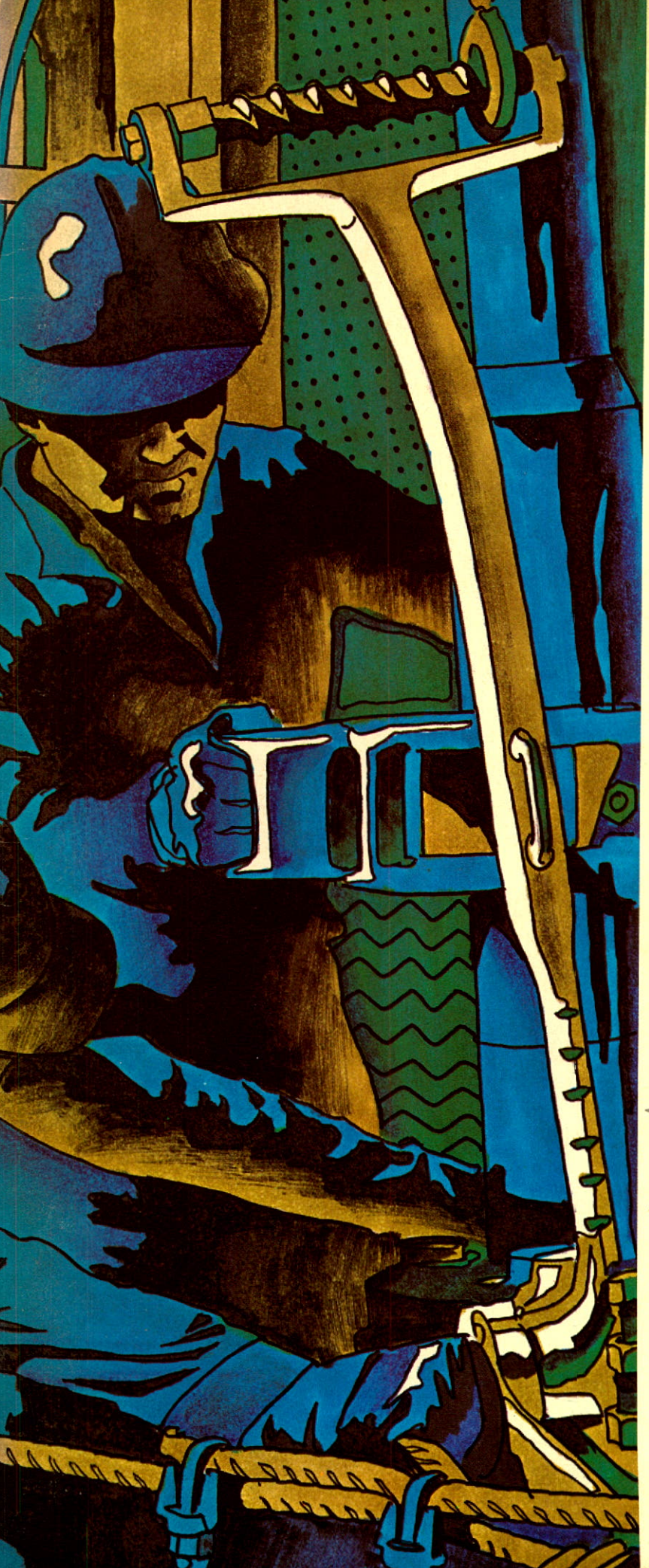


Rio Algom
Rio Tinto

RIO ALGOM MINES LIMITED ANNUAL REPORT 1970

Rio Algom Mines Limited

120 Adelaide Street West
Toronto 1, Canada

Index

Highlights of the Year's Consolidated Operations

YEAR ENDED DECEMBER 31, 1970

($000's omitted)

	1970	*1969*
Sales	$ 183,525	$ *173,114*
Net earnings	$ 14,076	$ *15,361*
Per share of common stock	$ 1.08	$ *1.18*
Dividends paid on common stock	$ 4,900	$ *4,900*
Per share	40¢	*40¢*
Working capital, year end	$ 76,038	$ *89,821*
Ratio of current assets to current liabilities	3.4 to 1	*4.0 to 1*
Common shareholders' equity	$ 161,821	$ *152,777*
Total common shares outstanding at December 31	12,249,584	*12,249,584*
Equity per share of common stock outstanding	$ 13.21	$ *12.47*
Production		
Uranium oxide (pounds)	3,994,987	*3,289,965*
Copper in concentrate (pounds)	35,238,821	*36,485,468*
Steel (tons)	155,192	*161,220*
Number of employees at December 31	5,392	*5,555*

Rio Algom Mines Limited

120 Adelaide Street West
Toronto 1, Canada

Officers

Sir Val Duncan	Chairman
R. D. Armstrong	President
G. R. Albino	Executive Vice-President, Corporate Staff
W. P. Arnold	Executive Vice-President, Mining Operations
O. S. Leslie	Executive Vice-President, Steel Operations
A. F. Lowell	Vice-President, Minerals Marketing
J. A. Sadler	Vice-President, Exploration
A. C. Turner	Vice-President, Secretary
H. A. Pakrul	Vice-President, Controller
J. Van Netten	Vice-President, Treasurer

Directors

G. R. Albino	Toronto	Executive Vice-President of the Company
W. A. Arbuckle	Montreal	President, Arbuckle, Govett & Co. Ltd.
*R. D. Armstrong	Toronto	President of the Company
W. P. Arnold	Toronto	Executive Vice-President of the Company
*Henry Borden, CMG, QC	Toronto	One of Her Majesty's Counsel
J. Ian Crookston	Toronto	President, Nesbitt, Thomson and Company, Limited
*Sir Val Duncan, OBE	London, England	Chairman of the Company and Chairman, The Rio Tinto-Zinc Corporation Limited
J. G. Edison, QC	Toronto	Partner, Edison, Aird and Berlis
*Sam Harris	New York, U.S.A.	Partner, Fried, Frank, Harris, Shriver and Jacobson
L. A. Lapointe, QC	Montreal	President, Miron Company Ltd.
O. S. Leslie	St. Catharines	Executive Vice-President of the Company
*B. R. MacKenzie, QC	Toronto	Partner, Fasken & Calvin
Leo Model	New York, U.S.A.	Chairman and Chief Executive, Model, Roland & Co., Inc.
W. D. Mulholland	Montreal	President and Chief Executive Officer of British Newfoundland Corporation Limited and of Churchill Falls (Labrador) Corporation Limited
F. A. Petito	New York, U.S.A.	Partner, Morgan Stanley & Co.
*J. Herbert Smith	Toronto	Chairman and Chief Executive Officer of Canadian General Electric Company Limited
Sir Mark Turner	London, England	Deputy Chairman, Kleinwort, Benson Ltd.
*R. W. Wright, CBE	London, England	Deputy Chairman, The Rio Tinto-Zinc Corporation Limited

*Member of the Executive Committee

The Annual Meeting

The Company will hold its Annual Meeting on Friday, April 16, 1971 at 10:00 a.m. Eastern Standard Time, in the Roof Garden, Royal York Hotel, 100 Front Street West, Toronto, Ontario, Canada.

Directors' Report

Your Directors are pleased to submit this report on the operations and financial position of the Company for the year ended December 31, 1970.

Financial

Consolidated net earnings from operations in 1970 before extraordinary charges were $15,406,000 or $1.19 per share as compared with $15,361,000 or $1.18 per share in 1969. After extraordinary charges of $658,000 arising from the write-down of marketable securities to net realizable value and of $672,000 resulting from the unpegging of the Canadian dollar, the consolidated net earnings for 1970 were $14,076,000 or $1.08 per share compared to $15,361,000 or $1.18 per share in 1969 when there were no extraordinary items. In all cases the earnings per share are stated after provision for dividends on preference shares.

The slight increase in consolidated net earnings before extraordinary charges resulted from an increase in net earnings from steel operations of $2,021,000, a reduction in corporate expenses, net interest costs and taxes of $708,000 and a decrease in earnings from mining operations of $2,684,000. The record earnings from steel operations reflect a better product mix, some price increases and improved manufacturing performance, achieved despite substantial increases in the cost of labour and raw materials. The reduction in earnings from mining operations was the result of a substantially lower level of copper prices and increased expenditures on exploration, partially offset by improved uranium production resulting from a higher milling rate and a better average ore grade.

On May 30, 1970 the Government of Canada freed the Canadian dollar from the exchange rate at which it had previously been pegged to the United States dollar. The Canadian dollar rose in relation to the United States dollar from a discount of approximately 7½% to a discount of approximately 1% at December 31, 1970; a similar movement of exchange rates occurred in relation to all other foreign currencies. In realizing, during the normal course of business, its net current assets held in foreign funds on May 30, 1970 the Company incurred a loss of $672,000 which was charged as an extraordinary item against 1970 earnings. In addition, the Company suffered substantial reductions in revenue and net earnings of both mining and steel operations as a result of the lower value in Canadian dollars of sales made in foreign currencies subsequent to May 30, 1970.

During 1970 dividends of $830,000 on preference shares and $4,900,000 on common shares were paid. Dividends on common shares were paid at the same rate of 40¢ per share as in 1969 and represented 34.8% of consolidated net earnings.

Bank loans increased during the year from $2,849,000 to $4,430,000. The loans to Anglo-Rouyn Mines Limited and Mines de Poirier Inc., which at their maximum totalled $13,000,000 and amounted to $1,485,000 at December 31, 1969, were paid off during the year; borrowings to finance the construction of the Utah uranium mine amounted to U.S. $3,892,000 in 1970 and totalled U.S. $4,172,000 at the end of the year. The net excess of assets over liabilities increased to $176,079,000 from $167,477,000. During the year $11,396,000 was expended on capital projects and $18,540,000 was invested in securities of Lornex Mining Corporation Ltd.

Under the terms of Rio Algom's uranium sales contract with Eldorado Nuclear Limited net advance payments of $933,000 remain to be repaid during 1971.

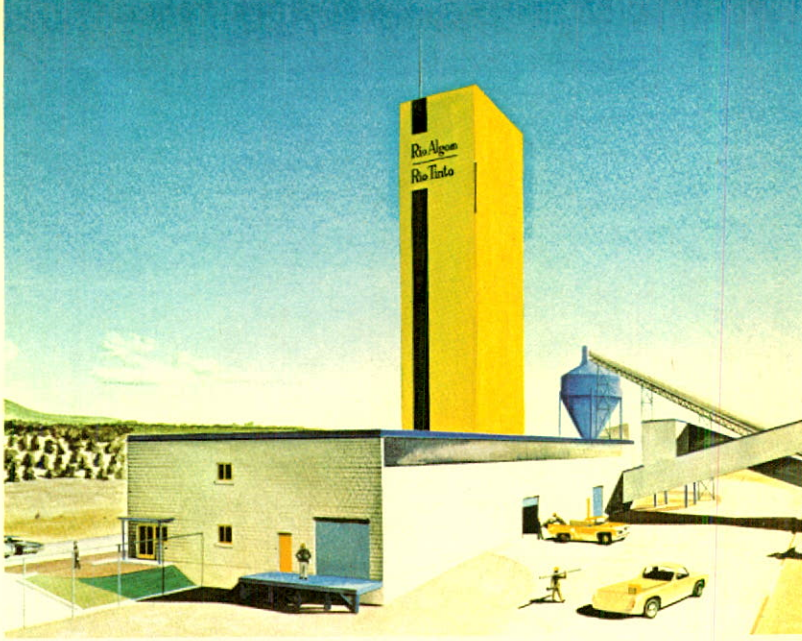
Mining

Uranium operations of the Quirke mines and mill at Elliot Lake averaged 4,231 tons per day. Tests have confirmed the capability of the Quirke mines and mill to maintain a milling rate of 4,500 tons of ore per day. This proven increased production capacity is sufficient to meet deliveries into the mid 1970's under present sales contracts.

During 1970 scheduled deliveries from the Elliot Lake operation were made under the long term contracts previously entered into with Eldorado Nuclear Limited, eight Japanese electric power utilities and Ontario Hydro. Deliveries under these contracts, together with the contract concluded with the United Kingdom Atomic Energy Authority for deliveries to start during 1972, provide a base for continuous uranium mining operations and employment at Elliot Lake into the 1980's.

Three new uranium orders were received during the year. The first was for 955,000 pounds of uranium oxide for delivery in 1972 to Kernkraftwerk Brunsbuttel GMBH, West Germany, from Elliot


Lomex


Rio Algom
Rio Tinto

New mines: Two mines were under development in 1970, the large Lornex open pit copper mine in British Columbia and a uranium mine in Utah. Photos, clockwise from lower left: Electric shovel removes 15-ton bite of overburden at the Lornex mine as it is prepared to begin production in 1972; at that time, deliveries will commence under sales contracts for the mine's total output of copper in concentrate for 12 years. Engineer surveys at Lornex. Artist's concept of headframe and part of surface plant at Rio Algom's first mine in the United States; virtually all the mine's planned uranium output has been sold into 1980.

Building a town: To provide housing close to Lornex, the company is building a town on the picturesque rolling hills rising from Logan Lake, 11 miles from the mine; construction began in the fall of 1970. Hon. P. A. Gaglardi (pointing), in whose constituency Logan Lake is located, and Mayor John G. Aldrich, the community's first mayor, look over town model after Logan Lake's inaugural council meeting. Construction continued through winter on first 100 homes to be completed by mid-1971.

Lake, the second for 500,000 pounds of uranium oxide for delivery in 1973 to Sydsvenska Kraftaktiebolaget of Sweden from the new mine in Utah and the third for 27,500 pounds of uranium oxide to be delivered in 1971 to Canadian Westinghouse Company Ltd. from Elliot Lake.

Total copper production was down slightly from 1969 due to the shutdown of the Pronto mine in April 1970 when all ore had been mined. However, the effect of the Pronto shutdown was largely offset by increased production at Mines de Poirier due to a higher milling rate and improvement in ore grade and mill recovery. Copper prices dropped continuously after the first quarter of the year and the average price for the year was substantially below the average price for 1969 with a consequent decline in revenue and earnings from copper operations. The assets, property and business of Mines de Poirier Inc., a wholly owned company, were purchased by Rio Algom as at February 28, 1970.

Research and development programs directed toward reducing mine and mill costs and to increasing productivity were continued during the year. At the New Quirke mine development is under way to assess a new mining method in Elliot Lake based on longhole drilling in conjunction with the use of backfill which, if successful, will permit increased mechanization and increase recovery of ore from pillars where thickness of the ore exceeds ten feet.

Exploration

Expenditure on the search for new orebodies in Canada and the United States has been increasing over the past several years. In 1970 net expenditure on exploration by the Company and its subsidiaries on their own account and through participation with others was $2,006,000 compared with $1,621,000 in 1969 and $1,257,000 in 1968.

During the year programs were continued in exploration for base metals and broadened to include industrial minerals. The search for coking coal in the eastern foothills of the Canadian Rocky Mountains was expanded. Exploration for uranium in Canada was limited to properties in which an interest was held in March 1970 when the Government of Canada announced its intention to limit foreign ownership in the Canadian uranium industry. The search for uranium prospects in the United States was continued.

During the year an agreement was entered into whereby a majority interest may be earned in a coal property in southeastern British Columbia and a working option was taken on an asbestos property in northwestern Quebec. Examination of these prospects together with the continuation and expansion of other programs is expected to increase 1971 exploration expenditures over the 1970 level.

Mine Development

Lornex Project

On August 14, 1970 the shareholders of Lornex Mining Corporation Ltd. approved financing and related agreements for the development and construction of its copper-molybdenum mine in the Highland Valley area of British Columbia. These agreements included a Construction and Management Agreement between Rio Algom and Lornex whereby Rio Algom agreed to assume responsibility for the construction of the Lornex Project and to supervise and manage the business of Lornex both during construction and thereafter for a period of at least fifteen years from December 31, 1969. Preparatory work had been carried out prior to the date of Lornex shareholders' approval and permitted development and construction work to begin immediately following the approval of the financing and related agreements.

Plans call for production to begin in the second quarter of 1972 and when operating at design capacity of 38,000 tons of ore per day, annual output is estimated at 162,000 short tons of copper concentrate and 2.5 million pounds of molybdenum in concentrate over the expected twenty-one year life of the orebody.

Preparation of the open pit for production being carried out by Lornex involving the removal of a currently estimated 47 million tons of preproduction material is substantially on schedule. At the end of the year engineering design was approximately 50% complete. Excavation for the crusher, concentrator and service buildings was essentially complete and much of the required concrete had been poured for building footings and foundations. Development of a townsite at Logan Lake some eleven miles from the mine site and forty miles from Kamloops is proceed-

ing on schedule. Construction of all phases of the project has been hindered somewhat due to unusually heavy snow and ice conditions.

It had been expected that other mining companies in the Highland Valley would participate in joint development of tailings and water systems on a shared cost basis. Since the other companies have not taken a final decision to proceed with development of their mining projects, Lornex is developing these systems independently. Previously signed agreements provide for participation of these companies at a later date, and if they do participate, Lornex will recover a pro rata share of the capital cost of the water intake portion of the water system and of the tailings area development.

Previously it was reported that the financial requirements of Lornex were expected to exceed the original estimate of $123.6 million by 6% to 8%. Based on the definitive engineering completed to date, it is estimated that $133.0 million will be required to bring the mine into production. The increase in cost has occurred because of the delay in start-up of construction, the unusual degree of cost escalation experienced (which was accentuated by the delay in the start-up of construction), the complexity of the tailings disposal system, the need to comply with more stringent pollution regulations and the deferral of participation by other mining companies in the development of the tailings and water systems.

Capital expenditures of Lornex for the year were $23,870,000 and total capital expenditures on the project to December 31, 1970 including accrued interest, financing expenses and exploration expenses were $34,121,000. Development and construction commitments at December 31, 1970 were approximately $15,700,000.

During the year the Company purchased from Lornex Units consisting of Income Debentures and Class A shares of Lornex for $21,240,000 and The Yukon Consolidated Gold Corporation Limited purchased from Lornex Units consisting of Income Debentures and common shares of Lornex for $2,360,000. Lornex repaid the Company and Yukon advances which had been made in 1969 and 1970, amounting to $9,180,000 and $1,020,000 respectively, to permit preparatory work on the Lornex Project to be carried out.

A Japanese consortium has agreed to purchase Units of common shares and promissory notes of Lornex for U.S. $26,500,000; purchases to date total U.S. $20,000,000. Under a bank loan agreement three Canadian banks are to lend a total of $60,000,000 secured by a pledge of First Mortgage Bonds. A maximum of $4,000,000 is to be provided for housing loans by Central Mortgage and Housing Corporation and Canadian banks. Further funds required may be provided, in whole or in part, by Rio Algom under the Construction and Management Agreement. Such funds may be required to be provided prior to the banks advancing funds to Lornex. If Lornex is unable to reimburse Rio Algom in cash for defined construction period costs and operating period costs incurred by Rio Algom under that agreement, Rio Algom may elect either to postpone reimbursement or, in lieu thereof, elect to accept Units of Income Debentures of Lornex in principal amount equal to the amount owing and Class A shares of Lornex. Each such Unit will consist of 80 Class A shares and an Income Debenture of Lornex in the principal amount of $1,000. Yukon has agreed to purchase from Rio Algom 17.5% of any Units that Rio Algom elects to accept and has been granted an option to purchase an additional 10% of such Units. Assuming that Rio Algom elects to accept Units and Yukon does not exercise its option Rio Algom estimates that its net commitment to accept Units will amount to approximately $7,800,000 during 1971 in respect of the estimated increase of project costs from the $123,600,000 originally estimated to $133,000,000 and a further $1,300,000 during 1971 in respect of a shortfall in realization from the Japanese loans as a result of the freeing of the Canadian dollar.

In view of the importance of the Lornex Project to your Company, with the consent of Lornex and for your further information, the annual report of Lornex Mining Corporation Ltd. for the year ended December 31, 1970 is forwarded to you with this report.

Utah Project

Development work during the year for the new uranium mine in Utah, commenced in March 1969, related mainly to sinking of the two shafts necessary to develop the orebody for mining. The sinking of the ventilation shaft was completed at 2,686 feet in November, stations were cut and concreted and work

Atlas Steel's modernization program at the Welland plant made good progress during the year. Main photo: Diesel-powered side loader lifts billets from racks at new stock area for removal to staging building prior to further processing. From top right down: Project engineers check foundations for new equipment. Computer linked with x-ray spectrometer provides 50 to 90-second analysis during melting process to achieve reduced melting time and greater quality control. New automated billet grinder, with several more to be installed in 1971, will replace manually-operated units.

began on the lateral haulage level. At the end of the year the production shaft had reached a depth of 2,520 feet and the cutting and concreting of the main station and openings at the haulage level was 90% complete. The final depth of this shaft will be 2,665 feet. Other work comprised the completion of a tailings dam, the development of the water supply system and detailed engineering of the mill facilities; construction of the mill was started in September.

After completing 875 feet of one of two parallel haulage drives being driven beneath the orebody from the ventilation shaft to the production shaft, an excess flow of water was encountered on February 12, 1971. Steps are being taken to bring the water flow under control. The production shaft is located 4,000 feet from the ventilation shaft and 3,125 feet from where water was encountered.

Construction and development was on schedule in relation to the planned commencement of operations early in 1972 until this occurrence. The appropriate corrective action and the effect on the completion schedule have not yet been determined. Work is continuing on the production shaft and surface facilities.

The planned production rate is 1,200,000 pounds of uranium oxide per year. Sales contracts for delivery from this mine total 8,400,000 pounds of uranium oxide when deliveries start in 1972 and extend to 1980.

Steel

Steel operations experienced a high level of demand early in the year, particularly for stainless flat rolled products. Favourable sales and profit opportunities developed early in the year for stainless flat rolled products partly due to a shortage of nickel as a result of strikes at major Canadian nickel producers in the latter half of 1969. Beginning in the third quarter demand softened and prices for stainless products declined. During the year employment costs, raw material and other costs escalated at a higher rate than expected.

Record sales reflect increased sales by the domestic warehouse operations, despite the general reduction in the level of domestic economic activity, and a strong overseas market for stainless steel products in Europe and South America in the first half of the year. However, domestic mill sales were adversely affected by the lower level of domestic economic activity and the prolonged automotive strike.

The performance of the Tracy plant continued to improve with consequent reduction in costs. The Welland plant again made substantial progress in upgrading product mix. However, this labour intensive plant has been hard pressed to maintain its profit margins in the face of escalating costs.

The major long term program to modernize the Welland plant, initiated in 1967, continued during the year. The cold draw finishing operations were transferred to a new building and new major bar finishing units have been put into operation. In May a major rehabilitation and re-arrangement of the conditioning department and billet stock area began; six modern machine grinders are being installed, a new outdoor billet stock area is in operation and a new building for the staging and the preparation of billets for rolling has been completed.

Technical support for melting operations has been increased by the installation of a computerized in-process analytical system and programs have been instituted to computerize the economic selection of available raw materials for melting. These and similar facilities are essential to improve basic steel-making capability, to improve technological capability and reduce costs and upgrade the product mix at the Welland plant. The program will continue through 1971 and several subsequent years.

A planning team has been established to undertake special product studies to provide the basis for a product oriented master plan for facilities and product development. The main objective is to improve the return on investment in steel operations. New processes are being studied. A powder metallurgy program which utilizes techniques considered to be unique is ahead of schedule. In addition, increased emphasis is being placed on process research aimed at reducing raw material costs.

Future Outlook

Mining

Orders placed in the United States for new nuclear generating stations showed a marked improvement in 1970 compared with 1969. The extensive nuclear power plant construction programs of the Japanese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electrical utilities were adhered to. In Europe there were some delays in ordering new plants.

The environmental issue, affecting industry generally, caused some delays in power reactor construction and ordering in 1969, principally in the United States. However, since the growing demand for electricity will have to be met and nuclear plants are believed to be superior to fossil-fuelled plants from the environmental standpoint, it seems likely that nuclear plants will continue to take over an increasing proportion of base load electricity generation. Shortages of steam coal and increases in the cost of other energy fuels also occurred during the year. These factors add to the relative attractiveness of nuclear power, and hence uranium, as an alternative power source.

The Company and Rio Algom Corporation, its wholly owned company in the United States, have firm contracts to deliver 53.7 million pounds of uranium oxide which assures continuity of uranium operations into the 1980's.

With regard to copper mines, the development work at Mines de Poirier in 1970 has established ore reserves and grade which extend the life of the mine and enhance its potential profitability.

Steel

The decline in demand for steel products in the fourth quarter of 1970 reflected the slow down in the North American economy, customer inventory adjustments and the prolonged automotive strike. As a result, the order backlog entering 1971 was lower than at the beginning of 1970 and is expected to limit first quarter sales and production schedules.

Employment, raw material and other costs will continue to increase in 1971 but it is anticipated that this will occur at a lower rate than in 1970. Such costs must be controlled to the fullest extent possible and management will continue to monitor this situation very closely. Although it would seem that prices for specialty steels must rise if producers are to recover increased costs it is not possible to predict accurately short run price trends. It is expected, however, that the severe cost-price squeeze will continue in the foreseeable future.

The demonstrated capability of the Tracy plant, the modernization program at the Welland plant and cost reduction and development programs place steel operations in a good position to take advantage of a return to more favourable economic conditions.

Other

There are two Government of Canada proposals that, if enacted into law, will have detrimental effects on the future prospects of the Company.

On November 7, 1969 the Government of Canada presented a White Paper which outlined Proposals for Tax Reform and invited a thorough discussion of such proposals. Because of the impact which certain of these proposals will have, if adopted, on Canada's mining industry and the growth of Canadian industry in general, the Company has submitted its views and made representations directly and through The Mining Association of Canada to the appropriate Federal Parliamentary Committees. The Government of Canada has not yet introduced legislation with regard to the proposed tax changes.

On March 19, 1970 a policy statement was made by the Government of Canada stating its intention to limit foreign ownership of the Canadian uranium industry. Since the indicated policy would have an unreasonable and adverse effect on the Company, appropriate representations have been made to the Government of Canada. This matter is still under review by the Government.

Organization

On November 27, 1970, Mr. N. F. Warren was appointed Lornex Project Manager, and in this capacity he has senior responsibility for construction of the Lornex Project and operation of the mine.

On February 25, 1971, Mr. H. A. Pakrul, formerly Controller, was appointed Vice-President, Controller; Mr. A. C. Turner, formerly Secretary, was appointed Vice-President, Secretary; Mr. J. Van Netten, formerly Treasurer, was appointed Vice-President, Treasurer.

Your Directors wish to express their thanks to all officers and employees of the Company and its associated companies for their loyal and effective efforts in furtherance of the Company's objectives during the past year.

On behalf of the Board

Toronto, Canada.
February 25, 1971.

R. D. Armstrong
President

Auditors' Report

To the Shareholders of Rio Algom Mines Limited:

We have examined the consolidated statement of financial position of Rio Algom Mines Limited as at December 31, 1970 and the consolidated statements of earnings, retained earnings, contributed surplus and source and disposition of funds for the year then ended. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1970 and the results of their operations and the source and disposition of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Toronto, Canada.
February 19, 1971

COOPERS & LYBRAND
Chartered Accountants

RIO ALGOM MINES LIMITED

(Incorporated under the laws of Ontario)

Consolidated Statement of Financial Position

DECEMBER 31, 1970

($000's omitted)

	1970	1969
CURRENT ASSETS:		
Cash	$ 2,353	$ 2,294
Short term investments, at cost, and deposits	11,016	29,511
Marketable securities (note 2)	384	442
Receivables	33,760	35,518
Due from affiliated and associated companies	1,579	231
Inventories and concentrates awaiting shipment (note 3)	55,880	48,976
Prepaid expenses	2,137	2,404
Total	107,109	119,376
Less:		
CURRENT LIABILITIES:		
Bank loans	4,430	2,849
Accounts payable and accrued liabilities	23,124	23,063
Due to affiliated and associated companies	100	171
Provision for income taxes including Provincial mining taxes	1,869	2,067
Preference share dividend payable January 1	207	213
Long term debt due within one year (note 8)	1,341	1,192
Total	31,071	29,555
WORKING CAPITAL	76,038	89,821
Investment in associated companies (note 4)	24,444	42
Plant and equipment, less depreciation (note 5)	77,496	76,401
Mining properties and preproduction expenditures, less amortization (note 6)	20,604	19,117
Other costs applicable to future periods (note 7)	13,248	20,721
TOTAL ASSETS LESS CURRENT LIABILITIES	211,830	206,102
Deduct:		
Long term debt (note 8)	34,000	36,933
Minority shareholders' interests in subsidiary companies	1,751	1,692
	35,751	38,625
EXCESS OF ASSETS OVER LIABILITIES	$176,079	$167,477
OWNERSHIP EVIDENCED BY (note 9):		
Capital stock	$ 86,695	$ 87,138
Contributed surplus	19,523	19,424
Retained earnings	69,861	60,915
Total	$176,079	$167,477

Approved on behalf of the Board:

R. D. Armstrong, Director Bryce MacKenzie, Director

Consolidated Statement of Earnings

YEAR ENDED DECEMBER 31, 1970

($000's omitted)

	1970	*1969*
REVENUE:		
Revenue from mine production and sales of steel and other products	$183,525	*$173,114*
Investment and other income	1,519	*2,267*
	185,044	*175,381*
EXPENSES:		
Cost of production, selling, general and administrative expenses	154,065	*144,005*
Interest and amortization of discount and financing expenses (note 7)	2,167	*2,722*
Depreciation and amortization (notes 5, 6, 7, and 13)	9,862	*9,521*
Exploration expenditures	2,006	*1,621*
	168,100	*157,869*
	16,944	*17,512*
Provision for income taxes including Provincial mining taxes (note 11)	1,491	*1,563*
Earnings before adjustment for minority interests in subsidiary companies	15,453	*15,949*
Minority interests in profits of subsidiaries	47	*588*
NET EARNINGS FROM OPERATIONS	15,406	*15,361*
Earnings per common share before extraordinary items	$1.19	*$1.18*
Extraordinary items:		
Writedown of marketable securities to net realizable value (note 2)	658	—
Foreign exchange loss arising from floating of Canadian dollar	672	—
	1,330	—
NET EARNINGS FOR THE YEAR	$ 14,076	*$ 15,361*
Net earnings per common share	$1.08	*$1.18*

Consolidated Statement of Retained Earnings

YEAR ENDED DECEMBER 31, 1970

($000's omitted)

	1970	*1969*
BALANCE, beginning of year	$ 60,915	*$ 51,313*
ADD:		
Net earnings for the year	14,076	*15,361*
Reserve for marketable securities no longer required (note 2)	600	*—*
	75,591	*66,674*
DEDUCT:		
Dividends on preference shares	830	*859*
Dividends on common shares	4,900	*4,900*
	5,730	*5,759*
BALANCE, end of year	$ 69,861	*$ 60,915*

Consolidated Statement of Contributed Surplus

YEAR ENDED DECEMBER 31, 1970

($000's omitted)

	1970	*1969*
BALANCE, beginning of year	$ 19,424	*$ 19,381*
Profit on purchase of preference shares for cancellation	99	*43*
BALANCE, end of year	$ 19,523	*$ 19,424*

Consolidated Statement of Source and Disposition of Funds

YEAR ENDED DECEMBER 31, 1970

($000's omitted)

	1970	*1969*
SOURCE OF FUNDS:		
Net earnings for the year	$ 14,076	*$ 15,361*
Add charges against earnings for year not involving current outlay of funds:		
Depreciation, amortization and other charges (net)	10,484	*10,670*
Write down of marketable securities reserved for in 1967 (note 2)	600	*—*
	25,160	*26,031*
DISPOSITION OF FUNDS:		
Expenditures (net) for plant and equipment and preproduction	11,396	*13,081*
Investment in associated companies (net) (notes 4 and 7)	18,540	*—*
Increase in development projects	—	*2,700*
Dividends on preference shares	830	*859*
Dividends on common shares	4,900	*4,900*
Reduction of long term debt	2,000	*2,000*
Reduction of long term advances	933	*1,192*
Purchase of preference shares for cancellation	344	*257*
	38,943	*24,989*
INCREASE OR (DECREASE) IN WORKING CAPITAL	$ (13,783)	*$ 1,042*

Notes to Consolidated Financial Statements

DECEMBER 31, 1970

1. BASIS OF CONSOLIDATION

The consolidated financial statements include the accounts of all significant majority-owned subsidiary companies.

The accounts in foreign currencies are stated in Canadian dollars on the following basis:

Plant and equipment and related depreciation, mining properties and preproduction expenditures at exchange rates in effect at date of acquisition;

Long term advances and capital stock at rates in effect at time of transactions;

Other assets and liabilities at year end rates; and

Revenues and expenses (other than depreciation) at average rates in effect during the year.

2. MARKETABLE SECURITIES

Marketable securities are carried at net realizable value (1969 — at cost less reserve of $600,000).

In 1967 an amount of $600,000 was appropriated from retained earnings as a reserve to reduce the carrying value of marketable securities to approximate market value at December 31, 1967. As the securities were sold in January, 1971 they have been written down to net realizable value in 1970, the write-down of $657,484 being reflected as an extraordinary item in the consolidated statement of earnings. The reserve of $600,000 has accordingly been restored to retained earnings.

3. INVENTORIES AND CONCENTRATES AWAITING SHIPMENT

These consist of:	1970	1969
Inventories —		
Steel, other metals, raw materials and supplies	$46,636,636	$41,972,804
Mine supplies	2,535,889	3,020,684
Total inventories	49,172,525	44,993,488
Concentrates awaiting shipment	6,707,425	3,982,880
	$55,879,950	$48,976,368

Inventories of steel, other metals, raw materials and supplies are valued at the lower of cost and market. Cost is determined generally at average or standard costs which approximate actual. Market for steel and other metals is net realizable value and for raw materials and supplies is replacement cost. Inter-company profits have been excluded from these inventories. Mine supplies are valued at cost less provision for loss on disposal of surplus supplies.

Concentrates awaiting shipment are valued at selling price.

4. INVESTMENT IN ASSOCIATED COMPANIES

These consist of:	1970	1969
Investment in Units of Income Debentures and shares of Lornex Mining Corporation Ltd., at cost	$21,240,000	$ —
Investment in shares of Lornex Mining Corporation Ltd., at cost (see note 7)	3,162,707	—
Shares in other associated companies, at cost less provision for losses	41,518	41,518
	$24,444,225	$ 41,518

During 1970 the Company purchased 21,240 Units consisting of $1,000 principal amount of Lornex 8½% Income Debentures and 80 shares of Lornex capital stock for the purchase price of $1,000 per Unit. In addition the Company's previous investment in shares of Lornex stock, costing $3,162,707, was reclassified from development projects where it was carried in 1969 (see note 7).

The Company's interest in Lornex at December 31, 1970 amounted to 50.0% of the common shares together with 224,374 or 100% of the Class A shares of Lornex. The Class A shares are non-voting but may be exchanged for common shares at any time.

At December 31, 1970 the Company's accrued interest receivable from Lornex amounted to $464,952 on the Income Debentures and to $427,476 on temporary advances to Lornex. Contractually this accrued interest cannot be paid by Lornex until after required principal and interest repayments have been made on senior forms of debt. At December 31, 1970 the Company provided an identical allowance of $892,428.

5. PLANT AND EQUIPMENT

Plant and equipment consists of:

	1970	1969
Buildings, machinery and equipment and construction in progress, at cost	$207,698,327	$201,946,070
Less accumulated depreciation	132,291,964	127,688,686
	75,406,363	74,257,384
Land, at cost	2,089,526	2,143,299
	$ 77,495,889	$ 76,400,683

The following accounting policies are being followed in connection with the depreciation charges of the Company:

(i) Mining fixed assets:
Depreciation is being provided on fixed assets on the basis of the shorter of physical life or economic life, as estimated for the individual mining units, the economic life to be adjusted from time to time as conditions warrant.

(ii) Steel fixed assets:
Fixed assets are being depreciated on the straight line method based on engineering estimates of the lives of the assets at the following rates:

Buildings	4% per annum
Plant and equipment	6⅔% per annum

During the year the Company reduced fixed assets by an amount of $47,448,678 to eliminate residual balances in respect of mining assets sold, dismantled or scrapped in prior years. Since these had been fully depreciated a corresponding amount was removed from accumulated depreciation. Comparative figures for 1969 have been adjusted to give effect to the reductions. The remaining amount shown for plant and equipment includes $76,045,486 in respect of assets of mines presently idle which have been fully depreciated.

6. MINING PROPERTIES AND PREPRODUCTION EXPENDITURES

These consist of:

	1970	1969
Mining properties, at cost	$ 7,142,853	$ 6,931,852
Less accumulated amortization	5,870,158	5,852,548
	1,272,695	1,079,304
Preproduction expenditures, at cost less amortization	19,331,483	18,037,315
	$20,604,178	$19,116,619

Mining properties and preproduction expenditures are being amortized on the same basis as depreciation is being provided, as described in note 5 (i).

7. OTHER COSTS APPLICABLE TO FUTURE PERIODS

These include the following:

	1970	1969
Development projects, at cost	$ —	$ 5,862,738
Discount and financing expenses, at cost less amortization	688,936	1,252,468
Excess of acquisition cost over adjusted book value of Atlas Steels assets, less amortization	12,559,092	13,606,192
	$13,248,028	$20,721,398

The following accounting policies are being followed in connection with amortization of other costs applicable to future periods:

(i) Development projects are carried forward as assets while the projects are considered to be of value to the Company. All exploration expenses have been written off.

During 1970 the amount of $3,162,707 previously invested in shares of Lornex Mining Corporation Ltd. was transferred from development projects to investment in associated companies (see note 4).

The remaining balance of $2,700,000 in this account at December 31, 1969 consisted of advances to Lornex and these were repaid by Lornex out of the proceeds from the sale of Units referred to in note 4.

(ii) Discount and financing expenses are being amortized on a straight line basis over the life of the Sinking Fund Debentures of the Company, which mature on April 1, 1983. Discounts realized on purchase for cancellation of debentures have been applied to reduce the unamortized balance of discount and financing expenses; and

(iii) Excess of acquisition cost over adjusted book value of Atlas Steels assets is being amortized on a straight line basis over a 20 year period which commenced January 1, 1963.

8. LONG TERM DEBT

	1970	1969
Advances on future deliveries of uranium concentrates	$ 932,846	$ 2,125,000
Less portion included in current liabilities	932,846	1,192,154
	—	932,846
5¾% Sinking Fund Debentures Series A, maturing on April 1, 1983	34,408,000	36,000,000
Less portion included in current liabilities	408,000	—
	34,000,000	36,000,000
	$34,000,000	$36,932,846

At December 31, 1970 the advance payments received from Eldorado Nuclear Limited on the account of future deliveries of uranium concentrates totalled $932,846 collaterally secured by $1,255,178 issued and outstanding Non-Interest-Bearing Performance Bonds due March 31, 1974.

The Company has agreed to make sinking fund payments for the retirement of the Sinking Fund Debentures as follows:

$2,000,000 on October 1 in each of the years 1971 to 1978; and
$2,500,000 on October 1 in each of the years 1979 to 1982.

At December 31, 1970 $1,592,000 principal amount had been purchased to meet the sinking fund requirements in 1971.

9. OWNERSHIP

Ownership was evidenced by:

	1970	1969
Capital stock		
Authorized:		
492,575 First Preference Shares with a par value of $100 each, issuable in series		
15,000,000 Common Shares without par value		
Issued:		
142,575 $5.80 Cumulative Redeemable First Preference Shares Series A (147,000 at December 31, 1969) (redeemable at premiums ranging from 4½% to 1%)	$ 14,257,500	$ 14,700,000
12,249,584 Common Shares	72,437,504	72,437,504
	86,695,004	87,137,504
Contributed surplus	19,522,577	19,424,039
Retained earnings	69,861,840	60,915,006
Total	$176,079,421	$167,476,549

(i) During the year 4,425 First Preference Shares were purchased for cancellation, thereby satisfying the Company's 1970 obligation referred to in note 10 (iii) below.

(ii) At December 31, 1970, 247,829 Common Shares were reserved:

(a) 99,600 shares under a Stock Option Plan. Outstanding options have been granted to employees to purchase:
20,100 shares at a price of $24.64 per share on or before March 30, 1977; and
32,500 shares at a price of $28.35 per share on or before April 1, 1978.

(b) 148,229 shares for holders of Series C Warrants, issuable at $22.25 per share on or before April 1, 1971.

(iii) There are restrictions on the payment of dividends in the provisions attaching to the $5.80 Cumulative Redeemable First Preference Shares Series A and the Company's trust indenture relating to the Series A Debentures contains certain covenants which limit the payment of any dividends as well as the assumption of additional long term liabilities.

10. COMMITMENTS AND CONTINGENT LIABILITIES

The following commitments and contingent liabilities were outstanding at December 31, 1970:

(i) Estimated total cost to complete capital projects, including the Utah uranium mine, was approximately $16,200,000 (committed approximately $4,710,000). This does not include

any abnormal costs which might be incurred in the corrective measures being taken at the Utah mine to control the excess flow of water recently encountered;

(ii) Minimum annual rentals upon real property with original lease terms extending beyond December 31, 1973, exclusive of certain expenses such as real estate taxes, insurance, etc. amounted to approximately $628,000. The leases are for varying periods, the longest lease extending to 1990, and include options for renewal;

(iii) The Company is obligated on April 1 in each year to set aside as a retirement fund, subject to certain limitations, an amount equal to 2% of the original aggregate par value of the Preference Shares Series A. The retirement fund will be used to purchase or redeem Preference Shares Series A subject to certain limitations; and

(iv) The Company has agreed to incur on behalf of Lornex Mining Corporation Ltd. all defined construction period costs and those operating period costs incurred during the the first four years following commencement of commercial production which is expected to occur in 1972. If the funds available to Lornex after payment of its primary obligations are insufficient to reimburse the Company for construction period costs and operating period costs, the Company may, from time to time, elect either to postpone payment thereof until after payment of all amounts owing under the Bank Loan Agreement, the Japanese Financing Agreement and Income Debenture Indenture or, alternatively, to accept in lieu of payment thereof, for each $1,000 principal amount of such cost, a Unit of Income Debentures and Class A shares of Lornex. Each such Unit will consist of 80 Class A shares and an Income Debenture in principal amount of $1,000. (See Note 4 for particulars of payment of interest on such Income Debentures). Any payments which the Company elects to postpone bear interest at the rate of 8½% per annum computed quarterly with interest on overdue interest but such interest is not payable while amounts are owing under the Bank Loan Agreement, Japanese Financing Agreement or Income Debenture Indenture. The principal of any postponed amount, unless repaid within three months from the date it originally became due, may not be paid while amounts are owing under the Bank Loan Agreement or Japanese Financing Agreement.

The Company's obligation to do work or incur further expenses without being reimbursed in cash is suspended if construction period costs incurred exceed by $20,000,000 the amount for which the Company has been reimbursed in cash, or, in the alternative, if construction period costs together with operating period costs in the aggregate exceed by $30,000,000 the amount for which the Company has been reimbursed in cash until the Company is satisfied that it will be reimbursed in cash by Lornex for such work or expenses.

Because of delays in the start-up date from that envisioned in the 1968 Project Evaluation and a number of other factors, the financial requirements of the Lornex Project are presently estimated to exceed original estimates by $9,400,000. These excess financial requirements may be provided, in whole or in part, under the Construction and Management Agreement in the manner described above. Such funds may be required to be provided prior to the banks advancing funds to Lornex.

It has been agreed that the Company will sell at cost to The Yukon Consolidated Gold Corporation Limited 17.5% of all Units of Class A shares and Income Debentures it elects to accept as aforesaid. In addition, Yukon has been granted the option to purchase an additional 10% of such Units at cost. Assuming that the Company elects to accept Units and Yukon does not exercise its option the Company estimates that its net commitment to accept Units will amount to approximately $7,800,000 during 1971 in respect of the estimated increase of project costs from the $123,600,000 originally estimated to $133,000,000, and a further $1,300,000 during 1971 in respect of a shortfall in realization from the Japanese Financing Agreement as a result of the freeing of the Canadian dollar.

11. INCOME TAXES

Because the Company did not claim depreciation or mine development expenses during the tax exempt periods of its mines, it has available sufficient of such expenses to eliminate taxable income for the year. The Company does not intend to provide for income taxes so long as the accumulated amount of these expenses claimed for tax purposes is less than the accumulated amount recorded in its accounts.

Full provision has been made for Provincial mining taxes and the income taxes of subsidiary companies.

12. REMUNERATION OF DIRECTORS AND SENIOR OFFICERS

During the year ended December 31, 1970 the aggregate direct remuneration paid or payable by the Company and its consolidated subsidaries to the directors and senior officers of the Company was $591,702.

13. DEPRECIATION AND AMORTIZATION

Provisions for depreciation and amortization relating to plant and equipment, mining properties and preproduction expenditures and other costs applicable to future periods were:

	1970	1969
Plant and equipment	$7,091,830	$6,798,231
Mining properties and preproduction expenditures	1,722,723	1,675,588
	8,814,553	8,473,819
Excess of cost over adjusted book value of assets acquired	1,047,100	1,047,100
	$9,861,653	$9,520,919

Comparative Consolidated Earnings by Operation

YEAR ENDED DECEMBER 31, 1970

($000's omitted)

	1970	*1969*
MINING		
Revenue from mine production	$ 44,413	*$ 45,931*
Expenses:		
Cost of production and administration	28,311	*27,230*
Depreciation and amortization	3,847	*3,606*
Exploration expenditures	2,006	*1,621*
Minority interest in profits of subsidiary	44	*585*
Total expenses	34,208	*33,042*
Net earnings from operations before taxes	10,205	*12,889*
STEEL		
Revenue from sales of steel and other products	139,112	*127,183*
Expenses:		
Cost of production, selling and administration	123,541	*113,733*
Depreciation	4,894	*4,794*
Amortization of excess of cost over adjusted book value of assets acquired	1,047	*1,047*
Minority interest in profits of subsidiary	3	*3*
Total expenses	129,485	*119,577*
Net earnings from operations before taxes	9,627	*7,606*
CORPORATE		
Expenses:		
Costs of administration	2,473	*3,042*
Interest	2,007	*2,560*
Amortization of discount and financing expenses	162	*162*
Depreciation	72	*74*
Total expenses	4,714	*5,838*
Less investment and other income	1,779	*2,267*
Net expense for the year	(2,935)	*(3,571)*
NET EARNINGS FROM OPERATIONS BEFORE PROVISION FOR TAXES	16,897	*16,924*
Provision for taxes:		
Provincial mining taxes	546	*685*
Income taxes	945	*878*
	1,491	*1,563*
NET EARNINGS FROM OPERATIONS	15,406	*15,361*
Deduct extraordinary items	1,330	—
NET EARNINGS FOR THE YEAR	$ 14,076	*$ 15,361*

Report on Operations

Mining Operations

The earnings from mining operations for the year before income and mining taxes were $10,205,000 compared with $12,889,000 in 1969. Total revenue was $44,413,000 a decrease of $1,518,000 compared to the previous year.

Revenue and earnings from uranium operations increased over 1969 primarily because of higher production which was a result of both a higher milling rate and a better average grade.

Total copper revenue and earnings were substantially lower than in 1969 as a result of lower copper prices, which dropped continuously since the first quarter of the year, and slightly lower total pounds of payable copper produced due to the shutdown of the Pronto mine in April 1970. The effect of the loss of this copper production was largely offset by increased production at Mines de Poirier as a result of improvement in ore grade and a higher milling rate.

Uranium

A total of 3,995,000 pounds of uranium oxide was produced in 1970 compared to 3,290,000 pounds in 1969. Deliveries totalling 3,520,000 pounds of uranium oxide were made comprising 2,394,000 pounds to Eldorado Nuclear Limited, 1,000,000 pounds to a number of Japanese utilities, 59,000 pounds to Canadian Westinghouse Company Ltd. and 67,000 pounds to Ontario Hydro.

During the year 1,443,000 tons of ore were milled at Quirke mill exceeding last year's record of 1,363,000 tons. The mining and milling operations averaged 4,231 tons per day compared to 3,940 tons per day in 1969. The average recovered grade was 2.8 pounds of uranium oxide per ton and the average mill recovery rate was 94.4% compared to 2.4 pounds of uranium oxide per ton and a 94.1% recovery rate in the previous year. The increase in average grade reflected the progressive displacement of ore from the Old Quirke mine by higher grade ore from the New Quirke mine and an increase in grade at the latter mine.

In the early part of the year tests confirmed the capability of the Quirke mines and mill to maintain an average milling rate of 4,500 tons per day. Underground leaching at the Nordic mine was stopped during the year and the surface plant is now dormant. The miner training and experimental mining programs have been transferred to the Old Quirke mine.

During the year the construction of a new tailings dam of advanced design was undertaken to contain tailings from the Quirke mill. This dam incorporates anti-pollution design features recommended by the Ontario Water Resources Commission. Tests are being carried out to develop a method of re-vegetating old tailings sites.

Base Metals

Production of copper in the year from all base metal properties totalled 35,239,000 payable pounds of copper in concentrate, a slight decrease from the 36,485,000 payable pounds of copper produced in 1969. The Pronto mine produced 1,919,000 payable pounds of copper prior to shutdown in April 1970 compared to the 8,245,000 pounds produced in the previous year.

Mines de Poirier

Copper production from Poirier in 1970 was the highest since production commenced in April 1966. A total of 23,549,000 payable pounds of copper in concentrate was produced, an increase of 4,948,000 pounds or 26.6% over 1969 production. Production of silver was 39,815 ounces compared to 52,147 ounces in the previous year. No zinc was produced in 1970; in 1969 a total of 1,688,000 payable pounds was produced prior to discontinuing the mining of zinc bearing ore in March.

The mill treated 562,000 tons of ore compared to 522,000 tons in 1969. The mill head grade averaged 2.3% copper and the average mill recovery was 94.4% which compares to 2.0% and 93.9% respectively in the previous year. Custom milling continued on a satisfactory basis and 247,000 tons of ore were treated compared to 242,000 tons in 1969.

Early in the year a decision was taken to concentrate on stope preparation in the main ore zone between the 1,750 and 2,050 foot levels. The 2,050 foot level main south crosscut was started in January and by year end development work on the 1,750, 1,900

and 2,050 foot levels was completed and mining by the blast hole method was started early in 1971. Development continued in the west ore zone where further extensions were made on the 1,450, 1,600 and 1,900 foot levels. Advance to the west on the 1,900 foot level and to the east and west on the 2,500 foot level will continue in 1971 to explore the downward extension of the main east and west zones.

Anglo-Rouyn Mines Limited

Anglo-Rouyn produced 9,770,000 payable pounds of copper in concentrate compared to 9,639,000 pounds in 1969. In addition 12,592 ounces of gold and 49,861 ounces of silver were produced compared to 10,330 and 52,336 ounces respectively in the previous year.

The mill treated 315,000 tons of ore compared to 298,000 tons in 1969. The average mill head grade was 1.7% and average mill recovery was 96.6% compared to 1.8% and 96.0% in the previous year.

Production from the underground "A" ore zone continued to be limited by difficulty in mining the lenses that are smaller and more fractured than indicated by the original surface drilling and by the continued shortage of underground labour. To enable the milling rate to be maintained approximately 68,000 tons of ore mined from a surface open pit on the "C" ore zone was used during the year to supplement production from underground. The ore obtained from the stockpile remaining when the open pit operation was terminated in January 1970 was considerably lower in grade than ore from underground, lowering the overall average grade for the year.

The two inclines commenced in 1969 were completed, development was completed and stoping commenced. One incline was driven from underground to the southwest extension of the orebody and the other from the surface to the underground "C" ore zone. Both ore zones were developed and are being mined with trackless equipment.

The Anglo-Rouyn mine is a small, high cost producer. Its operating results are thus influenced heavily by copper prices.

The shortage and turnover of labour continued. Training courses for local residents were continued successfully in co-operation with the Provincial and Federal Governments.

Research and Development

In 1970 research and development programs continued to be directed toward reducing mine and mill costs and to increasing productivity.

During the second half of the year, the 8th level at the New Quirke mine has been under development on a plan which will permit assessment of a mining method which has not previously been used by Rio Algom in the Elliot Lake uranium operation. Accurate longhole drilling is basic to the mining method and four items of special equipment have been designed for this purpose and are being tested. In conjunction with this program tests are being conducted to determine the effectiveness of a mixture of mill tailings and cement for use as backfill which would permit the removal of a portion of mine pillars. Success of this method would permit increased mechanization and would increase recovery of ore from pillars where thickness of the ore exceeds ten feet.

A variety of apparatus has been tested to develop a mine ventilation monitoring system. A pilot installation is now being made at Elliot Lake which should indicate the extent of cost saving and mine environment improvement.

Flow sheet test programs, effluent control work, and analytical services have been carried out for uranium and base metal operations. Tests at Elliot Lake covered uranium leaching, solvent-in-pulp extraction, and tests with hydraulic backfill for mine application. Laboratory facilities, previously in several locations, are centralized in newly outfitted quarters at the Old Quirke mine.

Employee Relations

At December 31, 1970 there were 1,660 employees engaged in mining operations (including all consolidated subsidiaries) of whom 1,219 were engaged in production and 441 were engaged in executive, technical, administrative and clerical functions. Employee relations throughout the year were good and there were no strikes or work stoppages.

Collective agreements for Elliot Lake employees to replace those which expired in 1970 were concluded; the agreement covering the majority of hourly rated employees will end on January 15, 1973. A new

agreement with hourly rated employees of the Anglo-Rouyn copper mine was negotiated and will terminate on May 31, 1973. The agreement with the production workers of the Mines de Poirier copper mine expires on December 22, 1971.

To alleviate the shortage of skilled miners the Elliot Lake miner training program initiated in 1969 was expanded. The program, in co-operation with Federal and Provincial Governments, involves training men with no previous mining experience. The Anglo-Rouyn mine training courses for local residents were conducted during the year with continued success and locally recruited employees now form an important nucleus of the underground force.

Exploration

Long term exploration programs were continued in the search for uranium and base metals in Canada and the United States. During the year the programs were broadened to include industrial minerals. The search for coking coal, which commenced in 1969, was expanded. Rioamex, the exploration division of Atlas Alloys Inc., a wholly owned United States company, opened an office in Denver, Colorado late in the year. This office will facilitate expansion of the Company's exploration activities within the United States.

Exploration for uranium was curtailed when the Government of Canada stated its intention early in 1970 to limit foreign ownership of the Canadian uranium industry. Work was limited to properties in which an interest was held on March 2, 1970, primarily in northern Quebec on a major uranium exploration project being carried out in conjunction with Soquem, the Quebec Government sponsored exploration company. In the United States the results of exploration and drilling of uranium prospects in certain regions of Wyoming in partnership with Mitsubishi Metal Mining Company did not disclose any viable prospects. Exploration programs for the Company's own account were also conducted in Colorado, Utah, Wyoming, New Mexico and Vermont.

Certain areas of British Columbia have been defined as of potential interest, as a result of the long term program initiated in 1967 directed toward identification of porphyry copper mineralization. Further investigation of these areas will continue. Base metal programs were also carried out in Saskatchewan and on an expanded scale in Ontario and Quebec.

A computer program was designed for the classifying, recording and retrieval of information obtained from field examinations in British Columbia. Information available from this system will provide rapid and comprehensive access to geological, geochemical and geophysical data and will facilitate the selection of areas warranting further investigation. This program will be extended to other regions.

A search for coking coal which commenced in 1969 in the eastern foothills of the Canadian Rocky Mountains was expanded. In partnership with Mitsui & Co., Ltd. certain areas were investigated, but indicated deposits are not considered to be of economic interest at this time. Other properties were examined for the Company's own account. An agreement has been entered into whereby a majority interest may be earned in a coal prospect in southeastern British Columbia adjacent to the Montana border. Drilling and other work is being carried out on this property.

A working option was taken on an asbestos prospect located at Lac Roberge in northwestern Quebec. A drilling program and preliminary assessment of this property is underway.

Steel Operations

The earnings from steel operations for the year before income taxes were $9,627,000 as compared with $7,606,000 in 1969, an increase of $2,021,000 or 26.6%. The earnings in each year are stated after the deduction of $1,047,000 representing the annual charge for amortization of the excess of acquisition cost over adjusted book value of the Atlas Steels assets purchased as at December 31, 1962. Total sales, including metal products purchased by warehousing operations for resale, were a record $139,112,000, which is $11,929,000 or 9.4% higher than in 1969. Domestic warehouse sales held up well despite the general reduction in the level of domestic economic activity and increased sales were achieved in overseas markets for certain Welland plant specialty steel products. The strikes at major Canadian nickel producers in the latter part of 1969 created a strong demand for stainless flat rolled products in the Cana-

Exploration was broadened in both Canada and the United States, with exploration crews ranging across the continent in the search for deposits of base metals, asbestos, coal and uranium. The photos on these two pages, taken by the exploration crews themselves, show something of what they saw and did. Clockwise from lower left: A geologist crosses a frozen British Columbia lake at dawn. Pontoon plane lands to pick up an exploration party. Diamond drilling in New Mexico. A geologist checks an outcrop on a glacier. Coal seam is examined in south-eastern British Columbia. Samples of base metal-carrying rock are examined by Robert D. Armstrong, Rio Algom president, and Robert C. Hart, manager of exploration for the company's exploration subsidiary Riocanex.

dian, United States and International markets during the first half of 1970. This partly offset the impact of reduced demand from the automotive industry during this period.

The Tracy and Welland plants both benefited from the strong overseas market and generally good prices for stainless steel products during the first half of the year. Substantial progress continued in 1970 in the upgrading of the Welland product mix. However, the labour intensive Welland plant has been hard pressed to maintain its profit margins in the face of escalating costs especially where there is competition from imports produced at much lower labour costs. Fourth quarter business at both plants was adversely affected by the prolonged automotive strike.

Marketing and Distribution

Direct mill sales in Canada were adversely affected by the general reduction in the level of domestic economic activity and the automotive strike.

The reorganization in 1969 of Canadian warehouse sales programs resulted in relatively good performance in the domestic market during 1970. A new Atlas Alloys metal service centre which replaced two less efficient former warehouses at different locations was opened in Montreal in April. Additional processing and cutting facilities were installed to provide improved service to customers.

Sales in the United States were below expectations as the market was affected by sharp cut-backs in government spending, a low production year in the automotive industry and consequent severe price competition at the mill and distributor levels.

Higher sales of hollow drill and stainless bar products contributed most of the increased revenue realized in the United Kingdom during the year.

Prohibitive tariffs on imports of stainless flat rolled products levied by Australian authorities in 1970 resulted in a substantial decline in sales of these products in Australia. The Australian operation will concentrate on sales of high speed steels and stainless wire finished by Atlas production facilities in Australia. Stainless flat rolled products produced in Canada will be sold in this market as opportunity permits.

The demand for stainless flat rolled products in South America provided an opportunity for increased sales in this market. Substantial stainless product sales were also achieved in Europe through a network of distributors in important user countries.

Despite major increases in the cost of critical raw material, high speed steel prices were depressed, particularly in the United States market. Severe price competition which developed in this market has been caused by imports of steel from Europe. Modest price increases for some specialty steel products were obtained in most markets during the year.

Manufacturing

The Tracy plant benefited from increased sales of stainless flat rolled products and continued improvement in operating performance.

Progress continued during 1970 on the long term program, initiated in 1967, to rehabilitate and modernize the Welland plant. The cold draw finishing operations were transferred to a new building during the August vacation shut-down period and new major bar finishing units have been placed in operation. In May a major rehabilitation and rearrangement of the conditioning department and billet stock area began; six modern machine grinders are being installed, a new outdoor billet stock area is in operation and a new building for the staging and the preparation of billets for rolling has been completed. The capability of the melt shop laboratory was improved by the installation of new spectrometer and x-ray units. These units together with a computerized in-process analytical system will ensure a high standard of support for the Welland melting operations.

During the year Manufacturing and Operations Research personnel instituted programs to computerize the economic selection of available raw materials for melting. These programs are achieving substantial cost reduction. During 1971 a program for computerized in-process control of Welland melting operations will be initiated.

Research and Development

The substantial increase in the prices of raw materials has necessitated increased emphasis on process research aimed at reducing raw material costs. Reduc-

Atlas Alloys, the company's specialty metals distributing arm, opened a new service centre in Montreal with a two-day exhibition showing the latest in modern metals and their applications. Clockwise from top left: Guests check in at registration desk. Dramatic display of ultra high temperature "plasma" cutting guided by operator with remote control. Part of the exhibition area, with Orren S. Leslie, Atlas Steels president (left), and William D. Dobbin, Atlas Alloys general manager, in foreground.

tion in the cost of chrome by using a higher proportion of low cost ferrochrome is the objective of a melt shop modernization program under study for the Welland plant. Vacuum decarburization of stainless steels, also under investigation, is expected to result in cost reductions at the Tracy plant. The direct recovery of mill scale generated at Welland is the object of another program and the recovery of nickel and other values from pickle liquor is being studied. The development of sources of metallized pellets has progressed to the point where nickel-iron pellets are being purchased from one source and other sources of supply are being investigated.

With respect to new processes, electroslag refining of steel is reaching production status, with proven advantages for a number of high quality steel grades. The powder metallurgy program, which utilizes techniques considered to be unique, is ahead of schedule.

Product development activities during the year covered a variety of products and produced encouraging results. Initial trials of a new hollow drill mining steel were successful and are being followed by more extensive evaluation. A new high strength stainless steel is being field tested in a variety of end use applications. A new high strength, low alloy steel is scheduled for customer evaluation in early 1971. A major service innovation in the Canadian market this year was the introduction of a stock line of fully machined ready to use tool steel bars. These aggressive product development programs are designed to provide new specialty alloys and improve the product mix in Welland.

Planning

The forward planning function was reorganized in 1970 with emphasis directed to the importance of co-ordinating market and production facilities plans for products of the future. A divisional planning team was established to undertake special product studies. The information obtained from these studies will be used to establish a product oriented master plan for marketing, plant facilities and technology necessary for an improved return on investment. Studies are also under way for the purpose of identifying and exploiting profitable growth opportunities for products which utilize the basic production skills and facilities at Welland and Tracy.

Employee Relations

As of December 31, 1970, the Steel Division employed 3,347 people of whom 2,109 were engaged in production, 584 in sales and marketing, and 654 in executive, administrative or clerical functions.

As a result of a representation vote held in February 1970 the Canadian Steelworkers Union continue to act as the bargaining agent for Welland hourly rated employees. A new three year contract with this union was signed and will be in effect until February 17, 1973. The contract with the Welland office and technical employees expires on December 31, 1971. The collective agreements for Tracy hourly rated employees and the office and technical employees are in effect until November 30, 1972 and February 1, 1974 respectively.

A program to identify individual skills of management personnel and to develop a centralized skills inventory for manpower planning has been initiated and is well under way. Continued attention throughout the year was devoted to personnel and management development programs.

Rio Algom Divisions and Affiliates

Canada

MINING

Head Office—Toronto, Ontario
Operating properties in Elliot Lake area;
Old Quirke and New Quirke
Anglo-Rouyn Mines Limited, La Ronge, Sask.
Mines de Poirier, Joutel, Quebec
Lornex Mining Corporation Ltd., Vancouver, B.C.,
Property at Ashcroft, B.C.

EXPLORATION

Rio Tinto Canadian Exploration Limited,
(Riocanex)
Head Office—Toronto, Ontario
Branch Offices—Vancouver, B.C., Noranda, P.Q.

STEEL

Atlas Steels Company, Head Office—Welland,
Ontario
Plants at Welland, Ontario
and Tracy, Quebec

METAL DISTRIBUTION

Atlas Alloys, Head Office—Toronto, Ontario
Service Centres at Toronto, Etobicoke,
Winnipeg, Montreal, Windsor,
Edmonton, Vancouver

United States

MINING

Rio Algom Corporation, Wilmington, Delaware
Property at Moab, Utah

EXPLORATION

Rioamex, Division of Atlas Alloys Inc., Cleveland,
Ohio and Denver, Col.

METAL DISTRIBUTION

Atlas Alloys Inc., Head Office—Cleveland, Ohio
Service Centres at Cleveland,
Ohio and Detroit, Mich.

Overseas

METAL DISTRIBUTION

Atlas Steels (England) Limited, Luton, England
Atlas Steels (Australia) Pty. Limited, Melbourne,
Australia
Atlas Steels S.A., Lausanne, Switzerland
Aceromex-Atlas S.A., Mexico City, Mexico
Agents or Distributors in other countries

Principal Associates

Canada

British Newfoundland Corporation Limited
Churchill Falls (Labrador) Corporation Limited
1 Viking Road, St. John's, Newfoundland

United Kingdom

The Rio Tinto-Zinc Corporation Limited
Anglesey Aluminium Limited
Imperial Smelting Corporation Limited
R.T.Z. Britain Limited
R.T.Z. Pillar Limited
6 St. James's Square, London, S.W.1
Capper Pass & Son Limited
Melton Works, North Ferriby, Yorkshire
Borax (Holdings) Limited
Borax House, Carlisle Place, London, S.W.1

Commonwealth of Australia

Conzinc Riotinto of Australia Limited
The Zinc Corporation Limited
New Broken Hill Consolidated Limited
The Broken Hill Associated Smelters Pty. Limited
Sulphide Corporation Pty. Limited
Comalco Limited
Hamersley Iron Pty. Limited
Mary Kathleen Uranium Ltd.
Bougainville Copper Pty. Limited
95 Collins Street, Melbourne, 3000

Republic of South Africa

Rio Tinto Holdings Limited
Palabora Mining Company Limited
P.O. Box 61140, Marshalltown, Transvaal

United States of America

Rio Tinto-Zinc Corporation of America
The Pyrites Company, Inc.
P.O. Box 1188, Christina Avenue
Wilmington, Delaware 19899
Alloys and Chemicals Corporation
4365 Bradley Road, South West
Cleveland 9, Ohio 44109
Ireco Chemicals
3000 West 8600 South, P.O. Box 77,
West Jordan, Utah 84084
United States Borax & Chemical Corporation
3075 Wilshire Boulevard, Los Angeles
California 90005

Spain

Union Explosivos Rio Tinto S.A.
Paseo De La Castellana, 20 Madrid

Japan

Rio Tinto-Zinc (Japan) Limited
Shin Tokyo Building,
2, 3-Chome, Marunouchi, Chiyoda-Ku,
Tokyo 100

Miscellaneous Corporate Information

Head Office

120 Adelaide St. West, Toronto 1, Ontario, Canada

Principal Bankers

Canadian Imperial Bank of Commerce, Toronto
The Toronto-Dominion Bank, Toronto
First National City Bank, New York

Solicitors

Fasken & Calvin, Toronto
Fried, Frank, Harris, Shriver and Jacobson, New York

Auditors

Coopers & Lybrand, Chartered Accountants, Toronto

Registrars and Transfer Agents

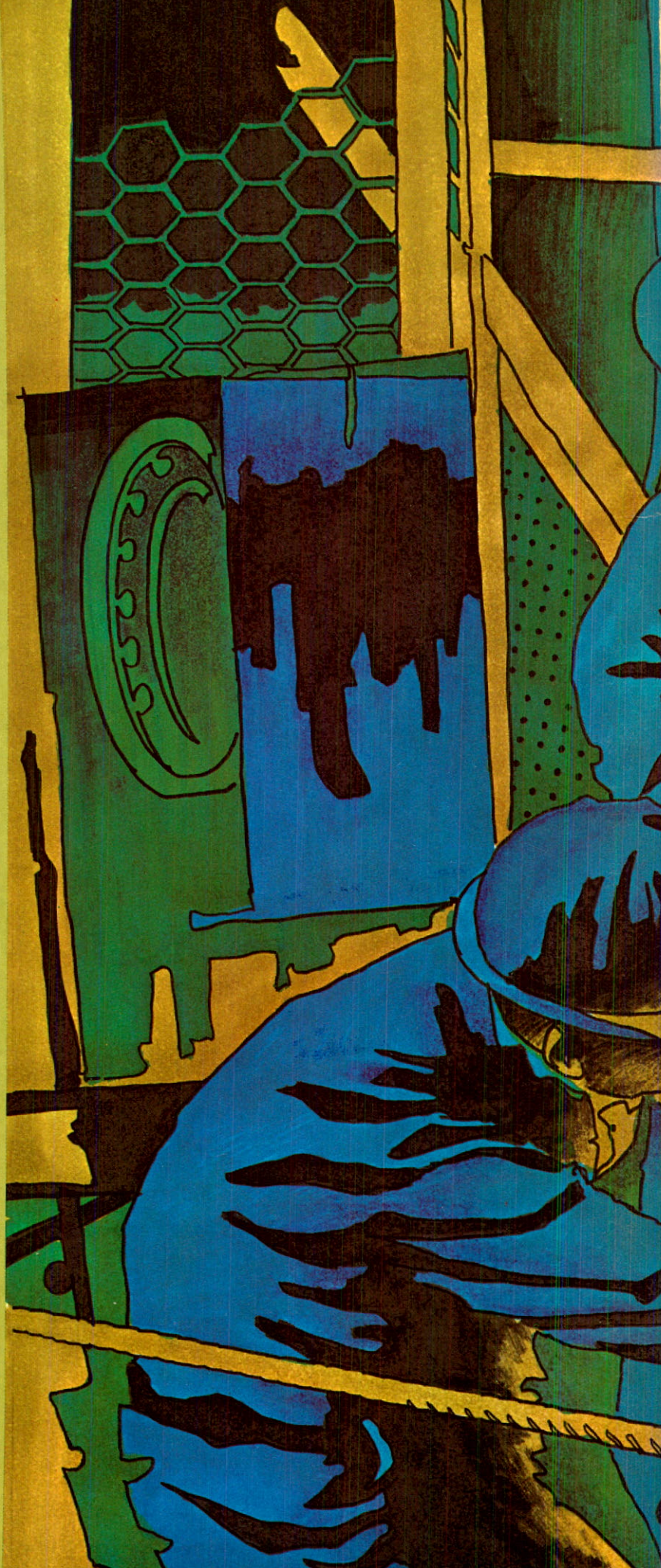
Common Shares
Canada Permanent Trust Company,
Toronto, Montreal, Winnipeg, Calgary
and Vancouver

The Canadian Bank of Commerce Trust
Company, New York

Preference Shares and Series "C" Warrants
Canada Permanent Trust Company,
Toronto, Montreal, Halifax, Winnipeg
and Vancouver

Shares Listed

Toronto Stock Exchange, Toronto
Montreal Stock Exchange, Montreal
American Stock Exchange, New York



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