# ALCAN ALUMINIUM LIMITED/ANNUAL REPORT 1979



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## Highlights of 1979

Operations for the year (U.S. \$ millions)	1979	1978
Total shipments of aluminum products ('000 tonnes)	1,532	1,597
Shipments of fabricated products ('000 tonnes)	1,036	982
Total sales and operating revenues	4,381	3,711
Net income	427	297
Capital expenditures	494	321
Number of employees, at year end (thousands)	65	63
Financial, at year end (U.S. \$ millions)	A STATE OF THE STA	
Working capital	1,275	1,113
Net fixed assets and investments	2,168	1,865
Long-term debt	759	691
Common shareholders' equity	2,032	1,689
Return on average shareholders' equity (%)	23.0	18.9
Shareholdings, at year end		
Number of common shares outstanding (thousands)	40,447	40,447
Shares registered in Canada (%)	38.6	42.5
Shares registered in USA (%)	53.3	45.0
Shares registered in other countries (%)	8.1	12.5
Per common share (U.S.\$)		
Net income (including extraordinary gain)		
First quarter	2.39	1.52
Second quarter	2.70	1.94
Third quarter	2.57	1.72
Fourth quarter	2.91	2.16
Total for the year	10.57	7.34
Dividends for the year	2.10	1.55

## Cover Photo

This aluminum automobile engine symbolizes the increasing demand for aluminum in all forms of transportation equipment where weight-saving means fuel-saving. Aluminum can also be recycled with the use of only 5% of the energy required for its original production.

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## **Directors**

Sonja I. Bata

Toronto-Director of Bata Limited, International footwear manufacturers

David M. Culver Montreal—President and Chief Executive Officer

Nathanael V. Davis

Montreal-Chairman of the Board

Dr. Lawrence E. Fouraker

Boston—Professor of Business Administration, Harvard Business School

Dr. Roger Gaudry, c.c.

Montreal-President of International Association of Universities

John H. Hale

Montreal-Executive Vice President

Lionel P. Kent, F.C.A.

Montreal-Director of various companies

Paul H. Leman, o.c.

Montreal—Director of various companies

Franklin S. McCarthy

Sarnia, Ontario-Director of

various companies

Louis Rasminsky, C.C., C.B.E.

Ottawa—Director of various companies

Patrick J. J. Rich

Montreal-Executive Vice President

Hon. James Sinclair, P.C.

Vancouver—Director of Canada Cement Lafarge Ltd

Eric A. Trigg

Montreal-Executive Vice President

William O. Twaits, c.c.

Toronto—Director of various companies

Eric F. West

Lyme, Connecticut

Executive Vice President

## Officers

Nathanael V. Davis

Chairman of the Board

David M. Culver

President and Chief Executive Officer

John H. Hale

Executive Vice President and

Chief Financial Officer

Patrick J. J. Rich Executive Vice President

Eric A. Trigg Executive Vice President

Eric F. West Executive Vice President

A. A. Bruneau

Vice President.

Chief Legal Officer and Secretary

David H. Clarke

Vice President, Personnel

W. O. Codrington

Vice President, Basic Raw Materials

Harold Corrigan

Vice President, Corporate Relations

D. G. Cuthbertson

Vice President, Finance

Duncan C. Campbell

Vice President, Corporate Projects

H. Stewart Ladd

Vice President, Organization and Management

H. S. McEvoy Vice President, Metal Planning

and Administration

Roger Phillips
Vice President, Research, Technology and Engineering

François Senécal-Tremblay

Vice President, Corporate Planning

A. A. Hodgson

Treasurer

#### **Audit Committee**

Louis Rasminsky, C.C., C.B.E., Chairman

Lionel P. Kent, F.C.A.

Paul H. Leman, O.C.

Franklin S. McCarthy

## Personnel Committee

William O. Twaits, C.C., Chairman

David M. Culver

Dr. Lawrence E. Fouraker

Dr. Roger Gaudry, C.C.

Hon. James Sinclair, P.C.

## Area General Managers

Canada, Fabricating and Sales:

S. M. Treat, Toronto

Canada, Smelting and Chemicals: P.J.J. Rich, Montreal

J. J. Gagnon, Montreal

United States:

Roy A. Gentles, Cleveland

Latin America:

A. F. Black, Rio de Janeiro

Europe

Ihor Suchoversky, Geneva

Africa and Middle East:

R. E. Rosane,

Aix-en-Provence, France

Japan and Korea:

Norman F. Macfarlane, Montreal

Asia: C. W. Birkett, Hong Kong

South Pacific:

J. B. Clarkson, C.B.E., Sydney

## Chairman's and President's Message



Nathanael V. Davis, chairman of the Board, retired from active management duties on 1 July 1979 after 32 years as chief executive officer of Alcan Aluminium Limited.

David M. Culver, president of the Company since 1977 and an executive vice president since 1968, was elected chief executive officer on 1 July 1979. In 1977, thanks to higher profits, we were able to start on the road to substantial smelter expansion, and in 1979 a total of \$494 million, or 116% of Alcan's

record net profit for the year, was re-invested in fixed

capital and in partially-owned companies.

Profits and expenditures of this magnitude are required to improve the efficiency of existing facilities and to provide additional capacity in anticipation of growing demand. Such investments can, of course, be beneficial to all concerned, to customers who look to Alcan for aluminum supplies, to employees who want jobs and require higher productivity to justify higher pay, and to shareholders who want to see good returns on capital invested.

While reported corporate profits now appear large in comparison with a decade ago, it is important to bear in mind that, due to the effects of inflation, the 'true' level of profitability is not shown in accounts drawn up under historic cost conventions. This applies particularly to the deduction for depreciation of fixed assets which is greatly understated and cannot meet the inflated cost of replacing those assets.

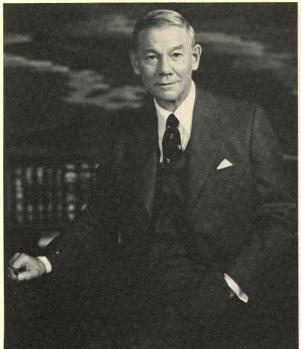
A different and more realistic presentation of Alcan's balance sheet and net income appears under 'Inflation accounting' starting page 27 of this report. There it will be seen, for example, that Alcan's net fixed assets have a value 36% higher than is shown in the historical accounts and that, as a result, the deduction from profits for depreciation would increase from \$149 million to \$276 million.

In spite of the problems and distortions of an inflationary and rather disordered world, the international aluminum business made overall gains in 1979. Within the industry, Alcan had a successful year and, on the basis of historical accounting, recorded a net profit of U.S. \$427.5 million and a return on average shareholders' equity of 23%.

Consolidated sales and operating revenues surpassed the \$4 billion level for the first time and, at \$4.381 billion, were 18% higher than in 1978, reflecting higher prices for primary aluminum and fabricated products in world markets.

Profitability in the past two years, and particularly in 1979, has risen to levels where the Company can provide capital for some new expansion as well as continuing with necessary and increasing investments in the upgrading of existing facilities.

The capital requirements of this industry are, of course, prodigious and Alcan has consistently reinvested in the business much more than it has earned. In fact, in the 10 years from 1969 through 1978, when return on equity averaged only 10%, Alcan's total capital expenditures were greater by \$700 million than recorded profits for the period and this without undertaking any major expansion of its basic smelting and power facilities.



## Chairman's and President's Message

The effect of this, of adjustments to inventory values and of other changes would reduce earnings in 1979 to \$6.70 per share, and return on average shareholders' equity to 9.4% compared with \$5.71 and 8.7% in 1978, similarly determined. These earnings and return, though much lower than in the historical accounts, represent more closely the encouraging performance, in real terms, of Alcan in 1979.

## Demand

Following a solid increase of 7% in primary aluminum consumption in the non-communist world in 1978, we estimate further growth of over 4% in 1979, limited by tight supplies of metal, particularly in the second half of the year.

Consumption of primary aluminum in the largest market, the United States, showed little or no growth for the year, largely as a result of second half downturns in the house construction and automotive industries. It remained strong in other areas of the world which showed total consumption growth of over 7%. Japan, the second largest single market, had a notable increase in primary consumption of more than 10% over 1978, with Canada showing an equally strong advance. The surging industrialization in the developing countries of Southeast Asia and Latin America again brought increased demand. European consumption showed good growth of over 6%, although within Europe the increase in the UK was small. Consumption also increased notably in Oceania.

Demand was particularly strong in 1979 in Europe and Japan for aluminum scrap and for secondary aluminum produced from scrap, mainly for automotive castings.

Prices for secondary aluminum, which represents close to 25% of total aluminum usage, climbed steeply and added pressure to the demand for primary metal to supplement the secondary.

## Supply

New additions to world smelting capacity as the year progressed were slightly above 400,000 tonnes, or some 3%. This modest increase reflects the long years of low profitability in the industry and the more recent problems of inflated construction costs and of limited availability of economic energy for smelting.

Production in 1979 was approximately 90% of total installed smelter capacity, a reasonably high performance in spite of being held down by power shortages in several countries, by strike action and by ordered smelter shutdowns, notably in Japan. If this deliberately de-activated capacity were excluded, the production rate was probably 95% of total effective capacity.

In sum, 1979 was a year of growing tightness in the market with all producers apparently reducing inventories to meet demand. According to statistics of the International Primary Aluminium Institute, producers' inventories were lowered by some 600,000 tonnes in the year, exhausting all surpluses and drawing working stocks to below normal levels.

As we enter 1980, the total world demand for primary aluminum continues strong and the calls of the market in Europe, Asia and Latin America in recent weeks could not be adequately answered. Alcan's smelters are producing at virtually full capacity except in India where low rainfall is restricting all aluminum output. Producers in other countries have also reported some power problems. A continued close balance between supply and demand seems indicated for much of 1980, but if a recessionary downturn in total demand occurs as the year progresses, most producers should be in a position to react by replenishing their depleted inventories.

#### Prices

The impact of demand pressures on available supplies of primary, scrap and secondary metal in 1979 caused a strong advance in market and list prices. The year's increases varied widely, up to 40% in terms of local currency in some major producing countries such as Japan and Italy. Even in countries with some measure of price control, strong advances took place, reflecting not only market forces but also inflationary cost pressures in energy, wages and interest rates.

Alcan's net realization on sales of ingot products was up by 24% over the previous year, a factor contributing to higher profits. Prices of fabricated products also advanced but did not keep pace with ingot advances in all markets and there was some squeeze on fabricating margins in Europe. Fabricating profits were, however, satisfactory in most areas.

## Production

As the result of strikes which shut down three smelters of 543,000-tonne annual capacity in Quebec for three months, Alcan's primary aluminum production in Canada reached only 709,200 tonnes in 1979, compared with 897,900 tonnes in 1978. (These tonnages include 45,000 tonnes toll-smelted in each year for Alcan's related company in Japan, Nippon Light Metal Company, Ltd, which are not included in statements of consolidated production.) Although the

start-up after the strike went well, production at the affected plants did not rise to full capacity until late November.

Other consolidated subsidiaries in the UK, Australia, Brazil, Germany and India had total available production of 354,000 tonnes against 300,000 tonnes in 1978, the increases arising from new capacity opened in Brazil and Australia and the mid-year acquisition of a 44,000-tonne smelter in Germany.

#### Sales

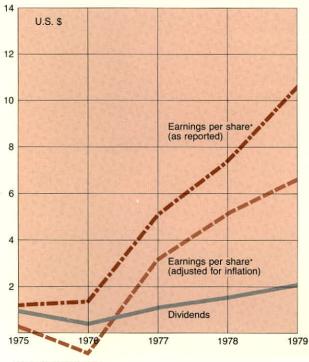
Despite the losses in Canadian smelter production, Alcan's consolidated sales tonnage of 1,532,100 tonnes was only 4% lower than in 1978. This was made possible by a reduction of 108,000 tonnes in inventories (in both the ingot and fabricating companies), by the larger production outside Canada and by some increase in metal purchases by fabricating companies.

Consolidated sales of semi-fabricated and fabricated products went above one million tonnes for the first time and, at 1,035,900 tonnes, were 5.5% higher than in 1978. Second half fabricated sales were, however, only 46% of the year's total, reflecting tightness of metal and possibly some market slackening.

Third-party sales of ingot and ingot products, on the other hand, declined by 19% for the year, from 614,900 tonnes to 496,200 tonnes. This was mainly the result of low production in the second half when sales were 208,900 tonnes against 287,300 tonnes in the first half, a decline of 27%.

#### Results

As in 1978, the contribution to Alcan's net income of Aluminum Company of Canada, Ltd and its subsidiaries, at \$230.3 million, exceeded that of the remainder of the group. The improvement in Aluminum Company of Canada's earnings, 27% greater than in 1978, arose from higher income from Canadian and



\*After extraordinary gains

United States fabrication and an improvement in Jamaica, but earnings from the Canadian smelting facilities were lower than in 1978, due to strikes. Elsewhere, excluding the extraordinary gain on the sale of an investment, the balance of the Group increased its earnings by 52% to \$175.6 million, in spite of lower earnings in Brazil, the UK and India.

#### Dividends

The directors increased the quarterly common dividend in the fourth quarter from U.S. 50 cents per share to 60 cents per share. Total dividends paid in 1979 were \$2.10 and, in 1978, \$1.55 per share.

## Share Split

On 7 February 1980, the Board of directors adopted a resolution to subdivide the Company's common shares by distributing to shareholders of record on 31 March one additional share for each share then held, as explained more fully in the proxy statement. The proposal is subject to approval by the shareholders at a special meeting to be held on 20 March, in conjunction with the annual meeting.

## **Future Development**

The rate of future development of aluminum markets will largely depend on the skill and consistency with which technology can be used to respond to changes in the external environment of the business and the economics of its production.

Furthermore, to be used extensively and to compete successfully against other metals and materials, aluminum needs to be sold at prices which, in combination with its advantages in use, justify its choice. This has always been the marketing challenge, and it is very real as the market price of aluminum rises. This presents the additional challenge of controlling the capital and operating costs of new facilities so that their output may be sold at competitive prices while still supporting a reasonable profit on the expensive new facilities. Other materials are also subject to similar inflationary cost pressures, but this provides no reason for complacency. Here too, technology is a principal key to uncovering the means by which costs can be controlled.

## Chairman's and President's Message

Aluminum's opportunities in many applications, particularly in transportation and electrical uses, are improving with the growing urgency to conserve petroleum and other forms of energy. The increased use of lightweight aluminum in commercial and passenger vehicles, rail cars, buses and all forms of transport will conserve tremendous amounts of energy, offsetting the energy needed to produce the aluminum in the first place. There will also be a continuing growth in demand for electricity in many uses, and aluminum cables are necessary to transmit electric power.

A further economy arises from the ease of repeated recycling of aluminum at an energy expenditure, each time, of only 5% of the quantity needed for primary smelting. These advantages are being recognized in the growing use of aluminum beverage cans and other products which are recycled.

Alcan is expanding its established manufacturing and marketing efforts for the transport, electrical and container markets. It is also giving greater attention to recycling and secondary smelting, and new investments were committed for this purpose in 1979 in Canada, the United States, Germany and Italy.

The other important aspects of the effort to retain aluminum's place in the competitive race lie in the premise that aluminum production should be expanded in those areas where it is most likely to be economic, hence able to compete successfully with other metals and materials.

### Smelting in Canada

As far back as 50 years ago, Alcan believed that the path to sound long-term development lay in the investment of Company funds in hydroelectric power facilities to support aluminum smelting in Canada. Over the period from 1940 to 1960, in the provinces of Quebec and British Columbia, heavy commitments were made to develop water power not needed for other purposes, power which is continually renewed by nature. This was joined with technology, capital and labour to create new industrial communities and employment opportunities, based on the production of aluminum largely for export. The task was often not easy and the debt load for the power and smelter assets bore heavily on the Company's operating results. Following some extended periods of relatively low return, the basic soundness of the policy is now more clearly demonstrated.

Alcan is today able to increase its smelting capacity in Quebec by 27%, utilizing the power which it had developed in excess of its previous production requirements. At a capital cost estimated at U.S. \$415 million, a new smelter of 171,000-tonne annual

capacity is being constructed at a site 30 km from the older Arvida Works. This Grande Baie site is well located close to our existing port and alumina facilities, and will constitute a totally new smelter which is energy-efficient, environmentally sound and high in productivity. One-third of the new capacity will enter production this year, and the other two-thirds in 1981 and 1982.

In order to help meet anticipated growing demand for aluminum in North America and the Pacific Rim area, Alcan proposes, over the next 10 to 15 years, to expand its existing smelting capacity in British Columbia by constructing three new smelters and by completing the Kemano power complex. When undertaken, this will be an important project for British Columbia and will add some 500,000 tonnes to the Company's existing smelting capacity in British Columbia of 268,000 tonnes, create more than 2,000 permanent jobs, and add to the Company's export earnings. The project will be environmentally sound. reflecting the results of the environmental and socioeconomic studies now being undertaken by the Company. Discussions are being conducted with the Government of British Columbia and with various community groups. A firm date for commencement of the project has not yet been determined.

The present Kitimat/Kemano smelting and power complex was a massive pioneering undertaking. It was commenced by Alcan in the early 1950s at the invitation of the Government of British Columbia which wished to employ its unused renewable resources to promote industrial development and new population centres in the Northwest part of the province. In order to achieve these objectives during the balance of the century, the province granted the Company the water rights which provide for the expansion now proposed.

## **Smelter Expansion**

The Company is expanding its smelter capacity in Brazil and Australia where incremental additions to existing facilities are economically attractive and power supplies from existing sources are assured.

The total additions to consolidated smelting capacity in 1979 were 81,000 tonnes in Germany, Brazil and Australia. Planned additions in 1980 in Canada and Australia will total 79,500 tonnes. In 1981 and 1982 in Canada and Brazil, a total of

144,000 tonnes will be added. This is an annual average growth rate of 5.5% over four years, slightly ahead of the expected average annual growth in demand of 4 to 5%.

For future aluminum expansion, Australia is well endowed by virtue of its large bauxite resources, increasing alumina capacity and vast resources of steam coal for generating electric power. Last year, Alcan embarked on a feasibility study for the construction of an export smelter of up to 300,000-tonne capacity to supply export markets, particularly in Asia. Further details will be found on page 12.

## Raw Materials

In the provision of expanded supplies of raw materials for its smelters and for sale to others, Alcan marked important progress in 1979. The first shipments of bauxite were received at our Quebec alumina plants from the new world-scale mining operation in the Amazon region of Brazil. In Ireland, a jointly-owned alumina plant of 800,000-tonne annual capacity is now in its second year of construction, due for completion in 1982. New agreements were finalized with the Government of Jamaica which are expected to assist in improving the international competitiveness of Alcan's bauxite and alumina operations in that country.

## Fabricating

The upgrading and strengthening of fabricating facilities continue in many countries, contributing to the 5% growth in fabricated sales last year. The major areas of investment in 1979 were Europe, North America and Australia.

Good progress is being made in extending the reliability and alloy range of Alcan's processes for the continuous casting of sheet products which we have been using commercially for several years. We expect soon to install the first of a new generation of improved and wider continuous casting machines and to offer an extended range of products from existing and new machines.

#### Research

Throughout the Alcan system greater effort and expenditure is being directed to research, development, and improved technology. In September, a \$5 million addition to Alcan's Research and Development Centre in Kingston, Ontario, was inaugurated. An experimental engineering centre, to develop advanced aluminum reduction technology, is being constructed at Jonquière, Quebec, at a capital cost of \$7 million. Total ongoing expenditures for R & D in 1979 were \$34 million and increases will be required.

#### Directors

Since the last annual meeting, Alcan lost the services of two valued members of its Board of directors, Erik Brofoss of Oslo, Norway, through death, and James W. Cameron of Calgary, Alberta, through retirement.

To fill these vacancies the Board elected Mrs. Sonja I. Bata, of Toronto and Lionel P. Kent, F.C.A., of Montreal, both of whom are candidates for reelection. We also regret that Louis Rasminsky, C.C., C.B.E., of Ottawa, who has contributed greatly to the Board during his directorship of six years will reach retirement age and will not be a candidate for reelection at the annual meeting. To succeed Mr. Rasminsky, Prof. Dr. Joachim Zahn will be nominated. Prof. Zahn is a prominent industrialist in Germany who has recently retired as chief executive officer of Daimler-Benz A.G.

### Officers

The officers of the Company as listed in this report reflect new appointments made on 7 February 1980.

M.G. O'Leary, who has served Alcan in a number of senior management posts during a career of 42 years, has retired from active duty as vice president, Engineering and Technology. T.F.D. Simmons, who has held the position of treasurer of Alcan Aluminium Limited for the past seven years, is transferring to Geneva to become Alcan's chief financial officer in Europe. Both these officers have rendered valuable service.

## **Employees**

As we enter the new decade of the eighties, it is important to recall that the decade just closed brought many changes in Alcan's business, with associated challenges and problems that made heavy demands on managers and employees in our widespread operations. Their efforts and diligence have contributed greatly to the Company's progress. Their skills and experience are the sound foundation for the future. To them, the directors express their sincere appreciation.

Nathanacl V Davis
Chairman of the Board
David M. Culver

President and Chief Executive Officer

Montreal, Canada 7 February 1980

## Canada—Smelting

Because of the significance to Alcan of the Canadian smelting performance in 1979 and because of the importance of the smelter expansion plans, these matters are reported in the Chairman's and President's message in this report. Other matters of significance are the following.

The operating unit, Alcan Smelters and Chemicals Ltd, though obliged to reduce shipments drastically because of strikes in three of its five smelters, nevertheless achieved total shipments of aluminum and chemical products in excess of \$900 million, of which \$600 million were exported from Canada.

Over the past few years, when operating fully, the actual production of the smelters was consistently 1% greater than their rated capacity due to good process control which resulted in higher efficiencies. Accordingly, the total rated capacity of the Canadian smelters has been restated at 904,000 tonnes per year, an increase of 10,000 tonnes.

Capital expenditures for upgrading existing facilities and for building new primary capacity totalled U.S. \$190 million. This included \$100 million on the new Grande Baie smelter in the Saguenay region of Quebec, which is progressing on schedule towards start-up of half of the first 57,000-tonne potline in the autumn of this year, and the other half plus the second potline in 1981. A total of \$20 million was spent to upgrade internal working conditions and further reduce external emissions both in the Quebec smelters and at Kitimat, B.C.

In December, authorization was given to proceed with the third 57,000-tonne potline and necessary carbon making facilities at the Grande Baie smelter. Power for the total expansion is available from Alcan's existing hydroelectric plants in the region. Construction of this final stage at an estimated cost of U.S. \$130 million is scheduled to commence in 1980 and come into production in 1982.

Construction of the new casting centre at the Arvida smelter in Jonquière is on schedule. The first phase has entered production and full operation is planned for the first quarter next year. In October, a significant upgrading was announced for the alumina plant, also at Jonquière. This project involves replacing 10 rotating kilns in service since the 1940s with three fluid flash calciners which offer significant energy savings and improved environmental and working conditions.

The Kitimat smelter celebrated a quarter century of operations with record production for the year of 271,000 tonnes. In September, plans were approved to replace the Kitimat carbon plant with a new facility scheduled for completion in mid-1982. This is part of a longer-term program to upgrade environmental control at this plant, with considerable improvements in quality control and working conditions.

## Canada—Fabricating

Economic growth in Canada began at the level of 4.3% in the first quarter, compared with a year earlier, then progressively declined so that the year's growth in real GNP reached only about 2.8%.

Aluminum markets were buoyant in the early part of the year and Alcan's shipments of ingot and fabricated products were up sharply. Demand declined gradually in the second half but these effects were partially masked by the shortage of aluminum due to smelter strikes.

Gross shipments by Alcan Canada Products Limited increased from 238,000 tonnes in 1978 to 257,000 tonnes, consisting of 206,000 tonnes of semi-fabricated and fully manufactured products, and 51,000 tonnes of ingot and scrap.

Revenues and operating results had been adversely affected in 1978 by strikes in several of the fabricating plants. With higher prices in the market place and larger volume, revenues in 1979 rose to the equivalent of U.S. \$640 million and profits recovered strongly.

The Rolled Products Division facilities at Kingston were improved by the addition of new slitting and annealing equipment. At Jonquière, Quebec, the technology of continuous casting of sheet products was extended and improved.

The Wire and Cable Division embarked on a program to update equipment at Shawinigan Works. Production of cable accessories was initiated at new facilities at Granby, Quebec.

A significant expansion of extrusion facilities started at Laval, Quebec. This project involves installation of a press for medium size extrusion, new handling facilities, and a new vertical paint line to improve product quality.

Construction of a foundry alloy batching centre in Guelph, Ontario, was undertaken. It will produce alloyed hot metal and foundry ingot from scrap and unalloyed ingot. This facility will service increased demand for aluminum automotive castings to support the efforts of the auto industry to build energy-efficient passenger and commercial vehicles.

## **United States**

Strong performance in several key markets made 1979 a year of record sales for Alcan Aluminum Corporation, despite the Canadian smelter strikes which impeded its source of ingot and despite the downturn in the U.S. economy during the fourth quarter. Sales were \$1.7 billion, 8% ahead of 1978, and shipments of aluminum in all forms were 402,000 tonnes.

Results for Alcan Sheet and Plate Division were outstanding, especially in sales for container sheet, up 10%, and building sheet, up 6%.

Alcan Building Products increased its market share in most product lines, recording higher sales and profits for residential siding (particularly for renovation), specialty building products, and agricultural/industrial siding and roofing. In the Ingot and Powders Division, the metal powders business remained strong but there were lower sales of ingot and chemicals due to the strikes at the Canadian smelters.

The doubling of the operating profit for the Metal Goods Service Centres resulted from the strong capital goods market, particularly for metals used by the chemical/petrochemical sector. Consumer oriented markets were also strong.

Increasing demand for insulated cable contributed to improved results for Alcan Cable. The supporting base continued to grow, with the opening of a new plant in Bay St. Louis, Mississippi to specialize in low-voltage insulated cable, and with the acquisition of an insulated cable plant in Sedalia, Missouri. Built in 1968, the latter plant has a capacity of 15,000 tonnes a year and employs 250 persons.

Alcan purchased the remaining 50% of Intercontinental Alloys Corporation, a producer of secondary aluminum at Joliet, Illinois. With full ownership, it has begun a program to double capacity to approximately 24,000 tonnes a year. A new aluminum powder plant is under construction at Joliet at an estimated cost of \$10 million, for start-up by mid-1980.

Alcan continued its more than \$20 million capital improvements program to strengthen and increase performance at its hot and cold mills at Oswego, N.Y. and sheet plants in Warren, Ohio, and Fairmont, West Virginia, and further improvements are planned.

A new plant was opened in Oklahoma, and plants expanded in Illinois and Georgia, to serve the market for agricultural roofing and siding.

During 1979, the company expanded its sales office in Detroit, staffing it with a corporate vice president and technical and marketing personnel, to strengthen Alcan's involvement with the U.S. automotive industry.

## Jamaica

On 31 October 1979, Alcan and the Government of Jamaica (through its wholly-owned company Jamaica Bauxite Mining Limited-JBM) implemented an agreement reached one year earlier for the two parties to establish a joint bauxite mining and alumina refining enterprise in that country. Under the agreement, JBM acquired 7% of Alcan's integrated mining and refining assets, and all the Company's mineral and agricultural lands. The Government and Alcan contributed their shares of the assets (7% and 93% respectively) into a joint venture association known as Jamalcan, under an executive committee of seven members to which Alcan nominates five members. Alcan continues to be responsible for the management of the operation and will receive at least its 93% share of the alumina production.

The Government granted Alcan special mining leases covering 40 years of bauxite requirements based on the integrated mining and alumina rated capacity of its two alumina plants. The sale of the land and assets did not involve any significant profit or write-off for the Company. Payment by the Government for the assets acquired will be made in 10 annual instalments, with the first paid as part of the implementation of the agreement. Alcan regards the new association as a positive development in its relations with Jamaica.

Also in September 1979, the Government reached new agreements with the industry in Jamaica whereby the rate of bauxite levy or taxation would be reduced on a sliding scale related to ingot price realizations and to increased levels of bauxite production. Largely because of third-party market conditions and the high levy rates and high production costs, Alcan's two alumina plants in Jamaica have been operated since early 1976 at under 80% of their rated annual capacity of 1,095,000 tonnes per annum. It is expected that the reduced levy rates will help to make Jamaican alumina more nearly competitive in world markets and permit Alcan to raise its rates of production which would be of assistance in the difficult economic and financial conditions prevailing in the country.

## Latin America

In the several Latin American countries where Alcan operates, from Mexico south to Argentina, economic growth was again recorded in 1979, although problems were more prevalent, particularly in Brazil.

Net income for the Area, including consolidated subsidiaries and equity-accounted companies, was level with 1978, as record earnings in all countries other than Brazil were offset by net declines in that country. Consolidated shipments of aluminum were 145,000 tonnes, against 121,400 tonnes in 1978, the increase reflecting higher Brazilian production.

In Brazil the economy grew by 6% and domestic aluminum demand by 12%, but heavy oil imports, poor harvests and inflation above 70% resulted in the cruzeiro being devalued by more than 50% over the year, seriously affecting the dollar earnings of Alcan Alumínio do Brasil S.A. Higher taxation and controlled selling prices also affected profits.

Alcan's smelter capacity in Brazil reached 88,000 tonnes per annum with the full commissioning of a 30,000-tonne potline at Saramenha in the state of Minas Gerais. A further 30,000-tonne expansion is under way at Aratú in the Northwest region and will enter production in early 1982. Capital expenditures last year were \$40 million.

The large Trombetas bauxite mining project in the Amazon region, in which Alcan has a 19% interest, made its first shipment in August and production is now building up to its initial annual rate of 3.35 million tonnes, of which Alcan will receive 1.5 million tonnes for its alumina plants in Quebec.

## Review of the year 1979

In Mexico the economy grew by about 7.5% and aluminum consumption by 6.5%. Alcan Aluminio, S.A. had a record earnings year and took a major step by becoming a public company on the Mexican stock exchange and raising equity funds for capital investment in 1980 and 1981. This was done through by an equity issue to the public in Mexico which reduced Alcan's ownership from 61% to 49%. By achieving local company status, Alcan Aluminio will be in a favourable position to participate in Mexico's promising oil-revenue based economy.

In Argentina the inflation rate has been very high at 150% but, with good exchange reserves, favourable balance of trade and economic growth of 9%, the country prospered in 1979. Camea S.A., a fabricating company in which Alcan increased its interest to 100% in late 1978, had a more profitable year despite reorganization problems. There are signs that Argentina's inflation is being brought under better control and, provided the economy remains stable, Camea has excellent prospects.

The smaller companies in Colombia, Venezuela and Uruguay all had record earnings. Aluminio Alcan de Colombia, S.A. installed a paint line and a window plant to extend its product line.

## Europe

In Europe, there was moderate growth in the economy during the year, with industrial output up 4% over 1978, but declining towards the year end. Demand for aluminum ingot and semi-fabricated products was strong and inventories at smelters and fabricating plants were drawn down to low levels. Although ingot prices rose sharply, corresponding increases for some semi-fabricated products, particularly sheet, were restrained by competitive market conditions.

Alcan's consolidated sales in the European Economic Community increased to 434,000 tonnes from 382,000 tonnes in 1978, the increase reflecting the acquisition of a smelter in Germany, supported by higher purchases of ingot for fabrication and resale.

In the consolidated accounts, European Area sales revenues increased by 26% to the equivalent of \$1.4 billion.

Except for the UK, Alcan's national operations had a satisfactory year with local currency operating earnings at or above 1978 levels. In Germany, Alcan Aluminiumwerke GmbH achieved increased volume and increased local earnings with high levels of production and productivity in all plants. Earnings in francs were also up in France, partly reflecting the inclusion in 1979 of Technal France S.A. (75% owned) which made a significant profit contribution from its business in architectural systems.

Aluminiumwerke A.-G. Rorschach in Switzerland had another profitable year with strong European demand for its range of sophisticated foil products, whilst in Italy Alcan's operations maintained earnings, the scrap recycling operation in particular showing a substantial increase.

In the United Kingdom, the combination of a slackening economy, industrial unrest and production problems meant an unsatisfactory year for Alcan's smelter and fabricating operations, while the strong British currency induced severe import competition in fabricated products and handicapped exports. Sales tonnage was about equal to 1978 but profits in sterling were down.

Expenditure on fixed assets and investments, including the acquisition of a 44,000-tonne smelter in Germany, amounted in total to \$80 million. The smelter formerly operated by Gebr. Giulini GmbH gives additional flexibility in supplying Alcan plants and third-party customers in Europe with high-quality extrusion ingot and foundry alloys. Also in Germany, an expansion of the foundry facilities at the Nürnberg plant was started and an automatic machining line was commissioned to produce pistons for small and highly efficient gasoline engines. Both projects reflect the increasing automotive demand for aluminum. The modern paint line installed in Göttingen in 1978 operated well, using new technologies, and will exceed its design capacity of 40,000 annual tonnes. Still in Germany, at Aluminium Norf GmbH (50% owned), a third cold-rolling mill was installed, bringing annual rated capacities to 500,000 tonnes for hotrolling and to 450,000 tonnes for cold-rolling. Norf is now one of the world's largest aluminum rolling mills.

A major modernization of the 162-cm cold-rolling mill was completed at Rogerstone in the UK together with the first stage of a hot line modernization.

A coordinated program to apply the most advanced technology at Alcan's six extrusion business operations in Europe resulted in significantly higher levels of productivity and product quality, and Alcan plants at Ornago in Italy and Uphusen in Germany now achieve productivity levels among the best in the world. Innovative achievements included the computer control of an extrusion press, numeric control of machining operations in a number of die shops and the micro-processor control of an extrusion paint line. All these are believed to be the first of their kind.

### Partially-Owned Companies

In June Alcan sold its remaining 25% holding in the Norwegian aluminum producer Årdal og Sunndal Verk a.s. (ÅSV), thus permitting each company to pursue its own plans for the future expansion and integration of its facilities. Commercial arrangements between Alcan and ÅSV continue in respect of alumina supply by Alcan, aluminum ingot deliveries to Alcan, and technical cooperation.

The aluminum smelter at San Ciprian, Spain (55% owned by Empresa Nacional del Aluminio, S.A. in which Alcan holds 26.4%), came on stream, and by year end was operating at over 60% of its 180,000-tonne per annum capacity, producing good quality ingot products. Work continued on the adjacent

800,000-tonne per annum alumina plant which will commence production in 1980.

At Aughinish, on the southwest coast of Ireland, construction progressed on the 800,000-tonne per annum alumina plant in which Alcan owns 40%, looking towards completion in 1982.

## Africa

In Nigeria and Ghana there were significant shifts from military governments to elected civilian administrations in 1979. In the transitions, both experienced economic or financial difficulties which adversely affected Alcan's fabricating operations in the two countries. The general economic situations are expected to improve in 1980. The commissioning of a new rolling mill by Alcan Aluminium of Nigeria at the end of 1979 will contribute to future development of the business.

In mid-year, an agreement was concluded with the Government of the United Republic of Cameroon whereby Alcan will direct the first stage of a feasibility study of the potential development of the bauxite deposits in the Western Cameroon.

In the Republic of South Africa, Alcan's 50% interest in Silicon Smelters (Pty) Ltd was sold. Huletts Aluminium Limited, in which Alcan retains a 24% interest, continued to operate at near capacity in all sections of the market in which it is engaged. The latter company published a policy document in which it asserted its continuing concern, and an enhanced program, for promoting equality of opportunity and working conditions for its non-white employees.

The bauxite mining activities of Compagnie des Bauxites de Guinée in the Republic of Guinea encountered a number of difficulties during the year, particularly in the fields of operating efficiency and cost control. Against this background, bauxite shipments were, nevertheless, maintained at the target level of just under nine million tonnes. Part of Alcan's 27% share of this tonnage was shipped for the first time to the new San Ciprian alumina plant in Spain.

Alcan's market coverage was broadened in 1979 when its trading company, Alcan S.A. in Zurich, extended its marketing and sales activities to the entire continent of Africa.

#### India

The Indian aluminum industry, including Indian Aluminium Company, Limited (55% owned by Alcan), had relatively good business results in the first half of 1979 but problems mounted in the second half. The rapid rise of inflation and of raw materials costs brought a severe profit squeeze which the Government was not willing to alleviate by permitting price changes. The second half also witnessed a serious failure in monsoon rains across the middle and the north of the country, curtailing production of hydroelectric energy on a wide scale and compounding an already difficult situation in thermally-generated power. Nearly all industrial activity was affected, with the aluminum industry particularly hard hit.

Indian Aluminium's 25,000-tonne smelter at Hirakud in the east was curtailed and has been obliged to suspend operations since September. Its other main smelter of 73,000 tonnes at Belgaum in the west is experiencing a 70% power cut, while the 21,000-tonne smelter at Alupuram in the south has been closed by a strike since December. The company's competitors also have had power cuts.

Production of primary aluminum in India fell in 1979 to about 210,000 tonnes against expected levels of 250,000 tonnes and estimated demand of 280,000 tonnes. Efforts by Government agencies to import ingot have been inadequate to cover the shortfall in sufficient time, leaving the industry dislocated by acute shortages. The situation is not expected to be righted before July 1980, assuming normal monsoon rainfalls.

Indian Aluminium's net profit in 1979 was reduced below the level of 1978 and a further decline is expected in 1980.

The company has begun to implement the sheet, foil and extrusion expansions authorized by the Government in 1978, to be operational in 1981. Modernization of the sheet mill near Calcutta is well advanced, in anticipation of stronger competition in rolled products. Activities in research and development are expanding and a new laboratory was opened at Belgaum for work related to ores, alumina and carbon products.

## Japan

In Japan, the second largest aluminum-using country, consumption of primary metal in 1979 rose about 10% to 1.80 million tonnes.

The Japanese smelters, in accordance with governmental guidelines, reduced their production in 1979 to 1.01 million tonnes and their rated capacity was scaled down from 1.64 million tonnes to 1.10 million tonnes. Approximately half this capacity loss is scheduled to be permanently shut down and the other half shut down for a period of five years. This latter half may never restart, due to the heavy dependence on oil to provide power for the smelters. As a result, imports of primary aluminum climbed to about 39% of domestic consumption, and imports of scrap from many countries also mounted.

During 1979 strong demand, improved prices, and the sale of all excess inventories resulted in the smelters becoming marginally profitable. However, long-term, the smelters are still suffering from the same basic problems as in previous years, namely high debt and the uniquely high Japanese residual oil price. Fabricating operations, however, remained profitable despite a large increase in ingot prices.

Nippon Light Metal Company, Ltd, 50% owned by Alcan, made significant further progress towards overcoming the difficulties facing the

## Review of the year 1979

Japanese industry. Reduction of personnel and improved operating efficiencies continued. Fabricating operations were further extended and the company's total sales reached the equivalent of \$1,600 million. Following several years of losses, the company made a major improvement in its earnings in 1979 and moved into a profit position.

Alcan's other 50% owned affiliate in Japan, Toyo Aluminium K.K., achieved foil shipments of 25,800 tonnes and Alpaste shipments of 4,600 tonnes, up 11% and 3%, respectively, from 1978, and again showed good earnings. The largest foil and paste producer in Japan, it is carrying out a major expansion program which will increase its capacity by approximately 20%. Its ninth high-speed foil mill was added in 1979.

## Far East

Another year of strong economic climates in the Far East gave most countries real growth rates in the 6% to 10% range. The five 'Asean' countries for example, with a population of 250 million, achieved average real growth of 7% in 1979.

In the face of inadequate aluminum supply and high customer demand, Alcan's Far East Area experienced a year of high business tempo and achieved new record profits. Aluminum ingot purchases from third-party sources were required to supplement reduced shipments from Canada.

Consolidated sales in the Area declined from 105,300 tonnes in 1978 to 76,300 tonnes, the drop being more than entirely accounted for by reduced sales to China which had been unusually high in 1978.

Aluminium Company of Malaysia Berhad (39% owned) had a record year of production in both sheet and extrusions and profits rose strongly. The company's second extrusion press came into production. Johore Mining and Stevedoring Co. Ltd (52.5%) in Malaysia developed new business with special grades of bauxite to compensate for reduced revenues from metal grade bauxite, and earnings increased.

Alcan Thai Company Limited in Thailand also increased its earnings to new high levels with satisfactory extrusion volume but P.T. Alcan Indonesia suffered losses due to low sales volume in the recessionary consequences of the 1978 currency devaluation.

The rate of change in the Western world's relationships with the People's Republic of China accelerated in 1979 and Alcan sent several business and technical missions to China.

## South Pacific

## Australia

At the start of 1979, Alcan restructured its activities in Australia, with Alcan Queensland Pty Limited (100% owned) becoming the holding company for Alcan's 70% interest in Alcan Australia Limited, a leading smelting and fabricating company, and for its 21.4% interest in Queensland Alumina Limited, which operates the world's largest alumina plant. Alcan Queens-

land also holds, in the State of Queensland, extensive bauxite leases which are available for development and is well advanced with a detailed feasibility study for a Queensland-based aluminum smelter to serve export markets. Consolidated net income of Alcan Queensland showed an increase of 45% over 1978.

With the Australian economy showing strength in 1979, particularly in the rural, mining and export sectors, Alcan Australia achieved record financial results and successfully commissioned major capital projects. Its smelter at Kurri in New South Wales reached new highs in operations while construction on the smelter site was also proceeding. An expansion of 50% in smelting capacity, to 67,500 tonnes per annum, was completed and put into production successfully. A further expansion to 90,000 tonnes is under way, to start producing in early 1981, and planning for a final stage to 135,000 tonnes by 1984 is well advanced. Power supplies from a state-owned thermal station have been arranged. Some of the additional metal production will be for export in the early years but will eventually be required for domestic usage. Alcan Australia's Granville fabricating works completed the installation of a 4,500-tonne extrusion press, and a remelt expansion and modernization program will be realized in 1980.

Primary aluminum production is presenting new opportunities for economic use of Australia's abundant reserves of steam coal to generate electricity. During 1979 Alcan Queensland undertook on behalf of Alcan a detailed feasibility study for the establishment in Queensland of an export aluminum smelter of approximately 300,000-tonne eventual capacity. The project may well involve Japanese partners and, if an early decision to proceed with construction is taken, the initial plant of 100,000-tonne annual capacity could start to produce in 1983. The site under study is near the Queensland Alumina plant, and power would be purchased from State authorities.

Preliminary estimates indicate the capital cost of the first stage of the smelter would be approximately \$380 million at today's value including major infrastructure and basic installations to serve the eventual larger facility. The smelter would be designed for progressive expansions, with the timing keyed to the demand for aluminum in the markets of Japan and Southeast Asia.

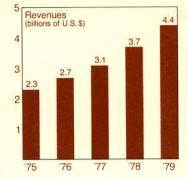
### New Zealand

The New Zealand economy performed better than expected in 1979, despite problems of inflation and balance of payments. Alcan New Zealand Limited, helped by higher prices and a strong volume of exports of rolled products, earned a record net profit in a static domestic market. The company is planning a sheet mill extension to cover expected growth in the domestic and export markets.

## Financial Review

## Revenues and Gross Profit

A strong aluminum market with higher prices resulted in total sales revenues of \$4,381 million, an 18% increase over 1978, despite a reduction in sales tonnage.



Gross profit (total revenues mi-

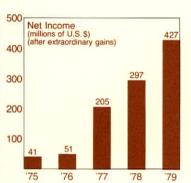
nus cost of sales and operating expenses and depreciation) was \$1,061 million compared to a restated \$884 million in 1978. Fabricated products contributed the largest increase to reach \$669 million, a 17% gain over 1978 as a result of strong demand and higher prices in most of Alcan's markets around the world. Despite higher prices, gross profit from ingot sales declined slightly to \$159 million in 1979 on reduced tonnage. The effect of the Quebec smelter strikes on volume, cost of production, and the added cost of additional metal purchases, all affected gross profit adversely on reduced tonnage.

Idle plant expenses and start-up costs arising from the strikes amounted to \$53 million before tax. This does not include any allowance for lost profit due to reduced metal sales.

The inventory profit is estimated at \$52 million for 1979 compared to a restated \$50 million in 1978.

### Net Income

Consolidated net 500 income for 1979 was \$427 million or \$10.57 per share compared with a restated \$297 million or \$7.34 per share in 1978. The 1979 net income included an extraordinary gain of



\$21.5 million, or \$0.53 per share, from the sale in June of the remaining 25% holding in the Norwegian company, Årdal og Sunndal Verk a.s. Net income in 1979 also benefitted from a credit of \$18.7 million for Alcan's share of the reversal of that portion of a deferred tax reserve provided during 1973-78 as a result of tax relief on increases in inventory values in the

United Kingdom which is no longer, or is unlikely to be, required.

Each major geographical area is now making a substantial contribution to consolidated net income. The development of Area net income during the past four years, (before minority interests which, with inter area profits, are adjusted under 'Eliminations') is illustrated in the table at the bottom of this page.

In 1979 the trend to strong earnings from Canada and the Caribbean (principally from Canada) continued in spite of the smelter strikes. Earnings from Europe include the extraordinary gain and tax credit already referred to, and were otherwise ahead of 1978. Latin America's contribution was little changed, a reduction in Brazil being offset by other gains. Further strong earnings growth was experienced in operations in Asia and the South Pacific.

Part of the higher income generated in Canada and the Caribbean arose from interest income on short-term investments, due to higher interest rates and to increased liquidity.

Equity income from Alcan's 20-50% owned companies, included in the relevant geographical areas, rose sharply during 1979 to \$21.3 million from \$5.1 million in 1978. Improved financial results were reported by related Japanese and European companies, and losses due to pre-operating costs at the bauxite project at Trombetas were reduced as the project came into production.

The impact on net income of changes in the value of net current assets (other than inventories) due to exchange fluctuations, and of the amortization of unrealized exchange on long-term monetary assets and liabilities over their remaining life was a loss of \$2.4 million, with gains and losses in different areas almost offsetting one another.

In 1979, as in previous years, all interest expense incurred in respect of assets under construction was charged to income, but this policy will be changed in 1980 as a result of a new ruling by the Financial Accounting Standards Board in the United States, concerning capitalization of such interest.

## **Financial Position**

Working capital increased by \$162 million, the principal increases being in receivables, inventories (where reduced aluminum inventories were more than offset by higher inventories of raw materials and other supplies) and in cash and short-term deposits.

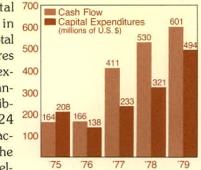
Internal cash generation at \$601 million again

Net Income, by Geographic Areas (in millions of U.S. dollars)

	Canada and Caribbean	United States	Latin America	Europe and Africa	Asia and South Pacific	Eliminations	Alcan Consol.
1979	214	48	40	107	46	(28)	427
1978	151	38	41	62	37	(32)	297
1977	94	15	48	61	24	(37)	205
1976	(36)	21	41	29	2	(6)	51

## Financial Review

exceeded capital 700
expenditure in 600
1979. Out of total
capital expenditures
of \$494 million, expenditures in Canada and the Caribbean were \$224
million, largely accounted for by the
Grande Baie smel-

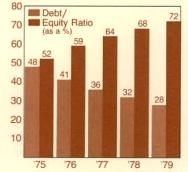


ter and other Canadian projects. Expenditures of \$134 million in Europe and Africa were almost entirely in Europe. They included the acquisition of a smelter in Germany and further investment in the alumina project in Ireland. Increased expenditures in Latin America, and in Asia and South Pacific, were mainly in respect of smelter projects in Brazil and Australia.

Capital expenditure in 1980 is expected to be about \$600 million. Higher expenditure than in 1979 is foreseen for continued smelter development in Canada and Australia, and in other developments in the United States and Europe.

The ratio of debt to equity, which has been significantly improved in recent years, was little

changed in 1979 in spite of higher capital expenditures and increased dividends. Shareholders' equity rose above the \$2 billion level to reach \$2,032 million at year end 1979, and total debt was \$912



million, using current rates of exchange and after deducting the unamortized and unrealized year-end exchange loss of \$37 million. New financing was arranged to provide for expansion requirements in Brazil, Germany and Australia, while Canadian expenditure was financed wholly from cash generation.

The ratio of total debt to equity was 28/72 at the 1979 year end.

## Dividends

In 1979 the quarterly cash dividend on common shares was increased in the fourth quarter from U.S. 50 cents to 60 cents per share. The 1979 dividend payment amounted to \$2.10 per share, a total payment of \$84.9 million, compared with \$1.55 per share, or \$62.7 million in 1978.

Quarterly	Dividends	and Market	Price	(NYSE)
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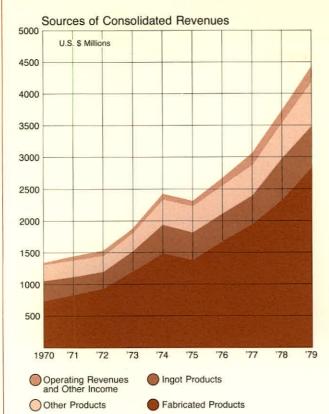
	Divis a Divis	Market Price of Com	mon Shares	
1978	Dividends Paid per Share	High	Low	
First	0.35	261/4	21 5/8	
Second	0.35	29 1/8	24 1/8	
Third	0.35	33 1/8	26 3/8	
Fourth	0.50	37	31 1/4	
Year	1.55	37	21 %	
1979				
First	0.50	381/2	33 1/2	
Second	0.50	37 1/8	33 %	
Third	0.50	41 1/8	32 1/8	
Fourth	0.60	46 1/8	34 1/2	
Year	2.10	46 1/8	32 %	

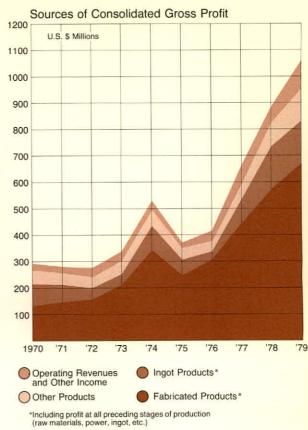
## **Internal Accounting Controls**

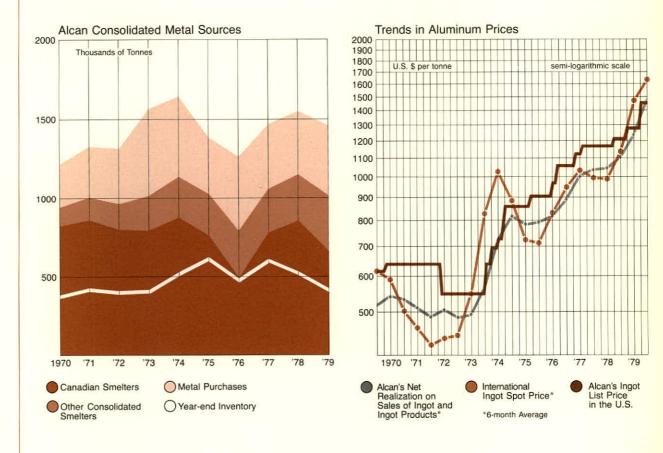
Alcan's management is responsible for the integrity and fair presentation of the accompanying financial statements which have been prepared in accordance with generally accepted accounting principles applied on a consistent basis, except for certain changes which are explained in Notes 1 and 2 of these financial statements.

Alcan's policy is to maintain systems of internal accounting and administrative controls of high quality consistent with reasonable cost. Such systems are designed to provide reasonable assurance that the financial information is accurate and reliable and that Company assets are adequately accounted for. The Audit Committee meets regularly with representatives of the independent auditors and with members of management to satisfy themselves that Alcan's policy is being followed.

The annual financial statements are reviewed by the Audit Committee and are approved by the Board of directors. In addition, the financial statements are examined by the shareholders' independent auditors, Price Waterhouse & Co., whose report on these financial statements appears on page 26.







## Information by Geographic Areas (in millions of U.S. dollars)

	Canada and Caribbean	United States	Latin America	Europe and Africa	Asia and South Pacific	Elim- inations	Alcar Consol
Year ending 31 December 1979	ĒI						
Sales and operating revenues							
To subsidiary companies	734	62	_	17	65	(878)	_
To other companies	1,005	1,073	439	1,439	425		4,381
Total	1,739	1,135	439	1,456	490	(878)	4,38
Net income	214	48	40	107	46	(28)	427
Capital expenditures	224	34	53	134	49	-	494
31 December 1979							
Current assets	870	475	165	676	236	(233)	2,189
Fixed assets (net)	984	163	217	371	180	_	1,915
nvestments and other assets	119	5	57	157	48		386
dentifiable assets	1,973	643	439	1,204	464	(233)	4,490
Current and other liabilities	393	173	101	394	143	(177)	1,02
Capital employed	1,580	470	338	810	321	(56)	3,463
Number of employees (thousands)	22.4	4.8	9.5	17.0	11.7	_	65.4
Year ending 31 December 1978							
Sales and operating revenues	901	50	1	19	48	(921)	
To subsidiary companies To other companies	801 891	52 980	314	1,148	378	(921)	3,711
Total	1,692	1,032	315	1,167	426	(921)	3,711
Total	1,092	1,002	313	1,107	420	(321)	0,71
Net income	151	38	41	62	37	(32)	297
Capital expenditures	137	20	57	73	34	_	32
Japital experiolities							
31 December 1978	749	403	187	628	243	(228)	0.000
B1 December 1978 Current assets	847	141	192	314	144	(228)	1,638
B1 December 1978 Current assets fixed assets (net)	847 84	141 7	10.700	314 170	144 46		1,638
31 December 1978 Current assets Fixed assets (net) Investments and other assets	847	141	192	314	144	-	1,638
31 December 1978 Current assets fixed assets (net) envestments and other assets dentifiable assets	847 84	141 7	192 40	314 170	144 46		1,638 347 3,967
31 December 1978 Current assets Fixed assets (net) nvestments and other assets dentifiable assets Current and other liabilities Capital employed	847 84 1,680	141 7 551	192 40 419	314 170 1,112	144 46 433	(228)	1,982 1,638 347 3,967 965 3,002

Certain 1978 amounts have been restated to give retroactive effect to the accounting changes described in note 2 to the financial statements.

Sales to subsidiary companies are made at a fair market price recognizing volume, continuity of supply and other factors. Net income is total revenues less expenses directly related to the geographic area in accordance with generally accepted accounting principles.

Capital employed represents the total book value of the net assets located in each area.

Of the Canada and Caribbean sales and operating revenues to other companies, \$167 million in 1979 (\$230 in 1978) were export sales from Canada, principally to the United States.

## Consolidated Sales of Aluminum by Markets (thousands of tonnes)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Canada	144	172	177	213	225	195	211	220	220	241
United States	323	351	377	435	410	295	352	374	450	402
Latin America	66	86	101	103	113	110	115	116	121	145
European Economic Community	353	303	346	429	448	348	408	364	382	434
Asia and South Pacific	233	251	220	249	235	262	216	185	335	255
All Others	102	105	95	91	77	62	72	59	89	55
	1,221	1,268	1,316	1,520	1,508	1,272	1,374	1,318	1,597	1,532

## Consolidated Statement of Income

Year ending 31 December (in thousands of U.S. dollars)	1979	1978 (note 2)
Revenues		
Sales	\$4,194,961	\$3,552,350
Operating revenues	186,261	158,854
Other income (note 11)	60,164	26,497
	4,441,386	3,737,701
Costs and expenses		
Cost of sales and operating expenses	3,231,490	2,716,163
Depreciation	148,873	137,593
Selling, research and administrative expenses	307,846	268,412
Interest on debt not maturing within one year	84,683	71,384
Other interest	28,945	16,277
Other expenses	14,382	16,585
CENTER DE LA CARRELLA DEL CARRELLA DE LA CARRELLA DEL CARRELLA DE LA CARRELLA DE	3,816,219	3,226,414
Income before income taxes and other items	625,167	511,287
Income taxes (note 12)		
Current	154,613	107,096
Deferred	56,431	83,161
White the second state of the second	211,044	190,257
Income before other items	414,123	321,030
Equity income	21,299	5,122
Minority interests	(29,464)	(29,168
Income before extraordinary gain	405,958	296,984
Gain on sale of investment (note 3)	21,509	
Net income	\$ 427,467	\$ 296,984

	in U.	S. dollars
Income per common share		
Before extraordinary gain	\$10.04	\$7.34
Extraordinary gain	0.53	
	\$10.57	\$7.34
Dividends per common share	2.10	1.55

# Consolidated Balance Sheet — Assets

31 December (in thousands of U.S. dollars)	1979	1978 (note 2)
Current assets		
Cash and time deposits	\$ 228,299	\$ 188,934
Receivables	826,716	727,573
Aluminum	608,916	629,968
Raw materials and other supplies	525,136	435,780
	2,189,067	1,982,255
Deferred charges	45,065	41,038
Deferred receivables (note 6)	87,945	78,555
Investments in companies owned 50% or less (note 3)	253,510	227,465
Property, plant and equipment (note 4)	3,807,584	3,433,630
Less: Accumulated depreciation	1,892,958	1,795,459
AND THE SECOND S	1,914,626	1,638,171

Total assets	\$4,490,213	\$3,967,484
		The second secon

## Consolidated Balance Sheet - Liabilities and Shareholders' Equity

31 December (in thousands of U.S. dollars)	1979	1978 (note 2)
Current liabilities		
Payables	\$ 614,238	\$ 518,615
Short-term borrowings (principally from banks)	108,504	145,332
Income and other taxes	147,177	129,392
Debt maturing within one year (note 5)	44,322	76,206
	914,241	869,545
Debt not maturing within one year (note 5)	759,371	690,868
Deferred credits (note 7)	112,848	95,212
Deferred income taxes	396,546	343,616
Minority interests (note 8)	275,478	278,922
Shareholders' equity		
Capital stock (note 9)		
Preferred shares	1,854	1,902
Common shares	426,905	426,905
Retained earnings (note 10)	1,602,970	1,260,514
	2,031,729	1,689,321

Total liabilities and shareholders' equity	\$4,490,213	\$3,967,484

Approved by the Board: David M. Culver, Director John H. Hale, Director

# Consolidated Statement of Changes in Financial Position

Year ending 31 December (in thousands of U.S. dollars)	1979	1978 (note 2)
Source of funds		
Income after taxes	\$ 414,123	\$ 321,030
Depreciation	148,873	137,593
Deferred income taxes	56,431	83,161
Other	(18,452)	(11,848)
From operations	600,975	529,936
New debt	151,555	114,065
Sales of investments (including extraordinary gain)	70,879	28,629
Disposals of plant and equipment	20,252	10,888
Common and preferred shares of subsidiary companies		25,412
	843,661	708,930
Application of funds		
Plant and equipment	450,638	303,384
Investments	43,122	17,529
Debt repayments	80,026	184,247
Dividends	85,011	62,770
Other (net)	22,748	7,161
	681,545	575,091
Increase in working capital (note 16)	162,116	133,839
Working capital—beginning of year	1,112,710	978,871
Working capital—end of year	\$1,274,826	\$1,112,710

## Consolidated Statement of Retained Earnings

Datained counings beginning of year as proviously reported	01 004 101	C 007 F40
Retained earnings—beginning of year as previously reported	\$1,224,161	\$ 997,540
Adjustment for change in accounting for inventories (note 2)	36,353	28,760
Retained earnings—as restated	1,260,514	1,026,300
Net income	427,467	296,984
	1,687,981	1,323,284
Dividends on preferred shares	73	78
Dividends on common shares	84,938	62,692
	85,011	62,770
Retained earnings—end of year (note 10)	\$1,602,970	\$1,260,514

## Notes to Financial Statements in millions of U.S. dollars

## 1. Summary of accounting policies

## Principles of consolidation

The consolidated financial statements include the accounts of all companies more than 50% owned. In addition, under the equity accounting principle, consolidated net income includes Alcan's equity in the net income or losses of all companies 20-50% owned and the investments in these companies have been increased or decreased by Alcan's share of their undistributed net income or losses since acquisition. When the cost of an investment differs from the book value of Alcan's equity therein at date of acquisition, the difference is amortized over the estimated useful life of the related fixed assets. Intercompany items and transactions between consolidated companies, including profits in inventories, are eliminated.

## Translation of accounts into United States dollars

The consolidated financial statements are expressed in U.S. dollars, the principal currency of international trade and of Alcan's business.

Current assets excluding inventories, current liabilities and long-term monetary assets and liabilities included in the consolidated balance sheet are translated at the rates of exchange at year end. Other balance sheet items are translated at rates prevailing at the respective transaction dates. Accounts included in the consolidated statement of income are translated at the average rates prevailing during the year except for the cost of inventories and depreciation which are translated at rates prevailing when the related assets were acquired. Translation gains and losses are included in net income except for gains and losses relating to the translation of long-term monetary assets and liabilities which are deferred and amortized over the remaining lives of the related items.

The Financial Accounting Standards Board in the United States requires that companies reporting to investors in the United States follow the practice of absorbing immediately in income unrealized exchange gains and losses on the translation of non-U.S. dollar long-term monetary assets and liabilities. However, Alcan follows the practice recommended by The Canadian Institute of Chartered Accountants of deferring such unrealized exchange gains and losses and amortizing them over the remaining lives of the related items.

The following table compares reported net income under the Alcan method with the net income that would have been reported under the FASB method, and also shows the cumulative effect on retained earnings.

	1979		1978	(note 2)
	Alcan Method	FASB Method	Alcan Method	FASB Method
Consolidated net income				
First quarter (unaudited)	\$ 96.7	\$ 98.2	\$ 61.6	\$ 53.7
Second quarter (unaudited)	109.0	108.9	78.4	70.2
Third quarter (unaudited)	104.3	97.4	69.4	57.1
Fourth quarter (unaudited)	117.5	121.2	87.6	73.4
	\$427.5	\$425.7	\$297.0	\$254.4
Dollars per common share	\$10.57	\$10.52	\$ 7.34	\$ 6.29
Consolidated retained earnings				
Beginning of year	\$1,260.5	\$1,184.6	\$1,026.3	\$ 992.9
Year end	1,603.0	1,525.3	1,260.5	1,184.6

## Other

Aluminum, raw materials and other supplies are stated at cost (determined for the most part on the monthly average method) or net realizable value, whichever is the lower.

Property, plant and equipment include the cost of renewals and betterments. Repairs and maintenance are charged against income as incurred.

Depreciation is calculated on the straight-line method using rates based on the estimated useful lives of the respective assets.

Income tax regulations in Canada and certain other countries permit the deduction from taxable income of certain items (principally depreciation) in amounts which do not coincide with those charged for financial reporting purposes. The effect of such timing differences on income taxes otherwise payable is recognized as deferred income taxes.

Research and development expenditures, charged to income as incurred, amounted to \$34 million in 1979 and \$33 in 1978.

Income per common share is calculated by dividing net income less preferred dividends by 40,446,694, being the number of shares outstanding during each year.

## 2. Accounting changes

## Inventories in the United States

The basis of determining the cost of inventories of aluminum and other supplies in the United States was changed in the fourth quarter of 1979 from the last-in-first-out method to the monthly average method to conform with Alcan's inventory accounting policy. This change in accounting method was adopted with retroactive effect. The change increased net income by \$7.6 million (\$.19 per share) in each of the years 1979 and 1978. The change also increased retained earnings at 31 December 1977 by \$28.8 million relating to the years 1974-1977.

#### Currency translation

Beginning 1 January 1979 Alcan changed its method of translation of non-U.S. dollar transactions and accounts to conform to the recommendations of The Canadian Institute of Chartered Accountants. Non-U.S. dollar long-term monetary assets and liabilities are now translated using the rates of exchange prevailing at the balance sheet date rather than at the date of origin. The resulting unrealized exchange gain or loss is deferred and amortized over the remaining life of the related item. This change had no significant impact on net income. Certain balance sheet amounts for 1978 have been restated for comparative purposes.

3. Investments in companies owned 50% or less	1979	1978	
At cost plus equity in undistributed net income since acquisition			
Companies 50% owned (cost \$50 million)	\$ 58	\$ 55	
Companies 20% to 50% owned (cost \$140 million)	192	168	
At cost			
Companies less than 20% owned	3	4	
	\$ 253	\$ 227	

During 1979 Alcan sold its remaining 25% interest in Ardal og Sunndal Verk a.s. to the Kingdom of Norway for \$70 million producing an extraordinary gain of \$21.5 million after estimated income taxes.

The combined results of operations and the financial position of the 20-50% owned companies, located mainly in Australia, Brazil, Europe, Guinea and Japan, are summarized below.

Results of operations for the year	1979	1978 (note 2)
Revenues Costs and expenses	\$ 4,012 3,846	\$ 3,761 3,707
Income before income taxes Income taxes	166 70	54 24
Net income *Alcan's share of net income Dividends received by Alcan	\$ 96 27 5	\$ 30 8 7
Financial position at 31 December Working capital Property, plant and equipment (net) Other assets (net)	\$ 216 2,327 461	\$ 410 2,007 489
Less: Debt not maturing within one year Deferred income taxes	3,004 2,081 <u>3</u>	2,906 2,080 19
Net assets	\$ 920	\$ 807
**Alcan's equity in net assets	253	219

<sup>\*</sup>Where a company operates as a joint venture supplying materials to each participant, Alcan's share of the net income is applied to the cost of the materials so obtained.

<sup>\*\*</sup>If deferred unrealized exchange gains and losses had been included in net income, as required by the Financial Accounting Standards Board in the United States, Alcan's equity in net assets of companies 20-50% owned would be reduced by \$49 million. Under Alcan's currency translation policy, if there were no further changes in exchange rates, this amount would be amortized against income over the remaining lives of the related items.

## 4. Property, plant and equipment

			1978		
	Cost	Accumulated Depreciation	Net	Net	
Land, and property rights	\$ 77	\$ 2	\$ 75	\$ 76	
Buildings, machinery and equipment Construction work in progress	3,329 402	1,891 —	1,438 402	1,315 247	
	\$ 3,808	\$ 1,893	\$ 1,915	\$ 1,638	

Expenditures in 1980 are expected to be about \$600 million.

5. Debt not maturing within one year	1979	1978 (note 2)
Canadian and Caribbean companies		
91/2% Sinking fund debentures, due 1995	\$ 87	\$ 97
1034% Sinking fund debentures, due 1994 (Can. \$57 million)	49	55
91/2% Sinking fund debentures, due 1988	41	48
93/% Sinking fund debentures, due 1991 (Can. \$46 million)	39	42
5.10% Notes, due 1980/1992 Other debt, due 1980/2001	58	63
Other debt, due 1980/2001	17	29
USA companies		
9½% Notes, due 1980/1994	45	45
43/% Notes, due 1980/1984	17	20
Other debt, due 1980/1998	12	7
Latin American companies		
Bank loans, due 1980/1991	58	38
Other debt, due 1980/1984	5	5
European and African companies		
5½% Bonds, due 1987 (Sw.F. 100 million)	63	62
*Loan, due 1991 (£15 million)	33	31
101/2% Loan stock, due 1981/1994 (£8 million)	18	16
*Bank loans, due 1980/1993 (including £36 million; DM 124 million)	167	146
Other debt, due 1980/2004	48	25
Asian and South Pacific companies		
81/2% Bonds, due 1989	24	25
*Bank loans, due 1980/1985	17	3
Other debt, due 1980/1996	42	35
	840	792
Less: Debt maturing within one year included in current liabilities	44	76
Unamortized net amount of unrealized exchange loss (note 1)	37	25
	759	691

<sup>\*</sup>Interest fluctuates with lender's prime commercial rate.

Based on rates of exchange at year end and after allowing for prepayments, sinking fund and other requirements over the next five years amount to \$44 million in 1980, \$30 in 1981, \$64 in 1982, \$59 in 1983 and \$57 in 1984.

## 6. Deferred receivables

Deferred receivables include \$41 million due with interest over the period 1981 to 1991 from the Government of Guyana in respect of the nationalization in 1971 of Alcan's bauxite and alumina assets and \$26 million due with interest over the period 1981 to 1988 from the Government of Jamaica in respect of funds on deposit and for the sale of assets.

## Notes to Financial Statements in millions of U.S. dollars

## 7. Deferred credits

Deferred credits include \$45 million prepayment by a related company under an alumina tolling arrangement.

8. Minority interests in subsidiary companies	1979	1978 (note 2)
Preferred shares Common shares Retained earnings	\$ 164 60 44	\$ 169 63 36
Unamortized amount of unrealized exchange gain on preferred shares (note 1)	<del>268</del> 7	268
	\$ 275	\$ 279

Preferred shares include \$155 million issued by Aluminum Company of Canada, Ltd of which \$100 million is floating rate fourth preferred shares issued in three equal series on 5 July 1977 and retractable at par in series at the option of the holder on 5 July 1984, 1985 and 1986, respectively.

### 9. Capital stock

On 2 April 1979 Alcan was continued under Section 181 of the Canada Business Corporations Act and, under the articles of continuance, changed its authorized share capital from 1,500,000 4 1/4% cumulative redeemable preferred shares of par value Can. \$40 and 60,000,000 common shares without nominal or par value to 50,007 Can. \$1.70 cumulative redeemable preferred shares and an unlimited number of common shares, both without nominal or par value.

As at 31 December 1979 there were 50,007 preferred shares outstanding (1978—51,292) and 40,446,694 common shares (1978—40,446,694). The preferred shares have been called for redemption on 15 April 1980 at the redemption price of Can. \$43 per share. Subject to shareholders' approval, the common shares will be subdivided on a 2 for 1 basis with effect from 31 March 1980.

#### 10. Retained earnings

Consolidated retained earnings at 31 December 1979 include \$148 million which, pursuant to the provisions of certain debt and share issues of Aluminum Company of Canada, Ltd, is not distributable as dividends either in cash or in kind to Alcan, the holder of its common shares.

Consolidated retained earnings at 31 December 1979 also include about \$650 million, some part of which may be subject to certain taxes on distribution to the parent company. No provision has been made for such taxes because these earnings are reinvested in the business.

11. Other income	1979	1978
Interest	\$ 45.6	\$ 20.5
Gain from disposal of fixed assets and investments	6.3	
Gain on redemption of debt		3.9
Other	8.3	2.1
	\$ 60.2	\$ 26.5

#### 12. Income taxes

Income taxes provided in 1979 represent approximately 34% of consolidated pre-tax income, an effective rate lower than statutory rates in Canada. The reduction is attributable to investment and other special allowances, to non-taxable income, and to an adjustment of UK deferred income taxes.

Pursuant to a recent change in UK income tax legislation limiting the period for recapture of tax relief on increases in inventory values and to a requirement of the Financial Accounting Standards Board, that portion of deferred tax relief (\$23.2 million) obtained during the years 1973 through 1978, which is not subject to recapture or is not likely to be paid, has been credited to 1979 income (deferred income taxes).

#### 13. Commitments and guarantees

As a participant in a long-term cost-sharing joint venture, Alcan is required to pay its share of the operating costs of the facilities and costs of servicing the long-term debt of Queensland Alumina Limited. The fixed portion of this commitment amounts to \$10.6 million in 1980, \$11.3 in 1981, \$11.1 in 1982, \$9.1 in 1983, \$8.6 in 1984 and like annual amounts up to 1992.

In addition Alcan is guarantor of \$110.2 million of long-term debt of certain related companies including \$64.8 of Compagnie des Bauxites de Guinée.

Minimum rental commitments amount to \$34.6 million in 1980, \$27.0 in 1981, \$21.3 in 1982, \$14.6 in 1983, \$12.5 in 1984 and lesser annual amounts thereafter. Total rental expense amounted to \$70.2 million in 1979 (\$56.8 in 1978). See also reference to capital expenditures in note 4 and debt repayments in note 5.

#### 14. Pension plans

The Company and its subsidiaries (with some exceptions) have established pension plans in the principal countries where they operate, for the greater part contributory and generally open to all employees. The total pension expense in 1979 was \$48 million (\$81 in 1978 including the funding of an experience deficiency for the period 1975 to 1977) which includes amortization of unfunded actuarial liabilities which the Company and its subsidiaries are funding for the most part over periods of 15 years or less. Based on the most recent actuarial reports, the unfunded actuarial liabilities amounted to \$24 million for currently vested benefits and to \$97 million for total benefits.

## 15. Quarterly financial data (unaudited)

		1979	9	
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenues	\$1,083.1	\$1,144.4	\$1,070.0	\$1,143.9
Costs and expenses	909.4	1,003.9	944.4	958.5
Income taxes	74.0	50.4	15.0	71.7
Equity income and minority interests	(3.0)	(2.6)	(6.3)	3.8
Extraordinary gain		21.5		
Net income	\$ 96.7	\$ 109.0	\$ 104.3	\$ 117.5
Income per common share (U.S.\$)				
Before extraordinary gain Extraordinary gain	2.39	2.17 .53	2.57	2.91
	2.39	2.70	2.57	2.91
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenues	\$ 822.3	\$ 964.2	\$ 918.9	\$1,032.3
Costs and expenses	717.9	822.1	787.0	899.4
Income taxes	40.2	57.4	51.6	41.1
Equity income and minority interests	(2.6)	(6.3)	(10.9)	(4.2)
Net income	\$ 61.6	\$ 78.4	\$ 69.4	\$ 87.6
Income per common share (U.S.\$)	1.52	1.94	1.72	2.16

The above quarterly results have been restated to give retroactive effect to the change in accounting for inventories referred to in note 2.

## Notes to Financial Statements in millions of U.S. dollars

16. Changes in working capital	1979	1978 (note 2)
Current assets		
Cash and time deposits	\$ 39.4	\$ 82.9
Receivables	99.1	201.1
Aluminum, raw materials and other supplies	68.3	40.2
	206.8	324.2
Current liabilities		
Payables and short-term borrowings	58.8	108.5
Income and other taxes	17.8	57.0
Debt maturing within one year	(31.9)	24.9
	44.7	190.4
Net increase	\$ 162.1	\$ 133.8

## 17. Information by geographic areas

Information by geographic areas is contained in the summary on page 16.

## 18. Supplementary inflation accounting data (unaudited)

The information required to be disclosed by the United States Securities and Exchange Commission is contained in the section 'Inflation Accounting' commencing on page 27.

## Auditors' Report

# TO THE SHAREHOLDERS OF ALCAN ALUMINIUM LIMITED:

We have examined the consolidated balance sheets of Alcan Aluminium Limited as at 31 December 1979 and 1978 and the related consolidated statements of income, retained earnings, and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion these financial statements present fairly the consolidated financial position of the Company as at 31 December 1979 and 1978 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 in Canada which (after giving retroactive effect to the change in accounting for certain inventories as explained in Note 2, with which we concur) have been applied on a consistent basis.

Montreal, Canada 7 February 1980 PRICE WATERHOUSE & CO. Chartered Accountants

## Inflation Accounting

The controversy over the best method of accounting under inflationary conditions continues. Indeed, it is intensifying as the rate of inflation is again increasing in many countries. There is general agreement that the historical cost basis should be retained for the basic financial statements because it affords a firm starting point and that information about the effects of inflation should be presented in supplementary form. However, much uncertainty centers around which of the principal alternative methods for inflation accounting should be used—Current Purchasing Power (CPP), Replacement Cost (RC) and Current Cost (CC).

The first, CPP, focuses on adjusting for the decline in the value of money. The second, RC, focuses on the changing prices of specific goods and services used by the enterprise. It is intended to give the present cost of replacing the existing fixed assets with new assets of equivalent capacity but with new technology. The third, CC, also focuses on specific price changes but is supposed to represent the current cost of replacing existing assets 'as is' and 'where is' with the same technology.

Thus it is apparent that the methods differ completely in concept and application. CPP is considered to be most appropriate for comparison and measurement of performance, and does not involve individual judgment. RC is considered to be appropriate for assessing future cash needs. CC is somewhat akin to RC but is less subjective because it deals with existing plant, not theoretical new plant; both of these methods require subjective judgment.

A major development occurred in October 1979 when the Financial Accounting Standards Board (FASB) in the United States issued its standard on this subject (FAS 33). It requires data stated in accordance with two methods: (1) CPP, which FAS 33 calls 'constant dollar accounting' and (2) CC. The constant dollar and current cost data are supplementary to the basic financial statements, which continue on the historical cost basis.

Using the U.S. Consumer Price Index to relate the value of the dollars of earlier years to current year-end 1979 dollars, the following statements of income and selected financial data demonstrate the effects of general inflation on Alcan's financial results.

Consolidated	Net	Income	Information	(in	millions of	of U.S.	dollars)
--------------	-----	--------	-------------	-----	-------------	---------	----------

	CPP in terms of year-	end 1979 dollars
	1979	1978
Net income for the year, as reported	427	297
Adjustment for:		
Inventories	(124)	(89)
Depreciation expense	(127)	(118)
Monetary items	139	113
Extraordinary item	(27)	_
Other items	(23)	28
Net income for the year, as adjusted for the effects of inflation	265	231

## Consolidated Balance Sheet (in millions of U.S. dollars)

	Historical a	s reported	CPP year-end 19	in terms of 979 dollars
	1979	1978*	1979	1978
Current assets	2,189	1,982	2,275	2,304
Deferred receivables and charges	133	120	133	134
Investments in companies owned 50% or less	253	227	435	435
Property, plant and equipment (net)	1,915	1,638	2,607	2,486
	4,490	3,967	5,450	5,359
Current liabilities	914	870	914	975
Long-term debt	759	691	759	775
Deferred income taxes and credits	510	438	510	492
Minority interests	275	279	379	382
Shareholders' equity	2,032	1,689	2,888	2,735
	4,490	3,967	5,450	5,359
Rate of return on average capital employed	15.9	12.3	8.2	7.5
Rate of return on average shareholders' equity	23.0	18.9	9.4	8.7

<sup>\*</sup>Restated for purposes of comparison; see note 2 to the financial statements.

# Inflation Accounting

## Statements of income for the year ended 31 December 1979

	As reporte		As adjusted for general inflation (CPP)  (in millions of year-end 1979 dollars)			
		millions of al dollars)				
Sales and operating revenues		4,381			4,585	
Cost of sales and operating expenses	3,231		3.	509	.,000	
Depreciation expense	149			276		
Selling, research and administrative expenses	308			322		
Other	287		346			
		3,975		_	4,453	
Income from continuing operations		406			132	
Gain on net monetary liabilities		_			139	
Extraordinary item		21			(6)	
Net income for the year		427			265	
Five-year comparison of financial data						
	1975	1976	1977	1978	1979	
Historical cost data						
In millions of U.S. dollars						
Sales and operating revenues	2,302	2,656	3,028	3,711	4,381	
Income from continuing operations	28	51	205	297	406	
Shareholders' equity at year end	1,131	1,295	1,455	1,689	2,032	
In U.S. dollars per common share						
Income from continuing operations	.80	1.33	5.05	7.34	10.04	
Cash dividends	.90	.40	1.10	1.55	2.10	
Market price at year end (NYSE)	19.38	23.63	26.25	33.88	46.88	
Constant dollar data in year-end 1979 dollars In millions of U.S. dollars						
Sales and operating revenues	3,244	3,538	3,778	4,288	4,585	
Income (loss) from continuing operations	(114)	(114)	77	118	132	
Gain on net monetary liabilities	112	71	80	113	139	
Net income (before extraordinary items)	(2)	(43)	157	231	271	
Shareholders' equity at year end	2,401	2,498	2,578	2,735	2,888	
In U.S. dollars per common share						
Net Income (before extraordinary items)	(.06)	(1.12)	3.88	5.71	6.70	
Cash dividends	1.27	.53	1.38	1.81	2.20	
Market price at year end	26.52	30.85	32.10	38.00	46.88	
Year-end consumer price index (1967 base year = 100)	166.3	174.3	186.1	202.9	227.6	

## Replacement Cost Data (in millions of U.S. dollars)

Next year Alcan will report the data required by FAS 33 for Current Cost (CC). In lieu thereof for this annual report Alcan presents below the replacement cost data for 1978 and 1979 as required by the Securities and Exchange Commission (SEC) in the United States.

		1979	1			
Productive capacity Property, plant and equipment Less: Accumulated depreciation  Depreciation expense	Historical cost basis	Estimated replacement cost basis	Historical cost basis*	Estimated replacement cost basis		
Productive capacity						
Property, plant and equipment	3,808	10,686	3,434	9,279		
Less: Accumulated depreciation	1,893	6,119	1,796	5,507		
	1,915	4,567	1,638	3,772		
Depreciation expense	149	403	138	378		
Inventories	1,134	1,221	1,066	1,115		
Cost of sales and operating expenses	3,231	3,283	2,716	2,766		

<sup>\*</sup>Restated for purposes of comparison; see note 2 to the financial statements.

In accordance with the SEC guidelines the 1979 replacement cost amounts are stated in terms of 1979 dollars while the 1978 amounts are stated in terms of 1978 dollars.

The larger subsidiaries have reviewed their assets in detail and attempted to estimate the replacement cost in most cases by valuing specific assets or operating capacities. Indexes were used to value the other assets and those of the remaining smaller subsidiaries. Land, and property rights, have not been revalued and are included in the estimated replacement cost at their historical cost. The accumulated depreciation and the charge for the year were calculated using the straight-line method and existing rates applied to the estimated replacement costs. Replacement cost of sales was determined by adjusting historical costs for the estimated inflation which occurred during the period between the time of production and the time of sale.

There has been no attempt to re-engineer the entire productive capacity nor to consider the many and varied problems of relocation and consolidation of existing facilities, such as sources of raw materials, energy, labour supply and proximity to markets. The cost and manner of actual replacement might be significantly changed by such considerations.

Furthermore, the present level of operating costs would be changed through greater efficiencies in the use of energy, labour and materials afforded by productive capacity of more modern design. These changes cannot be determined with any precision, but we believe they would significantly offset the additional depreciation on the replacement cost basis.

Because of the many subjective judgments and the lack of established standards, we feel that the replacement cost figures provide only a very general indication of the values involved and that comparisons with other reported data are unlikely to be valid.

A Ten-Year Summary
(Restated where necessary to give retroactive effect to changes in accounting practices)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Operating Data (thousands of tonnes)										
Aluminum shipments by consolidated										
subsidiaries	1,221	1,268	1,316	1,520	1,508	1,272	1,374	1,318	1,597	1,53
Ingot and ingot products	594	568	537	601	584	560	510	440	615	49
Fabricated products	627	700	779	919	924	712	864	878	982	1,03
Production of primary aluminum										
Canada—own production	819	857	799	792	874	761	493	781	853	66
Canada—tolling for a related company	-	_	_	_	_	_	-	45	45	4
Subsidiary and related companies outside Canada	770	848	890	1,040	1,099	1,069	1,025	1,049	1,006	88
1.0										
Primary aluminum capacity (at year end)  Consolidated subsidiaries	1,077	1,110	1,234	1,261	1,230	1,249	1.236	1,236	1,258	1,34
Total subsidiary and related companies	1,798	1,938	2,106	2,156	2,115	2,144	2,118	2,118	2,086	1,95
Consolidated Income Statement Items	2/11 S S m	illione)								
consolidated income Statement items	5 (0.3, 5 111	illions)	10 (04 (04 to 10	2.50	5 0000	100 040 00	No. 1000000	THE COMP.	1 81 124000	0.00
Total revenues	1,374	1,441	1,529	1,891	2,427	2,313	2,671	3,058	3,738	4,44
Sales of aluminum ingot and ingot products	321	284	267	318	448	441	432	448	661	66
Sales of aluminum fabricated products	723	821	922	1,191	1,489	1,355	1,674	1,942	2,315	2,82
Sales of all other products	268	277	266	306	400	419	452	486	576	70
Operating revenues	52 10	49 10	56 18	57 19	75 15	87 11	98 15	152 30	159 27	18
Other income	10	10	10	19	15	4 15	13	30	61	
Costs and expenses	CD12000		9.00			4.00	0 - 1 -	0.000	0.740	
Cost of sales and operating expenses	988	1,062	1,161	1,452	1,795	1,831	2,140	2,269	2,716	3,23
Depreciation	94	98	94	101	103	111	116 100	126 90	138 88	14 11
Interest expense	60	64 123	69 126	79 148	100 175	105 187	204	229	285	32
All other expenses (except income taxes)	113	123	120	140	175	107	204	223	200	32
ncome taxes	54	38	20	35	101	31	45	136	190	21
Equity income	11	9	8	18	11	(13)	(5)	13	5	2
Minority interests	(4)	(5)	(6)	(11)	(9) 27	(7) 12	(10)	(16)	(29)	(2
Extraordinary gains	9 81	60	61	83	182	40	51	205	297	42
Netincome	01		01		102		91	200	207	
Consolidated Balance Sheet Items (U.	S. \$ million	s)								
Working capital	444	401	468	442	675	807	831	979	1,113	1,27
Property, plant and equipment (net)	1,223	1,224	1,234	1,217	1,329	1,385	1,401	1,460	1,638	1,91
Investments in companies owned 50% or less	170	174	178	199	212	215	207	242	227	25
Long-term debt	751	740	798	744	881	971	837	749	691	75
Deferred income taxes	150	142	130	123	181	189	180	267	344	39
Minority interests	112	114	114	106	116	163	163	244	279	27
Shareholders' equity	847	872	904	957	1,106	1,131	1,295	1,455	1,689	2,03
Total assets	2,215	2,297	2,370	2,449	3,012	3,053	3,147	3,473	3,967	4,49
Per Common Share (U.S. \$)										
Income (after preferred dividends but										
before extraordinary gains)	2.11	1.75	1.78	2.42	4.49	0.80	1.33	5.05	7.34	10.0
Extraordinary gains	0.27			-	0.79	0.36	-	-	7 24	0.5
Income (after preferred dividends)	2.38	1.75	1.78	2.42	5.28	1.16	1.33	5.05	7.34	10.5
Dividends paid	1.20	1.00	0.80	0.90	1.20	0.90	0.40	1.10	1.55	2.
Shareholders' equity	24.03	24.78	25.76	27.71 40	31.79	31.89 26 %	31.98	35.93 29 ½	41.72 37	50.°
Market Price NYSE—high —low	27 1/8 19 1/4	24 ¾ 15	25 17¾	22 1/8	181/4	18 %	19 %	21 1/4	21 %	32
—close	22 %	18 1/4	22 3/4	39 1/8	20	19 3/8	23 %	26 1/4	33 %	46
Other Statistics										
Capital expenditures (U.S. \$ millions)	152	155	115	117	268	208	138	233	321	49
Funds generated from operations							166	411	530	60
(U.S. \$ millions)  Return on average shareholders' equity	164	155	140	163	308	164	100	411	330	.00
(as a percentage)	9.8	7.0	6.9	8.9	17.7	3.6	4.2	14.9	18.9	23
Number of common shareholders at year end (thousands)	76	70	64	50	48	47	43	40	37	
Number of employees			10001		1 1					
at year end (thousands)	67	61	62	62	64	61	60	61	63	

## Principal Subsidiary and Related Companies

At 31 December 1979—Fully owned unless the percentage of ownership is shown

## Operating Companies

#### North America

Canada

Aluminum Company of Canada, Ltd Alcan Canada Products Limited Alcan Smelters and Chemicals Ltd Alcan-Price Extrusions Limited (50%)

Alcan-Price Extrusions Limited (50%)
Revalex (1978) Inc.
Roberval and Saguenay
Railway Company, The
Saguenay Shipping Limited
Supreme Aluminum Industries Limited
(26.27%)

Vic Metal Corporation

**United States** 

Alcan Aluminum Corporation Luxfer USA Limited (80.66%)

Bermuda

Alcan (Bermuda) Limited

#### Caribbean

Jamaica

Alcan Jamaica Company\* Alcan Products of Jamaica Limited Jamalcan (93%) Sprostons (Jamaica) Limited

Trinidad

Chaguaramas Terminals Limited Geddes Grant Sprostons Industries Limited (49%) Sprostons (Trinidad) Limited

#### Latin America

Argentina

Camea S.A Extrusion S.A. (65.1%)

Brazil

Alcan Alumínio do Brasil S.A. Alumínio do Brasil Nordeste S.A. Mineração Rio do Norte S.A. (19%) Petrocoque S.A. (25.1%)

Colombia

Aluminio Alcan de Colombia, S.A. (49%)

Alcan Aluminio, S.A. (48.7%)

Alcan Aluminio del Uruguay S.A. (89.9%)

Venezuela

Aluminio de Venezuela, C.A. (Alcanven) (49%)

\*Division of Aluminum Company of Canada, Ltd

#### Europe

Belgium

Alcan Aluminium Raeren S.A.

Aluminium Alcan de France Alcan Filage et Finitions S.A. des Bauxites et Alumines de Provence Technal France S.A. (75%)

Alcan Aluminiumwerke GmbH Alcan Aluminiumwerk Nümberg GmbH Alcan Folien GmbH Aluminium folienwerk GmbH Aluminium Norf GmbH (50%) Cargo Van Fahrzeugwerk GmbH (50%)

Ireland

Aughinish Alumina Limited (40%) Unidare Limited (25.5%)

Italy

Alcan Alluminio Italiano S.p.A. Alcan S.p.A.

Netherlands

Hunter Douglas N.V. (25.16%)

Spain

Empresa Nacional del Aluminio, S.A. (ENDASA) (26.4%) Productos Aluminio de Consumo, S.A. (50%)

Switzerland

Aluminiumwerke A.-G. Rorschach

United Kingdom

Alcan Building Materials Limited (80,66%) Alcan Design Products Limited (60,5%) Alcan Ekco Limited (40,33%) Alcan Enfield Alloys Limited (40.33%) Alcan Extrusions Limited (80.66%) Alcan Foils Limited (80.66%) Alcan Lynemouth Limited (80.66%) Alcan Metal Centres Limited (80.66%) Alcan Plate Limited (80.66%) Alcan Polyfoil Limited (80.66%) Alcan Rain Water Products (80.66%) Alcan Safety Glass Limited (80.66%) Alcan Sheet Limited (80.66%) Alcan Transport Products Limited (80.66%) Alcan Windows Limited (80.66%) Alcan Wire Limited (80.66%) Bonallack Vehicles Limited (80.66%)

Cargo Van Equipment Limited (50%)
Coventry Metal Bars Limited (50%)
Coventry Metal Bars Limited (80.66%)
Ian Proctor Metal Masts Limited (19.4%)
Johnson & Bloy Aluminium
Pigments Limited (29.1%)
Luxfer UK Limited (80.66%) Minalex Limited (80.66%) Saguenay Shipping (UK) Limited

(80.66%)Serco-Ryan Limited (80.66%)

Ghana

Ghana Aluminium Products Limited (60%)

Compagnie des Bauxites de Guinée (13.77%)

Alcan Aluminium of Nigeria Limited Alcan Aluminium Products Limited (60%)

South Africa

## Huletts Aluminium Limited (24%)

Indian Aluminium Company, Limited (55.27%)

Indonesia P.T. Alcan Indonesia (70%)

Nippon Light Metal Company, Ltd (50%) Toyo Aluminium K.K. (50%)

Malaysia

Aluminium Company of Malaysia Berhad (38.62%) Johore Mining and Stevedoring Co. Ltd (52.5%)

Thailand

Alcan Thai Company Limited

## South Pacific

Australia

Alcan Australia Limited (70%) Alcan Queensland Pty Limited Queensland Alumina Limited (21.39%) Quintrex Marine Pty Limited (70%)

New Zealand

New Zealand
Alcan New Zealand Limited (69.2%)
Alcan Alloys Limited (69.2%)
Alcan Anodisers Limited (69.2%)
Alcan Building Products Limited (69.2%)
Alcan Cory Metals Limited (34.6%)
Aluminium Anodisers (N.Z.) Ltd (69.2%) Aluminium Conductors Limited (35.3%) Barker Aluminium Industries Limited (69.2%)

Horizon Aluminium Products Ltd (69.2%) Rolls Gerard Tile Company Ltd (34.6%) Rolls Holdings Ltd (29.1%)

## Other Companies

Holding and Financial

Alcan Aluminium (UK) Limited, London Alcan Alumínio da América Latina, S.A., Rio de Janeiro Alcan Europe N.V., Amsterdam Alcan Finances Overseas N.V., Amsterdam

International Sales

Alcan Canada Products Limited (Trading Division), Toronto—Canada Alcan Alumínio (América Latina) Inc., Montreal—Latin America Alcan Asia Limited, Hong Kong— Hong Kong, Japan, India and other areas

Alcan S.A., Zurich—Continental Europe (excluding Germany and Scandinavia),
Near and Middle East, Africa, U.S.S.R.
Alcan Metall GmbH, Frankfurt—Germany
Alcan Lynemouth Limited, London—
UK, Ireland, Scandinavia

Alcan Ingot and Powders (Division of Alcan Aluminum

Corporation), Cleveland--USA and Caribbean Alcan Project Services Limited (AES Division of Aluminum Company of Canada, Ltd), Montreal—Engineering and feasibility

studies, and project management, related Alcan Trading (Bermuda) Limited,
Hamilton, Bermuda—Worldwide;
trading in aluminum-related products
Alcan Trading Limited, Montreal—Canada;

trading in aluminum-related products; logistics services.

## Alcan Aluminium Limited

## **Annual Meeting**

The Annual Meeting of the shareholders of Alcan Aluminium Limited will be held on Thursday 20 March 1980, at 10 a.m., in the Chateau Champlain Hotel, Montreal.

#### Terms

All amounts are reported in United States dollars and all quantities in metric tons, or 'tonnes'. A tonne is 1,000 kilograms, or 2,204.6 pounds. 'Subsidiary' means a company in which Alcan directly or indirectly owns more than 50% of the voting stock whereas 'related company' indicates a company 50% or less owned.

## Companion Brochure

This Alcan annual report for 1979 contains the business, financial and statutory information as provided to shareholders in prior years. A general information document entitled 'Alcan Today', about the Company's activities, was produced in late 1979 and an updated version accompanies this annual report.

## Stock Exchanges

The common shares of Alcan Aluminium Limited are listed on the Montreal, Toronto, Vancouver, New York, Midwest, Pacific, London, Paris, Brussels, Amsterdam, Frankfurt, Basel, Geneva, Lausanne and Zurich stock exchanges.

Preferred shares: Montreal, Toronto and Vancouver stock exchanges.

## 10-K Report

A copy of the Company's current annual 10-K Report filed with the United States Securities and Exchange Commission will be available to shareholders after 1 April upon written request to the Secretary of the Company.

## Transfer Agents

Common shares:

National Trust Company, Limited, Montreal, Toronto, Winnipeg, Regina, Calgary, Vancouver. Mellon Bank, N.A., Pittsburgh. Citibank, N.A., New York. Morgan Grenfell & Co. Limited, London.

## Preferred shares:

National Trust Company, Limited, Montreal, Toronto, Calgary, Vancouver.

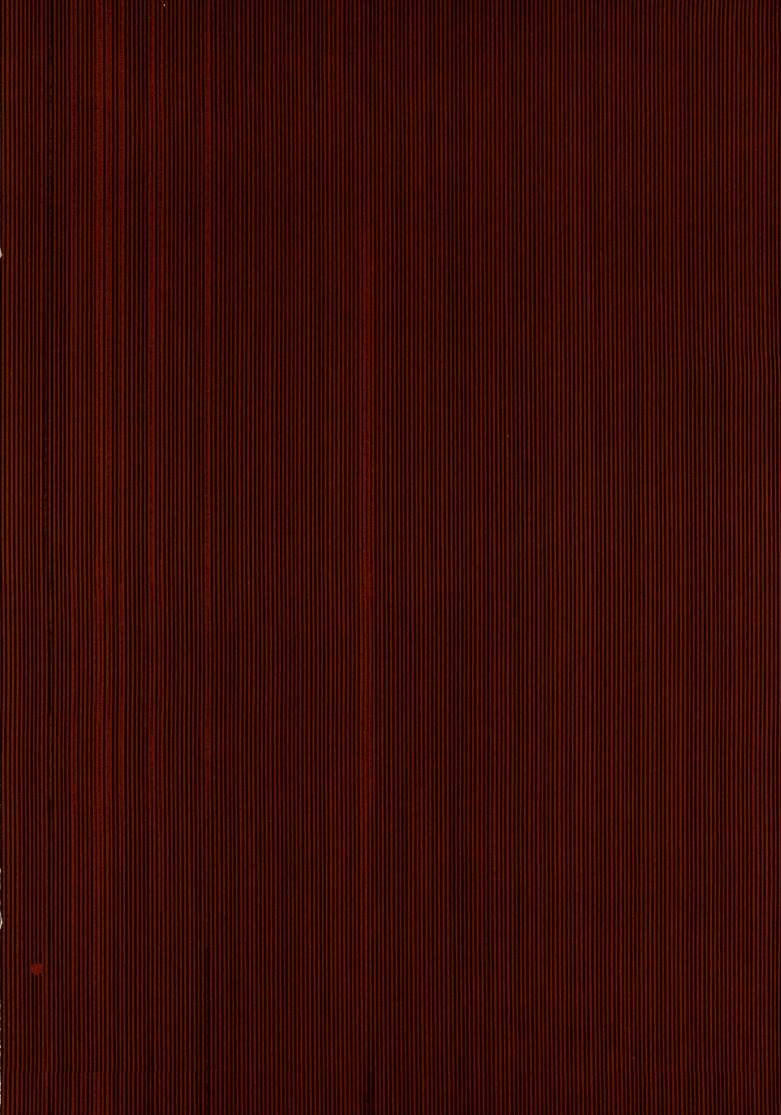
## Registrars

Common shares:

The Royal Trust Company,
Montreal, Toronto, Winnipeg, Regina,
Calgary, Vancouver.
Pittsburgh National Bank, Pittsburgh.
Manufacturers Hanover Trust
Company, New York.
The Royal Trust Company
of Canada, London.

## Preferred shares:

The Royal Trust Company, Montreal, Toronto, Calgary, Vancouver.





## Alcan Aluminium Limited 1 Place Ville Marie, Montreal, Canada Mail: Box 6090, Montreal, Canada H3C 3H2