NMINER
14 MARCH 1985

92ISW045

Bullmoose coal helps Lornex trim the 1984 loss to $3.3m.

92I/W

While the Bullmoose coal mine contributed net earnings of $3.8 million to **Lornex Mining Corp.**'s bottom line, it wasn't enough to offset losses from its Highland Valley copper-molybdenum-silver operation.

To the year ended Dec. 31, 1984, Lornex registered a $3,264,000 (39¢ a share) loss compared to a profit the previous year of $2,683,000 (32¢ a share).

Mine revenue climbed to $195,725,000 compared to $148,506,000 in 1983. Interest paid on long-term debt soared to $13,919,000 compared to $502,000 the year earlier.

The most significant event of the year was the startup of the Bullmoose mine (Lornex 39%, **Teck Corp.** 51% and Nissho Iwai Coal Development 10%) on Jan. 1. The Lornex share of production was 734,000 tons of metallurgical coal and 29,000 tons of thermal coal.

There was a contract price reduction of $10 per tonne negotiated late in the year, which should be balanced by increased coal sales, the company noted.

But while the coal operation has turned out to be a moneymaker, there is concern over the copper-moly complex.

"The deterioration in net earnings was mainly due to lower revenue from copper and silver," Chairman and Chief Executive Officer George R. Albino said. In Canadian dollars, Lornex received an average 79¢ per lb. for copper, down 11¢ from the year before, and $9.35 an oz. for silver, well below the $14.10 price in 1983.

Molybdenum actually rose to $4.40 per lb. compared to $4.18 the year before.

Production during the latest year declined slightly to 31,044,000 tons compared to 31,710,000 tons. Lornex produced 186,210,000 lb. of copper, up slightly from the previous year, 7,448,000 lb. of moly and 726,000 oz. of silver.

A ring gear repair early in the year on one of the operations' three autogenous mills accounted for the output decline.

Cost reductions at the huge open pit mine, which has reserves of 385 million tons, were achieved through a new computer-assisted haulage truck dispatch system, diesel engine modifications on the truck fleet, conversion of light vehicles to compressed natural gas rather than gasoline and revisions in tailings dam construction methods and waste disposal system. The workforce was reduced from 941 employees to 877.

"All costs will continue to be closely monitored and every available measure will be taken to further reduce costs and to improve productivity," Mr. Albino said.

NMINER 14 JULY 1986

92I/6E, 7W

Cominco/Lornex

Joining forces to create supersize copper firm

VANCOUVER – A previous agreement has been finalized between **Cominco** and **Lornex Mining** which will see the two combine their Highland Valley mining operations into one of the largest copper producers in the free world.

A new company, **Highland Valley Copper**, will be formed to hold their respective assets and construction will begin immediately to increase the capacity of the higher grade Cominco mine to supply the Lornex and Cominco mills at a combined rate of up to 120,000 tonnes per day. Capital costs are estimated to be $83 million, the companies say.

Paul Hansen, who was previously chairman and managing director of Cominco Europe in London, will act as president of Highland Valley Copper and Douglas E. Guild, previously vice-president and general manager of Lornex, will hold a similar position with the new company.

Cominco and Lornex will participate equally in the management of the new entity and capital requirements will be provided 45% by Lornex and 55% by Cominco. Cash generated from the operation will be distributed on the same basis.

The project will create new employment for approximately 200 people during the 18-month construction period. Key items in the program will include a major conveyor to the Lornex mill and also crushing facilities. Some engineering and design work has to be done on these systems, a spokesman for the company points out.

The Labor Relations Board of British Columbia is also sorting out the fact that two separate unions represent workers at both mining operations. Lornex is represented by the United Steel Workers of America and Cominco by a local union called the Highland Valley Association of Independent Mine Employees.

Teck Corp. took exception to the agreement when it was first announced, claiming it had an agreement with Lornex whereby neither would exclude the other from any rationalization of production in the Highland Valley. Teck has a dormant mill at its nearby Highmont Mine which would be suitable for processing ore from the Cominco orebody should it eventually become party to the joint venture.

Teck has been considering legal action to resolve the matter of its exclusion from the joint venture but Teck's president and chief executive officer, Norman Keevil Jr., says it won't decide what course of action to take until the matter is discussed with major shareholders.

N. Miner 3 Nov 86

Cost reductions help Lornex to higher profit

92I/6W/045 (6E)

A 14% jump in net earnings in the first nine months this year over the same period last year, has been attributed by **Lornex Mining Corp.** to reductions in operating costs and all other expenses.

Lornex reports earnings in the latest period of $20.1 million, or $2.43 a share, compared to earnings of $17.7 million or $2.14 a share last year.

Chairman George Albino says the cost reductions more than offset the effects of lower production of and prices for copper and molybdenum, adding that part of the reductions are attributable to the changed nature of copper-molybdenum operations in the third quarter of this year.

During that period, the copper-molybdenum operations have been conducted by **Highland Valley Copper**, a partnership with **Cominco Ltd.**

As a result, Mr Albino notes, the aforementioned financial results are not strictly comparable. The financial statements include Lornex's copper-molybdenum operations prior to the formation of the partnership at the first of July, 1986.

NMINER 21 July 1986

Lornex profit slips 21% for the first half of '86

A decline in molybdenum prices, as well as lower copper production and a higher effective tax rate are cited as reasons for the 21% decline in net earnings posted by **Lornex Mining Corp** for the six months ended June 30.

Unaudited net earnings of $9.8 million ($1.18 per share) were posted for the first half of this year compared to earnings of $12.5 million ($1.52) in the first half of 1985.

Net revenues for mine production for the six months of the year amount to $110.6 million versus revenues of $121.9 million posted in the same period last year.

Income and mining taxes for this year's first six months are $8.03 million, up from $7.99 million for the same period last year.

According to a company report, tonnage milled at the Lornex copper-molybdenum mine in the first half of both years was 15.9 million tons. However, copper production was 6% lower in this year's first half because of a reduced mill head grade. Mill head grade in the first half of 1985 was higher than for the balance of the year.

Molybdenum production improved by 16% for the six months mainly as a result of higher grades.

Increased molybdenum production as well as effective cost controls and the value of the U.S. dollar all helped to offset the negative influences on the balance sheet.

Lornex's 39% share of the Bullmoose metallurgical coal mine production was 361,000 tonnes, a reduction of 15% over the first half of 1985.

Lornex and **Cominco** have finalized their partnership to pool their assets and continue the copper and molybdenum operations of both corporations in the Highland Valley of B.C. The partnership will be known as *Highland Valley Copper* (N.M., July 14/86).

92I/6E (092ISW045)

GCNL #36 20FEB1986

LORNEX MINING CORPORATION LTD. (LMN-V)

YEAR ENDED 31 DECEMBER	1985	1984
Net Mine Production Revenue	$243,700,000	$195,700,000
Net Earnings (Loss)	24,142,000	(3,264,000)
Per Share	$2.92	(39¢)

SHARP TURNAROUND TO PROFIT ACHIEVED

On a $48,000,000 rise in net revenue from mine production in 1985 compared with 1984, a $27,000,000 turnaround from loss to profit was achieved by Lornex Mining Corporation Ltd. Net earnings for the last quarter of 1985 were $6,474,000 compared to a loss a year earlier of $394,000.

Management attributes the year over year increase in mine revenue mainly to greater production of copper and coal, a stronger United States dollar versus the Canadian dollar and, to a lesser extent, slightly higher copper prices. The improvement in earnings was due to greater net revenue, lower copper and molybdenum production costs and substantilly lower net interest costs. 92I/6E (092ISW045)

Ore milled in 1985 at the Lornex copper-molybdenum mine in British Columbia's Highland Valley was a record high of 32,200,000 tons, nearly 4% more than in 1984; copper production rose 13% due to higher mill head grade and greater mill throughput while molybdenum production was higher. Lornex's share of the Bullmoose metallurgical coal production in NE B.C. was 831,000 tonnes in 1985, up 25% from 1984.

Negotiations continue with Cominco Ltd. toward a combination of the assets and operations of the two companies in the Highland Valley (GCNL 10(86) p.1 refers).

The Northern Miner

January 20, 1986

NMINER 20 JAN 1986

92I/6E

LORNEX (092ISW045)

COMINCO-LARC ZONE (092ISW012)

Lornex, Cominco pool copper assets

A long-awaited attempt at mutual assistance in the Highland Valley area of British Columbia will see **Cominco** and **Lornex Mining** pool assets to create one of the world's largest producers of copper concentrate.

For Cominco, it marks a further step in an extensive program to rationalize many of its holdings. It previously announced it would rebuild its lead smelter at Trail, B.C., for $270 million and extensively revised operating plans have been announced at two of its zinc-producing subsidiaries.

Cominco's Highland Valley mine still has a long life ahead of it, but its copper mill is 30 years and can only process about 25,000 tons of ore per day.

Lornex, on the other hand, has an 80,000-ton-per day mill built in 1972 that can be expanded, but long-term reserves at its mine are not as secure as at Cominco's mine. The higher grade Cominco mine could supply the entire 120,000-ton-per-day feed for the two mills combined.

The third major Highland Valley operator, **Teck Corp.**, is not involved in the deal although it had talked with Cominco during the past year about some kind of melding of facilities. But that doesn't mean Teck won't participate in the future.

"It certainly doesn't preclude the partnership from discussing with Teck any involvement with Teck's operations," says Ken Culver, manager of corporate relations for **Rio Algom** which owns 68% of Lornex. Teck itself owns 22% of Lornex.

The combined Cominco-Lornex operation is expected to become official by the end of April and will probably take a couple of years to get production levels up to target levels. Eventually it is expected to be producing more than 400 million pounds of copper annually along with molybdenum, if market prices are good enough, and silver and gold byproducts.

"Basically we have a concept. A detailed development plan has to be put together now," says Mr. Culver. He gives the example of resolving how to transport ore from the Cominco mine to the Lornex mill and says a conveyor system is being looked at.

The total capital cost of the project is estimated at $75-100 million. Operating costs are estimated at about 50¢ (US) per pound of copper. Copper sold recently for about 70¢ on the spot market with the March futures contract at about 66¢.

Tom Byrne, an analyst with McLeod Young Weir, says the combination "looks good." He points out that Lornex is making money from its Highland Valley operations and "here's a way of making more" and Cominco gets a share. Cominco's operation has no particular problems but is small, so the economies of scale make it attractive.

The slowdown in the mining industry had a dampening effect on the entire area's economy through reduced direct employment and a slowdown in the mining services sector, but Ernie Levesque, economic development officer for the nearby city of Kamloops, says the move signals "a sense that some stability has arrived."

While the arrangement may not create more permanent jobs, existing jobs and operations will be more secure.

"The combined effect of higher grade and increased ore reserves will ensure a low cost and highly competitive facility, the benefits of which will accrue to both companies for many years to come," the companies say in a joint news release.

Lornex plans to phase out its mining operations, but the timing has not been determined. At the end of 1984 it had 385 million tons of ore reserves grading about 0.38% copper 0.013% molybdenum. Cominco's Valley mine, at the end of 1984, had 616 million tons of ore reserves grading an average 0.47% copper with additional inferred ore reserves of 156 million tons grading 0.48% copper.

While the nature of the legal entity the two companies will create hasn't been determined yet — it could be a separate company, a joint venture or a legal partnership — Cominco and Lornex will have equal control and management. Working and other capital will be provided 45% by Lornex and 55% by Cominco and profits will be shared in the same proportion.

Construction required to bring the operation up to target levels will create about 200 jobs.

GCNL #139 19 JUL 85

92I/16E (092ISW045)

LORNEX MINING CORPORATION LTD. (LMN-V)

6 MONTHS ENDED 30 JUNE	1985	1984
Net Revenue Fr. Mine Production	$121,891,000	$97,937,000
Operating Profit (Loss)	20,527,000	(3,733,000)
Income & Mining Taxes	7,997,000	(1,795,000)
Net Earnings (Loss)	12,530,000	(1,938,000)
Earnings (Loss) Per Share	$1.52	(23¢)

SHARP TURN TO PROFIT RECORDED

In presenting comparative first half results of Lornex Mining Corporation Ltd. that show a sharp turn from loss to profit, George R. Albino, chairman, attributes the turnaround to increased production of copper, coal and molybdenum, higher molybdenum prices, the continuing effects of stringent cost control measures and significantly lower net interest costs.

Tonnage milled at the Lornex copper-molybdenum mine near Ashcroft, B.C. in the first half of 1985 was 16,000,000 tons, 6% higher than in first half 1984 . Copper production was up 24% and molybdenum production up 14% as a result of the increased tonnage, higher copper grades and improved mill recoveries for both products. Lornex's share of the Bullmoose metallurgical coal production in NE B.C. was 34% higher this year.

NMINER 25 JUL 85

92I/16E (092ISW045)

Lornex earnings soar to $12.5m.

Lornex Mining Corp., one of the few money-making copper producers, posted net earnings of $12.5 million ($1.52 a share) for the six months ended June 30.

Compared to the 1984 first-half loss of $1.9 million the results were a "sharp improvement," the company noted.

Tonnage milled at the Lornex copper-molybdenum complex rose 6% to 16 million tons. Red metal production was up 24% and moly output climbed 14%.

The better financial performance resulted from higher moly prices and production from the Bullmoose coal project. Lornex's share of Bullmoose metallurgical coal production was 34% higher this year.

Cost control measures and lower net interest costs also aided bottom-line results, said George R. Albino, chairman and chief executive officer. Lornex is 68.1% owned by **Rio Algom Ltd.**

NO.205(1985)
OCTOBER 24, 1985

GCNL #205 24 OCT 1985

92I/16E (092ISW045)

LORNEX MINING CORPORATION LTD.(LMN-V)

9 MONTHS ENDED 30 SEPTEMBER	1985	1984
Net Revenue Fr.Mine Production	$123,437,000	$146,725,000
Operating Profit(Loss)	27,633,000	(6,130,000)
Income & Mining Taxes	9,965,000	3,260,000
Net Earnings(Loss)	17,668,000	(2,870,000)
Per Share	$2.14	(35¢)

SHARP TURNAROUND FROM LOSS TO PROFIT ACHIEVED

George R. Albino, chairman and chief executive officer of Lornex Mining Corporation Ltd., attributed the turnaround to profit in the first 9 months this year compared with last to increased production of copper, coal and molybdenum, higher molybdenum prices, the continuing effects of stringent cost control measures and significantly lower net interest costs.

In the first three quarters of 1985, tonnage milled at the Lornex copper-molybdenum mine, in British Columbia's Highland Valley, was 24,200,000 tons, 5% more than in the comparable period of 1984. Copper production was 17% higher and molybdenum production rose 4% as a result of the increased tonnage, higher copper grades and improved mill recoveries for molybdenum. Lornex's share of the Bullmoose metallurgical coal production in NE B.C. increased by 33%.

NMINER
29MARCH84

Lornex profit replaces loss

Although declining copper prices over the last half of 1983 resulted in a net loss for the company for that period, **Lornex Mining** reported net earnings of $2,683,000, or 32¢ a share, for the full year 1983 in contrast to a net loss of $11,140,000, or $1.35, for 1982.

Improved earnings reflect higher prices for copper and silver and increased molybdenum production, partly offset by lower copper grades.

Earnings of the company, George R. Albino, chairman and president, noted in the annual report, are primarily dependent upon the price of copper, the principal metal which it produces, strict control of costs and a high level of productivity. Recently, he continued, the price of copper in real terms has been at its lowest levels since the 1930s.

New technology

"All costs will continue to be rigorously controlled," he stated. "Studies were begun in 1983 to determine the impact of new technology upon operating costs in the future. By these actions Lornex intends to achieve further operating efficiencies and productivity so that, when world economic conditions improve, it will be well placed to realize maximum benefits from increases in the prices of its products."

Net revenue from production of the giant Highland Valley, B.C., open pit mine last year totalled $148,506,000, up from $126,893,000 the preceding year, and expenses were $143,451,000, against $146,578,000. Prices realized in 1983 averaged 90¢ a lb. for copper, $4.18 a lb. for molybdenum, and $14.10 an oz. for silver, compared with 81¢, $4.28 and $8.74, respectively, for copper, molybdenum and silver.

Ore milled last year totalled 31,710,000 tons, or a daily average of 86,877 tons, compared with 30,692,000, or a daily average of 84,086 tons, for 1982. Metals produced amounted to 181,682,000 lb. of copper, 7,506,000 lb. of molybdenum and 710,000 oz. of silver, against 194,582,000 lb. of copper, 6,347,000 lb. of molybdenum and 739,000 oz. of silver in 1982.

Measures instituted in 1982 to reduce costs, improve labor utilization and increase productivity were continued and expanded in 1983. Postponement to future years of some stripping of waste material has resulted in lower current operating costs.

A new copper concentrate regrind circuit came into production in December. The higher copper grade in concentrates produced from this circuit will result in net savings in freight and smelter treatment charges.

Ore reserves

Proven ore reserves at Dec. 31, 1983, totalled 416 million tons of 0.374% copper and 0.013% molybdenum, a decline from 448 million tons of 0.371% copper and 0.013% molybdenum a year ago. Some drilling has been done to assess the extent of deep ore beneath the confirmed lower limits.

The Bullmoose coal mine, northeast British Columbia, in which a 39% interest is held, was virtually completed on time and under budget in December and coal is being shipped from the project on a regular basis.

Working capital at the end of 1983 amounted to $36.7 million, more than triple the year-ago figure of $11 million.

92I/6E
(092ISW045)

GCNL #96 17MAY84

LORNEX MINING CORPORATION LTD. (LMN-V) 92I/6E (092ISW045)

THREE MONTHS ENDED MARCH 31	1984	1983
Mine Revenue, Net	$44,192,000	$35,886,000
Cash Flow	1,287,000	5,315,000
Net Earnings (Loss)	(2,911,000)	93,000
Per Common Share	(35¢)	1¢

Comparative first quarter results of Lornex Mining Corporation Ltd. include 39% joint venture interest in the Bullmoose metallurgical coal mine in NE B.C. G.R. Albino, chairman, attributes the deterioration from the small earnings in first quarter 1983 to this year's net loss was largely due to lower prices for copper and silver, a decline in tonnage resulting in lower production of copper and molybdenum and higher operating costs for the Lornex mine in the Highland Valley of B.C.

Tonnage milled at Lornex in the first quarter of 1984 was 7,071,000 tons, down 12% from first quarter 1983, largely because of a required ring gear change in the largest of the three autogenous mills. Copper production was 9% lower at 40,525,000 pounds molybdenum by 20% at 1,458,000 pounds and silver by 8% at 160,000 ounces. Copper shipments for the period totalled 37,500,000 pounds and inventory was 15,900,000 pounds at 31Mar84.

The Bullmoose mine started operations 1Jan84 and is operating well with only minor start-up problems. Lornex's share of the metallurgical coal production was about 155,000 metric tons. The mine's operating costs per ton produced were as expected for the first quarter of 1984. Lornex's project bank loans for Bullmoose at 31Mar84 totalled $106,300,000, including $65,000,000 borrowed under the limited recourse loan agreement, unchanged in the quarter.

37

MINER MAY 82

Lornex expansion completed

Lornex Mining reports earnings for 1981 were $23.2-million or $2.81/share compared to $65.1-million of $7.87/share in 1980.

A major expansion program adopted in October 1979 has now been completed, increasing production capacity from 48,000 tons/day to approximately 80,000 tons/day. Tonnage milled in the first quarter of 1982 was 7.6-million tons, 76% higher than the same period of 1981. Production was higher in 1982 by 56% for copper, 54% for molybdenum and 58% for silver. Copper mill head grades and molybdenum mill recoveries were lower than 1981.

Proven ore reserves for 1981 are estimated at 463-million tons with an average head grade of 0.371% copper and 0.014% molybdenum. During 1981 the first phase of a drilling program to further assess the extent of deep ore was completed and phase two of the program is now in progress.

Exploration expenditures during 1981 were $590,000. Currently, several exploration projects are underway, primarily in BC.

Lornex Mining Corporation Limited and Sage Creek Coal Limited are in process of moving their Vancouver office. Their new address is PO Box 10335, Stock Exchange Tower, Suite 1650, 609 Granville Street, Vancouver, BC V7Y 1G5.

92I/6E

092ISW045

N MINER 29 JULY 82

Lower metals prices hit hard at Lornex

VANCOUVER – Lornex Mining Corp. reports an unaudited net loss of $4,886,000, or 59¢ a share, for the six months ended June 30, compared to earnings of $16,147,000 or $1.95 a share, in the same period last year. Net revenue from mine production in the 1982 period was $65,628,000, down from the figure of $69,728,000 last year.

The company says the first-half loss was largely due to lower prices for copper, molybdenum and silver, than in the same period of 1981. The lower prices more than offset higher production of all three metals.

Tonnage milled in the 1982 first half was 15.1 million tons, 71% higher than in the same period last year because of expanded mining and milling facilities which came into operation in mid-1981. Mill head grades for copper, and mill recoveries for both copper and molybdenum were lower than last year, Lornex says. Production was up 46% for copper, 55% for molybdenum, and 51% for silver.

Commenting on the agreement under which Lornex will acquire a 39% interest in **Teck Corporation's** Bullmoose coking coal project in northeastern B.C., the company says it has made a first payment of $5.6 million, and that arrangements for financing Lornex's contribution are "well advanced."

Construction on the $245 million Bullmoose project was expected to have started this spring, with the mine beginning operations by late 1983 at a production rate of 2.3 million tonnes of clean coal per year (**N.M.**, May 6/82).

On the labor front, Lornex reports the terms of a new 2-year collective agreement with production, maintenance, office and technical employees were ratified by the union membership in mid-July. The previous agreement expired June 30 this year.

92I/6E

092ISW045

NMINER 8APR80 92I/6E 092ISW045

Cost efficiency big factor in Lornex Mining success

LOGAN LAKE — When you're mining 300,000 tons each day, five days per week, you can't afford to overlook any cost saving measure that would reduce handling charges for a ton of ore.

Even a seemingly miniscule saving represents a substantial amount of money when equated to that tonnage. This attitude, as explained last week in the first instalment of our story, has made Lornex Mining the lowest cost producer of its type in North America, according to James McManus, operations manager.

And Lornex expects to maintain that position. For one thing it's considering the advisability of installing a "trolley-assist" system for hauling trucks out of the pit similar to that used in South Africa, reports Douglas E. Guild, mine manager.

Petroleum costs are a decisive factor in profitability there as here, he contends, and Lornex "can't afford to ignore anything like that."

Also being studied is the desirability of an in-pit conveyor — about three would be needed. Placer Development's Gibraltar mine has such a system, with excellent results.

Mr. McManus, who prior to his new position was pit superintendent, notes the present mill rate has been constant for the past five months at approximately 5,000 tons over the design rate. The new rate, incidentally, is 68% over the old and now averages 83,000 tons daily. Added to the mill was a new "C" line which has been operating "above design capacity" largely because the ore wasn't as hard as expected. Once the hardness increases the throughput will drop somewhat, however.

The flow sheets for each of the three circuits are similar but the equipment in C is larger, Mr. McManus points out, noting all "in-house engineering" was utilized for the mill expansion.

In-between rate

Lornex felt it wasn't economical to double the mill rate, partly because of power considerations, so an "in between rate" was chosen.

And a leach plant representing 4% of the total expansion cost was also added. Known as the Brenda Mines leach process, it reduces the copper content in molybdenum concentrate from 1% to 0.2%.

Approximately 30% of their molybdenum goes to Placer Development's Endako operation for roasting to oxide form, making it more saleable.

Roger Brooke, the company's gregarious mill-manager, told The Northern Miner the size of the equipment installed was the main factor in keeping manpower down, although he cautions "if you lose one large piece of equipment it puts you out of business for a while."

Lornex's manager of mining, Phil King-Jones, a fairly recent and welcome addition to the Canadian mining scene, states the mining rate has to average 300,000 tons per day on a 5-day week.

Equipment availability better

Since the expansion, equipment availability has actually improved and high marks are given to the 22 new Unit Rig 170-ton trucks added to their fleet. They have a turning circle comparable to the smaller 120-ton vehicles, an important factor given the present pit design. Lornex has a phenomenal 0.22 powder factor (the number of pounds of explosive needed to break one ton of rock) and only occasionally does it rise to 0.28 lb. The company has a unique arrangement with Ireco Canada, an explosive manufacturer supplying the mine. Lornex has its own plant, its own people manufacturing the slurry, and Mr. King-Jones explains 65% of the explosives consumed are slurries with the remainder ANFO (ammonium nitrate and fuel oil).

About one million pounds per month are required in the huge open pit which is 6,500 ft. from north to south and 5,000 ft. wide.

GCNL #68 7APR82 LORNEX MINING CORPORATION 92I/6E 092ISW045

YEAR ENDED 31 DECEMBER	1981	1980
Ore Milled, Tons	22,851,000	17,678,000
Tons Milled P/Oper.Day Av.	62,634,000	48,302,000
Head Grade Copper, Av.	0.415%	0.411%
Head Grade Molybdenum, Av.	0.015%	0.017%
Recovery, Copper	89.8%	89.8%
Recovery Molybdenum	72.5%	81.4%
Payable Metal in Concentrate:		
Copper Produced, Pounds	164,730,000	126,346,000
Copper Delivered, Pounds	141,669,000	135,298,000
Molybdenum, Pounds	3,821,000	4,790,000
Molybdenum Produced, Pounds	4,790,000	4,813,000
Molybdenum Delivered, Pounds	3,821,000	4,790,000
Silver Produced, Ounces	590,000	507,000

ANNUAL REPORT REVIEWED

The annual report of Lornex Mining Corporation confirms the financial results of operations in 1981 as presented in a preliminary report in GCNL 46(82). G.R. Albino, chairman, states that the major expansion program decided upon in October 1979 to increase production capacity from 48,000 tons per day to approximately 80,000 was completed at a cost lower than the estimated $160,000,000 and was financed from internal cash flow. Minor problems only were encountered in the start-up period. During the last three months of 1981 the mill throughput overaged 83,000 tons per day. The average operating cost per ton of ore milled increased to $3.59 in 1981 from $3.13 in 1980, mainly due to higher costs for labour, power, fuel, materials and services as well as costs associated with start-up of the plant expansion.

Slightly more than half of Lornex' expanded annual production of copper concentrates has been sold to a group of Japanese companies under a 1979 contract for delivery of a fixed quantity of concentrates per year until the end of 1989. A second contract provides for delivery of a fixed quantity of copper concentrates per year until the end of 1985. Production in excess of deliveries under these contracts will be sold from time to time on a spot basis. A portion of the molybdenum in concentrates that will be produced in 1982 has been contracted for by a Canadian company on a pricing formula related to published dealer prices for molybdic oxide. Further portions of the 1982 molybdenum production will be converted to molybdic oxide under toll conversion agreements and the product sold through a sales agent. Arrangements will be made from the time to time for the sale of any production in excess of deliveries under these contracts.

Proven ore reserves at 31Dec81 are estimated to be 463,000,000 tons with an average head grade of 0.371% copper and 0.014% molybdenum. During 1981 the first phase of a drilling program to further assess the extent of deep ore was completed and phase two is now in progress. When this program is completed, new open pit ore reserves will be determined.

As for the outlook, Mr.Albino says that with the expansion now completed, Lornex are well placed to benefit from increases in prices for the metals they produce. If the economies of the advanced nations improve in 1982, copper prices may increase significantly from the present exceptionally depressed level, as copper inventories are relatively low. Prices for molybdenum are more likely to remain depressed longer due to overcapacity and excessive stocks in producers' hands.

— MINES, OILS, GAS —

The Northern Miner

APRIL 1, 1982

VOL. 68 NO. 4

270,000 tons a day

NMINER 1 APR 82

Lornex ready for expected metal recovery

By David Duval

LOGAN LAKE — The first truly elephant-sized base metal mining operation in Canada has all four feet on the ground despite the current economic slump. Scaled up 68% recently, **Lornex Mining's** massive open pit operation near here cranks out more than 270,000 tons in a single day's work — what some average-size underground mines produce annually.

Eight million tons of broken material are kept in reserve at all times. Now that's scale.

Once metal prices improve (copper and molybdenum) many analysts predict the sky is the limit for this impressive operation.

According to Lornex, the expanded mill now operates over capacity of 83,000 tons per day with only two 15-man shifts and on a "94% on-stream basis," which would rank it as probably the lowest cost-per-ton operation of its type in North America, the company believes.

The most impressive (almost awesome) mine this reporter has ever visited, Lornex is triple the size of the next largest and newest producer in the Highland Valley, Teck Highmont (N.M., Mar. 25/82). As readers are probably aware **Teck Corp.** has a 21.1% interest in Lornex with **Rio Algom,** the mining and specialty steels giant, holding most of the remaining equity.

And the only thing likely to displace Lornex from its lofty perch is Cominco's massive Valley Copper deposit a short distance away, currently awaiting more favorable metal prices.

Given the red-carpet treatment by all departments, The Northern Miner discussed in detail most aspects of the operation with senior management including Douglas Guild, general manager.

Obviously a man who rarely overlooks anything, Mr. Guild, after reading a rather unflattering commentary this reporter did on TV dinners (N.M., Mar. 11/82) graciously ensured a submarine sandwich was on the lunch menu for which I offer my heartfelt thanks.

He says the recent production increase "accelerated mining in the pit but didn't include any actual expansion," and during our visit Lornex was walking the last shovel out of the pit bottom to a new work area.

Activity will be suspended there for three years or more and he notes most of the present ore is being mined from the fringe areas of the pit meaning the current grade of 0.4% copper will drop to 0.38% or possibly 0.36%. About 60% of future ore will be coming from the south and east zones.

The grade at Lornex has always been better in the central core of the pit which is 1,800 ft. deep from the high wall and the stripping ratio has been projected at 2.4 to one — an almost ideal mining situation. However, to maintain the existing mining rate "we are operating at the limits of our equipment," Mr. Guild points out.

At the present rate Lornex has a mine life of 20 years but there could be another 250 million tons averaging 0.4% copper minable at depth which might extend this, he admits. And this portion is still open. Apparently, several deep holes indicated an extension which ultimately may see the pit deepened another 500 ft. at least.

Although not definite, Mr. Guild concludes this will be the last production increase since further expansion would mean dropping the cutoff grade now set at 0.25% copper equivalent.

Despite the 68% increase in capacity Lornex claims it's operating very close to the break-even point, the best scenario any mining operation can expect in today's economy, we gather.

No real surprises cropped up in the expansion and everything was completed on schedule and, even better, under budget. And the appointment notices after, probably said more about how well Lornex's staff performed than anything else, we suspect.

Some teething problems arose during the first 2-3 months of start-up, with production below target rates at times, but "then it took off and just kept going," Mr. Guild remarked.

Most mine employees live in Logan Lake, a town which on a scale of 10 would probably rate a good 8.5, according to some people we talked with. Located some 11 miles from the minesite, the town looks brand new, the result of a major housing effort by companies in the Highland Valley.

(This is the first instalment of our Lornex story, which will be continued next week.)

92I/6E

092ISW045

GSNL #247 13 NOV 81 LORNEX MINING CORPORATION LTD. 92I/16E 092I SW045

9 MONTHS ENDED SEPTEMBER 30,	1981	1980
Total Revenue	$113,482,000	$145,898,000
Cash Flow	46,123,000	96,013,000
Net Earnings	$21,759,000	$52,396,000
Per Common Share	$2.63	$6.34
Working Capital	$28,690,000	$99,144,000

PROFIT FELL SHARPLY

G.R. Albino, chairman of Lornex Mining Corporation Ltd., says the substantial decrease in net earnings in the first 9 months of 1981 was due largely to reductions in net revenue from mine production and investment income combined with higher expenses. The decline in mining revenue resulted primarily from lower prices for copper, molybdenum and silver; the effects of increased copper production were partly offset by reduced molybdenum output. The mining and milling expansion project started operations on August 1, and this, including minor start-up problems related thereto, contributed to the increased expenses. While total operating costs for the 9 months were 34% higher than last year, costs per ton milled rose by only 17%.

Production of copper at 110,467 pounds was 13% higher and molybdenum production at 3,071 pounds was 21% lower in the first three quarters of 1981 than in the corresponding period of 1980. Tonnage milled was 14% higher this year but mill head grades were lower for both copper and molybdenum. The molybdenum recovery rate was also well below the unusually high rate recorded last year which was a result of a clean-up in January, 1980 of an accumulated filter cake stockpile. Copper shipments for the period totalled 115,000,000 pounds and inventory was 14,200,000 pounds at 30Sep81. Expansion of Lornex' mining and milling complex has essentially been completed, on schedule and under budget.

THE GLOBE AND MAIL, WEDNESDAY, NOVEMBER 25, 1981

92I/16E 092ISW045

Exploration effort aims at new mines

LOGAN LAKE, B.C. — Lornex Mining Corp. Ltd. of Vancouver, controlled by Rio Algom Ltd. of Toronto, has started its own exploration effort with the objective of bringing in new mines in the next five to 10 years, according to vice-president and general manager L. H. Hunter.

"We plan to develop mining properties through joint ventures, options and other types of acquisition.

"Since we've gone into the exploration business, the response has been overwhelming. We've had close to 100 submissions this year already."

The exploration office has an exploration manager and two field geologists, with a third to be added early next year, he said.

"Basically, we're looking at B.C. at this time. About 80 per cent of the submissions to date have been for B.C., about 5 per cent for the Yukon and the NWT and about 15 per cent from the U.S.

"We have no specific targets. We're interested in anything — precious metals, base metals . . . coal."

Remarkably, the 68 per cent expansion of the Lornex B.C. copper-molybdenum-silver mine about 45 kilometres southwest of Kamloops was completed on time and under budget. Its costs came to $154-million, rather than $160-million.

It is also paid off, having been financed entirely from retained earnings and cash flow, so Lornex remains a debt-free mining company — "a rare and vanishing breed these days."

The expansion required the purchase of a new computer to control the mill by regulating the grinding rate and optimizing all mill functions, Mr. Hunter said.

The expansion's only new technology is its 34-foot diameter, semi-autogenous grinding mill — "the most powerful of its kind in the world, driven by twin DC 6,400-horsepower motors."

Semi-autogenous means the mill uses the tumbling of the chunks of ore themselves to do part of the grinding. This stage is followed by two ball mills.

Lornex uses the on-site computer for mine design, adjusting the ore being mined for grade, hardness and haulage cost for an optimum mix, according to economic conditions.

"You can adjust your mine plan in a matter of hours with the computer, compared with days by hand. It will tell us exactly what what we will be mining for the life of the mine."

The latest reserve estimate is 454.2 million tons with an average grade of 0.382 per cent copper and 0.407 per cent molybdenum, taken at Dec. 31, 1980.

This would be sufficient for 16 to 17 years at the expanded mining rates, but Mr. Hunter believes reserves are substantially greater.

"We're into a deep diamond drilling program that is to be completed late next year. We're drilling now — we've completed eight or 10 holes.

"I still say it's (the life of the mine) into the next century."

ration confirmed further reserves known to exist. It began to look as though expansion would be feasible.

Much of the infrastructure was already in place, and an effective working staff was in charge of operations.

Loans repaid

All the original loans had been paid off, leaving Lornex debt-free, and economic analyses indicated that expansion could be financed out of cash accumulated and continuing cash flow. Moreover, in 10 years the growth in technology had been phenomenal.

Now the automated constant speed mills, unsurpassed in Canada, were controlled by a computer reading over a hundred variables and making adjustments. Both mill and financial office had access to a central computer containing thousands of bits of information. The "educated" risk of 1968 had become a mass of data on which feasibility study for expansion could be based.

Nothing needed to be left to chance. Complete data were available, for instance, on the relation of overburden to ore, and its effect on mining rates. Based on accurate knowledge or rock hardness, metal content and depth of the orebody, the computer was programmed to simulate future mining and mill production. Choice of the type and size of equipment for the expanded mill involved engineering, economic and human factors.

The existing truck fleet included both 235-ton trucks and 120-ton trucks. The big ones haul rock at a lower cost, but, for turning and loading they require a bench width of 250 ft. Smaller sized trucks would have better performance on uphill hauls and could operate on narrower benches. A productivity study showed that medium-sized 170-ton trucks would be the most cost effective.

Geotechnical control, a daily routine at Lornex, was also a factor in planning for expansion. Regular safety checks use infra-red equipment which can detect a half-centimetre shift in a pitwall more than a kilometre away. Pit design is based on knowledge gained from experience.

An expanded mine requires a second crusher. Computerized time study data indicated the crusher capacity needed to prevent time-loss through truck line ups. New concentrator design took into account mill size and powerdrive. Flotation expansion was based on studies of tank size and control systems.

Decision made

Efficiency in the expanded plant was to be based on past performance, with every decision balanced against financial and marketing possibilities. In 1979, even as record-breaking tonnage of concentrate rolled to the railhead, a decision was finally made to expand.

Procurement and construction were to span 23 months. There were three new 22-yard electric shovels, each requiring four months for assembly. New trucks (18), manufactured in Canada, were brought to the site in sections because they were too large to transport in one piece. They were assembled at the mine at the rate of four a month.

The capital cost of the whole expansion works out at about $500,000 for every one of the 350 new permanent jobs that are being created.

The 170-ton trucks prove their worth as they manoeuver within the limits of the mine design.

Tailings from the mine are contained by a dam the height of which is raised as the tailings increase. Since the beginning of mining at Lornex water from the tailings pond has been reclaimed and recirculated so that only about 10% of the required water is drawn from the Thompson River. Water supply for the expanded mill would be maintained by an increased reservoir capacity near the plant.

A camp to house the men had been set up and work on the building extensions got under way. Extensions to buildings for the grinding and flotation lines were enclosed by November so that mechanical and electrical work and piping could be carried out during the winter. Sections of the huge machines began to arrive.

Largest in world

In Montreal a 12,500 h.p. gear-drive, the largest in the world, was engineered to Lornex specifications. It is more than 39 ft. in diameter, measuring 40 ins. at the face

Five Year Review

	1980	1979	1978	1977	1976
Earnings: (Thousands of dollars)					
Net revenue from mine production	$173,738	$190,572	$ 88,096	$ 75,449	$ 82,940
Investment and other income	12,355	3,607	829	1,495	1,503
	186,093	194,179	88,925	76,944	84,443
Operating costs	55,388	47,058	40,425	39,788	33,572
Administrative and general expense	11,847	9,941	8,603	7,564	6,913
Amortization and depreciation	9,865	9,544	9,264	9,072	8,002
	77,100	66,543	58,292	56,424	48,487
Operating profit	108,993	127,636	30,633	20,520	35,956
Interest expense	110	1,739	4,769	5,139	5,990
	108,883	125,897	25,864	15,381	29,966
Income and mineral resource taxes	43,770	68,328	11,510	7,600	14,063
Net earnings	$ 65,113	$ 57,569	$ 14,354	$ 7,781	$ 15,903
Production Data:					
Tons of ore milled (000's)	17,678	17,776	17,557	17,065	17,016
— Per operating day	48,302	48,701	48,100	46,753	46,877
Copper in concentrate (pounds) (000's)	126,346	134,194	135,422	141,111	145,712
Molybdenum in concentrate (pounds) (000's)	4,813	4,436	3,985	3,795	3,769
Silver (ounces) (000's)	507	487	507	556	501
Financial Data:					
Per share of common stock					
—Net earnings	$ 7.87	$ 6.96	$ 1.74	$ 0.94	$ 1.93
—Dividends	$ 4.00	$ 2.00	$ 0.20	—	—
—Equity	$ 21.17	$ 17.29	$ 12.33	$ 10.80	$ 9.86
Long term debt and housing loans (000's)	$ 1,050	$ 1,071	$ 25,448	$ 48,851	$ 62,263
Shareholders' equity (000's)	$175,030	$142,992	$101,942	$ 89,194	$ 81,343
Common shares outstanding (000's)	8,269	8,269	8,267	8,261	8,253
Capital expenditures (000's)	$ 95,833	$ 8,657	$ 4,406	$ 18,584	$ 17,115

N MINER
20 AUG 81

Well within budget

Lornex's mill addition is now in tune-up stage

The ambitious expansion program of Lornex Mining (owned 68.1% by **Rio Algom** and 21.1% by **Teck Corp.**) in the Highland Valley, 45 miles southwest of Kamloops, B.C., is essentially completed with the mill addition in the tune-up stage, a company spokesman told The Northern Miner. The cost of the project to boost the milling rate at this impressive copper-molybdenum producer by about 68% is expected to be slightly lower than the original estimate of $160 million.

Even before the expansion got under way, Lornex was Canada's largest single base metal mine. With an original design capacity of 38,000 tons of ore a day (tpd), the mill in the first half this year averaged a record 48,910 tpd. The 68% expansion will bring the daily milling capacity to between 74,000 and 80,000 tons, depending on the hardness of the ore.

Reflection in earnings

Obviously the higher milling capacity will be reflected in earnings especially as the expanded plant to be one of the most modern and efficient mining and milling operations in the world is being financed out of general funds of the corporation. Net earnings in 1980 (see accompanying five year review table) equalled $7.87 a share, up from $6.96 a share in 1979. Unfortunately, due to lower prices for copper, molybdenum and silver and to lower production of molybdenum, net profit for the first six months this year declined to $1.95 a share from $5.05 a share for the first half of 1980.

Lornex can look forward to a long life. The original pit, which eventually will be 1,800 ft. deep, two miles long and a mile wide, was designed for a life term of 21 years at a milling rate of 38,000 tons per day on the basis of estimated ore reserves of 292 million tons grading 0.427% copper and 0.014% molybdenum. Exploration and development have subsequently increased these reserves as of Dec. 31, 1980, to 454.2 million tons grading 0.382% copper and 0.015% molybdenum.

Sales agreement

Earlier this year Lornex signed a new copper concentrate sales agreement with a group of Japanese companies. This agreement replaced the original contract which was to expire at the end of 1984, and extends deliveries of the same fixed quantities to the end of 1989.

The annual quantity sold under the new agreement represents about three-quarters of Lornex' current level of production of copper concentrates and will represent slightly more than half of planned production following completion of the expansion program.

A second sales contract has been concluded for a substantial portion of the additional copper concentrates that will be produced from expanded facilities. The latter contract calls for delivery of a fixed quantity of concentrates per year to be delivered over the period 1981 to 1985. Production in excess of the deliveries under these contracts will be sold from time to time on a spot basis.

A portion of the molybdenum in concentrates that will be produced in 1981 has been contracted for by a Canadian company on a pricing formula related to published dealer prices for molybdic oxide. A further portion of the 1981 molybdenum production will be converted to molybdic oxide under a toll conversion agreement and the oxide product sold through a sales agent. Arrangements will be made from time to time for the sale of the remainder of 1981 molybdenum production.

A company movie., A Mine Expands, tells the Lornex story, a Canadian success story of risk, development, earnings and now expansion.

Lornex is an example of how a combination of engineering, financial and marketing skills can turn an "educated" risk into a venture so successful that it can finance major expansion from its own resources.

The story begins

The story began in the 1950s when a prospector named Egil Lorntzen found outcroppings of copper mixed with molybdenum. Over a 10-year period he staked a number of claims in the Highland Valley, but mining companies showed little interest in his discoveries until 1965 when Rio Algom decided to finance a comprehensive exploration program.

Buying $4.5 million worth of shares of Lornex, Rio Algom became majority owner of the Highland Valley claims. Another $2 million was raised by selling rights. The money was put right into the ground.

In 1970, after a thorough study of the property and its inherent financial risks, Rio Algom decided that they had the makings of a successful open pit mine worthy of a major investment by the corporation. Additional development money was borrowed from Canadian banks and from the mine's first customer, a Japanese consortium.

In 1972, two years and $144 million after the decision to go ahead, the mine was in production. In another two years the mine was exceeding the projected output . . . processing 45,000 tons of ore a day. Lornex was able to start paying off the bank loan.

Pioneer

Lornex pioneered the use of semi-autogenous mills where the rock itself is used as the primary grinding agent in the largest mills of this type in Canada.

The flotation system, which had proven successful in the pilot plant in separating out the copper and molybdenum, was operating at peak production 'round the clock. Concentrates were trucked to the nearest rail line for shipment to Vancouver where the warehouse had been established.

At Logan Lake, 11 miles east of the mine, an attractive new community had been built by the company. Most of the 750 mine and mill employees bought homes and established their families there.

The 1973 oil crisis caused worldwide economic upheaval. Demand for copper fell and prices followed. To ease its customers' difficulties, Rio Algom re-negotiated the Japanese contract. At the same time government royalties and taxes were increased. Production of concentrates from low grade ore is capital intensive. Millions of dollars are tied up in equipment. An additional market was needed.

It was found in the United States. Prices began to improve and government levies were revised. With careful management Lornex had weathered the lean years.

By 1979 Lornex was the biggest single base metal mine in Canada. The ore reserves originally identified had assured a mine life of 21 years — enough to justify the original development. Continuing explo-

92I/6E 092ISW045

LORNEX MINING CORPORATION LTD.

GCNL #82(1976) APRIL 29th

ANNUAL MEETING GIVEN SOME INTERESTING NUMBERS IN REMARKS MADE BY PRESIDENT

Robert A.Armstrong, formerly president and now chairman of Lornex Mining Corporation Ltd., provided some interesting numbers to the annual meeting. At a daily operating rate of 45,000 tons the present reserves at Lornex are sufficient to sustain operation beyond 2000. Ore reserves at Dec.31,1975, were reported as 419,000,000 tons grading 0.409% copper, 0.014% molybdenum. Since the start of operations 181,000,000 tons of material have been moved from the pit. Of this 50,000,000 was ore and it produced 189,000 tons(378,000,000 pounds)of copper. In the 39 months since the start of production pre-tax earnings were $83,200,000, provision for taxes and royalties totalled $29,200,000 and net earnings amounted to $54,000,000. The mine was put into production on a $7,000,000 equity base with $140,000,000 in bank and other debts. Capital debt service payments made in cash totalled $89,300,000 since the start of production of which $75,600,000 was reduction of principal. All of these payments were made in respect of the bank loan and the Japanese notes. The original principal amount of these obligations was $86,800,000. By the end of 1975 this had been reduced to $11,200,000 and repayment will be completed in May 1976. Mr.Armstrong told the meeting, "The calculation can be made in a variety of ways but the indication is that an assured copper price of not less than 90¢ per payable pound in 1976 dollars would be required to support the development of a new mine of the Lornex type today."

GCNL #211 2/11/77

LORNEX MINING CORPORATION LTD.

092I/06E

PRODUCTION DATA NINE MONTHS ENDED SEP.30,	1977	1976
Ore Milled, Tons	12,611,000	12,338,000
Mill Feed,Av.Tons Per Day	46,194	45,527
Ore Grade - Copper	0.487%	0.517%
Ore Grade - Molybdenum	0.016%	0.016%
Recovery - Copper	89.0%	86.8%
Recovery - Molybdenum	75.0%	70.8%
Copper Produced, Pounds	105,794,000	107,239,000
Molybd.Produced, Pounds	2,937,000	2,831,000

9 MONTHS ENDED SEP.30,	1977	1976
Mine Production Rev.	$58,258,000	$62,546,000
Investment,Oth.Income	1,246,000	1,253,000
Total Revenue	$59,504,000	$63,799,000
Operating Costs	29,069,000	24,679,000
Admin.,General Exp.	5,928,000	5,038,000
Amortiz'n.,Deprec'n.	6,692,000	5,770,000
Interest Expense	3,792,000	4,590,000
Income,Resource Taxes	6,655,000	11,563,000
Net Earnings	$7,368,000	$12,159,000
Per Common Share	89¢	$1.48

PRODUCTIO REVENUE SLIPS 7% PER SHARPROFIT FALLS 40%

In supplementing the brief report in GCNL 206(77) on comparative first nine month results of Lornex Mining Corporation, chairman R.D.Armstrong and president G.R.Albino attribute the decline in net earnings primarily to lower copper prices and to higher expenses. Total expenses rose about $6,200,000 over the like period last year mainly because of escalating costs a relatively more waste removal required. The increase in amortization and depreciation s largely due to higher depreciation charges on the new shovel and trucks bought since Sep76.

Th effect on net revenue from mine production of lower copper prices was mitigated somewh by increased molybdenum revenue, resulting mainly from higher prices.

N capital expenditures on plant and equipment totalled $15,300,000 in the nine months, mainl or tailings systems revisions, purchase of 235-ton capacity open pit haulage trucks and o r pit equipment, expansion and modification of the mine shop and the planned overhaul the 120-ton capacity truck fleet. All major programs are on schedule within budget.

gotiations with the Japanese buyers were concluded in August with an agreed increase in r ing charges for 2 years started 1Apr77.

flecting the continuing very low copper prices, Lornex' third quarter earnings fell to $,000 or 11¢ per share from $3,899,000 or 48¢ per share a year ago.

GCNL #37 22/2/[illegible]

LORNEX MINING CORPORATION LTD.

092I/06E

Year Ended Dec.31,	1977	1976
Net Revenue	$75,449,000	$82,940,000
Net Earnings	7,781,000	15,903,000
Earnings Per Share	94¢	$1.93
Copper Produced-lbs.	141,100,000	145,700,000

Lornex Mining Corporation Ltd. has reported that the decline in net earnings in the year ended Dec.31,1977, compared with the 1976 results was due primarily to lower copper prices. In addition, production of copper in concentrates was slightly below that of the previous year and expenses were higher. The lower number of pounds of copper produced in concentrate was due to slightly lower average mill head grade of ore.

The gross copper revenue price per payable pound for the year averaged 60¢ as compared with 65¢ in 1976, but the impact of the lower prices for copper was modified somewhat by higher prices for molybdenum. The overall effect was that net revenue from mine production, comprising revenue from copper, molybdenum and minor values of precious metals, less smelting refining and marketing charges decreased.

(2)