



Rio Algom Mines Limited Annual Report 1966

RIO ALGOM MINES LIMITED

120 Adelaide Street West,
Toronto 1, Canada

The President and Directors of Rio Algom Mines Limited are pleased to present the Annual Report to Shareholders for the year ended December 31, 1966.

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Highlights of the Year's Consolidated Operations

YEAR ENDED DECEMBER 31, 1966

(000's omitted)

	<u>1966</u>	<u>1965*</u>
Sales	\$ 147,080	\$ 136,899
Net Earnings	\$ 9,352	\$ 8,206
Earnings:		
Per Dollar of Sales	6.4%	6.0%
Per Share of Common Stock	82¢	77¢
Dividends Paid per Share of Common Stock	40¢	40¢
Current Assets	\$ 103,827	\$ 84,089
Current Liabilities	\$ 57,658	\$ 45,050
Working Capital	\$ 46,169	\$ 39,039
Common Shareholders' Equity	\$ 88,436	\$ 82,159
Number of Common Shares Outstanding	10,716,422	10,612,132
Equity per Share of Common Stock	\$8.25	\$7.74
Production:		
Uranium Oxide (pounds)	2,843,855	2,717,198
Copper in Concentrate (pounds)	26,884,130	8,248,656
Zinc in Concentrate (pounds)	23,375,880	—
Specialty Steel (tons)	141,875	149,962
Number of Employees at December 31	5,256	5,153



*The comparative figures for 1965 have been restated where necessary as described in notes 1 and 10 to the consolidated financial statements.

RIO ALGOM MINES LIMITED

Officers

Chairman	Val Duncan
President	R. D. Armstrong
First Vice-President	W. B. Malone
Vice-President and General Manager of Operations, Mining Division	W. P. Arnold
Vice-President and General Manager of Operations, Steel Division	O. S. Leslie
Vice-President and Executive Assistant to the President	G. R. Albino
Vice-President, Finance	E. J. Tanner
Vice-President, Administration; and Secretary	G. Baker
Counsel	K. L. Perry
Treasurer	A. G. Goodeve
Controller	A. C. Turner

Directors

W. A. Arbuckle, Montreal	Hon. Salter A. Hayden, QC, Toronto
R. D. Armstrong, Toronto	L. A. Lapointe, QC, Montreal
Henry Borden, CMG, QC, Toronto	W. B. Malone, Toronto
Ian Crookston, Toronto	Leo Model, New York, U.S.A.
Val Duncan, OBE, London, England	F. A. Petito, New York, U.S.A.
J. G. Edison, QC, Toronto	J. Herbert Smith, Toronto
F. G. Gardiner, QC, Toronto	Sir Mark Turner, London, England
Sam Harris, New York, U.S.A.	R. W. Wright, London, England

The Annual Meeting

The Company will hold its Annual Meeting and a General Meeting on Friday, March 31, 1967 at 10:30 a.m. Eastern Standard Time, in the Ontario Room, Royal York Hotel, 100 Front Street West, Toronto, Ontario, Canada.

Chairman's Letter to the Shareholders

In my letter to shareholders written in February last year, when I was serving as President of the Company on an interim basis, I stated that it was the intention of the Board to elect a new President and Chief Executive Officer in due course. It now gives me great pleasure to tell you that Mr. Robert D. Armstrong joined the Company in May as President and Chief Executive Officer. Mr. Armstrong brings to his duties with the Company a wide knowledge of modern business techniques and a reputation for energetic and forceful professional management. I am confident that under his leadership the group which he heads will deal with present and future operations efficiently and well, and that your Company will prosper and grow.

Other senior executive appointments were made in furtherance of the Company's programme for the development of an increasingly strong organization. Mr. George R. Albino, formerly Vice-President, Planning and Development, has been appointed Vice-President and Executive Assistant to the President. Mr. Orren S. Leslie joined the Company in mid-year as Chief Executive of Atlas Steels and has been appointed Vice-President and General Manager of Operations, Steel Division. Mr. Eugene J. Tanner joined the Company in November, 1966 to assume the position of Vice-President, Finance.

Mr. Albino contributed greatly to the Company's activities in his former capacity. His new and broadened responsibilities reflect the increased emphasis being placed on strategic planning and administrative controls. Mr. Leslie and Mr. Tanner bring to the Company successful records of responsible experience in major industrial activities. Their presence represents an effective increase in the strength of the Company's management group.

Mr. W. B. Malone has made a long and valuable contribution to the Company's progress ever since he joined the Rio Tinto organization in 1955 as one of its

senior executives and directors. He is retiring as First Vice-President on March 31, 1967, but I am pleased that he has agreed to accept re-nomination as a Director for the year 1967 and to be available for consultation for a period of time thereafter.

Senator Salter A. Hayden, Q.C. and Mr. F. G. Gardiner, Q.C. have reached retirement age under the Company's policy and will not present themselves for re-nomination as Directors.

Senator Salter A. Hayden, Q.C. was closely associated with several of the predecessor companies and first accepted nomination as a director of Rio Algom when the Company was formed by amalgamation of these companies. He has made a major and valuable contribution to the Company's development throughout his lengthy period of service.

Mr. F. G. Gardiner, Q.C. became a director in 1961 and has served the interests of the Company with distinction during the period of his association with its affairs.

I wish to express my own appreciation and that of my fellow Directors for the services which Senator Hayden and Mr. Gardiner have rendered to the Company.

You will be asked at the Annual and General Meeting to authorize an increase in the Board of Directors from sixteen members to nineteen. It is intended that the two vacancies created by the retirement of Mr. Gardiner and Senator Hayden and the three additional positions will be filled by Messrs. W. P. Arnold, Donald Gordon, O. S. Leslie, B. R. MacKenzie, Q.C. and D. J. McParland.

The indication of Mr. Donald Gordon that he will accept nomination as a Director is a source of particular gratification to me. Mr. Gordon, following his recent retirement as Chairman and President of Canadian National Railways, has been elected President and Chief Executive Officer of British Newfoundland Corporation Limited and Chairman of Churchill Falls

Ion exchange control unit for the production of uranium oxide at the Nordic mill, Elliot Lake, Ontario.

(Labrador) Corporation Limited. Mr. McParland is the President of Churchill Falls (Labrador) Corporation Limited. Since Rio Algom has substantial financial and managerial relationships with these two companies, the association of Mr. Gordon and Mr. McParland with Rio Algom will assist in the more effective functioning of these relationships.

The nomination of Mr. Arnold, Vice-President and General Manager, Mining Division, and Mr. Leslie, Vice-President and General Manager, Steel Division, as Directors is a manifestation of the desirability of associating senior Company executives with the broad responsibility for the guidance of its affairs as members of the Board of Directors.

Mr. MacKenzie has served the Company as a Director for some years. He resigned during 1966 to provide a vacancy to accommodate the election of Mr. Armstrong as a Director upon his appointment as President of the Company. Mr. MacKenzie's absence from membership of the Board was regarded as a temporary matter and I am pleased that he has agreed to accept formal re-nomination.

The Directors' report and the Report on Operations deal in detail with the affairs of the Company. I consider that substantial progress has been made in all of the activities in which the Company is involved and that its organization and resources provide a sound and effective base for continued success.

VAL DUNCAN
Chairman

Toronto, February 24, 1967



Directors' Report to the Shareholders

Your Directors are pleased to submit this report on the operations and financial position of the Company for the year ended December 31, 1966.

Financial

The Company's consolidated earnings from operations for 1966 amounted to \$10,427,000, after providing for mining and income taxes, as compared with \$8,893,000 in the previous year. Extraordinary charges totalled \$1,075,000 in 1966 and \$687,000 in 1965 and resulted in earnings of \$9,352,000 in 1966 as compared with \$8,206,000 in 1965, an increase of \$1,146,000. Net common stock earnings were 82¢ per share, after providing for dividends on preference shares issued during 1966, compared with 77¢ per share in 1965.

The improvement of \$1,534,000 in operating profit for the company (before providing for extraordinary charges) is in large measure the result of a major increase in mining division profit which was partially offset by a decline in steel division earnings. Corporate expenses and net interest costs, combined, were essentially unchanged.

Particulars of the 1966 operating results of the Company are set out in the financial statement section of this report.

Preference and common dividends paid during 1966 totalled \$4,871,000, comprising preference dividends of \$624,000 in respect of 150,000 preference shares issued on April 13, 1966 and \$4,247,000 representing a dividend of 40¢ per share on common stock. A full year dividend requirement for the preference stock outstanding amounts to \$870,000.

The net proceeds of the preference share issue were \$14,359,000 after provision for underwriting commissions and other issue expenses. The bank loans of \$17,318,000 include term loans totalling \$13,000,000 for Anglo-Rouyn and Poirier, which companies are consolidated for the first time in 1966. The bank loans of these two companies increased by \$4,300,000 during 1966. The Company's consolidated working capital position improved by \$7,130,000 during 1966, as explained in the financial statement section of this report.

Under the terms of its agreement with Eldorado Mining and Refining Limited, the Company repaid net uranium advances in 1966 in the amount of \$8,773,000. A total of \$29,463,000 remained to be repaid as at De-

ember 31, 1966; of this amount a net repayment of \$16,200,000 is due in 1967 and of \$11,138,000 in 1968.

Mining Division

The mining division earnings increase is attributable to a major increase in profits from copper operations and a lesser increase in profits from uranium production.

Profits from copper operations were derived primarily from the Pronto mine and reflect the substantial increases in copper prices which occurred during 1966 together with an increase in production from this mine. The 1966 copper production and profit figures also include the results of the Poirier and Anglo-Rouyn mines, which began commercial operation on April 1, 1966.

Uranium oxide production and sales increased slightly and the sales value per pound also increased slightly under the Company's several sales contracts. Unit operating expenses increased, in part by reason of increased labour, material and reagent costs and in part because of some reduction in grade as the Nordic mine approaches depletion of its ore reserves at presently developed mining levels.

Preparation for the re-opening of the Old Quirke mine continued on schedule as did work related to the opening of the New Quirke mine. Work preparatory to the sinking of the New Quirke shaft was completed during 1966 and actual shaft sinking began in January, 1967.

Exploration activities during 1966 were concentrated on uranium and base metals in Canada and uranium in the United States. Preliminary drilling results from a uranium prospect near Moab, Utah are encouraging and the drilling programme is continuing.

Drilling continued at the Lornex copper prospect in the Highland Valley of British Columbia. Rio Algom has an option arrangement that permits the Company to acquire an interest of 36%. Results have been sufficiently encouraging to warrant undertaking a more extended drilling programme in 1967 together with the sinking of a shaft to permit bulk sampling and the construction of a pilot mill for metallurgical test work. The Lornex orebody is known to be large and of low grade. If the mine proves to be viable it will require a very large capital investment to produce a high daily

tonnage at low unit cost. The current programme is directed at achieving precise analysis of the many critical elements involved in evaluating the property.

Steel Division

Steel division operating profits declined in 1966. The Welland plant operating results were approximately equal to those of the previous year as were those of the domestic and foreign steel warehousing subsidiaries as a group. The Quebec plant operating loss increased substantially during 1966 due to a combination of lower selling prices, higher re-processing costs and slightly increased overhead costs. The Company's titanium operation continued to develop in a satisfactory manner and is considered to be a promising undertaking.

As stated in the Chairman's letter, Mr. Orren S. Leslie was appointed President and Chief Executive Officer of Atlas Steels Company Limited in 1966. Other major managerial, operational and technical strengths were also added to the steel division in 1966, particularly at the Quebec plant.

Specific operational problems now centre on the new No. 2 cold mill and the planetary mill, the last two units required to come on stream in order to effect full integration and utilization of the Quebec plant. The gear train in the No. 2 cold mill was not satisfactory and is being replaced. Since this mill is similar in most respects to the No. 1 cold mill which is now fully operational, it is anticipated that it will be brought into commercial production without undue additional problems. Several test runs were carried out on the planetary mill during the latter part of the year and it is considered that satisfactory progress is now being made towards bringing this unit into commercial production.

A comprehensive re-evaluation was made of the projected supply-demand situation in stainless sheet, as a basis for refinement of the strategic marketing plan for the Quebec plant operation.

The merging in late 1965 of all of the steel division's Canadian warehousing activities into one organization, Atlas Alloys, has resulted in the integration of some facilities and this, together with the completion of new warehouses now under construction in Winnipeg, Edmonton and Vancouver, will add further strength to the Canadian marketing organization. Certain Atlas proprietary products are now being sold through independent distributors as well as through Atlas Alloys to provide wider distribution of these well established brands.

Significant progress has been made by the U.S.

marketing subsidiary in penetrating the U.S. market with specialty steels in a programme aimed at upgrading the Welland plant product mix and stabilizing the use of its productive capacity on a month to month basis.

The free-port warehouse at Rotterdam became operative in 1966, enabling the European marketing organization to reduce inventories and consolidate its operation into a more effective unit.

Other Interests

The Company has had the responsibility for providing supervisory management and other services to British Newfoundland Corporation Limited and to Churchill Falls (Labrador) Corporation Limited since August, 1963, for which it received a management fee. In recognition of the interruption of progress on the Churchill Falls power project in 1964 the fee was suspended for the period of interruption and during this interval the Company was reimbursed for the cost of advisory and management services rendered.

A letter of intent was signed by Churchill Falls and Quebec Hydro Electric Commission in October, 1966 which contemplates the purchase by Quebec Hydro of power generated at Churchill Falls. The period of interruption was ended by this action. The Company has signed an agreement to this effect under which payment of a management fee will be resumed retroactively to November 1, 1966 at such time as Churchill Falls receives proceeds of financing relative to the power project. Until this occurs, the Company will continue to be reimbursed for the cost of advisory and management services which it provides.

Pursuant to the terms of this agreement, Rio Algom exercised an option in February, 1967 on Churchill Falls shares, thereby increasing its holdings to approximately 10.48% of the outstanding shares of that company.

Long Term Outlook

Before presenting to you in the following pages the financial statements and report of operations, your directors feel it appropriate to comment on the longer range outlook for your Company in its mining and steel operations.

Uranium sales contracts held by the Company at the beginning of the year provided for deliveries into late 1971. Planned and projected requirements for nuclear fuel had indicated that major buyers would probably enter the market in the late 1960's for product required during the mid-1970's. This anticipated re-

activation of the uranium market has begun to occur and during 1966 the Company negotiated two major long term uranium supply contracts. These contracts, which are with the United Kingdom Atomic Energy Authority and The Hydro-Electric Power Commission of Ontario, are, in the opinion of the Company, attractive commercial arrangements. In addition, they ensure continuity of the Company's uranium operations when the current contracts expire and represent tangible substantiation of the Company's optimistic views as to the long term future of its uranium operations.

Under contracts now in force, deliveries will be made to Eldorado and can be made to the Canadian stockpile during the period 1967 through 1971; however, the per pound price for the years 1969 through 1971 under the Eldorado contract will be lower than that previously received. Deliveries of small quantities will be made to Ontario Hydro beginning in 1970 and will increase thereafter. The Company can, at its option, commence deliveries to the U.K. Atomic Energy Authority in 1972. The effect of the Ontario Hydro and the U.K. Atomic Energy Authority contracts is to provide the Company with an assured base load extending into the 1980's without commitment of an undue proportion of its production capacity. If market conditions warrant, the Company is in a position to utilize a part of this forward capacity to negotiate contracts which could include deliveries in the years 1969 through 1971, during which time the lower priced balance of the Eldorado contract will be completed.

As stated previously, 1966 mining profits were improved by substantial increases in copper prices. The price of copper is influenced by such a wide variety of unpredictable forces that valid predictions of future prices cannot be made. Having regard to these conditions, prudence dictates that continuation of the present

price level should not be relied upon for financial planning and capital investment justification purposes.

The disappointing aspect of the Company's operations has centred for several years on the new Quebec steel mill. Failure to bring this plant into effective production when originally planned has had a detrimental effect on overall net earnings. The rate of improvement which can realistically be achieved, in steel division earnings, assuming the continuation of a healthy economy, is expected to modify but not completely offset the short term decline in the mining division earnings caused by the reduction in average selling prices of uranium referred to above.

In retrospect, it is evident that the problems to be resolved in bringing into operation a complex steel mill of such advanced design as the Quebec plant had been underestimated. As a consequence, a high degree of managerial concentration has been focused on this activity. The result has been a delineation of problem areas, the development of specific plans for their resolution and the taking of positive corrective action where necessary.

Personnel

The Chairman has made reference in his letter to certain senior level personnel changes which occurred during the year. When such changes are made it is frequently easy to overlook the fact that in the final analysis the Company is dependent for its success on the efforts of the entire organization. Your directors particularly wish to emphasize their appreciation of this reality and to express sincere appreciation for their efforts to all members of the Company's organization.

On behalf of the Board
R. D. ARMSTRONG

Toronto, February 24, 1967. 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, 1966 and the consolidated statement of earnings, retained earnings and source and disposition of funds for the year ended on that date. 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, the accompanying financial statements

present fairly the consolidated financial position of the companies as at December 31, 1966 and the consolidated results of their operations for the year ended on that date, in accordance with generally accepted accounting principles applied on a basis consistent (except for the revision and restatement described in notes 1 and 10, with which we concur) with that of the preceding year.

Toronto, Canada
February 23, 1967

COOPERS & LYBRAND
Chartered Accountants

RIO ALGOM MINES LIMITED

(Incorporated under the laws of Ontario)

Consolidated Statement of Financial Position

DECEMBER 31, 1966

(000's omitted)

	<u>1966</u>	<u>1965</u>
CURRENT ASSETS:		
Cash	\$ 3,043	\$ 1,780
Short term investments, at cost, and deposits	16,791	2,555
Marketable securities, at cost (market value \$2,818)	3,032	3,640
Receivables	29,364	23,563
Due from affiliated and associated companies	64	252
Inventories (note 2)	49,810	50,065
Prepaid expenses	1,723	2,234
Total	<u>103,827</u>	<u>84,089</u>
Less:		
CURRENT LIABILITIES:		
Bank loans (note 3)	17,318	13,945
Accounts payable and accrued liabilities	20,065	17,950
Provision for income taxes including Provincial mining taxes	1,858	1,782
Preference share dividend payable January 1, 1967	217	—
Long term debt due within one year (note 6)	18,200	11,373
Total	<u>57,658</u>	<u>45,050</u>
WORKING CAPITAL	46,169	39,039
Shares in and advances to associated companies, at cost less provision for losses	3,832	3,740
Plant and equipment, less depreciation (note 4)	76,507	77,504
Costs applicable to future periods (note 5)	33,417	37,039
TOTAL ASSETS LESS CURRENT LIABILITIES	<u>159,925</u>	<u>157,322</u>
Deduct:		
Long term debt (note 6)	55,754	74,363
Minority shareholders' interests in subsidiary companies	735	800
	<u>56,489</u>	<u>75,163</u>
EXCESS OF ASSETS OVER LIABILITIES	<u>\$103,436</u>	<u>\$ 82,159</u>
OWNERSHIP EVIDENCED BY (notes 6 and 7):		
Capital stock	\$ 43,717	\$ 26,280
Contributed surplus	19,381	19,381
Retained earnings	40,338	36,498
Total	<u>\$103,436</u>	<u>\$ 82,159</u>

Approved on behalf of the Board:

R. D. ARMSTRONG, Director W. B. MALONE, Director

The accompanying notes are an integral part of this statement and should be read in conjunction therewith.

Consolidated Statement of Earnings

YEAR ENDED DECEMBER 31, 1966

(000's omitted)

	<u>1966</u>	<u>1965</u>
REVENUE:		
Revenue from mine production and sales of steel products (note 10)	\$147,080	\$136,899
Investment and other income	918	683
	<u>147,998</u>	<u>137,582</u>
EXPENSES:		
Cost of production, selling, general and administrative expenses (note 10)	119,388	111,769
Interest and amortization of discount and financing expenses (note 5)	3,595	3,209
Depreciation and amortization (notes 4, 5 and 12)	12,977	11,547
Exploration expenditures	627	524
	<u>136,587</u>	<u>127,049</u>
	11,411	10,533
Provision for income taxes including provincial mining taxes (note 9).	927	1,640
Earnings before adjustment for minority interest in subsidiary company	10,484	8,893
Minority interest in profits of subsidiary	57	—
NET EARNINGS FROM OPERATIONS	<u>10,427</u>	<u>8,893</u>
Earnings per common share before extraordinary items	92¢	84¢
Deduct extraordinary items :		
Write-off of start up expenses of Quebec steel plant	1,075	—
Provision for losses of Atlas Steels (Italy) S.p.A. and for loss on disposal of consumer products operations	—	687
	<u>1,075</u>	<u>687</u>
NET EARNINGS FOR THE YEAR	<u>\$ 9,352</u>	<u>\$ 8,206</u>
Net earnings per common share	82¢	77¢

The accompanying notes are an integral part of this statement and should be read in conjunction therewith.

Consolidated Statement of Retained Earnings

YEAR ENDED DECEMBER 31, 1966

(000's omitted)

	<u>1966</u>	<u>1965</u>
BALANCE, beginning of year	\$36,498	\$ 27,537
ADD:		
Net earnings for the year	9,352	8,206
Appropriation for development projects in prior year, no longer required	—	5,000
	<u>45,850</u>	<u>40,743</u>
DEDUCT:		
Dividends on preference shares	624	—
Dividends on common shares	4,247	4,245
Expense of preference share capital issue	641	—
	<u>5,512</u>	<u>4,245</u>
BALANCE, end of year	<u>\$40,338</u>	<u>\$ 36,498</u>

Consolidated Statement of Source and Disposition of Funds

YEAR ENDED DECEMBER 31, 1966

(000's omitted)

	<u>1966</u>	<u>1965</u>
SOURCE OF FUNDS:		
Net earnings for the year	\$ 9,352	\$ 8,206
Add depreciation, amortization and other charges (net) to operations not involving current outlay of funds	14,218	11,975
Total from operations	<u>23,570</u>	<u>20,181</u>
Issue of preference shares (net of issue expense)	14,359	—
Issue of common shares	2,437	—
	<u>40,366</u>	<u>20,181</u>
DISPOSITION OF FUNDS:		
Expenditures (net) for fixed assets, preproduction and development	8,356	18,990
Dividends on preference shares	624	—
Dividends on common shares	4,247	4,245
Reduction of long term advances (net)	16,100	8,872
Reduction of long term debt	2,509	2,500
Increase (decrease) in development projects (net)	1,400	(1,343)
	<u>33,236</u>	<u>33,264</u>
INCREASE (DECREASE) in working capital	<u>\$ 7,130</u>	<u>\$(13,083)</u>

The accompanying notes are an integral part of these statements and should be read in conjunction therewith.

Notes to Consolidated Financial Statements

December 31, 1966

1. BASIS OF CONSOLIDATION

The consolidated financial statements include the accounts of all subsidiaries except the following:

- (i) Wholly owned housing companies which have been excluded because the investment is of doubtful value. The losses of these companies in the year 1966 amounted to \$19,431 as compared with the amortization of \$315,693 provided in the accounts (note 4). The accumulated losses of such companies to December 31, 1966 exceed the amounts provided in the accounts by \$264,152.
- (ii) Partially owned companies which have been excluded because the companies are inactive or in the exploration and development stages and have had no profits or losses since acquisition.

For the first time, the accounts of Mines de Poirier Inc., wholly owned by the company, and Anglo-Rouyn Mines Limited, 58% owned by the company, have been included in the consolidation and earnings have been included from April 1, 1966, the date on which these mines were brought into commercial production. The 1965 comparative figures have been revised to include these companies and restated to conform with the financial presentation for 1966.

The accounts of consolidated foreign companies are stated in Canadian dollars on the following basis:

- Fixed assets and related depreciation 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. INVENTORIES

The companies' inventories comprised the following:

	1966	1965
Steel, other metals, raw materials and supplies	\$42,244,293	\$44,260,955
Concentrates awaiting shipment	5,402,296	3,695,833
Mine supplies	2,163,654	2,107,921
	<u>\$49,810,243</u>	<u>\$50,064,709</u>

Steel and other metal inventories are valued at the lower of cost and market. Cost is determined generally at average or standard costs which approximate actual. Market for finished steel and steel in process is net realizable value and for raw materials and supplies is replacement cost. Intercompany profits have been excluded from these inventories.

Concentrates awaiting shipment are valued at selling price. Mine supplies are valued at cost less provision for loss on disposal of surplus supplies.

3. BANK LOANS

Mines de Poirier Inc., consolidated and wholly owned by the company had a bank loan outstanding of \$8,900,000 at December 31, 1966 secured by a pledge of a debenture issued under a trust deed of hypothec mortgage and pledge charging the undertaking and all the assets of that company.

Anglo-Rouyn Mines Limited, consolidated and 58% owned by the company had a bank loan outstanding of \$4,100,000 at December 31, 1966 secured by way of assignment of ore concentrates, supplies, etc., under

Section 88 of the Bank Act, a registered general assignment of accounts receivable and a first mortgage bond of \$4,100,000.

4. PLANT AND EQUIPMENT

Plant and equipment, at cost, consists of:

	1966	1965
Buildings, machinery and equipment and construction in progress	\$229,070,153	\$221,486,195
Less accumulated depreciation	154,827,454	146,719,586
	<u>74,242,699</u>	<u>74,766,609</u>
Land	1,369,741	1,431,653
Mining properties (after accumulated amortization, 1966—\$5,088,963; 1965—\$4,620,232)	894,953	1,305,678
	<u>\$76,507,393</u>	<u>\$77,503,940</u>

The following accounting policies are being followed in connection with the depreciation and amortization charges of the company:

- (i) Fixed and related assets of the Mining Division:
 - (a) The unamortized cost, at July 1, 1960, of uranium plant and equipment, mining properties and preproduction and development expenditure, together with housing costs and the cost of the right to deliver under sales contract purchased since that date and an estimate of capital expenditures to July 30, 1968 are being amortized on the basis of the total poundage of uranium oxide to be delivered under Eldorado contracts (excluding the Eldorado-British contract received in 1962 and

the Government stockpile contracts received in 1963 and 1965).

In the case of uranium mining assets of \$149,665,556 cost is net cost after deducting proceeds of disposal.

- (b) Depreciation and amortization have been provided on the fixed assets and preproduction and development expenditure of Mines de Poirier Inc. and Anglo-Rouyn Mines Limited from April 1, 1966, the date on which these mines were brought into commercial production, on the basis of the shorter of physical life or economic life, based on proven and probable ore reserves, as estimated for the related mining unit, the economic life to be adjusted from time to time as conditions warrant.

- (ii) Fixed assets of the Steel Division: 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 6% per annum The cost of fixed assets retired or otherwise disposed of and the accumulated depreciation are eliminated in the related accounts and the resulting gain or loss has been reflected in income.

5. COSTS APPLICABLE TO FUTURE PERIODS

This includes the following:

	1966	1965
Preproduction and development expenditure, right to deliver under sales contract and housing costs, at cost less amortization	\$12,531,111	\$15,107,823

Development projects, at cost	1,612,056	299,966
Start up expenses of the Quebec steel plant, at cost	—	1,074,866
Discount and financing expenses, at cost less amortization	2,526,625	2,761,876
Excess of acquisition cost over adjusted book value of Atlas Steels assets, less amortization	<u>16,747,492</u>	<u>17,794,591</u>
	<u>\$33,417,284</u>	<u>\$37,039,122</u>

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

- (i) The preproduction and development expenditure, right to deliver under sales contract and housing costs are being amortized as described in note 4(i).
- (ii) Development projects are carried forward as assets while the projects are considered to be of value to the company. All exploration expenditures have been written off.
- (iii) Start up expenses of the Quebec steel plant incurred in 1966, relating primarily to the concast machine, hot planetary mill, and the second cold mill installed during the year, have been charged against 1966 earnings. Deferred start up expenses of \$1,074,866 incurred prior to December 31, 1964 have been charged against 1966 earnings.
- (iv) Discount and financing expenses are being amortized on a straight line basis over the life of the Sinking Fund Debentures of the company, which expire on April 1, 1983.
- (v) 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 commencing January 1, 1963.

6. LONG TERM DEBT

	1966	1965
Advances on future deliveries of uranium concentrates	\$29,462,500	\$38,235,032
Less portion included in current liabilities	<u>16,200,000</u>	<u>8,872,532</u>
	<u>13,262,500</u>	<u>29,362,500</u>
5½% Serial Debentures Series A, \$2,000,000 maturing annually on October 1, 1967 and and 1968	4,000,000	6,000,000
5¾% Sinking Fund Debentures Series A, maturing on April 1, 1983	<u>40,491,000</u>	<u>41,500,000</u>
	<u>44,491,000</u>	<u>47,500,000</u>
Less portion included in current liabilities	<u>2,000,000</u>	<u>2,500,000</u>
	<u>42,491,000</u>	<u>45,000,000</u>
	<u>\$55,753,500</u>	<u>\$74,362,500</u>

At December 31, 1966 the advance payments received from Eldorado Mining and Refining Limited on the account of future deliveries of uranium concentrates, after net repayment of \$8,772,532 in 1966, totalled \$29,462,500 collaterally secured by \$30,091,178 issued and outstanding Non-Interest-Bearing Performance Bonds due March 31, 1974. The Performance Bonds are secured by a charge on the uranium assets of the company located at Elliot Lake and uranium concentrates produced but not delivered. As the deferred poundage is delivered the Bonds are being surrendered to the company. \$16,200,000 (net) of these advances is repayable in 1967. The company's trust indenture contains certain covenants which limit the payment of dividends as well as the assumption of additional long term liabilities.

7. OWNERSHIP

	<u>1966</u>	<u>1965</u>
Ownership was evidenced by:		
Capital stock Authorized:		
500,000 First Preference Shares with a par value of \$100 each, issuable in series		
12,000,000 Common Shares without par value		
Issued:		
150,000 \$5.80 Cumulative Redeemable First Preference Shares Series A (redeemable at premiums ranging from 5¼% to 1%)	\$ 15,000,000	\$ —
10,716,422 Common Shares (10,612,132 at December 31, 1965)	28,717,187	26,280,276
Contributed surplus	19,381,472	19,381,472
Retained earnings	40,337,691	36,498,015
	<u>\$103,436,350</u>	<u>\$ 82,159,763</u>

During the year:

- (a) Supplementary letters patent were issued to the company increasing its authorized capital by the creation of 500,000 First Preference Shares with a par value of \$100 each, issuable in series, and designating the then authorized shares of the company as Common Shares without par value.
- (b) 150,000 \$5.80 Cumulative Redeemable First Preference Shares Series A accompanied by Series C share purchase warrants in respect to 150,000 Common Shares were sold for \$15,000,000 cash.
- (c) 104,290 Common Shares were issued for \$2,436,911 cash.

At December 31, 1966 there were share purchase warrants outstanding entitling

the holders of Series C warrants to purchase 149,875 shares of the company at Can. \$22.25 per share on or before April 1, 1971.

There are restrictions on the payment of dividends in the provisions attaching to the \$5.80 Cumulative Redeemable First Preference Shares Series A.

8. COMMITMENTS AND CONTINGENT LIABILITIES

The following commitments and contingent liabilities were outstanding at December 31, 1966:

- (i) Estimated total cost to complete capital projects was approximately \$13,000,000 (committed approximately \$2,000,000);
- (ii) An action has been commenced against the company in connection with the alleged infringement of a patent. The company has taken the position that it has good defences to the action;
- (iii) Minimum annual rentals upon real property leased to the company and/or its subsidiaries with original terms extending beyond December 31, 1969, exclusive of certain expenses such as real estate taxes, insurance, etc. amounted to approximately \$556,000. The leases are for varying periods, the longest lease extending to 1990 and include options for renewal; and
- (iv) Commencing in 1969 the company is required to provide for a retirement fund to be used for the purchase for cancellation or redemption of \$5.80 Cumulative Redeemable First Preference Shares Series A.

9. INCOME TAXES

Because of the exemptions and deductions permitted for tax purposes, it is estimated that the company has no liability for income tax for the year but will be subject to mining tax.

Certain of the companies included in this consolidation will be subject to income tax and/or mining tax.

10. REVENUE

For comparative purposes the 1965 sales value of steel products, previously reported has been increased by \$10,837,938 with a corresponding adjustment to cost of production, selling, general and administrative expenses. The change arises as a result of reporting the sales value of all steel products sold by the company in 1966 as revenue rather than including products which are not of the company's manufacture in earnings on a commission basis.

In addition, certain mining marketing and other costs previously reported as a cost of production, selling, general and administration in 1965, amounting to \$540,455, have been deducted from copper production revenue to reflect the practice adopted in 1966.

11. DIRECTORS' FEES

Directors' fees paid by the company totalled \$24,800 and \$33,025 in 1966 and 1965, respectively.

12. DEPRECIATION AND AMORTIZATION

Provisions for depreciation and amortization relating to plant and equipment and costs applicable to future periods were:

	<u>1966</u>	<u>1965</u>
Fixed assets and mining properties	\$ 7,903,129	\$ 7,344,598
Preproduction and other assets	4,026,323	3,155,359
Excess of cost over adjusted book value of assets acquired	1,047,100	1,047,100
	<u>\$12,976,552</u>	<u>\$11,547,057</u>

Comparative Consolidated Earnings by Divisions

YEAR ENDED DECEMBER 31, 1966

(000's omitted)

	<u>1966</u>	<u>1965*</u>
MINING DIVISION		
Revenue from mine production	\$ 42,094	\$ 29,479
Expenses:		
Cost of production and administration	18,621	10,871
Depreciation and amortization	8,960	7,664
Exploration expenditures	627	524
Minority interest in profits of subsidiary	57	—
Total expenses	<u>28,265</u>	<u>19,059</u>
Net earnings from operations before tax	<u>13,829</u>	<u>10,420</u>
STEEL DIVISION		
Revenue from sales of steel products	104,986	107,420
Expenses:		
Cost of production, selling and administration	98,324	98,411
Depreciation	2,941	2,836
Amortization of excess of cost over adjusted book value of assets acquired	1,047	1,047
Total expenses	<u>102,312</u>	<u>102,294</u>
Net earnings from operations before tax	<u>2,674</u>	<u>5,126</u>
CORPORATE DIVISION		
Expenses:		
Costs of administration	2,443	2,487
Interest	3,433	3,047
Amortization of discount and financing expenses	162	162
Depreciation	29	—
Total expenses	<u>6,067</u>	<u>5,696</u>
Less investment and other income	918	683
Net expense for the year :	<u>(5,149)</u>	<u>(5,013)</u>
NET EARNINGS FROM OPERATIONS BEFORE PROVISION FOR TAXES	<u>11,354</u>	<u>10,533</u>
Provision for taxes :		
Provincial mining tax	752	1,126
Income taxes	175	514
	<u>927</u>	<u>1,640</u>
NET EARNINGS FROM OPERATIONS	10,427	8,893
Deduct extraordinary items	<u>1,075</u>	<u>687</u>
NET EARNINGS FOR THE YEAR	<u>\$ 9,352</u>	<u>\$ 8,206</u>

*The comparative figures for 1965 have been restated where necessary as described in notes 1 and 10 to the consolidated financial statements.



Aerial view of Nordic uranium mine and mill at Elliot Lake.

Report on Operations

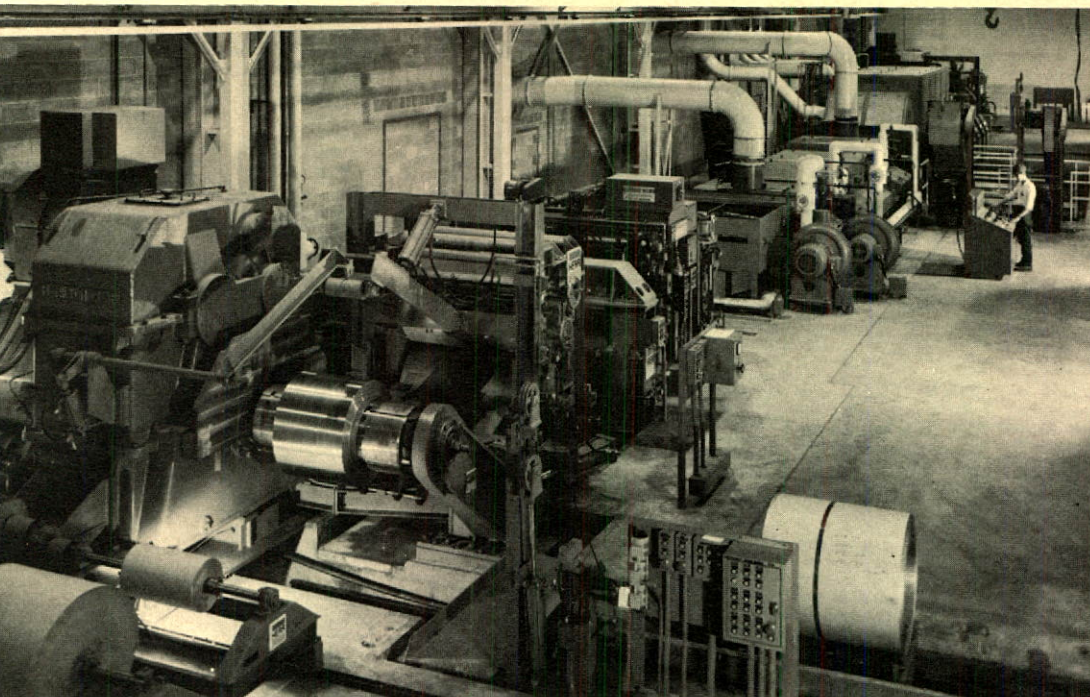
Finance

Consolidated net earnings for the year were \$9,352,000 as compared with \$8,206,000 in 1965 after deduction of extraordinary items of \$1,075,000 in 1966 and \$687,000 in 1965, an increase of \$1,146,000 in net earnings and of \$1,534,000 before deduction of extraordinary items. Mines de Poirier Inc. and Anglo-Rouyn Mines Limited began commercial operations on April 1, 1966 and the financial data and operating results of these Companies are included in the consolidated financial statements for the first time in 1966 as are those of Rio Tinto Nuclear Products Limited, which became wholly owned at the end of 1965.

Net earnings were 82¢ per share of common stock in 1966 as compared with 77¢ per share in 1965. The 1966 earnings per share of common stock are stated after provision for dividends of \$624,000 on preference shares issued in 1966. A full year dividend requirement on the preference shares is \$870,000.

Dividends totalling \$4,247,000 were paid on common shares at the rate of 20¢ per share on each of June 24 and December 28. Common dividends paid represent 48.7% of consolidated net earnings after provision for dividends on preference stock.

The income and expense items which give rise to the increase of \$1,146,000 in consolidated net earnings are set out in the financial statements section of this report and the factors which caused the net increase are explained in the Mining Division and Steel Division sections of the Report on Operations. In general terms, the improvement for the Company is the net result of an increase of \$3,409,000 in Mining Division earnings which was partially offset by a decline of \$2,452,000 in Steel Division earnings. There were offsetting changes in corporate expenses and interest costs, a reduction in taxes and an increase in extraordinary items. The amount of \$1,075,000 so classified



Stainless steel being ground and polished at Atlas Steels' plant at Tracy, Quebec.

in 1966 comprises start up expenses of the Quebec Plant incurred prior to December 31, 1964 which had been deferred at that time until full production had been achieved. All such expenses incurred since December 31, 1964 have been charged to earnings when incurred and a decision was made to charge the deferred amount of \$1,075,000 to net earnings in 1966 in the interests of consistency and conservative accounting practice. The nature of the extraordinary items totalling \$687,000 in 1965 is explained in the report for that year.

A total of 104,290 common shares were issued for cash in the amount of \$2,437,000 during the year and 150,000 preference shares were issued on April 13, 1966. The gross proceeds of the preference share issue were \$15,000,000; underwriting commissions and other expenses of issue amounted to \$641,000 which were charged to Retained Earnings. Particulars of these transactions are set out in Note 7 to the Consolidated Financial Statements.

Working capital increased by \$7,130,000 during the year, as detailed in the Consolidated Statement of Source and Disposition of Funds, and totalled

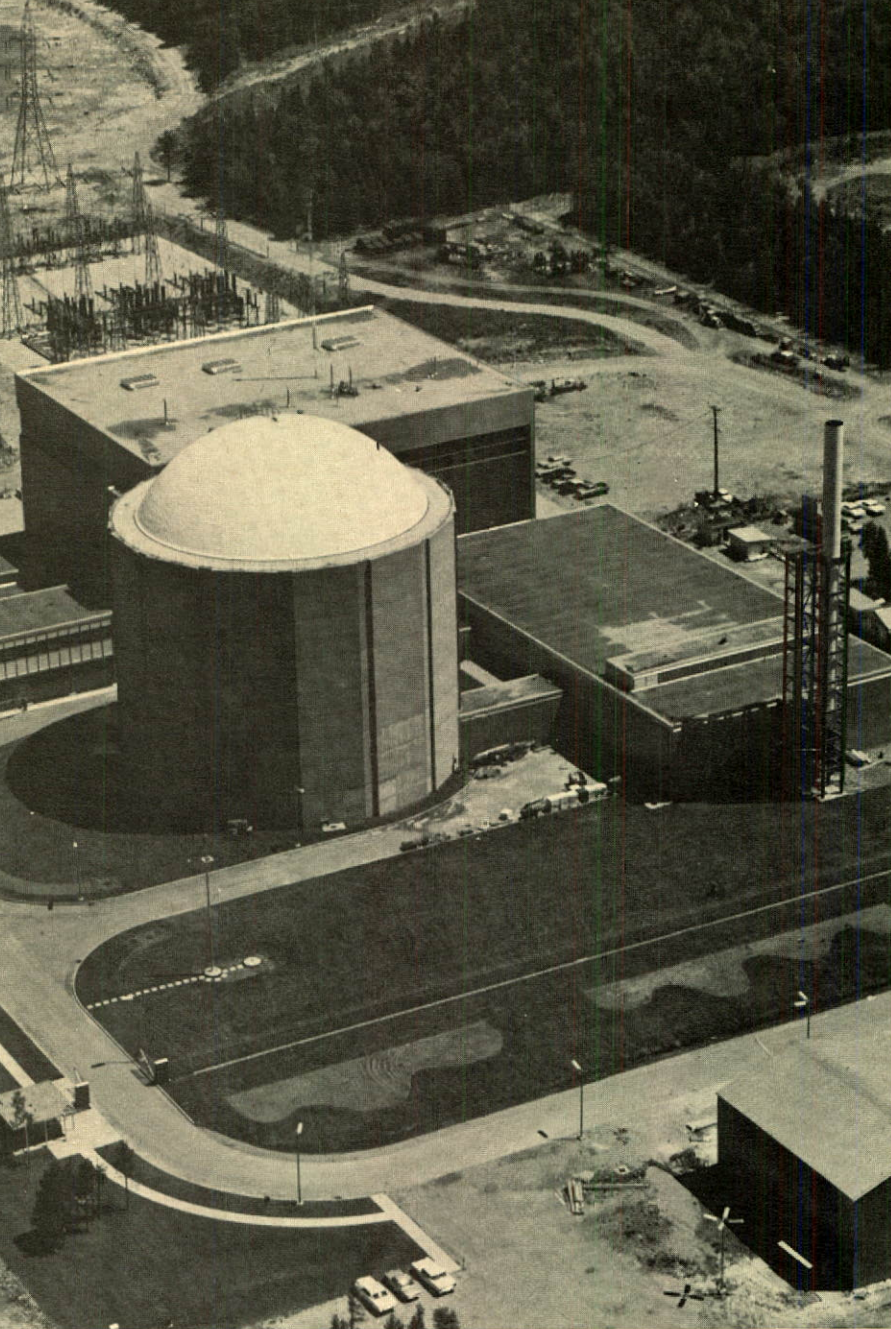
\$46,169,000 at December 31, 1966. Funds disbursed included net repayments to Eldorado in the amount of \$8,773,000 relative to advances made to the Company in prior years in respect of deferred deliveries of U_3O_8 . The cash advances are repaid on delivery of the deferred poundage and were not taken into income when received; they are recorded as income when the U_3O_8 to which they relate is produced.

At December 31, 1966 the amount of advances from Eldorado remaining for repayment was \$29,463,000 of which \$16,200,000 net and \$11,138,000 net are repayable in the years 1967 and 1968 respectively.

The policy of the Company with respect to depreciation, amortization and development expenditures, as set out in Notes 4 and 5 to the Consolidated Financial Statements, is consistent with that of the previous year. The increase of \$1,312,000 in the amount carried in development projects represents expenditures for the purchase of Lornex shares, and on the Moab uranium project less the writing off of previously deferred expenditures on a molybdenum project. Expenditures of \$627,000 for exploration were charged to earnings in 1966; the comparable 1965 amount was \$524,000.

New Quirke headframe under construction preparatory to shaft sinking. This new uranium mine, under development at Elliot Lake, will be phased into production as output at other mines is reduced.





Uranium is the atomic fuel used in nuclear electrical-generating plants such as Ontario Hydro's Douglas Point station. Rio Algom signed two long-term uranium sales agreements during the year.

Mining Division

The Mining Division profit before providing for mining taxes was \$13,829,000 in 1966 as compared with \$10,420,000 in 1965, an increase of \$3,409,000. Total Mining Division revenue was \$42,094,000 in 1966, a substantial increase over 1965 revenue of \$29,479,000.

The large increase in sales in 1966, in the main, is the result of bringing two new mines into production, Anglo-Rouyn Mines Limited, and Mines de Poirier Inc. Increased earnings are the result of several factors: higher copper prices, production from Anglo-Rouyn and Poirier, increased uranium production and slightly higher per-pound uranium prices.

Production of uranium oxide (U_3O_8) totalled 2,843,855

pounds during 1966, which represents a modest increase over the 1965 production, which was 2,717,198 pounds. Production of copper in concentrate increased from 8,248,656 payable pounds in 1965 to 26,884,130 payable pounds in 1966; 716,441 pounds of this increase is attributable to the Pronto mine near Elliot Lake and the balance of approximately 17.9 million pounds represents production from the Poirier and Anglo-Rouyn operations during the year. These two mines reached commercial output level on April 1st, 1966. In addition to copper, Poirier also produced a total of 23,375,880 payable pounds of zinc in concentrate during the year.

Uranium

As in 1965, the Nordic mine at Elliot Lake was the only uranium mine in operation. It produced a total of 2,741,340 pounds of U_3O_8 ; in addition, 102,515 pounds of U_3O_8 were recovered by treatment of mine water pumped from the Old Quirke mine in the course of preparing it for reactivation.

The production rate was increased at the Nordic mine and mill in February 1966 to meet delivery requirements under existing contracts. During 1966 a total of 1,285,400 tons of ore were milled; the average daily

rate of 3,704 tons is a production record for this property. The average grade at Nordic was 2.13 pounds per ton and the recovery rate was 93.9%. The slight decreases in grade and recovery rate as compared to 1965 had been anticipated and are due to natural occurrences as the Nordic orebody approaches exhaustion at present mining levels.

Deliveries totalled 2,766,302 pounds of U_3O_8 , mostly under the master contract with Eldorado Mining and Refining Limited. Relatively small deliveries were also made under the stockpile contract with the Canadian

Company laboratories at Elliot Lake assist in the maintenance of strict quality control and carry out assays for Rio Algom exploration crews.



Government entered into in 1965 and referred to in the report for that year.

During 1966, two major contracts for future delivery of U_3O_8 were negotiated, one with the United Kingdom Atomic Energy Authority and the other with The Hydro-Electric Power Commission of Ontario.

The contract with the U.K. Atomic Energy Authority provides for the sale of 16,000,000 pounds of U_3O_8 in total over an eight year period with deliveries commencing in 1973 or in 1972, at the Company's option. The U.K. Atomic Energy Authority has an option to increase the total amount of U_3O_8 up to 23,000,000 pounds and under certain conditions may adjust its annual delivery requirements within specified ranges.

The sale to Ontario Hydro provides for the delivery of approximately 12,000,000 pounds of U_3O_8 in total at varying delivery rates over the period 1970-1983. Some variations are provided for in the contract and these variations may affect the total amount of U_3O_8 deliverable under the contract. Ontario Hydro also has the right under certain conditions to decrease its commitment in the event of certain substantial technological changes or if it determines not to bring into service certain reactors presently planned. The Company considers remote the possibility that this right will be exercised.

The contract with the U.K. Atomic Energy Authority was signed on August 26, 1966. Ontario Hydro has accepted the Company's tender and has issued a letter of intent; a definitive contract is being prepared.

At December 31, 1966, the total future deliveries committed under these two new arrangements (excluding quantity variation options), plus the Eldorado contract totalled approximately 39 million pounds.

The addition of the U.K. Atomic Energy Authority and

Ontario Hydro contracts to those previously held assures uninterrupted continuity of the Elliot Lake uranium operation at a profitable level. Production plans to meet these commitments have been developed.

The Nordic mine is expected to be closed during 1968. The Old Quirke mine has been dewatered and the Quirke mill, which has been maintained on a standby basis, is being prepared for reactivation. The plan is to begin operations at the Quirke property during 1968 to replace the declining Nordic production. It is presently planned to operate the Old Quirke mine for several years. The New Quirke mine is being developed to supplement production from the Old Quirke mine, initially in 1968 with small quantities and in later years increasing sufficiently to meet present sales commitments and to replace Old Quirke when it terminates operations. This production plan is sufficient to meet known future commitments and production can be increased when market conditions warrant. Preparation of the surface plant for the sinking of the shaft at New Quirke was completed during 1966 and shaft sinking was commenced in January, 1967.

Copper

Operations continued at the Pronto mine in the Elliot Lake area throughout the year and the Poirier and Anglo-Rouyn mines were brought into commercial production on April 1, 1966. The Poirier mine which is wholly owned by the Company, is a copper-zinc orebody located in Northwestern Quebec. The Anglo-Rouyn mine, in which the Company has a 58% interest, is a copper operation near La Ronge, Saskatchewan.

Open pit at the Anglo-Rouyn copper mine was operated before start of production from underground workings. Commercial production at the mine began in 1966.



Pronto Mine

This mine produced copper concentrate containing 8,965,097 pounds of payable copper during 1966. A total of 240,828 tons of ore was milled with a mill head grade averaging 2.0% and a mill recovery of 96.4%. Although the total tonnage of ore milled was virtually unchanged from the previous year, the maintenance of mill recovery at 96.4% and an increase in mill head grade from 1.83% to 2.0% resulted in an increase in production of 716,441 pounds of payable copper.

The increase in head grade was achieved by implementation of the hydraulic cut and fill mining method. This method improves dilution control and has been an economically sound method for this mine.

The shaft deepening programme and the development of four new levels was completed in December. This provides economically mineable reserves for about a three-year period. Further drilling will be done to decide whether the mine should be deepened further.

The effect of increased labour rates and other cost increases was modified by the improved recovery grade but resulted in a net increase in production costs per pound.

Mines de Poirier Inc.

The Poirier mine reached its initial planned production rate of 1,500 tons of ore per day by April 1, 1966.

During the year the scheduled capacity of the mill was increased to 2,500 tons per day to provide capacity for

custom milling of ore from Joutel Copper Mines Limited, a neighbouring property. Since the Joutel deliveries did not commence until 1967, Poirier was able to use this new extension to process up to 2,000 tons per day of its own ore, part of which came from the surface stockpile of pre-production ore.

In the nine month period to December 31, 1966 concentrates containing 9,348,381 payable pounds of copper and 19,704,597 payable pounds of zinc were produced from the milling of 484,781 tons of ore. In addition, 1,088,288 payable pounds of copper and 3,671,283 payable pounds of zinc were produced in the tune-up period. The mill head grade averaged 1.09% copper and 3.43% zinc; mill recoveries were 90.2% and 72.3% respectively.

Anglo-Rouyn Mines Limited

The Anglo-Rouyn mine commenced production on a commercial basis on April 1, 1966. During the first few months thereafter problems were encountered with equipment and in attracting an adequate supply of skilled mine operating personnel due to the remote location of the property. The equipment became wholly operative in July and the availability of personnel improved as the operation became established and better housing facilities became available.

During the period from April 1, 1966 to December 31, 1966 a total of 6,638,571 payable pounds of copper in concentrate was produced from 199,251 tons of ore milled. The average mill head grade was 1.79% and



Anglo-Rouyn copper mine and mill at Lac la Ronge in northern Saskatchewan.

the mill recovery was 94.5%. Approximately 5,800 payable ounces of gold and 32,000 payable ounces of silver were produced during the same period. In addition, 843,793 payable pounds of copper were produced in the tune-up period.

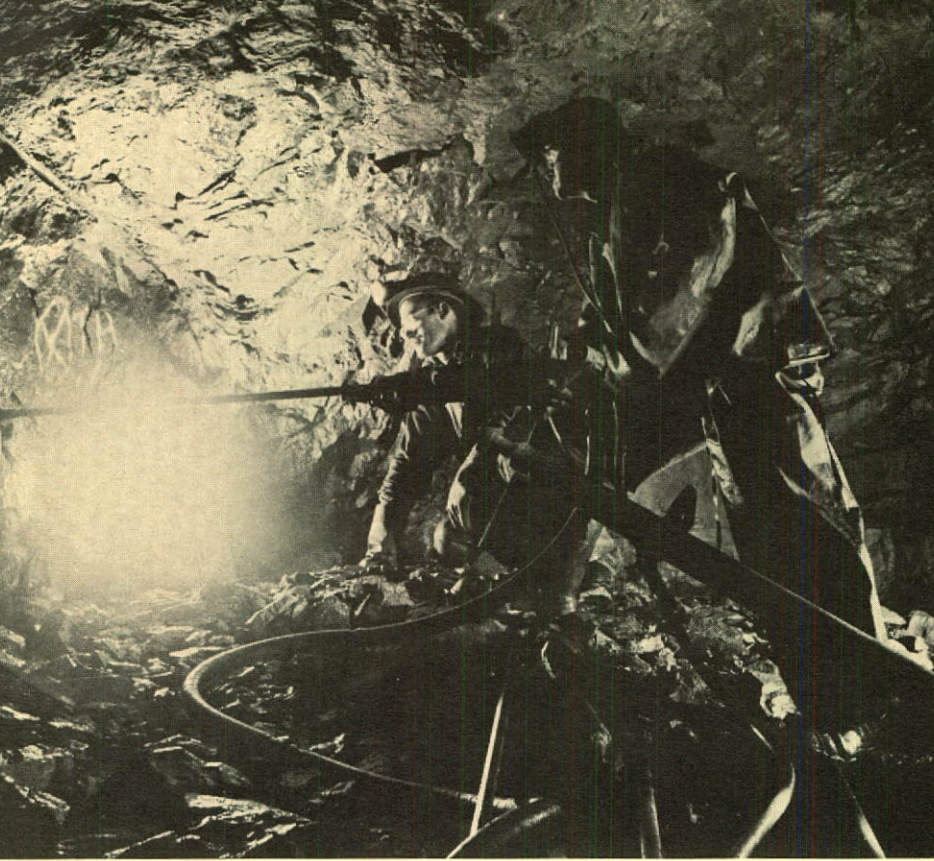
The mill head grade was adversely affected during this period by the processing of approximately 100,000 tons of ore produced from a small open pit operation on the orebody outcrop close to the shaft. This ore was mined to provide mill feed during the period in which underground development was delayed by labour shortages and mechanical difficulties.

By October 1st, sufficient underground development had been completed and thereafter all ore milled came from underground.

Rio Tinto Nuclear Products

In 1965, the Company acquired from Dow Chemical of Canada Limited the latter's 50% interest in Rio Tinto Dow Limited and the name of that company was changed to Rio Tinto Nuclear Products Limited. As a final step in the integration of this activity, the assets of Rio Tinto Nuclear Products Limited were purchased by the Company in December 1966, and its operations are now carried on as a department of the mining division.

Production of yttrium concentrates started late in 1965 as a supplement to thorium recovery. Market demand for yttrium was strong and sales contracts were developed. Technical difficulties arising from the com-



*Underground drilling at Mines de Poirier,
a Rio Algom copper-zinc mine near Val d'Or, Quebec.*

plexity of this new process hampered production initially but substantial increases in output are expected in 1967.

Production and sales of thorium were substantially higher than in 1965 and increased requirements are forecast for 1967. The addition of yttrium recovery to that of thorium in a combined process has contributed significantly to the economics of thorium production.

The 150 ton per year uranium refinery was completed during the year and is now available for commercial production of nuclear pure uranium dioxide.

Exploration

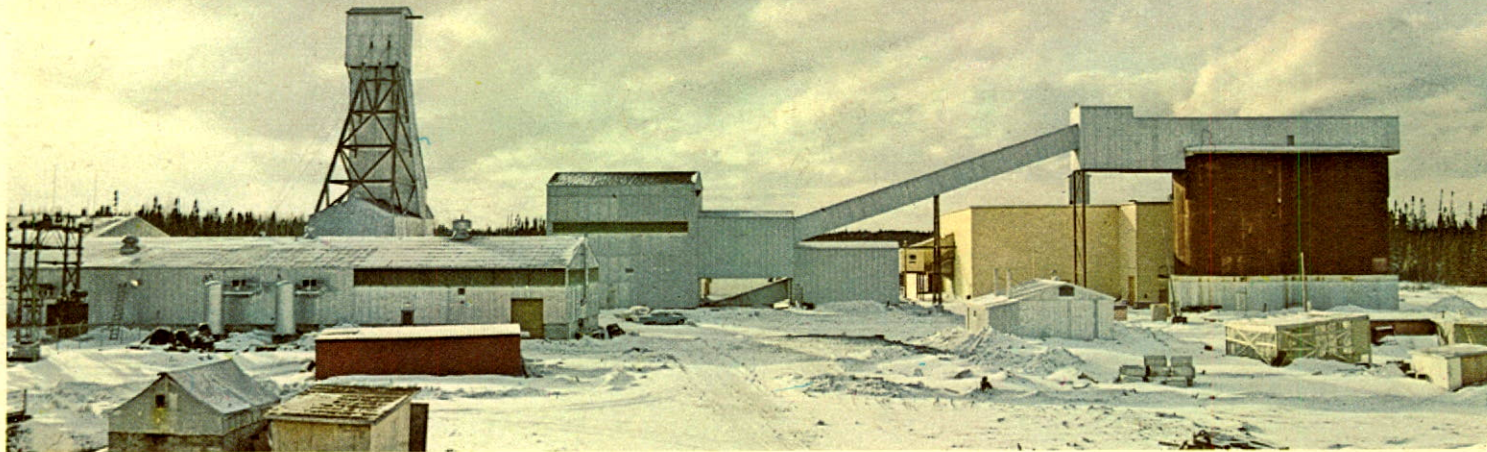
The Company's current exploration programme is directed principally towards uranium and base metal deposits in Canada and uranium in the United States.

In Canada, additional diamond drilling has been carried out in the examining of uranium prospects in the area between Elliot Lake and Sault Ste. Marie. Property examinations were also carried out in exploration for uranium in other sections of Ontario, Quebec and in the Northwest Territories.

Base metal exploration activities in Canada included the geological investigation of properties in Northern Saskatchewan, Ontario, Quebec and the Maritime Provinces.

Exploratory work continued during 1966 on the Lornex prospect in the Highland Valley area of British Columbia. The Lornex property contains a large low grade copper deposit with minor molybdenum values. Under the terms of its agreement with Lornex Mining Corporation Ltd., Rio Algom has assumed responsibility for management of the development project and will own approximately 36% of the Lornex equity after all share options are exercised.

Drilling to date indicates a lower grade of mineralization than that at virtually all open pit copper mines currently in operation. However, the size of the orebody is substantial. Current indications are that open pit mining on a scale of at least 30,000 tons of ore per day would be necessary if the deposit were to be mined. For these reasons, and having regard to the very large capital investment which would be required to bring the property into production, a programme has been undertaken to establish a precise definition of the critical economic factors which are involved.



Mines de Poirier headframe and plant. The mine began commercial production in 1966.

This programme comprises more extensive drilling than that carried out to date, the sinking of a shaft to permit underground bulk sampling and the construction of a pilot plant. The results should make it possible to determine during 1967 whether a full-scale feasibility study is warranted.

In the United States, encouraging drill hole results have been obtained on an optioned uranium prospect near Moab, Utah. Additional drilling will be carried out on this property during 1967. Investigation of uranium prospects was also carried out in Wyoming, Colorado and New Mexico. Drilling, in association with Mitsubishi Metal Mining Company, is now in progress on the properties recently acquired in Wyoming.

Research and Development

Two laboratory groups operate in Elliot Lake under combined management, one undertaking ore dressing and metallurgical research and the other engaging in development of nuclear products and by-products of uranium milling.

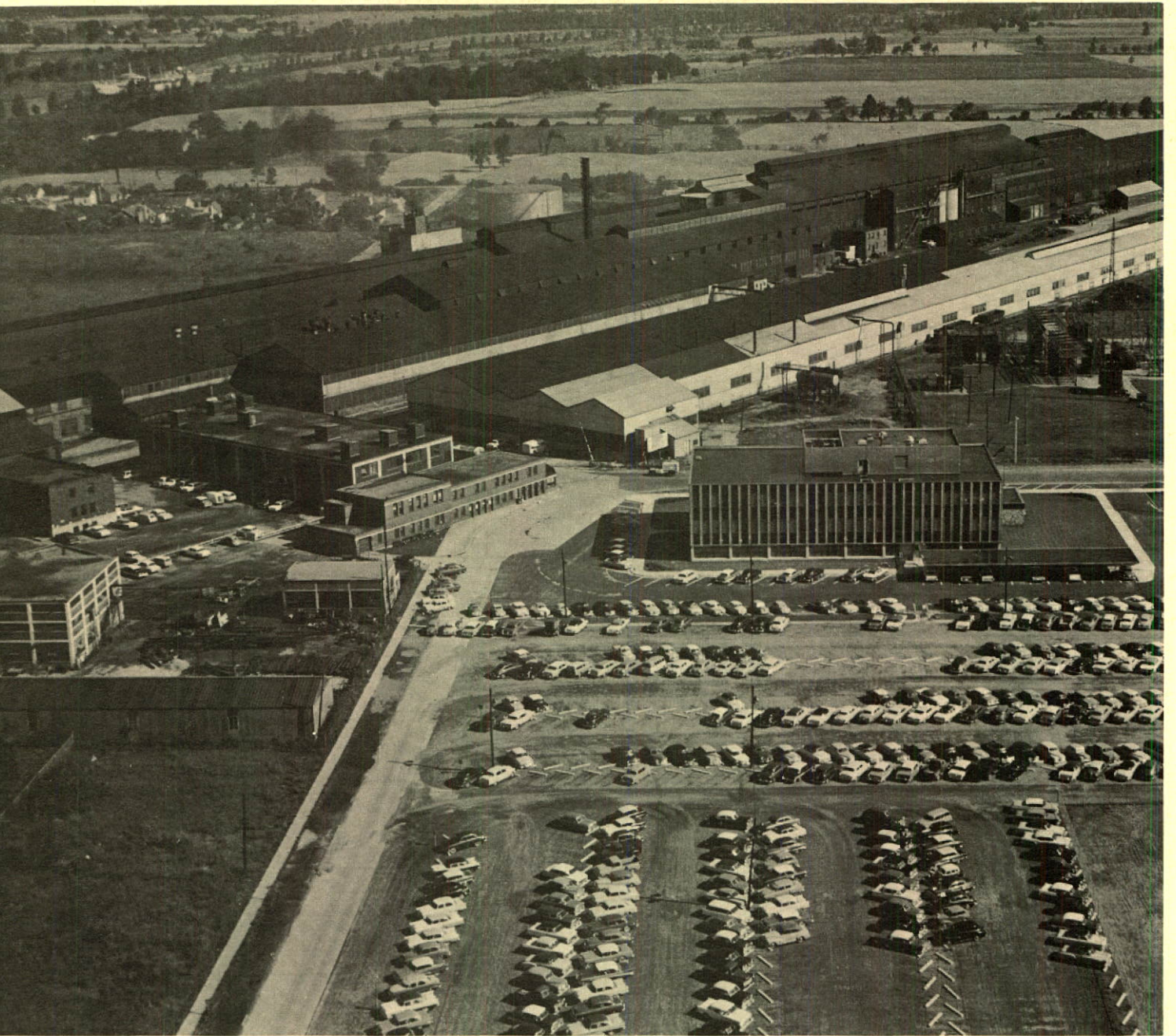
Their respective principal activities in 1966 were related to developments in drill core assay methods and metallurgical testwork in the pre-concentration, leaching and recovery of uranium from solutions; and to continued research and development on the yttrium recovery process.

Employee Relations

At December 31, 1966, employees of the Mining Division (including all consolidated subsidiaries) numbered 1,376, of whom 965 were production workers and 411 engaged in executive, administrative and clerical functions.

During the year, agreements covering hourly rated personnel were negotiated with the United Steelworkers of America at the Pronto and Poirier mines, covering periods of 3 years and 2 years respectively.

The shortage of experienced miners is becoming critical throughout the industry. The Company has carried out recruiting campaigns in many parts of Canada with limited success and programmes of recruiting overseas and "on the job" training are being investigated.



Atlas Welland plant and office.

Steel Division

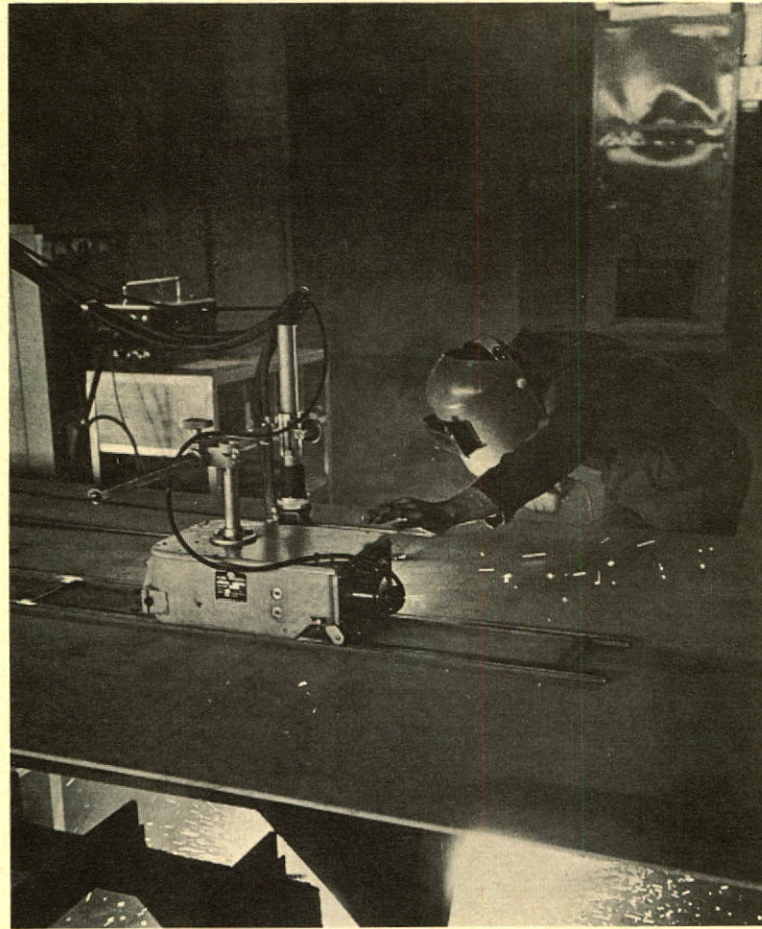
The Steel Division profit before providing for income taxes was \$2,674,000 in 1966 as compared with \$5,126,000 in 1965, a decrease of \$2,452,000. The profits in each year are after deducting amortization of \$1,047,000, which is the excess of acquisition cost over adjusted book value of the Atlas Steels assets purchased as at December 31, 1962.

Total Steel Division sales, which include sales of specialty steels and other purchased metal products that are marketed through the Company's domestic and international warehousing organizations, decreased slightly to \$104,986,000 in 1966 from \$107,420,000 in 1965. Total Welland and Quebec production declined to 141,875 tons in 1966 from 149,962 tons in 1965.

In the main, the net decrease in Steel Division operating profit is attributable to an increase in the operating loss of the Quebec Plant. This was modified somewhat by a net improvement in the results of other Steel Division operations.

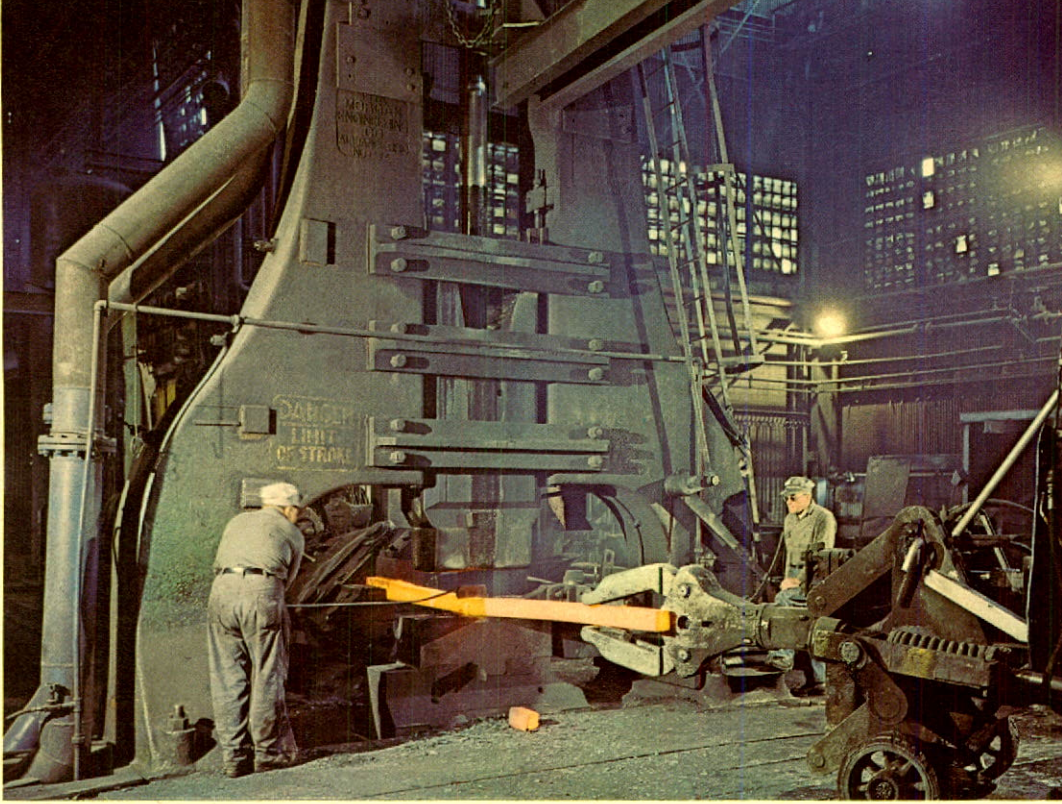
Manufacturing

The Welland Plant operated at a high level of capacity for the fifth successive year. Total tonnage produced and sold decreased but net sales revenue per ton increased as a result of progress made in up-grading the product mix from this plant. This improvement has been achieved as part of a long range plan to increase



Plasma cutting at 60,000 degrees (F) at Atlas Alloys.

the profitability of the Welland Plant by concentrating the established skills of its operating and technical personnel on the production of higher value and more profitable specialty steels. Labour and material costs increased but the effect of these increases on the plant's profit was offset by improvement in product mix and by continued emphasis on cost reduction. An improved production control programme is being implemented. This programme will improve delivery schedules, reduce process inventories, reduce material handling costs and improve plant efficiency.



12,000-pound pneumatic hammer shapes red-hot metal at Atlas Steels' Welland plant.

As stated earlier, the operations of the Quebec Plant in 1966 were disappointing and were the principal cause of the decline in Steel Division earnings. Tonnage manufactured and sold from this plant increased slightly but net sales revenue per ton decreased while cost per ton increased. Whereas the Welland plant manufactures a wide variety of items, produced on a large number of processing units, the Quebec Plant is a specialized entity in which there is a high degree of interdependence among processing units. A plant like the Quebec Plant cannot be an economical production operation until each of its major pieces of equipment is functioning effectively, making it possible for the plant as a whole to operate as an integrated production unit. The installation of the hot planetary mill was completed during 1966 and trial rollings were carried out. As might be expected because of the advanced nature of such equipment, design and construction problems were disclosed by the trials. Rollings are continuing as frequently as possible, consistent with the time required to make the necessary design and construction

modifications as they are disclosed by the rollings. The installation of the second cold mill and anneal and pickle line began in 1965 and was completed in 1966. Trial runs disclosed that the gear train in the cold mill was defective and it is being replaced. This mill is similar in most respects to the first cold mill, which is now operating at scheduled capacity, and it is expected that the second cold mill will be in effective operation for the greater part of 1967.

The principal reason for increased costs at the Quebec Plant in 1966 was the experimentation required to develop the various process units and the associated costs of extra processing of material produced during this development period which was required to meet quality standards of the market. To be conservative, all such extra costs are charged to expenses as they are incurred. Also in line with this conservative policy, start up costs in the amount of \$1,075,000 incurred prior to December 31, 1964, which had been deferred, were written off in 1966 as an extraordinary charge against earnings.

Marketing

During late 1965 the Atlas Alloys division was created by the merger of the Atlas Steels warehouse operation in Canada with the Alloy Metal Sales warehousing organization. Since then, progress has been made in the integration of both staff and facilities and new warehouses are under construction in Winnipeg, Edmonton and Vancouver. These steps will increase the marketing strength of this newly constituted division.

The earnings position of the foreign warehousing companies as a group improved slightly, in spite of a decrease of approximately 2% in sales revenues. Sales volume increases were achieved in the United States, Australia and Mexico. However, adverse economic conditions in the United Kingdom and intense price competition in Europe together with shortage of product from the Quebec Plant resulted in sales declines in the United Kingdom and in Europe. The new free-port warehouse and level and cut line at Rotterdam, which became operative during late 1966, will improve the competitive strength of the European warehousing company. In Mexico City, a new leased warehouse was brought into operation to replace an inadequate facility.

A comprehensive survey of the stainless sheet and strip products market was carried out in 1966 in collaboration with a firm of outside consultants. In general, this survey has affirmed the soundness of the Company's basic strategic marketing plan for these products. However, as a result of certain recommendations made, there have been changes in organization, in emphasis and in timing which, it is considered, will increase the effectiveness of the marketing programmes.

Labour and other cost increases which have beset the entire steel industry have made it necessary to increase selling prices selectively in some areas during the last quarter of 1966. The effect on 1966 earnings was not material.

Atlas Titanium

Atlas Titanium made significant progress in its own sales of titanium metal and also in the volume of titanium and superalloys converted by Atlas Steels for



Titanium ingot being removed from remelting furnace. Atlas Titanium division is producing increasing amounts of titanium for a variety of uses but particularly for aero-space application.

other manufacturers. Sales are being made primarily to the aircraft and aero-space industries in the United States and to sub-contractors in Canada. The expected increase in demand for these materials indicates a promising future for the titanium operation.

Research and Development

Research projects and metallurgical activities undertaken during the year were directed primarily towards supporting the programme to improve the product mix at the Welland Plant and towards maintaining competitive quality standards throughout the range of Atlas products. Longer range research was aimed at developing superior high temperature steel.



Work to harness the Churchill Falls, one of the largest single power developments in the world, is underway by Brinco affiliate Churchill Falls (Labrador) Corporation Limited. Rio Algom has interests in, and a management contract with, both.

Employee Relations

At December 31, 1966, the Steel Division employed 3,620 people, of whom 2,358 were production workers, 618 were engaged in marketing activities and 644 were executive, administrative and clerical employees. During 1966, only one labour agreement was negotiated within the Atlas Steels organization. This was a three-year agreement negotiated with United Steelworkers of America, providing a five percent average increase in salaries in each of the three years for the clerical and technical salaried employees at the Quebec Plant. In 1967, the only collective bargaining agreement requiring negotiation is the agreement with United Steelworkers of America covering the hourly-rated employees at the Quebec Plant, which opens for re-negotiation on May 31, 1967.

In recognition of the necessity to develop the skills of the Quebec Plant organization as rapidly as possible, steps have been taken to implement a series of

integrated training programmes for personnel at all levels within the organization. Management training in co-operation with outside specialists is well under way at the Quebec Plant and will be extended to the Welland Plant in 1967.

Head Office

In July 1966, the Company headquarters was moved to three floors of the new Richmond-Adelaide Centre in the heart of downtown Toronto. All corporate and mining division head office activities are now assembled in this one excellent location.

Head Office

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

Principal Bankers

Canadian Imperial Bank of Commerce,
Toronto

Solicitors

Fasken, Calvin, MacKenzie, Williston and
Swackhamer, Toronto

Auditors

Coopers & Lybrand, Chartered Accountants,
Toronto

Miscellaneous Corporate Information

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

Principal Overseas Associates

United Kingdom

The Rio Tinto-Zinc Corporation Limited
RTZ Metals Limited
6 St. James's Square, London, S.W.1
Imperial Smelting Corporation Limited
1 Redcliffe Street, Bristol

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 Industries Pty. Limited
Hamersley Iron Pty. Limited
Mary Kathleen Uranium Limited
CRA Engineering Pty. Limited
95 Collins Street, Melbourne, C.1

Republic of South Africa

The Rio Tinto Mining Company of South
Africa Limited
Palabora Mining Company Limited
40 Commissioner Street, Johannesburg

United States 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

Rhodesia

Rio Tinto (Rhodesia) Limited
Pearl Assurance House,
Jameson Avenue, Salisbury

Spain

Compañía Española de Minas
de Rio Tinto, S.A.
Alcalá 95, Madrid

COVER In this impressionistic rendering, artist Michael Fischer has captured the dynamics he found in Rio Algom's mining and specialty metals operations.

