



# Shell Canada 1980 Annual Report



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Unless the context indicates otherwise, the terms 'Shell', 'Shell Canada', 'Company', 'Corporation', 'we', 'our' and 'its' are used interchangeably in this report to refer to Shell Canada Limited and consolidated subsidiaries.

## Approximate metric conversion factors

1 cubic metre of liquids	— 6.29 barrels
1 cubic metre of gases	— 35.3 cubic feet
1 tonne	— 2,205 pounds or 0.984 long ton
1 kilometre	— 0.621 mile
1 hectare	— 2.47 acres
1 litre	— 0.22 gallon

## Highlights of the year

### Shell Canada Limited and subsidiary companies

Financial (\$ millions, except per share amounts)	1980	1979
Earnings	\$ 355	\$ 259
Average capital employed	\$2,563	\$2,291
Return on average capital employed	14.5%	12.0%
Earnings per Class "A" Common Share	\$ 3.34	\$ 2.42
Dividends paid per Class "A" Common Share	\$ 0.90	\$ 0.72
Income taxes charged against income	\$ 286	\$ 193
Cash from operations (before exploration and predevelopment expenses)	\$ 664	\$ 535
Cash reinvested in exploration, production facilities and other working capital	\$ 557	\$ 451
Adjusted for the effects of general inflation:		
Earnings	\$ 246	\$ 196
Earnings per Class "A" Common Share	\$ 2.25	\$ 1.77
Return on average capital employed	7.2%	6.4%

Operating	1980	Change from 1979
Crude oil and natural gas liquids produced – gross (cubic metres daily)	11 300	-7%
Natural gas produced and sold – gross (thousands of cubic metres daily)	16 300	-9%
Sulphur sales (tonnes daily)	3 304	+2%
Crude oil intake to distilling units (cubic metres daily)	44 400	-1%
Petroleum product sales (cubic metres daily)	40 400	-7%
Chemical sales (tonnes daily)	1 407	+9%

## President's message

The 1980s for Shell Canada began with a strong earnings performance and a high level of new investment. However, the Company and the petroleum industry continue to be faced with an environment of tension and uncertainty generated by federal-provincial disputes, especially surrounding energy policy.

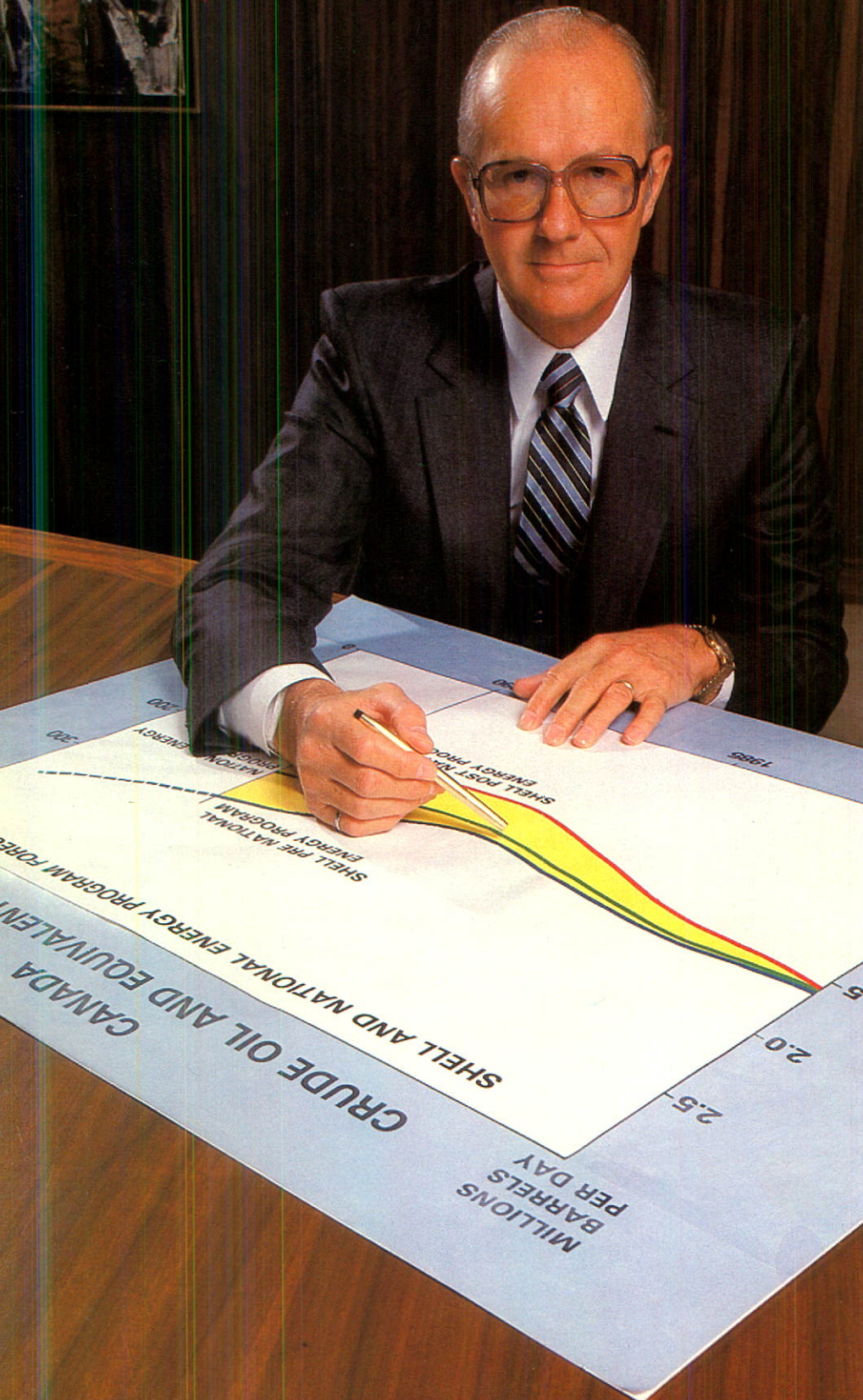
Earnings of \$355 million in 1980, or \$3.34 per share, were at a record level for your Company. These results reflect mainly higher prices and margins for oil products after a number of years of very low returns. In the Resources sector, gains from price increases on crude oil and natural gas production largely were offset by higher exploration expenditures and lower sales volumes.

Investment in 1980 continued the development of Shell Canada's existing businesses, while also broadening its activities as the basis for future growth. Capital and exploration expenditures totalled \$518 million, an increase of \$152 million over 1979. In the crucial area of providing Canada with new supplies of petroleum, Shell maintained a high level of activity with 126 exploration and development wells drilled, of which 49 were completed as gas and oil wells.

During the year, the Company developed its plans to expand its manufacturing base in Western Canada. Under joint venture agreements with Canadian partners, a synthetic crude oil refinery is being built at Scotford, near Edmonton, and several world-scale petrochemical plants will be constructed in Alberta. A major facility for the production of benzene, wholly-owned by Shell, will also be built at Scotford.

In British Columbia, development work continued on the Line Creek coal mine, which initially will supply Korean and Japanese markets starting in 1982.

However, the Alsands consortium, in which Shell has a major interest, found it necessary to curtail expenditures for development work on the Athabasca oil sands mining project as a result of the continuing inability of the federal and Alberta governments to agree on acceptable oil-pricing and revenue-sharing policies.



C. William Daniel, President and Chief Executive Officer, examines chart comparing Shell Canada and National Energy Program forecasts of Canada's future crude oil supply.

The decision by Alsands to cut spending will inevitably defer the date by which additional crude oil needed by Canada will be available from this important source. Moreover, if no movement towards a solution to the impasse is foreseen by mid-1981, the consortium may have to shelve the project.

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#### Energy policy impasse

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The current impasse over oil-pricing and revenue-sharing is a reflection of the historical Canadian struggle to balance regional aspirations with the needs of the central government. To the oil-producing provinces, increased revenues from non-renewable resources represent a unique chance to build a broader economic base for the future. To the federal government, an increased share of these resource revenues is seen as essential to fulfill its obligations to all Canadians.

Unfortunately, the principal participants in our national energy debate have become frustrated with the lack of agreement, and have taken unilateral approaches to serve their objectives.

The federal government, in its National Energy Program (NEP) announced last October, endorsed the crucial goal of oil self-sufficiency as a major objective for Canada. In addition, the NEP also was designed to generate substantial tax revenues for Ottawa, while maintaining a Canadian crude oil price much lower than world levels.

Regrettably, in trying to combine these goals, some of the specific measures of the NEP had the effect of deepening the conflict with the producing provinces. Moreover, these new initiatives, when combined with existing federal and provincial taxes, deprive the industry of sufficient profitability and cash flow to attract the higher level of investment required to attain the goal of oil self-sufficiency.

The real victim here is the Canadian public. Aside from jeopardizing the prospect for secure oil supplies, measures which inhibit energy investment also deprive the national economy of a major stimulus which would come from the petroleum industry working to capacity.

I believe there is a growing awareness among Canadians that achieving oil self-sufficiency is in the nation's interest, and that the industry should be en-

couraged to get on with the job. I also believe that, as consumers, Canadians increasingly recognize that oil prices must rise, both to encourage conservation and to achieve future supplies within Canada.

As a result, I remain hopeful that positive improvements in the areas of pricing, revenue-sharing and, most importantly, in federal-provincial relations, will be forthcoming.

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#### 1981 investment plans

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However, since there is no immediate prospect that the profitability of successful oil and gas exploration and the cash flow from resource production will be restored, we have had to cut back our 1981 exploration program from the levels previously planned. Exploration spending is now forecast at \$190 million, compared with \$230 million last year.

The 1981 investment plan maintains Shell's presence both in established producing areas and in the frontier. During this year, the Company will continue its East Coast offshore exploration work, with drilling expected to re-commence in 1982. Also during 1981, the Company will expand the heavy oil program it initiated in the Lloydminster area last year.

In areas unaffected by the energy policy conflicts - oil products, chemicals and coal - the Company's investment activities remain largely unchanged, and spending will grow to about \$375 million in 1981. In total, the Company's capital and exploration spending this year is expected to reach \$770 million, up almost 50 per cent over 1980.

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#### Shell and the future

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In looking to the future, Shell Canada will continue to pursue courses of action best suited to match the shareholders' interests with those of the nation.

Since its formation in 1911, it has been an objective of this Company to be a vital and active contributor to the well-being of Canada. Shell Canada recognizes the importance of Canadian par-

ticipation in the petroleum industry. Today, 21 per cent of Shell Canada's common shares representing 29 per cent of the voting rights are in the hands of the public; 10 of our 12 directors are Canadians as are virtually all our employees, and all our corporate decisions are made in Canada.

For the longer term, we believe that increased participation of Canadian risk capital in the exploration for and development of Canada's oil and gas reserves is a desirable objective. In this connection, the federal government in its National Energy Program introduced measures designed to increase the level of Canadian ownership and control of oil and gas production. However, following a thorough analysis, your Directors concluded that changes in Shell Canada's ownership structure, as a short-term response to the NEP, are not warranted.

Notwithstanding the current political and economic difficulties facing Canada, there still remain great opportunities, and these can and will be shared in by Shell.

For the nation and this Company, our potential lies in both our natural and our human resources. Because of my faith in Canadians, I am confident this potential will be realized. More specifically for your Company, my faith is inspired by our employees, dealers and agents. I thank them for their outstanding efforts during 1980. I know they have the ability to meet the challenges and opportunities in the dynamic environment of the decade ahead, and to enable Shell to meet your highest expectations.

On behalf of the Board,



C. William Daniel  
President and Chief Executive Officer

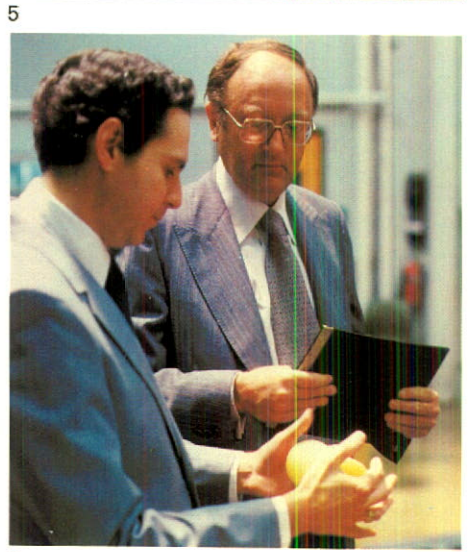
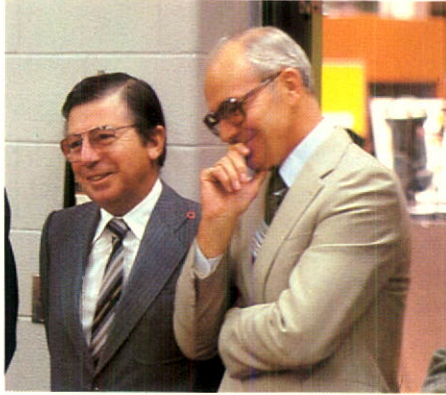
Toronto, Ontario  
March, 1981

# Board of Directors

The number of Directors was increased by two in 1980 to 12. One resignation (Donald S. Macdonald) occurred. Three new Directors were elected to the Board: Margaret Southern, President of Spruce Meadows Equestrian Centre, near Calgary, Alberta; D. J. Taylor, Senior Vice President, Shell Canada Limited, Toronto; Antoine Turmel, Chairman and Chief Executive Officer, Provigo Inc., Montreal.

During the year, Board members toured the Shell Research Centre at Oakville, Ontario, and the Alberta Research Council in Edmonton, during which these photographs were taken.

1. Mr. Antoine Turmel (left) with Mr. C. William Daniel.
2. Mr. D. de Bruyne (left) and Mr. P. B. Baxendell.
3. Mr. Gary Martin of the Alberta Research Council with Mrs. Margaret Southern.
4. Mr. D. J. Taylor (left), Mr. Louis Rasminsky and Mr. Peter J. G. Bentley (right).
5. Mr. Jacques de Billy (left) with Mr. J. M. MacLeod.
6. Mr. G. Gorrill (left), vice president and general manager of Shell's Synthetic Oils unit, with Mr. A. Davidson Dunton.
7. Mr. David Scott, senior research chemist at the Oakville Research Centre, with Mr. D. W. Menzel.



## Committees of the Board of Directors

Management Resources and Compensation – Messrs. Daniel, Dunton and Rasminsky.

Audit – Messrs. Bentley, de Billy and Rasminsky.

# 1980 financial review

Shell Canada's 1980 earnings were \$355 million or \$3.34 per Class "A" Common Share compared with 1979 earnings of \$259 million or \$2.42 per share. Almost all of the year to year increase occurred in the Oil Products segment of the business where improved market conditions have led to a recovery in profitability from the depressed levels of recent years. Earnings for the Resources segment were up modestly from 1979 as the effect of price increases for crude oil, natural gas and related products was offset to a large extent by higher exploration expenditures and reduced sales volumes.

The improved earnings represented a return on average capital employed of 14 per cent before adjusting for the effects of inflation. Allowing for inflation, the return on capital was only seven per cent. As shown in the chart on this page, the Company's return on capital averaged 12 per cent over the last five years before adjusting for inflation and five per cent on an inflation-adjusted basis.

Despite the higher risks inherent in the petroleum industry, the average return obtained since 1975 is only slightly above that of the manufacturing sector of the economy.

The financial and operating results for each segment of the business are discussed in the Operating Review, beginning on Page 9, and a detailed statement of financial results by segment appears on Page 29. The table on this page provides a summary of earnings and capital employed by business segment.

## Cash flow and re-investment

Cash from operations, at \$664 million, was up \$129 million over 1979 with Oil Products and Resources segments the major contributors. An additional \$37 million in cash payments was received from gas transmission companies which delayed taking delivery of certain volumes of natural gas beyond 1980. These proceeds will be taken into income

upon delivery of the gas, expected to begin in 1984. Sales of assets added a further \$13 million to 1980 cash generation.

Capital and exploration expenditures amounted to \$518 million, an increase of \$152 million over 1979. Investment in the Resources segment accounted for \$433 million of total 1980 expenditures and was up \$120 million. The increase reflects a high level of exploration particularly in the Alberta foothills area, and increased development activity, including completion of the Limestone gas field gathering system. Investment in other business segments rose by \$32 million, mainly as a result of expenditures on new manufacturing facilities for oil products and chemicals.

Despite tight operating controls, investment in inventories and receivables increased \$275 million to a total of \$1.2 billion at year-end, mainly due to rising crude and product costs.

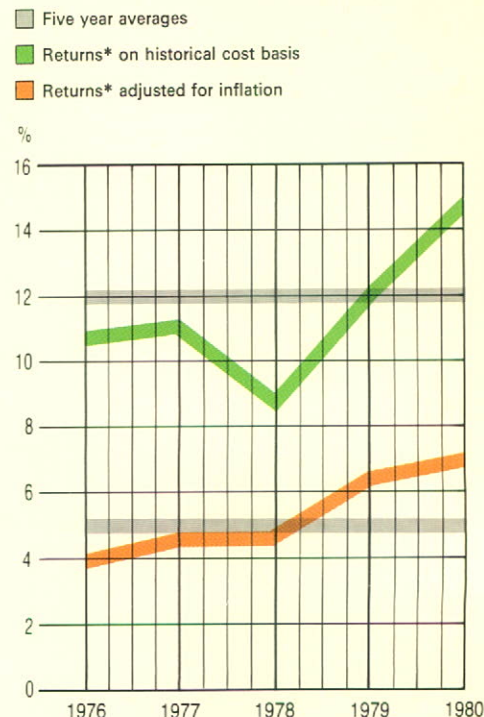
Over the last five years Shell Canada's capital and exploration programs and increased working capital requirements have totalled \$2.1 billion which represented 94 per cent of total cash flow from operations. In the Resources segment, investment over the same period represented 94 per cent of cash generation and in 1980 was 102 per cent.

## Investment outlook

Shell Canada's investment spending in 1981 is expected to total some \$770 million, up \$252 million over 1980.

Expenditures in the Oil Products and Chemicals segments will account for about \$140 million of this increase, mainly as a result of investment in a

## Return on average capital employed



\*Earnings before interest expense as a percentage of average capital employed.

new refinery and petrochemical facilities in Alberta.

Resources segment investment is forecast to increase about \$90 million, due mainly to expenditures on the Line Creek coal mine in southeastern British Columbia and to oil and gas development expenditures to delineate recent discoveries and maintain deliverability in existing fields. Oil and gas exploration expenditures, however, are expected to be about \$40 million less than in 1980.

Measures contained in the National Energy Program introduced in October, 1980, particularly the eight per cent tax

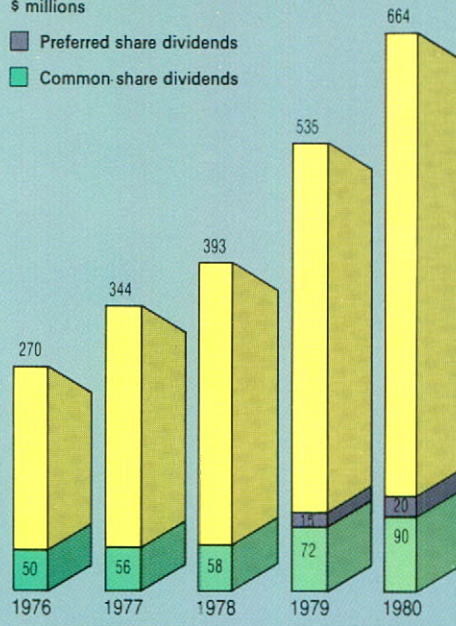
## Financial data by industry segment (\$ millions)

Segments	Capital employed		Earnings	
	1980	1979	1980	1979
Resources	\$1,132	\$ 933	\$158	\$145
Oil Products	1,070	853	188	110
Chemicals	280	277	21	17
Other	225	357	4	3
Interest on long term debt	—	—	(16)	(16)
<b>Total Company</b>	<b>\$2,707</b>	<b>\$2,420</b>	<b>\$355</b>	<b>\$259</b>

**Cash from operations before exploration and predevelopment expenses**

\$ millions

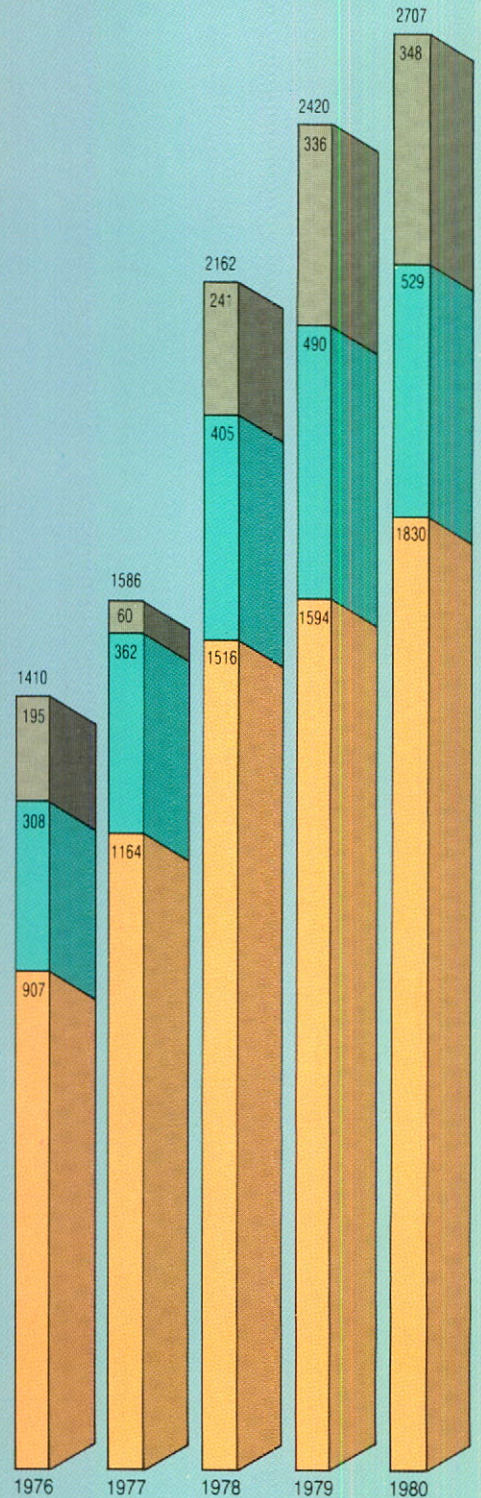
- Preferred share dividends
- Common-share dividends



**Capital employed at December 31**

\$ millions

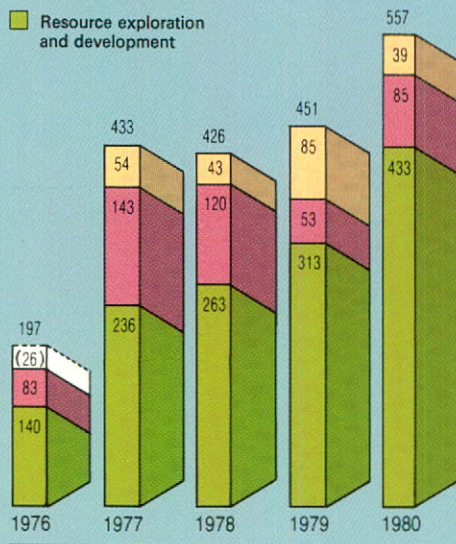
- Cash, short term investments and notes payable
- Other working capital
- Net fixed assets and other investments



**Capital, exploration expenditures and other working capital**

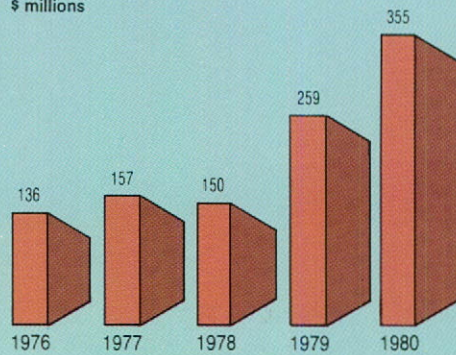
\$ millions

- Other working capital
- Refineries, chemical plants, marketing and other
- Resource exploration and development



**Earnings**

\$ millions





on oil and gas revenues, have reduced profitability and cash flow of oil and gas exploration and production activity. This factor and the prolonged inability of the federal government and governments of the producing provinces to resolve their conflicts on pricing and taxation caused Shell to amend its 1981 investment plans, reducing exploration and development expenditures by about \$100 million from earlier plans.

Capital and investment expenditures, together with increased working capital requirements, are expected to exceed internally-generated funds in 1981 and external financing is anticipated.

#### Common share dividends

During 1980 dividend payments on common shares amounted to \$90 million or 90 cents per share compared with 1979 payments of \$72 million or 72 cents per share.

#### Income taxes

Income tax provisions for 1980 amounted to \$286 million or 44.7 per cent of pre-tax earnings, compared with 1979 provisions of \$193 million, or an effective tax rate of 42.7 per cent. Of the 1980 amount, \$256 million is currently payable and \$30 million is a deferred tax provision in accordance with accounting requirements. The current and deferred provisions for 1979 were \$140 million and \$53 million respectively.

The table in Note 7 to the consolidated financial statements provides a

### Quarterly financial and stock-trading information

	1980				Total year
	Quarter				
	1st	2nd	3rd	4th	
Earnings (\$ millions)	\$ 89	\$ 92	\$ 86	\$ 88	\$ 355
Earnings per share	\$0.84	\$0.87	\$0.80	\$0.83	\$3.34
Share prices (dollars)					
High	41½	35¾	36⅝	35	41½
Low	28¾	27⅞	28¾	23¼	23¼
Shares traded (thousands)	33,865	20,127	24,261	26,262	104,515
	1979				
Earnings (\$ millions)	\$ 46	\$ 60	\$ 68	\$ 85	\$ 259
Earnings per share	\$0.42	\$0.57	\$0.63	\$0.80	\$2.42
Share prices (dollars)					
High	19⅞	26¼	31⅝	37½	37½
Low	15½	18¼	22¼	25¼	15½
Shares traded (thousands)	10,947	15,570	22,246	25,631	74,394

The Class "A" Common Shares of Shell Canada Limited are listed on the Montreal, Toronto, Alberta and Vancouver stock exchanges. The high and low Toronto exchange prices and the number of shares traded on all exchanges are shown by quarter for 1980 and 1979.

reconciliation between the Company's effective income tax rates and the combined federal and provincial statutory rates for 1980 and 1979.

#### Accounting for changing prices

To date, no single generally accepted method of portraying the impact of changing prices on financial results has emerged. Shell Canada, since 1974, has used the method referred to as General Price Level Accounting (GPLA) or Constant Dollar Accounting. This approach maintains the traditional basis of accounting, except that all amounts are restated by applying a single index which reflects changes in the general purchasing power of money. Shell Canada believes that data prepared on a GPLA basis will be useful to its shareholders as it deals adequately with changes in the general price level.

However, early in 1980 the Canadian Institute of Chartered Accountants proposed an alternative approach called Current Cost Accounting. Its objective is to indicate the impact of specific price

changes on operating results and it does so by seeking to measure the current cost of replacing the existing operating capacity. The proposal is the subject of considerable controversy and a final standard has not yet been issued. Until a consensus has been reached on this important issue, Shell Canada continues to report the effects of inflation on a GPLA basis, further details of which are provided on Page 36 of this report.

#### Reserve Recognition Accounting

As for 1979, shareholders may obtain Reserve Recognition Accounting data by writing to the Secretary's Office, 505 University Avenue, Toronto, Ontario, M5G 1X4.



# Operating review

## Resources

Shell's high level of exploration and development activity was increased during 1980, including expansion of its land base, a record level of drilling and achievement of a higher productive capability.

Although geological prospects remain favourable, the Company's 1981 exploration and development program has been reduced from the 1980 level to adjust to uncertainties in future profitability and cash flow. The program is designed to take advantage of selected investment opportunities for long-term growth within the current uncertain economic, political and regulatory environment.

Earnings in 1980 from Resources activities were \$158 million compared with \$145 million in 1979. The effect of price increases for natural gas, sulphur and crude oil was largely offset by reduced sales volumes and by higher exploration expenditures.

Natural gas sales declined nine per cent to 16.3 million cubic metres a day, due mainly to intense price competition in U.S. markets from U.S. domestic gas and alternative fuels. Gross production of crude oil and natural gas liquids, at 11 300 cubic metres a day, was down seven per cent, reflecting generally declining oil field production capabilities and reduced gas liquid production as a result of lower gas sales. Sulphur sales increased to 3304 tonnes daily from 3251 tonnes in 1979, while sulphur production decreased two per cent to 3446 tonnes a day due to lower natural gas production.

In considering the market outlook for natural gas, only modest growth in the Canadian market is expected over the next two or three years as energy conservation measures largely offset penetration into new gas markets and the substitution of gas for oil. Demand for Canadian gas exports is expected to remain soft in the same period because of strong price competition in the U.S. resulting from a short-term surplus in U.S. domestic supplies, competition

**Most exploration and development drilling for oil and natural gas has been concentrated in the foothills and plains of Alberta and British Columbia. Shell Canada has had considerable success in the Alberta foothills, where it has discovered most of the gas found by the industry to date. This Shell-contracted rig is operating northwest of Calgary.**

from alternative fuels and the effects of conservation. Prospects appear favourable, however, for increased sales of current supplies and newly-discovered gas reserves starting in 1984-85 as demand grows in both Canada and the U.S.

Shell's coal interests continue to offer good prospects for growth and investment, reflecting increasing world coal demand.

However, in oil sands developments, a vital part of the strategy for Canadian oil self-sufficiency, policy disputes between the federal and Alberta governments extending into 1981 forced the Alsands consortium to terminate all major field work and scale down design and engineering activities.

## Oil and gas

During 1980, Shell increased its oil and natural gas exploration and development activities as shown in the following table.

Conventional oil and gas expenditures					
(\$ millions)	1980	1979	1978	1977	1976
Exploration	\$211	183	153	109	69
Development	\$118	97	84	116	61
Total	\$329	280	237	225	130

Expenditures for exploration were concentrated in Alberta (62 per cent) and British Columbia (24 per cent). Exploration activities also took place in Ontario, Saskatchewan, Manitoba, Montana and the East Coast offshore.

A total of 126 exploration and development wells were drilled in 1980, with 21 completed as gas wells and 28 as oil wells. Eighteen were still to be evaluated at year-end. Of the 66 exploration wells drilled, nine were gas discoveries and nine remained to be tested at the end of the year. In addition, six exploration wells drilled in previous years were completed in 1980, five as gas discoveries and one as oil.

Farm-out of selected Shell land to other companies continues to be used as a means of accelerating exploration. This program was expanded in 1979 and 1980. In 1980, 54 tests were drilled on Shell land throughout Western Canada by other companies and resulted in 30 discoveries. One gas discovery in Alberta is significant but follow-up drilling is required to evaluate the potential of the others. Seven farm-out tests were being drilled and two were awaiting production tests at year-end.

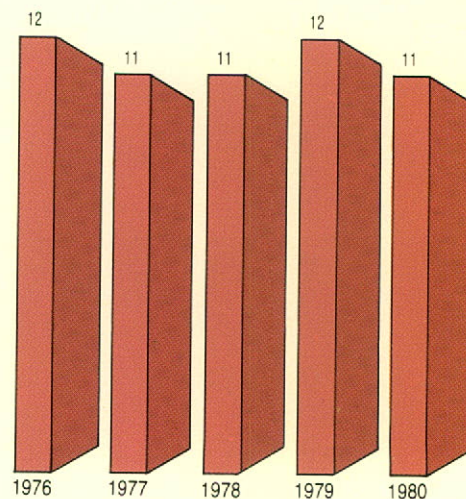
**Reserves** The Company's gross proved reserves at December 31, 1980, are summarized in the accompanying table.

Proved natural gas reserves were 122.6 billion cubic metres or 11 per cent below year-end 1979. In the field extensions and discoveries category 1.7 billion cubic metres were credited to proved reserves in 1980 through further delineation of the Moose Mountain field. This was more than offset by sales of six billion cubic metres and by significant downward revisions of 10.9 billion cubic metres.

The downward revisions were the result of an analysis of production history obtained in 1980, fuel gas require-

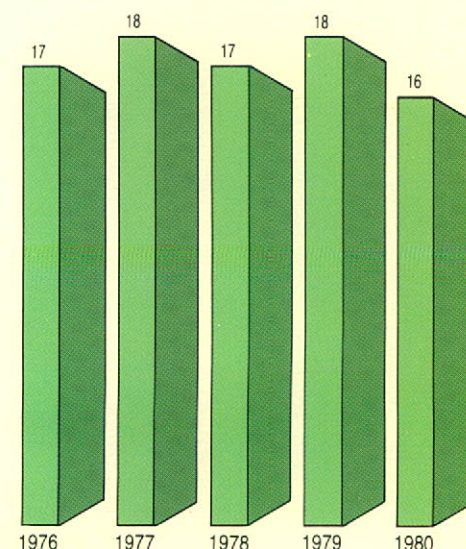
## Crude oil and natural gas liquids produced—gross

Thousands of cubic metres daily

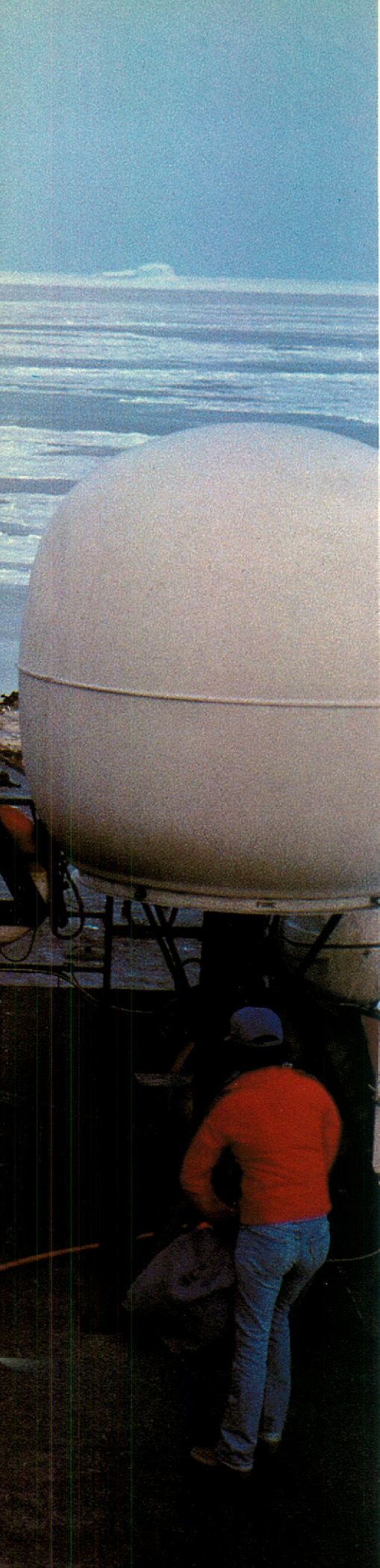


## Natural gas produced and sold—gross

Millions of cubic metres daily







## Reserves

I. Estimated proved recoverable gross reserves (excluding probable reserves and before deducting royalty owners' entitlements)<sup>(1)</sup>

December 31	Natural Gas		Oil & NGLs		Sulphur	
	1980 (billion cubic metres)	1979	1980 (million cubic metres)	1979	1980 (million tonnes)	1979
Beginning of year	137.8	145.1	50.7	54.1	27.9	27.4
Revisions of previous est.	(10.9) <sup>(2)</sup>	(4.6)	(2.5) <sup>(3)</sup>	1.0	(4.0)	(0.6)
Extensions and discoveries	1.7	3.9	0.6	—	0.4	2.3
Sales	(6.0)	(6.6)	(4.1)	(4.4)	(1.2)	(1.2)
End of year	122.6	137.8	44.7	50.7	23.1	27.9

II. Oil sands synthetic crude potential reserves<sup>(4)</sup>

December 31	1980 (million cubic metres)	1979
Mining (Athabasca)	300	300
In-situ (Peace River and Athabasca) <sup>(5)</sup>	500 to 800	500 to 800

- 1) Proved reserves are estimated quantities of crude oil, natural gas liquids, natural gas and sulphur which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs. These estimates are based on existing economic and operating conditions (prices, costs, royalties, income taxes) as of the date the estimate is made and only include natural gas volumes which have been contracted. If the National Energy Program were introduced in its present form there would be a negative impact on reserves, which is not reflected in the volumes shown above.
- 2) Significant downward revisions in 1980 gas reserve estimates occurred primarily at the Shell operated Burnt Timber and Waterton fields and the outside operated Brazeau, Berland River and Homeglen Rimbey gas fields.
- 3) Downward revisions in 1980 to previous oil and NGL reserves reflect a reduction in NGLs commensurate with the gas reserve downward revision and an updated analysis of production history in the Simonette, Nipisi and Innisfail fields.
- 4) Represents the Company's interest in oil sands.
- 5) Production of these reserves is dependent on the development of viable recovery technology.

ments, economic evaluations and delineation drilling in a few major fields, plus a comprehensive review of Shell reserves in small fields. As fields mature and more production data become available, revisions for these reasons are not unusual. These revisions will not have a significant impact on meeting gas deliverability requirements under existing contracts.

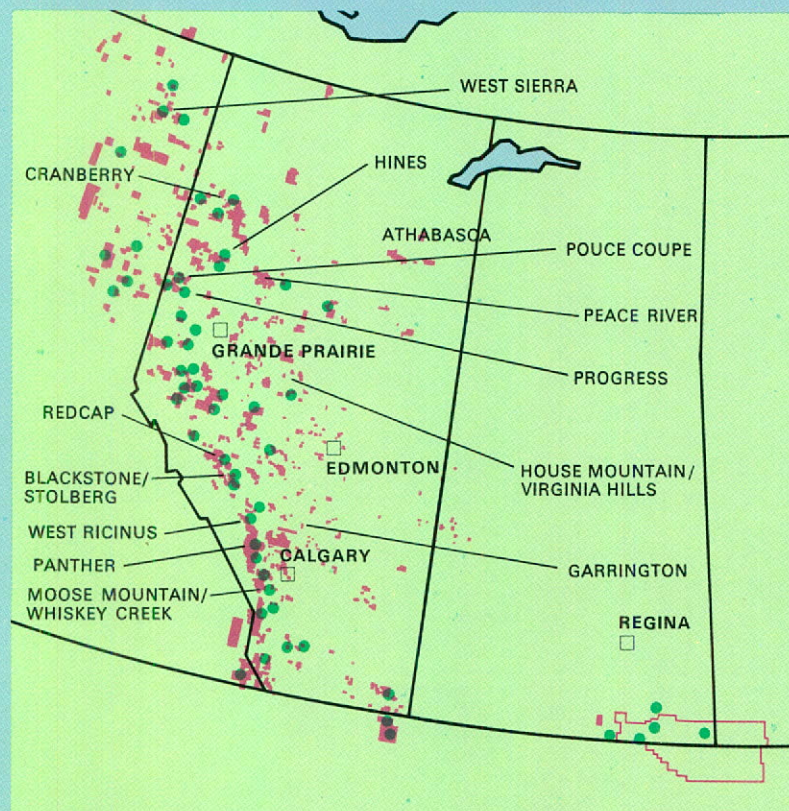
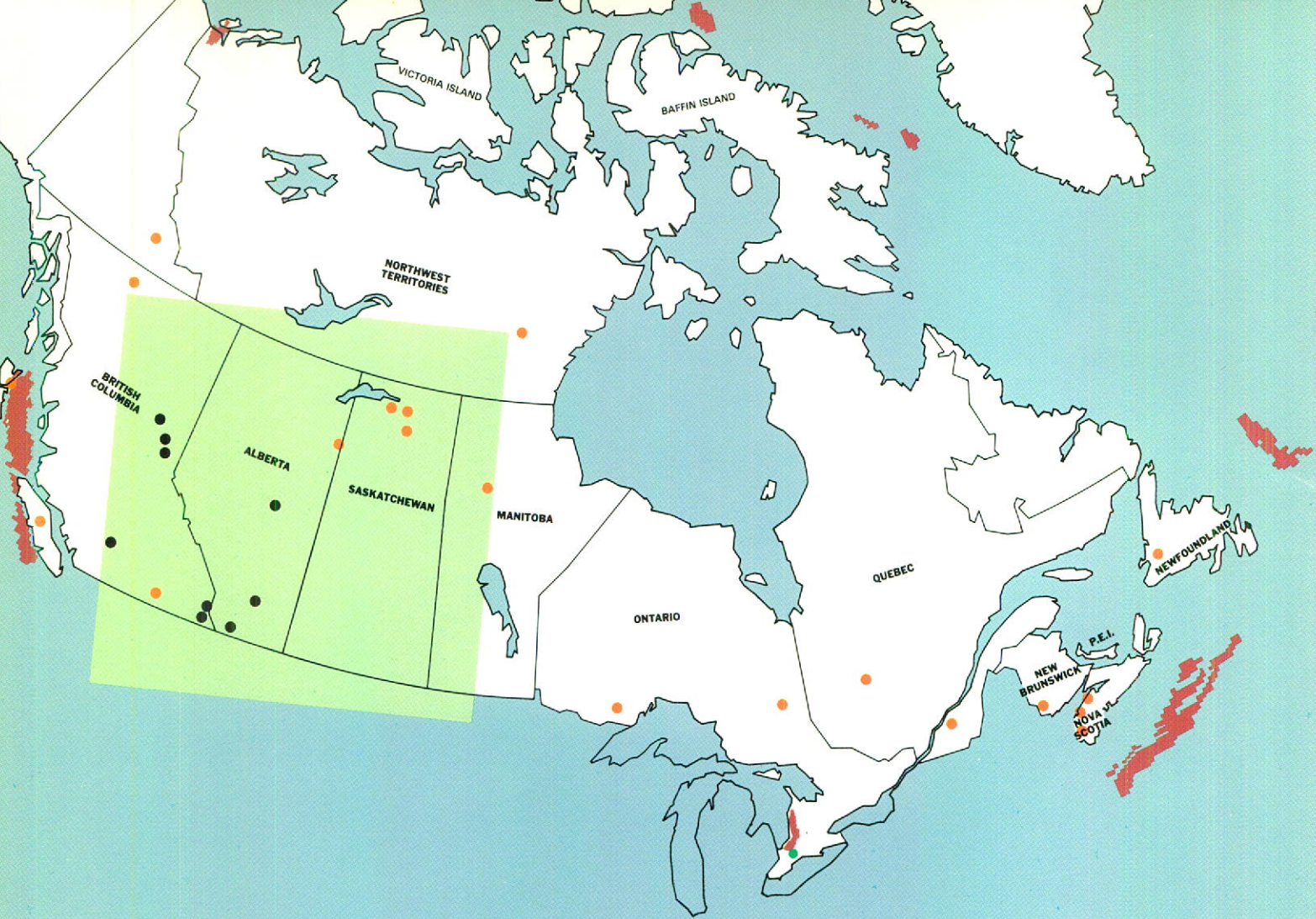
Proved crude oil and natural gas liquid reserves declined 12 per cent or six million cubic metres. A modest upward addition of 0.6 million cubic metres from field extensions was more than offset by 4.1 million cubic metres in sales and 2.5 million cubic metres in revisions. The revisions reflect natural gas liquid

reserve reductions in line with the 1980 decline in natural gas reserves as well as reductions in some major oil fields which resulted primarily from an updated analysis of producing history.

In addition to the proved reserves as defined and reported in the table, the Company at December 31, 1980, held 2.2 billion cubic metres of reserves for which sales contracts have not been arranged. The Company also estimates a probable category of reserves which require additional delineation. In 1980, this probable category totalled 16.4 billion cubic metres of natural gas, 5.6 million cubic metres of crude oil and natural gas liquids and 3.5 million tonnes of sulphur.

Neither the proved reserves nor the probable category of reserves estimated by the Company reflect the potential volumes associated with recent discoveries, such as at Blackstone and Carbondale in 1979 and at Whiskey

Offshore exploration activities on Canada's East Coast include the hazards and challenges of icebergs, hostile weather conditions and deep water operations. Shell Canada has been working off the coasts of Nova Scotia and Newfoundland and in Davis Strait off Baffin Island. This Shell-chartered vessel is carrying out seismic surveying in Davis Strait.



**Exploration and production areas at December 31, 1980**

- Shell Canada Resources lands
- Areas of oil and gas exploration drilling
- Areas of minerals exploration
- Areas of coal exploration
- Shell Canada Resources/Shell Oil agreement area

Creek, Redcap and West Ricinus in 1980. The potential volumes indicated by these discoveries are expected to be significant in magnitude. However, they cannot be credited to either the proved or probable estimates until sufficient delineation drilling is done to be reasonably certain about recoverable volumes and, in the case of natural gas, until contracts are available.

**Land position** In 1980, Shell's land holdings in oil and gas activities were increased one million hectares to a total of 18.2 million gross hectares. This large land inventory will continue to provide a broad base for exploration prospects by the Company.

Details of Shell's land position at the end of 1980, both gross and net, are contained in the table. Gross is the total land area in which the Company has any working interest; net is Shell's share of the gross and excludes the proportion held by other participants.

Shell's net land holdings in frontier regions were unchanged from 1979. In the producing regions of Western Canada, net holdings increased to 2.4 million hectares from 2.2 million, primarily through purchases at provincial land sales in Alberta and British Columbia. A highlight in 1980 was the acquisition of a significant heavy oil land position in the Lloydminster area of Saskatchewan and Alberta.

**Alberta foothills** Shell's largest exploration effort in 1980 continued to be concentrated in the Alberta foothills where the Company has discovered more than 60 per cent of gas reserves

found by the industry in the area to date. This foothills volume represents 75 per cent of Shell Canada's total gas reserves.

The Company drilled or participated in 11 exploration tests during 1980 and operations were in progress at two locations at year-end. A gas discovery was made at Redcap, west of Edmonton, where a follow-up test was under way at the end of the year. The 1979 gas discoveries at Blackstone, southwest of Edmonton, and at Sullivan, southwest of Calgary, were each followed by successful step-out tests. Two other 1980 wells, Whiskey Creek and West Ricinus, near Calgary, were indicated gas discoveries and were awaiting final testing at year-end.

The gathering system at the Limestone gas field northwest of Calgary was completed, with sales to TransCanada PipeLines beginning in November, 1980. This brings to production major reserves discovered in 1974 and completes a four-year development program which cost about \$75 million. Sales rates from the field are expected to average two million cubic metres daily in 1981.

At Panther River, also northwest of Calgary, one gas well was completed and two others were close to total depth at year-end. These wells are part of Shell's continued evaluation of this large gas-bearing structure. Two additional wells planned in 1981 will complete initial delineation drilling, at which time decisions on further drilling activity will be made.

Delineation drilling progressed towards development of the Moose Mountain field southwest of Calgary. Four wells were completed, with Shell's interest ranging from 32 to 100 per cent. A 25-kilometre pipeline is being planned to the Quirk Creek gas plant operated by Esso Resources where the gas will be processed. Initial production from Moose Mountain is scheduled to start in early 1982; Shell's contracted share is expected to be 220 000 cubic metres a day of sales gas.

**Alberta plains** Seismic surveys were conducted in selected areas in the plains of Alberta and Shell drilled or participated in 33 exploration tests during the year. Gas discoveries were completed at Pouce Coupe, Hines, Bolton and Smoky

River, a follow-up gas well was drilled at Progress and a small oil discovery was made at Prestville, all located near Grande Prairie 400 kilometres northwest of Edmonton.

In the Virginia Hills-Belloy oil field in west-central Alberta, three more development oil wells and one gas well were drilled, essentially completing drilling on this accumulation. A central oil treating plant was completed as scheduled and placed on stream in February, 1980, allowing daily oil production to reach 190 cubic metres. Design of a waterflooding facility is under way, with construction to be completed in 1981. Under waterflood, allowable production could increase to 800 cubic metres a day in 1982.

The Shell Garrington discovery in 1978, originally called Red Lodge, has resulted in active drilling by Shell and competitors in developing the Garrington Viking A pool 20 kilometres west of Innisfail in central Alberta. Shell now has a 50-per-cent interest in eight oil wells in this modest pool. Drilling will continue in 1981 on additional joint interest acreage. Production in 1981 is expected to reach 26 cubic metres a day.

In the House Mountain area of the Swan Hills field northwest of Edmonton, engineering and geological studies have led to the development of a field extension. Six oil wells were drilled and completed in 1980. An additional five wells are planned for 1981 and, when drilling is complete, waterflooding will be expanded in the area. It is expected that this extension area could contribute up to 45 cubic metres daily by 1982.

Construction of a gas plant at the Cranberry Debolt field northwest of Edmonton is on schedule. Capacity of the plant will be 410 000 cubic metres a day and Shell's 50-per-cent share of production is contracted to Pan Alberta Gas, with sales to begin in mid-1981.

A gas plant and gathering system is planned to develop the Cranberry Slave Point field, also northwest of Edmonton, with initial production expected to begin in early 1982 at an initial sales rate of 200 000 cubic metres a day to Pan Alberta Gas.

**Other areas** Information acquired by seismic surveys during the last few years resulted in resumption of drilling operations in the British Columbia foothills in late 1979. During 1980, one test was

#### Land Holdings

(Thousands of hectares at December 31, 1980)

	Gross	Net
<b>Oil and Gas</b>		
East Coast offshore		
Shelf/Slope off Nova Scotia	4 474	2 024
Slope off Newfoundland	2 252	633
Baffin Bay and Davis Strait	1 514	1 514
Northwest Territories and Yukon Territories		
Mackenzie Delta	258	109
Other	73	60
West Coast offshore	5 598	2 642
Plains and foothills of Western Canada and Ontario		
Producing regions	3 850	2 423
Synthetic oils		
Oil sands (mining and in-situ)	142	72
Heavy oil	42	42
<b>Coal</b>	358	309
<b>Minerals</b>	1 036	678
<b>Total</b>	<b>19 597</b>	<b>10 506</b>





abandoned and drilling operations were in progress at three other locations at the end of the year. In the northeast B.C. plains, where land acquisition and seismic work continued, Shell drilled or participated in eight tests during 1980 and a gas discovery was made at West Sierra, east of Fort Nelson. Further operations are planned in 1981.

**Frontier regions** Shell conducted a 4700-kilometre seismic survey in the East Coast offshore region. Work was completed on Shell lands off Nova Scotia and on the Company's acreage in Davis Strait off Baffin Island. Interpretation of the seismic data is in progress to delineate prospects for a drilling program over the next several years.

Such a program will require a drilling vessel with the capability to handle deep drilling, high pressures, deep water and adverse weather and ice conditions. The drilling equipment designed to satisfy these requirements is unique but plans are under way to obtain a rig so that drilling can commence in 1982.

## Coal

Crows Nest Resources, a wholly-owned subsidiary of Shell Canada Resources, is actively engaged in the exploration and development of coal deposits in Western Canada where land holdings total some 300 000 hectares, mainly in Alberta. Construction is under way in southeastern British Columbia of the new Line Creek mine where proved clean coal reserves total nearly 29 million tonnes.

### Coal expenditures

(\$ millions)	1980	1979	1978*	1977	1976
	\$57	9	5	3	3

\*excludes purchase of Crows Nest Industries Limited for approximately \$64 million.

A long-term contract was signed in mid-year with a consortium of Japanese steel mills for deliveries from Line Creek of one million tonnes of metallurgical coal annually beginning in 1983. This contract is in addition to contracts with the Korea Electric Company for deliveries of thermal coal totalling 750 000

tonnes annually, starting in 1982. To meet these contracts, an investment of about \$200 million will be required and about 450 jobs will be created.

Efforts are continuing to market the full potential of coal deposits in the Line Creek area as well as other coal properties in B.C. and Alberta, with a particular emphasis on countries in the Pacific rim and Europe. Trial shipments of thermal coal have been arranged for delivery in 1982 to a number of potential new customers in Europe and the Far East. Plans are under way for the expansion of Line Creek to handle additional long-term sales of thermal coal commencing in 1983.

## Alsands

The nine-member Alsands consortium, in which Shell Canada has a 25-per cent interest and is the manager, progressively scaled down activities during the year as a result of the continuing impasse between the federal and Alberta governments. This \$8 billion oil sands mining project was planned to extract 22 000 cubic metres daily of synthetic oil from the Athabasca area of Alberta.

Alsands expenditures (Shell Canada's share)	1980	1979	1978
(\$ millions)	\$10	2	1

Early in 1980, in anticipation of project approval, Alsands completed a \$9 million site clearing and drainage program. Engineering design was continued and the work of staffing up the project team was carried out.

The services of a joint venture managing contractor (Bechtel Canada Ltd. of Toronto and Edmonton, Moneco Ltd. of Calgary and Loram International Ltd. of Calgary) were obtained. The inclusion of Canadian companies will add significantly to the contracting and engineering expertise available in Canada for future large projects.

As the year progressed, however, and the disagreements between the federal and Alberta governments deepened, Alsands was forced to cancel a \$50 million winter site program. A reduced budget of \$35 million was approved for the first half of 1981, which would bring to about \$100 million the total spent on the project. In late 1980, the consortium stated that delays were adding approximately \$1 billion a year to the capital cost of the project and

the 1987 start-up target was being jeopardized.

Mid-1981 is expected to become a critical watershed beyond which meaningful project progress cannot be made without the commitment of substantial financial outlays. The sponsoring companies cannot prudently accept such risks in the absence of government approvals. As a result, if no resolution to inter-government disagreements is foreseen at that time, the project may have to be shelved.

## Synthetic oils

The Company accelerated activities in 1980 which related to potential development of in-situ oil sands and heavy oil projects. The table indicates expenditure growth in these activities.

### Synthetic oils expenditures

(\$ millions)	1980	1979	1978	1977
In-situ oil sands	\$ 5	12	6	1
Heavy oil	\$17	—	—	—
Total	\$22	12	6	1

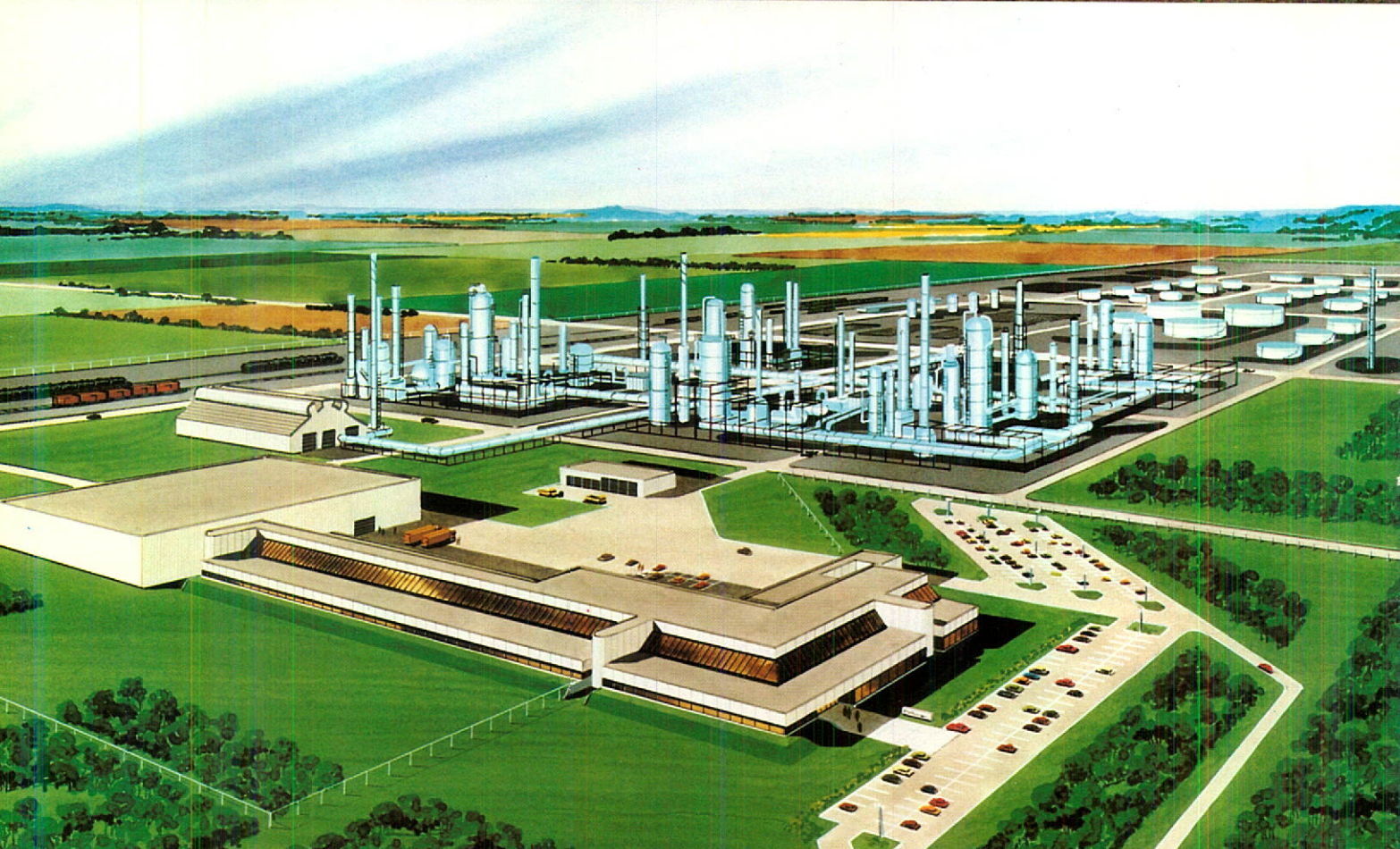
**In-situ activity** The Shell-operated in-situ oil sands pilot project near Peace River, Alberta, to cost \$150 million in capital and operating expenditures, progressed as anticipated during the first full year of operation.

This pilot is being carried out to develop technology for recovering bitumen from oil sands deposits which are too deep to be mined. The first phase of the project, involving steam soak stimulation of the production wells, was initiated in 1979 and continued through 1980. Production in this phase reached the planned 250 cubic metres of bitumen a day.

In January, 1981, the second phase was started — steam drive from the central injector wells — and this is expected to bring the pilot project up to its production capacity of 550 cubic metres of bitumen a day.

Assuming continued successful performance from the pilot, a decision to build a commercial-scale plant could come after four years of operation. The technical data gathered in that time would provide the basis for an estimate of costs. These costs, combined with product prices and fiscal terms, will determine the economic feasibility of a

The Line Creek coal mine is being developed in the rugged terrain of southeastern British Columbia by Crows Nest Resources. In addition to construction of coal washing and preparation plants, bridges and roads to span Line Creek are being built along with rail links to connect up with transportation services to West Coast shipping terminals.



commercial-scale plant. Present commercial-scale plant design anticipates production in the order of 20 000 cubic metres of synthetic oil daily, with start-up in the 1990s.

**Heavy oils** During 1980, the Company acquired a significant land position in the Lloydminster heavy oil area of Saskatchewan and Alberta for a total of 42 000 hectares. A seismic program was conducted and an 18-well drilling program was initiated. With successful application of tertiary recovery technology and the possibility of improved fiscal and pricing conditions, development of heavy oil could be very attractive. Further plans were under way at year-end to add to these holdings.

### Minerals

Shell increased its land holdings for mineral exploration by 200 000 hectares in 1980 to a total of 700 000 net hectares, reflecting continuation of the high level of activity in the minerals program. New uranium exploration programs were undertaken in Newfoundland and Nova Scotia. Other field programs emphasized tin and molybdenum exploration.

#### Minerals expenditures

(\$ millions)	1980	1979	1978	1977	1976
	\$15	9	10	9	8

Additional drilling was carried out on a tin deposit discovered in 1979 at East Kemptville near Yarmouth, Nova Scotia. Indicated reserves were increased by 50 per cent to 38 million tonnes, averaging 0.2 per cent tin to a depth of 100 metres. A mine feasibility study was undertaken in 1980. An underground bulk sampling program was begun to provide data for this study, which is to be completed in late 1981 and could lead to a production decision by early 1982.

Drilling continued in 1980 on the Casmo molybdenum prospect near Cassiar, B.C., in which Shell has earned a majority interest. A preliminary economic evaluation is being carried out. Molybdenum mineralization has also been encountered in a drilling program in southern B.C. Additional work, in-

Increasing petroleum demand in Western Canada is creating the need for more refining facilities. Earth-moving equipment clears the site for Shell Canada's new Scotford refinery near Edmonton, to be completed in 1984. Drawing shows the proposed refinery, the world's first designed exclusively to process synthetic crude oil from the oil sands.

cluding drilling, is required to test the commercial potential of this discovery.

Exploration work continued on three uranium properties in the Athabasca basin of northern Saskatchewan. The programs are expected to continue into 1981.

### Oil Products

Oil Products, comprising refining, transportation and marketing of finished petroleum products, provided strong earnings growth during 1980. This resulted from improved price margins, a more selective approach to marketing and a continued emphasis on increased operating efficiencies.

Earnings during the year were \$188 million, an increase of \$78 million over 1979. This represented a return on sales of seven per cent and an average unit profit of 1.3 cents per litre, compared with five per cent and 0.7 cents a litre a year earlier. Return on average capital employed reached 19.5 per cent, up from 13.6 per cent in 1979 and an average of about 10 per cent during the preceding five years.

Sales volumes, at 40 400 cubic metres a day, were down seven per cent from the previous year, primarily in heating oils and heavy fuel oils as a result of customer conversion to other fuels and conservation efforts as well as the economic slowdown. More than offsetting the effects of this volume decline were improved prices and increased sales of higher-valued products such as gasoline, aviation fuels and lubricants.

#### Oil Products expenditures

(\$ millions)	1980	1979	1978	1977	1976
Oil refineries	\$41	16	19	22	20
Marketing and other	\$30	14	18	23	26
Total	\$71	30	37	45	46

### Changing market demands

In response to the longer-term forecast of increased petroleum demand in Western Canada, the Company began to construct an oil refinery in Alberta and started related expansion at the Shellburn refinery in British Columbia.

Approvals were obtained from the Alberta government and the site was cleared for the Scotford refinery, 30 kilometres northeast of Edmonton, the world's first designed to process exclusively synthetic oil. When completed in

1984, it will have an initial total capacity of 8000 cubic metres daily, with 1600 cubic metres allocated to a benzene petrochemical facility. Of the remaining 6400 cubic metres, Shell's 60-per-cent share is 3800 cubic metres daily – eight per cent of the Company's total oil refining capacity. Estimated cost of that part of the refinery is \$520 million. Husky Oil Operations has a 40-per-cent interest. Feedstock will be supplied from the Athabasca oil sands.

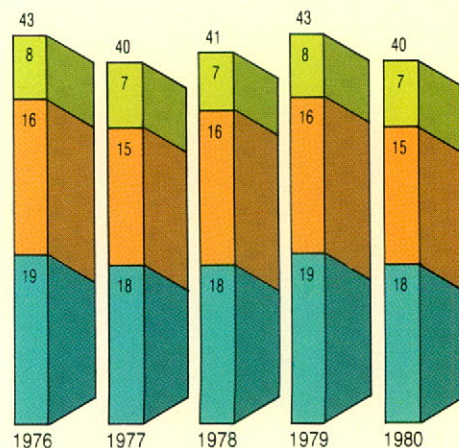
Expansion of the Shellburn refinery at Burnaby, B.C., will increase capacity 1750 cubic metres to a total of 5500 cubic metres a day. Significant improvements are also being made in environmental protection. The changes are scheduled for completion in 1983 at an estimated cost of about \$52 million. The increased capacity will help meet expected demand growth in British Columbia for unleaded gasoline, diesel fuel and aviation fuel.

As a major Canadian lubricants manufacturer, Shell will complete Western Canada's first grease plant at Calgary in 1981. This will more than double the Company's grease production and displace imports by some 40 per cent. The \$12 million plant will have a capacity of 10 million pounds a year and will incorporate new technology developed by Shell Canada research to manufac-

### Petroleum product sales

Thousands of cubic metres daily

- Other products
- Middle distillates
- Gasolines





C-GUTC

Shell



ture products specifically formulated to the needs of Canadian industry.

A \$2 million bulk lubricants plant, also located in Calgary, was completed in 1980. It supplies commercial and industrial users throughout southern British Columbia and Alberta.

*Recycling lubricants* Construction began in 1980 in Toronto on Shell's first used lubricants re-refinery at an estimated cost of \$13 million. It is intended to process used lubricating oils. Re-refining removes all impurities and produces a quality base stock which can be sold to other lubricants marketers, or used by Shell as the base for various branded oils and greases. The plant, to be completed in 1981 with a production capacity of 204 000 cubic metres annually, will help reduce lubricants imports into Canada by almost 20 per cent. It will also encourage the recycling of waste materials being disposed of in ways which may impact on the environment and will conserve scarce feedstock for other purposes.

#### Marketing improvements

A program to modernize the existing retail network by improving productivity, appearance and customer services was emphasized in 1980. This was aimed at meeting the consumers' evolving demands and maintaining Shell's competitive position. The Company continued to invest in new retail outlets, particularly in areas of significant population growth.

Expansion of the network of Rapidlube centres (La lubritec in Quebec) continued across Canada in 1980 as demand grew for fast oil changes and lubrication services. Eight centres were opened in 1980 for a total of 24. The number of Shell-operated convenience food stores, with retail outlets, was increased to 30 in Western Canada, adding to 25 leased convenience food stores in Eastern Canada.

After extensive testing over three years, Shell Super Plus Arctic was introduced to the market in October, 1980. This partially synthetic automotive oil,

Shell is a leading supplier of aviation fuels in Canada. In addition to meeting the needs of major national and international airlines, the Company's network of about 120 dealer-operated airport outlets services regional airlines and business aircraft. This commercial passenger aircraft is being refuelled at the Toronto Shell Aero Centre.

which can flow at minus 40° Celsius, is intended for use in cold weather markets.

#### Supply patterns altered

In contrast to supply difficulties in 1979, both crude oil and product supply were relatively stable in 1980.

However, inter-regional product movements were made to alleviate some local supply imbalances. Distillate was shipped from Shell's Ontario refineries to Vancouver; jet fuel imported into Newfoundland; and distillates transferred from Ontario refineries into areas normally supplied from Montreal.

This alteration to traditional supply patterns foreshadows changes that will be required in the future to cope with shortages of Alberta conventional and synthetic crude oils as well as periodic supply interruptions of imported crude oil.

To offset decreasing production of Western Canadian crude, the federal government arranged for deliveries of Mexican crude to Canada to begin in November, 1980, under a Petro-Canada contract with Petroleos-Mexicanos. Eastern Canadian refiners were allocated shares but delivery of Shell's 1240 cubic metres daily was delayed until early 1981. The processing of this Mexican crude, a large portion of which is low quality, will aggravate the surplus supply situation in heavy fuel oil in Eastern Canada. Shell Canada continues to purchase most of its import requirements under direct contract with the Venezuelan state oil company.

A future concern is the decreasing supply of high-quality domestic and world crudes available to Canada. For refineries in Quebec and the Maritimes, this will mean that more capacity will be taken up with processing low-quality crudes. The yield of gasolines, diesel, aviation fuels and heating oils from each barrel of crude oil refined will be reduced. Larger volumes of crude oil will have to be imported in the near term, with increasing amounts of heavy fuel oil being produced. At the same time, the trend to using natural gas and electricity will displace historical markets for heavy fuel oil, causing a substantial surplus for the "bottom of the barrel" product.

Shell, with other members of the industry, is involved in a study on the feasibility of establishing a joint-industry

Product  
- gasoline  
- aviation fuels  
- lubricants  
- diesel fuels



upgrading facility in Montreal. It would convert heavy oils into products such as gasoline, diesel and aviation fuels. A heavy oil upgrader with a capacity of 20 000 cubic metres will cost at least \$1.5 billion.

Additional refinery investments will also be required as furnace oil is displaced by natural gas for heating. The surplus furnace oil will have to be converted into more useful products such as diesel fuel.

## Chemicals

Shell Canada Chemical Company was formed in August, 1980, as a new division with responsibility for all aspects of Shell Canada's chemical activities. This change recognizes that the chemical business operates in different competitive, legislative and regulatory environments and acknowledges the continuing growth potential for petrochemical investment in Canada.

Chemical earnings were \$21 million, up from \$17 million in the previous year. Return on capital employed rose to 7.5 per cent in 1980 from 5.8 per cent in 1979, resulting from improved volumes and prices over a wide range of products.

Petrochemical plants at Sarnia producing isopropyl alcohol and polypropylene completed their first full year of operation. Sales of these two chemicals, including volumes from the Montreal chemical plant, increased in 1980 to 89 000 tonnes. This was 78 per cent more than tonnages sold in 1979 and was due entirely to increased quantities produced by the two new plants. Production from these plants also displaced Shell's requirements for polypropylene previously imported for resale. This was achieved despite slow economic conditions and industrial activity in North America. The operating rates of the two plants were in line with anticipated levels for 1980 and are expected to be higher in 1981.

Demand for Shell's chemical products continues to grow, both domestically

as well as for export, where the devalued Canadian dollar has created new market opportunities.

Chemicals expenditures					
(\$ millions)	1980	1979	1978	1977	1976
	\$4	16	73	96	33

**Alberta projects** A long-range Shell objective to expand its petrochemical operation was realized in 1980 with the formation of a new joint-venture company with Nova corporation and a decision to construct a Shell benzene plant in Alberta.

The Alberta-based joint-venture company, owned 40 per cent by Shell, will operate world-scale petrochemical plants in Alberta and market products in Canada and internationally. It has applied to the Energy Resources Conservation Board of Alberta to construct styrene monomer and polyethylene plants in the province, to be in operation by 1984. Further projects are being developed.

The styrene monomer plant will be located near the planned Scotford synthetic crude oil refinery. It will cost an estimated \$200 million and will produce 300 000 tonnes annually. Canadian Badger Company has been selected as general contractor. Major uses of styrene monomer are in the manufacture of polystyrene, synthetic rubber, and other plastic materials.

The polyethylene plant is to be located at Joffre, between Edmonton and Calgary, at a cost of \$250 million and with production capacity of 270 000 tonnes a year. Polyethylene is used in the manufacture of plastic film and other plastic products.

The benzene plant, wholly-owned by Shell, is being constructed within the Scotford synthetic crude oil refinery and is scheduled to be completed in 1984. The entire production of 670 tonnes a day will be used to manufacture styrene monomer at the nearby joint venture plant. Estimated cost is \$285 million.

## Other activities

Shell broadened its research efforts during the year and expanded many New Venture activities related directly and indirectly to energy development.

## Research

Shell Canada research activities are directed to improving petroleum and petrochemical products, advancing refinery technology to obtain additional upgraded products out of lower quality crude oil, and increasing the recovery rates of crude oil from both conventional and oil sands reservoirs.

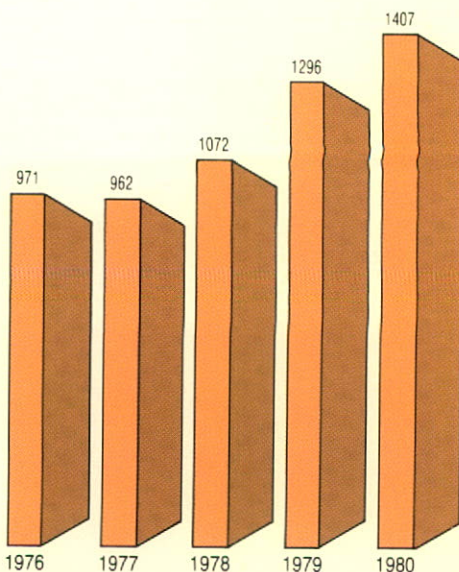
Total research costs in 1980 were \$25 million. Work is currently conducted at a laboratory in Oakville, Ontario, and through field work in Alberta, including the Peace River in-situ oil sands pilot plant. Construction of a new research centre in Calgary is planned to start in June, 1981.

In addition, Shell Canada participates in the world-wide research of the Royal Dutch/Shell Group of Companies. This participation provides the Company with the right to use the technology developed, and influence the direction of research, in other participating laboratories around the world. Under the research-sharing agreement, Shell Canada received \$2 million in support of its own research efforts and paid \$14 million towards the total 1980 program of about \$600 million.

Work at the Oakville Research Centre includes developing processes to manufacture more gasolines and distillates from the heavier forms of crude oil, improving automotive and industrial lubricant applications for Canadian con-

## Chemical product sales

Tonnes daily



Shell Canada's petrochemical business continues to expand, in both domestic and export markets. Polypropylene, produced at Sarnia, Ontario, is made into granules used in the manufacture of a wide range of consumer products as shown. Although the raw polypropylene is white, some granules are coloured (foreground) before being used in the manufacturing industry.

sumers, developing new uses for polypropylene to meet the requirements of the Canadian automotive and packaging industries, and examining alternative energy sources, with emphasis on improvements in manufacturing pellet-size fuel from wood wastes in Canadian forests. An addition is planned to the Oakville centre in 1981 at a cost of more than \$2 million to accelerate research into upgrading residues and heavy oils into gasolines and distillates.

The new centre in Calgary, to be located adjacent to the University of Calgary, recognizes the research needs in exploration and production, particularly the requirement of recovering more oil from known reservoirs. It will cost in excess of \$20 million and will be staffed by about 100 people once operational in 1982. Activities will be devoted to research in crude oil and natural gas exploration, including improvements in drilling and reservoir productivity, techniques for in-situ oil sands recovery and the design of tertiary oil recovery schemes.

### New Ventures

New Ventures activities were consolidated into a business unit in 1980 to capitalize on opportunities evolving from Shell Canada's technology and expertise or in areas which can be related to Shell's operations.

By their nature, such ventures often touch on the forward edge of technological development and involve a high element of risk. Consequently, only a few will mature into profitable businesses beyond their initial small scale.

**BioShell Inc.** This wholly-owned subsidiary completed construction of its first Woodex plant at Hearst, Ontario. The Woodex process converts wood waste into fuel pellets for the industrial and commercial markets. The \$4.5 million plant produces 325 tonnes of pellets a day, the equivalent of more than 45 million litres of fuel oil annually. Two similar plants will be constructed in 1981 in Quebec.

**Woodex International** Shell Canada and Bio Solar Research and Development Corporation of Eugene, Oregon, in May created Woodex International Limited to sell Woodex licensing and

services mainly to Pacific rim countries. The company has signed agreements with Japan Steel Works covering a territorial licence for Japan and for the design and supply of Woodex plants to be marketed internationally.

**Enviroglas** A wholly-owned company, Enviroglas Inc. of Belleville, Ontario, produces fibre-reinforced plastic tanks and distributes small-diameter fibre-reinforced plastic pipes. These products combine light weight, high strength, environmental stability and require less energy to produce than metal products. In 1980, the company opened a national sales office in Toronto and a branch sales office in Edmonton to serve the western oil industry. Addition of a pipe production facility in Belleville in mid-1981 will displace imports.

**Sheltech Canada** This unit continued to expand markets in Canada and abroad. Satellite surveying was conducted for customers in Canada, the United States, the Philippines, Egypt, the Sudan and Brazil. It provides accurate pinpointing of remote locations using recording units that pick up signals from globe-circling satellites.

**Alphatext** This electronic text-editing

and information retrieval company, owned 54 per cent by Shell Canada, is based in Ottawa. It encountered support systems development delays in introducing its new line of micro-computer systems tailored to office automation. Steps have been taken to overcome the delays, and the system should enter the market in 1981.

### Human resources

The recruitment, retention and development of high-calibre personnel have always been a priority for Shell Canada. It will take on new emphasis in the 1980s as the Company addresses special challenges, including the creation of complex mega-projects, all within a competitive market for skilled technical and professional people.

One aspect of meeting the Company's commitment has seen Shell active in drawing on the increasing number of women in the workforce. At the end of 1980 there were 270 women in managerial, technical, professional and supervisory positions, an increase of nearly 50 per cent over 1979.

**Industrial relations** The early months of 1980 were marked by a strike at Shell's Montreal refining and marketing facilities, although contracts had been signed by other unions across Canada. During the 19-week work stoppage, resolved in April, operations were maintained by supervisory personnel.

Late in the year, negotiations began with unions representing employees at refineries and marketing and gas plants in Central and Western Canada. By mid-February, contracts had been signed at all but two plants.

### Employee training

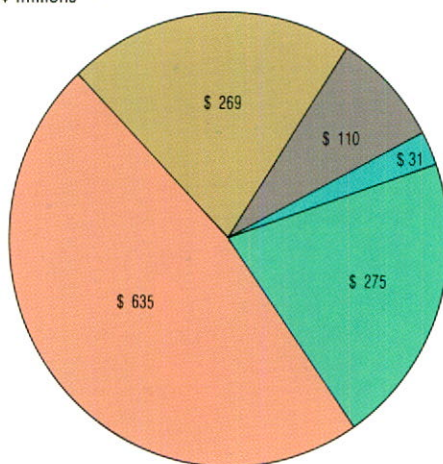
Shell Canada is committed to the development and training of employees, and utilizes a wide range of programs to encourage both job-related and personal growth.

Training activities include the orientation of new staff, apprenticeship programs for operating employees at refineries and gas plants, advanced technical training for skilled workers and staff, and supervisory and management courses. Both in-house courses and external resources such as public seminars and formal academic programs are employed.

### Wealth generation through 'value added'

How Shell Canada's \$1,320 million value added was shared in 1980

\$ millions



- Government crown royalties, taxes on income, federal sales taxes (48%)
  - Employees' wages and salaries (21%)
  - Retained in the business (21%)
  - Dividends (8%)
  - Interest (2%)
- } Providers of capital (shareholders, lenders)



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## Health and safety

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The Company continues to improve standards of occupational health, industrial hygiene and safety for its employees.

A new occupational health unit was established in 1980 to serve Oakville facilities. One of seven such Shell units, it is staffed by a full-time nurse who supervises Company health programs and provides on-site first aid.

A voluntary health surveillance project introduced in 1979 to the Montreal East refinery was extended to Oakville, Simcoe and Regina plants, and the Toronto blending and packaging plant. It is designed to help detect at an early stage any evidence among employees of ill-health – occupational or non-occupational.

In another initiative, a 24-hour emergency telephone number will be included in all new material safety data sheets and product health and safety bulletins. The service, extended to customers

and employees, will offer expert opinion in cases of possible human exposure to dangerous substances.

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## Shell and society

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A corporation exists and prospers to the extent it is responsive to the needs and concerns of the society in which it operates. Although the public often perceives business as divorced from these wider concerns, Shell Canada has incorporated social performance guidelines into its commercial goals.

The primary responsibility of a company such as Shell Canada lies in its contribution to the economic supply of energy in an attendant social framework of creating jobs and generating wealth which Canadian society requires for its well-being.

*Value added* One measure of Shell Canada's contribution to the generation of wealth is the "value added" concept—the increase in value Shell's activities bring to the goods and services the Company utilizes. In 1980, Shell bought

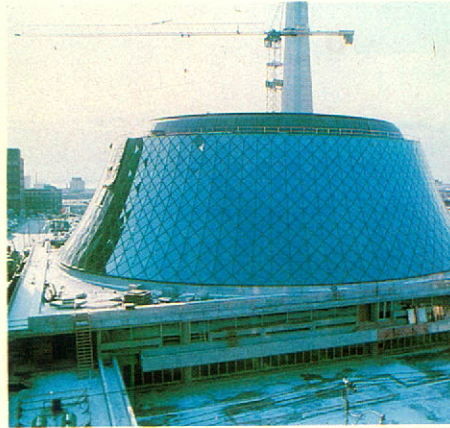
materials and services valued at \$2,703 million, from which the operations of the Company produced revenues of \$4,023 million. The difference between these two figures – \$1,320 million – is the value added to society.

The vast bulk of this value added, or additional wealth, is returned to Canada and Canadians. The largest share, 48 per cent or \$635 million, went to governments through royalties and taxation, providing the means for their public services and programs. The Company's employees received \$269 million, or 21 per cent, in the form of wages and sala-

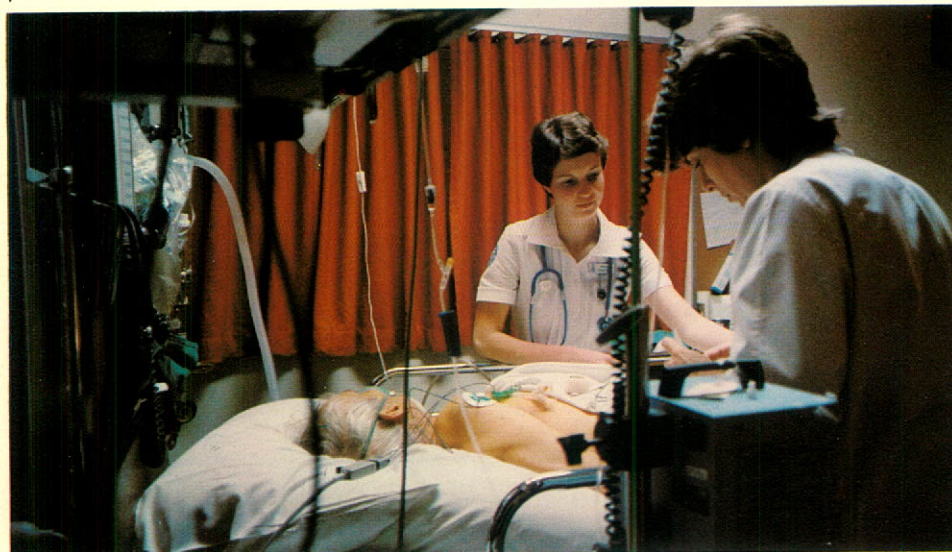
Shell Canada is active in Canadian society in a variety of ways: (1) In an oil spill containment test at Manitoulin Island in Ontario; (2) Through contributions to construction of Toronto's new Massey Hall; (3) By contributing to a fund-raising campaign to modernize Wellesley Hospital, Toronto; (4) To employee health and safety where members of Shell's industrial hygiene and product safety department (Bianca Rothwell, Michael Howlett, Shirley Ferguson and Jim McLean) check a computer print-out of an employee's individual occupational noise level.



1



2



3



4

ries plus the Company's contributions to pensions and social insurance payments.

Another 21 per cent, \$275 million, was re-invested in the business, in turn stimulating other parts of the economy. The fourth group benefitting from this value added were the shareholders and lenders of capital. In 1980, they received a 10-per-cent share of value added, or \$141 million, by way of dividends and interest payments.

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### Environmental protection

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Shell was active, through its own programs and in co-operation with governments and other bodies, in protecting the environment. The Shell program focuses not only on preventing pollution, but also on increasing employee awareness of ecological concerns.

Special emphasis continues to be placed on communication and consultation with members of the communities affected by Shell activities. This was

exemplified by briefing sessions held for residents around the proposed synthetic crude oil refinery near Edmonton and the new research centre in Calgary to discuss environmental impact and programs.

In the field of oil spill control, the Company took an active role in Ontario with the Petroleum Industry Marine Environmental Co-operative, formed in early 1980 to acquire spill control equipment for the protection of high risk marine locations.

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### Energy conservation

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Shell Canada has improved its energy conservation performance beyond the targets set by the Canadian petroleum refining industry's Energy Conservation Task Force. In the oil products sector in 1980, the Company used an estimated 20 per cent less energy to refine a barrel of oil compared with the 1972 base year – a saving of 330 000 cubic metres in liquid fuel equivalent.

Shell Resources achieved a 21-per-cent reduction in fuel gas consumption against 1973 base levels at its gas plants. The saving was primarily a result of more efficient steam generation at Waterton and Jumping Pound, and optimum use of fuel in sulphur plant incinerators, heaters and boilers at all plants. The net energy saving in 1980 relative to the base year was 71.4 million cubic metres of fuel gas.

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### Communications

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Programs were employed in 1980 both to widen Shell's communication with its various publics and to allow for an accelerated response on urgent issues.

The Company presented its position to governments and the general public on concerns such as the industry's rate of re-investment and Canada's long-term energy outlook. Shell executives expressed views on the federal budget and National Energy Program to the federal government and in various public forums, while also responding to wide-ranging media inquiries.

Increased emphasis was placed on helping to inform the public concerning broad energy issues. Briefing papers directed to the general public were produced on such topics as oil spills, oil sands development and the coal option in Canada's energy scene. Over the year, some 100,000 copies of these and other Shell publications were distributed.

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### Community involvement

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The Company was active in providing direct assistance to some 875 non-profit organizations in 1980, for a total Shell contribution of about \$2.2 million, above average for the petroleum industry in Canada. These contributions encompassed the areas of health and welfare, education, culture and community programs. To acknowledge and encourage the part Shell employees play in such organizations, the Company also provided about \$52,000 through grants to projects in which Shell people are involved.

Shell Canada's community involvement in 1980 also extended to: (5) Helping provide furniture for a children's library at Valleyview, Alberta; (6) Contributing to the newly reborn l'Opéra de Montréal; (7) Assisting Junior Achievement in Vancouver where Dave Peters, Shellburn refinery laboratory supervisor, helps assemble padded clothes hangers.



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# Financial information

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## Accounting policies

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A summary of major accounting policies of Shell Canada Limited and its subsidiaries is presented below.

### Principles of consolidation

The accounts of Shell Canada Limited and its subsidiary companies are included in the consolidated financial statements. Interests in oil and gas joint ventures are accounted for using the proportionate consolidation method.

### Investments

Investments in companies in which Shell Canada exercises significant influence are accounted for using the equity method. Other long term investments are recorded at cost with provision made where a permanent decline in the value of such investments has occurred.

### Inventories

Inventories of crude oil, products and merchandise are stated at the lower of cost, applied on a "first-in, first-out" basis, and net realizable value. Materials and supplies are stated at the lower of cost and estimated useful value.

### Exploration and development costs

The Company follows the successful efforts method of accounting for exploration and development activities. Acquisition costs of resource properties are capitalized. Exploratory drilling costs are initially capitalized and wells subsequently determined to be unsuccessful are charged to earnings. Other exploration and predevelopment costs, including geological and geophysical costs, are charged to earnings currently. All development costs are capitalized.

Expenditures relating to the Alsands mining project are charged to earnings currently until an operating agreement is signed.

### Depreciation and amortization

Depreciation and amortization on resource assets are provided on the unit of production basis. Costs of producing properties are depleted and gas plants depreciated over remaining proved reserves. The costs of non-producing properties are amortized in accordance with experience. Resource development expenditures are amortized over remaining proved developed reserves. Other plant and equipment are depreciated on a straight-line basis over their estimated useful lives.

### Pensions

The Company has retirement programs which cover virtually all employees. The cost of the programs is charged to earnings in the year incurred. The annual cost of these programs is calculated using an actuarial method which essentially spreads the cost of future benefits as a level percentage of payroll of active employees over their future years of service with the Company. The Company's policy is to fully fund these programs.

### Royalties and mineral taxes

Alberta royalties on crude oil obtained from its Crown leases are required to be delivered in kind, and accordingly are not reflected in these financial statements. All other royalty entitlements, which are not delivered in kind, and mineral taxes are reflected in the cost of purchased crude oil, petroleum products and other merchandise.

**Consolidated statement of earnings** (\$ millions, except per share amounts)

Year ended December 31	1980	1979
<b>Revenues</b>		
Sales and other operating revenue (Note 4)	\$3,962	\$3,379
Dividends, interest and other income	61	47
	<b>4,023</b>	<b>3,426</b>
<b>Expenses</b>		
Purchased crude oil, petroleum products and other merchandise (Note 5)	2,235	2,039
Operating expense	440	357
Selling and general expenses	401	329
Exploration and predevelopment expenses (Note 6)	169	134
Depreciation, amortization and retirements	106	84
Interest on long term debt	31	31
Income taxes (Note 7) :		
Current	256	140
Deferred	30	53
	<b>3,668</b>	<b>3,167</b>
Earnings for the year	\$ 355	\$ 259
Earnings per Class "A" Common Share	\$ 3.34	\$ 2.42

**Consolidated statement of earnings retained in the business** (\$ millions)

Year ended December 31	1980	1979
Balance at beginning of year	\$ 989	\$ 817
Earnings for the year	355	259
	<b>1,344</b>	<b>1,076</b>
Dividends paid (Note 8)	110	87
Balance at end of year	<b>\$1,234</b>	<b>\$ 989</b>

**Consolidated statement of financial position** (\$ millions)

As at December 31	1980	1979
<b>Assets</b>		
Current assets		
Cash	\$ 156	\$ 196
Short term investments, at cost which approximates market	192	165
Accounts receivable	581	526
Inventories:		
Crude oil, products and merchandise	637	417
Materials and supplies	31	31
Prepaid expenses	22	34
	1,619	1,369
Investments, long term receivables and other assets	111	107
Properties, plant and equipment (Note 9)	1,719	1,487
	\$3,449	\$2,963
<b>Liabilities, deferred credits and shareholders' investment</b>		
Current liabilities		
Short term notes payable	\$ —	\$ 25
Accounts payable and accrued liabilities	450	407
Income and other taxes payable	286	105
Long term debt due within one year	6	6
	742	543
Long term debt (Note 10)	302	328
Deferred gas production revenue	75	38
Deferred income taxes	337	307
Shareholders' investment		
Capital stock (Note 8)	468	467
Contributed surplus	291	291
Earnings retained in the business	1,234	989
Total shareholders' investment	1,993	1,747
	\$3,449	\$2,963

**Consolidated statement of changes in financial position** (\$ millions)

Year ended December 31	1980	1979
<b>Cash internally generated</b>		
Operations*	\$664	\$535
Sales of properties, plant and equipment and miscellaneous items	13	20
Deferred gas production revenue	37	24
	<b>714</b>	<b>579</b>
<b>Cash invested</b>		
Capital and exploration expenditures	518	366
Investments, long term receivables and other assets	10	(46)
Working capital excluding cash	39	85
	<b>567</b>	<b>405</b>
<b>Dividends paid</b>		
Preferred shares	20	15
Common shares	90	72
	<b>677</b>	<b>492</b>
Cash surplus before external financing	<b>37</b>	<b>87</b>
<b>External financing</b>		
Capital stock	1	1
Long term debt	(26)	7
	<b>(25)</b>	<b>8</b>
Increase in cash**	<b>\$ 12</b>	<b>\$ 95</b>

\*Cash from operations comprises earnings before exploration and predevelopment expenses adjusted for deferred income taxes, depreciation, amortization and other items not affecting cash.

\*\*Cash comprises cash and short term investments less short term notes payable.

The consolidated financial statements have been approved by the Board :

C. WILLIAM DANIEL, Director

PETER J. G. BENTLEY, Director

## Financial results by industry segment (\$ millions) (Note 3)

	Resources	Oil Products	Chemicals	Other	Total
<b>1980</b>					
Sales and other operating revenue	\$ 931	\$2,748	\$ 267	\$ 16	\$3,962
Dividends, interest and other income	1	8	—	52	61
Inter-segment transfers	—	95	—	—	—
Total revenue	932	2,851	267	68	4,023*
Product costs and operating expenses	423	2,481	218	49	3,076*
Exploration and predevelopment expenses	169	—	—	—	169
Depreciation, amortization and retirements	61	29	11	5	106
Operating profit	279	341	38	14	672
Interest on long term debt	—	—	—	31	31
Income taxes	121	153	17	(5)	286
Earnings	\$ 158	\$ 188	\$ 21	\$ (12)	\$ 355
Identifiable assets	\$1,278	\$1,403	\$ 290	\$ 478	\$3,449
Capital employed**	\$1,132	\$1,070	\$ 280	\$ 225	\$2,707
Capital and exploration expenditures	\$ 433	\$ 71	\$ 4	\$ 10	\$ 518
<b>1979***</b>					
Sales and other operating revenue	\$ 781	\$2,389	\$ 203	\$ 6	\$3,379
Dividends, interest and other income	—	6	—	41	47
Inter-segment transfers	—	69	—	—	—
Total revenue	781	2,464	203	47	3,426*
Product costs and operating expenses	347	2,254	167	26	2,725*
Exploration and predevelopment expenses	134	—	—	—	134
Depreciation, amortization and retirements	52	23	6	3	84
Operating profit	248	187	30	18	483
Interest on long term debt	—	—	—	31	31
Income taxes	103	77	13	—	193
Earnings	\$ 145	\$ 110	\$ 17	\$ (13)	\$ 259
Identifiable assets	\$1,041	\$1,165	\$ 275	\$ 482	\$2,963
Capital employed**	\$ 933	\$ 853	\$ 277	\$ 357	\$2,420
Capital and exploration expenditures	\$ 313	\$ 30	\$ 16	\$ 7	\$ 366

\*After elimination of inter-segment transfers.

\*\*Capital employed equals identifiable assets less current liabilities.

\*\*\*1979 figures have been restated where necessary to conform with the current year's presentation.

## Notes to consolidated financial statements

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### 1. Accounting policies

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A summary of major accounting policies of Shell Canada Limited and its subsidiaries is presented on page 25 of this report.

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### 2. Subsidiary companies

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Principal operating subsidiary  
Shell Canada Resources Limited

Other operating subsidiaries  
Crows Nest Forest Products Limited  
Crows Nest Resources Limited  
Salmon Pipelines Ltd.  
Salmon Resources Ltd.  
Shell Canadian Tankers Limited

In view of the insignificance to shareholders of other subsidiary companies, Shell Canada Limited has exercised its option not to comply with the requirement of Section 200 of the British Columbia Company Act that these be listed in the Annual Report.

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### 3. Financial results by industry segment

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Shell Canada operates principally in three industry segments: Resources, Oil Products and Chemicals. The Resources segment comprises exploration and production activities for crude oil, natural gas, gas liquids, sulphur, oil sands, synthetic oils, coal and minerals. The Oil Products and Chemicals segments include the manufacture, distribution and marketing of refined oil products and chemical products respectively. "Other" includes cash, short term securities, pipeline invest-

ments, miscellaneous corporate ventures, long term debt, general corporate facilities and unallocated corporate expenses.

The financial results by industry segment, as shown on page 29, are reported as if the segments were separate entities. Inter-segment transfers of products, which are included as revenues in the segment making the transfer, are eliminated from total Company revenues. Inter-segment transfers are accounted for at estimated market-related values.

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### 4. Sales and other operating revenue

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Sales and other operating revenue is net of direct retail taxes and does not include royalties delivered in kind to the Alberta Petroleum Marketing Commission of \$75 million (1979 \$57 million). In previous years such royalties were included in both

revenues and purchases. The 1979 comparative figures have been reclassified, with no effect on earnings, to conform with the current year's presentation.

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### 5. Purchased crude oil, petroleum products and other merchandise

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Purchased crude oil, petroleum products and other merchandise includes royalties paid to private leaseholders of \$40

million (1979 \$28 million) and royalties and mineral taxes paid to governments of \$241 million (1979 \$196 million).



## 6. Exploration and predevelopment expenses

Year ended December 31 (\$ millions)	1980	1979
Conventional oil and gas exploration	\$126	\$104
Alsands mining	10	2
Oil sands in-situ	4	11
Coal	15	8
Minerals	14	9
	\$169	\$134

## 7. Effective income tax rates

	% of pre-tax earnings	1980	1979
Statutory rate (weighted average)		50.1	48.1
Increase (decrease) resulting from:			
Non-deductibility of crown royalties and other payments to provinces		25.3	27.6
Resource allowance and other abatement measures to partially offset non-deductibility of crown royalties		(18.0)	(19.4)
Depletion earned by exploration and development expenditures		(7.8)	(7.5)
Frontier exploration allowance		(0.5)	(1.6)
Drilling and geophysical incentives		(1.5)	(2.0)
Inventory allowance (partially offsetting the effect of inflation)		(1.0)	(1.3)
Manufacturing and processing tax credit		(2.2)	(0.8)
Other		0.3	(0.4)
Effective tax rate reflected in earnings statement		44.7	42.7

## 8. Capital stock

The Company carries on business under the Canada Business Corporations Act. Under the terms of this Act, all classes of the

Company's shares are without nominal or par value and are authorized in unlimited number.

December 31 (\$ thousands)	1980		1979	
	Issued	Dividends	Issued	Dividends
10,000,000 Series "A" Preferred Shares	\$250,000	\$ 19,672	\$250,000	\$14,464
100 4% Preference Shares	1,000	40	1,000	40
63,924,738 Class "A" Common Shares (1979 - 63,880,078)	187,429	57,528	186,927	45,983
9,087,039 Class "B" Common Shares	29,107	32,713	29,107	26,171
	\$467,536	\$109,953	\$467,034	\$86,658

### Series "A" Preferred Shares

The holders of Series "A" Preferred Shares are entitled to receive cumulative preferential dividends fixed at a rate of one-half of the Canadian bank prime rate plus five-eighths of one per cent. These shares are retractable at the holders' option on February 15, 1989 at the price of \$25 per share plus accrued and unpaid dividends. The shares are redeemable at the Company's option on not less than 60 days notice, at a price equal to \$25 per share plus accrued and unpaid dividends to the redemption date.

### 4% Preference Shares

The holder of the Preference Shares is entitled to receive fixed cumulative dividends at the rate of four per cent (4%) per annum. The Company may redeem the Preference Shares at the amount paid-up thereon plus accrued dividends.

### Common Shares

The holder of Class "B" Common Shares is entitled on a share-for-share basis to four times any amount paid or distributed by way of dividend or other distribution to the holders of Class "A" Common Shares.

## 9. Properties, plant and equipment

December 31, 1980 (\$ millions)	Principal depreciation and amortization rates	Cost	Accumulated depreciation and amortization	Net book value
Resources segment	Unit of production	\$1,419	\$359	\$1,060
Oil Products segment	4% to 13%	885	447	438
Chemicals segment	4% to 13%	229	32	197
Other	4% to 13%	43	19	24
<b>Total December 31, 1980</b>		<b>\$2,576</b>	<b>\$857</b>	<b>\$1,719</b>
<b>Total December 31, 1979</b>		<b>\$2,261</b>	<b>\$774</b>	<b>\$1,487</b>

## 10. Long term debt

December 31 (\$ millions)	Maturity	1980	1979
Sinking Fund Debentures –			
Series F – 5¼%	1983	\$ 2	\$ 2
1 – 7½% (U.S. \$68)	1994	72	76
2 – 9¼% (U.S. \$75)	1996	74	74
9¾% Debentures	2003	120	120
Promissory Notes –			
7% (£9)	1981 to 1984	17	21
Floating Rate*	1981 to 1988	—	17
Other long term obligations	varying dates	23	24
		<b>308</b>	<b>334</b>
Included in current liabilities as due within one year		<b>6</b>	<b>6</b>
		<b>\$302</b>	<b>\$328</b>

\*These promissory notes (\$U.S.) bore interest at fluctuating rates which averaged 105 per cent of the U.S. bank's prime rate.

Of the foregoing long term debt, the aggregate amount of payments required to meet sinking fund or retirement provisions will be \$10 million in 1982, \$12 million in 1983, \$15 million in 1984, and \$11 million in 1985.

The principal amounts of the U.S. Debentures and of the U.S. and Sterling Promissory Notes included in the consolidated financial statements are expressed in terms of

Canadian dollars, translated at the rates of exchange prevailing when the funds were received. The aggregate principal amount, if translated at the rate of exchange prevailing at December 31, 1980 would have been \$198 million, compared with \$165 million included in the financial statements (1979 \$219 million, compared with \$190 million included in the financial statements).

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## 11. Transactions with affiliated companies

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Shell Canada, in the course of its regular business, has routine transactions at standard commercial rates with affiliates of the Royal Dutch/Shell Group of companies. Such transactions

are not significant in relation to the Company's overall activities.

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## 12. Commitments and contingent liabilities

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At December 31, 1980, the Company and its subsidiaries had non-cancellable operating leases, with an initial or remaining term of one year or more, covering service stations, office space, and other facilities. Future minimum payments (without reduction for related rental income) under such leases are estimated at \$18 million in 1981, \$18 million in 1982, \$ 16

million in 1983, \$14 million in 1984, \$13 million in 1985 and \$107 million thereafter.

Shell Canada and its subsidiary companies had no contingent liabilities which would result in the sustaining of losses that would materially affect its financial position.

## Auditors' report

To the Shareholders of Shell Canada Limited :

We have examined the consolidated statement of financial position of Shell Canada Limited as at December 31, 1980 and the consolidated statements of earnings, earnings retained in the business and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the Company as at December 31, 1980 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Price Waterhouse & Co. Chartered Accountants  
Toronto, Ontario  
February 20, 1981

## Statistical review – financial

\$ millions, except per share amounts	1980	1979	1978	1977	1976
<b>Revenues</b>					
Petroleum products	\$2,640	2,195	1,762	1,530	1,409
Crude oil, natural gas and related products*	\$ 965	892	697	620	551
Chemicals	\$ 267	203	136	113	97
Other operating revenue	\$ 90	89	71	46	39
Sales and other operating revenue	\$3,962	3,379	2,666	2,309	2,096
Dividends, interest and other income	\$ 61	47	19	25	26
Total revenues	\$4,023	3,426	2,685	2,334	2,122
<b>Earnings and dividends</b>					
Cash from operations (before exploration and predevelopment expenses)	\$ 664	535	393	344	270
per common share**	\$ 6.42	5.19	3.93	3.43	2.70
Earnings for the year	\$ 355	259	150	157	136
Earnings attributable to common shares	\$ 335	243	150	157	136
per common share**	\$ 3.34	2.42	1.49	1.57	1.36
Dividends paid on common shares	\$ 90	72	58	56	50
per common share**	\$ 0.90	0.72	0.58	0.56	0.50
<b>Income taxes</b>					
Current	\$ 256	140	—	42	86
Deferred	\$ 30	53	80	68	25
<b>Financial position at year end</b>					
Cash and short term investments	\$ 348	361	241	60	195
Short term notes payable	\$ —	(25)	—	—	—
Other working capital	\$ 529	490	405	362	308
Investments, long term receivables and other assets	\$ 111	107	158	69	57
Properties, plant and equipment – net	\$1,719	1,487	1,358	1,095	850
Capital employed	\$2,707	2,420	2,162	1,586	1,410
Long term debt	\$ 302	328	321	182	175
Deferred gas production revenue	\$ 75	38	14	—	—
Deferred income taxes	\$ 337	307	253	172	104
Shareholders' investment at book value	\$1,993	1,747	1,574	1,232	1,131
Common shareholders' investment per common share**	\$17.37	14.93	13.21	12.29	11.28
<b>Shareholders</b>					
Common shares outstanding at year end (millions)**	100	100	100	100	100
Shareholders (number at year end)	18,911	16,887	17,370	17,458	17,761
<b>Capital and exploration expenditures</b>					
Capital expenditures	\$ 349	232	287	315	176
Exploration and predevelopment expenses	\$ 169	134	96	64	47
<b>Employees</b>					
Salaries, wages and employee benefits	\$ 269	226	200	177	158
Employees (number at year end)	8,045	7,801	7,750	6,972	6,812

\*Crude oil revenues have been reclassified to reflect the exclusion of royalties delivered in kind.

\*\*Class "A" Common Share equivalent, calculated on the basis that the holder of Class "B" Common Shares is entitled on a share-for-share

basis to four times any amount paid or distributed to holders of Class "A" Common Shares. Cash from operations and earnings per common share have been calculated using monthly weighted average Class "A" equivalent.

## Statistical review – financial

	1980	1979	1978	1977	1976
<b>Ratios</b>					
Return on average capital employed	14.5%	12.0%	8.8%	11.0%	10.8%
Earnings attributable to common shares :					
as % of average common shareholders' equity	20.7%	17.2%	11.7%	13.3%	12.5%
as % of revenues	8.3%	7.1%	5.6%	6.7%	6.4%
Common share dividends as % of earnings attributable to common shares	26.9%	29.7%	38.8%	35.6%	36.7%
Current assets to current liabilities	2.2	2.5	2.3	2.0	2.5
Long term debt as % of capital employed	11.2%	13.6%	14.8%	11.5%	12.4%
Capital employed per employee ( \$ thousands)	336	310	279	228	207

## Statistical review – operating

<b>Resources</b>					
Crude oil and natural gas liquids produced :					
gross (cubic metres daily)	11 300	12 100	10 500	11 000	11 700
net (cubic metres daily)	7 100	7 400	6 500	6 900	7 600
Natural gas produced and sold :					
gross (thousands of cubic metres daily)	16 300	18 000	17 000	17 900	16 700
net (thousands of cubic metres daily)	10 200	12 300	11 700	12 200	11 600
Sulphur produced – gross (tonnes daily)	3 446	3 514	3 200	3 269	3 024
Sulphur sales – own production (tonnes daily)	3 304	3 251	3 160	2 376	2 213
Wells drilled (net) :***					
Exploratory – oil	—	—	4	3	2
Exploratory – gas	6	11	6	17	9
Exploratory – dry holes	42	40	47	31	16
Development – total	35	29	28	25	16
Total wells drilled	83	80	85	76	43
Land holdings (millions of hectares)					
gross	20	18	18	25	26
net	11	10	11	15	15
<b>Products</b>					
Rated refinery capacity at year end (cubic metres daily)	47 000	47 000	47 000	47 000	47 900
Crude oil intake to distilling units (cubic metres daily)	44 400	44 700	41 900	42 500	44 800
% of year end rated refinery capacity	94%	95%	89%	91%	94%
Petroleum product sales (cubic metres daily)	40 400	43 200	40 800	40 100	43 400
Chemical sales (tonnes daily)	1 407	1 296	1 072	962	971
Retail outlets (number at year end)	3 626	3 754	3 880	3 982	4 374

One cubic metre = 6.29 barrels ; one cubic metre = 35.3 cubic feet ; one tonne = 0.984 long ton ; one hectare = 2.47 acres.

\*\*\*Includes only those wells on which Shell Canada made direct expenditures.

## Accounting for inflation

To illustrate the impact of inflation on earnings the following table is provided. It presents the adjustments which account for the variance between earnings reported in the consolidated financial statements, on the historical cost basis, and earnings restated for changes in the general purchasing power of

money. As in previous years, the purchasing power adjusted figures are computed by using the Gross National Expenditure Implicit Price Index in accordance with the guideline issued by the Canadian Institute of Chartered Accountants.

Year ended December 31 (\$ millions, except per share amounts)	1980	1979
Earnings (per historical cost financial statements)	\$355	\$259
<b>General price-level adjustments</b>		
Inventories (removing inflationary gain from profit on sale of inventories)	(51)	(49)
Depreciation (based on increased cost of fixed assets measured in terms of general purchasing power at the end of the year)	(80)	(66)
General purchasing power gain (resulting from holding monetary items* during the year)	16	21
Sales, purchases and all other expenses** (restating revenues and costs incurred during the year in terms of general purchasing power at the end of the year)	6	11
	(109)	(83)
	246	176
Adjustment updating 1979 earnings to 1980 dollars	—	20
General price-level restated earnings	\$246	\$196
Per Class "A" Common Share (in terms of the general purchasing power of money at the end of 1980)	\$2.25	\$1.77

\*Monetary items comprise principally cash, receivables, current liabilities and long term debt.

\*\*Income taxes are based on amounts recorded in the historical cost financial statements.

Five year summary	1980	1979	1978	1977	1976
Earnings (per historical cost financial statements)	\$ 355	259	150	157	136
General price-level restated earnings (in terms of 1980 purchasing power)	\$ 246	196	119	111	98
Earnings as a % of average capital employed (in terms of general purchasing power)	7.2%	6.4%	4.5%	4.5%	4.0%
Purchasing power of the Canadian dollar (amount needed on January 1 each year to purchase what \$1.00 would buy on December 31, 1980)	\$0.90	0.81	0.76	0.70	0.65

### Auditors' report on inflation accounting

To the Shareholders of Shell Canada Limited:

As auditors of Shell Canada Limited we have examined its consolidated financial statements as at December 31, 1980 and have reported thereon to the shareholders under date of February 20, 1981. As part of our examination we have also examined the supplementary information concerning inflation accounting which restates in summary form the earnings for the year ended December 31, 1980 in terms of the purchasing power of money at that date.

In our opinion, the supplementary information concerning inflation accounting for the year ended December 31, 1980 has been properly prepared on a consistent basis in accordance with the guideline issued in December, 1974 by the Canadian Institute of Chartered Accountants.

Price Waterhouse & Co. Chartered Accountants  
Toronto, Ontario  
February 20, 1981

## Board of directors

- P. B. Baxendell  
Chairman and Managing Director, The "Shell" Transport and Trading Company, Limited, London, England.
- Peter J. G. Bentley  
President and Chief Executive Officer, Canadian Forest Products Ltd., Vancouver.
- Jacques de Billy  
Partner in law firm of Gagnon, de Billy, Cantin, Dionne, Martin, Beaudoin and Lesage, Quebec City.
- D. de Bruyne  
President and Managing Director, Royal Dutch Petroleum Company, The Hague, Netherlands.
- C. William Daniel  
President and Chief Executive Officer, Shell Canada Limited, Toronto.
- A. Davidson Dunton  
Professor and Fellow, Institute of Canadian Studies, Carleton University, Ottawa.
- J. M. MacLeod  
Senior Vice President, Shell Canada Limited, Toronto.
- D. W. Menzel  
Senior Vice President, Shell Canada Limited, Toronto.
- Louis Rasminsky  
Corporate Director, Ottawa.
- Margaret Southern  
President, Spruce Meadows Equestrian Centre, Calgary.
- D. J. Taylor  
Senior Vice President, Shell Canada Limited, Toronto.
- Antoine Turmel  
Chairman and Chief Executive Officer, Provigo, Inc., Montreal.

## Voting rights, ownership and major subsidiaries of Shell Canada Limited (Incorporated under the laws of Canada) (at December 31, 1980)

### Voting rights

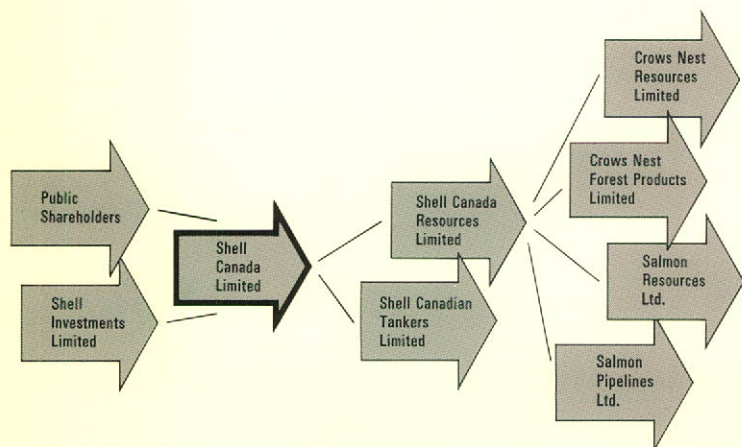
A total of 21.3 million Class "A" Common Shares, representing 29 per cent of the voting rights of Shell Canada Limited, are publicly available for trading on the Montreal, Toronto, Alberta and Vancouver stock exchanges.

Approximately 67 per cent of Class "A" shares and all of Class "B" shares are owned by Shell Investments Limited and represent 71 per cent of the voting rights.

### Ownership

The public shareholding of Shell Canada constitutes 21 per cent of the equity, while Shell Investments' holdings constitute 79 per cent.

Shell Investments Limited is a Canadian company, wholly-owned by Shell Petroleum N.V. of The Netherlands which, in turn, is owned 40 per cent by The "Shell" Transport and Trading Company, Limited of the United Kingdom and 60 per cent by Royal Dutch Petroleum Company of The Netherlands.



## Officers

- (at December 31, 1980)
- \*C. William Daniel
  - \*J. M. MacLeod
  - \*D. W. Menzel
  - \*D. J. Taylor
- R. S. Aberg, Vice President (Oil Sands Administration), Calgary  
W. A. M. Birt, Vice President (Special Assignments), Toronto  
L. F. J. Bolger, Vice President (Chemicals), Toronto  
W. M. Catterson, Vice President (Manufacturing & Engineering), Toronto  
J. E. Czaja, Vice President (Oil Sands Mining Development), Calgary  
D. C. Hayes, Vice President (General Counsel), and Secretary, Toronto  
R. A. King, Vice President (Coal), Calgary  
G. Robertson, Vice President (Exploration), Calgary  
A. G. Seager, Vice President (Oil Products), Toronto  
D. G. Stoneman, Vice President (Development), Calgary  
R. F. Taylor, Vice President (Corporate Development), Toronto  
K. J. Turpin, Vice President (Finance), Toronto  
K. B. Munnoch, Treasurer, Toronto  
G. L. Peterson, Controller, Toronto
- \*Also on the Board of Directors

## Executive changes during 1980

### Effective April 1, 1980

Mr. R. F. Taylor, formerly General Manager (Employee Relations), became Vice President (Corporate Development).

Mr. W. A. M. Birt, formerly Vice President (Employee Relations and Public Affairs), became Vice President (Special Assignments).

Mr. G. L. Peterson, formerly Manager (Accounting - Resources), became Controller.

Mr. R. J. Parton, formerly Controller, became General Manager (Public Affairs).

### Effective August 1, 1980

Mr. D. C. Hayes was appointed Vice President (General Counsel), and Secretary.

### Effective October 1, 1980

Mr. J. N. Fiell, formerly Vice President (Finance), accepted a senior appointment as Assistant Group Controller with Shell International Petroleum Company, London.

Mr. K. J. Turpin, formerly Finance Manager with The Shell Petroleum Development Company of Nigeria Limited, became Vice President (Finance).

### Effective November 1, 1980

Mr. R. A. King, formerly General Manager (Coal), became Vice President (Coal).

## Transfer agent and registrar

The Royal Trust Company - Halifax, Montreal, Toronto, Winnipeg, Calgary, Vancouver.

Changes of address or inquiries about shares and dividends should be directed to the transfer agent.

## Stock exchange listings

The Class "A" Common Shares of Shell Canada Limited are listed on the Montreal, Toronto, Alberta and Vancouver stock exchanges. The stock symbol is SHC.

## Investor information

Investors may obtain information about the Company's operations and results from the Assistant Treasurer, Shell Canada Limited, 505 University Avenue, Toronto, Ontario, M5G 1X4.

## Annual meeting

The annual meeting of shareholders will be held at 11:00 a.m. Thursday, April 30, 1981, in the Harbour Room, Harbour Castle Hotel, Toronto.

On peut obtenir ce rapport en français sur demande.



Shell Canada Limited

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