



Bow Valley Industries Ltd.
Annual Report 1980



The Year in Brief

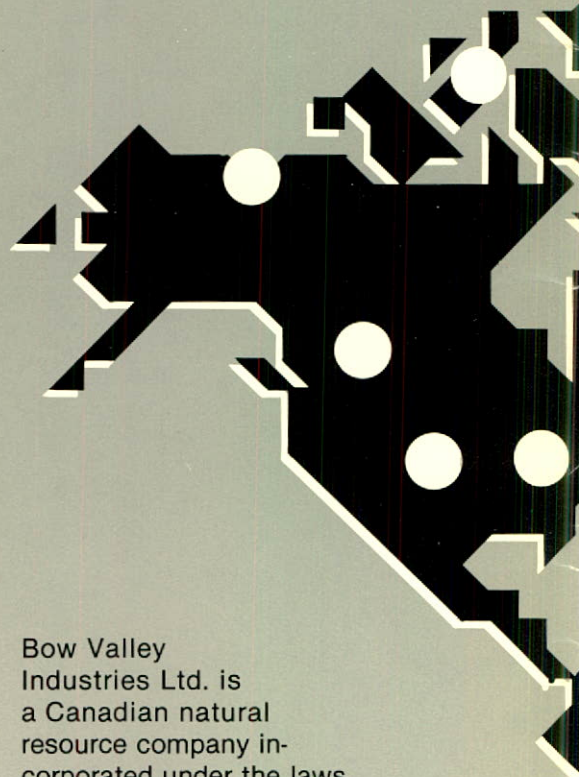
	1980	1979
Financial		
Revenue	\$362,100,000	\$275,600,000
Net Income	\$ 32,000,000	\$ 16,400,000
Per Common Share	\$ 0.85	\$ 0.49
Cash Flow	\$ 90,900,000	\$ 59,000,000
Per Common Share	\$ 2.55	\$ 1.79
Average Shares		
Outstanding	34,631,000	32,884,000
Capital Expenditures	\$194,600,000	\$ 78,000,000
Working Capital	\$ 35,600,000	\$ 16,800,000
Operations		
Daily Production		
Oil (bbls)	6,075	4,690
Gas (MMcf)	62.0	66.7
Coal (tons)	5,185	4,229
Proved Reserves		
Oil (millions of barrels)	72.6	68.0
Gas (Bcf)	501.6	537.6
Coal (millions of tons)	76.3	37.2
Oil and Gas Land		
Holdings (at year end) (thousands of net acres)	4,808	3,117
Gross Wells Drilled	213	180

All amounts in this report are in Canadian dollars, unless stated otherwise.

All production and reserve statistics in the narrative of this report are on a pre-royalty basis.

COVER

The Aladdin semi-submersible oilwell drilling rig on location 16/7a-16 in the North Brae field in the United Kingdom sector of the North Sea.



Bow Valley Industries Ltd. is a Canadian natural resource company incorporated under the laws of the Province of Alberta in 1950. The activities of Bow Valley are conducted under two operating entities:

- Bow Valley Exploration is engaged in domestic and international exploration for and development of oil, gas, coal, and uranium.
- Bow Valley Resource Services Ltd. provides service and manufacturing facilities to the natural resource industry in North America.



Report to the Shareholders

HIGHLIGHTS

- Record revenues, net income, and cash flow from operations.
- Growing diversification of profit sources.
- Improved debt to equity ratio.
- Substantial increase in capital expenditures.

FINANCIAL

Revenue in 1980 was \$362 million as compared to \$276 million in 1979. Net income increased to \$32 million, or \$0.85 per share, from \$16 million, or \$0.49 per share. Cash flow from operations was \$91 million, or \$2.55 per share, versus \$59 million, or \$1.79 per share, for the previous year. The improvement in earnings and cash flow in 1980 was largely attributable to increased oil sales and higher selling prices, greater coal production, and more profitable operations in service and manufacturing activities.

Capital expenditures in 1980 were \$195 million compared to \$78 million in 1979. These increased expenditures were financed by cash flow from operations, bank debt, and:

- non-recourse exploration and development advances, \$59 million.
- the sale of 7% convertible preferred shares, \$60 million.
- the sale of 8% convertible debentures, \$48 million.

Bow Valley's working capital at the end of 1980 increased to \$36 million from \$17 million a year earlier.

OPERATIONS

Oil and Gas

In exploration and drilling activity during 1980, Bow Valley participated in

drilling 213 wells compared to 180 in 1979. The overall success ratio increased to 81 percent from 68 percent.

Bow Valley's daily oil and gas production in 1980 was 6,075 barrels of oil and 62 MMcf of gas as compared to 4,690 barrels and 67 MMcf in 1979.

In Canada, exploration and development programs will be maintained at current levels due to a gas surplus and the unsettled conditions resulting from unresolved Federal and Provincial Government negotiations on pricing and other regulatory matters. Gas production in Alberta continues at less than capacity because of the reduced market demand.

Bow Valley has accelerated its exploration and development program in the United States due to higher product prices and the immediate availability of markets. Operations are located mainly in the Rocky Mountain area, Montana, North Dakota, Oklahoma, the Gulf coast, and the Appalachians. During 1980, Bow Valley entered into a joint venture with a Japanese company to conduct a U.S. \$30 million three-year program in the Black Warrior Basin in Mississippi and Alabama. Bow Valley anticipates an increase in its oil and gas production in the United States in 1981.

The development of the South Brae field in the North Sea is on schedule and production should begin in early 1983. Bow Valley's share of production from South Brae will be 15,700 barrels of oil per day. A successful well was drilled in the Heimdal field during the year. Production is scheduled to commence in 1986 and Bow Valley's

share will be 25 MMcf of gas per day and 600 barrels of condensate.

The Arzanah oil field offshore Abu Dhabi will temporarily have reduced production in 1981 while a pressure maintenance program is effected to ensure the ultimate recovery of reserves in place. During 1980, a 1.9 million-acre onshore concession in Abu Dhabi was acquired which will require a U.S. \$8 million investment for exploration and development over the next six years. Bow Valley has a 20 percent interest in this venture.

In Indonesia, Bow Valley is earning a 40 percent interest in 3.1 million acres by spending a total of U.S. \$22 million in 1980 and 1981. Bow Valley is presently participating in oil production and expects to increase its oil income from this onshore venture during 1981.

Coal

Bow Valley's coal production was 1,898,000 tons in 1980 compared to 1,544,000 tons in 1979.

All of Bow Valley's steam coal production is sold to two utility companies under long term contracts which provide for the sale of 2,850,000 tons per year by 1986.

Substantial additions were made to Bow Valley's coal reserves in 1980. This fact, together with highly automated processing facilities and an efficient non-union work force, should ensure that Bow Valley will maintain its 12 year record of annual increase in production.

Uranium

At Midwest Lake in northeastern Saskatchewan, a decision has been made to mine the uranium deposit,

subject to regulatory approval. The stripping of overburden, drainage of the lake, and other construction is planned to start during 1982. Initial production from this open pit mine will take place in 1986 at a rate of 4.4 million pounds of uranium oxide per year. Bow Valley's share of production will initially be 880,000 pounds per year.

Service and Manufacturing

Bow Valley's service and manufacturing operations are conducted by Bow Valley Resource Services Ltd. In late February 1981, BVRS completed a \$62 million public financing in Canada. This financing involved the sale of shares and convertible debentures by BVRS which effectively reduced Bow Valley's equity in this subsidiary to 78 percent. For purposes of this Annual Report, BVRS is, however, recorded as a wholly-owned subsidiary.

Activities of BVRS are administered in four groups, the largest of which is the Oilwell Drilling Group. Contract drilling activities are conducted in Canada and the United States. Operations in both countries were very profitable in 1980, however, increased emphasis will be placed on contracting rigs in the United States where an unprecedented level of exploration activity is taking place. In Canada, BVRS believes that the development of frontier areas will be accelerated and has accordingly recently acquired a semi-submersible drilling rig at a cost of U.S. \$112 million. The rig is signed to a four-year contract to work off the east coast of Canada.

The Industrial Products Group had improved operating income in both its manufacturing and sales divisions.

Margins have increased as greater emphasis has been placed on the manufacture and sale of specialty products, primarily to the oil and gas industry.

The consolidation of operations and improvement of administrative procedures by the Diamond Drilling Group resulted in a substantial gain in operating income in 1980. This trend is expected to continue.

The Environmental Products Group recorded higher operating income from the manufacture and sale of heating and air conditioning equipment and also from environmental control activities.

DIRECTORS AND MANAGEMENT

It was with deep regret that we reported the untimely death in October 1980 of Frederic J. Ahern, a Director of Bow Valley since 1963. Mr. Ahern was one of the first investors from the United States to support Bow Valley, both personally and as a corporate representative. His wise and prudent counsel will be greatly missed.

Two new Directors were appointed to the Board in November 1980; Arnold M. Ludwick, Executive Vice-President of Cemp Investments Ltd., Montreal, and John S. Poyen, Energy Industry Management Consultant, Calgary. J. Richard Harris resigned as a Director and Officer of Bow Valley on February 28, 1981. The Board has expressed appreciation for Mr. Harris' support and services over the past ten years. At the same time, H. Keith Lazelle was appointed Vice-President, Corporate Affairs and, in April 1981, Henry A. Smith joined Bow Valley as Vice-President, General Counsel, and Secretary.

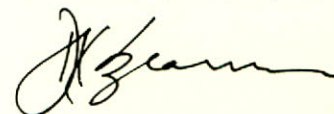
OUTLOOK

Bow Valley is in a preferable position compared to the majority of other Canadian energy companies for the following factors:

- Bow Valley has the necessary Canadian ownership base to benefit from Federal Government incentive programs.
- Bow Valley's diversified operations generate income in Canada, the United States, Abu Dhabi, and Indonesia.
- Bow Valley has projects in progress, as discussed in this report, that ensure substantial future contributions to net income.

It is with these factors in mind that Bow Valley is optimistic about the future and intends to take advantage of opportunities that exist. The Board wishes to express appreciation to the employees whose dedication and competence have made Bow Valley's continued growth record possible.

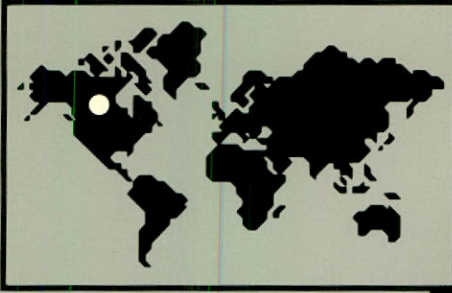
On behalf of the Board,



Daryl K. Seaman,
*Chairman, President, and
Chief Executive Officer*

April 7, 1981

Bow Valley Exploration



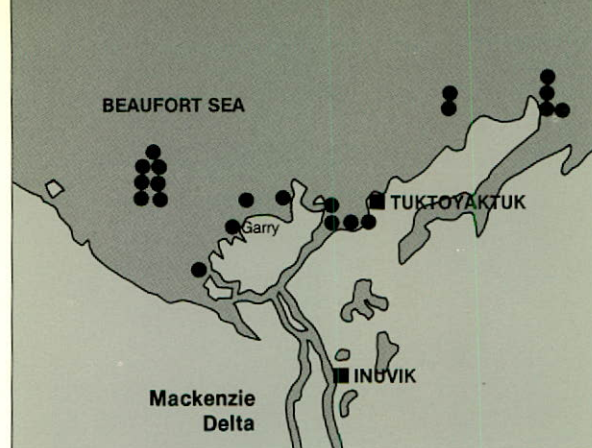
PACIFIC OCEAN

ATLANTIC OCEAN

GULF OF MEXICO

● Bow Valley Land Holdings

OIL AND GAS



● Bow Valley Land Holdings

OVERVIEW

Bow Valley is engaged, through Bow Valley Exploration, in the international exploration for and development of oil, gas, coal, and uranium. Operating offices are maintained in Calgary, Denver, London, and Singapore, and approximately 700 technical, operation, and administrative personnel are employed to conduct the various programs.

OIL AND GAS

During 1980, Bow Valley invested \$127.5 million in exploration and development and participated in drilling 213 wells, of which 172 were successful. Production during 1980 was 6,075 barrels of oil per day and 62 MMcf of gas per day. Proved reserves as at December 31, 1980, were 72.6 million barrels of oil and 501.6 Bcf of gas.

Exploration and development activities are being conducted on over 19.6 million gross acres in Canada, the United States, the North Sea, the Arabian Gulf offshore Abu Dhabi, Indonesia, and other areas.

Canada

During 1980, Bow Valley spent \$18.4 million on exploration and development activities in Canada, including the drilling of 121 wells, of which 49 were exploratory wells and 72 were development wells. The success ratio was 78 percent for exploration drilling and 83 percent for development drilling, for an overall success ratio of 81 percent.

Bow Valley is now placing more emphasis on the exploration for deeper oil and gas reserves in western Alberta

and northeastern British Columbia, where undeveloped acreage is still available. Bow Valley has an interest in 2.2 million gross exploratory acres in Alberta, Saskatchewan, and British Columbia. In 1981, Bow Valley expects to participate in the drilling of 133 wells in Canada and to spend approximately \$18 million on exploration and development.

Included in these figures is an exploration program with Mega Petrol Canada Limited. Bow Valley and Mega spent \$5 million each in 1980 and will spend about \$5 million each in 1981 pursuant to a joint exploration program.

Bow Valley has marketing arrangements for approximately two-thirds of its western Canadian gas reserves, with the balance currently awaiting markets. All this production is sold through various pipeline systems to approximately ten industrial and pipeline customers in Canada. Bow Valley estimates that its Alberta gas fields are capable of producing approximately 80 MMcf per day, should gas deliveries return to previous levels and additional exports to the United States be permitted. During 1980, Bow Valley's Canadian gas production was 46.3 MMcf per day at an average price of \$2.36 per Mcf and oil sales averaged 1,540 barrels per day at \$14.35 per barrel. The majority of this production was from Alberta. Proved reserves in Canada as at December 31, 1980, were 283 Bcf of gas and 6.7 million barrels of oil.

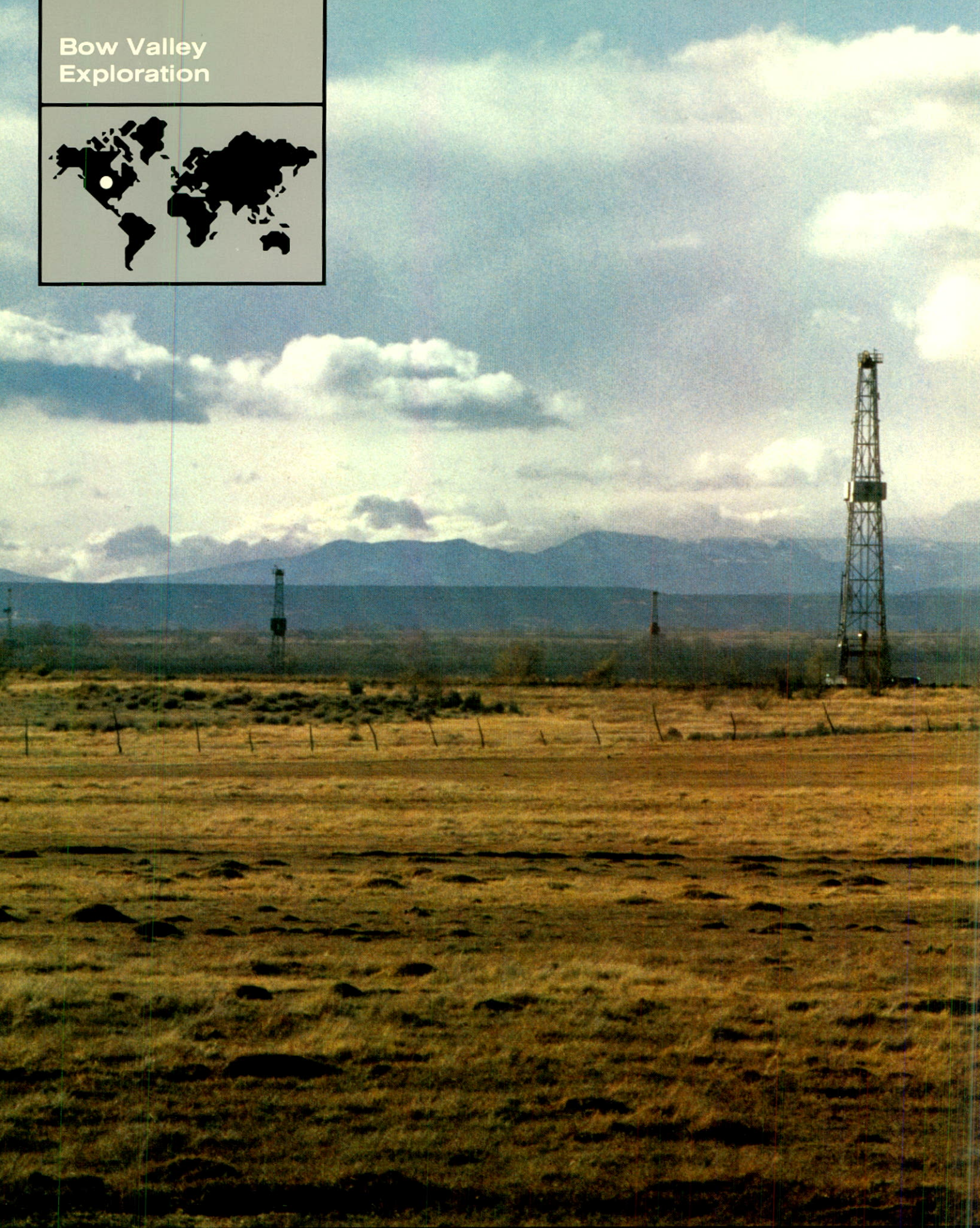
In the Mackenzie Delta, Bow Valley has a 27.5 percent interest in a 269,000-gross acre project on which

two successful wells, Garry P-04 and Garry G-07, were drilled in 1975 and 1978. The first well tested gas flows of 31 MMcf per day and an oil flow of 7,920 barrels per day, while the second well tested cumulative gas flows of 21 MMcf per day from two horizons. There are no current plans for further drilling until a suitable transportation system has been approved.

In the Beaufort Sea area of the Canadian Arctic, Bow Valley has various interests in 319,400 gross exploratory acres. These lands are approximately 30 to 60 miles from shore in water depths ranging from 60 to 200 feet. Marine geophysical work has been completed by the operators and, while promising structures have been identified, there are no current plans to drill at this time. An exploration program could be initiated depending on the progress of the Beaufort Sea project of Dome Petroleum Limited which has located hydrocarbons in its Tarsuit well approximately 15 miles from one of Bow Valley's permits. This well tested at the rate of 800 barrels of oil per day and 3.2 MMcf per day of gas from a 160-foot pay section. Dome expects to complete an artificial production island during 1981 and thereafter commence development drilling.

Bow Valley currently has a 1.71 percent equity interest in Panarctic Oils Ltd., a company formed jointly by the Government of Canada and others to explore for oil and gas in the Arctic Islands. Panarctic reports that it has discovered approximately 16 trillion cubic feet of natural gas and that exploration and appraisal drilling for additional reserves is continuing. During 1980, Panarctic participated in the drilling of four exploratory wells, of which three were discovery wells.

Bow Valley Exploration



United States

During 1980, Bow Valley spent \$19.1 million on exploration and development activities in the United States including the drilling of 74 wells, of which six were exploratory wells and 68 were development wells. The success ratio was 17 percent for exploration drilling and 94 percent for development drilling, for an overall success ratio of 88 percent. Bow Valley's most significant development drilling occurred in the Altamont-Bluebell oil field in Utah, the Madisonville gas field in Texas, and the Plateau Creek gas field in Colorado. During 1980, Bow Valley accelerated its land acquisition program and acquired more than 50,000 gross acres, including interests in the Williston Basin in Montana and North Dakota. As at December 31, 1980, Bow Valley had an interest in 667,750 gross exploratory acres in the United States.

Bow Valley's activities in the United States have increased significantly during the past three years, partially because of participation in a farmout and exploration program with Mega Petrol (U.S.A.) GmbH & Co. Erste Oel und Gas KG. Following expenditures of approximately U.S. \$11.5 million, Mega earned 50 percent of Bow Valley's interest in essentially all of Bow Valley's undeveloped exploration acreage west of the Mississippi River. Each party spent U.S. \$3 million in 1980 and plans to spend U.S. \$13.4 million in 1981.

In December 1979, Bow Valley participated in a gas discovery 100 miles offshore Louisiana. The operating group has approved development of the property and design work has begun on a production platform. Development drilling commenced in the fourth quarter of 1980 and production is expected to begin in June 1981. The total cost of developing the property is estimated at U.S. \$14 million, which amount includes construction of a five-mile pipeline to the nearest transmission system. Bow Valley has a 9.17 percent interest in the project and will receive 1.5 MMcf of gas per day.

In November 1980, Bow Valley signed a joint venture agreement with a U.S. subsidiary of Japan Petroleum Exploration Co. Ltd. to conduct oil and gas exploration and development programs over a large area of the Black Warrior Basin in the States of Mississippi and Alabama. The agreement provides for a joint expenditure of approximately U.S. \$30 million during its initial three-year term. Bow Valley is the operator and commenced drilling in November 1980. To March 31, 1981, five wells had been drilled in the program including two oil wells, two gas wells, and one dry hole.

During 1981, Bow Valley expects to participate in drilling 120 wells and spend \$36 million on exploration and development in the United States.

During 1980, United States oil production was 2,366 barrels per day at an average price of \$30.45 per barrel and gas sales were 15.8 MMcf per day at an average price of \$2.33 per Mcf. The majority of oil production was in Utah while gas sales were mainly from West Virginia, Colorado, and Texas.

Proved reserves in the United States as at December 31, 1980, were 11.7 million barrels of oil and 101.5 Bcf of gas.

United Kingdom

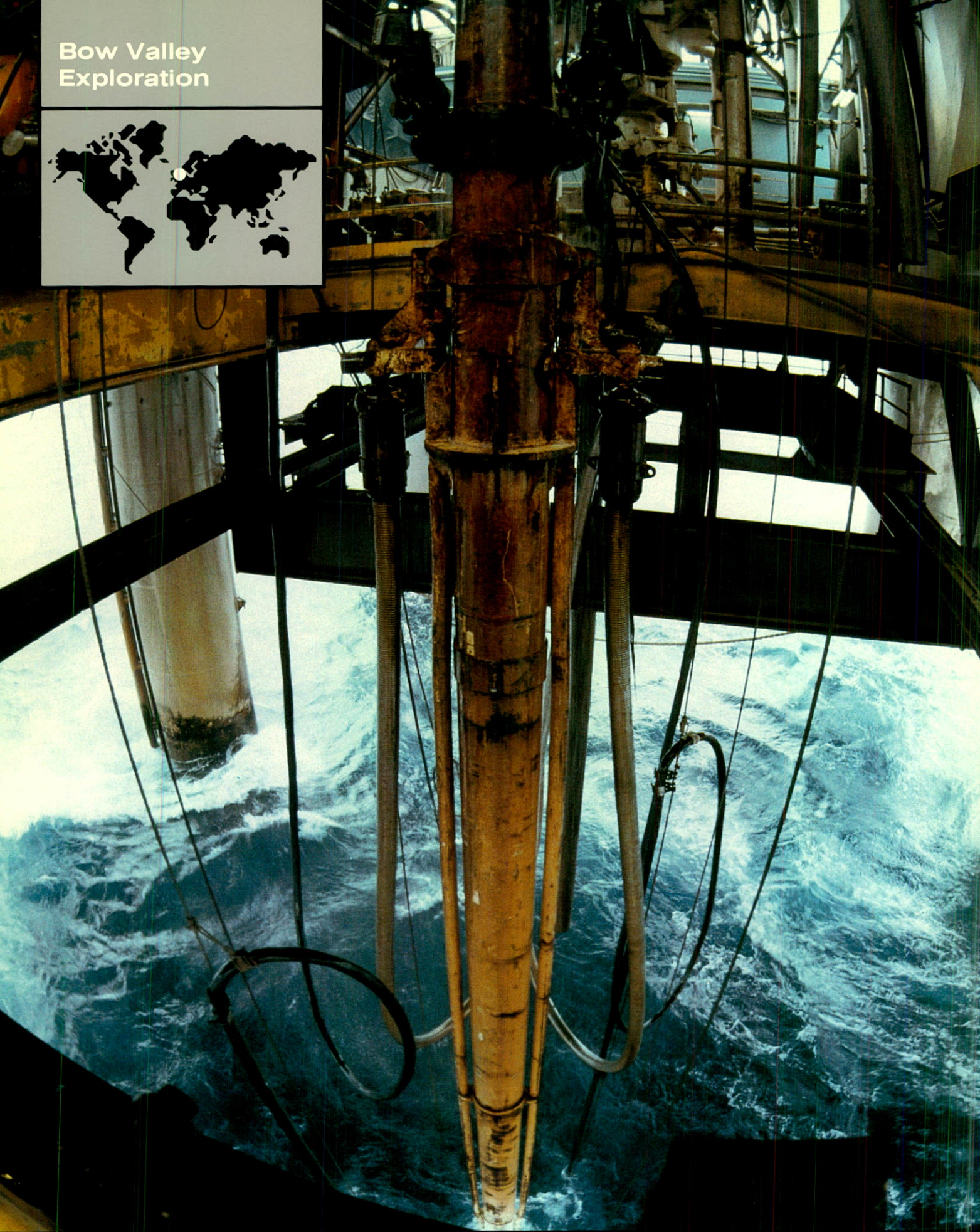
In the United Kingdom sector of the North Sea, Bow Valley has a 14 percent interest in the Brae field which is located about 150 miles northeast of Aberdeen, Scotland, in 350 feet of water.

The first exploratory well was drilled in 1975 on Block 16/7a and discovered the Brae field. Subsequently, 14 wells were drilled in Block 16/7a and have defined three separate reservoirs of the Brae oil field as well as a Paleocene oil and gas discovery. The three reservoirs are designated North, Central, and South Brae.

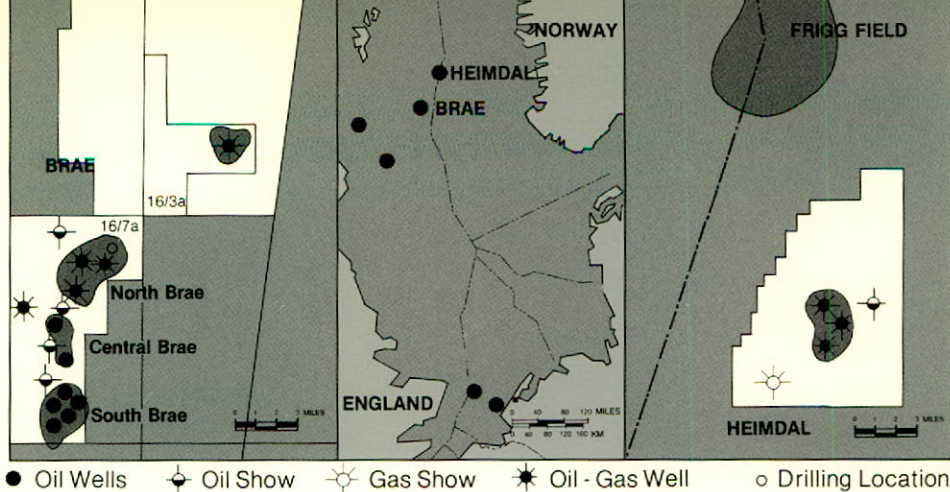
Early in 1980, the Minister of Energy approved a plan for the development of the South Brae reservoir, which the operator, Marathon Oil (U.K.) Limited, recently estimated would cost \$2.8 billion, including contingencies and after giving effect to inflation. The proposed facilities will include an eight-legged, 48-slot steel production platform from which 19 producing wells, 14 water injection wells, and three gas injection

Bow Valley recently had six rigs drilling for the Company in the Altamont-Bluebell area in northeast Utah.

Bow Valley Exploration



OIL AND GAS (continued)



wells will be operated. Production is anticipated to commence early in 1983 and to peak at a rate of 112,000 barrels per day of oil and natural gas liquids. A pipeline with a capacity of at least 200,000 barrels per day will be constructed from the production platform to the pipeline system servicing the Forties field and the oil and natural gas liquids will be transported from there to shore on a tariff basis. The excess capacity is designed to accommodate additional production from other Brae reservoirs. Construction of the pipeline is expected to begin in the summer of 1981.

Proved undeveloped reserves at South Brae on Block 16/7a were estimated at February 9, 1979, at 292 million barrels of oil and natural gas liquids and 154 Bcf of gas. Bow Valley's share of proved reserves is 40.9 million barrels of oil and 21.5 Bcf of gas.

During 1980, drilling activity at Brae was as follows:

- A successful exploratory well in Block 16/3a was drilled to a depth of 15,415 feet, approximately nine miles northeast of the Brae discovery well. From five tests of a 655-foot gross hydrocarbon section, oil flows ranged from 2,545 to 3,817 barrels per day and gas volumes varied from 16,000 to 28,800 Mcf per day. The drilling of 16/3a-1 satisfied Bow Valley's work obligations with respect to Block 16/3b.

The Aladdin rig drilling in 350 feet of water in the North Brae field in the United Kingdom sector of the North Sea.

- A successful appraisal well in North Brae, 16/7a-14, was drilled to a depth of 13,260 feet and from five tests of a 572-foot gross hydrocarbon section had oil flows of 2,887 to 4,336 barrels per day and gas/oil ratios ranging from 3,640 to 7,212 cubic feet per barrel.

- A delineation well, 16/7a-15, was abandoned after encountering hydrocarbon shows in Central Brae.

- An appraisal well, 16/7a-16, is currently being drilled in North Brae and as at March 31, 1981, was at a depth of approximately 15,000 feet. The well will be drilled to a depth of 17,000 feet to delineate the Upper Jurassic reservoir and test the underlying Middle Jurassic formation, not previously reached on the Brae Blocks.

Bow Valley's share of all costs are being advanced by The Louisiana Land and Exploration Company and by B.C. Coal Ltd. (formerly Kaiser Resources Ltd.), a majority of the shares of which were recently acquired by British Columbia Resources Investment Corporation. The advances are made as a non-recourse loan with principal and interest repayable only from 70 percent of Bow Valley's share of net proceeds of production after cash income taxes from petroleum produced from the Brae field. As at December 31, 1980, advances received and interest accrued thereon amounted to \$87.1 million.

Norway

In Block 25/4 in the Norwegian sector of the North Sea, Bow Valley has an eight percent interest in the Heimdal gas and condensate field. The Block is approximately 100 miles off the Norwegian coast in about 375 feet of water. The first exploratory well was drilled in 1972, 20 miles south of the

Frigg field, and discovered gas and condensate in the Paleocene sands.

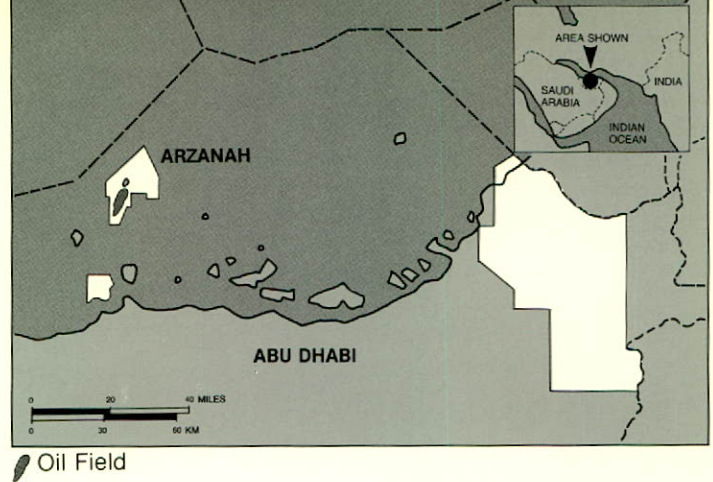
Three wells were subsequently drilled to delineate the reservoir known as the Heimdal field. One well was successful and two wells encountered non-commercial shows of hydrocarbons.

A fifth well has recently been drilled to 13,800 feet to test the Jurassic sands and has confirmed recoverable gas reserves in the Heimdal sand of 1.3 Tcf at about 8,000 feet. Bow Valley's share of proved reserves is estimated to be 95.4 Bcf of gas and 2.4 million barrels of condensate.

Application has been made to the Norwegian Government to market Heimdal gas through the Statfjord gas transportation system which will connect to the Ekofisk system and be marketed in Emdem, Germany. Production is expected to commence in 1986 at 307 MMcf of gas per day and 7,700 barrels of condensate per day. The development cost of the Heimdal field is estimated to be U.S. \$1.2 billion including escalation and contingency.

Bow Valley Exploration





Abu Dhabi

Offshore Abu Dhabi in the Arabian Gulf, Bow Valley has a ten percent interest in the Arzanah oilfield. The field commenced production in September 1979 and is operated by Amerada Hess Corporation.

Bow Valley acquired its first interest in Abu Dhabi in 1970 and then participated in the drilling of two offshore exploratory wells, one of which discovered the Arzanah oilfield in 1973. Appraisal drilling continued in the Arzanah field, which lies about five miles offshore Arzanah Island in 50 feet of water, with the eleventh appraisal well being successfully completed during November 1980.

During 1980, production averaged 20,650 barrels of oil per day. The designed flow rate of the field is 35,000 barrels of oil per day, however, the operator, pursuant to a proration notification from the Abu Dhabi authorities, reduced production during March 1980 to 20,000 barrels of oil per day.

Studies have been completed by the operator relating to the need for installation of pressure maintenance facilities on the Arzanah field in order to enhance the ultimate recovery of reserves in place. A decision has been made to proceed with installation of the facilities which will result in temporarily reduced production during 1981. Capacity of the Arzanah field is expected eventually to increase to its

designed flow rate. Bow Valley's share of production during 1980 was 2,065 barrels of oil per day at an average price of \$37.36 per barrel.

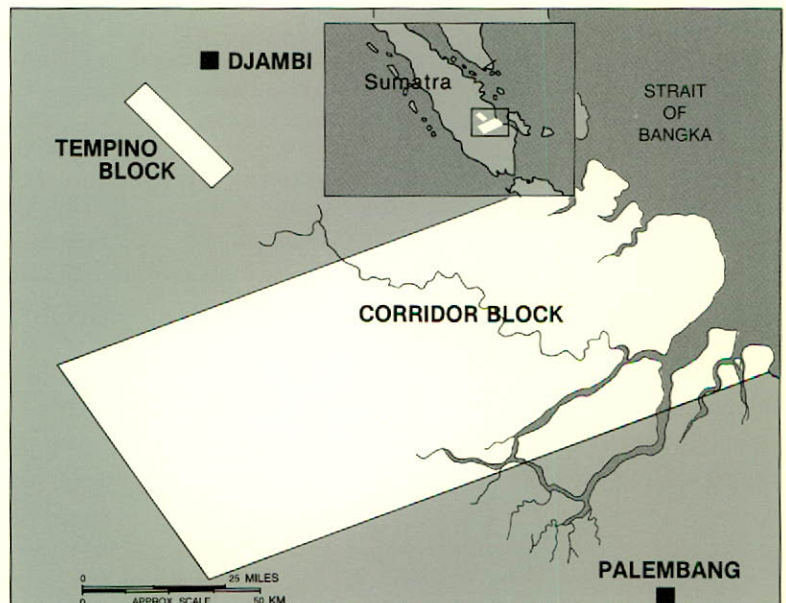
In October 1980, Bow Valley acquired a 20 percent interest in a concession onshore eastern Abu Dhabi covering approximately 1.9 million gross acres. The work program calls for the acquisition of seismic data beginning in the spring of 1981 with a view to begin drilling operations within two years. Bow Valley currently anticipates spending approximately U.S. \$8 million on this venture prior to January 1, 1987.

Indonesia

In October 1980, the Indonesian state oil company, Pertamina, approved the assignment, effective January 1, 1980, by Asamera (South Sumatra) Ltd. to Bow Valley of a 40 percent interest in a

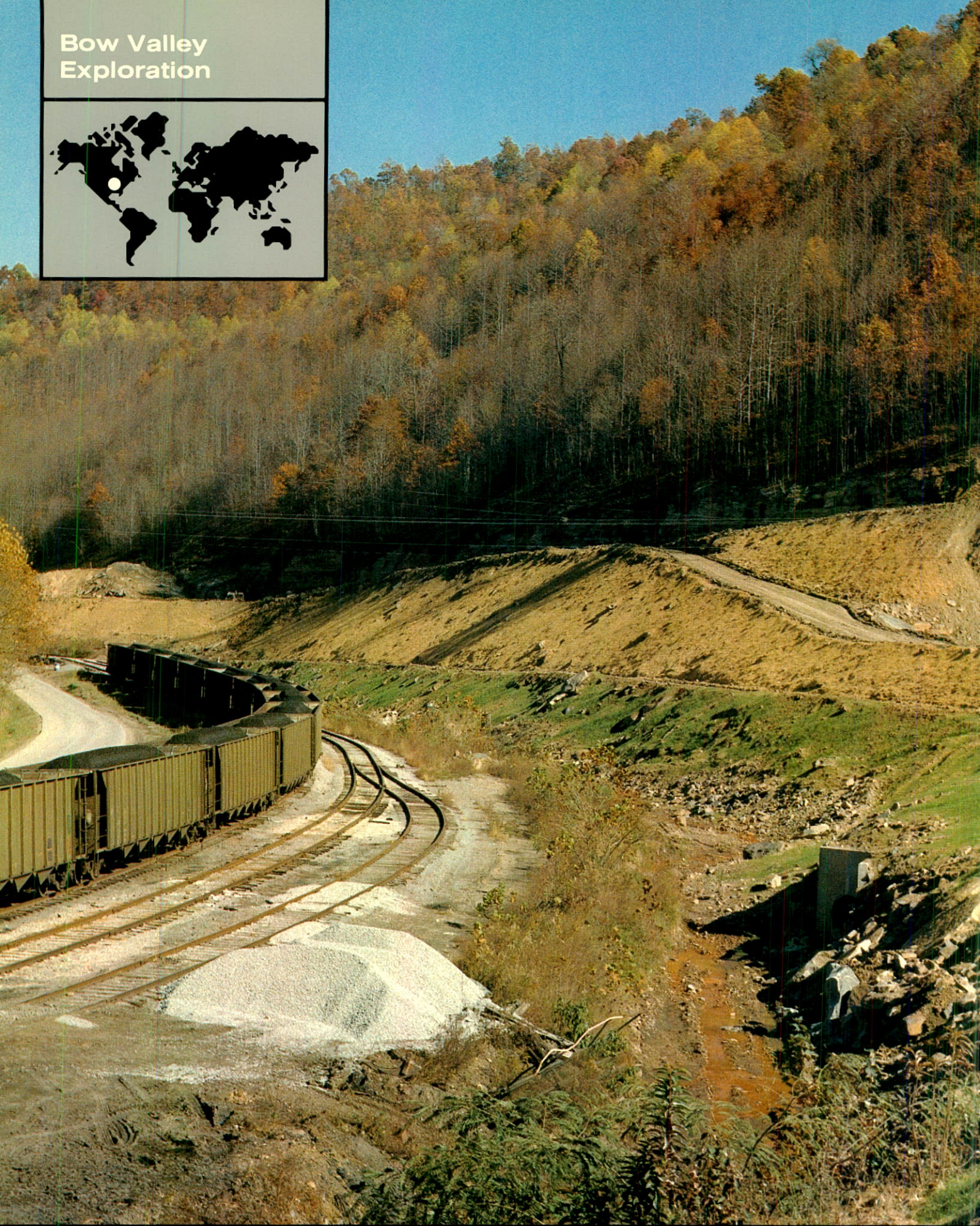
technical assistance contract covering approximately 3.1 million gross acres onshore South Sumatra. Bow Valley's interest will be progressively earned by spending U.S. \$11 million in 1980 and U.S. \$10.5 million in 1981.

Ten wells were drilled in 1980 and over 20 wells should be drilled in 1981. Present total production from several fields on this acreage amounts to approximately 1,500 barrels of oil per day, and several drillable exploration prospects have been identified. In addition, engineering studies are presently being conducted for the blending of heavy oil reserves from another field on this acreage with lighter crude oils. Bow Valley's proved reserves were estimated at December 31, 1980, to be 3,422,000 barrels of oil.



Flare tower installation on Arzanah Island, offshore Abu Dhabi.

Bow Valley Exploration



Bow Valley's new coal facilities in Bell County, Kentucky, commenced production in April 1981.



Bow Valley Exploration



COAL

Bow Valley's wholly-owned coal operation in Kentucky mines high-grade bituminous coal for sale to two utility companies in Florida and South Carolina.

The coal operation in Kentucky is located in two counties. Bow Valley has highly automated facilities and approximately 400 experienced non-union employees working on an 18,900-acre lease in Harlan County. The recently acquired 7,800-acre coal operation in Bell County will begin production in 1981.

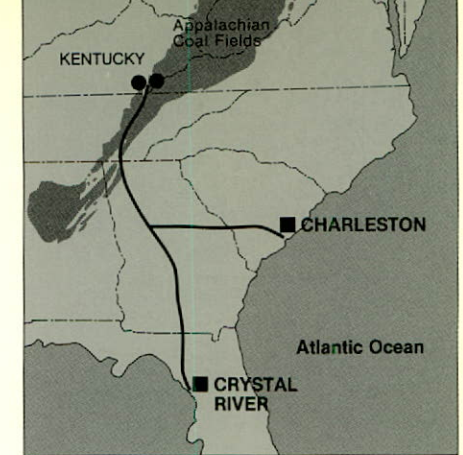
Bow Valley shipped 1,898,000 tons of coal from Harlan County in 1980, as compared to 1,544,000 tons in 1979. The selling prices for the comparative periods were both about \$35.00 per ton. Last year was the twelfth consecutive year of increased coal shipments from this property.

Bow Valley now markets virtually all of its production as steam coal, under two long term contracts. Florida Power Corporation has contracted to purchase 850,000 tons annually to the year 1995 from the Harlan County property. South Carolina Public Service Authority has contracted to purchase 1,000,000 tons of coal annually to the year 2000 from the Harlan County property and, from the Bell County property, 100,000 tons in 1981 increasing to 1,000,000 tons in 1986, through the year 2004. Florida Power Corporation also has an option on additional production in Harlan County that could increase sales

Coal seams in the Bell County property range from 30 to 80 inches in thickness.

annually by 500,000 tons in 1986. Bow Valley's total annual coal sales, as presently contracted, will therefore increase from 1,898,000 tons in 1980 to 2,850,000 tons in 1986. If the optioned coal is also sold, sales in 1986 could be 3,350,000 tons per year. The utility companies provide unit trains to take delivery of coal at the mines. Existing contracts provide for periodic price escalations based upon increased costs and inflation.

As at December 31, 1980, coal reserves at Harlan County were 46.9 million tons and, at Bell County, 29.4 million tons. The life index of the total coal reserves of 76.3 million tons, based on



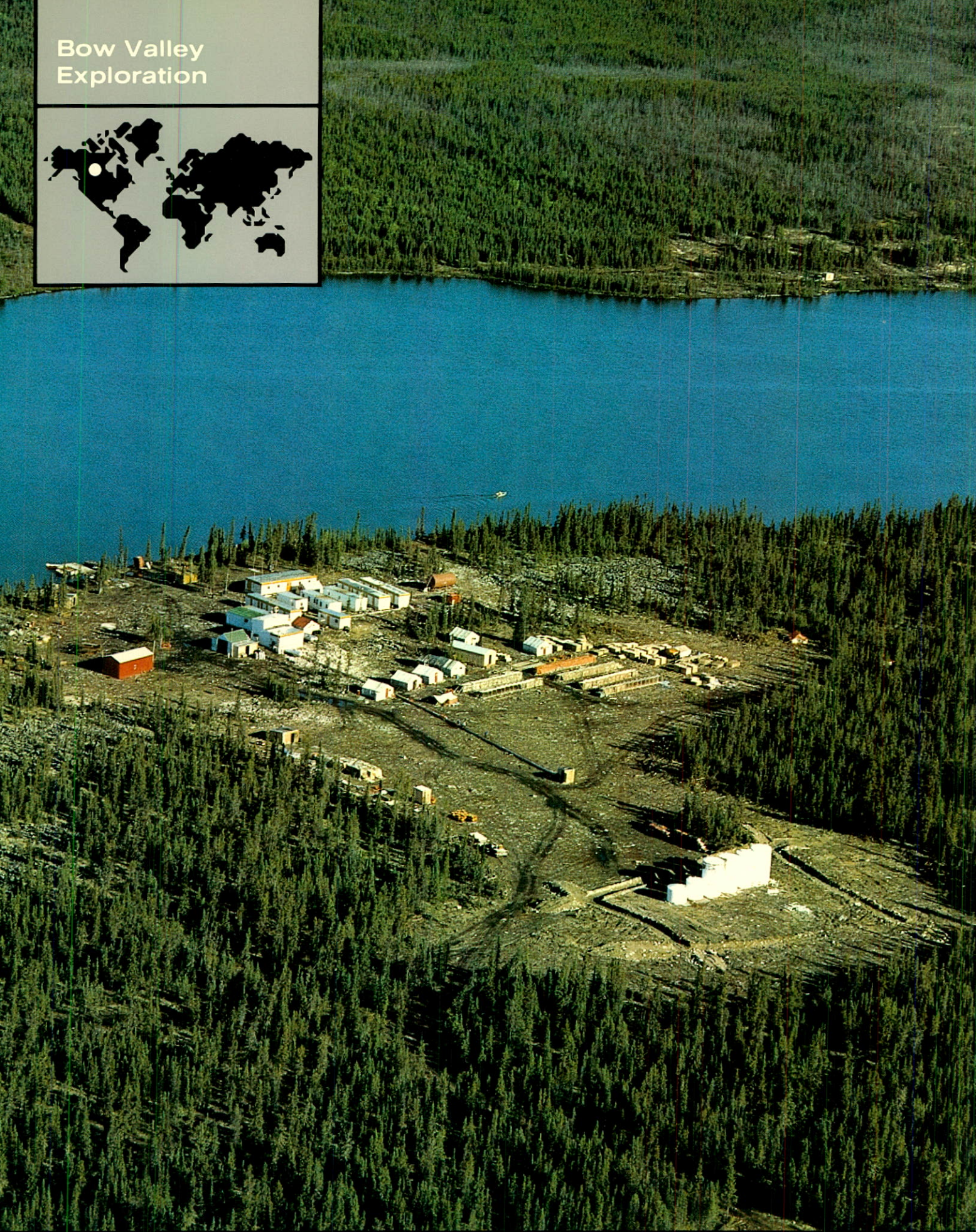
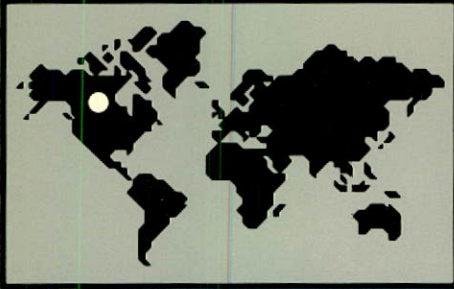
● Bow Valley Coal Properties

contracted and optioned production, is 32 years. Capital expenditures on the coal operation were \$13.3 million in 1980 and are estimated at \$18 million in 1981.

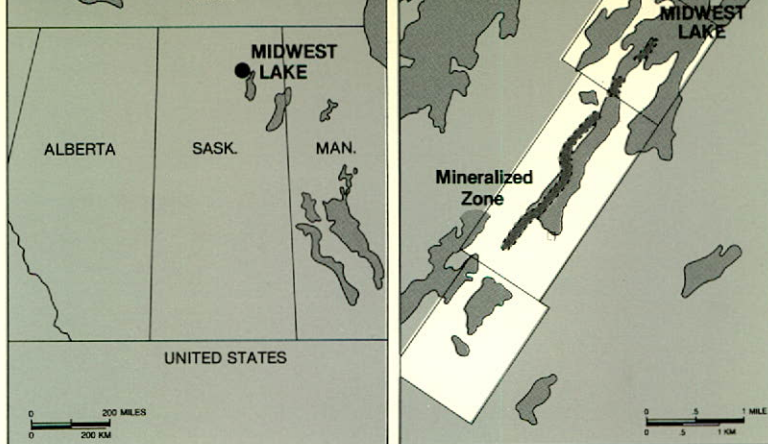
Coal being delivered by unit train to Florida Power in Crystal River, Florida.



Bow Valley Exploration



URANIUM



Bow Valley presently has a 20 percent interest in the Midwest Lake uranium deposit located in northeastern Saskatchewan. The deposit was discovered in early 1978 and as at December 31, 1980, 449 core holes had been drilled, of which 269 encountered mineralization. Reserves are estimated to be 75 to 80 million pounds of uranium oxide. The ore is of a very high grade and measures 32 pounds per ton, with a grade of 1.6 percent.

It is expected that the ore, which is at a depth of approximately 600 feet, will be mined by open pit methods. The latest estimates for the capital costs, including the surface facilities, tailings containment facilities, and the open pit development are \$371 million, without escalation for inflation or contingency. The ore will be mined over one and one-half years and placed in an 800,000-ton stock pile at the mill site. The uranium will be recovered from the ore in a processing plant. The stripping of overburden, drainage of the Mink Arm of Midwest Lake, and other

construction is planned to start during 1982. Ore mining will commence during 1986, and the initial production of yellow cake will take place in 1986 at a planned rate of about 4.4 million pounds of uranium oxide per year. Bow Valley's interest in the project reduces to 12.5 percent after recovery of its initial investment. Bow Valley spent \$1.7 million on the uranium program in 1980 and anticipates spending \$3 million in 1981.

Geologists examining core samples from the uranium deposit. Several core holes encountered various amounts of nickel, silver, and cobalt.



Operator's base camp at Midwest Lake in northeastern Saskatchewan.

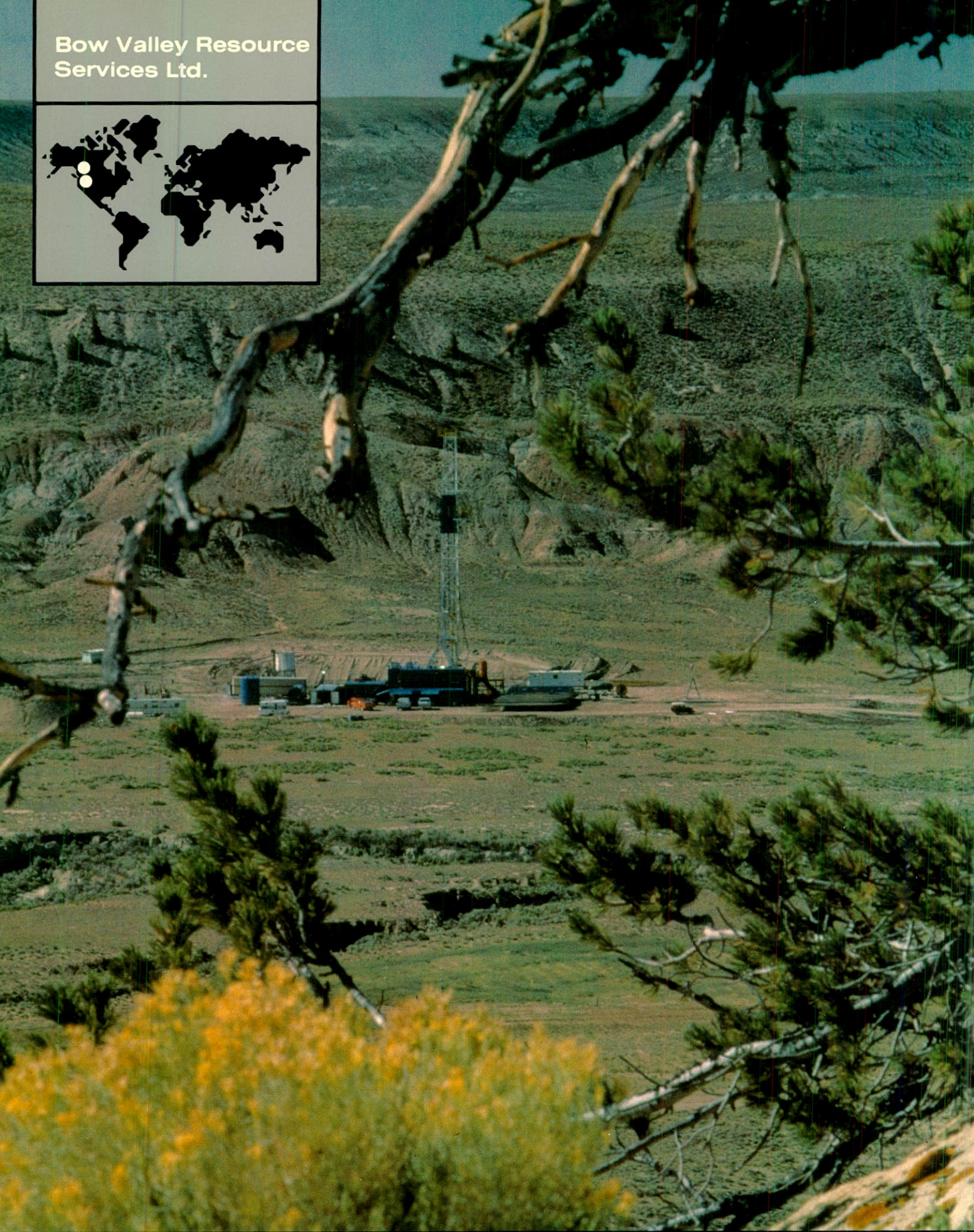
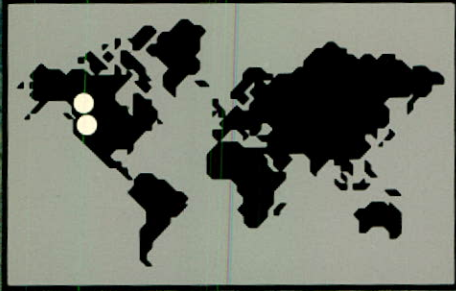
**Bow Valley Resource
Services Ltd.**



The Bredford Dolphin was acquired by BVRV in March 1981 for US \$112 million. The semi-submersible drilling rig can drill to 26,000 feet in 1,300 feet of water.



**Bow Valley Resource
Services Ltd.**



OVERVIEW

Bow Valley's service and manufacturing subsidiary, Bow Valley Resource Services Ltd., was a wholly-owned company until late February 1981. At that time, BVRS completed a public offering in Canada of common shares and convertible subordinated debentures that realized net proceeds of \$61.7 million and reduced Bow Valley's ownership to 78 percent.

As at December 31, 1980, BVRS had approximately 2,000 employees engaged in activities primarily related to the natural resource industry and operating in the following groups:

- Oilwell Drilling Group — provides contract drilling for the oil and gas industry.
- Industrial Products Group — designs and manufactures machinery and equipment for, and sells supplies to, the forest products, oil and gas, and mining industries.
- Diamond Drilling Group — conducts contract drilling for the mining industry and manufactures diamond drilling bits and related equipment.
- Environmental Products Group — manufactures heating and air conditioning equipment and is engaged in environmental engineering activities and products.

A BVRS oilwell drilling rig near Rock Springs, Wyoming.

OILWELL DRILLING

BVRS is one of the largest onshore oilwell drilling contractors in Canada, with about 1,100 employees operating 44 oilwell drilling rigs in western Canada and ten rigs in the United States. Included in the United States rig count is a six-rig operation in the Appalachians which remained a wholly-owned subsidiary of Bow Valley upon completion of the public offering by BVRS. During 1980, BVRS drilled 996 wells in Canada for 3,122,000 feet compared to 921 wells and 3,036,000 feet drilled in 1979. The 1980 footage is estimated to be eight percent of the total onshore footage drilled in Canada during such period. In 1980, BVRS spent \$37 million to expand its drilling capacity through the acquisition of additional rigs and \$7.8 million on capital improvements to existing equipment. Capital expenditures on land-based rigs in 1981 are estimated at \$8 million.

Although BVRS enjoyed a high level of drilling activity for most of 1980, the National Energy Program proposed by the Federal Government in October 1980 has materially affected the Canadian oilwell drilling industry. It is anticipated that there will be a substantial reduction in oil and gas exploration and development in western Canada in 1981. BVRS has taken the following steps to maintain profit margins in the Oilwell Drilling Group.

- During 1980, BVRS acquired a four-rig operation in the Rocky Mountain area of the United States complete with experienced crews and administrative personnel. Drilling activities in the United States have been at record levels and this trend should be continued as further encouragement is

offered to industry by way of price deregulation and market availability.

- Since December 31, 1980, BVRS has moved an additional three deep rigs from Alberta to its new base of operation in the United States. The market in the United States will be actively pursued for additional work for BVRS' deeper rigs.
- In March 1981, BVRS acquired a semi-submersible drilling rig for U.S. \$112 million. The new rig was built in The Netherlands and is equipped to operate in 1,300 feet of water and is capable of drilling to depths of 26,000 feet. The rig is contracted for four years off the east coast of Canada. BVRS believes that the Federal Government will emphasize the development of frontier areas and there should be a good market for Canadian rigs in offshore programs.

INDUSTRIAL PRODUCTS

The Industrial Products Group manufactures machinery for and sells and distributes supplies to the forest products, oil and gas, and mining industries.

- Manufacturing — operations in British Columbia consist of 170,000 square feet of manufacturing space and includes a foundry, steel fabrication shop, machine shop, saw shop, and facilities for the manufacture of electro-mechanical controls. Electrical and mechanical repair and field services are also provided. Operations near Portland, Oregon, include a fabrication shop and a machine shop. The manufacturing division employs 370 people.

Bow Valley Resource Services Ltd.



- Sales and Distribution — these activities employ 150 persons operating from 14 warehouses across Canada. Product lines include a wide range of mechanical and electrical power transmission items, such as motors, gears, chains, and conveyor equipment, as well as oilfield supplies.

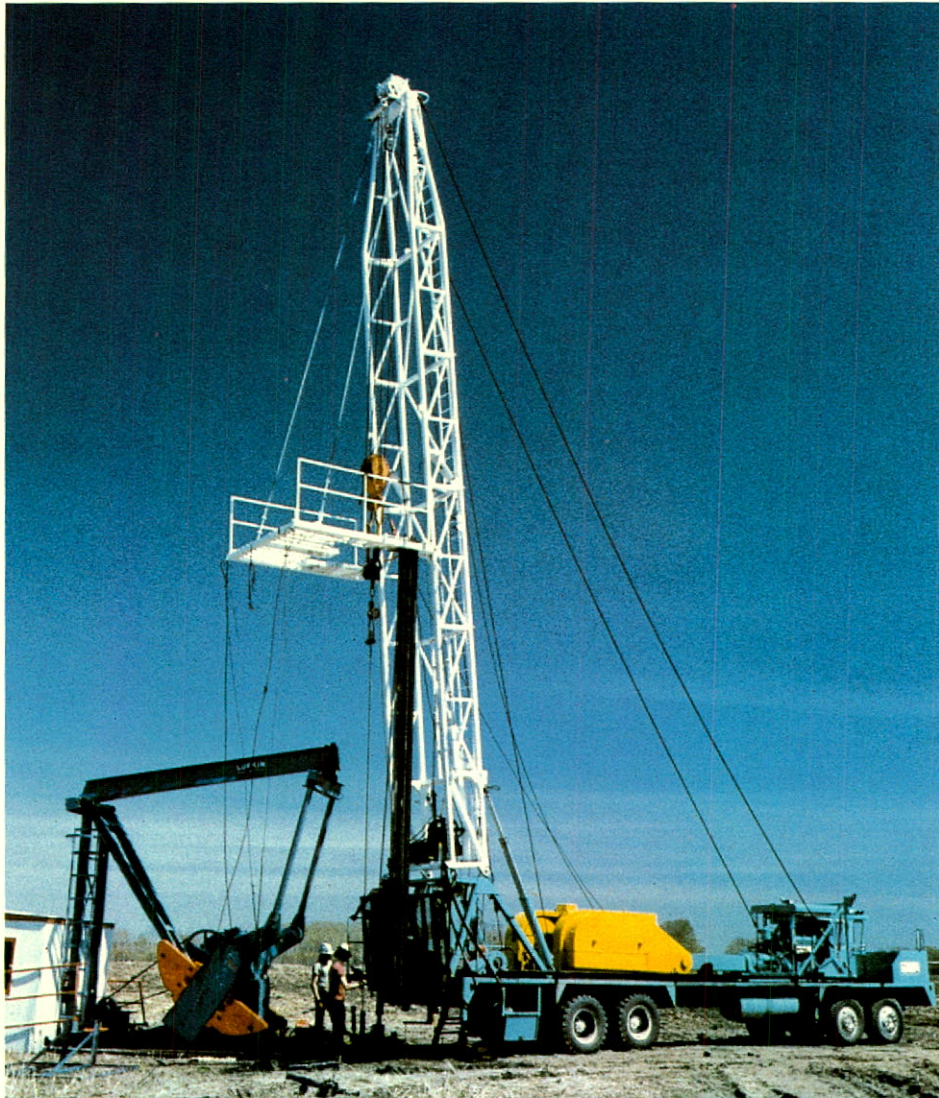
Operating profits in both areas continue to improve as management has reduced the volume of low-margin products and has placed greater emphasis on the manufacture and sale of specialty products, primarily to the oil and gas industry.

In March 1981, BVRS and NOVA, AN ALBERTA CORPORATION jointly acquired the truck division assets of White Motor Corporation of Canada Limited at a total cost of about \$30 million. White Motor assembles the Western Star heavy-truck at a plant in Kelowna, British Columbia, and is a profitable and well-managed operation.

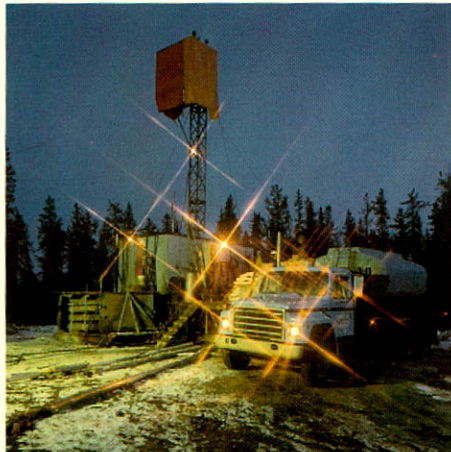
DIAMOND DRILLING

BVRS conducts contract drilling for the North American mining industry and manufactures diamond drilling bits and related equipment and supplies.

- Drilling — BVRS employs 150 persons operating 50 surface and 28 underground drills for the mining industry in the search for and delineation of base and precious metals, coal, and uranium deposits. Soil permeability and porosity testing is conducted for the construction industry. The division also engages in special projects, such as control drilling in the oil sands of Alberta and large-diameter coring in the oil shales in the United States. During 1980, BVRS drilled 505,700 feet as compared to 556,800 feet in 1979. New management in this



A BVRS-manufactured oilwell service rig changing a bottom hole pump on an oilwell in east central Alberta.



Surface diamond drill coring lead zinc deposits at Hay River, Northwest Territories.



Underground drill in a uranium mine in northern Saskatchewan.

division, appointed in 1979, implemented controls, improved employment policies, upgraded and modernized equipment, eliminated obsolete units, and closed down redundant locations. These changes together with other factors have substantially improved the financial performance of this division. It is anticipated that this favourable trend will continue.

- Manufacturing — the manufacturing division has a 16,500-square foot manufacturing plant in Vancouver, British Columbia. Approximately 100 employees manufacture drill bits, drills, rods, casing, and related equipment. This division is enjoying profitable operations and a higher percentage of

its sales is now being made to other companies in the industry.

ENVIRONMENTAL PRODUCTS

This group has one division which manufactures and sells heating and air conditioning equipment, and another which provides engineering services and products related to environmental monitoring and control.

- Heating and Air Conditioning Equipment — BVRS' product lines include furnaces and central air conditioning equipment for residential use, unit heaters, and large engineered ventilation, heating, and air conditioning products for commercial and institutional application. The majority of the heating equipment is gas-fired. This division has 160 employees operating two plants in Edmonton and one in Toronto, with combined manufacturing space of approximately 100,000 square feet. Sales offices are maintained in British Columbia, Alberta, and Ontario.

The market for BVRS' products is a function of activity in certain sectors of the Canadian construction industry.

During 1980, emphasis was placed on the commercial and industrial product market because of greater profitability, however, the residential market should improve during the next few years. Recent changes in energy costs and availability of supply should have a favourable influence on future conversions to gas-fired residential furnaces.

- Environmental Monitoring and Control — this division has offices, laboratory, and manufacturing facilities in Calgary and has approximately 100 employees. BVRS provides a wide range of environmental engineering services and products, including air quality monitoring, meteorological studies, environmental impact studies, laboratory services, monitoring instrumentation, and process control instrumentation.

BVRS has developed the capacity to provide products and services to the natural gas processing industry. Government and industry are placing a greater emphasis on source monitoring of sulphur compounds and, in particular, sulphur dioxide. This is due to the increasing concern for the harmful effects of pollution resulting from these compounds, especially the impact of acid rain on population centres.

Selected Consolidated Financial Data

(Canadian dollars — millions, except per share data)

	Year Ended December 31			Seven Months Ended December 31	Year Ended May 31	
	1980	1979	1978	1978	1978	1977
Revenue	\$ 362.1	\$ 275.6	\$ 232.5	\$ 143.8	\$ 174.7	\$ 131.7
Net income	32.0	16.4	14.3	8.9	10.9	4.8
Cash flow from operations	90.9	59.0	42.6	25.9	29.7	14.6
Share capital issued	63.8	26.1	1.1	0.6	0.6	0.2
Increase (decrease) in long term obligations						
Debt	1.8	(1.3)	205.0	27.9	178.8	1.3
Exploration and development advances ..	58.8	6.5	5.7	2.4	7.5	11.9
Capital expenditures	194.6	78.0	85.7	54.6	51.0	34.5
Total assets	659.5	480.3	418.1	418.1	373.8	150.5
Net book value of capital assets	510.2	360.6	324.4	324.4	290.6	92.8
Long term obligations						
Debt	257.4	255.6	256.9	256.9	229.0	50.2
Exploration and development advances ..	87.1	28.3	21.8	21.8	19.4	11.9
Shareholders' equity	184.4	95.9	54.8	54.8	46.2	36.0
Return on average shareholders' equity	22.8%	21.7%	30.1%	30.1%	26.4%	14.0%
Ratio of long term debt to shareholders' equity	1.4:1	2.7:1	4.7:1	4.7:1	5.0:1	1.4:1
Per common share						
Net income	\$ 0.85	\$ 0.49	\$ 0.47	\$ 0.29	\$ 0.36	\$ 0.14
Cash flow from operations	2.55	1.79	1.44	0.87	1.00	0.48
Dividends	0.10	0.033	0.029	0.017	0.021	0.017

Management's Discussion and Analysis

(Canadian dollars, unless otherwise indicated)

OPERATIONS

Bow Valley's revenues, net income, and cash flow from operations have increased significantly during the period 1978 to 1980, with the oil and gas, coal, and oilwell drilling segments being the main contributors.

Oil and Gas

Bow Valley's revenues and operating income from oil and gas production have increased significantly during the period 1978 to 1980 as a result of increased oil production and higher prices received from oil and gas.

	1980	1979	1978
AVERAGE DAILY PRODUCTION			
Oil (bbls)			
Canada	1,540	1,653	1,700
United States	2,366	2,168	2,111
Abu Dhabi	2,065	869	—
Indonesia	104	—	—
	<u>6,075</u>	<u>4,690</u>	<u>3,811</u>
Gas (Mcf)			
Canada	46,260	51,539	53,242
United States	15,761	15,207	13,785
	<u>62,021</u>	<u>66,746</u>	<u>67,027</u>
AVERAGE PRICE			
Oil (bbls)			
Canada	\$14.35	\$12.20	\$11.36
United States	30.45	16.93	13.61
Abu Dhabi	37.36	31.53	—
Indonesia	34.97	—	—
Weighted average	<u>\$28.89</u>	<u>\$17.97</u>	<u>\$12.61</u>
Gas (Mcf)			
Canada	\$ 2.36	\$ 1.65	\$ 1.39
United States	2.33	1.93	1.80
Weighted average	<u>\$ 2.35</u>	<u>\$ 1.71</u>	<u>\$ 1.48</u>

In Canada, oil production continues to decline as a result of the natural production characteristics of Bow Valley's oil wells. The decline in gas production has resulted from the

general reduction in demand for gas, particularly for the export market. The impact of these declines, however, was more than offset by the increase in average price received. Oil production in 1981 is presently anticipated to approximate 1980 levels and gas production should recover to the 1978-1979 levels. As provided for in the National Energy Program, prices of oil and gas will increase during 1981; however, the impact of higher prices will be more than offset by the new 8% Petroleum and Natural Gas Revenue Tax, introduced as part of the Program, which Bow Valley anticipates will approximate \$4.7 million in 1981. Bow Valley estimates that its Alberta gas fields are capable of producing approximately 80 MMcf of gas per day, should sufficient market demand exist.

While production of oil and gas has increased at a modest rate in the United States during the period 1978 to 1980, prices have increased significantly. The large oil price increase in 1980 was, however, partially offset by the Windfall Profit Tax introduced effective March 1, 1980, which reduced Bow Valley's net income before taxes by approximately \$3 million. Production and prices should show good increases in 1981 as a result of new discoveries in 1980, deregulation of oil prices and continuing increases of gas prices. During the month of January 1981, Bow Valley received an average price of \$37.26 per barrel of oil and \$2.64 per Mcf of gas.

Production from the Arzanah field in Abu Dhabi, in which Bow Valley has a 10 percent interest, commenced in September 1979 achieving average daily production for Bow Valley of 2,600 barrels during the four months ended December 1979, or an average daily rate of 869 barrels for the full year. The decline in daily production rate occurring in 1980 results from a proration notification received from the Abu Dhabi authorities reducing production for the entire field to 20,000 barrels per day from the designed flow rate of 35,000 barrels, commencing March 1980. The price Bow Valley receives for oil produced from the Arzanah field is based on world prices as determined by OPEC and approximated \$44.33 during the month of January 1981. Pressure maintenance facilities are being installed in order to enhance the ultimate recovery of reserves in place. This installation will require the lowering of production to approximately 15,000 barrels per day, commencing in January 1981.

Bow Valley began earning an interest in various Indonesian

oil fields effective January 1, 1980. It is anticipated that Bow Valley's production from these fields will increase significantly during 1981 as Bow Valley's participation rate and production increase. Furthermore, average prices received will improve in 1981 in line with increases in world prices as determined by OPEC. During January 1981, Bow Valley received an average price of \$40.60 per barrel.

Coal

Coal production increased by 23 percent in 1980 compared with a 24 percent increase in 1979. Substantial coal reserves were acquired in 1980 and long term sales contracts negotiated, with shipments scheduled to commence in 1981. Coal production in 1981 is expected to exceed 1980 by more than 10 percent and the average price received should also increase; during the month of January 1981, Bow Valley received an average price of \$38.48 per ton. Virtually all of Bow Valley's coal is now sold under long term contracts to Florida Power Company and South Carolina Public Service Authority.

	<u>1980</u>	<u>1979</u>	<u>1978</u>
Average daily production (tons)	5,185	4,229	3,399
Average price received per ton	\$35.56	\$35.41	\$33.78

Oilwell Drilling

Bow Valley's revenues and operating income from oilwell drilling have increased significantly during the period 1978 to 1980. The oilwell drilling industry in North America has enjoyed favourable market conditions during recent years which has prompted Bow Valley to increase the size of its drilling fleet, and has resulted in increased utilization rates and higher gross margins. During 1980, Bow Valley added four rigs to its U.S. fleet and five rigs to its Canadian fleet, retired two rigs, and disposed of one rig.

	<u>1980</u>	<u>1979</u>	<u>1978</u>
RIGS OPERATED AT YEAR END			
Canada — shallow rigs	23	22	19
Canada — deep rigs	21	20	19
	<u>44</u>	<u>42</u>	<u>38</u>
United States — deep rigs	10	6	6
	<u>54</u>	<u>48</u>	<u>44</u>

	<u>1980</u>	<u>1979</u>	<u>1978</u>
UTILIZATION RATE			
Canada — shallow rigs	63%	55%	57%
Canada — deep rigs	77	71	71
Weighted average	70	63	65
United States — deep rigs	70	53	70
Total weighted average	<u>70%</u>	<u>59%</u>	<u>63%</u>

The activity level in Canada started to decline in mid-1980 as a result of the growing surplus of gas. This decline was accentuated with the introduction of the National Energy Program in October 1980. Uncertainties arising from this Program have resulted in predictions of reduced Canadian oil and gas exploration, leading to decreased utilization in the Canadian oilwell drilling industry. Should this occur, it would likely have a greater impact on Bow Valley's deep rigs than on its shallow rigs. Bow Valley believes, however, that opportunities available in the rapidly expanding United States market and elsewhere reduce the likelihood of significant long term oversupply occurring in Canada.

In April 1980, Bow Valley acquired a four-rig drilling fleet in the western United States, known as Apollo Drilling, to complement its present operation in the eastern United States. This western operation is providing Bow Valley with a base for transferring deep rigs from Canada to the United States. During the first three months of 1981, three rigs were transferred to Apollo.

BVRS announced on March 17, 1981, that it had agreed to purchase a semi-submersible drilling rig at a cost approximating U.S. \$112 million. The rig is contracted to Petro-Canada Exploration Inc. for a four-year period from March 1981 and will commence drilling in Canadian waters in November, after drilling three wells offshore Europe and North Africa.

Other Segments

Over the period 1978 to 1980, the Industrial Products segment experienced improved economic conditions within the oil and gas, forest products, and mining industries which are its main customers. Improved bidding and cost saving procedures have also had a favourable impact on operating income. The general decline expected in 1981 in Canadian oil and gas exploration may have a moderating impact on this segment; however, management is

attempting to broaden its product line and market area to minimize any negative impact.

As a result of unsatisfactory performance in the Diamond Drilling segment during earlier periods, management has concentrated on consolidating its activities, improving bidding practices, and increasing operating efficiency. These efforts are reflected in the improved operating income in 1980. Continued improvement is anticipated for 1981.

The Environmental Products segment has had a steady growth during recent years. The market for the Company's instrumentation and consulting services, particularly in the North American gas processing industry, is continuing to expand as governments and industry place more emphasis on environmental control.

It has recently been announced that BVRS and NOVA, AN ALBERTA CORPORATION acquired the Canadian truck manufacturing operation of White Motor Corporation of Canada Limited at a cost approximating \$30 million.

GENERAL

General and administrative expenses have increased as a result of inflationary pressures, higher business levels, and administrative costs associated with increasing governmental reporting and taxation requirements.

Interest incurred by Bow Valley has increased substantially from \$25 million in 1978 to \$43 million in 1980. This results from increases in long term debt, primarily relating to the acquisition of Flying Diamond Oil Corporation in 1978, larger exploration and development advances received relating to the exploration and development of the Brae fields in the U.K. sector of the North Sea, and substantially higher interest rates in 1979 and 1980. The amount of this interest which has been capitalized has risen from \$2.8 million in 1978 to \$7.0 million in 1980, partly as a result of the change in accounting principles referred to in Note 1 to the Consolidated Financial Statements. The remaining interest, which has been expensed, has increased from \$22.2 million in 1978 to \$36.0 million in 1980.

Substantially all of Bow Valley's long term debt has been on a floating rate basis during the period 1978 to 1980. Management is attempting to reduce Bow Valley's vulnerability to floating interest rates through the issue of additional share capital, as it did in 1979 and 1980, and the

issue of long term debt at fixed rates. Late in 1980, Bow Valley issued U.S. \$40 million of 8% Convertible Subordinated Guaranteed Debentures and, in February 1981, BVRS realized approximately \$61.7 million from the issue of common shares and 11% Convertible Subordinated Debentures. Bow Valley is currently negotiating for the private sale of 15-year unsecured senior notes, expected to realize approximately U.S. \$100 million at a rate of 14½ percent.

An analysis of the effective income tax rate is contained in Note 10 to the Consolidated Financial Statements. The change in method of recording Canadian investment tax credits, reviewed in Note 1 to the Consolidated Financial Statements, reduced the 1980 effective rate from 44 percent to 42 percent.

Bow Valley's return on average shareholders' equity has declined from the year ended December 31, 1978, primarily because of the significant reduction in the ratio of long term debt to shareholders' equity which occurred in 1979 and 1980.

As explained in Note 14 to the Consolidated Financial Statements, Bow Valley will realize a significant extraordinary income item approximating \$18 million during the first quarter of 1981 in recognition of the increase in Bow Valley's share of the net equity of BVRS following the public issue of common shares in February 1981 by the latter company.

CAPITAL RESOURCES AND LIQUIDITY

Historically, Bow Valley has had an aggressive capital expenditure program which has required continual increases in long term debt and share capital. During the period 1978 to 1980 Bow Valley spent \$358 million on its capital expenditure program and an additional \$135 million in 1978 for the acquisition of Flying Diamond Oil Corporation. To finance these expenditures, Bow Valley obtained \$91 million through the issue of common and preferred shares during the period and \$71 million through advances in connection with the exploration and development of the Brae fields, and increased its long term debt by \$205 million with substantially all of this increase occurring in 1978.

MANAGEMENT'S DISCUSSION AND ANALYSIS (continued)

The following table provides an analysis of the capital expenditures made during the period 1978 to 1980 and the expenditures proposed for 1981, in millions of Canadian dollars:

	1981 (Proposed)	1980	1979	1978
Oil and gas				
Canada	\$ 18.0	\$ 18.4	\$ 12.5	\$ 12.7
United States	36.0	19.1	13.2	10.5
Abu Dhabi	8.0	9.0	14.5	15.5
United Kingdom	154.0	60.5	7.3	6.3
Norway	1.0	4.3	0.2	0.5
Indonesia	14.0	12.9	—	—
Other	3.0	3.3	5.7	1.5
	<u>234.0</u>	<u>127.5</u>	<u>53.4</u>	<u>47.0</u>
Coal	18.0	13.4	9.5	14.1
Uranium	3.0	1.7	1.2	0.3
Oilwell drilling equipment	142.0	44.8	9.7	12.6
Other capital assets	11.0	7.1	4.2	11.6
	<u>\$408.0</u>	<u>\$194.5</u>	<u>\$ 78.0</u>	<u>\$ 85.6</u>

This ambitious capital expenditure program will continue over the foreseeable future resulting from exploration and development costs incurred in connection with the Brae and Heimdal fields and the Midwest Lake uranium project, the continued expansion of coal operations, the potential acquisition of additional offshore semi-submersible drilling rigs, and other projects. Furthermore, increased investment in working capital will be required to reflect business growth and inflationary factors.

Exploration and development advances received for the Brae fields should approximate \$146 million in 1981. The remaining capital expenditures planned for 1981 will be financed through cash flow from operations and increases in long term debt. Bow Valley's existing lines of bank credit have recently been increased to provide for the acquisition of the semi-submersible drilling rig and the Canadian truck manufacturing operation of White Motor Corporation of Canada Limited.

Historically, Bow Valley has had a high debt-to-equity leverage position. As a result of the Flying Diamond acquisition in early 1978, Bow Valley's ratio of long term debt to shareholders' equity increased to 5.0:1. Subsequent growth in shareholders' equity, through profits generated and equity issues, has resulted in the ratio improving to

1.4:1 at December 31, 1980. Present indications are that the ratio at December 31, 1981, should not exceed 2.5:1, taking into consideration increased borrowing for the 1981 capital expenditure program and the impact of the BVRS public offering which occurred in February 1981. Bow Valley is projecting substantial increases in cash flow from operations over the balance of this decade as production commences in the Brae field in 1983 and from the proposed Heimdal and Midwest Lake projects in 1986. These increased cash flows will be used, in part, to repay outstanding long term debt and exploration and development advances.

Bow Valley does not prepare a detailed analysis of the impact of inflation on its results of operations; accordingly, it is impossible to quantify the impact of inflation. Virtually all of Bow Valley's costs and revenues are affected by inflation; on the other hand, general market conditions also have a significant impact. The current value of Bow Valley's reserves in place increases as a result of inflation and the real value of the funds borrowed to acquire or develop these reserves declines on a relative basis during inflationary periods.

The National Energy Program introduced the concept of paying higher exploration grants, particularly for frontier regions, to Canadian-controlled companies with higher levels of Canadian ownership. The final rules for determining Canadian ownership levels have not been published but Bow Valley believes it has sufficient Canadian ownership to qualify for exploration grants. If Bow Valley is able to qualify for the highest Canadian ownership category proposed in the Program, and if significant exploration expenditures are made in frontier areas, Bow Valley will receive substantial incentive payments. During recent years, Bow Valley has not undertaken significant exploration expenditures in Canadian frontier areas. Bow Valley's Annual Report to the United States Securities and Exchange Commission, on Form 10-K, contains a discussion of the various governmental regulations affecting Bow Valley in Canada, the United States, the United Kingdom, Norway, and other countries.

Consolidated Financial Statements

Summary of Significant Accounting Policies

These consolidated financial statements have been prepared by management in accordance with the accounting principles described below. Where necessary, management has made informed judgments and estimates in accounting for transactions which are not complete at the balance sheet date. In the opinion of management, these statements have been prepared within acceptable limits of materiality and are in accordance with Canadian generally accepted accounting principles appropriate in the circumstances.

The accounting principles used conform in all material respects with the International Accounting Standards adopted by the International Accounting Standards Committee (IASC). As explained in Note 15, Bow Valley's accounting principles do not conform in certain respects with United States generally accepted accounting principles.

Minor reclassifications have been made to information previously provided for prior periods to conform to the presentation adopted in 1980.

Principles of Consolidation

The consolidated financial statements include Bow Valley Industries Ltd. and all its subsidiaries as well as Bow Valley's proportionate interest in partnerships, some of which are limited partnerships in which Bow Valley is the general partner.

Foreign Currency Translation

Bow Valley translates foreign currency transactions and accounts of foreign subsidiaries to Canadian dollars as follows:

- Monetary assets and liabilities (mortgages and accounts receivable, current liabilities, and long term debt) are translated at year-end rates.
- Non-monetary assets and liabilities (inventories, capital assets, deferred income taxes, and exploration and development advances) are translated at rates in effect on the dates of the transactions (historical rates).
- Most revenues and expenses are translated at average rates in effect during the year. Certain expenses relating to non-monetary assets are translated at historical rates.
- The resulting gains and losses are reflected immediately in the statement of income, except for unrealized translation gains and losses relating to long term debt and mortgages receivable which are amortized over their remaining terms.

Substantially all of the deferred unrealized exchange losses relate to long term debt repayable in U.S. funds by subsidiaries operating within the United States or whose major revenues are in U.S. currency.

Capital Assets, Depreciation, and Depletion

(a) Oil and Gas Properties and Equipment

The full cost method of accounting used by Bow Valley for oil and gas operations results in all costs of exploring for and developing oil and gas reserves being capitalized and charged against earnings as explained below. These costs are accumulated in various cost centres, of which the most significant are:

- Producing Cost Centres — Canada, excluding frontier areas north of 60°N and offshore; United States; North Africa and the Middle East; and Southeast Asia.
- Non-Producing Cost Centres - Frontier Canada; and Europe, including the North Sea.

Costs accumulated in producing cost centres are depleted using the unit of production method based upon estimated proved reserves of oil and gas. Depreciation of oil and gas well equipment is also calculated on the unit of production basis. Depletion is not recorded for unusually significant investments in unproved properties pending the assessment of whether proved reserves have been discovered, or for major development projects if unusually significant development costs must be incurred prior to ascertaining the quantities of proved reserves attributable to the properties.

Expenditures in non-producing cost centres are amortized at the rate of 10% annually on a straight-line basis until sufficient reserves are established to warrant economically commercial production (at present only Europe), at which time amortization ceases. If exploration activities are discontinued in a cost centre, the unamortized costs in that area are charged to depletion expense.

(b) Mining Properties and Equipment

All costs of exploring for and developing mineral and coal reserves which relate to specific properties are capitalized. Costs accumulated for productive properties are depleted using the unit of production method when production commences, based on proved recoverable reserves. Costs relating to properties which are proven to be unproductive or uneconomic are written off to depletion expense during the period when such event occurs. Mining and related equipment is depreciated by the straight-line method over the estimated useful life of the equipment.

(c) Oilwell Drilling Equipment

Oilwell drilling equipment is depreciated by the declining balance method at the rate of 8% annually, based on an estimated 15-year life with a residual value of 30%.

Auditors' Report

(d) Other Capital Assets

Other capital assets are depreciated by various methods and at various rates designed to amortize the cost of the assets over their estimated useful lives.

Capitalization of Interest

Interest is capitalized on expenditures relating to the construction of major capital assets, including significant oil and gas properties and projects subject to current exploration or development activities in countries where Bow Valley does not have production. Interest is also capitalized on unusually significant exploration and development projects in producing cost centres where such costs are not being depreciated or depleted. Capitalization is discontinued when the asset is ready for use or production commences.

Industry Segments

Bow Valley has divided its operations into the following business segments for segmented financial reporting:

- Oil and Gas — The worldwide exploration, development and production of oil and natural gas;
- Coal — The development and mining of coal in the United States;
- Oilwell Drilling — The provision on a contract basis of oilwell drilling services in North America;
- Industrial Products — Various manufacturing and supply operations, primarily related to the natural resource industries in North America;
- Diamond Drilling — The provision of diamond drilling services on a contract basis and the manufacture of diamond drilling equipment, in North America;
- Environmental Products — The manufacture of heating and air-conditioning equipment and provision of engineering services and products related to environmental monitoring and control, in North America; and
- Other — Other operations, including uranium, which are presently insignificant with respect to Bow Valley's assets and operations.

TO THE SHAREHOLDERS OF
BOW VALLEY INDUSTRIES LTD.

We have examined the consolidated balance sheets of Bow Valley Industries Ltd. as at December 31, 1980 and 1979 and the consolidated statements of income, changes in financial position, segmented financial information, changes in components of working capital, and retained earnings for the years ended December 31, 1980 and 1979 and the seven months ended December 31, 1978. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the Company as at December 31, 1980 and 1979 and the results of its operations and the changes in its financial position for the years then ended and for the seven months ended December 31, 1978 in accordance with Canadian generally accepted accounting principles, which except for the changes in accounting principles referred to in Note 1 with which we concur, have been consistently applied.

Pricewaterhouse & Co.

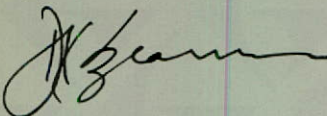
Chartered Accountants

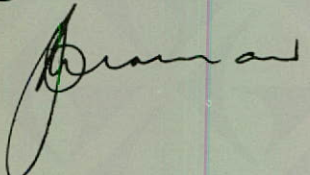
Calgary, Alberta, Canada
March 3, 1981

Consolidated Balance Sheet*(Canadian dollars — thousands)***ASSETS**

	December 31	
	<u>1980</u>	<u>1979</u>
Current Assets		
Accounts receivable	\$ 92,199	\$ 75,590
Inventories, at lower of cost or net realizable value	27,616	22,068
Prepaid expenses	3,358	2,081
	<u>123,173</u>	<u>99,739</u>
Capital Assets, at cost (Note 4)	640,212	453,768
Less accumulated depreciation and depletion	<u>130,002</u>	<u>93,148</u>
	510,210	360,620
Other Assets		
Mortgages and other receivables	7,499	4,854
Real estate held for resale, at cost	4,472	3,995
Unrealized foreign exchange losses, less amounts amortized	5,367	3,981
Other assets, at cost	8,731	7,124
	<u>26,069</u>	<u>19,954</u>
	<u><u>\$ 659,452</u></u>	<u><u>\$ 480,313</u></u>

Approved by the Board


 Director


 Director

LIABILITIES AND SHAREHOLDERS' EQUITY

December 31

	<u>1980</u>	<u>1979</u>
Current Liabilities		
Bank indebtedness (Note 5)	\$ 8,015	\$ 13,255
Accounts payable and accrued	55,557	39,903
Income taxes	120	6,206
Long term debt due within one year	<u>23,900</u>	<u>23,584</u>
	87,592	82,948
Long Term Debt (Note 6)	233,469	232,034
Exploration and Development Advances (Note 7)	87,144	28,327
Other Liabilities	9,714	1,689
Deferred Income Taxes	<u>57,120</u>	<u>39,374</u>
Total Liabilities	475,039	384,372
Shareholders' Equity (Note 8)		
7% Cumulative redeemable convertible Class B preferred shares	58,793	—
Redeemable preferred shares	—	1,590
Common shares — 34,992,503 (1979 - 34,455,267) shares issued and outstanding	60,009	53,455
Retained earnings	<u>65,611</u>	<u>40,896</u>
	184,413	95,941
Contingent Liabilities (Note 11)		
	<u><u>\$ 659,452</u></u>	<u><u>\$ 480,313</u></u>

Consolidated Statement of Income*(Canadian dollars — thousands, except per share data)*

	Year Ended December 31			Seven Months Ended December 31
	1980	1979	1978 (Unaudited)	1978
Revenue				
Service and manufacturing	\$ 193,097	\$ 156,259	\$ 143,531	\$ 88,553
Oil, gas, and coal, less royalties	157,650	110,196	83,249	51,793
Other	11,380	9,193	5,767	3,429
	<u>362,127</u>	<u>275,648</u>	<u>232,547</u>	<u>143,775</u>
Expenses				
Direct costs				
Service and manufacturing operations	136,883	112,549	106,290	63,811
Oil, gas, and coal operations	60,835	43,116	32,844	21,277
	<u>197,718</u>	<u>155,665</u>	<u>139,134</u>	<u>85,088</u>
Depreciation and depletion	41,423	30,108	25,570	15,341
General and administrative	32,185	25,797	23,886	14,743
Interest (Note 9)	35,953	33,543	22,244	15,365
	<u>307,279</u>	<u>245,113</u>	<u>210,834</u>	<u>130,537</u>
Income Before Income Taxes	54,848	30,535	21,713	13,238
Income Taxes (Note 10)				
Current	5,101	239	4,541	3,615
Deferred	17,746	13,929	2,830	754
	<u>22,847</u>	<u>14,168</u>	<u>7,371</u>	<u>4,369</u>
Net Income	\$ 32,001	\$ 16,367	\$ 14,342	\$ 8,869
Net Income per Common Share , based on the weighted average number of shares outstanding of (thousands)	34,631	32,884	29,238	29,337
Basic	\$ 0.85	\$ 0.49	\$ 0.47	\$ 0.29
Fully diluted	\$ 0.84	\$ 0.49	\$ 0.45	\$ 0.28

Consolidated Statement of Changes in Financial Position*(Canadian dollars — thousands, except per share data)*

	Year Ended December 31			Seven Months Ended December 31
	1980	1979	1978 (Unaudited)	1978
Source of Working Capital				
From operations				
Net income	\$ 32,001	\$ 16,367	\$ 14,342	\$ 8,869
Add non-cash items, principally depreciation, depletion and deferred income taxes	58,942	42,592	28,241	17,038
Cash Flow From Operations	90,943	58,959	42,583	25,907
Long term debt issued	122,834	33,276	185,071	28,467
Exploration and development advances	58,817	6,557	5,658	2,358
Common shares issued, less costs	5,347	26,118	1,139	606
Preferred shares issued, less costs	58,413	—	—	—
Other	11,768	4,224	5,549	5,183
	<u>348,122</u>	<u>129,134</u>	<u>240,000</u>	<u>62,521</u>
Application of Working Capital				
Additions to capital assets				
Oil, gas, and mining properties and equipment	142,630	64,137	61,416	41,122
Drilling and other equipment	51,921	13,892	24,268	13,496
	194,551	78,029	85,684	54,618
Less proceeds of disposals	5,938	14,372	7,513	5,541
	188,613	63,657	78,171	49,077
Acquisition of Flying Diamond Oil Corporation	—	—	135,005	—
Repayment of long term debt	125,693	42,758	19,805	11,133
Loans to officers and employees (Note 8 (c))	4,879	—	—	—
Dividends paid	5,639	1,292	1,425	918
Other	4,508	14,687	5,727	2,831
	<u>329,332</u>	<u>122,394</u>	<u>240,133</u>	<u>63,959</u>
Increase (Decrease) In Working Capital	18,790	6,740	(133)	(1,438)
Working Capital at Beginning of Year	16,791	10,051	10,184	11,489
Working Capital at End of Year	<u>\$ 35,581</u>	<u>\$ 16,791</u>	<u>\$ 10,051</u>	<u>\$ 10,051</u>
Cash Flow from Operations per Common Share, based on the weighted average number of shares outstanding				
Basic	\$ 2.55	\$ 1.79	\$ 1.44	\$ 0.87
Fully diluted	\$ 2.43	\$ 1.77	\$ 1.34	\$ 0.81

Consolidated Statement of Segmented Financial Information*(Canadian dollars — thousands)***Industry Segments**

	Year Ended December 31			Seven Months Ended December 31
	1980	1979	1978 (Unaudited)	1978
Revenue				
Oil and Gas	\$ 95,569	\$ 56,924	\$ 40,443	\$ 24,285
Coal*	67,154	55,054	43,551	28,089
Oilwell Drilling	103,609	75,376	61,979	39,785
Industrial Products	64,989	50,949	45,453	27,158
Diamond Drilling	16,731	14,804	14,476	8,834
Environmental Products	16,407	14,192	10,228	6,012
Other	1,287	10,092	19,439	11,162
	<u>365,746</u>	<u>277,391</u>	<u>235,569</u>	<u>145,325</u>
General corporate	5,403	6,247	4,032	1,951
Inter-segment eliminations	(9,022)	(7,990)	(7,054)	(3,501)
	<u>\$ 362,127</u>	<u>\$ 275,648</u>	<u>\$ 232,547</u>	<u>\$ 143,775</u>
Operating Income				
Oil and Gas	\$ 47,030	\$ 25,560	\$ 16,598	\$ 9,986
Coal	15,342	13,614	11,754	7,605
Oilwell Drilling	23,030	17,723	12,243	9,013
Industrial Products	5,350	4,006	2,809	1,934
Diamond Drilling	1,562	(40)	(255)	536
Environmental Products	2,540	1,525	915	247
Other	600	1,475	1,026	1,176
Operating income	95,454	63,863	45,090	30,497
General corporate	(4,653)	215	(1,133)	(1,894)
Interest	(35,953)	(33,543)	(22,244)	(15,365)
Income taxes	(22,847)	(14,168)	(7,371)	(4,369)
Net income	<u>\$ 32,001</u>	<u>\$ 16,367</u>	<u>\$ 14,342</u>	<u>\$ 8,869</u>
Assets, at year end				
Oil and Gas	\$ 395,350	\$ 280,444	\$ 226,936	\$ 226,936
Coal	79,710	75,922	66,715	66,715
Oilwell Drilling	104,326	59,965	51,816	51,816
Industrial Products	33,856	24,823	20,780	20,780
Diamond Drilling	7,449	7,807	7,470	7,470
Environmental Products	9,807	9,053	6,762	6,762
Other	12,800	15,466	26,760	26,760
	<u>643,298</u>	<u>473,480</u>	<u>407,239</u>	<u>407,239</u>
General corporate	16,154	6,833	10,858	10,858
	<u>\$ 659,452</u>	<u>\$ 480,313</u>	<u>\$ 418,097</u>	<u>\$ 418,097</u>
Capital Expenditures				
Oil and Gas	\$ 129,429	\$ 53,821	\$ 47,799	\$ 27,767
Coal	13,348	9,495	14,063	13,574
Oilwell Drilling	45,645	10,339	12,912	9,438
Industrial Products	2,850	1,207	350	246
Diamond Drilling	532	572	626	232
Environmental Products	430	697	311	174
Other	1,749	1,548	8,626	2,208
	<u>193,983</u>	<u>77,679</u>	<u>84,687</u>	<u>53,639</u>
General corporate	568	350	997	979
	<u>\$ 194,551</u>	<u>\$ 78,029</u>	<u>\$ 85,684</u>	<u>\$ 54,618</u>

* Substantially all of the coal is sold under long term contracts to the Florida Power Company and the South Carolina Public Service Authority.

	Year Ended December 31			Seven Months Ended December 31
	1980	1979	1978 (Unaudited)	1978
Depreciation and Depletion Expense				
Oil and Gas	\$ 22,862	\$ 16,202	\$ 12,736	\$ 7,743
Coal	8,994	7,004	5,335	3,221
Oilwell Drilling	8,034	5,113	5,324	3,332
Industrial Products	580	429	416	232
Diamond Drilling	406	374	383	220
Environmental Products	300	248	221	136
Other	17	594	1,073	416
	<u>41,193</u>	<u>29,964</u>	<u>25,488</u>	<u>15,300</u>
General corporate	230	144	82	41
	<u>\$ 41,423</u>	<u>\$ 30,108</u>	<u>\$ 25,570</u>	<u>\$ 15,341</u>

Geographic Areas

Revenue				
Canada	\$ 198,562	\$ 166,095	\$ 147,945	\$ 89,285
United States	133,464	95,750	81,338	52,852
Abu Dhabi	24,946	8,703	—	—
Other	1,248	—	—	—
	<u>358,220</u>	<u>270,548</u>	<u>229,283</u>	<u>142,137</u>
General corporate	5,403	6,247	4,032	1,951
Inter-area eliminations	(1,496)	(1,147)	(768)	(313)
	<u>\$ 362,127</u>	<u>\$ 275,648</u>	<u>\$ 232,547</u>	<u>\$ 143,775</u>
Operating Income				
Canada	\$ 49,148	\$ 38,524	\$ 28,190	\$ 17,984
United States	32,703	20,482	17,720	12,843
Abu Dhabi	13,673	5,722	—	—
Other	(70)	(865)	(820)	(330)
Operating income	<u>95,454</u>	<u>63,863</u>	<u>45,090</u>	<u>30,497</u>
General corporate	(4,653)	215	(1,133)	(1,894)
Interest	(35,953)	(33,543)	(22,244)	(15,365)
Income taxes	(22,847)	(14,168)	(7,371)	(4,369)
Net income	<u>\$ 32,001</u>	<u>\$ 16,367</u>	<u>\$ 14,342</u>	<u>\$ 8,869</u>
Assets, at year end				
Canada	\$ 208,889	\$ 159,760	\$ 141,292	\$ 141,292
United States	252,582	216,475	197,712	197,712
United Kingdom	98,581	36,759	27,600	27,600
Abu Dhabi	47,954	45,004	24,200	24,200
Other	35,292	15,482	16,435	16,435
	<u>643,298</u>	<u>473,480</u>	<u>407,239</u>	<u>407,239</u>
General corporate	16,154	6,833	10,858	10,858
	<u>\$ 659,452</u>	<u>\$ 480,313</u>	<u>\$ 418,097</u>	<u>\$ 418,097</u>

Consolidated Statement of Changes in Components of Working Capital

(Canadian dollars — thousands)

	Year Ended December 31			Seven Months Ended December 31
	1980	1979	1978 (Unaudited)	1978
Increase (Decrease) In Current Assets				
Accounts receivable	\$ 16,609	\$ 27,868	\$ 20,808	\$ 5,923
Inventories	5,548	2,244	3,636	114
Prepaid expenses	1,277	(491)	1,759	364
Net increase in current assets	<u>23,434</u>	<u>29,621</u>	<u>26,203</u>	<u>6,401</u>
Increase (Decrease) In Current Liabilities				
Bank indebtedness	(5,240)	2,026	(3,587)	3,546
Accounts payable and accrued	15,654	6,651	19,142	1,153
Income taxes	(6,086)	3,502	2,074	531
Long term debt due within one year	316	10,702	8,707	2,609
Net increase in current liabilities	<u>4,644</u>	<u>22,881</u>	<u>26,336</u>	<u>7,839</u>
Increase (Decrease) In Working Capital	<u>\$ 18,790</u>	<u>\$ 6,740</u>	<u>\$ (133)</u>	<u>\$ (1,438)</u>

Consolidated Statement of Retained Earnings

(Canadian dollars — thousands, except per share data)

	Year Ended December 31			Seven Months Ended December 31
	1980	1979	1978 (Unaudited)	1978
Retained Earnings at Beginning of Year	\$ 40,896	\$ 25,820	\$ 12,888	\$ 17,854
Add				
Net income	32,001	16,367	14,342	8,869
Contributed surplus arising on open market redemption of Series A preferred shares	17	1	15	15
	<u>32,018</u>	<u>16,368</u>	<u>14,357</u>	<u>8,884</u>
Deduct				
Dividends paid				
7% Class B preferred shares	2,138	—	—	—
5½% preferred shares Series A	17	69	71	54
5% second preference shares	4	126	500	375
Common shares	3,480	1,097	854	489
Capital transactions relating to the issue and redemption of preferred shares, less income taxes (Note 8)	1,664	—	—	—
	<u>7,303</u>	<u>1,292</u>	<u>1,425</u>	<u>918</u>
Retained Earnings at End of Year	\$ 65,611	\$ 40,896	\$ 25,820	\$ 25,820
Dividends Paid per Common Share	\$0.10	\$0.033	\$0.029	\$0.017

Notes to Consolidated Financial Statements

(Canadian dollars — tabular amounts in thousands, except per share data)

1. Changes in Accounting Principles

As a result of the adoption in the United States in 1980 of Statement No. 34 of the Financial Accounting Standards Board which substantially revised the generally accepted method of capitalizing interest costs, Bow Valley changed its method of calculating interest to be capitalized, effective January 1, 1980. This revision is in accordance with Canadian generally accepted accounting principles and, in the opinion of management, appropriate for Bow Valley.

The change involves the capitalization of interest on specific capital projects, as discussed in the Summary of Significant Accounting Policies, on the basis of interest incurred on all long term and current debt and exploration and development advances. Previously, only interest on debt specifically obtained for the construction or development of such capital projects was capitalized. The effect in 1980 was to increase the amount of interest capitalized by \$3,888,000, net income by \$2,187,000 (\$0.06 per share) and cash flow from operations by \$3,888,000 (\$0.11 per share).

Effective January 1, 1980, Bow Valley changed its method of recording Canadian investment tax credits to conform with the method used by Bow Valley for recording United States investment tax credits. Accordingly, all investment tax credits are now recorded as a reduction of income tax expense, whereas previously the Canadian credits had been recorded as a reduction of the costs of the related capital assets. The effect in 1980 was to increase net income by \$1,335,000 (\$0.04 per share) and cash flow from operations by \$2,534,000 (\$0.07 per share). The impact on earlier years is not material.

Both of these changes were adopted in the fourth quarter of 1980, with effect from January 1, 1980, and the previously reported first three quarters of 1980 have been restated.

2. Change in Accounting Estimate

Based on operating performance and physical condition, Bow Valley changed its depreciation rate for oilwell drilling rigs from 20% declining balance to 8% declining balance, effective January 1, 1979. As a result, net income was increased by \$1,489,000 (\$0.05 per share) in 1979. Net income was not restated retroactively for 1978.

3. Comparative Financial Information

During 1978 Bow Valley changed its year end from May 31 to December 31, resulting in a seven-month fiscal period ended December 31, 1978. Management believes that its estimate of the results for the twelve months ended December 31, 1978, which has been presented but not audited, is more informative for comparison with 1979 and 1980.

4. Capital Assets

	1980		1979	
	Cost	Net Book Value	Cost	Net Book Value
Oil and gas properties and equipment by cost centre, using full cost accounting method				
Canada, excluding frontier areas	\$ 99,319	\$ 68,142	\$ 80,159	\$ 55,080
United States	139,616	111,410	120,728	103,871
North Africa and the Middle East	52,639	44,666	43,722	40,906
Europe, including the North Sea	107,973	107,609	41,983	41,619
Other, including Southeast Asia	22,670	19,146	8,737	5,387
	<u>422,217</u>	<u>350,973</u>	<u>295,329</u>	<u>246,863</u>
Mining properties and equipment	96,759	75,356	81,956	69,542
Oilwell drilling equipment	91,981	66,123	52,790	30,512
Other capital assets	29,255	17,758	23,693	13,703
	<u>\$ 640,212</u>	<u>\$ 510,210</u>	<u>\$ 453,768</u>	<u>\$ 360,620</u>

5. Bank Indebtedness

Bow Valley has established revolving lines of short term credit with banks, providing for overdrafts, loans and bankers' acceptances. Borrowings under these lines of credit can be made at any time and bear interest based on prevailing bank prime rates; there are no significant compensating balance requirements or commitment fees. Unused lines of short term credit approximated \$7.2 million at December 31, 1980 and are additional to the unused lines of long term credit discussed in Note 6.

The average month-end indebtedness under the lines of short term credit during 1980 approximated \$16.1 million and the maximum outstanding at any month end was \$27.5 million. The weighted average interest rate for the year was 15.1% and was 18.7% at December 31, 1980.

NOTES (continued)

6. Long Term Debt

	1980	1979
Bank loans (including U.S. \$103.6 million)	\$ 206,689	\$ 236,068
8% Convertible subordinated guaranteed debentures, (U.S. \$40 million)	47,788	—
Other (including U.S. \$1.4 million)	2,892	19,550
	<u>257,369</u>	<u>255,618</u>
Less amount due within one year	23,900	23,584
	<u>\$ 233,469</u>	<u>\$ 232,034</u>

The bank loans are secured by various oil and gas properties and other capital assets and bear interest which approximated 13.4% and 15.9% on a weighted average basis for 1979 and 1980, respectively, and 19.9% as at December 31, 1980, generally based on prevailing bank prime rates. These loans are repayable over varying periods of time extending to 1990; however, as is normal practice in Canada, bank loans approximating \$187.7 million are evidenced by demand loans, and the banks reserve the right to call them at any time.

The 8% convertible subordinated guaranteed debentures are due in 1995 and were issued in December, 1980 by Bow Valley Investments B.V., a wholly-owned subsidiary incorporated in The Netherlands. Interest is payable semi-annually, with Canadian, United States or United Kingdom withholding taxes, if any, payable by Bow Valley. These debentures, which were issued in denominations of U.S. \$1,000, are convertible at any time after April 15, 1981 and before the due date into approximately 52 common shares (subject to anti-dilutive provisions) of Bow Valley Industries Ltd. for an effective conversion price of Cdn. \$23¹/₈ per common share.

On December 15, 1985, the debentures may be redeemed at the option of the holder for an amount equal to 125% of their principal amount. Bow Valley may fully or partially redeem the debentures at any time after December 15, 1985 at their principal amount, or at any time prior to December 15, 1985 provided that the average market price of Bow Valley's common shares has been at least 130% of the conversion price then in effect for a specified period of time, at an amount declining on an annual basis from 105% to 101% of their principal amount.

Redemption by Bow Valley is permitted at any time, and without premium, if a detrimental change occurs in the withholding tax regulations of The Netherlands, United States or United Kingdom which affects payments made relating to these debentures. These debentures are subordinated to Bow Valley's other debt and liabilities.

The aggregate repayments required on long term debt are:

	Canadian Dollars or Equivalents	U.S. Dollar Repayments
1981	\$ 23,900	\$ 11,714
1982	28,273	14,207
1983	23,871	12,533
1984	18,361	9,572
1985	16,528	8,036
Thereafter	<u>146,436</u>	<u>88,983</u>
	<u>\$ 257,369</u>	<u>\$ 145,045</u>

At December 31, 1980, Bow Valley had unused lines of long term credit available for general corporate purposes approximating \$52.0 million. Bow Valley pays monthly commitment fees at an annual rate of ¹/₈ of 1% on unused lines of credit.

7. Exploration and Development Advances

Bow Valley receives interest bearing, non-recourse advances in connection with the exploration and development of United Kingdom Blocks 16/2a, 16/3a, and 16/7a (Brae) in the North Sea. Interest rates are 6³/₄% on the first U.S. \$40 million of advances and will be at prevailing market rates relating to the principal lender's cost and source of financing on the remaining advances. Advances aggregated U.S. \$76,324,000 at December 31, 1980 and the principal lender was using short term LIBOR financing at a rate of 16.86%.

The advances and interest are repayable solely out of 70% of Bow Valley's share of net proceeds of production after cash income taxes from these Blocks when commercial production commences. The United Kingdom authorities have approved the development plans for the South Brae field; production is expected to commence in 1983.

8. Shareholders' Equity

(a) 7% CUMULATIVE REDEEMABLE CONVERTIBLE CLASS B PREFERRED SHARES

Bow Valley is authorized to issue up to 1,000,000 Class B preferred shares having a par value of \$60 each.

Following a public offering dated April 25, 1980, Bow Valley received \$60 million, before expenses, from the issue of 1,000,000 7% cumulative redeemable convertible Class B preferred shares having a par value of \$60 each. Underwriters' commission and other expenses related to this issue (\$2,588,000 less income taxes of \$1,001,000) have been charged to retained earnings.

The Class B preferred shares are convertible by the holder at any time prior to May 16, 1990 into approximately 3½ common shares of Bow Valley Industries Ltd. at a conversion price of \$17.10, which is subject to adjustment in certain circumstances. Bow Valley may redeem these shares at any time after May 14, 1982 at an initial price of \$63 per share declining to \$60 per share after May 15, 1989, provided that redemption may not occur prior to May 15, 1985 unless the weighted average market price of Bow Valley's common shares on The Toronto Stock Exchange for a specified 30 trading day period has been at least 125% of the conversion price then in effect (an average price requirement of \$21.375, at present). Bow Valley has certain purchase fund obligations commencing July, 1990, based on the par value of preferred shares outstanding on May 16, 1990.

During 1980, 20,114 preferred shares having a par value of \$1,207,000 were converted by the holders into 70,566 common shares. As a result, 979,886 preferred shares were outstanding at December 31, 1980.

(b) REDEEMABLE PREFERRED SHARES

On April 15, 1980, all of the issued and outstanding 5½% cumulative redeemable preferred shares Series A, and the 5% cumulative redeemable second preference shares were redeemed and cancelled at an aggregate redemption price of \$1,611,000. The excess of the redemption price over book value of these shares, amounting to \$77,000, was charged to retained earnings.

Prior to April 15, 1980, minor amounts of the Series A preferred shares had been purchased for cancellation at prices resulting in small gains on redemption, which have been credited to retained earnings.

The second preference shares were convertible prior to April 2, 1979 into approximately 20 common shares each; 96,600 preference shares were converted into 1,932,021 shares during 1979.

(c) COMMON SHARES

Bow Valley is authorized to issue up to 60,000,000 no par value common shares. Details of common shares issued during the period 1978 to 1980 are:

	1980		1979		1978 (12 months)		1978 (7 months)	
	Shares Issued	Consideration	Shares Issued	Consideration	Shares Issued	Consideration	Shares Issued	Consideration
Issued for cash								
Employee stock options . . .	466,670	\$ 5,347	139,650	\$ 508	344,880	\$ 1,139	173,580	\$ 606
Private placement at \$8.67 per share, less costs of \$390,000 . . .	—	—	3,000,000	25,610	—	—	—	—
	<u>466,670</u>	<u>5,347</u>	<u>3,139,650</u>	<u>26,118</u>	<u>344,880</u>	<u>1,139</u>	<u>173,580</u>	<u>606</u>
Issued on conversion of second preference shares	—	—	1,932,021	9,660	—	—	—	—
Class B preferred shares	70,566	1,207	—	—	—	—	—	—
	<u>537,236</u>	<u>\$ 6,554</u>	<u>5,071,671</u>	<u>\$35,778</u>	<u>344,880</u>	<u>\$ 1,139</u>	<u>173,580</u>	<u>\$ 606</u>

During 1980, stock options exercisable at any time over a 10-year period were granted to various officers and senior employees permitting them to purchase 554,400 common shares at a price of \$15.79 each and 11,000 common shares at a price of \$23.63 each. No outstanding options expired or were cancelled during the year.

Options for 309,000 common shares at \$15.79 each were exercised during 1980 by certain officers and senior employees under a plan providing for 10-year interest-free loans for 100% of the purchase price. These loans were made to 6 officers (\$2,454,000) and 10 senior employees (\$2,425,000); the shares purchased are being held by an independent trustee as security for the loans. Repayment of the loans is required at an annual rate of 5% of the original balance plus an amount equal to the dividends paid on the related shares. Accelerated maturities are required in the event of retirement or other termination of employment. The balances outstanding at December 31, 1980 were \$2,323,000 and \$2,297,000, respectively, and have been included in the balance sheet under the caption "mortgages and other receivables", with the portions due within one year included under "accounts receivable".

NOTES (continued)

At December 31, 1980, the following options were outstanding:

Number of Shares	Option Price		Expiry Date
	Per Share	Total	
66,000	\$4.02	\$ 265	June 3, 1981
101,700	3.33	339	June 8, 1982
43,500	4.89	213	June 7, 1983
241,900	15.79	3,819	May 27, 1990
11,000	23.63	260	August 13, 1990
<u>464,100</u>		<u>\$4,896</u>	

None of the options outstanding at December 31, 1980 are subject to the provision of interest-free loans.

At December 31, 1980, 3,438,196 common shares were reserved for conversion of the Class B preferred shares, 2,076,886 common shares for conversion of the convertible debentures (Note 6), and 464,100 common shares for options issued under the employee stock option plan. In addition, 811,630 common shares are reserved for future issuance of options to officers and employees.

All information in these financial statements has been adjusted to retroactively reflect the 3 for 1 stock split on May 13, 1980 and the 2 for 1 split on October 27, 1978.

9. Interest Expensed and Capitalized

	1980	1979	1978 (12 months) (Unaudited)	1978 (7 months)
Interest incurred on				
Long term debt	\$37,070	\$33,401	\$22,087	\$15,342
Exploration and development advances	3,121	1,783	1,431	905
Other	2,771	2,169	1,498	1,016
	<u>42,962</u>	<u>37,353</u>	<u>25,016</u>	<u>17,263</u>
Less interest capitalized	7,009	3,810	2,772	1,898
Interest expensed	<u>\$35,953</u>	<u>\$33,543</u>	<u>\$22,244</u>	<u>\$15,365</u>

10. Income Taxes

Bow Valley's income before income taxes has been earned as follows:

	1980	1979	1978 (12 months) (Unaudited)	1978 (7 months)
Canada	\$33,870	\$25,658	\$19,363	\$11,417
Other	20,978	4,877	2,350	1,821
	<u>\$54,848</u>	<u>\$30,535</u>	<u>\$21,713</u>	<u>\$13,238</u>

Total income tax provisions have varied from the Canadian corporate tax rate of 47%, for the following reasons:

	1980		1979		1978 (12 months) (Unaudited)		1978 (7 months)	
	Amount	%	Amount	%	Amount	%	Amount	%
Income taxes at the Canadian corporate tax rate	\$25,779	47	\$14,351	47	\$10,205	47	\$6,222	47
Add (deduct)								
Effect of higher foreign tax rates on foreign earned income	4,722	9	1,692	6	—	—	—	—
Crown charges disallowed for tax purposes	6,620	12	5,496	18	4,782	22	2,587	19
Resource profits rate reductions	(6,967)	(13)	(5,519)	(18)	(6,499)	(30)	(3,633)	(27)
Investment tax credit	(2,534)	(4)	(863)	(3)	(203)	(1)	(203)	(1)
Permanent difference between foreign depreciation and depletion for tax purposes over book	(2,580)	(5)	—	—	—	—	—	—
Provincial resource industry rebates	(1,545)	(3)	(1,425)	(5)	(1,443)	(7)	(772)	(6)
Other	(648)	(1)	436	1	529	3	168	1
Actual income tax provision	<u>\$22,847</u>	<u>42</u>	<u>\$14,168</u>	<u>46</u>	<u>\$7,371</u>	<u>34</u>	<u>\$4,369</u>	<u>33</u>

The actual income tax provision can be analyzed as follows:

	1980	1979	1978 (12 months) (Unaudited)	1978 (7 months)
Current				
Canada	\$ 2,995	\$ 5,649	\$ 2,966	\$ 2,635
Other	2,106	(5,410)	1,575	980
	<u>5,101</u>	<u>239</u>	<u>4,541</u>	<u>3,615</u>
Deferred				
Canada	10,731	4,280	2,975	1,006
Other	7,015	9,649	(145)	(252)
	<u>17,746</u>	<u>13,929</u>	<u>2,830</u>	<u>754</u>
	<u>\$22,847</u>	<u>\$14,168</u>	<u>\$ 7,371</u>	<u>\$ 4,369</u>

Deferred income tax expense results from timing differences in the recognition of revenues and expenses for tax and financial statement purposes, primarily relating to depreciation and depletion.

11. Contingent Liabilities

(a) OUTSTANDING LITIGATION

Bow Valley is a defendant in the following lawsuits:

- (i) On December 23, 1977, an action was filed in the United States District Court for the Southern District of New York by the plaintiff, Sol Levine, against Flying Diamond, H. P. McLish, Gary F. Sprouse and Harold U. Zerbe. The complaint alleges violations of the Securities Act of 1933 and the Securities Exchange Act of 1934 in connection with the offer and sale to the plaintiff of interests in nine limited partnerships formed by Flying Diamond. In addition, the complaint alleges that Flying Diamond, among other things, breached the limited partnership agreements and fiduciary duties and violated the General Business Law of the State of New York. The plaintiff seeks, among other things, damages in excess of U.S. \$2.3 million, an accounting, reformation of one of the limited partnership agreements, the employment of a receiver to operate the limited partnerships which are the subject of the lawsuit, and punitive damages in the amount of U.S. \$500,000. Legal counsel representing Bow Valley and the other defendants in this action have advised that such defendants, in their answers, have denied the substantive allegations in the complaint and have asserted various affirmative defences and that discovery procedures have not yet been completed.
- (ii) On August 14, 1978, an action was commenced in the United States District Court for the Southern District of New York by the plaintiff, Harvey Greenfield, against Flying Diamond, Bow Valley Industries Ltd., Bow Valley Exploration (U.S.) Inc., Holmes P. McLish and Gary F. Sprouse. The plaintiff purports to represent all stockholders of Flying Diamond as of March 3, 1978, and seeks damages on their behalf.

The complaint alleges violation of the Securities Exchange Act of 1934 and state law and seeks judgment for damages sustained, punitive damages, and plaintiff's costs in prosecuting the suit. The complaint alleges, among other things, inadequate disclosure relating to the value of the Flying Diamond shares. Legal counsel representing Bow Valley and the other defendants have advised that they believe the possibility that the outcome of this action will cause a material loss to Bow Valley is remote.
- (iii) On July 17, 1979, an action was instituted in the Federal District Court for the Eastern District of Kentucky by the plaintiffs, Lindsey and Elliott, against Bow Valley Coal Resources, Inc. The plaintiffs claim U.S. \$5 million in damages and U.S. \$5 million in punitive damages for breach of an operating agreement for oil and gas wells. An answer has been filed contesting the plaintiffs' claim. Legal counsel representing Bow Valley in this action have indicated that Bow Valley will not incur a material loss as a result of this claim.

These lawsuits relate to Flying Diamond's operations prior to its acquisition by Bow Valley or to the acquisition process itself. Settlements, if any, will be considered as additional Flying Diamond purchase consideration and allocated to the capital assets acquired.

(b) REDEMPTION PREMIUM ON 8% CONVERTIBLE SUBORDINATED GUARANTEED DEBENTURES

As discussed in Note 6, holders of any debentures still outstanding on December 15, 1985 may on that date require redemption of the debentures at a premium of 25% over their principal amount. As at December 31, 1980, the maximum premium payable is U.S. \$10 million.

NOTES (continued)

12. Pension Plans Bow Valley's non-unionized permanent employees are eligible after various service requirements to participate in one of the following pension plans: a voluntary defined benefit pension plan for Canadian employees; a mandatory money purchase plan for U.S. coal employees; or a voluntary money purchase plan for other U.S. employees. As of January 1, 1980, the date of the most recent actuarial valuation for the Canadian defined benefit plan, Bow Valley did not have an unfunded pension liability. Bow Valley's contributions for these plans were: 1980 - \$1,170,000; 1979 - \$950,000; 1978 (12 months) - \$570,000; and 1978 (7 months) - \$370,000.

13. Selected Quarterly Financial Information (Unaudited)

	Quarter Ended				Full Year
	March 31	June 30	Sept. 30	Dec. 31	
YEAR ENDED DECEMBER 31, 1980					
Revenue	\$88,409	\$83,766	\$89,512	\$ 100,440	\$ 362,127
Gross profit	32,278	28,877	28,006	33,825	122,986
Net income	7,606	6,033	6,358	12,004	32,001
Cash flow from operations	22,981	19,936	21,421	26,605	90,943
Net income per common share	\$0.22	\$0.16	\$0.15	\$0.32	\$0.85
Cash flow per common share	0.67	0.56	0.58	0.74	2.55
YEAR ENDED DECEMBER 31, 1979					
Revenue	\$61,765	\$56,673	\$74,589	\$82,621	\$ 275,648
Gross profit	19,320	16,926	23,700	29,929	89,875
Net income	3,532	1,403	4,835	6,597	16,367
Cash flow from operations	10,455	10,635	15,501	22,368	58,959
Net income per common share	\$0.12	\$0.03	\$0.15	\$0.19	\$0.49
Cash flow per common share	0.35	0.32	0.46	0.66	1.79

Gross profit represents revenues less direct costs and depreciation and depletion expense.

As explained in Note 1, the previously reported information for the first three quarters of 1980 has been restated to reflect the changes in accounting principles adopted during the fourth quarter of 1980, with effect from January 1, 1980.

14. Subsequent Event

On February 23, 1981, Bow Valley Resource Services Ltd., a principal operating subsidiary, completed a public offering of common shares and 11% convertible subordinated debentures, receiving net proceeds approximating \$61.7 million after all costs of issue. As a result, Bow Valley's ownership of Bow Valley Resource Services Ltd. was reduced from 100% to 78% and will be further reduced to 68% if all of the debentures are converted to common shares.

All of the proceeds were used to retire existing current and long term bank indebtedness. Had this transaction been finalized at December 31, 1980 and the proceeds applied as noted, the effect on Bow Valley's financial statements would have been to increase working capital by approximately \$20 million, decrease long term debt by \$21.5 million, and create a minority interest of \$16 million. In addition, Bow Valley would have realized an extraordinary income item of approximately \$18 million, recognizing the increase in Bow Valley's share of the net equity of Bow Valley Resource Services Ltd. — this item will be reflected in the results for the first quarter of 1981. Similar extraordinary income items will arise as the 11% convertible subordinated debentures are converted into common shares.

15. Significant Differences Between Canadian and United States Generally Accepted Accounting Principles

(a) FOREIGN CURRENCY TRANSLATION

The U.S. Financial Accounting Standards Board's Statement No. 8 requires that all unrealized foreign exchange translation gains and losses be reflected immediately in net income with no deferral for those relating to long term debt and mortgages receivable.

(b) OIL AND GAS PROPERTIES AND EQUIPMENT

The U.S. Securities and Exchange Commission's full cost accounting rules require the establishment of cost centres on a country-by-country basis and annual valuation of non-producing cost centres with no annual amortization unless a valuation loss is apparent.

(c) RECONCILIATION OF NET INCOME AND RETAINED EARNINGS

	1980		1979		1978 (12 months)		1978 (7 months)	
	Net Income	Retained Earnings	Net Income	Retained Earnings	Net Income	Retained Earnings	Net Income	Retained Earnings
In accordance with Canadian generally accepted accounting principles, as reported	\$32,001	\$65,611	\$16,367	\$40,896	\$14,342	\$25,820	\$8,869	\$25,820
Add (deduct) adjustments for Foreign currency translation	(1,386)	(5,367)	3,399	(3,981)	(7,380)	(7,380)	(6,314)	(7,380)
Oil and gas properties	(1,158)	(2,485)	147	(1,327)	(764)	(1,474)	(1,090)	(1,474)
In accordance with United States generally accepted accounting principles	<u>\$29,457</u>	<u>\$57,759</u>	<u>\$19,913</u>	<u>\$35,588</u>	<u>\$6,198</u>	<u>\$16,966</u>	<u>\$1,465</u>	<u>\$16,966</u>
Earnings per share, in accordance with United States generally accepted accounting principles (Canadian dollars)	\$0.80		\$0.60		\$0.19		\$0.04	

16. Oil and Gas Producing Activities

The Securities and Exchange Commission ("SEC") of the United States requires disclosure of the following supplementary financial and other information relating to oil and gas producing activities.

(a) METHOD OF ACCOUNTING USED

As reviewed in Note 15, Bow Valley follows a form of the full cost method of accounting for oil and gas properties which is different from the method prescribed by the SEC.

(b) CAPITALIZED COSTS

Bow Valley's capitalized costs and related accumulated depreciation and depletion for oil and gas properties and equipment at December 31 were as follows:

	1980		1979	
	Capitalized Costs	Accumulated Depreciation and Depletion	Capitalized Costs	Accumulated Depreciation and Depletion
Canada	\$95,805	\$29,962	\$77,787	\$24,395
United States	139,616	28,205	120,728	16,857
Abu Dhabi	49,894	7,383	40,928	2,505
United Kingdom	96,395	62	35,940	62
Norway	8,927	302	4,583	302
Indonesia	15,745	2,072	—	—
Other	15,835	3,258	15,363	4,345
	<u>\$422,217</u>	<u>\$71,244</u>	<u>\$295,329</u>	<u>\$48,466</u>

(c) COSTS INCURRED IN OIL AND GAS PRODUCING ACTIVITIES

During the periods indicated, Bow Valley incurred the following costs related to oil and gas producing activities (including costs capitalized and expensed):

	Property Acquisition Costs	Exploration Costs	Develop- ment Costs	Production (Lifting) Costs
Year ended December 31, 1980				
Canada	\$5,142	\$5,410	\$7,865	\$3,594
United States	1,744	783	16,615	9,589*
Abu Dhabi	3,549	857	4,561	6,177
United Kingdom	—	8,514	51,941	—
Norway	—	4,290	54	—
Indonesia	4,404	973	7,536	736
Other	108	2,961	236	—
	<u>\$14,947</u>	<u>\$23,788</u>	<u>\$88,808</u>	<u>\$20,096</u>

*Includes Windfall Profit Tax of \$3,029,000, commencing March 1, 1980.

NOTES (continued)

	Property Acquisition Costs	Exploration Costs	Develop- ment Costs	Production (Lifting) Costs
<u>Year ended December 31, 1979</u>				
Canada	\$ 5,306	\$ 3,464	\$ 3,790	\$ 3,110
United States	1,012	3,724	8,518	5,877
Abu Dhabi	—	18	14,447	1,200
United Kingdom	—	2,506	4,755	—
Norway	—	168	4	—
Other	153	5,322	203	—
	<u>\$ 6,471</u>	<u>\$ 15,202</u>	<u>\$ 31,717</u>	<u>\$ 10,187</u>
<u>Year ended December 31, 1978 (Unaudited)</u>				
Canada	\$ 1,869	\$ 5,187	\$ 5,692	\$ 2,590
United States	1,448	3,075	6,007	5,194
United Kingdom	—	1,259	5,009	—
Abu Dhabi	—	84	15,453	—
Norway	16	402	59	—
Other	331	1,146	—	—
	<u>\$ 3,664</u>	<u>\$ 11,153</u>	<u>\$ 32,220</u>	<u>\$ 7,784</u>
<u>Seven months ended December 31, 1978 (Unaudited)</u>				
Canada	\$ 322	\$ 1,897	\$ 3,108	\$ 1,507
United States	1,055	1,734	5,212	1,975
Abu Dhabi	—	—	9,492	—
United Kingdom	—	547	2,150	—
Norway	16	243	10	—
Other	331	1,116	—	—
	<u>\$ 1,724</u>	<u>\$ 5,537</u>	<u>\$ 19,972</u>	<u>\$ 3,482</u>

Bow Valley's depreciation and depletion provisions relating to oil and gas producing activities during these periods were:

	1980	1979	1978 (12 months) (Unaudited)	1978 (7 months)
Canada	\$ 5,567	\$ 4,512	\$ 4,246	\$ 2,499
United States	11,348	9,022	7,846	4,153
Other	5,863	2,586	713	438
	<u>\$ 22,778</u>	<u>\$ 16,120</u>	<u>\$ 12,805</u>	<u>\$ 7,090</u>

All costs accumulated in producing cost centres are depreciated and depleted using the unit of production method based upon estimated proved reserves of oil and gas. During the periods indicated, Bow Valley's depreciation and depletion charges per equivalent barrel produced were as follows:

	1980	1979	1978 (12 months) (Unaudited)	1978 (7 months)
Canada	\$ 2.69	\$ 1.52	\$ 1.46	\$ 1.51
United States	7.69	6.24	5.43	4.93
Other	8.55	9.40	—	—

(d) REVENUES FROM PRODUCING OIL AND GAS RESERVES

Bow Valley's net revenues from proved developed oil and gas reserves were as indicated in the table below. Net revenues are defined as gross revenues from the sale of oil and gas less royalties paid and production (lifting) costs, including the United States Windfall Profit Tax; net revenues are before depreciation, depletion and interest costs.

	1980	1979	1978 (12 months) (Unaudited)	1978 (7 months)
Canada	\$27,968	\$22,442	\$20,063	\$11,597
United States	23,186	13,767	10,573	7,338
Abu Dhabi	18,747	7,488	—	—
Indonesia	497	—	—	—
	<u>\$70,398</u>	<u>\$43,697</u>	<u>\$30,636</u>	<u>\$18,935</u>

(e) ESTIMATED NET QUANTITIES OF PROVED OIL AND GAS RESERVES (UNAUDITED)

The following tables set forth Bow Valley's estimated net proved reserves (developed and undeveloped) of oil (including condensate and natural gas liquids) and natural gas at the dates indicated, and explain the changes occurring between these dates.

Oil (thousands of barrels)	Canada	United States	Other	Total
Proved reserves at December 31, 1977	5,324	—	6,971	12,295
Purchases of reserves in place	—	7,401	—	7,401
Extensions, discoveries, and other additions	—	426	—	426
Production	(178)	(250)	—	(428)
Proved reserves at May 31, 1978	5,146	7,577	6,971	19,694
Extensions, discoveries, and other additions	1,600	31	35,770	37,401
Production	(232)	(375)	—	(607)
Proved reserves at December 31, 1978	6,514	7,233	42,741	56,488
Revisions of previous estimates	(322)	(521)	(680)	(1,523)
Purchases of reserves in place	52	—	—	52
Extensions, discoveries, and other additions	57	578	3,493	4,128
Production	(385)	(635)	(275)	(1,295)
Proved reserves at December 31, 1979	5,916	6,655	45,279	57,850
Revisions of previous estimates	(403)	2,098	(162)	1,533
Extensions, discoveries, and other additions	6	1,376	3,071	4,453
Production	(352)	(693)	(686)	(1,731)
Proved reserves at December 31, 1980	<u>5,167</u>	<u>9,436</u>	<u>47,502</u>	<u>62,105</u>
Gas (millions of cubic feet - MMcf)	Canada	United States	Other	Total
Proved reserves at December 31, 1977	188,160	—	122,318	310,478
Purchases of reserves in place	—	110,234	—	110,234
Extensions, discoveries, and other additions	2,137	9,847	—	11,984
Production	(5,269)	(1,836)	—	(7,105)
Proved reserves at May 31, 1978	185,028	118,245	122,318	425,591
Revisions of previous estimates	—	(11,678)	—	(11,678)
Extensions, discoveries, and other additions	12,710	—	41,405	54,115
Production	(6,796)	(2,351)	—	(9,147)
Proved reserves at December 31, 1978	190,942	104,216	163,723	458,881
Revisions of previous estimates	(3,897)	(4,595)	(46,885)	(55,377)
Purchases of reserves in place	7,458	—	—	7,458
Extensions, discoveries, and other additions	6,407	6,379	—	12,786
Production	(11,654)	(4,597)	—	(16,251)
Sales of reserves in place	(986)	—	—	(986)
Proved reserves at December 31, 1979	188,270	101,403	116,838	406,511
Revisions of previous estimates	4,486	(19,060)	(14,490)	(29,064)
Extensions, discoveries, and other additions	5,191	7,568	—	12,759
Production	(10,328)	(4,683)	—	(15,011)
Proved reserves at December 31, 1980	<u>187,619</u>	<u>85,228</u>	<u>102,348</u>	<u>375,195</u>

NOTES (continued)

Proved developed net reserves of oil and natural gas at the dates indicated were:

Oil (thousands of barrels)	Canada	United States	Other	Total
December 31, 1977	4,704	—	3,548	8,252
May 31, 1978	4,526	3,298	3,548	11,372
December 31, 1978	4,550	3,550	3,548	11,648
December 31, 1979	3,909	3,355	6,766	14,030
December 31, 1980	3,698	4,753	7,267	15,718

Gas (millions of cubic feet - MMcf)	Canada	United States	Other	Total
December 31, 1977	163,260	—	—	163,260
May 31, 1978	160,128	52,527	—	212,655
December 31, 1978	172,152	42,328	—	214,480
December 31, 1979	167,515	40,205	—	207,720
December 31, 1980	173,535	41,415	—	214,950

Proved reserves are the estimated quantities of oil and gas which are reasonably certain of recovery in future years from known reservoirs under existing operating conditions, assuming current prices and costs. Proved reserves include proved developed reserves and proved undeveloped reserves.

Proved developed reserves are those reserves that can be expected to be recovered through existing wells with existing equipment and existing (either operating or tested) recovery techniques. Substantially all of Bow Valley's proved developed reserves are producing. Bow Valley's producing reserves in the United States and Canada include those expected to be produced from existing completion intervals now open for production in existing wells. Bow Valley's non-producing developed reserves in the United States and Canada are those which exist behind the casing of or at minor depths below the present bottom of existing wells, which are expected to be produced through existing wells in the predictable future, and where the cost of making such oil and gas available for production should be relatively minor.

Proved undeveloped reserves from onshore fields in conventional operating areas are those which are expected to be recovered from new wells on undrilled acreage offsetting productive acreage, or from existing wells where a relatively major expenditure is required for completion. Proved undeveloped reserves from offshore fields or from fields in onshore frontier operating areas are those which are expected to be recovered from new wells on undrilled acreage offsetting productive acreage, or from existing wells where significant expenditures in well completions and transportation systems will be required.

All Canadian and United States reserves at December 31, 1979 and 1980 were appraised by independent consultants. Other foreign reserves at December 31, 1979 and 1980 were based upon the applicable operator's latest estimate, adjusted by Bow Valley for subsequent production to December 31, 1979 or 1980, where appropriate.

(f) FUTURE NET REVENUES FROM ESTIMATED PRODUCTION OF PROVED OIL AND GAS RESERVES (UNAUDITED)

Bow Valley's estimated future net revenues obtainable from proved oil and gas reserves are set forth in the following table. Estimated future net revenues have been calculated on an undiscounted basis and assume continuation of prices in effect at January 1, 1981 and current royalty rates, costs and economic conditions. Lifting costs, royalties and future capital costs (based on current costs) have been deducted from gross revenues in arriving at net revenues. Depreciation, depletion, interest, income taxes, and various petroleum and natural gas taxes, as discussed below, have not been deducted. Revenues and costs of foreign areas have been converted to Canadian dollars at year-end exchange rates.

	Canada		United States		Other		Total	
	Proved	Proved Developed	Proved	Proved Developed	Proved	Proved Developed	Proved	Proved Developed
1981	\$ 28,523	\$ 28,523	\$ 35,031	\$ 51,414	\$ (98,709)	\$ 8,177	\$ (35,155)	\$ 88,114
1982	28,618	28,618	49,528	37,453	(65,360)	11,396	12,786	77,467
1983	27,864	27,864	70,800	31,982	119,072	23,687	217,736	83,533
Thereafter	306,848	306,848	356,594	131,718	1,897,460	185,229	2,560,902	623,795
	<u>\$ 391,853</u>	<u>\$ 391,853</u>	<u>\$ 511,953</u>	<u>\$ 252,567</u>	<u>\$ 1,852,463</u>	<u>\$ 228,489</u>	<u>\$ 2,756,269</u>	<u>\$ 872,909</u>

Negative future net revenue estimates result from development costs during the period indicated exceeding revenues, if any.

The estimated future net revenues for net gas reserves of 18,838 MMcf at South Brae, in the North Sea offshore the United Kingdom, have not been determined, although the future revenues from the sale of these gas reserves may be

substantial. In addition, the oil and gas reserves in the Mackenzie Delta have not been included in future net revenues; Bow Valley's share of net reserves are estimated at 1,469,000 barrels of oil and 14,084 MMcf of gas. Transportation systems in both areas are not sufficiently planned to permit a determination of when sales will occur.

The present values at December 31, 1978, 1979 and 1980 (using a 10% discount factor) of Bow Valley's estimated future net revenues obtainable from proved oil and gas reserves were as follows:

	1980		1979		1978	
	Proved	Proved Developed	Proved	Proved Developed	Proved	Proved Developed
Canada	\$ 194,854	\$ 194,854	\$ 160,538	\$ 160,538	\$ 134,596	\$ 134,596
United States	311,858	170,490	184,201	80,887	123,264	61,587
Other	866,100	139,840	562,330	126,460	80,084	28,794
	<u>\$ 1,372,812</u>	<u>\$ 505,184</u>	<u>\$ 907,069</u>	<u>\$ 367,885</u>	<u>\$ 337,944</u>	<u>\$ 224,977</u>

(g) SUMMARY OF OIL AND GAS PRODUCING ACTIVITIES, PREPARED ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING (UNAUDITED)

The SEC has concluded that the traditional accounting methods for oil and gas producing activities, including the full cost method followed by Bow Valley, fail to provide sufficient information on financial position and operating results relating to these activities. Specifically, such methods are inherently limited because of their failure to provide timely recognition of oil and gas reserves in assets and earnings reported in the financial statements. Accordingly, the SEC developed a method of accounting for oil and gas producing activities known as Reserve Recognition Accounting ("RRA") which is to be provided as supplementary information to the basic financial statements prepared under the traditional methods.

The more significant differences between RRA and full cost accounting are:

- (i) Under RRA, the value, as defined, of proved oil and gas reserves plus temporarily deferred costs relating to the exploration for and development of additional reserves are reported as an asset on the balance sheet.
Under full cost accounting, all costs associated with the exploration for and development of oil and gas reserves are reported as an asset on the balance sheet.
- (ii) Under RRA, additions to proved reserves and changes in valuation of proved reserves are reported in the income statement during the year when the proved reserves are determined to exist or the changes in valuation occur. The value of reserve additions is reduced by all costs already incurred in the related exploration and development process plus the present value of all estimated future costs for the development and production of these reserves. Non-productive exploration and development costs are charged to the income statement as incurred. Changes in valuation can occur for many reasons including changes in previous reserve estimates, oil and gas prices, future production and capital costs, and production schedules. The actual production and sale of oil and gas does not affect the income statement.

Under full cost accounting, additions to proved reserves and changes in valuation of proved reserves do not immediately affect the income statement, unless the depreciation, depletion and amortization rate per unit produced changes. Instead, the proceeds from the sale of oil and gas less the related production costs are reflected in the income statement as the sales occur. In addition, the exploration and development costs previously capitalized, which included non-productive as well as productive costs, are charged to the income statement on a unit of production basis as the reserves are produced.

SUMMARY OF OIL AND GAS PRODUCING ACTIVITIES ON
THE BASIS OF RESERVE RECOGNITION ACCOUNTING

	Year ended December 31	
	1980	1979
ADDITIONS AND REVISIONS TO ESTIMATED PROVED OIL AND GAS RESERVES		
Additions to estimated proved reserves, gross	\$ 186,291	\$ 100,075
Revisions to estimates of reserves proved in prior years		
Changes in prices	499,047	574,486
Other, principally resulting from changes in estimates of reserve quantities, changes in estimated future development and production costs, revised production schedules and changes in foreign exchange translation rates	(260,204)	(104,313)
Accretion of discount	90,707	33,794
	<u>515,841</u>	<u>604,042</u>
EVALUATED ACQUISITION, EXPLORATION, DEVELOPMENT AND PRODUCTION COSTS		
Costs incurred, including impairments	41,944	18,285
Present value of estimated future development and production costs, relating to current year additions to estimated proved reserves	45,136	16,018
	<u>87,080</u>	<u>34,303</u>
ADDITIONS AND REVISIONS TO PROVED RESERVES OVER EVALUATED COSTS	428,761	569,739
PROVISION FOR		
Petroleum and natural gas taxes	225,946	87,490
Income taxes	145,227	255,023
	<u>371,173</u>	<u>342,513</u>
RESULTS OF OIL AND GAS PRODUCING ACTIVITIES ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING	\$ 57,588	\$ 227,226

"Additions to estimated proved reserves" represent the value, based on year end prices, of estimated reserves added during the year resulting from Bow Valley's exploration and development program, discounted to year end at an annual rate of 10% based on estimated annual production rates. The related development and production costs have also been discounted to year end at 10% based on the estimated expenditure dates.

"Changes in prices" have been calculated by multiplying the opening reserves net of current year's production by the increase in oil and gas prices at year end over the prior year end and discounting the resulting product to year end at 10% based on the related estimated production rates. To this has been added the excess of the proceeds from the current year's production resulting from actual prices higher than the prices used to determine the beginning of year RRA valuation. The "other" revisions have similarly been calculated by reference to the beginning of year RRA valuation estimates and discounted to year end at 10%.

"Accretion of discount" has been computed by applying 10% to the beginning of year RRA valuation, in recognition of the increase resulting from the impact of the passage of time on the discounted cash flow approach to the RRA valuation of proved reserves.

The costs of acquiring unproved properties and drilling exploratory wells are deferred until the properties are evaluated and determined to be either productive or non-productive, at which time they are charged to expense. Other exploration costs are charged to expense as incurred. At December 31, 1979 and 1980, \$2,071,000 and \$10,220,000 of costs were deferred, respectively. All deferred costs are assessed for recoverability and impairments, if any, are charged to expense.

The provision for petroleum and natural gas tax includes the Canadian 8% Petroleum and Natural Gas Tax, United States Windfall Profit Tax, United Kingdom Petroleum Revenue Tax and 20% Supplementary Petroleum Duty, and the Norway Special Tax. Potential changes to the United Kingdom Petroleum Revenue Tax announced in November, 1980 have not been taken into consideration as insufficient details have been made public to permit an assessment of the impact. The Canadian and United States taxes and the United Kingdom 20% Supplementary Petroleum Duty are new in 1980. The United Kingdom Petroleum Revenue Tax and the Norway Special Tax were increased significantly during 1980.

The provision for income taxes is calculated at the beginning and end of the year by applying the statutory tax rates to the present value of estimated future net revenue to be generated from the producing reserves, after deduction of the current tax basis of the properties involved and related carry forwards. The change in this provision during the year is adjusted by the taxes estimated to be currently payable relating to oil and gas producing activities and the resulting balance is charged against RRA income.

The RRA income before taxes of \$428,761,000 (1979 - \$569,739,000) can be contrasted with the oil and gas revenues less royalties, production costs and depreciation, depletion and amortization reflected in Bow Valley's historical full cost income statement of \$47,622,000 (1979 - \$27,577,000).

CHANGES IN PRESENT VALUE OF ESTIMATED FUTURE NET REVENUE
FROM PROVED OIL AND GAS RESERVES

	Year ended December 31	
	1980	1979
INCREASES		
Additions and revisions	\$ 515,841	\$ 604,042
Less related estimated future development and production costs	45,136	16,018
Net additions and revisions	470,705	588,024
Purchase of reserves in place	—	3,565
Expenditures that reduced estimated future development costs	68,636	21,890
	<u>539,341</u>	<u>613,479</u>
DECREASES		
Sales of oil and gas, net of production costs of \$20,096,000 (1979 - \$10,187,000)	73,598	43,697
Sales of reserves in place	—	657
	<u>73,598</u>	<u>44,354</u>
NET INCREASE	465,743	569,125
BEGINNING OF YEAR	907,069	337,944
END OF YEAR	\$ 1,372,812	\$ 907,069

As acknowledged by the SEC, RRA valuation, although based on discounted cash flow or present value basis, is not intended to result in a current or fair market valuation of a company's oil and gas producing activities. An estimate of fair market value would have to take into account, among other things, such additional factors as:

- the probability that future recoveries of oil and gas from present proved properties will differ from the reserves presently estimated;
- the probability that reserves presently classified by engineers as probable but unproved will ultimately become proved;
- the probability of additional reserves being discovered on unproved acreage;
- the value of proved reserves in frontier areas which have not been included in the RRA valuation due to such factors as lack of transportation systems and governmental approvals;
- the probability that future oil and gas prices and the costs of developing and producing the estimated reserves will increase;
- the probability of significant changes in the production schedule from the currently estimated schedule; and
- the probability of changing tax rates on oil and gas production and net income.

Furthermore, a discount rate of 10% may not be appropriate in view of the high level of interest rates currently being experienced. Finally, a uniform discount rate may not be appropriate due to an evaluation of differing risk factors for development of offshore or frontier areas relative to more conventional areas, or operation in various foreign jurisdictions.

RRA income may differ substantially from and be more erratic than conventionally reported income. RRA attempts to reflect events relating to exploration and development and changes in prices and costs as they occur; under conventionally reported income, the impact of such events is reported over many future years. Specific examples include:

- the recognition in RRA income of reserves as discovered rather than as produced;
- the recognition of price increases for unproduced reserves in the year of the price increase rather than as production occurs;
- the recognition in income of changes in reserve estimates and production schedules; and
- the recognition in income of changes in income taxes during the year of the change rather than during the production years.

Furthermore, RRA income is subject to significantly greater estimation than conventionally reported income. Reserve estimates are inherently imprecise, particularly with respect to newly discovered reserves. The accuracy of reserve estimates generally improves as greater production history is attained. Estimates of development costs and production schedules are also highly susceptible to revision.

Corporate Information

Directors

R. GUY GODBOU, President, Les Industries Valcartier Inc., Montreal
JAMES S. GRAHAM†, Industrialist, Vancouver
WILLIAM A. HOWARD*†, QC, Barrister and Solicitor, Calgary
E. LEO KOLBER, President, Cemp Investments Ltd., Montreal
ARNOLD M. LUDWICK†, Executive Vice-President, Cemp Investments Ltd., Montreal
JOHN S. POYEN, Energy Industry Management Consultant, Calgary
BYRON J. SEAMAN*, Vice-Chairman of the Board, Bow Valley Industries Ltd., Calgary
DARYL K. SEAMAN*, Chairman of the Board, Bow Valley Industries Ltd., Calgary
DONALD R. SEAMAN*, Senior Vice-President, Bow Valley Industries Ltd., Calgary
D'ALTON L. SINCLAIR†, Financial Consultant, Toronto

* Executive Committee

† Audit Committee

Executive Officers

DARYL K. SEAMAN, Chairman of the Board, President, and Chief Executive Officer
BYRON J. SEAMAN, Vice-Chairman of the Board
WILLIAM H. TYE, Senior Vice-President and Chief Financial Officer
DONALD R. SEAMAN, Senior Vice-President
FREDERIC J. WELLHAUSER, Senior Vice-President
H. KEITH LAZELLE, Vice-President, Corporate Affairs
TREVOR A. LEGGE, Vice-President and Treasurer
ROBERT J. PHIBBS, Vice-President, Administration
HENRY A. SMITH, Vice-President, General Counsel, and Secretary
PHILIP R. LAWTON, Controller

SENIOR PERSONNEL

Bow Valley Exploration

C. R. DE LUCA, General Manager — United States
A. L. FLOOD, General Manager — Southeast Asia
A. J. GOTTLIEB, General Manager — Canada
C. A. RANDLE, General Manager — Europe, Africa, Middle East

Bow Valley Coal Resources Inc.

C. E. GOINS, President and General Manager

Bow Valley Resource Services Ltd.

W. C. HAY, Group Vice-President — Oilwell Drilling
R. E. HINDSON, Group Vice-President — Diamond Drilling
A. M. PARENT, Group Vice-President — Industrial Products
D. G. THURSTON, Group Vice-President — Environmental Products

Head Office

1800, 321 Sixth Avenue SW,
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Calgary, Alberta T2P 2V8
Telephone: (403) 231-1211 Telex: 24692

International Offices

BOW VALLEY COAL RESOURCES INC.
Coalgood, Kentucky 40818
Telephone: (606) 573-1715

BOW VALLEY EXPLORATION (U.S.) INC.
1700 Broadway, Denver, Colorado 80290
Telephone: (303) 861-4366

BOW VALLEY EXPLORATION (U.K.) LIMITED
Windsor House, 50 Victoria Street, London SW1H 0NW
Telephone: (01) 222-5421 Telex: 23688

BOW VALLEY EXPLORATION (S.E. ASIA) LTD.
1406 - 1411 Tower Block, Goldhill Plaza, Newton Road, Singapore 11
Telephone: 252-2160 Telex: 8726328

Transfer Agents

Common Shares
GUARANTY TRUST COMPANY OF CANADA
Calgary, Toronto, and Vancouver
THE BANK OF NEW YORK, New York
7% Cumulative Redeemable Convertible Class B Preferred Shares
CROWN TRUST COMPANY
Calgary, Vancouver, Toronto, and Montreal
8% Convertible Subordinated Guaranteed Debentures
ORION BANK LIMITED
London

Registrars

Common Shares
GUARANTY TRUST COMPANY OF CANADA
Calgary, Toronto, and Vancouver
THE BANK OF NEW YORK, New York
7% Cumulative Redeemable Convertible Class B Preferred Shares
CROWN TRUST COMPANY
Calgary, Vancouver, Toronto, and Montreal

Stock Exchange Listings

Common Shares
The Toronto Stock Exchange
American Stock Exchange
Montreal Stock Exchange
London Stock Exchange (Section 163(1)E)
7% Cumulative Redeemable Convertible Class B Preferred Shares
The Toronto Stock Exchange
Montreal Stock Exchange

Auditor

PRICE WATERHOUSE & CO., Calgary

Legal Counsel

HOWARD, MACKIE, Calgary
PAUL, WEISS, RIFKIND, WHARTON & GARRISON, New York
TEACHER, STERN, HUNTER & SELBY, London

Banker

THE ROYAL BANK OF CANADA

Shareholders Information

Market Price and Volume — Common Shares

Period	The Toronto Stock Exchange		American Stock Exchange		Number of Shares Traded	
	Price Range		Price Range (\$US)		Toronto	American
	High	Low	High	Low		
1976	\$ 4 $\frac{3}{4}$	\$ 2 $\frac{9}{16}$	\$ 4 $\frac{7}{8}$	\$ 2 $\frac{1}{2}$	15,904,800	15,044,400
1977	4 $\frac{1}{16}$	2 $\frac{11}{16}$	4 $\frac{1}{16}$	2 $\frac{1}{2}$	12,284,400	12,483,600
1978	8 $\frac{1}{8}$	3 $\frac{3}{8}$	7 $\frac{1}{8}$	3 $\frac{1}{16}$	19,351,500	23,543,100
1979						
1st quarter	9 $\frac{3}{8}$	6 $\frac{15}{16}$	8 $\frac{1}{16}$	5 $\frac{3}{4}$	3,877,000	5,483,400
2nd quarter	10 $\frac{1}{2}$	8 $\frac{3}{16}$	9	6 $\frac{7}{8}$	2,894,900	4,273,800
3rd quarter	14 $\frac{1}{2}$	8 $\frac{9}{16}$	12 $\frac{3}{8}$	7 $\frac{7}{8}$	4,524,100	10,567,200
4th quarter	15 $\frac{1}{4}$	11 $\frac{5}{16}$	12 $\frac{15}{16}$	9 $\frac{9}{16}$	5,019,300	15,477,300
					16,315,300	35,801,700
1980						
1st quarter	21 $\frac{1}{2}$	11	18 $\frac{11}{16}$	8 $\frac{3}{8}$	11,629,600	19,476,600
2nd quarter	19 $\frac{1}{8}$	12 $\frac{15}{16}$	17 $\frac{3}{8}$	10 $\frac{13}{16}$	5,375,800	5,109,100
3rd quarter	27	19 $\frac{1}{8}$	23 $\frac{3}{8}$	15 $\frac{7}{8}$	8,545,400	9,825,600
4th quarter	25 $\frac{5}{8}$	19 $\frac{5}{8}$	22	15 $\frac{7}{8}$	2,142,200	2,381,400
					27,693,000	36,792,700

Shareholders Distribution¹ — Common Shares

December 31, 1980

	Number of Shareholders	Number of Shares	Percent
Canada	4,800	23,924,000	68% ²
United States	2,600	9,857,000	28%
Other	200	1,212,000	4%
	7,600	34,993,000	100%

¹ As determined by addresses in the Shareholders Register.

² Canadian ownership as at March 31, 1981, was 72 percent.

Other

The payment of dividends on common shares is subject to the holders of the Cumulative Redeemable Convertible Class B Preferred Shares receiving a dividend of 7 percent per annum.

The general rate of withholding tax on common dividends paid to United States shareholders is 10 percent.

Form 10-K

A copy of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1980, as filed with the U.S. Securities and Exchange Commission may be obtained without charge by writing to the Vice-President, Corporate Affairs, Bow Valley Industries Ltd., P.O. Box 6620, Postal Station D, Calgary, Alberta, Canada T2P 2V8.

Annual General Meeting

Annual General Meeting of the Shareholders of Bow Valley Industries Ltd. will be held in Calgary in the Turner Valley Room of the Palliser Hotel at 10:00 a.m., May 14, 1981.



Bow Valley Industries Ltd.

