



**The future
is NOVA.
The future
is here!**

NOVA, AN ALBERTA CORPORATION... for all of Canada. The cube represents NOVA... its division affiliates and subsidiaries. The risk is getting it together!
It's what we have been doing for more than a quarter of a century. It's what we continue to do in Canada every day.



**NOVA
AN ALBERTA
CORPORATION**
for all of Canada.

One Office Box 2535, Calgary



Shareholders...meeting!

Walk down any street in Canada and chances are good you'll meet a NOVA shareholder in minutes. Our shareholders come from every walk of life and every part of Canada.

They're businessmen and high school students, inspectors and hamburger vendors, executives and labourers. They're fishermen and school teachers, journalists and miners. They're Canadians.

They have a share in NOVA, AN ALBERTA CORPORATION... for all of Canada. A company that's grown from eight employees to three thousand, from assets in 1970 of four hundred million dollars to three billion dollars... and all in less than three decades.

From strength to strength, NOVA broadens its resourceful base and builds for the Canadian future.

**NOVA
AN ALBERTA
CORPORATION**
for all of Canada.



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Cover Story

The advertisements displayed on the cover of the 1980 Annual Report were among the material used to mark a milestone in the Company's history: the change of name to NOVA, AN ALBERTA CORPORATION.

The Company, after more than a quarter century of business, outgrew the name of The Alberta Gas Trunk Line Company Limited that had fit so well in 1954. It moves into the future with a name that better suits the many facets of NOVA and one that allows flexibility to adapt to even more growth and change.

From the many images the public viewed in connection with the extensive advertising campaign introducing NOVA, a favourite was the one of shareholders meeting, and the photo provided a fitting focus for the Annual Report cover.

The picture was taken in Redcliff in southern Alberta, but it could have been taken anywhere in Canada. It's the kind of town from which NOVA has drawn and will continue to draw strength.

NOVA People

More people — NOVA employees — are featured in a foldout section at the back of this year's Annual Report. These are people who, with their expertise, ideas and talents, their commitment and hard work, make the Company what it is.

As the text in this section points out, NOVA people are special, and it's with them that the Company can move with confidence into the future.

Units Of Measure

Units of measure in this Annual Report are supplied in SI, the official symbol in all languages for the International System of Units (metric system). The more familiar measures follow in brackets.

Units	Metric (SI)	Imperial
Volume	cubic metres (m ³) thousand cubic metres (10 ³ m ³) million cubic metres (10 ⁶ m ³) billion cubic metres (10 ⁹ m ³)	million cubic feet (mmcf) billion cubic feet (bcf) trillion cubic feet (tcf) barrels (bbls.)
Weight	tonnes (t)	tons pounds (lbs.)
Distance	kilometres (km)	miles (mi.)
Length	millimetres (mm)	inches (in.)
Area	hectares (ha)	acres
Power	kilowatt (kW)	horsepower (hp.)

NOVA, AN ALBERTA CORPORATION THE COMPANY

NOVA, AN ALBERTA CORPORATION is primarily engaged in activities related to the energy industry: petroleum, gas transmission, pipeline development, petrochemicals and manufacturing.

The Company, headquartered in Calgary, Alberta, is Canadian owned with more than 60,000 shareholders from all parts of the country and all walks of life.

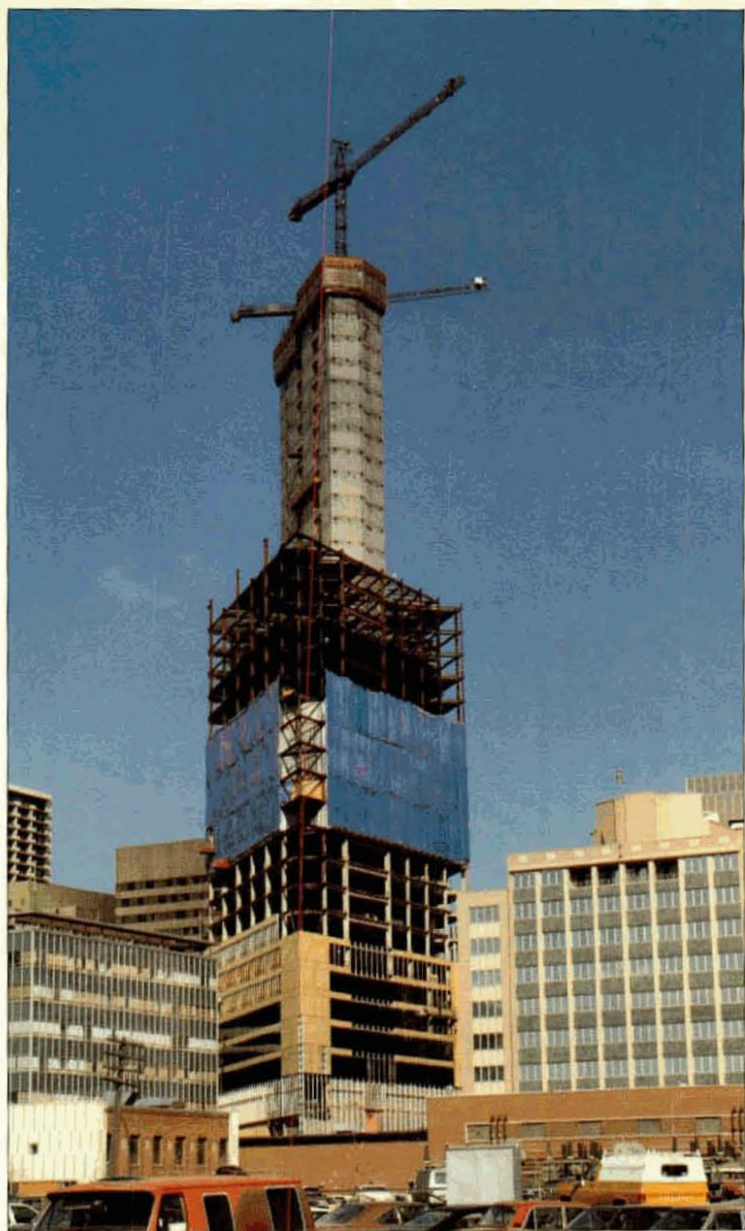
Founded in 1954 as The Alberta Gas Trunk Line Company Limited, the Company was originally charged with building and operating natural gas transmission facilities within the province, and today that responsibility continues to be a vital part of NOVA's business. During 1980 the Alberta transmission system transported over 70 per cent of marketed Canadian production.

The Company has undergone a transformation since those early days. In less than three decades, NOVA has grown from eight employees to almost three thousand. Assets during the past decade have increased from \$400 million in 1970 to over \$3.6 billion today.

With growth has come a broadening of horizons, both geographically and in terms of focus. Pipeline development currently includes the Alaska Highway Gas Pipeline Project, the Trans Quebec & Maritimes Pipeline Project and the Arctic Pilot Project. These projects will provide jobs, offer investment opportunity and increase energy security for Canadians during the coming decade.

As well, NOVA's interests in petroleum underwent a dramatic increase in 1979 with the purchase of majority ownership in Husky Oil Ltd., a fully-integrated oil company with extensive North American holdings and international exploration activities. Husky's heavy oil and plans by NOVA to embark on an oil sands joint venture put the Company into position for expanded development of non-conventional energy resources.

Production of petrochemicals is playing an ever-increasing role in NOVA's business. During 1980 plans were announced for tripling capacity of the ethylene facilities at Joffre, Alberta, central to the province's \$1.5 billion petrochemical complex. Announcement was made, too, of a joint venture to construct world-scale derivative plants in Alberta through the next decade.



**The NOVA Head Office Building —
*Going up!***

Calgary is a city unique in the world — a city that demands energy and rewards it. Here NOVA is headquartered and here NOVA is building for the future.

Soon we will be not only a part of the Calgary community but a distinctive new shape on the Calgary skyline.

Construction of the new corporate headquarters, begun in July 1979, is proceeding, with the building core just completed. Occupancy is scheduled for mid-1982.

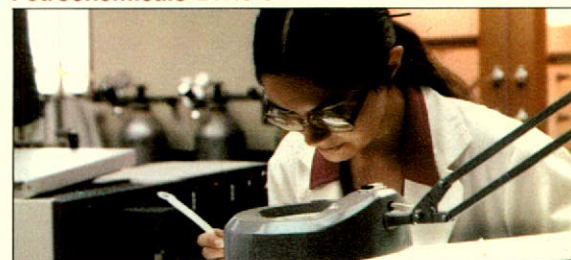
NOVA AN ALBERTA CORPORATION



Petroleum Division



Petrochemicals Division



Gas Transmission Division



Pipeline Development Division



Manufacturing Division



Research and Development



CONSOLIDATED FINANCIAL HIGHLIGHTS

	1980	1979	% Increase
Operating revenue	\$2,125,753,000	\$1,243,972,000	70.88
Net operating income	\$ 363,867,000	\$ 273,020,000	33.27
Net income	\$ 143,746,000	\$ 116,398,000	23.50
Earnings per common share			
Basic	\$ 3.29	\$ 2.97	10.77
Fully diluted	\$ 2.71	\$ 2.43	11.52
Dividends paid per common share	\$ 1.08	\$ 0.925	16.76
Average number of common shares outstanding	33,000,218	29,774,255	10.83
Additions to plant, property and equipment	\$ 569,389,000	\$ 313,905,000	81.39
Investment in plant, property and equipment (cost)	\$2,995,508,000	\$2,428,515,000	23.35
Investment in plant, property and equipment (net)	\$2,541,902,000	\$2,110,332,000	20.45
<i>Earnings per common share after giving effect to the 3-for-1 stock split on February 13, 1981</i>			
Basic	\$ 1.10	\$ 0.99	
Fully diluted	\$ 0.90	\$ 0.81	

REPORT TO SHAREHOLDERS

Board of Directors

Robin J. Abercrombie
S. Robert Blair
Arthur J. E. Child
Donald R. Getty
J. Joseph Healy
Harley N. Hotchkiss
William A. Howard
Peter L. P. Macdonnell
John R. McCaig
Frederick A. McKinnon
A. Ernest Pallister
H. J. Sanders Pearson
Robert L. Pierce
Daryl K. Seaman
Ronald D. Southern

Officers of the Board

H. J. Sanders Pearson
Chairman of the Board
Dianne I. Hall
Secretary to the Board

CHANGE OF NAME

By Order of the Lieutenant Governor in Council of the Province of Alberta the Company's name was changed, effective August 6, 1980, from The Alberta Gas Trunk Line Company Limited to NOVA, AN ALBERTA CORPORATION. An extensive television and print advertising campaign was conducted to introduce the new name and was very successful in making a much larger segment of the Canadian public aware of the Company's present diversity.

It is important to note that while NOVA is proud of its ability to change and diversify, its Board wanted to be sure the Alberta base of the Company continued to be emphasized. It is as true as ever that by far the majority of NOVA's assets are located in Alberta as are its permanent headquarters and most of its employees and offices.

FINANCIAL HIGHLIGHTS

Consolidated net income for 1980 was \$143.8 million or \$3.29 per common share compared to \$116.4 million or \$2.97 per common share for 1979. This growth reflects the continued returns on investments in transportation and production assets. After giving effect to the February 13, 1981, 3-for-1 stock split, basic earnings were \$1.10 and 99¢ for 1980 and 1979 respectively.

Consolidated assets of the Company increased to over \$3.6 billion at December 31, 1980, up \$0.5 billion (17%) over 1979. This increase reflects the continued strong asset growth in all activities.

The Company, its subsidiaries and affiliates have a very large capital expenditure program in 1981 including over \$400 million in the Gas Transmission Division. Due to continuing uncertainties in the Canadian energy industry, this budget has been kept flexible to allow for changes or modifications as may be necessary. Tentatively, NOVA's net share of the total consolidated capital program is estimated at about \$1.5 billion.

NATIONAL ENERGY PROGRAM

On October 28 the federal government announced its new National Energy Program (NEP) in conjunction with the tabling of the budget. Both have been highly controversial and provoked extreme comments from industry and governments. NOVA has worked over the last few months to develop and put forward its own assessment of the proposed federal measures, the concurrent provincial positions and the combined influences of all these on production and projects. After examining in detail those elements of the NEP and budget which are known currently (certain regulations and other aspects are still being finalized and there have been indications recently that further adjustments will be made), the Company can sum up its main criticisms as follows:

- The price of oil to consumers in Canada and the netbacks being offered producers in various

producing arenas are both too low to allow the domestic balancing of supply and demand by the early 1990s.

- Primary production of many heavy oil wells under the existing royalty structure in Saskatchewan, combined with the new federal taxes and pricing, cannot recover basic costs, and other wells are not generating sufficient cash flow to support routine maintenance requirements.

- The combined impact of current tax, royalty and pricing provisions for tertiary and enhanced heavy oil production does not encourage such production to meet previous expectations.

- While the NEP intends to provide Canadian petroleum companies better opportunity to participate in frontier lands, the effectiveness of this intention is still not clear.

- Most important of all in March 1981 are the negatives of provincial/federal impasse, continuing federal emphasis on nationalization references in the NEP, clear loss of morale among Canadian producing and service companies and some diversion of skilled Canadian personnel and equipment to other areas.

NOVA has registered publicly its particular concern about the Alberta government's anxiety with respect to the NEP and budget because the main Canadian supply of natural gas, conventional oil, heavy oil and oil sands production for the 1980s will be provincially sourced.

NOVA of course strongly endorses the three publicly-stated objectives of (1) greater security of supply, (2) a higher level of Canadian ownership and participation in the energy industry, and (3) an equitable revenue sharing system among governments and the industry. However, it is doubtful today whether those objectives are achievable without appropriate price increases and incentives being in place. It is hoped there will be satisfactory resolution of the impediments which now exist but many major industry developments have been delayed by at least one year.

Immediate effects of the NEP and budget on NOVA are reduced cash flow in Husky Oil Operations Ltd. (by about 20 to 30%) and some impact on the net earnings of Alberta Gas Chemicals Ltd.

Noting the above concerns, NOVA, as a company substantially more than 75% Canadian owned, should be in a position to take advantage of some of the opportunities that may become available in the future. These subjects are receiving top priority by



Corporate Officers

S. Robert Blair
*President and
Chief Executive Officer*

Robert L. Pierce
Executive Vice President

Robin J. Abercrombie
Senior Vice President

Dianne I. Hall
Senior Vice President

George L. Bastin
*Vice President and
Corporate Secretary*

H. Clive Chalkley
Vice President

C. Kent Jespersen
Vice President

Donald A. MacIver
Senior Vice President

William C. Rankin
*Senior Vice President
and Controller*

Ronald D. Dooley
*Vice President
and Treasurer*

Barry E. Harper
Vice President

Bruce G. Hartwick
Vice President

Richard C. Milner
*Vice President and
Assistant Controller*

Robert W. Schmidt
Vice President

Bruce W. Simpson
Vice President

William J. Beamer
Vice President

John E. Feick
Vice President

Joan A. Dennis
*Assistant to the President
and Assistant Secretary*

James D. Hinks
Assistant Treasurer



the directors and managements of the NOVA group of companies, and dialogue is continuing with each of the governments involved.

PHASE 1 — ALASKA HIGHWAY GAS PIPELINE PROJECT

After a delay of three years, Phase 1 of the Alaska Highway Gas Pipeline Project commenced in August 1980 and a special report is carried on pages 6 and 7. On September 27 Foothills Pipe Lines (Yukon) Ltd. invited more than 300 guests to participate in a commemorative weld ceremony marking the commencement of the Alaska Highway pipeline. The celebration took place on a site overlooking the right-of-way in the foothills area of southwestern Alberta and provided the project partners with an opportunity to give credit to those individuals who participated through the many years of negotiations, studies and regulatory hearings which culminated in the approval of Phase 1 construction.

OTHER MATTERS

On February 26, 1980, the Company's largest compressor station at Princess, Alberta, was almost completely destroyed by an explosion and subsequent fire. All losses were fully insured. As this station handles virtually all gas transported to central Canada, including export volumes ultimately destined for mid-western and eastern U.S. markets, it is a vital link in the North American natural gas grid. An all-out effort by NOVA's Gas Transmission staff, outside contractors, suppliers and industry in general enabled the redesign, repair and

reconstruction to be completed in time to accommodate November gas deliveries. All those involved deserve real recognition for accomplishing the job in half the time it would normally have taken.

In this year's report, a page has been added which explains the main government agencies regulating certain of the activities of NOVA and its affiliates.

Thanks to all those shareholders who took the time over the last year to write or telephone, sometimes to take us to task but primarily to let us know of their support. Many thanks also to a dedicated management and staff.

The last year has produced many strains and disagreements within Canada; we are optimistic these problems will be solved for the benefit of all Canadians and the strengthening of Canada's regions within a national framework.

Respectfully submitted on behalf of the
Board of Directors:

H. J. S. Pearson, Chairman

S. Robert Blair, President and
Chief Executive Officer

March 13, 1981

PRESIDENT'S MESSAGE



“Hard, unbending solutions are not the Canadian solution. The West must receive, and it must perceive that it will receive, fair treatment.”

Viewing our petroleum energy industry overall, covering all oil, gas, pipeline and related investment, we now have a business partly very active and partly very stalled. It is important to note that it is a business in which the authority to set all economic environment and control all projects is being held by governments within Canada, provincial and federal. This authority is very complete and it is clear that governments exert total control over this part of the national commerce.

That control has not in itself caused the partial stall. It can be quite feasible for private sector business to proceed aggressively within a framework of set prices, even though such a framework inevitably stiffens a system, making it more cumbersome than a freer market system. What has caused the partial stall is that the two levels of government have also occupied some opposing policy positions which will make settlement of other matters dominant over and ahead of energy supply. For various reasons, whether to await stronger negotiating position or to follow other priorities, the governments are postponing attacking these differences for at least a couple of months.

The parts of our business receiving stall effects are:

- The extent of oil and gas exploration in the western provinces, which provinces are overwhelmingly the main source of supply in Canada for certainly the next six years, perhaps also for the next twelve.
- Oil sands mining projects.
- Heavy oil recovery projects.
- Development of natural gas discovered recently.

These effects have certain unfortunate repercussions. One is in the timing itself. It is a particularly unfortunate time in a world seriously troubled by shortages and high costs of oil and gas supply.

In such a context, it can be said fairly that surely Canada, in its special providence, could as a moral decision stop competing for oil supply against the sources of lesser developed countries and against other developed but energy deficient countries. Particularly, Canada could stop subsidizing consumption of such valuable oil within Canada. To those thinking of humanity, surely one absolutely right thing for Canada to do is to leave available OPEC oil for the other countries and so help everyone else by helping ourselves. We are specially competent to do so.

Part of this Canadian objective would be realization of very large employment and manufacturing advantages within Canada by an

intense effort to substitute new natural gas supply for oil imports in Ontario, Quebec, New Brunswick and Nova Scotia. This work alone would instigate a new round of construction, supply of materials and employment in central and eastern Canada, and gas supply development in western Canada. It could reduce Canada's oil supply deficiency by 400,000 barrels per day by the mid-1980s.

There are those who attack the federal National Energy Program and those who attack western positions. I have different things to say about both, but considering domestic natural gas-for-oil import substitution, with its huge potential for eastern Canada and the national economy, I know it is neither Alberta nor Ottawa that stands in the way. Alberta as a provincial government has tried to encourage further use of natural gas for years. The National Energy Program is strongly for it. Active opposition has been from a succession of government officials in Ontario and energy-based private industries in central Canada. Those are the managements who would have to cease foot-dragging for gas-for-oil substitution. Some general devotion to practical national objectives is the necessity. Part of what this country needs for 1981 is recognition that there are some national objectives deserving willing devotion, and then enough good will and persuasive effort to get the work started. The companies will then respond.

A full gas substitution program, supplemented by heavy oil and oil sands projects and later in the 1980s by frontier oil and gas production, could put this country in better shape economically than anyone is daring to say. Of course, so much of what has been said is directed toward pulling down one government or another's image, or negotiating future protections. We don't hear much positive support for national objectives while the present disagreements continue.

How can the disagreements be relieved? I am not an oracle, but I think some points are coming into public view as rather obvious. The first to me is that provincial ownership of natural resources within provincial boundaries be assured permanently. With this would follow the understanding that the management of resource production and upgrading is fundamentally a matter of provincial authority within a system of national objectives. A practical reason is that producing province governments have demonstrated over the years that they are proficient at such management, or at least can be

“Part of what this country needs for 1981 is recognition that there are some national objectives deserving willing devotion, and then enough good will and persuasive effort to get the work started. The companies will then respond.”

when the province's economy is in a reasonably strong condition.

For offshore resources nearer to one province than another, isn't some sharing of ownership between the public of those provinces and the Canadian public possible, with rational agreement?

I believe it is now time for a large increase in the price of domestic oil, with provision that much of it go to federal taxes and provincial royalties rather than to larger corporate profits, as would occur immediately for some types of oil production. This increase in price at point of production is needed because for some oil production projects, there just isn't enough room in the present regime to cover provincial and federal revenue expectations and the revenues required to proceed with development.

The oil price increase also needs to apply at the consumer level. While that would add a degree to Canada's inflation rate, I feel strongly that it would be offset by employment and other economic benefits obtained from a large gas-for-oil substitution program.

Very seriously, I suggested in January that if there were an increase instantly, or with a few months forewarning, of \$10 per barrel in the Canadian oil price, coupled with an instant start of gas-for-oil substitution, the overall effect on the Canadian economy would be a plus. The only strong doubt in my mind is whether \$15 per barrel wouldn't be more justified and effective. The domestic price after such an increase would still remain \$15 less than January world price.

I do not suggest the \$10 increase to make oil companies richer, but to give the situation more room for negotiation. If ever and wherever petroleum producing companies start making much more than they need to develop next year's supply, or more than society trusts them to hold in their possession as a matter of public concern, then set the tax rates accordingly and let them work with the balance. What a private sector petroleum company needs is enough net price, after royalty and tax, to justify its new investments on the expectation of making a return reasonable to the associated risk.

I often emphasize "Canadianizing". The reason is that it is supported so little by business. But surely, in our petroleum industry as in so many other of our industries, a greater element of domestic ownership and direction is overdue in the private sector. I feel we have to rush it there or subsequent public policies will soon press it harder toward nationalization. The Canadianizing part of the federal program displeases many, but my own purely personal instinct is that the industry would be much wiser to try to co-operate than to demand its replacement.

Other petroleum executives have said recently that "there is no possible way that Canada can meet its crude oil needs domestically in the 20th century". I personally think it is still entirely possible to achieve a crude oil surplus position well before the end of the century and in the same years contribute to a strong national economy, given assurance to producing provinces, persuasion for national objectives and enough common sense and good will.

Despite the strains presently felt in Canada, I cannot conceive of a divided country. I cannot conceive of a Canada surviving without Quebec and I also cannot see it surviving without its West, where destiny has allotted much of Canada's future production strength. Nor can I conceive of a western Canada on its own. There is no one else with whom to align to assure sufficient size to maintain the particular pattern of individual liberty and choice, including preserving the provincial rights we all seem to value across Canada. Many western residents may be fed up with Canada just now, but I've never heard them imagine a secure alternative.

But conceive hypothetically what the effect of last year's Quebec referendum might have been if the central government, for whatever reason, had had no Quebec representation in it and had just unilaterally decreed, over the objections of the great majority of Quebecers, that the price to be paid for the largest product of Quebec would be essentially one-third of the price obtainable for that product elsewhere? With a new federal tax applied within the Quebec revenue? With expansion of federal Crown corporations in the same kind of production?

Hard, unbending solutions are not the Canadian solution. The West must receive, and it must perceive that it will receive, fair treatment.

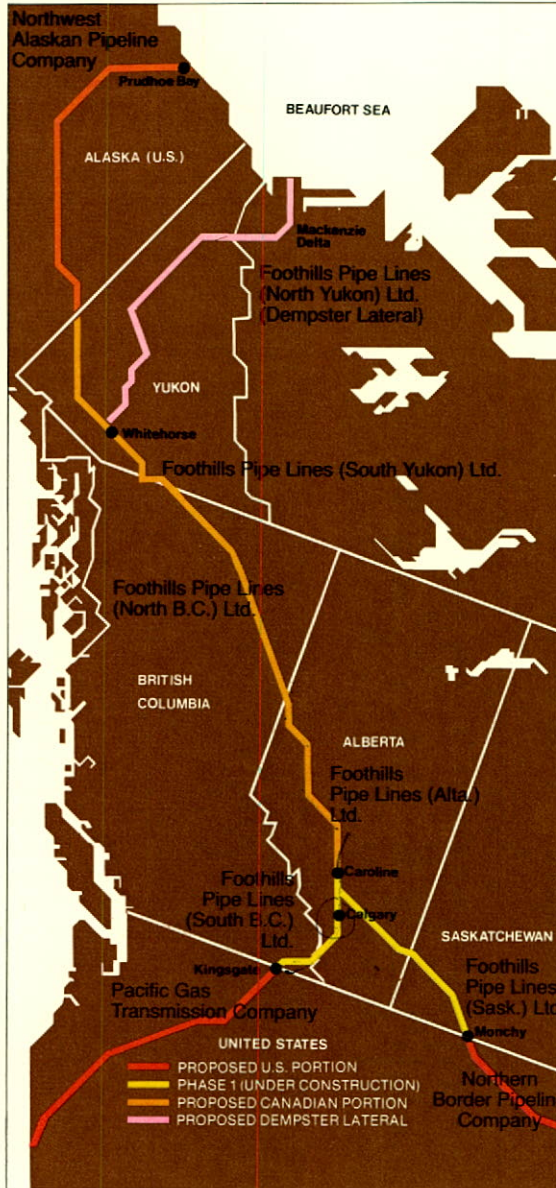
Much better to have these contests out with as much good will as the best people can provide to each other.

Better still to downstage the name-calling within this favoured country and re-emphasize the business of business.



SPECIAL REPORT - PHASE 1

ALASKA HIGHWAY GAS PIPELINE PROJECT



Phase I construction began in August on the western leg. The portion (right) near Nanton, Alberta, southwest of Calgary, was completed in the fall.



We have already said it elsewhere, but it can stand repeating: a statement made at the commemorative weld ceremony to mark the commencement of the Alaska Highway Gas Pipeline Project.

Here, as we saw the start of construction of one of the most dramatic energy challenges ever, Robert Blair observed: "A project like this does not happen because there is a resource, or because there is capital or, in the end, for any other reason than that some people will it to occur."

Where there's a will, there is always a way. NOVA and its people are gratified and challenged to have such a large stake in this exciting project.

The first phase in the construction of the Alaska Highway Gas Pipeline Project is the building of portions of the eastern and western legs of the project in Canada and the United States. Canadian sections are being constructed by Foothills Pipe Lines (Yukon) Ltd. and its subsidiaries. Construction of Phase I will allow Foothills to transport short-term export gas from Alberta to markets in the west and midwest U.S. This system will allow the export of approximately $29.3 \times 10^6 \text{ m}^3$ (1.04 bcf) of gas per day until Phase II construction is completed and Alaskan gas supplies connected late in 1985.

In Canada Phase I sections extend over 848 km (527 mi.) at an estimated cost of \$900 million, including interest charges. Together, the two legs will require some 275 000 t (300,000 tons) of 914 mm (36-in.) and 1067 mm (42-in.) diameter pipe. Phase I will provide a total of 150,000 man-years of Canadian employment directly and indirectly over the period 1980-1982, with capital expenditures of \$1.6 billion for the pipeline and necessary new gas production, gathering and conditioning facilities.

Construction of Phase I, along with the approved gas exports, is expected to yield a net economic benefit of \$4.5 billion to Canada over the period 1980-1988. The sale of Alberta gas and related by-products is expected to produce export revenues of \$17 billion.

The Canadian Imperial Bank of Commerce (CIBC) agreed to finance 75% of the costs of Phase I in Canada providing Foothills with a commitment for



Executives (far right) of companies involved in the project spoke at commemorative weld ceremony. Coat and wrap operation (above) progresses on 914 mm (36-in.) pipe.

debt financing up to Cdn. \$800 million repayable over 15 years. The CIBC also agreed to lead a syndicate of Canadian and U.S. banks to provide up to U.S. \$1,055 million for the midwest portion of Phase I in the U.S.

The Alaska Project Division (APD) of NOVA is responsible for design and construction of both the western and eastern leg segments within Alberta, through a contractual arrangement with Foothills Pipe Lines (Alta.) Ltd. Similar arrangements have been entered into by the other Foothills (Yukon) subsidiaries involved and transmission companies that operate in the different regions through which Phase I passes. NOVA's Gas Transmission Division will be responsible for operating the Alberta portions of Phase I.

WESTERN LEG

The Phase I loops which are the western leg cover 124 km (77 mi.) between James River and Coleman, Alberta, and a further 88 km (55 mi.) between Coleman and an international border crossing at Kingsgate, British Columbia, where the gas will enter the western leg facilities of the Pacific Gas Transmission Company (PGT) in the United States. Gas will be moved south from Kingsgate to Stanfield, Oregon, through the addition of 257 km (160 mi.) of loops to PGT's existing system and on into southern California through 565 km (351 mi.) of loops added to Northwest Pipeline Corporation's system in Oregon and Idaho.

Construction started in August 1980 in Canada and was essentially complete by February, with the exception of some tie-ins to the NOVA mainline system and the mainline in B.C. Final cleanup will proceed in the spring, with revegetation scheduled for the summer months.

Phase I construction will provide capacity for the export of up to $6.8 \times 10^6 \text{m}^3$ (240 mmcf) a day of Alberta gas starting in 1981. Total authorized export through Phase I of the western leg by Pan-Alberta Gas Ltd. on a firm and conditional basis over a seven-year period is $19.7 \times 10^9 \text{m}^3$ (0.7 tcf).

In the U.S. construction activity began in December 1980 in northern Idaho on the western leg of Phase I. The first loop of the western leg will transport up to $2.8 \times 10^6 \text{m}^3$ (100 mmcf) a day of Alberta gas into existing facilities of Northwest Pipeline Corporation near Stanfield, Oregon. Construction of the remaining three loops is scheduled for completion in October 1981, at which time the full $6.8 \times 10^6 \text{m}^3$ (240 mmcf) of additional Canadian gas will be delivered into the system.

EASTERN LEG

The eastern leg portion of Phase I extends 377 km (234 mi.) from James River to Empress, Alberta. From Empress the line runs a further 257 km (160 mi.) to Monchy, Saskatchewan, where it will join with new facilities of the Northern Border Pipe Line



Company in the United States. Phase I of the eastern leg in the U.S. will involve construction of 1321 km (821 mi.) of 1067 mm (42-in.) pipe by Northern Border from Monchy to Ventura, Iowa. The line will eventually be extended to Dwight, Illinois.

APD is currently seeking the final regulatory approvals necessary to enable construction of the eastern leg to commence in the spring of 1981 as scheduled. Startup is projected for September 1982. The eastern leg will have an initial capacity of $22.6 \times 10^6 \text{m}^3$ (800 mmcf) a day of Alberta gas, with throughput increasing to a peak of $29.6 \times 10^6 \text{m}^3$ (1.05 bcf) daily in 1985. The total authorized exports through Phase I by Pan-Alberta Gas Ltd. on a firm and conditional basis over a six-year period amount to $45.1 \times 10^9 \text{m}^3$ (1.6 tcf).

Three new compressor stations will be required for the eastern leg in Canada. One will be installed in the vicinity of Jenner, Alberta, a second near Piapot, Saskatchewan, and a third close to Monchy. Construction of these stations is scheduled to commence in mid-1981.



PETROLEUM DIVISION



Husky rig (left) pumps heavy oil in a rapeseed field near the company's refinery at Lloydminster (above).

Is there a day that goes by when petroleum isn't in the news? Who knew, a hundred years ago, how critical this natural resource would become and how important its role would be?

While natural gas was the initial area of interest and specialization for NOVA, petroleum has come to play an equally strong role. Through subsidiaries and affiliates, NOVA is active in the conventional integrated oil business as well as heavy oil and – for the future – the oil sands and Canada's frontier resources.

The acquisition of a majority position in Husky Oil Ltd. has placed NOVA in the forefront of petroleum development by Canadian-owned companies. Activities of Novalta Resources Ltd. and Pan-Alberta Gas Ltd. are reported in this section, as are plans for the recently announced Canstar oil sands joint venture.

HUSKY OIL LTD.

NOVA is the beneficial owner of approximately 68% of the outstanding shares of Husky Oil Ltd. The Canadian and overseas activities of Husky Oil Ltd. are directed by Husky Oil Operations Ltd. with headquarters in Calgary. The U.S. operations are directed by the separately managed Husky Oil Company with headquarters in Cody, Wyoming.

Canadian Petroleum Operations

Husky continued a program of accelerated exploration development and enhanced oil recovery (EOR) in the Lloydminster area during 1980. Despite severe heavy oil marketing problems, the company's initiatives produced good results.

Husky continued its research and planning on thermal, gas and chemical EOR processes during the year. Equipment for two EOR steam pilots was put in place and design and planning was initiated for a suite of five commercial-scale EOR projects. These larger "pilots" would include two fire flood, two steam flood and a chemical flood located in the Lloydminster area of both Alberta and Saskatchewan.

Husky continued its plan to increase land position in conventional oil and gas areas in southwestern and central Alberta and is now seeking to expand activities on Canada Lands as it is able to qualify for maximum incentives provided for under the NEP.

In an expanded program, extending from southern Alberta to northeastern British Columbia, Husky participated in 36 gross (23 net) wildcat wells. This resulted in 15 gas and five oil discoveries. Heavy oil exploration in the Lloydminster area involved the drilling of 85 wells and resulted in 44 oil and 14 gas wells.

During 1980 difficulties were encountered in marketing heavy crude oil and this resulted in production cutbacks in early fall of from 10 to

50 per cent. A sale in October of 635 640 m³ (4 million bbls.) of heavy crude enabled Husky to return to full production.

Asphalt product sales volumes were down about seven per cent from the previous year owing to very poor weather conditions during the road construction paving season of 1980.

At mid-year Husky announced participation (40% interest) in a light oil refinery joint venture with Shell Canada Limited. This refinery, to be constructed near Scotford, Alberta, will be the first refinery in the world to use synthetic crude oil as its exclusive feedstock.

At Lloydminster Husky will expand its own asphalt refinery from 1910 m³ (12,000 bbls.) per day to 3970 m³ (25,000 bbls.) per day. A development permit for this facility has been granted and the expanded facility is scheduled to be completed by mid-1982.

With the general growth in Husky's activities there has been a corresponding growth in the employee group. To provide office facilities for this larger employee population, Husky will build a new office complex in downtown Calgary. Completion is scheduled for mid-1983. In Lloydminster Husky recently completed a four-storey addition to an existing two-storey office facility.

A Husky subsidiary, CanOcean Resources Ltd., is primarily a developer, producer and servicer of systems for the exploration of hydrocarbons offshore.

U.S. Petroleum Operations

The most prolific oil prospect now under development is the Little Sand Draw field in Wyoming. Husky has a 50% working interest in this field. Six wells have been drilled in an expansion area with four wells being completed as oil wells.

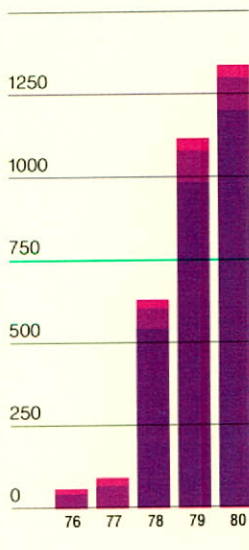
Recent gas discoveries include the Atoka Zone completion on the Diamond Mound prospect in New Mexico. This is of particular interest since Husky has lease interests of from 50 to 100% in the surrounding 1255 ha (3,100 acres). Another gas discovery is located in Tehema County in northern California where Husky is currently completing an earning well. Included in this farm-in are 560 ha (1,300 acres).

Exploratory drilling in 1980 involved participation in 28 wells located in California, Nevada, Montana, Wyoming, New Mexico, Texas and Louisiana.

Petroleum Division Assets

(millions of dollars)

■ Husky Oil Ltd.
■ Novalta Resources Ltd.
■ Pan-Alberta Gas Ltd.



Petroleum Division *continued*

To date this program has resulted in the completion of six oil wells, five natural gas wells and one suspended oil well. One of the company's most promising prospects, located in the Green River Basin-Unita Mountain Front area, is drilling and has yet to reach its objective.

In the Santa Maria Basin of California three exploratory wells were completed as oil producers. These wells have added substantially to Husky's reserve base and provided many additional development locations.

Encouraging shows of light oil have been tested in the Wind River Basin of Wyoming and Husky has an excellent land position on this prospect.

During 1980 a delayed coker installation became operational at the Cheyenne refinery and that facility can now produce gasoline and diesel fuel to meet market demands and as well reduce its dependency on asphalt market conditions.

Two Husky subsidiaries continued to serve specialized markets. Gate City Steel Corporation warehouses, distributes and processes steel and steel products at 14 plants in the United States. Husky Industries, Inc., is engaged in the manufacturing of charcoal briquets as well as activated carbon for use in municipal water treatment.

Overseas Operations

In 1980 Husky increased its overseas exploration acreage position by acquiring 100% interest in 307 000 ha (758,000 acres) offshore the northeast coast of Brazil, adding 129 900 ha (321,000 acres) to the 100%-controlled offshore Senegal Concession and participating in a group which acquired Block 16/27b in the seventh round of U.K. North Sea licensing. In compliance with concession terms in Pakistan, Husky had a mandatory 25% relinquishment, 483 000 ha (1,194,000 acres).

Marine seismic surveys were conducted in Senegal, Brazil and the Philippines and a common boundary gas condensate discovery was made in the U.K. sector of the North Sea. In the Philippines two oilfields, Cadlao and Matinloc, are under development and expected to come onstream in 1981 and 1982. Two 1980 oil discoveries, Pandan No. 1 and Libro No. 1, are to be further assessed.

NOVALTA RESOURCES LTD.

Novalta Resources Ltd. (formerly Algas Mineral Enterprises Ltd.) is a wholly-owned subsidiary of NOVA, primarily engaged in oil and gas exploration and production in Alberta. Novalta's share of gross sales before royalty during 1980 amounted to 186.2 10⁶m³ (6,610 mmcf) of gas (including the gas equivalents of oil and natural gas liquids) as compared to 197.9 10⁶m³ (7,024 mmcf) in 1979. A substantial part of Novalta's proven gas reserves remains shut-in awaiting improved market



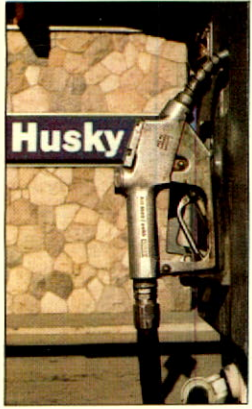
Worker (far right) is silhouetted on rig in Saskatchewan near Aberfeldy steam pilot project.

conditions. Drilling activity during 1980 is reflected in the following table:

WELLS DRILLED	GAS		OIL		DRY		TOTAL	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Exploratory	11	7.4	1	.8	5	1.4	17	9.6
Development	33	10.6	3	.4	2	1.1	38	12.1
Total	44	18	4	1.2	7	2.5	55	21.7

An additional 13 wells were drilled during the year at no cost to Novalta, resulting in 10 gas wells, one oil well and two dry holes. A 10-well drilling program on 100% working interest lands in the Kehiwin area in northeastern Alberta resulted in 10 gas wells, adding substantially to gas reserves. Drilling in the Chump Lake and Craigend areas led to significant extensions of previously discovered gas pools. Novalta also participated in gas discoveries in the Lamoral, Bigoray and Racosta areas.

During 1980 Novalta participated in extensive seismic surveys and acquired 19 800 ha (49,500



Husky's gasoline pumps are familiar throughout western North America.

acres) gross, 8900 ha (22,200 acres) net, to bring land holdings at year end to 501 000 ha (1,253,000 acres) gross, 219 000 ha (548,000 acres) net.

Expenditures for petroleum and natural gas rights, geophysical surveys, exploration and development drilling, and surface facilities amounted to \$12 million in 1980.

PAN-ALBERTA GAS LTD.

Pan-Alberta Gas Ltd. (50.005% owned by NOVA), a gas brokerage operation, contracts for the purchase of natural gas throughout Alberta and for the sale of gas to purchasers primarily outside Alberta. Pan-Alberta holds two permits authorizing the removal of specified quantities of natural gas from Alberta. Under the first permit, which expires October 31, 1989, natural gas is being sold primarily to Gaz Metropolitain, inc., and Westcoast Transmission Company Limited. The second permit authorizes the removal of $95 \times 10^9 \text{m}^3$ (3.37 tcf) of gas over a 15-year period commencing November 1, 1980. In October 1980 the Alberta Energy Resources Conservation Board recommended, subject to approval by the Lieutenant Governor in Council of Alberta, an amendment to this second permit increasing the amount authorized to be removed from the province to $138 \times 10^9 \text{m}^3$ (4.9 tcf).

During 1980 total revenues amounted to \$105 million, an increase of 11% over 1979. As a result of soft markets in the United States, sales of $1.8 \times 10^9 \text{m}^3$ (62.8 bcf) were slightly less than experienced during 1979. Net earnings amounting to \$944,000 continued to exhibit a low profit margin as a result of regulation. Appeals to increase regulated earnings were heard by the Alberta Public Utilities Board (PUB) during August 1980. Pan-Alberta had applied first for an incentive method of determining revenue based on sales achieved and, as an alternate, an increase to the 11¼% return on rate base currently allowed by the Alberta Petroleum Marketing Commission. The PUB's reasons in refusing both requests relied strongly on the wording of the Natural Gas Pricing Agreement Act which was not designed to accommodate a brokerage operation.

Pan-Alberta's major sales project to export natural gas from Canada to the United States received sufficient regulatory approvals during the year to enable the project to proceed. The project, which provides for the sale to Northwest Alaskan Pipeline Company of $139.9 \times 10^9 \text{m}^3$ (4.9 tcf) over a term of 12 years, is proceeding with initial Canadian licences, received in July 1980, which granted authorization to export an aggregate of $65.15 \times 10^9 \text{m}^3$ (2.3 tcf). First deliveries are anticipated to commence in the spring of 1981. The sale of remaining contract volumes will depend upon receiving additional export authorizations in the future. The gas, to be supplied by more than 400 producers, will be transported through the southern portions of the Alaska Highway Gas Pipeline.

Additional natural gas markets being pursued by Pan-Alberta include providing part of the supply required for the proposed pipeline extension to serve domestic markets in Quebec and the Maritimes. As well and related to this project, Pan-Alberta is negotiating sales contracts with Algonquin Gas Transmission Company and Transcontinental Gas Pipe Line Corporation to export to the United States up to $8.66 \times 10^9 \text{m}^3$ (306 mmcf) per day of natural gas to serve markets in the New England states for a term of 15 years commencing in 1983.

In addition, with respect to the Arctic Pilot Project sale of natural gas to United States transmission companies, Pan-Alberta in August 1980 signed a letter of intent with the participants in the Arctic Pilot Project pursuant to which Pan-Alberta proposes to supply on the average $6.37 \times 10^9 \text{m}^3$ (225 mmcf) per day of conventional gas from western Canada for 15 years commencing in 1983.

OIL SANDS JOINT VENTURE (CANSTAR PROJECT)

During 1980 the Company turned its attention towards opportunities for participating in the development of Alberta's vast oil sands deposits, and in May entered into an agreement in principle with Petro-Canada to develop an oil sands mining complex in northern Alberta.

The companies have formed a project team and, by year end, NOVA had 30 employees dedicated to this effort. The initial work has been directed towards a lease acquisition program, a variety of environmental base line studies, exploration and delineation drilling, and an assessment of available technologies for mining extraction and upgrading. Completion of an application to the ERCB is planned for 1982, by which time the two companies will have spent in the order of \$100 million in project development expenditures. Expenditures by NOVA on this project to the end of December 1980 amounted to some \$2 million.

The Company fully anticipates that acceptable fiscal, commercial and pricing arrangements will be agreed upon between the Alberta and federal governments to allow the timely development of Alberta's oil sands deposits.



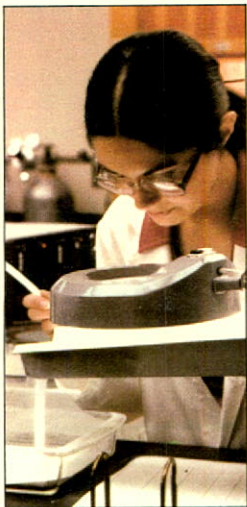
PETROCHEMICALS DIVISION

Division Officers

John P. Sutherland
Division Vice President and
General Manager

Robert E. Bowser
Division Vice President

G. L. W. Clark
Division Vice President



Ethylene plant near Joffre, Alberta, will soon have two sister plants. Its product helps form the polyvinyl chloride samples undergoing quality check (above).

'Petrochemicals' – the word still isn't in most dictionaries, yet most Canadians know very well what it means.

It means energy, manufacturing employment, investment returns and a leadership position in world markets for Alberta and Canadian industry: a large step in the direction of a more secure future.

It makes sound sense in terms of economics, access to feedstocks and a productive work force. Here in Alberta, where NOVA's petrochemical facilities are based, we have a sure supply of the feedstock that forms the foundation of this industrial complex.

Transporting gas is what we began with. Building a petrochemical manufacturing industry from gas is how we continue to grow.

Petrochemical production in Alberta offers significant opportunities for expansion, and NOVA management expects that the Company will experience major growth in this area during the next few years. Key facilities are already in place; others are in the planning, design or application stages. With the basic elements in production, NOVA now plans to move into manufacture of derivatives, taking advantage of the economic benefits that accrue from basing these products on Alberta feedstock.

Hence, the Company's petrochemical activity in 1980 focused on two fronts: the bringing into full operation of facilities completed in 1979 and the advancement of plans for the next round of petrochemical expansion.

ALBERTA PETROCHEMICAL COMPLEX

During 1980 The Alberta Gas Ethylene Company Ltd. (AGEC), wholly owned by NOVA, operated its world-scale plant at Joffre, Alberta, somewhat below capacity of 544 000 t (1.2 billion lbs.). Demand for ethylene is such that AGEC has expanded design capacity for projected second and third plants on the site to 680 000 t (1.5 billion lbs.) per year for each plant. As well as retaining world-scale dimensions, the new plants will incorporate increased efficiencies by utilizing waste heat in the production process.

An industrial development permit has been issued by the Energy Resources Conservation Board (ERCB) of Alberta for the second plant, and an application for a permit for the third plant has been filed. It is anticipated that the second unit will come onstream during the first half of 1984 and the third during mid-1985. Capital costs are currently estimated at \$500 million for the second plant and \$590 million for the third. Maximum Alberta and Canadian content will be employed in the engineering, procurement and construction of both facilities.

In support of increased ethylene production, negotiations are under way with existing and prospective ethane suppliers to provide the feedstock required. Management is satisfied that adequate supplies will be available.

The Cochin Pipe Line, which transports ethane, ethylene and other products to eastern Canadian and United States markets, operated at capacity throughout most of the year. NOVA holds a 20% interest in the line through wholly-owned subsidiaries.

The polyvinyl chloride plant, jointly owned by NOVA and Diamond Shamrock Canada Ltd., operated at less than satisfactory rates during the year because of a combination of very poor market conditions and technical operating difficulties. The technical problems have been largely overcome and it is anticipated that this plant, with some improvements in the market, will yield better results in future years. Polyvinyl chloride is used in the manufacture of such items as plastic pipe, wire coating, floor tiles, records and footwear.

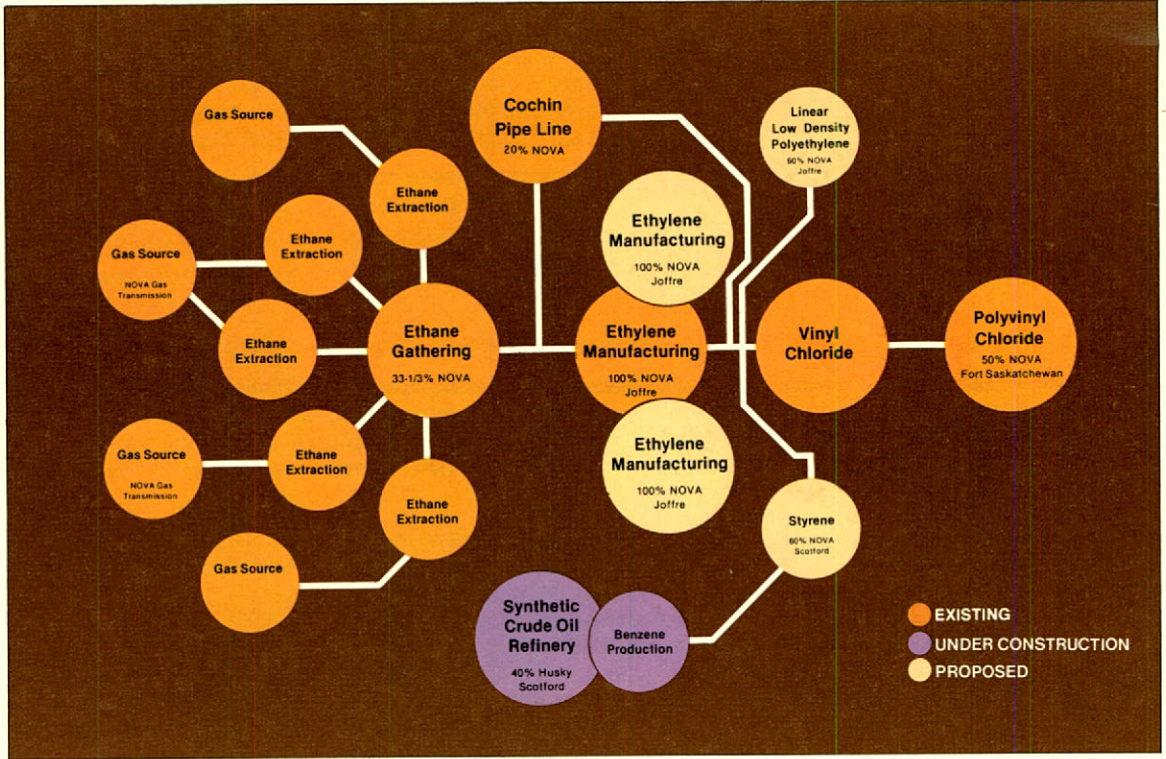
NOVA/SHELL JOINT VENTURE

Now that NOVA, through AGECE, has established a highly cost-competitive source of ethylene within Alberta, the Company is working toward developing derivative production based on this feedstock. Significant progress towards this goal was achieved during 1980 through the formation of a joint venture with Shell Canada Limited to manufacture and sell petrochemical derivatives, initially ethylene based, in Canadian and international markets. The joint venture will form a major Alberta-headquartered company, owned 60% by NOVA and 40% by Shell Canada, with the objective of constructing world-scale petrochemical plants in the province through the next decade.

In this regard, applications for industrial development permits for the first two plants, a styrene plant and a linear low density polyethylene plant, have been filed with the ERCB. The styrene plant, to be located at Scotford, Alberta, adjacent to a proposed Shell/Husky refinery, will have a world-scale design capacity of 300 000 t (660 million lbs.) per year. The cost is estimated at \$240 million. Canadian Badger Company Limited has been awarded the contract for engineering, procurement and construction, using Badger-licensed technology. Startup in mid-1984 is anticipated. Ethylene and benzene will be utilized



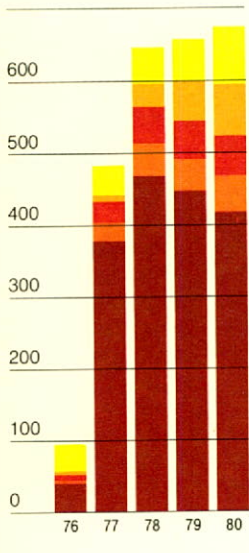
When completed, these blending silos will be used to store polyvinyl chloride.



Petrochemicals Division Assets

(millions of dollars)

- The Alberta Gas Ethylene Company Ltd.
- A.G. Pipe Lines (Canada) Ltd.
- A.G. Pipe Lines Inc.
- Diamond Shamrock Alberta Gas
- Alberta Gas Chemicals Ltd.



as feedstock to produce the styrene, a base product for polystyrene used by the building and refrigeration industries, as well as in packaging and containers. Styrene is also upgraded into products used in tires, automotive parts and plastic pipe products.

The proposed linear low density polyethylene plant will have a design capacity of 270 000 t (595 million lbs.) per year and will utilize UNIPOL technology under licence from Union Carbide. The cost of the plant and associated facilities is currently estimated at \$250 million, with the unit expected to come onstream in 1984. The polyethylene produced will be sold in domestic and export markets for use as packaging film and food containers, pipe, electrical wire coatings and molded forms, such as toys and sporting goods.

ALBERTA GAS CHEMICALS LTD.

This first venture by NOVA into the petrochemical business completed a very successful year in 1980. The competitive position of Alberta Gas Chemicals Ltd. (AGCL) improved significantly during 1980 with the result that earnings were substantially increased. Production for the year reached an

all-time high, and the two existing plants continued to operate at capacity with minimum downtime.

Work is continuing on the construction of new facilities at Medicine Hat which will double capacity in 1982 to 2177 t (2,400 tons) per day. The estimated capital cost is \$140 million. Financing for the plant will be from internally generated funds supplemented by borrowings arranged by Alberta Gas Chemicals.

In 1980 AGCL continued its long-range program of securing competitively priced feedstocks through a combination of purchasing gas reserves, entering into supply arrangements with other companies and gas exploration. For example, the company entered into a joint venture with Allarco Developments Ltd. and Willroy Mines Limited for the purpose of exploration for and production of natural gas. These feedstock acquisition programs are expected to continue in 1981.

Negotiations were started in 1980 with Petrocorp, a New Zealand Crown corporation, to form a joint venture to construct and operate a 1200 t (1,320 tons) per day methanol plant in New Zealand. Under the terms of the proposed agreement, Alberta Gas Chemicals would own 49% of the venture and have responsibility for construction, operation and marketing of the production. Estimated cost is U.S. \$130 million. A final decision on the joint venture is expected to be made shortly.

Alberta Gas Chemicals, Incorporated, a wholly-owned subsidiary of AGCL, operates a malic and fumaric

Methanol is loaded into tankers (right) at Medicine Hat.



acid plant in Duluth, Minnesota. This plant experienced a good operating record in 1980. Its products, which are derivatives of benzene, are two principal acidulents used in food processing.

Alberta Gas Chemicals Ltd. is equally owned by the Company and Allarco Developments Ltd. of Edmonton. In 1980 all of the outstanding shares of Allarco Developments were acquired by Carma Developers Ltd., an affiliate of Nu-West Group Limited of Calgary.

IMPACT OF NEP

The Company has reviewed the National Energy Program with a view to determining its impact on the petrochemical activities in which the Company is participating in western Canada. On balance, the outlook can be termed as positive.

The oil and gas price schedules set forth in the NEP provide for a decrease in the regulated price of gas relative to the price of oil over the next three years. The Company's ethylene production facilities, based on ethane feedstock derived from natural gas purchased at the regulated Alberta border price, operate on a cost of service basis, so there will be no impact on the cash flow derived from this segment of the Company's business.

It can also be noted that the NEP specifically encourages petrochemical production from natural

gas based feedstocks, as opposed to a crude oil derived feedstock.

The methanol production facilities owned by Alberta Gas Chemicals Ltd. operate solely on natural gas feedstock. However, this company will experience a cost increase in the price of its feedstock as a result of the NEP. Unlike Alberta Gas Ethylene, its purchase contracts are substantially below the Alberta border price, so that the imposition of the natural gas excise tax will cause a net increase in the cost of natural gas feedstock and fuel and impact on future earnings to some extent.



GAS TRANSMISSION DIVISION

Division Officers

Donald G. Olafson
Division Vice President and
General Manager

Terence N. Befus
Division Vice President

Douglas R. Hagerman
Division Vice President

V. Bent Kromand
Division Vice President

Walter J. Litvinchuk
Division Vice President

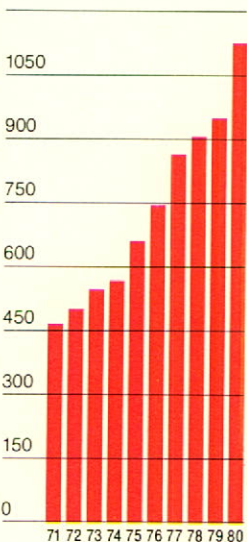
C. Dale Richards
Division Vice President



Alberta's early morning light shines on Hussar compressor station (left). Operator checks valves in station yard (above).

Investment in Plant, Property and Equipment — at Cost

(millions of dollars)



'Gas Transmission' — there was a time when it was all we did; these days it is still a big part of NOVA's overall efforts. Our pipeline network extends throughout Alberta: a system that is one of the largest in North America.

It's a system so extensive that it requires some 800 people to take care of its day-to-day operations and maintenance alone. Its air patrol flies approximately 1,000 hours a year checking the entire length of the pipeline on a monthly basis. It's an impressive system, as a visit to the new Edmonton headquarters of the operations group will reveal.

Many things change, but some things remain the same. We're still involved in gas transmission. It's an involvement we plan to long continue.

The Gas Transmission Division of NOVA marked two major events in its history during the past year. One of the events was unanticipated: facilities at the Princess compressor station had to be redesigned, repaired and rebuilt following extensive damage from an explosion and fire on February 26. The other, however, was planned: the operations group moved into new headquarters in Edmonton. Both these challenges were met successfully.

Princess, the Alberta system's largest and most important compressor station, is the point from which natural gas is shipped from Alberta to heavily populated areas in central Canada and mid-western U.S. markets. Damage sustained in the accident was significant. Nonetheless, capacity to satisfy seasonal demands was restored within three days, and, despite the heavy requirements of the reconstruction job, full service capability had been recovered by early November. The achievement was only accomplished through maximum effort by division personnel, suppliers and contractors.

The relocation of the operations group to new headquarters at 9888 Jasper Avenue, Edmonton, involved moving about 140 positions from Calgary, with a further 80 scheduled for 1981. Associated with the move was the installation of a more sophisticated gas control and communications system, developed over the past four years. When fully operational, the new system will provide the operating personnel with enhanced system control and monitoring capabilities.

The most significant pipeline project for the year was the construction of a loop along the Nordegg to Clearwater section in western Alberta, with 66 km (40 mi.) of 1067 mm (42-in.) pipe installed. This was the first phase of a program to loop the line from Edson south to Clearwater, and additional looping of 96 km (60 mi.) in the same size pipe is scheduled for completion in early 1981.

Engineering was completed for two other major pipeline projects being constructed in early 1981. These projects will allow connection of the new reserves in the Elmworth area of northwestern

Alberta and the Kirby area in the northeast. The Elmworth system comprises approximately 268 km (166 mi.) of 914 mm, 762 mm and 610 mm (36-, 30- and 24-in.) pipe; the Kirby, approximately 181 km (112 mi.) of 406.4 mm (16-in.) pipe.

Total pipeline installation during the year included approximately 260 km (162 mi.) of 114.3 mm to 323.9 mm (4- to 12-in.) pipe to bring new reserves onstream. About 121 km (75 mi.) of 406.4 mm to 1067 mm (16- to 42-in.) pipe were added to the mainline transmission facilities to meet requirements. The division's 1980 capital expenditures program, totalling \$186 million (includes \$2 million interest during construction), also included installation or modification of 49 meter stations.

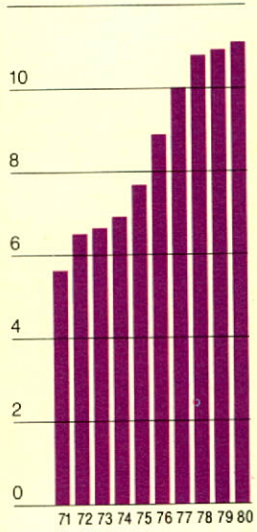
In addition, construction commenced on four compressor stations during 1980. When completed this will add approximately 15 800 kW (21,000 hp.) to the system. Efforts also continued towards the development of a "combined cycle" installation at the Clearwater station from which waste heat from an existing compressor will be processed and used to power an additional compressor.

The construction described above required that system development personnel prepare design and economic evaluations for numerous facility applications to the Alberta Energy Resources Conservation Board (ERCB). Staff members were also involved in co-ordinating a full submission from the NOVA group of companies to the National Energy Board's comprehensive hearing on Canadian energy supply and requirements, which commenced in late 1980, and a submission to the ERCB for the Alberta energy requirements and resources hearing, scheduled for early 1981.

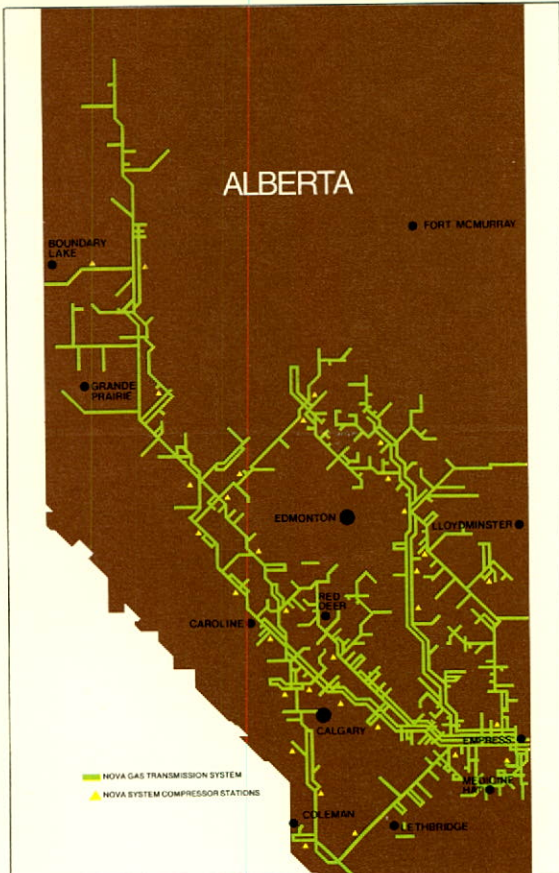
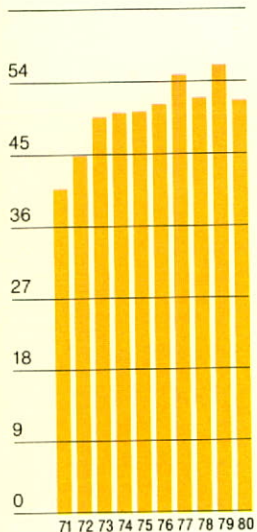
For the Alberta gas transmission system, 1980 gas receipts totalled slightly below the 1979 volumes. However, the maximum day receipt recorded on January 10 was a new Company record. (See accompanying chart for figures.) Intra-provincial deliveries also recorded a new high in December 1980, representing approximately 17 per cent of the total system deliveries and usage.

The division's operations group, in addition to its regular responsibilities for operation and maintenance of the Alberta system, will be providing similar services for Alberta sections of the Alaska Highway Gas Pipeline. Phase I of this line commences operation in 1981 and preparatory work for providing these services was completed by the Gas Transmission group in 1980.

Kilometres of Pipeline in Service
(thousands of kilometres)



Total System Receipts
(billions of m³)



REGULATORY ACTIVITIES

It is anticipated that during the summer of 1981 the Supreme Court of Canada will hear appeals by the Company from two judgments of the Court of Appeal of Alberta respecting decisions by the Public Utilities Board (PUB) of Alberta. These decisions arose out of a series of complaints by several natural gas producers in 1977 and 1979 and relate to the income tax and depreciation components of the Company's rates, tolls and other charges to its customers.

On June 30, 1980, Alberta Regulation 194/80 made under The Alberta Gas Trunk Line Company Act came into force and applies to all billings rendered by the Company for services provided by it on or after July 1, 1980. Section 3 of the regulation has the effect of requiring the Company to determine its total cost of service without regard to its contracts on a "rolled-in" basis rather than on a "customer-by-customer" basis as in the past. Approximately 95% of the total cost of service is applicable to the Company's gas export customers and will be allocated on a commodity basis without regard to the distance gas moves, the party for whom facilities were originally constructed, the party



Viking sales meter station (above) is among the facilities monitored by NOVA's new gas control centre in Edmonton (left).

Operating Highlights

	1980	1979	% Increase (Decrease)
Average Rate Base (\$000)	708,768	693,975	2.1
Average Rate of Return (%)	10.55	10.55	—
Length of Pipeline in Service (km) (mi.)	11 067 6,877	10 836 6,733	2.1
Compression (kW) (hp.)	365 781 490,520	363 632 487,634	0.6
Receipts (10 ⁹ m ³) (mmcf)	52.006 1,845,886	56.228 1,995,743	(7.5)
Maximum Day Receipts (10 ³ m ³ /d) (mmcf)	199 738 7,089	196 470 6,973	1.7
Average Day Receipts (10 ³ m ³ /d) (mmcf)	142 093 5,043	154 049 5,468	(7.8)

by whom facilities are used or the design capacity of the facilities. The effect of Section 3 of the regulation is to change the Company's method of allocating total cost of service among its customers on a so-called "postage stamp" basis, but it has no material effect on total gas transmission revenue or net income of the Company. Section 3 of the regulation remains in effect so long as the price of gas delivered under sales contracts to export companies is determined substantially as it is today under the Natural Gas Price Administration Act.

On July 3, 1980, after the introduction of Alberta Regulation 194/80, the Company's Board of Directors established the following method for allocating its cost of service for all billings rendered for services provided on and after July 1, 1980:

- normalization as the method by which the Company is to determine its income tax expense to be included in its total cost of service.
- the Equal Life Group Method for certain fixed assets (transmission mains) and the Remaining Physical Life Method for the balance of the Company's fixed assets as the method by which the Company will determine its depreciation expense to be included in its total cost of service.
- the determination by the Company of the return on the Company's rate base resulting from the application of the current rate of return of 10.55% as the return to be included in the Company's total cost of service.
- the rates, tolls and other charges on a "postage stamp" commodity rate basis for the Company's gas export customers and a "commodity kilometre" basis for the majority of the Company's intra-provincial customers as the methods by which the Company is to fix its rates, tolls and other charges.

In July 1980 several natural gas producers filed a complaint with the Public Utilities Board respecting

the Company's treatment of income taxes established on July 3, 1980. No date has been set for the hearing of this complaint.

Following a hearing called by the PUB, the Company was forbidden, by order of the PUB dated August 11, 1980, from including in its rates, tolls and other charges for its gas transmission services taxes other than taxes calculated on a "flow-through" basis. The Company sought and obtained leave to appeal that decision of the Court of Appeal of Alberta. It is anticipated that the appeal will be heard in 1981.

ALGAS ENGINEERING SERVICES LTD.

This wholly-owned subsidiary of NOVA provides project management, engineering, construction supervision, training and consulting services for others, mainly with respect to natural gas gathering and transmission.

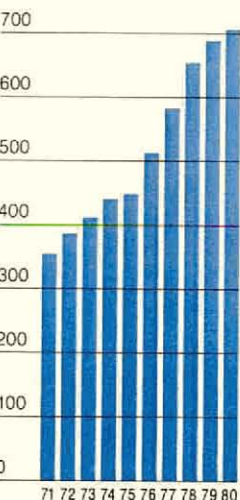
Major projects completed by Algas during the year included a pipe testing program in the high Arctic and assistance in the commissioning of compressor stations in Dubai, United Arab Emirates.

Because of Algas Engineering's cold climate engineering expertise, the Company has just completed work under contract with a Belgian consortium for the design of compressor stations on the upcoming pipeline system from the Yamal region in the Soviet Union to western Europe.

Algas Engineering has recently been retained by the Amsterdam-Rotterdam Bank N.V. and Lloyds Bank International Limited, the lead lenders for the 1750 km (1,087-mi.) Centro-Oeste Pipeline Project in Argentina, to provide technical audit activities during the construction phase of the \$1.5 billion project.

Average Rate Base

(millions of dollars)





PIPELINE DEVELOPMENT DIVISION

Alaska Project Division Officers

William J. Deyell
Division Vice President and
General Manager

Murray L. Peterson
Division Vice President

Eric H. Shelton
Division Vice President

Robert B. Snyder
Division Vice President



Phase 1 right-of-way wends its way south (left) near Nanton, Alberta. Workman (above) makes a visual check of the newly-installed line.

It has been a long, long journey, this whole Alaska pipeline project. And it's only just begun!

It has been researched and documented, argued and held up, studied and regulated and argued again. It's meant mountains of paper and endless hearings and meetings. But it finally paid off: this was the year it went active. The project is a 'go' and we are on our way.

Construction has begun, systems are moving into place and these days, if you stroll the floors that house NOVA's pipeline personnel you'll find bustling activity; here are people at work from one geographic extreme to another – Canada's northwest to southeast as projects proceed in the West, the Arctic, Quebec and the Maritimes.

NOVA has under way three pipeline development projects: the Alaska Highway Gas Pipeline Project, the Trans Quebec & Maritimes Pipeline Project and the Arctic Pilot Project. Taken together, these projects offer Canada possibilities for expanded resource development, increased economic balance and greater national energy security.

THE ALASKA HIGHWAY GAS PIPELINE PROJECT
NOVA and Westcoast Transmission Company Limited are equal sponsors of Foothills Pipe Lines (Yukon) Ltd., the organization responsible for co-ordinating and directing construction of the Alaska Highway Gas Pipeline Project's Canadian sections. Original National Energy Board (NEB) approval of the Foothills application was received on July 4, 1977, and subsequently varied as to routing and scope by negotiation between the Canadian and U.S. governments. On April 4, 1978, the Parliament of Canada enacted legislation establishing the Northern Pipeline Agency (NPA) to facilitate planning and construction of the project.

The original Canada/U.S. agreement called for a January 1, 1983, completion date of the total project; however, owing primarily to regulatory delays, that date has now been deferred to late 1985. Since the original approval was received in 1977, the sponsors developed and have implemented the concept of staging construction in two phases. Phase I is detailed on pages 6-7 of this report.

In July 1980 the Phase I concept was approved by the appropriate regulatory authorities, allowing for construction to begin in Alberta, Saskatchewan and southern British Columbia. In making this decision, three major issues critical to the project were resolved.

First, the federal government accepted U.S. assurances that the entire project could be financed and that U.S. portions would be completed expeditiously.

Secondly, approval was received relating to amending Condition 12 of the Northern Pipeline Act. Under the amended Condition 12, Foothills was

required to satisfy the NEB and the minister responsible for the NPA that financing for Phase I construction had been obtained and that financing for the remainder of the project could be obtained.

The third issue related to approval of additional volumes of Canadian gas to be exported to U.S. markets through Phase I facilities by Pan-Alberta Gas Ltd.

With the resolution of these issues, the Canadian government determined that the risk of non-completion or a long delay in the construction of the entire project was minimal. The decision to approve Phase I will in fact facilitate total project completion by providing immediate returns in terms of cash flow, producer revenues, employment, stimulation of the manufacturing sector and a positive effect on Canada's balance of payments.

Since that decision, the primary direction of Foothills (Yukon) activity has been to co-ordinate all aspects of Phase I implementation, including financing arrangements for the 1980 construction program, and compliance with requirements of the Northern Pipeline Agency.

Other important developments in 1980:

- On April 29 Foothills completed negotiations with the Steel Company of Canada Limited and Interprovincial Steel and Pipe Corporation Ltd. for 1.4 million t (1.5 million tons) of line pipe, with a value of approximately \$2 billion, for the Canadian portion of the pipeline.
- On May 9 the National Energy Board approved charging the full cost of service for the pipeline when "leave to open" is granted. The Board also amended the incentive rate of return mechanism for the mainline to make it similar to that already approved for Phase I.
- On July 1 Alaskan Northwest Natural Gas Transportation Company, the 11-member U.S. consortium responsible for the Alaskan segment of the line, submitted an application to the Federal Energy Regulatory Commission seeking a final unconditional Certificate of Public Convenience and Necessity authorizing construction of the Alaska portion of the pipeline.
- In October the Ralph M. Parsons Company of Pasadena, California, was selected to carry out design and engineering activities for the conditioning plant on Alaska's North Slope.
- On December 1 the U.S. Department of the Interior approved the consortium's request for a single right-of-way grant across federal lands in Alaska.

Pipeline Development Division *continued*



Coat and wrap machine (above) operates on the western leg in British Columbia, and welding crews (right) prepare to add another 24.4 m (80-ft.) section of pipe to the Alberta portion.



- Foothills' Northern Alberta Burst Test Facility, which was put into operation in the fall of 1979 to test large diameter pipe, was in full operation during 1980. Six tests were conducted during the year on pipe to be used for both the Canadian and American segments of the line. The data collected has been analysed and a first summary report submitted to the Northern Pipeline Agency.

- During 1980 Foothills conducted a series of industry briefings and community workshops in the Yukon, Saskatchewan and northeast B.C. as part of its commitment to inform both the communities affected and the business sector about opportunities which will develop as a result of the pipeline.

- Also during the year the Foothills group of companies and its contractors worked toward facilitating the involvement of native companies in the construction of the pipeline in Alberta and southern British Columbia. Foothills Pipe Lines (Alta.) Ltd. awarded a contract to a native firm to unload coated pipe in Cochrane, Alberta, and a major clearing contract to a newly incorporated native firm from High Prairie, Alberta. As of the end of October, one of the pipeline contractors was employing 36 women and natives. In southern B.C. a count taken September 15 showed that the project work force totalled 348. Of that figure, 69 were native, which represented approximately 20 per cent of the work force. Although project construction has not yet begun in the Yukon, several local and native firms have been contracted to work on survey and drilling programs.

ALASKA PROJECT DIVISION

NOVA's Alaska Project Division is handling the project management, engineering and construction services for the Alberta and Saskatchewan portions of the Alaska Highway Gas Pipeline Project. This has been undertaken through construction management agreements between the division and the appropriate regional subsidiaries of Foothills (Yukon). The division is currently seeking, on behalf of Foothills (Alta.) and Foothills Pipe Lines (Sask.) Ltd., the designated regulatory approvals to enable construction of the eastern leg to commence on schedule.

During the year the division has grown to a permanent staff of 195. Development of a strong project management capability is being achieved through effective use of computer based cost control and project scheduling systems.

TRANS QUEBEC & MARITIMES PIPELINE INC.

In early 1978 Q & M Pipe Lines Ltd. (wholly owned by NOVA) and TransCanada PipeLines Limited (TCPL) both made application to the National Energy Board to extend natural gas service to eastern Quebec and the Maritimes. Hearings commenced in September 1979 and were completed in January 1980.

During the course of the hearings, both applicants advised the NEB of their intention to form a joint venture, in which they would participate equally, for the construction and operation of a natural gas pipeline system in Quebec and the Maritimes. According to the terms of the joint venture agreement, the certificates granted by the NEB would be assigned to a new Montreal based company, Trans Quebec & Maritimes Pipeline Inc., in which the Company and TCPL would each own 50% of the shares.

In May 1980 the NEB approved the application for facilities in the Province of Quebec and denied the application for the Maritime portion.

On October 28, 1980, the Government of Canada tabled before Parliament the National Energy Program and the budget, of which natural gas service in the Maritimes is an important feature. The National Energy Program confirmed that construction of the Maritime portion is in the public interest.

Construction of the approved facilities in Quebec is scheduled to commence in the spring of 1981. Re-application for the Maritime portion was made in December 1980 and, given timely regulatory approval, construction will begin in the Maritimes in 1982.

The total TQM system will consist of approximately 3300 km (2,050 mi.) of pipeline and nine compressor stations. There will be 1225 km (761 mi.) of mainline, ranging in diameter from 762 mm to 457 mm (30- to 18-in.), and 2075 km (1,289 mi.) of laterals and sub-laterals, ranging in diameter from 508 mm to 114.3 mm (20- to 4-in.). An underground natural gas storage facility is also planned, using salt caverns in southern New Brunswick to provide the system with additional supplies for high demand periods. TransCanada and Pan-Alberta Gas Ltd. are



Welders (above) work near Cochrane, Alberta. Stockpiled pipe (right) is ready for installation near Flathead Ridge, B.C.



contracting for Alberta gas to supply total TQM requirements.

The total capital cost of the transmission system to 1990, escalated to the year of expenditure, is estimated at \$1.2 billion. Of this, about \$500 million will be spent to Quebec City and about \$700 million on the remainder, including the Maritimes. Estimated capital costs for the associated provincial distribution systems over the same period will be comparable to those for transmission.

As of December 31, 1980, the costs incurred by the Company in connection with this project totalled approximately \$11 million, which have been deferred in the accounts of the Company.

ARCTIC PILOT PROJECT

The Arctic Pilot Project is a proposal by NOVA, Petro-Canada Exploration Inc., Dome Petroleum Limited and Melville Shipping Ltd. to liquefy natural gas in the Canadian Arctic Islands and transport it south by ice-breaking carrier for regasification in eastern Canada. An updated gas export application was filed with the National Energy Board in 1980, and it is expected a hearing will be called in mid-1981.

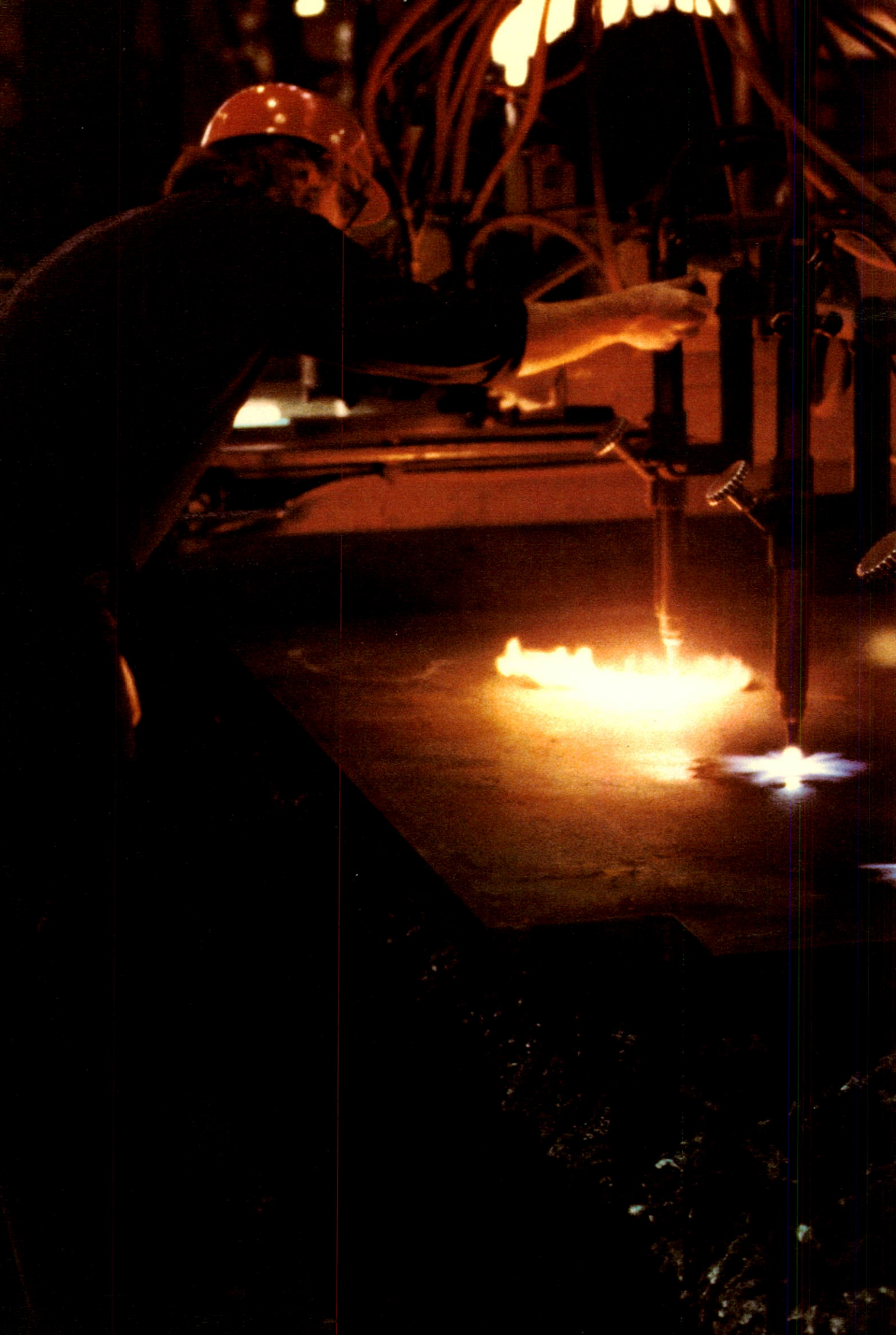
In April 1980 the Environmental Assessment and Review Process (EARP) panel, reporting to the federal minister of the environment, held detailed hearings in four Arctic communities. The panel concluded that the project generally was found to be environmentally acceptable.

The project contemplates that natural gas will be obtained from eight onshore wells operated by Panarctic Oils Ltd. at Drake Point on the northern Sabine Peninsula of Melville Island. The gas would be gathered and transported via buried pipeline to Bridport Inlet, a natural harbour on the island's southern coast. The pipeline, consisting of 160 km (99 mi.) of 559 mm (22-in.) pipe, would be constructed and operated by NOVA.

The liquefaction plant and storage facilities at Bridport are to be mounted on three barges, to be built in a southern Canadian shipyard and towed north for installation. The plant has a capacity of $7.1 \times 10^6 \text{ m}^3$ (250 mmcf) per day and the storage facilities, a capacity of $200\,000 \text{ m}^3$ (7.1 mmcf).

Transportation south from Bridport to a regasification plant site in eastern Canada would be carried out on a year-round basis using two powerful ice-breaking LNG carriers, each with a capacity of $140\,000 \text{ m}^3$ (4.9 mmcf).

The estimated capital cost of the project excluding the southern receiving terminal is \$1.5 billion (1980 dollars, or \$2.0 billion in escalated dollars). As at December 31, 1980, costs of approximately \$48 million had been incurred and the Company's share of these costs is approximately \$14 million.



MANUFACTURING DIVISION

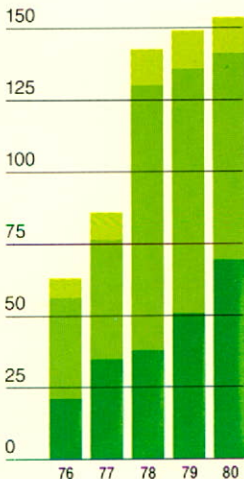


Worker adjusts computer-assisted torches (left) that cut the intricate steel parts used in valve assembly. Machinist (above) examines ball valve. Valve (far right) is coated with epoxy resin to prevent corrosion.

Manufacturing Division Assets

(millions of dollars)

- Grove Valve and Regulator Company
- WAGI International S.p.A.
- Steel Alberta Ltd.



All aspects of NOVA's endeavours are related to oil and gas in some way. Manufacturing shows one of the ways in which we broaden our business base to encompass even wider areas of the industry.

NOVA is gaining additional strength in this field, especially in valves and related products built to exacting standards and specifications in the U.S. and Italy. Here, too, research plays a big part in the plan. New systems are always under review and development to improve the overall quality of the hardware that is an important part of our and industry requirements.

Manufacturing is one more way in which NOVA helps things happen in energy.

The Manufacturing Division of the Company covers the activities, among others, of Energy Equipment & Systems Inc. (EESI) (100% owned) and its subsidiaries, Grove Valve and Regulator Company (Grove) of Oakland, California (100% owned), WAGI International S.p.A. (WAGI) of Rome, Italy (66⅔% owned), and Pipeline Hydraulics Engineering, Inc., of Houston, Texas (100% owned). The activities of Steel Alberta Ltd. (50% owned) are also reported here.

ENERGY EQUIPMENT & SYSTEMS INC.

The 1980 sales and earnings of EESI, principally from Grove and WAGI, increased about 33% and 15% respectively. This improvement is a result of improved markets, increased efficiencies at Grove and improved labour stability in Italy. Through changes in distribution arrangements, Grove is able to produce in more economical lots and to fill customers' short lead-time requirements without disrupting plant production schedules.

Over \$12 million was spent during 1980 on plant improvements for Grove and WAGI. Grove's Oakland plant has undergone major layout improvements which will be completed in 1981 and will eliminate production bottlenecks and allow for a substantial capacity increase. These capital expenditures were financed by cash from operations.

A further dividend was received from WAGI and used for the retirement of long-term debt.

Grove and WAGI continued with expansion of their product research and testing work which has led to additions to product line and new materials for use in such areas as high temperature and pressure applications.

Pipeline Hydraulics Engineering, Inc., formed in 1980 and headquartered in Houston, Texas, continued building up its organization and began providing consulting and computer simulation work in liquid pipeline flow and surge to the pipeline industry.



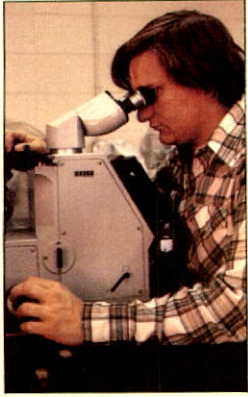
Continued strong demand for pipeline flow products and the addition of further products and services in the EESI companies are expected to maintain increases in sales and earnings for the Manufacturing Division.

STEEL ALBERTA LTD.

Steel Alberta's principal asset is the ownership of 20.2% of the shares of Interprovincial Steel and Pipe Corporation Ltd. (IPSCO) of Regina. It also holds iron ore reserves in the Peace River area of Alberta and Carter Creek area of Montana. Some lease work was begun in 1980 on the Carter Creek reserve to confirm ore and iron concentrate estimates. Work continued with the Alberta Research Council and with a process company for research into processing the Peace River ore.



RESEARCH AND DEVELOPMENT



Lush greenery marks Princess greenhouse (left), a waste heat recovery project, and the area of Nova Scotia (far right) where the coal demethanation project is under way. Ongoing materials quality control (above) requires intense research effort.

'R & D' – a couple of letters that speak volumes.

Research and Development – mostly it means expanding horizons: developing more knowledge from experience and proven performance. The term itself is an unexciting one for such an exciting and futuristic field: a field populated by scientists and specialists, engineers and technicians – computers, theories and suppositions.

It is also a field that yields breakthroughs in new technologies, in improved facilities and, above all, in rewards for the successful.

The future is a mystery to all of us. NOVA seeks to unlock some of its secrets. R & D is the tool and people are the catalyst.

NOVA, recognizing the need for increased emphasis on research and development, gave this effort more importance and standing during 1980. Reported upon in this section are activities of Algas Resources Ltd. and plans for a new research and development centre.

ALGAS RESOURCES LTD.

Algas Resources Ltd., a wholly-owned subsidiary of NOVA, is engaged in initiatives for the Company and its subsidiaries and affiliates in areas of research and development. It is currently active in the study and development of new and alternate energy sources, waste heat utilization projects and a wide range of sponsored research projects. Its activities also include the management of technology transfer and the evaluation of potential investment opportunities in manufacturing and high technology fields.

In conjunction with other resource companies and government agencies, Algas is investigating liquefaction of coal primarily for use as a transportation fuel. An Alberta-sited project involving laboratory and engineering studies has been concluded, and preliminary work related to a project in Nova Scotia has commenced.

The methane drainage department completed additional work on several test wells in Alberta's mountain coal areas to add to its research results and operating experience in surface demethanation work. A development surface demethanation project, begun in Nova Scotia in 1979, continued with the completion of three test production wells in the Pictou area and several thousand feet of core drilling in other areas to test coal methane content. A mine methane drainage project with Petro-Canada and the Cape Breton Development Corporation (DEVCO) at DEVCO's mines moved ahead to a second development phase during the year, with a commercial phase expected to commence in late 1981 or early 1982.

The one-acre greenhouse, which is heated by waste heat from NOVA's Princess compressor station in southeastern Alberta, has been rebuilt and a



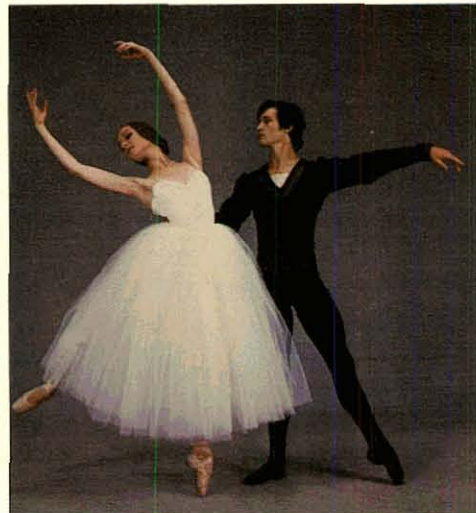
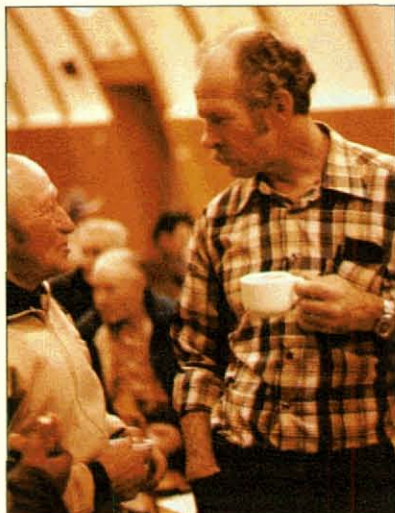
second acre greenhouse erected adjoining it. Vegetable crops for the southern Alberta consumer market were started in late 1980 for harvesting this spring. Other greenhouse ventures are being evaluated and investigations into energy efficient greenhouse construction and into using waste heat for fish farming are continuing.

RESEARCH AND TECHNOLOGY CENTRE

The NOVA group of companies is involved in the study and preliminary design for construction of a large research centre in the Calgary area. The centre is planned to start operation by the mid-1980s and will employ scientists, engineers and technicians. It will bring together the existing research activities of the NOVA group (including those of Husky Oil Operations Ltd.) and will increase emphasis on these as well as commencing in-house research activities in other areas. It is expected that NOVA and Husky will share ownership of the proposed facility.

GENERAL PROGRAMS

1980 corporate contributions went to Skate Canada (near right) and the Royal Winnipeg Ballet (far right). Landman meets landowner (centre right) at community relations meeting in Myrnam, Alberta.



NOVA has many corporate philosophies. Some apply to organizational structures, others to hiring policies. Some are specifically people-oriented while others deal with standards and specifications.

We have philosophies that direct our involvement with the community. A strong one – rarely stated but underlying everything – is a solid sense of responsibility. We work in many communities. We want to be a part of them: not just in terms of presence, investment, jobs, but also in recreation, social concern, culture, conservation and enjoyment.

CORPORATE CONTRIBUTIONS

NOVA 1980 corporate contributions amounted to almost \$1 million and were allocated among about 250 charitable organizations. The budget is administered by a 12-member committee, with donations going to traditional as well as less-known agencies.

As is customary, the largest shares went to health and welfare organizations, with a number of United Way funds receiving substantial amounts. Significant contributions were also made for special campaigns to benefit the Ottawa Civic Hospital and Montreal's Royal Victoria Hospital.

Both performing and visual arts received support. Large donations went to the internationally recognized Royal Winnipeg Ballet, for its 1981 western Canadian spring tour, and to the Glenbow Museum in Calgary. NOVA purchased three major Canadian paintings for the Glenbow, works by Frederick H. Varley, Herbert S. Palmer and Ernest Lindner.

Other particularly noteworthy contributions were made in the educational, recreational and native culture sectors. Funds for scholarships and bursaries were donated to the University of Regina, recognizing the first university degree program in journalism and communications in western Canada. Skate Canada was also a recipient, with NOVA, as

the major corporate sponsor, pledging financial support over a five-year period and commissioning a team trophy for the organization's annual international competition. Another beneficiary, the National Native Friendship Centre, will serve as a cultural focus for the Ottawa native community and as a national centre for all Canadian native people.

The Gas Transmission Division continues to administer contributions in Alberta communities where the Company has operations. Among those made in 1980 was one for a recreational complex in Edson where NOVA has a district headquarters office.

COMMUNITY RELATIONS MEETINGS

NOVA holds community relations meetings in areas of the province where the Company's Gas Transmission Division has operations facilities or construction projects. These meetings serve as forums where residents of the area meet Company personnel. The settings are informal, with presentations by superintendents, foremen or landmen. In 1980 meetings were held in several Alberta communities, from Paddle Prairie in the north to Iddesleigh in the south.

THE ENVIRONMENT

NOVA's Gas Transmission Division is presently carrying out a \$500,000 two-part environmental study in the vicinity of the Company's construction projects in northern Alberta. This study will determine if pipeline construction affects wildlife and, in the event that it does, will enable the development of mitigative actions where necessary. The first part of the study focuses on elk: their distribution and feeding habits, forage availability, and vegetative composition in winter ranges. The second part will assess the behavioral responses of moose, elk, deer and caribou to pipeline construction. The division expects the study results to add to the sound planning and construction of future projects.

REGULATORY AGENCIES

NOVA was incorporated by Special Act of the Legislative Assembly of the Province of Alberta, being Chapter 37 of the Statutes of Alberta, 1954, as amended (the Incorporating Act).

The original business of the Company was the ownership and operation of a natural gas gathering and transmission pipeline system in Alberta. The operation of the pipeline system gave rise to the exercise of some authority by two regulatory agencies:

- (i) The Alberta Public Utilities Board (PUB)
- (ii) The Energy Resources Conservation Board (ERCB)

The PUB's limited jurisdiction over the Company is not founded on the Gas Utilities Act but springs from the Incorporating Act. That jurisdiction is solely with respect to review of rates, tolls and other charges for gas transmission services, fixed by the Company following complaint by an interested party.

The ERCB's jurisdiction over the Company's operation, as a natural gas gathering and transmission pipeline system in Alberta, is in the main with respect to approval of the construction of gas transmission pipelines and related facilities.

NOVA has expanded from a natural gas transmission company to a company with diversified interests. Parts of the activities of the divisions and subsidiaries of the Company involve regulation by a number of provincial and federal agencies.

The following is a brief overview of the principal agencies. Reference to their functions as they relate to the Company and its divisions and subsidiaries will be found at a number of places in the Annual Report.

ENERGY RESOURCES CONSERVATION BOARD

The Energy Resources Conservation Board has general responsibilities to regulate certain areas of oil, gas and electrical energy industries in the public interest and to advise the Government of Alberta on the development and use of the energy resources of the Province of Alberta. The ERCB's major areas of responsibility are conservation of Alberta's energy resources and setting policies for their development including: construction of pipelines, transmission lines and processing and generating plants; ensuring orderly and efficient development of Alberta's resources; keeping up-to-date estimates of the remaining energy reserves; and appraisal of the demand for Alberta's energy within and outside of Alberta.

SURFACE RIGHTS BOARD

The Surface Rights Board was created by the Surface Rights Act and is responsible for administering this act. The act gives the Board the authority to issue right-of-entry orders, subsequent

to ERCB approval to construct, and to establish the compensation payable to the affected landowners.

NATIONAL ENERGY BOARD

The National Energy Board (NEB) has general responsibilities to regulate certain areas of oil, gas and electrical utilities in the public interest and to advise the federal government on the development and use of the energy resources of the country.

The NEB's major areas of regulation include the granting of certificates of public convenience and necessity for interprovincial or international pipeline companies; the issuing of export and import licences; and the regulation of pipeline rates, tolls and tariffs of pipeline companies under federal jurisdiction.

The Board has specific responsibilities under two acts, the Petroleum Administration Act (PAA) and the Northern Pipeline Act (NPA). The NEB administers the provisions of the PAA which concern the imposition and collection of a charge on the export of crude oil and certain petroleum products as well as regulate the price of natural gas in the interprovincial and export markets. The Board's responsibilities under the NPA relate to financing, tariffs and construction of the Alaska Highway Gas Pipeline Project.

NORTHERN PIPELINE AGENCY

The Northern Pipeline Agency (NPA) was established in accordance with the November 1977 Canada-United States Agreement to oversee the planning and construction of the Canadian portion of the Alaska Highway Gas Pipeline Project. The NPA was designed to function as a "single regulatory window" to streamline and expedite the approval process which allows for the many federal acts to be administered by a single regulatory authority. The NPA is also responsible to facilitate consultation and co-ordination with the governments of the provinces and Yukon Territory. One of the NPA's major activities is the development of detailed regional socio-economic and environmental terms and conditions and overall technical requirements which will govern the actual construction of the pipeline by the Foothills group of companies.













**NOVA
AN ALBERTA
CORPORATION**



MAIN MAP

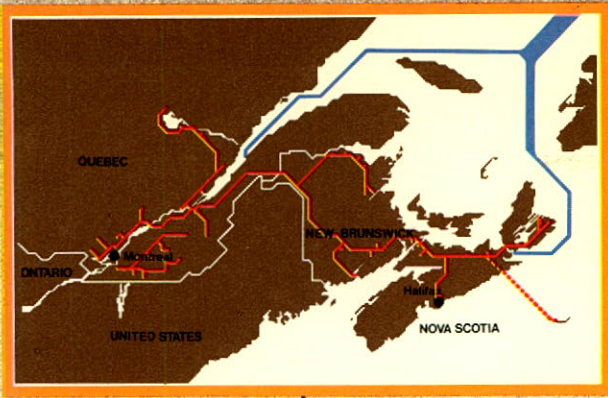
-  Proposed Arctic Pilot Project
 -  Proposed TQM Pipeline
 -  Cochin Pipe Line
 -  Proposed Alaska Highway Pipeline
 -  Husky Explorations
 -  Husky Refineries
 -  Manufacturing
 -  NOVA Principal Subsidiary Offices
 -  CanOcean Offices
- MARITIMES MAP**
-  Proposed TQM Pipeline
 -  Proposed Arctic Pilot Project

ALBERTA MAP

-  NOVA System
-  Compressor Stations
-  Proposed Alaska Highway Pipeline
-  (Under Construction)
-  Cochin Pipe Line
-  Ethylene System
-  Ethane Gathering System
-  Ethylene Extraction Plants
-  Petrochemical Plants
-  Petrochemical Plants Under Construction
-  Proposed Petrochemical Plants
-  Proposed Shell / Husky Refinery

All maps in this report are meant to be graphic representation only and are not to scale.



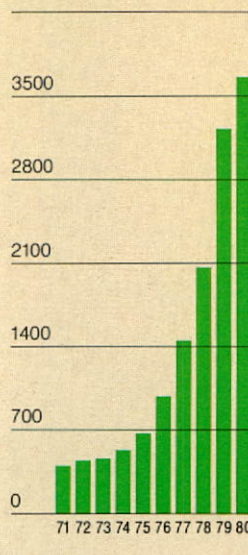


BOARD OF DIRECTORS

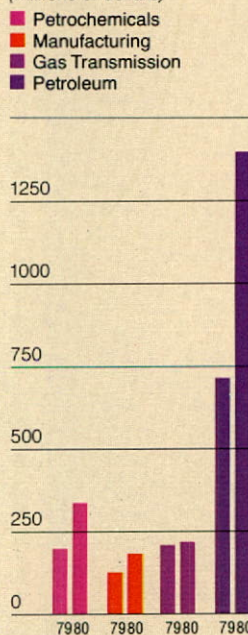
- Robin J. Abercrombie** Senior Vice President of the Company
- S. Robert Blair** President and Chief Executive Officer of the Company
- Arthur J. E. Child** President and Chief Executive Officer,
Burns Foods Limited, Calgary, Alberta
(Food Processor)
- Donald R. Getty** President, D. Getty Investments Ltd.,
Edmonton, Alberta
(Investments)
- J. Joseph Healy** President, Healy Motors Limited,
Edmonton, Alberta
(Transportation)
- Harley N. Hotchkiss** Private Investor, Calgary, Alberta
- William A. Howard** Partner, Howard, Mackie, Calgary, Alberta
(Barristers and Solicitors)
- Peter L. P. Macdonnell** Partner, Milner & Steer, Edmonton, Alberta
(Barristers and Solicitors)
- John R. McCaig** Chairman and Chief Executive Officer,
Trimac Limited, Calgary, Alberta
(Transportation and Resource Services)
- Frederick A. McKinnon** Retired, Calgary, Alberta
- A. Ernest Pallister** President, Pallister Resource Management Ltd.,
Calgary, Alberta
(Resource Management)
- H. J. Sanders Pearson** Chairman and Chief Executive Officer,
Century Sales & Service Limited,
Edmonton, Alberta
(Industrial Tools and Fasteners Distribution)
Chairman of the Board of Directors of the Company
- Robert L. Pierce** Executive Vice President of the Company
- Daryl K. Seaman** Chairman and Chief Executive Officer,
Bow Valley Industries Ltd., Calgary, Alberta
(Natural Resource Services, Exploration and Development)
- Ronald D. Southern** President and Chief Executive Officer,
ATCO Ltd., Calgary, Alberta
*(Natural Resource Services, Property Development
and Manufacturing)*

NOVA, AN ALBERTA CORPORATION FINANCIAL REVIEW

Total Consolidated Assets
(millions of dollars)



Gross Revenue by Division
(millions of dollars)



The 1980 financial results of the Company continue the trend of the '70s with increases in assets, revenue, costs and net income. One of the reasons for such growth arises from the consolidation of Husky Oil Ltd.'s accounts for the full year. In 1979 Husky's accounts were consolidated only for the last six months of the year. In addition, 1980 petrochemical results reflect a full year of operations of the ethylene plant which began operations in August, 1979. Year to year changes relating to the Petroleum and Petrochemicals Divisions in the following comments are principally attributable to these factors unless additional comment is provided.

REVENUE

Total consolidated operating revenue of \$2.126 billion reflects an increase of \$882 million or 71% over revenue of \$1.244 billion achieved in 1979. All divisions showed revenue growth with principal increases occurring in the Petroleum Division (up \$688 million) and Petrochemicals Division (up \$131 million). The Manufacturing Division's improvement of \$52 million or 40% is attributable to improved markets, improved labour stability in Italy and increased distribution and production efficiencies at Grove.

COSTS

Total costs and expenses of \$1.762 billion increased by \$791 million or 81% from \$971 million in 1979. The increase in operating expenses of \$715 million or 82% was mainly attributable to the Petroleum Division (\$557 million) and the Petrochemicals Division (\$97 million). The Manufacturing Division's increase of \$44 million or 40% matches the growth of revenues.

Depreciation and depletion increase of \$64 million or 66% primarily reflects depreciation and depletion from the Petroleum Division and depreciation of the ethylene plant for a full year.

Loss on foreign currency translation of \$7.7 million compares to a loss of \$231 thousand in 1979. The 1980 loss results principally from the translation effect of U.S. dollar debt retirements and the weaker Italian lire. After allowing for income taxes, minority interest and amounts billed under cost of service contracts, this item had an adverse effect of 9¢ per share on net income compared with no effect in 1979.

OPERATING INCOME

Net operating income of \$364 million represents an increase of \$91 million or 33% over 1979 of \$273 million. All divisions contributed to this increase except Gas Transmission, down \$15 million principally as a result of billing income taxes to customers on a taxes payable ("flow-through") method as compared to the tax allocation ("normalized") basis for the first eleven months of 1979. This change in method reduces operating revenue, net operating income and income tax expense by an identical amount.

OTHER INCOME ITEMS

The reduction of \$2.3 million in equity in earnings of affiliates is due to the effect of Husky accounts being accounted for on an equity basis for the first six months of 1979. This was substantially offset by

the significant increase of \$8.6 million in the contribution to equity earnings received from the petrochemical affiliate, Alberta Gas Chemicals.

The decrease of \$13.7 million in the allowance for funds used during construction reflects the completion of the ethylene plant in August, 1979. The allowance for funds capitalized on the Alaska Highway Gas Pipeline Project of \$14.9 million is an increase of \$9.9 million over 1979 and reflects the start of construction in August, 1980.

INTEREST

Net interest expense of \$93.3 million increased by \$28.6 million or 44% over 1979 net interest expense of \$64.7 million. This increase is chiefly due to the consolidation of Husky accounts together with Husky's increased capital spending.

Income, before income taxes and minority interest, of \$304.3 million is up \$56.2 million or 23% over the 1979 level of \$248.1 million.

INCOME TAX

The 1980 provision for income taxes represents an effective rate of 35.4% on income before income taxes and minority interest as compared to 36.9% in 1979. Income tax expense increased by \$16.2 million or 18% from 1979.

The principal reasons for an effective tax rate below the expected tax rate are the method of collecting income taxes in cost of service operations; the after tax income arising from equity in earnings of affiliates; the effect of resource allowances, earned depletion and investment tax credits on petroleum and natural resource earnings.

MINORITY INTEREST

Minority interest in net income of \$52.8 million is up \$12.6 million from \$40.2 million in 1979 with the increases nearly all relating to the effect of the minority shareholders' interest in Husky's consolidated net income since July 1, 1979.

NET INCOME

Net income of \$143.7 million for the year represents an increase of \$27.3 million or 23% over 1979 of \$116.4 million. After providing for dividends on preferred shares, the following table reflects earnings per share and outstanding shares prior to and after the February 13, 1981 stock split — see further comments under Share Capital caption.

	1980	1979	% Variance
Earnings per common share			
Basic	\$3.29	\$2.97	10.8
Fully diluted	\$2.71	\$2.43	11.5
Earnings per common share Reflecting 3-for-1 split			
Basic	\$1.10	\$0.99	
Fully diluted	\$0.90	\$0.81	
Average common shares outstanding (millions)			
Before stock split	33.0	29.8	10.7
Reflecting stock split	99.0	89.4	

ASSETS

Consolidated assets of the Company increased from \$3.1 billion at December 31, 1979 to over \$3.6 billion at December 31, 1980, an increase of \$523 million. This growth of approximately 17% reflects continued strong asset growth in all areas of the Company's activities.

DIVIDENDS

Dividends paid or payable for 1980 totalled \$74.4 million, an increase of \$17.5 million or 31% over the \$56.9 million for 1979. Common share dividends were \$37.5 million (\$28.8 million in 1979); convertible preferred share dividends were \$21.2 million (\$11.5 million in 1979); and preferred share dividends were \$15.7 million (\$16.6 million in 1979). The quarterly dividend on common shares was increased from 24¢ to 28¢ with the May dividend. In 1980 common shareholders received a dividend of \$1.08 per common share compared to \$.925 in 1979, an increase of 17%. The aforementioned dividends per share figures would be \$.36 and \$.308 respectively after taking into effect the three-for-one stock split.

NEW FUNDS

Sources of funds of \$900 million were obtained in 1980 compared to just over \$600 million in 1979. Funds from operations generated \$398 million (\$283 million in 1979) with the major contributors to this increase being the Petroleum and Petrochemicals Divisions. Other funds of \$200 million were derived from a public issue of preferred shares (NOVA) and \$220 million through the issue of long term debt (primarily financing for Husky, Cochin, and Alaska Highway Gas Pipeline Project — Phase I). The funds generated in 1980 were utilized principally for capital expenditures and deferred costs (\$593 million), retirement of long term debt (\$215 million) and the payment of dividends to the shareholders of the Company (\$74 million) and minority shareholders of subsidiaries (\$28 million).

CAPITAL EXPENDITURES

Expenditures for capital assets and deferred project costs amounted to \$593 million in 1980 compared to \$348 million in 1979. This significant increase of \$245 million consists of increases in petroleum properties, refining and marketing facilities (\$139 million), gas transmission facilities expansion (\$137 million) and the Company's proportionate share of Alaska Highway Gas Pipeline Project — Phase I facilities (\$54 million) offset by a reduction in expenditures of \$85 million in petrochemical facilities.

SHARE CAPITAL

Effective February 13, 1981 the Company subdivided its Class "A" common shares on a three-for-one basis. This share split resulted in appropriate adjustments to dividend rates per share and conversion basis for convertible debentures and convertible preferred shares. Information giving effect to the stock split is noted in parentheses in the following comments.

Class "A" common shares at December 31, 1980 totalled 34.4 (103.3) million compared to 30.8 (92.3) million a year previous. The increase in the number of Class "A" common shares occurred primarily as a result of conversions of 6 $\frac{2}{3}$ % Cumulative Redeemable Convertible Second Preferred Shares. The Class "A" shares are owned by 32,989 shareholders of whom 15,115 or 46% were registered in Alberta.

1981 OUTLOOK

The 1981 consolidated capital program reflects the continuation of significant growth in production and transportation assets. The 1981 programs for the Company, subsidiaries and affiliates amount to over \$2.0 billion. These programs principally cover significant gas service expansions by the Gas Transmission Division; continuing exploration, production, refining and marketing activities of the

Petroleum Division; additional upgrades and expansion to the Alberta-based petrochemical complex; and major construction activities for the Alaska Highway Gas Pipeline Project — Phase I and the Trans Quebec and Maritimes Pipeline Project.

If all the capital programs authorized are expended in 1981, consolidated assets will rise from \$3.7 billion to over \$5.0 billion. This major growth in real assets, combined with related borrowings and higher interest costs, together with the current National Energy Program (NEP) will probably result in a smaller rate of growth in net income in 1981.

However, due to the uncertainties arising from the NEP and interest rates, it is presently impossible to assess what the real impact on 1981 earnings and the capital program will be.

Supplementary Divisional Information

Financial information relating to specific divisions is included both in the narrative section of this Annual Report and in the Financial Statements and Notes thereto. A summary of operations by division is set out below.

(a) Gas Transmission

The Gas Transmission Division consists primarily of facilities for the transmission of gas owned by Trans-Canada PipeLines Limited, Alberta and Southern Gas Co. Ltd., Westcoast Transmission Company Limited, Westcoast Transmission Company (Alberta) Ltd., Consolidated Natural Gas Limited and Pan-Alberta Gas Ltd.

The Company's charges to the above-named owners are calculated on a cost of service basis which includes operating expenses, income taxes and depreciation of its facilities together with an annual return on rate base of 10.55% for 1980 and 1979.

(b) Petrochemicals

The Petrochemicals Division consists of the Company's investments (either directly or through subsidiaries) in the following interests:

- (i) 100% ownership of a 544 000 t (1.2 billion lbs.) per year ethylene plant at Joffre, Alberta with all production being sold to Dow Chemical of Canada, Limited on a take or pay basis. The plant and a related ethylene pipeline were constructed at a cost of \$361,500,000 including post-start-up costs and commenced operations in August, 1979. The ethylene is paid for by Dow on a cost of service basis including cost of feedstock (ethane) and fuel, operating expenses, depreciation, amortization, income taxes, return to capital and foreign exchange gains or losses in respect of debt service. The return to capital includes a 20% after tax return to equity on a deemed 75:25 debt equity ratio.

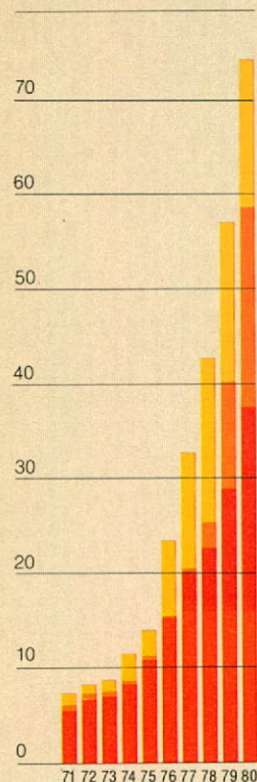
The Energy Resources Conservation Board of Alberta has issued an industrial development permit for a second ethylene plant, having an annual capacity of 680 000 t (1.5 billion lbs.) per year and a current estimated cost of \$500,000,000. Before construction can commence certain agreements have to be completed, financing arranged and appropriate governmental authorization and approvals obtained. In addition, an application for an industrial development permit to construct a third ethylene plant has been filed with the Energy Resources Conservation Board of Alberta;

- (ii) 33 $\frac{1}{3}$ % interest in a joint venture formed to own and operate an ethane gathering pipeline and related storage facilities to transport ethane from the extraction plants to the Joffre ethylene plant and to the western terminus of the Cochin pipeline at a point near Edmonton. The ethane gathering system consists of approximately 550

Total Dividends

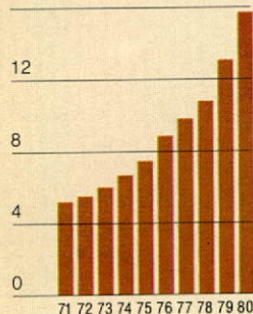
(millions of dollars)

■ Common Shares
■ Convertible Preferred Shares
■ Other Preferred Shares

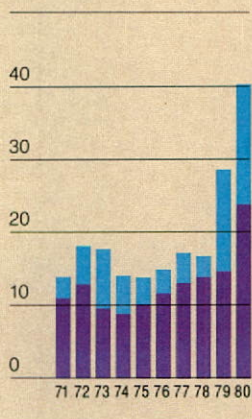


Shareholders' Equity per Common "A" Share at Year End

(dollars)



Hi-Low Price
(dollars)



miles of pipeline together with storage facilities of approximately 500,000 barrels and was completed in 1979 at a cost of approximately \$50,000,000. Alberta Gas Ethylene has agreed to pay the joint venture on a cost of service basis for such transportation and storage;

- (iii) 20% interest in the ownership and operation of the Cochin Pipe Line to transport ethane, ethylene and other products from Alberta to markets in eastern Canada and the United States. The Cochin Pipe Line was completed in the fall of 1978 at a cost of approximately \$340,000,000 including related storage facilities;
- (iv) The Company, as to 20%, and others have agreed to purchase on a take or pay basis ethane in excess of the Alberta Gas Ethylene plant requirements but not exceeding 6950 m³ (44,000 bbls.) per day. (See Note 13(a) to the financial statements);
- (v) 50% interest in the ownership and operation of a polyvinyl chloride manufacturing plant near Fort Saskatchewan, Alberta which was constructed at a cost, including interest during construction and certain pre-start-up and start-up costs, of approximately \$127,000,000. The plant uses vinyl chloride monomer feedstock purchased from Dow Canada. Dow Canada manufactures vinyl chloride monomer from ethylene purchased from the Joffre ethylene plant. Most of the polyvinyl chloride will be marketed in Canada with the balance sold in export markets;
- (vi) 50% interest in Alberta Gas Chemicals Ltd. which owns and operates two methanol plants at Medicine Hat, Alberta. A third plant is under construction at Medicine Hat, Alberta and is scheduled to be completed in late 1981 at an estimated cost of approximately \$140,000,000. Natural gas provides the feedstock for the production of methanol which is currently being produced at approximately the total name plate capacity of 1088t (1,200 short tons) per day. The third plant when completed will double the current capacity to 2177t (2,400 short tons) per day. Methanol is sold either on the open market or under contracts for various periods. In addition, a subsidiary of Alberta Gas Chemicals owns and operates a malic and fumaric acid plant in Duluth, Minnesota.

The Government of New Zealand has awarded Alberta Gas Chemicals the rights to construct in that country a 1200t (1,320 short tons) per day methanol plant at an estimated cost of U.S. \$130,000,000. Alberta Gas Chemicals will have a 49% interest in the project. Construction is to commence in 1981 following completion of certain agreements and financing arrangements;

- (vii) 60% interest in a joint venture with Shell Canada Limited for the manufacture and sale of petrochemicals. The joint venture has made application to the Energy Resources Conservation Board of Alberta for industrial development permits regarding (1) a 300 000 t (660 million lbs.) per year styrene plant at an estimated cost of \$240,000,000, and (2) a 270 000t (595 million lbs.) per year linear low density polyethylene plant at an estimated cost of \$250,000,000. Before construction can commence on either plant, certain agreements have to be finalized, suitable financing arranged and appropriate government authorization and approvals obtained.

(c) Petroleum

The Petroleum Division consists of the Company's investments (either directly or through subsidiaries) in the following interests:

- (i) 68.0% ownership of Husky Oil Ltd.; a fully integrated Canadian oil and gas company engaged in the exploration for, and the production and

transportation of, crude oil and natural gas, the refining of crude oil and the wholesale and retail marketing of petroleum products as well as warehousing distribution and the distribution of steel and steel products and the marketing of charcoal briquets and industrial and activated carbons. For further details regarding the nature of Husky Oil Ltd. operations refer to the Husky 1980 Annual Report;

- (ii) 100% ownership of Novalta Resources Ltd. (formerly Algas Mineral Enterprises Ltd.); a company engaged in the acquisition, development and production of crude oil and natural gas reserves;
- (iii) 50.005% ownership of Pan-Alberta Gas Ltd.; a company which contracts for the purchase of natural gas at field delivery points throughout Alberta and for the sale of such gas to purchasers primarily outside Alberta. Gas is transported within Alberta by the Gas Transmission Division;
- (iv) The Company and Petro-Canada Exploration Inc. have entered into an agreement in principle to develop an oil sands mining complex in northern Alberta (see Note 13(e) to the financial statements).

(d) Manufacturing

The Manufacturing Division consists of the Company's investment through subsidiaries in the design, manufacture, distribution and licensed production of valves on a world-wide basis for use primarily in the oil and gas industry. This investment is primarily represented by the 100% ownership of Grove Valve and Regulator Company and 66.7% ownership of WAGI International S.p.A.

In addition, the Company owns 50% of Steel Alberta Ltd. which in turn owns 20.2% of the issued shares of Interprovincial Steel and Pipe Corporation Ltd., an integrated steel company which manufactures pipe, casing, structural tubing and sheet metal.

(e) Pipeline Development and Other

Activities in this category consist of the Company's interests (either directly or through subsidiaries) in a variety of pipeline development and other projects:

- (i) Together with others, principally through ownership in Foothills Pipe Lines (Yukon) Ltd. and its subsidiaries, as sponsors of the Alaska Highway Gas Pipeline Project which has as its objective the transportation of natural gas from Alaska through Canada to the United States. Phase I of the project (being essentially those portions in Canada south of Caroline, Alberta) is being constructed at an estimated cost of \$900,000,000. On completion, Phase I will be used initially for transporting Canadian gas available for export to United States markets;
- (ii) 50% interest in the Trans Quebec and Maritimes Pipeline Project which has as its objective the construction and operation of a natural gas pipeline and related laterals from Montreal to Halifax. Construction from Montreal to Quebec City at an estimated cost of \$507,000,000 is expected to commence in the spring of 1981;
- (iii) 25% interest in the Arctic Pilot Project, the objective of which is the liquefaction on Melville Island of natural gas, and the year round transportation of liquefied natural gas by tanker from Melville Island to a regasification point in eastern Canada;
- (iv) Varying interests in other energy related projects including study and development of new energy sources that offer viable supplements to conventionally produced crude oil and natural gas.

CONSOLIDATED STATEMENT OF INCOME*(thousands of dollars except for per share data)*

		Total	
		1980	1979
	Year ended December 31		
Revenue	Operating revenue (Note 1)	\$2,125,753	\$1,243,972
	Intersegment revenue	—	—
		2,125,753	1,243,972
Costs and expenses	Operating expenses	1,586,124	871,241
	Intersegment expenses	—	—
	Depreciation and depletion (Note 1)	161,308	97,404
	Loss (gain) on foreign currency translation	7,734	231
	Other unallocated expenses	6,720	2,076
		1,761,886	970,952
Net operating income		363,867	273,020
Equity in earnings of affiliated companies		16,267	18,580
Allowance for funds	Used during construction	2,543	16,218
	Capitalized on Alaska Highway Gas Pipeline Project	14,856	4,947
		33,666	39,745
Income before the undernoted items		397,533	312,765
Interest and expense on debt	(Net of interest income: 1980 – \$30,818; 1979 – \$31,164)	93,279	64,658
Income before income taxes and minority interest		304,254	248,107
Income taxes (Notes 1 and 7)	Current	27,953	3,532
	Deferred	79,779	87,957
		107,732	91,489
Income before minority interest		196,522	156,618
Minority interest		52,776	40,220
Net income (Notes 1 and 7)		\$ 143,746	\$ 116,398
Earnings per common share	Basic	\$ 3.29	\$ 2.97
	Fully diluted	\$ 2.71	\$ 2.43
Earnings per common share, after giving effect to the 3-for-1 stock split (Note 14)	Basic	\$ 1.10	\$ 0.99
	Fully diluted	\$ 0.90	\$ 0.81

See accompanying summary of accounting policies and notes

Gas Transmission		Petroleum		Petrochemicals		Manufacturing	
1980	1979	1980	1979	1980	1979	1980	1979
\$219,324	\$208,836	\$1,404,564	\$716,324	\$321,147	\$189,675	\$180,718	\$129,137
15,571	23,376	—	—	—	—	—	—
234,895	232,212	1,404,564	716,324	321,147	189,675	180,718	129,137
91,939	74,743	1,089,774	532,501	250,579	154,009	153,832	109,988
—	—	15,571	23,376	—	—	—	—
32,781	32,370	104,154	50,852	19,549	9,783	4,824	4,399
—	—	2,081	(1,336)	2,699	1,197	2,954	370
—	—	—	—	—	—	—	—
124,720	107,113	1,211,580	605,393	272,827	164,989	161,610	114,757
110,175	125,099	192,984	110,931	48,320	24,686	19,108	14,380
—	—	—	11,248	14,133	5,557	2,134	1,775
2,065	1,244	—	—	478	14,974	—	—
—	—	—	—	—	—	—	—
2,065	1,244	—	11,248	14,611	20,531	2,134	1,775
\$112,240	\$126,343	\$ 192,984	\$122,179	\$ 62,931	\$ 45,217	\$ 21,242	\$ 16,155

NOVA, AN ALBERTA CORPORATION
CONSOLIDATED BALANCE SHEET

(thousands of dollars)

ASSETS	December 31	1980	1979
Current Assets	Cash and short term deposits	\$ 119,184	\$ 115,177
	Accounts receivable	413,861	438,529
	Inventories (Note 2)	375,058	240,926
	Prepaid expenses	4,439	6,566
		<u>912,542</u>	<u>801,198</u>
Funds on Deposit for Construction Expenditures		—	74,418
Investments and Advances (Note 3)		82,533	44,019
Plant, Property and Equipment (Note 4)		2,995,508	2,428,515
	Less accumulated depreciation and depletion	(453,606)	(318,183)
		<u>2,541,902</u>	<u>2,110,332</u>
Deferred Costs (Note 5)		126,568	110,578
		<u>\$3,663,545</u>	<u>\$3,140,545</u>

On behalf of the Board:



, Director



, Director

See accompanying summary of accounting policies and notes

LIABILITIES	December 31	1980	1979
Current Liabilities	Bank loans (Note 6)	\$ 271,585	\$ 208,825
	Accounts payable and accrued liabilities	387,774	321,416
	Income taxes payable	12,538	—
	Deferred income taxes	72,980	65,106
	Dividends payable	18,474	14,127
	Long term debt instalments due within one year	66,487	59,525
		829,838	668,999
Long Term Debt	(Note 6)	1,043,009	1,038,193
Deferred Income Taxes	(Note 7)	328,097	256,192
Minority Interest in Subsidiary Companies	(Note 8)	439,772	410,679
SHAREHOLDERS' EQUITY	Capital stock (Notes 9 and 14) —		
	Preferred shares	492,723	363,581
	Common shares	43,070	38,446
	Contributed surplus	223,368	170,127
	Reinvested earnings	263,668	194,328
		1,022,829	766,482
Contingencies and Commitments	(Note 13)		
		\$3,663,545	\$3,140,545

NOVA, AN ALBERTA CORPORATION

CONSOLIDATED STATEMENT OF CONTRIBUTED SURPLUS

(thousands of dollars)

Year ended December 31	1980	1979
Balance at beginning of year	\$170,127	\$146,680
Premium on issue of common shares	60,152	23,000
Gain on purchase of preferred shares for cancellation	814	447
Capital stock issue expenses written off	(7,725)	—
Balance at end of year	\$223,368	\$170,127

CONSOLIDATED STATEMENT OF REINVESTED EARNINGS

(thousands of dollars)

Year ended December 31	1980	1979
Balance at beginning of year	\$194,328	\$134,885
Net income	143,746	116,398
	338,074	251,283
Less dividends paid or payable:		
Preferred shares	36,898	28,115
Common shares	37,508	28,840
	74,406	56,955
Balance at end of year	\$263,668	\$194,328

See accompanying summary of accounting policies and notes

NOVA, AN ALBERTA CORPORATION

**CONSOLIDATED STATEMENT
OF CHANGES IN FINANCIAL POSITION***(thousands of dollars)*

Year ended December 31		1980	1979
Source of funds:	Operations	\$397,755	\$282,605
	Preferred shares	200,000	—
	Long term debt	220,130	152,262
	Common shares	64,776	25,041
	Less common shares issued on conversion of –		
	Preferred shares	(62,351)	(19,211)
	Debentures	(664)	(3,666)
	Preferred shares issued by subsidiaries –		
	A. G. Investments Ltd.	—	50,000
	The Alberta Gas Ethylene Company Ltd.	4,500	—
	Funds on deposit for construction expenditures	74,418	147,690
	Other	1,129	4,902
		\$899,693	\$639,623
Use of funds:	Plant, property and equipment –		
	Gas transmission plant	\$170,257	\$ 33,611
	Alaska Highway Gas Pipeline – Phase I	53,759	—
	Petrochemical facilities	34,083	118,921
	Petroleum and mineral resource properties	235,597	117,409
	Refining and marketing facilities	42,541	21,884
	Manufacturing and other facilities	33,152	22,080
		569,389	313,905
	Acquisition of Husky Oil Ltd. shares (net of working capital acquired)	—	94,872
	Other investments	23,639	14,720
	Deferred costs	23,766	33,636
	Reduction of long term debt	214,650	87,781
	Dividends to –		
	Shareholders	74,406	56,955
	Minority shareholders of subsidiaries	27,920	21,632
	Cost of issuing securities	7,725	—
	Purchase of preferred shares for cancellation	7,693	9,354
	Working capital increase (decrease)	(49,495)	6,768
		\$899,693	\$639,623

See accompanying summary of accounting policies and notes

SUMMARY OF ACCOUNTING POLICIES

December 31, 1980

The consolidated financial statements of NOVA, AN ALBERTA CORPORATION (formerly The Alberta Gas Trunk Line Company Limited) have been prepared by management on a consistent basis in accordance with accounting principles generally accepted in Canada and conform in all material respects with International Accounting Standards. The financial statements have, in management's opinion, been properly prepared within reasonable limits of materiality and within the framework of the accounting policies summarized as follows:

Principles of consolidation

The consolidated financial statements include the accounts of the Company and all subsidiaries, principally:

100% Owned

The Alberta Gas Ethylene Company Ltd.
 AGECE Security Corporation
 A.G. Industries International, Inc.
 A.G. Investments Ltd.
 A.G. Pipe Lines Inc.
 A.G. Pipe Lines (Canada) Ltd.
 Algas Engineering Services Ltd.
 Algas Properties Ltd.
 Algas Resources Ltd.
 Energy Equipment & Systems Inc.
 Grove Valve and Regulator Company
 Novalta Resources Ltd.
 (formerly Algas Mineral Enterprises Ltd.)
 Q & M Pipe Lines Ltd.

Partially Owned

Pan-Alberta Gas Ltd. (50.005% owned)
 WAGI International, S.p.A. (66.7% owned)
 Husky Oil Ltd. (68.0% owned;
 69.1% at December 31, 1979)

Companies acquired have been accounted for using the purchase method.

Substantially all of the companies' exploration and production activities related to oil and gas are conducted jointly with others and accordingly the accounts reflect only the companies' proportionate interest in such activities.

Investments in Phase I of the Alaska Highway Gas Pipeline Project and in unincorporated petrochemical joint ventures are accounted for by the proportionate consolidation method and, accordingly, the accounts reflect only the companies' proportionate interest in such activities. The Company's investment in Phase I of the Alaska Highway Gas Pipeline Project is principally represented by its direct and indirect percentage ownership in Foothills Pipe Lines (Yukon) Ltd. and its subsidiaries. Costs for Phase I of the project (being essentially those portions in Canada south of Caroline, Alberta) are classified as plant, property and equipment.

The companies' proportionate share of aggregate assets, liabilities, revenue and expenses of these ventures is as follows:

	Petrochemical Joint Ventures		Alaska Highway Gas Pipeline Project — Phase I		Total	
	1980	1979	1980	1979	1980	1979
	(thousands of dollars)					
Assets	\$163,556	\$153,067	\$74,685	—	\$238,241	\$153,067
Liabilities	97,333	51,141	52,345	—	149,678	51,141
Revenue	66,079	41,941	—	—	66,079	41,941
Expenses	46,112	28,386	—	—	46,112	28,386

Foreign currency translation

Accounts in foreign currencies have been translated to Canadian dollars using current rates of exchange for current assets and current liabilities, historical rates of exchange for non-current assets and non-current liabilities and average rates for the year for revenue and expenses, except depreciation which is translated at the rate of exchange applicable to the related assets. Gains or losses resulting from exchange adjustments are included in income.

Inventories

Refining and manufacturing inventories are carried at the lower of cost as determined on a first-in, first-out basis and net realizable value. Other materials and supplies are carried at cost.

Investments and advances

The Company accounts for its investment in Alberta Gas Chemicals Ltd. and Steel Alberta Ltd. (both 50% owned) by the equity method. Other investments are carried at cost.

Plant, property and equipment	<p>Plant, property and equipment are carried at cost.</p> <p>An allowance for funds used during construction is capitalized when recoverable under cost of service contracts. For gas transmission plant under construction the rate is equivalent to the annual rate of return and for petrochemical facilities the rate is the agreed cost of capital. For plant, property and equipment not subject to cost of service contracts, related interest incurred during construction is capitalized.</p> <p>Plant, property and equipment (except for gas transmission and certain petroleum production equipment) are depreciated on a straight-line basis at annual rates varying from 2.5% to 50.0% which rates are designed to write these assets off over their estimated useful lives.</p> <p>Depreciation of gas transmission plant approximates a composite annual rate of 3.5% on cost in 1980 (1979 – 3.6%) (see Note 1).</p> <p>Certain petroleum production equipment is depreciated by the unit of production method.</p> <p>The companies employ the full cost method of accounting and capitalize all North American exploration and reserve development costs into three cost centres: the United States, the Lloydminster area of Canada and all other areas in Canada. These costs are depleted, by cost centre, on a composite unit-of-production method based upon proved developed reserves as estimated by the companies' engineers and in 1980 confirmed by independent consultants.</p> <p>The cost of acquiring, exploring and developing oil and gas interests outside of North America has been capitalized pending the outcome of exploration in each area of interest. These costs are being amortized on a straight-line method at an annual rate of 20% pending reserve development. Unamortized costs will be depleted by the method set forth in the preceding paragraph if sufficient reserves are developed. The unamortized costs of an abandoned area are charged against earnings at the time of abandonment.</p>
Deferred costs	<p>Costs relating to Phase II of the Alaska Highway Gas Pipeline Project and other projects which may benefit future periods are being deferred pending evaluation and completion of the projects. Deferred costs applicable to projects which have been terminated are expensed.</p> <p>The Company capitalizes an allowance for funds on expenditures incurred to date for both Phases of the Alaska Highway Gas Pipeline Project (see Note 5).</p> <p>Unamortized debt discounts and expenses are being amortized over the terms of the respective issues.</p>
Long term debt	<p>Short term borrowings which are expected to be repaid from the proceeds of long term financing are included in long term debt.</p> <p>Capital lease obligations which relate to transactions which are similar in nature to a purchase have been capitalized and included in long term debt.</p>
Income taxes	<p>The companies follow the tax allocation basis of recording income taxes on all income except for gas transmission and certain petrochemical operations which are subject to cost of service contracts. Income taxes are provided on these sources of income only to the extent that they are included in allowable cost of service under such contracts (see Note 7).</p>
Earnings per common share	<p>Earnings per common share is calculated using the weighted average number of shares outstanding during the period. The calculation of earnings per common share on a fully diluted basis assumes conversion of all securities and exercise of all stock options which would have a dilutive effect on earnings per share.</p>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1980

1. Regulatory matters — Gas Transmission Division

There are various outstanding matters before the Courts and the Public Utilities Board of Alberta (PUB) for 1980 and prior years regarding the Company's treatment of income taxes and depreciation rates in the cost of service billings for the Gas Transmission Division. In summary, these outstanding matters are —

- (i) The Company has obtained leave from the Supreme Court of Canada to appeal the two judgments relating to its treatment of income taxes and depreciation for 1978 and 1979. The judgments arose from a 1978 PUB decision and a 1979 interim order which would have had the effect of requiring the Company to charge income taxes on a taxes payable ("flow-through") basis for gas transmission. If the Company is required to refund an amount by recalculating all the 1978 and 1979 monthly cost of service billings, the effect could be a reduction of working capital of approximately \$36 million with no material impact on net income. It is anticipated that the Supreme Court appeal will be heard in the summer of 1981.
- (ii) Further complaints were filed by several natural gas producers in 1980 respecting the Company's depreciation rates and treatment of income taxes. No dates have been set for the hearing of these complaints.
- (iii) Commencing on January 1, 1979 the Company charged depreciation in accordance with a 1978 PUB decision. No hearings have been scheduled by the PUB with respect to that part of the 1979 and 1980 complaints relating to depreciation. From and after July 1, 1980 the Company has charged depreciation on the basis of a depreciation study.
- (iv) The Company charged income taxes for gas transmission on a tax allocation ("normalized") basis for the period January 1, 1978 to November 30, 1979. From December 1, 1979 to December 31, 1980 income taxes have been charged on a taxes payable ("flow-through") basis. In view of interim orders and orders, during this latter period the Company has felt constrained from billing income taxes other than on a flow-through basis. The Company obtained leave to appeal from the Alberta Court of Appeal an August, 1980 PUB order forbidding the Company from charging income taxes for gas transmission other than those calculated on a flow-through basis.

On June 30, 1980 Alberta Regulation 194/80 under the Incorporating Act came into force and applies to all billings rendered by the Company for gas transmission services provided by it on or after July 1, 1980. Section 3 of the regulation has the effect of requiring the Company to determine its total cost of service without regard to its contracts on a "rolled-in" basis rather than on a "customer-by-customer" basis as previously calculated. The effect of Section 3 of the regulation is to change the Company's method of allocating total cost of service among its customers but there is no material effect on total gas transmission revenue or net income of the Company.

2. Inventories

	December 31	
	1980	1979
	(thousands of dollars)	
Gas Transmission Division	\$ 15,028	\$ 13,135
Petrochemicals Division	18,868	8,280
Petroleum Division	283,017	177,988
Manufacturing Division and other	58,145	41,523
	\$375,058	\$240,926

3. Investments and advances

	December 31	
	1980	1979
	(thousands of dollars)	
Alberta Gas Chemicals Ltd.	\$30,036	\$16,615
Steel Alberta Ltd.	13,286	11,832
Other	39,211	15,572
	\$82,533	\$44,019

4. Plant, property and equipment

	December 31			
	1980		1979	
	(thousands of dollars)			
	Cost	Accumulated Depreciation and Depletion	Net	Net
Gas Transmission Division				
Plant in service	\$ 983,638	\$276,949	\$ 706,689	\$ 692,597
Plant under construction	133,241	—	133,241	7,772
Alaska Highway Gas				
Pipeline — Phase I under construction (Note 5)	74,685	—	74,685	—
Petrochemicals Division				
Plant in service	518,177	33,124	485,053	422,252
Plant under construction	6,495	—	6,495	54,129
Petroleum Division				
Petroleum and mineral resource properties	860,424	93,047	767,377	625,484
Refining and marketing facilities	266,805	20,181	246,624	217,219
Other facilities	56,024	7,754	48,270	45,454
Manufacturing Division and other facilities	96,019	22,551	73,468	45,425
	\$2,995,508	\$453,606	\$2,541,902	\$2,110,332

5. Deferred costs

	December 31	
	1980	1979
	(thousands of dollars)	
Alaska Highway Gas Pipeline Project – Phase II	\$ 74,959	\$ 66,900
Arctic Pilot Project	13,680	12,896
TQM Project	11,217	7,957
Unamortized debt discount and expense	4,640	5,334
Other	22,072	17,491
	\$126,568	\$110,578

ALASKA HIGHWAY GAS PIPELINE PROJECT:

The Company, through its investment in Foothills Pipe Lines (Yukon) Ltd., is one of the principal sponsors of the Alaska Highway Gas Pipeline Project. This project has as its objective the transportation of natural gas from Alaska through Canada to the United States of America and would have the potential of facilitating the transportation of Canadian natural gas from the Mackenzie Delta and Beaufort Basin — the Dempster Link [see Note 13(g)].

Construction has commenced on Phase I (being essentially those portions in Canada south of Caroline, Alberta) and deferred costs relating thereto have been reclassified to plant, property and equipment. The total cost of Phase I is estimated at \$900,000,000 of which \$90,000,000 will be provided as equity by the Company.

Upon commencement of construction of Phase II of the project, the Company would incur, or be responsible for, large expenditures in respect of this Phase.

ARCTIC PILOT PROJECT:

The Company, together with others, has formed a joint venture (Arctic Pilot Project) for the purpose of processing natural gas in, and transporting liquefied natural gas by LNG tanker from, the Arctic Islands. The estimated capital cost of the Arctic Pilot Project is \$2 billion.

TQM PROJECT:

In 1977 the Company initiated the Q & M Project to construct and operate a major gas transmission system to transport Alberta natural gas to Quebec, New Brunswick and Nova Scotia. On November 5, 1979 Q & M Pipe Lines Ltd. and TransCanada PipeLines Limited advised the National Energy Board of their intention to merge their competing applications and form a joint venture in which they would participate equally (the Trans Quebec and Maritimes Pipeline Project). On May 16, 1980 the National Energy Board issued a certificate of public convenience and necessity, authorizing the construction of a pipeline from Montreal to Quebec City and laterals to certain other Quebec communities, subject to certain conditions. The capital cost of the pipeline and laterals is estimated at \$507,000,000.

In December, 1980 the joint venture filed an application for a pipeline extending from Quebec City to Halifax and with laterals in New Brunswick and Nova Scotia. The cost of this pipeline and laterals is estimated at \$655,000,000, including \$122,000,000 for an underground storage facility in New Brunswick.

6. Long term debt (thousands of dollars)

	Maturity	December 31	
		1980	1979
NOVA, AN ALBERTA CORPORATION			
First Mortgage Bonds			
5¼% Series A	1981	\$ 2,296	\$ 4,499
5¾% Series B (1980 – U.S. \$7,238; 1979 – U.S. \$12,191)	1981	7,238	12,191
5½% Series C	1985	6,650	7,548
8¾% Series D (1980 – U.S. \$40,100; 1979 – U.S. \$43,100)	1989	43,037	46,257
Secured Debentures			
6½% Series A	1981	7,245	8,995
5¾% Series B	1985	17,742	18,118
Unsecured Debentures			
7½% Series 1 (convertible)	1990	2,430	3,094
9¾% Series 2	1990	17,297	17,607
9¼% Series 3	1990	15,378	15,708
8% Series 4	1991	43,717	44,463
8½% Series 5	1992	31,455	32,073
11¾% Series 6	1995	55,047	56,430
		249,532	266,983
Bank Financing on purchase of Husky Oil Ltd. Shares			
Canadian		—	46,808
United States (1979 – U.S. \$39,980)		—	46,820
		249,532	360,611
Alberta Gas Ethylene			
Ethylene Plant Financing			
8¼% Secured Notes (1980 – U.S. \$256,783; 1979 – U.S. \$319,397)	1998	292,069	360,314
5¾% First Income Debentures (1980 – U.S. \$256,783; 1979 – U.S. \$319,397)	1987	292,069	360,314
Less certificates of deposit (1980 – U.S. \$256,783; 1979 – U.S. \$319,397) pledged as security against the First Income Debentures		(292,069)	(360,314)
		292,069	360,314
Husky Oil Ltd. and Subsidiaries			
Sinking Fund Debentures, Series A, B, C and D with interest rates varying from 6% to 8½%			
		32,632	33,699
Notes Payable and Other Loans — secured and unsecured with interest rates varying from 4½% to 21½%			
Canadian		77,569	28,131
United States (1980 – U.S. \$157,777; 1979 – U.S. \$122,196)		174,858	131,176
Capital Lease Obligations		12,297	13,421
		297,356	206,427
Novalta Resources Ltd.			
Income Debentures (1980 – U.S. \$51,796; 1979 – U.S. \$55,814)		58,678	63,224
Cochin Pipe Line and Ethane Gathering System			
A.G. Pipe Lines (Canada) Ltd.		31,500	33,250
A.G. Pipe Lines Inc. (1980 – U.S. \$40,500)		47,172	—
		78,672	33,250
Foothills (Yukon) – Phase I Financing			
		52,345	—
Polyvinyl Chloride Plant Financing (1980 – U.S. \$36,340; 1979 – U.S. \$36,340)			
		42,095	42,095
Algas Properties – Head Office Building Financing			
		10,000	—
Other Bank Loans			
		20,025	21,716
Other Loans			
		4,045	5,143
Other Capital Lease Obligations			
		4,679	4,938
		1,109,496	1,097,718
Less instalments due within one year shown as current liability			
		66,487	59,525
		\$1,043,009	\$1,038,193

FIRST MORTGAGE BONDS AND SECURED DEBENTURES:

The First Mortgage Bonds are secured by a first fixed and specific mortgage, pledge and charge and a first floating charge on the assets of the Company. The Secured Debentures are secured in the same manner, subject to the prior charge of the First Mortgage Bonds.

The First Mortgage Bonds, Series B and Series D, are payable in U.S. dollars and have been converted into Canadian dollars at par and 1.07325 respectively. Foreign exchange gains or losses relative to the principal and interest on these bonds is for the account of customers of the Company.

HUSKY ACQUISITION FINANCING:

The Company financed a substantial portion of the Husky shares acquired in 1979 through bank loans drawn under a credit arrangement with two Canadian banks. The Company repaid such loans from the proceeds of the 6½% Second Preferred Share issue (see Note 9).

ETHYLENE PLANT FINANCING:

The proceeds from the issuance of the 8¼% Secured Notes are invested in certificates of deposit which bear interest equivalent to that due on the Secured Notes. The Secured Notes are guaranteed by The Alberta Gas Ethylene Company Ltd. and are secured by a first fixed and floating charge on the ethylene plant, the ethylene pipeline and related assets of The Alberta Gas Ethylene Company Ltd. and by the assignment of certain related contracts.

The First Income Debentures were issued simultaneously with the issuance of the Secured Notes and are secured by the certificates of deposit referred to in the previous paragraph.

Under the take or pay contract with Dow Chemical of Canada, Limited, all exchange gains and losses are for the account of Dow.

HUSKY OIL LTD. AND SUBSIDIARIES:

The Series A, B, C and D Sinking Fund Debentures are secured by the common shares of certain wholly-owned subsidiaries of Husky and a first floating charge on all other assets of Husky and certain of its subsidiaries. Certain notes payable and other loans of \$80,707,000 (\$36,370,000 at December 31, 1979) are secured by certain assets and properties.

NOVALTA RESOURCES FINANCING:

Security for the income debentures includes natural gas properties and a general assignment of book debts. Interest on these income debentures varies with the London Inter Bank Offering Rate and was approximately 10% at December 31, 1980 (8% at December 31, 1979). The income debentures mature on various dates between 1986 and 1989.

COCHIN PIPE LINE AND ETHANE GATHERING SYSTEM FINANCING:

A.G. Pipe Lines (Canada) Ltd. in connection with the long term financing of its share of the cost of the Canadian segment of the Cochin Pipe Line and of the Ethane Gathering System, pursuant to a loan agreement, has issued term notes which mature on December 31, 1987 and are secured by a first floating charge upon a portion of the assets of A.G. Pipe Lines (Canada) Ltd. and a first fixed charge in certain agreements (insofar as they relate to the Canadian segment of the Cochin Pipe Line). The interest rate on the term notes was approximately 19½% at December 31, 1980 (16¼% at December 31, 1979).

A.G. Pipe Lines Inc., in connection with the long term financing of its share of the cost of the United States segment of the Cochin Pipe Line, pursuant to a loan agreement, has issued promissory notes of U.S. \$40,500,000 which mature on various dates to December 31, 1987. These promissory notes are secured by an assignment of the interest of A.G. Pipe Lines Inc. in certain agreements (insofar as they relate to the United States segment of the Cochin Pipe Line), by the guarantee of A.G. Pipe Lines (Canada) Ltd., and by a pledge of the outstanding shares of A.G. Pipe Lines Inc. The interest rate varies with the London Inter Bank Offering Rate and was approximately 24% at December 31, 1980.

FOOTHILLS (YUKON) — PHASE I FINANCING:

In connection with the financing of Phase I of the Alaska Highway Gas Pipeline Project, Foothills Pipe Lines (Yukon) Ltd. has arranged long term financing with a Canadian chartered bank for the issuance of term notes of up to \$800,000,000. When issued, the term notes will mature on December 31, 1987 and December 31, 1996. Pending drawdown of the long term financing, the bank has provided a \$180,000,000 interim line of credit. This line of credit is secured by the assignment of the interest of Foothills Pipe Lines (Yukon) Ltd. in certain agreements and by debentures of Foothills Pipe Lines (Yukon) Ltd. and three of its subsidiaries containing floating charges on their respective property and assets.

At December 31, 1980 \$102,499,000 had been issued under the interim financing. The interest rate at December 31, 1980 was 18⅞%.

POLYVINYL CHLORIDE PLANT FINANCING:

The polyvinyl chloride plant is financed through the issuance of U.S. \$72,680,000 8¾% secured notes Series A due December 15, 1999. These notes are secured by a first fixed and floating charge upon the property and assets relating to the project and by an assignment of certain related contracts. Repayment on the notes is required to commence in 1984 at an annual rate of 5.88% of the principal amount outstanding.

ALGAS PROPERTIES — HEAD OFFICE BUILDING FINANCING:

Algas Properties Ltd., in connection with the financing of the Head Office building, has arranged a line of credit with a Canadian chartered bank of up to \$100,000,000 of which \$10,000,000 was outstanding at December 31, 1980. This line of credit is secured by the assignment of Algas Properties' lease and hypothecation of the title to the property and is repayable in varying amounts commencing in 1986 with final maturity in 1998. The interest rate at December 31, 1980 was approximately 18¼%.

OTHER BANK LOANS:

At December 31, 1980 other bank loans are secured by natural gas properties as to \$159,000 (\$238,000 at December 31, 1979) and manufacturing inventories, facilities and accounts receivable as to \$10,799,000 (\$10,697,000 at December 31, 1979) and mature by agreement to 1984. The interest rate will vary during the term of the loans and approximated 18¼% at December 31, 1980 (11.86% at December 31, 1979).

OTHER LOANS:

Other loans of \$2,570,000 (\$3,312,000 at December 31, 1979) are secured by manufacturing facilities and mature by agreement to 1999. The effective interest on the other loans varies and approximated 6% at December 31, 1980 (6% at December 31, 1979).

SINKING FUND AND REPAYMENT REQUIREMENTS:

Sinking fund and repayment requirements in respect of long term debt for the years 1981 to 1985 are: 1981 - \$66,487,000; 1982 - \$73,383,000; 1983 - \$53,523,000; 1984 - \$57,759,000; 1985 - \$67,978,000.

CURRENT BANK LOANS:

Current bank loans of \$88,195,000 (\$139,529,000 at December 31, 1979) are secured by accounts receivable and inventories.

7. Income taxes

For the Gas Transmission Division and certain of the petrochemical operations, charges to customers are on a cost of service basis. Because income taxes related to these operations are a component of the charges, the billing for such income taxes on either a taxes payable or tax allocation basis does not affect net income.

Income tax expense varies from the amounts that would be computed by applying the Canadian federal and provincial income tax rates to income before income taxes as shown in the following table:

	Year ended December 31			
	1980		1979	
	Amount (thousands of dollars)	% of Pre-Tax Income	Amount (thousands of dollars)	% of Pre-Tax Income
Income before income taxes	\$304,254		\$248,107	
"Expected" income tax expense	\$148,476	48.8%	\$116,610	47.0%
Less adjustment of expected income taxes due to inclusion in pre-tax income of -				
Equity in earnings of affiliates	(7,939)	(2.6)	(8,732)	(3.5)
Income on which income taxes are recorded only to the extent they are included in cost of service				
Gas Transmission	(9,700)	(3.2)	2,699	1.1
Petrochemicals	(9,032)	(3.0)	(6,334)	(2.6)
Petroleum and natural resource activities	(7,741)	(2.5)	(5,978)	(2.4)
Other - net	(6,332)	(2.1)	(6,776)	(2.7)
Actual income tax expense	\$107,732	35.4%	\$ 91,489	36.9%

8. Minority interest

	December 31	
	1980	1979
	(thousands of dollars)	
Husky Oil Ltd.	\$167,796	\$142,641
Preferred shares in A.G. Investments Ltd.	255,000	255,000
Other	16,976	13,038
	\$439,772	\$410,679

In connection with the acquisition of 41,716,500 shares of Husky, A.G. Investments Ltd. issued \$255,000,000 (or U.S. dollar equivalent) of variable rate, cumulative, redeemable, senior preferred shares. The preferred shares are redeemable at the option of A.G. Investments Ltd. between 1982 and 1989 and are redeemable at the option of the holder in certain events. The variable dividend rate approximated 9.30% at December 31, 1980 (8.36% at December 31, 1979). The Husky shares owned by A.G. Investments Ltd. have been pledged as collateral security.

9. Capital stock
(Note 14)

	December 31	
	1980	1979
	(thousands of dollars)	
(a) Preferred shares		
(i) Preferred shares of a par value of \$100 each		
Authorized — 2,000,000 shares		
Issued — Cumulative and Redeemable		
4¾% Series C - 121,777 shares (1979 – 133,853)	\$ 12,178	\$ 13,385
5¾% Convertible Series D - 1,836 shares (1979 – 6,913)	184	691
(ii) Preferred shares of a par value of \$25 each		
Authorized — 10,000,000 shares		
Issued — Cumulative and Redeemable		
7¾% – 886,011 shares (1979 – 913,571)	22,150	22,839
9¾% – 1,289,636 shares (1979 – 1,359,995)	32,241	34,000
9.76% – 1,868,843 shares (1979 – 1,968,000)	46,721	49,200
7.60% – 2,846,935 shares (1979 – 2,941,700)	71,173	73,543
(iii) Second preferred shares of a par value of \$25 each		
Authorized — 15,560,000 shares (1979 – 7,560,000)		
Issued — Cumulative and Redeemable		
6¾% Convertible – 4,342,361 shares (1979 – 6,796,920)	108,559	169,923
6½% Convertible – 7,980,671 shares	199,517	—
	\$492,723	\$363,581

On January 21, 1980 the Company increased the number of authorized Second Preferred Shares of the par value of \$25 each from 7,560,000 to 15,560,000 Second Preferred Shares and designated 8,000,000 shares thereof as 6½% Cumulative Redeemable Convertible Second Preferred Shares, which shares were issued and sold for \$200,000,000 cash, pursuant to an Underwriting Agreement dated January 21, 1980. The 6½% Preferred Shares are redeemable on or after February 15, 1983 and prior to February 15, 1985 at \$26.25 per share if the weighted average price at which the Class "A" common shares were traded was not less than 130% of the conversion price. These shares are redeemable from February 15, 1985 to February 15, 1986 at \$26.25 per share plus accrued and unpaid dividends and at reducing amounts thereafter. In addition, the Company shall annually, commencing in 1983, use all reasonable efforts to purchase for cancellation 240,000 6½% Preferred Shares at a price not in excess of \$25.00 per share plus accrued and unpaid dividends and costs of purchase.

The Company is required to set aside on its books as Purchase Funds \$2,175,000 annually or such lesser amount as would increase the funds to \$4,350,000 for the purchase for cancellation, if and when available, of its 4¾% Cumulative Redeemable Preferred Shares Series C and 5¾% Cumulative Redeemable Convertible Preferred Shares Series D, at a price not in excess of \$100 per share plus costs of purchase, and its 7¾% Cumulative Redeemable Preferred Shares, at a price not in excess of \$25 per share plus accrued and unpaid dividends and costs of purchase.

The Company has the option of redeeming the 4¾% Preferred Shares Series C at \$102 per share on or before May 15, 1985, the 5¾% Preferred Shares Series D at \$105 per share on or before May 15, 1983 and the 7¾% Preferred Shares at \$26.50 per share on or before May 15, 1984 and at reducing amounts after those dates.

The Company is required to call for redemption and redeem annually, through the operation of cumulative mandatory sinking funds, 64,000 9¾% Preferred Shares and 96,000 9.76% Preferred Shares at par value plus accrued and unpaid dividends unless acquired otherwise and credited against the cumulative mandatory sinking funds. In addition, the Company may call for redemption and redeem annually, through the operation of non-cumulative optional sinking funds, 48,000 9¾% Preferred Shares and 72,000 9.76% Preferred Shares at par value plus accrued and unpaid dividends. Other than for sinking fund purposes the 9¾% Preferred Shares and the 9.76% Preferred Shares are not redeemable prior to May 15, 1981 and November 15, 1981, respectively, at which time they are redeemable to May 15, 1982 and November 15, 1982 at \$27.00 per share and \$26.25 per share, respectively, plus accrued and unpaid dividends and at reducing amounts thereafter.

The 7.60% Preferred Shares are not redeemable until on or after February 5, 1983 at which time they are redeemable to February 15, 1984 at \$26.25 per share plus accrued and unpaid dividends and at reducing amounts thereafter. In addition, the Company shall annually use all reasonable efforts to purchase for cancellation 90,000 7.60% Preferred Shares at a price not in excess of \$25.00 per share plus accrued and unpaid dividends and costs of purchase.

The 6¾% Preferred Shares are redeemable on or after November 15, 1981 and prior to November 15, 1983 at \$26.25 per share if the weighted average price at which the Class "A" common shares were traded was not less than 125% of the conversion price. These shares are redeemable from November 15, 1983 to November 15, 1984 at \$26.25 per share plus accrued and unpaid dividends and at reducing amounts thereafter. In addition, the Company shall annually, commencing in 1982, use all reasonable efforts to purchase for cancellation 216,000 6¾% Preferred Shares at a price not in excess of \$25.00 per share plus accrued and unpaid dividends and costs of purchase.

During the year the Company purchased for cancellation 12,076 4¾% Preferred Shares, 27,560 7¾% Preferred Shares, 94,765 7.60% Preferred Shares, 70,359 9¾% Preferred Shares, 99,157 9.76% Preferred Shares and 40 5¾% Preferred Shares at an aggregate discount of \$814,000, which has been credited to contributed surplus. In addition, 5,037 5¾% Preferred Shares were converted into 56,105 Class "A" common shares, 2,454,559 6¾% Preferred Shares were converted into 3,436,376 Class "A" common shares and 19,329 6½% Preferred Shares were converted into 16,654 Class "A" common shares.

(b) Common shares

	December 31	
	1980	1979
	(thousands of dollars)	
(i) Class "A" common shares of the par value of \$1.25 each (non-voting except for the election of seven directors)		
Authorized — 100,000,000 shares (1979 — 45,000,000)		
Issued — 34,449,840 shares (1979 — 30,750,305)	\$43,062	\$ 38,438
(ii) Class "B" common shares of the par value of \$5.00 each		
Authorized — 2,004 shares		
Issued — 1,653 shares	8	8
	\$43,070	\$ 38,446

On January 21, 1980 the Company increased the number of authorized Class "A" common shares from 45,000,000 to 100,000,000 shares.

Class "A" common shares were issued during the year as follows:

	Shares	Consideration		
		Share Capital	Contributed Surplus	Total
		(thousands of dollars)		
On conversion of —				
5 $\frac{3}{8}$ % Preferred Shares Series D	56,105	\$ 70	\$ 434	\$ 504
6 $\frac{1}{2}$ % Preferred Shares	16,654	21	462	483
6 $\frac{3}{8}$ % Preferred Shares	3,436,376	4,295	57,069	61,364
7 $\frac{1}{2}$ % Sinking Fund Debentures Series 1	66,400	83	581	664
On exercise of options granted to officers and employees	124,000	155	1,606	1,761
	3,699,535	\$ 4,624	\$60,152	\$64,776

(iii) Reserved:

Class "A" common shares were reserved at December 31, 1980 as follows:

	Shares
For conversion of the 6 $\frac{3}{8}$ % Cumulative Redeemable Convertible Second Preferred Shares until November 15, 1986, on a conversion basis of 1.4 common shares for each preferred share	6,079,305
For conversion of the 6 $\frac{1}{2}$ % Cumulative Redeemable Convertible Second Preferred Shares until February 15, 1990, on a conversion basis of .862 common shares for each preferred share	6,879,338
For conversion of the 7 $\frac{1}{2}$ % Convertible Sinking Fund Debentures, Series 1 until July 15, 1982, on a conversion basis of 100 common shares for each \$1,000 principal amount of Series 1 Debentures	243,000
Under the incentive stock option plan, options are outstanding to officers and employees to purchase 426,700 common shares at prices ranging from \$13.125 to \$31.875 per share (415,000 shares at December 31, 1979 at prices ranging from \$11.25 to \$26.625) exercisable in annual instalments on a cumulative basis from 1981 to 1985 and 247,000 common shares are reserved but unallocated (382,700 shares at December 31, 1979)	673,700
Under the executive share option plan, options are outstanding to officers to purchase 560,000 common shares at \$25.25 per share (560,000 shares at December 31, 1979 at \$25.25 per share) exercisable in annual instalments on a cumulative basis from 1981 to 1983 and thereafter the balance until 1989 and 140,000 common shares are reserved but unallocated (140,000 shares as at December 31, 1979)	700,000
	14,575,343

10. Remuneration of directors and senior officers

The aggregate remuneration paid during the year by the Company and its subsidiaries to directors of the Company, as such, was \$317,000 (1979 — \$204,000) and, directly or indirectly to senior officers of the Company, as such, was \$1,836,000 (1979 — \$1,468,000).

In 1980 the aggregate amount paid in respect of the year 1979 to the trustee of the Company's Profit Sharing Deferred Bonus Plan for the benefit of senior officers was \$693,000 (in 1979 — \$500,000).

11. Pension and retirement plans

The Company and its subsidiaries maintain pension and retirement plans for substantially all employees. At December 31, 1980 there were no significant unfunded liabilities with respect to any of the pension plans.

12. Acquisition of Husky Oil Ltd.

For the first six months of 1979 the investment in Husky Oil Ltd. was accounted for by the equity basis. The controlling interest in Husky was acquired in June, 1979 and the accounts of Husky have been consolidated thereafter. The following information, presented on a pro-forma basis, presents what the Company's results for 1979 would have been had the controlling interest been acquired on January 1, 1979 instead of June 30, 1979.

Revenue	\$1,690,000,000
Net income	\$ 116,000,000
Earnings per common share:	
Basic	\$ 2.94
Fully diluted	\$ 2.41

The pro-forma net income and earnings per common share figures represent no material difference from the actual consolidated results reported for 1979.

13. Contingencies and commitments

Petrochemicals –

- (a) The Company (to the extent of 20%), Dow Chemical of Canada, Limited, Dome Petroleum Limited, Petro-Canada and Shell Canada Resources Ltd. have agreed on a cost of service basis under take or pay contracts to purchase, for a term extending to December 31, 1998, ethane acquired by Alberta Gas Ethylene in excess of its requirements for the ethylene plant but not exceeding 44,000 barrels per day. Dome has agreed to act as agent for the sale of the Company's 20% share of the surplus ethane.
- (b) The Company and Diamond Shamrock Canada Ltd., as limited partners, and Diamond Shamrock Alberta Gas Ltd., as general partner, are parties to a limited partnership agreement. The limited partnership owns and operates a polyvinyl chloride plant near Fort Saskatchewan, Alberta, having an annual capacity of 220 million pounds of polyvinyl chloride. Under a completion agreement the Company is responsible for 50% of the limited partnership's cash requirements. Under a product purchase agreement the Company has agreed to make advance payments to the limited partnership in an amount equal to 50% of the limited partnership's cash requirements, such advances to be credited against future purchases of polyvinyl chloride.
- (c) The Company and Shell Canada Limited have announced the formation of a joint venture (owned 60% by the Company and 40% by Shell Canada) for the manufacture and sale of petrochemical derivatives in both foreign and domestic markets. The first project planned is a 660 million pound per year styrene plant at a present estimated cost of \$240,000,000. In addition, a 595 million pound per year linear low density polyethylene plant is planned at an estimated cost of \$250,000,000. Before construction can commence on either plant, certain agreements have to be finalized, suitable financing arranged and appropriate government authorizations and approvals obtained.
- (d) An application by The Alberta Gas Ethylene Company Ltd., a wholly-owned subsidiary, for an industrial development permit to construct a second ethylene plant has been approved by the Alberta Government, and application for the permit for the third plant has been filed. Capital costs are currently estimated at \$500,000,000 for the second plant and at \$590,000,000 for the third.

Petroleum –

- (e) The Company and Petro-Canada Exploration Inc. have entered into a joint venture to examine the feasibility of developing an oil sands mining complex in northern Alberta. The current project schedule envisages an application being made to the Energy Resources Conservation Board of Alberta in late 1982 and a plant start-up before 1990. The cost of the project through the regulatory stage is estimated at \$100,000,000.
- (f) Husky and Shell Canada Limited have agreed in principle to construct, as a joint venture, a refinery at an estimated cost of \$583,000,000. Under the agreement Husky will have a 40% interest in the facilities which will produce refined petroleum products and its share of the cost of these facilities is estimated at \$233,000,000.

Pipeline Development and Other –

- (g) In the event that (a) the National Energy Board issues certificates of public convenience and necessity authorizing construction of the Dempster Highway Pipeline and of the additional capacity in the Alaska Highway Gas Pipeline and (b) the Board determines that these facilities can be financed without undue financial burden, the parties to the Dempster Link Agreement other than the Government of Canada have undertaken to cause construction of the Dempster Highway Pipeline as expeditiously as possible. On default by the parties other than the Government of Canada to the Dempster Link Agreement, the parties, including the Company and Westcoast Transmission Company Limited have jointly and severally undertaken to pay \$50,000,000 to the Government of Canada and the Dempster Link Agreement would thereupon terminate. The Company, Foothills Pipe Lines (Yukon) Ltd., the Foothills subsidiaries and Westcoast have fulfilled their obligations to date under the Dempster Link Agreement. In the opinion of the Company, the costs incurred or to be incurred to comply with the provisions of the Dempster Link Agreement relating to the feasibility studies and the application for certificates of public convenience and necessity will not exceed \$10,000,000.
- (h) In July 1979 the Company, through a subsidiary, Algas Properties Ltd., began construction of a corporate head office building in downtown Calgary with completion expected in the spring of 1982 at a construction cost of approximately \$75,000,000.
- (i) The Company will be responsible for costs relating to certain projects currently in the feasibility and development stages (see Note 5).

14. Subsequent event

Effective February 13, 1981 the number of authorized Class "A" common shares was increased from 100,000,000 to 300,000,000 and the Class "A" common shares of the par value of \$1.25 per share were converted into Class "A" common shares without par value. In addition, February 13, 1981 was the date of record for the subdivision of the Class "A" common shares on a three-for-one basis. This share split resulted in appropriate adjustments to dividend rates per share and the conversion basis for convertible debentures and convertible preferred shares.

15. Summarized quarterly financial data (unaudited)

(thousands of dollars except for per share data)

	Three Months Ended							
	March 31		June 30		September 30		December 31	
	1980	1979	1980	1979	1980	1979	1980	1979
Consolidated revenue	\$480,772	141,424	515,745	140,627	536,164	451,783	593,072	510,138
Net operating income	\$ 78,916	38,219	80,403	37,702	113,979	95,157	90,569	101,942
Net income	\$ 29,338	20,350	27,717	24,208	52,952	34,134	33,739	37,706
Earnings per common share								
Basic	\$ 0.66	0.45	0.57	0.58	1.33	0.91	0.73	1.03
Fully diluted	0.56	0.40	0.49	0.48	0.98	0.74	0.68	0.81
Earnings per common share, after giving effect to the 3-for-1 stock split (Note 14)								
Basic	\$ 0.22	0.15	0.19	0.19	0.44	0.30	0.25	0.35
Fully diluted	0.19	0.13	0.16	0.16	0.33	0.25	0.22	0.27
Market price per common share								
High	\$ 32¼	19½	32	25	35½	28	40¼	27¾
Low	24	14¾	25	18⅞	30	21½	31	20⅞
Market price per common share after giving effect to the 3-for-1 stock split (Note 14)								
High	\$ 10¾	6½	10⅝	8⅜	11⅞	9⅜	13⅜	9¼
Low	8	4⅞	8⅜	6¼	10	7⅞	10⅜	6¾

16. Segmented information

(a) Financial Information by Division (thousands of dollars)

		1980	1979	1978
Revenue:	Gas Transmission	\$ 219,324 10.3%	\$ 208,836 16.8%	\$ 198,931 42.9%
	Petroleum	\$1,404,564 66.1%	\$ 716,324 57.6%	\$ 94,473 20.4%
	Petrochemicals	\$ 321,147 15.1%	\$ 189,675 15.2%	\$ 54,519 11.7%
	Manufacturing	\$ 180,718 8.5%	\$ 129,137 10.4%	\$ 116,208 25.0%
	Consolidated	\$2,125,753 100%	\$1,243,972 100%	\$ 464,131 100%
	Net operating income:	Gas Transmission	\$ 110,175 30.3%	\$ 125,099 45.8%
Petroleum		\$ 192,984 53.0%	\$ 110,931 40.6%	\$ 5,338 3.8%
Petrochemicals		\$ 48,320 13.3%	\$ 24,686 9.0%	\$ 3,291 2.4%
Manufacturing		\$ 19,108 5.2%	\$ 14,380 5.3%	\$ 16,239 11.6%
Other		\$ (6,720) (1.8%)	\$ (2,076) (0.7%)	\$ (3,970) (2.8%)
Consolidated		\$ 363,867 100%	\$ 273,020 100%	\$ 139,454 100%
Identifiable assets:	Gas Transmission	\$ 903,768 24.7%	\$ 761,162 24.2%	\$ 738,400 35.8%
	Petroleum	\$1,666,029 45.5%	\$1,412,085 45.0%	\$ 377,377 18.3%
	Petrochemicals	\$ 581,959 15.9%	\$ 602,901 19.2%	\$ 613,872 29.8%
	Manufacturing	\$ 171,513 4.7%	\$ 181,719 5.8%	\$ 183,801 8.9%
	Pipeline Development and other	\$ 340,276 9.2%	\$ 182,678 5.8%	\$ 148,371 7.2%
	Consolidated	\$3,663,545 100%	\$3,140,545 100%	\$2,061,821 100%

(b) Financial Information by Geographic Area (thousands of dollars)

		1980	1979	1978
Revenue:	Canada	\$ 996,969 46.9%	\$ 668,236 53.7%	\$ 345,809 74.5%
	United States	\$ 988,796 46.6%	\$ 502,699 40.4%	\$ 52,233 11.3%
	Other	\$ 139,988 6.5%	\$ 73,037 5.9%	\$ 66,089 14.2%
	Consolidated	\$2,125,753 100%	\$1,243,972 100%	\$ 464,131 100%
Net operating income:	Canada	\$ 230,830 63.4%	\$ 199,240 73.0%	\$ 121,563 87.2%
	United States	\$ 118,841 32.7%	\$ 64,941 23.8%	\$ 6,963 5.0%
	Other	\$ 14,196 3.9%	\$ 8,839 3.2%	\$ 10,928 7.8%
	Consolidated	\$ 363,867 100%	\$ 273,020 100%	\$ 139,454 100%
Identifiable assets:	Canada	\$2,617,833 71.5%	\$2,271,490 72.3%	\$1,837,227 89.1%
	United States	\$ 917,399 25.0%	\$ 731,690 23.3%	\$ 95,895 4.7%
	Other	\$ 128,313 3.5%	\$ 137,365 4.4%	\$ 128,699 6.2%
	Consolidated	\$3,663,545 100%	\$3,140,545 100%	\$2,061,821 100%

AUDITORS' REPORT

To the Shareholders of
NOVA, AN ALBERTA CORPORATION
(formerly The Alberta Gas Trunk Line Company Limited)

We have examined the consolidated balance sheet of NOVA, AN ALBERTA CORPORATION as at December 31, 1980 and the consolidated statements of income, reinvested earnings, contributed surplus and changes in financial position for the year then ended. For NOVA, AN ALBERTA CORPORATION and for those other companies of which we are the auditors and which are consolidated in these financial statements, 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. For other companies consolidated or accounted for by the equity method we have relied on the reports of the auditors who have examined their financial statements.

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.

Calgary, Canada
March 5, 1981

Clackson Gordon
Chartered Accountants

NOVA, AN ALBERTA CORPORATION

TEN YEAR CONSOLIDATED FINANCIAL REVIEW

(thousands of dollars except share data)

		1980	1979
Statement of income	Operating revenue	\$2,125,753	1,243,972
	Operating expenses	\$1,586,124	871,241
	Depreciation and depletion	\$ 161,308	97,404
	Loss (gain) on foreign currency translation	\$ 7,734	231
	Other unallocated expenses	\$ 6,720	2,076
	Net operating income	\$ 363,867	273,020
	Equity in earnings of affiliated companies	\$ 16,267	18,580
	Allowance for funds used during construction	\$ 2,543	16,218
	Allowance for funds capitalized on Alaska Highway Gas Pipeline Project	\$ 14,856	4,947
	Interest and expense on debt (net of interest income)	\$ 93,279	64,658
	Income before income taxes and minority interest	\$ 304,254	248,107
	Income taxes	\$ 107,732	91,489
	Minority interest	\$ 52,776	40,220
	Net income	\$ 143,746	116,398
Assets	Working capital (deficiency) at year end	\$ 82,704	132,199
	Additions to plant, property and equipment	\$ 569,389	313,905
	Investment in plant, property and equipment (cost)	\$2,995,508	2,428,515
	Investment in plant, property and equipment (net)	\$2,541,902	2,110,332
	Deferred costs	\$ 126,568	110,578
	Total assets	\$3,663,545	3,140,545
Capital employed	Long term debt (less due within one year)	\$1,043,009	1,038,193
	Deferred income taxes	\$ 328,097	256,192
	Minority interest	\$ 439,772	410,679
	Shareholders' equity		
	Preferred shareholders	\$ 492,723	363,581
Common shareholders	\$ 530,106	402,901	
Share data	Earnings per common share		
	Basic	\$ 3.29	2.97
	Fully diluted	\$ 2.71	2.43
	Dividends paid per common share	\$ 1.08	0.925
	Average common shares outstanding during year (thousands)	33,000	29,774
	Number of common shares outstanding at year end (thousands)	34,451	30,752
	Book value per common share	\$ 15.39	13.10
	Market value per common share		
	High	\$ 40 ¹ / ₄	28
	Low	\$ 24	14 ³ / ₄
	Number of preferred shareholders	28,776	22,534
	Number of common shareholders	33,073	31,974
	<i>Earnings per common share, after giving effect to the 3-for-1 stock split on February 13, 1981</i>		
	Basic	\$ 1.10	0.99
	Fully diluted	\$ 0.90	0.81
<i>Market value per common share, after giving effect to the 3-for-1 stock split on February 13, 1981</i>			
High	\$ 13 ³ / ₈	9 ³ / ₈	
Low	\$ 8	4 ⁷ / ₈	

1978	1977	1976	1975	1974	1973	1972	1971
464,131	348,779	271,397	141,844	89,860	78,715	64,666	56,351
280,802	186,725	146,992	66,338	31,434	22,864	19,644	16,109
46,073	38,599	29,493	20,861	13,112	12,408	11,227	10,282
(6,168)	(2,184)	—	—	—	—	—	—
3,970	—	904	—	—	104	20	53
139,454	125,639	94,008	54,645	45,314	43,339	33,775	29,907
16,924	3,184	1,620	1,993	135	—	—	—
23,777	13,831	8,544	4,030	1,228	1,668	2,635	1,027
—	—	—	—	—	—	—	—
41,113	28,055	29,470	25,015	22,546	24,255	22,343	19,535
139,042	114,599	74,702	35,653	24,131	20,752	14,067	11,399
47,668	49,372	30,338	9,188	6,321	5,884	—	—
5,743	7,756	4,947	415	—	—	—	—
85,631	57,471	39,417	26,050	17,810	14,868	14,067	11,399
125,431	64,305	87,279	6,614	15,179	(4,463)	2,716	5,590
233,154	233,988	152,244	108,306	44,255	26,804	44,604	60,892
1,368,054	1,110,991	863,007	680,009	578,448	535,009	507,903	463,761
1,137,411	923,420	712,674	558,472	477,539	446,396	432,000	398,622
68,421	46,358	29,120	26,277	12,435	9,226	7,435	8,197
2,061,821	1,443,625	945,356	657,918	534,673	473,491	459,157	429,646
821,091	744,255	411,311	377,369	305,370	315,113	315,329	292,013
90,754	62,653	40,747	20,248	12,205	5,884	—	—
218,208	15,915	10,293	446	6	—	—	—
392,593	210,597	142,254	45,413	47,982	30,547	32,142	33,888
317,970	270,546	239,936	162,674	146,190	103,455	95,694	86,508
2.31	1.64	1.42	1.08	0.85	0.79	0.75	0.66
2.14	1.58	1.34	1.04	0.83	0.77	0.74	0.64
0.7772	0.7344	0.6136	0.52	0.445	0.42	0.3975	0.375
28,361	27,421	22,021	21,344	17,371	16,793	16,530	14,584
29,119	27,826	26,937	21,485	21,089	16,837	16,711	4,094
10.92	9.72	8.91	7.57	6.93	6.14	5.72	5.28
16 $\frac{3}{8}$	16 $\frac{1}{2}$	14 $\frac{5}{8}$	13 $\frac{7}{8}$	14	17 $\frac{7}{8}$	18	13 $\frac{1}{2}$
14	12 $\frac{7}{8}$	11	10 $\frac{1}{8}$	9	9 $\frac{5}{8}$	12 $\frac{3}{4}$	10 $\frac{7}{8}$
25,564	12,111	12,524	6,894	7,195	7,977	8,289	8,833
31,798	29,555	26,405	23,508	23,184	22,148	21,374	22,277
0.77	0.55	0.47	0.36	0.28	0.26	0.25	0.22
0.71	0.53	0.45	0.35	0.28	0.26	0.25	0.21
5 $\frac{1}{2}$	5 $\frac{1}{2}$	4 $\frac{7}{8}$	4 $\frac{5}{8}$	4 $\frac{5}{8}$	6	6	4 $\frac{1}{2}$
4 $\frac{5}{8}$	4 $\frac{1}{4}$	3 $\frac{5}{8}$	3 $\frac{3}{8}$	3	3 $\frac{1}{4}$	4 $\frac{1}{4}$	3 $\frac{5}{8}$

Petroleum Division

Husky Oil Ltd.
 Novalta Resources Ltd.
 Pan-Alberta Gas Ltd.
 Canstar Oil Sands Project

Petrochemicals Division

Alberta Gas Ethylene Company Ltd.
 A.G. Pipe Lines (Canada) Ltd.
 A.G. Pipe Lines Inc.
 Diamond Shamrock Alberta Gas
 Alberta Gas Chemicals Ltd.
 NOVA/Shell Joint Venture

Gas Transmission Division

Alberta Gas Transmission Facilities
 Algas Engineering Services Ltd.

Pipeline Development Division

Foothills Pipe Lines (Yukon) Ltd.
 Alaska Project Division
 Trans Quebec & Maritimes Pipeline Inc.
 Arctic Pilot Project

Manufacturing Division

Grove Valve and Regulator Company
 WAGI International S.p.A.
 Steel Alberta Ltd.

Research and Development

Algas Resources Ltd.
 Research and Technology Centre

Ownership of companies shown on page 42

THE FUTURE STARTS HERE WITH NOVA'S PEOPLE!

It has been a good year for the Company and it has been in large measure due to the people whose skills and energies, drive and commitment have helped us to achieve our successes. They are a very special group of people.

Special, we feel, because they've chosen NOVA and shown confidence in their own future and philosophies. That is confidence we value highly. In turn, we have placed our confidence for NOVA's future in their abilities.

As part of the 1980 Annual Report, we incorporate a special section to showcase NOVA people.

TABLE OF PERMANENT EMPLOYEES* AS AT DECEMBER 31, 1980

NOVA AND WHOLLY-OWNED SUBSIDIARIES	
NOVA, AN ALBERTA CORPORATION	1,897
The Alberta Gas Ethylene Company Limited	204
Novalta Resources Ltd.	48
Algas Engineering Services Ltd.	15
Algas Resources Ltd.	22
Algas Properties Ltd.	9
Energy Equipment & Systems Inc.	2
Grove Valve and Regulator Company	806
	<u>3,003</u>
PARTIALLY-OWNED SUBSIDIARIES AND AFFILIATES	
WAGI International S.p.A.	1,200
Husky Companies	
USA: Husky Oil NPR Operations, Inc.	176
Husky Oil Company	1,090
Gate City Steel Corporation	821
Husky Industries, Inc.	571
Canada: Husky Oil Operations Ltd.	865
CanOcean Resources Ltd.	245
Pan-Alberta Gas Ltd.	35
Foothills Group of Companies	430
Diamond Shamrock Alberta Gas	126
Alberta Gas Chemicals Ltd.	144
Trans Quebec & Maritimes Pipeline Inc.	54
Canstar Oil Sands Project	28
Steel Alberta Ltd.	7
	<u>5,792</u>
TOTAL:	<u><u>8,795</u></u>

*Excludes companies with no permanent staff.

**Offices of
NOVA,
AN ALBERTA
CORPORATION**

HEAD OFFICE
2800 Bow Valley Square 2
205 Fifth Avenue S.W.
P.O. Box 2535
CALGARY, Alberta
T2P 2N6 (403) 231-9100

OTHER CALGARY OFFICES
Calgary Service Centre
7210 Blackfoot Trail S.E.
P.O. Box 2535
CALGARY, Alberta
T2P 2N6 (403) 252-8821

Works Department
2611-58 Avenue S.E.
P.O. Box 2535
CALGARY, Alberta
T2C 0B4 (403) 279-0079

EDMONTON OFFICES
Floor 10
9888 Jasper Avenue
P.O. Box 2330
EDMONTON, Alberta
T5J 2R1 (403) 423-6111

Edmonton Service Centre
15810-114 Avenue
P.O. Box 3240, Station 'D'
EDMONTON, Alberta
T5L 4J1 (403) 451-0531

DISTRICT OFFICES
District No. 1 Headquarters
9615-52 Street S.E.
P.O. Box 2535
CALGARY, Alberta
T2P 2N6 (403) 279-7201

District No. 2 Headquarters
P.O. Box 819
BROOKS, Alberta
T0L 0J0 (403) 362-2838

District No. 3 Headquarters
P.O. Box 1808
EDSON, Alberta
T0E 0P0 (403) 723-3371

District No. 4 Headquarters
P.O. Box 1650
VEGREVILLE, Alberta
T0B 4L0 (403) 632-3336

**Offices of
Principal
Subsidiaries and
Certain Affiliates**

ALBERTA GAS CHEMICALS LTD.
400-11456 Jasper Avenue
EDMONTON, Alberta
T5K 0M1 (403) 482-6361
P.O. Box 1100
MEDICINE HAT, Alberta
T1A 7H1 (403) 527-8141

THE ALBERTA GAS ETHYLENE
COMPANY LTD.
Suite 500, BP House
333 Fifth Avenue S.W.
CALGARY, Alberta
T2P 3B6 (403) 263-8130

P.O. Box 5006
RED DEER, Alberta
T4N 6A1 (403) 343-8211

ALGAS ENGINEERING
SERVICES LTD.
2800 Bow Valley Square 2
205 Fifth Avenue S.W.
CALGARY, Alberta
T2P 2N6 (403) 231-9791

ALGAS PROPERTIES LTD.
1200 Bow Valley Square 1
205 Fifth Avenue S.W.
P.O. Box 2535
CALGARY, Alberta
T2P 2N6 (403) 231-9281

ALGAS RESOURCES LTD.
400 Bow Valley Square 2
205 Fifth Avenue S.W.
P.O. Box 9294
CALGARY, Alberta
T2P 2W5 (403) 231-9683

ENERGY EQUIPMENT &
SYSTEMS INC.
904 Spear Street Tower
One Market Plaza
SAN FRANCISCO, California
U.S.A.
94105 (415) 777-1607

FOOTHILLS PIPE LINES
(YUKON) LTD.
1600 Bow Valley Square 2
205 Fifth Avenue S.W.
P.O. Box 9083
CALGARY, Alberta
T2P 2W4 (403) 237-1422

Suite 930 Metropolitan Life Bldg.
99 Bank Street
OTTAWA, Ontario
K1P 6B9 (613) 236-7163

HUSKY OIL LTD.
HUSKY OIL OPERATIONS LTD.
P.O. Box 6525
Postal Station "D"
CALGARY, Alberta
T2P 3G7 (403) 267-6111

HUSKY OIL COMPANY
P.O. Box 380
CODY, Wyoming
U.S.A.
82414 (307) 578-1000

NOVALTA RESOURCES LTD.
700 Home Oil Tower
324 Eighth Avenue S.W.
P.O. Box 2870
CALGARY, Alberta
T2P 2M7 (403) 261-3630

PAN-ALBERTA GAS LTD.
350 Bow Valley Square 1
202 Sixth Avenue S.W.
P.O. Box 9660
CALGARY, Alberta
T2P 2R9 (403) 265-1763

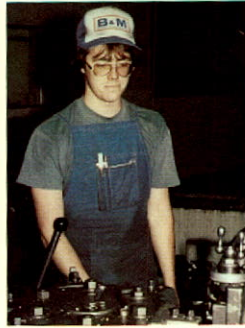
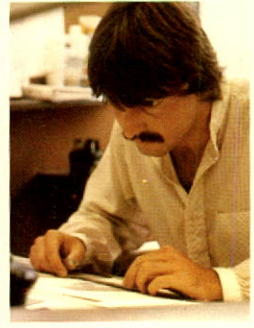
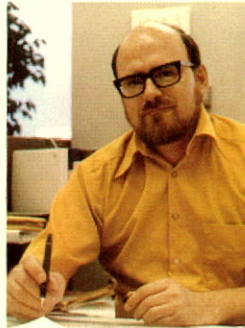
TRANS QUEBEC & MARITIMES
PIPELINE INC.
Les Atriums, Fifth Floor
870 de Maisonneuve Boulevard
MONTREAL, Quebec
H2L 1Y6 (514) 286-5000

NOVA people at work (right) and some of their jobs (top).



- Controls Technician
- Pipeliners
- Landman
- Carpenter
- Stenographer
- Measurement Technologist
- Welder
- Word Processor
- Executive Secretary
- Geologist
- Marketing Analyst
- Receptionist
- Economist
- Data Entry Operator

- Expeditor
- Accountant
- Librarian
- EDP Auditor
- Warehouseman
- Administrative Assistant
- Gas Controller



A cheerful receptionist (right) greets visitors.



At some point, in some central place, decisions are made, programs begun, projects analysed and facts assembled. In Calgary, NOVA's Head Office houses dozens of secretaries and administrators, assistants and support personnel, professionals and specialists, advisors, consultants and managers.

Opportunities are identified, feasibility studies made and decisions reached. The projects NOVA is involved with are the projects that exist because, at one point, some people had the will to get things done and skilled support people helped put it together.

From the designing of new data processing systems to the signing of the Alaska Highway Gas Pipeline agreements, people are the starting point.

It's in places like Brooks and Edson, Joffre and Medicine Hat, Princess and Vegreville where NOVA meets the public. And there are hundreds of other places where our field people are at work — in fact they're often at work in places that don't even have a name: walking pipeline patrol or conducting burst test research, checking charts and repairing equipment, recruiting employees and meeting members of small communities.

NOVA people enjoy a multitude of opportunities.

Counsellor
Travel Co-ordinator
Plumbing and Heating Technician
Controller
Field Operator
Lease Records Clerk
Engineer
Office Supervisor
Interior Planner
Library Assistant
Tax Analyst
Draftsperson
Market Development Co-ordinator
Painter



Community Relations Superintendent
 Air Conditioning Technician
 Spare Parts Analyst
 Automation Technician
 Down-Time Co-ordinator
 Electrical Engineer
 Chart Controller
 Environmental Planner
 Construction Inspector
 Design Drafting Technologist
 Research Assistant
 Survey Technician
 Graphic Artist

Transport Supervisor
 Gardener
 Space Planner
 Forms Analyst
 Micrographics Supervisor
 Safety Co-ordinator
 Field Security Supervisor
 Treasury Assistant
 Procurement Planner
 Communications Co-ordinator
 Phototypesetter
 Computer Supervisor
 Software Support Analyst
 Land Clerk

Occupational Health Nurse
 Training Advisor
 Recruiter
 Off-line Sales Co-ordinator
 Human Resources Analyst
 Purchasing Agent
 Aircraft Maintenance Engineer
 Field Environmentalist



NOVA PEOPLE

Switchboard operators (right) at NOVA's main reception area are the public's first contact with the Company.



NOVA PEOPLE — THEY'RE SPECIAL

Certainly they are very special to our Company and its subsidiaries and affiliates.

It's our people who ultimately make it all happen. While systems and hardware, regulations and mechanisms are vital, the truth of the matter is still very simple.

Regardless of how many systems and procedures may be in place, sooner or later someone, somewhere has to weld the first two lengths of pipe, push the first compressor control switch, monitor the screens, answer the telephone, turn the valve, read the chart and — when it's all done — close the door!

That takes people. We have almost 9,000 working with us in the NOVA group of companies.

They are a large number of specialists, a lot of people. A lot of *good* people, doing a lot of good work to build our Company.

If you're one of our people — our thanks.

Solicitors	Howard, Mackie	
Auditors	Clarkson Gordon	
Stock Exchange Listings	CLASS "A" COMMON SHARES Alberta Stock Exchange Montreal Stock Exchange The Toronto Stock Exchange	PREFERRED SHARES Alberta Stock Exchange Montreal Stock Exchange for 7.60%, 6¾% and 6½% Preferred Shares only. The Toronto Stock Exchange
Transfer Agents and Registrars	CLASS "A" COMMON SHARES National Trust Company, Limited in Vancouver, Calgary, Edmonton, Winnipeg, Toronto and Montreal. Canada Permanent Trust Company as agent for National Trust Company, Limited in Regina. CLASS "B" COMMON SHARES National Trust Company, Limited in Calgary.	PREFERRED SHARES Crown Trust Company in Vancouver, Calgary, Edmonton, Winnipeg, Toronto and Montreal, except for 6¾% and 6½% Preferred Shares. Canada Permanent Trust Company as agent for Crown Trust Company in Regina. Royal Trust Company as agent for Crown Trust Company in Halifax for 7.60% Preferred Shares only. The Canada Trust Company in Vancouver, Calgary, Edmonton, Regina, Winnipeg, Toronto, Montreal and Halifax for 6¾% and 6½% Preferred Shares only.
Annual Meeting	The Annual Meeting of the shareholders of the Company will be held at the Calgary Convention Centre, Calgary, Alberta, on Thursday, May 7, 1981, at 10:00 a.m.	
Annual Reports in French	Les personnes désirant des exemplaires en français du présent rapport sont priées de s'adresser au secrétaire de la Compagnie. P.O. Box 2535, CALGARY, ALBERTA T2P 2N6	
Duplicate Annual Reports	Some holders of NOVA securities receive more than one copy of our annual report and other material mailed to shareholders. We make an effort to eliminate duplications of such mailings; however, if securities of the same class or series are registered in different names and addresses, multiple copies will be received. In those instances security holders should contact either the appropriate registrar or the Company to consolidate their holdings of each security under one name.	
Contributors	PHOTOS — Bob Boyce, Stephanie Ho Lem, Dale Leniuk, Murray Ronaghan, Steve Wendelboe.	PRODUCTION — Intercorp Marketing Ltd.; Mitchell Press Limited; NOVA — Senior Management, Corporate Accounting, Computer Services, Corporate Communications, Word Processing.

