

ALCAN  
ALUMINIUM  
LIMITED

ANNUAL  
REPORT  
1990

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HOWARD ROSS LIBRARY  
OF MANAGEMENT  
JUN 05 1991  
MCGILL UNIVERSITY



## CONTENTS

Highlights of 1990	1
Chairman's Message	2
Review of Operations	4
Management's Discussion and Analysis	10
Responsibility for the Annual Report, OECD Guidelines and Auditors' Report	15
Consolidated Financial Statements	16
Notes to Consolidated Financial Statements	19
Quarterly Financial Data	29
Eleven-Year Summary	30
Directors, Officers and Principal Operating Executives	32
Shareholder Information	33

### ANNUAL MEETING

The Annual Meeting of the holders of common shares of Alcan Aluminium Limited will be held on Thursday, April 25, 1991. The meeting will take place at 10:00 a.m. in the Ballroom of Le Centre Sheraton Montréal at 1201 René-Lévesque Boulevard West.

### TERMS

In this report, unless stated otherwise, all dollar amounts are stated in United States dollars and all quantities in metric tons, or tonnes. A tonne is 1,000 kilograms, or 2,204.6 pounds.

A "subsidiary" is a company in which Alcan directly or indirectly owns more than 50 per cent of the voting stock. A company owned 50 per cent or less by Alcan, and in which the Company has significant influence over management, is referred to as a "related company".

The following abbreviations are used:

/t	per tonne		
kt	thousand tonnes	kt/y	thousand tonnes per year
Mt	million tonnes	Mt/y	million tonnes per year

### VERSION FRANÇAISE

Pour obtenir la version française de ce rapport, veuillez écrire aux Services aux actionnaires d'Alcan dont l'adresse figure en page 33.



This report is printed on a recyclable paper consisting of 30 to 40% straw, a waste product. Straw pulp reduces the need for wood fibres and can be bleached without the use of chlorine. The paper is produced in an alkaline process (as opposed to acidic), which reduces air pollution and makes effluent water treatment easier.

## COMPANY PROFILE

Alcan Aluminium Limited, a Canadian corporation, is the parent company of a multinational industrial group engaged in all aspects of the aluminum business. Through subsidiaries and related companies on six continents, Alcan's activities include bauxite mining, alumina refining, aluminum smelting, manufacturing, sales and recycling, as well as a number of related new businesses.

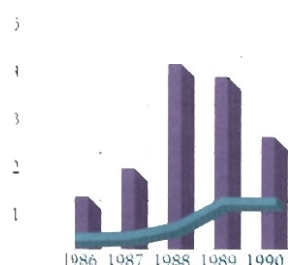
Established nearly 90 years ago, Alcan has developed a unique combination of competitive strengths, with low-cost, owned hydroelectricity in Canada, international diversification and proprietary process technology. In the process, Alcan has become one of the world's largest aluminum companies. More than 55,000 people are directly employed by the Alcan Group, with thousands more employed in related companies.

Alcan Aluminium Limited has more than 38,000 holders of its common shares and nearly 3,000 holders of its preference shares widely distributed internationally - the majority in North America.

The word ALCAN and the symbol are registered trademarks in more than 100 countries.

### NET INCOME AND DIVIDENDS PER COMMON SHARE

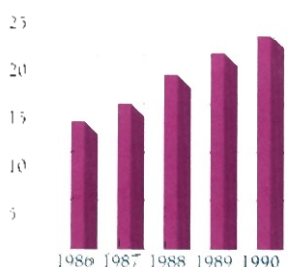
US\$/share



■ Net income  
■ Dividends

### COMMON SHAREHOLDERS' EQUITY PER COMMON SHARE

US\$/share



### HIGHLIGHTS OF 1990

	1990	1989
<b>Principal highlights</b> (in millions of US\$)		
Sales and operating revenues	8,757	8,839
Net income	543	835
Return (%) on average common shareholders' equity	11	19
Total assets (at year-end)	10,649	9,508
Capital expenditures	1,367	1,466
Ratio of total borrowings to equity, including minority interests (at year-end)	33:67	26:74

### Operating data

 (in thousands of tonnes)

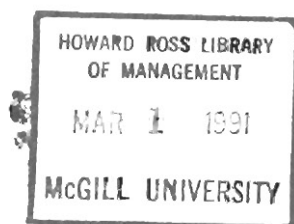
Aluminum shipments		
Fabricated products	1,488	1,518
Ingot products	857	743
Total	2,345	2,261
Primary aluminum production	1,651	1,643
Secondary aluminum production	281	182
Aluminum purchases (including scrap)	646	718

### Per common share

 (in US\$)

Net income	2.33	3.58
Dividends	1.12	1.12
Common shareholders' equity (at year-end)	22.19	20.30
Market price (NYSE - consolidated trading)		
High	24½	25¼
Low	16⅞	20⅞
Close	19½	22⅞

Amounts reflect the three-for-two share split on May 9, 1989.



## CHAIRMAN'S MESSAGE



DAVID MORTON  
Chairman and  
Chief Executive Officer

Total earnings of \$543 million for 1990 are reasonably satisfactory, though again this year they include significant non-recurring items. Of the total earnings, \$214 million, or 39%, arise from book profits on the sale of a Spanish investment combined with a non-operating benefit from our long-standing participation in Nippon Light Metal, a relationship which is a source of great promise for the future.

The after-tax operating earnings of \$347 million indicate more starkly the underlying performance of the Company during the difficult year that was 1990. These results are not good enough. They reflect the impact of weak business conditions and lower prices for aluminum ingot and fabricated products. However, they also indicate that we have not yet sufficiently contained our costs to meet today's conditions. As the year progressed, we renewed the emphasis on cost control on all fronts. We have put in place continuing cost-reduction programs, which will reduce 1991 costs by over \$200 million. Metal inventory – an important controllable item in our working capital – has been cut by 17% during 1990 and is at the lowest ratio to shipments in the Company's history. Capital expenditure in 1991 is being reduced to under \$900 million from \$1.4 billion in 1990, without, however, compromising our major strategic investments – particularly the rounding out of our hydroelectric capacity in British Columbia, and the expansion of rolling operations in the United States and Germany.

Rigorously containing costs is part of the solution. The other is employee involvement, focusing on all the factors that go to create excellence in manufacturing – maximizing customer satisfaction, increasing productivity, reducing waste, solving environmental problems, and building markets for tomorrow. Encouraging results in all these areas are emerging in Brazil, North America, Australia, Europe, in fact wherever the creative energies and enthusiasm of Alcan people are put to work.

Increasing attention was paid in 1990 to the area of the environment, where, after thorough review with senior management throughout the Group and approval by the Board, we have spelled out our commitment in an updated environmental policy statement. Alcan is committed to the principle of sustainable development. Making that principle a reality will take innovative technology and determined management, as well as time and money. In the ten years through 1990, total capital expenditure on environment-related projects was more than \$530 million, in addition to the \$730 million spent on the Laternère smelter, which came on stream in 1990 and replaces older and less environmentally sound smelting capacity nearby in Quebec. The Company also incurs non-capital expenses on environmental improvements, which have totalled approximately \$100 million in the past three years. In 1990, over 10% of Alcan's total research and development expenses of \$150 million was focused on environmental technology projects. Environmental excellence cannot be achieved overnight. Standards continue to rise, and those that were acceptable yesterday become less so today and perhaps unacceptable tomorrow. But Alcan is determined to implement its environmental policy vigorously, with a program ranging from plant-by-plant action plans to regular Board review.

Nineteen-ninety was a challenging year. It is greatly to the credit of our employees that the challenges, of all kinds and at all levels, have been met with commitment and imagination. Real improvements are often achieved when times are tough and, on behalf of the Directors, I would like to express appreciation for the personal efforts made by all employees.

The outlook for the aluminum industry is for some short-term turbulence but continuing long-term growth, based both on the spread of existing end-uses, particularly in packaging, and on the exciting prospects for aluminum in automobile engines and bodies. Aluminum's light weight and true recyclability are both valuable assets for the automotive industry in the energy- and environment-conscious nineties.

Unlike previous recessions, the current economic slowdown is accompanied in the aluminum industry by historically low inventories and a reasonable supply-demand balance – both factors will support a relatively rapid recovery when demand picks up. The impact of the slowdown varies from region to region and we are fortunate in being an important participant in those areas with above-average growth, particularly in Europe and the Far East. In taking steps to deal with current problems, we are not compromising our ability to profit from the longer-term growth markets for aluminum; our investments in sheet rolling in the U.S. and Germany and the expansion of our hydroelectric capacity in British Columbia are aimed at that growth. In support of the same objective is our investment in recycling capacity in the U.S. and England, which will provide a low capital-cost source of metal as well as help solve a solid waste-management problem. We are also maintaining a strong balance sheet, an attribute which, in the current lending climate, will truly differentiate the financially strong from the weak.

Our overall purpose is summed up in the words of the Company's mission statement, revised during the year and set out alongside. We have gone some way in 1990 towards meeting our return-on-equity objective. Our aim is to achieve a reasonable return on equity in the weaker part of the business cycle which, when coupled with an excellent return in the stronger part, will enable us to outperform the Standard & Poor's Industrials over the cycle as a whole.

The outlook for 1991 is very clouded. We face a widespread economic downturn, the effects of the Gulf war, stresses in the world financial structure and an uncertain situation in the Soviet Union and Eastern Europe. Such a year will call for rigorous and very adaptive management, as well as the need to continue laying the foundations for the future. I believe we have worked hard to achieve that combination in 1990. We shall be working even harder at it in 1991.

#### MISSION STATEMENT

Alcan will be the most innovative aluminum company in the world. Through its people, Alcan will be a global, customer-oriented and environmentally responsible enterprise committed to excellence and lowest cost in its chosen aluminum and related businesses. In the 1990s, Alcan's return on equity will outperform the Standard & Poor's Industrials.



David Morton

February 7, 1991

## REVIEW OF OPERATIONS

While 1990 was disappointing in terms of Alcan's profitability, the year was marked by our rapid response to the deterioration of the world economy and the continued progress in the implementation of our strategy. In addition to the emphasis on cost reduction and the priority given to the environment, as discussed in the Chairman's Message, the following were other key developments.

- Widespread acceleration of 'operational excellence' programs, stressing continuous improvement through employee involvement.
- Continued reductions in the incidence of job-related injuries and illnesses.
- Greater emphasis on the relatedness of new businesses and R&D programs to our mainstream business.
- Technology and investment initiatives in response to the developing aluminum needs of the automobile companies.
- Expansion and upgrading of recycling activities as a key component of our low-cost metal sourcing and market strategies.
- Successful start-up of our world-class Laterrière smelter, on time and below budget.

### NORTH AMERICA

North American operations account for 7.3% of Alcan's worldwide smelting capacity. The Company is also an important producer of fabricated products in this geographic market. For example, Alcan is the second largest producer of rolled products and, through the Enterprises group of downstream manufacturing companies, has leading positions in many end-use markets.

#### CANADA

Canadian operations reported profits of \$29 million in 1990, which were substantially lower than in 1989 and reflected the generally depressed level of primary aluminum ingot prices. Demand and prices for fabricated products also weakened as the Canadian economy slowed and entered a recession in the last half of the year.

**Smelting:** The Company's seven Canadian smelters operated at approximately 97% of rated capacity, producing 1 040 thousand tonnes (kt) of primary metal. While 240 kt of this metal was sold to customers in Canada, as compared to 265 kt in 1989, the balance was exported to Alcan's fabricating operations and third-party customers in the United States, Europe and Asia.

Lower aluminum prices, a stronger Canadian dollar, and the costs of starting-up the Laterrière smelter in Quebec combined to place pressure on margins in 1990.

In the North American smelting and chemical operations, priority was given to improving customer service and organizational effectiveness. The operations were decentralized and the management structure simplified, resulting in greater autonomy for production units.

The Laterrière smelter was inaugurated in September and 150 thousand tonnes per year (kt/y) of capacity is now on stream, replacing a similar tonnage shut down at Arvida Works. This smelter will reach its full 200 kt/y capacity in 1991 and represents a considerable improvement in production efficiency and environmental performance over the capacity it replaces.

Additional strides were made elsewhere in Quebec to reduce the impact of operations on the environment through such projects as a new dross recycling plant at Jonquière, an additional scrubber at the Shawinigan smelter, and the recycling of scrubber effluents from the Shawinigan and Beauharnois smelters. In British Columbia, at the Kitimat smelter, a pilot plant was built to treat emissions arising from the coke-calcining process.

A \$160-million program to modernize and expand casting centres neared completion, enabling Alcan to increase its capacity to produce value-added ingot products by 340 kt/y.



JACQUES BOUGH  
President and  
Chief Operating Officer



Completion of a new superwhite-hydrate facility at the alumina complex in Jonquière will allow the Company to enter new markets for chemical products in North America. On another front, the proprietary technology acquired through the purchase of Handy Chemicals Limited in 1989 is now being disseminated throughout the Alcan Group. The company is a manufacturer of specialty chemicals for the pulp and paper, water treatment and concrete industries.

In British Columbia, the expansion of the Kemano hydroelectric generating system continued to progress on schedule. The cost for the project is estimated at \$900 million, excluding capitalized interest. Scheduled to begin operation in late 1994, this project will add 540 megawatts (mw) to Alcan's installed power-generating capacity of 3,583 mw in Canada.

A new three-year collective agreement was negotiated with employees at the Kitimat smelter and the Kemano power station in British Columbia.

**Recycling:** As part of Alcan's strategy to expand the scale of its collection and recycling activities, the Company acquired four used beverage can (UBC) collection and processing businesses. The Company now has a UBC collection capacity of 28 kt/y in Canada.

**Fabricating:** In a year marked by weakening market demand and pressure on selling prices, Alcan Enterprises companies in Canada continued to improve their competitive position in most of their major markets through first-class customer service and manufacturing quality.

While the Company's cable business in Canada benefited from export sales, total sales revenue declined from the year earlier due to the depressed domestic markets and lower prices.

Alcan reinforced its leadership position in residential siding and window markets through the integration of the Hunter Douglas building products operations, acquired in 1989, which yielded manufacturing efficiencies and increased the number of service centres to 39.

Weaker economic activity saw demand and prices fall for extrusions, foil products and pipe products. Alcan's shipments of extruded products in Canada were also affected by a nine-month strike at its Laval, Quebec, plant.

## UNITED STATES

Earnings from operations in the U.S. rose to \$83 million from \$15 million in 1989, benefiting from the lower cost of aluminum used in fabricating operations. Demand and prices in most markets weakened as the economy slowed during the course of the year, finally entering a recession in the fourth quarter.

Aluminum shipments to U.S. customers were 882 kt, virtually unchanged from their level in 1989. This compares favourably to a 5% decline in overall aluminum consumption in the U.S.

**Fabricating:** The rolled products division continued to outpace the market. Alcan, with nearly 16% of the aluminum sheet, plate and foil market in North America, is the second largest producer of sheet for beverage cans. An increase in beverage can sheet shipments in 1990 offset the slight decrease in shipments of non-can products.

Prices, however, have been under pressure in both the can and non-can sectors due to weak overall demand and over-capacity in the common-alloy sheet market.

Despite market pressures, the rolled products division turned in an outstanding performance, benefiting from the operating cost efficiencies achieved in the past five years, which have reduced average unit costs, without adjustments for inflation, by 21%.

Three major capital projects, with total estimated costs of \$465 million, are aimed at strengthening the Company's position as a quality and technology leader in the industry.

Two of the projects are focused on quality enhancement and cost reduction. In mid-1990, a new foil mill was commissioned at the Terre Haute, Indiana, plant. This \$75-million investment will make Alcan a world-class producer of packaged foil for household and institutional use, and rigid container foil for food containers. As well, a \$135-million project now under way at the Company's Oswego, New York, plant will upgrade the hot rolling line and include state-of-the-art melting and casting operations.

The largest project, a \$255-million expansion of the cold rolling facilities at Logan Aluminum Inc. in Russellville, Kentucky, will provide an important increase in Alcan's cold rolling capacity. While the plant will continue to focus on the production of the highest-quality beverage can sheet, the incremental capacity will also support Alcan's growth in other markets, such as automotive sheet, when the new capacity comes on-stream in mid-1993.

The downstream manufacturing companies of Alcan Enterprises in the U.S. saw prices decline and margins erode as a slowing economy reduced demand for many products.

Alcan's cable business extended its leading position in building wire and service cable, a position built on the quality of its products. Overall shipments declined 7%, however, primarily due to the weakness in construction markets.

Despite depressed business conditions, building product sales increased by 22%, largely due to acquisitions made in late 1989 and mid-1990. These acquisitions extend Alcan's leadership position in the fabrication and distribution of residential, commercial and industrial siding and roofing, architectural panels and other specialty products.

With the opening of six new service centres, which now brings the total in the U.S. to 33, the Metal Goods division increased its market share and reinforced its leading position in the non-ferrous metals distribution business.

During the year, Alcan acquired Reade Manufacturing, located in Lakehurst, New Jersey. The company is a leading producer of magnesium powder used principally in the steel industry for the desulphurization of iron.

Elsewhere, a new plant was commissioned in Graham, North Carolina, for the production of aluminum high-pressure gas cylinders.

**Recycling:** The Berea, Kentucky, recycling plant, commissioned in late 1989, completed its first year of operation. During the year the plant recycled approximately seven billion used beverage cans (UBCs), or 104 kt. Alcan recycled a further six billion UBCs at its Greensboro, Georgia, and Oswego, New York, plants.

In March, the Company also acquired a 25 kt/y secondary smelter in Shelbyville, Tennessee.

## EUROPE

Earnings, excluding non-operating gains, from Alcan's European operations declined in 1990 to \$28 million from the \$73 million reported in the prior year. The decline reflected the lower earnings from the Company's operations in the United Kingdom. Shipments to customers in Europe, mostly in the form of fabricated products, reached 625 kt, 4% higher than in 1989.

### GERMANY

Alcan's German operations continued to prosper due to the strength of the domestic economy, which has been aided by German unification. Aluminum industry shipments to the building and transportation markets were especially strong while shipments to the packaging market improved slightly. All of the Company's fabricating facilities operated at capacity throughout the year.

Prices for Alcan's fabricated products remained stable. This factor, combined with the strength of the Deutschmark led to improved profitability.

Significant resources are being devoted to addressing recycling and environmental issues. The German government is now requiring retailers, with the subsequent involvement of their suppliers, to guarantee the take-back of packaging for recycling. Alcan is meeting this challenge through the continued development of recyclable aluminum products and the introduction of collection systems.

The Norf rolling mill, owned equally by Alcan and Vereinigte Aluminium-Werke AG (VAW), will be expanded at a total cost of approximately 900 million Deutschmarks, or \$590 million at current exchange rates. The expansion of the 650 kt/y facility, already one of the largest in the world, will virtually double output, reinforcing Alcan's leading low-cost position in the European rolled products market. This project will be completed in 1993.





#### UNITED KINGDOM

The downward economic trend evident at the end of 1989 gathered pace during 1990 with the U.K. economy entering a recession. Results from the Company's operations reflected this economic downturn as prices fell and margins were squeezed.

Some segments of Alcan's business, such as packaging, held up well despite the downturn. The beverage can sheet market showed exceptional growth, increasing 25% over the prior year. Alcan is a leader in this market and the commissioning in 1991 of the Company's new 50 kt/y used beverage can recycling plant at Warrington, England, will reinforce this position.

Sales of extruded products, severely affected by the depressed state of the building and home renovation markets, declined approximately 8%. The Company's strategy for greater participation in the European semi-fabricated product market did, however, help to offset the lost domestic volume.

Programs designed to achieve world-class excellence in manufacturing are now in place in most facilities and the necessary training and reorganization is under way, including the introduction of systematic employee involvement schemes.

As part of the ongoing modernization and rationalization of its rolled products business in the U.K., Alcan announced early in 1991 the closure of a foil conversion plant in Silvertown, England. Production will now be centered at the Company's modernized foil rolling plant in Glasgow, Scotland.

A new zirconium chemicals plant, commissioned at Manchester, England, will provide extra capacity to consolidate the Company's worldwide lead in this market.

#### FRANCE

For Alcan's French operations, business conditions were generally healthy, with shipments up nearly 6% for the year. In France, where Alcan is a leading supplier of building systems, the Company benefited from the good growth in the commercial construction and home renovation markets. Healthy growth also occurred in Spain and Portugal where those fast-expanding economies have experienced a construction boom. In these countries, the Company enjoys a commanding lead in the high-quality building systems market.

#### ITALY

Italian operations faced difficult business conditions during the year as a result of the slowing domestic economy. Market conditions were especially severe for secondary alloys, and selling prices softened in all markets. Profitability was also affected by additional costs incurred on the start of construction of a new cold rolling mill at Pieve, expected to begin operation in 1992.

Costs were also increased by the start-up of an extrusion press in Pieve and by the restructuring of the Bresso rolling facility.

Environmental projects related to salt-cake recycling and the modification of an existing remelt furnace were completed at the Borgofranco secondary smelter.

#### SWITZERLAND

Profits from Alcan's packaging operations in Switzerland increased significantly, benefiting from lower metal costs and the stronger Swiss franc.

The Company has been able to increase its share of the European foil container market by meeting the increasingly demanding quality standards for printing and lacquering. The important retortable food container market has continued to show good growth.

With the discontinuation of foil rolling activities in Switzerland, operations will now focus solely on foil conversion. Cost savings will be achieved through the sourcing of foil supplies from Alcan Group companies.

The Company has improved its environmental performance by recovering the volatile solvents from its lacquering operations and incinerating them for plant heating.

#### IRELAND

Work continued on further capacity increases at the 65%-owned Aughinish alumina refinery, which was operating at the million-tonne-per-year level by year-end.

## LATIN AMERICA

The leading countries in Latin America are in the midst of a major adjustment program to curb inflation, modernize their economies and reduce protectionism and government regulation. While these are positive steps in the medium term, the immediate impact on economic growth has been negative and some of the larger countries are now in a deep recession. Against this background, Alcan's operations reported a loss of \$12 million in 1990, down sharply from the profit of \$63 million in 1989. Aluminum shipments to customers in the region fell to 106 kt from 114 kt in 1989.



### BRAZIL

The Brazilian government's economic plan, coupled with its severe monetary policy and a sharp reduction in tariffs, resulted in a rapid slowdown in economic activity and brought the country into a recession by the end of the year. Demand for semi-fabricated aluminum products dropped 17% and per capita consumption of aluminum reached its lowest level in 15 years.

While demand declined across all market segments, the performance of sheet and foil products was better than average due to the two-piece aluminum beverage can, which was introduced late in 1989. Alcan is the only local producer of beverage can sheet and as a result its share of the rolled products market increased. While total shipments were slightly higher than in the previous year, they included increased ingot exports to compensate for lower semi-fabricated product shipments to the domestic market.

Profitability was reduced by higher power costs, which increased the cost of smelting aluminum, and by the high value of the local currency. Reduced cash generation led to a need for short-term borrowings in local currency. High interest rates in the last quarter of the year substantially increased net interest costs.

A copper cable business was acquired in March 1990. The acquisition will allow the Company to expand its product line and strengthen its market position.

In order to cope with the new, more competitive environment, operations in Brazil are redoubling efforts to improve efficiency and productivity, and reduce overhead costs

At Mineração Rio do Norte S.A. (MRN), a 24%-owned company that mines bauxite in the Amazon region of Brazil, an ambitious cost reduction program is under way and will have positive effects on the competitiveness of MRN's bauxite in 1991.

Reforestation of mine sites continues to be an important aspect of MRN's operations. Since the formation of the company, approximately 600 hectares of land have been restored.

### ARGENTINA

The country was in a severe recession throughout the year. The high value of the local currency increased production costs and resulted in break-even results.

### PACIFIC

Earnings from operations, excluding non-operating gains, declined to \$111 million from \$162 million, largely reflecting a weak economy in Australia and lower ingot prices. In Japan, Korea, Malaysia and Thailand, however, demand for aluminum continued to be healthy due to strong economic growth in those countries. Shipments to customers in the region were 376 kt, compared to 348 kt in the prior year.

### AUSTRALIA

After several years of strong growth, the Australian economy contracted in 1990. High interest rates caused a decline in the building and construction industry, the single largest market for Alcan Australia Limited, 73.3% owned by Alcan.

The most critical factors affecting the company's performance were the low price for aluminum ingot and the decline in domestic demand for fabricated products.

The aluminum rolled products business of Austral Bronze Crane Copper Limited was acquired in mid-year, giving the company a large share of the markets for non-can sheet and *Roll-bond* evaporator panels.

As part of the company's commitment to recover and recycle a higher proportion of available scrap, construction of two remelt centres is under way, with a total capacity of 70 kt/y. One will replace an existing, less efficient centre, while the other adds scrap processing facilities to the Kurri Kurri smelter, resulting in a net increase in remelt capacity of 35 kt/y.

Queensland Alumina Limited, 21.4% owned by Alcan, completed an expansion of its alumina refinery which increased capacity by 10% to 3,300 kt/y.

Alcan signed an agreement with Comalco Aluminium Limited to carry out a joint feasibility study for the construction and operation of an alumina plant at Weipa in Queensland. The study should be completed by 1992.

#### JAPAN

Alcan is active in Japan through its interest in two related companies, Nippon Light Metal Company, Ltd. (NLM) and Toyo Aluminium K.K. (Toyal), and through its own sales activities which supply primary and fabricated aluminum products to the Japanese market.

The Japanese economy continued its strong growth, fuelled largely by domestic consumption. Aluminum demand was up 6% over 1989 due to the strength of the transportation and packaging markets.

NLM, 45% owned by Alcan, had another good year in 1990. The company contributed \$160 million to Alcan's net income versus \$40 million in 1989. The increase was largely due to a gain recorded by NLM on the creation of a 33% minority interest and simultaneous listing on the Tokyo Stock Exchange of its building products subsidiary, Shin Nikkei Company Limited.

Toyal, 48.9% owned by Alcan, and a major producer of foil and paste products, reported lower profits primarily due to the sluggish automotive market in North America.

Alcan continues to pursue its strategy of working closely with NLM and Toyal, with emphasis on developing the packaging and automotive markets and the high growth markets of Southeast Asia and China.

#### INDIA

Revenues for Indian Aluminium Company Limited, 39.6% owned by Alcan, were comparable to the record levels reached in 1989. Earnings declined, however, largely due to lower prices for exported alumina.

After several years of reduced levels of capital investment, the company is now expanding its alumina and cold rolling capacities and is building a thermal power station.

#### OTHER AREAS

In Alcan's alumina operations, the most important cost factors affecting production have been the increasing costs of oil and caustic soda. Steps were taken to minimize the impact of higher oil prices in 1990 and, while this will continue to be a concern in the coming year, the competitive position of the Company's facilities should not be seriously affected. With two of four alumina operations now converted to the use of natural gas, with the option of reverting to oil, Alcan's dependence on oil has been substantially reduced. Programs are also under way to reduce the amount of caustic soda used in production.

#### JAMAICA

Alcan's two 93%-owned alumina refineries, at Kirkvine and Ewarton, increased their combined operating capacity by 3% to 1,000 kt/y. Progress was made on major investments to increase productivity at both plants.

The Company also continues to devote much effort to the restoration of former bauxite mine sites to agricultural uses.



Jacques Bougie

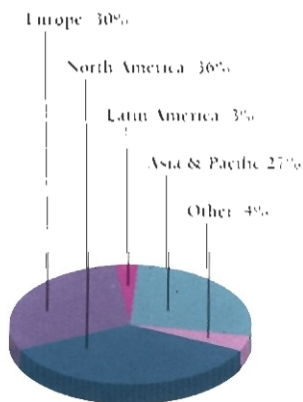
**W**ith the continued slowing of the world economy, consumption of aluminum dipped slightly in 1990. While the European and Asian markets continued to register healthy growth, their strength was not sufficient to offset the pronounced weakness that developed in other important markets for aluminum.

Alcan's performance reflected these weak market conditions. Net income for the year was \$543 million, down from the record earnings of the previous two years, particularly at the operating level.

## MANAGEMENT'S DISCUSSION & ANALYSIS

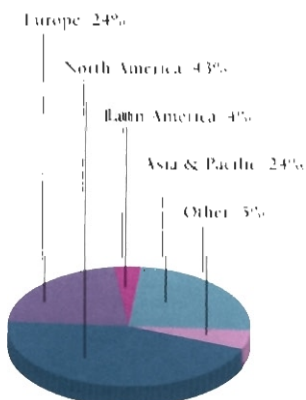
### 1990 WESTERN WORLD ALUMINUM CONSUMPTION

19.8 million tonnes



### 1990 ALCAN GROUP ALUMINUM SHIPMENTS\*

2.6 million tonnes



\*Includes Alcan's share of Shipon Light Metal Company Ltd. and Towan Aluminium K.K.

## INDUSTRY REVIEW

For the first time in eight years, Western World consumption of aluminum declined, slipping 0.5% to 19.8 million tonnes (Mt).

Alcan's own shipments in 1990 were 2.3 Mt, up 3.7% from 1989. Together with its share of shipments from related companies in Japan, Alcan Group shipments totalled 2.6 Mt. The geographic breakdown of the Group's shipments closely resembles that of Western World consumption.

In 1990, the growth markets for aluminum were Asia and Europe. European aluminum consumption grew nearly 3% in 1990, largely driven by the strength of the German economy. Growth in aluminum consumption was also evident in other European countries, even in the United Kingdom, which entered a recession early in the year.

Asian markets continued to exhibit impressive growth due to the fast-expanding economies of Japan and most Southeast Asian countries. Aluminum consumption increased 5%, largely due to increased demand from the packaging and transportation sectors. Meanwhile, in the Pacific area, Australian aluminum usage declined due to the recession in that country.

In North America, the largest market for aluminum, the economies of both Canada and the United States were in recession by year-end. Aluminum consumption was down almost 5% due to the depressed state of the construction and automobile markets. Packaging was the only end-use market to post gains.

In Latin America, consumption fell by over 14%, as all the leading economies of the area experienced recessionary conditions.

Approximately 30% of the aluminum now consumed in the Western World is recycled or secondary aluminum, with the remaining 70% supplied from primary smelters.

The supply-and-demand situation in the primary aluminum ingot market, the major determinant for aluminum prices, eased further during the year. Production by Western World primary aluminum smelters rose 1% to 14.2 Mt as new capacity came on-stream towards year-end. At this level of production, smelters operated at 98% of their nominal capacity.

With these trends in supply and demand for primary aluminum, total inventories held by producers and commodity exchange warehouses rose slightly from 3.3 Mt at the end of 1989 to 3.4 Mt at the end of 1990, representing approximately 12 weeks of supply.

Except for a brief rally towards the end of the third quarter, spot aluminum prices remained at depressed levels. International spot prices averaged \$1,636/t for the year, 16% less than the average in 1989.

Faced with the prospect of continuing difficult economic conditions in 1991, the near-term outlook for aluminum demand is uncertain. With further additions to world smelter capacity coming on-stream during the year, it is unlikely that there will be any immediate improvement in aluminum prices. The fundamentals for the industry, however, continue to be relatively good with inventories at historically low levels.

## FINANCIAL PERFORMANCE

### REVENUES

Total sales and operating revenues for 1990 were \$8.8 billion, virtually unchanged from the prior year, while total aluminum shipments, at 2,345 kt, were 84 kt higher. Revenues benefited from the weaker U.S. dollar, but suffered from the higher percentage of total shipments in the form of ingot products and by the price decline in those products. By comparison, sales and operating revenues in 1989 were 3.6% higher than in 1988. The increase reflected better average realizations on the sales of fabricated products and a greater concentration of these products in the sales mix.

**Fabricated product sales:** Shipments of fabricated products decreased slightly to 1,488 kt from 1,518 kt in 1989, but remained above the 1988 level of 1,446 kt.

Following gains in 1989 due to buoyant business conditions and increased market share in certain end-use areas, 1990 shipments reflected the generally weaker economic conditions in many countries where the Company operates, most notably the U.K., Brazil, Australia and Canada.

For the year, fabricated product shipments accounted for 63% of total shipments, compared to 67% in 1989 and 64% in 1988.

Prices for fabricated products in local currency terms, in most countries where the Company operates, were generally lower in 1990. However, due to the strengthening of these currencies against the U.S. dollar, average sales realizations in U.S. dollar terms were virtually identical to their level of one year ago. The average realization in 1990 was \$3,839/t.

Fabricating costs in local currency terms rose due to inflationary pressures. This rise

was further accentuated by the impact of the weaker U.S. dollar. On the other hand, the cost of scrap, purchased and recycled for use in fabricated products, dropped in line with market prices for ingot. Overall, U.S. dollar costs were \$3,214/t, 5.7% higher than in 1989.

With flat U.S. dollar realizations but higher costs, gross margins on sales of fabricated products declined from \$797/t in 1989 to \$625/t in 1990.

Alean's performance in various end-use markets was as follows:

**Containers and packaging:** Sales to the packaging market declined 1% in total, with no change in U.S. sales. Continental Europe enjoyed a 14% growth, but sales were weak in the U.K., Canada, Brazil and Australia.

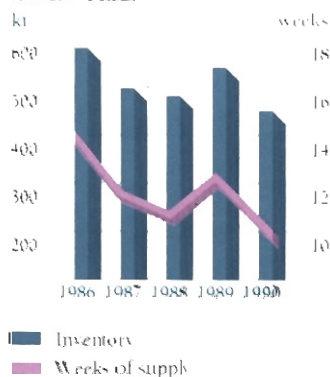
**Building and construction:** Sales to this market were up 3.5% in 1990. Weak market conditions prevailed in North America. Sales, however, were up as a result of acquisitions. Elsewhere, revenues were higher in Europe and Brazil, but lower in the Pacific.

**Transportation:** Car and truck production in North America fell by 5% in 1990, but with increased market penetration, sales to this sector were down only 3% in North America as well as worldwide. In Europe, declines in the U.K. and Italy were offset by higher sales in Germany.

**Electrical:** Overall sales were down by 15%, with the weak housing sector and lack of demand for overhead transmission cable in Canada and the United States. Other markets experienced modest declines.

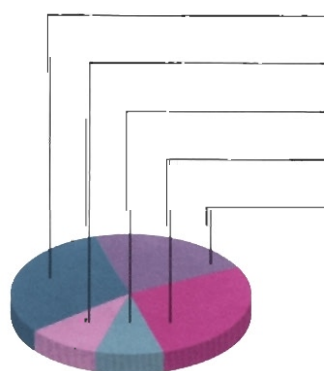
**Other uses:** Sales revenues rose by 5%, with bauxite and alumina sales unchanged. After falling in 1989, sales to distributors recovered well in 1990 and revenues from Continental Europe benefited from stronger local currencies.

### CONSOLIDATED ALUMINUM INVENTORIES



### 1990 FABRICATED AND NON-ALUMINUM SALES BY MARKET

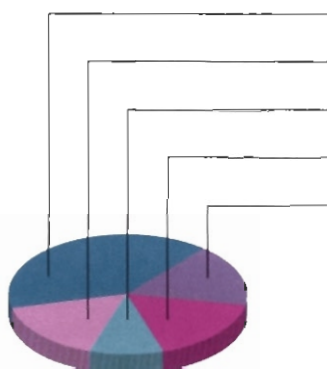
millions of US\$



		1990	1989	1988	1987	1986
Containers and packaging	31%	2,197	2,228	1,938	1,604	1,352
Transportation	10%	700	720	617	497	467
Electrical	9%	652	765	746	552	490
Building and construction	29%	2,003	1,935	1,814	1,468	1,319
Other	21%	1,462	1,394	1,314	1,244	1,236
<b>Total fabricated and non-aluminum sales</b>	<b>100%</b>	<b>7,014</b>	<b>7,042</b>	<b>6,429</b>	<b>5,365</b>	<b>4,864</b>
Aluminum ingot sales		1,439	1,537	1,846	1,182	892
<b>Total sales</b>		<b>8,453</b>	<b>8,579</b>	<b>8,275</b>	<b>6,547</b>	<b>5,756</b>

## 1990 SALES BY PRODUCT

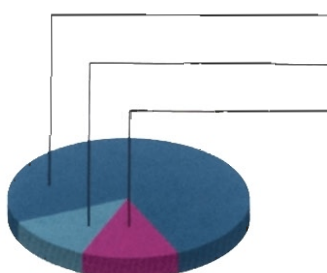
millions of US\$



	1990	1989	1988	1987	1986	
Flat-rolled products	40%	3,368	3,406	3,152	2,821	2,384
Extruded, rolled, drawn products	18%	1,516	1,640	1,578	1,166	1,142
Other fabricated products	10%	827	781	666	470	344
Ingot products	17%	1,439	1,537	1,846	1,182	892
Other products	15%	1,303	1,215	1,033	907	794
<b>Total sales</b>	<b>100%</b>	<b>8,433</b>	<b>8,579</b>	<b>8,275</b>	<b>6,546</b>	<b>5,756</b>
Operating revenues and other income		466	468	351	332	300
<b>Total</b>		<b>8,919</b>	<b>9,047</b>	<b>8,626</b>	<b>6,878</b>	<b>6,056</b>

## 1990 GROSS PROFIT BY PRODUCT

millions of US\$



	1990	1989	1988	1987	1986	
Total fabricated products (integrated)	72%	930	1,210	1,263	947	749
Ingot products	15%	200	370	628	244	154
Other products	13%	166	182	175	111	96
<b>Total</b>	<b>100%</b>	<b>1,296</b>	<b>1,762</b>	<b>2,066</b>	<b>1,302</b>	<b>999</b>
Operating revenues and other income		261	290	189	179	171
<b>Total</b>		<b>1,557</b>	<b>2,052</b>	<b>2,255</b>	<b>1,481</b>	<b>1,170</b>

**Ingot product sales:** Third-party shipments of ingot products rose 114 kt to 857 kt in 1990, offsetting reduced fabricated product shipments.

Average realizations on sales of ingot products in 1990 were \$1,679/t, down from \$2,070/t in the previous year, reflecting the weaker market price for primary aluminum.

Ingot sales were comprised of aluminum produced by the Company's smelters as well as purchased aluminum. Costs of the Company's own produced aluminum were slightly higher in U.S. dollar terms than in the previous year, partly due to a strengthening of currencies in Canada and the United Kingdom. Purchased aluminum costs fell in line with market prices for ingot.

The \$391/t fall in ingot realizations was partly offset by the \$125/t decline in the combined cost of purchased and Company-produced aluminum. As a result, margins fell from \$499/t in 1989 to \$233/t in 1990.

During 1990, Alcan's total purchases of aluminum were 646 kt, which included 536 kt of ingot and scrap purchased at market-related prices. Total purchases were 718 kt in 1989 and 716 kt in 1988.

**Other products:** Sales revenues of other products increased 7%, reflecting higher shipment levels for stainless steel, nickel and speciality chemicals. Margins, however, were lower than in the previous year.

**Operating revenues:** Operating revenues were \$304 million compared to \$260 million in 1989 and \$254 million in 1988. These revenues are principally generated from aluminum tolling and sales of electric power to third parties.

**Other income:** Income from other sources was \$162 million in 1990, compared to \$208 million in 1989 and \$97 million in 1988. In 1990, other income included a \$43-million gain on the sale of the Company's 24% equity investment in Industria Española del Aluminio S.A. in Spain and a \$19-million gain resulting from a change in Alcan's holdings of Nippon Light Metal Company, Ltd. (NLM). In addition, gains of \$101 million and \$11 million, were realized in 1989 and 1990, respectively, when holders of some of the Company's Eurodollar exchangeable debentures exchanged them for shares held in NLM. The balance of other income is derived largely from interest revenue.

## RESULTS OF OPERATIONS

Alcan reported net income of \$543 million for 1990, down from the record high levels of \$835 million and \$931 million reported in 1989 and 1988, respectively. Consequently, the Company's average return on equity for the year declined to 10.9%, from 18.7% in 1989 and 23.5% in 1988.

Alcan's net income for 1990 and 1989 included net after-tax non-operating gains of \$196 million and \$69 million, respectively. The components of these gains are covered in the discussions of Other income. Other expenses and Equity income. Net income in 1988 did not include any non-operating items.

Cost of sales and operating expenses were \$7.0 billion, compared to \$6.7 billion in 1989 and \$6.1 billion in 1988. Cost reduction programs continued to be implemented throughout the year. Excluding the effect of acquired businesses, the total number of employees at year-end was lower by 2,200 compared to a year ago. Despite these measures, there was a rise in costs largely due to inflationary pressures and the foreign currency impact of the weaker U.S. dollar. For example, on an annual basis, each one-cent increase in the Canadian dollar against the U.S. dollar is estimated to reduce profits by approximately \$13 million after-tax.

Depreciation expense for 1990 was \$393 million, compared to \$333 million in the previous year. The increase marked the completion of construction and the start-up of new production facilities, most notably the Laterrière smelter in Quebec. In 1988, depreciation expense was \$316 million.

Selling, administrative and general expenses rose 10% in 1990 to \$659 million. More than 40% of this increase was due to the impact of the weaker U.S. dollar. The balance reflected wage increases and additional costs from businesses acquired or expanded in France, Brazil, Australia, Canada and the United States. Expenses rose 14% in 1989, also due to the impact of acquisitions and inflation.

Research and development expenses rose 10% in 1990 to \$150 million, up from \$136 million in 1989 and \$132 million in 1988. Most of the increase in 1990 was concentrated in process technology programs in the plants, aimed at reducing costs and improving quality. In the research centre programs, work was accelerated in environment-related areas such as waste minimization and emission control. Spending in 1991 is expected to be \$145 million.

Interest costs, including amounts capitalized, were \$263 million, up from \$180 million in 1989. The increase was due to higher levels of debt during the year and the impact of high interest rates on short-term borrowings in Brazil. In 1990 and 1989, \$66 million and \$50 million, respectively, of interest costs were capitalized. Interest costs in 1988 were \$150 million, including a capitalized amount of \$13 million.

Other expenses included \$19 million related to the closure of a foil conversion plant in the U.K. In 1989, other expenses included a \$12-million write-down of certain investments.

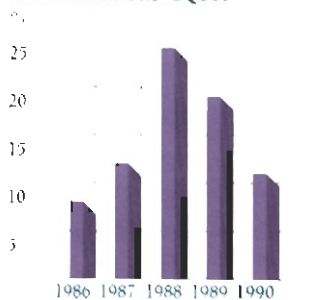
The effective income tax rate for the year was 27%, compared to 32% in 1989 and 37% in 1988. The low tax rate in 1990 was largely due to investment and other allowances, exchange translation items and non-taxable income.

Equity income rose to \$211 million from \$97 million in 1989. The increase was largely attributable to a non-operating gain arising from the creation, by NLM, of a 33% minority interest in a subsidiary now listed on the Tokyo Stock Exchange.

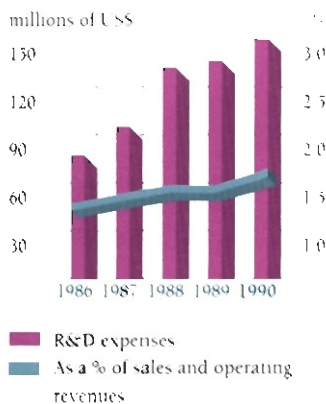
## LIQUIDITY AND CAPITAL RESOURCES

Cash generated from operations decreased to \$760 million in 1990, down from \$970 million in 1989 and the record level of \$1,370 million in 1988. Contributing to cash generation in 1990 was a \$92-million reduction in total inventories. Aluminum inventory tonnage was reduced by 17% in 1990. At the end of the year, the Company had 447 kt of aluminum (10 weeks' supply) in inventory, compared to 539 kt (13 weeks' supply) at the end of 1989.

### RETURN ON AVERAGE COMMON SHAREHOLDERS' EQUITY



### RESEARCH AND DEVELOPMENT EXPENSES



During 1990, Alcan purchased 5.4 million of its common shares on the open market. The Company enters 1991 with regulatory approval to purchase a further 13.6 million shares under a share repurchase program which expires on October 26, 1991. Since the inception of its first repurchase program in October 1987, Alcan has acquired 17.3 million of its common shares.

Alcan maintained its quarterly dividend at 28 cents per common share during 1990. Total dividends for the year were \$1.12 per share, equating to a yield of approximately 5%, based on the average price of the Company's common shares for that period. Total dividends were \$1.12 for 1989 and 59 cents for 1988. All per-share amounts reflect the three-for-two share split of May 1989.

**Investments:** Capital spending was \$1,367 million in 1990, down 7% from the \$1,466 million recorded in 1989, but still substantially higher than the \$676 million recorded in 1988. Proceeds on the disposal of investments amounted to \$122 million, compared to \$137 million in 1989 and \$35 million in 1988.

Approximately 40% of spending in 1990 was for major ongoing projects such as the construction of the Laterrière smelter in Quebec, the expansion of the Kemano hydroelectric facilities in British Columbia and the modernization and upgrading of rolled product facilities around the world.

As part of its long-term strategy, Alcan is expanding its aluminum scrap collection and recycling activities. In 1989, Alcan commissioned the world's largest used beverage can (UBC) recycling centre in Kentucky. In 1990, the Company acquired a secondary smelter in Tennessee and four collection businesses in Canada. Currently under construction is a 50 kt/y UBC recycling centre in the U.K. as well as scrap handling facilities at the Company's smelter in Australia.

During the year, the Company produced 281 kt of secondary aluminum, which was more than double the amount produced four years ago.

Given the uncertain outlook for aluminum demand, Alcan is using the flexibility built into its capital program to reduce spending in 1991 to approximately \$850 million, net of disposals. Included in this amount will be expenditures for the Kemano hydroelectric project and the expansion of the Logan Aluminum rolling mill in Kentucky.

**Financing:** With less cash generated from operations, Alcan looked to the debt markets to meet the balance of its financing requirements in 1990. During the year, the Company increased borrowings, net of repayments, by nearly \$800 million. Of this amount, \$482 million was raised through four debenture issues.

In January, the Company issued \$100 million of 9½% debentures, due in 2010. This was followed by an issue in May for \$150 million of 9.4% debentures, due in 1995.

In October, the Company made two additional issues, one for \$125 million of 9.7% debentures, due in 1996, and the other for CAN\$125 million of 12.45% debentures, due in 1997. The latter issue was swapped into U.S. dollars at an effective interest rate of 9.82%.

During the year, the Company issued commercial paper in Canada, which totalled \$184 million at year-end. Such commercial paper is fully backed by long-term credit lines with banks. In addition, notes payable amounting to \$50 million were issued under a note issuance facility from banks. Both borrowings bear interest at short-term floating rates.

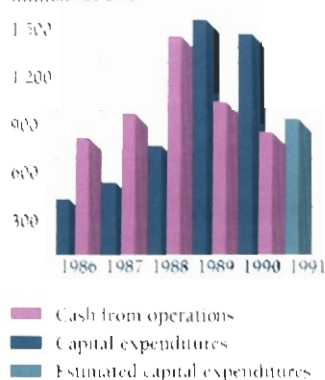
In 1990, short-term borrowings increased from \$581 million to \$736 million. Part of this increase reflects the operating cash requirements of Alcan's Brazilian subsidiary.

Term credit lines with banks were increased to \$1,529 million, from \$1,091 million in 1989. At the end of 1990, excluding amounts used to back outstanding commercial paper, \$806 million of these lines of credit were still available. These unused lines of credit, together with cash balances at year-end, gave Alcan total liquidity of \$877 million at year-end.

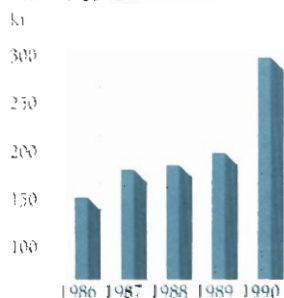
At the end of 1990, the ratio of total borrowings to equity was 33:67, up from 26:74 at the end of both 1989 and 1988.

In summary, Alcan continues to generate substantial funds from operations. The Company's continued strong financial condition allows access to additional external financing as required. Management believes that these financial resources are sufficient to meet anticipated cash requirements of operations and planned capital expenditures.

#### CAPITAL EXPENDITURES AND CASH FROM OPERATIONS



#### SECONDARY ALUMINUM PRODUCTION





## RESPONSIBILITY FOR THE ANNUAL REPORT

Alcan's management is responsible for the integrity and fair presentation of the financial statements and other information in the Annual Report. The financial statements have been prepared in accordance with accounting principles generally accepted in Canada, conforming in all material respects with those of the International Accounting Standards Committee. A reconciliation with accounting principles generally accepted in the United States is also presented. Financial and operating data elsewhere in the Annual Report are consistent with those contained in the accompanying financial statements.

Alcan's policy is to maintain systems of internal accounting and administrative controls of high quality consistent with reasonable cost. Such systems are designed to provide reasonable assurance that the financial information is accurate and reliable and that Company assets are adequately accounted for and safeguarded. The Audit Committee, which is comprised of directors who are not employees, meets regularly with representatives of Price Waterhouse, the shareholders' independent auditors, and with members of management including internal audit staff to satisfy themselves that Alcan's policy is being followed.

The financial statements have been reviewed by the Audit Committee and, together with the other required information in this Annual Report, have been approved by the Board of Directors. In addition, the financial statements have been audited by Price Waterhouse, whose report is provided below.

## OECD GUIDELINES

The Organization for Economic Cooperation and Development (OECD), which consists of 24 industrialized countries including Canada, has established guidelines setting out an acceptable framework of reciprocal rights and responsibilities between multinational enterprises and host governments.

Alcan supports and complies with the OECD guidelines and the Company's own statement, *Alcan, Its Purpose, Objectives and Policies*, is consistent with them. The statement, first published in 1978, was distributed in 11 languages to Alcan employees worldwide to strengthen the awareness of the basic principles and policies which have guided the conduct of Alcan's business over the years.

The statement, as well as the Company's annual 10-K report which contains a list of significant Alcan Group companies worldwide, is available to shareholders on request.

## AUDITORS' REPORT

### To the Shareholders of Alcan Aluminium Limited

We have audited the consolidated balance sheet of Alcan Aluminium Limited as at December 31, 1990, 1989 and 1988 and the consolidated statements of income, retained earnings and cash flows for each of the years in the three year period ended December 31, 1990. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

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

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 1990, 1989 and 1988 and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 1990, in accordance with generally accepted accounting principles in Canada.

Montreal, Canada  
February 7, 1991

Price Waterhouse  
Chartered Accountants

**CONSOLIDATED  
STATEMENT OF  
INCOME**

(IN MILLIONS OF US\$,  
EXCEPT PER SHARE  
AMOUNTS)

Years ended December 31	1990	1989	1988
<b>Revenues</b>			
Sales and operating revenues	\$8,757	\$8,839	\$8,529
Other income (note 12)	162	208	97
	<b>8,919</b>	<b>9,047</b>	<b>8,626</b>
<b>Costs and expenses</b>			
Cost of sales and operating expenses	6,996	6,682	6,072
Depreciation	393	333	316
Selling, administrative and general expenses	659	600	525
Research and development expenses	150	136	132
Interest (note 14)	197	130	137
Other expenses	65	62	91
	<b>8,460</b>	<b>7,943</b>	<b>7,273</b>
<b>Income before income taxes and other items</b>	<b>459</b>	<b>1,104</b>	<b>1,353</b>
Income taxes (note 4)	126	350	497
<b>Income before other items</b>	<b>333</b>	<b>754</b>	<b>856</b>
Equity income (note 5)	211	97	97
Minority interests	(1)	(16)	(22)
<b>Net income (note 3)</b>	<b>\$ 543</b>	<b>\$ 835</b>	<b>\$ 931</b>
Dividends on preference shares	22	21	30
Net income attributable to common shareholders	521	814	901
<b>Net income per common share (note 1)</b>	<b>\$ 2.33</b>	<b>\$ 3.58</b>	<b>\$ 3.85</b>
<b>Dividends per common share</b>	<b>\$ 1.12</b>	<b>\$ 1.12</b>	<b>\$ 0.59</b>

**CONSOLIDATED  
STATEMENT  
OF RETAINED  
EARNINGS**

(IN MILLIONS OF US\$)

Years ended December 31	1990	1989	1988
<b>Retained earnings - beginning of year</b>	<b>\$3,410</b>	<b>\$2,874</b>	<b>\$2,282</b>
Net income	543	835	931
	<b>3,953</b>	<b>3,709</b>	<b>3,213</b>
Premium on purchase of common shares (note 9)	81	23	161
Premium on redemption of preference shares	—	—	10
Dividends - Common	250	255	138
- Preference	22	21	30
<b>Retained earnings - end of year (note 11)</b>	<b>\$3,600</b>	<b>\$3,410</b>	<b>\$2,874</b>

December 31 1990                      1989                      1988

**ASSETS**

**Current assets**

Cash and time deposits	\$ 200	\$ 247	\$ 670
Receivables	1,383	1,345	1,403
Inventories			
Aluminum	1,016	1,169	1,067
Raw materials	370	335	290
Other supplies	401	375	340

**3,370                      3,471                      3,770**

Deferred charges and receivables 362                      326                      190

Investments (note 5) 750                      451                      375

**Property, plant and equipment**

Cost (note 6) 10,445                      9,098                      7,860

Accumulated depreciation 4,278                      3,838                      3,580

**6,167                      5,260                      4,280**

**Total assets                      \$10,649                      \$9,508                      \$8,615**

**LIABILITIES AND SHAREHOLDERS' EQUITY**

**Current liabilities**

Payables \$ 1,244                      \$1,327                      \$1,081

Short-term borrowings (note 14) 736                      581                      250

Income and other taxes 84                      123                      255

Debt maturing within one year 84                      64                      69

**2,148                      2,095                      1,655**

Debt not maturing within one year (note 7) 1,796                      1,079                      1,199

Deferred credits and other liabilities 392                      393                      362

Deferred income taxes 1,092                      1,044                      1,006

Minority interests 67                      75                      73

Redeemable retractable preference shares (note 8) 9                      9                      8

Redeemable non-retractable preference shares (note 8) 203                      203                      203

**Common shareholders' equity**

Common shares (note 9) 1,156                      1,162                      1,147

Retained earnings (note 11) 3,600                      3,410                      2,874

Deferred translation adjustments (note 2) 186                      38                      88

**4,942                      4,610                      4,109**

**Commitments and contingencies (note 13)**

**Total liabilities and shareholders' equity                      \$10,649                      \$9,508                      \$8,615**

Approved by the Board: David Morton, Director  
Allan A. Hodgson, Director

**CONSOLIDATED  
BALANCE SHEET**

(IN MILLIONS OF US\$)

**CONSOLIDATED  
STATEMENT OF  
CASH FLOWS**

(IN MILLIONS OF US\$)

Years ended December 31	1990	1989	1988
<b>Operating activities</b>			
Income before other items	\$ 333	\$ 754	\$ 856
Adjustments to determine cash from operating activities:			
Depreciation	393	333	316
Deferred income taxes	25	43	254
Dividends from related companies	41	34	25
Change in receivables	(38)	58	(196)
Change in inventories	92	(182)	(199)
Change in payables	(83)	246	169
Change in income and other taxes payable	(39)	(132)	197
Change in deferred charges, receivables and credits	12	(105)	5
Changes to operating working capital due to:			
Deferred translation adjustments	103	(14)	(37)
Acquisitions, disposals and deconsolidations	—	37	(9)
Other – net	(79)	(102)	(11)
Cash from operating activities	760	970	1,370
<b>Financing activities</b>			
New debt	792	269	225
Debt repayments	(136)	(360)	(209)
Short-term borrowings – net	656	(91)	16
Common shares issued	143	318	28
Common shares purchased for cancellation	22	23	16
Common shares purchased for cancellation	(109)	(31)	(213)
Redemption of preference shares	(109)	(31)	(213)
Redemption of preferred shares of subsidiary companies	—	—	(213)
Redemption of preferred shares of subsidiary companies	(1)	(1)	(21)
Dividends – Alcan shareholders (including preference)	(1)	(1)	(21)
– minority interests	(272)	(276)	(168)
– minority interests	(6)	(9)	(6)
Cash from (used for) financing activities	433	(67)	(561)
<b>Total cash available before investment activities</b>	<b>1,193</b>	<b>903</b>	<b>809</b>
<b>Investment activities</b>			
Property, plant and equipment	(1,255)	(1,273)	(660)
Investments	(112)	(193)	(16)
Sales of fixed assets and investments	(1,367)	(1,466)	(676)
Cash used for investment activities	122	137	35
Cash used for investment activities	(1,245)	(1,329)	(641)
Effect of exchange rate changes on cash and time deposits	5	3	9
Increase (Decrease) in cash and time deposits	(47)	(423)	177
Cash and time deposits – beginning of year	247	670	493
Cash and time deposits – end of year	\$ 200	\$ 247	\$ 670

## 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### PRINCIPLES OF CONSOLIDATION

The consolidated financial statements, which are expressed in U.S. dollars, the principal currency of Alcan's business, are prepared in accordance with generally accepted accounting principles in Canada. They include the accounts of all companies more than 50% owned. Joint ventures, irrespective of percentage of ownership, are included to the extent of Alcan's participation. In addition, consolidated net income includes Alcan's equity in the net income or loss of companies owned 50% or less where Alcan has significant influence over management, and the investment in these companies is increased or decreased by Alcan's share of their undistributed net income or loss since acquisition. Investments in companies in which Alcan does not have significant influence over management are carried at cost less amounts written off.

Intercompany items and transactions, including profits in inventories, are eliminated.

### OTHER

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

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

Net income per common share is calculated by dividing Net income attributable to common shareholders by the average number of common shares outstanding (1990: 224.0 million, 1989: 227.5 million, 1988: 234.2 million).

## 2. CURRENCY GAINS AND LOSSES

Gains and losses arising from foreign currency denominated items are included in other income or expense, except as described below.

The financial statements of self-sustaining foreign operations are translated into U.S. dollars at prevailing exchange rates. Differences arising from exchange rate changes are included in the Deferred translation adjustments (DTA) component of Common shareholders' equity. If there is a reduction in the Company's ownership in the foreign operation, the relevant portion of DTA is recognized in other income or expense at that time.

Gains or losses on forward exchange contracts, which serve to hedge certain identifiable foreign currency exposures, are recognized on maturity and are included in sales or in cost of sales and operating expenses, as applicable.

The following are the amounts recognized in the financial statements:

	1990	1989	1988
<b>Currency gains (losses)</b>	<b>\$ (27)</b>	<b>\$ 11</b>	<b>\$ (2)</b>
<b>Deferred translation adjustments:</b>			
Balance - beginning of year	\$ 38	\$ 88	\$ 100
Effect of exchange rate changes	110	(45)	(16)
Losses (Gains) realized	38	(5)	4
Balance - end of year	<b>\$ 186</b>	<b>\$ 38</b>	<b>\$ 88</b>
<b>Gains on forward exchange contracts</b>	<b>\$ 6</b>	<b>\$ 27</b>	<b>\$ 8</b>

Based on rates of exchange at December 31, 1990, there was an unrealized gain of \$72 on outstanding forward exchange contracts totalling \$2,027. These contracts mature over the next three years.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN MILLIONS OF U.S.  
EXCEPT WHERE INDICATED)

### 3. DIFFERENCES BETWEEN CANADIAN AND UNITED STATES GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (GAAP)

#### CURRENCY TRANSLATION

Under Canadian GAAP, unrealized exchange gains and losses on translation of long-term monetary items are deferred and amortized over the life of those items, whereas, under U.S. GAAP, such gains and losses are absorbed in income immediately. Also, under Canadian GAAP, deferred income taxes of companies using the temporal method are translated at historical exchange rates rather than at current exchange rates as used under U.S. GAAP.

#### TAX RECOVERY

Under Canadian GAAP, tax benefits of a purchased subsidiary arising from losses which occurred prior to acquisition are recorded in income in the year of realization. Under U.S. GAAP such tax benefits are recorded in the year of realization as a reduction of the fixed assets of the purchased subsidiary and are recognized in income through lower depreciation charges over the useful lives of these fixed assets.

The following table compares Net income as reported with the net income that would have been reported under U.S. GAAP together with the cumulative effect on Retained earnings and Deferred translation adjustments

	1990		1989		1988	
	As Reported	U.S. GAAP	As Reported	U.S. GAAP	As Reported	U.S. GAAP
<b>Net income</b>						
First quarter*	\$ 172	\$ 173	\$ 269	\$ 274	\$ 175	\$ 161
Second quarter*	84	75	244	250	243	244
Third quarter*	97	108	180	171	258	260
Fourth quarter*	190	181	142	132	255	249
<b>Net income from continuing operations</b>	<b>\$ 543</b>	<b>\$ 537</b>	<b>\$ 835</b>	<b>\$ 827</b>	<b>\$ 931</b>	<b>\$ 914</b>
<b>Net income attributable to common shareholders</b>	<b>\$ 521</b>	<b>\$ 515</b>	<b>\$ 814</b>	<b>\$ 806</b>	<b>\$ 901</b>	<b>\$ 884</b>
<b>Net income per common share</b>	<b>\$ 2.33</b>	<b>\$ 2.30</b>	<b>\$ 3.58</b>	<b>\$ 3.54</b>	<b>\$ 3.85</b>	<b>\$ 3.78</b>
<b>Retained earnings</b>						
December 31	\$3,600	\$3,612	\$3,410	\$3,428	\$2,874	\$2,900
<b>Deferred translation adjustments</b>						
December 31	\$ 186	\$ 128	\$ 38	\$ (19)	\$ 88	\$ 33

The difference between Deferred translation adjustments under "As Reported" and "U.S. GAAP" arises principally from the different treatment of exchange on long-term debt at January 1, 1983.

\*Unaudited

Net income from continuing operations and per common share amounts for the years 1990, 1989 and 1988 are as shown above. Net income from continuing operations on a U.S. GAAP basis for the years 1987 and 1986 was \$413 and \$234, respectively, compared to \$433 and \$251, respectively, as reported. Net income from continuing operations per common share on a U.S. GAAP basis for the years 1987 and 1986 was \$1.59 and \$0.89, respectively, compared to \$1.68 and \$0.97, respectively, as reported.

No effect has been provided for the Financial Accounting Standards Board Statement No. 96, Accounting for Income Taxes, nor for Statement No. 106, Employers' Accounting for Post Retirement Benefits Other Than Pensions. In line with current requirements, the Company proposes to adopt these standards commencing January 1, 1992, and January 1, 1993, respectively. The impact of adopting Statement No. 96 on U.S. GAAP earnings cannot reliably be estimated at this time and will depend upon tax legislation and exchange rates prevailing at that time. The Company's obligations for post retirement benefits, other than pensions, are not significant and therefore the adoption of Statement No. 106 will not have a material impact on U.S. GAAP net income.

#### 4. INCOME TAXES

	1990	1989	1988
<b>Income before income taxes and other items</b>			
Canada	\$133	\$ 658	\$ 756
Other countries	326	446	597
	<b>459</b>	<b>1,104</b>	<b>1,353</b>
<b>Current income taxes</b>			
Canada	(28)	164	138
Other countries	129	143	105
	<b>101</b>	<b>307</b>	<b>243</b>
<b>Deferred income taxes</b>			
Canada	30	42	149
Other countries	(5)	1	105
	<b>25</b>	<b>43</b>	<b>254</b>
<b>Income tax provision</b>	<b>\$126</b>	<b>\$ 350</b>	<b>\$ 497</b>

The composite of the applicable statutory corporate income tax rates in Canada is 37.9% (38.0% in 1989 and 41.4% in 1988). The following is a reconciliation of income taxes calculated at the above composite statutory rates with the income tax provision:

	1990	1989	1988
<b>Income taxes at the composite statutory rate</b>	<b>\$174</b>	<b>\$420</b>	<b>\$560</b>
<b>Increase (Reduction) attributable to:</b>			
Investment and other allowances	(27)	(39)	(30)
Exchange translation items	(40)	(2)	(13)
Reduced rate or tax exempt items	(5)	(24)	(12)
Foreign tax rate differences	2	(1)	(16)
Unrecorded tax benefits on losses - net	14	—	—
Other - net	8	(4)	8
<b>Income tax provision</b>	<b>\$126</b>	<b>\$350</b>	<b>\$497</b>

The principal items giving rise to the deferred portion of the income tax provision are:

	1990	1989	1988
Tax benefit carryovers	\$(19)	\$ 11	\$ 87
Depreciation	55	69	63
Research expense carryovers	(18)	3	39
Inventory valuation	1	(26)	36
Investment and foreign tax credits	5	(9)	17
Other - net	1	(5)	12
	<b>\$ 25</b>	<b>\$ 43</b>	<b>\$254</b>

## 5. INVESTMENTS

	1990	1989	1988
Companies accounted for under the equity method (note 1)	\$718	\$423	\$352
Other investments - at cost, less amounts written off	32	28	23
	<b>\$750</b>	<b>\$451</b>	<b>\$375</b>

The activities of the major equity-accounted companies are the procurement and processing of raw materials in Brazil, Australia and Guinea, integrated aluminum operations in Japan and aluminum rolling operations in Germany. Their combined results of operations and financial position are summarized below:

	1990	1989	1988
<b>Results of operations for the year</b>			
Revenues	\$6,893	\$6,234	\$5,827
Costs and expenses	5,993	5,634	5,322
Income before income taxes	900	600	505
Income taxes	364	333	230
Net income	\$ 536	\$ 267	\$ 275
Alcan's share of net income	\$ 211	\$ 97	\$ 97
Dividends received by Alcan	\$ 41	\$ 34	\$ 25
<b>Financial position at December 31</b>			
Current assets	\$4,134	\$3,294	\$2,788
Current liabilities	3,111	2,985	2,665
Working capital	1,023	309	123
Property, plant and equipment - net	2,227	1,950	1,864
Other assets - net	67	280	274
	3,317	2,539	2,261
Debt not maturing within one year	1,308	1,330	1,211
Net assets	\$2,009	\$1,209	\$1,050
Alcan's equity in net assets	\$ 718	\$ 423	\$ 352

Equity income in 1990 includes \$160 (1989, \$40; 1988, \$55) from Nippon Light Metal Company, Ltd. (NLM). The increase in 1990 arose largely from gains recorded by NLM on the sale of a part of its holding in a subsidiary company and from the issuance of shares to third parties by that subsidiary at a price above book value.

## 6. PROPERTY, PLANT AND EQUIPMENT, AT COST

	1990	1989	1988
Land, and property rights	\$ 148	\$ 133	\$ 114
Buildings, machinery and equipment	9,311	7,894	7,246
Construction work in progress	986	1,071	500
	<b>\$10,445</b>	<b>\$9,098</b>	<b>\$7,860</b>

Capital expenditures, net of disposals, are expected to be about \$850 in 1991.



## 7. DEBT NOT MATURING WITHIN ONE YEAR

	1990	1989	1988
<b>Alcan Aluminium Limited</b>			
Commercial paper (a)	\$ 184	\$ —	\$ —
Notes payable (b)	50	—	—
15¾% Eurodollar debentures	—	—	79
14¼% Notes	—	—	100
9.4% Debentures, due 1995	150	—	—
11¼% Debentures, due 1995	100	100	100
9.7% Debentures, due 1996	125	—	—
12.45% Canadian dollar debentures, due 1997 (c)	107	—	—
9¾% Debentures, due 1998	100	100	100
5¾% Swiss franc bonds, due 2003 (c)	105	105	105
9.5% Debentures, due 2010 (d)	100	—	—
9¾% Sinking fund debentures, due 2019 (d)	150	150	—
Other debt, due 1991-2001	29	36	48
<b>Alcan Aluminum Corporation</b>			
9.956% Bank loan, due 1995	25	25	25
Other debt, due 1991-2013	25	26	28
<b>Alcan Empreendimentos Ltda and subsidiary companies (Brazil)</b>			
Bank loans, due 1991-1992 (e)	13	15	34
Other debt, due 1991-1994	23	26	22
<b>British Alcan Aluminium plc and subsidiary companies</b>			
Bank loans, due 1991-1999 (£45) (e)	85	112	156
Bank loan, due 1998 (£45) (e)	85	72	—
10½% Debentures, due 2011 (£30)	57	48	54
Other debt, due 1991-2001 (£9)	17	16	21
<b>Alcan Deutschland GmbH and subsidiary companies</b>			
7.66% Bank loans, due 1991-2001 (DM85)	56	61	68
Bank loans, due 1996 (DM55) (e)	36	33	32
<b>Other companies</b>			
Bank loans, due 1991-1997 (e)	129	82	52
5¾% Swiss franc bank loan, due 1993 (SFr40) (f)	31	26	26
4% Eurodollar exchangeable debentures, due 2003 (g)	33	45	150
Other debt, due 1991-2002	65	65	68
	<b>1,880</b>	<b>1,143</b>	<b>1,268</b>
Debt maturing within one year included in current liabilities	<b>(84)</b>	<b>(64)</b>	<b>(69)</b>
	<b>\$1,796</b>	<b>\$1,079</b>	<b>\$1,199</b>

(a) Commercial paper borrowings are issued in Canada at market rates and are fully backed by long term credit agreements amounting to CAN\$250.

(b) Notes payable are issued under a \$200 note issuance facility with a group of banks and bear interest at a rate related to the London Interbank Offered Rate (LIBOR). They mature five years from the date of issue.

(c) The Canadian dollar debentures were issued as CAN\$125 and the Swiss franc bonds as SFr178. Both debts were immediately swapped for \$107 and \$105 at effective interest rates of 9.82% and 8.98%, respectively. The Company may be exposed to losses if the counterparties to these swap agreements fail to perform, however, such non-performance is not anticipated.

(d) In certain circumstances prior to January 30, 1995, for the 9.5% debentures or July 30, 1994, for the 9¾% sinking fund debentures, the rate of interest must be adjusted or the debentures redeemed by the Company at 103%. If similar circumstances occur between January 30, 1995, and January 30, 2000, for the 9.5% debentures or between July 30, 1994, and July 30, 1999, for the 9¾% debentures, the holders may retract the debentures at 100%.

(continued on next page)

## 7. DEBT NOT MATURING WITHIN ONE YEAR (cont'd)

- (e) Interest rates fluctuate principally with the lender's prime commercial rate, or the commercial bank bill rate, or are related to the LIBOR.
- (f) The debt is treated as a hedge of the Company's investment in Switzerland and, accordingly, the exchange gain or loss is allocated to the Deferred translation adjustments component of Common shareholders' equity.
- (g) Debenture holders are entitled to receive at their option 1,772 common shares held by the Company in Nippon Light Metal Company, Ltd., a related company, in exchange for each ten thousand dollar principal amount of debentures.

Based on rates of exchange at year-end, debt repayment requirements over the next five years amount to \$84 in 1991, \$82 in 1992, \$277 in 1993, \$74 in 1994 and \$376 in 1995.

## 8. PREFERENCE SHARES

### AUTHORIZED:

2,000,000 Cumulative Redeemable First Preferred Shares; an unlimited number of Preference Shares issuable in series; and an unlimited number of Junior Preferred Shares. All shares are without nominal or par value.

### AUTHORIZED AND OUTSTANDING:

	Number (in thousands)			Stated Value		
	1990	1989	1988	1990	1989	1988
<b>Redeemable retractable preference shares</b>						
Preference, series F	400	400	400	\$ 9	\$ 9	\$ 8
<b>Redeemable non-retractable preference shares</b>						
Preference, series C	5,700	5,700	5,700	\$106	\$106	\$106
Preference, series D	1,700	1,700	1,700	43	43	43
Preference, series E	3,000	3,000	3,000	54	54	54
				<b>\$203</b>	<b>\$203</b>	<b>\$203</b>

Outstanding shares are eligible for quarterly dividends as follows:

- Preference, series C and D – An amount related to the average of the Canadian prime interest rates for Series C and the average of the U.S. prime interest rates for Series D quoted by two major Canadian banks for stated periods.
- Preference, series E – CAN\$2.16 per share per annum up to October 31, 1991, and thereafter at an amount related to the average of the Canadian prime interest rates quoted by two major Canadian banks for stated periods.
- Preference, series F – CAN\$2.00 per share per annum.

Outstanding shares may be called for redemption at the option of the Company on 30 days' notice as follows:

- Preference, series C (denominated in Canadian dollars) and D (denominated in U.S. dollars) – At \$25.60 per share during the twelve-month period commencing January 1, 1991, and reducing by \$0.30 per share in each of the succeeding twelve-month periods until December 31, 1992, after which the shares may be redeemed at \$25.00 per share.
- Preference, series E – At CAN\$25.00 per share commencing October 31, 1991.
- Preference, series F – At CAN\$25.00 per share commencing March 31, 1992, (retractable at the option of the holder at CAN\$25.00 per share on March 31, 1992).

Any partial redemption must be made on a pro-rata basis or by lot.

## 9. COMMON SHARES

The authorized common share capital is an unlimited number of common shares without nominal or par value. Changes in outstanding common shares are summarized below:

	Number (in thousands)			Stated Value		
	1990	1989	1988	1990	1989	1988
<b>Outstanding – beginning of year</b>	<b>227,071</b>	227,539	236,964	<b>\$1,162</b>	\$1,147	\$1,183
<b>Purchased for cancellation</b>	<b>(5,444)</b>	(1,556)	(10,340)	<b>(28)</b>	(8)	(52)
<b>Issued for cash:</b>						
Executive share option plan	145	448	452	3	8	7
Dividend reinvestment and share purchase plans	895	640	463	19	15	9
<b>Outstanding – end of year</b>	<b>222,667</b>	227,071	227,539	<b>\$1,156</b>	\$1,162	\$1,147

Under the executive share option plan, certain employees may purchase common shares at a price not less than 90% of the market value on the effective date of each option. The average price of the shares covered by the outstanding options is CAN\$22.77 per share. These options expire at various dates during the next 10 years. Changes in shares under option are summarized below:

	1990	1989	1988
<b>Outstanding – beginning of year</b>	<b>1,188,035</b>	859,411	1,394,379
Granted	509,500	864,000	—
Exercised	(145,482)	(447,957)	(452,324)
Cancelled	(34,883)	(87,419)	(82,644)
<b>Outstanding – end of year</b>	<b>1,517,170</b>	1,188,035	859,411

During 1990, the Company purchased and cancelled 5,444,400 (1,555,600 in 1989 and 10,340,250 in 1988) of its common shares at a total cost of \$109 (\$31 in 1989 and \$213 in 1988) and at year-end had regulatory approval to purchase an additional 13,606,000 shares to October 26, 1991.

### SHAREHOLDER RIGHTS PLAN

In 1990, shareholders approved a plan whereby each common share of the Company carries one right to purchase additional common shares. Such rights are not currently exercisable but may become so in a variety of circumstances, the most important of which will arise upon the acquisition by one person, or a related group, of 20% or more of the Company's outstanding voting shares. Holders of rights, with the exception of such person or group, in such circumstances will be entitled to purchase from the Company, upon payment of the exercise price (currently \$100.00), such number of additional common shares as can be purchased for twice the exercise price based on the market value of the Company's common shares at the time the rights become exercisable. Also, in the event of a proposed transaction such as an amalgamation, all holders of the Company's common shares will have the right to purchase from the other amalgamating entity, common shares of that entity at a 50% discount to market.

The rights expire in 1999, but may be redeemed earlier by the Company for 1 cent per right in certain events. In addition, the Plan must be submitted for re-confirmation by the shareholders at the 1995 Annual Meeting.

The Plan provides a procedure whereby a person making a take-over bid, satisfying certain fairness tests, and provided such person holds 5% or less of the Company's voting shares at the time of the bid, may request shareholder approval of the bid at a shareholder meeting. If the shareholders, other than such person, approve the bid by a majority of votes cast, the bid will be permitted to proceed without the rights becoming exercisable.

## 10. ABATABLE PREFERRED SHARES

Payment terms for assets acquired in January 1985 from Atlantic Richfield Company included contingent consideration in the form of abatable preferred shares with an initial total nominal value of \$400. Of these, \$200 have been fully abated and \$40 are expected to be fully abated based on 1990 metal prices. The outstanding shares will either qualify for dividend and redemption or be subject to abatement depending upon whether or not Alcan and three other designated aluminum producers realize certain specified prices for ingot products, ranging from \$1.47 per pound in 1991 to \$1.99 per pound in 1994.

To the extent the shares are not abated, the qualifying amount will be reflected in the financial statements and a corresponding amount, together with a cumulative dividend of 9% per annum payable thereon retroactive to the date of issue (January 18, 1985), will be added to the book value of the assets acquired and amortized against income over the remaining lives of the fixed assets acquired. Such qualifying shares are subject to retraction by the holder on January 18, 1997, but may be redeemed earlier at the option of Alcan.

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## 11. RETAINED EARNINGS

Consolidated retained earnings at December 31, 1990, include:

- \$406 of undistributed earnings of companies accounted for under the equity method.
  - \$1,846 of undistributed earnings of subsidiaries, some part of which may be subject to certain taxes and other restrictions on distribution to the parent company; no provision is made for such taxes because these earnings are reinvested in the business.
- 

## 12. OTHER INCOME

Other income includes a gain of \$11 (1989: \$101) resulting from \$12 (1989: \$105) of the Company's debentures being tendered in exchange for shares held by Alcan in Nippon Light Metal Company, Ltd. (NLM), a related company in Japan. Also included is a gain of \$19 (1989: Nil) arising from the issue of shares by NLM to third parties at a price above book value. As a result of these transactions, Alcan's holding in NLM was reduced from 46.1% to 45.0%.

Other income in 1990 also includes \$43 (net of DTA) on the sale of the Company's 24% interest in Industria Española del Aluminio, S.A. in Spain.

These gains have been allocated to Pacific and Europe respectively in the Information by Geographic Areas (note 16).

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## 13. COMMITMENTS AND CONTINGENCIES

To ensure long-term supplies of bauxite and access to alumina and fabricating facilities, Alcan participates in several long-term cost sharing arrangements with related companies. Alcan's fixed and determinable commitments, which comprise long-term debt service and "take-or-pay" obligations, are estimated at \$129 in 1991, \$128 in 1992, \$119 in 1993, \$117 in 1994, \$117 in 1995 and \$219 thereafter. Total charges from these related companies were \$322 in 1990, \$308 in 1989 and \$267 in 1988. In addition, there are guarantees for the repayment of approximately \$21 of indebtedness by related companies. Alcan believes that none of these guarantees is likely to be called. Commitments with third parties for supplies of other inputs are estimated at \$52 in 1991, \$52 in 1992, \$51 in 1993, \$45 in 1994, \$45 in 1995 and \$292 thereafter. Total fixed charges from these third parties were \$47 in 1990, \$51 in 1989 and \$33 in 1988.

Minimum rental obligations are estimated at \$72 in 1991, \$62 in 1992, \$49 in 1993, \$32 in 1994, \$26 in 1995 and lesser annual amounts thereafter. Total rental expenses amounted to \$113 in 1990, \$102 in 1989 and \$102 in 1988.

Alcan, in the course of its operations, is subject to environmental and other claims, lawsuits and contingencies. Accruals have been made in specific instances where it is probable that liabilities will be incurred and where such liabilities can be reasonably estimated. Although it is possible that liabilities may be incurred in other instances for which no accruals have been made, the Company does not believe that such an outcome will significantly impair its operations or have a material adverse effect on its financial position.

In addition, see reference to forward exchange contracts in note 2, capital expenditures in note 6, debt repayments in note 7, preference share retractions in note 8, and abatable preferred shares in note 10.

## 14. SUPPLEMENTARY INFORMATION

	1990	1989	1988
<b>Income statement</b>			
Repairs and maintenance	\$688	\$626	\$539
Taxes, other than payroll and income taxes	134	119	138
Interest on long-term debt	160	124	119
Capitalized interest	(66)	(50)	(13)
<b>Balance sheet – Short-term borrowings</b>			
Commercial paper*	\$279	\$ —	\$ —
Other (principally from banks)	457	581	250
*The Company has revolving credit agreements in Canada and the United States totalling \$800 which provide for loans bearing interest at rates related to LIBOR. Of this amount, \$279 had been used as a back-up facility for commercial paper, leaving \$521 available at year-end.			
<b>Statement of cash flows</b>			
Interest paid	\$238	\$180	\$152
Income taxes paid	118	432	37
All time deposits qualify as cash equivalents.			

## 15. PENSION PLANS

Alcan and its subsidiaries have established pension plans in the principal countries where they operate, for the greater part contributory and generally open to all employees. Most plans provide pension benefits that are based on the employee's highest average eligible compensation during any consecutive 36-month period before retirement. Plan assets consist primarily of listed stocks and bonds.

Alcan's funding policy is to contribute the amount required to provide for benefits attributed to service to date with projection of salaries to retirement and to amortize unfunded actuarial liabilities for the most part over periods of 15 years or less.

PENSION COST	1990	1989	1988
Service cost for the year	\$ 94	\$ 83	\$ 76
Interest cost on projected benefit obligations	204	169	153
Actual loss (gain) on assets	107	(474)	(222)
Variance of actual return from expected long-term rate of 8.5% (8.3% in 1989 and 8.1% in 1988) being deferred, and amortization of other gains and losses	(373)	251	22
Net cost for the year	\$ 32	\$ 29	\$ 29

The plans' funded status at December 31 was:

Actuarial accumulated benefit obligation, which is substantially vested	\$2,362	\$2,119	\$1,771
Plan assets at market value	2,788	2,880	2,468
Actuarial projected benefit obligation based on average compensation growth of 6.3% (6.2% in 1989 and 6.2% in 1988) and discount rate of 8.1% (8.0% in 1989 and 8.2% in 1988)	2,770	2,506	2,080
Plan assets in excess of projected benefit obligation	18	374	388
Unamortized actuarial gains – net*	(114)	(466)	(218)
Unamortized prior service cost*	345	360	134
Unamortized portion of actuarial surplus at January 1, 1986*	(222)	(249)	(301)
Pension asset in balance sheet	\$ 27	\$ 19	\$ 3

\*Being amortized over expected average remaining service of employees, generally 15 years.

## 16. INFORMATION BY GEOGRAPHIC AREAS

	Location	1990	1989	1988
Sales and operating revenues – subsidiaries	Canada	\$ 2,207	\$2,553	\$2,104
	United States	341	408	197
	Latin America	48	35	61
	Europe	195	210	205
	Pacific	103	96	87
	All other	317	355	314
	Sub-total	3,211	3,657	2,968
	Consolidation eliminations	(3,211)	(3,657)	(2,968)
Total	\$ —	\$ —	\$ —	
Sales and operating revenues – third parties	Canada	\$1,171	\$1,265	\$1,226
	United States	2,876	3,073	2,967
	Latin America	537	523	416
	Europe	3,169	2,878	2,756
	Pacific	922	989	1,074
	All other	82	111	90
	Total	\$8,757	\$8,839	\$8,529
	Sales to subsidiary companies are made at fair market prices recognizing volume continuity of supply and other factors.			
Net income (Loss)	Canada	\$ 29	\$ 368	\$ 453
	United States	83	15	101
	Latin America	(12)	63	72
	Europe (note 12)	78	73	120
	Pacific (note 12)	264	243	176
	All other	96	79	64
	Consolidation eliminations	5	(6)	(55)
	Total	\$543	\$ 835	\$ 931
Total assets at December 31	Canada	\$ 3,768	\$3,509	\$3,160
	United States	1,710	1,545	1,448
	Latin America	858	814	724
	Europe	3,125	2,819	2,726
	Pacific	1,334	1,000	1,009
	All other	786	637	673
	Consolidation eliminations	(932)	(816)	(1,125)
	Total	\$10,649	\$9,508	\$8,615
Capital expenditures	Canada	\$ 616	\$ 782	\$ 297
	United States	227	259	106
	Latin America	77	89	32
	Europe	244	216	201
	Pacific	158	36	31
	All other	45	84	9
	Total	\$1,367	\$1,466	\$ 676
	Average number of employees (in thousands)	Canada	16	16
United States		7	7	7
Latin America		9	9	9
Europe		18	18	18
Pacific		5	5	5
All other		2	2	2
Total		57	57	56

(unaudited)	First	Second	Third	Fourth	Year
<b>1990</b>					
Revenues	\$2,189	\$2,174	\$2,270	\$2,286	\$8,919
Cost of sales and operating expenses	1,674	1,715	1,796	1,811	6,996
Depreciation	92	95	97	109	393
Income taxes	35	41	45	5	126
Other items	216	239	235	171	861
Net income	\$ 172	\$ 84	\$ 97	\$ 190	\$ 543
Dividends on preference shares	(5)	(6)	(5)	(6)	(22)
Net income attributable to common shareholders	167	78	92	184	521
Net income per common share (in US\$)*	\$ 0.74	\$ 0.35	\$ 0.41	\$ 0.83	\$ 2.33
<b>1989</b>					
Revenues	\$2,306	\$2,396	\$2,207	\$2,138	\$9,047
Cost of sales and operating expenses	1,628	1,729	1,676	1,649	6,682
Depreciation	81	80	85	87	333
Income taxes	128	123	73	26	350
Other items	200	220	193	234	847
Net income	\$ 269	\$ 244	\$ 180	\$ 142	\$ 835
Dividends on preference shares	(5)	(5)	(5)	(6)	(21)
Net income attributable to common shareholders	264	239	175	136	814
Net income per common share (in US\$)*	\$ 1.16	\$ 1.05	\$ 0.77	\$ 0.60	\$ 3.38
<b>1988</b>					
Revenues	\$1,969	\$2,218	\$2,185	\$2,254	\$8,626
Cost of sales and operating expenses	1,440	1,572	1,495	1,565	6,072
Depreciation	76	74	81	85	316
Income taxes	84	130	153	130	497
Other items	194	199	198	219	810
Net income	\$ 175	\$ 243	\$ 258	\$ 255	\$ 931
Dividends on preference shares	(9)	(9)	(8)	(4)	(30)
Net income attributable to common shareholders	166	234	250	251	901
Net income per common share (in US\$)*	\$ 0.70	\$ 0.99	\$ 1.07	\$ 1.09	\$ 3.85

\*Net income per common share calculations are based on the average number of common shares outstanding in each period

**QUARTERLY  
FINANCIAL DATA**  
(IN MILLIONS OF US\$)

**ELEVEN-YEAR  
SUMMARY**

		1990
<b>CONSOLIDATED INCOME STATEMENT ITEMS</b> (in millions of US\$)	<b>Revenues</b>	
	Sales and operating revenues	8,757
	Other income	162
	<b>Total revenues</b>	<b>8,919</b>
	<b>Costs and expenses</b>	
	Cost of sales and operating expenses	6,996
	Depreciation	393
	Selling, administrative and general expenses	659
	Research and development expenses	150
	Interest	197
	Special charges and rationalization expenses	—
	Other expenses	65
	Income taxes	126
	Minority interests	(1)
	Equity income	211
	<b>*Net income (Loss) from continuing operations</b>	<b>543</b>
	Extraordinary gain	—
<b>*Net income (Loss)</b>	<b>543</b>	
Preference dividends	22	
<b>*Net income (Loss) attributable to common shareholders</b>	<b>521</b>	
<b>CONSOLIDATED BALANCE SHEET ITEMS</b> (in millions of US\$)	Working capital	1,222
	Property, plant and equipment – net	6,167
	<b>Total assets</b>	<b>10,649</b>
	Long-term debt	1,796
	Deferred income taxes	1,092
	Preference shares	212
	<b>Common shareholders' equity</b>	<b>4,942</b>
<b>PER COMMON SHARE</b> (in US\$)	<b>*Net income (Loss) from continuing operations</b>	<b>2.33</b>
	<b>*Net income (Loss)</b>	<b>2.33</b>
	Dividends paid	1.12
	<b>Common shareholders' equity</b>	<b>22.19</b>
	Market price – NYSE close	19.50
<b>OPERATING DATA</b> (in thousands of tonnes)	<b>Consolidated aluminum shipments</b>	
	Ingot and ingot products	857
	Fabricated products	1,488
	<b>Total aluminum shipments</b>	<b>2,345</b>
	<b>Consolidated primary aluminum production</b>	<b>1,651</b>
	<b>Consolidated aluminum purchases</b>	<b>646</b>
	<b>Consolidated aluminum inventories (end of year)</b>	<b>447</b>
	<b>Primary aluminum capacity</b>	
	Consolidated subsidiaries	1,685
	<b>Total consolidated subsidiaries and related companies</b>	<b>1,836</b>
<b>OTHER STATISTICS</b>	<b>Cash from operating activities (in millions of US\$)</b>	<b>760</b>
	<b>Capital expenditures (in millions of US\$)</b>	<b>1,367</b>
	<b>Ratio of total borrowings to equity (%)</b>	<b>33:67</b>
	<b>Average number of employees (in thousands)</b>	<b>57</b>
	<b>Common shareholders (in thousands at end of year)</b>	<b>38</b>
	<b>Common shares outstanding (in millions at end of year)</b>	<b>223</b>
	Registered in Canada (%)	54
	Registered in the United States (%)	44
	Registered in other countries (%)	2
<b>Return on average common shareholders' equity (%)</b>	<b>11</b>	

\* All net income figures include the after-tax impact of unusual charges, such as special charges and rationalization expenses of \$252 million (\$1.13 per common share) in 1985, and the gains and losses from the disposal of various assets and investments.

All per-share amounts reflect the three-for-two share split on May 9, 1989.

See note 3 to the financial statements for U.S. GAAP information.



1989	1988	1987	1986	1985	1984	1983	1982	1981	1980
8,839	8,529	6,797	5,956	5,718	5,467	5,208	4,644	4,978	5,215
208	97	81	100	113	109	97	65	75	49
9,047	8,626	6,878	6,056	5,831	5,576	5,305	4,709	5,053	5,264
6,682	6,072	5,117	4,635	4,692	4,228	4,185	3,818	3,801	3,669
333	316	296	276	258	250	238	221	202	162
600	525	447	406	385	393	392	362	365	319
136	132	95	77	77	66	60	55	48	47
130	137	177	202	232	244	255	234	186	107
—	—	—	—	416	—	—	—	—	—
62	91	113	52	53	38	32	30	22	23
350	497	230	160	(87)	151	73	(9)	142	393
(16)	(22)	(5)	(2)	(3)	(5)	9	3	(5)	(16)
97	97	35	5	15	46	10	(46)	(4)	26
835	931	433	251	(183)	247	89	(45)	278	554
—	—	—	26	36	37	15	—	—	—
835	931	433	277	(147)	284	104	(45)	278	554
21	30	36	33	33	31	31	13	14	12
814	901	397	244	(180)	253	73	(58)	264	542
1,376	2,115	2,039	1,660	1,452	1,488	1,452	1,361	1,486	1,373
5,260	4,280	3,965	3,949	3,875	3,600	3,550	3,701	3,267	2,441
9,508	8,615	7,660	7,118	6,861	6,690	6,600	6,632	6,339	5,470
1,079	1,199	1,336	1,366	1,600	1,350	1,499	1,749	1,589	930
1,044	1,006	754	554	409	562	537	535	564	514
212	211	405	421	398	405	337	340	139	140
4,610	4,109	3,565	3,116	2,746	2,916	2,799	2,511	2,631	2,463
3.58	3.85	1.68	0.97	(0.97)	0.98	0.29	(0.31)	1.44	2.98
3.58	3.85	1.68	1.09	(0.81)	1.15	0.36	(0.31)	1.44	2.98
1.12	0.59	0.39	0.35	0.49	0.53	0.40	0.60	0.80	0.60
20.30	18.06	15.05	13.18	12.23	13.07	12.83	13.10	14.15	13.53
22.88	21.75	17.92	12.55	12.89	12.78	17.67	12.39	10.22	14.78
743	832	787	731	878	577	728	758	510	533
1,518	1,446	1,410	1,388	1,340	1,213	1,174	949	1,037	1,055
2,261	2,278	2,197	2,119	2,218	1,790	1,902	1,707	1,547	1,588
1,643	1,619	1,587	1,641	1,644	1,560	1,383	1,297	1,395	1,302
718	716	593	489	465	496	520	417	425	450
539	480	496	579	625	708	534	620	666	485
1,685	1,680	1,680	1,841	1,841	1,646	1,619	1,593	1,483	1,426
1,836	1,831	1,861	1,905	1,905	2,097	2,070	2,035	1,987	1,930
970	1,370	879	725	586	489	324	255	240	675
1,466	676	415	342	597	427	382	643	974	752
26:74	26:74	27:73	31:69	37:63	34:66	36:64	43:57	41:59	30:70
57	56	63	67	70	70	71	67	67	66
40	41	46	49	59	67	59	51	47	37
227	228	237	237	225	224	218	192	188	182
44	54	44	43	46	56	48	51	48	39
54	43	53	52	49	39	48	42	45	53
2	3	3	5	5	5	4	7	7	8
19	24	12	8	(6)	9	3	(2)	10	24

## DIRECTORS

**Sonja I. Bata, O.C.**<sup>1</sup>  
Director of Bata Limited, *Toronto*

**Laurent Beaudoin, C.C.**  
Chairman and Chief Executive Officer of Bombardier Inc., *Montreal*

**W. R. C. Blundell**<sup>2</sup>  
Director of various companies, *Toronto*

**Jacques Bougie**  
President and Chief Operating Officer of Alcan Aluminium Limited, *Montreal*

**Warren Chippindale, F.C.A.**  
Director of various companies, *Montreal*

**Dr. John R. Evans, C.C.**  
Chairman of Allelix Biopharmaceuticals Inc., *Toronto*

**Dr. L. E. Fouraker**<sup>3</sup>  
Director and trustee of various organizations, *Boston*

**Allan E. Gotlieb, C.C.**<sup>4</sup>  
Former Ambassador of Canada to the United States, *Toronto*

**Allan A. Hodgson**  
Vice President and Chief Financial Officer of Alcan Aluminium Limited, *Montreal*

**David Morton**<sup>1</sup>  
Chairman and Chief Executive Officer of Alcan Aluminium Limited, *Montreal*

**J. E. Newall**<sup>2</sup>  
Chairman and Chief Executive Officer of Du Pont Canada Inc., *Toronto*

**The Hon. John L. Nichol, O.C.**<sup>3</sup>  
President of a private investment company, *Vancouver*

**Dr. Peter H. Pearse, C.M.**<sup>4</sup>  
Professor of forestry, the University of British Columbia, *Vancouver*

**The Rt. Hon. Lord Peyton of Yeovil**<sup>1</sup>  
Director of various companies, *London*

**The Hon. Jean-Marie Poitras, O.C.**<sup>2</sup>  
Director of various companies, *Quebec City*

**George Russell, C.B.E.**<sup>3</sup>  
Chairman of Marley plc., *Kent, England*

## OFFICERS

**David Morton**  
Chairman and Chief Executive Officer

**Jacques Bougie**  
President and Chief Operating Officer

**Jeff W. Edington**  
Vice President, Research and Technology

**Allan A. Hodgson**  
Vice President and Chief Financial Officer

**John W. Kelly, M.D.**  
Vice President  
Occupational Health and Safety

**Michael C. d'E. Miller**  
Vice President, Corporate Affairs

**Jean Minville**  
Vice President, Environment

**Owen M. Ness**  
Vice President, Personnel

**P. K. Pal**  
Vice President, Chief Legal Officer and Secretary

**Maurice D. Taylor**  
Treasurer

**Suresh Thadhani**  
Controller

## PRINCIPAL OPERATING EXECUTIVES

**Stephen R. Brown\***  
President, Alcan Rolled Products Company (Canada and U.S.A.), *Cleveland, Ohio*

**Claude Chamberland**  
President, Alcan Smelters and Chemicals Limited, *Montreal*

**Gerald Clark**  
Executive Director, Raw Materials, *Montreal*

**David W. Hackbirth**  
President, Alcan Aluminum Corporation, *Cleveland, Ohio*

**S. Bruce Heister**  
President, Alcan Pacific Limited, *Tokyo*

**Roger J. Maggs**  
President, Metal Marketing and Recycling, *Montreal*

**Douglas M. Ritchie**  
Managing Director and Chief Executive Officer, British Alcan Aluminium plc., *Chalfont Park, England*

**E. Ian Rugeroni**  
President, Alcan Enterprises (Canada and U.S.A.), *Montreal*

**Everaldo N. Santos**  
President and Chief Executive Officer, Alcan Alumínio do Brasil S.A., *São Paulo*

**Reinhold Wagner**  
President and Chief Executive Officer, Alcan Deutschland GmbH, *Eschborn, Germany*

\*Replaced by Robert I. Ball with effect from February 13, 1991

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

<sup>2</sup>Chairman of Audit Committee

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

<sup>4</sup>Chairman of Personnel Committee

## COMMON SHARES

The principal markets for trading in the common shares are the New York and Toronto stock exchanges. The common shares are also traded on the Montreal, Vancouver, Midwest, Pacific, London, Paris, Brussels, Amsterdam, Frankfurt, Basel, Geneva, Zurich and Tokyo exchanges.

The transfer agents for the common shares are National Trust Company in Montreal, Toronto, Winnipeg, Regina, Calgary and Vancouver; Manufacturers Hanover Trust Company in New York; Manufacturers Hanover Trust Company of California in San Francisco; and The Royal Trust Company in London.

## PREFERENCE SHARES

The preference shares are listed on the Montreal, Toronto and Vancouver stock exchanges. The transfer agent for the preference shares is The Royal Trust Company.

## DIVIDENDS AND PRICES PER COMMON SHARE

1990	Dividend	Price*					
		NYSE - US\$			TSE - CANS		
Quarter	US\$	High	Low	Close	High	Low	Close
First	0.28	24½	18⅞	21¼	28½	22⅞	24¼
Second	0.28	23⅞	19⅞	22½	27½	22⅞	26½
Third	0.28	24½	19⅞	20¼	28¼	22¾	23¼
Fourth	0.28	21	16⅞	19½	24⅞	19⅞	22½
Year	1.12						
<b>1989**</b>							
Quarter		High	Low	Close	High	Low	Close
First	0.28	24	20¼	21⅞	28½	24	25
Second	0.28	22⅞	20¼	21¼	27⅞	24⅞	26
Third	0.28	25⅞	21⅞	23	29½	25⅞	26⅞
Fourth	0.28	24⅞	21	22⅞	28⅞	24½	26½
Year	1.12						

\* The share prices are those reported as New York Stock Exchange - Consolidated Trading and reported by the Toronto Stock Exchange.

\*\* Amounts reflect the three-for-two common share split of May 9, 1989.

## INVESTMENT PLANS

The Company offers holders of common shares two convenient ways of buying additional Alcan common shares without payment of brokerage commissions. These are known as the Dividend Reinvestment Plan and the Share Purchase Plan, and copies may be obtained from Alcan Shareholder Services at the address below.

## SECURITIES REPORTS FOR 1990

Copies of the Company's annual 10-K report to be filed with the Securities and Exchange Commission in the United States and the annual information form to be filed with the Canadian securities commissions will be available to shareholders after April 1 and may be obtained from Alcan Shareholder Services at the address below.

## HEAD OFFICE

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Alcan Aluminium Limited



