

ALBERTA ENERGY COMPANY LTD. 1990 ANNUAL REPORT 10

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The Company

Alberta Energy Company Ltd. is a Canadian natural resource development corporation with approximately 44,000 shareholders. AEC participates in Canada's oil and natural gas, pipelines, forest products and petrochemicals industries. AEC is among the top ten oil and gas companies in Canada in terms of reserves, production levels and exploratory landholdings. It is the fifth largest publicly traded oil and gas firm in the country.

Cover Photos (clockwise from upper left): Apache pipelaying vessel; oil and gas drilling; pulp mill aspen feedstock; Borger, Texas fertilizer plant. This annual report is printed on "A"-rated environmentally

friendly paper. No dioxins are produced in the manufacture of this stock.

## Highlights

Financial Results (\$ million except per share amounts)	1990	1989	% Change
Net earnings	53.6	37.3	44
- \$ per common share	0.72	0.52	38
Cash flow	204.0	187.1	9
• \$ per common share	2.99	2.99	-
Revenues, net of royalties	562.5	505.9	11
Capital spending	222.1	195.9	13
Operating Performance			
Natural gas			
· sales (million cubic feet/day)	272	272	-
· prices (\$/million btu)	1.54	1.47	5
Conventional oil and NGLs			
· sales (barrels/day)	6,880	6,410	7
· prices (\$/barrel)	21.26	16.89	26
Synthetic oil			
· sales (barrels/day)	15,530	14,800	5
· prices (\$/barrel)	26.85	21.45	25
Lumber			
· sales (million board feet)	196	201	(2)
Medium density fibreboard			
· sales (million square feet)	59	63	(6)

## **Major Projects**

- A major gas gathering and production system at Primrose came on stream.
- A successful exploration program yielded the equivalent of 148 billion cubic feet of proven and probable reserves.
- The Vancouver Island natural gas pipeline was 62 percent complete at year-end, including all of the underwater portion.
- The proposed Iroquois Gas Transmission System to serve new northeast U.S. gas markets received federal and state regulatory approvals.
- The Slave Lake Pulp Corporation chemithermo-mechanical pulp mill commenced start-up in December.

ALBERTA ENERGY COMPANY 1990 ANNUAL REPORT

MCGILL UNIVERSITY

AT THE PEPORE D. BEILG ARTILL. THE TRAGE COUDED - LASE CONTROL PAGES OF PRICES ARE DESPERATING GREAT VOLATION. CANADIAL UNITS IS THREATENED AND ECONOMIC CONDITIONS OFFER LITTE SOLASE, AGAINST SHIS BACEGPOUND OPTIMEMALS DIFFICULT AND SET THEREMATIONAL CONFLICTS CONCERNS ABOUT CANADA AND CHAITINGES IN THE ENERGY BUSINESS HAVE BEED OVEPCOME OP ADAPTED TO BEFORE AND THE WILL BE AGAIN

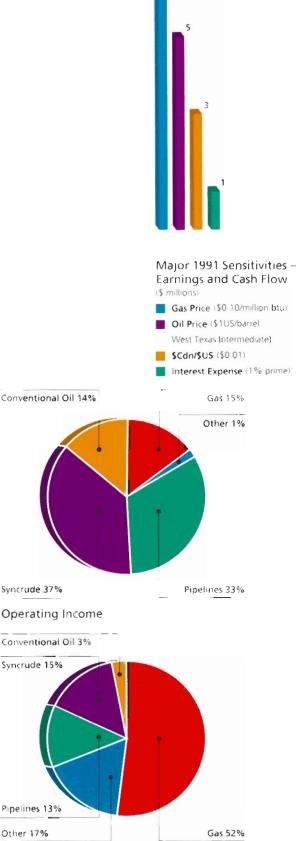
For AEC, the positive news in 1990 included very good exploration results; excellent oil and gas operating reliability and efficiency; development of new oil and gas production facilities; start-up of the Slave Lake pulp mill; progress on the Iroquois and Pacific Coast natural gas pipelines to the northeastern United States and Vancouver Island, respectively, and advancement of computer and production technology that bodes well for future operations. Strengthening of oil prices, for unfortunate reasons, was a major lift for financial results in the last five months of the year.

Special mention is warranted for Syncrode which produced at a record rate, 155,300 barrels per calendar day, and did an impressive job of delivering over 20 percent of Canada's light and medium oil supply.

The bad news was that, although AEC's average gas price increased by 5 percent in 1990, largely due to marketing agility, gas storage opportunities, and payback of Topgas advances, the long-awaited improvement in basic natural gas prices did not materialize. Another negative event occurred when others in the fertilizer business decided to build a government-supported plant in Saskatchewan.

As evidenced in the Highlights and other sections of this report, financial results were higher, year-overyear. Total earnings and cash flow increased, while per share earnings were up 38 percent and per share cash flow was the same as last year. Cash flow per share would have increased by 3 percent, or 10 cents per share, if cash taxes had not increased by \$6.5 million in 1990.

Clearly, the Corporation's financial results have been significantly lessened by the ongoing saga of depressed natural gas prices. As the graphs to the right illustrate, about 52 percent of our assets are in natural



gas, which in 1990 delivered only 15 percent of operating income. A turnaround in natural gas prices, which have declined 42 percent since 1985, would be of major benefit to AEC. Natural gas currently sells for less than one-half the price of crude oil, on an energy equivalent basis. Natural gas prices are expected to increase in 1992, when further pipeline transportation capacity is available, but they are likely to show little change in 1991.

In situ heavy oil is another asset offering considerable potential to AEC. The advent of so-called "cold production" methods (production without prior steam injection) offers the prospect of increased energy supplies from a very large resource base. AEC's in situ heavy oil totals about 25 billion barrels, of which about 500 million barrels is estimated to be exploitable with present technology.

AEC's pipelines continue to be a welcome source of cash flow. Forest products had a less than satisfactory year as the depressed economic conditions and a high exchange rate on the Canadian dollar continued to affect that industry. Fertilizer returns improved somewhat, mainly due to lower production costs, but are still less than satisfactory.

The graph on the page opposite illustrates "sensitivities", or the estimated effect of certain changes on AEC's 1991 financial results. These numbers may evolve quite differently as the year progresses, because they are based on a number of assumptions. For example, the royalties paid on Syncrude production commence at a crude oil price of approximately U.S. \$23 per barrel. Nonetheless, the graph should be helpful in assessing the outlook.

Overshadowing all variables is the price of crude oil, which still is remarkably low when allowance is made for the effect of inflation. The average 1990 West Texas Intermediate oil price of U.S. \$24.50 per barrel is only 70 percent of the average 1985 price expressed in 1990 dollars. In the final analysis, the price of oil will depend primarily upon events in the Middle East, both during and after the war.

The year 1991 offers promise of improved financial returns, subject to those volatile oil prices, and hopefully some lessening of interest rates along with a more realistic value on the Canadian dollar vis-a-vis other currencies. Low operating costs and operating efficiencies, successful exploration results and increased production are contributing to a favourable start for 1991.

Most gasoline consumers are unaware that returns to the producer represent only about onequarter of the ultimate pump price. The balance comprises taxes and refining and marketing costs. Federal tax and some provincial taxes are assessed as a percentage of the price; therefore, the higher the cost of crude oil, the greater the tax.

AEC takes pride in its commitment to the environment and its supportive role in charitable community endeavours. The Corporation supports "Imagine," a campaign to stimulate personal and corporate giving of time and money. We take pride also in our people and their accomplishments and in our programs to promote safe work conditions and practices.

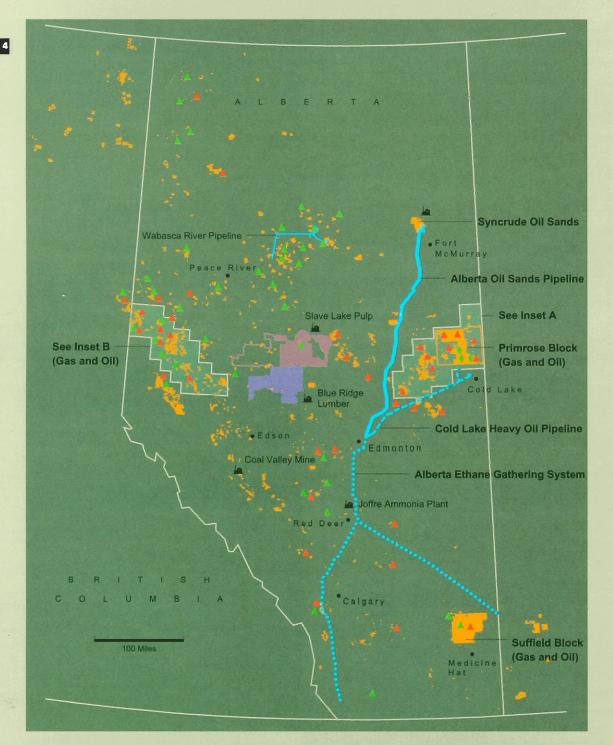
Mr. Mervin Leitch, Q.C., a Director of the Corporation, died in June 1990. His excellent contributions to the progress of AEC will long be remembered by his friends and colleagues. Mrs. Valerie Nielsen is welcomed as a new member of the Board.

As 1991 unfolds, there no doubt will be surprises in the world around us. With its solid financial footing, excellent assets and considerable strengths, AEC will work with evolving opportunities to outperform its competitors and enhance shareholder value.

David E. Mitchell, O.C. President & Chief Executive Officer

February 15, 1991

AEC Gas, Oil and Other Activities

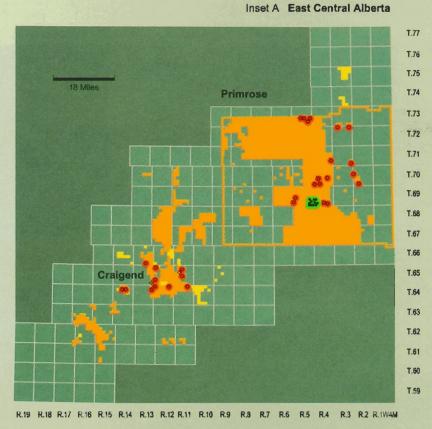




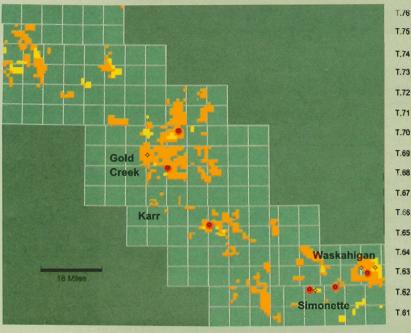
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> Vancouver Island Natural Gas Pipeline

- AEC Interest Land
- Natural Gas
- Conventional Oil
- In Situ Heavy Oil Sands
- Forest Management Areas
- Forest Products Option Lands
- A Plant Facilities



#### Inset B West Central Alberta





AEC/Cominco Fertilizer Business



R 13W6M R.12 R.11 R.10 R.9 R.8 R.7 R.6 R.5 R.4 R.3 R.2 R.1 R.27 R.26 R.25 R.24 R.23 R.22W5M

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Two of AEC's strategies – storing natural gas for subsequent sale in stronger markets and pursuing longterm sales contracts which generate higher prices – increased rhe Corporation's unit gas prices. Repayment of Topgas advances also contributed to enhanced prices. Additional gas sales contracts for future U.S. exports were negotiated.

A successful exploration program achieved low finding costs and identified promising follow-up drilling potential. Positive engineering revisions to producing oil and gas fields also contributed to reserve additions. Conventional oil reserves grew by 27 percent after production, and natural gas reserve additions more than offset production.

Further technical advancements and higher oil prices strengthened the prospects for near-term commercial heavy oil production at Primrose.

Responsible resource development in harmony with the environment has been an integral component of AEC's oil and gas operations since the Corporation began. On the Suffield Military Range, for example, AEC and the military have always been strongly committed to preservation of the wildlife, vegetation, archeology and sand dunes. Since AEC started operations at Suffield fifteen years ago, antelope have increased from a few hundred to 4,000; whitetail and mule deer have shown similar increases; a large herd of wild horses exists; bald and golden eagles abound; and a protected environment has been provided for many other animals, birds and reptiles. Key parts of the Range are being returned to the natural prairie environment which existed before the arrival of man.

AEC conducts environmental audits of its operating locations and funds relevant environmental

research. The Corporation currently is cooperating with the Alberta Department of Forestry, Lands and Wildlife in a research program to monitor the impact of oil and gas activities on the woodland caribon.

#### Reserves.

AEC's oil and gas reserves at year-end 1990 as estimated by AEC's professional engineers are given in the table below. New reserves or significant revisions to previous reserves have been audited by independent engineering consultants, McDaniel & Associates Consultants Ltd.

## Natural Gas (Billion Cubic Feet)

	Proven	Probable	Total
Balance at December 31, 1989	1,412	225	1,637
Revisions to mature established pools	6	19	25
Discoveries, extensions and			
new pool revisions	72	24	96
Acquisition of reserves	7	14	21
Production	(99)		(99)
Balance at December 31, 1990	1,398	282	1,680

#### **Crude Oil and Natural Gas Liquids (Million Barrels)**

Balance at December 31, 1989	15. <b>9</b>	52	21.1
Revisions to mature established pools	1.4	16	3.0
Discoveries, extensions and new pool revisions	5 2	_	52
Acquisition of reserves			
Production	(2.5)	-	(2.5)
Balance at December 31, 1990	20 0	6.8	26.8

#### Synthetic Oil (Million Barrels)

8alance at December 31, 1989	207	-	207
Revisions of previous estimates	(2)	-	(2)
Production	(6)		(6)
Balance at December 31, 1990	199	-	199

#### In Situ Heavy Oil

The above reserves do not include in situitieavy oil. AEC holds an estimated 25 billion barrels of heavy oil in place, net of the amount participants have earned or are entitled to earn, primarily on the Primrose Range in northeastern Alberta. Over 3 billion barrels of the oil is contained within the Clearwater "B" formation at combined thicknesses of more than 33 feet. Using normal industry estimates of recoverability, AEC's





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#### All of AEC's

reported reserves are located in Western Canadian producing areas; none are in the frontiers. share of recoverable oil is anticipated to be 300 to 600 million barrels from the Clearwater "B" formation alone. In situ heavy oil will be recognized as reserves on a progressive basis as commercial development projects proceed.

#### Exploration

Over the last four years, AEC's exploration program has achieved reserve additions averaging 107 billion cubic feet equivalent and progressively lower finding costs. The 1990 exploration program achieved the largest reserve additions and lowest finding costs to date. The 1990 exploration program was supplemented by selective acquisition of reserves and land interests. While exploration continued to be predominantly in Alberta, land acquisition and seismic activity in B.C. increased.

#### **1990 Well Statistics**

#### Exploratory

	Gross	Net
Oil	9	4
Gas	30	18
Cased-Waiting Evaluation	1	1
Dry & Abandoned	 23	10
Total	63	33
Total	 63	33

#### Development

Oil	24	11
Gas	50	25
Cased-Waiting Evaluation	2	1
Dry & Abandoned	3	2
Total	79	39

#### 1990 Landholdings (Acres)

	To	otal Ur	ndeveloped	Developed
	Gross	Net	Net	Net
Alberta	4,539,885	3,024,869	877,008	2,147,861
Saskatchewan	255,916	184,848	182,791	2,057
British Columbia	ə 276,320	121,362	98,485	22,877
Beaufort	851,522	24,915	24,915	
Total	5,923,643	3,355,994	1,183,199	2,172,795

AEC's exploration group is committed to internal prospect generation and a proactive land

acquisition program. The Corporation seeks to maximize its control and profitability of exploration plays by retaining high working interests in land and wells. AEC's average working interest in the 1990 land purchase program was 94 percent, and the average working interest in the exploratory drilling program was 52 percent.

Natural gas drilling activity in east-central Alberta included 48 successful exploration and development wells. Discovery areas included Primrose and Craigend.

In west-central Alberta, AEC participated in 6 successful wells, exploring for natural gas and gas liquids in the Cretaceous and Triassic zones. Discoveries were made at Simonette, Karr and Gold Creek. Additional land purchases increased AEC's position to an average 58 percent interest in 470,000 acres in the region.

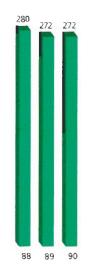
AEC's position in these regions is illustrated on the maps on page 5. Other areas of exploration concentration include Alberta's East Peace River Arch, the Deep Devonian of western Alberta, and nortbeastern British Columbia. Oil discoveries were made at Ogston and Evi. Deep gas discoveries were made at Colt and Strachan.

#### Natural Gas

Sales levels equalled those recorded in 1989. While prices increased 5 percent to \$1.54 per million btu, they remain at a substantial discount to oil prices. AEC estimates that heating value parity with average 1990 oil prices would have resulted in wellhead gas prices more than twice the 1990 average.

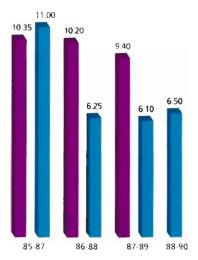
The Corporation continued to develop facilities to bring additional reserves on production to supply recently negotiated, higher-value, long-term U.S. contracts. A major new gas gathering and production facility was placed on stream at Primrose North. This 100 percent AEC owned and operated facility has a maximum capacity of over 30 million cubic feet per day. It will fulfill the majority of a 50 million cubic feet per day contract currently being phased in to serve a new Alberta and Southern California gas contract.

AEC's Karr area discoveries in northwestern Alberta were placed on stream at 12 million cubic feet per day of gas and 450 barrels per day of oil and natural gas liquids. This additional production is being



Natural Gas Sales





Finding and Development Costs (3-year "rolling average") \$ per barrel of oil equivalent)

Industry (88-90 figures not available)
 AEC

Industry figures are derived from Energy Resources **Conservation Board** and Canadian Petroleum Association published data. Equivalent reserves are calculated on an energy ratio of 10,000 cubic feet of gas equals 1 barrel of oil Industry data for 1990 is not available at the time of printing.

marketed in Canada and the United States, including a new contract with Pan-Alberta Gas. The Primrose and Karr production facilities, along with others at Majorville and Gold Creek, have raised AEC's sustainable annual average field gas production capacity to over 300 million cubic feet per day.

Expansion of AEC's natural gas storage facility will increase peak injection and withdrawal capacity by 50 percent to 180 million cubic feet per day by the fall of 1991. This will further enhance marketing flexibility.

The fact that 80 percent of gas production is from 100 percent AEC owned and operated wells further illustrates the Corporation's strategy of maintaining high working interests and operating control in its exploration, production and marketing activities.

AEC's 1990 direct gas production cost of 22 cents per thousand cubic feet is among the lowest in the industry.

During the year, a number of critical regulatory approvals were received for the construction of Canadian and U.S. facilities required to supply gas to the northeastern United States through the proposed Iroquois pipeline. Total direct and indirect sales averaging 38 million cubic feet per day are expected by November 1992, with 5 million cubic feet per day ro be flowing by year-end 1991.

Canadian natural gas markets continue to be depressed due to oversupply and insufficient pipeline capacity to the United States. The completion of the Iroquois pipeline and proposed pipeline expansions to the U.S. Midwest and California markets will have a positive impact on Canadian producers. AEC has made arrangements to transport 30 million cubic feet per day of potential new gas sales through the proposed Northern Border expansion to the Midwest. The Corporation also has committed to the Southern California Edison Company 50 million cubic feet per day, which will be transported through the proposed pipeline capacity expansion to California. Thirty million cubic feet per day of this commitment will be supplied from AEC production, the balance to be supplied under arrangements with Pan-Alberta Gas.

The full phase-in of Iroquois sales and Alberta and Southern related sales to California will mean about 50 percent of AEC's gas production will be moving to higher value export markets by November 1992. This compares with 33 percent in 1990. A further shift towards these markets will occur when new sales through Northern Border and the California expansion are phased in.

#### Conventional Oil

Exploration discoveries in rhe Kitty and Evi areas in west-central Alberta and the application of specialized recovery rechnology at Suffield combined ro increase conventional oil and natural gas liquids production and to set the stage for further increases in 1991. Coincident with the production increases, world oil prices strengthened due to the Iraqi invasion of Kuwait. Prices during the last five months of 1990 were 57 percent higher than in the first seven months.

The AEC-developed anti-water coning technology (AWACT) and an enlarged program of horizontal drilling in the Suffield heavy gravity crude reservoirs improved production rates and contributed to conventional oil reserve growth.

AEC's average 1990 conventional oil operating cost was \$3.80 per barrel, well below industry average.

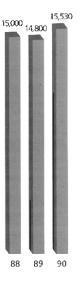
#### Situ Heavy Oil Sands

AEC's Primrose in situ heavy oil sands lease rights are a major untapped asset. Several events occurred during 1990 which have advanced the timing of development. First, the application of new technical approaches has shown the Primrose heavy oil deposits to be of higher quality and recoverable at lower costs than previously anticipated. Second, a new steam injection heavy oil pilot, placed on production in the first quarter of 1991, adds another potential commercial project in the central portion of the Range. Third, AEC believes that, after an adjustment period following the Persian Gulf crisis, prices will settle at a higher base level.

The Clearwater formation currently is being evaluated for commercial production in three major project areas. This formation is producing 100,000 barrels per day from commercial steam injection heavy oil projects immediately south of Primrose. This proven rechnology is profitable at a West Texas Intermediate oil price of U.S. \$22 per barrel. A cold or primary production technique which employs specialized pumps to recover heavy oil without steam injection also has shown potential.



Conventional Oil and NGL Sales (barrels per day)



Synthetic Oil Sales (barrels per day)

By year-end 1991, more than 80 wells are expected to be testing various techniques, including this cold production, with a view to early commercial development.

AEC's involvement in these projects is a combination of working interest and/or net profits interest, allowing the Corporation to choose the most profitable means of participation. While the timing and size of commercial projects will be affected by oil prices, fiscal terms and the positions taken by AEC's joint venture partners, it is anticipated that AEC's equivalent share of Primrose heavy oil production will grow to about 10,000 barrels per day over the next five years and double by the late 1990s.

#### Syncrude

A production record and strong world oil prices combined to yield excellent results for Syncrude. AEC holds a 10 percent joint venture interest in Syncrude, plus an average 7 percent overriding royalty on another 10 percent, a portion of which is subject to maximum synthetic oil volume limitations.

During 1990, Syncrude provided over 20 percent of Canada's light and medium gravity oil production. This high quality, light gravity, low sulphur product is in increasing demand as Canadian conventional production continues to fall.

Syncrude's research department has developed new technologies to reduce production costs, improve product quality, increase volumes and enhance environmental protection.

Syncrude has proven reserves capable of sustaining current production rates well into the next century and already has produced 500 million barrels of light oil.

#### Pan-Alberta Companies

AEC owns one-half of Pan-Alberta Gas Ltd. and Pan-Alberta Resources Inc.

Pan-Alberta Gas, the second largest exporter of Canadian natural gas, exported 375 billion cubic feet of gas in 1990, a 7 percent increase over 1989.

Pan-Alberta Resources (PARI) has a 50 percent interest in the Empress natural gas liquids extraction plant, which operates on a cost-of-service basis. In addition, PARI profits from a share of NGLs extracted from the Pan-Alberta gas stream processed by the Empress and Cochrane plants. Higher natural gas liquids prices in 1990 substantially increased the earnings of PARI.

#### Chieftain International, Inc

AEC participates in international oil and gas activities through its 50 percent ownership in Chieftain International, Inc. (CII).

Natural gas sales increased almost three-fold to average 46 million cubic feet per day during 1990 compared with 16 million cuhic feet per day in 1989. Oil sales averaged 1,790 barrels per day, up from 1,650 barrels per day. The increases are attributed to a full year's production from platforms in U.S. waters in the Gulf of Mexico on Matagorda Island Block 604 and West Cameron Blocks 187 and 188 which commenced production during the second half of 1989. CII is participating, with a 25 percent interest, in the development of a Gulf of Mexico gas discovery on Eugene Island Block 265 where production is scheduled to commence in the second half of 1991.

CII was a 25 percent participant in a Gulf of Mexico gas discovery on Brazos Block 515, which was production tested at 11 million cubic feet per day, and in an indicated shallow gas discovery on Main Pass Block 262. While these wells increased CII's potential reserves, further drilling will be required before independent engineering consultants consider these accumulations to be proven. After production in 1990, the Company's proven natural gas reserves declined and proven oil reserves increased. On an energy equivalent basis total proven reserves declined by 14 percent to 14.9 million barrels.

#### 1990 CII Landholdings (Thousand Acres)

	Gross	Net
United States	272	71
North Sea	101	30
Total	373	101

During 1990, CII expanded its holding of gas and oil rights in the Gulf of Mexico region. In the offshore area, CII increased its holdings of federal acreage from 24 blocks covering 133,600 gross (34,300 net) acres to 37 blocks covering 200,900 gross (71,200 net) acres. Onshore, an additional 5,700 gross (1,200 net) acres were acquired in southern Louisiana, Texas and Mississippi.



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Construction of the Vancouver Island natural gas pipeline in British Columbia was 62 percent complete by year-end and will be fully operational in late 1991. The system will be operated by 50 percent AEC-owned Pacific Coast Energy Corporation. The pipeline route is shown on page 4.

The pipeline crosses many environmentally sensitive areas, including the Coquitlam watershed and many streams and rivers. The construction program, structured to minimize environmental impact, pioneered many new techniques in pipeline construction. More than 200 stream crossings were individually scheduled and designed to prevent disruption to fish habitat. The pipeline will provide natural gas for residential and commercial service on Vancouver Island. As well, the system will enable seven pulp mills along the route to switch from fuel oil to natural gas, greatly reducing sulphur dioxide emissions. The availability of natural gas also will reduce the need for 300 oil barges moving annually along the Island coast.

During the year, the Iroquois Gas Transmission System received federal and state regulatory approvals for a new pipeline to serve the northeast United States. An AEC subsidiary owns a 6 percent interest in this U.S. \$597 million natural gas system which will have the capacity to transport 575 million cubic feet per day of Alberta gas. Construction is expected to begin in the





## spring of 1991; deliveries will commence in late 1991. The equity investment of AEC's subsidiary will be U.S. 59 million 59 million.

The Iroquois pipeline will have a favourable environmental impact on the northeast U.S. as natural gas will displace 30 million barrels of oil annually and result in a substantial reduction of sulphur and carbon dioxide emissions.

The two major oil transmission systems owned and operated by AEC continued to provide reliable, cost effective transportation.

In the past year, AEC implemented a public awareness and education program to help minimize the risk of any environmental impact due to third party action. Employees are personally contacting each landowner or occupant across whose land AECoperated pipelines run to ensure the occupant is aware of the pipeline. The respective obligations of the occupant and the Corporation are being reviewed.

AEC Pipelines completed four years without a lost-time accident and won, for the second consecutive year, a Canadian Petroleum Association award for its safety performance.

## **AEC Pipelines Profile**

	Alberta Oil Sands Pipeline		old Lake Ipeline	
Product	Synthetic Crude Oil	Blended Bitumen	Condensate (Diluent)	
1990 Throughput (oarrels/day)	156,300	131,000	35,700	
198 <b>9</b> Throughput roarrels/day)	148,000	129,500	35,500	
Pipeline Size Inches.	22	24	12	
Length of Pipeline (miles)	280	150	150	

Apache, the world's most advanced pipelaying vessel, was required to lay pipe for the Vancouver Island marine crossings Pipe was welded into continuous lengths on land,

The real ship

reeled onto the Apache and then

lovered into the

ocean



ASSE ENTIFIED THE PUTP BUSIDESS WITH THE DECEMBER 1990 START-UP OF THE SLAVE LAKE PULP CORPORATION (STPC): ASPEN-BASED BLEACHED CHEMI-THERMO-MECHANICAL PULP MITH & STPC IS OWNED BY A PARTNERSHIP OF ALBERTA ENERGY COMPANY FTD (75 PERCENT) AND MODO CANADA INC. (25 PERCENT), A WHOLLY OWNED SUBSIDIARY OF MO OCH DOMIDO AB OF SWEDEN

#### Pulp

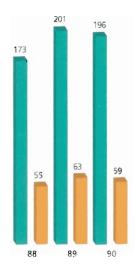
The Slave Lake mill is a state-of-the-art facility which has been designed to meet environmental standards that are among the highest in the world for a mill of its type. The mill will not produce either chlotinated dioxins or furans, which are among the principal causes of environmental concern with pulp mills.

As part of its assessment of the environmental impact of the mill, SLPC completed the most comprehensive environmental studies ever done on a Canadian river. These studies identified the initial fisheries and water quality characteristics present in the Lesset Slave River and indicated that the impact of mill operations on the river system will be insignificant. Nevertheless, an extensive monitoring program has been established. The aspen feedstock to supply the mill is an abundant hardwood resource in Alberta which has been secured under a long-term forest management agreement with the Government of Alberta.

The high yield pulp is targeted for the production of printing and writing grade papers and will be marketed around the world under the **Ranger**⊗ tradename by MoDo CellKraft.

#### Wood Products

Sales revenues for **Ranger**<sup>®</sup> lumber and medium density fibreboard (MDF) from the mill operated by wholly owned Blue Ridge Lumber (1981) Ltd. were lower than 1989 record levels.





# Lumber and MDF Sales Lumber Sales (million board feet) MDF Sales (million square feet)

North American lumber markets weakened substantially during the fourth quarter due to deteriorating Canadian and U.S. economies. Average mill ner prices were slightly lower in 1990 while sales totalled 196 million board feet, a decrease of 2 percent from 1989.

Reduced medium density fibreboard sales were due in part to operating difficulties experienced during the first half of the year. The problems have been corrected, and the plant is operating well. Mill net prices were 4 percent lower, and shipments of 59 million square feet were down 6 percent from 1989.

The Corporation produces high quality MDF that meets the most stringent market standards. **Ranger**⊗ MDF continues to enjoy strong market acceptance and global recognition for its superior quality.

## Timber Lands

AEC manages its 2.5 million acres of forest lands on a sustained yield basis. In 1990, over 8,300 acres of cutover areas were planted while an additional 2,100 acres were seeded. As part of its reforestation program, Blue Ridge Lumber planted 4.6 million trees during 1990, representing 1.6 trees for each tree harvested.



# The Slave Lake Pulp Corporation chemothermomechanical pulp mult, which uses an abundant aspen feedstock, produces neither chlorinated



AD IN DVENIMENT OF THE FERDILIER BUSINESS ACHIEVED ITS HIGHEST TEVEL OF OPERATING CASH FLOW SINCE THE ALCO ONNO O TOHLY VEHTURE BEGAN IN 1987 SEVERAL MAJOR INITIATIVES ARE EXPECTED TO IMPROVE RESULTS (1999) AND DITURE (FAP)

The acquisition of a large ammonia storage and distribution facility in western Kansas has opened up a new market area. A new and much more economical production facility for ammonium nitrate in Alberta is being considered. Significant opportunities for cost savings in transportation and distribution have been identified and are being actively pursued.

Average plant gate netbacks decreased in 1990, reflecting weak demand for ammonia and urea in western Canadian agricultural markets. This weak demand was due to low grain prices and lack of moisture. In the U.S., where almost two-thirds of AEC's products are sold, prices on average were slightly below 1989 levels. The strong Canadian dollar also reduced returns from this market. The crisis in the Middle East, combined with reduced exports from the USSR and eastern Europe, reduced the world supply of nitrogen fertilizers, particularly urea, with a consequent increase in international prices.

Increased cash flow and income in 1990 reflected a 2 percent increase in sales volumes and a significant reduction in costs. Capital programs carried out in 1989 at the Borger, Texas and Carseland, Alberta plants to reduce natural gas feedstock requirements were responsible for the cost reductions.

Measures were taken to ensure that the seven fertilizer production plants continue to meet high environmental standards. The modifications to the Borger ammonia plant not only reduced natural gas

requirements by 8 percent but also reduced waste water by 30 percent. The Joffre, Alberta ammonia plant uses only two-thirds of the natural gas and discharges less than 10 percent of the water of a conventional ammonia plant. Design work is underway to reduce atmospheric emissions at the ammonium nitrate plant in Nebraska, while the new ammonium nitrate plant being considered for Alberta will use substantially less energy and have lower emission levels than the existing Calgary plant.

#### AEC-Cominco Fertilizer Business

	1990	1989
AEC nitrogen fertilizer sales (thousand tonnes)	355	349
Average plant gate netback (\$/tonne)	122	126

The market area and production and storage facilities of the AEC-Cominco fertilizer business are shown on page 5.

#### Other Investments

#### AEC Power

AEC holds a two-thirds interest in AEC Power I.td., owner of the power plant which supplies electricity and steam for the Syncrude operation. Profits are earned on a set cost-of-service basis.

#### Coal Valley

AEC's 25 percent joint venture share of sales from the Coal Valley mine was comparable to 1989, totalling over 500,000 tons of very low-sulphur coal. The Coal Valley mine, which has consistently made a profit for AEC, is the first surface mine in Alberta's foothills region to receive environmental reclamation certificates confirming that mining areas have been returned to timber production standards.

#### Tri-City Diilling (1968) Lid

Tri-City is a wholly owned subsidiary of AEC which operates 14 drilling rigs specializing in shallow- to medium-depth contract drilling for oil and gas. In 1990, Tri-City's rig utilization was 54 percent compared with 33 percent for the drilling industry.





## Modifications at the Commonoperated Borger Texas ammonia plant reduced the requirements for natural gas feedstock and decreased the quantity of waste water

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TO BE READ IN CONJUNCTION WITH THE AUDITED FINANCIAL STATEMENTS (COMPARISONS ARE TO 1989 AMOUNTS

#### UNLESS OTHERWISE STATED)

Net earnings and revenues rose significantly in 1990 mainly due to higher oil prices, while operating expenses increased because of higher Syncrude and gas operating expenses. \$11 million was invested in new computer technology which is the principal reason for the increase in general and administrative expense. Depreciation, depletion and amortization expense includes a higher provision for future development and a new \$3 million provision for future site restoration. Income taxes rose primarily due to higher earnings. Chieftain International, Inc. and the Pan-Alberta companies provided higher equity earnings.

Net earnings and cash flow for 1991 will be largely dependent on gas and oil prices. Due to the present conflict in the Gulf, oil prices have been extremely volatile. Based on anticipated production volumes and prices for 1991, each \$0.10 per million btu increase in average gas prices would increase net earnings and cash flow by \$6 million, while a U.S. \$1.00 per barrel increase in the price of oil would lead to a \$5 million increase in net earnings and cash flow. Although dependent on net earnings, it is expected that cash taxes of \$8 million in 1990 may increase somewhat in 1991.

Oil and Gas operating income increased largely due to a 25 percent increase in oil prices and a 5 percent increase in gas prices. Synthetic and conventional oil volumes increased by an average of 6 percent while gas volumes remained unchanged. It is estimated that Syncrude will pay Crown royalties in 1991 if the average annual West Texas Intermediate oil price exceeds U.S. \$23 per barrel. Royalty expense was not recorded in 1990 due to the offsetting effect of capital investment made in prior years.

Pipelines operating income declined slightly, with AEC's two major operated pipelines generating approximately 95 percent of the total. Operating income in 1991 is expected to improve marginally. Forest Products operating income decreased, primarily due to decreased lumber and medium density fibreboard (MDF) revenues and higher unit costs for both products. Average lumber prices remained relatively constant while MDF prices decreased as did both lumber and MDF volumes. The Slave Lake pulp mill is not expected to reach design capacity until late 1991 and, accordingly, 1991 equity losses are expected from the Partnership. 19

Petrochemicals operating income combined with equity earnings from the U.S. fertilizer partnership remained at about the same level. A small decrease in average price was offset by a reduction in cost of sales.

In 1990, capital investment totalled \$222 million with approximately two-thirds relating to oil and gas and most of the remainder for the completion of the Slave Lake pulp mill. Capital investment in 1991, to be funded largely by cash from operations, is expected to approximate the 1990 level. Much lower capital expenditures are expected for forest products due to completion of the Slave Lake pulp mill.

The debt to equity ratio is 42:58. The average term of long-term debt is 9 years and approximately 94 percent of total long-term debt is unsecured. Mandatory long-term debt repayments over the next five years amount to \$17 million. At year-end, over \$240 million was available in unused long-term lines of credit. 20

To the Shareholders of Alberta Energy Company Ltd.:

We bave audited the consolidated balance sheets of Alberta Energy Company Ltd. as at December 31, 1990 and 1989 and the consolidated statements of earnings, retained earnings and changes in financial position for the years then ended. These financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Corporation as at December 31, 1990 and 1989 and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles.

Price Walnhome

Chartered Accountants Edmonton, Alberta February 6, 1991

#### Consolidated Statement of Earnings Year Ended December 31 (\$ millions\*)

* except per share amounts	Note Reference	1990	1989
Revenues, Net of Royalties		\$ 562.5	\$ 505.9
Costs and Expenses			
Operating		283.1	255.5
General and administrative		21.1	18.7
Interest, net	2	57.1	54.5
Depreciation, depletion and amortization		137.5	129.2
		498.8	457.9
Earnings before the Undernoted		63.7	48.0
Income tax expense	3	26.7	17.4
Equity earnings		16.6	6.7
Net Earnings		\$ 53.6	\$ 37.3
Earnings per Common Share		\$ 0.72	\$ 0.52

Consolidated Statement of Retained Earnings Year Ended December 31 (\$ millions)

	1990	1989
Balance, Beginning of Year	\$ 228.8	\$ 220.7
Net Earnings	53.6	37.3
	282.4	258.0
Dividends – Preferred Shares	5.8	7.3
- Common Shares	21.8	19.7
Affiliate's Financing Costs, Net of Income Taxes	-	2.2
	27.6	29.2
Balance, End of Year	\$ 254.8	\$ 228.8

See accompanying notes to the consolidated financial statements.

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Assets	Note Reference	1990	1989
Current Assets			
Cash and short-term investments, at cost which approximates market		\$ 29.8	\$ 60.7
Accounts receivable and accrued revenue		79.5	70.7
Inventories		42.2	30.5
		151.5	161.9
Investments	4	209.8	145.8
Property, Plant and Equipment	5	1,704.2	1,683.5
Deferred Charges and Other Assets		16.7	12.2
		\$ 2,082.2	\$ 2,003.4

## Liabilities and Shareholders' Equity

Current Liabilities			
Notes payable		\$ 37.8	\$ 35.0
Accounts payable and accrued liabilities		101.7	111.2
Current portion of long-term debt	6	3.0	3.2
		142.5	149.4
Long-Term Debt	6	595.9	538.2
Deferred Revenue and Other Liabilities		34.6	65.4
Deferred Income Taxes		437.0	418.4
		1,210.0	1,171.4
Shareholders' Equity			
Share capital	7	619.8	605.8
Retained earnings		254.8	228.8
Foreign currency translation adjustment		(2.4)	(2.6)
		872.2	832.0
		\$ 2,082.2	\$ 2,003.4

Approved by the Board:

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See accompanying notes to the consolidated financial statements.

#### Consolidated Statement of Changes in Financial Position Year Ended December 31 (\$ millions)

		1990	1989
Operating Activities			
Net earnings	\$	53.6	\$ 37.3
Depreciation, depletion and amortization		137.5	129.2
Deferred income taxes		19.2	16.4
Equity earnings, net of dividends from affiliates		(7.6)	2.9
Other		1.3	1.3
Cash flow		204.0	187.1
Net change in non-cash working capital		(25.1)	(30.0)
Reduction of deferred revenue		(2.5)	(9.1)
		176.4	148.0
Investing Activities			
Purchase of property, plant and equipment		(167.1)	(98.7)
Additions to equity investments		(55.0)	(97.2)
Proceeds on disposal of assets		9.7	15.0
Other		(0.2)	(4.5)
		(212.6)	(185.4)
Dividends			
Preferred share dividends		(5.8)	(7.3)
Common share dividends		(21.8)	(19.7)
		(27.6)	(27.0)
Decrease in Cash before Financing Activities		(63.8)	(64.4)
Financing Activities			
Net issue (repayment) of revolving debt		60.9	(56.6)
Issue of common shares		14.0	110.0
Repayment of deferred revenue		(39.9)	_
Repayment of non-revolving debt		(3.2)	(3.1)
Payment of other liabilities		(1.7)	(17.1)
		30.1	33.2
Decrease in cash and short-term investments less notes payable	S	(33.7)	\$ (31.2)
Cash and short-term investments less notes payable, end of year	\$	(8.0)	\$ 25.7

See accompanying notes to the consolidated financial statements.

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#### **1.Summary of Significant Accounting Policies**

#### (a) Principles of consolidation

The consolidated financial statements include the accounts of Alberta Energy Company Ltd. (the "Corporation") and its subsidiaries, all of which are wholly owned.

Investments in unincorporated joint ventures are accounted for using the proportionate consolidation method, whereby the Corporation's proportionate share of revenues, expenses, assets and liabilities are included in the accounts.

Investments in companies and partnerships over which the Corporation has significant influence or joint control are accounted for using the equity method.

A listing of major subsidiaries, affiliates, unincorporated joint ventures and partnerships is included on page 36.

## (b) Property, plant and equipment

#### Oil and Gas

## Conventional

The Corporation accounts for conventional oil and gas properties in accordance with the Canadian Institute of Chartered Accountants' guideline on full cost accounting in the oil and gas industry.

Under this method all costs associated with the acquisition, exploration and development of oil and gas reserves are capitalized in cost centres on a country by country basis. Direct general and administrative costs related to exploration activities are capitalized while interest is not capitalized.

Depletion and depreciation is calculated using the unit-of-production method based on estimated proven reserves, before royalties. For purposes of this calculation, oil is converted to gas on an energy equivalent basis. All capitalized costs are subject to depletion and depreciation including costs related to unproved properties as well as estimated future costs to be incurred in developing proven reserves.

A ceiling test is applied to ensure that capitalized costs do not exceed estimated future net revenues less certain costs.

#### **Oil sands**

Property, plant and equipment associated with both surface mineable and in situ commercial oil sands projects are accumulated, at cost, in separate cost centres. Substantially all of these costs are amortized using the unit-ofproduction method based on estimated proven developed reserves applicable to each project. Project expenditures during the exploratory and pilot phases are depreciated using the straight-line method over terms up to five years.

#### Pipelines

Property, plant and equipment related to pipelines is carried at cost and is depreciated in accordance with the terms of each applicable pipeline service agreement.

## Other

Other property, plant and equipment is carried at cost and is depreciated over the useful life of the assets.

#### (c) Deferred charges and other assets

## **Financing costs**

Financing costs relating to long-term debt are deferred and amortized over the life of the related debt.

## Project investigation costs

Project investigation costs for new business opportunities are charged to earnings as incurred until such time as the commercial viability of the project is established. Subsequent expenditures are capitalized and amortized on a basis appropriate for the project.

## (d) Foreign currency translation

The accounts of self-sustaining foreign subsidiaries are translated using the current rate method whereby assets and liabilities are translated at year-end exchange rates while revenues and expenses are converted using average annual rates. Translation gains and losses relating to these subsidiaries are deferred and included in shareholders' equity.

## (e) Inventories

Inventories are valued at the lower of cost or estimated net realizable value.

#### (f) Interest capitalization

Interest is capitalized during the construction phase of large capital projects.

#### (g) Comparative figures

Certain 1989 figures have been reclassified for comparative purposes.

2. Interest, Net	1990	1989
Interest expense - long-term debt	\$ 54.2	\$ 60.8
- other	5.8	0.8
Interest income	(2.9)	(5.3)
Capitalized interest	-	(1.8)
	\$ 57.1	\$ 54.5

#### Notes to Consolidated Financial Statements (tabular amounts in \$ millions, unless otherwise indicated)

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3. Income Taxes		1990	1989
Current		\$ 6.0	\$ 2.4
Deferred		19.2	16.4
Large corporations tax		3.2	1.6
Alberta royalty tax credit		(1.7)	(3.0)
Income tax expense		\$ 26.7	\$ 17.4

The following table reconciles income tax expense calculated at statutory rates with actual income tax expense:

Earnings before income tax expense and equity earnings	\$ 63.7	\$ 48.0
Income tax expense at statutory rate of 43.8%	\$ 27.9	\$ 21.0
Effect on taxes resulting from:		
Non-deductibility of:		
Crown royalties and leases	11.3	10.0
Depreciation, depletion and amortization	5.7	5.7
Federal resource allowance	(21.1)	(17.4)
Large corporations tax	3.2	1.6
Alberta royalty tax credit	(1.7)	(3.0)
Other, net	1.4	(0.5)
Income tax expense		
(Effective Rate: 1990 - 41.9%; 1989 - 36.3%)	\$ 26.7	\$ 17.4

The Corporation's U.S. subsidiaries have tax losses available which can be applied against future taxable income earned in the U.S., with certain restrictions, in the approximate amount of U.S. \$20 million, the benefit of which has not been recorded. The losses, which expire between 2001 and 2003, became available due to the reorganization of the U.S. subsidiaries.

4. Investments	Percent Interest	1990	1989
All of the following investments are accounted for using the equity m	ethod.		
Corporations:			
AEC Power Ltd. (50% voting)	66 ½	\$ 31.7	\$ 31.1
Chieftain International, Inc.	50	78.7	74.5
Pacific Coast Energy Corporation	50	14.5	5.4
Pan-Alberta Gas Ltd. (40% voting)	49.995	8.6	7.8
Pan-Alberta Resources Inc. (40% voting)	49.995	2.0	0.9
Partnerships:			
Cominco Fertilizer Partnership	25	16.8	12.4
Iroquois Gas Transmission System	6	4.1	1.7
Slave Lake Pulp Partnership	75	53.4	12.0
		\$ 209.8	\$ 145.8

5. Property, Plant and Equipment		1990		1989
	Cost	Accumulated depreciation, depletion and amortization	Net	Net
Oil and gas	\$ 1,949.2	\$ 657.4	\$ 1,291.8	\$ 1,249.4
Pipelines	355.0	111.0	244.0	259.0
Forest products	85.6	42.5	43.1	47.0
Petrochemicals	102.1	20.5	81.6	87.1
Other	119.0	75.3	43.7	41.0
	\$ 2,610.9	\$ 906.7	\$ 1,704.2	\$ 1,683.5

#### Notes to Consolidated Financial Statements (tabular amounts in \$ millions, unless otherwise indicated)

6. Long-Term Debt		1990	1989
Fixed rate debt: Unsecured debentures	Argen.		
10.50%, due June 1996		\$ 100.0	\$ 100.0
6.75% convertible subordinated, due June 2002		125.0	125.0
7.25% convertible subordinated, due September 2003 First Mortgage Sinking Fund Bonds		150.0	150.0
Series A, 9 5/8%, due June 1997		12.1	13.7
Series B, 9 3/4%, due June 1997		14.5	15.9
Mortgage, 11.75%, due September 2000		5.0	5.1
Other		3.2	1.8
		409.8	411.5
Floating rate debt:			
Revolving credit and term loan borrowings			
Notes payable		171.9	110.8
Term loans		20.0	22.1
		191.9	132.9
		601.7	544.4
Current portion of long-term debt		3.0	3.2
Unamortized portion of debt discount		2.8	3.0
		5.8	6.2
		\$ 595.9	\$ 538.2

## (a) Mandatory five year debt repayments

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The minimum annual repayments of long-term debt required over each of the next five years are as follows:

1991	\$ 3.0
1992	3.5
1993	3.4
1994	3.5
1995	3.6

#### (b) Convertible debentures - 6.75%

Each debenture is convertible at the option of the holder into Common Shares at any time until June 29, 1997 or the last business day prior to the date fixed for redemption, whichever is earlier, at a conversion price of \$23.375 per Common Share.

Subject to certain conditions, the debentures are redeemable at the option of the Corporation, at prices varying from 104.50% to 100.00% of the principal amount.

## (c) Convertible debentures - 7.25%

Each debenture is convertible at the option of the holder into Common Shares at any time until September 29, 1997 or the last business day prior to the date fixed for redemption, whichever is earlier, at a conversion price of \$25.50 per Common Share.

Subject to certain conditions, the debentures are redeemable at the option of the Corporation, at prices varying from 104.8% to 100.0% of the principal amount.

## (d) First Mortgage Sinking Fund Bonds

Alberta Oil Sands Pipeline Ltd. ("AOSPL"), a subsidiary of the Corporation, is obligated to retire \$2.8 million of these bonds annually. The bonds are secured by both a fixed and floating charge on AOSPL's assets that relate to the Syncrude project which at December 31, 1990 had a carrying value of \$76.8 million. The participants in the Syncrude project, including the Corporation to the extent of 10%, are committed to provide funds for the repayment of these bonds.

## (e) Revolving credit and term loan borrowings

The Corporation has \$375 million of revolving credit and term loan facilities available with three banks. One facility is fully revolving until converted to a five year revolving reducing facility at the option of the lender and upon 24 months' notice to the Corporation. The other two facilities are fully revolving until 1992 and 1993, respectively, with provisions for yearly extensions at the option of the lenders following 19 months' notice from the Corporation. If not extended, the two facilities convert to revolving reducing facilities over seven and four years, respectively.

All three facilities are unsecured and are available in Canadian and/or U.S. dollar equivalent amounts and currently bear interest at the lenders' rates for Canadian prime commercial or U.S. base rate loans, or at Bankers' Acceptance rates or LIBOR plus applicable margins.

The Corporation also has a \$75 million unsecured revolving credit and term loan facility with a trust company. The agreement is fully revolving until 1996 and provides for an extension to 1998 and successive anniversaries thereafter, at the option of the lender following notice from the Corporation. If not extended, the facility is repayable in full on expiry of the revolving term. Amounts advanced under this facility bear interest at the lender's prime commercial lending rates minus a factor up to 34% or at Bankers' Acceptance rates plus an applicable margin.

Alenco Inc., a subsidiary of the Corporation, has a U.S. \$20 million unsecured revolving credit and term loan facility available which is guaranteed by the Corporation. This facility is fully revolving until 1992 with provision for yearly extensions at the option of the lender upon 19 months' notice from Alenco Inc. If not extended, the facility converts to a revolving reducing facility over seven years.

Notes payable consist of Commercial Paper and Bankers' Acceptances maturing at various dates to May 23, 1991 with a weighted average interest rate of 12.48% (1989 - 12.53%). Notes payable shown as long-term debt represent amounts which are not expected to require the use of working capital during the year and are supported by the availability of term loans under the revolving credit facilities.

#### Notes to Consolidated Financial Statements (tabular amounts in \$ millions, unless otherwise indicated)

0 7. Share Capital		1990	1989
First Preferred Shares:	n. Angala		
Authorized - 20,000,000 shares			
Issued - None		\$ -	\$ -
Second Preferred Shares:			
Authorized - 20,000,000 shares			
Issued - 2,999,700 7.75% Deferred Convertible Redeemable,			
Series 2 shares with a paid up amount of \$25 each		75.0	75.0
Third Preferred Shares:			
Authorized - 20,000,000 shares			
Issued - None		-	-
Common Shares:			
Authorized - 300,000,000 shares			
Issued - 66,785,038 shares (1989 - 65,849,537)		544.8	530.8
Non-Voting Shares:			
Authorized - 5,000,000 shares			
Issued - None		-	-
		\$ 619.8	\$ 605.8

## (a) Second Preferred Shares - Series 2

3(

Subject to certain conditions, the shares are redeemable at the option of the Corporation at prices varying from \$26.50 to \$25.00 per share. Dividends relating to these shares are cumulative.

The Series 2 Preferred Shares are convertible, at the option of the holder, into 1.28 Common Shares until May 16, 1995.

(b) Common Shares Issued	19	1990			1989			
	Number of Shares		Amount	Number of Shares	,	Amount		
Balance, beginning of year	65,849,537	\$	530.8	59,773,585	\$	419.5		
Issued for cash								
Shareholder Investment Plan	852,741		13.0	639,199		10.9		
Employee Share Option Plan	82,760		1.0	173,595		1.9		
Public offering	-		-	5,263,158		100.0		
Common share issue costs, net of								
income taxes	-		-	-		(1.5)		
Balance, end of year	66,785,038	\$	544.8	65,849,537	\$	530.8		

## (c) Employee Share Option Plan

The Employee Share Option Plan provides for granting to employees of the Corporation and its subsidiaries options to purchase Common Shares of the Corporation. Each option granted under the plan expires after seven years and may be exercised in cumulative annual amounts of 25% on or after each of the first four anniversary dates of the grant.

As at December 31, 1990, options, exercisable between 1991 and 1997, were outstanding to purchase 1,363,850 Common Shares at minimum prices ranging from \$9.79 to \$21.60 per share.

#### (d) Common Shares Reserved

At December 31, 1990, Common Shares were reserved for issuance as follows:

Conversion of Subordinated Debentures	11,229,946
Conversion of Second Preferred Shares	3,839,616
Employee Share Option Plan	2,723,225
Shareholder Investment Plan	582,763
Employee Savings Plan	435,800
Share Purchase Plan (presently inactive)	100,108
	18,911,458

## (e) Alberta Energy Company Act

Pursuant to the Alberta Energy Company Act, aggregate ownership of voting shares in the Corporation by nonresidents of Canada is limited to 10% and the maximum ownership of any one shareholder, excluding the Government of Alberta, is limited to 5% of the total number of issued and outstanding voting shares of each class of the Corporation.

#### 8. Supplementary Information

## (a) Unincorporated joint ventures

The Corporation has included in its accounts the following aggregate amounts in respect of major unincorporated joint ventures:

	1990	1989
Assets	\$ 428.5	\$ 414.1
Liabilities	42.3	40.3
Revenues, net of royalties	214.4	176.1
Expenses	156.9	139.8

#### (b) Capitalized general and administrative expenses

General and administrative expenses capitalized to oil and gas properties during the year amounted to \$7.0 million (1989 - \$7.2 million).

#### (c) Ceiling test prices

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The prices used in the ceiling test evaluation of the Corporation's conventional reserves at December 31, 1990 were as follows:

Natural gas	\$1.57 per million btu
Oil and natural gas liquids	\$23.25 per barrel

## (d) Pension plans

At December 31, 1990, the market value of pension fund assets was \$26.8 million (1989 - \$23.4 million) and the accrued pension liability, as estimated by the Corporation's actuaries, was \$24.4 million (1989 - \$20.7 million).

#### (e) Related party transactions

During the year, the Corporation sold approximately \$41.2 million (1989 - \$35.9 million) of natural gas to affiliates of which \$5.5 million (1989 - \$6.3 million) is included in accounts receivable at year end.

During 1989, the Corporation sold its non-Canadian oil and gas assets to Chieftain International, Inc. (CII) for \$96 million. The Corporation acquired 50% of the common shares issued by CII for \$76.1 million pursuant to an Initial Public Offering that was completed in April 1989.

## (f) Commitments

Pacific Coast Energy Corporation is constructing a natural gas pipeline from the mainland to Vancouver Island, British Columbia, which is expected to cost \$339 million when completed in 1991. Project financing of \$120 million and Government financing of \$175 million are in place, which obligates both shareholders, under certain conditions, to complete the pipeline by April, 1993.

The Slave Lake Pulp Partnership mill commenced start-up operations in December, 1990. Project financing of \$96 million has been advanced which requires the partners to meet certain production levels by 1995. In addition, rhe partnership has a working capital credit facility in the amount of \$10 million, which is secured by certain partnership assets.

#### 9. Segmented Information

	N	enues, et of yalties	Incon	erating ne (Loss) and Earnings		ntifiable Assets	Pro Plant &	itions to operty, Equipmen vestments	t Dep	reciation letion & rtization
	1990	1989	1990	1989	1990	1989	1990	1989	1990	1989
Oil and gas	\$ 346.1	\$ 290.7	\$ 107.6	\$ 69.1	\$1,455.8	\$1,385.2	\$ 142.9	\$ 156.4	\$ 99.0	\$ 90.6
Pipelines	85.8	84.9	50.2	51.4	271.7	277.3	11.7	13.7	16.2	15.5
Forest products	65.2	66.8	(3.6)	2.9	115.7	74.6	45.2	14.9	6.1	6.1
Petrochemicals	27.2	27.5	(0.1)	(0.4)	120.7	113.7	2.6	4.1	6.0	5.9
Other	38.2	36.0	8.5	8.6	56.5	64.6	1.4	4.2	6.1	7.4
	562.5	505.9	162.6	131.6	2,020.4	1,915.4	203.8	193.3	133.4	125.5
Corporate	-	-	(109.0)	(94.3)	61.8	88.0	18.3	2.6	4.1	3.7
Total	\$ 562.5	\$ 505.9	\$ 53.6	\$ 37.3	\$2,082.2	\$2,003.4	\$ 222.1	\$ 195.9	\$ 137.5	\$ 129.2

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<ul> <li>All dollar amounts, except per share amounts</li> </ul>		1990		1989		1988		1987		1986
Financial										
Earnings before extraordinary items	\$	53.6	\$	37.3	\$	36.1	\$	60.5	\$	47.8
Net earnings (loss)		53.6		37.3		51.4		60.5		(35.5)
Cash flow		204.0		187.1		196.2		207.0		201.5
Revenues, net of royalties		562.5		505.9		477.2		464.0		443.3
Property, plant and equipment		1,704.2		1,683.5		1,726.6		1,584.5		1,546.2
Long-term debt		595.9		538.2		597.8		537.9		534.5
Share capital		619.8		605.8		494.5		391.4		384.0
Total assets		2,082.2		2,003.4		1,931.3		1,858.8		1,806.3
Per Share Data										
Earnings before extraordinary items	\$	0.72	\$	0.52	\$	0.52	\$	1.02	\$	0.72
Net earnings (loss)		0.72		0.52		0.79		1.02		(1.12)
Cash flow		2.99		2.99		3.24		3.68		4.01
Common shareholders' equity		11.94		11.49		10.68		9.48		8.62
Common dividend		0.33		0.33		0.30		0.30		0.30
Shares										
Registered shareholders		43,920		45,326		45,339		46,528		51,125
Common Shares outstanding	66,7	785,038	65	,849,537	59,	,773,585	53	,814,652	52	,757,339
Total volume of Common Shares traded Common Share price range (TSE)	17,4	124,979	17	,275,199	12,	,014,918	21	,188,500	15	,327,109
High	\$	20.25	\$	22.75	\$	19.50	\$	25.25	\$	17.38
Low		15.50		15.63		13.63		14.38		9.75
Close		16.88		19.88		15.75		15.88		14.88
Operating Data										
Gas sales (billion cubic feet)		99.3		99.3		102.3		85.0		92.0
Synthetic oil sales (million barrels)		5.7		5.4		5.5		5.0		4.7
Conventional oil and										
natural gas liquids sales (million barrels)		2.5		2.3		2.4		1.8		1.7
Lumber sales (million board feet)		196		201		173		169		152
Medium density fibreboard sales										
(million square feet)		59		63		55		47		8
Nitrogen fertilizer sales (thousand tonnes)	)	355		349		292		135		-
Coal sales (thousand tons)		544		548		544		501		448
Pipeline throughput (all systems)										
(million barrels)		173.6		166.8		173.0		160.0		118.8

At Year-End 1990

Net petroleum and natural gas rights	3.35 million acres	Proven synthetic oil reserves	199 million barrels
Natural gas reserves (billion cubic feet)	•	Synthetic oil reserve life*	35 years
Proven 1,398 Probable 282	Total 1,680	Net Primrose heavy oil in place	25 billion barrels
Proven and probable natural gas reser		Timber lands	2.5 million acres
Oil and natural gas liquids reserves (m		Coal reserves	4.8 million clean short tons
Proven 20.0 Probable 6.8 Proven and probable oil and natural g	Total 26.8	Coal reserve life*	9 years
reserve life*	11 years	Pipelines (in 5 pipelines)	1,400 miles
* At 1990 production rates	i i jears	ripennes (in 5 pipennes)	1,400 miles

Mathew M. Baldwin President Embee Consulting Ltd. Edmonton, Alberta

Peter L. P. Macdonnell, C.M., Q.C. Partner Milner Fenerty Barristers & Solicitors Edmonton and Calgary, Alberta

John E. Maybin President Cohnac Energy Inc. Calgary, Alberta

#### **Board of Directors**

Stanley A. Milner President & CEO Chieftain International, Inc. Edmonton, Alberta

David E. Mitchell, O.C. President & CEO Alberta Energy Company Ltd. Calgary, Alberta

Raymond J. Nelson President Nelson Lumber Company Ltd. Lloydminster, Alberta

Valerie A. A. Nielsen Oil & Gas Consultant Vice-President and Director Proximus Energy Corporation Calgary, Alberta

Gordon H. Sissons Chairman of the Board I-XI. Industries Ltd. Medicine Hat, Alberta

J. Harry Tims President & General Manager McTavish McKay & Company Limited Calgary, Alberta

H. Richard Whittall Corporate Director Vancouver, British Columbia

#### **Corporate Officers and Senior Personnel**

David E. Mitchell, O.C. President & Chief Executive Officer

Edward J. Martin Vice-President, Administration

Hector J. McFadyen Vice-President

John D. Watson Vice-President, Finance and Chief Financial Officer

Rohert A. Towler

Director

Petrochemicals

Donald R. Gardner Treasurer

Barry D. Gilchrist Corporate Secretary

Sydney R. Chen-See Secretary to the Board and Assistant Corporate Secretary

David W. Richardson Assistant Treasurer

> Wayne G. Holt General Counsel

Richard H. Wilson Director Public Affairs

Derek S. Bwint Director Planning

Ronald D. Jones Director **Computer Services** 

Vice-President

Frank W. Proto

Marketing

President

**Principal Officers of Divisions** 

AEC Oil and Gas

Gwyn Morgan President

Bernie J. Bradley

Senior Vice-President

Dennis W. Cornelson Allan F. Kiernan Vice-President

R. William Oliver Vice-President

Roger D. Dunn Senior Vice-President

Wayne G. Thomson Vice-President Production

Robert O. Potter Vice-President Exploration

**AEC** Pipelines

**AEC Forest Products** 

Wallace W. Scott Vice-President, Engineering

Vincent J. Gallant

Comptroller

John D. Watson Vice-President, Finance

Hector J. McFadyen President

Richard E. Huff Vice-President

John D. Watson Vice-President, Finance

## ALRERTA ENERGY COMPANY 1990 ANNUAL REPORT

Gwyn Morgan Senior Vice-President Frank W. Proto

Senior Vice-President

Roger D. Dunn Vice-President

> Keith O. Fowler Director Tax & Risk Management

## Offices

#1200, 10707 - 100 Avenue
Edmonton, Alberta T5J 3M1
(Registered Office)
#2400, 639 - 5 Avenue S.W.
Calgary, Alberta T2P 0M9
(Executive Office)

#### Transfer Agent and Registrar (Common Shares)

National Trust Company Calgary, Edmonton, Vancouver, Regina, Winnipeg, Toronto, Montreal, Halifax

#### Transfer Agent and Registrar (Second Preferred Shares, Series 2) and Trustee (Convertible Debentures and 10.50% Debentures)

The Royal Trust Company Calgary, Edmonton, Vancouver, Regina Winnipeg, Toronto, Montreal, Halifax

#### Auditors

Price Waterhouse Chartered Accountants Edmonton, Alberta

#### **Stock Exchange Listings**

The Alberta Stock Exchange The Montreal Exchange The Toronto Stock Exchange Vancouver Stock Exchange In newspaper listings, AEC's share issues are shown as follows: Alt Energy Common Al Enr 775 Second Preferred, Series 2

#### Major Subsidiaries, Affiliates and Partnerships

AEC Power Ltd. (50% voting)	66.67%
Alberta Oil Sands Pipeline Ltd.	100%
Alenco Inc.	100%
Alenco Iroquois Pipelines Inc.	100%
Alenco Petrochemicals Inc.	100%
Alenco Pipelines Inc.	100%
Alenco Resources Inc.	100%
Blue Ridge Lumber (1981) Ltd.	100%
Chieftain Energy Resources Ltd	. 100%
Chieftain International, Inc.	50%
Cominco Fertilizers Partnership	2.5%
Iroquois Gas Transmission	
System, L.P.	6%
Pacific Coast Energy Corporation	on 50%
Pan-Alberta Gas Ltd.	
(40% voting)	49.995%
Pan-Alberta Resources Inc.	
(40% voting)	49.995%
Ranger Forest Products Ltd.	100%
Slave Lake Pulp Corporation	75%
Slave Lake Pulp Partnership	75%
Tri-City Drilling (1968) Ltd.	100%

#### **Major Joint Ventures**

Coal Valley	25%
Ethane Gathering System	33.33%
Nitrogen Fertilizer	25%
Syncrude	10%

#### **Duplicate Annual Reports**

Receipt of duplicate shareholder material results from shareholders having shares of the same class or series registered in different names or addresses. You can avoid receiving duplicates and help AEC save money by contacting your Transfer Agent (see Transfer Agent and Registrar) to have your holdings registered under one name and address.

### **Annual Meeting**

The Annual Meeting of Shareholders of Alberta Energy Company Ltd. will be held in Saamis Ballrooms C & D, Medicine Hat Lodge, 1051 Ross Glen Dr. S.E., Medicine Hat, Alberta at 3:00 p.m. local time on Wednesday, April 10, 1991.

#### Annual Reports

Copies of AEC's 1990 Annual Report may be obtained by contacting the Corporate Secretary at Alberta Energy Company Ltd., #2400, 639 - 5 Avenue S.W., Calgary, Alberta T2P 0M9.

#### Shareholder Investment Plan

Shareholders wishing to increase their holdings of Common Shares of Alberta Energy Company Ltd. may take advantage of the Shareholder Investment Plan which offers two options.

The dividend reinvestment option provides a convenient method for shareholders to invest their cash dividends in new Common Shares at 95 percent of Average Market Price. The share purchase option allows a shareholder to purchase up to \$5,000 per calendar quarter (minimum \$50 per remittance) of new Common Shares at Average Market Price.

No commissions, service charges or brokerage fees are payable by shareholders to acquire Common Shares via the Plan, as all administrative costs are borne by AEC. Registered shareholders of Common Shares or 7.75% Deferred Convertible Redeemable Second Preferred Shares, Series 2, are eligible to participate.

Detailed information and copies of the Plan may be obtained from: National Trust Company Corporate Trust Services Suire 1008, 324 - 8 Avenue S.W. Calgary, Alberta T2P 3B2 Telephone (403) 263-1460



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