



HIGHLIGHTS OF 1982				
Principal highlights		1982	1981	1980
	Total shipments of aluminum ('000 tonnes)	1,707	1,547	1,588
	Shipments of ingot products	758	510	533
	Shipments of fabricated products Total sales and operating	949	1,037	1,055
	revenues (U.S.\$ millions)	4,644	4,978	5,215
	Net income (Loss) (U.S.\$ millions)	(58)	264	542
	Capital expenditures (U.S.\$ millions)	643	974	752
Financial, at end of year	Working capital	1,361	1,486	1,373
(U.S.\$ millions)	Net fixed assets and investments	3,972	3,543	2,767
	Long-term debt	1,837	1,612	910
	Common shareholders' equity Return on average shareholders' equity (%)	2,511	2,631	2,463
	Historical cost method	(2)	10	24
	Current cost method	(4)	3	7
Common shares (U.S.\$)	Net income (Loss) per share	(0.69)	3.24	6.70
	First quarter	0.14	1.01	1.83
	Second quarter	0.06	1.09	1.70
	Third quarter	(0.18)	.82	1.63
	Fourth quarter	(0.71)	.32	1.54
	Dividends per share Number of common shares	1.35	1.80	1.35
	outstanding (at end of year—thousands)	85,189	82,652	80,893

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"For the aluminum industry, 1982 was a year of hope deferred."

The severe economic pressures that first hit the aluminum industry in mid 1981, became even more severe in 1982. As the year drew to a close, there were some signs of recovery—the slowing of inflation, lower interest rates, and a pick-up in the North American housing market—but firm indications of a lasting recovery are not yet clearly visible. For the aluminum industry, 1982 was a year of hope deferred.

It was a year marked for the industry by falling volumes, lower operating levels, and, inevitably, lower earnings. 1982 was the third consecutive year in which world primary aluminum consumption declined. The downward movement of ingot prices accelerated through the first half of the year, with little improvement thereafter; the U.S. spot ingot price has fallen 30% since the end of 1980. Not only are aluminum prices being hurt by reduced demand, as in other industries, but this is the first major recession in which aluminum has been traded on the London Metal Exchange (L.M.E.). Trading on the L.M.E. tends to increase the amplitude of price swings between the top and bottom of a business cycle. Earlier in 1982, this appeared to have some additional downward effect on overall prices but it may equally show an upward influence as the supply-demand relationship tightens.

The industry's overall response has been a marked reduction in the operating rates of its primary smelters. These smelters have widely different power sources and contracts, and the combined impact of reduced demand and increased energy costs has caused a far wider spread of basic costs to exist now than ever before. It is for this reason that of the four million tonnes per annum of free world smelting capacity which has already been shut down, around one million tonnes of high-cost capacity may never be restarted. The other three million tonnes may come back into operation rather sluggishly, and then only in response to much higher prices than now prevail.

Alcan has not been exempt from the difficulties of 1982. The downward movement of quarterly earnings that started in 1980 continued throughout 1982 and resulted in a loss for the year of \$58 million, compared with a net income of \$264 million in 1981. Despite these difficulties, and the cash pressures that they have caused, Alcan has not lost sight of its strategic objectives, and it has capitalized on its strengths. With its favourable energy cost-base in Canada, it has been economic to maintain a relatively high operating rate. Consolidated shipments were 1,707,000 tonnes, up 10% on 1981, benefitting from unusually high ingot sales to Asian markets, where Alcan has had an effective marketing presence for many years.

Reduced earnings occurred in most major areas of operations, including Canada and the United States, which suffered a marked decline in shipments. Results in Brazil and Asia were an exception and showed improved earnings. In Europe, Spain and the United Kingdom showed heavy losses. In Spain, Alcan is participating as a minority shareholder in a financial restructuring of Empresa Nacional del Aluminio S.A. and its two 55%-owned subsidiary companies, intended to put them on a sounder financial footing. In the United Kingdom in December, we completed a merger of Alcan Aluminium (U.K.) Ltd. with British Aluminium Company plc., the other major U.K. aluminum company. This merger, and the rationalization of facilities which it makes possible, will provide an opportunity to create an aluminum company in the U.K. which should be competitive, something that was becoming increasingly difficult to achieve for either company on its own.

In response to the prospects of a deferred economic recovery, particularly in the U.S., capital expenditures in 1982 were \$643 million, down from \$974 million in 1981. Capital expenditures in 1983 are expected to amount to about \$400 million. To strengthen Alcan's financial position, additional preference and common shares totaling \$340 million were issued in 1982 and early 1983. The company also adopted additional belt-tightening measures in mid-year. These measures included a reduction in all levels of discretionary spending, cutbacks and delays in salary increases, a 25% reduction in directors' fees and two weeks' work without pay for senior managers throughout the group. After the second quarter, the Board of Directors also reduced the quarterly dividend from 45 cents a share to  $22\frac{1}{2}$  cents a share.

Alcan employees all over the world have faced considerable and widely varying problems during 1982, and have tackled them with determination and professionalism. Industrial relations in all our plants have steadily improved, thanks to a genuine commitment of all Alcan people to continuing dialogue in an atmosphere of mutual respect. The Board would like to express its appreciation for their unstinting efforts.

"Last year's message concluded—'We are organizing ourselves to handle the gap between today and tomorrow... without compromising our long-term strategic thrust. Despite the difficulties of 1982, and despite the uncertainties about 1983, we are still on course."

"World-class technology management is a key to success in our strategy, and we are making changes which will influence the way in which we emerge from this recession." Among the officers of the company, Duncan C. Campbell retired as a Vice President of Alcan at the end of 1982 after 37 years of employment with the company. During most of that time, he has represented the parent company at a senior level in its public and international relations. This is a remarkable record and his counsel has been of great value to successive generations of management. His skills and experience will be put to good use in the writing of a history of Alcan and its people, which he has agreed to undertake.

Last year's message concluded—"We are organizing ourselves to handle the gap between today and tomorrow with a minimum loss of momentum, and without compromising our long-term strategic thrust". Despite the difficulties of 1982, and despite the uncertainties about 1983, we are still on course. In the light of current conditions, we are cutting capital expenditures wherever possible. Some projects have been postponed—the Manitoba smelter project for example—while others have been stretched out. Two very large projects, the Grande Baie, Quebec, smelter and the Irish alumina project have been virtually completed. In British Columbia, we are continuing to examine plans and hold discussions with interested groups aimed at linding a mutually acceptable structure for future power and smelting expansion. We have also exercised our option to buy land for smelter expansion in Quebec. There is still much going on, but we are not in the middle of any irreversible or costly project and we have in place assets which give us a balanced base.

Following recent investments in new and upgraded facilities, we now have a well-spread foundation in bauxite and alumina which is sufficient for our foreseeable needs. Our longer term strategy, in addition to continuing the progressive modernization of the Canadian smelter system and incremental expansion of Alcan's world smelter base, also calls for the selective up-grading of fabricating operations and improvement of our market position in selected geographic and industry markets. In this connection, the U.K. merger is an opportunity born of adversity, but it fits our strategy and we shall not ignore other opportunities if they arise.

World-class technology management is a key to success in our strategy, and we are making changes which will influence the way in which we emerge from this recession. This is reflected in our research and development expenditures, which increased nearly 15% in 1982 to a total of \$55 million. A later section in this report deals with technology in Alcan. It illustrates internationally some of the things that we are already doing. We plan to strengthen our ability to transfer and apply market-related technology, both in our existing businesses and in new areas. We have recently established a Ventures activity to exploit market opportunities related to Alcan's strengths. In depressing times like the present, it is an exciting prospect to be building a new dimension, as well as strengthening our existing base.

The outlook for 1983 remains uncertain. At the close of 1982, the continuing world recession was causing growing protectionist pressures. To yield to these pressures would be a scrious threat to long term economic growth, and, in the short term, to any broadly based recovery. If a real economic recovery is to start, we believe it will be in the U.S., and in consumer-oriented markets. It would be prudent to assume that it will be slow, though there are some factors which could help accelerate it. Alcan's plans for 1983 are based on this prudent assumption and on a consequent slow recovery in earnings. But, despite the severity of this recession. Alcan will emerge leaner and with greater clarity of purpose than before. Adversity shows up strengths as well as weaknesses. What we have found in our own resources during this difficult period gives us confidence for the future.

Nathanare V. Davis David M. Culver

Nathanael V. Davis Chairman of the Board David M. Culver President and Chief Executive Officer

Montreal, Canada 3 February 1983

"Technological innovation will require, and will be given a new emphasis and a new priority."

- David M. Culver to the Annual Meeting of Shareholders, March 1982.

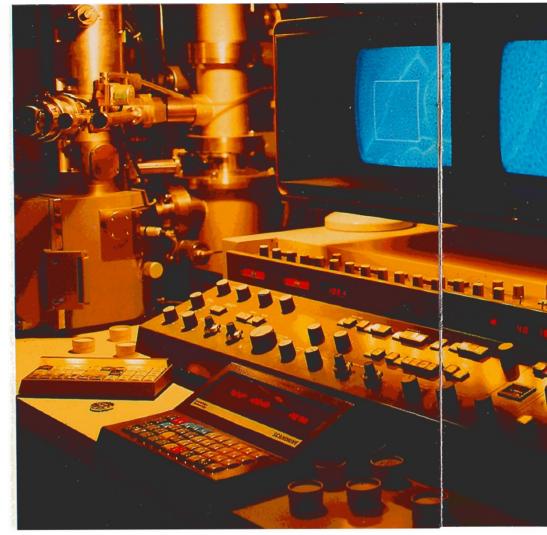
Alcan's major role in developing the aluminum industry of many countries has given it a unique depth of experience in international markets and operations and in the management of technological change on a world scale. Today as changes in both technology and markets are accelerating, so is Alcan's international response.

The key to this response is its technology strategy. This has four dimensions - innovation, selection, process and product improvement and international transfer.

The versatility of aluminum and Alcan's global position in the industry combine to create a major challenge as well as an opportunity - to innovate. Management of existing operations dictates minimizing risks, and emphasizes continuing return on investment. Strategic innovation requires the management of projects with higher risks and with longer payback periods.

To enable technological innovation and transfer to thrive within Alcan, significant emphasis is being placed on two areas - Design and Demonstration, and Ventures.

The first has as its mission the nurturing of selected market-related innovations through to commercial readiness, packaged for exploitation. The second and recently-organized area of innovation is Ventures, which aims to seek out and develop business investments, related to Alcan's existing strengths, that offer attractive combinations of technology, markets and growth opportunities.



Process and product improvement is achieved by organizing the availability of technological knowledge and people, focused at every managerial decision point. In Alcan, the technical lessons learned in one location are analyzed and disseminated to others on an organized basis. There is exposure and development of technical personnel by foreign assignments and transfer. There is a growing culture of technical excellence, in which professionalism flourishes and is recognized and where the question is not "Who is right?" but "What is right?". Technology ranks alongside finance and personnel in the management of the company's resources.

The following pages illustrate the four dimensions of technology strategy with examples from around the world. There are many others, and more await development.



Aluminum surfaces can be treated by Alcan's interference colour anodizing process, to give the subtle shades in the colour spectrum above.



The scanning electronic microscope at Alcan Laboratories in Banbury, England, magnifies samples such as that shown on the postage stamp (left) by more then 800,000 times to determine the elements present on the surface.





The continuous roll-caster takes molten metal directly from the furnace and solidifies it into aluminum sheet. This technology, which has been adopted for the new Malaysian sheet mill, provides the production flexibility required to meet the multiple variety of small orders typical of developing countries.









## "It is people who make technology transfer happen"

Most aluminum today is consumed in highly-industrialized countries, but the developing countries offer many growth opportunities for tomorrow.

Developing markets cannot be economically served by the high-volume production facilities used in mature markets. The multiple variety of small orders typical of a developing country must be served by a flexible facility, capable of adjusting outputs to demands, and of growing by incremental stages.

Alcan is meeting this challenge with specially-designed, small-scale and expandable plants, supported by resources drawn from widely-scattered locations. The new combined sheet and foil mill for Aluminium Company of Malaysia Berhad at Kuala Lumpur is a case in point. Small but highly-efficient, the mill uses continuous roll-casting technology drawn from Alcan operations in Alicante, Spain and Bracebridge, Canada, as well as cold-rolling and foil know-how from other locations. The technical and engineering personnel came from Alcan's affiliated company in India, bringing to the project both cultural awareness and worldclass professional excellence.

To develop the skills of the Malaysian work force, key teams were brought to Bracebridge for special training. Along with the needed operational skills and expertise, the Malaysian trainees took home some fascinating tales about life in Ontario's snow-belt!

Alcan people are growing accustomed to such training, involving cultural contrasts and challenges; it is an important - indeed essential - aspect of the transfer of technology. Alcan's experiences show that in the final analysis, it is people who make the transfer of technology happen. Putting the right people together is the essence of our global enterprise.







## "Exploiting innovations to achieve world leadership"

Through its global network of companies, Alcan can effectively transform technical innovations into positions of world market leadership. The key is to apply the unique advantages of aluminum to products in demand around the world.

Portable high-pressure containers are a good example. Aluminum's lightness and strength make it an ideal material for this use. Alcan's cold-impact reverse extrusion process turns this possibility into an efficient, affordable reality. By forming one-piece, seamless cylinders from single billets of high-strength aluminum allov, this process makes products that are able to meet the most rigorous safety standards for numerous applications all over the world.

Developed in the 1950's, this deceptively simple process is used by Alcan's United Kingdom subsidiary, Luxfer Holdings Limited, to produce cylinders in sizes ranging from 0.5 litres to 40 litres, meeting more than 16 different and exacting national specifications.

The cylinders are used in dozens of ways; they give divers the freedom of the underwater world and help climbers reach the top of Everest. They are used in emergency breathing apparatus and fire extinguishers, in carbonating drinks and in a host of other industrial and medical applications.

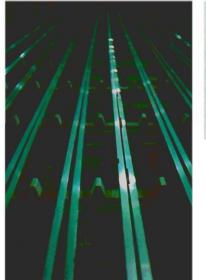
Because of their attractive combination of lightness, strength and security, aluminum cylinders have a bright future in world markets. Luxfer has already gained a world leadership position. It is pursuing future growth through co-ordinated exploitation of technology and market information in three widelyseparated Alcan locations, Nottingham, England, Riverside, California and through a licensee - Sydney, Australia







Aluminum's lightness and strength make it an ideal material for portable high-pressure containers and give divers freedom to explore the underwater world.





Advanced computer-aided design of shapes like the one shown above enable Alcan extrusion plants around the world to provide rapid and accurate service to customers.











## "Turning a European success into a global one"

There are more differences of language and of social and technical culture within Europe than in any other industrial market of comparable size. Yet it is in this complex environment that Alcan has carried out its most successful multinational technical development program. The program has placed Alcan's extrusion operations, both in Europe and elsewhere, among the world's leaders.

The aluminum extrusion business world-wide is made up of small- and medium-sized plants, serving relatively local markets. Individual plants are too small to sponsor major research programs but they do have common needs. In the early 1970's, Alcan technology and business managers laid out a master plan for technical development in their European extrusion operations, drawing on expertise from many countries, including Japan. All aspects were examined - metallurgical quality, diemaking, extrusion press technology and materials handling.

Alloy development, the application of microprocessor technology to information control and fault-finding, as well as innovative engineering, all contributed to the drive for improved quality and productivity. Elements were explored in parallel in different plants, and the developments, co-ordinated centrally, were systematically and enthusiastically shared. In Belgium, France, Germany, Italy, Spain and the United Kingdom, a common program drew its success from widely different technical cultures.

In this way European operations have achieved productivity improvements of 50% or more through planned, costeffective modernization. These benefits are now being passed on to Alcan's extrusion plants around the world, turning a European success story into a global one.







## "Researchers have come to expect the unexpected"

It is not uncommon for research aimed at one objective to deliver breakthrough benefits in another direction, quite unexpectedly.

Alcan's "255" family of alloys is an example of this kind of serendipity. These alloys were first developed in Alcan Laboratories in Kingston, Ontario by metallurgical researchers looking for ways to improve aluminum's forming properties without sacrificing strength. The "255" allovs were the successful answer to this challenge, and were first marketed for use in difficult-to-form components of heat exchangers and radiators in Australia and the United States.

About the same time. Alcan in the United Kingdom was looking for a way to revitalize its static position in the household foil market. Having heard of tests being carried out by Alcan in Australia, Alcan Polyfoil Limited, in the United Kingdom, decided to take a look at the new "255" alloys. Could their improved strength prove to be a marketing advantage in the foil business?

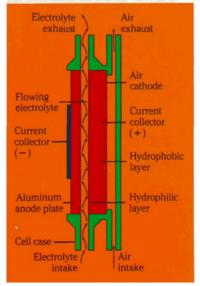
Yes, it could. Stronger foil made from the new alloy was given a diamondpattern embossed finish and with specially designed packaging was launched under the label "Alcan Diamond Foil", a product with both appearance and performance that set it apart from its competitors. The result was a significant increase in United Kingdom market share

In addition to household foil, the "255" family of alloys is now being suc cessfully marketed around the world in a number of other foil products, such as pharmaceutical and dairy-product packaging. At Alcan, researchers have come to expect the unexpected.





Adcan "255" foil, produced at Rogerstone, Walles, is stronger than conventional household foil, and thus enabled Alcan to increase its share of the Ulmited Kingdom foil market.





The aluminium-air cell (left) could become an alternative energy source to gasoline for powering automobiles. Alcan is working on development of appropriate alloys and casting technology to produce plates and other components for the "fuel cell"

## "Alcan believes that the future is in aluminum'

At the turn of this century, battery-powered cars outnumbered gasoline-powered ones. They have remained on the scene in small numbers ever since, but they have been heavy and costly, and it takes hours to charge their lead-acid batteries. Now, a new, light-weight power source is emerging, based on aluminum and other abundant materials, and capable of being refuelled in 15

Called the aluminum-air battery, it is actually a "fuel cell" rather than a conventional battery which stores electricity. The aluminum-air combination produces electricity by oxidizing aluminum by electrochemical reaction. The system uses aluminum plates as anodes. caustic soda and ordinary tap water as the electrolyte, and air as the cathode. The aluminum plates dissolve in the electrolyte, releasing electric energy. When they are used up, they are simply replaced by dropping in new plates.

Researchers now working on this device in the United States estimate that it can produce up to 200 watt-hours per pound (versus storage batteries' 30 to 90 watt-hours). This is enough power to propel a five-passenger car 3,000 kilometers at 90 km per hour, using a 500-pound cluster of 60 cells.

All the driver needs to do between plate changes is add water every 400. km, and remove the aluminum-hydrate crystals that settle out of the electrolyte solution. These crystals are a form of alumina, the feedstock of the aluminum industry, so they can be readily recycled into new aluminum.

The aluminum-air cell could become an alternative fuel system offering drivers the same power and range they expect at present. The fuel would not burn, it would not pollute, and it could be stored indefinitely in solid form. While still some years away from commercial application, this new technology could lead to a huge new market for

Long-term research projects are costly and the outcome is often uncertain. Alcan believes that the costs and the risks are worth taking, because it believes that the future is in aluminum.

#### **MANAGEMENT'S REPORT**

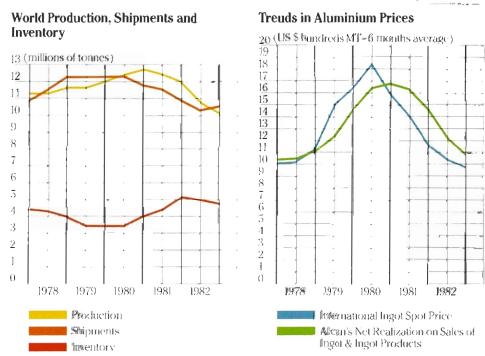
#### **Business Conditions**

1982 was an extremely difficult year for the international aluminum industry. The business recovery, which most forecasters predicted would begin in the U.S. sometime during the year, failed to materialize, with the result that all major aluminum producers incurred losses from their operations. For Alcan, it marked the first time since 1932 that the company reported a loss.

With aluminum consumption weakened by the international recession and world inventories at high levels, prices declined substantially, particularly on ingot products. Spot ingot prices fell by mid-year to levels at which, by Alcan's estimate, smelters accounting for more than half of world capacity could not fully recover their costs. These prices began to improve very slowly in the second half of the year.

The impact on the industry was significant. By year end four million tonnes out of some 14 million tonnes of smelter capacity in the Western world was idle. The operating rate had fallen to about 70%, the lowest in more than 20 years, and as a result the level of industry shipments in July exceeded production for the first time in 27 months. Since then inventorics, as reported by the International Primary Aluminium Institute, have been declining at a slow rate.

The longer term effect of these smelter cutbacks is likely to be positive for the industry. To date, over 800,000 tonnes of capacity has been permanently shut down, primarily due to high energy costs, and more may suffer the same fate. Significantly higher prices are likely to precede restart of most other idle capacity. Another development resulting from the recession was that previously announced expansions of existing smelters and greenfield projects amounting to more than one million tonnes of new capacity were cancelled or deferred indefinitely.



#### Shipments

#### Realizations

Under the difficult conditions experienced in 1982, Alcan shipped a record 1,707,000 tonnes of aluminum products, up 10% from the previous year. The company reduced its own inventories by more than 86,000 tonnes prior to gaining about 40,000 tonnes of metal through the acquisition of British Aluminium Co. plc.

Ingot volume, at 758,000 tonnes, was the highest in company history while sales of fabricated products declined 8% to 949,000 tonnes. However, the depressed price levels, especially for ingot products, resulted in lower revenues and earnings.

Alcan's net realizations per tonne of ingot products averaged 26% lower than in 1981 and 31% lower than in 1980. Average realizations on fabricated products declined only 3% from 1981 levels and 4% from 1980, partly reflecting changes in product mix, in particular Alcan's participation in the U.S. canning sheet market.

### SOURCES OF CONSOLIDATED REVENUE AND GROSS PROFIT (in millions of U.S.\$)

Revenues

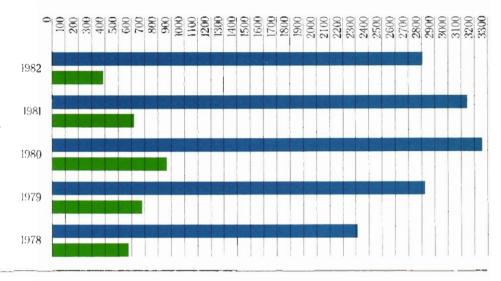
■ Gross Profit

#### **Fabricated Products**

Flat-rolled products accounted for more than half of 1982 sales revenues and nearly two-thirds of volume in the fabricated category, mainly for beverage can, transportation and construction markets.

About 35% of sales revenue and less than one-third of volume was derived from extruded, rolled and drawn products. This includes extrusions, mainly for the construction market, and wire, rod, bar and cable.

Products such as castings, powder and aluminum paste account for the remaining sales revenues and volume.

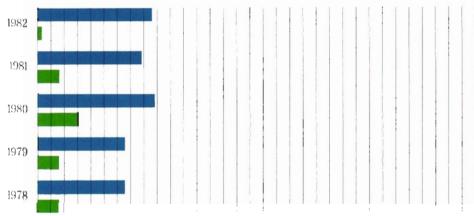


**Ingot Products** 

In 1982, the ratio between ingot and fabricated product shipments was 44:56 whereas the average for the 1978-81 period was 34:66.

Over the past several years, extrusion ingot accounted for the major portion of revenues and volume from ingot sales. This was not the case in 1982 due to large shipments of remelt ingot to Asian markets. Alcan's most important market for extrusion ingot is the U.S.

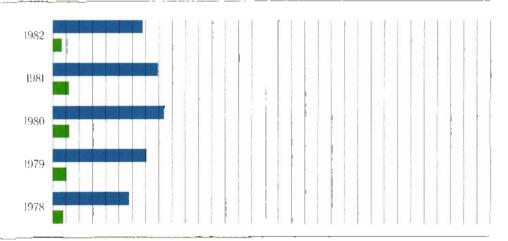
Alcan also produces sheet ingot, high purity remelt ingot and wire ingot, mostly for its own fabricating operations.



#### Other Products

About 30% of 1982 revenues from "other products" was from the sale of non-aluminum corrosion-resistant metals, of which Alcan is the largest U.S. distributor. These include nickel alloys, copper, brass, stainless steel, foundry alloys, piping, fittings and valves. Another 25% of revenues was from sales of alumina, bauxite, carbon and coke.

The remaining revenues were derived from sales of products such as steel siding and roofing; magnesium, copper and vinyl; ferro-alloys, and aluminum sulphate and calcined alumina.

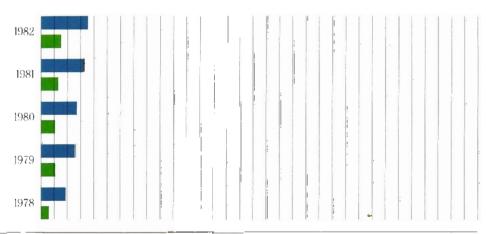


#### Operating Revenues & Other Income

"Other Income", totaling \$65 million, was principally interest income and exchange gains on debt redemptions.

Operating revenues in 1982 totaled \$291 million, the largest contribution coming from tolling. This included conversion of alumina to ingot for Nippon Light Metal Company. Other tolling revenues were earned by fabricating units in the U.S. and Europe.

The remainder of operating revenues were generated by sales of surplus electricity and general cargo services by a wholly-owned shipping subsidiary.



#### **Review of Operations**

**North America:** Alcan earned \$14 million from its operations in Canada and the U.S. during 1982, down sharply from \$249 million in 1981. The decline was largely due to lower selling prices for ingot products and lower volume and higher production costs for fabricated products.

The company's Canadian smelters operated at 88% of capacity, a higher rate than the Western world aluminum industry average. Lower shipments in Canada and the U.S. were offset by increased ingot sales to Asian markets through Alcan's international marketing organization. A major achievement was the reduction of smelter inventories to near normal levels by year end.

Alcan's U.S. shipments fell 20% in 1982 and prices edged downwards throughout the year in most market segments, reflecting recessionary conditions. The major exception was canning sheet, where prices remained relatively stable and industry shipments increased about 3%.

Since aluminum already has a very large share of the beer can market, further growth in canstock is likely to be slow. In addition, new domestic producers are entering the market as are Japanese and, to a lesser extent, European suppliers, thereby increasing competition.

The automotive sector weakened noticeably in the third quarter but by the end of the year was showing signs of a recovery. However, Alcan improved its position in the trim products market before the slowdown took hold and expects to do well in 1983. Aluminum should continue to make gains in automotive applications.

Wire and cable business as a whole was poor with lower earnings as industry shipments dropped 14% during the year. The building products business was badly affected by the recession but is expected to improve with the increase in housing starts forecast for 1983. Vinyl continued its penetration in siding at the expense of aluminum and now accounts for more than 50% of this market.

In Canada, aluminum consumption during 1982 dropped 30%. All market segments were affected.

Cost cutting measures were instituted at all levels within North American operations during the year. These and other efforts to increase productivity and efficiency will continue as the company positions itself for the upturn. There is increasing evidence of a gradual business recovery in the U.S.

**Europe:** Industrial output in Europe appeared to weaken further in the second half of 1982 after remaining almost stable, at a relatively low level, since the end of 1980. Although demand for some aluminum semi-fabricated products improved, it was not sufficient to load plants adequately or to improve depressed prices. Alcan's European operations ended the year with a loss of \$124 million in consolidation, including Alcan's share of losses amounting to \$46 million in equity companies.

More than half the 1982 loss was incurred by the U.K. subsidiary, principally due to weak demand, low selling prices and overcapacity in the domestic fabricating industry. Stiff competition from Continental European imports, favoured by the relative strength of Sterling, was an additional factor.

In Spain, market conditions continued difficult and Empresa Nacional del Aluminio S.A. (Endasa), of which Alcan owns 42.7%, and its subsidiaries again experienced heavy losses, mainly reflecting depressed international ingot prices and heavy financial expenses. Instituto Nacional de Industrio (INI) owns 57% of Endasa. Since September the principal subsidiaries of Endasa, which operate a modern smelter and an alumina plant on the northwest coast of Spain, have been in "suspension of payments" and at year end discussions were continuing with the authorities and other shareholders to seek a solution which will permit these companies to operate viably. Aluminio de Galicia, a subsidiary of Pechiney Ugine Kuhlmann, and a group of Spanish banks have minority shareholdings in the smelter-alumina complex. Some operating problems are being experienced with the alumina plant and modifications are being carried out.

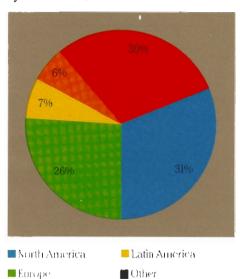
In November, INI and Alcan agreed to subscribe to a capital increase of Ptas 11.5 billion. Half of the amount was contributed in December and the other half will be called not later than the end of May 1983.

Alcan's subsidiary in Germany performed much better than in the prior year. Good results recorded by the rolled products division were offset by losses on metal trading and by provision for costs associated with the decision to close the 44,000-tonne Ludwigshafen smelter early in 1983. In February, however, Alcan accepted an offer of financial help for one year from the federal and regional governments, which will permit the smelter to operate while attempts continue to resolve the long-term problem of uncompetitive power costs.

In France, Italy and Switzerland, operations were close to break-even. Belgian facilities again recorded losses although there was some progress with an agreed recovery plan.

#### Review of Operations Cont'd

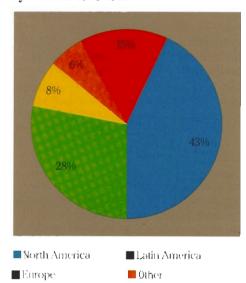
#### Consolidated Sales of Aluminum by Markets 1982



#### Consolidated Sales of Aluminum by Markets 1978-1981

Asia

Asia



Late in 1982 Alcan Aluminium (UK) Limited acquired the whole of the issued share capital of British Aluminium Co. plc. for £30 million and the two companies have been merged to form British Alcan Aluminium Limited. The merger creates a stronger base than either company could have provided on its own and will permit rationalization of production, marketing and administrative facilities giving the best chance of creating a competitive U.K. aluminum entity.

**Latin America:** Net income from Alcan's operations in Latin America was \$15 million, compared to \$24 million in 1981. Strong performance in Brazil, particularly during the first half of the year, was partly offset by losses in Mexico, due largely to successive major devaluations of the peso and exchange controls. Alcan's subsidiary in Argentina recorded a small gain in consolidation after a loss in 1981 while operations in Uruguay posted a loss following several profitable years.

In Brazil, Alcan's principal subsidiary ended the year with both profits and shipments higher than in 1981 on the strength of increased market penetration in semi-fabricated products, some relief on strict price controls and productivity improvement. Shipments were running 20-25% above 1981 levels during the first six months but business conditions turned down in the second half as government concern focused on the country's external debt and balance of payments.

Asia: Alcan's interests in Asia, an area partially insulated from the world recession in 1982, increased their contribution to consolidated net income by more than 40% over 1981. Metal sales in the region, mostly from the Canadian smelters, totaled 509,000 tonnes.

About 190,000 tonnes of ingot was sold in Japan and Korea, more than double 1981 volume. Additional tonnages were shipped to third parties and fabricating subsidiaries in other countries in the region and to the People's Republic of China. A portion of the 1982 shipments to China, a long-standing Alcan customer, were on a contractual basis while the bulk were spot sales.

The ASEAN countries—Indonesia, Malaysia, Philippines, Singapore, and Thailand—where real economic growth averaged 5% in 1982, remained a bright spot in the world economy and Alcan's fabricating interests in the region recorded improved results. Aluminium Company of Malaysia Berhad, 40%-owned, improved earnings and produced the first coils from a new \$50 million sheet rolling mill. The 70%-owned Indonesian subsidiary, which produces extrusions and roofing sheet, increased volume and profits. Extrusion operations in Thailand returned to profitability after a loss in 1981.

In India, Alcan's 50.5%-owned subsidiary posted a small profit for the year on total shipments of more than 80,000 tonnes although demand in most markets declined from 1981 levels. The company's smelters operated at 57% of capacity due to power shortages.

Alcan's 50%-owned Japanese affiliate. Nippon Light Metal Company, Limited (NKK) continued to suffer from high ingot costs and weak demand for commercial building products. The contribution from Toyo Aluminium K.K., a major Japanese foil, powder and paste producer, also 50%-owned, was lower in 1982. About 100,000 tonnes of Alcan's ingot sales in Japan during 1982 were to NKK to make up for permanent cutbacks in its smelter capacity, Under an existing long-term alumina tolling contract, NKK received an additional 44,000 tonnes of ingot from Alcan's smelter in British Columbia. At year end the annualized operating rate of the Japanese primary aluminum industry was 262,000 tonnes, compared to 564,000 tonnes in December 1981.

**South Pacific:** The world recession caught up with Australia in the second quarter, its effects compounded by a severe drought which crippled agricultural output. Alcan's operations posted a sizeable loss which was principally caused by the steep drop in ingot export realizations. The latter part of the year saw the recession hitting the construction and transportation industries, Alcan's major domestic outlets. Although sales of fabricated products held up well, ingot sales in the domestic market fell significantly.

Alcan's operations in New Zealand again posted a profit in 1982 as extrusion and foil sales improved. However, in the latter half of the year the residential building market turned down and began to affect extrusion sales.

#### MANA GEMENT'S REPORT

#### **Exchange Rates**

Net income was adversely affected by the strenghtening of the U.S. dollar throughout the 1980-82 period. The loss on translation of cost of inventories as included in cost of sales was partly offset by exchange gains on monetary items, as indicated in the following table.

	- *1			91	0.0	
In	mil	lions	OI	U.	.5.5	

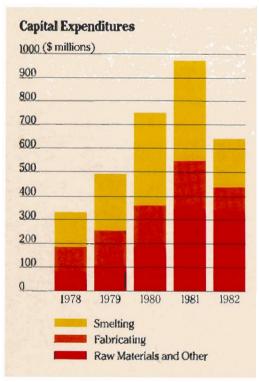
in minions of 0.5.5	Cost of Inventories	Monetary Items	Net
1980	(7)	(26)	(33)
1981	(181)	121	(60)
1982	(165)	92	(73)

#### **Foreign Currency Translation**

For 1982 and prior years the financial statements of all non-U.S. dollar operations have been translated into U.S. dollars using the method described in Note 1 to the financial statements.

Beginning in 1983, in compliance with the proposed recommendations of The Canadian Institute of Chartered Accountants, which largely parallel those already finalized by the Financial Accounting Standards Board in the U.S., certain of Alcan's international operations deemed to be self-sustaining and located principally in Europe, Asia, and the South Pacific, will use the current rate method. Under this method all assets and liabilities are translated into U.S. dollars using rates of exchange at each balance sheet date with the statement of net income translated at average exchange rates for the period. For these companies, translation adjustments arising from changes in exchange rates which were included in Alcan's net income through 1982, will henceforth be shown as a separate component of shareholders' equity. The balance of Alcan's international operations, including North America, will continue to use the existing method.

#### **Liquidity and Capital Resources**



Capital spending on plant, equipment and investments in 1982 was \$643 million, a substantial reduction from the record level of \$974 million in 1981. Expenditures were concentrated on the closing stages of major projects initiated in prior years. These included completion of the third potline at the Grande Baie smelter in Québec and an alumina plant in Ireland scheduled for completion in 1983. Investments included \$49 million for the acquisition of British Aluminium Co. plc. and \$43 million as Alcan's share of capital increases in a related Spanish company.

Capitalization of interest on major projects under construction accounted for \$99 million of the total expenditure in 1982 compared with \$64 million in 1981.

During the 1978-82 period Alcan's capital expenditures, including investments, totaled \$3.2 billion. Of this, \$1,418 million were spent on additions to primary smelter capacity, principally the new 171,000-tonne smelter at Grande Baie; 30,000 tonnes of incremental capacity at Aratu in Brazil; 45,000 tonnes at Kurri Kurri in Australia and modernizations of other smelter facilities. Expenditures on fabricating facilities, at \$720 million, have provided significant incremental capacity and improved productivity which should contribute to results when the facilities are fully loaded. The Irish alumina plant and the upgrading and rounding out of other raw materials facilities accounted for \$727 million and will help ensure a reliable base for the company's smelter operations.

Careful review and evaluation of the short-term capital spending plans have resulted in a projected capital program for 1983 of about \$400 million. This substantial reduction from the 1982 levels is consistent with the maintenance of operations at reasonable levels of efficiency and finalization of projects under way.

Working capital requirements decreased by \$125 million in 1982, due largely to lower inventories. Despite this and the significant decline in capital expenditures, the company was short of its requirements because cash generation from operations was severely impacted by lower selling prices. As a result, not new debt increased by \$162 million.

Aluminum Company of Canada, Limited (Alcan:Canada) was particularly active in the capital markets in 1982. It raised \$75 million of 10-year fixed rate debentures in the Eurodollar market and \$100 million of fixed rate 10-year notes in the U.S. bond market. The proceeds were used to repay floating rate borrowings, thereby reducing exposure to interest rate fluctuations. At the end of 1982 Alcan:Canada's unused committed credit lines exceeded \$800 million, while total debt was almost the same amount as at the end of 1981.

Alcan:Canada also raised \$204 million through the issue of cumulative redeemable retractable preference shares. The offering included 4.8 million warrants, each entitling its holder to purchase one common share of Alcan at a price of Can.\$36.50 per share until the end of 1986.

The consolidation of the borrowings of British Aluminium in December 1982 added \$90 million to Alcan's debt. In addition, Alcan subsidiaries in Australia, Brazil and Europe arranged further borrowings, mostly from banks through medium term lines of credit at floating rates of interest.

At the end of 1982, Alcan's ratio of total debt to equity was 43:57, compared with a ratio of 41:59 at the end of 1981 and 30:70 at the end of 1980. An important objective for 1983 and the years beyond is to use the opportunity provided by any improvements in profitability to bring the ratio to levels prevailing before the onset of the recession.

The liquidity position of the parent company, Alcan, continued to be adversely affected in 1982 by severely reduced dividend flows from its operating subsidiaries. Furthermore, Alcan was required during the year to increase its financial support to certain subsidiary and related companies, especially in the U.K. and Spain. Under these circumstances, the decision was made to redeem the parent company's holding of \$150 million of Alcan:Canada preferred shares in conjunction with the Alcan:Canada preference share issue. An additional \$51 million was raised during the year through the issue of common shares mainly under the company's shareholder investment plans established in 1981.

Two financings announced early in 1983 will improve short-term liquidity. On 1 February Alcan sold 2,570,734 new common shares through a group of New York underwriters for a net consideration of \$69.7 million. Agreement in principle has also been reached with Finance For Industry plc (FFI) to fend £20 million to Alcan's U.K. financing subsidiary. As part of this financing, Alcan would issue to FFI warrants identical to those attached to the Alcan:Canada preference share issue to a value of £1.6 million.

#### Dividends and Stock Prices

Dividends totaled \$113 million in 1982 compared to \$146 million in 1981. In July 1982 the Board of Directors reduced the dividend to 22½ cents from the 45 cents a share level paid since February 1981. The dividend reduction was made in view of the sharply lower level of earnings and the need to maintain liquidity. Management had previously cut capital expenditures, reduced salaries and instituted stringent measures to reduce controllable expenses.

#### Quarterly Dividends and Market Price (NYSE)

<b>Q</b>	1982		( ( , , , , , , , , , , , , , , , , , ,		1981	
	Dividends Paid Per Share		Price of n Shares Low	Dividends Paid Per Share		Price of n Shares Low
First	0.450	23.250	17.875	0.45	40.000	31.375
Second	0.450	20.250	15.875	0.45	38.125	27.750
Third	0.225	23.875	17.000	0.45	28.875	23.125
Fourth	0,225	28.375	20.500	0.45	25.250	19.625
Year	1.350			1.80		

#### Responsibility for Financial Reporting

Alcan's management is responsible for the integrity and fair presentation of the accompanying financial statements. These have been prepared in accordance with accounting principles generally accepted in Canada, conforming in all material respects with international standards, and have been applied on a consistent basis. 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 consistent with reasonable cost. Such systems are designed to provide reasonable assurance that the financial information is accurate and reliable and that company assets are adequately accounted for. The Audit Committee, which is comprised solely of directors who are not employees, meets regularly with representatives of the independent auditors and with members of management to satisfy themselves that Alcan's policy is being followed.

The annual financial statements are reviewed by the Audit Committee and are approved by the Board of Directors. In addition, the financial statements are examined by the shareholders' independent auditors, Price Waterhouse, whose report appears on page 31.

World Bauxite Reserves		1982	1981	1980
	Subsidiaries			
	Proved bauxite reserves at beginning			
	of year (millions of crude tonnes)	257	263	252
	Total weighted average aluminum			
	content*	27%	27%	27%
	Bauxite mined during the year			
	(millions of crude tonnes)	4	5	5
	Related companies			
	Alcan's share of proved bauxite			
	reserves at beginning of year			
	(millions of crude tonnes)	65	71	68

<sup>\*</sup>The amount of aluminum extractable is always less than the total aluminum content, varying according to the nature of the bauxite, the process technology employed to extract the intermediate product, alumina, and the alumina plant efficiency.

QUARTERLY FINANCIAL DATA (unaudited	l) (in millions of U.	S.\$)		
1982	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenues Costs and expenses Income taxes Equity income and minority interests	\$1,236 1,201 14 (9)	\$1,193 1,185 (10) (13)	\$1,194 1,189 3 (17)	\$1,086 1,146 (16) (16)
Net income (Loss)	\$ 12	\$ 5	\$ (15)	\$ (60)
Income (Loss) per common share (U.S.\$)	0.14	0.06	(0.18)	(0.71)
Revenues Costs and expenses Income taxes Equity income and minority interests Net income Income per common share (U.S.\$)	\$1,305 1,134 82 (7) \$ 82 1.01	\$1,338 1,185 61 (3) \$ 89 1.09	\$1,223 1,142 12 (2) \$ 67 0.82	\$1,187 1,151 (13) (23) \$ 26 0.32
1980 Revenues Costs and expenses Income taxes Equity income and minority interests	\$1,310 1,058 108 4	\$1,319 1,062 114 (6)	\$1,320 1,097 91 —	\$1,315 1,109 80 (1)
Net income	\$ 148	\$ 137	\$ 132	\$ 125
Income per common share (U.S.\$)	1.83	1.70	1.63	1.54

#### Alcan in North America and the Caribbean









Alcan's major operations in North America include six Canadian smelters, representing more than two-thirds of Alcan's world-wide smelter capacity, as well as facilities for the production of alumina and chemicals, semi-fabricated and fabricated products, and two major research and development laboratories. In Canada, Alcan owns hydroelectric generating facilities with a total installed capacity of 3,583,000 kilowatts. Ownership of these facilities provides a stable source of low-cost power, and is a major advantage in an energy intensive industry.

- Alcan's Canadian smelters produced 917,700 metric tonnes of primary aluminum in 1982 (962,100 tonnes in 1981). The smelters operated at 88% of rated capacity for most of 1982 following a cutback of 43,000 tonnes of production at the Jonquière, Québec, smelter early in the year.
- The third and final 57,000 tonne-a-year potline at Grande Baie, Québec, was completed in late 1982 and was readied for production. However, the third line, like the second line completed in 1981, will not be brought into production until demand for aluminum improves. With this increase in annual capacity to a total of 1,075,000 tonnes, Alcan's current Canadian smelter operating rate falls to 83.5%.
- Labor contracts covering unionized employees at British Columbia and Québec smelters expire on 23 April and 31 December 1983, respectively.
- Modernization and expansion of facilities also continued in 1982 on installation of energy-efficient fluid flash calciners at the Jonquière chemical complex and construction of a carbon paste plant at Kitimat, British Columbia.
- Alcan strengthened its base in the Western Canada electrical wire and cable market with completion early in 1982 of a new rod mill in British Columbia.
- In the U.S., Alcan undertook a number of steps to improve its ability to meet anticipated future requirements for overhead and distribution cable. Bare cable production was consolidated at Williamsport, Pennsylvania, resulting in cost efficiencies, and capacity of the Bay St. Louis, Mississippi, plant, the most automated cable plant in the U.S., was doubled to 50 million feet a year.
- The secondary smelter at Joliet, Illinois, was converted to the specialized handling of used beverage cans, and together with new decoating and material handling equipment to be installed at the Greensboro, Georgia facility, will increase Alcan's total recycling capability in the U.S. to about 65,000 tonnes annually.
- Alcan's alumina operations in Jamaica were further reduced in 1982 as a result of lower smelter operating rates in the aluminum industry. Production was 775,000 tonnes, or 72% of rated capacity, while shipments were 780,000 tonnes, mostly to Alcan group companies.
- Consolidated shipments of aluminum in North America were 528,000 tonnes in 1982, down 28% from 1981.

#### Alcan in Europe

















Alcan operates in eight countries throughout Europe with an extensive network of fabricating operations serving the next largest market for aluminum after the United States.

- In Germany, Alcan began mothballing its 44,000 tonne-a-year smelter at Ludwigshafen on 1 January 1983 when negotiations with various agencies failed to reach agreement on competitive power rates. After the physical closedown of the smelter was virtually complete, Alcan accepted an offer of financial help for one year from the federal and regional governments which will enable the smelter to continue operations for that period while attempts are made to resolve the long-term problem of uncompetitive power costs.
- Construction was virtually completed by the end of 1982 on an 800,000 tonne-a-year alumina refinery in the Republic of Ireland, in which Alcan has a 40% interest. The first shipments of bauxite arrived at the plant late in the year. Production at the \$1.1 billion project is expected to begin in the second half of 1983
- Consolidated shipments of aluminum in Europe were 438,000 tonnes in 1982, little changed from a year ago.

#### Alcan in Latin America



Alcan has been associated with the aluminum industry in Latin America since 1916 and today is involved in nearly all aspects of the production of aluminum in the region.

- In Brazil, the largest market in Latin America, a 30,000 tonne-a-year expansion of the Aratu smelter to 58,000 tonnes was virtually completed in 1982, raising Alcan's annual smelting capacity in that country to 118,000 tons.
- Alcan Aluminio do Brasil S.A. continued to increase its market share in semi-fabricated products during 1982. Additional extrusion capacity was added during the year and the number of distribution centres was increased to 20.
- Consolidated shipments of aluminum in Latin America were 118,000 tonnes in 1982, up 8% from 1981.

#### Alcan in Asia and the South Pacific















Alcan is involved in all facets of the production of aluminum and aluminum products in Asia and the South Pacific from fully integrated aluminum operations in India to bauxite mining in Malaysia, alumina production and smelting in Japan and Australia and fabricating facilities in these and other countries in the area.

- Alcan's involvement in the Asian area—where above average growth in demand for aluminum is forecast for the medium term—was increased in 1982 with the construction of a \$50 million sheet and foil mill in Malaysia by a company in which Alcan has a 40% interest.
- In Japan, Nippon Light Metal Company, Limited, a related company, further reduced its smelter operating rate to 72,000 tonnes annually in late 1982 in line with the restructuring of the Japanese smelting industry.
- In order to provide a more effective vehicle for Alcan's interest and participation in the Indian aluminum industry, a tentative merger has been agreed upon by Indian Aluminium Company, Limited, in which Alcan has a 50.5% interest, and Mahindra & Mahindra Limited, a diversified Indian company engaged in the automotive and agricultural equipment field. The merger is still subject to regulatory approvals.
- In Australia, construction of a third polline at Alcan's Kurri Kurri smelter in New South Wales has been suspended due to the continuing low world-wide demand for aluminum. This project, which is within a year of completion, will be resumed as soon as market conditions warrant, and will increase the annual capacity of the smelter to 135,000 tonnes from 90,000 tonnes.
- Consolidated shipments of aluminum in Asia and the South Pacific totaled 567,000 tonnes in 1982, more than double a year earlier.

### INFORMATION BY GEOGRAPHIC AREAS (in millions of U.S.\$)

	Çanada	United States	Latin America	Europe	All Other	Eliminations	Total
Year ending 31 December 1982							
Sales and operating revenues	=0.0	20			004	(1.110)	
To subsidiaries To others	736 1,050	63 1,093	431	17 1,312	294 758	(1,110)	4 644
to others		-				(1.110)	
Net income (Loss)	1,786 15	1,156 (1)	431 15	1,329 (124)	1,052 7	(1,110) 30	4,644 (58)
						30	
Capital expenditures	212	17	95	236	83	_	643
31 December 1982		10.0		=0.0	-00	(0.75)	0.710
Current assets	800	439	183	786	586	(275)	2,519 3,701
Fixed assets—net Investments and other assets	1,658 62	225 7	428 103	904 64	486 177	_	413
						(075)	
Identifiable assets	2,520	671	714	1,754 560	1,249 291	(275) (243)	6,633 1,293
Current liabilities and deferred credits	392	145	148				
Capital employed	2,128	526	566	1,194	958	(32)	5,340
Number of employees (thousands)	18	5	10	22	17		72
Year ending 31 December 1981							
Sales and operating revenues To subsidiaries	743	101		25	405	(1,274)	_
To others	1,108	1,319	409	1,373	769		4,978
10 others						(1.074)	
Net income (Loss)	1,851 231	1,420 18	409 24	1,398 (71)	1,174 83	(1,274) (21)	4,978 264
	404	48	146	236	140	(21)	974
Capital expenditures	404	40	140	230	140	_	317
31 December 1981				2.05	550	(0.12)	0.051
Current assets	1,063	482	208	665	576	(343)	2,651 3,267
Fixed assets—net Investments and other assets	1,546 52	225 9	354 115	704 95	438 150		421
Identifiable assets Current liabilities and deferred credits	2,661 517	716 178	677 154	1,464 397	1,164 316	(343) (278)	6,339 1,284
							5,055
Capital employed	2,144	538	523	1,067	848	(65)	660,6
Number of employees (thousands)	20	5	9	16	16		
Year ending 31 December 1980							
Sales and operating revenues	723	87		16	422	(1,248)	
To subsidiaries To others	1,176	1,273	448	1,674	644	(1,240)	5,215
TO Others			-	1,690	1,066	(1,248)	5,215
Net income	1,899 344	1,360 33	448 63	21	132	(51)	542
Capital expenditures	377	53	61	146	115	_	752
	011	00					
31 December 1980	070	491	254	728	508	(284)	2,567
Current assets Fixed assets—net	870 1,234	198	261	412	336	(204)	2,367
Investments and other assets	68	8	60	188	138	_	462
	2,172	697	575	1,328	982	(284)	5,470
Identifiable assets Current liabilities and deferred credits	466	176	157	456	266	(212)	1,309
	1,706	521	418	872	716	(72)	4,161
Capital employed				16	16	(12)	67
Number of employees (thousands)	20	5	10	10	10		07

Sales to subsidiary companies are made at a fair market price recognizing volume, continuity of supply and other factors. Export sales from Canada amounted to \$934 in 1982 (\$827—1981, \$682—1980).

Net income is total revenues less expenses directly related to the geographic area in accordance with generally accepted accounting principles.

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

Year ending 31 December		1982	1981	1980
Revenues				
	Sales	\$4,353	\$4,732	\$4,992
	Operating revenues	291	246	223
	Other income	65	75	49
		4,709	5,053	5,264
Costs and expenses				
•	Cost of sales and operating expenses	3,837	3,801	3,682
	Depreciation	221	202	162
	Selling, research and administrative			
	expenses	399	401	352
	Interest (note 14)	234	186	107
	Other expenses	30	22	23
		4,721	4,612	4,326
Income (Loss) before income taxes				
and other items		(12)	441	938
	Income taxes (note 2)	(9)	142	393
Income (Loss) before other items		(3)	299	545
	Equity income (loss)	(45)	(16)	25
	Minority interests	(10)	(19)	(28
Net income (Loss) (note 3)		\$ (58)	\$ 264	\$ 542

In U.S.\$			, to W
Income (Loss) per common share	\$(0.69)	\$3.24	\$6.70
Dividends per common share	\$ 1.35	\$1.80	\$1.35

ASSETS				
31 December		1982	1981	1980
Current assets	Cash and time deposits Receivables Inventories Aluminum Raw materials Other supplies	\$ 136 777 906 449 251	\$ 203 740 974 470 264	\$ 283 848 785 412 239
		2,519	2,651	2,567
Deferred charges		67	62	56
Deferred receivables (note 4)	•	75	83	80
Investments in companies owned 50% or less (note 5)		271	276	326
Property, plant and equipment	Cost (note 6) Accumulated depreciation	6,066 2,365	5,436 2,169	4,459 2,018
		3,701	3,267	2,441
Total assets	_	\$6,633	\$6,339	\$5,470
LIABILITIES AND SHAREHOLDERS' EQUIT 31 December	Y	1982	1981	1980
Current liabilities				
	Payables Short-term borrowings	\$ 746	\$ 764	\$ 700
	(principally from banks) Income and other taxes	305 50	304 48	243 225

	1982	1981	1980
P	6 740	¢ 704	6 700
	\$ 746	\$ 764	\$ 700
	305	304	243
			225
Debt maturing within one year (note 7)	57	49	26
	1,158	1,165	1,194
ote 7)	1,837	1,612	910
	135	119	115
•	535	564	514
	457	248	274
Common shares (note 9)	528	477	427
Retained earnings (note 10)	1,983	2,154	2,036
	2,511	2,631	2,463
2)	• •		
ity	\$6,633	\$6,339	\$5,470
	Payables Short-term borrowings (principally from banks) Income and other taxes Debt maturing within one year (note 7)  ote 7)  Common shares (note 9) Retained earnings (note 10)	Payables Short-term borrowings (principally from banks) Income and other taxes Debt maturing within one year (note 7)  1,158  ote 7)  1,837  Common shares (note 9) Retained earnings (note 10)  2,511	Payables \$ 746 \$ 764 Short-term borrowings (principally from banks) 305 304 Income and other taxes 50 48 Debt maturing within one year (note 7) 57 49  1,158 1,165  ote 7) 1,837 1,612  135 119  535 564  457 248  Common shares (note 9) 528 477 Retained earnings (note 10) 1,983 2,154  2,511 2,631

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

Year ending 31 December		1982	1981	1980
Source of funds				
	Income (Loss) after income taxes	\$ (3)	\$ 299	\$ 545
	Depreciation	221	202	162
	Deferred income taxes	(26)	50	117
	Other—net	(14)	(5)	7
	From operations	178	546	831
	New debt	671	782	197
	Common and preferred shares			
	of subsidiary companies	219	11	4
	Common shares of Alcan (note 9)	51	50	_
	Sales of investments	4	11	6
	Disposals of plant and equipment	10	12	14
	Othernet	27	<u>-</u>	_
		1,160	1,412	1,052
Application of funds	•			
	Plant and equipment	545	869	683
	Investments	98	105	69
	Debt repayments	509	130	62
	Dividends paid to Alcan shareholders	113	146	109
	Dividends paid to shareholders of			
	subsidiary companies	20	19	18
	Othernet	<del></del>	30	13
		1,285	1,299	954
Increase (Decrease) in working o	capital (note 13)	(125)	113	98
Working capital—beginning of ye	ear	1,486	1,373	1,275
Working capital—end of year		\$1,361	\$1,486	\$1,373

Year ending 31 December		1982	1981	1980
	Retained earnings—beginning of year Net income (Loss)	\$2,154 (58)	\$2,036 264	\$1,603 542
	Dividends	2,096 113	2,300 146	2,145 109
	Retained earnings—end of year (note 10)	\$1,983	\$2,154	\$2,036

#### NOTES TO FINANCIAL STATEMENTS (in millions of U.S.\$)

#### 1. Summary of accounting policies

#### Principles of consolidation

The consolidated financial statements, which are prepared in accordance with generally accepted accounting principles in Canada, include the accounts of all companies more than 50% owned. In addition, under the equity accounting principle, consolidated net income includes Alcan's equity in the net income or loss of all companies 20-50% owned and the investments in these companies have been increased or decreased by Alcan's share of their undistributed net income or loss since acquisition. When the cost of an investment differs from the book value of Alcan's equity therein at date of acquisition, the difference is amortized over the estimated average useful life of the fixed assets acquired.

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

#### Translation of accounts into United States dollars

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

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

#### 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.

Income (loss) per common share is calculated by dividing net income (loss) by the average number of common shares outstanding (1982: 83.8 million; 1981: 81.6 million; 1980: 80.9 million).

#### 2. Income taxes

	1982	1981	1980
Income (Loss) before income taxes and other items			
Canada	\$ 54	\$384	\$584
Other countries	(66)	57	354
	(12)	441	938
Current income taxes			
Canada	(6)	50	160
Other countries	23	42	116
	17	92	276
Deferred income taxes			
Canada	4	88	81
Other countries	(30)	(38)	36
	(26)	50	117
Total income tax provision (recovery)	\$ (9)	\$142	\$393

The composite of the applicable statutory corporate income tax rates in Canada is presently 47.8% (51.2% in 1981, 51.0% in 1980). Profits earned by subsidiary companies located outside Canada are generally subject to income taxes at rates comparable to this composite rate. Dividends paid by these subsidiary companies are generally tax-exempt upon receipt in Canada. Taxes withheld at source are included in current income taxes —other countries.

The following is a reconciliation of income taxes calculated at the above composite rates with the total income tax provision (recovery):

	1982	1981	1980
Income taxes at the composite rate	\$ (6)	\$226	\$478
Increase (reduction) attributable to:			
Investment and depletion allowances	(34)	(84)	(85)
Non-taxable exchange translation	37	50	(5)
Losses net of gains without			
tax effect	8	(11)	6
Reversal of U.K. deferred income taxes		(19)	_
Other—net	(14)	(20)	(1)
Income tax provision (recovery)	\$ (9)	\$142	\$393

The deferred income taxes in 1982 arise from investment tax credits, foreign tax credits and other tax benefits of \$44 and inventory valuation timing differences of \$19, which were offset to a large extent by depreciation timing differences of \$37. In 1980 and 1981 the deferred income taxes were principally due to depreciation timing differences.

### NOTES TO FINANCIAL STATEMENTS (in millions of U.S.\$)

#### 3. Currency translation

Currency translation losses included in net income were \$73 in 1982, (\$60 in 1981, and \$33 in 1980), including losses of \$165 in 1982, (\$181 in 1981, \$7 in 1980) arising from the translation of cost of inventories.

The Financial Accounting Standards Board in the United States in Statement No.8 requires that companies reporting to investors in the United States follow the practice of absorbing immediately in income unrealized exchange gains and losses on the translation of non-U.S. dollar long-term monetary assets and liabilities. However, Alcan follows the practice recommended by The Canadian Institute of Chartered Accountants of deferring such unrealized gains and losses and amortizing them over the remaining lives of the related items. The following table compares reported net income (loss) under the Alcan method with the net income (loss) that would have been reported under the FAS 8 method together with the cumulative effect on retained earnings.

	1982		1981		1980	
	Alcan Method	FAS 8 Method	Alcan Method	FAS 8 Method	Alcan Method	FAS 8 Method
Consolidated net income (loss	)					
First quarter (unaudited)	\$ 12	\$ 38	\$ 82	\$112	\$148	\$171
Second quarter (unaudited)	5	20	89	129	137	124
Third quarter (unaudited)	(15)	6	67	99	132	127
Fourth quarter (unaudited)	(60)	(62)	26	6	125	147
	(58)	2	264	346	542	569
Dollars per common share	(0.69)	0.02	3.24	4.25	6.70	7.03
Consolidated retained earnings						
Beginning of year	2,154	2,185	2,036	1,985	1,603	1,525
End of year	1,983	2,074	2,154	2,185	2,036	1,985

#### 4. Deferred receivables

Deferred receivables include \$32 (\$33 in 1981 and \$35 in 1980) due with interest over the period 1984 to 1991 from the Government of Guyana in respect of the nationalization in 1971 of Alcan's bauxite and alumina assets.

## 5. Investments in companies owned 50% or less

	1982	1981	1980
Shares at cost plus equity in undis- tributed net income since acquisition			
Companies 50% owned (cost \$51) Companies 20% to 50% owned	\$ 68	\$ 67	\$ 68
(cost \$199)	197	207	173
Shares at cost Companies less than 20% owned	6	2	4
	271	276	245
Advances	_	_	81
	\$271	\$276	\$326

The combined results of operations and the financial position of the 20-50% owned companies are summarized below.

Results of operations for the year Revenues Costs and expenses	\$4,148 4,286	\$4,724 4,734	\$4,861 4,699
Income (Loss) before income taxes Income taxes	(138)	(10)	162
	21	4	106
Net income (Loss) *Alcan's share of net income (loss) Dividends received by Alcan	\$ (159)	\$ (14)	\$ 56
	(46)	(4)	26
	10	7	7
Financial position at 31 December Current assets Current liabilities	\$2,359	\$2,714	\$3,108
	2,277	2,555	2,856
Working capital	82	159	252
Property, plant and equipment—net	2,386	2,326	2,662
Other assets—net	613	603	499
Debt not maturing within one year	3,081	3,088	3,413
	2,243	2,156	2,340
Net assets	\$ 838	\$ 932	\$1,073
**Alcan's equity in net assets	260	267	322

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

## 6. Property, plant and equipment, at cost

	1982	1981	1980
Land, and property rights Buildings, machinery and equipment Construction work in progress	\$ 97 4,945 1,024	\$ 87 4,362 987	\$ 80 3,670 709
	\$6,066	\$5,436	\$4,459

Capital expenditures in 1983 are expected to be about \$400.

<sup>\*\*</sup>If deferred unrealized exchange gains and losses had been absorbed immediately in net income, as required by the United States Financial Accounting Standards Board Statement No. 8, Alcan's equity in net assets of companies 20-50% owned for 1982 would be increased by \$6. Under Alcan's accounting policy this amount is amortized over the remaining lives of the related items.

### NOTES TO FINANCIAL STATEMENTS (in millions of U.S.\$)

## 7. Debt not maturing within one year

	1982	1981	1980
Aluminum Company of Canada, Limited and subsidiary companies			
Bank loans under \$600 revolving credit agreement, due 1986/1990 (a) Bank loans under \$150 credit agreement,	\$ 100	\$ 460	\$ 40
due 1987/1991 (a)	50	_	_
Notes payable (commercial paper) (b) 9½% Sinking fund debentures, due 1995	112 75	80	82
10¾% Sinking fund debentures, due 1994 (Can. \$53)	43	45	46
93/18 Sinking fund debentures, due 1991 (Can. \$45)	36	38	38
9½% Sinking fund debentures, due 1988	33	35	37
153/4% Eurodollar debentures, due 1992	75	_	_
14¼% Notes, due 1992 5.10% Notes, due 1983/1992	100 <b>4</b> 5		<del></del> 54
9½% Notes, due 1983/1994	41	42	44
8½% Loan, due 1983/1992(£31)	51	35	_
Other debt, due 1983/2005	71	61	40
Alcan Aluminio da América Latina Ltda			
and subsidiary companies	101	140	100
Bank loans, due 1983/1991 (a)	191	146	100
Alcan Europe N.V.     and subsidiary companies Bank loans, due 1983/1994     (principally £135; DM136) (a) 5½% Bonds, due 1987 (Sw.F.100) 10½% Loan stock, due 1983/1994(£7) Loan, due 1987/1991 (£15) (a) Other debt, due 1983/2008	308 50 12 24 57	246 56 15 29 47	190 56 19 36 30
Alcan South Pacific Limited and subsidiary companies Bank loans, due 1983/1989 (A.\$152,U.S.\$75) (a) Notes payable, due 1984/1987 (A.\$30) (c) 8½% Bonds, due 1989	224 29 22	$\frac{171}{23}$	74 — 23
Other debt, due 1983/1996	11	12	12
Other companies Bank loans, due 1983/1987 (a) Other debt, due 1983/1992	12 34	18 29	5 30
ome: desk, dae 1005, 1002			
Debt maturing within one year	1,806	1,638	956
included in current liabilities Unamortized net amount of	(57)	(49)	(26)
unrealized exchange	88	23	(20)
	\$1,837	\$1,612	\$910

<sup>(</sup>a) Interest fluctuates with lender's prime commercial rate or is related to the London interbank offered rate.

Based on rates of exchange at year end and after allowing for prepayments, sinking fund and other requirements over the next five years amount to \$57 in 1983, \$145 in 1984, \$181 in 1985, \$162 in 1986 and \$237 in 1987.

<sup>(</sup>b) Notes payable (commercial paper) are issued in Canada and the United States at market rates and are fully backed up by unutilized long-term credit agreements.

<sup>(</sup>c) Interest fluctuates with commercial bank bill rate.

#### 8. Deferred credits

#### 9. Capital stock

Deferred credits include a prepayment of \$61 (\$57 in 1981 and \$51 in 1980) by a related company under an alumina tolling arrangement.

The authorized share capital is an unlimited number of common shares, without nominal or par value.

Changes in outstanding common shares are summarized below:—

	Number of	
	Shares	Value
Balance at end of 1980 and 1979	80,893,388	\$427
Issued for cash under:		
Share Purchase Plan	640,653	15
Dividend Reinvestment Plan	111,121	2 7
Issued under Stock Dividend Plan	300,935	7
Issued in exchange for the minority		
shareholders' interest in a subsidiary		
company	705,536	26
Balance at 31 December 1981	82,651,633	477
Issued for cash under:		
Share Purchase Plan	571,894	14
Dividend Reinvestment Plan	454,727	8
Employee Savings Plan	112,208	3
Executive Share Option Plan	1,900	
Issued under Stock Dividend Plan	1,396,146	26
Balance at 31 December 1982	85,188,508	\$528

10,000,000 common shares have been reserved for offering to shareholders under three investment plans of which 3,475,476 have been issued.

2,100,000 common shares have been reserved for issuance under employee savings plans of which 112,208 have been issued.

1,000,000 common shares have been reserved for issuance to key employees under the executive share option plan at a price not less than 90% of market value on the effective date of the grant. At 31 December 1982, options covering 401,300 shares at prices from Can. \$20.50 to \$31.08 per share were outstanding and, if not exercised, will expire at various dates during the next ten years.

Changes in outstanding options are summarized below:

	1982	1981
Outstanding, beginning of year	408,200	
Granted	<del>-</del>	408,200
Exercised	1,900	
Cancelled	5,000	_
Outstanding, end of year	401,300	408,200

Options exercised in 1982 were at a price of Can. \$24.53 per share.

At 31 December 1982, 4,800,000 warrants were outstanding entitling the holder to purchase from Alcan one common share for each warrant at a price of Can. \$36.50 until 31 December 1986. Alcan intends to issue in February 1983 up to a further 1,000,000 warrants carrying identical terms.

On 1 February 1983, 2,570,734 common shares were sold for a consideration of \$70 million.

#### 10. Retained earnings

Consolidated retained earnings at 31 December 1982 include:

- —\$555 which, pursuant to the provisions of certain debt and share issues of Aluminum Company of Canada, Limited, is not distributable as dividends either in cash or in kind to Alcan, the holder of its common shares.
- -\$15 of undistributed earnings of companies owned 50% or less, and
- —\$712, some part of which may be subject to certain taxes on distribution to the parent company. No provision has been made for such taxes because these earnings are reinvested in the business.

#### NOTES TO FINANCIAL STATEMENTS (in millions of U.S.\$)

## 11. Minority interests in subsidiary companies

	1982	1981	1980
Preferred Shares			
Aluminum Company of Canada, Limited	\$340	\$139	\$140
Others	9	9	10
Common shares	53	45	63
Retained earnings	49	51	56
	451	244	269
Unamortized amount of unrealized			
exchange on preferred shares	6	4	5
	\$457	\$248	\$274

The preferred shares of Aluminum Company of Canada, Limited include \$100 floating rate preferred shares retractable at \$25 per share in series at the option of the holder on 5 July 1984, 1985 and 1986, and \$157 Series A and \$46 Series B preference shares retractable at Can. \$25 and \$25, respectively, at the option of the holder on 31 December 1989.

#### 12. Commitments and guarantees

To assure 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 are comprised of long-term debt service in one joint venture and "take-or-pay" obligations in others, are estimated at \$178 in 1983, \$193 in 1984, \$200 in 1985, \$192 in 1986, \$191 in 1987 and \$1,453 thereafter. Alcan's total charges from these related companies were \$192 in 1982, \$188 in 1981 and \$198 in 1980. In addition, Alcan is guarantor of \$79 of long-term debt of certain of the related companies.

Minimum rental obligations amount to \$58 in 1983, \$53 in 1984, \$37 in 1985, \$29 in 1986, \$24 in 1987 and lesser annual amounts thereafter. Total rental expense amounted to \$73 in 1982 (\$85 in 1981 and \$84 in 1980).

See also reference to capital expenditures in note 6, debt repayments in note 7 and preferred share retractions in note 11.

#### 13. Changes in working capital

	1982	1981	1980
Current assets Cash and time deposits Receivables Inventories	\$ (67) 37 (102)	\$ (80) (108) 272	\$ 55 21 302
	(132)	84	378
Current liabilities Payables and short-term borrowings Income and other taxes Debt maturing within one year	(17) 2 8	125 (177) 23	220 78 (18)
	(7)	(29)	280
Net increase (decrease)	\$(125)	\$ 113	\$ 98
	1982	1981	1980
Repairs and maintenance Taxes, other than payroll and income taxes Research and development Interest on long-term debt Capitalized interest	\$350 104 55 225 (99)	\$361 94 48 156 (64)	\$339 68 47 97 (36)

# 14. Supplementary income statement information

#### 15. Pension plans

Alcan and its subsidiaries (with some exceptions) have established pension plans in the principal countries where they operate, for the greater part contributory and generally open to all employees. The total pension expense in 1982 was \$50 (\$69 in 1981 and \$63 in 1980). Pension expense includes amortization of unfunded actuarial liabilities which Alcan and its subsidiaries are funding for the most part over periods of 15 years or less.

Based on the most recent actuarial reports the present value of vested accumulated plan benefits was \$692 (\$644 in 1981 and \$549 in 1980), and of non-vested benefits was \$16 (\$11 in 1981 and \$9 in 1980). These present values were determined using a weighted average assumed rate of return of 7.1% (6.9% in 1981 and 1980). The net assets available for benefits amounted to \$866 (\$804 in 1981 and \$668 in 1980) at market values. The apparent surplus will be needed to meet increases in pension liabilities arising from future increases in salaries, which have not been allowed for in the above present values. The effective dates of the principal actuarial reports were 1 January 1982 for the major Canadian plan and United States plans, 1 January 1981 for the other Canadian plan and 6 April 1982 for the United Kingdom plan.

Improved benefits granted subsequent to the above effective dates of the actuarial reports will increase the present value of vested accumulated plan benefits by approximately \$91.

#### 16. Information by geographic areas

Information by geographic areas is contained in the summary on page 20.

#### **AUDITORS' REPORT**

To the Shareholders of Alcan Aluminium Limited

We have examined the consolidated balance sheets of Alcan Aluminium Limited as at 31 December 1982, 1981 and 1980 and the consolidated statements of income, retained earnings and changes in financial position for the three years then ended. Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at 31 December 1982, 1981 and 1980 and the results of its operations and the changes in its financial position for the three years then ended, in accordance with generally accepted accounting principles in Canada applied on a consistent basis.

Montreal, Canada 3 February 1983 PRICE WATERHOUSE Chartered Accountants

#### **INFLATION ACCOUNTING (unaudited)**

#### Introduction

Although inflation has started to decline somewhat, the need for inflation accounting still continues. Even if inflation were to disappear entirely, it will be many years before the old, lower historical costs of fixed assets are removed from the system. Therefore, as long as there is inflation or until there has been zero inflation for several years, there will be inflation induced distortions in the historical cost financial statements. Alcan believes these distortions should be recognized if readers of the financial statements are to obtain a realistic assessment of the company's results.

Alcan has voluntarily published inflation accounting information in recent years in accordance with Statement No. 33 of the Financial Accounting Standards Board (FASB) in the United States. However, beginning in 1982, Alcan has complied with the requirements of the recently published recommendations of The Canadian Institute of Chartered Accountants (CICA) for reporting the effects of changing prices. These are basically the same as the FASB's current cost reporting requirements except as noted below.

#### **Current Cost Accounting**

The primary emphasis of the inflation accounting data presented below is on current cost (CC) accounting. This focuses upon the specific changes in prices of assets and in expenses associated with the use of fixed assets or sale of inventories. It is a method of measuring their current values in terms of what the assets would cost to purchase or produce at the balance sheet date or at the date of use of fixed assets or sale of goods produced.

CC amounts for the company's assets were determined primarily by using appropriate specific indexes or reliable market prices. For property, plant and equipment this method assumes the assets would be replaced with like technology which would not always be the case. Current cost of sales was determined by adjusting historical costs by the estimated specific price changes which occurred between the time of production and the time of sale.

The net current cost values for property, plant and equipment are based on the original estimated lives used for the historical cost accounts except for the company's hydroelectric power facilities in Canada. These assets have proven to have a life span much longer than the original estimates. Accordingly, their lives have been changed and when applied retroactively portray a more realistic assessment of their net current cost value. The effect of this change results in an increase in the net current cost values by approximately one billion dollars as compared with the values which would have been obtained using the original estimated lives. Current cost depreciation expense was not affected materially by this change.

The current cost income (loss) in the schedule below (loss of \$221 million for 1982, profit of \$40 for 1981) are those attributable to the enterprise. To assess income attributable to common shareholders on a current cost basis, a further factor needs to be considered, that is, the "financing adjustment". It is based on the realistic supposition that the funds required to maintain a company's operating capability (replace the assets it consumes) will be provided by a combination of shareholder funds and borrowed funds. The financing adjustment calculated by reference to the specific price change during the year for inventory and property, plant and equipment provides a measure of the increases in current costs that will be financed by debt. Therefore, recognizing this adjustment in determining the current cost income (loss) attributable to common shareholders produces a loss of \$214 for 1982 and a profit of \$156 for 1981. The FASB does not require a financing adjustment calculation.

#### General Inflation Information

In compliance with the CICA requirements, two items of general inflation information are presented. The first, "increase in current cost amounts of inventory and property, plant and equipment based on general inflation" can be compared to the specific price change for these assets. The latter for 1982 was \$276 million less than the amount that would have resulted if the specific costs had increased by the rate of general inflation. The second is the "general purchasing power gain on net monetary liabilities". Holders of cash and other monetary assets lose purchasing power during periods of inflation; debtors gain. Alean has greater monetary liabilities than monetary assets and the general purchasing power gain thereon helps to preserve the general purchasing power of shareholders' equity. It should be noted that, unlike the FASB, the CICA does not consider deferred income taxes to be a monetary item. Therefore, Alcan would report a general price level gain on net monetary liabilities of \$102 million (\$180, 1981) under the FASB rules.

#### Conclusions

Because of inflationary trends, especially those of the past decade, the "income (loss)" to the enterprise on a current cost basis for both 1982 and 1981 is unfavourable compared to the historical cost basis. Nevertheless, it should be observed that the difference between the two bases has narrowed for 1982 as the rate of inflation has lessened in most countries. Moreover, with the weakening of all major foreign currencies during 1982, the effects of inflation on Alcan's foreign operations become even smaller in dollar terms.

1982		Current Cost Basis in average 1982 \$	
	1981	1982	1981
\$4,644	\$4,978	\$4,644	\$5,284
3,837 221	3,801 202	3,817 412	4,118 392*
399 234 (35)	401 186 (53)	399 234 (37)	426 197 (58)
\$4,656	\$4,537	\$4,825	\$5,075
(12)	441	(181)	209
17 (26) 55	92 50 35	17 (26) 49	98 53 18
\$ (58)	\$ 264	\$ (221)	\$ 40
	3,837 221 399 234 (35) \$4,656 (12) 17 (26) 55	3,837       3,801         221       202         399       401         234       186         (35)       (53)         \$4,656       \$4,537         (12)       441         17       92         (26)       50         55       35	3,837       3,801       3,817         221       202       412         399       401       399         234       186       234         (35)       (53)       (37)         \$4,656       \$4,537       \$4,825         (12)       441       (181)         17       92       17         (26)       50       (26)         55       35       49

SCHEDULE OF CONSOLIDATED ASSETS	(in millions of U.	S. <b>\$</b> )			
	Histo as rep		Current Cost Basis in year-end 1982 \$		
	1982	1981	1982	1981	
Inventory Property, plant and equipment — net Net assets (common shareholders' equity)	\$1,606 3,701 2,511	\$1,708 3,267 2,631	\$1,692 6,767 5,826	\$1,908 6,535 6,126	

SUPPLEMENTARY INFORMATION (in average 1982 \$)		
	1982	1981
ncrease in current cost amounts of inventory and property, plant and equipment based on:		
General inflation Specific prices	\$ 312 36	\$ 661 653
Difference	\$ 276	\$ 8
inancing adjustment on specific price increases of inventory and property, plant and equipment	\$ 7	\$ 116
Based on the current cost adjustments made to income during the year, the financing adjustment amounts to \$31 (1981, \$48).		
General purchasing power gain on net monetary liabilities	\$ 80	\$ 131

#### A TEN-YEAR SUMMARY

(Restated where necessary to give retroactive effect to changes in accounting practices)

**Operating data** (thousands of tonnes)

Consolidated aluminum shipments

Ingot and ingot products Fabricated products

Consolidated primary aluminum production

In Canada Outside Canada

Consolidated aluminum inventories (end of year)

**Primary aluminum capacity** (end of year)

Consolidated subsidiaries Total subsidiaries and related

companies

Consolidated income

statement items (U.S.\$ millions)

Total revenues

Sales of aluminum ingot and ingot

products

Sales of aluminum fabricated products

Sales of all other products

Operating revenues and other income

Costs and expenses

Cost of sales and operating expenses

Depreciation Interest Income taxes

Other

Equity income Minority interests

Income from continuing operations

Extraordinary gains Net income (Loss)

Consolidated balance

**sheet items** (U.S.\$ millions)

Working capital

Property, plant and equipment—net

Investments in companies owned 50% or less

Long-term debt Deferred income taxes Minority interests

Common shareholders' equity

**Total assets** 

Per common share (U.S.\$)

Income (Loss) from continuing operations Income (Loss) including extraordinary gains but after preferred dividends Dividends paid to Alcan shareholders Common shareholders' equity

Market price NYSE close

Other statistics

**Funds from operations** (U.S.\$ millions) Capital expenditures (U.S.\$ millions) **Employees** (thousands at end of year)

Common shareholders (thousands at end of year) **Common shares outstanding** (millions at end of year)

Registered in Canada(%) Registered in USA(%)

Registered in other countries(%)

Return on average common shareholders' equity

Based on historical cost method (%)

1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
1,520 601 919	1,508 584 924	1,272 560 712	1,374 510 864	1,318 440 878	1,597 615 982	1,532 496 1,036	1,588 533 1,055	1,547 510 1,037	1,707 758 949
792 224	874 264	761 269	493 299	826 280	898 300	709 354	918 384	962 433	917 380
404	517	612	476	599	518	410	485	666	620
1,261	1,230	1,249	1,236	1,236	1,258	1,347	1,426	1,483	1,593
2,156	2,115	2,144	2,118	2,118	2,086	1,959	1,930	1.987	2,035
1,891	2,427	2,313	2,671	3,058	3,738	4,450	5,264	5,053	4,709
318 1,191 306 76	448 1,489 400 90	441 1,355 419 98	432 1,674 452 113	448 1,942 486 182	661 2,315 576 186	663 2,827 705 255	886 3,265 841 272	789 3,150 793 321	867 2,809 677 356
1,452 101 79 35 148	1,795 103 100 101 175	1,831 111 105 31 187	2.140 116 100 45 204	2,269 126 90 136 229	2,716 138 88 190 285	3,240 149 114 211 322	3,682 162 107 393 375	3,801 202 186 142 423	3,837 221 234 (9) 429
18 (11) 83 — 83	11 (9) 155 27 182	(13) (7) 28 12 40	(5) (10) 51 — 51	13 (16) 205 — 205	5 (29) 297 — 297	21 (29) 406 21 427	25 (28) 542 — 542	(16) (19) 264 — 264	(45) (10) (58) — (58)
442 1,217 199 744 123 110 953 2,449	675 1,329 212 881 181 119 1,103 3,012	807 1,385 215 971 189 165 1,128 3,053	831 1,401 207 837 180 165 1,293 3,147	979 1,460 242 749 267 246 1,453 3,473	1,113 1,638 227 691 344 281 1,688 3,967	1,275 1,915 253 759 397 277 2,030 4,490	1,373 2,441 326 910 514 274 2,463 5,470	1,486 3,267 276 1,612 564 248 2,631 6,339	1,361 3,701 271 1,837 535 457 2,511 6,633
1.23	2.24	.40	.67	2.53	3.67	5.01	6.70	3.24	(0.69)
1.21 .45 14.13 19.94	2.64 .60 15.98 10.00	.58 .45 16.25 9.69	.66 .20 16.79 11.81	2.53 .55 17.96 13.13	3.67 .78 20.86 16.94	5.28 1.05 25.09 23.44	6.70 1.35 30.45 33.25	3.24 1.80 31.83 23.00	(0.69) 1.35 29.48 27.88
163 117 62 50 69 46 45	309 268 64 48 69 45 44	164 208 61 47 71 42 43 15	174 138 60 43 81 53 34	425 251 61 40 81 47 39	545 333 63 37 81 43 45	619 495 65 35 81 39 53 8	831 752 67 37 81 39 53 8	546 974 66 47 83 48 45	178 643 72 51 85 51 42
9	18	4	4	15	19	23	24	10	(2)

### DIRECTORS AND OFFICERS

DIRECTORS AND OFFICERS		
Directors	Nathanael V. Davis Osterville, Massachusetts Chairman of the Board Sonja I. Bata Toronto—Director of Bata Limited, International footwear manufacturers David M. Culver Montreal—President and Chief Executive Officer Dr. Lawrence E. Fouraker Boston—Professor of Business Administration, Harvard Business School Dr. Roger Gaudry, C.C. Montreal—Director of various companies John H. Hale Montreal—Senior Vice President Lionel P. Kent Montreal—Director of various companies	Paul H. Leman, O.C. Montreal—Director of various companies Franklin S. McCarthy Brockville, Ontario Director of various companies Hon. John L. Nichol, O.C. Vancouver—President of a private investment company Jean-Marie Poitras, O.C. Quebec City—Chairman. President and Chief Executive Officer of La Laurentienne Mutuelle d'Assurance Eric A. Trigg Montreal—Senior Vice President William O. Twaits, C.C. Toronto—Director of various companies Eric F. West Lyme. Connecticut Senior Vice President Dr. Joachin Zahn
	Audit Committee Lionel P. Kent, Chairman Sonja I. Bata Paul H. Leman Franklin S. McCarthy Joachim Zahn	Munich—Director of various companies  Personnel Committee  William O. Twaits, Chairman David M. Culver Lawrence E. Fouraker Roger Gaudry John L. Nichol
Office of the President	David M. Culver President and Chief Executive Officer John H. Hale Senior Vice President	Eric A. Trigg Senior Vice President Eric F. West Senior Vice President
Functional Officers	Ronald C. Bales Vice President, Corporate Planning A. A. Bruneau Vice President, Chief Legal Officer and Secretary David H. Clarke Vice President, Personnel W. O. Codrington Vice President, Basic Raw Materials Harold Corrigan Vice President, Corporate Relations Hon. J. Hugh Faulkner, P.C. Vice President, Environment, Occupational Health and Safety	Allan A. Hodgson Vice President, Chief Financial Officer and Treasurer H. Stewart Ladd Vice President, Organization and Management Murray D. Lester Director of Energy Resources H. Stuart McEvoy Vice President, Metal Planning and Administration Ihor Suchoversky Vice President, Research and Operations Technology
Field Officers	Caryll Birkett Hong Kong—Vice President, Asia A. F. Black Sydney—Vice President, South Pacific Gerald Clark Rio de Janeiro—Vice President, Latin America Roy A. Gentles Cleveland—Vice President	Norman F. Macfarlane Montreal—Vice President, Japan and Korea  David Morton Montreal—Vice President, North America and Caribbean  Patrick Jean Jacques Rich Geneva—Vice President, Europe  R. E. Rosane Les Milles, France—Vice President, Africa and Middle East

#### ALCAN ALUMINIUM LIMITED La version française de ce rapport sera expédiée sur demande écrite adressée : Version française Alcan Alumínium Limitée, service des Relations extérieures, C.P. 6090, Montréal (Québec) H3C 3H2. 10-K Report A copy of the company's annual 10-K report for 1982 to be filed with the United States Securities and Exchange Commission will be available to shareholders after I April and may be obtained upon written request to the Secretary of the company. Terms All dollar amounts are stated in U.S. dollars and all quantities in metric tons, or tonnes. A tonne is 1,000 kilograms, or 2,204,6 pounds. Trademark The word ALCAN and the symbol are registered as trademarks in more than 100 countries, and they are owned, directly or indirectly, by Aluminum Company of Cariada, Limited. Common Shares The common shares of Alcan Aluminium Limited are listed on the Montreal, Toronto. Vancouver, New York, Midwest, Pacific, London, Paris, Brussels, Amsterdam, Frankfurt, Basel, Geneva, Lausanne and Zurich stock exchanges. The markets where most of the shares are traded are New York and Toronto. **Transfer Agents** National Trust Company, Limited, Montreal, Toronto, Winnipeg, Regina, Calgary, Vancouver, Mellon Bank, N.A., Pittsburgh, Citibank, N.A., New York, Morgan Grenfell & Co. Limited, London. Registrars The Royal Trust Company, Montreal, Toronto, Winnipeg, Regina, Calgary, Vancouver. Pittsburgh National Bank, Pittsburgh, Manufacturers Hanover Trust Company, New York. The Royal Trust Company of Canada, London. Warrants Warrants, representing rights to purchase common shares of the company at \$36.50 per share in Canadian currency to 31 December 1986, are listed on the Montreal, Toronto and Vancouver Stock Exchanges. The warrant agent is The Royal Trust Company in Montreal, Toronto, Winnipeg, Regina, Calgary and Vancouver. Shareholder Investment Plans Dividend Reinvestment Plan Shareholders can reinvest their cash dividends in newly issued Alcan shares at a 5% discount from market value. Stock Dividend Plan

Shareholders can elect to receive their dividends in the form of newly issued Alcan shares at a 5% discount from market value.

#### Share Purchase Plan

Shareholders can purchase newly issued Alcan shares at market value.

Each plan enables shareholders to acquire newly issued Alcan shares at regular intervals without payment of brokerage commissions or service charges. For information write—or call collect:

Alcan Shareholder Services P.O. Box 6077, Montreal, Canada H3C 3A7

Telephone: (514) 866-4411



