

 **BOW VALLEY INDUSTRIES LTD.**  
**ANNUAL REPORT 1981**

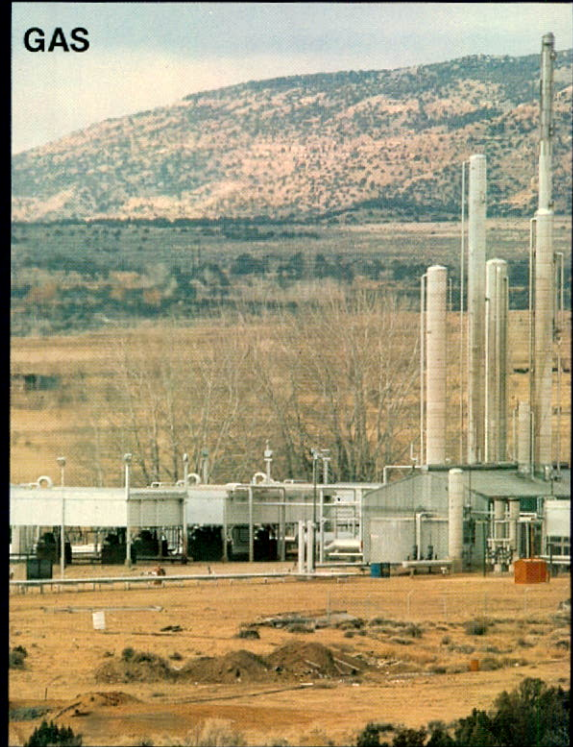


**BOW VALLEY INDUSTRIES LTD.**

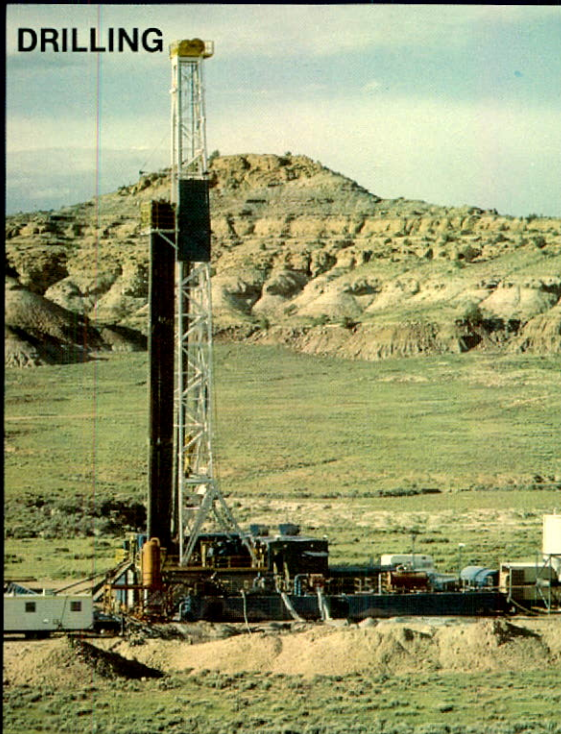
**OIL**



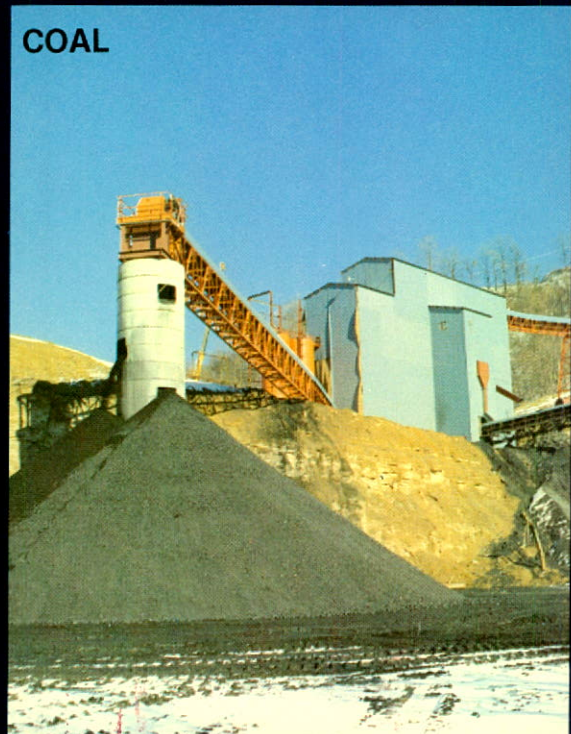
**GAS**



**DRILLING**



**COAL**





# THE YEAR IN BRIEF

	<u>1981</u>	<u>1980</u>
<b>Financial</b>		
Revenue .....	<b>\$494,400,000</b>	\$362,100,000
Income before extraordinary item .....	<b>\$ 28,900,000</b>	\$ 32,000,000
Per common share .....	<b>\$ 0.71</b>	\$ 0.85
Net income .....	<b>\$ 47,300,000</b>	\$ 32,000,000
Cash flow from operations .....	<b>\$ 99,400,000</b>	\$ 90,900,000
Per common share .....	<b>\$ 2.71</b>	\$ 2.55
Average shares outstanding .....	<b>35,208,000</b>	34,631,000
Capital expenditures .....	<b>\$405,600,000</b>	\$194,600,000
Working capital .....	<b>\$ 74,700,000</b>	\$ 35,600,000
 <b>Operations</b>		
Daily production	<i>z m t y r</i>	
Oil (bbls) .....	<b>5,468</b>	6,075
Gas (MMcf) .....	<b>61.1</b>	62.0
Coal (tons) .....	<b>6,311</b>	5,185
Proved reserves		
Oil (millions of barrels) .....	<b>72.0</b>	72.6
Gas (Bcf) .....	<b>489.3</b>	501.6
Coal (millions of tons) .....	<b>77.1</b>	76.3
Oil and gas land holdings, at year end (thousands of net acres) .....	<b>4,222</b>	5,139
Gross wells drilled .....	<b>220</b>	213

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

All production and reserve statistics are on a pre-royalty basis, unless stated otherwise.

## The Company

Bow Valley conducts oil and gas exploration and development programs in Canada, the United States, the United Kingdom and Norwegian sectors of the North Sea, Abu Dhabi, Indonesia, and other areas.

The Company has major coal mining operations in Kentucky and has an interest in a uranium deposit in Saskatchewan.

A 78 percent-owned subsidiary, Bow Valley Resource Services Ltd., provides drilling and manufacturing facilities to the natural resource industries in Canada and the United States.

Approximately 3,000 employees are engaged in these activities managing and operating assets that have a book value in excess of \$1 billion.

Shareholders with Canadian addresses own about 80 percent of the outstanding common shares of the Company. Major shareholders are: the Seaman brothers of Calgary, 17 percent; Cemp Investments Ltd. et al of Montreal, 12 percent; and the Olympia & York group of Toronto, seven percent.

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OF MANAGEMENT

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MCGILL UNIVERSITY



# REPORT TO SHAREHOLDERS



*Byron J. Seaman, Vice-Chairman of the Board. Daryl K. Seaman, Chairman of the Board and Chief Executive Officer. Donald R. Seaman, Senior Vice-President.*

Bow Valley experienced satisfactory financial results in 1981 as cash flow increased to a record level of nearly \$100 million, while net income before an extraordinary item decreased marginally from the prior year. Net income after the extraordinary item increased very substantially to over \$47 million, a new high for the Company.

The financial results reflect a difficult period for the petroleum industry and also for the general economic climate in Canada. Even though net income fell short of expectations, overall results were reasonable after taking into account the depressed state of the economy during the latter part of the year. Bow Valley's diversity of operations, both geographically and as to business lines, was a significant factor in helping to partially avoid downtrending economies, particularly in Canada and the United States.

In 1981, Bow Valley invested a record \$406 million in petroleum exploration and development, coal mining, oilwell drilling rigs, and manufacturing assets in Canada and a number of other countries. Major investments during the year included the purchase of a \$133 million semi-submersible drilling rig to work off the east coast of Canada and \$118 million on exploration and appraisal drilling and development in the Brae fields in the North Sea. Other oil and gas investments totalled \$86 million; \$26 million was expended on coal properties and \$43 million was invested in drilling and manufacturing operations.

These substantial investments reflect the confidence of the Company in the long term future of the energy industry, despite its current state in Canada and the international oversupply of oil-producing capacity. We believe that these are cyclical conditions and, while they demand certain adjustments be made to our operations, they should not totally dominate our long term investment strategy.

In 1981, expenditures were financed by internally generated cash flow, non-recourse loans, and external financings. The Company's long term debt was restructured during the year to substantially decrease exposure to floating commercial prime rates.

Spending plans for 1982 call for an investment of nearly \$400 million in capital assets. Financing requirements of \$127 million for Brae will continue to be provided through non-recourse advances. Loans at favourable rates have been arranged for two semi-submersible rigs that are now under construction, with progress payments during the year expected to be \$66 million. The remainder of 1982 capital expenditure requirements will primarily be provided by cash flow from operations and drawdown of existing bank lines of credit.

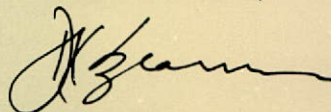
The development of the south Brae field is proceeding on schedule with production expected to begin mid-1983. The planned sequential development of the Brae fields will have a significant impact on Bow Valley's future cash flow.

The acquisition of offshore drilling and servicing equipment represents a major commitment by the Company to participate in oil and gas exploration and development off the east coast of Canada, both as an operator and as a contractor. Substantial oil and gas discoveries have been made in the area and government incentives for Canadian participants have made activity in this region particularly attractive to Bow Valley.

On April 5, 1982, G. J. Maier, formerly Chairman of the Board and Chief Executive Officer of a major Canadian-based international oil and gas company, joined Bow Valley as President and Chief Operating Officer. Mr. Maier has over 30 years' petroleum experience in Canada and internationally. At the Annual Meeting on May 13, 1982, Mr. Maier will be appointed Chief Executive Officer of the Company.

The Board wishes to announce that D. K. Seaman will remain as Chairman and will continue to have an active interest in the affairs of Bow Valley.

On Behalf of the Board,



D. K. Seaman  
Chairman and  
Chief Executive Officer

April 6, 1982



*Bow Valley's largest Canadian gas processing facilities are in Wandering River, Alberta. Gas production in Canada averaged 48 MMcf per day in 1981 compared to a capacity rate of 85 MMcf per day.*

Bow Valley has varying interests in 16.8 million gross acres in Canada, the United States, the United Kingdom and Norwegian sectors of the North Sea, Abu Dhabi, Indonesia, and other parts of the world. Approximately 500 employees conduct exploration and development programs from offices in Calgary, Denver, London, and Singapore.

During 1981, \$204 million was invested in oil and gas exploration and development. Bow Valley participated in drilling 111 exploratory wells and 109 development wells; 72 exploratory wells and 89 development wells were successful. Production during the year averaged 5,468 barrels of oil and 61,085 Mcf of gas per day. At year end, proved reserves were 72 million barrels of oil and 489 Bcf of gas.

In 1982, Bow Valley plans to invest \$244 million in oil and gas exploration and development and participate in drilling 226 wells in seven countries.

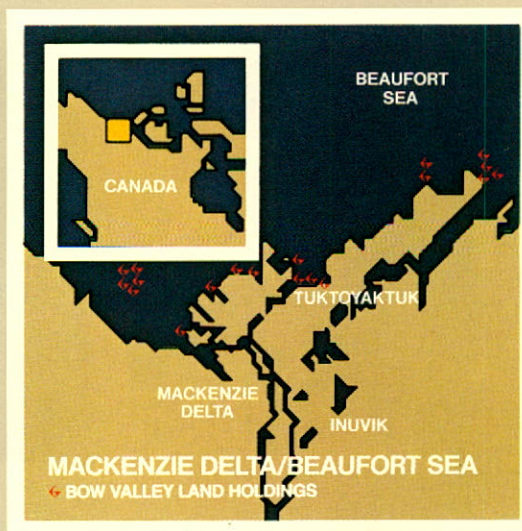
#### CANADA

Bow Valley has 4.3 million gross acres in Canada. Capital expenditures during 1981 were \$14 million and included the drilling of 41 exploration wells, of which 27 were successful, and 39 development wells, of which 28 were successful. Canadian production rates during the year averaged 1,438 barrels of oil and 48,047 Mcf of gas per day.

Proved reserves at December 31, 1981, were 6.3 million barrels of oil and 278.8 Bcf of gas.

Activities in the western provinces during 1981 featured greater emphasis on oil-related programs due to the attractive pricing schedule established by the Provincial and Federal Governments for new oil. During the last few months of 1981, Bow Valley acquired, at government land sales, an interest in 27,918 gross acres in the Shekille, Springburn, South Seal, Sunset, and Utikuma areas of Alberta for a cost to Bow Valley of \$2.8 million. Seismic programs are now in progress and exploration drilling on the acquired properties is expected to begin mid-summer.

Off the east coast of Canada, Bow Valley has entered into an exploratory and development agreement with Husky Oil Operations Ltd. The Joint Venture partners have contracted two semi-submersible drilling rigs, Bow Drills 2 and 3, and will drill about 20 exploratory wells over four years beginning in the latter part of 1983. The Joint Venture is currently in the process of assembling an acreage position offshore Newfoundland and Nova Scotia. Seismic work is in progress and the construction of the semi-submersibles, work boats, and other support equipment is under way. It is expected that these operations and the Canadian content of the two companies will qualify the Joint Venture for the highest level



**OIL AND GAS** *(continued)*



*During 1981, Bow Valley drilled 14 development wells in the Altamont-Bluebell oil field in north-east Utah. This is Bow Valley's largest oil field in the United States which averaged 1,800 barrels of oil per day for Bow Valley in 1981.*



of financial assistance from the Federal Government through the Petroleum Incentives Program announced recently as part of the National Energy Program. Both companies in the Joint Venture are committed to provide maximum Canadian content and industrial benefits to Canada. Under these circumstances, it is the opinion of Management that exploration off the east coast is attractive in view of the early stage of development of the area and the substantial discoveries already made.

In the Mackenzie Delta and Beaufort Sea, Bow Valley is assessing industry exploration programs which could stimulate development of Bow Valley's adjacent offshore and onshore acreage, on which discoveries were drilled in 1975 and 1978. Farm-in and farm-out proposals are also being evaluated. The success of major operators' exploration programs in the area during the past year indicates that production from the Beaufort Sea could begin by 1987.

In the Arctic Islands, Bow Valley's participation is represented by a 1.57 percent interest in Panarctic Oils Ltd. During the last winter season, Panarctic drilled five wells, three of which were multiple-zone oil and gas discoveries. Panarctic's current reserve estimates of 17 Tcf of gas have yet to be updated, pending the completion of appraisal wells now in progress.

During 1982, Bow Valley will spend

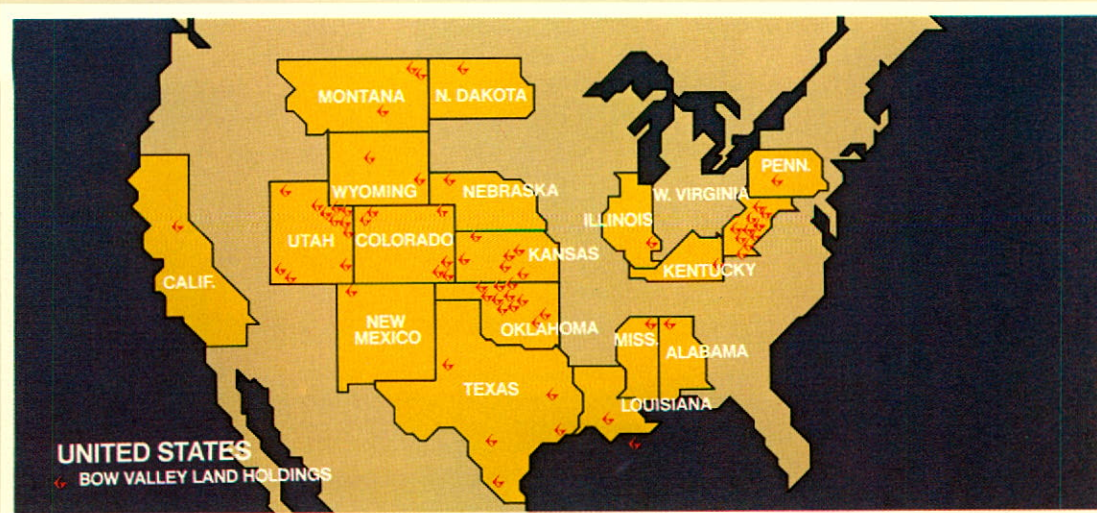
\$23 million on oil and gas exploration and development in Canada and participate in drilling 71 wells.

#### UNITED STATES

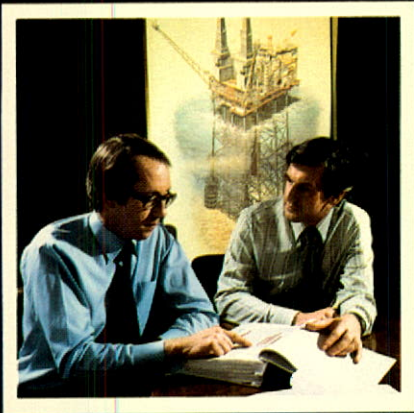
Bow Valley's acreage position in the United States increased by 22 percent in 1981 to 1,009,000 gross acres. Capital expenditures during the year were \$37 million and included the drilling of 64 exploratory wells and 56 development wells; 43 exploration and 52 development wells were successful. Average production rates in the United States during 1981 were 2,557 barrels of oil and 13,038 Mcf of gas per day. Proved reserves at year end were 11.8 million barrels of oil and 93.5 Bcf of gas.

Activities during the year included development drilling in the Altamont-Bluebell oil field in Utah and the Madisonville gas field in Texas, while exploration programs were conducted in the Montana and North Dakota sections of the Williston Basin and the Mississippi and Alabama sections of the Black Warrior Basin. In the Burning Springs oil and gas field in Wirt County, West Virginia, an eight-mile gas-gathering system is under construction to connect 17 shut-in oil and gas wells to market by mid-1982. A further 29 wells are scheduled to be drilled in this field in 1982.

During 1982, Bow Valley's exploration and development program in the United



OIL AND GAS (continued)



The Brae 'A' Production Platform Jacket will be set on location in South Brae in June 1982. By December 1982, drilling of the first development wells will have commenced. The 30-inch pipeline to the Forties Platform has been laid for transportation of Brae liquids to the mainland. The 400,000 barrel per day capacity of this pipeline will accommodate additional future production.

States will cost \$32 million and will include drilling 119 wells.

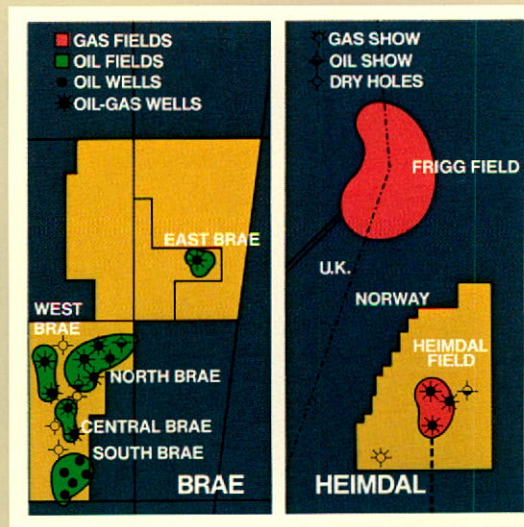
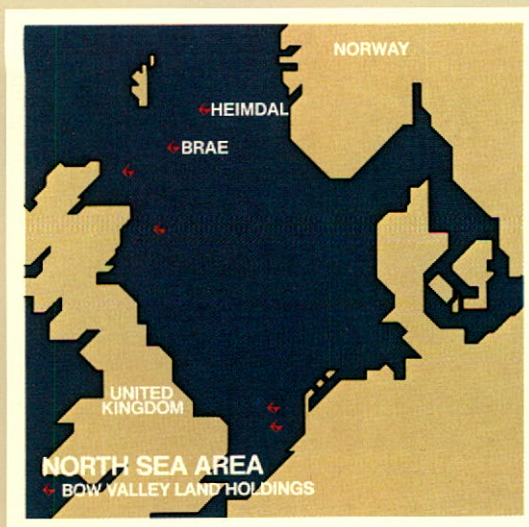
### UNITED KINGDOM

On Blocks 16/7a and 16/3a, in the North Sea, 20 wells have been drilled and five separate reservoirs have been defined and designated South Brae, North Brae, East Brae, Central Brae, and West Brae. Bow Valley is a 14 percent participant in the Brae fields which are located about 150 miles northeast of Aberdeen, Scotland, in 350 feet of water.

The development of the South Brae field is underway and Marathon Oil (U.K.) Limited, the operator, estimates that production should begin mid-1983. The production platform is being built in Scotland and will be towed to location this June. The connecting pipeline to the Forties field is already in place. Maximum production rates from South Brae will be 112,000 barrels of oil and natural gas liquids per day. Development costs for South Brae are budgeted at U.S. \$2.1 billion, including contingency provisions and inflation. Proved undeveloped reserves within Block 16/7a at South Brae are estimated to be 292 million barrels of oil and natural gas liquids and 154 Bcf of gas. Bow Valley's share of these reserves is 40.9 million barrels of oil and natural gas liquids and 21.5 Bcf of gas.

Since early 1981, four wells have been drilled at Brae:

- An appraisal well in North Brae, 16/7a-16, was drilled to a depth of 15,211 feet but was abandoned because of mechanical difficulties and high bottom-hole pressure. The results, however, were encouraging and a future deep test will be drilled by a rig with capacity to handle the high pressures of the 17,000-foot deep Middle Jurassic zones in North Brae.
- A successful appraisal well in North Brae, 16/7a-17, was drilled to a depth of 13,076 feet in the Upper Jurassic, and from four tests of a 625-foot gross hydrocarbon section had cumulative flow rates of 16,555 barrels of condensate and 90 MMcf of gas per day.
- An exploratory test, 16/7a-18, was successfully completed as a significant extension of the West Brae field. The well was drilled to 8,700 feet and tested 3,698 barrels of oil per day from the Devonian, and from a higher Paleocene sand tested 20 MMcf of gas and 208 barrels of oil per day. The well is about two miles north of well 16/7a-2, which was drilled in 1975 and tested 8 MMcf of gas per day from the Paleocene and 4,023 barrels of oil per day from a separate Paleocene sand.
- An appraisal well, 16/7a-19, was drilled to a depth of 12,970 feet in March 1982 in North Brae and tested 4,898 barrels of oil



OIL AND GAS *(continued)*



*Advanced geophysical technology has indicated a number of structures to be drilled onshore Abu Dhabi.*

and 22.9 MMcf of gas per day. The successful completion of this well will result in an application being submitted in the next few months to the Government for the development of the North Brae field. This reservoir will be included in proved undeveloped reserves upon approval of the application.

Further appraisal drilling is required in the Paleocene and Devonian sands in West Brae, the deeper Jurassic zones in North Brae, and the Upper Jurassic formation in Central and East Brae. Block 16/2a also has yet to be drilled.

Bow Valley's share of capital expenditures at Brae during 1982 is estimated at \$127 million and will include the drilling of five wells. These costs continue to be paid for by other participants in the venture. The payments are made as a non-recourse loan with principal and interest payable only from 70 percent of Bow Valley's share of net proceeds of Brae production after deducting cash income taxes. The balance of the non-recourse loan, including accrued interest, was \$204 million at December 31, 1981.

#### NORWAY

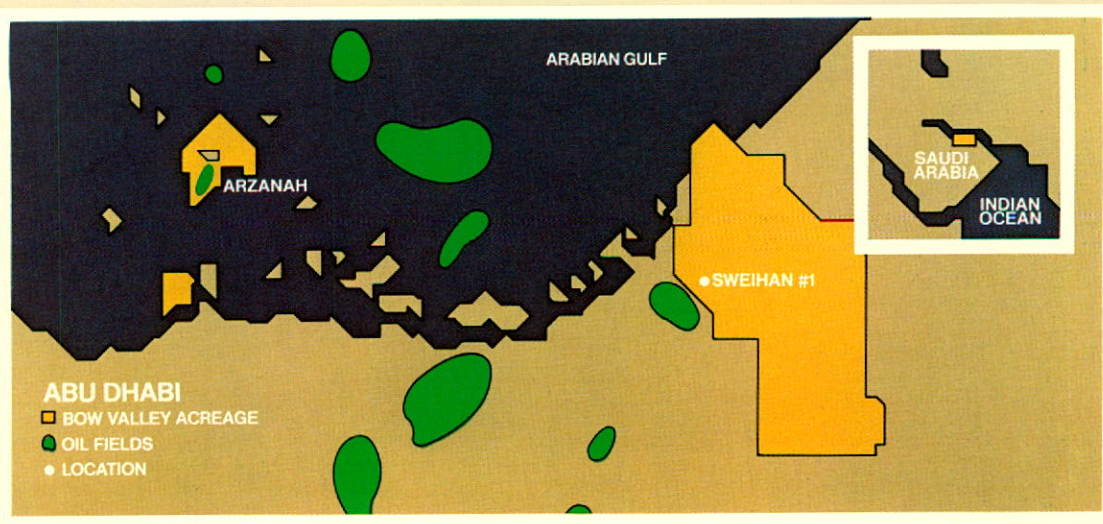
The Heimdal gas condensate field was discovered in 1972 in Block 25/4 in the North Sea. Bow Valley has an eight percent interest in the Heimdal field, which is located about

100 miles off the coast of Norway in 375 feet of water. Five wells have been drilled, three of which were successful, and proved reserves have been confirmed in the 8,000-foot deep Heimdal sand of 1.2 Tcf of gas and 29 million barrels of condensate. Bow Valley's share of these reserves is 95.4 Bcf of gas and 2.3 million barrels of condensate.

Approval has been received from the Norwegian Government to transport the Heimdal gas to Ekofisk through the Statpipe gas pipeline system which is currently under construction. The gas will then flow through the Norpipe system and be marketed in Continental Europe at Emden, Germany. Production is expected to begin in 1986 at 307 MMcf of gas and 7,700 barrels of condensate per day. Development costs at Heimdal are estimated at U.S. \$1.2 billion including escalation and contingency. Bow Valley is analyzing a proposal to finance its share of the development costs on a non-recourse basis.

#### ABU DHABI

Bow Valley has a ten percent interest in the Arzanah oil field offshore Abu Dhabi in the Arabian Gulf. Bow Valley acquired its first interest in Abu Dhabi in 1970 and then participated in the drilling of two offshore exploratory wells. One of these wells discovered the Arzanah field during 1973, about five miles south of Arzanah Island in



OIL AND GAS (continued)



*Bow Valley is developing shallow oil reserves in Indonesia in areas which have previously been highly productive from deeper formations.*

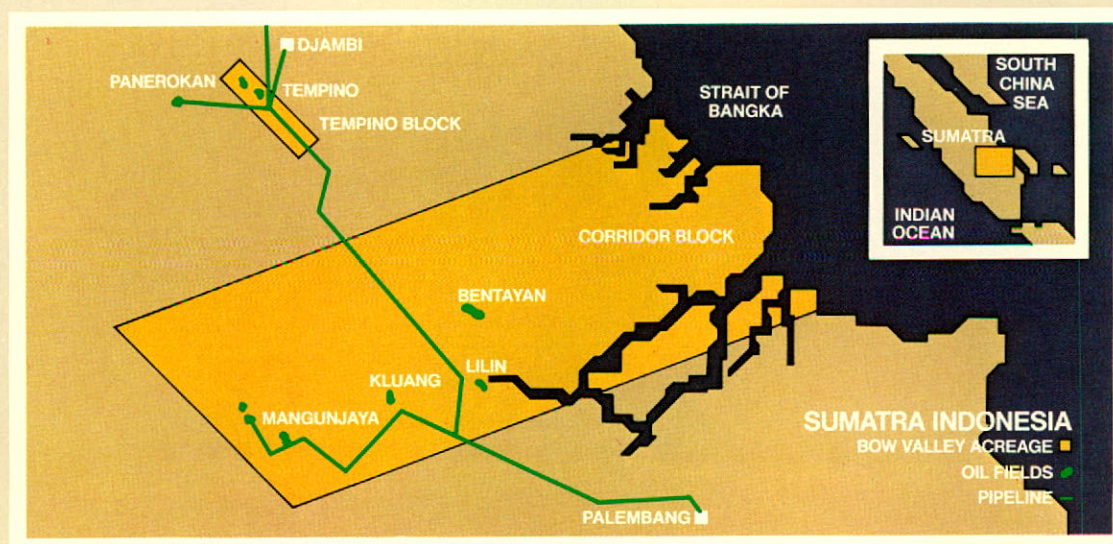
50 feet of water. The Arzanah oil field began production in September 1979, with Amerada Hess Corporation as operator. Facilities on Arzanah Island were constructed to process 35,000 barrels of oil per day. In 1979, the government allowable production rate for the field was reduced to 20,000 barrels of oil per day and subsequently production has been further reduced pending completion of a pressure maintenance system. During 1981, production averaged 11,550 barrels of oil per day. Four water injection wells are scheduled to be drilled during 1982, and pressure maintenance facilities will be installed mid-1983. Production rates thereafter should approximate 20,000 barrels of oil per day.

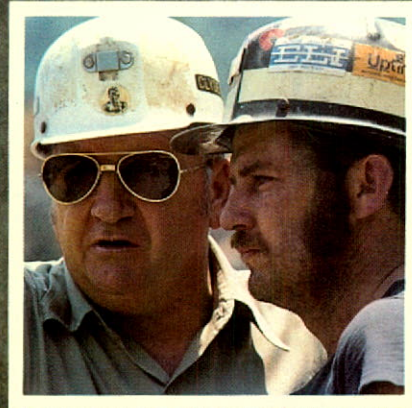
Bow Valley also has a 20 percent interest in a 1.9 million-acre concession onshore Abu Dhabi. During 1981, about 730 miles of new seismic data was acquired and on October 25, 1981, the first exploration well, Sweihan No. 1, spudded. The well has been drilled to a depth of 14,525 feet in the Jurassic and is being tested. The drilling rig is on a long term contract and a number of locations have been determined as future drilling sites. Bow Valley anticipates investing about \$10 million in this onshore exploration program prior to January 1, 1987.

## INDONESIA

Bow Valley is a 40 percent participant in a 3.1 million-acre project in south Sumatra. Exploration and development is conducted on the Corridor and Tempino Blocks under a Technical Service Contract. In 1981, 15 wells were drilled, of which eight were oil wells having flow rates of between 60 barrels and 150 barrels of oil per day. Most of the successful wells were completed at depths near 1,500 feet in the Palembang sands of the Kluang oil field. Bow Valley's average production from the three fields, Tempino, Mangunjaya, and Kluang, during 1981 was 318 barrels of oil per day. During 1982, Bow Valley will invest \$17 million and participate in drilling 21 wells.

There are large quantities of high pour-point oil reserves in the Bentayan oil field in the Corridor Block which will begin production in late 1982 as a blended mixture with the lighter crude presently being produced. The success of this blending concept could lead to further development of the Bentayan field.





*Bow Valley's highly-automated facilities in Kentucky weigh and load coal into 72-car unit trains in two and one-quarter hours. Each hopper car contains 99 tons and the trains are provided and maintained by the two major customers.*



## COAL

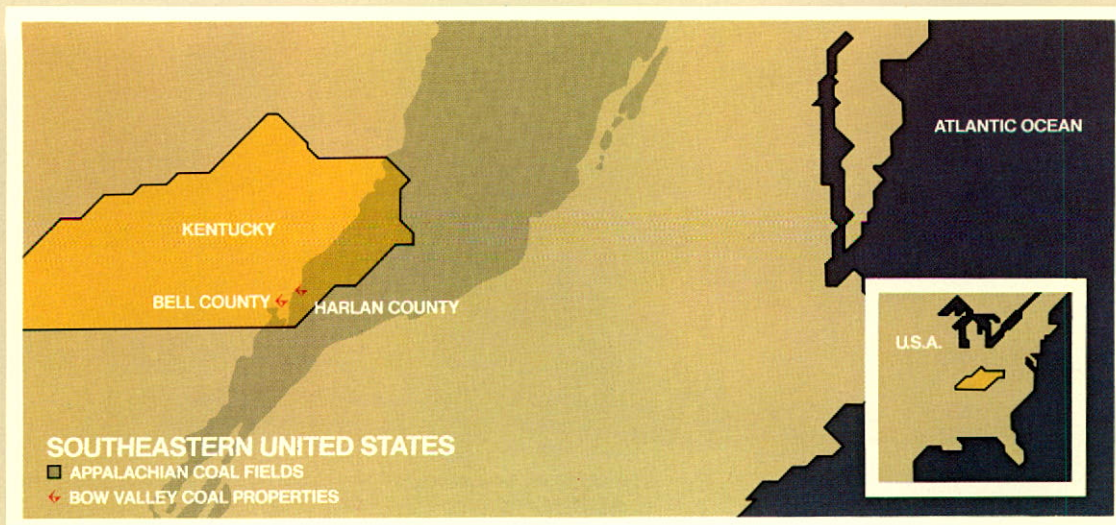
Bow Valley conducts underground and surface bituminous coal mining operations in Kentucky. Approximately 600 non-union employees mine the high-grade steam coal on a 20,100-acre lease in Harlan County and an 8,200-acre lease in Bell County. The coal is sold with minimal preparation for use in power generation. The highly-automated facilities processed 2,303,000 tons of coal in 1981 compared to 1,898,000 tons in 1980. This year's coal shipments represent the thirteenth consecutive year of increased volumes being shipped from Bow Valley's properties in Kentucky.

Almost all Bow Valley's coal production is sold under long term contracts to two utility companies. Florida Power Corporation has contracted to purchase 850,000 tons annually to 1995 and has an option to take up an additional 500,000-ton minimum per year from 1983 to 1995. South Carolina Public Service Authority under one contract has agreed to purchase 1,000,000 tons annually to the year 2000 and, under another contract, will receive quantities that will increase to 1,000,000 tons per year by 1986 and will continue at that rate until the year 2004. By 1986, Bow Valley's coal sales under long term contracts should be a minimum of 3,350,000 tons per year. These contracts provide for periodic price escalations based upon increased costs and inflation.

At December 31, 1981, recoverable clean coal reserves were estimated to be 77,091,000 tons. Subsequent to the year end, additional coal reserves of a minimum 5,000,000 tons were acquired upon the purchase of an adjacent mining operation. During 1981, capital expenditures were \$28 million and in 1982 are estimated at \$19 million.

## URANIUM

Bow Valley has a 20 percent interest, reducing to a 12½ percent interest after payout, in the Midwest Lake uranium deposit in northeast Saskatchewan. The ore body was discovered in 1978 and a coring program over the last few years has outlined the deposit and a proposed mining program has been developed. A decision has been made to mine only higher grade ore zones with an average grade of 2.4 percent  $U_3O_8$ . Approximately 39 million tons of uranium oxide will be processed over a ten-year period beginning in the late 1980s or 1990. The start-up date has been deferred from 1986 to 1990 because of the low selling price of uranium and the reduced demand for the product on world markets.





## DRILLING AND MANUFACTURING



*Bow Drill 1 is drilling 250 miles off the coast of Nova Scotia. In addition to being actively utilized on exploratory and appraisal wells, consideration is being given to using semi-submersibles for drilling development wells off the coast of Labrador.*

Bow Valley's drilling and manufacturing operations are conducted by Bow Valley Resource Services Ltd., a 78 percent-owned subsidiary. BVRS had been a wholly-owned subsidiary until February 1981, when a \$64.8 million public offering was successfully completed in Canada and the company was listed on The Toronto Stock Exchange.

## **DRILLING**

BVRS has 1,200 employees engaged in drilling activities and operates 48 oilwell drilling rigs: 23 shallow and 16 deep rigs in western Canada, one semi-submersible rig off the east coast of Canada, and eight deep rigs in the western United States.

Oilwell drilling activity in western Canada was adversely affected during the year by a decrease in exploration and development activity. BVRS' drilling footage was down and the utilization rates for shallow rigs decreased this year to 47 percent from 63 percent in 1980 and for deep rigs to 50 percent from 77 percent last year. The National Energy Program has reduced industry cash flows and the situation has been further aggravated by a lack of markets for gas in western Canada. An estimated 227 drilling rigs left western Canada and competition for the remaining work increased considerably with a corresponding reduction in profit margins. There are indications that the attractive pricing arrangement for new oil established by the Energy Pricing Agreement will stimulate the economy to a limited extent in western Canada, but relief is not expected to be immediate.

Off the east coast of Canada, the BVRS semi-submersible drilling rig, Bow Drill 1, is drilling on the Scotian Shelf for Petro-Canada Exploration Inc. The rig was purchased in March 1981 for \$133 million while working in the initial phase of a four-year contract with Petro-Canada. The rig operated in European waters until November 1981 when it was moved to Halifax, Nova Scotia, and refitted for Canadian operations. Bow Drill 1 has a depth capacity of 26,000 feet and can operate in 1,300 feet of water.

During 1981, BVRS, as a 65 percent partner, and Husky Oil Operations Ltd., as a 35 percent partner, contracted to build two

additional semi-submersible drilling rigs for a total cost of approximately \$300 million. One rig, an Enhanced Pacesetter design to be called Bow Drill 2, is being built in Norway and will be completed mid-1983. The other rig, Bow Drill 3, an Aker 3.2 design, is being constructed in Saint John, New Brunswick, and will be operational in late 1983. The rigs are designed to have maximum drilling capacities and will incorporate all other features that should establish BVRS as the premier contractor in Canadian waters. Both rigs are financed on a long term basis at less than current commercial rates and are contracted to Bow Valley and Husky for a term of four years. BVRS should experience 100 percent utilization for its offshore equipment. The Federal Government is encouraging activity in frontier areas for Canadian companies and the east coast has already provided industry with a number of significant oil and gas discoveries.

In the United States, BVRS' rigs had a utilization rate of 86 percent in 1981 compared to 90 percent the previous year. BVRS moved four deep rigs from Alberta to Montana and Wyoming during the year and the eight rigs now operating in the United States are enjoying a high level of activity. The political climate and product demand in the United States offer encouragement to the oil and gas industry and rig availability has increased considerably.

During 1981, BVRS spent \$143 million on offshore drilling equipment and \$15 million on land-based rigs. It is proposed to incur capital costs of approximately \$105 million in 1982, mostly for offshore drilling equipment.

## **MANUFACTURING**

BVRS manufactures equipment for and sells and distributes supplies to the oil and gas, forest products, mining, and construction industries. Approximately 700 employees are engaged in these operations.

The largest facilities are in Vancouver where there is over 200,000 square feet of plant capacity including manufacturing operations, a grey iron foundry, and fabrication and machine shops. Smaller operations near Portland include a fabrication shop and a machine shop.

**DRILLING AND MANUFACTURING** *(continued)*



*During 1981, 40 oilfield service rigs were manufactured in BVRS' facilities in Vancouver and sold primarily to markets in the United States.*

Products from these facilities include oilwell service rigs; oilfield machinery; steel buildings; machined castings; sawmill equipment and saws; foundry items, mainly for the metal processing industry; and diamond drill bits and related equipment. Sales and distribution activities are conducted from 14 warehouses across Canada.

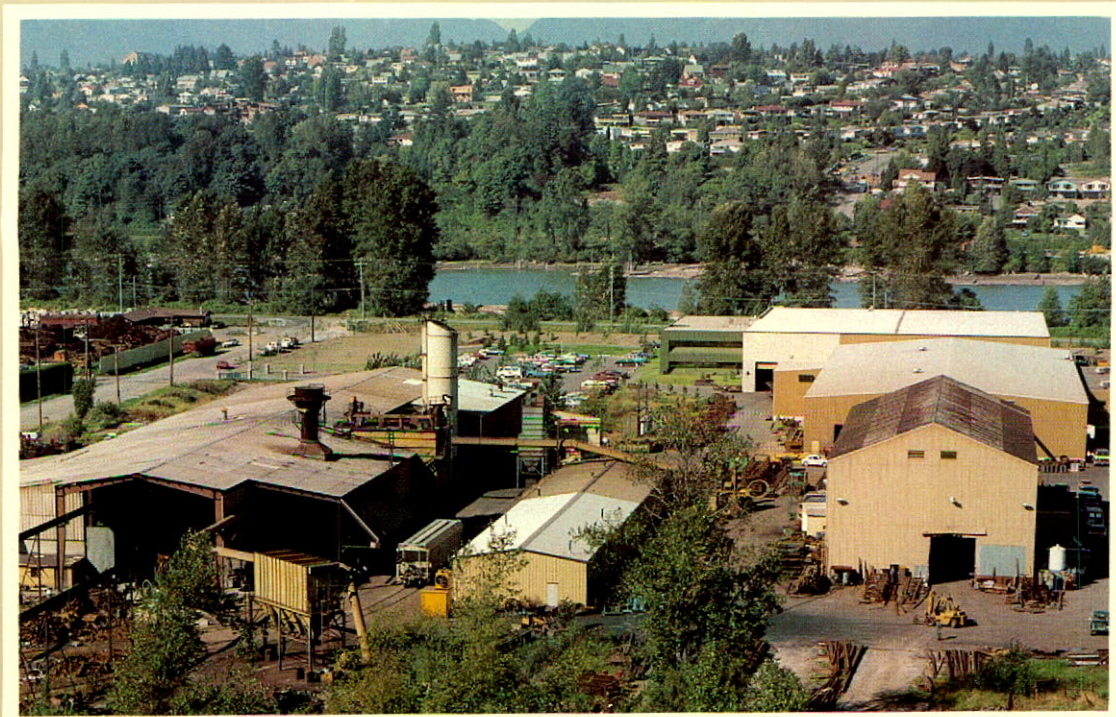
BVRS also manufactures heating and air conditioning equipment for residential, commercial, and institutional construction. There is 100,000 square feet of plant capacity in Edmonton and Toronto and sales offices and warehouses are located in major Canadian cities.

In Calgary, BVRS has offices and a laboratory and plant which provide engineering services and instrumentation relating to environmental monitoring and control.

During 1981, equipment and other items sold to the oil industry were the most profitable lines of BVRS products. There was a good market in the United States for BVRS-built oilfield service rigs. The relatively

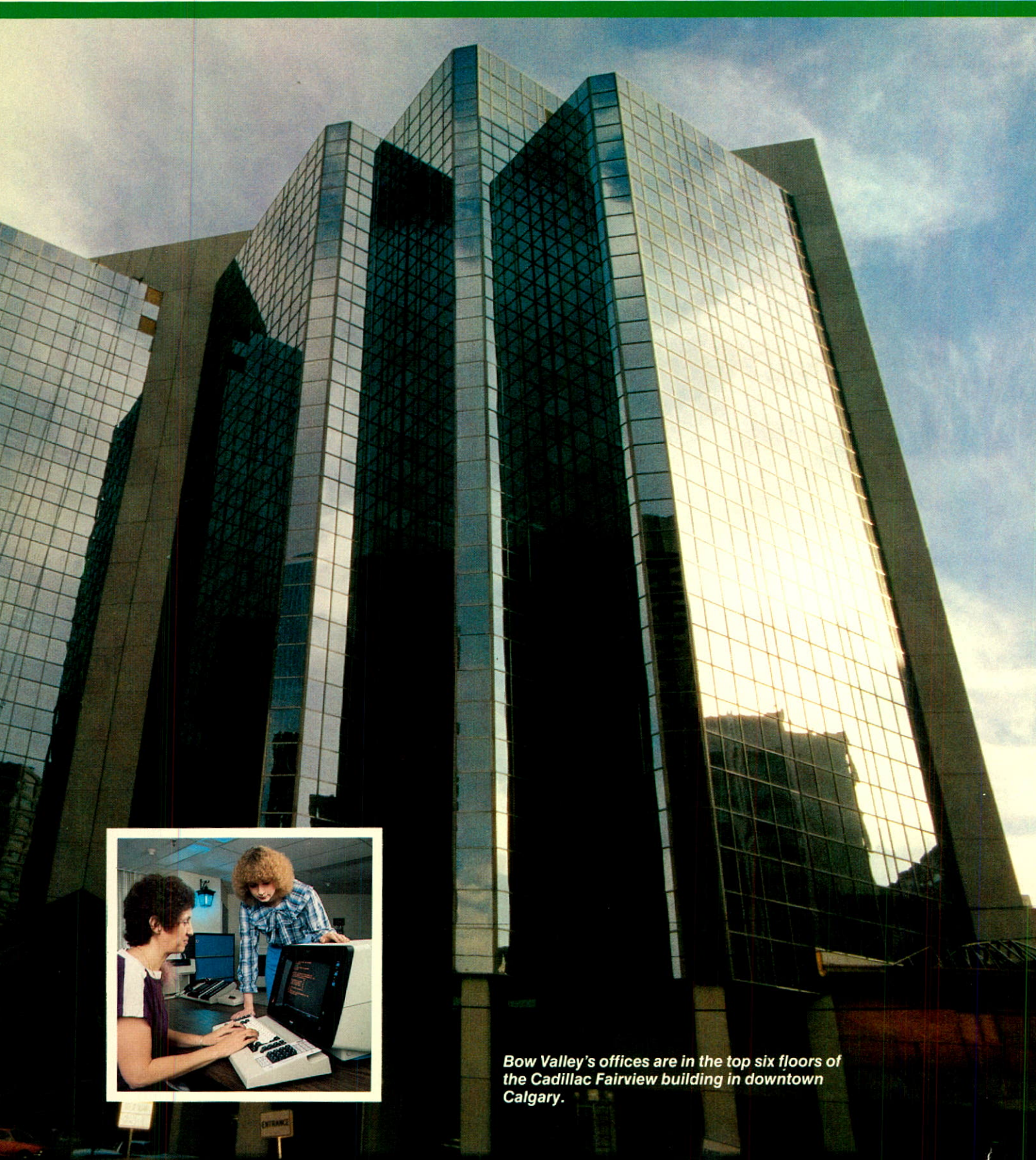
higher oil and gas prices are encouraging oil operators to increase the productivity of marginal wells in both Canada and the United States and a good demand for workover equipment was experienced during the year. Difficult economic conditions prevailed during 1981 for products sold to the sawmill, mining, and construction industries. BVRS continues to examine new business opportunities, particularly as they relate to servicing the new mega-projects for western Canada and the frontier areas.

On April 1, 1981, BVRS and NOVA, AN ALBERTA CORPORATION jointly acquired the truck manufacturing operation of White Motor Corporation of Canada Ltd. for a total cost of \$30 million. Activities are now conducted by Western Star Trucks Inc. in a 150,000-square foot plant in Kelowna, British Columbia. Capacity is 14 units a day and at year end eight units a day were being processed. Production has since been reduced and a low market demand is expected to continue throughout 1982.





## MANAGEMENT'S DISCUSSION AND ANALYSIS



*Bow Valley's offices are in the top six floors of the Cadillac Fairview building in downtown Calgary.*

During 1981, Bow Valley's assets increased by 61% to exceed \$1 billion, common share dividends were increased 50% to \$0.15 per share, and cash flow from operations increased 9% over 1980 to almost \$100 million. Operating income increased 22% during 1981 to \$122.7 million; however, substantially higher interest costs, higher general corporate costs, and minority interest in BVRS' earnings reduced Bow Valley's

income for the year before extraordinary item by \$3.1 million to \$28.9 million. Bow Valley had an extraordinary gain in 1981 of \$18.4 million, or \$0.52 per common share.

## OPERATIONS

Bow Valley's revenues, operating income, and cash flow from operations increased significantly from 1979 to 1981.

### SELECTED CONSOLIDATED FINANCIAL DATA

(Canadian dollars — millions, except per share data)

	Year Ended December 31				Year Ended
	1981	1980	1979	1978	May 31 1978
Revenue .....	<b>\$494.4</b>	\$362.1	\$275.6	\$232.5	\$174.7
Operating income.....	<b>122.7</b>	100.8	68.7	45.1	27.1
Income before extraordinary item .....	<b>28.9</b>	32.0	16.4	14.3	10.9
Net income .....	<b>47.3</b>	32.0	16.4	14.3	10.9
Cash flow from operations .....	<b>99.4</b>	90.9	59.0	42.6	29.7
Share capital issued					
Bow Valley.....	<b>3.0</b>	63.8	26.1	1.1	0.6
BVRS .....	<b>45.1</b>	—	—	—	—
Increase (decrease) in long term obligations					
Debt .....	<b>165.5</b>	1.8	(1.3)	205.0	178.8
Exploration and development advances ..	<b>117.0</b>	58.8	6.5	5.7	7.5
Capital expenditures .....	<b>405.6</b>	194.6	78.0	85.7	51.0
Total assets.....	<b>1,061.9</b>	659.5	480.3	418.1	373.8
Net book value of capital assets.....	<b>857.0</b>	510.2	360.6	324.4	290.6
Long term obligations					
Debt .....	<b>422.9</b>	257.4	255.6	256.9	229.0
Exploration and development advances ..	<b>204.1</b>	87.1	28.3	21.8	19.4
Shareholders' equity .....	<b>225.2</b>	184.4	95.9	54.8	46.2
Return, before extraordinary item, on average shareholders' equity .....	<b>14.1%</b>	22.8%	21.7%	30.1%	26.4%
Ratio of long term debt to shareholders' equity .....	<b>1.9:1</b>	1.4:1	2.7:1	4.7:1	5.0:1
Per common share					
Income before extraordinary item .....	<b>\$0.71</b>	\$0.85	\$0.49	\$0.47	\$0.36
Net income .....	<b>1.23</b>	0.85	0.49	0.47	0.36
Cash flow from operations .....	<b>2.71</b>	2.55	1.79	1.44	1.00
Dividends.....	<b>0.15</b>	0.10	0.033	0.029	0.021

## MANAGEMENT'S DISCUSSION AND ANALYSIS (continued)

### Oil and Gas

Revenues from oil and gas increased moderately during 1981 after significant growth during recent years. Higher prices received for both oil and gas throughout the period have been offset by lower production and increasing costs, resulting in an overall marginal decline in operating income from this segment in 1981. Higher petroleum and natural gas taxes in Canada and the United States further eroded the contribution of this segment to Bow Valley's net income.

	1981	1980	1979
<b>AVERAGE DAILY PRODUCTION</b>			
Oil (bbls)			
Canada . . . . .	1,438	1,540	1,653
United States . . . . .	2,557	2,366	2,168
Abu Dhabi . . . . .	1,155	2,065	869
Indonesia . . . . .	318	104	—
	<u>5,468</u>	<u>6,075</u>	<u>4,690</u>
Gas (Mcf)			
Canada . . . . .	48,047	46,260	51,539
United States . . . . .	13,038	15,761	15,207
	<u>61,085</u>	<u>62,021</u>	<u>66,746</u>
<b>AVERAGE PRICE</b>			
Oil (per bbl)			
Canada . . . . .	\$17.57	\$14.35	\$12.20
United States . . . . .	40.15	30.45	16.93
Abu Dhabi . . . . .	44.71	37.36	31.53
Indonesia . . . . .	40.90	34.97	—
Weighted average	<u>\$35.22</u>	<u>\$28.89</u>	<u>\$17.97</u>
Gas (per Mcf)			
Canada . . . . .	\$ 2.50	\$ 2.36	\$ 1.65
United States . . . . .	2.97	2.33	1.93
Weighted average	<u>\$ 2.60</u>	<u>\$ 2.35</u>	<u>\$ 1.71</u>

#### a) CANADA

Oil production continues to decline as a result of the natural productivity characteristics of Bow Valley's oil wells. Gas production in Canada remains well below estimated capacity due to the reduced demand in both the domestic and export markets. Oil production for 1982 is anticipated to remain unchanged from 1981 levels

while gas production should increase modestly.

As provided in the agreements between the Government of Canada and the producing provinces, prices of oil and gas are scheduled to rise throughout the next five years towards world levels. The immediate impact will, however, be substantially offset by new and higher taxes, particularly the 8% Petroleum and Gas Revenue Tax ("PGRT") introduced in January 1981 and increased by 50% for 1982. During 1981, Bow Valley paid PGRT of \$3.5 million.

Bow Valley estimates that its Alberta gas fields are capable of producing approximately 85 MMcf of gas per day, should sufficient market demand exist. The Federal-Provincial agreements provide for market development incentive payments to encourage the development of new markets within the eastern provinces, and gas pipelines are currently being extended further into the Province of Quebec. At present, it is not possible to assess the impact of these factors on Bow Valley's gas production.

#### b) UNITED STATES

Gas production was lower in 1981 than in 1980 due to gas surpluses in Bow Valley's market areas while oil production has continued to increase at a modest rate. Revenues have increased substantially over the three-year period due to deregulation of oil prices and the phased gas price decontrol program. The gains in operating income have, however, been partially offset by the Windfall Profit Tax introduced effective March 1, 1980; Bow Valley paid \$5.5 million in 1981 compared with \$2.6 million in 1980. Production is expected to increase during 1982, particularly for gas as a result of new facilities which came on-stream during 1981.

#### c) ABU DHABI

Production from the Arzanah field in Abu Dhabi, in which Bow Valley has a 10% interest, began in September 1979 at an initial average rate during 1979 of 26,000 barrels per day, reaching a maximum of 35,000 barrels per day. A decline in the reservoir pressure in early 1980 has



subsequently reduced production which is expected to remain at a relatively low level until installation of pressure maintenance facilities has been completed in mid-1983. Thereafter, production should increase to the 20,000 barrels per day level. In addition, production and operating costs during 1981 were adversely affected by a major workover program.

#### d) INDONESIA

Bow Valley commenced 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 as a result of Bow Valley earning a full year's 40% participation rate, which became effective July 1981, and new discoveries scheduled to begin production during 1982.

#### Coal

Coal production increased by more than 20% during each of the three years, 1979 to 1981. Substantial coal reserves have been acquired over this period and extensive capital expenditures have been made to open new mines and improve efficiency of existing operations. Virtually all of Bow Valley's coal is sold under long term contracts. These contracts include provisions for increases in selling prices in line with certain operating costs. Production is expected to increase in 1982.

	<u>1981</u>	<u>1980</u>	<u>1979</u>
Annual production (thousands of tons).	<b>2,303</b>	1,898	1,544
Average price received per ton . . .	<b>\$39.60</b>	\$35.56	\$35.41

#### Offshore Drilling

BVRS is a major participant in the ownership and operation of semi-submersible drilling rigs for use off the east coast of Canada. BVRS is the first Canadian offshore drilling contractor operating in the area and believes that there will soon be a significant market for Canadian semi-submersibles, partially in response to the National Energy Program which provides for higher incentive payments for offshore exploration.

BVRS acquired its first semi-submersible drilling rig, the Bow Drill 1, in March 1981 and immediately started to earn revenue under a four-year contract with Petro-Canada Exploration Inc.

BVRS (65%) and Husky Oil Operations Ltd. (35%) have contracted for the construction of two semi-submersibles, at a total cost of U.S. \$249 million, which are scheduled for delivery in mid and late 1983. Both rigs are contracted to BVI and Husky for a four-year period, following delivery for use in their Canadian east coast offshore exploration project.

#### Land Drilling

After substantial increases in 1979 and 1980, Bow Valley's revenues and operating income from land drilling declined marginally during 1981. Drilling conditions in Canada have been relatively depressed as a result of the continuing surplus of gas and the introduction of the National Energy Program in October 1980, resulting in higher taxes and lower cash flow for producers.

In April 1980, BVRS acquired a four-rig drilling operation in the western United States and expanded it during 1981 by the transfer of four deep rigs from Canada. One Canadian deep rig was sold in 1981 and will be replaced by a new rig of improved design in the United States during 1982.

	<u>1981</u>	<u>1980</u>	<u>1979</u>
<b>RIGS OPERATED AT YEAR END</b>			
Canada — shallow rigs . . .	<b>23</b>	23	22
Canada — deep rigs . . . . .	<b>16</b>	<u>21</u>	<u>20</u>
	<b>39</b>	44	42
United States — deep rigs	<b>8</b>	<u>4</u>	—
	<b>47</b>	<u>48</u>	<u>42</u>
<b>UTILIZATION RATE</b>			
Canada — shallow rigs . . .	<b>47%</b>	63%	55%
Canada — deep rigs . . . . .	<b>50</b>	<u>77</u>	<u>71</u>
Weighted average . . . . .	<b>48</b>	70	63
United States — deep rigs.	<b>86</b>	<u>90</u>	—
Total weighted average .	<b>53%</b>	<u>71%</u>	<u>63%</u>

The recent Federal-Provincial agreements do not appear to have created any change in

## MANAGEMENT'S DISCUSSION AND ANALYSIS (continued)

the environment for drilling rigs in Canada and competitive conditions with some oversupply are expected to continue throughout 1982. Utilization rates are not expected to change materially in 1982 from 1981.

Although exceptionally good utilization rates were experienced in the United States over the past two years, there are signs of an oversupply of drilling rigs in some areas and competitive pressures on rig rates.

Economic conditions in the mining industry have been relatively depressed over the past few years and conditions are not expected to improve within the foreseeable future.

### Manufacturing and Distribution

Over the period 1979 to 1981, this segment has expanded its customer base to take advantage of favourable conditions within various segments of the natural resource industry. However, a continued decline in the forest products, mining, and Canadian oil and gas industries, which are its main customers, will have a moderating impact on future revenues and operating income of this segment.

In April 1981, BVRS and NOVA, AN ALBERTA CORPORATION each acquired a 50% interest in the Canadian truck manufacturing operation of White Motor Corporation of Canada Ltd., which is now operated as a joint venture called Western Star Trucks Inc. Although not contributing to operating income due to poor market conditions, this division increased total revenues of the manufacturing and distribution segment by \$63 million during 1981. The current economic slowdown in North America continues to have a significant impact on this operation.

### Other Income Statement Items

General and administrative expenses have increased as a result of inflationary pressures, higher business levels, and growing governmental reporting, regulatory, and taxation requirements. The Western Star Truck manufacturing and offshore drilling

operations, added in 1981, also contributed to the significant increase in such costs. Furthermore, additional costs have resulted from BVRS becoming a separate public corporation with its own reporting and compliance requirements.

Interest incurred by Bow Valley has increased substantially from \$37 million in 1979 to \$77 million in 1981. Increases result from larger exploration and development advances received relating to the Brae fields, substantially higher debt levels necessary to finance Bow Valley's extensive capital programs, and higher interest rates. The capitalized portion of this interest has increased from \$3.8 million in 1979 to \$24.2 million in 1981.

An analysis of income taxes is provided in Note 8 to the Consolidated Financial Statements. The effective tax rate of 28% has decreased from prior years primarily as a result of investment tax credits recognized on the qualifying capital expenditures made during 1981, including the acquisition of Bow Drill 1. The recognition of investment tax credits in 1981 was attributable partially to the existence of deferred taxes arising in prior years which, in certain taxable entities, have now been fully utilized. The ultimate realization of these credits is dependent upon the payment of income taxes by such entities, which is expected to occur prior to expiry of their carry forward period. The recording of investment tax credits on future qualifying expenditures will be limited by the amount of accounting income earned by such entities and the extent to which Management anticipates the payment of taxes during the carry forward period.

Minority interest represents the earnings of BVRS attributable to its outside common and preferred shareholders. As explained in Note 5 to the Consolidated Financial Statements, the extraordinary income item arose from the public offering of common shares by BVRS.

## CAPITAL RESOURCES AND LIQUIDITY

The table below provides an analysis of the capital expenditures made during the period 1979 to 1981 and the expenditures proposed for 1982.

Expenditures in 1981 included \$117 million for exploration and development of the Brae fields and \$133 million by BVRS on the acquisition of the Bow Drill 1 semi-submersible drilling rig. Projected expenditures for 1982 include \$127 million on the Brae fields, \$66 million on the Bow Drill 2 and 3 semi-submersibles, and \$14 million for development of the Heimdal gas field.

Bow Valley's capital expenditures will probably remain at very high levels in 1983 and subsequent years due to continuing expenditures on other Brae fields, development of the Heimdal field, completion of the Bow Drill 2 and 3 semi-submersibles, and other possible rig additions, the Canadian east coast offshore exploration project, and other on-going capital expenditure projects.

In view of the significant benefits to be provided by the Canadian Government for frontier exploration by Canadian companies and the attractiveness of the Canadian east coast offshore area, Bow Valley has embarked upon a significant exploration program in this area, primarily through a 50/50 joint venture with Husky Oil Operations Ltd. As discussed earlier, the joint venture

has contracted for the use of the Bow Drill 2 and 3 semi-submersibles. Bow Valley is actively pursuing the acquisition of appropriate east coast acreage through direct application to the Federal and Provincial Governments and farm-ins from foreign-controlled companies. Bow Valley believes that the joint venture partners and BVRS, the drilling contractor, have sufficiently high Canadian Ownership Ratings to receive the maximum benefit under the Federal Government's Petroleum Incentives Payment program.

Bow Valley's ambitious capital expenditure program has been financed through cash flow from operations, non-recourse advances, and external financings. During the period 1979 to 1981, Bow Valley has used the debt and equity markets in Canada, the United States, and Europe to raise new funds as required. Over this period, Bow Valley has significantly improved its ratio of long term debt to shareholders' equity and reduced its vulnerability to erratic short term interest rates.

Following several successful equity and debenture financings in the preceding year and one-half, Bow Valley completed the following major financings in 1981:

- 2,850,000 BVRS common shares and convertible debentures issued in Canada for net proceeds of \$62.7 million in February 1981;

### CAPITAL EXPENDITURES

(Canadian dollars — millions)

	<u>1982</u> (Proposed)	<u>1981</u>	<u>1980</u>	<u>1979</u>
Oil and Gas				
Canada .....	\$ 23.4	\$ 14.2	\$ 18.4	\$ 12.5
United States .....	32.1	36.8	19.1	13.2
Abu Dhabi .....	21.9	9.1	9.0	14.5
United Kingdom .....	133.0	118.0	60.5	7.3
Norway .....	14.2	5.8	4.3	0.2
Indonesia .....	16.9	18.2	12.9	—
Other .....	2.9	1.6	3.3	5.7
	<u>244.4</u>	<u>203.7</u>	<u>127.5</u>	<u>53.4</u>
Coal .....	19.3	28.2	13.4	9.5
Offshore drilling equipment .....	91.0	143.3	—	—
Land drilling equipment .....	14.2	15.3	45.1	9.9
Other .....	20.3	15.1	8.5	5.2
	<u>\$389.2</u>	<u>\$405.6</u>	<u>\$194.5</u>	<u>\$ 78.0</u>

## MANAGEMENT'S DISCUSSION AND ANALYSIS (continued)

- U.S. \$112 million LIBOR term loan obtained in Canada for the acquisition of Bow Drill 1 in March 1981;
- U.S. \$80 million and Cdn. \$20 million of 14½% unsecured notes obtained from Canadian and United States institutional lenders in August and December 1981;
- \$10 million of BVRS floating rate redeemable preferred shares issued in Canada in September 1981; and
- U.S. \$100 million under two separate unsecured LIBOR term loans from European lenders in December 1981 (U.S. \$70 million was drawn down prior to December 31, 1981).

Financing for Brae expenditures continues to be provided through non-recourse advances, which are repayable only from 70% of the net proceeds of production after cash income taxes. Financing has been arranged for construction of Bow Drills 2 and 3 as explained in Note 10 to the Consolidated Financial Statements. A non-recourse proposal is currently being considered by Bow Valley to finance a major portion of the development costs of the Heimdal gas field. The remainder of the 1982 budgeted expenditures and working capital requirements will be supplied mainly through cash flow from operations and drawdown of existing lines of credit. Additional financings may be required in late 1982 to augment internally generated funds and non-recourse exploration and development advances.

Bow Valley is projecting substantial increases in cash flow from operations over the balance of this decade. The South

Brae field will commence production in mid-1983. Construction of the Bow Drill 2 and 3 semi-submersible drilling rigs will be completed in mid and late 1983, respectively. The Norwegian Government has approved the development of the Heimdal field which is expected to commence operations in 1986. An appraisal well was recently successfully tested in the North Brae field and, based on results, a proposal for the development of this field will be submitted to the United Kingdom Government for approval, with potential production beginning in 1986. Cash flows from these operations 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 the results of its operations; accordingly, it is impossible to quantify the impact of inflation on Bow Valley. Virtually all 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 generally 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.

A discussion of the various government regulations affecting Bow Valley in Canada, the United States, the United Kingdom, Norway, and other countries is contained in the Annual Report on Form 10-K, filed with the United States Securities and Exchange Commission.



BOW VALLEY INDUSTRIES LTD.

## CONSOLIDATED FINANCIAL STATEMENTS

### AUDITORS' REPORT

TO THE SHAREHOLDERS OF BOW VALLEY INDUSTRIES LTD.

We have examined the consolidated balance sheets of Bow Valley Industries Ltd. as at December 31, 1981 and 1980 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, 1981, 1980 and 1979. 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, 1981 and 1980, and the results of its operations and the changes in its financial position for the years ended December 31, 1981, 1980 and 1979 in accordance with Canadian generally accepted accounting principles which, except for the changes in accounting principles referred to in Note 9 with which we concur, have been consistently applied.

Calgary, Alberta, Canada  
March 3, 1982

*Price Waterhouse*  
Chartered Accountants

## SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

These consolidated financial statements have been prepared by Management in accordance with the accounting policies described below. Where necessary, Management has made informed judgments and estimates in accounting for transactions which were 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. As explained in Note 14, Bow Valley's accounting policies do not conform in certain respects with United States generally accepted accounting principles.

Reclassifications have been made to information previously provided for prior years to conform to the presentation adopted in 1981.

### Principles of Consolidation

These consolidated financial statements include Bow Valley Industries Ltd., all its wholly-owned subsidiaries, and its 78%-owned subsidiary, Bow Valley Resource Services Ltd. ("BVRs"). A significant amount of Bow Valley's activity is conducted through joint venture, partnership, and similar agreements, and is accounted for by the proportionate consolidation method.

### Foreign Currency Translation

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

- Monetary assets and liabilities (receivables, 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 receivables which are amortized over their remaining terms.

### 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 an assessment of the existence of proved reserves, or for major development projects where unusually significant expenditures must be incurred to ascertain 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 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) Drilling Equipment*

Depreciation of all drilling equipment is based on an estimated 15-year life with a residual value of 30%. Offshore drilling equipment is depreciated by the straight-line method at the rate of 4.67% annually and land drilling equipment by the declining balance method at the rate of 8% annually.

*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 subject to depletion. Capitalization is discontinued when the asset is ready for use or production commences.

**Investment Tax Credits**

Investment tax credits are recorded following the flow-through method as a reduction of income tax expense. In applying this method, Bow Valley records investment tax credits to the extent that existing deferred tax credits and current income are available to generate the tax payments, by individual taxable entity, necessary to claim the credits prior to their expiry.

**Industry Segments**

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

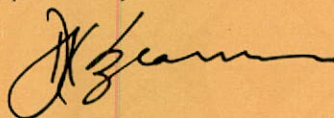
- Oil and Gas — The exploration, development and production of oil and natural gas;
- Coal — The development and mining of coal;
- Offshore Drilling — The provision by BVRS on a contract basis of offshore oilwell drilling services;
- Land Drilling — The provision by BVRS on a contract basis of oilwell and diamond drilling services;
- Manufacturing and Distribution — Various manufacturing, assembly, and distribution activities of BVRS; and
- Other — Various operations, including uranium, which presently are not material with respect to Bow Valley's assets and operations.

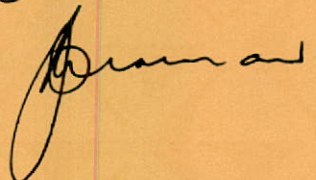
# CONSOLIDATED BALANCE SHEET

(Canadian dollars — thousands)

ASSETS	December 31	
	<u>1981</u>	<u>1980</u>
<b>Current Assets</b>		
Accounts receivable .....	\$ 111,975	\$ 92,199
Inventories, at lower of cost or net realizable value .....	58,174	27,616
Prepaid expenses .....	<u>4,026</u>	<u>3,358</u>
	174,175	123,173
<b>Capital Assets, at cost (Note 1) .....</b>	<b>1,038,353</b>	<b>640,212</b>
Less accumulated depreciation and depletion .....	<u>181,400</u>	<u>130,002</u>
	856,953	510,210
<b>Other Assets, at cost less amounts amortized .....</b>	<b>30,741</b>	<b>26,069</b>

Approved by the Board

 Director

 Director

\$1,061,869

\$659,452



**LIABILITIES AND SHAREHOLDERS' EQUITY**

December 31

	<u>1981</u>	<u>1980</u>
<b>Current Liabilities</b>		
Bank indebtedness .....	\$ 8,332	\$ 8,015
Accounts payable and accrued .....	77,055	55,677
Long term debt due within one year.....	<u>14,051</u>	<u>23,900</u>
	99,438	87,592
<b>Long Term Debt</b> (Note 2) .....	408,890	233,469
<b>Exploration and Development Advances</b> (Note 4).....	204,075	87,144
<b>Other Liabilities</b> .....	21,401	9,714
<b>Deferred Income Taxes</b> .....	73,803	57,120
<b>Minority Interest</b> (Note 5) .....	<u>29,023</u>	<u>—</u>
	836,630	475,039
<b>Shareholders' Equity</b> (Note 6)		
7% Cumulative redeemable convertible Class B preferred shares .....	58,218	58,793
Common shares — 35,323,112 shares issued and outstanding (1980 — 34,992,503) .....	63,551	60,009
Retained earnings .....	<u>103,470</u>	<u>65,611</u>
	225,239	184,413
<b>Commitments and Contingent Liabilities</b> (Notes 10 and 11)		
	<u>\$1,061,869</u>	<u>\$659,452</u>

**CONSOLIDATED STATEMENT OF INCOME***(Canadian dollars — thousands, except per share data)*

	Year Ended December 31		
	1981	1980	1979
<b>Revenue</b>			
Service and manufacturing .....	\$291,543	\$193,097	\$156,259
Oil, gas, and coal, less royalties .....	187,411	157,650	110,196
Other .....	15,486	11,380	9,193
	<u>494,440</u>	<u>362,127</u>	<u>275,648</u>
<b>Expenses</b>			
Direct costs			
Service and manufacturing .....	206,758	136,883	112,549
Oil, gas, and coal .....	76,547	58,250	43,116
Depreciation and depletion .....	53,692	41,423	30,108
General and administrative .....	47,271	32,185	25,797
Interest (Note 7) .....	53,098	35,953	33,543
	<u>437,366</u>	<u>304,694</u>	<u>245,113</u>
<b>Income Before Undernoted Items</b> .....	<b>57,074</b>	<b>57,433</b>	<b>30,535</b>
<b>Income and Other Taxes</b> (Note 8)			
Petroleum and natural gas taxes .....	9,285	2,585	—
Income taxes — current .....	(874)	5,101	239
— deferred .....	16,683	17,746	13,929
	<u>25,094</u>	<u>25,432</u>	<u>14,168</u>
<b>Income Before Minority Interest and Extraordinary Item</b> .....	<b>31,980</b>	<b>32,001</b>	<b>16,367</b>
Minority interest (Note 5) .....	3,076	—	—
<b>Income Before Extraordinary Item</b> .....	<b>28,904</b>	<b>32,001</b>	<b>16,367</b>
Extraordinary item (Note 5) .....	18,350	—	—
<b>Net Income</b> .....	<b>\$ 47,254</b>	<b>\$ 32,001</b>	<b>\$ 16,367</b>
<b>Income Per Common Share</b> , based on the weighted average number of shares outstanding of (thousands) .....	<b>35,208</b>	<b>34,631</b>	<b>32,884</b>
Before extraordinary item			
Basic .....	\$0.71	\$0.85	\$0.49
Fully diluted .....	0.71	0.84	0.49
After extraordinary item			
Basic .....	\$1.23	\$0.85	\$0.49
Fully diluted .....	1.20	0.84	0.49

# CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

(Canadian dollars — thousands, except per share data)

	Year Ended December 31		
	1981	1980	1979
<b>Source of Working Capital</b>			
From operations			
Income before extraordinary item . . . . .	\$ 28,904	\$ 32,001	\$ 16,367
Add non-cash items, principally depreciation, depletion, minority interest, and deferred income taxes . . . . .	70,534	58,942	42,592
<b>Cash Flow From Operations . . . . .</b>	<b>99,438</b>	90,943	58,959
Long term debt issued . . . . .	435,496	122,834	33,276
Exploration and development advances . . . . .	116,931	58,817	6,557
Common shares issued . . . . .	2,967	5,347	26,118
Preferred shares issued, less costs . . . . .	—	58,413	—
Shares issued by Bow Valley Resource Services Ltd., less costs (Note 5) . . . . .	45,134	—	—
Other . . . . .	17,652	11,768	4,224
	<u>717,618</u>	<u>348,122</u>	<u>129,134</u>
<b>Application of Working Capital</b>			
Additions to capital assets			
Oil and gas properties and equipment . . . . .	203,737	127,542	53,391
Mining properties and equipment . . . . .	31,433	15,088	10,746
Offshore drilling equipment . . . . .	143,252	—	—
Land drilling equipment . . . . .	15,276	45,112	9,864
Other . . . . .	11,882	6,809	4,028
	<u>405,580</u>	194,551	78,029
Less proceeds of disposals . . . . .	8,956	5,938	14,372
	<u>396,624</u>	188,613	63,657
Repayment of long term debt . . . . .	261,433	125,693	42,758
Dividends paid to Bow Valley shareholders . . . . .	9,395	5,639	1,292
Dividends paid to minority shareholders . . . . .	836	—	—
Other . . . . .	10,174	9,387	14,687
	<u>678,462</u>	<u>329,332</u>	<u>122,394</u>
<b>Increase in Working Capital . . . . .</b>	<b>39,156</b>	18,790	6,740
<b>Working Capital at Beginning of Year . . . . .</b>	<b>35,581</b>	16,791	10,051
<b>Working Capital at End of Year . . . . .</b>	<b>\$ 74,737</b>	<b>\$ 35,581</b>	<b>\$ 16,791</b>
<b>Cash Flow From Operations Per Common Share,</b> based on the weighted average number of shares outstanding			
Basic . . . . .	\$2.71	\$2.55	\$1.79
Fully diluted . . . . .	2.49	2.43	1.77

# CONSOLIDATED STATEMENT OF SEGMENTED FINANCIAL INFORMATION

(Canadian dollars — thousands)

Industry Segments	Year Ended December 31		
	1981	1980	1979
<b>Revenue</b>			
Oil and gas .....	\$ 105,342	\$ 96,601	\$ 56,924
Coal* .....	91,783	67,154	55,054
Offshore drilling** .....	29,343	—	—
Land drilling .....	98,610	106,815	79,631
Manufacturing and distribution .....	166,040	93,668	72,806
Other .....	16,084	12,530	22,034
	<u>507,202</u>	<u>376,768</u>	<u>286,449</u>
General corporate .....	249	2,621	1,441
Inter-segment eliminations .....	(13,011)	(17,262)	(12,242)
	<u>\$ 494,440</u>	<u>\$362,127</u>	<u>\$275,648</u>
<b>Operating Income</b>			
Oil and gas .....	\$ 48,719	\$ 50,647	\$ 25,560
Coal .....	24,575	15,342	13,614
Offshore drilling .....	14,984	—	—
Land drilling .....	20,832	23,856	17,283
Manufacturing and distribution .....	10,959	8,777	6,692
Other .....	2,623	2,204	5,520
Operating income .....	122,692	100,826	68,669
General corporate .....	(12,520)	(7,440)	(4,591)
Interest .....	(53,098)	(35,953)	(33,543)
Income and other taxes .....	(25,094)	(25,432)	(14,168)
Minority interest .....	(3,076)	—	—
Income before extraordinary item .....	<u>\$ 28,904</u>	<u>\$ 32,001</u>	<u>\$ 16,367</u>
<b>Assets, at year end</b>			
Oil and gas .....	\$ 582,976	\$395,350	\$280,444
Coal .....	103,264	79,710	75,922
Offshore drilling .....	148,202	—	—
Land drilling .....	96,389	97,444	53,245
Manufacturing and distribution .....	83,720	44,643	39,643
Other .....	27,980	26,151	24,226
	<u>1,042,531</u>	<u>643,298</u>	<u>473,480</u>
General corporate .....	19,338	16,154	6,833
	<u>\$1,061,869</u>	<u>\$659,452</u>	<u>\$480,313</u>
<b>Capital Expenditures</b>			
Oil and gas .....	\$ 204,844	\$129,429	\$ 53,821
Coal .....	28,443	13,348	9,495
Offshore drilling .....	143,321	—	—
Land drilling .....	16,715	45,319	9,704
Manufacturing and distribution .....	7,919	3,841	2,038
Other .....	3,743	2,046	2,621
	<u>404,985</u>	<u>193,983</u>	<u>77,679</u>
General corporate .....	595	568	350
	<u>\$ 405,580</u>	<u>\$194,551</u>	<u>\$ 78,029</u>

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

\*\*All revenue is attributable to one drilling rig which is under long term contract to Petro-Canada Exploration Inc.

	Year Ended December 31		
	1981	1980	1979
Depreciation and Depletion Expense			
Oil and gas .....	\$ 25,438	\$ 22,862	\$ 16,202
Coal .....	10,708	8,994	7,004
Offshore drilling .....	4,780	—	—
Land drilling .....	8,976	6,629	3,807
Manufacturing and distribution .....	1,662	969	728
Other .....	1,930	1,739	2,223
	<u>53,494</u>	<u>41,193</u>	<u>29,964</u>
General corporate .....	198	230	144
	<u>\$ 53,692</u>	<u>\$ 41,423</u>	<u>\$ 30,108</u>
<b>Geographic Areas</b>			
Revenue			
Canada .....	\$ 288,670	\$200,555	\$170,823
United States .....	185,025	134,246	95,828
Abu Dhabi .....	16,379	24,953	8,703
Other .....	4,405	1,248	—
	<u>494,479</u>	<u>361,002</u>	<u>275,354</u>
General corporate .....	249	2,621	1,441
Inter-area eliminations .....	(288)	(1,496)	(1,147)
	<u>\$ 494,440</u>	<u>\$362,127</u>	<u>\$275,648</u>
Operating Income			
Canada .....	\$ 61,855	\$ 51,146	\$ 43,252
United States .....	55,537	36,070	20,560
Abu Dhabi .....	5,681	13,680	5,722
Other .....	(381)	(70)	(865)
Operating income .....	<u>122,692</u>	<u>100,826</u>	<u>68,669</u>
General corporate .....	(12,520)	(7,440)	(4,591)
Interest .....	(53,098)	(35,953)	(33,543)
Income and other taxes .....	(25,094)	(25,432)	(14,168)
Minority interest .....	(3,076)	—	—
Income before extraordinary item .....	<u>\$ 28,904</u>	<u>\$ 32,001</u>	<u>\$ 16,367</u>
Assets, at year end			
Canada .....	\$ 391,424	\$208,889	\$159,760
United States .....	321,268	252,582	216,475
United Kingdom .....	214,737	98,581	36,759
Abu Dhabi .....	52,045	47,954	45,004
Other .....	63,057	35,292	15,482
	<u>1,042,531</u>	<u>643,298</u>	<u>473,480</u>
General corporate .....	19,338	16,154	6,833
	<u>\$1,061,869</u>	<u>\$659,452</u>	<u>\$480,313</u>

## CONSOLIDATED STATEMENT OF CHANGES IN COMPONENTS OF WORKING CAPITAL

(Canadian dollars — thousands)

	Year Ended December 31		
	1981	1980	1979
<b>Increase (Decrease) in Current Assets</b>			
Accounts receivable .....	\$19,776	\$16,609	\$27,868
Inventories .....	30,558	5,548	2,244
Prepaid expenses .....	668	1,277	(491)
Net increase in current assets .....	<u>51,002</u>	<u>23,434</u>	<u>29,621</u>
<b>Increase (Decrease) in Current Liabilities</b>			
Bank indebtedness .....	317	(5,240)	2,026
Accounts payable and accrued .....	21,378	9,568	10,153
Long term debt due within one year .....	(9,849)	316	10,702
Net increase in current liabilities .....	<u>11,846</u>	<u>4,644</u>	<u>22,881</u>
<b>Increase in Working Capital</b> .....	<u>\$39,156</u>	<u>\$18,790</u>	<u>\$ 6,740</u>

## CONSOLIDATED STATEMENT OF RETAINED EARNINGS

(Canadian dollars — thousands, except per share data)

	Year Ended December 31		
	1981	1980	1979
<b>Retained Earnings at Beginning of Year</b> .....	\$ 65,611	\$40,896	\$25,820
<b>Add</b>			
Net income .....	<u>47,254</u>	<u>32,001</u>	<u>16,367</u>
	<b>112,865</b>	<b>72,897</b>	<b>42,187</b>
<b>Deduct</b>			
Dividends paid			
7% Class B preferred shares .....	4,105	2,138	—
Redeemable preferred shares .....	—	21	195
Common shares .....	5,290	3,480	1,097
Capital transactions relating to the issue and redemption of preferred shares, less income taxes .....	—	1,647	(1)
	<u>9,395</u>	<u>7,286</u>	<u>1,291</u>
<b>Retained Earnings at End of Year</b> .....	<u>\$103,470</u>	<u>\$65,611</u>	<u>\$40,896</u>
<b>Dividends Paid Per Common Share</b> .....	<b>\$0.15</b>	<b>\$0.10</b>	<b>\$0.033</b>

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS***(Canadian dollars — tabular amounts in thousands, except per share data)***1. Capital Assets**

	1981		1980	
	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 . . .	\$ 113,428	\$ 75,554	\$ 99,319	\$ 68,142
United States . . . . .	175,885	134,999	139,616	111,410
North Africa and the Middle East . . .	61,940	50,185	52,639	44,666
Europe, including the North Sea . . .	232,946	232,581	107,973	107,609
Other, including Southeast Asia . . .	40,786	35,361	22,670	19,146
	<u>624,985</u>	<u>528,680</u>	<u>422,217</u>	<u>350,973</u>
Mining properties and equipment . . . . .	128,192	96,061	96,759	75,356
Offshore drilling equipment . . . . .	143,252	138,482	—	—
Land drilling equipment . . . . .	105,152	69,324	93,737	66,065
Other . . . . .	36,772	24,406	27,499	17,816
	<u>\$1,038,353</u>	<u>\$856,953</u>	<u>\$640,212</u>	<u>\$510,210</u>

The Canadian Government introduced Petroleum Incentives Program payments ("PIP grants") and a Petroleum and Gas Revenue Tax ("PGRT") in 1981, as part of the National Energy Program. The Canadian Institute of Chartered Accountants has issued an accounting guideline which requires Bow Valley to deduct PIP grants from the cost of oil and gas properties recorded on the Balance Sheet. Accordingly, Bow Valley has deducted estimated PIP grants receivable of \$2.5 million from the cost of Canadian oil and gas properties shown above.

A number of Canadian companies, including Bow Valley, believe that it is more appropriate to offset PIP grants against PGRT on the income statement, with any excess of PIP grants deducted from the expenditures which gave rise to the grant. Had Bow Valley followed this approach, net income would have been increased by \$1.3 million (\$0.04 per share) in 1981. The impact of this approach will likely increase in the future as a result of Bow Valley's commitment to exploration in the Canadian frontier areas.

**2. Long Term Debt**

	1981	1980
Term bank loan — secured (a) . . . . .	\$123,333	\$ —
14½% senior notes — unsecured (b) . . . . .	114,872	—
Eurodollar loans — unsecured (c) . . . . .	83,013	—
11% subordinated debentures convertible into BVRS common shares — unsecured (d) . . . . .	28,500	—
8% subordinated debentures convertible into Bow Valley common shares — unsecured (e) . . . . .	47,436	47,788
Other bank loans — secured . . . . .	25,787	209,581
	<u>422,941</u>	<u>257,369</u>
Less portion due within one year . . . . .	14,051	23,900
	<u>\$408,890</u>	<u>\$233,469</u>

a) An 8-year term bank loan of U.S. \$104 million is secured by a first mortgage on the Bow Drill 1 semi-submersible drilling rig. Interest rates range from  $\frac{5}{8}$  to  $\frac{7}{8}$  of 1% over the London Interbank Offered Rate ("LIBOR") or, at the option of BVRS, from  $\frac{1}{4}$  to  $\frac{1}{2}$  of 1% over the lender's U.S. base rate. The average interest rate during 1981 was 18.5% and approximated 17.3% at year end, under the LIBOR option. LIBOR rates are redetermined at various times during the life of the loan. Monthly repayments approximating U.S. \$1.1 million commence on February 1, 1982, increasing to U.S. \$1.5 million on February 1, 1983, and decreasing to U.S. \$0.6 million on February 1, 1987. Partial or complete prepayments may be made at any time with a nominal penalty.

## NOTES (continued)

- b) The 14½% senior unsecured notes are due in 1996 and were issued in two equal installments in August and December 1981, under the terms of a note agreement with institutional investors. The principal amount of the notes comprises U.S. \$80 million and Cdn. \$20 million. Annual repayments commence January 1984 and amount to 7.7% of the principal then outstanding with a final installment due in January 1996.

The agreement imposes on the Company and certain subsidiaries (excluding BVRS) covenants which require the maintenance of certain financial ratios; limit the incurrence of debt, leases, and liens; and restrict the acquisition and disposal of certain investments and assets. The notes can be prepaid, with possible penalty, as a result of adverse changes in certain Canadian tax regulations or failure of the noteholders to consent to either agreement amendments necessitated by changes in the Canadian National Energy Program or to the incurrence of additional debt by Bow Valley.

- c) The Eurodollar loans are unsecured and bear interest at rates ranging from ½ to ¾ of 1% over LIBOR as redetermined at various times during the life of the loans. Loans under these facilities amounted to U.S. \$70 million at December 31, 1981 with an average interest rate of 14.4%, both for the year and at year-end. Repayments are scheduled in varying amounts during the period December 1985 to December 1989. Prepayments may be made without penalty on interest redetermination dates.
- d) The 11% convertible unsecured subordinated debentures were issued in February 1981 by BVRS and mature on March 1, 2001. The debentures are convertible at any time prior to March 2, 1991 into BVRS common shares at a conversion price of \$15.00 per common share, subject to anti-dilutive provisions.

Redemption is permitted in full or in part by BVRS at any time after August 31, 1983; however, during the period September 1, 1983, to February 28, 1986, redemption is permitted only if the market value of BVRS common shares for a specified period of time is at least 125% of the conversion price then in effect (a market price requirement of \$18.75 per share, at present). A premium of 9.6% during the six months prior to March 1, 1984, declining annually by 0.6%, is payable upon early redemption. Mandatory 4% sinking fund payments are required annually from March 1, 1992 until maturity.

- e) The U.S. \$40 million convertible subordinated guaranteed debentures are due December 15, 1995, and were issued by Bow Valley Investments B.V., a wholly-owned subsidiary incorporated in The Netherlands. Interest is payable semi-annually with withholding taxes, if any, payable by Bow Valley. These debentures are convertible before the due date into common shares of Bow Valley Industries Ltd. at a conversion price of Cdn. \$23.125 per common share, subject to anti-dilutive provisions.

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. Redemption is permitted in full or in part by Bow Valley at any time; however, during the period prior to December 15, 1985, redemption is permitted only if the market value of Bow Valley common shares for a specified period of time is at least 130% of the conversion price then in effect (a market price requirement of \$30.06 per share, at present). A premium of 4% during 1982, declining annually by 1%, is payable upon early redemption prior to 1985.

Full redemption by Bow Valley is permitted at any time, and without premium, if an adverse change occurs in withholding tax regulations which affects payments made relating to these debentures.

- f) Aggregate repayments on long term debt, in each of the next 5 years are: 1982 — \$14,051,000; 1983 — \$20,751,000; 1984 — \$33,074,000; 1985 — \$39,582,000; and 1986 — \$46,179,000.

### 3. Unused Lines of Credit

Bow Valley had unused short term lines of credit with banks, providing for overdrafts, loans and bankers' acceptances of approximately \$49 million at December 31, 1981. 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.

In addition to the credit lines arranged for the construction of the Bow Drill 2 and 3 semi-submersible drilling rigs (Note 10), Bow Valley had unused long term lines of credit of approximately \$95 million at December 31, 1981. Commitment fees of ¼ of 1% are payable on these unused lines.



#### **4. 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 6.75% on the first U.S. \$40 million of advances with the balance at prevailing market rates relating to the principal lender's cost and source of financing. Advances aggregated U.S. \$173 million at December 31, 1981 and the principal lender was using short term LIBOR financing at a rate of 15.89%.

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 and production is expected to commence in 1983.

#### **5. Minority Interest and Extraordinary Item**

During February 1981, BVRS completed a public offering of common shares, reducing Bow Valley's ownership interest from 100% to 78%. This resulted in an extraordinary income item reflecting the increase in Bow Valley's share of the net equity of BVRS compared to its previously recorded value.

At year end, BVRS had 12,970,000 common shares outstanding, of which 2,850,000 shares represented minority interests, and an additional 1,900,000 common shares were reserved for conversion of its 11% convertible debentures (Note 2). Conversion would reduce Bow Valley's interest in BVRS to 68% and result in an additional extraordinary income item.

In September 1981, BVRS issued 1,000,000 variable rate Series A cumulative redeemable term preferred shares at their par value of \$10 each. The quarterly dividend rate is 50% of the weighted average prime rate of a specified Canadian chartered bank, plus 2%. These shares are reflected in minority interest.

#### **6. Shareholders' Equity**

##### **a) 7% CUMULATIVE REDEEMABLE CONVERTIBLE CLASS B PREFERRED SHARES**

Bow Valley has authorized and issued 1 million Class B preferred shares having a par value of \$60 each. All the authorized shares were issued at their par value in 1980 with proceeds amounting to \$60 million, before costs. Underwriters' commissions and other expenses related to this issue were charged to retained earnings.

These shares are convertible 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 per common share, subject to anti-dilutive provisions. Redemption is permitted in full or in part by Bow Valley at any time after May 14, 1982; however, during the period prior to May 15, 1985, redemption is permitted only if the market value of Bow Valley common shares for a specified period of time is at least 125% of the conversion price then in effect (a market price requirement of \$21.375 per share, at present). A premium of \$3.00 per share during the period to May 16, 1985, declining annually by \$0.60, is payable upon redemption prior to May 16, 1989. Bow Valley has certain purchase fund obligations commencing July 1990, based on the par value of preferred shares outstanding on May 16, 1990.

During 1981, 9,580 (1980 — 20,114) preferred shares having a par value of \$575,000 (1980 — \$1,207,000) were converted by the holders into 33,609 (1980 — 70,566) common shares. As a result, 970,306 preferred shares were outstanding at December 31, 1981.

##### **b) REDEEMABLE PREFERRED SHARES**

On April 15, 1980, all of the then outstanding 5½% cumulative redeemable preferred shares Series A and the 5% cumulative redeemable second preference shares were redeemed and cancelled at a cost of \$1.6 million.

NOTES (continued)

c) COMMON SHARES

Bow Valley is authorized to issue up to 60 million no par value common shares. Details of common shares issued during the period 1979 to 1981 are:

	1981		1980		1979	
	Shares Issued	Consideration	Shares Issued	Consideration	Shares Issued	Consideration
Issued for cash						
Employee stock options . . .	297,000	\$2,967	466,670	\$5,347	139,650	\$ 508
Private placement at \$8.67 per share, less costs of \$390,000 . . .	—	—	—	—	3,000,000	25,610
	<u>297,000</u>	<u>2,967</u>	<u>466,670</u>	<u>5,347</u>	<u>3,139,650</u>	<u>26,118</u>
Issued on conversion of						
Second preference shares .	—	—	—	—	1,932,021	9,660
Class B preferred shares . . .	<u>33,609</u>	<u>575</u>	<u>70,566</u>	<u>1,207</u>	—	—
	<u>330,609</u>	<u>\$3,542</u>	<u>537,236</u>	<u>\$6,554</u>	<u>5,071,671</u>	<u>\$35,778</u>

During 1981, stock options exercisable at any time over a ten-year period were granted to various officers and senior employees permitting them to purchase 43,000 common shares at a price of \$18.53 each, 105,500 common shares at a price of \$21.61 each, and 30,000 common shares at a price of \$18.05 each. Outstanding options totalling 27,000 common shares expired or were cancelled during the year.

Options have been granted to certain officers and senior employees under a plan introduced in 1980 which provides for ten-year interest-free loans for 100% of the purchase price. Shares purchased under this plan are 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. Loans were made to two officers (\$451,000) and one senior employee (\$173,000) under the plan in 1981 for the exercise of options on 31,000 shares. During 1980, loans were made to six officers (\$2,454,000) and ten senior employees (\$2,425,000) upon the exercise of options for 309,000 shares. The balances outstanding from officers and senior employees at December 31, 1981, were \$1,704,000 and \$2,127,000, respectively.

At December 31, 1981, the following options, which do not qualify for interest-free loans, were outstanding:

Number of Shares	Option Price		Expiry Date
	Per Share	Total	
15,000	\$ 3.33	\$ 50	June 8, 1982
43,500	4.89	213	June 7, 1983
116,700	15.79	1,843	May 27, 1990
9,000	23.63	213	August 13, 1990
27,900	18.53	517	May 13, 1991
76,500	21.61	1,653	August 12, 1991
30,000	18.05	541	November 25, 1991
<u>318,600</u>		<u>\$5,030</u>	

At December 31, 1981, 3,404,587 common shares were reserved for conversion of the Class B preferred shares, 2,076,886 common shares for conversion of the 8% convertible debentures (Note 2) and 318,600 common shares for outstanding employee stock options. An additional 660,130 common shares were reserved for stock options which may be issued to officers and employees in the future.

d) RETAINED EARNINGS

Under terms of the 14½% senior unsecured note agreement (Note 2), payment of dividends is effectively restricted to one-half of consolidated net income, excluding extraordinary items, earned subsequent to January 1, 1981.

## 7. Interest Expensed and Capitalized

	<u>1981</u>	<u>1980</u>	<u>1979</u>
Interest incurred on			
Long term debt.....	\$56,287	\$37,070	\$33,401
Exploration and development advances.....	15,789	3,121	1,783
Other.....	5,180	2,771	2,169
	<u>77,256</u>	<u>42,962</u>	<u>37,353</u>
Less interest capitalized.....	24,158	7,009	3,810
Interest expensed.....	<u>\$53,098</u>	<u>\$35,953</u>	<u>\$33,543</u>

## 8. Income Taxes

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

	<u>1981</u>	<u>1980</u>	<u>1979</u>
Canada.....	\$21,366	\$33,870	\$25,658
Other.....	35,708	23,563	4,877
	<u>\$57,074</u>	<u>\$57,433</u>	<u>\$30,535</u>

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

	<u>1981</u>		<u>1980</u>		<u>1979</u>	
	Amount	%	Amount	%	Amount	%
Income taxes at the Canadian corporate tax rate.....	\$26,825	47	\$26,993	47	\$14,351	47
Add (deduct) effect of						
Higher foreign tax rates on foreign earned income.....	1,115	2	4,722	9	1,692	6
Crown charges disallowed for tax purposes.....	7,320	13	6,620	12	5,496	18
Resource profits rate reductions.....	(6,461)	(11)	(6,967)	(13)	(5,519)	(18)
U.S. Windfall Profit Tax.....	(2,576)	(5)	(1,214)	(2)	—	—
Investment tax credits.....	(8,154)	(14)	(2,534)	(4)	(863)	(3)
Permanent difference between foreign depreciation and depletion for tax purposes over book.....	(749)	(1)	(2,580)	(5)	—	—
Provincial resource industry rebates.....	(1,917)	(3)	(1,545)	(3)	(1,425)	(5)
Other.....	406	—	(648)	(1)	436	1
Actual income tax provision.....	<u>15,809</u>	<u>28</u>	<u>22,847</u>	<u>40</u>	<u>14,168</u>	<u>46</u>
Petroleum and natural gas taxes.....	<u>9,285</u>		<u>2,585</u>		<u>—</u>	
Total provision for income and other taxes.....	<u>\$25,094</u>		<u>\$25,432</u>		<u>\$14,168</u>	

A significant part of the tax benefit of investment tax credits has resulted in a reduction of deferred income tax expense. To the extent that the related benefits of investment tax credits are not realized on a tax basis during the relative carry-forward period, there will be a charge to deferred income tax expense on expiry of the credit.

## NOTES (continued)

The actual tax provisions can be analyzed as follows:	1981	1980	1979
Petroleum and natural gas taxes			
Canada .....	\$ 3,498	\$ —	\$ —
Other .....	5,787	2,585	—
	<u>9,285</u>	<u>2,585</u>	<u>—</u>
Current income tax			
Canada .....	(3,027)	2,995	5,649
Other .....	2,153	2,106	(5,410)
	<u>(874)</u>	<u>5,101</u>	<u>239</u>
Deferred income tax			
Canada .....	5,187	10,731	4,280
Other .....	11,496	7,015	9,649
	<u>16,683</u>	<u>17,746</u>	<u>13,929</u>
	<u>\$25,094</u>	<u>\$25,432</u>	<u>\$14,168</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, depletion and investment tax credits.

### 9. Changes in Accounting Principles

As previously reported, effective January 1, 1980, Bow Valley revised its accounting policies for the capitalization of interest and the recording of Canadian investment tax credits. The effect of these revisions was to increase net income in 1980 by \$3,522,000 (\$0.10 per share). The net income for 1979 was not restated.

### 10. Commitments

BVRS has a 65% interest in two offshore drilling rigs, Bow Drills 2 and 3, currently under construction. BVRS will be the operator and manager of the rigs which have been contracted to Bow Valley and a partner for a four-year period following delivery. Bow Valley anticipates using the rigs in its exploration program off the east coast of Canada.

Bow Drill 2 is being constructed in Norway at a total cost of U.S. \$122 million and is scheduled for delivery in June 1983. Financing has been arranged during construction at commercial bank rates. Upon delivery, financing of approximately U.S. \$85 million at an effective rate of 9.5% will be provided by Eksportfinans, repayable over a term of eight and one-half years. The remaining cost of approximately U.S. \$37 million will be financed at U.S. commercial bank rates with repayments over eight and one-half years commencing after delivery.

Bow Drill 3 is being constructed in Saint John, New Brunswick, at a total cost of U.S. \$127 million and is scheduled for delivery in November 1983. The Canadian Export Development Corporation will provide financing of approximately U.S. \$105 million for a ten and one-half-year term at a rate of 12.5%. The remaining cost of approximately U.S. \$22 million will be financed at commercial bank rates.

These financings are secured by a first mortgage on the applicable rig and assignment of the related drilling contracts.

### 11. Contingent Liabilities

#### a) OUTSTANDING LITIGATION

Bow Valley is a defendant in a number of lawsuits arising out of the normal course of business. In the opinion of Management and legal counsel, it is unlikely that Bow Valley will suffer material losses as a result of these lawsuits.

Bow Valley is a defendant in a number of lawsuits involving either the activities of Flying Diamond Oil Corporation before its acquisition by Bow Valley in 1978, or as a result of the acquisition process itself. Bow Valley has filed answers denying the substantive allegations either asserting affirmative defences or requesting dismissal of these lawsuits, some of which involve substantial amounts. In the opinion of Management, it is unlikely that Bow Valley will suffer material losses as a result of these lawsuits.

Settlements, if any, will be treated as additional Flying Diamond Oil Corporation purchase consideration and allocated to the capital assets acquired rather than charged to net income. These lawsuits are in varying stages of proceedings and probably will not be resolved in the immediate future.

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

As discussed in Note 2(e), 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, 1981, the maximum premium payable is U.S. \$10 million.

**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, 1981, the date of the most recent actuarial valuation for the Canadian defined benefit plan, Bow Valley did not have a material unfunded pension liability. Bow Valley's contributions for these plans were: 1981 — \$1,335,000; 1980 — \$1,170,000; and 1979 — \$950,000.

**13. Selected Quarterly Financial Information (Unaudited)**

	Quarter Ended				Full Year
	March 31	June 30	Sept. 30	Dec. 31	
<b>YEAR ENDED DECEMBER 31, 1981</b>					
Revenue .....	\$101,405	\$127,656	\$130,902	\$134,477	\$494,440
Gross profit .....	35,941	42,584	40,231	38,687	157,443
Income before extraordinary item .....	9,906	7,496	7,048	4,454	28,904
Net income .....	28,256	7,496	7,048	4,454	47,254
Cash flow from operations .....	26,784	24,157	22,724	25,773	99,438
Income per common share					
Before extraordinary item .....	\$0.25	\$0.19	\$0.17	\$0.10	\$0.71
After extraordinary item .....	0.77	0.19	0.17	0.10	1.23
Cash flow per common share .....	0.73	0.66	0.62	0.70	2.71
<b>YEAR ENDED DECEMBER 31, 1980</b>					
Revenue .....	\$ 88,409	\$ 83,766	\$ 89,512	\$100,440	\$362,127
Gross profit .....	32,353	29,610	29,123	34,485	125,571
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

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

**14. Significant Differences Between Canadian and United States Generally Accepted Accounting Principles ("GAAP")**

**a) FOREIGN CURRENCY TRANSLATION**

The U.S. Financial Accounting Standards Board's ("FASB") 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 receivables.

FASB Statement No. 52 introduced for 1982 will significantly modify the treatment of foreign exchange translation gains and losses. Bow Valley has not determined the impact on 1981 net income of applying this new statement.

**b) FULL COST ACCOUNTING FOR OIL AND GAS PROPERTIES**

The U.S. Securities and Exchange Commission's ("SEC") full cost accounting rules require the establishment of cost centres on a country-by-country basis. Non-producing cost centres are not amortized unless a valuation loss is apparent.

NOTES (continued)

c) EXTRAORDINARY INCOME ITEM

Under Canadian GAAP, Bow Valley is required to recognise the gain resulting from the public issuance of common shares by BVRS as an extraordinary income item (Note 5). Under SEC rules, however, gains are credited directly to contributed surplus.

d) RECONCILIATION OF NET INCOME AND RETAINED EARNINGS

	1981		1980		1979	
	Net Income	Retained Earnings	Net Income	Retained Earnings	Net Income	Retained Earnings
After extraordinary item, in accordance with Canadian GAAP, as reported.....	\$47,254	\$103,470	\$32,001	\$65,611	\$16,367	\$40,896
Add (deduct) adjustments for						
Foreign currency translation ..	3,066	(2,301)	(1,386)	(5,367)	3,399	(3,981)
Full cost accounting.....	(3,054)	(5,539)	(1,158)	(2,485)	147	(1,327)
Extraordinary income item ....	(18,350)	(18,350)	—	—	—	—
In accordance with United States GAAP .....	<u>\$28,916</u>	<u>\$ 77,280</u>	<u>\$29,457</u>	<u>\$57,759</u>	<u>\$19,913</u>	<u>\$35,588</u>
Earnings per share, in accordance with United States GAAP (Canadian Dollars)	\$0.71		\$0.80		\$0.60	

15. Oil and Gas Producing Activities

The SEC requires disclosure of the following supplementary information relating to oil and gas producing activities.

a) CAPITALIZED COSTS

Capitalized costs and related accumulated depreciation and depletion for oil and gas properties and equipment at December 31 were:

	1981		1980	
	Capitalized Costs	Accumulated Depreciation and Depletion	Capitalized Costs	Accumulated Depreciation and Depletion
Canada.....	\$109,637	\$36,376	\$ 95,805	\$29,962
United States.....	175,885	40,886	139,616	28,206
Abu Dhabi.....	59,104	11,237	49,894	7,383
United Kingdom.....	214,824	62	96,395	62
Norway.....	14,709	302	8,927	302
Indonesia.....	33,212	3,529	15,745	2,072
Other.....	17,614	3,913	15,835	3,257
	<u>\$624,985</u>	<u>\$96,305</u>	<u>\$422,217</u>	<u>\$71,244</u>

b) COSTS INCURRED IN OIL AND GAS PRODUCING ACTIVITIES

Costs related to oil and gas producing activities, including costs capitalized and expensed, were:

Year Ended December 31, 1981	Property Acquisition Costs	Exploration Costs	Development Costs	Production (Lifting) Costs
Canada.....	\$ 5,369	\$ 5,070	\$ 3,749	\$ 4,655
United States.....	5,039	15,308	16,492	8,500
Abu Dhabi.....	—	7,186	1,924	6,796
United Kingdom.....	—	11,475	106,571	—
Norway.....	—	4,415	1,366	—
Indonesia.....	52	7,760	10,345	3,054
Other.....	132	1,484	—	—
	<u>\$10,592</u>	<u>\$52,698</u>	<u>\$140,447</u>	<u>\$23,005</u>

<u>Year Ended December 31, 1980</u>	<u>Property Acquisition Costs</u>	<u>Exploration Costs</u>	<u>Development Costs</u>	<u>Production (Lifting) Costs</u>
Canada.....	\$ 5,142	\$ 5,410	\$ 7,865	\$ 3,594
United States.....	1,744	783	16,615	7,004
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	235	—
	<u>\$14,947</u>	<u>\$23,788</u>	<u>\$88,807</u>	<u>\$17,511</u>

Year Ended December 31, 1979

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	204	—
	<u>\$ 6,471</u>	<u>\$15,202</u>	<u>\$31,718</u>	<u>\$10,187</u>

Production (lifting) costs exclude petroleum and natural gas taxes of:

	<u>1981</u>	<u>1980</u>	<u>1979</u>
Canadian PGRT.....	<u>\$3,498</u>	\$ —	\$ —
United States Windfall Profit Tax.....	<u>5,481</u>	2,585	—
Other.....	<u>306</u>	—	—
	<u>\$9,285</u>	<u>\$2,585</u>	<u>\$ —</u>

Depreciation and depletion provisions relating to oil and gas producing activities were:

	<u>1981</u>	<u>1980</u>	<u>1979</u>
Canada.....	<u>\$ 6,414</u>	\$ 5,567	\$ 4,512
United States.....	<u>12,680</u>	11,348	9,022
Other.....	<u>5,967</u>	5,863	2,586
	<u>\$25,061</u>	<u>\$22,778</u>	<u>\$16,120</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. Depreciation and depletion charges per equivalent net barrel produced were:

	<u>1981</u>	<u>1980</u>	<u>1979</u>
Canada.....	<u>\$2.89</u>	\$2.69	\$1.52
United States.....	<u>9.12</u>	7.69	6.24
Other.....	<u>12.77</u>	8.55	9.40

**c) REVENUES FROM PRODUCING OIL AND GAS RESERVES**

Net revenues from proved developed oil and gas reserves were:

	<u>1981</u>	<u>1980</u>	<u>1979</u>
Canada.....	<u>\$26,221</u>	\$27,968	\$22,442
United States.....	<u>27,354</u>	23,186	13,767
Other.....	<u>10,332</u>	19,244	7,488
	<u>\$63,907</u>	<u>\$70,398</u>	<u>\$43,697</u>

Net revenues are defined as gross revenues from the sale of oil and gas, less royalties paid, production (lifting) costs, and petroleum and natural gas taxes, but excluding deduction for depreciation, depletion, interest, general and administrative costs, and income taxes.



BOW VALLEY INDUSTRIES LTD.

## UNAUDITED SUPPLEMENTARY INFORMATION

(Tabular amounts in thousands of Canadian dollars)

The following supplementary information is presented in compliance with United States Securities and Exchange Commission ("SEC") regulations and is not subject to audit.

### ESTIMATED NET QUANTITIES OF PROVED OIL AND GAS RESERVES

Bow Valley's estimated net proved developed and undeveloped reserves of oil and gas at the dates indicated, and the changes occurring between these dates, were:

Oil (thousands of barrels)	Canada	United States	United Kingdom	Other	Total
Proved reserves at December 31, 1978	6,514	7,233	35,770	6,971	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	35,770	9,509	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	5,167	9,436	35,770	11,732	62,105
Revisions of previous estimates	72	589	—	—	661
Extensions, discoveries, and other additions	6	144	—	146	296
Production	(324)	(747)	—	(467)	(1,538)
Proved reserves at December 31, 1981	4,921	9,422	35,770	11,411	61,524

Gas (Bcf)	Canada	United States	United Kingdom	Other	Total
Proved reserves at December 31, 1978	191.0	104.2	41.4	122.3	458.9
Revisions of previous estimates	(4.0)	(4.6)	(22.6)	(24.3)	(55.5)
Purchases of reserves in place	7.5	—	—	—	7.5
Extensions, discoveries, and other additions	6.4	6.4	—	—	12.8
Production	(11.6)	(4.6)	—	—	(16.2)
Sales of reserves in place	(1.0)	—	—	—	(1.0)
Proved reserves at December 31, 1979	188.3	101.4	18.8	98.0	406.5
Revisions of previous estimates	4.5	(19.1)	—	(14.5)	(29.1)
Extensions, discoveries, and other additions	5.1	7.6	—	—	12.7
Production	(10.3)	(4.7)	—	—	(15.0)
Proved reserves at December 31, 1980	187.6	85.2	18.8	83.5	375.1
Revisions of previous estimates	(2.6)	(5.6)	—	—	(8.2)
Extensions, discoveries, and other additions	12.0	2.9	—	—	14.9
Production	(11.3)	(3.9)	—	—	(15.2)
Proved reserves at December 31, 1981	185.7	78.6	18.8	83.5	366.6

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

Oil (thousands of barrels)	Canada	United States	United Kingdom	Other	Total
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
December 31, 1981	3,452	5,352	—	6,925	15,729

Gas (Bcf)	Canada	United States	United Kingdom	Other	Total
December 31, 1978	172.2	42.3	—	—	214.5
December 31, 1979	167.5	40.2	—	—	207.7
December 31, 1980	173.5	41.4	—	—	214.9
December 31, 1981	171.6	40.3	—	—	211.9



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; however, Bow Valley estimates that its Alberta gas fields are capable of producing approximately 85 MMcf of gas per day, should sufficient market demand exist.

Proved undeveloped reserves are those which are expected to be recovered from new wells on undrilled acreage offsetting productive acreage, and from existing wells where significant expenditures in well completions or transportation systems will be required.

The Canadian and United States reserves were appraised by independent consultants. Other foreign reserves were based upon the applicable operator's latest estimate, adjusted by Bow Valley for subsequent production where appropriate. United Kingdom reserves do not include identified fields other than South Brae since commerciality has not yet been proven. Based on the results of a well currently being drilled, Bow Valley expects that the North Brae field will likely be declared commercial in 1982.

#### FUTURE NET REVENUES FROM ESTIMATED PRODUCTION OF PROVED OIL AND GAS RESERVES

Estimated future net revenues from proved oil and gas reserves have been calculated on an undiscounted basis and assume continuation of prices in effect at January 1, 1982. Lifting costs, royalties, and future capital costs are based on conditions at the same date and have been deducted from gross revenues in arriving at net revenues. Depreciation, depletion, interest, general and administrative costs, income taxes, and petroleum and natural gas taxes have not been deducted. Revenues and costs of foreign areas have been converted to Canadian dollars at the appropriate January 1, 1982, exchange rates.

	1982	1983	1984	Thereafter	Total
Proved					
Canada .....	\$ 28,661	\$ 27,966	\$ 28,545	\$ 341,247	\$ 426,419
United States .....	26,640	32,400	51,480	399,960	510,480
United Kingdom .....	(77,640)	91,560	176,520	921,600	1,112,040
Other .....	(22,167)	(20,180)	6,430	610,262	574,345
	<u>\$(44,506)</u>	<u>\$131,746</u>	<u>\$262,975</u>	<u>\$2,273,069</u>	<u>\$2,623,284</u>
Proved Developed					
Canada .....	\$28,661	\$27,966	\$28,545	\$341,247	\$426,419
United States .....	39,600	39,360	32,760	160,800	272,520
United Kingdom .....	—	—	—	—	—
Other .....	(3,091)	10,827	18,485	135,395	161,616
	<u>\$65,170</u>	<u>\$78,153</u>	<u>\$79,790</u>	<u>\$637,442</u>	<u>\$860,555</u>

Negative future net revenue occurs when development costs during the year exceed revenue.

The estimated future net revenues from net gas reserves of 18.8 Bcf at South Brae, in the United Kingdom North Sea, has 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 these net reserves is estimated to be 1,469,000 barrels of oil and 14.1 Bcf of gas. Transportation systems in these areas are not sufficiently developed to permit a determination of the ultimate marketability of the reserves.

World oil prices have been under significant pressure since January 1, 1982. A number of countries have implemented price and production reductions, with further reductions a possibility.

The present values at December 31, 1981, 1980, and 1979 (using a 10% discount factor) of Bow Valley's estimated future net revenues from proved oil and gas reserves were:

UNAUDITED SUPPLEMENTARY INFORMATION (continued)

	1981		1980		1979	
	Proved	Proved Developed	Proved	Proved Developed	Proved	Proved Developed
Canada . . . . .	\$ 208,207	\$208,207	\$ 194,854	\$194,854	\$160,538	\$160,538
United States . . . . .	318,117	177,600	311,858	170,490	184,201	80,887
United Kingdom . . . . .	650,700	—	578,400	—	356,270	—
Other . . . . .	231,940	93,272	287,700	139,840	206,060	126,460
	<u>\$1,408,964</u>	<u>\$479,079</u>	<u>\$1,372,812</u>	<u>\$505,184</u>	<u>\$907,069</u>	<u>\$367,885</u>

SUMMARY OF OIL AND GAS PRODUCTION ACTIVITIES, PREPARED ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING ("RRA")

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.

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 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 and depletion 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.

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 changes for unproduced reserves in the year of the price change 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 petroleum and natural gas and 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.

#### Summary of Oil and Gas Producing Activities on the Basis of Reserve Recognition Accounting

	Year ended December 31		
	1981	1980	1979
<b>ADDITIONS AND REVISIONS TO ESTIMATED PROVED OIL AND GAS RESERVES</b>			
Additions to estimated proved reserves, gross . . . . .	\$ 24,382	\$186,291	\$100,075
Revisions to estimates of reserves proved in prior years			
Changes in prices . . . . .	(13,644)	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 . . . . .	(163,138)	(260,204)	(104,313)
Accretion of discount . . . . .	137,281	90,707	33,794
	<b>(15,119)</b>	515,841	604,042
<b>EVALUATED ACQUISITION, EXPLORATION, DEVELOPMENT, AND PRODUCTION COSTS</b>			
Costs incurred, including impairments . . . . .	52,839	41,944	18,285
Present value of estimated future development and production costs relating to current year additions to estimated proved reserves . . . . .	9,949	45,136	16,018
	<b>62,788</b>	87,080	34,303
<b>ADDITIONS AND REVISIONS TO PROVED RESERVES OVER EVALUATED COSTS . . . . .</b>	<b>(77,907)</b>	428,761	569,739
<b>PROVISION FOR</b>			
Petroleum and natural gas taxes . . . . .	83,825	225,946	87,490
Income taxes . . . . .	(78,351)	145,227	255,023
	<b>5,474</b>	371,173	342,513
<b>RESULTS OF OIL AND GAS PRODUCING ACTIVITIES ON THE BASIS OF RESERVE RECOGNITION ACCOUNTING. . . .</b>	<b>\$ (83,381)</b>	<b>\$ 57,588</b>	<b>\$227,226</b>

UNAUDITED SUPPLEMENTARY INFORMATION (continued)

Changes in Present Value of Estimated  
Future Net Revenue from Proved Oil and Gas Reserves

	Year ended December 31		
	1981	1980	1979
<b>INCREASES</b>			
Additions and revisions .....	\$ (15,119)	\$ 515,841	\$604,042
Less related estimated future development and production costs .....	<u>9,949</u>	<u>45,136</u>	<u>16,018</u>
Net additions and revisions .....	(25,068)	470,705	588,024
Purchase of reserves in place .....	—	—	3,565
Expenditures that reduced estimated future development costs .....	<u>134,411</u>	<u>68,636</u>	<u>21,890</u>
	<u>109,343</u>	<u>539,341</u>	<u>613,479</u>
<b>DECREASES</b>			
Sales of oil and gas, net of production costs (1981 — \$23,005,000; 1980 — \$17,511,000; 1979 — \$10,187,000) .....	73,191	73,598	43,697
Sale of reserves in place .....	—	—	657
	<u>73,191</u>	<u>73,598</u>	<u>44,354</u>
<b>NET INCREASE</b> .....	<b>36,152</b>	<b>465,743</b>	<b>569,125</b>
<b>BEGINNING OF YEAR</b> .....	<b>1,372,812</b>	<b>907,069</b>	<b>337,944</b>
<b>END OF YEAR</b> .....	<b><u>\$1,408,964</u></b>	<b><u>\$1,372,812</u></b>	<b><u>\$907,069</u></b>

“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 change 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 price variances from 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%.

The trend of significantly increasing oil prices halted in 1981 with decreases being experienced primarily in the United Kingdom and Abu Dhabi as a result of the current world-wide oversupply situation. International prices have declined further in 1982.

“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, 1981, 1980, and 1979, \$25,092,000, \$10,220,000, and \$2,071,000 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 taxes includes the Canadian Petroleum and Gas Revenue and Incremental Oil Revenue Taxes, the United States Windfall Profit Tax, the United Kingdom Petroleum Revenue Tax and Supplementary Petroleum Duty, and the Norway Special Tax. The United States Windfall Profit Tax and the United Kingdom Supplementary Petroleum Duty were introduced in 1980. The United Kingdom Petroleum Revenue Tax and the Norway Special Tax were increased significantly during 1980. The Canadian Petroleum and Gas Revenue Tax was introduced on January 1, 1981, and increased for 1982; the Incremental Oil Revenue Tax is effective for 1982. The United Kingdom introduced a budget in March 1982 which proposed changes to the Petroleum Revenue Tax and Supplementary Petroleum Duty; preliminary review indicates that the overall net impact on Bow Valley of these changes will not be significant.

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.

Under RRA Bow Valley recorded a loss before taxes of \$77,907,000 in 1981 compared to income of \$428,761,000 and \$569,739,000 in 1980 and 1979, respectively. These results can be contrasted with the oil and gas revenues less royalties, production costs, and depreciation and depletion reflected in Bow Valley's historical full cost income statement for the years 1981, 1980, and 1979 of \$48,131,000, \$50,205,000, and \$27,577,000, respectively.



## CORPORATE INFORMATION

### Directors

R. GUY GODBOUT, President,  
Prego Investments 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  
GERALD J. MAIER, President,  
Bow Valley Industries Ltd., Calgary  
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 and  
Chief Executive Officer  
BYRON J. SEAMAN, Vice-Chairman of the Board  
GERALD J. MAIER, President and Chief  
Operating Officer  
WILLIAM H. TYE, Senior Vice-President and  
Chief Financial Officer  
DONALD R. SEAMAN, Senior Vice-President  
WILLIAM F. CLARK, Vice-President, Land  
ROBERT E. HINDSON, Vice-President, Mining  
PHILIP R. LAWTON, Vice-President and  
Controller  
H. KEITH LAZELLE, Vice-President,  
Corporate Affairs  
ROBERT J. PHIBBS, Vice-President,  
Administration  
HENRY A. SMITH, Vice-President, General  
Counsel, and Secretary  
LAWRENCE A. MACKWOOD, Treasurer

### Head Office

1800, 321 Sixth Avenue SW,  
P.O. Box 6610, Station D  
Calgary, Alberta T2P 2V8  
Telephone: (403) 231-1211 Telex: 24692

### International Offices

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

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

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

BOW VALLEY EXPLORATION (S.E. ASIA) LTD.  
A. Lloyd Flood, General Manager  
1406 - 1411 Tower Block, Goldhill Plaza,  
Newton Road, Singapore 1130  
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

### Auditors

PRICE WATERHOUSE, Calgary

### Legal Counsel

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

### Banker

THE ROYAL BANK OF CANADA



## SHAREHOLDER 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		
1977.....	\$ 4 <sup>1</sup> / <sub>16</sub>	\$ 2 <sup>1</sup> / <sub>16</sub>	\$ 4 <sup>1</sup> / <sub>16</sub>	\$ 2 <sup>1</sup> / <sub>2</sub>	<u>12,284,400</u>	<u>12,483,600</u>
1978.....	8 <sup>1</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>16</sub>	<u>19,351,500</u>	<u>23,543,100</u>
1979.....	15 <sup>1</sup> / <sub>4</sub>	6 <sup>15</sup> / <sub>16</sub>	12 <sup>15</sup> / <sub>16</sub>	5 <sup>3</sup> / <sub>4</sub>	<u>16,315,300</u>	<u>35,801,700</u>
1980						
1st quarter.....	21 <sup>1</sup> / <sub>2</sub>	11	18 <sup>11</sup> / <sub>16</sub>	8 <sup>3</sup> / <sub>8</sub>	11,629,600	19,476,600
2nd quarter.....	19 <sup>7</sup> / <sub>8</sub>	12 <sup>15</sup> / <sub>16</sub>	17 <sup>3</sup> / <sub>8</sub>	10 <sup>13</sup> / <sub>16</sub>	5,375,800	5,109,100
3rd quarter.....	27	19 <sup>1</sup> / <sub>8</sub>	23 <sup>3</sup> / <sub>8</sub>	15 <sup>7</sup> / <sub>8</sub>	8,545,400	9,825,600
4th quarter.....	25 <sup>5</sup> / <sub>8</sub>	19 <sup>5</sup> / <sub>8</sub>	22	15 <sup>7</sup> / <sub>8</sub>	<u>2,142,200</u>	<u>2,381,400</u>
					<u>27,693,000</u>	<u>36,792,700</u>
1981						
1st quarter.....	21 <sup>3</sup> / <sub>4</sub>	16 <sup>5</sup> / <sub>8</sub>	18 <sup>1</sup> / <sub>4</sub>	13 <sup>3</sup> / <sub>4</sub>	2,568,560	2,304,000
2nd quarter.....	23 <sup>3</sup> / <sub>8</sub>	16 <sup>1</sup> / <sub>2</sub>	19 <sup>5</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>4</sub>	3,940,855	1,764,100
3rd quarter.....	25 <sup>1</sup> / <sub>2</sub>	13 <sup>3</sup> / <sub>4</sub>	21 <sup>1</sup> / <sub>4</sub>	11 <sup>5</sup> / <sub>8</sub>	6,170,711	1,903,200
4th quarter.....	21 <sup>5</sup> / <sub>8</sub>	15 <sup>1</sup> / <sub>8</sub>	18	12 <sup>1</sup> / <sub>2</sub>	<u>3,270,942</u>	<u>755,000</u>
					<u>15,951,068</u>	<u>6,726,300</u>

### Shareholder Distribution<sup>1</sup> — Common Shares

December 31, 1981

	Number of Shareholders	Number of Shares	Percent
Canada.....	6,260	28,207,000	80%
United States.....	2,195	6,159,000	17%
Other.....	171	957,000	3%
	<u>8,626</u>	<u>35,323,000</u>	<u>100%</u>

<sup>1</sup> As determined by addresses in the Shareholder Register.

### Annual General Meeting

The Annual General Meeting of Shareholders of Bow Valley Industries Ltd. will be held in Calgary in the Glencoe Room of the Calgary Convention Centre at 10:00 a.m., May 13, 1982.

### 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 seven percent per annum.

The general rate of withholding tax on common dividends paid to United States shareholders is 15 percent.

### Form 10-K

A copy of the Company's Annual Report on Form 10-K for the year ended December 31, 1981, 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 6610, Postal Station D, Calgary, Alberta, Canada T2P2V8.

