

ANNUAL REPORT

TECK CORPORATION

1982

In Memoriam

All of those associated with Teck Corporation were saddened by the loss of two respected directors within a two week period in November, 1982. Dr. John D. Leishman passed away suddenly, and will always be remembered for his good humour and conscientious service as a director of Teck for 20 years. John discovered the Steelman oil field in Saskatchewan, which is still the company's main source of oil production.

The Honourable Robert K. Andras passed away after a long illness on November 17. Bob will be remembered as one of the best Cabinet Ministers in the Federal Government for many years, and for his contributions to the Northeast Coal Project in particular in the too-short time he had with Teck Corporation following his retirement from public service.

Robert W. Falkins, the man who discovered the Highmont orebody and who was intimately associated with it as well as with other mining developments, also passed away suddenly last Spring, and is missed with fond memories by his many friends in the mining community.

ANNUAL MEETING

The Annual Meeting of Shareholders will be held at 10:30 a.m., February 4, 1983 in the Arbutus Room of the Four Seasons Hotel, Vancouver.

The Bullmoose construction site in October. The vertical structure is the 45 metre high raw coal silo. The washing plant and dryer buildings are to the right and the service complex to the left.



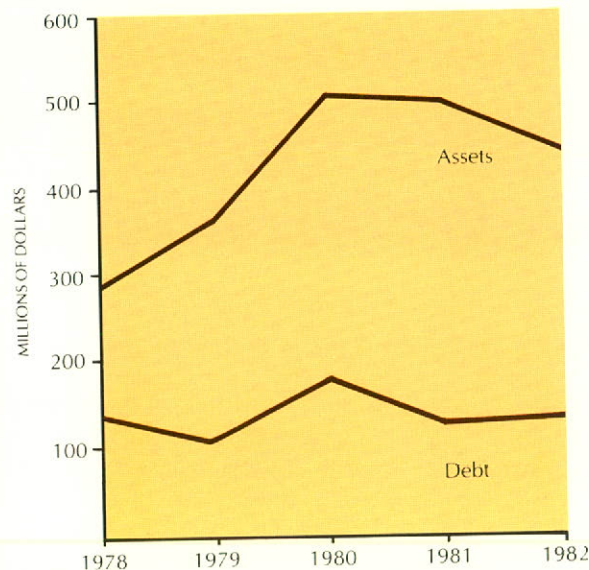
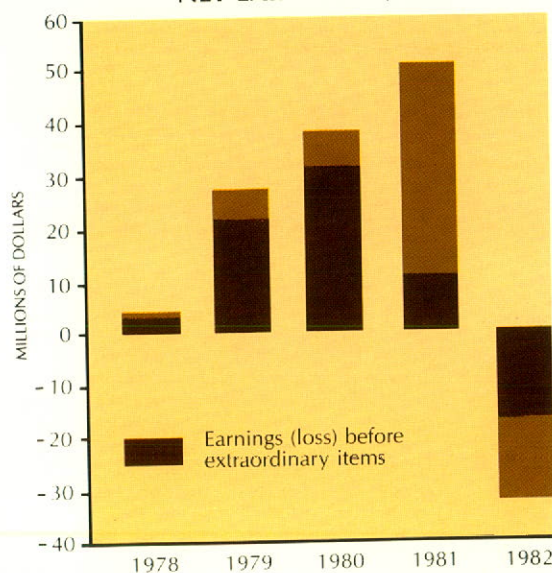
HIGHLIGHTS

- \$221 million received over two years from reorganization and divestment programme.
- Gold, silver, zinc and niobium mines and petroleum division produce operating profits, but copper mines generate substantial losses.
- Teck's first loss in over 60 years of mining, incurred primarily in second and third quarters.
- Fourth quarter improvement as a result of divestment programme.
- Financing arranged and construction started at new Bullmoose coal project in British Columbia.
- Reserves established and feasibility study started on Corona gold property at Hemlo, Ontario.

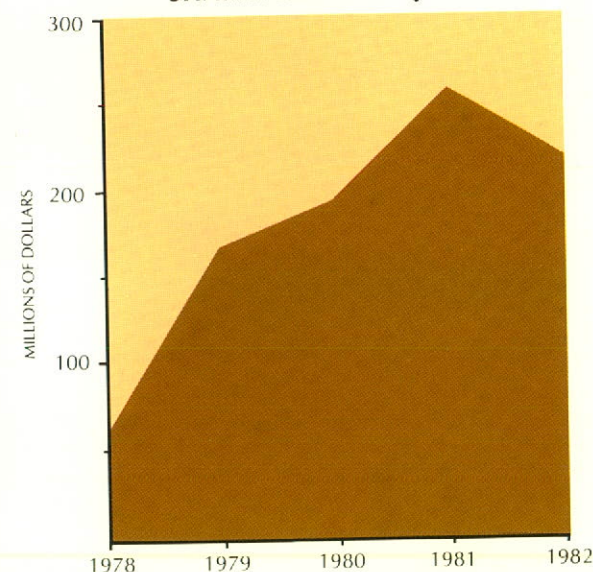
COMPARATIVE FINANCIAL INFORMATION

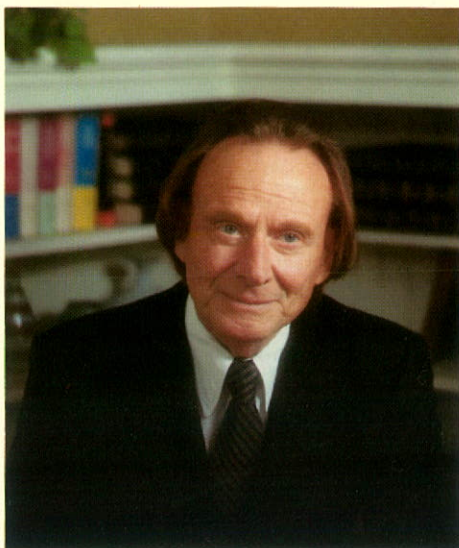
COMPARATIVE FINANCIAL INFORMATION		
	1982	1981
	(thousands)	
OPERATIONS		
Revenue	\$127,956	\$154,088
Exploration	6,971	11,232
Ordinary Earnings (Loss)	(17,705)	11,259
Net Earnings (Loss)	(31,851)	51,910
FINANCIAL STATUS		
Working Capital	\$ 27,069	\$ 22,362
Additions: property, plant & equipment	54,859	89,720
Total Assets	438,958	495,632
Long-Term Debt	132,497	127,906
Shareholder's Equity	217,785	254,994
PER COMMON SHARE		
Ordinary Earnings (Loss)	(\$0.76)	\$0.43
Net Earnings (Loss)	(\$1.32)	2.03
Dividends	\$0.15	0.15
STATISTICAL		
Number of Employees	1,707	2,083
Number of Shareholders	12,900	13,350
Average Common Shares Outstanding	25,350,241	25,308,271

NET EARNINGS (LOSS)



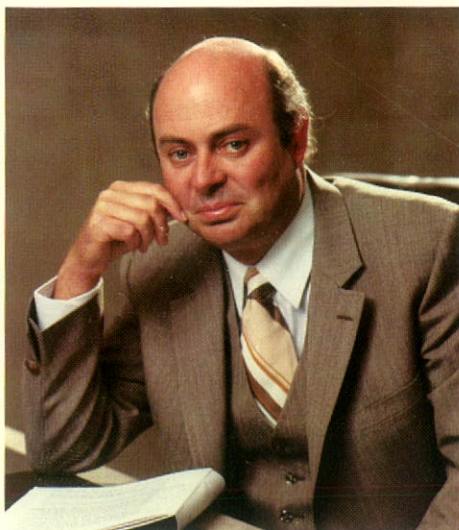
SHAREHOLDER'S EQUITY





Norman B. Keevil, Chairman of the Board and Executive Committee.

Norman B. Keevil Jr., President and Chief Executive Officer.



To the Shareholders:

The past year has been a difficult one for the mining industry. A prolonged period of extraordinarily high interest rates led to a particularly deep recession and to low metal prices. The combination resulted in most mining companies reporting significant losses, some for the first time in years. Teck Corporation was no exception, reporting its first loss in over sixty years of continuous metal production, — going back to the original Teck-Hughes gold mine at Kirkland Lake, Ontario.

Fortunately, it was recognized early that the high interest rate policies in effect in 1981 would lead to a significant slowdown in economic activity, — though few would have expected the restrictive monetary policies to have been maintained as long as they were and result in a recession that has become the deepest in fifty years.

Our response was to begin a programme of debt reduction early in 1981, through re-organization and disposition of certain holdings. This resulted in an infusion of cash amounting to \$143 million in fiscal 1981. The programme continued in 1982, with the sale of several petroleum properties, a 10% interest in the Bullmoose coal project and a 30% interest in the Highmont mine for a total of \$78 million, — or \$221 million over a period of 18 months.

In addition to the sale of 10% of the Bullmoose project to Nissho-Iwai of Japan, Lornex Mining Corporation agreed to become a 39% participant. As a result of these arrangements, Teck will retain a 51% interest in and management of this \$300 million development project for a net \$135 million share of the projected capital cost.

In addition, production at the Afton copper mine was suspended in June pending improvement in the price of copper, and substantial cuts were made in discretionary expenditures, particularly in exploration.

As a result of these steps, the substantial earnings losses of the second and third quarters were stemmed and Teck was actually able to report a modest profit of \$1.0 million before extraordinary items in the fourth quarter, ended September 30.

Operations

Five of our seven mines, those producing gold, silver, zinc and niobium, operated at a profit during the year despite lower prices. Both the Afton and Highmont mines reported operating losses, with the price of copper, adjusted for inflation, at its lowest level in over 50 years. Teck's share of the operating profit from all seven mines was \$5.4 million, compared with \$46.2 million in 1981.

Lornex Mines Limited was also affected by low copper and molybdenum prices and reported a net loss of \$5.1 million during our

fiscal year, of which Teck's 21.7% share was \$1.1 million, compared with a contribution of \$7.1 million to Teck's earnings in 1981.

Operating profit from petroleum and natural gas was \$10.6 million, similar to that in 1981.

Earnings

The net loss before extraordinary items for the year was \$17.7 million or 76¢ a share, compared with a profit of \$11.3 million or 43¢ a share last year.

Extraordinary losses, consisting primarily of a writedown of the carrying cost of our Highmont investment, amounted to \$14.1 million, for a net loss of \$31.9 million or \$1.32 a share, compared with a profit of \$52.0 million or \$2.03 a share in 1981.

Construction

Construction on the new Bullmoose coking coal mine in north-eastern British Columbia began in the Spring.

Bullmoose is part of the *Northeast Coal Project*, a major co-operative undertaking which consists of the development of the Bullmoose mine, the nearby Quintette mine being built by a consortium led by Denison Mines, the new town of Tumbler Ridge, a 130 kilometre extension of the B.C. Rail line, upgrading of the CN Rail line between Prince George and Prince Rupert, and a new coal port at Ridley Island near Prince Rupert. The total capital cost of all components is estimated to be \$2.5 billion, and the project is having a significant, beneficial impact on the Canadian economy in these difficult times.

Construction at all sites is well underway, and is scheduled for completion by the end of 1983.

Financing for Teck's investment in the Bullmoose mine was arranged through a consortium of Canadian, European and Japanese banks.

Outlook

The major achievement of the last two years has been the success of the company's debt and cost control programmes. The early steps in 1981 kept the level of losses at mid-year from being significantly worse than they were, and the continuation of the programme this year had essentially stemmed those losses by the year end.

Nevertheless, while the company is now in a positive cash flow position, some continuing losses must be anticipated until the prices of base metals begin to recover.

Reprinted March, 1982, on the occasion of the Fiftieth Anniversary of the Prospectors and Developers Association
(Courtesy of The Northern Miner)

TWO
SECTIONS

The Northern Miner

FIRST
SECTION

EDITORS:
RICHARD PEARCE NORMAN PEARCE

THURSDAY, MARCH 4th, 1932

Published at TEN CENTS
Toronto, Canada VOL. XVII, No. 31

FEATURING THIS ISSUE:

Teck Speeds Deep Work
Dome Situation Improves
Howey Annual Report
Engineers Oppose Bill
Metal Prices Weaken

TECK-HUGHES BROADENS ITS EXPOSURE TO HIGH GRADE ORE

Will Probably Have Three More Levels Opened by Fall—For This Year and Perhaps Next, Dividend Rate Seems Safe Enough and in Mean-time Good Ore Developments Could Assure It Indefinitely

By September Teck-Hughes should be opened to a depth of about 4300 ft., which would bring the new level in addition to those four already opened above the present level. The present level is getting under way and during the summer and early fall the 2500, 3000 and 3500 levels should be successfully reached and opened. All this means that before next autumn Teck-Hughes will have secured a line on the ore content of quite a big depth—back of mine, and will have increased its chances of finding a high grade horizon comparable with those had on higher levels.

The present dividend rate seems assured for the present calendar year and the chances of its being raised next year are something better than fair. This assumption is based on the grade of ore blocked out. It is quite true, as already intimated in The Northern Miner that when ore conditions are good on some of the new levels opened, the grade is not all it might be. However, like in a situation that could be changed in a few weeks by a series of favourable disclosures. By carrying work down as fast as possible the company expects itself to be able to secure a good average of 4.0 on the existing 1300 level a day basis earn the 90¢ annual dividend quite comfortably, and without the assistance of exchange.

A point of note that is worth repeating is that the bulk of the work done on the new levels below the 3000 is on the forward side of the

mine. This side was attacked first because conditions are steady. The hanging wall is supported by concrete, and then by drifting, and the hanging wall, or much side of the mine, frequently makes larger tonnage and better grade than the footwall.

At the time of writing there has been no striking change in the situation in respect to the lower levels, but one would expect at any time almost over night.

The Northern Miner is informed that there has been no change in geological conditions to depth from those ruling through the life of the mine. This knowledge, in connection with Teck's past high grade ore development experience carries assurance.

From a recent trip to Kirkland Lake camp-

The Northern Miner brought back an exceptionally fine specimen, carrying visible gold, from the bottom level, 4300 ft. of Teck was neighbor, Kirkland Lake Gold Mine. At this horizon Kirkland Lake Gold is getting plenty of high grade. On the other side Lake shore as a level as good as any in its mine. These disclosures suggest that Teck-Hughes should make a good average of its new levels below the 3000 ft. will take a relatively short time to explore them and in the meantime the present dividend, which returns 14% at current market prices, seems safe.

COPPER AND CARTEL JUST DRIFTING

Decision Delayed, but Breakdown Looming Up—Four Cents Talked

In the dispatch of The Northern Miner's special serial, corresponded to New York on

forward Sullivan Consolidated. The Northern Miner understands that other groups are coming into the picture with them to secure funds that should carry the property into production. The company is to have 1,000,000 shares of which 1,000,000 go to the old company and the balance are under option control.

Business has conditions and are similar to its those neighbor. Reports give 1,000,000 tons of 40 ore blocked out above the 300 level, which considerable work has been done. The property has seen a lot of diamond drilling and

NORANDA

In our opinion one of the outstanding purchases in the Canadian Mining stocks at the time. Write for copy of our special letter, which contains significant news pertaining to depth developments.

A. A. AMOS & PARTNERS

Specializing in Canadian Mine Shares
COBALT - ONTARIO
BRANTFORD - ONTARIO
ST. CATHARINES - ONTARIO
TORONTO - ONTARIO
CHICAGO - ILLINOIS
NEW YORK - NEW YORK
MONTREAL - QUEBEC

MINING TAXES

Next week the mining industry will probably learn what is to be done for it in the way of taxation changes. It is anticipated that the federal income tax will be raised from 19% to 19½% in an income that will apply to all Canadian corporations of every description, then. The best information is that the Ontario budget will include nothing aimed at the way of tax imposition.

DOMES HEADED FOR BIGGER OUTPUT

February Will Show Increase on January—New York Says Quebec Drilling Good

"It is that a temporary improvement!" The Northern Miner says.

"I don't think so. I am inclined to think that from now on we will show a somewhat higher output and a more even rate," was the reply. He said was "quite a bit better than January." The expectation of more even production would be based on the saving of mining problems, it was believed.

NIPISSING CLOSING SILVER LIFE

Final Cleanup at Cobalt—Turns to Gold to Perpetuate Generous Existence

Within a couple of weeks virtually all operations at the Nipissing mine, Cobalt, will have been gradually winding up and it is just about finished. The mill will be engaged on cleanup for the next fortnight.

The end of Canada's premier silver producer does not come suddenly. It has been fore-shadowed for the last few years. Each year has seen exhaustion of ore resources and prospecting disclosures brought down even though occasional good discoveries and continued reduction in costs have kept the old mine going paid for its reputation.

"It is no bed we have to quit," said Frank Park, general manager of The Northern Miner. "We tried to get through the winter because in the summer there is more activity in the field and our men would have a better opportunity to secure new jobs. But it is utterly impossible to carry on any longer. The old mine is done."

Concentrated operations will not shut either down for Nipissing will sink a prospect shaft in the 400 area north of Cobalt and east of Chambers-Parkland where there is a lot of unexplored territory worth a lot of effort.

After distributing dividends of \$234,000 during a 20-year period, Nipissing suspended payments with that of April 20th last year. The company is the 12th largest dividend payer among the mines of Ontario, being preceded by International Nickel and Hollinger. In its first dividend year, 1906, the company distributed \$400,000. The big year was 1915, when 25% equal to \$175 a share on the 1,000,000 shares

Further work at Noranda on the lower H

revels, enlarges the picture there and The

Noranda Miner fully anticipates that the

annual working, in a few weeks will have

a drilling story of one of the biggest gold

developments in Canadian history—mark-

able, however, a grade not far from Pros-

pectors, and truly enormous tonnage. The

breakup developed in the copper metal will

work out in Noranda's benefit, although new

plans may cloud the situation in all but the

recovered for a few weeks.

NORANDA'S GOLD

The Northern Miner reprinted part of its March 4, 1932 issue on the occasion of the fiftieth anniversary of the Prospectors and Developers Association this year.

On behalf of the board,

December 6, 1982

NORMAN B. KEEVIL,
Chairman

NORMAN B. KEEVIL, Jr.
President



Robert E. Hallbauer, Senior Vice President.

MINING

Teck Corporation operates seven mines producing gold, silver, niobium, zinc, copper and molybdenum, — situated in Newfoundland, Quebec, Ontario and British Columbia. Teck is also in the process of building a new coking coal mine in northeastern British Columbia.

It was encouraging that the five mines producing gold, silver, niobium and zinc each recorded an operating profit, despite lower prices for each product. However, the two copper mines, Afton and Highmont, were affected by the lowest copper prices in real terms in over 50 years, and both produced operating losses. Afton was also affected by a four month strike from November through March, and operations were suspended in June pending an improvement in the price of copper.

Teck's share of the net operating profit from all seven mines was \$5.4 million, compared with a profit of \$46.2 million a year earlier.

Afton

The Afton mine near Kamloops, British Columbia has a mill capacity of 7,500 tons per day and a smelter capacity of 50,000,000 pounds of copper per year. It is owned 73% by Teck Corporation and 27% by an affiliate of Metallgesellschaft Canada Ltd.

Afton had a difficult year due to low copper prices and labour problems, compounded by the fact that the open pit mine is in the midst of a cycle of lower than average grade.

The operation was closed by a strike between November 21 and March 15, when a substantial wage increase was accepted by a slim majority of the employees. With the price of copper continuing to fall, it was decided to suspend operations from June 22 pending improvement in the price. Most of the staff have been placed on half salary during the suspension, with others having been transferred to work at Highmont and Bullmoose.

Copper production was 10,800,000 pounds during the period the mine operated, compared to 44,900,000 pounds a year earlier. In addition to producing for less than half the year, output was affected by an average ore grade of 0.58% copper, compared to 0.93% in 1981. The low grade cycle will continue for approximately 12 months after the mine is re-opened, following which grade will return to the average reserve grade.

Open pit reserves at the year end were 13,900,000 tons grading 0.82% copper and 0.022 ounces of gold per ton. Underground reserves beneath the pit have been estimated to be 10,500,000 tons of 1.5% copper and 0.03 ounces of gold per ton.

Beaverdell

Teck's Beaverdell mine near Kelowna, British Columbia produced 467,400 ounces of silver, its highest output in the last nine years. Mill throughput was 40,200 tons, comparable with last year, but the grade was up from 8.6 to 12.9 ounces per ton. This offset lower silver prices and resulted in an operating profit of \$1,278,000, up slightly from that a year earlier.

Highmont

The Highmont copper-molybdenum mine south of Kamloops achieved commercial production capacity January 1, 1982 as a joint venture between Teck Corporation (80%) and an affiliate of Metallgesellschaft Canada Ltd. (20%). Effective June 30, 1982, Teck transferred a 29.999% partnership interest to Redclay Holdings Limited, a Canadian corporation owned by the Kuwait Investment Office, London, and Teck's interest now stands at 50.001%.

Average daily milling rate since January 1 has been 26,500 tons, compared to design capacity of 25,000 tons per day. In the last quarter of the fiscal year, average throughput was 27,000 tons per day. Recovery averaged 84% for copper and 72.8% for molybdenum, and production of the two metals was 24,951,000 and 4,242,100 pounds, respectively.

Highmont's concentrate is sold on long term contracts which include customer price support provisions, designed to maintain operating cash flow

during low parts of the price cycle. These are non-recourse project loans, subordinated to Highmont's bank indebtedness, to make up the difference between market prices and the support prices of \$7.50 (US) per pound of molybdenum and 79.9¢ (US) per pound of copper. Teck's share of such loans incurred in the nine month period was \$8.4 million, of which \$6.7 is interest-free.

The mine produced a positive cash flow after support payments and before interest costs. However, earnings are calculated based on the quoted market price, before support loans, and Highmont contributed a loss of \$14.6 million to Teck's earnings statement this year. This included \$5.5 and \$5.8 million in the second and third quarters, reducing to \$3.3 million in the fourth quarter after the reduction of Teck's interest in the mine from 80% to 50%.

The staff and workforce at Highmont have done a good job under trying conditions. Financial losses are simply inevitable at any large new copper-molybdenum mine beginning production at unprecedented high interest rates and low metal prices.

Lamaque

Teck's Lamaque mine at Val d'Or, Quebec has been producing gold since 1934. Production in fiscal 1982 was 36,744 ounces of gold on mill throughput of 318,000 tons grading 0.123 ounces per ton.

In addition to ore from the Lamaque mine, 255,700 tons of ore from the nearby Kiena mine were treated on a custom milling basis, for a combined mill throughput averaging 1,720 tons per day.

Operating profit was \$2,946,000, compared to \$3,689,000 a year earlier, with the average price of gold being down from \$560 to \$455 Canadian.

Ore reserves at the year end were increased from 293,000 tons at 0.109 ounces of gold per ton to 447,440 tons at 0.152 ounces per ton, primarily due to the addition of a pillar not previously included in reserves.

Jack Shaver retired as mine manager during the year, after over 40 years of service at Lamaque. Gerald P. Proulx was promoted to manager from underground mine superintendent, effective September 1st.

Lornex

Teck holds a 21.7% interest in Lornex Mining Corporation Ltd., which operates Canada's largest metal mine located adjacent to Highmont. During the year, Lornex also became a 39% participant in the Bullmoose coal project.

During Teck's 1982 fiscal year the Lornex concentrator treated an average of 84,000 tons of ore per day, with copper recovery of 89.8% and molybdenum at 66.8%, producing 200,277,000 pounds of copper and 6,056,000 pounds of molybdenum.

Lornex is one of the lowest-cost producers of copper in North America because of the scale of operation, but was also affected by the drop in copper prices. It generated an operating profit of \$14.2 million in our fiscal year, but

reported a net loss of \$5.1 million, of which Teck's share was \$1.1 million.

Newfoundland Zinc

The Newfoundland Zinc mine near Daniel's Harbour is owned 63% by Teck Corporation and 37% by Amax Lead and Zinc Inc.

Production for the year amounted to 71,000,000 pounds of zinc, with 559,000 tons grading 6.6% zinc being milled at a recovery of 96.9%. Operating profit was \$6,143,000, down from \$13,567,000 a year earlier.

The grade of ore milled was lower than in recent years as much of the production came from lower grade open pit orebodies and lower grade fringe orebodies in the underground mine. Extensive preparation was carried out for pillar recovery in the main L Zone and mining of high grade pillars will commence next year.

Ore reserves at year end were 1,325,000 tons grading 6.8% zinc, compared with 1,350,000 tons at 7.7% at the end of fiscal 1981. Two new mineralized areas northwest of the main workings were encountered in exploratory drilling this year, and two headings are being driven to investigate these underground. Since the year end, exploratory drilling has also indicated a possible extension of the main L Zone 1,600 feet to the west, and exploration will be continued from the underground workings this year.

Niobec

Teck has a 50% joint venture interest in and operates the Niobec niobium mine near Chicoutimi, Quebec, with the remaining 50% owned by Soquem Ltée.

Milling capacity has been expanded from the original 1,500 tons per day, and throughput during 1982 averaged 2,325 tons per day, or 809,200 tons of ore grading 0.63% Nb₂O₅. Production was up from 5,960,000 pounds in 1981 to 6,900,000 pounds.

Ore reserves at year end were virtually unchanged at 12,990,000 tons grading 0.66% niobium oxide.

Silverfields

The Silverfields mine, wholly owned by Teck Corporation, is located in Cobalt, Ontario. Despite weak silver prices and rapidly declining ore reserves Silverfields had a successful year, treating 77,800 tons of ore grading 7.8 ounces of silver per ton to produce 596,585 ounces of silver. The operating profit was \$1,430,000.

Silverfields went into production in 1964 and, after producing 18,000,000 ounces of silver and providing steady employment for its staff and crew for over eighteen years, will close sometime in early 1983. During the past year exploration programmes were carried out on both the Silverfields and adjoining properties, but these efforts were not successful in locating tonnages that would prolong the mine life significantly.

It is planned to maintain the concentrator in condition for possible custom milling of other properties that may be developed in the Cobalt area.

MINE OPERATING STATISTICS

	AFTON COPPER, GOLD		NEWFOUNDLAND ZINC ZINC		LAMAQUE GOLD		SILVERFIELDS SILVER		BEAVERDELL SILVER		NIOBEC NIOBIUM		HIGHMONT COPPER, MOLYBDENUM		LORNE COPPER, MOLYBDENUM	
	1982* 73%	1981 73%	1982 63%	1981 63%	1982 100%	1981 100%	1982 100%	1981 100%	1982 100%	1981 100%	1982 50%	1981 50%	1982 50% (A)	1981 (B) 80%	1982 22%	1981 22%
TECK INTEREST																
Tons Milled	1,129,897	2,814,220	559,140	605,882	318,338	437,520	77,834	85,902	40,217	40,435	809,242	762,838	9,335,000	4,943,117	30,622,000	19,666,000
Tons Per Day	4,120	7,690	1,579	1,716	1,000	1,257	213	235	113	114	2,325	2,188	25,500	18,107	83,896	53,879
Grade (% or oz/ton)	0.58	0.93	6.6	7.6	0.123	0.084	7.8	6.7	12.9	8.6	0.63	0.58	0.16 Cu 0.032 Mo	0.155 Cu 0.033 Mo	0.365 Cu 0.014 Mo	0.418 Cu 0.015 Mo
Recovery (%)	82.8	85.9	96.9	97.9	94.1	91.4	93.5	94.1	89.9	87.5	67.8	66.9	84.0 Cu 72.8 Mo	81.3 Cu 58.6 Mo	89.8 Cu 66.8 Mo	89.8 Cu 69.9 Mo
Production:																
Copper (lbs)	10,883,949	44,912,930											24,951,000	12,454,965	200,227,000	139,096,000
Gold (oz)	8,562	41,024			36,744	33,566										
Zinc (lbs)			71,491,118	90,544,236												
Silver (oz)	69,645	246,150					596,585	545,133	467,433	305,725						
Molybdenum (lbs)													4,242,100	1,835,813	6,056,000	4,023,000
Niobium Oxide (lbs)											6,899,189	5,960,776				
Operating Cost Per Ton (\$)	18.42	12.72	22.90	17.87	54.04	39.17	43.08	32.20	58.27	58.49			5.66	5.13	4.06	4.26
Average Price																
Main Product (Can.\$)	0.82	0.96	0.48	0.49	459.79	560.49	9.88	13.90	9.31	13.99			0.83 Cu 7.89 Mo	0.94 Cu 11.06 Mo		
Operating Profit (\$) (loss)	(8,211,000)	26,092,000	6,143,000	13,566,500	2,946,000	3,689,000	1,430,000	2,773,000	1,278,000	1,228,000			(11,481,205)		14,193,000	64,470,000
Ore Reserves (tons)																
Open Pit	13,900,000	14,800,000											125,000,000	135,000,000	463,000,000	438,987,000
Underground	10,500,000	10,500,000	1,325,000	1,350,000	447,440	293,000	27,000	89,000			12,990,000	13,000,000				
Grade Reserves																
(% or oz)																
Open Pit	0.82 Cu 0.022 Au	0.81 Cu 0.016 Au											0.26 Cu 0.026 Mo	0.260 Cu 0.027 Mo	0.371 Cu 0.014 Mo	0.382 Cu 0.015 Mo
Underground	1.50 Cu 0.03 Au	1.50 Cu 0.03 Au	6.8	7.7	0.152	0.109	9.6	6.1			0.66	0.67				

*6 months' operations

(A) 80% up to June 30, 1982

*at December 31, 1981

(B) For period commencing January 1, 1981



Richard Drozd, Vice President, Coal Operations.

THE BULLMOOSE PROJECT

Construction began this Spring on the new Bullmoose coking coal mine, after many months of complex negotiations with customers, railroads, port operators and governments.

Bullmoose is part of the *Northeast Coal Project*, a major co-operative undertaking which consists of the simultaneous development of the Bullmoose mine, the nearby Quintette mine being built by a consortium led by Denison Mines, the new town of Tumbler Ridge, a 130 kilometre extension of the B.C. Rail line, upgrading of the CN Rail line between Prince George and Prince Rupert, and a new coal port at Ridley Island outside of Prince Rupert. The total capital cost of all components is estimated to be \$2.5 billion.

Although most of the well-publicized Canadian *mega-projects* of a couple of years ago failed to materialize, this one is proceeding, thanks to the hard work of a lot of people in this company and in the other companies and agencies involved. It is currently having a major positive economic impact across Canada as well as in British Columbia, providing employment on the

various construction sites as well as for suppliers of services and equipment in what are otherwise difficult times.

As the new mines come on stream, they will provide permanent jobs at the mines and in the communities nearby, as well as along the transportation and port delivery links, — and will augment the federal and provincial tax bases as well as increase Canada's foreign exchange earnings. The establishment of the new transportation and port facilities will make it possible for other new mines in the area to be built as markets develop through the Eighties, and will help to take some of the pressure off the southern railroad facilities which are in danger of becoming clogged.

The construction of the rail line into the area is one of the more complex aspects of the Northeast Coal Project. The rail line passes through mountainous terrain and several long tunnels are necessary to provide reasonable grades and to avoid avalanche areas. Ground conditions encountered in the tunnels have been good to date, and by the end of October over 5,000 metres of tunnel had been driven. At the current rate of progress the tunnels will be completed on schedule. On the other facets of the rail line construction, approximately 70% of the grading and seven out of eleven bridges have been completed.

The B.C. Hydro power line from the W.A.C. Bennett Dam to the Tumbler Ridge townsite and to the Bullmoose mine has been completed on schedule.

The Ridley Island coal port at Prince Rupert is being constructed by a joint venture of the National Harbours Board and Federal Commerce and Navigation Ltd. The port is designed to handle twelve million tonnes of coal per year in the first phase and can be expanded to a capacity of twenty-four million tonnes per year. This component is also progressing on schedule, with the site preparation largely completed and marine-works construction underway.

Progress in the creation of a new town at Tumbler Ridge has been good but labour problems have stopped some of the work recently. The dispute is currently before the Labour Relations Board and a satisfactory solution is expected. Sufficient work has been completed in the town to provide services over the winter to apartments and mobile homes. A school and temporary recreation center have been opened.

The Bullmoose mine itself is a joint venture managed by Teck Corporation, with a 51% interest, with Lornex Mining Corporation holding a 39% interest and Nissho-Iwai Canada Ltd., a subsidiary of a Japanese trading company, 10%.

The capital cost of the mine, including preproduction interest and working capital, is expected to be \$300 million. After taking into account financial arrangements with the two partners, Teck's share of the capital cost is expected to be \$135 million, for which project-financing has been arranged with a consortium of Canadian, German and Japanese banks.

The Bullmoose project was made possible through the negotiation of long term coal contracts with a consortium of Japanese steel mills. These cover the sale of 1.7 million tonnes of coking coal per year and contain a price escalation formula which establishes the price until 1989.

Construction progress has been good and is at a stage where work can



One of two railroad loadout silos with a capacity of 11,000 tonnes each. At 70 metres high, they are among the tallest structures in the north.



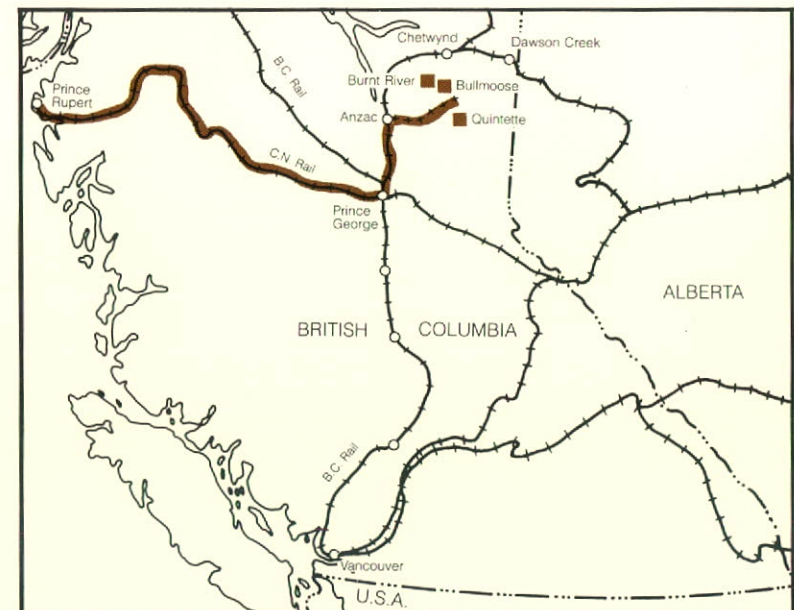
The service building includes the dry, warehouse and maintenance facilities, with Mt. Spieker in the background.

The Northeast Coal Project Involves the development of the Bullmoose and Quintette coal mines, upgrading and extension of rail transportation facilities, and a new coal port at Prince Rupert.

continue efficiently throughout the winter. Site grading in the plant area is almost completed and construction of the coal washing plant, the shop and warehouse building, and office are well underway.

Concrete work has progressed on schedule with the raw coal silo and the clean coal load-out silo as well as two load-out silos at the railhead having been completed.

At the present time schedules indicate that construction of all components can be completed and the plant started up prior to December 1, 1983. The one bright spot in an economy such as the prevailing one is that equipment deliveries and prices have improved, construction and operating personnel are readily available and interest rates are falling, creating an environment favourable for the efficient development of a new project.





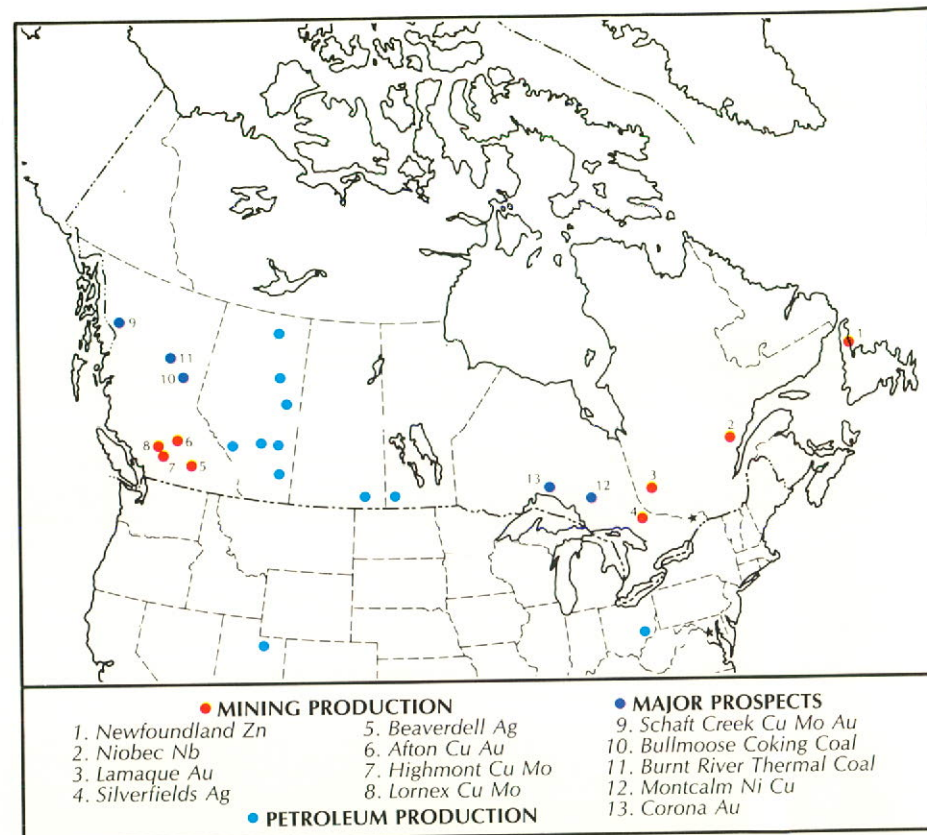
Keith E. Steeves, Vice President, Marketing, and Tony Yoshida of Nissho-Iwai Canada Ltd.

METAL MARKETS

The continuation and indeed deepening of the recession in 1982 had a major impact on demand and prices for most mine products, leading to a number of production cutbacks and shutdowns across the industry.

Copper was the most severely affected of the commodities produced by Teck Corporation. The London Metal Exchange price, expressed in U.S. dollars, declined from \$1.40 per pound in February, 1980 to a low of 53¢ in June this year, recovering somewhat by year end. The average price of 69¢ in our fiscal year was, after adjusting for inflation, the lowest in real terms in over 50 years.

The outlook for a significant price recovery when the general economic recovery begins is relatively good for copper. The extreme low prices have resulted in substantial production cutbacks in many countries, so that consumption and production are currently well-matched and inventories have not built up to the excessive level which inhibited price recovery after the last major recession seven years ago.



The price of *molybdenum* also declined substantially, with Producer Prices being around \$6 (US) a pound of molybdenum oxide at year end, compared with a high of \$9.70 two years ago. "Dealer prices" have declined from almost \$30 to under \$4 per pound.

Gold and *silver* prices averaged \$375 and \$7.65 (US) per ounce in fiscal 1982, compared with \$512 and \$13 an ounce a year earlier, but had recovered to over \$400 and \$9 by the year end with renewed concern about world financial conditions.

The price of *niobium* continued to be fairly stable at about \$3 (US) a pound of niobium oxide contained in concentrate, with steadily-expanding new uses partially offsetting the effect of the slump in the steel industry.

Teck's *zinc* production is sold at the European Producers' Price, and the company received an average of 48¢ (Can.) a pound in fiscal 1982, compared with 49¢ a year earlier. As with copper, lower demand in the recession led to cutbacks in production which have prevented excessive inventory increases and, in the case of zinc, this has resulted in relatively stable prices, although declining somewhat by year end.

MINING EXPLORATION

The highlight of Teck's mining exploration activities in 1982 was the acquisition of an interest in the *Hemlo* gold deposit, discovered by International Corona Resources Ltd. Teck has the right to earn a 55% interest in this Ontario property upon arranging to place it into production.

Twenty six holes were drilled on the East and West zones, indicating geological reserves of 1,300,000 tons grading 0.31 ounces of gold per ton and 380,000 tons at 0.19 ounces respectively. Both deposits are open to depth. Metallurgical testing was also carried out and indicated that the mineralization is amenable to treatment by conventional gold processes. A feasibility study is presently underway.

Surface drilling on the *Newfoundland Zinc* property encountered a new mineralized zone northwest of the main L Zone, and a crosscut was put out from the main workings to explore this from underground. Two recent surface holes encountered good mineralization over significant widths which indicate a possible extension of the L Zone for an additional 1,600 feet to the west.

Drilling at the old *Leitch* gold mine near Beardmore, Ontario did not meet with sufficient encouragement to warrant de-watering and re-opening of the mine. However, the possibility of heap-leaching the existing waste dumps is being investigated.

Little work was carried out on the company's three main undeveloped deposits due to economic conditions. The *Schaft Creek* deposit contains mineable, open pit reserves of 1.0 billion tons grading 0.30% copper and 0.034% molybdenite plus precious metals. The *Burnt River* property north of Bullmoose contains 30,000,000 tons of geological reserves of semi-anthracite coal, and the *Montcalm* deposit near Timmins contains 4,200,000 tons grading 1.2% nickel and 0.6% copper.

The company continued to participate in syndicated airborne electromagnetic surveys in both eastern Canada and in New South Wales, Australia.

Teck has a 50% interest in a gold property in *Western Australia*, on which a recent drill hole returned a value of 0.35 ounces per ton over a length of 33 feet. The property adjoins a producing gold mine. Further drilling is planned for the coming months.

Teck received royalty income of \$140,000 (US) from *geothermal* power production from one of its properties at the Geysers, north of San Francisco. A second property is being readied for production, which is expected to begin in 1984.

Exploration Subsidiaries

Dighem Limited, — in which Teck has a net 48% interest, manufactures the DIGHEM airborne electromagnetic system, which is used primarily for base metal exploration. New applications are being developed including exploration for sand and gravel deposits, geothermal power sources, ground water surveys, and exploration for diamondiferous kimberlites.

Teck's interest in Sonotek Ltd., an instrument manufacturing company, was sold during the fiscal year.

RESEARCH

Discretionary expenditures in research and development were minimized during the year in light of the recession, as were expenditures in exploration. However, there were a number of significant achievements.

An important advance in minerals separation technology was demonstrated at the Canadian Institute of Mining and Metallurgy Conference in Toronto by *Mag-Sep Corp.*, a subsidiary of Teck and CDC's TDC Technology Development Corporation.

Mag-Sep utilizes high intensity, superconducting magnets to create strong density gradients in which minerals and other substances can be separated according to specific gravity differentials.

Seagold Industries continued development of a number of desalination pumps, using reverse osmosis and a particular hydraulic invention. The hand pump is designed primarily for life rafts and a motorized version is available for resort and other uses where fresh water must be obtained from the sea.

Moli Energy made considerable progress towards commercializing its molybdenum disulphide batteries, which are geared both towards electric vehicles and military uses.

TDC sold a part of its interest in *Intermagetics General Corporation*, a manufacturer of superconductive products in New York, for a gain of \$950,000 during the year. The remainder of its investment is subject to a purchase option by the buyer.

OIL AND GAS

Teck Corporation produces oil and natural gas from a number of fields in Alberta, Saskatchewan, Manitoba, British Columbia, Utah, North Dakota and Texas.

Canadian production amounted to 560,831 barrels of oil and 2.7 billion cubic feet of natural gas in 1982, down from 750,000 barrels and 3.3 billion cubic feet a year earlier because of reduced markets. Operating profit after deducting \$4.0 million in provincial royalties was \$9.2 million, compared with \$8.7 million last year.

Production in the United States was 60,732 barrels of oil and 100 million cubic feet of natural gas, compared with 94,000 barrels and the same amount of natural gas the previous year. Operating profit was \$1.4 million, compared with \$1.6 million in 1981.

During the year Teck sold its interest in the Wayne-Rosedale and Bellshill Lake properties in Alberta, the Franks Creek property in North Dakota, and the Ratcliff property in Saskatchewan for a total of \$15.2 million.

Reserves

Proven and probable Canadian reserves were calculated by Sproule Associates Limited to be 7,066,000 barrels of oil and natural gas liquids and 100.9 billion cubic feet of natural gas at the year end. The company's engineers estimated United States reserves to be 1,205,000 barrels of oil and natural gas liquids and 1.9 billion cubic feet of natural gas.

Reserves in the frontier areas are not included because definitive reserve determinations have yet to be made.

Location of Reserves

	Oil & Natural Gas Liquids (barrels)	Natural Gas (mcf)
Canada		
Alberta	1,651,000	89,305,000
British Columbia	2,000	8,411,000
Saskatchewan	4,856,000	3,179,000
Manitoba	557,000	—
	<u>7,066,000</u>	<u>100,895,000</u>
United States		
North Dakota	368,000	392,000
Utah	687,000	551,000
Texas	77,000	259,000
Ohio	47,000	705,000
Louisiana	26,000	—
	<u>1,205,000</u>	<u>1,907,000</u>

Exploration

Petroleum exploration activity was reduced from the levels of previous years in response to the recession, with discretionary expenditures having been frozen since mid-year.

Teck participated in 78 wells during the year, of which 55 were in Canada and 23 in the United States. This resulted in 33 gas wells and 19 oil wells, of which the most significant were a Cardium oil discovery in the Edson area and a potentially interesting oil discovery in the Sundance area, both in Alberta, and an oil and gas well in the Lindahl area of North Dakota.

Frontier Exploration

Teck holds an 80% interest in Teck Frontier Corporation, formed to explore Canada Lands in the Beaufort Sea, Labrador Shelf and other areas in conjunction with Canterra Energy Ltd. (previously Aquitaine Company of Canada). Teck Frontier participated in eight wells during the year at a net cost, after Petroleum Incentive Payments, of \$10.2 million.

The Tarsiut N-44 and N-44A wells in the Beaufort Sea encountered significant amounts of oil, with tests indicating production capabilities of 3500 and 2175 barrels of oil per day respectively. Kiggavik A-43, drilled at the east end of the Tarsiut structure 6 km. away tested 15.5 million cubic feet of gas from unrelated zones. At present, recoverable reserve estimates for this structure vary from 80 to 350 million barrels. Teck has earned a 1.04% working interest in 55,000 acres covering the majority of the structure.

The North Bjarni F-06 well off the Labrador coast was drilled to total depth early in the fiscal year and is considered to be a significant gas discovery, although no production tests were carried out because of the onset of winter conditions. Teck's interest is 1.11% in 45,000 acres covering the structure.

The Rut H-11 and Corte Real P-85 wells on the Labrador Shelf were spudded in 1981 and deepened during 1982, to be completed next year. Pothurst P-19 was spudded and will also be completed next year. The Raleigh N-18 well was drilled and abandoned.

Teck Corporation also participated with the Colexcan Group in a dry hole on Banks Island in the Arctic, and plans are to do additional drilling near the Hopedale gas discovery and in the Bonavista Graben off Labrador next year.



David A. Thompson, Vice President and Chief Financial Officer.

FINANCIAL

Teck's principal financial activity in the last two years has been a programme to re-organize and divest certain assets that were not producing immediate income, in order to reduce debt and interest costs during the period of high interest rates which led to the current recession.

This programme resulted in an inflow of cash totalling \$221 million, including \$143 million in 1981 and a further \$78 million this year, and to an increase in working capital in both years, to \$27.0 million at the end of fiscal 1982.

In addition, we elected to take in partners on the new Bullmoose coal project, to attain a certain amount of leverage and maintain our investment at a level appropriate for the times. Teck's net investment in this \$300 million development project will be approximately \$135 million, while retaining a 51% equity and management of the operation.

As a result, Teck Corporation's debt position at year end stood at \$139 million, compared with the book value of shareholders' equity of \$218 million. Outstanding debt consisted of \$77 million related to the Highmont mine, \$27 million of financing related to Afton, and \$20 million of general corporate loans. It also includes a bridging loan of \$15 million for the Bullmoose project. This loan will be replaced by substantially non-recourse financing in the new year.

In order to manage the company's debt during the recession, arrangements were made to lengthen the maturity of Teck's major loans, so that virtually no mandatory payments are required during the next two years.

Bullmoose Financing

Arrangements have been made with a consortium of twelve Canadian, Japanese and European banks to provide Teck-Bullmoose Coal Inc., a wholly owned subsidiary of Teck Corporation, with a \$158.0 million credit facility to cover Teck Corporation's 51% share of the Bullmoose Coal Project. This includes \$28.0 million which is a standby line to cover any capital expenditure over-run or cash deficiencies during start-up. The \$130.0 million facility comprises a \$98.0 million loan, which is without recourse to Teck Corporation from drawdown. The remaining \$32.0 million can be converted to a non-recourse loan after the project has met certain physical and marketing criteria.

The financing package was designed to minimize the near-term financial impact of this capital expenditure on the company. The term of the loan is twelve years, extendable at the lenders' option to fourteen years. Unlike previous project financings, not all cash flow is mandated to bank payments, and thus Teck Corporation can benefit from the project's cash generation while the loans are still outstanding.

Earnings

Teck incurred a loss before extraordinary items of \$17.7 million in 1982, compared with a profit of \$11.3 million the previous year. The significant losses of the second and third quarters, January through June, were successfully halted in the fourth quarter. Major contributing factors to this improvement were the reduction in the company's holding in the Highmont mine, falling interest rates, sharply reduced exploration expenditures and a reversal of previous tax provisions.

We elected to take writedowns against ordinary earnings of \$7.0 million to reduce the book cost of certain petroleum properties. Although the net appraised value of our petroleum properties is substantially in excess of book value, this will ensure that no such writedowns of non-productive properties can presently be expected to cause a problem in the future.

The sale of a 30% interest in Highmont necessitated a re-appraisal of the carrying value of this project. This was recognized as an extraordinary writedown of \$17.7 million, which is the principal non-recurring item in the accounts.

Outlook

The fourth quarter results, while encouraging, should not be taken as an indication of the likely outlook for 1983. Although cash flow is expected to be positive, it must be anticipated that Teck will continue to report negative earnings until there is some recovery in the prices of metals.

Dividend Policy

Teck Corporation and its predecessor company, The Teck-Hughes Gold Mines Limited have paid dividends every year but four since 1926. The company's dividend rate is modest related to earnings in good times, because of the policy of reinvesting cash flow in development of new production, and your directors have decided that it would be appropriate to maintain this regular dividend despite these difficult times.

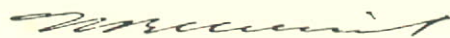
TECK CORPORATION

Consolidated Balance Sheet as at September 30, 1982

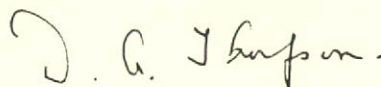
	1982	1981
	\$	\$
ASSETS		
	(in thousands)	
Current Assets		
Cash and short-term deposits	6,033	3,615
Accounts receivable (Note 3)	46,224	13,240
Concentrates, metals & settlements receivable (Note 3)	20,100	28,012
Notes receivable	—	22,869
Supplies and prepaids — at cost	<u>11,374</u>	<u>13,533</u>
	83,731	81,269
 Investments (Market value for quoted investments — \$86,729,000; Note 1)	 46,534	 58,572
 Property, Plant and Equipment (Notes 2 and 3)	 <u>308,693</u>	 <u>355,791</u>
	 <u><u>438,958</u></u>	 <u><u>495,632</u></u>

LIABILITIES	1982 \$	1981 \$
	(in thousands)	
Current Liabilities		
Bank loans (Note 3)	19,722	30,097
Accounts payable and accrued liabilities	36,585	27,068
Income and mining taxes payable	355	1,384
Current portion of long-term debt	<u>—</u>	<u>358</u>
	56,662	58,907
Long-Term Debt (Note 3)	132,497	127,906
Deferred Income Taxes	29,764	53,712
Minority Interest in Net Assets of Subsidiaries	<u>2,250</u>	<u>113</u>
	<u>221,173</u>	<u>240,638</u>
 SHAREHOLDERS' EQUITY		
Capital Stock (Note 4)	91,740	91,740
Contributed Surplus (Note 4)	27,602	27,602
Retained Earnings	<u>98,443</u>	<u>135,652</u>
	<u>217,785</u>	<u>254,994</u>
	<u>438,958</u>	<u>495,632</u>

Approved by the Directors:



N.B. Keevil, Director



D.A. Thompson, Director

TECK CORPORATION

Consolidated Statement of Earnings for the year ended September 30, 1982

	1982 \$	1981 \$
	(in thousands)	
Revenues		
Mining	105,242	134,588
Petroleum	16,647	14,224
Investment and other income	6,067	5,276
	<u>127,956</u>	<u>154,088</u>
Costs and Expenses		
Mining operations	99,794	88,342
Petroleum operations	6,031	3,907
Administration and general	5,135	5,889
Depletion, depreciation and amortization	19,951	14,285
Exploration	6,971	11,232
Interest on long-term debt	13,327	5,146
Other interest	7,411	8,514
Currency translation and amortization	1,940	3,523
	<u>160,560</u>	<u>140,838</u>
	<u>(32,604)</u>	<u>13,250</u>
Income and Mining Taxes		
Current	437	3,967
Deferred (recovery)	(17,406)	3,595
	<u>(16,969)</u>	<u>7,562</u>
Earnings (loss) before the following	(15,635)	5,688
Equity in net earnings (loss) of associated companies (net of amortization of \$156,000; 1980 — \$502,000)	(1,221)	7,245
Minority interests in net earnings of subsidiaries	—	(1,674)
Unusual items (Note 5)	(849)	—
Net Earnings (Loss) before Extraordinary Items	(17,705)	11,259
Extraordinary items (Note 6)	(14,146)	40,651
Net Earnings (Loss) for the Year	<u>(31,851)</u>	<u>51,910</u>
Basic Earnings (Loss) Per Share (Note 7)		
Before extraordinary items	(\$0.76)	\$0.43
After extraordinary items	(\$1.32)	\$2.03

TECK CORPORATIONConsolidated Statement of Changes in Financial Position
for the year ended September 30, 1982

	1982 \$	1981 \$
	(in thousands)	
Source of Working Capital		
Funds generated from (used for) operations	(12,138)	26,127
Sale of investments and marketable securities	2,557	116,921
Sale of mining and petroleum properties	73,295	50,849
Dividends from associated companies	1,791	7,289
Long-term debt	52,842	34,656
Petroleum incentive payments	28,386	—
Issue of common shares	—	483
Issue of preferred shares	—	12,280
Reclassification of current income taxes	—	3,052
	<u>146,733</u>	<u>251,657</u>
Use of Working Capital		
Investments	3,663	56,519
Petroleum properties	43,780	18,006
Mineral properties, rights and deferred costs	11,802	6,375
Plant and equipment	27,663	65,339
Reduction in long-term debt	49,760	86,615
Dividends	5,358	4,332
Other	—	304
	<u>142,026</u>	<u>237,490</u>
Increase in Working Capital	4,707	14,167
Working Capital — Beginning of Year	<u>22,362</u>	<u>8,195</u>
Working Capital — End of Year	<u>27,069</u>	<u>22,362</u>
Represented By:		
Current assets	83,731	81,269
Current liabilities	<u>56,662</u>	<u>58,907</u>
	<u>27,069</u>	<u>22,362</u>

TECK CORPORATION

Condoliated Statement of Retained Earnings for the year ended September 30, 1982

	1982 \$ (in thousands)	1981 \$
Balance at Beginning of Year		
As previously stated	138,267	90,089
Adjustment of 1979, 1980 and 1981 income taxes	(2,615)	(2,015)
As restated	135,652	88,074
Net earnings (loss) for the year	(31,851)	51,910
Dividends on preferred shares	(1,551)	(532)
Dividends on common shares	(3,807)	(3,800)
Balance at End of Year	<u>98,443</u>	<u>135,652</u>

Auditors' Report to the Shareholders

We have examined the consolidated balance sheet of Teck Corporation as at September 30, 1982 and the consolidated statements of earnings, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances, except as explained in the following paragraph.

Equity in losses of associated companies and the related investment includes \$1,538,000 which represents that portion of their losses which have not been audited.

In our opinion, except for the effect of adjustments, if any, which might have been required had the audited finan-

cial information of the investee companies described in the preceding paragraph been available, these consolidated financial statements present fairly the financial position of the company as at September 30, 1982 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Vancouver, B.C.
November 12, 1982

Coopers & Lybrand
CHARTERED ACCOUNTANTS

SIGNIFICANT ACCOUNTING POLICIES

Principles of consolidation

These consolidated financial statements include the accounts of the company and all of its subsidiaries. Significant subsidiaries included in the consolidation are:

Teck-Bullmoose Coal Inc., Dighem Limited, Teck Explorations Limited, Teck Mining Group Limited, Teck Frontier Corporation, Teck Resources (U.S.) Inc.

Translation of foreign currencies

Amounts stated in foreign currency have been translated to Canadian dollars on the following bases:

- (a) property, plant and equipment, together with related accumulated depletion, depreciation and amortization — at exchange rates in effect at the acquisition dates.
- (b) all other assets and liabilities, including long-term debt — at exchange rates in effect at the balance sheet date.
- (c) all earnings accounts other than depletion, depreciation and amortization — at average exchange rates for the year.

Gains and losses arising from the translation of long-term debt are deferred and amortized over the term of the debt.

Investments in associated companies

The company follows the equity method of accounting for its investments in companies in which it owns from 20% to 50% and over which it exercises significant influence. Under this method the company includes in its earnings its share of the earnings and losses of these associated companies. All of the significant accounting policies followed by the investee companies conform to those of the company. The excess cost of these investments over the related underlying equity in the net assets of the investee companies relates to specific mineral properties and is amortized over the estimated life of the orebody.

Joint ventures and partnerships

The company conducts substantially all of its petroleum and mining activities on joint venture and partnership bases and the accounts reflect the company's proportionate interest in such activities.

Concentrates, metals and settlements receivable

Concentrates are recorded at estimated net realizable value except where there is no contract for sale in which case they are recorded at the lower of cost and net realizable value. Metals and settlements receivable are recorded at estimated net realizable value.

Cost is determined on an average cost basis. Net realizable value is based upon the latest available metal prices, weights and assays, less provision for possible future declines in metal prices.

Property, plant and equipment

- (a) Petroleum properties and well development expenditures

Costs incurred, other than in frontier areas, in the exploration and development of petroleum property reserves are accounted for by the "successful efforts" method whereby all expenditures are deferred as non-producing properties costs and amortized at an annual rate, presently 8%, until the property is abandoned or placed into production.

The costs relating to abandoned properties are charged against the 8% reserve pool to the extent costs were incurred in prior years and the balance is charged to earnings in the year of abandonment. Geological and geophysical costs are expensed as incurred.

Properties placed into production are transferred to producing well costs which include lease acquisition costs and the costs of drilling and equipment. Depletion and depreciation are calculated on the unit of production method based on estimated recoverable reserves.

Exploration costs in frontier areas, the Beaufort Sea, the Arctic Islands and East Coast offshore, are deferred as non-producing properties costs until the property is abandoned or placed into production. Such costs include land acquisition costs, geological and geophysical expense, financing costs and overhead expense related to frontier exploration activities.

Government grants received and accrued under the federal and provincial petroleum incentives programmes are deducted from the costs of the petroleum properties.

- (b) Mineral properties, rights and deferred costs.

Mineral properties and rights are carried at cost less amortization. Exploration costs are charged to earnings in the year in which they are incurred, except where these costs relate to specific areas having indicated economically recoverable reserves, in which case they are deferred.

Deferred costs also include financing costs relating to the construction of plant and equipment and operating costs net of concentrate revenue prior to the commencement of commercial production of a new mine.

Mineral properties and deferred costs are amortized over the life of the orebody upon commencement of production, or written off if the property is abandoned.

- (c) Plant and equipment

Plant and equipment are depreciated on a unit of production method based on estimated recoverable reserves.

Futures contracts

Futures contracts for sales of metals and currencies are entered into for maturities based upon estimated future production or receipt of currency. These contracts are liquidated at the time of production or receipt of currency and the realized gains or losses are included in revenue from mining.

Provision is made for unrealized losses on contracts maturing in subsequent accounting periods where the contracts relate to current production.

Income and mining taxes

The company records income and mining taxes on the tax allocation basis. Differences in amounts reported for tax purposes and accounting purposes result in deferred income and mining taxes which are shown separately in the statement of earnings and balance sheet. Deferred income taxes relate primarily to the depreciation and depletion of property, plant and equipment. Tax savings from investment tax credits are reflected in earnings as they are realized.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — YEAR ENDED SEPTEMBER 30, 1982

1. INVESTMENTS

	% Ownership	Carrying Value	
		1982	1981
		\$ (in thousands)	\$ (in thousands)
Investments carried on an equity basis			
Casino Silver Mines Ltd. (N.P.L.)	38	676	676
Highland-Crow Resources Ltd.	33	780	780
Lornex Mining Corporation Ltd.	22	33,398	45,530
Silver Standard Mines Limited (N.P.L.)	35	3,322	3,442
TDC Technology Development Corporation	50	3,110	2,960
Pine Bell Mines Limited	47	1	1
		<u>41,287</u>	<u>53,389</u>
Investments and advances carried at cost			
Other investments — quoted		3,764	1,167
Other investments — not quoted		564	1,740
Advances to associated companies		570	1,726
Housing loans to directors and senior officers		349	550
		<u>5,247</u>	<u>5,183</u>
		<u>46,534</u>	<u>58,572</u>

Investments carried on an equity basis, excluding TDC Technology Development Corporation which is not quoted, have a quoted market value of \$84,128,000 at September 30, 1982. Other investments have a quoted market value of \$2,601,000. Certain investments have been pledged as security for bank loans and long term-debt.

During the year, the company sold a 39% interest in its Bullmoose Coal Project to Lornex Mining Corporation Ltd. The sale, a related party transaction, was negotiated on an arm's length basis. Since the company is accounting for its investment in Lornex on an equity basis, the gain on the sale is deemed to be unrealized and treated as a reduction to the carrying cost of the investment. The gain will be realized over the life of the Bullmoose Mine. At September 30, 1982, an amount of \$9,200,000 due from Lornex Mining Corporation Ltd. was included in accounts receivable.

2. PROPERTY, PLANT AND EQUIPMENT

	1982		1981	
	Cost	Accumulated depreciation, depletion and amortization	Net	Net
	\$	\$ (in thousands)	\$	\$
Petroleum properties				
Producing well costs	21,745	9,811	11,934	20,322
Plant and equipment	16,369	6,720	9,649	8,001
Non-producing properties	37,504	4,526	32,978	29,172
	<u>75,618</u>	<u>21,057</u>	<u>54,561</u>	<u>57,495</u>
Mining properties				
Mineral properties, rights and deferred costs	104,171	12,212	91,959	114,273
Plant and equipment	185,253	44,538	140,715	184,023
Construction in progress	21,458	—	21,458	—
	<u>310,882</u>	<u>56,750</u>	<u>254,132</u>	<u>298,296</u>
	<u>386,500</u>	<u>77,807</u>	<u>308,693</u>	<u>355,791</u>

3. LONG-TERM DEBT

	1982 \$ (in thousands)	1981 \$
Bank Loans		
Afton Project (a)		
— term bank loan	27,309	—
Bullmoose Project (b)		
— interim financing	15,000	—
Highmont Project (c)		
— term bank loan	76,935	120,500
Niobec Project		
— term bank loan	—	2,586
	<u>119,244</u>	<u>123,086</u>
Non-Recourse Loans		
Highmont Project (c)		
— customer loans	8,382	—
Other		
Niobec Project (d)		
— customer loan	1,240	1,240
Convertible Debenture (e)	3,000	3,000
Miscellaneous	631	938
	<u>132,497</u>	<u>128,264</u>
Debt due within one year	—	358
	<u>132,497</u>	<u>127,906</u>

Aggregate minimum amounts, based on current rates of exchange, estimated to meet repayment provisions in each of the next five fiscal years are:

1983	\$ NIL
1984	\$ 8,000
1985	\$46,625
1986	\$24,240
1987	\$13,309

- The Afton loan (U.S. \$21,900,000) is secured by fixed and floating charges on the company's share of the mine assets. Repayment commences on March 31, 1984 at which time a repayment schedule will be established. The interest rate is at 1% above the L.I.B.O. rate.
- The Bullmoose project interim financing is secured by certain marketable investments and the interest rate is at the bank prime lending rate. A consortium of banks has agreed to provide Teck-Bullmoose Coal Inc., a wholly-owned subsidiary of the company, with a credit facility of \$158 million to finance its 51% joint venture in the Bullmoose Project. The interim financing will be repaid from the proceeds of this loan (see Note 8(b)).
- The Highmont Project loan (U.S. \$62,285,246) is secured by fixed and floating charges on the company's share of the mine assets, plus a fixed charge on the proceeds of sales. Certain investments and petroleum properties have also been lodged as additional security. The loan is repayable commencing in October, 1984, subject to acceleration in the event of available cash flow as defined in the loan agreement. The interest rate on the term bank loan is at 1 1/2% above U.S. dollar L.I.B.O. rate.

The customer loans are non-recourse loans, repayable out of project cash flows commencing when the term bank loan is repaid. A portion of the customer loan (\$6,690,000) was advanced by a related party and is interest free. The balance (\$1,692,000) bears interest at the bank prime lending rate.

- (d) The Niobec loan (U.S. \$1,000,000) is an interest-free customer loan with no fixed repayment terms.
- (e) The convertible debenture is held by a related party and is repayable on December 31, 1988 or may be converted before December 31, 1983 into 400,000 Class B common shares (Note 4(f)). Interest on the debenture is at 9 1/2%.
- (f) Repayment of the current bank loans of \$19,722,000 is secured by certain receivables and inventory.
- (g) Interest on long-term debt of \$5,630,000 was capitalized as deferred costs during the year.

4. CAPITAL STOCK

(a) Authorized

An unlimited number of preferred shares without nominal or par value issuable in series.
An unlimited number of Class A common shares without nominal or par value.

An unlimited number of Class B common shares without nominal or par value.

The Series A preferred shares are 7.5% cumulative redeemable convertible preferred shares.

The Series C preferred shares are 8.36% cumulative redeemable convertible preferred shares.

The Class A common shares carry the right to 100 votes per share and the Class B common shares carry the right to one vote per share; in all other respects the Class A and B common shares rank equally.

(b) Issued and fully paid

	1982	1981
	\$	\$
	(in thousands)	
70,000 Series A preferred shares	7,000	7,000
223,002 Series C preferred shares	12,265	12,280
	<u>19,265</u>	<u>19,280</u>
4,893,261 Class A common shares	13,987	13,987
20,737,319 Class B common shares	58,488	58,473
	<u>72,475</u>	<u>72,460</u>
	<u>91,740</u>	<u>91,740</u>

Included in Class B common shares are 238,369 shares available for issue to the former shareholders of Brameda Resources Limited, The Yukon Consolidated Gold Corporation Limited, Highmont Mining Corporation and Iso Mines Limited who have not yet presented their share certificates entitling them to obtain Class B common shares of the company.

(c) Adjustments to Class B common shares

As part of the amalgamation with Highmont Mining Corporation and Iso Mines Limited, the company was obligated to issue 2,147,228 Series B preferred shares for a value of \$35,772,818, of which \$2,941,702 was stated capital and \$32,831,116 was designated as contributed surplus. As at September 30, 1981, 341,972 Series B preferred shares were redeemed for cash and 1,732,491 shares were converted to Class B common shares. The Class B common shares at September 30, 1981 have been restated to reflect the contributed surplus relating to the issue of Class B shares.

	Shares	\$ ('000's)
Balance at September 30, 1981		
As previously stated	20,449,408	84,151
Shares available for issue from amalgamation with Brameda and Yukon Consolidated	141,706	712
Shares available for issue from amalgamation with Highmont and Iso	145,530	1,212
Transfer to contributed surplus	—	(27,602)
As restated	20,736,644	58,473
Issued in 1982 on conversion of Series C preferred shares	675	15
Balance at September 30, 1982	<u>20,737,319</u>	<u>58,488</u>

(d) Contributed surplus

	\$ ('000's)
Contributed surplus for 2,147,228 Series B preferred shares issued (Note 4 (c)).	32,831
Reduced by 341,972 shares redeemed for cash (Note 4 (c)).	(5,229)
Balance	<u>27,602</u>

- (e) During the year ended September 30, 1980, stock options were granted to officers and employees on 485,000 Class B common shares at \$9.675 per share. The options are exercisable in varying annual amounts up to December 31, 1984. As at September 30, 1982 options on 433,000 shares were outstanding.

- (f) The holder of the 9 1/2% debenture (Note 3(c)) may convert the debenture on or before December 31, 1983 into 400,000 fully paid Class B common shares.

- (g) Each Series A preferred share may be converted into 9.52 fully paid Class B common shares up to May 15, 1985. After that date, the shares are redeemable at \$100 per share.

- (h) The Series C preferred shares are redeemable at prices between \$55.00 to \$60.00 per share after July 1, 1984, but redemption may only be made under certain conditions prior to July 1, 1986. Each share may be converted into fully paid Class B common shares at the following rates:

Up to June 30, 1986	2.5 Class B common shares
Up to December 31, 1991	2.3 Class B common shares

5. UNUSUAL ITEMS

	\$ (in thousands)
Gain on sale of petroleum properties, net of tax provision of \$5,200,000	6,171
Write-down of petroleum properties, net of provision for tax recovery of \$3,482,000	<u>(7,020)</u>
	<u>(849)</u>

6. EXTRAORDINARY ITEMS

	1982 \$ (in thousands)	1981 \$
Loss on sale of 29.999% interest in Highmont mine after provision for deferred income tax recovery of \$11,792,000	(17,659)	—
Gain on sale of 10% interest in Bullmoose Coal Property after provision for deferred income tax of \$3,200,000	4,346	—
Gain on sale of mining property	—	11,834
Gain on sale of investments	—	26,110
Other	(833)	2,707
	<u>(14,146)</u>	<u>40,651</u>

7. EARNINGS PER COMMON SHARE

Basic earnings per share are calculated using the weighted average number of common shares outstanding during the year of 25,350,241 (1981 — 25,308,271).

Fully diluted earnings per share are calculated on the weighted average number of shares that would have been outstanding during the year had the convertible debenture and the Series A and Series C preferred shares been converted at the date of issue.

	1982 \$	1981 \$
Basic earnings (loss) per share		
Before extraordinary items	(\$0.76)	\$0.43
After extraordinary items	(\$1.32)	\$2.03
Fully diluted earnings (loss) per share		
Before extraordinary items	(\$0.76)	\$0.42
After extraordinary items	(\$1.32)	\$1.90

8. OTHER INFORMATION

(a) Related party transactions (Notes 1, 3(c) and 3(e))

Under the provisions of long-term concentrate sales contracts the company made sales amounting to \$33,905,000 during the year to Metallgesellschaft AG, a company owning approximately 20% of Teck Corporation's issued shares. The contracts were negotiated on an arms length basis. At September 30, 1982, concentrates and settlements receivable include \$3,756,000 due from Metallgesellschaft AG.

(b) Commitments

In 1981, Teck Frontier Corporation, a subsidiary of the company, agreed to spend up to \$162.5 million, over a four year period, on frontier oil and gas exploration through a farm-in arrangement with Canterra Energy Ltd. Expenditures to date total \$43 million and it is likely that the total programme expenditures will be substantially less than originally planned. The federal Petroleum Incentive Programme reimburses up to 80% of the expenditures incurred. At September 30, 1982, grants receivable of \$22,020,000 were included in accounts receivable.

Teck-Bullmoose Coal Inc. (Teck-Bullmoose), a wholly-owned subsidiary company having a 51% undivided interest in the Bullmoose coal joint venture, has entered into various agreements on behalf of the joint venture. Each of the other joint venturers is obligated to indemnify Teck-Bullmoose in proportion to its interest in the joint venture.

- i) The joint venture is committed to sell to certain Japanese steel mills 1.7 million tonnes of metallurgical coal annually for fifteen years. The total capital cost of the plant facilities is expected to be approximately \$300 million and costs to date total \$35 million (see Note 3 (b) for financing arrangements).

- ii) Under an agreement with Ridley Terminals Inc., the joint venture is committed to ship a minimum of 1.6 million tonnes of coal annually through the terminal facilities to be constructed in Prince Rupert.

- iii) Under a comprehensive agreement with the Province of British Columbia, the Province will construct and provide infrastructure facilities with the capital costs to be recovered through charges to the joint venture and other users of the facilities. Teck-Bullmoose has provided a debenture of \$100 million which will be released upon the completion of the mine. Under the same agreement, Teck-Bullmoose has agreed to provide loan guarantees to the District of Tumbler Ridge up to a maximum of \$7.2 million, also secured by a debenture. These debentures are secured by a floating charge on all the assets of Teck-Bullmoose but are subordinated to any other lien issued for any indebtedness.

As provided by the above contracts, Teck-Bullmoose has minimum annual payment obligations with respect to port, rail and hydro facilities.

(c) Contingent liabilities

The company carries on certain of its mining activities on a partnership basis and as a result is jointly and severally liable for certain partnership liabilities and a project loan. The proportionate share of the loan and partnership liabilities attributable to other partners of \$51 million represents the amount for which the company is contingently liable. The partners' share of partnership assets would be available for settlement of this amount. In addition, the company holds indemnities from its partners.

(d) Pension plan

As at September 30, 1982, there was no unfunded past service liability.

(e) Plant shutdown

Due to economic circumstances, the Afton mine was temporarily shut down on June 22, 1982. Maintenance costs and interest expense incurred during the shutdown period are capitalized as deferred costs.

(f) Segmented information

The directors have determined the company's principal classes of business, as defined by the Canada Business Corporations Act, to be mining and petroleum. Financial information relating thereto is disclosed in the Consolidated Statement of Segmented Information.

Consolidated Statement of Segmented Information
for the Year ended September 30, 1982

(in thousands of dollars)

	1982				1981			
	Mining \$	Petroleum \$	Other \$	Total \$	Mining \$	Petroleum \$	Other \$	Total \$
OPERATIONS								
Revenue								
Export	80,367	2,615	—	82,982	105,145	2,344	—	107,489
Domestic	<u>24,875</u>	<u>14,032</u>	<u>6,067</u>	<u>44,974</u>	<u>29,443</u>	<u>11,880</u>	<u>5,276</u>	<u>46,599</u>
	<u>105,242</u>	<u>16,647</u>	<u>6,067</u>	<u>127,956</u>	<u>134,588</u>	<u>14,224</u>	<u>5,276</u>	<u>154,088</u>
Costs and expenses								
Cost of operations	99,794	6,031	—	105,825	88,342	3,907	—	92,249
Administration and general	—	—	5,135	5,135	—	—	5,889	5,889
Depreciation and amortization	15,554	4,397	—	19,951	9,797	4,428	60	14,285
Exploration	4,274	2,697	—	6,971	5,055	6,177	—	11,232
Interest and currency translation adjustments	<u>19,551</u>	<u>41</u>	<u>3,086</u>	<u>22,678</u>	<u>9,815</u>	<u>—</u>	<u>7,368</u>	<u>17,183</u>
	<u>139,173</u>	<u>13,166</u>	<u>8,221</u>	<u>160,560</u>	<u>113,009</u>	<u>14,512</u>	<u>13,317</u>	<u>140,838</u>
	(33,931)	3,481	(2,154)	(32,604)	21,579	(288)	(8,041)	13,250
Income and mining taxes	<u>17,050</u>	<u>(900)</u>	<u>819</u>	<u>16,969</u>	<u>(10,096)</u>	<u>114</u>	<u>2,420</u>	<u>(7,562)</u>
	(16,881)	2,581	(1,335)	(15,635)	11,483	(174)	(5,621)	5,688
Equity in earnings of associated companies	—	—	(1,221)	(1,221)	—	—	7,245	7,245
Minority interest	—	—	—	—	(1,668)	—	(6)	(1,674)
Unusual items	<u>—</u>	<u>(849)</u>	<u>—</u>	<u>(849)</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Net earnings	<u>(16,881)</u>	<u>1,732</u>	<u>(2,556)</u>	<u>(17,705)</u>	<u>9,815</u>	<u>(174)</u>	<u>1,618</u>	<u>11,259</u>
WORKING CAPITAL (DEFICIENCY)	29,092	(1,664)	(359)	27,069	(2,678)	(1,435)	26,475	22,362
INVESTMENTS	—	—	46,534	46,534	—	—	58,572	58,572
PROPERTY, PLANT AND EQUIPMENT	246,782	54,561	7,350	308,693	288,799	57,495	9,497	355,791
CAPITAL EXPENDITURES	39,465	43,780	3,663	86,908	71,714	18,006	56,519	146,239

OTHER: includes equity in earnings of associated companies and items not allocated to mining or petroleum.

COMPARATIVE FIGURES

	Year Ended September 30,									
	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Balance Sheet ('000)										
Total Assets	438,958	495,632	502,806	367,073	295,194	197,526	108,929	76,380	59,969	54,051
Long-term debt	132,497	127,906	178,587	104,120	135,907	81,397	34,349	17,885	8,961	4,772
Shareholders' equity	217,785	254,994	196,668	168,460	59,920	54,155	38,732	37,729	35,261	37,288
Working Capital	27,069	22,362	8,195	40,476	29,848	3,497	3,429	4,880	4,368	67
Earnings and cash flow ('000)										
Petroleum revenue	16,647	14,224	15,695	11,596	10,630	8,589	6,971	4,756	4,259	4,030
Mining revenue	105,242	134,588	160,288	127,034	64,366	36,305	29,643	17,266	12,783	9,694
Petroleum operating profit	10,616	10,317	11,252	8,810	8,198	6,618	5,147	3,392	3,131	2,935
Mining operating profit	5,448	46,246	82,476	58,325	22,096	8,057	4,298	3,955	4,180	2,556
Exploration expense charged to earnings	6,971	11,232	10,562	4,616	3,580	1,946	1,246	1,776	1,362	995
Capitalized exploration and property acquisition	27,196	24,381	23,111	20,572	5,770	5,643	2,824	2,355	2,770	1,381
Funds provided from operations	(12,138)	26,127	61,316	39,784	14,699	8,224	6,069	5,321	6,209	5,513
Capital expenditures excluding investments	54,859	89,720	132,105	30,355	22,818	64,153	17,049	12,617	3,132	1,575
Investments	3,663	56,519	38,990	64,716	32,283	4,219	892	2,410	4,246	5,833
Earnings (loss) before extraordinary items	(17,705)	11,259	31,816	22,506	4,292	4,083	1,786	2,423	4,202	2,962
Extraordinary items	(14,146)	40,651	6,372	5,723	316	18,601	216	45	(131)	940
Net earnings (loss)	(31,851)	51,910	38,188	28,229	4,608	14,684	2,002	2,468	4,071	3,902
Per Share										
Cash flow	(\$0.47)	\$1.03	\$1.91	\$1.73	\$0.85	\$0.60	\$0.45	\$0.39	\$0.46	\$0.41
Earnings (loss) before extraordinary items	(\$0.76)	\$0.43	\$1.24	\$1.19	\$0.31	\$0.29	\$0.13	\$0.17	\$0.31	\$0.22
Net earnings (loss)	(\$1.32)	\$2.03	\$1.49	\$1.50	\$0.33	\$1.05	\$0.15	\$0.18	\$0.30	\$0.29
Dividends	\$0.15	\$0.15	\$0.15	\$0.125	\$0.105	\$0.045	—	—	—	—

DIRECTORS

Sir Michael Butler; Bt, Q.C., Victoria; Barrister and Solicitor
Ross G. Duthie, Vancouver; Mining Engineer
*R.E. Hallbauer; B.A.Sc., P.Eng., Vancouver; Executive
*N.B. Keevil, Ph.D.; Vancouver; Executive
*N.B. Keevil Jr; Ph.D.; Vancouver; Executive
K.G. Ratjen; Frankfurt; Chairman, Metallgesellschaft A.G.
I.F. Rushbrook; Edinburgh; Director, Ivory & Sime
H. Schimmelbusch; Frankfurt, Metallgesellschaft A.G.
K.E. Steeves, Vancouver; Executive
*D.A. Thompson, B.Sc.Econ.; Vancouver; Executive
J.H. Westell; Orillia; Consultant
*R.J. Wright; Q.C.; Toronto; Barrister and Solicitor
K. Zeitler; Toronto; President, Metallgesellschaft Canada Ltd.
*Members of the Executive Committee

OFFICERS

Honorary Chairman	The Rt. Hon. Roland Michener
Chairman of the Board and Executive Committee	Norman B. Keevil
President and Chief Executive Officer	Norman B. Keevil, Jr.
Senior Vice President	Robert E. Hallbauer
Vice President, Finance	David A. Thompson
Vice President, Marketing	Keith E. Steeves
Vice President, Coal Operations	Richard Drozd
Vice President, Engineering	Cory Sibbald
Vice President, General Counsel	Robert J. Wright
Vice President, Administration	John A. Guminski
Secretary	Ronald F. Mossman
Treasurer	G.R. Shipley
Assistant Secretary	Ronald W. Kram
Controller	John G. Taylor

DIVISION MANAGERS

Oil & Gas Division	N.B. Rudden
Mining Exploration	J.L. May
Dighem Limited	D.C. Fraser, president
TDC Technology Development	C.H. Rosner, president
Eastern Mining Operations	K.I. Hymas, general manager
Lamaque Mine	G.R. Proulx, manager
Silverfields Mine	M. Robinson, manager
Beaverdell Mine	B.E. Goetting, manager
Niobec Mine	M.R. Rodrigue, manager
Newfoundland Zinc Mine	A. Mitchell, manager
Bullmoose Mine	M.P. Lipkewich, manager
Highmont Mine	B. Rhys Williams, manager

EXECUTIVE OFFICE

1199 West Hastings Street, Vancouver, British Columbia, V6E 2K5

PETROLEUM DIVISION

Suite 2000, Esso Plaza, East Tower, 425 - 1st Street SW, Calgary, Alberta, T2P 3L8

EASTERN DIVISION

P.O. Box 170, 1 First Canadian Place, Toronto, Ontario, M5X 1G9

TRANSFER AGENTS

National Trust Company, Limited, Vancouver, Calgary, Winnipeg, Toronto, Montreal
First National State Bank of New Jersey, Newark, New Jersey, U.S.A.

AUDITORS

Coopers & Lybrand, Vancouver, British Columbia



1. *Chlorophyll a* (Chl a) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue and red regions of the visible spectrum. Chl a is essential for the light-dependent reactions of photosynthesis, where it converts light energy into chemical energy in the form of ATP and NADPH.