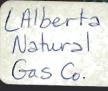
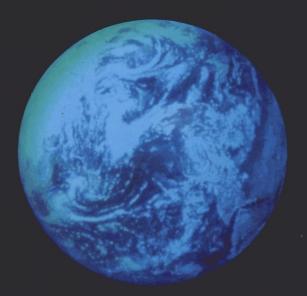
# 9.8.9 Annual Report and Annual Information Form







The Annual Meeting of Shareholders will be held in the Britannia Room,
Westin Hotel, Calgary, Alberta,
on Thursday, the 26th day of April,
1990 at 9:30 a.m.
The notice of the meeting and proxy
form are included with this report
to all shareholders of record.







The 1989 Annual Report of ANG reflects, more than any other year, the international flavour of the Company. Certain design criteria have changed from previous years, and this report reflects a more simplified graphic message.

Perhaps the most significant change in this year's report, however, is the inclusion of an Annual Information Form (AIF), in compliance with regulatory guidelines. As a result of the AIF inclusion, detailed financial results which would normally have been included within the Annual Report are now included within the AIF. The AIF, while bound into this Annual Report, is essentially a separate document and is included at the back of this report on a different paper stock.

One other departure from previous reports is that the Company has this year included the Management Proxy Circular as a boundin document within this Annual Report.

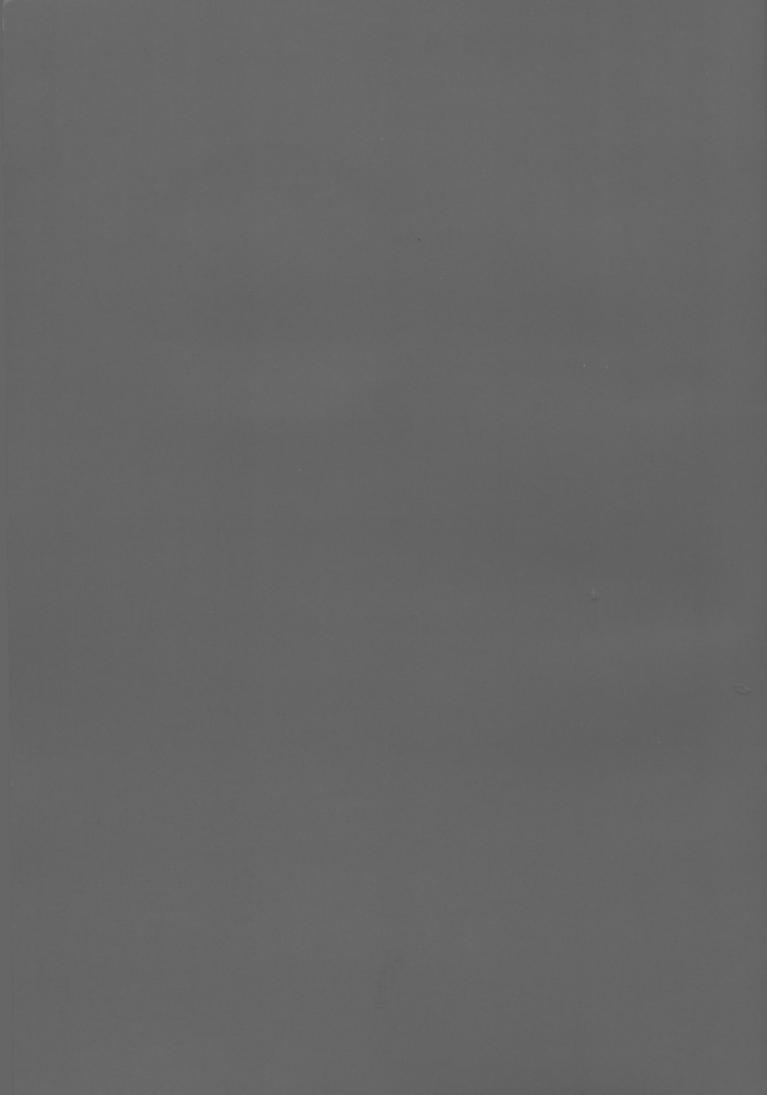
That document appears between the Annual Report section and the Annual Information Form.





HOWARD ROSS LIBRARY OF MANAGEMENT

McGILL UNIVERSITY

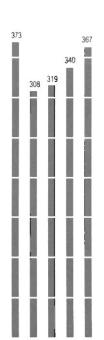


## Contents

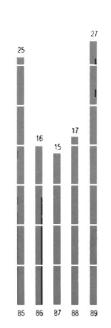
1989 Annual Report	
Financial Highlights	;
Corporate Profile	5
To Our Shareholders	÷
Review of Operations	ŝ
Financial Review	17
1989 Annual Meeling	
Notice of the Meeting	· ś
Management Proxy Citzular	13
1989 Annual Information Form	23
Report of Management	ţ-
Financial Statements	47
Corporate Information	ŝŝ
Ten Year Comparative Highlights	54
Directors and Officers	38

	1989	1988
OPERATING REVENUE (\$)	366,847,000	340,400,000
NET INCOME (\$)		
- before extraordinary items	26,889,000	17,025,000
- after extraordinary items	23.623,000	4,511,000
INCOME PER AVERAGE OUTSTANDING COMMON SHARE (\$)		
- first quarter	.25	.22
- second quarter	2	.23
- third quarter	31	.17
- fourth quarter	43	.23
- annual		
- before extraordinary items	1.26	.85
- after extraordinary items	1.11	.23
COMMON SHAREHOLDERS' EQUITY (\$)		
- total at year-end	152,652,000	145,211,000
- per average outstanding common share	<sup>-</sup> 15	7.23
RETURN ON AVERAGE COMMON SHAREHOLDERS' EQUITY (%)	18.05	12.18
DIVIDENDS PAID PER COMMON SHARE (\$)		
- annual rate	.68	.68
TOTAL ASSETS(\$)	386.148.000	376,790,000
CAPITAL EXPENDITURES (\$)	18.003.000	14,484,000
AVERAGE NUMBER OF COMMON SHARES OUTSTANDING	21,362,119	20,083,593
NUMBER OF SHAREHOLDERS AT YEAR-END	1,126	1,283

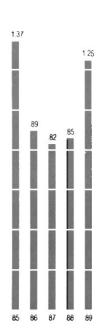




## Income before Extraordinary Items (in millions of dollars)



Income per Average Outstanding Common Share (in dollars)



## Corporate Profile



1989 ANG is a Calgary-based company operating in three business areas - hydrocarbons, specialty chemicals and magnesium.

Pacific Gas Transmission Company: a U.S. federally-regulated pipeline company, owns 49.2% of the issued and outstanding common shares of ANG. In turn, Pacific Gas and Electric Company: a major investor-owned utility based in San Francisco, California, owns 100% of Pacific Gas Transmission. The balance of the shares of Alberta Natural are held predominantly by Canadian institutions and individuals

The Company owns and operates a large-diameter natural gas pipeline which links the systems of Nova Corporation of Alberta and Pacific Gas Transmission, to move natural gas from Alberta to California. ANG has a 49% interest in and operates Foothills Pipe Lines (South B.C.) Ltd., a pipeline which parallels about one-half of Alberta Natural's line in southeastern British Columbia.

The Company also owns and operates a pipeline which transports natural gas for Shell Canada Resources. Limited in the Peace River area of Alberta.

Through the Cochrane Extraction Plant Partnership. ANG owns and operates a world-scale natural gas liquids and ethane extraction facility near Cochrane. Alberta, on the western leg of Nova's pipeline system.

This facility also produces and contracts for the marketing of carbon dioxide.

ANG is in the business of natural gas and natural gas liquids brokerage in Canada and the United States, through ANG Liquids Ltd. and its wholly-owned subsidiaries, and has an interest in NGL fractionation and storage facilities located at Marysville, Michigan.

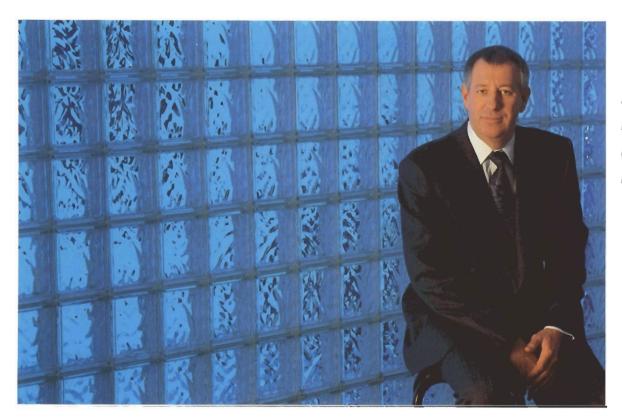
Through its subsidiary, ANGUS Chemical Company, ANG is engaged in the production and marketing of nitroparaffins and their derivatives, and the manufacture and marketing of specialty chemicals in the United States and abroad.

ANG is a 50% equity owner in a new company. Magnesium Company of Canada Ltd., which is presently completing the construction of a processing facility near High River. Alberta to produce and market high purity magnesium.

ANG has a 50% interest in the Amoco Centre tower located in downtown Calgary.







Douglas R Fenton

President and

Chief Exect: .=

Officer

We are pleased to report that consolidated earnings in 1989 increased by 58%, to \$26,889,000, or \$1.26 per share before extraordinary items. The Company incurred extraordinary losses in 1989 of \$3,266,000, or \$.15 per share due to expenses incurred to prepare the California erythromycin facility for disposal and because of the decision to write down our investment in International Permeation Inc..

These record earnings were achieved as both the Cochrane extraction plant and ANGUS Chemical's nitroparaffins business had excellent years.

The construction of the magnesium production facility by Magnesium Company of Canada Ltd. (MAGCAN) is now complete and the start-up has commenced. This commissioning period is expected to last several months. We will not be able to assess the success of the new process until this is complete. ANG is a 50% partner in MAGCAN.

We are intent on continuing to make ANG an attractive investment for the shareholders and are concentrating on the growth of the Company through its three distinct business units: hydrocarbons, specialty chemicals and magnesium.

We have recognized that although we still maintain a solid cost-of-service base, increasingly our revenue sources are market-driven. This change in asset mix requires an organizational structure and management philosophy that allows the Company to be responsive to the fast changing global environment in which we operate.

Growth in our traditional pipeline transportation and natural gas processing businesses will come not only from the direct expansion of these businesses but through the pursuit of related opportunities. These have recently included the direct marketing of natural gas liquids and refinery feedstocks through our 50% owned affiliate. CanStates. Another opportunity exists in the proposed expansion of the Alberta-California pipeline system to afford greater throughput to supply the California market with Camadian gas. This proposed expansion is currently in the design and regulatory review process.

Future opportunities being investigated currently include the utilization of waste heat from our pipeline compressor stations for the generation of electricity for domestic and export use.

ANGUS Chemical Company is dedicated to expansion in relatively small niche markets in special use chemicals. The nitroparaffins' operations provide a very satisfactory and steady level of earnings and a modest level of growth is expected in the future. The fine chemicals plant in Ireland is a grass roots diversification that supplies custom manufacturing service to large and well known pharmaceutical and agricultural chemical companies throughout the world. Its specialization is the custom manufacture of chemical intermediates used in the production of pharmaceuticals. The success of this business depends on a reputation for accuracy and reliability that takes time to build. As we establish this reputation for excellence, we expect ANGUS Fine Chemicals to be one of our important and valuable assets, that could be expanded.

MAGCAN, our newest venture into a diversified business, still must prove itself. MAGCAN has to prove that its new process is an effective method of producing magnesium that will allow timely. economic expansion of production to match the development of new uses in applications such as structural auto parts.

Through MAGCAN, we are participating in the creation of a new inclustry in Alberta that will help meet the Provincial Government's goal of economic diversification and, at the same time, create new jobs and new wealth.

The environment is rapidly becoming the focus of attention of our entire population. It promises to be the major issue of the 1990s in the developed world.

We in Canada have to make sure that our own economic development strikes a sensible balance between growth and environmental sensitivity. As Canadians, we can make a small, but important contribution to this global problem by our actions at home. Therefore, we believe that Canada should continue to be a catalyst in an international approach to the problem.

In the conduct of its own business activities, ANG continually takes steps to address and monitor areas of environmental concern. The Company plans to become more active in its responses to growing environmental concerns and will be conducting those activities under the direction of the Chairman of the Board.

During the Annual Meeting of shareholders on April 27, 1989, Messts, R.A. MacKimmie Q.C., EW. Mielke Jr., and B.W. Shackleford retired from the Board. Mr. MacKimmie served as Chairman of the Board from December, 1970, to April. 1983. We greatly appreciate their contributions to the affairs of the Company.

At the same meeting, Messrs, G.A. Maneatis, President of Pacific Gas and Electric Company: J.R. McLeod, Executive Vice President of Pacific Gas and Electric Company; and D.C. Lowe, Deputy Chairman of Bombardier Inc., were elected to the Board.

In December, 1989, Mr. D.A. Sharp was appointed Senior Vice-President and General Manager of the newly formed Hydrocarbons Business Unit; Mr. W.J. Demcoe was appointed Senior Vice-President, Finance and Corporate Services; Mr. E.W. Mychaluk was appointed Senior Vice-President responsible for ANG's magnesium investment, and Ms. P.M. Mahoney was appointed Assistant Secretary and Manager, Investor Relations.

The Board of Directors would like to thank our employees, whose dedication and commitment made this year of record earnings possible.

For the Board of Directors,

N.E. Wagner Chairman of

the Board

D.R. Fenton

President and Chief Executive Officer

March 1, 1990

The photographer's lens provides an interesting and artistic perspective of overhead pipes, a common scene throughout the operations of the Hydrocarbons Business Unit

# Hydrocarbons Business Unit

During 1989, ANG centralized its pipeline, natural gas and natural gas liquids marketing, and extraction plant activities under a separate operating entity, the Hydrocarbons Business Unit. This reorganization has created a distinct profit centre which separates the Company's core business from its chemical and magnesium activities. In addition, the Hydrocarbons Business Unit reflects the unique financial and operating environment of its pipeline and extraction plant activities.

#### Pipeline Operations

ANG's pipeline operations are centred around a large-diameter, high-pressure pipeline which transports natural gas through southeastern British Columbia. The pipeline is an integral link between the Alberta natural gas system owned by Nova and the PGT system which transports gas into the United States from a border crossing at Kingsgate, British Columbia.

In addition, ANG's pipeline operations include a 49% interest in Foothills (South B.C.) which operates pipeline loops that form part of the Alaska Highway Pipeline Project. In northern Alberta, ANG also operates a pipeline supplying gas to Shell Canada Limited.

## Average Daily Deliveries of Natural Gas

	1989	_	1988
For Export at Kingsgate	10°ms Mmcf	39.1 1.380	10 <sup>6</sup> m <sup>3</sup> Mmcf
Interruptible deliveries	10 <sup>6</sup> m <sup>3</sup> Mmcf	0.8 27.7	10 <sup>6</sup> m <sup>3</sup> Mmcf
Off-line sales	10 <sup>6</sup> m <sup>3</sup> Mmcf	0.6 22	10 <sup>6</sup> m <sup>3</sup> Mmcf
For the Shell Peace River Project	10 <sup>6</sup> m <sup>5</sup> Mmcf	0.53 18.7	10 <sup>6</sup> m <sup>3</sup> Mmcf

Deliveries to Kingsgate remained relatively unchanged in 1989 over 1988. Sales to PGT continued at high levels as a result of below normal precipitation in California, and the response of the California and northwest U.S. markets to competitively priced Canadian gas.

With continued high sales at Kingsgate, transportation capacity for interruptible shippers remained at a premium.

Capital expenditures to improve pipeline operations and reduce fuel costs continued during 1989. Near Yahk, British Columbia, a 3.5 kilometre section of main pipeline was replaced to meet regulatory safety requirements due to population increases. To increase efficiency, a new compressor was installed at the Crowsnest Compressor Station. On the Alberta/B.C. border, a new loop of the Nova pipeline was tied into ANG's system.

ANG continually conducts studies to assess its pipeline operations. In 1989, the Company completed major studies to determine compressor reliability, pipeline coating conditions and maintenance techniques. These studies have resulted in a number of capital projects which will be undertaken in 1990.



Common Shareholders' Equity per Average Outstanding Common Share (in dollars)





This double-exposure of control panels from the Cochrane extraction plant presents an interesting visual impact. Throughout the operations of the Company's Hydrocarbons Business Unit, a high degree of control is exercised over all areas of operation.

# Peace River Pipeline



The Peace River pipeline in northern Alberta continued to operate efficiently and trouble-free. Gas deliveries remained virtually constant with 1988 levels at 18.2 million cubic feet per day, with supplies dedicated to a heavy oil facility operated by Shell.

Gas deliveries are expected to increase substantially in 1990 due to the successful negotiation of a transportation agreement to supply gas to another industrial project in the region. This agreement effectively increases ANG's overall return from the Peace River operation. A metering station to supply this project was placed in service in the fourth quarter of 1989.

# Cochrane Extraction Plant Average Daily Production and Feed Gas Volumes

		1989		1988
Inlet Volumes		106m3 Mmcf		10 <sup>6</sup> m <sup>3</sup> Mmcf
NGL	2.601 16.357	200	2,480 15,613	
Ethane	6,202 39,011		6,481 40,981	m³ Bbls
CO <sub>2</sub>		Tonnes Tons		Tonnes Tons

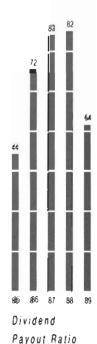
Increased NGLs production is directly attributable to higher levels of gas throughput. The plant is expected to maintain these higher levels in 1990 as a result of the Alberta Energy Resources Conservation Board (ERCB) granting final approval of an 18% increase in the plant's maximum capacity.

Ethane production was down 4.8% due to severe cold in the first two months of 1989 which affected inlet pressures and reduced recovery efficiencies. In addition, the ethane content in the gas stream was decreased.

In 1990, a \$1.0 million plant modification will be initiated. In addition to improving the plant's control system, the plant will be fitted with the technology to remove additional ethane from residue gas leaving the plant.

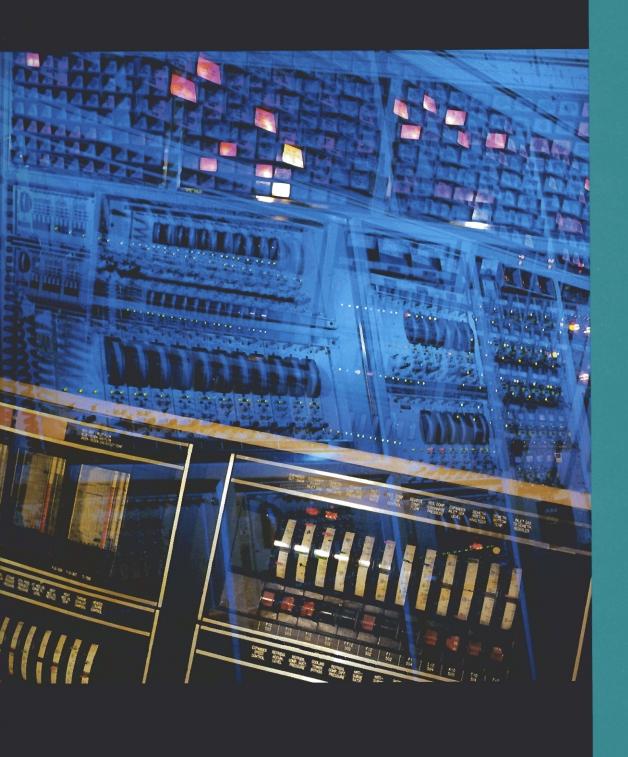
# Cochrane Liquetaction Plant

The CO<sub>2</sub> Liquefaction plant continued to show production improvements. During 1989, a number of modifications were made to recovery processes to improve efficiencies. Installation of a new product quality control system during the year will ensure improvements to the production of quality, food - grade CO<sub>2</sub>.



(in percentage)







# CanStates Energy

Since being acquired by ANG during 1987, the CanStates Energy partnership continued to show improvement in the marketing of NGLs, petrochemical feedstocks and refinery specialty streams in both Canada and the United States. ANG, through ANG Liquids Ltd., owns a 50% equity position in the partnership.

Operating income increased 15% due to higher product prices on volumes that remained stable at 1988 levels.

The strategic hub of CanStates operations are the fractionation and NGL storage facilities located at Marysville, Michigan. CanStates, as an agent for the Marysville Underground Storage Terminal, leased approximately 3.5 million barrels of liquid petroleum gas (LPG) storage during 1989, a substantial increase over the 1.6 million barrels leased in 1988.



ANG, through CanStates, is also a participant in a project to construct injection facilities, at Edmonton, Alberta. Construction is scheduled to begin in 1990. These facilities will provide NGLs to the Interprovincial Pipe Line (IPL) System. IPL has indicated that it will build storage facilities at Superior, Wisconsin to ensure that NGLs can be shipped to the fractionation facilities at Marysville. The first NGL shipments are expected to commence in 1991.

## Gas Marketing

On February 1, 1990, ANG established a general partnership, ANG Marketing, dedicated to expanding its gas marketing capabilities.

The partnership has created an independent business entity with the flexibility and efficiency to respond to the highly competitive domestic and export gas markets.

# Pipeline Expansion Project

The technical study of ANG's planned pipeline expansion project was completed in 1989 and formal regulatory application to the NEB is expected to take place by mid 1990.

ANG will design, build and operate the expansion facilities in southeastern British Columbia on behalt of Foothills (South B.C.) and will own any new compression facilities required as part of the expansion.

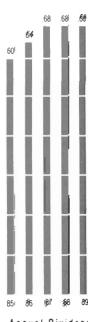
The project is currently fully subscribed by 22 shippers and will provide the most direct route for Canadian gas to California. Once completed, the line will transport 21.38 106m<sup>5</sup> (755 Mmcf) per day of Canadian gas to California and 4.19 106m<sup>5</sup> (148 Mmcf) per day to the Pacific Northwest.

ANGUS Chemical produces nitroparations derivatives for the manufacture of pharmaceuticals, cosmetics, paints and a wide range of other products

Production facilities are located in the United States

Ireland, and West Germany.





Annual Dividend
Rate per
Common Share
(year end in dollars)





# ANGUS Chemical Company

ANGUS Chemical's results improved significantly in 1989 over prior years levels. Operating earnings for the company's core nitroparaffins business improved over 1988 levels for a seventh consecutive year. Nitroparaffins derivatives activity was particularly strong in 1989, and feedstock costs were once again at stable levels. The company authorized expansions to its nitroparaffins derivatives production capacity, which are expected to be operational in early 1990.

Results at ANGUS Fine Chemicals Ltd., located in Cork County, Ireland, improved over 1988 levels. Several new products were introduced during 1989, and other potential opportunities have been identified and are being actively pursued.

The improvement in consolidated results reflects the cessation of operations at ANGUS Biotech. Inc. ANGUS has entered into negotiations to sell the assets of the California facility and anticipates no further material impact on financial results from that sale.

500

The MAGCAN production facility at High River.

Alberta will turn out high-purity magnesium for alloy use in such diverse industries as sporting goods, automotive diecast components, and other industries requiring high-strength, lightweight metal.



# Magnesium Company of Canada Ltd. (MAGCAN)

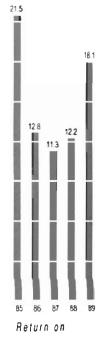
MAGCAN, 50% owned by ANG, was formed in 1987 to construct and operate a magnesium production facility near High River, Alberta. The plant utilizes a new process developed by Magnesium International Corporation Ltd., to produce high purity magnesium ingots in primary and alloy forms.

Construction of Phase I was virtually complete by year-end and plant start-up commenced early in 1990, with full production scheduled by the third quarter.

An aggressive marketing program during 1989 focused on identifying new product applications and markets. It is expected that the majority of the Company's production will supply customers in the United States. Substantial deliveries will also he made to the domestic Canadian market and key customers in Europe.

With the start-up of operations in 1990, MAGCAN will focus on proving the plant's operational and commercial viability, and ensuring a competitive position.

In conjunction with establishing a strong presence in the industry, preliminary planning is underway to prepare for a market-led construction of Phase II.



Return on Average Common Shareholders' Equity (in percentage)







## Regulatory Allairs

In August, 1989, the NEB expressed concern over terms and conditions of access to ANG's British Columbia pipeline, and directed ANG to file a uniform transportation service document to address these issues.

ANG's position is that its tariffs should remain unaltered due to the pipelines unique characteristics which set it apart from other pipelines. In addition, the pipeline is already regulated on a complaints-only basis.

ANG is proceeding with preparing a gas transportation document for filing with the NEB in the first half of 1990. This will have no material earnings impact on ANG.

At Cochrane, periods of high gas flow past the ANG plant have resulted in the maximum inlet volume exceeding levels under the Company's permit issued by Alberta's ERCB. To rectify this situation, ANG applied two years ago to have the plant's authorized maximum capacity increased from 31.15 106m3 (1.1 bcf) per day to 36.65 106m3 (1.3 bcf) per day. After several extensions of interim approval permits, the ERCB granted final approval of the application in October, 1989.

The NEB initiated a Cost Recovery proposal during 1989, which enables it to recover operating costs from regulated companies.

The NEB completed its review of industry comments, including submissions from ANG and its major natural gas transmission customer. Alberta and Southern Gas Co. Ltd., and obtained approval from the Treasury Board of a cost recovery implementation plan.

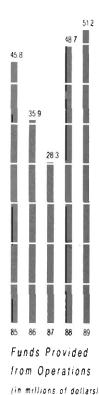
Pursuant to the plan, approximately 55% of the Board's total budget is expected to be recovered from the Canadian natural gas industry; via a charge to the regulated pipeline companies based on forecasts of throughput for the next calender year. ANG will be allocated about \$2.4 million of the NEB costs on an annual basis. These costs will be included in ANG's cost of service, and recovered from ANG's shippers.

# Safety Program

ANG's Safety Program continues to be an integral part of day-to-day operations.

In 1989, the Company's focus was to reorganize its loss prevention management systems, audit the health and safety program and continue to emphasize employee training.

These activities ensure that management and employees work together to successfully prevent accidents and minimize losses.



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The consolidated income of Alberta Natural for 1989, before extraordinary items, was \$26,889,000, or \$1.26 per average outstanding common share. After the extraordinary item discussed previously is included, net income was reduced to \$23,623,000, or \$1.11 per share. In comparison, in 1988, consolidated income, before the addition of extraordinary items, was \$17,025,000, or \$.85 per share.

As part of its long term financial strategy, the Company entered into a Deutsche mark denominated long term bank loan to offset the foreign exchange fluctuations resulting from the operations in Germany of a subsidiary of ANGUS Chemical.

The annual dividend rate during 1989 remained at the 1988 level of \$.68 per share. Dividends were payable quarterly on the last banking day of each quarter.

## Common Share Market Information

### Toronto Stock Exchange

	High	Ĺ o w	Close	Shares Traded	Dividends Paid
989					
First quarter	5 17 25	× 1 , 25	× 35 75	663,998	8.0.15
Second quarter	17 25	15.63	]ti =5	272,350	11 j
Third quarter	19 (8)	1(5.50)	]u =5	688,908	:17
Fourth quarter	19.15	16.75	19.00	268.10	0.17
ear	5 19 13	8.17.25	× 19,00	1,893,363	A), (), *
88	\$ 16.25	\$ 12.87	\$ 14.50	3.255.620	\$ 0.68
987	16.00	10.75	13.00	2,882,069	0.64
986	16.00	11.00	13.37	3.285,744	0.64
985	16.25	12.75	15.87	6,917,476	0.60

Notice is hereby given that the annual meeting of the shareholders of Alberta Natural Gas Company Ltd will be held at the Britannia Room in the Westin Hotel, Calgary, Alberta, on Thursday, the 26th day of April. 1990 at 9:30 o'clock in the forenoon, local time, for the purpose of:

- (a) receiving the report of the directors containing the financial statements of the Corporation for the year ended December 31, 1989 and the report of the auditors thereon:
- (b) electing directors:
- (c) appointing auditors; and
- (d) transacting such further and other business as may properly be brought before the meeting.

A copy of the report referred to in business item (a) above accompanies this notice.

The Board of Directors has fixed Friday, March 16, 1990, as the record date for the determination of the shareholders of the corporation entitled to notice of and to vote at the annual meeting or any adjournment thereof. Only shareholders of record at the close of business on the date so fixed shall be entitled to notice of and to vote at such annual meeting unless the transferee of any common shares after such date establishes that he owns such shares and demands, not later than ten days before the meeting, that his name be included in the list of shareholders entitled to vote thereat.

If you will not be present at the annual meeting, it would be appreciated if you would complete and sign the enclosed form of proxy and forward it in the enclosed stamped self-addressed envelope to the Secretary of the Corporation not later than 48 hours before the time appointed for the meeting.

Dated at Calgary, Alberta this 1st day of March, 1990.

By order of the Board of Directors

F.G. Homer

Vice-President and Secretary

### Revocability of Proxy

A shareholder who has given a proxy may revoke the proxy by an instrument in writing executed by the shareholder or by his attorney authorized in writing, or if the shareholder is a corporation, under its corporate seal or by an officer or attorney thereof duly authorized, and deposited either at the registered offices of Alberta Natural Gas Company Ltd (the "Corporation"), 2400 East Tower, Esso Plaza, 425 First Street S.W., Calgary, Alberta, or at the office of Montreal Trust Company, 411 - 8th Avenue S.W., Calgary, Alberta, at any time up to and including the last business day preceding the day of the meeting, or any adjournment thereof, at which the proxy is to be used or with the chairman of such meeting on the day of the meeting, or any adjournment thereof.

#### Solicitation of Proxy

The management of the Corporation is soliciting proxies to be voted at the annual meeting of shareholders of the Corporation to be held at the time and place and for the purposes set forth in the accompanying Notice of Meeting and at any adjournment thereof. The solicitation will be made primarily by mail, supplemented possibly by telephone or other personal contact by regular employees of the Corporation. The cost of the solicitation by the management will be borne by the Corporation.

#### Voting Shares and Principal Holders

On March 1, 1990, the Corporation had 21,290,686 outstanding common shares without nominal or par value. There are no other shares of any class outstanding.

Each shareholder is entitled to one vote for each common share shown as registered in his name on the list of shareholders which is available for inspection during normal business hours at the above mentioned office of Montreal Trust Company and at the meeting of shareholders. The list of shareholders will be prepared as of the close of business on March 16, 1990, the record date fixed for determining shareholders entitled to notice of the meeting. If a person has acquired ownership of shares since that date, he may establish such ownership and demand, not later than ten days before the meeting, that his name be included in the list of shareholders.

To the knowledge of the directors or officers of the Corporation, only Pacific Gas Transmission Company beneficially owns or exercises control or direction over shares carrying more than 10 percent of the voting rights attached to all outstanding shares of the Corporation. The said Pacific Gas Transmission Company beneficially owns 10,491,250 common shares of the Corporation representing 49.2 percent of the outstanding common shares of the Corporation.

#### Election of Directors

The board presently consists of eleven directors to be elected annually. The persons named in the enclosed form of proxy intend to vote for the election of the nominees whose names appear below, all of whom are now directors and have been since the date indicated opposite the particular name. The management does not know that any of the said nominees will be unable to act as director, but, should that occur in any case prior to the meeting, the persons named in the enclosed form of proxy intend to vote for another nominee in their discretion unless the shareholder has specified in the form of proxy that his shares are to be withheld from voting. Shareholders executing the form of proxy who wish their shares to be withheld from voting on this matter should so indicate in the appropriate place on the form of proxy. Each director elected will hold office until the close of the next annual meeting of shareholders or until his successor is duly elected, unless his office is earlier vacated and a successor appointed pursuant to the by-laws of the Corporation.

The following table shows the names of the persons proposed to be nominated for election as directors, the other positions and offices with the Corporation presently held by them, their principal occupations or employments, the period during which they have served as directors and the approximate number of common shares of the Corporation beneficially owned or over which control or direction is exercised by each of them.

Nomunee for Director	Position and Offices presently held in the Corporation	Principal occupation or employment and principal business of the company or organization in which such occupation or employment is carried on	Director since	Shares as at 1 March 1990
Harry Beoth		Consultant, Former Chairman of the Board and Chief Executive Officer of the Corporation.	14 November, 1969	24,334
Richard A. Clarke		Chairman of the Board and Chief Executive Officer of Pacific Gas and Electric Company, a gas and electric utility company.	23 April, 1987	5(X)
Douglas R. Fenton	President and Chief Executive Officer	President and Chief Executive Officer of the Corporation and of Alberta and Southern Gas Co. Ltd.	15 May, 1975	01-8,00
John F. Goudge		Chairman of the Board of Alberta and Southern Gas Co. Ltd.	22 April, 1981	26,282
Donald C. Lowe		Deputy Chairman, Bombardier Inc., a transportation and equipment manufacturing company	27 April, 1989	~
George A. Maneatis		President of Pacific Gas and Electric Company.	27 April, 1989	-
Jerry R. McLeod		Executive Vice President of Pacific Gas and Electric Company.	27 April, 1989	-
Robert J. Richardson		Management Consultant.	29 April. 1988	1.000
Stanley T. Skinner		Vice Chairman of the Board of Pacific Gas and Electric Company	23 April, 1987	300
John A. Sproul		Consultant. Former Chairman of the Board of Pacific Gas Transmission Company, a gas transmission company.	7 June, 1978	2,000
Norman E. Wagner	Chairman of the Board	Consultant.	22 April, 1986	200

Messrs. Booth, Fenton, Goudie, Maneatis, Richardson and Wagner are also directors of ANGUS Chemical Company, a significant affiliate of the Corporation.

The information as to common shares beneficially owned or over which control or direction is exercised by a nominee for director, not being within the knowledge of the Corporation, has been furnished by the respective nominees individually.

#### exercise of Discretion by Proxy

The shares represented by the enclosed form of proxy will be voted or withheld from voting on any ballot that may be called for. Where the shareholder specifies a choice on the enclosed form of proxy with respect to any matter to be acted upon, the shares will be voted or withheld from voting in accordance with any specification so made. The enclosed form of proxy confers discretionary authority upon the persons named therein with respect to amendments to matters identified in the notice of meeting of other matters that may properly come before the meeting. At the time of printing this circular, the management of the Corporation knows of no such amendments or other matters to come before the meeting.

#### Directors' and Officers' Insurance

Directors' and officers' liability insurance is carried by the Corporation in the amount of \$10 million. The policy of insurance provides that there will be no deductible for each director or officer, or for all of them in the aggregate. The policy does provide for a deductible of \$250,000 for the insured organization (as that term is defined in the policy). The premium paid by the Corporation for the period July 28, 1989 to July 28, 1990 was \$49,500.

#### Appointment of Auditors

The persons named in the enclosed form of proxy intend to vote for the reappointment of Arthur Andersen & Co., Chartered Accountants, Calgary, Alberta as auditors of the Corporation to hold office until the close of the next annual meeting of shareholders. Shareholders executing the form of proxy who wish their shares to be withheld from voting on this matter should so indicate in the appropriate place on the form of proxy.

#### Executive Remuneration

- 1. The Corporation has 4 executive officers (as defined in the Regulations issued pursuant to the Canada Business Corporations Act).
- 2. Neither the Corporation nor any of its subsidiaries makes any direct payment of cash remuneration to the executive officers of the Corporation. In respect of services rendered to it by an executive officer who is also an officer of a related company, the Corporation pays a service charge to the related company.
- 3. The Corporation has a Senior Management Stock Option Plan (the "Plan") pursuant to which options to purchase common shares of the Corporation, which have been set aside for issuance under the Plan, are granted to certain employees of the Corporation including its executive officers. The granting of any such options is the responsibility of the compensation committee of the Board of Directors, subject to approval by the Board. The compensation committee determines the number of shares that may be subject to the option as well as all terms and conditions to which the option may be subject. Options granted to date have been exercisable within five years from the date of the grant at a price which was 90% of the average market price of the common shares of the Corporation on The Toronto Stock Exchange during the five trading days immediately preceding the date of the grant. The Plan also provides that the Corporation, if requested, will loan the Optionee a sum of moncy equal to the price payable for the number of shares purchased, which loan is repayable, without interest, on the fifth anniversary of the date of the loan.

During 1989, options to purchase 12,500 common shares of the Corporation pursuant to the Plan were granted to the executive officers of the Corporation at a price of \$14.75 per share. The average market price of the common shares of the Corporation underlying the option, during the five trading days immediately preceding the date of the grant was \$16.36. With respect to options exercised during 1989 pursuant to the Plan, by the executive officers of the Corporation, the aggregate net value (market value less exercise price on the date of exercise) of the common shares under option was \$21,875.

4. Compensation presently payable by the Corporation to its directors for service as directors comprises an annual retainer of \$12,500 plus \$500 for attendance at each meeting including committee meetings. However, those directors who are full time employees of Pacific Gas and Electric Company do not accept any such compensation, due to a policy of that company which precludes them from so doing.

### Indebtedness of Directors and Officers

Since January 1, 1989, the Corporation loaned the sum of \$1.006,925 to employees of the Corporation to assist those employees in the purchase of common shares of the Corporation pursuant to the Corporation's Senior Management Stock Option Plan. The following directors and officers are indebted to the Corporation in amounts exceeding \$10,000 to the extent set forth below in respect of non-interest bearing loans for the purchase of common shares of the Corporation under the said Plan.

	Largest aggregate amount of indebtedness	Current outstanding amount of
	since January 1, 1989	indebtedness
I Booth	256,398.5+	256,398.34
VJ. Demcoe	308,500.00	308,500.00
D.R. Fenton	812,050.00	525,850.00
E. Goudie	3 10,390.50	340,390.50
C. Homer	388.419.34	388.±19.34
M. Mahonev	246,609.00	2 (6,609.00
) V.c.Morland	461,487.00	161,487.00
W Mychiduk	425,908.00	125,908.00
D.A. Sharp	419,942,34	419,942,34

### Effective Date of Information and Approval of Management Proxy Circular

The information herein is given as at March 1st, 1990. The contents of this Management Proxy Circular and the mailing thereof to the shareholders have been authorized by the Board of Directors of the Corporation.

Dated at Calgary, Alberta, this 1st day of March, 1990.

Alberta Natural Gas Company Ltd

F.G. Homer

Vice-President and Secretary

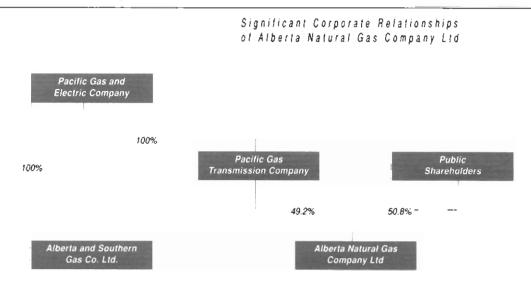
# Contents

The Company		Summary of Consolidated	
Corporate Relationships	24	Financial Information	2.0
<b>4</b> aps	2.	Management Discussion and Analysis	37
Hydrocarbons and Magnesium Facilities -		General	; -
Alberta and British Columbia	26	Significant Accounting Policies	37
Chemical Facilities	27	Foreign Exchange	37
Business and Property	7.5	Goodwill	37
Summary Description	28	Depreciation	37
Hydrocarbons	29	Financial Condition	38
Gas Transportation Facilities	29	Property, Plant and Equipment	38
Gas Transportation Contracts	29	investments and Advances	38
British Columbia Pipeline -		Long Term Debi	39
Firm Transportation	29	Working Capital	39
British Columbia Pipeline		Changes in Cash Flow	40
Interruptible Transportation	30	Liquidity and Capital Resources	4.1
British Columbia Pipeline		Results of Operations	2.
Regulation of British Columbia Pipeline	30	Hydrocarbons Business	41
Peace River Pipeline	31	Chemical Business	41
Cochrane Extraction Plant	31	Magnesium Business	43
Cochiane Plant		Market for the Constitue	
Extraction Contracts	31	Market for the Securilies of the Company	2.1
Cochrane Plant -		Dividends	2.4
Product Sales Contracts	31		
Pipeline and Plant Volumes	32	Subsidiaries of the Company	÷ .
Natural Gas Marketing	33	Directors and Officers of the Company	± 5
Natural Gas Liquids	34		
Chemicals	34	Report of Management	ź '
ANGUS Chemical Company	34	Consolidated Financial Statements	2.5
Magnesium	35	Auditors' Report to Shareholders	48
Magnesium Company of Canada Ltd.	35	Consolidated Statement of Income	49
Other	35	Consolidated Balance Sheet	50
Office Building	35	Consolidated Statement of	
International Permeation Inc.	35	Reinvested Earnings	52
		Consolidated Statement of	
		Changes in Cash Flow	53
		Summary of Significant	
		Accounting Policies	54
		Notes to the Consolidated Financial Statements	5.0
		rinanciai Statement\$	5 €
		Additional information	33
		Certificate of the Company	ē 2

Alberta Natural Gas Company Ltd (the "Company" or "ANG") was incorporated on June 1, 1950 by a Special Act of the Parliament of Canada, being 14 George VI Chapter 61. On July 8, 1971, ANG was continued as a company under Part I of the Canada Corporations Act and on May 14, 1979, was further continued as a corporation under the Canada Business Corporations Act.

The head and principal office of the Company is located at 2400, 425 - First Street S.W., Calgary, Alberta, Canada, T2P 3L8.

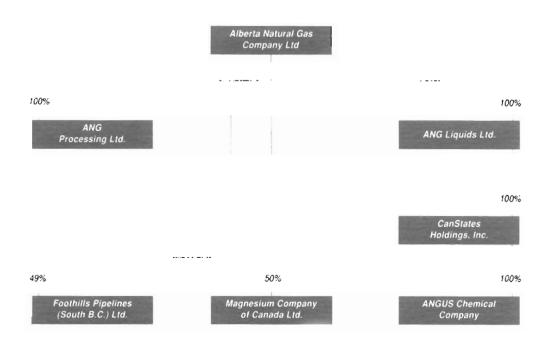
## Corporate Relationships



Pacific Gas and Electric Company ("Pacific Gas and Electric"), a major investor-owned utility company having its head and principal office in San Francisco, California, owns 100% of Pacific Gas Transmission Company ("Pacific Gas Transmission"). Pacific Gas Transmission, a U.S. federally-regulated pipeline company, owns 49.2% of the issued and outstanding shares of ANG. The halance of the shares are held predominantly by the Canadian public.

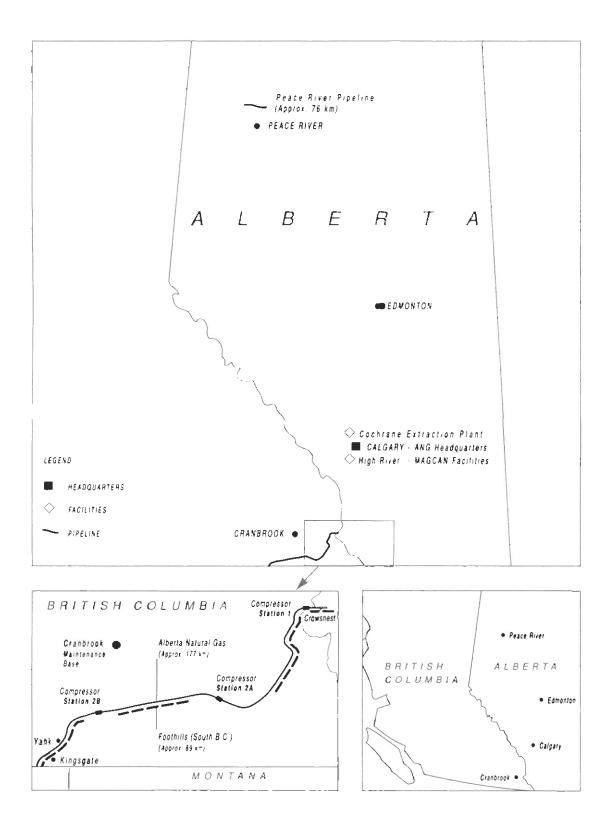
# Corporate Relationships

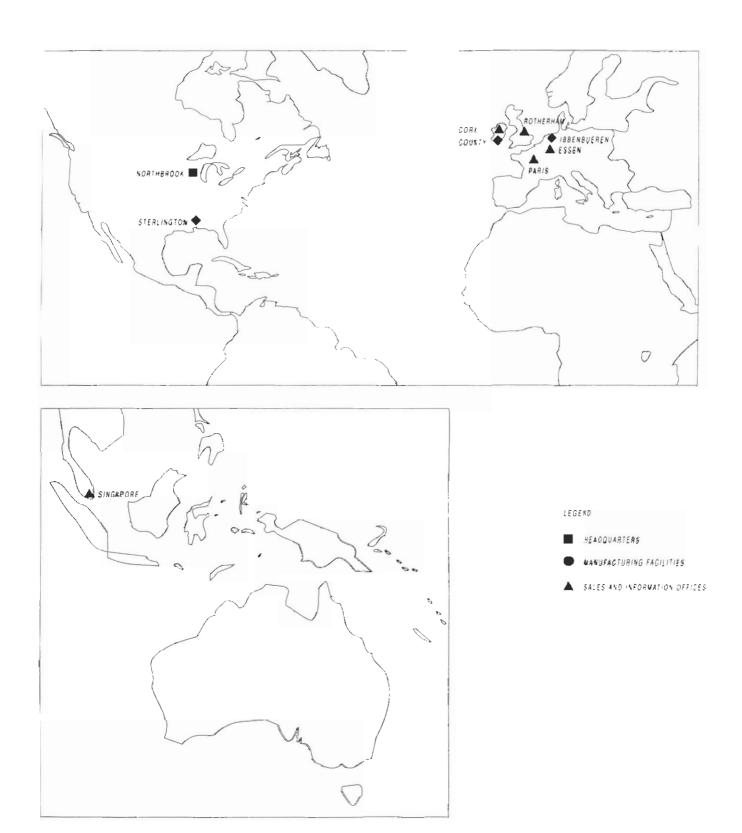




Of the above corporations, ANG Liquids Ltd. ("ANG Liquids") and its subsidiaries, and ANG Processing Ltd. ("ANG Processing") are considered to be direct subsidiaries of ANG under applicable securities legislation. The remaining corporations are shown for information purposes only. A complete list of corporations, considered to be subsidiaries of ANG under applicable securities legislation, is on page 44.

ANG owns 100% of the issued capital stock of each of ANG Liquids and ANG Processing. ANG Liquids owns 100% of the issued common shares of CanStates Holdings, Inc. ("CanStates Holdings") which in turn owns 100% of the issued common shares of ANGUS Chemical Company, ("ANGUS Chemical"). ANG owns 49% of the outstanding common shares of Footbills Pipe Lines (South B.C.) Ltd. ("Footbills (South B.C.)"), with the remaining outstanding common shares being owned by Footbills Pipe Lines (Yukon) Ltd. ANG owns 50% of Magnesium Company of Canada Ltd. ("MAGCAN") with the remaining 50% being held by one other party.





## Summary Description

Alberta Natural Gas Company Ltd is a Calgary-based company which has been active in the natural gas industry for over twenty-five years. Originally a transporter of natural gas, ANG has expanded its operations to include natural gas processing and marketing.

More recently, the Company has diversified its operations through the acquisition of a chemical division and most recently has acquired an interest in a magnesium production facility. The Company's fundamental corporate strategy of resource management to provide steady income and asset growth has been strengthened by this strategy of diversification.

The Company's operations are now comprised of three primary business segments together with certain other interests. These primary segments include hydrocarbon processing, marketing and transportation, chemical processing and marketing and magnesium processing and marketing.

The Company owns and operates a large-diameter pipeline for the transportation of natural gas through southeastern British Columbia (the "British Columbia Pipeline"). This pipeline links the systems of NOVA Corporation of Alberta ("NOVA") and Pacific Gas Transmission. The Company has a 49% interest in Foothills (South B.C.), which owns a pipeline looping about one-half of ANG's British Columbia Pipeline. The pipeline loops form a portion of the Alaska Highway Pipeline Project. The Company operates the Foothills (South B.C.) pipeline in conjunction with its own British Columbia Pipeline system. ANG also owns and operates a pipeline in northern Alberta, which transports natural gas for Shell Canada Limited ("Shell").

ANG is the managing partner of a major natural gas liquids ("NGL") and ethane extraction facility near Cochrane, Alberta, on the western leg of NOVAs system. A carbon dioxide ("CO $_2$ ") facility at the plant site extracts food-grade liquified CO $_2$  from the ethane product stream.

The Company is engaged in the NGL brokerage business in Canada and the United States through ANG Liquids and its wholly-owned subsidiaries and has interests in two United States partnerships, which own and operate a fractionator and an underground storage facility located at Marysville, Michigan.

The following is a brief summary of events which have occurred in the past five years, which have significantly impacted upon the Company's general development.

#### Corporate

In 1988, ANG completed a Rights Offering and issued 3.050,305 common shares for proceeds of \$34,640,000 which was used to reduce notes payable.

#### Hydrocarbons

In 1985, ANG entered into a contract with Shell Canada Limited ("Shell") for the transportation of natural gas to Shell's oil sands recovery project in the Peace River area of Alberta. Delivery of gas commenced in 1986.

In 1987, ANG acquired a 50% equity position in CanStates Energy Partnership ("CanStates Energy"), a marketer and broker of NGL and chemical and refined products. In 1988 and 1990, the Company entered into the CanStates Gas Marketing partnership and the ANG Marketing partnership, respectively, each fonned to market natural gas.

## Chemicals

In 1987, ANG acquired substantially all of the shareholders' interest in ANGUS Chemical which is engaged in the production of nitroparaffins and derivatives and the manufacture of fine chemicals in the United States and Europe.

ANGUS Chemical, through its subsidiary ANGUS Fine Chemicals Ltd., completed construction in 1987 of a new plant in freland offering fully integrated process development and manufacturing capabilities for the pharmaceutical and fine chemical markets.

In 1988, ANG curtailed the operation of its erythromycin production facility operated by ANGUS Biotech, Inc., a subsidiary of ANGUS Chemical and wrote down its investment in related plant, property and equipment and product inventories in the amount of \$12,514,000 (net of tax of \$8,343,000).

### **Magnesium**

In 1987, ANG became a 50% participant in a project to design, engineer, construct and own a magnesium production facility near High River, Alberta. Construction commenced in 1988 and was completed during the first quarter of 1990.

#### Other

In 1981, ANG entered into an agreement for the joint development of an office building (Amoco Centre) in downtown Calgary with Olympia & York Developments Limited ("Olympia & York") on land to be equally owned by ANG and Olympia & York. Construction was completed in 1988 and the building is now 71% occupied.

#### Hydrocarbons

## Gas Transportation Facilities

The British Columbia Pipeline is a large-diameter, high-pressure pipeline system, which connects with the pipeline system of NOVA near Coleman, Alberta, and the pipeline facilities of Pacific Gas Transmission at the international border near Kingsgate, British Columbia, and consists of approximately 177 km (110 miles) of 914 mm (36 inch) pipeline along a 171 km (166 mile) mainline right-of-way, and three compressor stations with a total of approximately 73 500 kW (98,500 horsepower [ISO]) (see the map on page 26). This interconnected pipeline system historically has provided up to 50% of the total volume of natural gas required by Pacific Gas and Electric for its northern and central California market and, in 1989, provided approximately 49% of the total volume of this market. In addition to the large volumes of gas exported at the Kingsgate international border point, deliveries are made to Columbia Natural Gas Limited at eight sales taps and gas is also delivered on an exchange basis to Inland Natural Gas Co. Ltd., all for use in the interior of southeastern British Columbia. The Company also transports gas on an interruptible basis, as described below under the heading "Gas Transportation Contracts".

The 76 km (48 miles) of 324 mm (12 inch) pipeline in the Peace River area of northern Alberta supplies natural gas to a heavy oil recovery project operated by Shell near Peace River, Alberta.

The Company has all certificates, licences and authorizations necessary to operate all of its pipeline facilities. In accordance with industry practice, all of the Company's pipelines and ancillary facilities were constructed on either rights-of-way acquired primarily by easement and similar grants, or property purchased in fee simple.

# Gas Transportation Contracts

## British Columbia Pipeline · Firm Transportation

The Company entered into a gas transportation contract with Alberta and Southern Gas Co. Ltd. ("Alberta and Southern") and Westcoast Transmission Company Limited, now Westcoast Energy Inc. ("Westcoast"), dated September 20, 1960, which contract, as amended, provides among other things, for the firm transportation of natural gas exported by the two companies from Canada. The contract will remain in force until October 31, 1993, and for as long thereafter as either Alberta and Southern or Westcoast has all the necessary government authorizations for the export of natural gas.

Alberta and Southern presently has the requisite authorizations, extending to October 31, 2000, to remove specified quantities of natural gas from Alberta. In June, 1989, the National Energy Board (the "NEB") extended

Alberta and Southern's Canadian natural gas export licence from 1994 to 2005. Approval is currently being sought from the Alberta Energy Resources Conservation Board, for a term extension of the Alberta and Southern provincial removal permit to the year 2010.

Westcoast Energy Marketing Ltd. ("Westcoast Energy Marketing"), a wholly-owned subsidiary of Westcoast, presently has the requisite authorizations, extending to October 31, 1991, to remove specified quantities of natural gas from Alberta. Westcoast holds a natural gas export licence allowing it to export specified volumes until October 31, 1992. In September, 1989, Westcoast filed an application with the NEB for a consolidated licence extending to October 31, 2004. It is expected that the NEB will issue a decision on the matter during 1990.

Regulatory authorities in the United States have issued to Pacific Gas Transmission, as purchaser of Alberta and Southern's natural gas volumes, an import authorization with a term ending in October 31, 1993. Pacific Gas Transmission has applied to extend the term to October 31, 2005. All customers of Westcoast also hold the requisite United States import authorizations.

Under its major gas transportation contract with Alberta and Southern and Westcoast, the Company receives a monthly cost-of-service payment allocated among the shippers in proportion to their respective daily contract quantities. This cost of service includes all reasonable and necessary operating expenses, depreciation, amortization, income and other taxes, and a contractually established return, presently fixed at an annual rate of 11.78% applied to its rate base.

The Company's net income from the provision of this transportation service is not affected by the quantity of gas transported within the limits of the present export licences of Alberta and Southern and Westcoast. The contract also provides that Alberta and Southern and Westcoast may require the Company to construct facilities, subject to the receipt of necessary authorizations, to enable its pipeline system to transport additional volumes of gas.

The Company entered into operating and transportation agreements with Foothills (South B.C.), dated April 24, 1980, as amended, providing for the transportation of natural gas owned by Pan-Alberta Gas Ltd. ("Pan-Alberta") through Foothills (South B.C.)'s pipeline and ANG's British Columbia Pipeline, and for the operation of the Foothills (South B.C.) pipeline. The operating agreement with Foothills (South B.C.) terminates upon the date the NEB authorization to operate the pipeline terminates. The transportation agreement can be terminated by Foothills (South B.C.) on not less than twelve months' notice. The Foothills (South B.C.) pipeline operates under a Certificate of Public Convenience and Necessity issued pursuant to Section 20 (1) of the Northern Pipeline Act. The Certificate itself does not contain any time limitation.

## British Columbia Pipeline - Interruptible Transportation

The Company began transporting natural gas on an interruptible basis in February. 1986, after entering into its first interruptible transportation contract on November 1, 1985. Since then, the Company has entered into more than twenty natural gas transportation contracts for interruptible service on the British Columbia pipeline. Natural gas transported under all but one of the contracts is exported at Kingsgate, British Columbia. These interruptible shippers are only entitled to have their gas transported when and if there is any unused capacity on the British Columbia Pipeline. Priority among these shippers is determined on the basis of the effective date of their respective gas transportation contracts with the Company.

## Regulation of the British Columbia Pipeline

Effective April 22, 1987, the NEB determined that it would accept the Company's tolls and tariffs as filed by the Company from time to time and would review these tolls and tariffs only if a complaint is received. In light of recent NEB decisions concerning the tolls and tariffs of gas pipelines, the NEB indicated in August, 1989, that certain aspects of ANG's tariffs were not in accordance with principals recently adopted by the NEB. Accordingly, ANG has been directed to file with the NEB, a uniform transportation tariff to reflect all transportation services offered by the Company on the British Columbia Pipeline. It is anticipated that any

decision made by the NEB with respect to this matter will not materially affect the Company's transportation operations.

#### Peace River Pipeline

The Company entered into a gas transportation contract with Shell dated February 1, 1985, as amended, providing for the transportation of natural gas for Shell's Peace River Expansion Project, a heavy oil recovery project in the Peace River area of Alberta. Delivery of gas commenced September 1, 1986. The contract will remain in force until February 1, 2016, and for as long thereafter as is mutually agreed to by the two companies. The contract also provides that the Company is to receive a monthly cost-of-service tariff. The Company's net income from the operations of the Peace River pipeline is not affected by the quantity of gas transported.

#### Cochrane Extraction Plant

On December 3, 1987, ANG transferred ownership of the ethane and NGL extraction plant, located near Cochrane, Alberta, to the Cochrane Extraction Plant Partnership (the "Partnership"). The partners of the Partnership are ANG, and two of its wholly-owned subsidiaries, ANG Liquids and ANG Processing. ANG is the managing partner of the Partnership, and also holds a majority interest in the Partnership. Other activities of ANG Liquids and ANG Processing are described on page 33.

The Cochrane plant commenced operations in May, 1970, to extract propane and heavier hydrocarbons from the gas stream passing by the plant. An expansion completed in 1978 provided for the recovery of ethane, and a further expansion, completed in 1983, provided for the recovery of additional quantities of ethane and for the removal of  $\mathrm{CO}_2$ . Construction of a facility to refine the  $\mathrm{CO}_2$  to food grade for use in gas well stimulation operations and in the carbonated beverage industry, was completed in June of 1986. The Cochrane plant has a design capacity of 6 500 cubic meters (41,000 barrels) per day of ethane, and 2 600 cubic meters (16,000 barrels) per day of NGL. The Cochrane plant has achieved a one day production record of 8 280 cubic meters (52,399 barrels) of ethane and 3 200 cubic meters (20,146 barrels) of NGL. The  $\mathrm{CO}_2$  facility has the design capacity to produce 150 tonnes (170 tons) per day of liquid  $\mathrm{CO}_2$ .

## Cochrane Plant - Extraction Contracts

ANG has gas supply agreements with each of Alberta and Southern and Pan-Alberta, authorizing the extraction of ethane and NGL from their respective gas streams which flow by the Cochrane plant. ANG also has agreements with certain of the interruptible shippers of natural gas for the processing of their natural gas.

ANG has two gas supply contracts with Alberta and Southern. The first, for the extraction of NGL, is dated July 2, 1968, and will remain in force until December 31, 2009. The second, for the extraction of ethane, is dated June 24, 1977, and will remain in force until December 31, 2012.

In October, 1981, ANG executed a contract with Pan-Alberta for the right to extract ethane and NGL from Pan-Alberta's natural gas stream passing by the Cochrane plant. This arrangement expired as of April 30, 1985, and was replaced by a Letter Agreement effective May 1, 1985, between ANG and Pan-Alberta Resources Inc. "PARI"). Pan-Alberta has granted to PARI the sole and exclusive right to extract NGL and ethane from Pan-Alberta's natural gas stream, and in turn, PARI has granted these rights to ANG. The parties are currently operating under this Letter Agreement and are in the process of completing a formal agreement.

## Cochrane Plant - Product Sales Contracts

The NGL produced at the Cochrane plant are delivered to and marketed by Amoco Canada Resources Ltd. ("Amoco Canada Resources"), formerly Dome Petroleum Limited, and Amoco Canada Petroleum pursuant to a Liquids Sales Agreement among the Partnership, Amoco Canada Resources, and Amoco Canada Petroleum dated July 2, 1968, as amended (the "Liquids Sale Agreement"). This agreement provides the Partnership with a participation of at least 25% in the cumulative net profits from the marketing of NGL, and with a monthly

cost-of-service tariff, which includes a return on the net investment base of the plant. Amoco Canada Resources and Amoco Canada Petroleum are responsible for the marketing of the liquids. The agreement will remain in force until December 31, 2009.

Pursuant to an Ethane Supply Agreement, dated June 24, 1977, as amended, between the Partnership and Alberta Gas Ethylene (the "Ethane Supply Agreement"), ethane is delivered to The Alberta Gas Ethylene Company Ltd. ("Alberta Gas Ethylene") at the tailgate of the Cochrane plant for use primarily as a feedstock in the production of ethylene at plants located near Joffre, Alberta. This agreement includes a return on the unrecovered investment. In addition, the Partnership receives a share of the annual net profit realized by Alberta Gas Ethylene on the sale, outside Alberta, of ethane surplus to ethylene plant requirements. The agreement will remain in force until December 31, 1998.

Sales to the buyers under the Ethane Supply Agreement and the Liquids Sale Agreement contributed to the consolidated revenues of ANG for 1989 and 1988 in the following percentages:

	1989	1988
Alberta Gas Ethylene	$26^{-\alpha}$	27.6%
Amoco*	1 + 9%	15.1%

<sup>\*</sup>includes Amoco Canada Petroleum and Amoco Canada Resources

The Partnership earns a return on its investment at the Cochrane plant, regardless of the quantity of NGL or ethane produced.

#### Pipeline and Plant Volumes

The following table sets forth both the average daily volumes of gas delivered through ANG's pipeline systems during the five calendar year period 1985 - 1989, together with the average daily volumes of ethane, NGL and  $\rm CO_2$  produced at the Cochrane plant during the same period:

(Average Per Day)	1949	1988	1987	1986	1985
Volume of gas delivered:					
For export at Kingsgate:					
$(10^6 \text{m}^3)$	- SS - 1	39.1	37.6	27.0	31.9
(Mmef)	4.0	1,380	1.327	953	1,127
For Peace River Project:					
$(10^6 \text{m}^3)$	• _	.53	.56	.34	
(Mmcf)	50	18.7	20.0	12.0	_
Cochrane plant production:					
NGL:					
(m <sup>5</sup> )	1.1	2 480	2 326	1 802	2 235
(Bbls)	10,55	15,613	14,645	11.345	14,070
Ethane:					
(M3)	2.1	6 481	6 349	5 045	6 <b>1</b> 60
(Bbls)	ext.11	40,981	40,146	31,935	38,940
CO2:					
tonnes		72.1	52.4	21.5	_
tons	68.73	79.5	57.8	23.7	_

# Natural Gas Marketing

In 1982, ANG instituted a natural gas marketing program within the Province of Alberta, to take advantage of an opportunity to market the growing surplus of natural gas. Since that time, numerous brokerage arrangements have been entered into to serve other Canadian markets, primarily on a short term basis. One of ANG's gas sale contracts, with Shell Canada Products Limited, dated July 15, 1983, is for a longer term, as it provides for the supply of gas for a twenty-year period for use by Shell Canada Products Limited at its facilities near Scotford, Alberta.

A general partnership, ANG Marketing, comprised of ANG and ANG Processing was established in February, 1990, for the purpose of independently carrying on ANG's gas marketing business primarily in Alberta and British Columbia.

ANG continues to participate in marketing opportunities east of Alberta and in the United States through CanStates Gas Marketing, a partnership between CanStates Energy and GasTrade Inc.

### Natural Gas Liquids

ANG finalized, in 1987, the acquisition of a 50% equity position in CanStates Energy through the purchase of the issued and outstanding shares of Rankin Holdings Ltd., subsequently renamed ANG Liquids Ltd., and related asset purchase arrangements with subsidiaries and affiliates of Polysar Limited ("Polysar").

CanStates Energy operates as a marketer and broker of NGL and chemical and refined products, including a large portion of the petrochemical feedstock requirements of Polysan

In addition to the marketing operations of CanStates Energy, ANG acquired, through two partnerships, interests in certain fractionation and NGL storage facilities. These assets consist of a 24% interest in a 5 085 m<sup>5</sup> (32,000 barrels) per day fractionator and a 12.25% interest in a 794 550 m<sup>5</sup> (5 million barrels) underground storage facility, both located at Marysville, Michigan across the St. Clair River from Samia, Ontario.

The hydrocarbons business segment of the Company had 125 employees at January 1, 1990. This number represents the total staff in the Calgary office and at field facilities and offices.

## ANGUS Chemical Company

In 1982, ANGUS Chemical was formed to purchase the nitroparaffins division of International Minerals and Chemical Corporation ("IMC"). ANGUS Chemical has its head office in Northbrook, Illinois. Pursuant to transactions made effective December 30, 1988, all of the shares of ANGUS Chemical were transferred from ANG to CanStates Holdings. Through ANG Liquids, ANGUS Chemical remains a 100% subsidiary of ANG.

The properties of ANGUS Chemical include production facilities located on freehold land owned by the company in Sterlington, Louisiana. For the purpose of installing a bio-waste pollution control system at the ANGUS Chemical plant in Sterlington, the town of Sterlington issued certain revenue bonds. The facility is encumbered in the amount of \$15,061,000 by an indenture of mortgage and pledge securing these revenue bonds. ANGUS Chemical also owns a technical center located near the Northbrook office, which provides new applications research and expanded analytical capabilities to ANGUS Chemical for the benefit of its customers.

Nitroparaffins and derivatives produced by ANGUS Chemical are used in many areas, including pharmaceuticals, coatings, solvents and textiles, and serve a wide range of specialty chemical markets. The Sterlington plant manufactures nitroparaffins from a feedstock of internally manufactured nitric acid and readily available propane and is operated for ANGUS Chemical by IMC in accordance with an agreement between the two parties. A \$5.0 million (U.S.) expansion of the plant, scheduled for completion in the first half of 1990, will enable the core business to meet increased demand for two high margin nitroparaffins derivatives. A wholly-owned subsidiary. ANGUS Chemic GmbH, owns and operates a plant in Ibbenbueren. West Germany, which manufactures two major nitroparaffins derivatives from a combination of formaldehyde, nitropropane and hydrogen.

ANGUS Fine Chemicals Ltd. ("ANGUS Fine Chemicals"), 100% owned by ANGUS Chemical, operates a multipurpose fine chemicals plant in Cork County, Ireland, on land held under long term lease. This plant offers fully integrated process development and manufacturing capabilities to the pharmaceutical and fine chemical markets on a world-wide basis. Using raw materials often supplied by its customers, ANGUS Fine Chemicals is a toll manufacturer of pharmaceutical intermediates designed to meet the specifications and requirements of its customers. As a result of business expansion, a \$2 million expansion to the waste treatment facilities at the plant is intended for 1990.

ANGUS Biotech, Inc. ("ANGUS Biotech"), 96% owned by ANGUS Chemical, was formed in 1986 through the acquisition of certain assets of Rachelle Laboratories of Long Beach, California for the purpose of commercial production of the antibiotic erythromycin at its Long Beach facility. Process and production problems resulted in a decision, in December, 1988, to curtail commercial production. Despite implementation of process improvement efforts, it was determined in March, 1989, that a return to commercial production was not practical. Operations have been discontinued and ANGUS Chemical is currently completing the sale of the assets of ANGUS Biotech.

ANGUS Chemical and its subsidiaries employ 328 people worldwide. This number does not include the 300 contract personnel at the Sterlington plant. Both the contract personnel at the Sterlington plant and approximately 60% of the 165 employees at the Cork County, freland plant are unionized. The labor contract for Sterlington is being renewed in 1990 and the Irish three-year labor contract is currently in its second year. During 1989, 54% of the total sales of ANGUS Chemical and its subsidiaries were made in the United States,

The consolidated accounts of ANGUS Chemical are included in the consolidated financial statements of ANG

with the remaining 46% of sales being made in Europe.

# Magnesium Company of Canada Ltd.

MAGCAN, 50% owned by ANG, was formed in 1987, to design, engineer, construct and own a magnesium production facility, located near High River, Alberta, utilizing a new process and to market the high quality magnesium produced therefrom. Construction of phase one of the three phase facility commenced in April. 1988, and was completed during the first quarter of 1990. As of February 1, 1990, commissioning activity had commenced on 75% of the plant systems with full plant start-up targeted for the first quarter of 1990. Pursuant to a long term supply contract, high-grade magnesite ore, sourced nearby in British Columbia, is the primary feedstock for the facility.

The facility has been designed and constructed to meet all environmental protection requirements. Consequently, no material capital expenditures relating to environmental protection are foreseen at this time.

The primary markets for magnesium produced at the High River facility will be aluminum alloy production, desulfurization of iron and steel, chemical and metallurgical processes, and structural uses including the discasting market. MAGCAN is dedicated to the development of new applications and markets for its product. In conjunction with its market expansion plans, MAGCAN's research and development activities include process enhancement and assistance in the development of specific product applications of its customers.

The patented technology upon which the process is based is owned by Mineral Process Licensing Corporation B.V. and is licenced to MAGCAN under a technology licence agreement for a term of thirty years or the expiration of the last patent, whichever is the latter. With this new technology, MAGCAN believes it will attain a competitive position in the world magnesium markets.

MAGCAN employed a total of 81 persons at its Calgary office and High River plant at year-end 1989.

Other

# Office Building

Construction of Amoco Centre, a major office building in downtown Calgary, owned equally by ANG and Olympia & York, was completed in the summer of 1988. Olympia & York is responsible for arranging the interim and permanent financing for the project. ANG is to assume the obligation for its proportionate share of such financing. The Company's security to be pledged for the financing will be restricted to its share of the project. At the end of 1989, lead tenant Amoco Canada Petroleum occupied approximately 71% of the leasable space; Olympia & York are actively seeking additional tenants.

### International Permeation Inc.

ANG is one of four owners of IPI, a private Alberta company, which had developed a membrane technology for the separation and recovery of various components from gas mixtures and natural gas streams. IPI's mandate was to pursue the commercial exploitation of this technology and it had devoted extensive efforts to accomplish this end. In April, 1989, the board of directors of IPI resolved to either sell the company or wind up its activities. This decision resulted from the current economic environment in the petroeum industry, which has to date, prevented the company from developing adequate markets. Accordingly, all deferred research and development costs were written down at March 31, 1989.

				Year Ended (	December 31
Thousands of dollars (except share data)	1989	1988	1987	1986	1985
Operating revenue	366,81	340,400	318,797	308,454	372,806
Income before extraordinary items	26,889	17,025	14.893	16,247	24,968
Net income	23,623	4,511	16,906	16,247	24,968
Total assets	386.148	376,790	386,527	360,283	340,183
Long term debt (including current portion)	91.042	83.921	95,612	95,395	35,961
Earnings per average outstanding common share:					
before extraordinary items	1.20	0.85	0.82	0.89	1.37
after extraordinary items	: 11	0.23	0.93	0.89	1.37
Dividends declared per common share	0.68	0.68	0.68	0.64	0.60

Notes: The Company has not issued any preferred shares.

1988 earnings per share reflect the effect of a rights offering completed May 31, 1988.

Certain prior year figures have been reclassified to conform to the 1989 financial statement presentation.

Decrease in net income and total assets in 1988 reflect the December, 1988 writedown of the assets of the erythromycin production facilities in California.

Three Wonths Ended Lunaudited; Thousands of dollars (except share data)	Dec. 31 1989	Sept. 30 1989	June 30 1989	Mar. 31 1989
Operating revenue	89.721	90,867	90.976	95,283
Net income:				
before extraordinary items	9,157	6,670	5.765	5,297
after extraordinary items	5,891	6.670	5.765	5.29
Earnings per share:				
before extraordinary items	13 TX	0.31	0.2-	0.25
after extraordinary items	(-28	0.31	0.27	0.25

Three Wonths Ended (unaudited) Thousands of dollars (except share data)	Dec. 31 1988	Sept. 30 1988	June 30 1988	Mar. 31 1988
Operating revenue	88,039	82,500	85.118	84,743
Net income:				
before extraordinary item	5,016	3,588	4,458	3.963
after extraordinary item	(7,498)	3,588	4,458	3,963
Earnings per share:				
before extraordinary item	0.23	0.17	0.23	0.22
after extraordinary item	(0.39)	0.17	0.23	0.22

The following is a discuss 2000, management, providing both a prospective and historical analysis of 1000 businesses of the Company. This discussion is broken down into three major headings. General, Liquidity and Capital Resources, and Results of Operations

Management Discussion and Analysis - General

# Significant Accounting Policies

### Foreign Exchange

The Company has major investments in foreign operations, largely in its chemical business. These investments are held by the Company's subsidiary, ANGUS Chemical, most significantly in the United States, with a somewhat smaller portion of the core business investment committed to operations in West Germany. The fine chemicals aspect of the business maintains its operation in freland. The chemical business is considered, by management, to be a self-sustaining investment, and as a result, the current rate method is used to translate both the investment and the results of foreign operations to Canadian dollars. Using the current rate of exchange for Canadian dollars measures the impact that foreign exchange fluctuations have on the Company's U.S. dollar investment. This measurement is held in an account in shareholders' equity titled "Cumulative Translation Adjustment" and represents the unrealized gain or loss to the Company from holding the investment. Following a strengthening of the Canadian dollar to the U.S. dollar by approximately 8.3% in 1988, the Canadian dollar strengthened by 2.9% in 1989 in relation to the U.S. dollar. A stronger Canadian dollar has had the effect of devaluing the Company's U.S. dollar denominated net investment in ANGUS Chemical.

As well, ANGUS Fine Chemicals maintains its accounts in Irish pounds. Current rates of exchange for U.S. dollars are used to translate these accounts for purposes of the ANGUS Chemical consolidated accounts. After strengthening by 12,3% in relation to the Irish pound in 1988, the U.S. dollar weakened in value by 3,2% relative to the Irish pound in 1989. A stronger U.S. dollar has the effect of devaluing Irish pound denominated net investments like the Company's investment in ANGUS Fine Chemicals. This effect is also included in "Cumulative Translation Adjustment".

Wherever appropriate, the analysis that follows reflects these foreign currency fluctuations.

#### Goodwill

During 1987, the Company made significant acquisitions in the chemical and NGL marketing businesses. These acquisitions resulted in the recognition of goodwill. Goodwill, acquired in this manner, is measured as that portion of the purchase price that is in excess of the fair value of assets and liabilities identified with the business acquisition. Goodwill generally represents all those business factors, which in combination, contribute to future earnings capacity. Management anticipates that these businesses will make significant contributions to the Company's long term success. With this in mind, a thirty (30) year amortization schedule on a straight-line basis was chosen to match the cost of this future earnings capacity against future earnings from these businesses.

#### Depreciation

Depreciation schedules for the hydrocarbons business' fixed assets are calculated on a straight-line basis and are generally tied to the term of associated cost of service contracts or supply arrangements.

The chemical business schedules its depreciation of fixed assets based on management's best estimates of their physical life using the straight-line basis.

## Financial Condition (Consolidated Balance Sheet)

The following analysis is primarily focused on significant changes for 1989 and 1988, in financial condition, and changes in cash flow, and should be read in conjunction with the consolidated financial statements and accompanying notes.

### Property, Plant and Equipment

During 1989, net changes in the property, plant and equipment accounts are explained as follows:

Net capital maintenance expenditures:

hydrocarbons	8	7,809,000
chemical		10,208,000
		J8:01 <sup>-</sup> .000
Unrealized foreign exchange gains on translation of ANGUS		
Fine Chemical's accounts from Irish pounds to U.S. dollars		1,885,000
Unrealized foreign exchange losses on translation of ANGUS		
Chemical's accounts from U.S. dollars to Canadian dollars		(3,334,000)
	4	16.568.000

During 1988, net changes in the property, plant and equipment accounts are explained as follows:

Net capital maintenance expenditures:

hydrocarbons	\$ 2,477,000
chemical	11,130,000
	13,607,000
The December, 1988 writedown of ANGUS Biotech facilities as described in Note 10 to the consolidated financial statements	(18,416,000)
Unrealized foreign exchange losses on translation of ANGUS Fine Chemical's accounts from Irish pounds to U.S. dollars	(6,300,000)
Unrealized foreign exchange losses on translation of ANGUS Chemical's accounts from U.S. dollars to Canadian dollars	(11,229,000)
	\$ (22,338,000)

# Investments and Advances

Details of the Company's long term investments and advances are outlined in Note 2 to the consolidated financial statements.

During both 1989 and 1988, the major change in this account reflects the Company's investment in the magnesium business through a 50% partnership interest as discussed in Note 2 to the consolidated financial statements.

Construction of the High River. Alberta magnesium metal production facility was completed and commissioning began during the first quarter of 1990.

As a result of the April, 1989 decision of the board of directors of IPI to either sell the company or wind up its activities, all deferred research and development costs were written down at March 31, 1989.

### Long Term Debt

Details of the Company's long term debt are outlined in Note 5 to the consolidated financial statements.

During 1989, the net increase in long term debt is explained as follows:	
In February, 1989, the Company concluded a 14 million DM bank loan to more effectively hedge European earnings in its chemical segment	9,597,000
Scheduled repayment of ANGUS Fine Chemical's debt	(1.898,000)
Unrealized foreign exchange loss on translation of ANGUS Chemical's accounts from U.S. dollars to Canadian dollars	(563,000)
	136.000
December 1999 de la Company de	
During 1988, the net decrease in long term debt is explained as follows:	
During 1988, the net decrease in long term debt is explained as follows: Scheduled repayment of ANGUS Fine Chemical's debt	\$ 3,800,000
	\$ 3,800,000 2,200,000

# Working Capital (including cash)

During 1989, net changes in consolidated working capital are explained as follows:

- Cash increased by approximately \$7.5 million due largely to the shutdown of the ANGUS Biotech operation
  in the chemical segment.
- Other current assets decreased by approximately \$2.7 million due largely to lower income taxes receivable
  at the end of 1989 when compared to the end of 1988 due to substantially larger tax deferrals in 1988.
- Other current liabilities increased by approximately \$3.8 million due largely to increased business activity in the fine chemicals business and a dividend accrual in ANGUS Chemical.
- Notes payable have decreased by approximately \$19.6 million. The proceeds of the DM bank loan were
  used for this purpose as well as operating cash flow from the hydrocarbons business segment that was not
  required for other investing activities.

During 1988, net changes in consolidated working capital are explained as follows:

- Cash declined by approximately \$13.5 million due largely to draws on ANGUS Chemical's cash balance to finance the ANGUS Biotech operating losses and ongoing capital expenditures programs.
- · Other current assets increased by approximately \$22.7 million due largely to:
  - increasing trade receivables and product inventory levels required to bring the fine chemical and ANGUS Biotech activities to commercial scale.
  - income tax receivable by ANG due to deferral of a substantial portion of taxable income resulting in the carryback of 1988 deductions to prior years.
- Notes payable decreased by approximately \$6 million. ANG's notes payable were reduced by
  approximately \$14.3 million with a portion of the proceeds of the May, 1988 rights offering. This reduction
  was offset somewhat, however, by ANGUS Chemical, in taking on an additional \$8.3 million in notes
  payable to finance current operating activities and capital expenditures.
- Other current liabilities declined by approximately \$10.6 million due largely to paying out the mortgage bondholders in February, 1988, as well as a reduction in income taxes payable.

# Changes in Cash Flow (Consolidated Statement of Changes in Cash Flow)

During 1989, net changes in consolidated cash flow are explained as follows:

- Cash flow from operating activities showed marginal improvement. The most substantial improvement is
  found in the working capital accounts other than cash. Signficant cash was required by the chemical
  business during 1988 to bring its fine chemical and erythromycin operations to commercial scale. The
  requirement did not repeat itself during 1989.
- During 1988, the Company required cash (\$23 million) to make the bulk of its equity contribution to the
  magnesium partnership. This partnership is discussed in Note 2 to the consolidated financial statements.
   During 1989, a further \$3.5 million was required as an equity contribution.

During 1988, net changes in consolidated cash flow are explained as follows:

- The improvement in cash flow from operating activities (before non-cash working capital changes) was
  due largely to the deferral of taxes during 1988, compared to a drawdown of deferred taxes during 1987.
- The improvement in cash provided from financing activities was traced to the proceeds of \$35.4 million for shares issued in May, 1988, as at result of a rights offering made to existing shareholders in the same month.

# Management Discussion and Analysis - Liquidity and Capital Resources

Capital expenditures will continue to be made each year in developing the assets of the Company within its existing scope of activities.

Opportunities for capital investment through ongoing capital maintenance programs will continue at a reasonable pace in the future. A major pipeline expansion opportunity is currently being pursued as a result of increased market interest in natural gas in California. Together with Foothills (South B.C.), ANG plans to participate in the proposed Pacific Gas Transmission Alberta/California Pipeline Expansion Project (the "Project"). If the Project proceeds, ANG will design, build and operate the expansion facilities in southeastern British Columbia on behalf of Foothills (South B.C.) and will own any new compression facilities required as part of the expansion. Foothills (South B.C.) will own the pipeline sections necessary to connect its existing pipeline loops to the Company's pipeline system. The Project involves the expansion of both the existing ANG and Pacific Gas Transmission pipeline systems to provide transportation service for an incremental 750 Mmcf per day of natural gas to distribution companies in southern California and the Pacific northwest U.S. The success of this investment opportunity will depend on the resolution of a variety of issues culminating in regulatory approval by the bodies having jurisdiction.

A second investment opportunity is also being considered by the Company. Through a joint venture with TransAlta Resources Corporation, ANG proposes to develop an 85 megawatt wasteheat recovery and cogeneration plant near Sparwood, British Columbia for the purpose of supplying electricity to British Columbia Power Export Corporation ("Powerex") for export to markets in the United States. The proposed project is one of five power supply proposals being considered by Powerex. If this proposal is successful, the Company would be a 50% participant in the \$75 million project. A decision as to the successful proposal is anticipated by the end of 1990.

The Company and its subsidiaries expect to meet their cash requirements for fiscal 1990 for working capital, capital expenditures, long term debt repayments and dividends from internally generated funds, unutilized existing bank lines of credit and unutilized existing short term borrowing facilities.

The following analysis is primarily focused on significant changes for 1989 and 1988, in results of operations and should be read in conjunction with the consolidated financial statements and accompanying notes. As well, reference should be made, whenever necessary for a clear understanding, to the Summary of Business and Property beginning on page 28 of this Annual Information Form.

### Hydrocarbons Business

The hydrocarbons business includes its pipeline investments in British Columbia and Peace River, Alberta, its natural gas processing business, and its NGL and natural gas marketing businesses.

The success of the pipeline businesses depends almost solely on capital investment and reliable and safe transportation service. The British Columbia Pipeline, which is regulated on a complaint basis only by the NEB, is the major Canadian link to the Pacific Gas Transmission and Pacific Gas and Electric pipeline system and therefore provides the Company with a unique competitive position. Both the British Columbia Pipeline and the natural gas processing plant operate at high load factors year round.

The natural gas processing business operated under the Cochrane Extraction Plant Partnership provides for three major profit streams:

- 1) Similar to the pipeline businesses, the capital investment in the Cochrane plant facility is subject to the Liquids Sale Agreement which calls for full recovery of both current operating expenses and capital facilities investment over the life of the agreement along with a guaranteed return on the committed investment. As the investment is recovered, returns decline unless there is additional facilities investment.
- 2) The Liquids Sale Agreement also provides that the buyers of the NGL will pay a charge based on the gas supply provided by our major supplier, Alberta and Southern. Other agreements currently in place for the supply of natural gas to the plant, provide a profit opportunity to the Partership. These opportunities are dependent on both price and plant production.
- 3) As stated on page 31, the Liquids Sale Agreement provides for a participation in marketing profits. Minimal marketing profits have been generated for the past two years due to low NGL prices. This condition will likely continue for the foreseeable future until the supply of hydrocarbons-based energy sources tightens.

The NGL marketing and natural gas marketing businesses are much smaller in scale and rely for success on the application of brokerage or administrative fees on high volumes of sales. These businesses are very competitive and the fees or profit margins have been tightened in recent times. Success will continue to depend on high volume by providing a reliable supply and by expanding into both fractionating and storage services through the CanStates group of partnerships. Arrangements are being pursued to ensure a long term supply of feedstock to the fractionation facility.

# Chemical Business

The chemical business is operated by the Company's U.S. subsidiary, ANGUS Chemical. The core business produces nitroparaffins and their derivatives in the United States and West Germany, and markets these products worldwide. The core business continues to contribute superior returns to the Company's overall profitability. Through an ongoing commitment to research and development, ANGUS aggressively pursues new opportunities for placing its products in existing and new end-use markets and anticipates increasing future research and development expenditures as a percentage of sales. During 1990, ANGUS proposes to invest \$4 million (U.S.) in research and development activities, the majority of which is intended for applications support and technical services. ANGUS has only one major competitor in the production of basic nitroparaffins. Through a concerted effort to move more aggressively into the marketing of derivatives, the Company sees continuing success in the core business.

ANGUS Fine Chemicals, operating out of its facilities located in Ireland, offers a specialty chemical design and production service. Profitability depends on efficient utilization of plant capacity. To date, a number of opportunities have been brought to fruition. Long term success will depend on an aggressive marketing strategy.

Significant changes in results of operations are discussed below:

(Thousands of dollars)	1989	1988	1987
Income before extraordinary items			
Hydrocarbons:*			
Revenue	> 219,653	\$ 205,027	\$ 201,817
Expenses	187,301	178,982	175,824
	32.352	26,045	25,993
Chemical:			
Sales	1171121	135.373	116,980
Research & development	4.089	5,074	4,549
Other expenses	116,678	116,991	101,175
	26,42	13,308	11,256
Operating income	58,779	39,353	37,249
Other income	1,076	3,906	6,022
	59,855	43.259	43,271
Interest expense	(15.590)	(15.953)	(14,014)
Income taxes	(17.376)	(10,281)	(13,564)
Minority interest			(800)
	3 26,889	\$ 17,025	\$ 14,893

<sup>\*</sup> These figures exclude NGL marketing, operated through the CanStates group. These results are included on an equity basis in Other Income.

Significant changes in results of operations during 1989 are discussed below:

- The bydrocarbons business continued to make a strong contribution during 1989. The significant improvement, when compared to 1988, is due to the extension of the production life of the Cochrane plant facility due in turn to an extension of the supply arrangements to the year 2012 with its major supplier, Alberta and Southern. This contributed approximately \$4.9 million to operating income.
- The chemical business, as well, showed continued strength throughout 1989. The significant
  improvement in 1989, in large measure, is due to the shutdown, late in the first quarter of 1989, of
  operations at its crythromycin facility.
- The increase in income taxes is solely traceable to improved operating results from both the hydrocarbons and chemical businesses.

Significant changes in results of operations during 1988 are discussed below:

- Operating income improved by \$2.1 million, or approximately 5,6%. This improvement is mainly traceable to the results of ANGUS Chemical. Their core nitroparaffins business showed continuing strength during 1988, with some improvement beginning to appear in the Irish fine chemical business segment. These results, however, were offset by disappointing returns from the erythromycin production facilities in California during 1988. The Company made the decision in December, 1988, to curtail the operation of these facilities and concentrate on a process development effort. In March, 1989, it was determined that operations should be discontinued. ANGUS Chemical has entered negotiations for the sale of the ANGUS Biotech assets.
- Other income declined by \$2.1 million due largely to foreign exchange losses of ANGUS Chemical
  relating to the operation of their German subsidiary, ANGUS Chemic GmbH, reported during 1988, as
  opposed to exchange gains reported during 1987. These foreign exchange gains/(losses) are a reflection
  of the average relative strength (1987) or weakness (1988) of the West German mark relative to the U.S.
  dollar.
- Interest expense increased during 1988 by approximately \$1.9 million, reflecting the cost of financing, for a full year, the April, 1987 acquisition of the minority interest in ANGUS Chemical.
- The provision for income taxes declined by approximately \$3.3 million reflecting lower federal tax rates both in Canada and the United States.

### Wagnesium Business

Management will be able to provide discussion on results of operations for the magnesium business segment once the MAGCAN facility is on stream. Start-up is targeted for the end of the first quarter of 1990. A description of the magnesium business is included on page 35 of this Annual Information Form.

Market for the Securities of the Company

The Company's common shares are listed on the Alberta, Montreal, Toronto and Vancouver stock exchanges.

The Company's Eurobond Debentures are listed on the Luxembourg Stock Exchange.

Dividends on the outstanding common shares of the Company have been declared and paid without interruption on a quarterly basis since June, 1962. The Company has no stated common share dividend policy.

The Company has paid the following dividends per share on its share capital during the two fiscal years preceding the date of this Annual Information Form:

-		
	1989	1988
Fourth quarter	NI ]-	\$0.17
Third quarter	\$0.17	\$0.17
Second quarter	\$0.17	\$0.17
First quarter	80.17	\$0.17

# Subsidiaries of the Company

Company	Jurisdiction of Incorporation	Ownership by ANG (Direct and Indirect)
ANG Liquids Ltd.	Alberta	100%
ANG Processing Ltd.	Alberta	100%
ANGUS Biotech, Inc.	Delaware	96%
ANGUS Chemical Company	Delaware	100%
ANGUS Chemie GmbH	Federal Republic of Germany	100%
ANGUS Fine Chemicals Ltd.	Cayman Islands	100%
ANGUS International Ltd.	United States Virgin Islands	100%
CanStates Energy, Inc.	Oklahoma	100%
CanStates Holdings, Inc.	Oklahoma	100%
CanStates Hydrocarbons, Inc.	Michigan	100%
Rankin Petroleums, Inc.	Michigan	100%
Rankin Petroleum Marketing Ltd.	Alberta	100%

# Directors

Name and Municipality of Residence	Principal Occupation during the Last Five Years	Director since
Harry Booth <sup>3</sup> Calgary, Alberta	Consultant. Former Chairman of the Board and Chief Executive Officer of the Company.	November, 1969
Richard A. Clarke San Francisco, Californía	Chairman of the Board and Chief Executive Officer of Pacific Gas and Electric Company since May, 1986; prior to which he was an executive officer of Pacific Gas and Electric Company.	April, 1987
ouglas R. Fenton <sup>3</sup> algary, Alberta	President and Chief Executive Officer of the Company and of Alberta and Southern Gas Co. Ltd. since May, 1986; prior to which he was Executive Vice-President of the Company and President of Alberta and Southern Gas Co. Ltd.	May, 1975
hn E. Goudie 1.3 ilgary, Alberta	Former Chairman of the Board of the Company. Chairman of the Board of Alberta and Southern Gas Co. Ltd. since May, 1986; prior to which he was President of the Company and Executive Vice-President of Alberta and Southern Gas Co. Ltd.	April, 1981
onald C. Lowe ontreal, Quebec	Deputy Chairman, Bombardier Inc. since January, 1990; prior to which he was President and Chief Executive Officer of Canadair Inc. since 1986; prior to which he was President and Chief Executive Officer of Kidd Creek Mines Ltd.	April, 1989
rge A. Maneatis Francisco, California	President of Pacific Gas and Electric Company since May, 1986; prior to which he was an executive officer of Pacific Gas and Electric Company.	April, 1989
R. McLeod <sup>2</sup> Francisco, California	Executive Vice President of Pacific Gas and Electric Company since February, 1989; prior to which he was President of Tenneco Gas Transportation Company since 1987; prior to which he was President of Tenngasco Corporation.	April, 1989
oert J. Richardson <sup>1,2</sup> htreal, Quebec	Management consultant since January, 1987; prior to which he was President of Bell Canada Enterprises Inc.; prior to which he was Executive Vice-President, E.I. du Pont de Nemours Inc.	April, 1988
iley T. Skinner Francisco, California	Vice Chairman of the Board of Pacific Gas and Electric Company since May, 1986; prior to which he was an executive officer of Pacific Gas and Electric Company.	April, 1987
n A. Sproul 13 Francisco, California	Consultant since April, 1989; prior to which he was Chairman o the Board of Pacific Gas Transmission Company and Executive Vice President of Pacific Gas and Electric Company.	of June, 19 <sup>7</sup> 8
rman E. Wagner <sup>2</sup> Igary, Alberta	Chairman of the Board of the Company since June, 1988; prior to which he was President and Vice-Chancellor of the University of Calgary.	April, 1986

Each of the directors was elected at the Annual General Meeting of Shareholders held on April 27, 1989, for a term ending at the termination of the Company's next Annual General Meeting, which will be held on April 26, 1990.

Messrs. Booth, Fenton, Goudie, Maneatis, Richardson and Wagner are also directors of the Company's subsidiary, ANGUS Chemical.

The Company has an Audit Committee, as required under its By-Laws and by the Canada Business Corporations Act, and also has an Executive Committee and a Compensation Committee.

<sup>1</sup> Member of Audit Committee

<sup>&</sup>lt;sup>2</sup> Member of Compensation Committee

<sup>3</sup> Member of Executive Committee

# Officers

Name and Municipality of Residence	Principal Occupation during the Last Five Years
sonnan F. Wigner Zalgary, Alberta	Chairman of the Board of the Company since June. 1988; prior to which he was President and Vice-Chancellor of the University of Calgary.
ouglas R. Fenton Calgary, Alberta	President and Chief Executive Officer of the Company and of Alberta and Southern Gas Co. Ltd. since May, 1986; prior to which he was Executive Vice-President of the Company and President of Alberta and Southern Gas Co. Ltd.
onald McMoriand algary, Alberta	Senior Vice-President of the Company.
illiam J. Demcoc ilgary, Alberta	Senior Vice-President, Finance and Corporate Services since January, 1990; prior to which he was Vice-President, Finance and Administration since 1985.
Garrick Homer Igary, Alberta	Vice-President and Secretary since 1988; prior to which he was Secretary and Assistant to the Chairman of the Board.
ner W. Mychaluk gary, Alberta	Senior Vice-President since January, 1990; prior to which he was Vice-President. Business Development.
vid A. Sharp Igary, Alberta	Senior Vice-President and General Manager of Hydrocarbons Business Unit since August, 1989; prior to which he was Vice-President, Operations and Engineering.
tricia M. Maltones Ilgary, Alberta	Assistant Secretary and Manager, Investor Relations since January, 1990; prior to which she was Treasurer since 1985.

As at March 1, 1990, all the directors and officers of the Company, as a group, beneficially held directly or exercised control or direction over 284,826 common shares of the Company, or less than 2% of the total common shares outstanding.

The accompanying consolidated financial statements have been prepared by management, which is responsible for the integrity and objectivity of this information. These financial statements, prepared on an historical cost basis, are in accordance with generally accepted accounting principles in Canada and are also in conformity with International Accounting Standards. Where appropriate, amounts based on estimates and judgements are included. Other financial information included in this Annual Information Form is consistent with that in the financial statements.

Management has established and maintains appropriate systems of internal control, and policies and procedures, which are designed to meet its responsibility for reliable and accurate reporting. These systems of control include periodic review by the Company's internal auditors.

Arthur Andersen & Co., independent auditors appointed by the shareholders, have reviewed the systems of internal control and examined the consolidated financial statements in accordance with generally accepted auditing standards, to enable them to express an opinion on the fairness of the statements. Their report is included herewith.

Through its appointed Audit Committee, the Board of Directors oversees management's responsibilities for financial reporting. The Audit Committee meets annually with management, the internal auditors and the independent auditors to review auditing and financial matters. Internal and external auditors have unrestricted access to the Audit Committee. The consolidated financial statements have been approved by the Board of Directors on the recommendation of the Audit Committee.

# Auditor's Report To the Shareholders of Alberta Natural Gas Company Ltd:

We have examined the consolidated balance sheet of Alberta Natural Gas Company Ltd (a Canada corporation) as at December 31, 1989 and 1988 and the related consolidated statements of income, reinvested earnings and changes in cash flow for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of Alberta Natural Gas Company Ltd as at December 31, 1989 and 1988 and the results of its operations and the changes in its cash flow for the years then ended in accordance with generally accepted accounting principles applied on a consistent basis.

Calgary, Alberta February 6, 1990

Arthur Andersen & Co. Chartered Accountants

Thousands of dollars	1989	1988
ERATING REVENUE	5 300,84	<b>\$</b> 340,400
ERATING EXPENSES:		
Operating and maintenance	203.154	203,215
Gas purchases	17.392	33.150
Selling, administrative and research	35.972	37,290
Depreciation and amortization	15,137	21,406
Property taxes and other	6,413	5,986
	308,068	301,047
RATING INCOME	58,779	39.353
EREST AND OTHER INCOME	1,075	3,906
DME BEFORE INCOME DEDUCTIONS	59.855	43,259
ME DEDUCTIONS:		
Interest on long term debt	8,6+1	7,366
Interest on other debt	6,949	8,587
	15,590	15,953
OME BEFORE INCOME TAXES EXTRAORDINARY ITEMS	+4,205	27,306
VISION FOR INCOME TAXES	17.376	10,281
OME BEFORE EXTRAORDINARY ITEMS	26,889	17,025
RAORDINARY ITEMS	:3.200	(12,514)
INCOME	\$ 25,625	\$ 4,511
NINGS PER SHARE:		
Before extraordinary items	÷ 1.26	\$ .85
Extraordinary items	, 151	(.62)
After extraordinary items	× 1.11	\$ .23

Thousands of dollars	. 989	1988
;		
T ASSETS:		
Cash and interest bearing deposits	< 13,611	\$ 6,130
Accounts and notes receivable	63,812	65,651
Inventories	40.898	41,815
Other	3.105	2,047
Total current assets	120, ±26	115,643
MENTS AND ADVANCES	18.757	48,459
) CHARGES	22,218	20,736
Y, PLANT AND EQUIPMENT - Net	(9),7)	191,952
	•	
TOTAL	586,148	\$ 376,790

Thousands of dollars	1987	1988
BILITIES AND SHAREHOLDERS' EQUITY		
RENT LIABILITIES:		
Notes payable	$\chi = \{a, s_i\}^{-1}$	\$ 86,382
Accounts payable	$\mathcal{D}_{\mathcal{C}}(\mathcal{C}_{\mathcal{C}}^{*})$	25.511
Income taxes payable	5	816
Other	9. (%)	9.452
Total current liabilities	17 to 140 T	122,161
TERM DEBT	47.3.5	82,109
RED INCOME TAXES	37,884	27,309
HOLDERS' EQUITY:		
21,359,235 common shares (1988 - 21,332,035)	* - C1 -	53,780
Reinvested earnings	28,000	99,549
Cumulative translation adjustment	(10,136)	(8,118)
Total shareholders' equity	152,652	145,211
TOTAL	- 386.148	\$ 376,790

Approved by the Board:

J. S. Hondin

Director

Director

John a. Sproul

Thousands of dollars	1989	1988
ALANCE AT BEGINNING OF THE YEAR	5 99,549	\$ 109, 348
ET INCOME	23.623	4.511
	123.172	113,859
CHASE AND CANCELLATION OF COMMON SHARES	(Sur	317
/IDENDS	14,528	13,993
ANCE AT END OF THE YEAR	\$ 108,488	\$ 99,549

Thousands of dollars	. 985	1988
PERAITING ACTIVITIES:		
Income before extraordinary items	26,889	\$ 17,025
Items not affecting cash:		
Depreciation and amortization	15.137	21,406
Deferred income taxes	10 551	10,924
Equity earnings and partnership earnings -		
net of dividends and distributions	Sec. 2	(351)
Other	(2,233	(322)
	51,166	48,682
Change in working capital items other than cash	6.3~1	(36,494)
Effect of exchange rate changes	(1.5)9	(2.966)
	50,118	5 9,222
ESTING ACTIVITIES:		
Net property, plant and equipment expenditures	: 18,003	\$ (14,484)
Investments and advances	(2,00	(19,956)
Other	(2,593)	479
	5 (22.603)	\$ (33,961)
		V (,)5,701.
NCING ACTIVITIES.		
Common shares - issued	\$ 420	\$ 35,386
- purchased and cancelled	$x = \int_{\mathbb{R}^n} d_x v_x$	(363)
Increase (decrease) in long term debt	1	(3,803)
Dividends	(1).528)	(13.993)
	s de als el	\$ 17,227
f PROVIDED BY (USED IN):		
Operating activities	5 56.118	\$ 9,222
Investing activities	22,603)	(33,961)
Financing activities	(6.16+)	17,227
	27.051	(7,512)
I, INTEREST BEARING DEPOSITS AND NOTES PAYABLE:		
Beginning of year	80,252)	(72,740
End of year	5 (53,201)	\$ (80,252)
the or year	4 3 3, 2017	3 (60,4)4.

# Operations:

Alberta Natural owns and operates, through the Cochrane Extraction Plant Partnership, an extraction plant near Cochrane, Alberta, which removes propane and heavier liquids (NGL) and ethane from the gas stream. Alberta Natural also owns and operates two pipeline transportation facilities:

- a) a 914 mm (36 inch) pipeline, from a point near Coleman, Alberta to Kingsgate, on the British Columbia-Idaho border, for the transportation of gas owned by Alberta and Southern Gas Co. Ltd. and Westcoast Transmission Company Limited and a number of interruptible shippers, and for the transportation of gas for Foothills Pipe Lines (South B.C.) Ltd. Alberta Natural also operates the pipeline facilities owned by Foothills Pipe Lines (South B.C.) Ltd. located in southeastern British Columbia.
- b) a 324 mm (12 inch) pipeline, from a point near Warrensville, Alberta to an oil sands recovery facility owned by Shell Canada Resources Limited, for the transportation of gas owned by Shell Canada.

The sale agreements with the purchasers of NGL and ethane and the gas transportation contracts and operating agreement with the gas shippers provide for the full recovery of all operating expenses, property and income taxes and capital investment together with a return on the unrecovered investment. In addition, Alberta Natural is entitled to approximately 25% of the cumulative net marketing profits arising from the sale of the NGL by each of the buyers, Dome Petroleum Limited and Amoco Canada Petroleum Company Ltd.

ANGUS Chemical Company, a U.S. subsidiary, owns and operates nitroparaffins production facilities located in the United States and West Germany. The facilities utilize feedstocks derived from natural gas in the production of nitroparaffins and other derivative products that are marketed worldwide. ANGUS Chemical, through its subsidiary, ANGUS Fine Chemicals Etd., also owns and operates a fine chemicals production facility located in Ireland.

ANG Liquids Ltd., a subsidiary of the Company, is engaged in various aspects of the natural gas and NGL business in both Canada and the United States, which it conducts in partnership with subsidiaries of Polysar Limited through the CanStates group. In addition to these marketing operations, the CanStates group has an interest in certain NGL fractionation and storage facilities located in Marysville, Michigan.

### Consolidation:

The consolidated financial statements include the accounts of Alberta Natural and its wholly-owned subsidiaries or majority interest partnerships as follows:

ANGUS Chemical Company

ANG Processing Ltd.

ANG Liquids Ltd.

Cochrane Extraction Plant Partnership

All intercompany accounts and transactions have been eliminated upon consolidation.

# Investments:

Alberta Natural follows the equity method of accounting for the following investments:

	Interest
Footbills Pipe Lines (South B.C.) Ltd.	49%
International Permeation Inc.	24%
The "Amoco Centre" joint venture	50%
Magnesium Partnership No.	50%
CanStates Energy Partnership	50%
CanStates Petroleum Marketing Partnership	50%
Marysville Fractionation Partnership	24%
St. Clair Underground Storage Partnership	12%

### Regulation:

The pipeline facility located in British Columbia is subject to the National Energy Board Act and to the jurisdiction of the Board created thereby. This Board regulates accounting matters, export of gas, construction and operation of gas pipelines and rates, tolls and tariffs charged for such operations.

#### Foreign Currency Translation:

The Company's Deutsche Mark (DM) denominated long term bank loan is translated into Canadian dollars using the year end rate of exchange. The effect of this foreign currency translation is deferred and amortized over the term of the bank loan.

The accounts of U.S. subsidiaries have been translated into Canadian dollars using the year end rate of exchange for all assets and liabilities and average rates of exchange for the year for revenues and expenses. The cumulative effects of foreign currency translations are included in a separate component of shareholders' equity.

#### Goodwill:

Goodwill arises on the acquisition of subsidiaries, and represents that portion of the purchase price that was in excess of the fair value of the net assets acquired. Goodwill is included in deferred charges and is being amortized over a period of 30 years.

# Property, Plant and Equipment:

Property, plant and equipment is carried at cost.

An allowance for funds used during construction is capitalized for plant under construction. Any such allowance recorded is included in other income.

Depreciation is provided on a straight-line basis over the term of the service contracts associated with the pipeline facilities and the term of the supply contracts associated with the Cochrane extraction plant. During 1989, these supply contracts were extended to the year 2012. As a result of this extension, operating income increased by approximately \$4,900,000 in 1989.

Chemical production facilities are being depreciated on a straight-line basis over the estimated useful life of the assets. Buildings are depreciated over 9 to 25 years and equipment is depreciated over 3 to 15 years.

#### Inventories:

Chemical product inventories are carried at the lower of cost or market on the last-in, first-out (LIFO) method of accounting for inventory cost. Inventories of materials and supplies are carried at average cost.

#### Income Taxes:

Income taxes are provided on the tax allocation basis for all income except liquids extraction income which is subject to cost of service contracts. Income taxes are provided on this source of income only to the extent that they have been included in costs of service under such contracts.

### Deferred Charges:

Project costs are initially recorded as deferred charges pending evaluation of the projects. Deferred charges applicable to projects which have been terminated are expensed.

# 1. Property, Plant and Equipment:

Thousands of dollars	1989	1988
Natural gas processing	137.943	\$ 137,013
Chemical	128, (66	121,746
Pipeline transport	80.123	79,616
Under construction	10.07	7,966
	502.9km	346,341
Less accumulated depreciation	J68.162	154,389
Net property, plant and equipment	× 194.*4*	\$ 191,952

### 2. Investments and Advances:

Thousands of dollars	1989	1988
Foothills Pipe Lines (South B.C.) Ltd.	(1,29)()	\$ 6,285
Foothills Pipe Lines (Yukon) Ltd.		
(preferred shares at cost)	2,981	3.025
International Permeation Inc.	ESC	911
The "Amoco Centre" joint venture		696
Magnesium Partnership No. 1	20.5641	23,000
CanStates Partnerships	9.774	10,734
Other	3,070	3,808
	18.75	\$ 48,459

Construction of the "Amoco Centre" building in downtown Calgary is complete, and the building was occupied, to the extent leased, by its major tenant, Amoco Canada Petroleum Company Ltd., on October 1, 1988. Alberta Natural's share of construction costs totals \$46,868,000 as at December 31, 1989. Security pledged, by the Company, for construction loans is restricted to its share of the project development. The results of operations have been included in other income, and amount to a loss of \$2,687,000 for 1989 (1988 - income of \$235,000).

The Company is in partnership with Magnesium International (Canada) Ltd., for the joint construction and operation of a magnesium production facility located near High River, Alberta. The initial phase of the project is budgeted to cost approximately \$139,000,000. At December 31, 1989, the Company has advanced \$26,500,000 towards the cost of its 50% participation in this project.

The total cost of Alberta Natural's participation is the first \$25,000,000 of equity financed construction expenditures, and 50% of any subsequent equity requirements. Upon completion, the plant will be financed on a 75% debt, 25% equity basis. A non-recourse debt financing arrangement, which is guaranteed by the Government of Alberta, is in place to complete the initial phase of the project. At December 31, 1989, Alberta Natural's share of debt-financed construction expenditures totals \$49,720,000.

# 3. Deferred Charges:

Thousands of dollars	1989	1988
Unamortized goodwill	- 18,266	\$ 18.9 <u>3</u> 8
Unamortized debt expense	607	770
Other	1315	1,028
	> 22,218	\$ 20,736

### 4. Shareholders' Equity:

The classes of shares Alberta Natural is authorized to issue consist of an unlimited number of preference shares, having such rights and privileges attached to them as the Directors may by resolution determine, and an unlimited number of common shares.

On May 31, 1988, Alberta Natural completed a Rights Offering. An additional 3,050,305 common shares were issued for proceeds of \$34,640,000 which was used to reduce notes payable.

In accordance with the provisions of a Senior Management Stock Option Plan, 1,140,000 common shares were reserved for issuance under the Plan. Options have been made available on 783,300 shares at prices ranging from \$7.55 to \$14.75 per share. As of December 31, 1989, substantially all of the options have been exercised in the amount of \$8,093,750. An additional 67,100 shares were issued in May, 1988, for \$772,000 as a result of rights offered on shares outstanding under the Plan. Of these amounts, \$5,765,000 (1988 - \$5,354,000) is included in accounts receivable. A cumulative total of 365,300 common shares have been purchased by the Company at market prices and cancelled in accordance with the provisions of the Plan.

# 5. Long Term Debt:

Thousands of dollars	Year Issu <b>ed</b>	Maturity	1989	1988
Debentures 10 1/8% - unsecured	1986	1993	5 60,000	\$ 60,000
Revenue Bonds 6 3/4%				
(\$13,008,000 U.S.)	1978/79	2004/08	15761	15,516
Bank Ioan 7.75% (14,000,000 DM)	1989	1996	9,597	_
Other (\$5,514,000 U.S.)	1985/87	1992	6,38-)	8,405
			91,042	83,921
Less amounts due within one year			1.797	1.812
			\$ 89,245	5 82,109

Repayment requirements for other long term debt are \$1,552,000 U.S. for 1990 and subsequent years.

The debentures, revenue bonds and DM bank loan have no repayment requirements before maturity.

# 6. Income Taxes:

The provision for income taxes varies from the amount that would be computed by applying current federal and provincial income tax rates for the reasons shown in the following table:

Thousands of dollars	1989	1988
Income before income taxes and extraordinary items	3 44,265	\$ 27,306
Add (deduct):		
Liquids extraction activities not subject to tax allocation	(8,580)	(6.058)
Equity earnings	(971)	(1,151)
Amortization of the cost of assets acquired in excess of book value	228	1,957
Income subject to tax allocation	\$ 30,000	\$ 22,054
Expected provision for income taxes at 43.5% (1988 - 47.25%)	8 (6.82)	\$ 10,421
Add (deduct) adjustments to income taxes:		
Manufacturing and processing profits deduction	\$97°s	(492)
Foreign tax credits	1505	(71)
Tax relief available to foreign subsidiary	1863	(919)
Losses of foreign subsidiaries for which no current benefit is provided	(98)	2.345
Lower effective tax rate of foreign subsidiaries	(1.152)	(432)
Withholding taxes on foreign income	0 (84)	(276)
Other	\$15)	(519)
	19,59	10,057
Tax recovered through cost of service contracts	2,829	224
Actual provision for income taxes	5 1736	5 10.281

The Company anticipates that all foreign earnings will be reinvested by its foreign subsidiaries on an ongoing basis. As a result, during 1989, management made the decision to reverse its provision for withholding taxes on foreign income.

# 7 Segmented Information:

a) Financial information by industry segment:

_	Thousands of dollars	Chemical	Natural Gas Processing	Pipeline Transport	Other	Eliminations	Total
983	Operating revenue	147.194	155,751	20,004	19,041	(13.043)	366,847
	Depreciation and amortization expense	c =:	₹ ( <u>-2</u> G	2.2 (0)	202		15,13
	Operating income	20.12	42.539	3.0543	0.080		58,779
	Identifiable assets	187,223	(0.165)	35,973	62,85		386,148
	Capital expenditures	10 190	1121	6783			18.00
988	Operating revenue	135,373	146,285	28,416	35,190	(4,864)	340,400
	Depreciation and amortization expense	10,652	7,964	2,605	185	_	21,400
	Operating income	13,308	24,030	4,386	(2,371)		39.353
	Identifiable assets	180,951	99,852	29,985	66,002	-	376,790
	Capital expenditures	11,730	1.146	1,608		_	14,484

# b) Financial information by geographic segment:

	Thousands of dollars	Canada	United States	European Community
1989	Operating revenue	219,053	~9,094	68,100
	Operating income	35.352	23.746	2,681
	Total identifiable assets	191.213	118,123	~6,812
1988	Operating revenue	205,027	77,573	57,800
	Operating income	26,045	10,518	2,790
	Total identifiable assets	187,773	117,907	71,110

# 8. Related Party Transactions:

Alberta and Southern Gas Co. Ltd. and Pacific Gas Transmission Company are wholly-owned subsidiaries of Pacific Gas and Electric Company. Pacific Gas Transmission Company, in turn, owned 49.12% of the outstanding capital stock of the Company at December 31, 1989.

Significant transactions with these and other related parties were as follows:

Thousands of dollars	1989	1988	
(a) Net charges for personnel and related			
administrative costs from:			
Alberta and Southern	0.530	6,616	
Pacific Gas Transmission	825	341	
(b) Charges for liquids extraction feedstock			
and fuel purchased from			
Alberta and Southern	(50,790)	62,789	
(c) Net charge for transportation of gas to:			
Alberta and Southern	11,820	12,284	
Foothills (South B.C.)	1.51	1.812	
(d) Net charges for gas sales to			
Alberta and Southern	12 493	7,653	
(e) Not charges for gas purchases from			
CanStates Energy Partnership	1.270	426	
(f) Amounts outstanding at December 31:			
Payable to:			
Alberta and Southern	7,709	7.443	
Pacific Gas Transmission	ş¢	59	
Receivable from:			
Alberta and Southern	3,60.2	2,231	
Foothills (South B.C.)	569	223	
Management - ANGUS Chemical	1). <u>2(</u> )	954	

# 9. Pension Plan:

Alberta Natural and its subsidiaries maintain defined benefit pension plans for substantially all of their employees. Information relating to the plans, on a consolidated basis, is provided below:

1989	1988	
9,768	9.034	
8.685	7,427	
	9.768	9.034

## 10. Extraordinary Items:

In December, 1988, the Company made the decision to curtail the operation of its erythromycin production facility located in California. The plant was reduced to a pilot phase which concentrated on a process development effort during the first quarter of 1989. As a result of this decision, the Company wrote down its investment in related property, plant and equipment and product inventories in the amount of \$12,514,000 (net of tax of \$8,343,000).

During the first quarter of 1989, the process development effort was abandoned and, for the remainder of 1989, the facility was readied for sale. All costs incurred, since the date of abandonment associated with the maintenance of the facility and all other expenditures incurred in preparing the facility for disposal, are recorded as an extraordinary item in the amount of \$2,491,000 (net of tax of \$1,660,000).

During 1989, International Permeation Inc. (IPI) made the decision to write off its investment in deferred research and development expenditures due to the continuing economic uncertainty surrounding the markets for its products. As a result, the Company has written down its investment in IPI in the amount of \$775,000.

#### 11. Prior Year Financial Statements:

Certain prior year figures have been reclassified where necessary to conform to the 1989 presentation.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, options to purchase securities and interests of insiders in material transactions, where applicable, is contained in the Company's Information Circular relating to the most recent Annual General Meeting of Shareholders involving the election of directors.

Additional financial information is also provided in the 1989 comparative financial statements included herein.

For copies of this Annual Information Form and the Company's Information Circular listed in the preceding paragraph, please contact:

F. Garrick Homer Vice-President and Secretary

Alberta Natural Gas Company Ltd East Tower, Esso Plaza 2400, 425 - First Street S.W. Calgary, Alberta T2P 3L8

Certificate of the Company

Dated: March 1, 1990

The foregoing, together with any information incorporated by reference, contains no untrue statement of a material fact and does not omit to state a material fact that is required to be stated herein in accordance with the requirements for this Annual Information Form or that is necessary to make a statement contained herein not misleading in light of the circumstances in which it was made.

D.R. Fenton President

and Chief Executive Officer

W.J. Demcoe

Senior Vice-President.

Finance and Corporate Services

On behalf of the Board of Directors

Sentin

•

J. S. Mandie

J.E. Goudie Director N.E. Wagner Director

Corporate Office
East Tower, Esso Plaza
2400, 425 - Pint Street S.W.
Calgary, Alberta
T2P 3L8 (403) 260-9000

Common shares are listed for trading on the Alberta, Montreal, Toronto and Vancouver Stock exchanges, and trade under the symbol ANG.

Montreal Trust Company, Calgary, Montreal, Regina, Toronto, Vancouver, Winnipeg

Calgary and Toronto; London, England

Olrect Deposit Service:
Shareholders of ANG may elect to have their dividends deposited directly into the bank account of their choice by advising Montreal

Subsidiary Companies
ANG Liquids Ltd.
Calgary, Alberta

CanStates Holdings, Inc Calgary, Alberta (100% owned by ANG Liquids Ltd.)

ANGUS Executives
R.E. Secrist, Chairman and Chief
Executive Officer

President and Chief Operating Officer

Notice of change of address should

	1989	1988	1987	1986	1985
Financial					
Operating revenue (\$000's)	366,847	340,400	318,797	308.454	372,806
Operating income (\$000's)	58,779	39.353	37,249	38,022	54.345
Income before extraordinary items (\$000's)	26,889	17,025	14.893	16,247	24,968
Earnings per average outstanding common		_			
share (\$)	1.26	.85	.82	.89	1.37
Common shareholders' equity per average outstanding common share (\$)	7.15	7.23	7 26	7.08	6.86
Price/earning ratio (%)	15.09	17.10	7.36 15.94	14.99	11.58
Return on average common shareholders'	15 09	17.10	15.74	14.99	11.70
equity (%)	18.05	12.18	11.31	12.82	21.51
Return on capital employed (%)	9.61	6.69	6.01	5.34	10.27
Income before interest, income taxes,					
minority interest and extraordinary items (\$000's)	59,855	43,259	43,271	43.966	59,820
Interest expense (\$000's)	15.590	15.953	14,104	8,291	6,709
Interest coverage (x)	3.84	2.71	3.09	5.30	8.92
Cash dividends (\$000's)	14.528	13.993	12,419	11,653	10,911
Dividend payout ratio (%)	54.03	82.2	83.4	71.7	43.7
Annual dividend rate per common share	4.1	//>	40		(0)
(\$) - year end	68	.68	.68	.64	.60
Financial Position (\$000's)					
Capital Provided:					
Common shareholders' equity - total	152,652	145,211	134,332	128,977	124,584
Long term debt (including current portion)	91,042	83,921	95,612	95,395	35,961
Short term debt	66.812	86,382	92,363	16,343	56,774
Minority interest		_	_	50,156	47,437
Deferred income taxes	37,884	27,309	25,235	31,317	36,569
Average equity outstanding	148,932	139,772	131,655	126,781	116,067
Average debt outstanding	164.079	179,139	149,857	102,237	85,251
Total assets	386,148	376,790	386,527	360,283	340,183
Current assets	120.426	115.643	106,460	136,195	145,606
Current liabilities	106,367	122,161 (6,518)	138,788	55,791 80,404	96,986 48,620
Working capital	14.059	(816,0)	(32,328)	80,404	48,020
Share Data					
Common shares outstanding - year-end	21,359,235	21,332,035	18,242,430	18,205,130	18,223,430
Average number of common shares outstanding	21,362,119	20,083,593	18,262,748	18,210,696	18,174,171
Closing share price (\$)	19.00	14.50	13.00	13.37	15.87
Capital Expenditures (\$000's)	18,003	14,484	40,127	43,722	27,801
Plant					
At year end: (\$000's)					
Original cost	362,909	346,341	368,679	318.392	277,058
Depreciated cost	1,94,747	191,952	229,330	196,672	171,751
Operational (average per day)					
Daily volume of gas exported:					
(106m <sup>3</sup> )	38.9	39.1	37.6	27.0	31.9
(Mmcf)	1.374	1,380	1.327	953	1,127
Daily production: (average)	- 40				-,-2
NGL (m <sup>3</sup> )	2 601	2 480	2 326	1 802	2 235
(Bbls)	16,357	15,613	14,645	11,345	14,070
Ethane (m <sup>3</sup> )	6 202	6 481	6 349	5 045	6 160
(Bbls)	39.011	40,981	40,146	31,935	38,940

1984	1983	1982	1981	1980	
309,201	290,257	214,618	130,904	116,135	Notes:
52,661	48,251	29,597	22.239	21,458	1989 results do not include the effect of
24,178	22,779	16,004	14,014	12,304	extraordinary items (\$3.266.000, or \$.15 per share
1.32	1.27	.89	.78	.69	extraordings from g (go., goo, go, g, s, s, per grafe
* 00	<b>5</b> 0 /		27.		Certain of the comparable figures for prior years
5.89	5.04	4.04	3.64	2.92	have been reclassified to conform with the
10.42	6.83	8.43	11.76	9.30	financial statement presentation adopted for 1989
24.40	27.96	23.29	23.85	25.27	
11.28	11.89	9.68	13.40	13.46	1988 earnings per share figures reflect the effect
= / / / /	(0.1.(3	20.00	25 / 10	22.200	of the May, 1988 Rights Offering
56,646	49.143	38,054	25,410	23,209	
7,739	8,216	8,073	2,000	1,915	1988 results do not include the effect of an
7.32	5.98	4.71	12.71	12.12	extraordinary item (\$12,514,000, or \$.62 per share
10,234	7.932	7,873	5,964	5,009	extraprornary item (\$12,314,000. Dr \$.02 per Share
42.3	34.8	49.2	42.6	40.7	1987 results do not include the effect of
.56	.44	.44	.33	.28	extraordinary items (\$4.786.000, or \$.27 per share
			12.2		extraordinary items (\$4,700.000, 01 \$.27 per \$nate
					Share information has been adjusted to give
107,549	90,635	72,282	65,171	52,335	refroactive effect to the five-for-one stock split or
31,979	30,546	31,374	17,755	20,128	May 16, 1980 and the Intee-lot-one stock split on
45,787	54,687	69,102	13,083	20,120	May 18, 1984
39,917	32,164	28,596	1,7,77		, , , , , , , , , , , , , , , , , , ,
36,882	40,116	34,521	23,209	20,475	Accounts of ANGUS Chemical Company have been
99,092	81,459	68,727	58,753	48,688	
81,500	92,855	65,657	25,483	21,315	consolidated since July. 1982
301,044	279,223	262,363	128,385	110,681	
123,909	94,080	81,503	24,385	31,603	1981 results do not includes the effect of
86,710	87,633	97,109	23,769	19,262	extraordinary items (\$2.013.000 or \$ 11 per share
37,199	6,447	(15,606)	616	12,341	
511177	V. • • •	(1/1/0/0//	(7.4.7)	1 - 1,7 3 4	Closing price - Valuation Day,
	4- 4				December 22 1971 - <b>§</b> 1 33
8,236,130	18,162.630	17,892,330	17,892,330	17,892,330	
8,256,683	17,982,677	17,892,330	17,892,330	17,892,330	
13.75	8.67	7.50	9.17	6.42	
10,243	13,875	40,982	22,569	1,486	
245,878	232,912	221,750	137,488	120,921	
156,239	160,052	163,842	89,320	73,984	
23.2	24.7	26.6	26.6	27.8	
818	871	940	938	982	
1 625	1 630	1 970	1 600	1 705	
10,230	10,270	12,385	10,085	10,730	
4 695	3 920	3 025	3 370	3 480	
. 0//	J /=-	19,105	21,230	21,800	

#### Directors

H Booth, 5.4

Calgary, Alberta

Consultant.

Former Chairman of the Board and Chief Executive Officer of the Company and of Alberta and Southern Gas Co. Ltd.

R A. Clarke.

San Francisco, California Chairman of the Board and Chief Executive Officer, Pacific Gas and Electric Company.

D.R Fenton, 3.+

Calgary, Alberta

President and Chief Executive Officer of the Company and of

Alberta and Southern Gas Co. Ltd.

J.E. Goudie, 1.3.4

Calgary, Alberta

Chairman of the Board,

Alberta and Southern Gas Co. Ltd.

DC Lowe.

Montreal, Quebec

Deputy-Chairman,

Bombardier Inc.

G.A Manealis. +

San Francisco, California

President.

Pacific Gas and Electric Company.

J.R. McLeod. 2

San Francisco, California

Executive Vice President,

Pacific Gas and Electric Company.

R.J. Richardson, 1.2.+

Montreal, Quebec

Management Consultant.

S.T. Skinner.

San Francisco, California

Vice Chairman of the Board,

Pacific Gas and Electric Company.

John A. Sproul. 1.3

San Francisco, California

Consultant.

Former Chairman of the Board,

Pacific Gas Transmission Company.

N.E. Wagner, 2.4

Calgary, Alberta

Consultant.

Chairman of the Board

#### Officers

N.E. Wagner.

Chairman of the Board

DR Fantos

President and Chief Executive Officer

D McMorland.

Senior Vice-President

# J Demcoe.

Senior Vice-President,

Finance and Corporate Services

E.W. Mychaluk,

Senior Vice-President

D A Sharp.

Senior Vice-President and

General Manager,

Hydrocarbons Business Unit

F G Homer

Vice-President and Secretary

P !! Mahoney.

Assistant Secretary

and Manager, Investor Relations

<sup>1</sup> Member of Audit Committee

<sup>2</sup> Member of Compensation Committee

<sup>3</sup> Member of Executive Committee

<sup>\*</sup> Directors of ANGUS Chemical Company

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