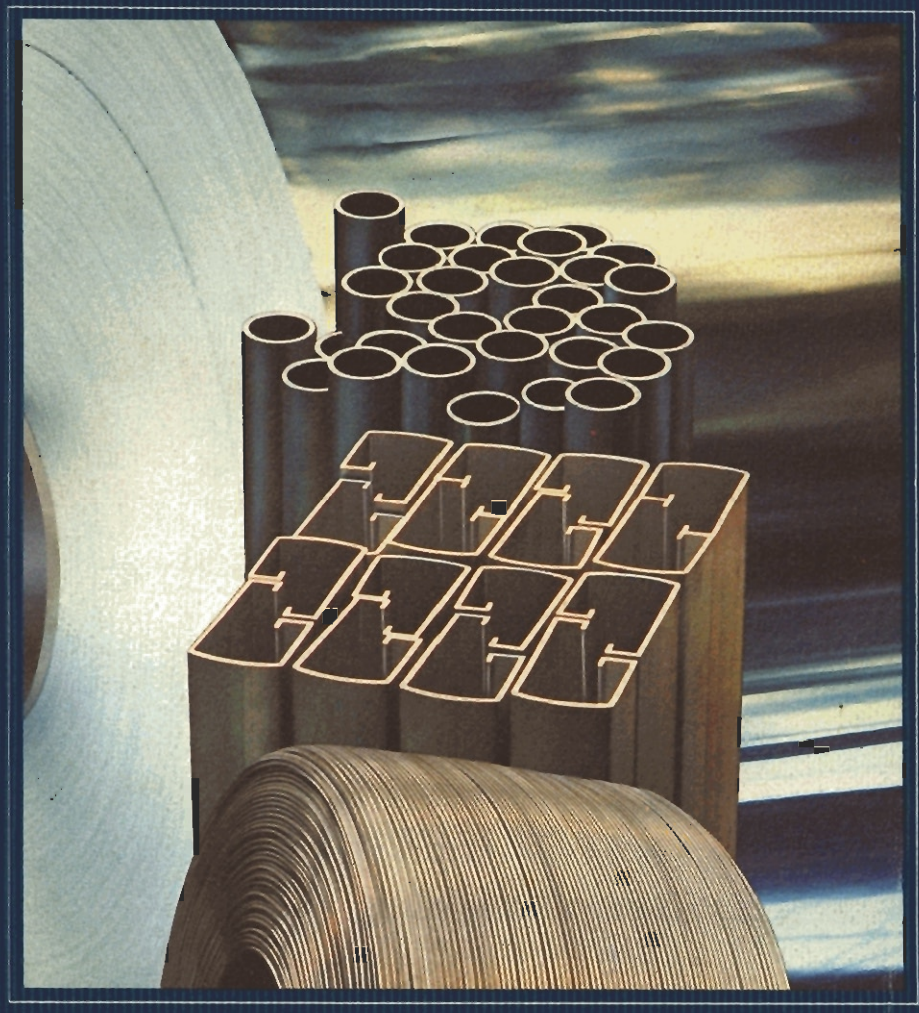
ALCAN ALUMINIUM LIMITED / ANNUAL REPORT 1978



Customers Create Markets

For Alcan, as for every commercial company, it is our customers who provide a vital key to business progress. Literally thousands of customers, large and small, in many countries, transform our semi-fabricated aluminum into useful products which they sell in their various ways in their respective markets. Others purchase from us aluminum ingot materials which they fabricate and sell to their manufacturer customers. Many clients receive from our representatives technical and marketing advice to aid them in their business and we, in turn, learn much from our customers.

Altogether, Alcan's customers are the commercial lifeblood of the enterprise. Illustrations in this report show executives of a few customer companies with their products. They are broadly representative of the large number of manufacturers who find our metal in its many forms useful in their businesses. We acknowledge their cooperation in presenting this window on the world of aluminum.

Cover photo: Some Alcan fabricated products.

Highlights of 1978

Operations for the year *(U.S. $ millions)*		1978	1977
	Total shipments of aluminum products *('000 tonnes)*	1,597	1,318
	Shipments of fabricated products *('000 tonnes)*	982	878
	Total sales and operating revenues	3,711	3,028
	Net income	289	202
	Capital expenditures	321	233
	Number of employees, at year end *(thousands)*	63	61
Financial, at year end *(U.S. $ millions)*			
	Working capital	1,032	909
	Net fixed assets and investments	1,866	1,702
	Long-term debt	683	749
	Common shareholders' equity	1,651	1,424
	Return on average equity *(%)*	18.8	14.9
Shareholdings, at year end			
	Number of common shares outstanding *(thousands)*	40,447	40,447
	Shares registered in Canada *(%)*	42.5	47.1
	Shares registered in USA *(%)*	45.0	39.3
	Shares registered in other countries *(%)*	12.5	13.6
Per common share *(U.S.$)*			
	Net income for the year	7.15	4.98
	First quarter	1.48	0.88
	Second quarter	1.90	1.23
	Third quarter	1.72	1.32
	Fourth quarter	2.05	1.55
	Dividends for the year	1.55	1.10

Metric Units

All quantities of aluminum and other products are reported in metric tons, or 'tonnes'. A tonne is 1,000 kilograms, or 2,204.6 pounds. See note on page 44.

Contents

Directors

Erik Brofoss
Oslo—*Director of various companies*

James W. Cameron
Calgary—*Retired Alcan executive*

David M. Culver
Montréal—*President*

Nathanael V. Davis
Montréal—*Chairman of the Board and Chief Executive Officer*

Dr. Lawrence E. Fouraker
Boston—*Dean of the Harvard University School of Business Administration*

Dr. Roger Gaudry, C C
Montréal—*President of International Association of Universities*

John H. Hale
Montréal—*Executive Vice President*

The Rt. Hon. Viscount Harcourt, K C M G O B E
London—*Chairman of the Advisory Council of Morgan Grenfell Holdings Limited*
(Died 3 January 1979)

Paul H. Leman, O C
Montréal—*Vice Chairman of the Board*

Franklin S. McCarthy
Sarnia, Ontario—*Vice Chairman and Chief Executive Officer of Petrosar Limited*
(Elected 1 February 1979)

Louis Rasminsky, C C . C B E
Ottawa—*Director of various companies*

Patrick J. J. Rich
Montréal—*Regional Executive Vice President*

Hon. James Sinclair, P C
Vancouver—*Chairman of Lafarge Canada Ltd. manufacturers of cement and related products*

Eric A. Trigg
Montréal—*Regional Executive Vice President*

William O. Twaits, C C
Toronto—*Director of various companies*

Eric F. West
Lyme, Connecticut
Regional Executive Vice President

Officers

Nathanael V. Davis
Chairman of the Board and Chief Executive Officer

Paul H. Leman, O C
Vice Chairman of the Board

David M. Culver
President

John H. Hale
Executive Vice President, Finance

Patrick J. J. Rich
Regional Executive Vice President, Western Hemisphere

Eric A. Trigg
Regional Executive Vice President, Asia, Iran and South Pacific

Eric F. West
Regional Executive Vice President, Europe, Africa, Near and Middle East

Duncan C. Campbell
Vice President, Public Affairs

H. Stewart Ladd
Vice President, Personnel

François Senécal-Tremblay
Vice President, Corporate Planning

M. G. O'Leary
Vice President, Engineering and Technology

A. A. Bruneau
Secretary

T. F. D. Simmons
Treasurer

Audit Committee

Louis Rasminsky, C C C B E *Chairman*
Erik Brofoss
Franklin S. McCarthy,
(Effective 1 February 1979)

Personnel Committee

Nathanael V. Davis, *Chairman*
David M. Culver
Dr. Lawrence E. Fouraker
Dr. Roger Gaudry, C C
Hon. James Sinclair, P C
William O. Twaits, C C

Area General Managers

Canada, Fabricating and Sales
Harold Corrigan, Toronto

Canada, Smelting and Chemicals
Roger Phillips, Montréal

Caribbean
J. J. Gagnon,
Mandeville, Jamaica

United States
Roy A. Gentles, Cleveland

Latin America
A. F. Black, Rio de Janeiro

Europe
Ihor Suchoversky, Geneva
Deputy D. A. Pinn, London

Africa, Near and Middle East
R. E. Rosane,
Aix-en-Provence, France

India
D. A. Corbett-Thompson,
Calcutta

Far East
David H. Clarke, Hong Kong

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

Alcan Directors

Alcan Aluminium Limited's Board of directors normally meets ten times a year and its personnel and audit committees meet separately on call as required.

Members of the Board in the year 1978:

Top left: John H. Hale, Erik Brofoss, Patrick J. J. Rich, Louis Rasminsky

Centre left: Eric A. Trigg, the late Rt. Hon. Viscount Harcourt (died 3 January 1979), Dr. Roger Gaudry, William O. Twaits, David M. Culver (president)

Lower left: Hon. James Sinclair, James W. Cameron, Nathanael V. Davis (chairman)

Above: Eric F. West, Dr. Lawrence E. Fouraker, Paul H. Leman (vice chairman)

The Chairman's Message

The year 1978 was a good year for Alcan with profits and return on equity reaching levels which are required if we are to keep pace with the maintenance and modernization of older facilities and provide some capital for expansion. Sales tonnage increased by 21% over 1977 and total revenues increased by 22% to $3,738 million. This growth in sales volume, combined with higher market prices and the cost efficiencies which can be achieved through near-capacity operations, resulted in a 43% increase in net profit to $289.4 million, or $7.15 per common share compared with $4.98 per share in 1977.

Most of the Company's operations outside North America continued to record an improving trend in profits. The major increase in profits was contributed by the Aluminum Company of Canada, Ltd, largely through increased sales of primary metal and through improved operations and sales in its U.S. fabricating subsidiary.

With improved earnings, Alcan in October increased its quarterly dividend payable in December to U.S. $0.50 per share. The previous dividend had been U.S. $0.35 per share, which was the maximum permitted under the Canadian Government's anti-inflation rules respecting dividends which ended in October.

We estimate that in the non-Communist world the growth in primary aluminum consumption was over 7% in 1978, compared with only 2% the previous year. North America showed growth of about 7%, Japan recovered by over 10% after declining the previous year, and Europe showed a 3 to 4% increase. Latin America held steady at an 8% increase. In Asian areas other than Japan, higher levels of growth were also experienced, including additional purchases by the People's Republic of China from Western world producers.

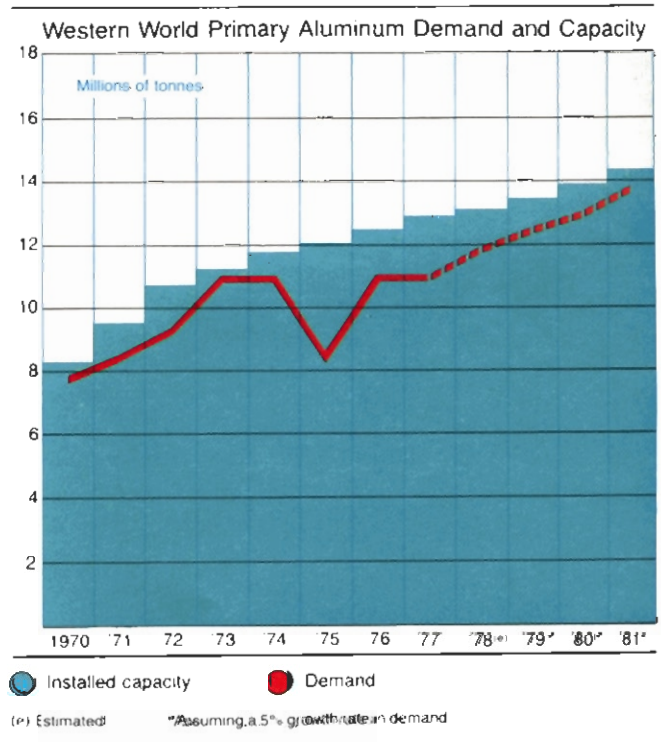
Since these demand levels were greater than the estimated increase of some 3% in smelter production, surplus inventories in the free world dropped from an estimated 1.5 months' supply at the start of 1978 to about half a month's supply at the current rate of usage.

The supply/demand relationship in the industry is now in better balance than has been the case for some years. As indicated by the chart, the excess of capacity and supply, which caused difficulties and kept prices low through most of the decade of the 1970s, has been considerably reduced. One of the factors which contributed to this change was that some 700,000 tonnes of smelting capacity has been taken out of service or mothballed for energy reasons in Japan and the United States and is not likely to be reactivated in the foreseeable future. Thus, while the current smelter operating rate in the industry is approximately 89% of total installed capacity, this rate is equivalent to about 94% of today's effective capacity.

According to published reports by the International Primary Aluminium Institute, new increases in capacity due to enter production through 1981 will add about 3% per annum in the next three years. Barring a serious recession, it seems likely that the supply/demand relationship will continue to be in reasonable balance during the next few years, assuming a 4 to 5% average growth rate and near full utilization of effective capacity.

With the recovery in demand since the world recession of 1975 and with the upward pressure on costs since the oil crisis, the market prices of aluminum have shown improvement. Some producers, particularly those in Europe and Japan where the effects of rising energy costs have been aggravated by the high exchange values of their currencies in relation to the dollar, are unable to earn an adequate return on investment at current North American price levels. Conversely, the large changes in currency values in the last few years have brought competitive benefits to producers in the dollar and dollar-related areas and particularly to Canadian producers. With the large disparities in exchange values, prices in some of the hard-currency producing areas have risen above North American levels, but the dollar price for aluminum has had a moderating effect on realized prices in many overseas markets.

Taking a ten-year span, current prices for primary aluminum in North America have approximately doubled.



this increase being generally in line with the increase in the consumer price index in North America. Any detailed study to determine the competitive position of aluminum requires price comparisons for a myriad of aluminum products in differing markets with the prices of competitive products made from other materials. Such a study involves not only the recent trend of price relationships, but also an assessment of the outlook for other basic materials such as steel and copper, recognizing that they too are faced with cost pressures in reorganizing old industrial structures and building new facilities.

Our studies of trends lead us to the conviction that the basic competitive position of aluminum is not deteriorating. Vis-à-vis steel the situation is expected to remain much the same, but longer-term gains are expected against copper and lumber. Among newer materials, plastics are presenting us with stiffer competition in certain products where increased volume production of plastic products has lowered their unit costs.

Consequently, competitive price pressures have intensified in some aluminum product lines but, on the other hand, the increasing need to conserve energy and materials is providing growing markets which benefit from the intrinsic advantages of aluminum, such as weight saving in the transportation industry, high electrical and thermal conductivity in the electrical industry and the heat exchanger markets, and the very low energy requirements for the recycling of valuable scrap and used aluminum products. The initial cost of aluminum is not the only factor to be considered by the buyer; its economic advantages in use, and in recycled use, are increasingly significant.

Looking ahead, and adopting the current view that growth in overall industrial production may be somewhat slower in the future than in the past, we are assuming that the growth rate in aluminum will be in the range of 4 to 5% in the coming years. While this assumed rate of growth is below the historical rate, it will put a heavy capital burden on the industry to expand to meet such growth in demand.

Alcan, we believe, is in a sound position to participate actively and profitably in the future growth of the industry. As more fully described elsewhere in this report, our present capital expenditure program will provide 37,000 tonnes of new smelter capacity in Brazil and Australia in 1979, 67,000 tonnes in Canada and Brazil in 1980, and 77,000 tonnes in Canada and Brazil during 1981 and 1982. Other opportunities in the field of primary metal expansion and related power supplies are being studied and our current program includes modernization and enlargement of fabricating in several markets.

We enter 1979 with a good order book and a firm tone in the market places. Although the preponderant opinion of forecasters predicts some slowdown in the North American economy as the year progresses, we believe the supply/demand equation in our industry will support healthy market conditions in most major areas. In the case of Alcan, having drawn down inventories in 1978 to support a 21% increase in volume of sales, we are currently in a position to maintain the 1978 sales level from our own primary production capacity and normal purchases.

We regret to report that the Company suffered the grievous loss of two directors during the past 12 months. Mr. James T. Hill, Jr. of New York died suddenly on 21 March at the age of 61 and Viscount Harcourt of London, England died on 3 January 1979 at the age of 70. Both Mr. Hill and Lord Harcourt served as directors for eight years and contributed greatly to the deliberations of the Board and as committee members. Their dedicated participation in the Company's affairs will be missed. These vacancies have been filled by the election of Dr. Lawrence E. Fouraker, Dean of the Harvard Business School, in September, and by today's election of Mr. Franklin S. McCarthy, Vice Chairman and Chief Executive Officer of Petrosar Limited, Sarnia, Ontario.

Last year, after receiving the endorsement of the Board, the Company issued a Statement of Alcan's Purpose, Objectives and Policies. This statement, which was distributed to shareholders and members of the public in August, has also been made available to employees around the world in 11 languages. Although the statement represents a review and confirmation of the basic principles and policies which had guided Alcan's first 50 years of operation, its preparation was a constructive undertaking, involving the participation and commitment of some 200 Alcan managers in all geographic areas. Basic to the document are Alcan's adherence to the responsible private enterprise and competitive market system, high ethical standards of business conduct, and the continuing development of capable personnel, in all areas, who are committed to the implementation of the stated purpose, objectives and policies of the Company.

We know that Alcan officers and employees in every country of operation derive satisfaction from the improving record of the business. For their contributions and efforts in making this possible, we express appreciation on behalf of the Board of directors.

Nathanael V. Davis

Nathanael V. Davis

Paul H. Leman

Montreal, Canada
1 February 1979

The President's Message

The operating highlights of Alcan's record year in 1978 were the following.

Revenues

Sales and operating revenues reached a total of $3,711 million compared with $3,028 million in 1977.

Markets and Sales

Shipments of aluminum in all forms to third-party customers were at new high levels of 1,596,700 tonnes, some 76,000 tonnes greater than in the previous best year of 1973, and 21% higher than the 1,318,100 tonnes in 1977.

Both ingot products and semi-fabricated products showed substantial sales gains. Ingot sales were up by 40% from 439,900 tonnes in 1977 to 614,900 tonnes. Sales of semi-fabricated and finished products increased by 12% from 878,200 tonnes to 981,800 tonnes.

It proved to be a year in which Alcan's long experience of ingot selling showed to advantage as a larger tonnage of ingot was marketed at satisfactory prices. As our purchases of aluminum metal in various forms, including scrap, were 2% lower at 398,500 tonnes, the heavy sales volume was made possible by a reduction in inventories. As the year ended, total Alcan inventories were at 'normal working levels' for the current rate of activity.

Markets by Areas

As in prior years, Alcan's largest markets were in North America and Europe. Sales in the United States, spurred by the strong demand for sheet products, were 20% ahead of 1977 at 449,800 tonnes. In Europe, including the UK, sales were up 5% at 431,600 tonnes.

In Canada, Alcan was unable to take full advantage of the stronger market due to strikes in the third quarter in several of its fabricating plants, and total sales for the year held level with 1977.

The most striking sales gains were in Asia where the booming economies in several countries, the heavy buying by China and special circumstances in Japan opened opportunities for Alcan's international ingot marketing activities. Our consolidated sales in Asia increased from 61,900 tonnes in 1977 to 199,800 tonnes last year. Alcan has developed a good commercial relationship with the People's Republic of China in the past decade and expects to remain active in that country.

Sales in other areas including Latin America, the South Pacific, India and Africa either held steady or showed modest gains.

Much of our sales growth was of course supported by higher ingot exports from Canada both to our own fabricating plants and to third-party ingot buyers. These shipments in 1978 reached a value in excess of $750 million and were one of Canada's leading export commodities.

Production

In nearly all Alcan smelters, and particularly in Canada, the high and steady level of operations, combined with emphasis on cost efficiency, contributed to the good financial results. Smelter production in Canada reached 897,900 tonnes against 826,400 tonnes in 1977 (including 45,300 tonnes of production for Alcan's Japanese affiliate in each year). Other consolidated subsidiaries in the UK, Australia, Brazil and India produced 300,000 tonnes against 283,500 tonnes in 1977.

Higher smelter production was achieved in India thanks to greater rainfall and better availability of power, and this led to improved commercial results in that country.

Our Japanese partners, Nippon Light Metal Company, Ltd, cut back smelter production in accord with Government guidelines but, through their efforts to reduce costs and expand fabricating and marketing activities, made good headway in overcoming the problems afflicting the industry in Japan.

Capital Expansion Program

Total capital outlays and investments in 1978 were $321 million. Some significant new construction projects were started, notably the Grande Baie smelter in Canada, and the alumina plant in Ireland, while work continued on the bauxite export project in Brazil, smelter expansion in Australia and Brazil and upgrading of fabricating facilities in several countries. An associate company, Empresa Nacional del Aluminio, S.A., was completing a major alumina and smelting complex in Spain, and as the year ended we increased our commitment to fabricating in Argentina. New acquisitions at the 'downstream' end of the market included a building systems manufacturer in France, several service centres in the USA and a supplier of industrial and agricultural building sheet in Eastern Canada. Higher capital outlays are planned for 1979.

Basic Raw Materials

Supplies of our principal basic raw materials, bauxite and alumina, were more than adequate in 1978 and no special difficulties arose in their procurement. For the main smelter operations in Canada, the UK and Australia, and for our sales commitments in Europe, the bulk of the alumina supply of 2.8 million tonnes came from Alcan plants in Canada and Jamaica, and from our interest in a major producer, Queensland Alumina Limited, in Australia.

Bauxite for the Canadian alumina plants was supplied mainly from Guinea, Guyana and Sierra Leone. An additional source in Brazil will be opened this year. Alcan holds large bauxite inventories which will be reduced when the Spanish and Irish alumina plants commence production.

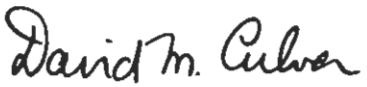
Jamaica
Alcan's bauxite and alumina operations in Jamaica took on a better outlook with a renewed industry-wide union settlement, the removal of the two-tier foreign exchange rate and the signing of an agreement with the Government concerning the future mode of Alcan's operations.

Research and Development
We are obtaining significant results from our Research and Development programs, particularly in new alloys and processes for use by our customers and licencees as detailed later in this report. Alcan assigns major importance to its R & D efforts and is augmenting these in several branches of the business, including smelting and casting technology. An extension to the laboratory at Kingston, Ontario will be completed in a few months at a cost of $5 million. Total expenditures for Research and Development in 1978 were $33 million.

Services
Alcan operates certain service functions to supply a varying proportion of its needs for ocean transport, engineering and design services, materials purchasing and insurance. Also to varying degrees, these divisions perform services for outside parties. All are operated on a business centre basis, making competitive charges for the services they render to Alcan companies and third parties. In 1978 they again contributed to the Company's profits.

The Year Ahead
Alcan enters 1979 in a good posture to meet the opportunities and the challenges which the year will bring. Our objectives are to exploit Alcan's unique international linkages for technological progress; to emphasize development of managerial skills, both nationally and internationally; to strengthen relations with employees, particularly through this year's negotiations of new union contracts in our Québec smelters; to implement our plans for capital expansion at an orderly pace; to consolidate our sales position in the interests of continued and profitable growth.

The illustrations in this annual report show just a representative few of the many customers with whom Alcan is privileged to work in developing markets for our metal. Service to them and hundreds of other customers is the basis for our future.



Montréal, Canada
1 February 1979

David M. Culver

United States—Midwestern University Art Centre, Wichita Falls, Texas. James R. Killebrew (right), chairman of Killebrew Rucker Associates, Wichita Falls, the architects for the building, discusses features of Alcan Planar® ceiling with Robert L. Talley, national sales manager—ceilings, for Alcan Building Products, a division of Alcan Aluminum Corporation.

The Western Hemisphere Region

Aluminum Company of Canada, Ltd, the subsidiary responsible for North American and Caribbean operations, had a consolidated net profit, after preferred dividends, of $173.8 million compared with $95.4 million in 1977. Within this consolidation, the Canadian smelters and the United States fabricating and sales activities had greatly improved earnings, the Jamaican bauxite and alumina operations recovered from a loss to a modest profit position, and the results of the Canadian fabricating and sales operations were adversely impacted by strikes in the third and fourth quarters.

Canada—Smelting

Alcan's smelter operations in Canada, conducted by Alcan Smelters and Chemicals Ltd, had a successful year in terms of both production and sales.

The smelters were operated at full capacity for nearly the entire year, and production reached 897,900 tonnes against 826,400 tonnes in 1977. These totals include 45,300 tonnes smelted on a tolling basis for Alcan's Japanese associate, Nippon Light Metal Company, Ltd, but not included in consolidated sales. The rated capacity of the Canadian smelters is 894,000 tonnes per year.

Export ingot shipments to affiliated Alcan fabricating plants and third-party customers in numerous countries grew substantially in 1978. The United States was the largest market for these shipments, while Japan, China and countries in South and East Asia strongly increased their purchases to occupy second place in total.

The improvement in cash flow and in profitability resulting from stronger sales results and capacity operations enabled the smelter and chemicals system to step up its program for capital maintenance and upgrading of older facilities, and construction of new ones. Total capital expenditures in 1978 were $113 million, of which $31 million was devoted to improving the internal working environment or further reducing external emissions both in the Québec smelters and at Kitimat, British Columbia.

Construction of the first phase of the new Grande Baie smelter in the Saguenay region of Québec proceeded on schedule last year. This project, in its first phase, involves the installation of a 57,000-tonne per year potline, together with much of the basic facilities and electrode-making machinery for another two potlines of equal capacity. Most of the infrastructure such as water supply and roads, and building foundations, have been completed. Installation of production equipment will commence in the early spring, looking to the first pouring of aluminum by the end of 1980. Estimated cost of this first phase is Can. $200 million.

Canada—This enclosed terrace at the Montréal Airport Hilton Hotel, Dorval, is by Aluminium Building Products (Montréal) Ltd and Arcon Canada which design, manufacture and install architectural products. The president of both companies, Jean Fafard (right), chats with Yvon Aubertin, sales manager, Eastern Region for Alcan Extrusions.

In December, authorization was given to proceed in early 1979 with the building of Phase II of Grande Baie, a second 57,000-tonne potline, with necessary anode-making facilities. Construction of both potlines will proceed concurrently. The second line is scheduled to enter production in 1981 at an additional cost of Can. $90 million. A third potline, or Phase III of the project, can be added when necessary to bring the total capacity to 171,000 tonnes.

Hydroelectric energy to supply all three phases of the Grande Baie smelter is available from Alcan's own power plants. This energy is now being used, in substitution for oil, for the generation of industrial steam in the Saguenay-Lake St. John region. The new complex will also utilize railroad, port and service facilities operated by Alcan in connection with its Arvida Works at Jonquière, some 30 kilometres away.

Construction of a new Alcan casting centre at Jonquière commenced in April at a capital cost of $25

The Western Hemisphere Region

Canada—Barry Thomson, president of Aluma Systems Incorporated, Toronto shoulders lightweight beams used in the construction industry to speed the assembly of concrete forms for high-rise buildings. The reusable beams make for greater handling efficiency, as well as helping to keep labour costs down.

million. This will provide increased capacity to cast ingot in forms suitable for customers' fabricating plants and offer greater flexibility to meet market demand and competition levels. It will begin operating late in 1979.

Industrial relations was a major priority and concern during the year. While good overall progress was made in improving industrial relations, there were illegal work stoppages and walkouts at the Arvida plants and at the Beauharnois smelter during October. The production losses were relatively small but the Beauharnois stoppage cost about $1 million.

Existing labour contracts for all Québec smelters expire on 12 May 1979 and negotiations with the union will begin in March. The contract covering employees at the Kitimat smelter expires in October 1980.

Total employment in Alcan Smelters and Chemicals Ltd was at an average of 12,500 in 1978.

Canada—Fabricating and Sales

Demand for fabricated and ingot aluminum by Canadian customers of Alcan Canada Products Limited was strong as the year opened and through the first half shipments continued to surpass the previous year. However, during the third quarter, strikes commenced at several Alcan fabricating works. One was settled shortly after it had started, but the others were not settled until the fourth quarter. Sixteen new union contracts were finally signed for periods varying from 12 to 36 months. The disruption of supply caused by the strikes had a severe adverse effect on the Company's Canadian sales.

Gross sales of aluminum products in Canada in 1978 reached 238,000 tonnes, valued at $462 million. These included 57,000 tonnes of ingot and 181,000 tonnes of semi and fully manufactured aluminum products. At year end the Company was producing in 27 locations throughout Canada, employing about 4,800 people.

Several significant product developments were realized. Pressure on all modes of transport to improve energy efficiencies means increased demand for aluminum in the form of rolled products, extrusions, and ingot and hot metal for castings. Alcan is supplying extruded bumper stock for North American cars and is working closely with truck manufacturers to lighten overall weights in such diverse vehicles as fire trucks and cattle transporters. The use of sheet products in automotive, rail and marine applications continues to grow and is evident in such projects as bi-level rail commuter cars for the Government of Ontario transit system, and new designs for offshore fishing and patrol vessels. Sales of canning sheet for the traditional beverage can and the newer single-portion food cans continued strong.

The Wire and Cable Division successfully launched a smaller, more easily handled building wire for residential applications. Acceptance of the new product was immediately apparent. Cable supply for the Hydro-Québec's massive Baie James power project continued at satisfactory levels with 4,262 kilometres of overhead transmission conductor being shipped from the St. Augustin Works, Québec.

Additional equipment was added at the Algoods Division in Toronto to expand the capacity to produce Roll-Bond® evaporator panels. As a result Algoods is expected to become the major supplier of Roll-Bond® panels for the North American refrigerator market.

Development work progressed on the continuous sheet casting and rolling process with the installation at Saguenay Works, Jonquière, of an experimental Alcan Caster. Work is progressing on this machine to extend the

range of alloys that can be continuously cast.

In November, the Company completed the purchase of the remaining 80% equity of Vic Metal Corporation, Victoriaville, Québec. This company is a major supplier of roll-formed industrial and agricultural building sheet in Eastern Canada.

Canada—Bi-level commuter cars used by GO Transit, the Government of Ontario's rail transportation authority serving the Toronto area, derive their lightness from internal and external use of aluminum extrusions and sheet supplied by Alcan Canada Products Limited. E.J. White is chief executive officer and president of Hawker Siddeley Canada Ltd, the company that designed and built the new units.

United States

Exceptionally strong customer demand and improved prices combined to make 1978 a year of record sales and profits for Alcan Aluminum Corporation. Nearly all product areas contributed, as sales rose to a total of $1,071 million. Shipments of aluminum in all forms were 449,800 tonnes against 374,000 tonnes in 1977, an increase of 20%.

The strongest performance was by the Alcan Sheet and Plate Division as its rolling mills operated at near capacity because of the heavy demand for sheet products experienced in the U.S. aluminum industry. Improved prices lifted margins to a reasonable level by mid-year, as the division's major markets—sheet for building products and beverage cans—plus a growing demand for automotive products, contributed to the year's record levels.

The sheet and plate division is spending $34 million to strengthen the performance and round out the capacity of its hot and cold mills at Oswego, New York. It will also expend $5 million to upgrade its sheet products plant at Fairmont, West Virginia.

Alcan Building Products benefitted from a strong building and construction market in 1978. Improved productivity and cost controls and increases in market share resulted in higher sales and profits for residential siding, windows, doors, and agricultural/industrial siding and roofing. During the year, the division expanded into several new geographic markets and undertook an intensive consumer advertising campaign. Alcan Building Products continued its program of product innovation by introducing new snap-on accessories for siding installations and by expanding its line of Planar® ceiling designs which is gaining enthusiastic acceptance by architects.

The Metal Goods Division acquired in May the three service centres of Eagle Metals in the states of Washington and Oregon. It also opened a new service centre at

United States—Herbert F. Schuler (left), vice president of sales for General Extrusions, Inc., Youngstown, Ohio, shows Grant A. Gauld, district sales manager of Alcan Ingot and Powders, how extrusions made from Alcan ingot are anodized in various colours.

The Western Hemisphere Region

Beaumont, Texas and a facility to manufacture piping components in Atlanta, Georgia. Metal Goods, with 24 service centres plus the manufacturing operations, is the largest and the only national distributor of non-corrosive metals in the United States. The division experienced a modest growth in sales, largely to customers in consumer-oriented markets. The capital goods market, served through chemical/petrochemical customers, is usually very important to Metal Goods but remained relatively inactive in 1978.

Results for Alcan Cable were mixed, with a strong demand for insulated conductor but a soft market for bare conductor because of the many unanswered questions regarding U.S. energy policy. Performance was also hindered by the low prices prevalent in the conductor market. Since the end of the year it has been decided that, after incurring operating losses due mainly to market forces for eight of the past 10 years, the cable plant at Rocklin, California would be closed by April 1979. Cable production will be concentrated at other plants.

Alcan Cable is becoming an important producer of low-voltage insulated cable and expects to continue to increase its market share when a specialized plant, using new manufacturing technologies developed by the division, begins operations in 1979 at Bay St. Louis, Miss.

Alcan's metal powders operations had record sales revenues, with copper powders particularly successful. Aluminum ingot sales in the U.S. were also strong, with demand and prices firm throughout the year.

Trinidad—In Port of Spain David Hahn, general manager of the Metal Products Division, Alstons Building Enterprises Ltd, checks aluminum windows and doors intended for the local market and most of the CARICOM area. Alcan Products of Jamaica Limited supplied the extrusions.

The Caribbean

Alcan's alumina shipments from Jamaica were more than 100,000 tonnes greater than in 1977. Production was 835,000 tonnes and shipments 876,000 tonnes, compared with 805,000 tonnes produced and 762,000 tonnes shipped in 1977. Although the alumina plants operated at approximately 75% of capacity, improved prices and efficiencies, coupled with the effects of devaluation of the Jamaican currency, resulted in the company coming out of its loss position for the first time since 1973.

On 25 September, the Government of Jamaica, Alcan Jamaica Limited and Aluminum Company of Canada, Ltd signed a joint venture agreement under which the Government will acquire 7% of Alcan's integrated bauxite and alumina assets in Jamaica. The agreement provides that the joint venture will be directed by a seven-man Board, of whom two will be appointed by the Government, and that Alcan will manage the joint enterprise to be known as Jamalcan. Alcan has agreed to sell its mineral lands to the Government and will obtain a lease on a 40-year bauxite reserve, sufficient for its needs based on the total capacity of its two plants.

It is expected that the agreement, which is similar to one made earlier between the Government and a U.S. producer, will be implemented late in 1979. The agreement is a welcome clarification of the Company's relations with the Government and provides a vehicle for discussion of measures to make the costs of Jamaican alumina more nearly competitive in world markets.

Related agreements also provide for the Company's agricultural lands to be sold to a government agency and for the agency to acquire a 7% interest in the assets necessary for continuing the agricultural operations under Alcan management. These operations, which include beef cattle, dairy production and citrus growing, and the leasing of small land-holdings to 5,000 tenant farmers, together with a broad extension and education program, have made a recognized substantial contribution to Jamaica's rural economy over many years. It is expected that their benefits will be extended under the new agreements. A sixth dairy farm was opened in 1978, bringing a total annual milk production to more than 2 million quarts. The company's beef herd of 4,700 animals provides the basis for substantial meat supplies to serve the Jamaican market.

Alcan Jamaica Limited went into voluntary liquidation on 16 November 1978, and its business became a division of Aluminum Company of Canada, Ltd, to which its employees and its assets, except lands, were transferred. The entity now does business under the name of Alcan Jamaica Company.

After long negotiations involving also other companies in the industry, Alcan Jamaica and the National Workers' Union signed a 32-month collective labour agreement.

Other Alcan non-alumina operations in the Caribbean: Trinidad and Jamaica, in total had a satisfactory year.

Latin America

The economic climate favoured Alcan's operations throughout Latin America in 1978. Total aluminum shipments of 121,400 tonnes were 5% higher than in 1977. Net income, of $41 million for the area as a whole, was down from $48 million, after providing for a $5 million increase in Alcan's share of the interest charges on the major bauxite project under construction in Brazil. The area rate of return, however, continued satisfactory. Although generally favourable conditions should continue into 1979, weak spots are likely to develop in certain countries.

Brazil—Roll-bonded aluminum evaporators by Alcan Aluminio do Brasil S.A. are a feature of the refrigerators made for the local market and for export by Brastemp S/A, São Paulo, a subsidiary of Brasmotor S.A. Hugo Miguel Etchenique (left), chairman of both companies, chats with Ivo Barone, president of the Alcan company.

Alcan Aluminio do Brasil S.A. set new sales records, but earnings were off slightly. Expansion of the Saramenha smelter by 28,000 tonnes to a capacity of 60,000 tonnes was completed as planned and all pots will be operating by mid-1979. Construction at the Aratú smelter in the state of Bahia to double its capacity to 58,000 tonnes will begin in 1979. The staged expansion of this plant to a final capacity of 148,000 tonnes is incorporated in the company's plans and the hydroelectric energy is expected to be available.

The first shipload of bauxite from the large Trombetas mining bauxite project in the Amazon region is scheduled to be exported at mid-year of 1979. This project has been developed by a consortium of aluminum producers in which Alcan is a 19% participant. The planned shipments will be at an annual rate of 3.35 million tonnes of which Alcan will receive 1.5 million tonnes for processing in Canada.

A 52-day strike at Alcan Aluminio, S.A. in Mexico adversely affected results in the early part of the year but rapid recovery produced good sales and earnings for the year as a whole. With strong growth in oil production over the next few years, Mexico promises to be a dynamic market for aluminum products.

A second extrusion press began operation at Aluminio Alcan de Colombia S.A. Sales and earnings were both at record levels. Alcan Aluminio del Uruguay S.A. had an outstanding year in all respects, but Aluminio de Venezuela, C.A. experienced reduced sales and earnings, mostly because of raw material difficulties and low prices in the first nine months.

Late in 1978 Pechiney sold its 65% interest in Camea S.A., the leading aluminum fabricator in Argentina, to Alcan, already the owner of 35%. At the same time Alcan purchased from Pechiney their direct interest in a separate impact extrusion company.

United Kingdom—Alcan aluminum sails the world. John Oakeley (left), a participant in the 1980 America's Cup Challenge, discusses his needs with Barrie Perry, managing director of Ian Proctor Metal Masts Ltd, Southampton, a world leader in masts for yachts and sailboats. Alcan tapered extrusions are the basic components.

The Europe, Africa, Near and Middle East Region

Europe

In Europe, Alcan's consolidated sales volume at 431,600 tonnes was ahead of 1977, reflecting the modest improvement in economic activity which took place during the year. Business conditions generally were adversely affected by the sharp fall in the value of the dollar which created uncertainty and had a depressing effect on European metal prices.

Area revenues were up almost 20% and net profit remained satisfactory at $57 million in the consolidated accounts. During the year expenditure on fixed and working capital was roughly equal to cash generation.

In the United Kingdom, Alcan Aluminium (UK) Limited, while increasing its share of UK producers' shipments, showed lower sales volumes of semi-fabricated products and reduced earnings as compared with 1977. Capital investment, in the first year of a program to upgrade semi-fabricating facilities and ensure the reliability of full output at the smelter, was $33 million against $21 million in 1977.

In May, following conversion by holders of its 9% convertible loan stock, Alcan Aluminium (UK) Limited, the holding company for UK operations, gained a quotation for its ordinary shares on the London Stock Exchange and 19.3% of its equity is now held by British investors.

The company's interest in the recovery and recycling of scrap was reinforced by technological improvements at the secondary smelters of Alcan Enfield Alloys Limited. Luxfer UK Limited has lived up to the expectations of its acquisition and is continuing to expand its sales worldwide of high-pressure gas cylinders.

As part of its commitment to strengthen the links between industry and the academic world, Alcan Aluminium (UK) Limited has endowed a chair of industrial management at the University of Newcastle.

In Germany, Alcan Aluminiumwerke GmbH maintained a high level of operations. The installation of a new 40,000-tonne capacity paintline was completed in the Göttingen Works as part of its development as a specialist plant to finish products for the building, packaging and printing industries. In Nürnberg, work continued on the installation of additional automated equipment for machining passenger car pistons. At Aluminium Norf GmbH (50% owned), work started on the installation of a third cold-rolling mill which will increase total capacity to 450,000 tonnes.

In France and Belgium, market conditions improved towards the end of the year and Alcan extrusion plants were able to increase operating rates and slightly increase their market share. In July Alcan acquired a 75% interest in Technal France S.A., a major distributor of aluminum systems to the building industry. Operations in France were further consolidated by the acquisition of all the outstanding shares of Alcan-Schwartz Filage et Oxydation which has subsequently been renamed Alcan Filage et Finitions.

France – André Bos, managing director of Technal France S.A., Toulouse, a long-standing customer and now an associate of Alcan in France, shows a typical section of Technal's versatile aluminum system used in the building and construction industry.

Alcan's operations in Italy were maintained at capacity levels during the year in modest growth market conditions. Investments in the Rolled Products Division continued and a modern dross plant was strengthened and extrusion sales reached new record levels. Profits in Italy continued to be satisfactory.

In Switzerland, Alcan's foil operations were influenced by the sharp rise of the Swiss franc and a low-growth economy. As a result, the important export business of Aluminiumwerke A.-G. Rorschach was adversely affected and its domestic business came under growing price pressure from imports. Nevertheless, the company achieved an encouraging result under difficult conditions. Alcan

The Europe, Africa, Near and Middle East Region

Germany—Ernst-Georg Pantel, corporate vice president of Messerschmitt-Bölkow-Blohm GmbH, Munich and managing director of the Commercial Aircraft Division at Hamburg, shows an Airbus A300 under construction. The aircraft, designed to carry 345 passengers, is the most important commercial plane being produced in Europe. Alcan Plate Limited, England supplies aircraft plate through Alcan's German sales organization.

S.A., based in Zurich but trading throughout the European Area, the Middle East and Africa, sharply increased its ingot business mainly through sales to new independent fabricators starting operations in the Middle East in spite of the difficult political and economic conditions in some countries.

Partially-Owned Companies

Alcan's minority participations in Europe tended to suffer from strong European currencies coupled with aluminum prices which are related to dollars.

The Norwegian aluminum producer, Årdal og Sunndal Verk a.s., of which Alcan owns 25%, did not achieve its profit expectations although, with ingot prices rising in the last months of the year, better profitability was achieved. The Høyanger smelter refurbishing was delayed as were several other investments in view of the difficult cash flow situation resulting from the lower than expected profits.

In Sweden, Alcan sold its 21% interest in Gränges Essem AB for some $26 million at mid-year, thus ending over 30 years of endeavour in that country.

The Spanish national company, Empresa Nacional del Aluminio, S.A., in which Alcan holds 25%, also suffered difficulties due to the contraction of the domestic market and to a tight credit policy enforced by the authorities. The first stage of the San Ciprian smelter complex (of which Endasa holds 55%) was completed in late 1978 and brought on stream at the turn of the year. Increments to this capacity will be activated during 1979 and by the end of the year the new smelter should be running close to its full capacity of 180,000 tonnes per annum. The alumina plant, designed by Alcan with a capacity of 800,000 tonnes per annum, will be reaching completion by the end of 1979 but is not now likely to be fully operational before the second quarter of 1980.

In Ireland, construction of the 800,000-tonne per year alumina plant, in which Alcan holds 40%, got under way at mid-year. Site clearance and marine terminal contracts at Aughinish Island in the Shannon estuary have been let, as have certain major foundation and building contracts. Financing for the project was agreed with Alcan's partners, Billiton Aluminium Ireland Limited and Anaconda Ireland Company (members of the Shell and Arco groups respectively), and a $250 million Eurodollar loan and £30 million Irish bank financing were completed in October to round out the equity and other debt ar-

Germany—Prof. Dr. Joachim Zahn, chief executive officer of Daimler-Benz AG, Stuttgart, with the new Mercedes-Benz 300 SD Turbo-Diesel. Pistons for the car's five-cylinder engine are crafted to rigid tolerances by Alcan Aluminiumwerk Nürnberg GmbH.

rangements concluded at the time of entering the project in January. The plant, which is being designed and engineered by Alcan, is expected to be brought into production in 1982.

Africa

Alcan's investments in four African countries are under the supervision of an area management office, Alcan Aluminium Africa and Middle East Limited, which also seeks to develop new opportunities on the continent of Africa and in the Middle East. In 1978 the responsibilities of this office were extended to include the area of the Middle East, thus recognizing also the growing investment and development links between Africa and the Arab world. From the Zurich office of Alcan S.A., trading activities are pursued in various African and Middle East countries.

In the fabricating operations in Nigeria and Ghana, where Alcan has management responsibility, the year's business in 1978 was severely affected by adverse economic circumstances.

Extensive shortages of power in the first half of the year resulted in lost production at the rolling mill of Alcan Aluminium of Nigeria Limited at Port Harcourt. The other Nigerian operation, Flag Aluminium Products Limited, suffered power cuts, and its sales of profiled aluminum building sheet were also curtailed by cuts in Government spending. Alcan's equity in the companies was reduced to 58% and 60% respectively, and they are working constructively with the Government in implementing the directives on Nigerianization.

In Ghana, foreign exchange restrictions gave rise to an acute shortage of imported rolled materials for finishing by Ghana Aluminium Products Limited. Following the devaluation of the currency and the negotiation of foreign loans to the Government, it is now hoped that raw material supplies will become more freely available.

In the Republic of South Africa, the economy was stimulated in the second half of the year by the higher price of gold and a rise in export demand for minerals. Huletts Aluminium Limited, in which Alcan holds 24% of the equity, benefitted from this higher level of activity and profitability was maintained at the same level as in the preceding two years. Alcan is represented on the company's Board but does not participate in its management.

In the other South African participation, Silicon Smelters (Pty) Ltd, the continuing losses were reduced, helped by improving prices for silicon. In a restructuring of the company, flowing from its financial difficulties, one partner, Foote Minerals, withdrew in 1978 and the ownership became equally divided between Alcan and African Oxygen Limited. These two partners are presently discussing the future of the business. Meanwhile, at the end of 1978, Alcan withdrew as the international sales and marketing agent for the products of Silicon Smelters (Pty) Ltd.

La Compagnie des Bauxites de Guinée, in which Alcan continues to hold a minority interest, shipped some 8 million tonnes of bauxite from Port Kamsar during the year, slightly more than in 1977. Some of these bauxite exports were used in Alcan's alumina plants in Canada. During the year CBG borrowed, directly for the first time, $15 million to build additional worker housing.

India—Indian Aluminium Company, Limited supplies aluminum plate, sheet and extrusions contributing to economical bus transportation. About 1700 Bombay buses contain each up to 2,400 kg of aluminum. Dinubhai Desai (left) is managing director of Sion Garage Pvt Ltd, builders of the bus. K.G. Anand represents the Bombay Electric Supply and Transport Undertaking

The Asia, Iran and South Pacific Region

India

The growth in gross national product in India slowed slightly to about 4% in 1978 but still contained increases of 3% in the agricultural sector and 5 to 6% in industrial output. The country's balance of payments was in a net surplus position.

Demand for aluminum in India continues to increase at about 8% per annum due mainly to growth in the transportation, household and packaging industries, and to increased government spending on power generation and transmission. Total domestic demand in 1978 is estimated at 250,000 tonnes (225,000 in 1977) and is expected to grow to 270,000 tonnes in 1979.

Domestic aluminum production in 1978 was an estimated 205,000 tonnes, about 40% below installed smelter capacity because of shortages of power from State suppliers. The shortfall in supplies was made up by imports of 29,000 tonnes and higher scrap utilization. The production forecast for 1979 is 240,000 tonnes, due to an improved outlook for power.

With increased power availability at its Belgaum smelter, Alcan's subsidiary, Indian Aluminium Company, Limited, was able to raise smelter production to 83,000 tonnes, or 70% of capacity. In 1979 the company should be able to produce 95,000 tonnes, or 80% of its capacity.

In 1978 the Indian Government introduced amendments to its price control policies on aluminum, abolishing its previous requirement that metal sold for some electrical transmission uses in effect receive a price subsidy from other sectors of the market. Excise duties on aluminum products were also reduced. Prices of semi-fabricated products remain free of formal controls, thus enabling primary producers with downstream facilities to earn higher overall margins.

The increased production of primary metal and semi-fabricated items, combined with the steady increase in demand for commercial grade products, enabled Indian Aluminium Company to achieve a considerable improvement in profits. In its consolidated accounts, Alcan's share of the net income, including reversal of excess tax provisions in prior years, was $9 million.

A new project to produce pre-baked carbon anodes for smelter use was commissioned at the end of 1978. Modernization of the company's sheet mill near Calcutta is progressing and official approval to expand sheet, foil and extrusion facilities at other plants was received. In view of continued growth in the domestic industry, Indian Aluminium Company proposes to seek Government approval for further expansion of alumina, smelting and semi-fabricating facilities. The company is undertaking research and development on oils and lubricants at its new laboratory established for this purpose and is also setting up research facilities relating to ores, alumina and carbon products, which will work in coordination with Alcan's research and development activities internationally.

Japan

Japan has the second largest aluminum consumption and second largest installed smelting capacity (1.65 million tonnes) of all free world countries. Consumption of primary metal in 1978 finally exceeded 1973 levels and increased over 10% from the previous year, to 1.62 million tonnes. Fabricating operations generally became marginally profitable. Smelting operations, however, are still unprofitable and plagued by basic problems, namely, large debt, high power costs caused by the uniquely high Japanese residual oil prices, and the rise in the exchange

Japan—Streaked anodized aluminum produced by Nippon Light Metal Company, Ltd, Tokyo contributes elegance and long-lasting utility to the entrance of a Japanese house.

value of the yen. International market prices for aluminum, expressed in dollars, rose sufficiently in 1978 to largely offset the rise in value of the yen. As a result Japanese ingot producers were able to maintain, though not increase, prices which still remain lower than the average costs of their ingot.

The Japanese smelters, in accordance with Government guidelines, have reduced production to 60% of capacity and Japan is importing approximately 30% of its domestic requirements. A broadly-selected Industrial Structure Council studied the industry's problems and submitted recommendations to the Japanese Government in late 1978. The recommendations include expanding imports and reducing domestic capacity by compensating producers for shutting down, permanently or for a period of years, certain production facilities. However, action on those recommendations has been confined to an extension of the tariff quota system for a year. This system provides funds to smelter companies which have shut down capacity in accordance with Government guidelines, to partially offset the carrying cost of the assets involved.

Nippon Light Metal Company, Ltd, 50% owned by Alcan, made significant progress towards overcoming the difficulties now facing Japanese smelters and fabricators. Reduction of personnel costs and improvement of operating efficiencies continued. High-cost domestic smelting operations were curtailed. In addition, certain large fabricating operations were consolidated and expansions undertaken, leading to an improved position in the market and total sales of the equivalent of $1,400 million. The company continued to operate at a loss in 1978, although at a lower rate during the second half of the year. Exchange profits on translation were, however, lower in 1978 than in the preceding year with the result that a loss of $5.6 million was recorded in Alcan's accounts compared with a loss of $1.4 million in 1977.

In January 1979, after lengthy negotiations, exchange of technical missions and competitive bidding, Nippon Light Metal was awarded a contract to design, supply, build and commission an aluminum smelter in the province of Kwei-Chow for the People's Republic of China. The 80,000-tonne smelter, using the Japanese company's technology, is to be ready for start-up by March of 1981. The Chinese authorities will be responsible for the civil works and construction of the smelter buildings. Nippon Light Metal will undertake the training of Chinese engineers to operate the plant.

Alcan's other 50% owned affiliate in Japan, Toyo Aluminium K.K., achieved a new high in foil shipments of 23,000 tonnes and again showed good earnings. It is the largest aluminum foil and powder producer in Japan and in 1978 commissioned a new foil converting facility at Gunma, near Tokyo. It also embarked on a $10 million expansion and modernization of its foil rolling facilities near Osaka which will increase its capacity by 20%.

Far East

The major event during 1978 was the acceleration of pace in commercial and political relations between major countries and the People's Republic of China. This added further stimulus to the economies of East Asia, already more dynamic than the more mature economies of the Western world.

Asia's demand for aluminum is growing at an annual rate of some 8% and, being in metal deficit, the major consuming countries together need increasing imports of ingot at a rate close to 10% per annum. In 1978 these imports exceeded one million tonnes.

Thailand—In Bangkok, Sa-ing Mekdhanasam (left), manager of the trading firm Hoon & Company L.P., Alcan's agents, visits storage yard with Udom Pichitpongchai, proprietor-chairman of Chue Chin Hua L.P., makers of aluminum sheet products and cooking utensils.

Hong Kong—W.G. Cheng, managing director of Meyer Aluminium Limited, manufacturers of a wide range of high quality utensils, is seen with one of his products made from aluminum purchased through Alcan Asia Limited.

Alcan Asia Limited enjoyed a boost to its revenue in U.S. dollar terms from strong sales in the area, including Japan where it was aided by the appreciation of the yen. Total ingot sales in the Far East were 191,500 tonnes compared with 53,000 tonnes the previous year. To a large extent this was achieved by increased shipments of ingot to the People's Republic of China. A supply agreement for Alcan ingot from Canada extending over the next few years was signed with the Peking authorities in November.

Alcan's operations in Malaysia, Thailand and Indonesia were all profitable during 1978 and aggregate earnings in local currencies were up by 15% but declined in dollar terms.

P.T. Alcan Indonesia achieved good earnings from sales of both extrusions and roofing sheet until the one-third devaluation of the Indonesian currency, against the U.S. dollar in mid-November. The higher cost of imported aluminum supply and the increased business uncertainties which accompanied this event reduced profitability in the last six weeks of the year.

Alcan's shareholding in Aluminium Company of Malaysia Berhad increased to 38.6% through acquisition of shares previously held by the co-founding Swiss company. The installation of a second extrusion press and expansion of anodizing facilities started in 1978 and will be commissioned during 1979.

Alcan Thai Company Limited also installed a second press with additional anodizing capacity in Thailand during 1978. The company continues to enjoy favourable export business, especially in the Middle East.

Bauxite shipments by Johore Mining and Stevedoring Co. were reduced by 10% due to severe cuts in demand from Japan. Price increases and more efficient shiploading, however, held an earnings decline to a modest amount. During the year, 30% of the equity was sold to local Malaysian interests.

Iran

Alcan's interest in the potential growth of the aluminum industry in Iran has been increasing over the past few years, culminating in substantial ingot sales in 1978, and recent additional orders for 1979. Assuming industrial development revives following resolution of the current political problems, Iran should present opportunites for higher levels of production in fabricating and smelting than now exist.

In 1977 a joint feasibility study under Alcan management for a new smelter project was undertaken by Alcan and a government agency. The study was completed in September 1978 and presented to the Government, but further discussions must now await a return to more stable conditions.

Australia and New Zealand

The Australian economy showed only modest growth in 1978. However, the Government's measures to reduce its level of expenditures and combat inflation were successful. There was a progressive decline in inflation rates but by the year end business activity had not quickened and unemployment was still troublesome. Improvements in the building industry and in the economy generally will await the outcome of efforts to stimulate investment, particularly through the private business sector.

The domestic aluminum industry, along with other metals and manufacturing industries, continues to be affected by the slow rate of economic growth. With the exception of canning uses, which continued to grow at an annual rate of 16%, markets for aluminum products either declined or remained static in 1978.

The Asia, Iran and South Pacific Region

Australia—Gary Burnham is general manager of the Millard Group, Sydney, a leading Australian manufacturer of recreational vehicles and mobile homes. Using Alcan aluminum for frames, siding and accessories, the company produces one unit every seven minutes for the Australian market. Illustrated is the new Millard XP6, an easy-to-handle mini-caravan with pop-up top.

Despite these general conditions, Alcan Australia Limited was able to maintain and improve its share of traditional markets, and its profit for 1978 was the highest yet attained. This improvement was due principally to a 9% increase in the sales volume of semi-fabricated products and to price increases for the company's goods which are subject to Government price supervision. The company exported 3,000 tonnes of ingot.

Construction of a 50% expansion of the capacity of the Kurri Kurri smelter, to 67,500 tonnes per annum, progressed during the year and completion is scheduled for 1979.

The other major capital project under way is the installation at the Granville Works, near Sydney, of a 4,100-tonne extrusion press and auxiliary equipment, replacing outdated facilities.

New Zealand

New Zealand entered 1978 with a depressed economy but there was a mild business upturn in the closing months. However, unemployment remains high by New Zealand standards and inflation, though reduced, is still near 10%.

In its fabricating business, Alcan New Zealand Limited achieved a business turnover similar to that of 1977, but, with improved operating efficiencies, profit was at a new high level.

Research and Development

Alcan's research and development operations were concerned in 1978 with a broad variety of programs ranging through raw materials processing, smelting technology and fabrication and utilization techniques for existing and new aluminum materials.

Two new developments have stimulated widespread interest from the heat exchanger and automotive industries. Alcan's highly formable medium strength alloys, which permit the demanding requirements of these industries to be met more economically, have received a good initial market acceptance. NOCOLOK®, Alcan's proprietary brazing process for aluminum for the manufacture of complex assemblies, was introduced to world markets in February and the first licences have been granted.

During the same period, the Company's new high strength aircraft plate alloy went into regular production at Alcan's plate plant in Kitts Green, England. The alloy is being produced for existing aircraft, such as Tornado and Airbus, and is being specified for new military and civil aircraft. Discussions are also proceeding for its use in the Canadair Challenger, a new executive jet aircraft.

Two other projects are expected to reach fruition in the near future. Alcan's superplastic alloy, which combines improved formability with strength, will significantly broaden the potential for using aluminum in complex formed parts such as in transport vehicles. Additionally, work is continuing on an attractive new range of colours on anodized aluminum. Early reaction from architects in Europe has been highly favourable.

Also in 1978, the expanded program in smelting research and development picked up momentum as new experimental facilities at Kingston, Ontario came into use. Other programs related to improved hot metal treatment and casting processes have been initiated to increase the quality and range of products available to customers. In particular, advances have been made in the continuous casting of bar and strip, increasing the availability of a new range of economical products to North American customers. Advances in energy conservation and aluminum scrap recycling technologies have also been made and implemented in Alcan plants.

A major joint program undertaken with Pechiney of France has reached satisfactory conclusions. A pilot plant built in France to test on a semi-industrial scale the 'H-plus' process for the extraction of alumina from ores other than bauxite was closed at the end of the year having served its trial function. Alcan and Pechiney are now undertaking feasibility studies for a larger plant. Studies of other processes for obtaining alumina from alternative raw materials have been conducted through the year.

In 1978, a $5 million building expansion was undertaken at Kingston's Research and Development Centre. Its completion, in the summer of 1979, will allow the finalization of the restructuring of North American R & D operations intended to concentrate process and product research in one location. This rationalization includes continuing a program of technical work for the Arvida Research Centre based particularly on its proven capability in analytical chemistry and physics.

Also in 1978, steps were taken to improve collaboration with the R & D centres of associated companies in India and Japan. Through mutual sharing of research results with these companies, it is expected that Alcan can further improve the effectiveness of its R & D system. Beyond this, the Company continues to watch for the need to establish additional research centres in major operating areas where they will effectively assist local business development.

Alcan's three research centres at Kingston, Ontario; Jonquière, Québec; and Banbury, England employed a total of 600 scientists, engineers, technicians and support staff in 1978. They were complemented by a significant number of employees involved in development and engineering work in operations worldwide. Overall R & D expenditure by Alcan Group companies during the year totalled $33 million.

Financial Review

Net Income

Consolidated net income reached a new high level in 1978 at $289.4 million, or $7.15 per share. The improvement over the 1977 result of $201.5 million, or $4.98 per share, reflected generally favourable economic conditions in which strong demand led to a high level of output and sales, and permitted a significant reduction in inventories both for Alcan and the industry. Prices improved in most markets.

The return on average shareholders' equity, at 18.8%, is higher than that achieved at any time during the last 20 years. It is now at the approximate level necessary for appropriate modernization and expansion, after allowing for the higher cost of new projects and of capital. A further perspective on this subject is presented by the section on inflation accounting (page 39).

Minority interests' share of net income rose from $16.0 million to $29.2 million, principally due to higher preferred dividends in Aluminum Company of Canada, Ltd. and to the new minority interest in Alcan's UK subsidiary which arose through conversion of loan stock issued in 1969. Income from equity investments was reduced from $13.0 million in 1977 to $5.1 in 1978 due to absorption of interest charges on new projects under construction and to conditions in European and Japanese smelting operations where results were adversely affected by currency factors.

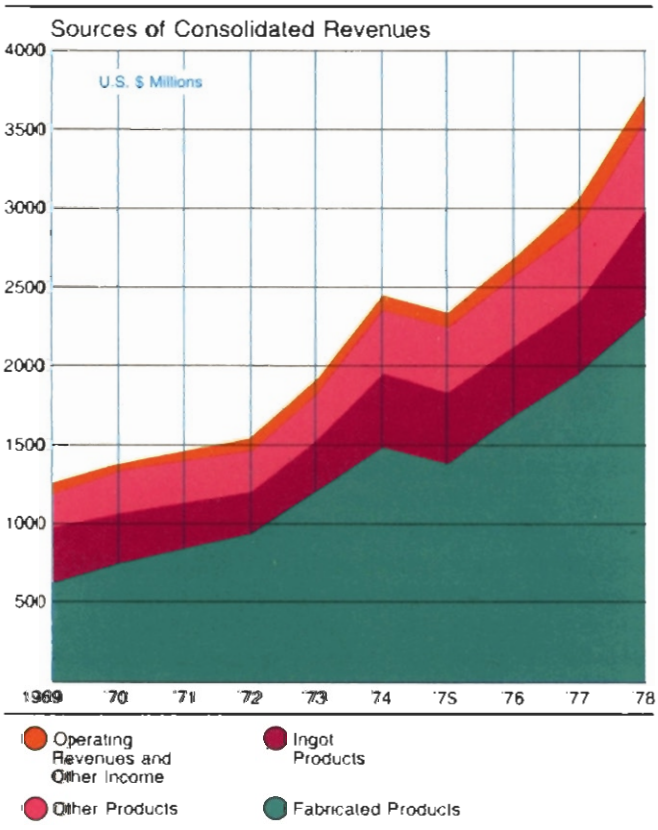
Revenues

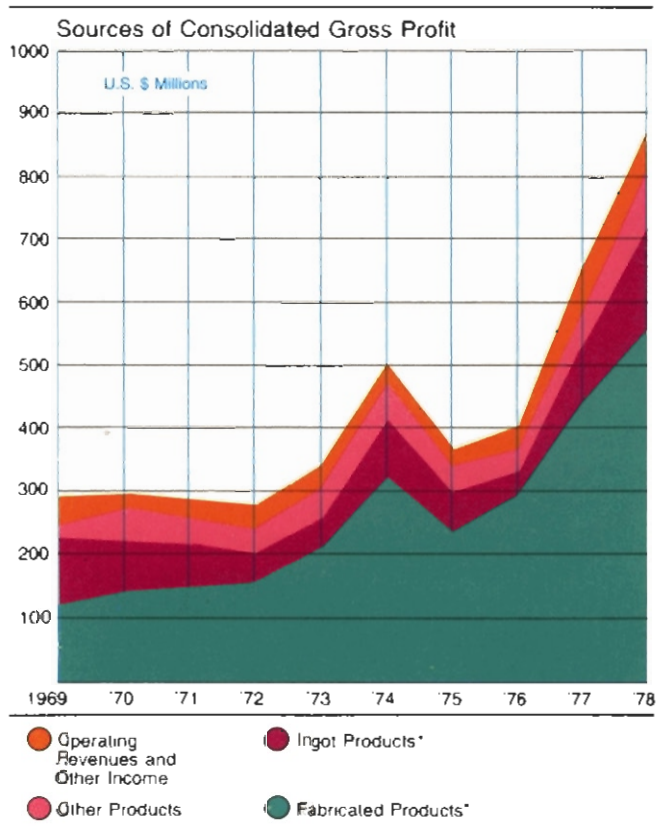
Sales and operating revenues were up 22% to $3,711.2 million. At the fabricating level, revenues amounted to $2,315.8 million against $1,941.9 million in 1977. Ingot revenues were $661.6 million, recording a 48% gain over 1977 mainly as a result of strong demand and higher prices. Operating revenues, which include shipping and tolling revenues, power sales and other services, reached $158.9 million in 1978.

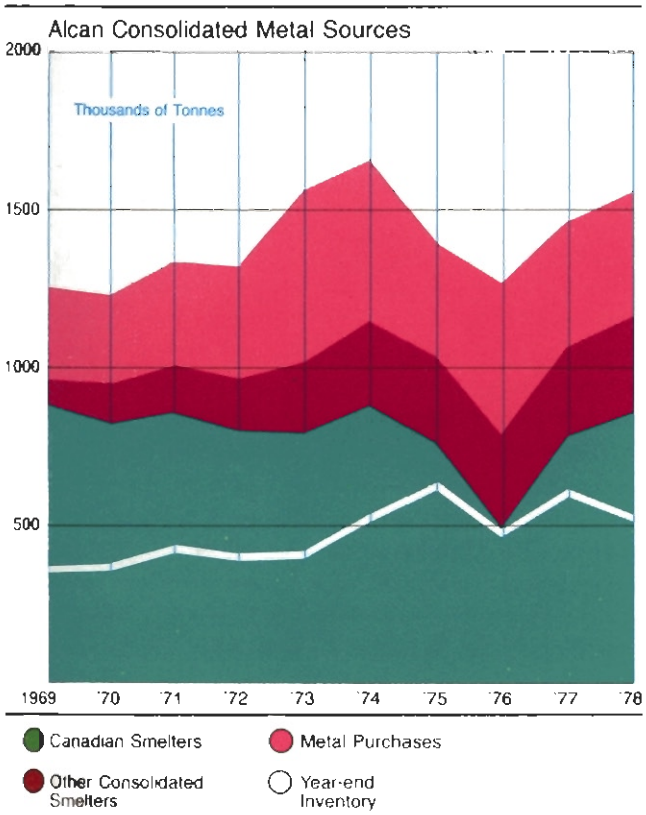
Cost of goods sold and operating expenses increased by 20% to $2,730.0 million in 1978. Much higher sales volume, continuing inflation, product mix and exchange factors all contributed to the increase.

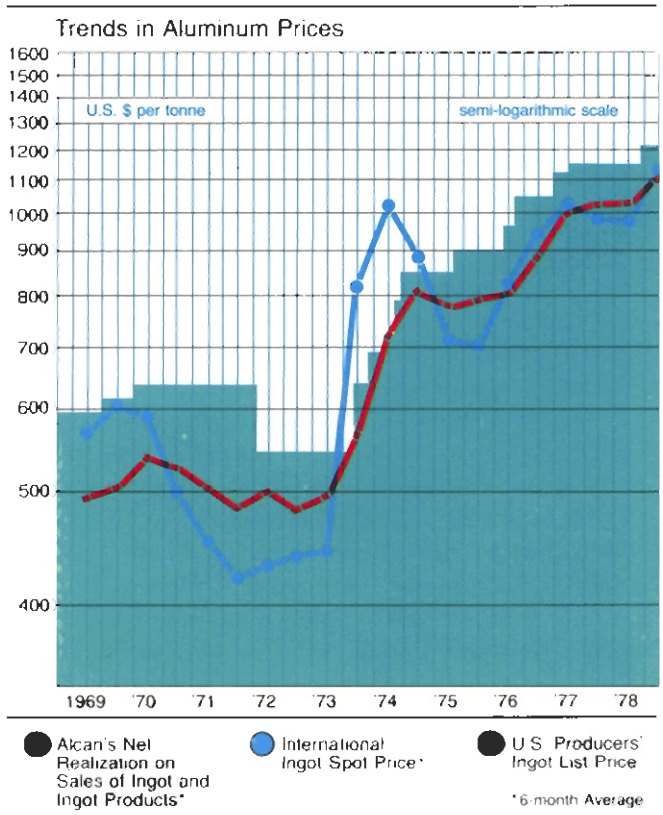
Selling, research and administrative expenses, including sales commissions, rose to $268.4 million from $215.3 million in 1977. The increase resulted from continuing inflation, increased pension costs, expanded research and the consolidation of new subsidiaries.

Interest expense was reduced to $87.7 million compared to $89.6 million in 1977. Higher interest rates throughout 1978 were more than compensated for by a reduction in long and short-term debt.









Gross Profit Analysis by Products

Consolidated gross profit totalled $870.2 million, compared to $656.2 million in 1977. The major increase came from ingot products whose contribution to gross profit nearly doubled in 1978, reaching $161.0 million compared to $85.6 million in 1977 on an increase in volume of 40%. Gross profit on fabricated products amounted to $558.0 million, a 24% increase over 1977 on an increase in volume of 12%. The contribution of other products, principally alumina, chemicals and metals other than aluminum, was also substantially higher, $91.0 million compared to $56.0 million in 1977.

Comparison 1977-76

1977 was the first year that Alcan's consolidated net income reflected the world economic recovery. In 1976 the costs of a prolonged strike at the Québec smelters had prevented Alcan from benefitting fully from the improved market conditions for aluminum products, and this was reflected in the low net income for that year. Earnings per share were $1.14 in 1976 and $4.98 in 1977, providing respectively a 3.7% and 14.9% return on average shareholders' equity.

The most important improvement in 1977 was in Alcan's North American operations, reflecting a return to high volume in the smelters and improvement in world aluminum prices which resulted in better margins. Almost all other geographic areas realized significant earnings gains, particularly the UK, Asia and the South Pacific.

Foreign Exchange

As Alcan reports in United States dollars, but has subsidiaries or affiliated companies operating in more than 30 other currencies, its reported results incorporate the effects of exchange rate variations between these currencies and the United States dollar. In 1978 almost all of these currencies moved significantly in relation to the dollar. Those which principally affect Alcan included a depreciation of the Brazilian cruzeiro by 23% and of the Canadian dollar by 8%, an appreciation against the dollar of the UK pound (7%), Indian rupee (8%), Deutsche mark (15%), Spanish peseta (15%), Swiss franc (24%), and Japanese yen (24%).

Variations in exchange rates impact on Alcan's net income through the revaluation at current exchange rates of current assets and current liabilities each month, while

changes in the dollar value of non-U.S. inventories are brought into income as and when the goods are sold.

In 1978, exchange rates affected Alcan both positively and negatively and in total the difference on net current assets excluding inventories amounted to a loss of $12 million mainly in Brazil and Canada.

In 1978, the lower value of the Canadian dollar contributed to better earnings by reducing Canadian smelting costs when expressed in U.S. dollar terms, but the higher value of the European currencies resulted in higher smelting and fabricating costs in that area. Exchange considerations affected market prices in Europe and Japan.

Finally, the impact of differences between historical rates of exchange on long-term debt and those prevailing at the time of repayment also affect net income and in 1978 reduced income by $4 million.

Beginning in 1979, Alcan will adopt the policy established by the Canadian Institute of Chartered Accountants under which the difference between the current value of long-term debt and the historical exchange rate value at each accounting date is amortized over the remaining life of the relevant debt. This method differs from that followed by the Financial Accounting Standards Board in the United States which provides for exchange differences to be absorbed immediately, and may result in large swings in reported net income.

Financial Position

As in 1977, cash generation exceeded capital expenditures and dividends, further strengthening the financial position of Alcan.

Cash and time deposits reached $189 million (against $106 million in 1977). Accounts receivable, reflecting improved sales and higher prices, rose to $728 million, while aluminum inventories, as a result of substantially higher sales, were reduced during 1978 to $567 million from $578 million in 1977. The inventory profit is estimated for the year at $36 million compared with $38 million in 1977.

During the year total borrowings were reduced by $50 million and at year end the debt/equity ratio was 32/68 compared to 36/64 in 1977. Capital expenditures were $321 million, compared to $233 million in 1977. Expenditures on plant and equipment were $303 million while investments in companies owned 50% or less totalled $18 million. The increased investment in Camea in Argentina and the sale of Alcan's 21% interest in Gränges Essem AB in Sweden were the main changes in investments. Capital expenditures for 1979 are currently expected to exceed $400 million, with major commitments for new smelting construction in Canada, Australia, and Brazil already in progress. Capital commitments have also been made in the raw materials sector, involving expenditures on alumina or bauxite projects of affiliates in Ireland, Spain and Brazil.

Dividends

The quarterly dividend on the common stock was increased to 50¢ a share, from the previous level of 35¢, on 26 October 1978. Early that month, the dividend restriction imposed since 1975 by the Canadian Government Anti-Inflation Program had been terminated.

Quarterly Dividends and Market Price (NYSE)

		Market Price of Common Shares	
1977	Dividends Paid per Share	High	Low
First	0.20	27⅝	23⅛
Second	0.20	29½	25
Third	0.35	28	23½
Fourth	0.35	26½	21¼
Year	1.10	29½	21¼
1978			
First	0.35	26¼	21⅝
Second	0.35	29⅞	24⅞
Third	0.35	33⅞	26⅜
Fourth	0.50	37	31¼
Year	1.55	37	21⅝

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

	Canada and Caribbean	USA	Latin America	Europe and Africa	Asia and South Pacific	Elimination	Alcan Consol
Year ending 31 December 1978							
Sales and operating revenues							
To subsidiary companies	801	52	1	19	48	(921)	—
To other companies	891	980	314	1,148	378	—	3,711
Total	1,692	1,032	315	1,167	426	(921)	3,711
Net income	151	34	41	62	37	(36)	289
Capital expenditures	137	20	57	73	34	—	321
31 December 1978							
Current assets	749	310	187	628	243	(216)	1,901
Fixed assets (net)	847	141	192	314	144	—	1,638
Investments and other assets	84	7	40	170	46	—	347
Identifiable assets	1,680	458	419	1,112	433	(216)	3,886
Current and other liabilities	338	156	115	417	136	(189)	973
Capital employed	1,342	302	304	695	297	(27)	2,913
Number of employees (thousands)	21.8	4.8	8.4	16.8	11.6	—	63.4
Year ending 31 December 1977							
Sales and operating revenues							
To subsidiary companies	656	61	—	15	53	(785)	—
To other companies	758	771	292	935	272	—	3,028
Total	1,414	832	292	950	325	(785)	3,028
Net income	94	5	48	61	24	(30)	202
Capital expenditures	111	21	42	44	15	—	233
31 December 1977							
Current assets	619	242	136	523	210	(142)	1,588
Fixed assets (net)	779	136	145	276	124	—	1,460
Investments and other assets	75	6	48	178	48	—	355
Identifiable assets	1,473	384	329	977	382	(142)	3,403
Current and other liabilities	256	115	75	324	105	(117)	758
Capital employed	1,217	269	254	653	277	(25)	2,645
Number of employees (thousands)	21.3	4.6	8.0	16.5	11.0	—	61.4

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 Canada and Caribbean sales to other companies, $230 million in 1978 ($141 in 1977) were export sales from Canada, principally to the United States.

Consolidated Sales of Aluminum by Markets (thousands of tonnes)

	1972	1973	1974	1975	1976	1977	1978
Canada	177	213	225	195	211	220	220
United States	377	435	410	295	352	374	450
United Kingdom	190	240	260	199	209	172	169
EEC (less UK)	156	189	188	149	199	192	213
Latin America	101	103	113	110	115	116	121
All Others	315	340	312	324	288	244	424
	1,316	1,520	1,508	1,272	1,374	1,318	1,597

Financial Statements

Consolidated Statement of Income

year ending 31 December (in thousands of U.S. dollars)	1978	1977
Revenues		
Sales	$ 3,552,350	$ 2,876,211
Operating revenues	158,854	152,190
Other income (note 9)	26,497	29,807
	3,737,701	3,058,208
Costs and expenses		
Cost of sales and operating expenses	2,729,929	2,276,427
Depreciation and depletion	137,593	125,557
Selling, research and administrative expenses	268,412	215,262
Interest on debt not maturing within one year	71,384	73,727
Other interest	16,277	15,858
Other expenses	16,585	14,609
	3,240,180	2,721,440
Income before income taxes and other items	497,521	336,768
Income taxes (note 10)		
Current	104,929	54,614
Deferred	79,155	77,660
	184,084	132,274
Income before other items	313,437	204,494
Equity income	5,122	12,967
Minority interests	(29,168)	(15,955)
Net income (note 1)	$ 289,391	$ 201,506

	in U.S. dollars	
Income per common share	$ 7.15	$ 4.98
Dividends per common share	1.55	1.10

Consolidated Balance Sheet—Assets

31 December (in thousands of U.S. dollars)	1978	1977
Current assets		
Cash and time deposits	$ 188,934	$ 106,016
Receivables	727,573	526,459
Aluminum	566,607	577,852
Raw materials and other supplies	417,943	378,107
	1,901,057	1,588,434
Deferred charges	41,038	36,100
Deferred receivables (note 5)	78,555	76,889
Investments in companies owned 50% or less (note 2)	227,465	241,608
Property, plant and equipment (note 3)	3,433,630	3,150,249
Less: Accumulated depreciation and depletion	1,795,459	1,690,199
	1,638,171	1,460,050
Total assets	$ 3,886,286	$ 3,403,081

Consolidated Balance Sheet — Liabilities and Shareholders' Equity

31 December (in thousands of U.S. dollars)	1978	1977
Current liabilities		
Payables	$ 518,615	$ 400,689
Short-term borrowings (principally from banks)	145,332	154,750
Income and other taxes	129,392	72,440
Debt maturing within one year (note 4)	76,206	51,283
	869,545	679,162
Debt not maturing within one year (note 4)	682,625	748,599
Deferred credits	103,455	78,724
Deferred income taxes	298,771	226,599
Minority interests (note 6)	278,922	243,548
Shareholders' equity		
Preferred shares, par Can. $40 (note 7)		
Outstanding—51,292 shares (1977—54,029)	1,902	2,004
Common shares, without nominal or par value		
Authorized—60,000,000 shares		
Outstanding—40,446,694 shares	426,905	426,905
Retained earnings (note 8)	1,224,161	997,540
	1,652,968	1,426,449
Total liabilities and shareholders' equity	$ 3,886,286	$ 3,403,081

Approved by the Board: Nathanael V. Davis, Director
John H. Hale, Director

Consolidated Statement of Changes in Financial Position

year ending 31 December (in thousands of U.S. dollars)	1978	1977
Source of funds		
Income after taxes	$ 313,437	$ 204,494
Depreciation and depletion	137,593	125,557
Deferred income taxes	79,155	77,660
Other	(11,848)	(8,568)
From operations	518,337	399,143
Common and preferred shares of subsidiary companies	25,412	100,000
New debt	114,065	73,919
Disposals of plant and equipment	10,888	14,344
Sale of investments	28,629	1,327
	697,331	588,733
Application of funds		
Plant and equipment	303,384	217,750
Investments	17,529	15,020
Debt repayments	184,247	161,722
Dividends	62,770	44,577
Other (net)	7,161	14,090
	575,091	453,159
Increase in working capital (note 15)	122,240	135,574
Working capital—beginning of year	909,272	773,698
Working capital—end of year	$ 1,031,512	$ 909,272

Consolidated Statement of Retained Earnings

Retained earnings—beginning of year	$ 997,540	$ 840,611
Net income	289,391	201,506
	1,286,931	1,042,117
Dividends on preferred shares	78	86
Dividends on common shares	62,692	44,491
	62,770	44,577
Retained earnings—end of year (note 8)	$ 1,224,161	$ 997,540

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.

Accounts included in the consolidated statement of income, except depreciation and depletion, are translated at average rates of exchange prevailing during the year. Accounts included in the consolidated balance sheet are translated at rates of exchange at year end except that (a) inventories, investments, fixed assets and accumulated depreciation and depletion are at rates at dates of acquisition, (b) deferred income taxes are at rates at dates of origin, and (c) debts not maturing within one year, and preferred and common shares are at rates at dates of issue. Translation adjustments are included in income.

The Financial Accounting Standards Board in the United States requires that companies reporting to investors in the United States adopt the practice of translating long-term debt at current rates of exchange. However, as Alcan's borrowings in currencies other than U.S. dollars have for the most part been invested in the country of the borrowing and will be repaid out of funds generated in the same currency, Alcan believes that it could be misleading and cause violent fluctuations in reported earnings to recognize immediately translation gains or losses which arise from changes in exchange rates. Accordingly, Alcan has not adopted the current rate method but has continued to follow its policy of translating such debt at historic rates, an accounting practice which is generally accepted in Canada. The following table compares reported net income with the net income that would have been reported using the FASB current rate method, and also shows the cumulative effect on retained earnings.

	1978		1977	
	As Reported	Current Rate Method	As Reported	Current Rate Method
Consolidated net income				
First quarter (unaudited)	$ 60.0	$ 52.1	$ 35.5	$ 41.0
Second quarter (unaudited)	76.9	68.7	49.7	37.9
Third quarter (unaudited)	69.3	57.0	53.6	52.4
Fourth quarter (unaudited)	83.2	69.0	62.7	50.5
	$ 289.4	$ 246.8	$ 201.5	$ 181.8
Dollars per common share	7.15	6.10	4.98	4.49
Consolidated retained earnings				
Beginning of year	$ 997.5	$ 964.1	$ 840.6	$ 826.9
End of year	1,224.2	1,148.2	997.5	964.1

Deferred income taxes

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.

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

1. Summary of accounting policies (Continued)

Inventories

Aluminum, raw materials and other supplies are stated at cost or net realizable value, whichever is the lower. The cost of inventories other than those in the United States is determined for the most part on the monthly average method. The cost of inventories in the United States, amounting to $145 million, is determined by the last-in-first-out method which is permitted for income tax purposes. Had such inventories been valued on the monthly average method, the value would have been $81 million higher.

Other

Property, plant and equipment includes 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 per common share is calculated by dividing net income less preferred dividends by the number of shares outstanding during the year (40,446,694 shares in both years).

2. Investments in companies owned 50% or less	1978	1977
At cost plus equity in undistributed net income since acquisition		
Companies 50% owned (cost $52 million)	$ 55	$ 60
Companies 20% to 50% owned (cost $133 million)	168	178
At cost		
Companies less than 20% owned	4	4
	$ 227	$ 242

The 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	1978	1977
Revenues	$ 3,761	$ 3,299
Costs and expenses	3,707	3,217
Income before income taxes	54	82
Income taxes	24	26
Net income	$ 30	$ 56
*Alcan's share of net income	8	15
Dividends received by Alcan	7	3
Financial position at 31 December		
Working capital	$ 539	$ 780
Property, plant and equipment (net)	2,007	1,663
Other assets (net)	360	364
	2,906	2,807
Less: Debt not maturing within one year	2,080	1,840
Deferred income taxes	19	64
Net assets	$ 807	$ 903
**Alcan's equity in net assets	219	233

*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.

**If debt not maturing within one year of companies 20-50% owned was translated into U.S. dollars at year-end rates of exchange, Alcan's equity in net assets of such companies would be reduced by $51 million and, if there were no further changes in exchange rates, this amount would be amortized against income over the remaining life of each debt.

3. Property, plant and equipment

	1978			1977
	Cost	Acc. Dep.	Net	Net
Land, and water rights	$ 65	$ 0	$ 65	$ 63
Mineral properties, rights and development	14	3	11	11
Raw material, power and other facilities	1,140	699	441	421
Smelting facilities	1,140	575	565	478
Fabricating facilities	1,075	519	556	487
	$ 3,434	$ 1,796	$ 1,638	$ 1,460

Expenditures in 1979 are expected to exceed $400 million.

4. Debt not maturing within one year	1978	1977
Canadian and Caribbean companies		
9½% Sinking fund debentures, due 1995	$ 97	$ 100
10¾% Sinking fund debentures, due 1994 (Can. $65 million)	66	77
9⅜% Sinking fund debentures, due 1991 (Can. $49 million)	49	55
9½% Sinking fund debentures, due 1988	47	50
5.10% Notes, due 1979/1992	63	68
*Bank loans, due 1979 (J$4 million)	4	44
Other debt, due 1979/2001	30	45
USA companies		
9½% Notes, due 1980/1994	45	45
4¾% Notes, due 1979/1984	20	24
Other debt, due 1979/1998	7	3
Latin American companies		
Bank loans, due 1979/1984	38	21
Other debt, due 1979/1988	5	5
European and African companies		
10½% Loan stock, due 1981/1994 (£8 million)	19	19
**Loan, due 1979 (£15 million)	36	36
5½% Bonds, due 1987 (Sw. F. 100 million)	26	26
**Bank loans, due 1979/1993 (including £35 million; DM 108 million)	127	62
Other debt, due 1979/2004	24	49
Asian and South Pacific companies		
8½% Bonds, due 1989	25	25
**Bank loans, due 1979/1984	5	4
Other debt, due 1979/1996	35	46
	768	804
Less: Debt maturing within one year included in current liabilities (equivalent to $76 million and $51 respectively, at year-end rates of exchange)	85	55
	$ 683	$ 749

*Interest is related to the London Interbank offered rate.
**Interest fluctuates with lender's prime commercial rate.

After allowing for prepayments, sinking fund and other requirements over the next five years amount to $85 million in 1979, $55 in 1980, $39 in 1981, $58 in 1982 and $44 in 1983.

If translated into United States dollars at year-end rates of exchange, debt not maturing within one year at 31 December 1978 would increase by $25 million and, if there were no further changes in exchange rates, this amount would be amortized against income over the remaining life of each debt.

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

5. Deferred receivables

Deferred receivables include $42 million due from the Government of Guyana over the period 1980 to 1991 in respect of the nationalization in 1971 of Alcan's bauxite and alumina assets. This amount bears interest at 6% per annum.

6. Minority interests in subsidiary companies

	1978	1977
*Preferred shares	$ 180	$ 182
Common shares	63	38
Retained earnings	36	24
	$ 279	$ 244

*Includes $171 million of Aluminum Company of Canada, Ltd of which $100 million is floating rate preferred shares redeemable at par at the option of the holder in 1984, 1985 and 1986.

7. Alcan preferred shares

The number of 4¼% cumulative redeemable convertible preferred shares originally authorized and issued was 1,500,000 of which 1,404,289 were exchanged for an equal number of common shares prior to the expiration of the conversion privilege in 1973 and 44,419 were subsequently purchased on the open market (1978: 2,737, 1977: 2,280). The outstanding preferred shares are subject to redemption in whole or in part at any time at the option of the Board of directors on thirty days' notice at Can. $43 per share.

8. Retained earnings

Consolidated retained earnings at 31 December 1978 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 1978 also include about $459 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.

9. Other income

	1978	1977
Interest	$ 20.5	$ 18.0
Gain on redemption of debt	3.9	6.8
Other	2.1	5.0
	$ 26.5	$ 29.8

10. Income taxes

Income taxes provided in 1978 represent approximately 37% 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 different tax rates in other countries, and to non-taxable income.

11. 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 (Australia). The fixed portion of this commitment amounts to $11.1 million in 1979, $10.6 in 1980, $11.0 in 1981, $10.9 in 1982, $8.9 in 1983 and like annual amounts up to 1992.

In addition Alcan is guarantor of $104.2 million of long-term debt of certain related companies including $69.6 of Compagnie des Bauxites de Guinée.

Minimum rental commitments amount to $36.1 million in 1979, $29.1 in 1980, $17.5 in 1981, $12.3 in 1982, $10.3 in 1983 and lesser annual amounts thereafter. Total rental expense amounted to $56.8 million in 1978 ($60 in 1977).

See also reference to capital expenditures in Note 3 and debt repayments in Note 4.

12. 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 1978 was $81 million ($37 in 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. The 1978 increase is principally attributable to funding an experience deficiency for the period 1975 to 1977 which was revealed by an actuarial valuation made in 1978, and which was caused mainly by salary escalation and early retirements exceeding the previous actuarial assumptions.

Based on the most recent actuarial reports, the unfunded actuarial liabilities amounted to $16 million for currently vested benefits and to $102 million for total benefits.

13. Remuneration of directors and officers

The remuneration paid in 1978 by the Company to the 15 directors amounted to $83,848 ($80,631 in 1977). The remuneration paid in 1978 to the 13 officers (seven of whom were also directors) amounted to $2,457,583 ($2,315,787 in 1977) of which $1,854,534 was absorbed by the Company, $218,793 by Aluminum Company of Canada, Ltd and $384,256 by three management subsidiaries.

14. Quarterly financial data (unaudited)

	1978			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenues	$ 822.3	$ 964.2	$ 918.9	$1,032.3
Costs and expenses	721.0	824.8	787.4	907.0
Income taxes	38.7	56.2	51.3	37.9
Equity income and minority interests	(2.6)	(6.3)	(10.9)	(4.2)
Net income	$ 60.0	$ 76.9	$ 69.3	$ 83.2
Income per common share (U.S. $)	1.48	1.90	1.72	2.05

	1977			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenues	$ 741.5	$ 790.5	$ 745.5	$ 780.7
Costs and expenses	668.2	704.1	654.2	694.9
Income taxes	36.0	37.0	38.3	21.0
Equity income and minority interests	(1.8)	0.3	0.6	(2.1)
Net income	$ 35.5	$ 49.7	$ 53.6	$ 62.7
Income per common share (U.S. $)	0.88	1.23	1.32	1.55

15. Changes in working capital

	1978	1977
Current assets		
Cash and time deposits	$ 82.9	$ 48.1
Receivables	201.1	32.4
Aluminum, raw materials and other supplies	28.6	139.3
	312.6	219.8
Current liabilities		
Payables and short-term borrowings	108.5	74.7
Income and other taxes	57.0	(2.1)
Debt maturing within one year	24.9	11.6
	190.4	84.2
Net increase	$ 122.2	$ 135.6

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

16. Information by geographic areas

Information by geographic areas is contained in the summary on page 27.

17. Replacement cost 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 39.

Auditors' Report

TO THE SHAREHOLDERS OF
ALCAN ALUMINIUM LIMITED:

We have examined the consolidated balance sheets of Alcan Aluminium Limited as at 31 December 1978 and 1977 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 1978 and 1977 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, applied on a consistent basis.

Montréal, Canada
1 February 1979

PRICE WATERHOUSE & CO.
Chartered Accountants

Inflation Accounting

Inflation is an increasingly serious problem in most countries despite a variety of efforts to bring prices under control, and there is as yet no general consensus on the most appropriate method of accounting under inflationary conditions, although research continues in several countries including Canada, the United States, the United Kingdom and Australia. Few accounting authorities appear willing to abandon the historical cost basis since this gives the only firm starting point, but all agree that some form of supplementary data should be presented so that shareholders and other interested parties may better evaluate a company's performance.

Alternative Methods

The controversy as to how to account for the effects of inflation centers around two main methods. The first, which focuses on adjusting for the decline in the value of money through inflation, is price level accounting, commonly referred to as Current Purchasing Power (CPP) Accounting. The second, which focuses on the changing prices of specific goods and services, is Replacement Cost (RC) Accounting. The two methods differ completely in concept and application; they are not simple alternatives. CPP accounting shows the effects of inflation on reported results by revaluing assets in current dollars, while RC shows the consequences if all the assets were to be replaced, which requires judgement not only as to the method and cost of replacement, but also calls for concepts and for estimates of events, many of which are never likely to occur. Each method has its own merits. CPP is considered to be the most appropriate means for purposes of comparison and measurement of performance. RC is considered to be an appropriate method for developing forecasts and assessing future cash needs.

CPP Favoured

Alcan favours the CPP method of reporting results under inflationary conditions because it is based on actual accounting figures, not on estimates, and it is consistent in valuing assets and costs in current dollars. In 1975 we published a first set of supplementary financial statements using the CPP method. In 1976 and 1977 we did not do so because of the controversy surrounding this subject. Instead, we published RC data as required by the United States Securities and Exchange Commission (SEC.). This year we are again publishing, for the benefit of shareholders and others, the effects of adjusting for inflation in the historical results using the CPP method, as well as providing the required RC data.

Current Purchasing Power

Under the CPP method, the historical book value of the assets owned is restated in current dollars. No accounting principle is changed, nor is anything else changed except the unit of measurement, but it requires selection of an index to relate the value of the current dollar to dollars of earlier years. As our accounts are reported in U.S. dollars, the U.S. Gross National Product Implicit Price Deflator has been selected as the most suitable index of overall purchasing power.

Monetary assets and liabilities remain unchanged on the current balance sheet as they are already stated in current dollars, but the change in value from the previous year is included in net income. Inventory values are adjusted by substituting CPP depreciation for historical depreciation and by applying the price index for the time in inventory. Similarly, investments and fixed assets are restated by applying to the historical cost the change in the index between the year of acquisition and the current year. The accumulated depreciation of fixed assets is recalculated on the current dollar value using the same asset life as in the historical accounts. The effects of these changes on Alcan's reported results appear in the tables on the next page.

Inflation Accounting

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

	CPP in terms of 1978 dollars	
	1978	1977
Net income for the year, as reported	289	202
Adjustment for:		
Inventories	(79)	(35)
Depreciation	(105)	(98)
Monetary items	97	68
Other items	(8)	(3)
Net income for the year, as adjusted for the effects of inflation	194	134

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

	Historical as reported	CPP in terms of 1978 dollars	
	1978	1978	1977
Current assets	1,901	1,991	1,813
Deferred receivables and charges	120	120	122
Investment in companies owned 50% or less	227	387	402
Property, plant and equipment (net)	1,638	2,216	2,152
	3,886	4,714	4,489
Current liabilities	870	870	736
Long-term debt	683	683	811
Deferred income taxes and credits	401	401	331
Minority interests	279	360	313
Shareholders' equity	1,653	2,400	2,298
	3,886	4,714	4,489
Rate of return on capital employed	13.0%	7.1%	5.3%
Rate of return on shareholders' equity	18.8%	8.3%	6.0%

The Company's auditors, Price Waterhouse & Co., have reviewed the above results and agree with the principles and procedures applied in their preparation.

Conclusions from Alcan's CPP accounts

(1) There is no doubt that the CPP balance sheet gives a much better picture of the Company than the historical balance sheet, particularly in the case of investments, fixed assets, and accumulated depreciation. The CPP figures are based on original costs, not on estimates, and are converted to 1978 dollars by a reasonably appropriate index. Totalling the historical values for many different years without first converting them to current values, as is done in the historical accounts, is like adding deutsche mark, sterling and dollar figures, without first translating them into one currency.

(2) Arising from the above, the CPP annual charge for depreciation is much higher and much more realistic than the historical charge. Also, inventory profit is excluded from CPP net income, since it arises from inflation, and is not really a 'profit' as its retention in the business is necessary to finance working capital.

(3) The gain resulting from the decline in value of long-term debt and other monetary liabilities, which is included in CPP net income, tends to offset high nominal interest rates, giving a net amount for 'real' interest, which is more appropriate. It is sometimes considered that theoretical 'real' interest should be around 3%.

(4) The rates of return on capital employed and shareholders' equity, which are shown in the table above, are 'real' and comparable to the 'real' interest rate. It is clear that, for Alcan in 1977, these were marginal, but that in 1978 they reached more satisfactory levels.

In accordance with SEC requirements, Alcan's estimated replacement cost data are set out in the following table.

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

	1978		1977	
	Estimated Replacement Cost Basis	Historical Cost Basis	Estimated Replacement Cost Basis	Historical Cost Basis
Productive capacity				
Property, plant and equipment (a)	9,279	3,434	8,303	3,150
Less: Accumulated depreciation and depletion	5,507	1,796	4,877	1,690
	3,772	1,638	3,426	1,460
Depreciation and depletion expense	378	138	304	126
Inventories	1,115	985	1,074	956
Cost of sales and operating expenses	2,766	2,730	2,314	2,276

(a) Land, water rights and mineral properties have not been revalued and are included in the estimated replacement cost at their historical cost of $79 million ($84 million in 1977). Accumulated amortization and depletion relating to these assets of $3 million ($10 million 1977) also have not been revalued.

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. 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 occurring during the period between production and 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, 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 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 judgements 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

(Adjusted to give effect to retroactive changes in accounting practices)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Operating Data (thousands of tonnes)										
Aluminum shipments by consolidated subsidiaries	1,236	1,221	1,268	1,316	1,520	1,508	1,272	1,374	1,318	1,597
Ingot and ingot products	673	594	568	537	601	584	560	510	440	615
Fabricated products	563	627	700	779	919	924	712	864	878	982
Production of primary aluminum										
Canada—own production	879	819	857	799	792	874	761	493	781	853
Canada—tolling for a related company	—	—	—	—	—	—	—	—	45	45
Subsidiary and related companies outside Canada	653	770	848	890	1,040	1,099	1,069	1,025	1,049	1,006
Primary aluminum capacity (at year end)										
Consolidated subsidiaries	1,056	1,077	1,110	1,234	1,261	1,230	1,249	1,236	1,236	1,258
Total subsidiary and related companies	1,722	1,798	1,938	2,106	2,156	2,115	2,144	2,118	2,118	2,086
Consolidated Income Statement Items (U.S. $ millions)										
Total revenues	1,239	1,374	1,441	1,529	1,891	2,427	2,313	2,671	3,058	3,738
Sales of aluminum ingot and ingot products	342	321	284	267	318	448	441	432	448	661
Sales of aluminum fabricated products	611	723	821	922	1,191	1,489	1,355	1,674	1,942	2,316
Sales of all other products	224	268	277	266	306	400	419	452	486	576
Operating revenues	48	52	49	56	57	75	87	98	152	159
Other income	14	10	10	18	19	15	11	15	30	26
Costs and expenses										
Cost of sales and operating expenses	864	988	1,062	1,161	1,452	1,824	1,840	2,155	2,276	2,730
Depreciation and depletion	83	94	98	94	101	103	111	116	126	138
Interest charges	50	60	64	69	79	100	105	100	90	88
All other expenses (except income taxes)	99	113	123	126	148	175	187	204	229	285
Income taxes	65	54	38	20	35	85	27	37	132	184
Equity income	11	11	9	8	18	11	(13)	(5)	13	5
Minority interests	(4)	(4)	(5)	(6)	(11)	(9)	(7)	(10)	(16)	(29)
Extraordinary gains	—	9	—	—	—	27	12	—	—	—
Net income	85	81	60	61	83	169	35	44	202	289
Consolidated Balance Sheet Items (U.S. $ millions)										
Working capital	384	444	401	468	442	641	766	774	909	1,032
Property, plant and equipment (net)	1,130	1,223	1,224	1,234	1,217	1,329	1,385	1,401	1,460	1,638
Investments in companies owned 50% or less	177	170	174	178	199	212	215	207	242	227
Long-term debt	668	751	740	798	744	881	971	837	749	683
Deferred income taxes	144	150	142	130	123	161	166	149	227	299
Minority interests	92	112	114	114	106	116	163	163	244	279
Shareholders' equity	808	847	872	904	957	1,093	1,112	1,270	1,426	1,653
Total assets	2,047	2,215	2,297	2,370	2,449	2,979	3,012	3,090	3,403	3,886
Per Common Share (U.S. $)										
Income (after preferred dividends but before extraordinary gains)	2.52	2.11	1.75	1.78	2.42	4.11	0.65	1.14	4.98	7.15
Extraordinary gains	—	0.27	—	—	—	0.79	0.36	—	—	—
Income (after preferred dividends)	2.52	2.38	1.75	1.78	2.42	4.90	1.01	1.14	4.98	7.15
Dividends paid	1.12	1.20	1.00	0.80	0.90	1.20	0.90	0.40	1.10	1.55
Book value	22.85	24.03	24.78	25.76	27.71	31.41	31.36	31.34	35.22	40.82
Other Statistics										
Capital expenditures (net of government development grants—U.S. $ millions)	147	152	155	115	117	268	208	138	233	321
Funds generated from operations (U.S. $ millions)	160	164	155	140	163	275	156	150	399	518
Return on average equity (as a percentage)	11.0	9.8	7.0	6.9	8.9	16.5	3.2	3.7	14.9	18.8
Number of common shareholders at year end (thousands)	72	76	70	64	50	48	47	43	40	37
Number of employees at year end (thousands)	62	67	61	62	62	64	61	60	61	63

Principal Subsidiary and Related Companies

At 31 December 1978—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%)
Alsco (1974) Inc.
Revalex (1978) Inc.
Roberval and Saguenay Railway Company, The
Saguenay Shipping Limited
Storall Limited
Supreme Aluminum Industries Limited (26.27%)
Vic Metal Corporation

United States
Alcan Aluminum Corporation
V E. Anderson Mfg Co
Intercontinental Alloys Corporation (50%)
Luxfer USA Limited (80.7%)

Bermuda
Alcan (Bermuda) Limited

Caribbean

Jamaica
Alcan Jamaica Company*
Alcan Products of Jamaica Limited
Sprostons (Jamaica) Limited

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

Latin America

Argentina
Camea S.A.

Brazil
Alcan Aluminio 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%)

Mexico
Alcan Aluminio, S.A. (60.9%)

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

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

Europe

Belgium
Alcan Aluminium Raeren S.A.

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

Germany
Alcan Aluminiumwerke GmbH
Alcan Aluminiumwerk Nürnberg GmbH
Alcan Folien GmbH
Aluminiumfolienwerk 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 Angeletti & Ciucani Alluminio S.p.A.

Netherlands
Hunter Douglas N.V. (25.16%)

Norway
Årdal og Sunndal Verk a.s. (ASV) (25%)

Spain
Empresa Nacional del Aluminio, S.A. (ENDASA) (25%)
Productos Aluminio de Consumo, S.A. (50%)

Switzerland
Aluminiumwerke A.-G. Rorschach

United Kingdom
Alcan Building Materials Limited (80.7%)
Alcan Design Products Limited (60.5%)
Alcan Ekco Limited (40.4%)
Alcan Enfield Alloys Limited (40.4%)
Alcan Extrusions Limited (80.7%)
Alcan Foils Limited (80.7%)
Alcan Lynemouth Limited (80.7%)
Alcan Metal Centres Limited (80.7%)
Alcan Plate Limited (80.7%)
Alcan Polyfoil Limited (80.7%)
Alcan Safety Glass Limited (80.7%)
Alcan Sheet Limited (80.7%)
Alcan Transport Products Limited (80.7%)
Alcan Windows Limited (80.7%)
Alcan Wire Limited (80.7%)
Amari Limited (8.1%)
Bonallack Vehicles Limited (80.7%)
Ian Proctor Metal Masts Limited (19.4%)
Johnson and Bloy Aluminium Pigments Limited (29.1%)
Luxfer UK Limited (80.7%)
Minalex Limited (80.7%)
Saguenay Shipping (UK) Limited (80.7%)
Serco-Ryan Limited (80.7%)

Africa

Ghana
Ghana Aluminium Products Limited (60%)

Guinea
Compagnie des Bauxites de Guinée (13.34%)

Nigeria
Alcan Aluminium of Nigeria Limited (58%)
Flag Aluminium Products Limited (60%)

South Africa
Huletts Aluminium Limited (24%)
Silicon Smelters (Pty) Limited (50%)

Asia

India
Indian Aluminium Company, Limited (55.27%)

Indonesia
P.T. Alcan Indonesia (70%)

Japan
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
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 (34.6%)
Aluminium Conductors Limited (35.3%)
Barker Aluminium Industries Limited (69.2%)
Horizon Aluminium Products Ltd (34.6%)
Rolls Gerard Tile Company Ltd (34.6%)
Rolls Holdings Ltd (29.1%)

Other Companies

Holding and Financial

Alcan Aluminium (UK) Limited, London
Alcan Aluminio 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 Aluminio (America Latina) Limited, Montréal—Latin America
Alcan Asia Limited, Hong Kong—Hong Kong, Japan, India and other areas of Asia
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, Montréal—Engineering and feasibility studies, and project management, related to the aluminum industry
Alcan Trading (Bermuda) Limited, Hamilton, Bermuda—Worldwide; metals other than aluminum
Alcan Trading Limited, Montréal—Canada; metals other than aluminum

*Division of Aluminum Company of Canada, Ltd

Alcan Aluminium Limited

Annual Meeting
The Annual Meeting of the shareholders of Alcan Aluminium Limited will be held on Thursday 15 March 1979, at 10 a.m., in the Chateau Champlain Hotel, Montréal.

Definition of Terms
1. In this report, all monetary amounts are in United States dollars, unless otherwise stated.

2. Sales and production tonnages are in metric tons or 'tonnes' of 1,000 kilograms, or 2,204.6 pounds each. Statistics for prior years, formerly in short tons of 2,000 pounds, have been restated in tonnes.

In step with the continuing metric conversion program under the guidance of the Canadian Metric Commission, Alcan in Canada converted to the exclusive use of metric SI units for its operations, sales and official records on 1 January 1979.

All Alcan operations around the world, except in the United States, are therefore now on the metric system. Alcan Aluminum Corporation in the U.S. is, however, serving some customers, including the automotive industry, in metric units.

To convert from short tons to tonnes, divide by 1.1023.

To convert from tonnes to short tons, multiply by 1.1023.

3. 'Subsidiary' indicates a company owned directly or indirectly more than 50% whereas 'related company' indicates a company owned 50% or less.

4. The term 'Alcan' refers to the parent Alcan Aluminium Limited itself, or to one or more subsidiaries according to the context.

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.

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

Preferred shares: Montréal, Toronto and Vancouver stock exchanges.

Transfer Agents
Common shares:
National Trust Company, Limited, Montréal, 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, Montréal, Toronto, Calgary, Vancouver.

Registrars
Common shares:
The Royal Trust Company, Montréal, 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, Montréal, Toronto, Calgary, Vancouver.

ALCAN

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