

A. O. Riley

Addresses to Shareholders

Bound Volume 1930-1968

Enclosed, for possible reference, is a bound volume of Addresses given by the Chairman and/or President at Annual Meetings of Shareholders held during the years 1930 through 1968.

A handwritten signature in dark ink, appearing to read "G. F. Welby", with a horizontal line drawn through the middle of the signature.

G. F. Welby

ADDRESSES TO SHAREHOLDERS

THE INTERNATIONAL NICKEL COMPANY
OF CANADA, LIMITED

COVERING THE YEARS

1930-1968

By

CHAIRMAN AND PRESIDENT

Date in parenthesis at bottom of page indicates year referred to.

LORD MELCHETT

Before presenting my report for the past year I wish to refer to the death of a prominent director of your company.

The Rt. Hon. Lord Melchett died on the 27th of December, 1930. My comment on the loss of our distinguished associate may best be conveyed to you by quoting from a resolution passed by the Board of Directors at a meeting held on January 5th, 1931:

"The members of the Board of Directors of this company have learned with deep regret and a sense of great personal loss of the death of their friend and esteemed associate, The Rt. Hon. Lord

Melchett, P. C., F. R. S., D. Sc., a man of outstanding accomplishments in the industrial, political and social life of the British Empire, Chairman of the Advisory Committee and a Director of this company, whose genius contributed so largely to the development of The Mond Nickel Company, Limited, and whose collaboration in the direction of the Company's affairs has been so valued."

Lord Melchett's seat on your Board has been filled by a man well known throughout Canada, Mr. Edward W. Beatty, Chairman and President of the Canadian Pacific Railway Company.

ADDRESS TO STOCKHOLDERS MARCH 31st, 1931

Consideration of the report on the affairs of the company for 1930 makes it obvious that your company was confronted by adverse conditions entirely beyond the control of your management. The present industrial depression, which extends over the period covered by the report, is world-wide in extent and is one of the most severe business reversals in many years.

Your company's business is primarily dependent upon world consumption of nickel which in turn is dependent upon the prosperity of other basic industries. The latter were forced to drastic curtailment and in the final result your net earnings decreased to \$11,770,060.42 as compared with \$22,235,996.87 for 1929.

The market price of copper and the prices of all of the company's by-product metals, with the exception of gold, fell rapidly during 1930 and naturally this fact contributed largely to the decrease in earnings.

Copper declined from 18 cents to 9½ cents, the lowest price recorded during the past fifty years with the exception of the year 1894. Though 34% more copper was sold in 1930 than in 1929 less profit was derived from this source. Conditions in the copper industry will ultimately improve and your company, because of its large copper production, has assumed and will continue to hold an important position for Canada in the world's copper industry.

Platinum metals and silver sold at abnormally low prices during the year, silver in particular reaching the lowest price of record.

We must therefore frankly accept the results of 1930 as disappointing from the standpoint of earnings. However, as the present period is abnormal and we hope not likely to be soon repeated we must not let it unduly influence us in considering the company's future.

I shall return to the important question of outlook for the com-

pany's business but wish now to point out that notwithstanding the financial results of 1930 much was accomplished during the year on the constructive side.

Your company is the principal source of supply of an essential metal and for this reason it must of necessity maintain at all times adequate stocks of semi-finished and refined nickel. It is moreover imperative to have substantial reserve capacity which may be used in periods of peak consumption. These provisions are vitally necessary as failure of supply may mean substitution of other materials with consequent permanent loss of nickel business.

Accordingly, the Frood mine has been developed and is now capable of meeting market demand for nickel on a progressive scale for many years. Production facilities both here and abroad have been modernized. The concentrating plant and new smelter at Copper Cliff have been completed and paid for and are now operating efficiently and showing lower costs even on a curtailed production schedule than did the old plants at full capacity.

Adequate mining, smelting and refining facilities have been provided to produce 90,000 tons of nickel and 120,000 tons of copper per annum.

Owing to the heavy demand for nickel during 1929 metals in process and warehouse stocks were depleted and it was necessary to continue operations in 1930 sufficiently in excess of consumption to replenish these reserves. While stocks of nickel in consumers' hands at the end of 1930 were practically nil the company's stocks, though not excessive, are now sufficient to provide for any demand on their part.

A word may be said regarding the company's increased copper output at a time of over-production and low priced copper. In smelting and refining copper-nickel ores it is impossible to produce nickel without producing copper. The Frood ore body and accessory smelting and refining capacity were developed in order to provide for an increasing demand for nickel. Frood ore has a much higher ratio of copper

to nickel than the Creighton ore formerly used. The mining and smelting operations of the company in 1930 were scheduled to replenish stocks depleted in 1929 and in operating to meet this objective a large tonnage of copper was of necessity produced.

Normal stocks of nickel having been accumulated operations were curtailed during October and November to a rate at which nickel production was in step with consumption, and we were thus able to restrict our copper output at a time when a large majority of other copper producers decided to curtail production. The result of this general curtailment is now apparent in copper statistics in that stocks are decreasing for the first time in many months.

SALES AND OPERATIONS

The report reviews the company's business during 1930 and shows comparable sales figures for 1929 and 1930.

The section dealing with your production facilities outlines the scope of operations as now conducted and indicates that favorable results are already apparent as a consequence of the program of additions and betterments which has called for large capital expenditures during the past three years.

Your company and its subsidiaries are now conducting operations in Canada, the United States and Great Britain. All plants worked continuously throughout the year though it was necessary to curtail various operations substantially during the latter months.

All of the company's plants and those of its subsidiaries are now integral both as to management and operations and all show the result of your management's policy of maintenance and efficiency.

ORE RESERVES

The ore reserves of the Company are ample, but it must be borne in mind that the Company's main activity has ceased to be that of mining. Its works and business are day by day becoming more commercial and widespread throughout the World and the Company's success now depends less on the ore reserves than on the ability to find or make markets which will take the manufactured product of the Company. The Company is rapidly approaching, if it has not already reached, the position where the profits out of which dividends are paid will be manufacturing profits comparable in every way to those of any ordinary commercial manufacturing company.

FINANCIAL

The financial figures for 1930, as verified by your auditors, Messrs. Price, Waterhouse & Company, have been available since March 17th.

The consolidated profit and loss statement shows that:

The net operating income for 1930 was \$16,225,157.18 from which were deducted \$481,157.87 for interest on debenture stock and purchase money notes, \$3,145,795.49 for depreciation and depletion and \$828,143.40 for retirement system, insurance and other reserves, leaving a net profit of \$11,770,060.42 compared with a net profit of \$22,235,996.87 for 1929.

To the earned surplus as of December 31st, 1929, amounting to \$24,958,970.10, there was added the net profit for 1930, \$11,770,060.42. There were deducted therefrom \$1,933,919.76 for preferred dividends and \$14,148,941.55 for common dividends, leaving the earned surplus \$20,646,169.21 as at December 31st, 1930.

The earnings for 1930, after allowing for preferred dividends, were equivalent to 67 cents per share on the basis of the 14,584,025 shares of the no par value common stock now issued or issuable as compared with \$1.47 per share for 1929 on the 13,758,208 shares then issued or issuable.

Additions to property account, less recoveries, amounted to \$12,328,918.35, the amount written off for dismantlement was \$220,925.18, leaving the net additions \$12,107,993.17 as shown on the balance sheet. The total property account, after deducting reserves for depreciation of plants and depletion of ore, is \$145,481,480.46 as compared with \$136,298,357.60 December 31st, 1929.

Net current assets were \$30,102,999.73 at December 31st, 1930 as compared with \$32,231,839.02 at December 31st, 1929.

Four dividends of \$1.75 each, aggregating \$7 per share, were paid on the \$100 par value preferred stock and four dividends of 8¾ cents each, aggregating 35 cents per share, were paid on the \$5 par value preferred stock. Four quarterly dividends of 25 cents each, aggregating \$1 per share, were paid on the no par value common stock.

The dividends on the preferred stock amounted to \$1,933,919.76 and the dividends on the no par value common stock amounted to \$14,148,941.55.

The number of preferred shareholders was 10,723 on December 31st, 1930 as compared with 14,119 on December 31st, 1929, a decrease of 24 per cent. The number of common shareholders was 76,235 on December 31st, 1930 as against 54,241 on December 31st, 1929, an increase of 41 per cent.

At a special general meeting of stockholders, held in Toronto July 25th, 1930, the authorized common stock of the company was increased to 15,000,000 shares and subsequently your Board of Directors offered to common stockholders additional common shares for subscription in the ratio of six shares of common stock for each one hundred shares of common stock of record on August 7th 1930, at \$20 per share. As a result of this stock offering 825,817 shares of common stock were subscribed and allotted, the proceeds being apportioned between Capital Stock and Capital Surplus.

Capital expenditures incident to the development of the Frood mine and construction of accessory plants are practically completed and the same may be said of the program of additions and betterments in Great Britain.

Expenditures for the fiscal year ended December 31st, 1930 were \$12,328,918.35, distributed as follows: Sudbury District \$10,623,911.43, Port Colborne \$189,558.47, Great Britain \$925,102.35, Huntington \$398,741.14, Bayonne \$182,571.79, New York Office and Foreign Development Companies \$9,033.17. Details of these expenditures are shown in the report.

In addition to the foregoing capital expenditures there was invested in other companies \$4,322,862.36. This amount is made up of \$345,000.00 in Horseshoe Lake Mining Company, Limited and \$3,977,862.36 in Ontario Refining Company, Limited, 42% of the stock of the latter being owned by your company.

Of the total expenditures enumerated, amounting to \$16,651,-780.71, the treasury has been reimbursed by funds realized from the sale of common stock in August, 1930 in the amount of \$15,281,164.44.

Capital expenditures during 1931 will be substantially less than those of 1930. Two important items are scheduled for completion in 1931; first, the transfer of the Orford Separation Process (a smelting operation) from Port Colborne to Copper Cliff and second, the rehabilitation of the Mond shaft and head-works at the Frood mine. The former will result in a substantial saving in operating expenses and the latter is a necessary elimination of fire hazard and will moreover facilitate handling Frood ore from depths below 2,800 feet.

DEVELOPMENT OF MARKETS FOR NICKEL

The section devoted to "Development of Markets for Nickel" summarizes progress that is being made in extending the uses of nickel in the most prominent fields of application. Development of new uses for nickel has become your management's most important work. Vast stores of raw material and low cost operations, though fundamentally important, must be coupled with expanding distribution of product in order to create a profitable industrial enterprise.

With reference to the "Platinum Metals" it may be said that your management now faces the same problem it faced in finding a market for nickel several years ago, viz. potential production largely in excess of present consumption. It is believed that this problem can be solved as it was in the case of nickel and your management is at present actively engaged in Research and Development work in both America and Great Britain. Similar work is also being carried on by the large fabricators of platinum metals.

The report states that notwithstanding necessary curtailment of plant operations during 1930 it was deemed advisable to continue and in some particulars to expand the company's sales, development and research activities. Time and effort are required in order to penetrate new nickel markets and to develop new nickel products; hence your management decided that there should be no slackening of the technical and commercial activities of the company during this period.

In addition to the work of the Sales and Development Departments in America, work of similar character is being carried on in Great Britain and Continental Europe. The Sales and Development and Research Departments of The Mond Nickel Company, Limited are well organized and are making rapid progress along lines best suited to conditions in the United Kingdom. The Bureaus of Information on Nickel, with offices in Paris, London and Frankfurt, together with similar offices in Brussels and Milan which were opened during the year, are functioning satisfactorily and are developing an active interest in the use of nickel products which will be reflected in increased foreign sales.

OUTLOOK

Obviously it is impossible to forecast business conditions accurately and I can do no better than quote the "Outlook" as it appears in the report.

The immediate prospects of the company naturally depend upon a gradual return to normal conditions in world industry generally. Over a period of years the increase of your business will be determined primarily by the expansion of the uses for nickel and nickel alloys and the experience gained in recent years gives promise that this expansion will be continued.

Due to well-known causes copper is selling at an abnormally low price. Notwithstanding large stocks of the metal and the imminent output from Rhodesia the best opinion of the copper industry contemplates the future of the metal with confidence and with this opinion your management agrees. Similar depressions have confronted the industry in the past followed always by periods of heavy demand and higher prices.

The rapid and world-wide expansion of the electrical industry, which uses approximately sixty per cent of the world's output, and the prevailing low per capita consumption in the rest of the world as contrasted with America, should assure an expanding market for copper for years to come. Your company with ample ore reserves and low cost production will benefit in large measure with the return of prosperity to the copper industry.

In considering the nickel market situation it should be noted that your company has been fortunate in its conservative price policy, with which, it is gratifying to state, large consumers of nickel generally have expressed entire satisfaction. Sales of nickel during 1930, for new uses, were in some cases in excess of those for 1929 and there is no reason to believe that the world demand for nickel will not resume its forward course. In fact there are distinct signs of improvement and it is the opinion of many leaders in the industries which consume nickel that 1931 will show a gradual return to normal conditions. While it is impossible to make an accurate forecast it seems probable that the trend of the company's business in 1931 will be the reverse of that recorded in 1930.

It is reasonable to assume that an industry which has shown steady progress for the past decade will continue to progress. Ample ore reserves, modern plants and an experienced personnel are behind an organized market development effort that will unquestionably extend the use of an essential metal such as nickel. Nothing has occurred during the present depression to disturb permanently the general course of your company's business and there is every reason to believe that it will continue definitely upward. Your management does not regard the present industrial depression, serious as it now appears, as of major importance in the life of a company so well equipped to serve an expanding world market.

In conclusion I wish to state that your company's success depends in large measure upon the good will of the customer and the morale of its organization. I believe we now have and will continue to hold

the confidence and respect of the consumers of our products. On behalf of your Board of Directors I wish to express its grateful appre-

ciation of all that has been achieved through the loyalty, co-operation and hard work of its executives and employees during the past year.

MARCH 29, 1932.

PRESIDENT'S ADDRESS

TO

SHAREHOLDERS

The annual report of The International Nickel Company of Canada, Limited for the calendar year 1931 has been in your hands for several days. It embodies, in addition to an analysis of your Company's finances, a general summary of plant operations, sales activities and current progress in research and development. An official review of the Nickel industry for 1931 appeared in the annual financial issues of prominent newspapers and industrial magazines in Canada and elsewhere. Thus the occasion of this annual address to shareholders becomes an opportunity for the interpretation of information already available to you, rather than a time for the presentation of new material.

In the first place, then, what do the figures in our financial statements show? They show that your Company successfully weathered the second full year of one of the most severe economic depressions the world has ever experienced. Dividends were maintained on the preferred shares, and holders of the common shares in 1931 continued to receive some income, although the disbursements were necessarily of modest proportions. At the same time your Company has completed its \$50,000,000 modernization program started in 1924, some \$17,000,000 of this having been required during the past two years of depression. Yet your Company has been fortunate in having been able to provide for this extraordinary financing in addition to its current operations without recourse to borrowing.

It had been hoped that business conditions would permit the payment of a dividend on the common stock for the first quarter of this year, but your directors determined that in view of the decreased demand for your Company's products in January, and especially the demoralized state of the copper market, the question of a declaration of a dividend should be held over. The payment of dividends in the past year of acute depression evidences the desire on the part of your directors to provide income to shareholders and gives assurance that dividends will be resumed as soon as such action is deemed prudent.

From the figures submitted in the report it is apparent that financing of capital expenditures, retirement of debenture stock and purchase money notes, and disbursement of dividends, occasioned the withdrawal of \$4,652,356.27 from working capital and that this amount closely approximates the \$4,679,435.46 expended for capital account. As there

appears to be no probability of large expenditures for capital account for some time to come increased earnings, when attained, will be more readily available for dividends than during recent years.

With construction now completed and the new equipment in actual operation many economies are already being realized, and with the resumption of reasonable industrial activity your Company's large capital expenditures will not only have provided the necessary facilities for mining, smelting and refining Frood ore but will enable your management to show great economies in metallurgy when contrasted with methods formerly used.

What we have faced during the last year has been a greatly restricted demand for all the metals produced by your company. With decrease in consumption came severe drops in prices, copper having sold at the lowest price in history and silver and the platinum metals also having experienced disastrous price reductions.

Your Company has met this situation in two ways; on the one hand it has drastically curtailed output and reduced expenses; on the other hand it has maintained its aggressive sales policy in the nickel field, which is its dominant interest, and it has actively co-operated with other metal groups in which it is only one of many great world producers.

Not only have all expenditures been carefully scrutinized but the compensation of executives and all salaried employees has also been substantially reduced. At the same time production has been slowed down to the consumption rate to prevent excessive inventories and thus protect working capital. By referring to the balance sheet it may be noted that "inventories" as at December 31st amounted to \$21,429,936.21 as compared with \$21,060,096.16 as at December 31st, 1930, an increase of only \$369,840.05 or less than 2 per cent—a showing considered very satisfactory by your management. This has necessarily meant a considerable reduction in the amount of work available in the mines and the plants. A distressing factor in curtailing plant operations is the necessity of laying off employees, thereby increasing unemployment and adding further to the vicious circle of depression. We have tried to ration work as intelligently and as considerably as possible.— Priority has been given to family heads and on the basis of seniority of employment. Your Company also aided in relieving

general unemployment in the Sudbury district through an appropriation of \$100,000.00 which was used for various public works. By adopting this plan of relief several hundred unemployed men in the City of Sudbury were given part-time work.

In this connection may I pay my respects to the public officials of Ontario, local and Provincial, who are showing both imagination and competence in coping with unemployment.

Simultaneous with this program of rigid retrenchment your Company has maintained its sales activities at full vigor. The following figures demonstrate this point: While operating expenditures have been reduced by 51 per cent as compared with 1929, the budget for research, sales and development has been increased by 25 per cent over that of 1929. Even so, our sales policy has not been able to maintain nickel consumption at an adequate volume. That would have been a superhuman task in the face of the serious curtailment in practically every industry where nickel has developed an important market. But we have been able to win acceptance for nickel and "Monel Metal" in a variety of new applications. It may be interesting to note that sales of nickel, including those by The Mond Nickel Company, Limited, of 55,740,000 pounds compare with 27,380,000 pounds in 1921, also a year of serious business depression. From this gratifying comparison it may be inferred that our policy of technical sales development is showing concrete results. Thus, with return of better business conditions, your Company will be the beneficiary on a broader basis than heretofore.

In the matter of platinum metals improvement has had to wait upon group recognition of the industry's common interest. Late in 1931, as a result of months of discussions and negotiations, Consolidated Platinums, Limited was organized as an English corporation which will not only sell platinum originating in Canada, Russia, South Africa and South America, but will also conduct an active campaign to promote and increase its uses. I believe this to be an intelligent effort by an industry to put its house in order for the good of producer and consumer alike.

Similarly the year 1931 closed with action taken by the world's copper producers. In this instance Canada, the United States, Africa and South America are the fields principally affected. Approximately ninety per cent of the world's productive capacity—now in excess of five billion pounds per annum—voluntarily curtailed output to twenty-six and a half per cent of capacity on January 1st, 1932. It should follow that in time abnormal stocks will be liquidated and stability and better prices will replace the chaos which has prevailed in the copper industry since 1929. The greatest menace to this

demonstration of common sense by the leading producers is that copper may become a football in a melee of retaliatory international tariffs.

Your Company, which is the largest copper producing unit in Canada, voluntarily reduced its output to twenty-six and a half per cent of capacity beginning January 1st this year. I believe that by adopting such a policy your Company demonstrated that this Canadian enterprise is prepared to accept its responsibilities and play its part where it is a factor in international industrial situations.

Looking toward the immediate future, it is futile to attempt any definite forecasts. We know, however, that there have been bad industrial storms in the past and that they have eventually blown themselves out. We know also that your Company has been able to do measurably better than maintain steerage way during the past two years of this particular storm. We know that the great resources of rich ore, the extensive hydro-electric power development and the modern plants for smelting and refining nickel, "Monel Metal," copper and the precious metals remain unimpaired as the great potential wealth of your Company. I can further state with the utmost assurance that at no time in your Company's history has the morale been higher or co-operation among the various and widely separated units more in evidence than at the present time. With patience and courage we shall emerge from the prevailing depression and find better and far saner business than we ever enjoyed in the past.

I wish at this time to refer to a great loss your Company sustained during the past year by the deaths of Messrs. John L. Agnew and Frederick S. Jordan. Mr. Agnew was Vice President and a member of the Executive Committee of the Board of Directors, and had served your Company with distinction for over twenty-seven years. His years of leadership as an executive and his achievements in connection with the Frood mine development are widely known. Mr. Jordan was one of your Company's oldest employees in years of service, having been with The International Nickel Company and predecessor companies for forty years. As Sales Manager he played an important part in extending the markets for nickel.

In conclusion I can think of no better opportunity of expressing on behalf of the Board of Directors their sincere appreciation of the loyalty shown and the constructive work accomplished by executives and employees both here and abroad. From the record made by your organization during this period of acute depression we may look forward with confidence to prosperity in the nickel industry with the return of improved business conditions throughout the world.

PRESIDENT'S ADDRESS

TO

SHAREHOLDERS

We are meeting today to discuss our record in the third successive year of depression. I assume that while the past has been discouraging to all of us, we still have real confidence in the ability of the world to work itself out of its existing difficulties.

A comprehensive review of the nickel industry for 1932 was issued during December and since then has appeared quite generally in the press. The information regarding applications of nickel embraced in that review, together with the financial statements and data shown in the "Annual Report", has already furnished to you a resumé of the activities of your Company during the past year and set forth its condition at the close of that period.

Three years of progressive curtailment of consumption, coupled with falling prices, have caused world-wide stagnation in industry, and in consequence the production and sale of metals have been seriously affected. In common with others your business has suffered, though doubtless to a lesser extent than has been the case in many industrial enterprises.

Drastic retrenchment, coupled with what is generally conceded to be an effective sales policy, has enabled your Company to weather this protracted period without recourse either to borrowing money or to an entire suspension of plant operations. Thanks to the substantial earned surplus which was built up during better times, we have been able to maintain some degree of activity in the production departments and to continue dividends on the preference shares without unduly depleting our resources. In fact at the close of the year our net current assets exceeded the comparative amount at the close of 1931 by \$407,727.05. Our record of dividend payments on the preferred shares, with no omission during the past twenty-seven years, is cause for satisfaction not only to your Company but also to the individuals and institutions which have invested in this stock.

An examination of the balance sheet and of the profit and loss statement shows that the aggregate amount of cash, and government and other securities, as of December 31st, 1932, exceeded the comparative figure of December 31st, 1931 by \$2,681,080.34. While as shown in the report the net loss for the year was \$135,344.65 I would call attention to the fact that net operating income for the year, prior to reserving \$2,763,437.93 for depreciation and mine depletion but after all other reserves, was \$2,628,093.28, an amount exceeding preferred dividend payments of \$1,933,909.26 by \$694,184.02.

Your Company's present strong cash position may be attributed to liquidation of inventories and receivables, and furthermore to the fact that capital outlay during 1932 was only \$535,651.83 as compared with the large expenditures of former years.

In this connection it will be of interest to you to hear that the major program of improvements begun in 1926, and now completed, which included opening the Frood Mine for production, the construction of a new concentrator and smelter, our investment in the Orco electrolytic copper refinery, and the general rehabilitation of plants, both here and abroad, cost \$52,076,306.09. Of this amount \$37,185,678.27 was furnished by the sale of the Company's securities and the balance from net earnings. This program was completed for approximately One Million Dollars less than the amounts appropriated for the purpose. That the money was prudently spent has been fully demonstrated during the past year by the satisfactory operating costs obtained, notwithstanding the abnormally low rate of production.

Sales of nickel in all forms in 1932 were less by 38 per cent than in 1931 and less by 73 per cent than in the peak year 1929. These figures, which fairly parallel those of industry generally, clearly indicate the serious problems faced by your management in "cutting its cloth" to conform to the interest of shareholders on the one hand, and to the just treatment of employees on the other. Of necessity operations have been curtailed, with consequent loss of employment to many men. Constant and conscientious efforts have, however, been directed to the spreading of all available work, as far as possible, and to the care of the less fortunate men and their families.

Your employees have carried on their work with fortitude and courage through three years fraught with disappointments and in many instances actual distress. All credit for what has been accomplished by your Company under present day conditions must be attributed to all of your employees, both here in Canada and in other countries.

The world curtailment plan adopted by the copper industry in 1932 was not renewed for 1933 and in consequence this great industry, which at the time of our last meeting appeared to have put its house in order, is disorganized. The imposition of a United States import duty of 4¢ per pound, made effective on June 21st, 1932, has effectively barred all shipments of copper to what has heretofore been regarded as Canada's logical and economic market. To meet this situation your Company took immediate steps to market its output in the Empire and elsewhere and has been successful in doing so.

Owing to excessive stocks of refined metal and to the great potential capacity of several new low-cost producers, including your Company, the price of copper is abnormally low. Since the futility of artificial price fixing has been demonstrated, producers may discover that a higher regard for the law of supply and demand and the adoption of improved merchandizing methods are the more natural cures for the basic troubles of the current price situation. Even so, any real pros-

perity for the copper industry must await the return of improved business generally.

Conditions in the platinum metals industry closely parallel those of the copper industry in that stocks are heavy and consumption much reduced. Under such circumstances prices have fallen considerably below those of a year ago, and it is likely that, as in the case of copper, they may not rise again until the pace of industry is quickened. Fortunately the platinum metals are by-products of your Company's operations and their production cost is still far below prevailing sales prices.

Your Company's well established policy of sales promotion has been aggressively continued. These activities have been thoroughly described in the "Annual Report" and the "Review of the Nickel Industry for 1932". In this connection the acquisition of Monel-Weir, Limited and the establishment of the Japan Bureau are features which should be noted. Monel-Weir, Limited was organized in 1928, prior to the Inco-Mond merger, for the purpose of furthering the sales of "Monel Metal" and other products. Your Company held bonds and stock in the Monel-Weir enterprise. Both Monel-Weir, Limited and your subsidiary Company, Henry Wiggin & Company, Limited, had sales organizations, with numerous branches in Great Britain and Continental countries, as well as individual Development and Research departments.

Since the recent purchase of Monel-Weir, Limited, the terms of which are set forth in the "Annual Report", these duplications have been eliminated, with resulting economies in both our sales and operating divisions.

The Japan Bureau, staffed by Japanese, is organized and functions along the same lines as our bureaus in Europe. Your management believes that the Far East affords a potential outlet for a substantial tonnage of nickel bearing products.

There appears in the "Annual Report" a section showing the comparative numbers of shareholders at the close of the years 1932 and

1931 respectively. Owing to stock held in brokerage accounts, it is almost impossible to break down these figures so as to show accurately individual ownership. However, it would appear that your Company's shareholders at the present time are distributed as follows: Canada 44%, United States 37%, Great Britain 18%, Other Countries, 1%.

The distribution of actual shares is quite different, being as follows: Canada 3,970,301 shares, United States 7,488,205 shares, Great Britain 6,107,225 shares, Other Countries 378,011 shares.

Comparing these figures with those similarly obtained a year ago, we find that Canada has maintained her investment position and that Great Britain's has increased. It is cause for satisfaction and encouragement to your management that, despite the chaotic conditions of world industry and finance, investors are maintaining their interest in your Company's stock.

As to the immediate future, I can refer only to current conditions in the nickel industry and let you each draw your own inferences. In developing its status from that of a specialty to one of varied and widespread industrial applications, nickel has become a world commodity. Your Company therefore cannot progress counter-current to world trade, but must assuredly benefit from any general revival of industry. Against this background, then, it is interesting to learn that nickel sales have shown an improvement since last summer.

Whether the improvement in sales will be maintained through 1933, time alone will answer. Pending this answer you can properly have the satisfaction of knowing that your Company has great natural resources, efficient plants and undiminished energy in seeking to maintain and to broaden its markets. The policies which, during the past five years, have carried your Company through a great boom and, we hope, through the worst of a great depression, should lead to profitable business as world affairs again establish a better equilibrium.

TORONTO, March 27—ROBERT C. STANLEY, *President* of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

In my remarks to you last spring I stated that while your Company's business could not be expected to progress counter-current to world trade, nevertheless there had been a noticeable improvement since the spring of 1932. It is therefore with satisfaction that I can report a continuation of that improvement during the past year. I further recall stating that the Nickel Industry had suffered less than many other industries. It now appears to follow that your Company's business is recovering more rapidly than many other industries. This gratifying situation is, I believe, largely due

to the fact that there has been no let-up in your Company's research and development activities.

"The Review of the Nickel Industry" issued by your Company last December clearly sets forth the greatly diversified usage of nickel. The current output of your Company's nickel goes into different uses about as follows:

Alloy Steel used in Motor Cars, Trucks and Busses	20%
Nickel Silver and Nickel Copper Alloys for a multitude of uses	18%

(1932)

(1933)

Pure Rolled Nickel in the form of Rods, Strip, Wire, and Tubes, used largely in the Radio, in the Chemical Industries and for Coinage....	17%
Alloy Steel, inclusive of Stainless Steel, used in Railroad Equipment, Farm Implements, General Machinery and numerous miscellaneous applications	15%
Nickel for Plating and as undercoat in Chromium Plating.....	10%
Monel Metal used for many Engineering purposes and for Household Equipment.....	9%
Alloy Cast Iron—castings of all kinds.....	4%
Miscellaneous Uses including Magnetic Alloys, Nickel Brasses, Nickel Bronzes, Nickel Aluminum Alloys and White Gold.....	4%
Heat Resistant and Electrical Alloys.....	3%
Total.....	100%

Before referring in detail to the financial statements shown in the annual report it should be observed that exchange problems during the past year were of major importance. For example, in view of the wide fluctuations in currencies it was extremely difficult to carry on a stable price policy which your management regards as of fundamental importance to the further development of the use of nickel. With this situation in mind your management based prices on the pound sterling for its world business outside of Canada and the United States as a means of minimizing such currency fluctuations. Exchange adjustments, due to the conversion of sterling and other currencies into United States dollars, were favorable in the amount of \$1,739,617.06 and it was deemed proper to exclude this item from earnings and to carry the full amount as an exchange reserve.

An examination of the balance sheet and of the profit and loss statement shows that the aggregate of cash, government and other securities as of December 31st, 1933 exceeds the comparable figures of December 31st, 1932 by \$9,822,911.39. The net earnings for the year, after reserving \$3,551,653.32 for depreciation and mine depletion, and \$555,988.26 for all other reserves, were \$9,662,583.64, an amount in excess of preferred dividend requirements by \$7,728,684.89, or 53 cents per share on the common stock.

Cash as of December 31st, 1933 was \$14,085,610.64 after expending \$300,000.00 to retire the final outstanding purchase money notes issued to acquire the assets of the British America Nickel Corporation, Limited, and \$3,000,021.75 for an additional 26 per cent interest in the Ontario Refining Company, Limited, thus giving your Company 68 per cent stock ownership in this refinery, primarily constructed to refine your Company's copper. The acquisition of this additional stock merely carries out the policy forecast in the Annual Report of 1931.

During the past year your management called for redemption as of June 1st, 1934 two issues of debentures of The Mond Nickel Company, Limited and its subsidiary Henry Wiggin & Company, Limited respectively. The cash required for this purpose, amounting to £548,398, has been ear-marked and placed in short term

loans in London. When this financing is completed there will remain but one outstanding debenture issue of £1,089,908 to appear on your Company's balance sheet.

In concluding comment on the financial side I feel that I must call attention to the large and growing item of taxation. This preponderant overhead charge amounted to 27½ per cent of the net profits shown on the Company's profit and loss statement and the appalling fact is that this drain on earnings is growing rapidly.

Your directors, in accordance with the policy mentioned at prior annual meetings that dividends would be paid from time to time as the business of your Company warranted such disbursements, declared a dividend of 10 cents per share on the common stock payable March 31st, 1934. Moreover, your directors will from time to time give further consideration to this question of common dividends, and their action will continue to be guided by the progress of your Company.

Sales of nickel in all forms in 1933 were more by 116 per cent than in 1932 and less by 41 per cent than in 1929, the peak year of the industry. In meeting market requirements inventories were reduced to a point which called for increased production and such increases were made from time to time so that at the end of December the mines and plants were operating at an average of about 70 per cent of capacity.

Your Company's important position in the world's copper industry was further improved during the year and a market has been developed overseas for all of your copper. Notwithstanding that the copper industry is still suffering from disorganization and surplus stocks, prices realized during last year were considerably better than in 1932, the average price received showing a gain of 1.67 cents per pound. I have mentioned the acquisition of a controlling interest in the Ontario Refining Company, Limited and it is with considerable satisfaction that I can report that the copper produced at this refinery and sold under the trade name "ORC" is finding a ready market and has already established a reputation as a copper of high purity.

The position of platinum and its associated metals, which are by-products of the nickel ores, has also improved. Throughout the depression your Company's operations have maintained Canada as second only to Russia in the production of platinum and first in the production of palladium. Due to general business improvement, and to the special impetus given to platinum by the difficulties of getting gold for use in industry and the arts, prices have strengthened and stocks have been reduced. There is some indication that this better outlook for the platinum metals has encouraged resumption of production elsewhere; but your Company, as a low-cost producer, is in a position to dispose profitably of its precious metal output whatever the price situation.

The great benefit resulting from increased production is the creation of employment for our men, forced to be idle through no fault of their own. Salary and wage earners alike have been long suffering and loyal throughout an extended period of curtailment.

It is therefore especially pleasing to be able to report that 3,643 more men were employed on December 31st, 1933 than on the same date of the previous year. This means that millions of dollars more per annum are being paid to labor than was the case a year ago. This increase for Canada alone is in excess of \$4,000,000. Much credit for the satisfactory morale which exists within your organization is due to the cooperation shown at all times by salary and wage earners alike.

Interest was shown last year in the figures indicating stock ownership in your Company. For this meeting I have had prepared from available statistics a tabulation of comparable figures of shareholders and distribution of shares as of March 1st, 1933 and 1934.

1933	Shareholders	1934
44%	Canada	41%
37%	United States	38%
18%	Great Britain	19%
1%	Others	2%

TORONTO, March 26—ROBERT C. STANLEY, *President* of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

The custom of your management in presenting a detailed Annual Report of your Company's activities has been supplemented in recent years by quarterly letters to shareholders, and by an annual review of the Nickel Industry which is widely used by newspapers, financial weeklies and trade and technical magazines. As a result you are doubtless familiar with the progress of the industry during 1934 and with the part your Company has played in that progress.

Because of this background of information I will direct my remarks to facts which I believe merit your careful consideration.

Undoubtedly you have already compared the 1934 profit of \$18,487,478.80 with the \$22,235,996.87 shown in 1929, a year which the industrial world is prone to look upon as one of record achievement. That your Company in 1934 approached its record of 1929 is due in large measure to two basic factors; one being its success in developing new uses for nickel, and the other, the efficiencies realized in mines and plants as a result of the large expenditures made in recent years for mine development and plant improvements. Now that in order to meet the world demand for nickel nearly ten thousand tons of ore must be mined and treated every twenty-four hours, the wisdom of the recent expansion is quite apparent.

(1933)

Shares

3,970,301	Canada	3,874,191
7,488,205	United States	7,621,799
6,107,225	Great Britain	6,011,281
378,011	Others	401,739

It is quite apparent that there has been no radical change internationally either in the distribution of shareholders or of shares during the past year.

Your Company's business, which is international in character, indicates quite clearly improvement in world trade. The low point in your industry was in May, 1932, since which time there have been almost two years of improvement, until at present your nickel sales amount to about 75 per cent of the 1929 volume.

What then may be said in regard to prospects? In my opinion we can look forward with reasonable assurance to an increase in the demand for nickel. Your management will continue its well-established policy of technical development in the commercial field, and believes that 1934 will show substantially better results than did the past year.

Your Company's financial structure has in no way suffered through special attention paid to production problems. This fact is evidenced on the balance sheet before you. In the first instance, additional purchases of capital stock of Ontario Refining Company, Limited, have increased your ownership in this enterprise to ninety per cent. The latter Company built and is operating the largest copper refinery in the British Empire, and is engaged exclusively in refining your copper, an inevitable by-product of Frood and Creighton ores. Since the "ORC" brand of electrolytic copper is refined from your blister copper, and is marketed by your Company, the ultimate complete ownership of this refinery seems desirable. There is the further consideration that your blister copper contains platinum and other precious metal inclusions which can be recovered only by the process of electrolytic refining.

Secondly, may be noted the retirement of the 5 per cent debentures of The Mond Nickel Company, Limited and the 6¼ per cent debentures of Henry Wiggin & Company, Limited. The elimination of this mortgage indebtedness reduces fixed charges and brings your consolidated companies closer to an entirely unencumbered financial

(1934)

position. There still remains outstanding £1,089,908 of 5½ per cent mortgage debenture stock of The Mond Nickel Company, Limited which is redeemable at a premium on three months' notice. It is appropriate in this connection to recall that your parent Company has conducted its business since 1905 without recourse to bank loans, a record which has been maintained despite several critical periods in world trade.

Reference to the financial statements should include mention of the somewhat revised form in which the figures for the year have been reported to you. These modifications have been made to conform with the provisions of The Companies Act, 1934 of the Dominion of Canada and when read in connection with the explanations given in the Financial Section of the Report, the Consolidated Balance Sheet and the Statement of Consolidated Profit and Loss present an understandable picture of your Company's financial structure.

As mentioned in the Report, sales were substantially greater than in the preceding year. It is interesting to note that no less than twenty-five million dollars were distributed in Canada alone in 1934, for Canadian labor and Canadian commodities, to Canadian railroads and utilities, to Canadian shareholders, and for various Canadian services, while the gross sales of your Company's nickel products in the Canadian market amounted to less than one and one-quarter per cent. of the total. The inference to be drawn from these figures is that your Company's export trade is a substantial and growing factor in converting Canadian natural resources into wealth for Canadians. That this can be done, and is being done, depends on the fact that in conducting world business in nickel your Company has not been handicapped to any great extent by trade barriers or by other governmental restrictions. The future of the Canadian nickel industry depends in large measure on a continuation of this freedom from trade restrictions.

Your directors have adhered to the policy stated at previous meetings that "dividends would be paid from time to time as the business of your Company warranted such disbursements". The amount determined upon for payment next Saturday (March 30th), 15¢ per share on the common stock, was the result of full consideration in the light of unsettled business conditions, especially in the United States upon which market your Company is dependent for a substantial part of its nickel sales.

Because of your Company's rapid growth, and its prospects of further expansion, it is both necessary and prudent to hold substan-

tially larger cash reserves than heretofore. In this connection you should be advised of actual cash commitments and possible cash contingencies during the year 1935. As noted in the Report, estimated expenditures for improvements and betterments call for \$2,500,000. Moreover, it is possible that the remaining ten per cent of stock in Ontario Refining Company, Limited may be acquired and that the remaining £1,089,908 of 5½ per cent mortgage debenture stock of The Mond Nickel Company, Limited may be retired. It is gratifying to state that, should your Company's business continue in present volume, all of these items can be financed from cash in hand without affecting future dividend declarations. May I repeat my statement of last year that "your directors will from time to time give further consideration to this question of common dividends and their action will continue to be guided by the progress of your Company".

The world's copper market is becoming of increasing importance to your Company and to Canada. Great potential production in many parts of the world, and excessive stocks principally in the United States, have held and are holding the price of copper metal at a very low level. Repeated attempts to rationalize this industry have failed, due to a variety of reasons such as divergent interests, by-product copper, prohibitive tariffs, and other causes. It would seem that a curtailment agreement amongst all producers would be a practical procedure that should prove advantageous to all concerned. The record of world conferences, however, indicates how well-nigh impossible it is to find a common denominator for the copper industry. I am inclined to think that this industry as a whole, and all of its constituent companies as well, might intensify Sales Development and Research activities, and inaugurate aggressive merchandising, as possibly a slower but surer cure for the ills of over production.

This Annual Report of 1934 is the first in which mention is made of nickel ore deposits outside of the Sudbury Basin in Ontario. I refer, of course, to the exploratory work begun in Finland and to the conditional agreement entered into with the Government of that nation. Nickel is one of the most widely disseminated elements in the earth's crust, and it is obvious that your Company must be constantly alert in watching for concentrations of sufficient importance to justify commercial development. To this end your management has inspected various deposits at various times during past years. The deposit in Finland is one which would seem to justify further exploration. Should it prove to be commercially important, its proper development as part of the existing world nickel industry would seem to be a logical step.

Following the custom established some time ago, I have had

prepared a tabulation of comparable figures for shareholders and distribution of shares as of March 1st, 1934 and 1935, as follows:

1934			1935		
Number	%	Shareholders	%	Number	
39,550	40.9	Canada	39.7	36,915	
37,094	38.4	United States.....	39.4	36,707	
18,197	18.8	Great Britain.....	19.3	17,930	
1,881	1.9	Others	1.6	1,510	
Shares					
3,874,191	21.6	Canada	21.8	3,908,241	
7,621,799	42.6	United States.....	40.8	7,313,840	
6,011,281	33.6	Great Britain.....	34.9	6,242,745	
401,739	2.2	Others	2.5	442,740	

Owing to stock held in brokerage accounts it is almost impossible to show accurately individual ownership. However, it would appear that your Company's shareholders and shares are distributed as stated. It may be noted that there has been no great change during the past twelve months in the distribution either of shareholders or of shares.

In closing may I refer with sincere regret to the death of Mr. William Ellis Corey who served as a director and as a member of the Executive Committee of your Company for many years. As one of the outstanding steelmakers of his day Mr. Corey brought to your

Board wide experience and sound judgment. In carrying on that tradition your Company has been fortunate in securing Mr. Ross Huntington McMaster of Montreal, outstanding Canadian steelmaker, to fill the vacancy.

Because of changes in the laws in the United States governing directorships, Mr. William J. Hutchinson, for years a valued member of your Board and of its Executive Committee, has resigned. This vacancy on the Board has been filled by the election of Dr. Paul D. Merica, Assistant to the President.

In the 1934 Report, as in previous Annual Reports, I have emphasized the technical foundation which I believe gives assurance that the industrial structure we are building will rest secure. The stress I lay on the technical staff must in no way detract from the splendid service rendered by your organization as a whole, which, including sales agencies, now encircles the globe. Despite inevitable changes in personnel your Company has been fortunate in holding together during a difficult period an extremely high percentage of its employees. Thus the current upturn in business finds your mines, plants and offices manned by men who are thoroughly experienced in all of the details of the nickel business. Therefore, in closing, it may fairly be stated that the year 1934 was one of satisfactory and definite progress, and that the year 1935 begins auspiciously for your Company.

TORONTO, March 31—ROBERT C. STANLEY, President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

It is a pleasing duty for me to report to you at this annual meeting that 1935 was an outstanding year in your Company's history. I think you will all agree that the Annual Report which has been in your hands since March 17th fairly indicates a desire on the part of your directors to acquaint you with essential facts concerning the Company's business affairs. The latter are complex and are international in scope. Hence my comments on what transpired in 1935 are made from this point of view.

More nickel, copper, and platinum metals were produced and sold than ever before and net profits were substantially greater than in any past year. Comparable figures for all metals sold during 1934 and 1935 appear in

the Report which we are considering.

While nickel is and will doubtless remain our most important product it is of interest to note that the world copper industry is now recovering from a long period of trade depression. Consumption is increasing in the countries to which our copper is exported, particularly in Great Britain, where I believe the activities of the Copper Development Association have demonstrated the great value of an organization of this character in expanding the market for this essential metal. The restriction of mine output, resulting from a producers' agreement, coincided with an almost universal expansion of consumption and in consequence excess stocks have been largely liquidated and

prices have improved. Further price advance depends upon the maintenance of a sound production policy throughout the world and upon continued industrial improvement. Your Company, as the leading producer of copper in Canada, will benefit as prosperity returns to this great metal industry.

As shareholders of The International Nickel Company you are partners in a world enterprise. Your directors on the one hand, are endeavoring to keep you informed of all phases of the Company's activities. You on the other hand, as shareholders, in addition to a knowledge of financial facts with regard to the Company, might advantageously become familiar with its products and its marketing activities generally. It was with this thought in mind that a review of "THE NICKEL INDUSTRY IN 1935" was mailed last December to all shareholders of record. I believe that as our nearly 100,000 widely scattered shareholders become conversant with the subject matter of this review and the contents of the Annual Report, additional impetus will be given to the Company's promotional efforts which have been the predominating factor in the progress made by the nickel industry in recent years.

Referring to the Financial Section of the Annual Report you will see that notwithstanding certain extraordinary expenditures your Company has gained in financial strength since our last meeting. Furthermore, net profits of \$26,086,527.47 exceeded those of the previous high year 1929 by \$3,850,530.60.

Total capital expenditures of 1935 amounted to \$3,206,642.40 and like expenditures in 1936 are estimated at \$10,000,000, of which \$9,000,000 will be expended in this country. The principal items making up this substantial sum are shown in the Capital Expenditure section of the Report.

I referred at a previous meeting to the desirability of relieving the Company of all mortgage indebtedness and it is now gratifying to report that during the past year the outstanding $5\frac{1}{2}\%$ debentures of The Mond Nickel Company, Limited, amounting to £1,089,908, were retired and in consequence your Company is now entirely free from funded debt. The purchase of the remaining outstanding stock of the Ontario Refining Company, Limited for \$1,175,000 gives your Company complete ownership of the largest copper refining unit in the British Empire.

Referring to your management's policy of dividend

disbursements on the common stock I may point out that the rate was increased twice during the past year. This record should assure you that in determining dividend policy your directors are guided by the Company's financial position and its progress. The amount paid on the common stock in 1935 was \$10,933,626.75, comparable with \$7,289,084.50 distributed during the preceding year. Dividends paid during the year on the 7% cumulative preferred stock amounted to \$1,933,898.75. The disbursement made last month was the 121st paid on these preferred shares, which now have an unbroken dividend record of more than thirty years. Suggestions are received from time to time that this issue should be retired in whole or in part for cash, or that the shares be converted into some other form of security carrying a lower dividend or interest rate. In this connection I may say that careful consideration having been given to these suggestions it has been deemed that it is not at present in the interest of the Company or its common shareholders to retire or convert the preferred shares.

The cash item of \$30,473,311.32 as at December 31st, 1935 compares with \$18,789,023.24 shown at December 31st, 1934. It may be asked "why does the Company require such large cash balances?" You will recall that I stated at last year's meeting that because of the Company's rapid growth and its prospects of further expansion it was considered prudent to hold substantially larger cash reserves than formerly.

In this regard I should like to compare the cash item of \$30,473,311.32 with your Company's expenditures during 1935 for all purposes, approximately \$70,000,000, which was disbursed for capital account, pay rolls, supplies, taxes, freight charges, dividends and other purposes.

Your business as now constituted has been built and is maintained upon the basis of an assured supply of nickel which necessitates at all times the maintenance of reserve productive capacity and adequate inventories of readily accessible stocks in the principal metal consuming countries. In pursuance of this policy your management decided last year to increase smelter capacity at Copper Cliff by approximately 30% and to enlarge the Clydach nickel refinery in Wales by approximately 40%. This construction work is under way and should be completed within the current year. The cash outlay entailed for these two items is estimated at \$6,200,000 for Copper Cliff

and \$700,000 for Clydach.

A new chemical and research laboratory will be erected at Copper Cliff this year to cost about \$150,000. This laboratory will deal both with projects leading to improvements in processes for refining nickel, copper and precious metals, and with technical research directed toward developing new uses for these materials. A modern research laboratory was built in Bayonne, New Jersey, four years ago and the new research laboratory in Birmingham, England, to cost \$185,000, announced last year, is nearing completion. The Copper Cliff laboratory will add another link to the chain of research and development facilities which is such a prominent factor in your Company's advance.

During the past year in an address delivered at Birmingham, England, and in a letter accompanying the financial statement for the first six months of 1935, I endeavored to make it clear that the business of mining, refining, and sell-

ing nickel should not be classed as a munitions industry. Unquestionably a small percentage of your nickel output, in common with other metals, enters into the manufacture of armament, and a war would temporarily increase demand for supplies of this character. Such a demand would be temporary only and might be followed by a disastrous interruption of your Company's well-established efforts in the great fields of peace-time industry. We need only recall the experiences of this Company in the aftermath of the world war to realize that war demand is neither desirable nor profitable for the nickel industry.

I think you will be interested in an analysis of the uses for nickel, so tabulated as to be comparable with like figures given two years ago. Due to the many manufacturing operations through which nickel passes to reach its final utilization, too great a degree of exactness cannot be claimed for the percentages shown. However, I am satisfied that the tables give a fairly accurate picture of world distribution.

	1933	1935
World Sales of INCO Nickel.....	74,356,969 lbs.	129,850,207 lbs.
Alloy Steel used in Motor Cars, Trucks and Busses.	20%	20%
Nickel Silver and Nickel Copper Alloys for a multitude of uses.....	18%	12%
Pure Rolled Nickel in the form of Rods, Strip, Wire and Tubes, used largely in the Radio, in the Chemical Industries and for Coinage.....	17%	8%
Alloy Steel, inclusive of Stainless Steel, used in Railroad Equipment, Farm Implements, General Machinery and numerous miscellaneous applications	15%	27%
Nickel for Plating and as undercoat in Chromium Plating	10%	10%
"MONEL METAL" used for many Engineering purposes and for Household Equipment.....	9%	8%
Alloy Cast Iron—castings of all kinds.....	4%	4%
Miscellaneous Uses including Magnetic Alloys, Nickel Brasses, Nickel Bronzes, Nickel Aluminum Alloys and White Gold.....	4%	6%
Heat Resistant and Electrical Alloys.....	3%	5%
Total.....	100%	100%

It may be noted that with few exceptions, notwithstanding the large increase in consumption in 1935, the percentages in this general classification remain about the same as they were in 1933. The significant fact is that there has been a gratifying advance in the use of nickel in all directions, particularly in nickel steel for general purposes and in Stainless Steel for diversified applica-

tions in many industries. While not reflected in the percentages given there has been a steady increase in the sale of "MONEL METAL" produced in our Wiggins works in Birmingham, England, and attention should also be called to the growing interest in nickel for coinage, now shown by many countries throughout the world.

Nearly 99% of Canada's nickel output is exported and

of these exports a large proportion is sold to consumers in the United States. It has been for years the policy of your Company to sell to consumers for their own use only and not for resale. Therefore, the Company has not sold any nickel in the United States for subsequent export to other countries. I am emphasizing this point because there has been some misunderstanding as to the ultimate destination of nickel exports from this country to the United States.

Sanctions prohibiting the sale of nickel to Italy have been imposed by Great Britain and Canada, and your Company accordingly took prompt steps to avoid any breach on its part of such sanctions.

Interest has always been shown in the distribution of the Company's shares and in the nationality of its stock holding groups. I must again call attention to the fact that it is impossible to determine accurately the ownership of stock registered in brokers' names. However, the following figures are comparable with those given in past years:

1935				1936	
Number	%	Shareholders	%	Number	
36,915	39.7	Canada	35.2	30,772	
36,707	39.4	United States....	43.0	37,614	
17,930	19.3	Great Britain....	20.0	17,553	
1,510	1.6	Others	1.8	1,595	

TORONTO, March 30—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

Since 1932 metal industries the world over have been gradually recovering from a very serious trade depression. The improvement generally has been progressive, not only in volume of sales but in market prices as well, with the result that in many instances deficits have given place to substantial profits.

The nickel industry, in which your Company occupies a predominant position, recovered somewhat in advance of other basic industries. The reasons for this early and gratifying progress I believe to be twofold. In the first place, research and sales activities were continued and even augmented during the years of depression, with the result that nickel has been introduced into diversified fields

Shares

3,908,241	21.8	Canada	19.4	3,465,449
7,313,840	40.8	United States....	42.9	7,658,739
6,242,745	34.9	Great Britain....	34.2	6,104,246
442,740	2.5	Others	3.5	613,563

It is quite apparent from these statistics, and from the data presented in the Annual Report, that while your Company is predominantly Canadian from the standpoint of its natural resources it is truly international in respect to its markets and to its share holdings.

From the Report submitted to you at this meeting it is evident that your Company has made substantial progress. This progress has been due to active sales development and research, supported by well-equipped mines and modern plant facilities directed by an experienced organization. The nickel industry, from the standpoint of diversified usage of the metal, is comparatively new and its field for further expansion is still extensive. General business in the countries which provide your Company's best outlets for nickel is improving and the copper industry as well is recovering from a long period of depression. Thus it would appear that today the prospects for a continuation of your Company's growth are as promising as at any previous time in its history.

and has taken its place as an essential industrial metal. Secondly, the installation of modern facilities throughout all of the Company's properties has widened the range and improved the quality of products.

However, it should be noted that metallurgy and research are simply the means for revealing and employing the latent worth possessed by nickel, which in many instances does what no other metal can do. It is on this premise that further progress of the world's nickel industry, largely depends.

The Annual Report for the year 1936, which you received several days ago, was prepared with a desire to present to shareholders all essential facts regarding the

Company's financial, commercial and operating affairs.

From the financial viewpoint your Company is in the strongest position in its history, since it has no interest bearing indebtedness and the balance sheet as of December 31st, 1936 shows cash and Government bonds in the amount of \$47,113,426.32 as compared with \$32,720,024.06 on December 31st, 1935. Your management believes that with the manifold requirements of a worldwide industrial business, substantial cash resources are both prudent and necessary at all times. The "Financial" section in the Report contains supplementary information regarding various items appearing in the financial statements as certified by your Auditors. Net profit of \$36,865,526.11 shown on the profit and loss statement compares with \$26,086,527.47 reported for the previous year. This satisfactory increase was due in large measure to a greater volume of sales and to an improvement in prices of copper and platinum.

I have stated at former meetings that your Board of Directors is guided by the Company's financial position and its current earning power in determining dividend disbursements. This policy was adhered to during the past year and dividends were progressively increased. The amount paid as common dividends was \$18,951,619.70, comparable with \$10,933,626.75 in 1935. As you know, the rate was again increased this quarter and \$7,289,084.50, or 50 cents per share, will be disbursed tomorrow. Dividends paid on the preferred stock amounted to \$1,933,898.75 and it should be noted that the payment made on this issue last month was the 125th, thus continuing an unbroken dividend record for 31 years.

Capital expenditures in 1936 aggregated \$11,202,265.71, comparable with \$3,206,642.40 in 1935. Of the foregoing total \$9,965,885.62 was used in Canada for necessary additions to mining, smelting and refining plants. I am pleased to say that I do not think capital expenditures this year will total more than one half the amount required in 1936.

Exploratory work which has been conducted during the past two years in Finland, on a concession held under option from the Government of Finland, has shown satisfactory results. Work on this nickel-copper property will be continued and it is estimated that \$500,000 will be expended on the project during the current year.

Notwithstanding its international scope your Company is Canadian and it may be of interest to you to hear

what its operations meant to Canada last year. Briefly, \$15,000,000 was disbursed for labor, \$15,700,000 for materials and equipment, \$5,500,000 for freight and purchased power, and \$4,700,000 for other expenses inclusive of taxes. In addition to the foregoing items, \$4,600,000 was paid to Canadian shareholders in the form of dividends. Thus \$45,500,000 was expended in Canada by your Company in a single year.

On the commercial side 1936 was outstanding in that your Company sold more nickel, copper and platinum metals than in any previous year. Sales of nickel totalled 168,927,980 pounds, comparable with 129,850,207 pounds in 1935, the previous record year of consumption. It is of interest to note that 54 per cent of the Company's sales of nickel were in the United States and Canada and the balance distributed over the rest of the world. Consumption in the United States and Canada increased 35 per cent over the preceding year and consumption elsewhere increased 25 per cent.

These figures are significant in that they refute the suggestion, sometimes made, that the prosperity and development of your Company are based upon military expenditures. The greatest increase of consumption, as well as the largest market, has been in two countries which have abstained from any large re-armament program. In this connection I wish to call your particular attention to the review of the nickel industry in 1936 which was mailed to all of the Company's shareholders last December. This pamphlet was prepared carefully and contains the most recent and authentic information in respect to the worldwide use of nickel. It is difficult to comprehend how anyone having read this review can continue to believe that nickel is essentially a war material and I trust the Company's friends and shareholders will endeavor further to correct this erroneous impression.

The price of nickel in Canada and the United States remained unchanged, at a figure which has held since 1926. After the devaluation of the French franc and subsequent changes in currencies over-seas the scale of nickel prices in that market was adjusted downward. It is believed that this revision will stimulate consumption more particularly among the great number of consumers of small quantities of nickel.

Copper and the precious metals, while by-products from a metallurgical viewpoint, are the source of nearly

one half of the Company's net earnings at the present time. Sales of the now well known "ORC" brand of refined copper were 265,954,589 pounds, comparable with 233,009,392 pounds in 1935. The price of copper increased from less than 9 cents per pound at the beginning of the year to almost 12 cents at the year-end and is currently selling at a price well above the average of 14½ cents per pound over the past thirty years. It is quite evident that the copper industry has entered a prosperous period which should continue for some time if the potential demand which appears to exist is to be met.

The Copper Development Association in London continues its excellent work on behalf of the industry and is becoming increasingly recognized as an authority on matters relating to copper. I trust the trend toward higher prices will not handicap the promotional work of the Association or tend to retard the development of new fields for the consumption of copper. The latter point is one that should have the serious consideration of all producers.

Income from sales of the platinum metals is also becoming of more and more importance as markets for these metals are found and developed. There is included in the Report a section which deals with the several metals of the platinum group which are produced by your Company in Canada and refined in England.

Since the essential details of various plant operations are given in the Report I will discuss briefly only certain points of interest. You may recall that at last year's meeting it was reported that smelter capacity at Copper Cliff was to be increased and that the nickel refinery at Clydach, Wales, was to be enlarged. Shortly after that meeting it was deemed necessary to provide additional capacity at the Port Colborne electrolytic nickel refinery. It is gratifying to advise you that all of this work has been completed and a large part of the new facilities is now in use. Expenditures for these major improvements appear in the Annual Report.

The many activities from mine to market that are reported to you cannot be conducted without loyal and efficient employees and constant supervision. It is my pleasant duty today to express on behalf of your Board of Directors their appreciation of all that is being accomplished by a far-flung organization to further the progress of this Canadian enterprise. Your management is not unmindful of the wage earners. From time to time working hours have been shortened and wages have been increased.

Recently vacations with pay have been extended to wage earners and this policy will be continued. A co-operative group insurance plan, enabling employees to participate in life insurance at group rates, has been in effect since 1928. It is the belief of your management that recreation and interest in community affairs are essential to the welfare of employees. With this in view facilities for athletic activities have been provided, recreational halls and club houses have been built and the mining communities made more attractive as residential centres.

Further, a Plan designed to provide security to employees, affording old age and disability pensions and benefit payments in the case of death, has been in operation since 1928. The Plan has been financed entirely by your Company without contribution by employees. As against liabilities under the Plan, a reserve, which at December 31, 1936 amounted to \$6,772,957.26, has been set up out of annual appropriations and appears as a liability on the Company's balance sheet. Since the benefit payments under the Plan relate back and take into account periods of service prior to the Plan having been put into effect, there was an initial "accrued liability" which was scheduled for amortization over a period of years. This "accrued liability" has not yet been fully amortized, the amount remaining for amortization approximating \$4,300,000.

Your Directors are now giving consideration to the irrevocable setting aside of all or part of the funds required to meet the existing "liability" under the Plan so that the Company will have no further responsibility other than the intention to continue the annual appropriations necessary to finance the continued operation of the Plan.

If the full "liability" under the Plan at December 31, 1936, as actuarially estimated, were discharged by irrevocably setting aside the requisite funds, this would affect your Company's balance sheet as follows:

From the asset side of the balance sheet, there would be subtracted from Current Assets and Investments the sum of approximately \$11,100,000. Correspondingly, on the liability side of the balance sheet, the liability now shown of \$6,772,957.26 on account of the Retirement System Reserve would be cancelled and Surplus would be reduced by about \$4,300,000.

A number of problems are involved which have not yet been completely solved and which require further study. Your Directors are however seeking a solution of these

problems with a view to giving a permanent, fixed and independent status to the Plan, believing that this would discharge an important social responsibility of your Company to its employees and, in the long run, operate to the advantage of employees and shareholders alike.

At previous meetings and in Annual Reports I have emphasised the importance of research as an adjunct to sales development. From a review of the activities of the various branches of the Development and Research Division it is evident that not only do materials containing nickel continue to be used in established applications but they are being utilized for widely diversified purposes where materials of high quality are desirable.

The new research laboratory in Birmingham, England was completed and opened on October 21st, last year. It is one of the largest laboratories in Europe erected by a single company and devoted solely to metallurgical research. The work of this laboratory will enable a further expansion throughout Europe of the Company's technical services furnished the users of materials containing nickel. The Canadian research laboratory now being erected at Copper Cliff will be completed shortly. Plans for this building were extended to include the general chemical laboratory and a geological laboratory in addition to the facilities originally contemplated.

I have stated on previous occasions that your Company is an international enterprise and that the scope of its business is broadening from year to year. This is exemplified by recent sales of substantial quantities of nickel to South American countries for the manufacture of pure nickel coins. Moreover, during 1936 your Company's commercial and technical representatives visited South America in order to appraise that vast territory as a market for nickel products. It is believed that a potential demand exists and distributors have been appointed recently in the Argentine and Chile.

The Nickel Information Bureau established in Tokyo in 1932 has demonstrated that a field for the consumption of nickel exists in the Far East. Your Company's success in Japan has led to similar efforts in China and India. It would appear but reasonable that the great populations of these Asiatic countries may in time become more important consumers of nickel.

It should not be inferred from what I have said that the Company's expansion programs and increased commercial efforts have entailed extravagant spending. As the Company emerged from the rigid curtailment of depression years, and funds became available, the necessity for continuing sound economy was not forgotten. Your management believes that liberal expenditures for production facilities to provide adequately for the future, and money invested in research laboratories and sales promotional activities, are compatible with sound economy.

I have from time to time referred to your Company's business as being truly international in respect to its markets for nickel. To a somewhat lesser extent this is also true as to the distribution of the Company's shares and as to the nationality of its stockholding groups, as shown by the following tabulation which is comparable with those given for the past three years.

1936		Shareholders	1937	
Number	%		%	Number
30,772	35.2	Canada	31.4	26,352
37,614	43.0	United States...	46.5	39,029
17,553	20.0	Great Britain...	19.5	16,386
1,595	1.8	Others	2.6	2,193
Shares				
3,465,449	19.4	Canada	18.9	3,351,132
7,658,739	42.9	United States...	44.4	7,927,699
6,104,246	34.2	Great Britain...	33.2	5,926,549
613,563	3.5	Others	3.5	631,392

You will have noted in the Report a reference to the great loss your Company suffered through the death of Mr. Charles Hayden, who had been a Director for twenty years and Chairman of the Board of Directors for the past fifteen years. I am happy to report that Mr. Donald MacAskill, Vice-President of the Company, who is well known in Canadian mining circles, was elected by the Board as a Director to fill the vacancy caused by Mr. Hayden's death.

In closing it has been customary to express an opinion as to the Company's near-time prospects. I am inclined to think that, with the information contained in the year-end review and the Annual Report, you are in a position to draw your own conclusions. Your Company's further progress depends upon world trade which is currently improving and hence, barring any serious political disturbances, it would seem that the outlook today is as favorable as at any time in recent years.

TORONTO, March 29—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

An examination of the Annual Report, which was mailed to all shareholders on March 14th, indicates that 1937 was in all respects the most productive year in your Company's history.

Sales of nickel have increased progressively since 1932, and during the past year reached a total of 207,700,000 pounds, representing 86½ per cent of the world's consumption.

The nickel industry, in common with all other basic industries, has been subject to alternate periods of prosperity and depression. These disastrous cycles in world trade apparently cannot yet be averted, having so far baffled all attempts of correction by the financier, the economist, and the politician. Time alone will tell whether the acute trade recession which developed in the United States during the autumn of 1937, and which still exists, is the forerunner of another major trade upset in world industry.

During the last three months of 1937 sales of nickel in the United States, the Company's largest single market for nickel, decreased to such an extent that average monthly consumption was less by 44 per cent than that for the preceding nine months. Fortunately, your Company's sales of nickel in other parts of the world were well maintained. There was also a sharp drop in the prices of copper and platinum, the average price realized for the latter metal during the last quarter being over \$10.00 per ounce less than for the preceding nine months.

Your Company holds a unique position in the copper industry in that its output, amounting to approximately 300,000,000 pounds in 1937, depends wholly upon the tonnage of nickel produced. Copper and nickel occur as constituents of the same ores and our metallurgy is such that copper must of necessity be carried through the entire process and produced as refined metal. Thus it is impracticable to participate in any general copper production curtailment during periods of decreased demand. General curtailment in the copper industry, however, is of vital importance in periods of general trade recession in order to avoid accumulation of excessive stocks and violent fluctuations in market price. We believe that it is wise to play our part in assisting to maintain stability in the copper

industry and in times of distress your Company's policy will be to withhold as stock, and refrain from selling, a portion of its refined copper output.

In this connection it should be realized that with expanding production of nickel, and, in consequence, of copper, the price of copper figures largely in the net earnings of your Company. Hence it is obvious that with an annual production of about 300,000,000 pounds of copper a difference of one cent per pound in market price is reflected in net earnings to the extent of \$3,000,000, less of course any taxes which would have been payable had such additional earnings been made. You are doubtless familiar with the fact that the major portion of our copper is sold overseas, as an import duty of 4 cents per pound effectually bars sales of Canadian copper in the United States.

I believe the annual report which you have received contains information adequate to give each shareholder an understanding of the diversified business of the Company.

I have emphasized from time to time the international scope of our activities. Conducting operations as we do, subject to the varying labor and plant conditions, taxes, and currencies of three countries, your management must strive constantly to follow policies which it believes to be in the joint interest of the shareholding groups in these countries. The practice of obtaining "an average return over a period of time", rather than taking speculative positions, has been followed consistently for a number of years and the results have been highly satisfactory, both as applied to sales of metals and to conversion of currencies.

Referring to the financial statements, it should be noted that notwithstanding heavy disbursements, which I shall discuss, cash balances as at December 31, 1937 stood at \$48,871,395.90, comparable with \$44,871,895.34 as at December 31, 1936. I cannot stress too strongly the advisability of maintaining substantial cash reserves. The wisdom of this policy has been proved by the experience of this Company in the years 1921-1922, and again during the recent years of 1932-1933.

Canadian payrolls and salaries for 1937 amounted to \$19,555,221 and the total disbursements in Canada, inclu-

sive of purchase of Canadian government securities for the Retirement System, aggregated \$64,958,636.

Capital expenditures during 1937 amounted to \$7,924,204.19, of which \$4,829,765.62 was spent in Canada to increase mining, smelting, and refining facilities. These extensions, necessary to meet an increasing world demand for nickel, have been completed. All plants are now running at or near rated capacity.

Projected capital expenditures during 1938 call for about \$14,000,000. The major items of this program are: a new shaft and surface plant at the Levack mine; installation of equipment for surface mining at the Froid mine; additions to the Copper Cliff concentrator for treating low grade ore; an additional reverberatory furnace at the Copper Cliff smelter; development of the Company's concession in Finland; and numerous minor installations in various plants to effect economies and minimize metal losses.

Work on the property in Finland was continued throughout 1937 and \$717,753.68 was expended. Briefly, the facts in respect to this property are that a substantial tonnage of ore has been proven by diamond drilling and prompt steps are being taken to develop the property for initial production. To date \$1,025,994.13 has been expended and it is estimated that an additional \$6,000,000 will be required to complete the program by 1940, of which \$2,500,000 has already been authorized. The plan of operation contemplated is the production of bessemer matte in Finland.

Lest it be misunderstood, I wish to emphasize the fact that the expenditures planned, with the exception of Finland, are not undertaken primarily to increase capacity, but to effect economies and thereby lower production costs. It is only through improvements in operating methods and equipment that the rising costs of taxes, supplies, and transportation can be offset.

This occasion affords me an opportunity to report to you that employer and employee relations throughout your various organizations have never been more harmonious and co-operative than at the present time. There are now over 17,000 men on the pay rolls, the greatest number in the Company's history. Your Company has demonstrated that its policy has been to establish reasonable working hours, good working conditions, fair wages, and to provide adequate social and recreational centres and hospitalization in the communities in which it conducts operations. This,

however, merely reflects the continuation of a labor relations policy that has been in effect for many years and has been highly beneficial to wage earners and shareholders alike.

I call to your attention a new item appearing on the consolidated balance sheet entitled "Securities held against Retirement System Reserve", which represents an investment of \$12,736,250.64 in short term bonds of the governments of Canada, Great Britain and the United States, held under control of your Board of Directors. The accrued liability as at December 31, 1936, amounting to \$4,510,326, was transferred from earned surplus to retirement system reserve during 1937, with the result that the reserve now reflects the complete or full liability up to the present time. This subject was brought to your attention at the last annual meeting and I am sure it must be very gratifying to our shareholders to know that this action has been taken to provide for employees who may become incapacitated or who are growing old in the service of the Company.

At former meetings I have stated that it is the policy of your directors to make dividend disbursements compatible with the Company's current earning power, business prospects, and after provision of adequate cash reserves. Your Company paid during 1937 four dividends of 50 cents each and an extra dividend of 25 cents on the common stock, amounting in the aggregate to \$32,800,880.25. Preferred dividends amounting to \$1,933,898.75 were disbursed, thus continuing payments on this issue without interruption for the past thirty-two years.

As shareholders you received, early in January, copies of "The Nickel Industry in 1937", a summary of developments and of diversified usage of nickel in the various major fields of world industry, transportation and communication. A careful reading of this review indicates quite clearly that the amount of nickel used for munitions of war is of minor importance to your Company as contrasted with the rapidly increasing quantity used in peacetime industries.

This review is prepared each year primarily to supply information for editors of newspapers, and trade and technical magazines. In certain instances this year, editorial comment has called attention to the fact that the review contained no reference to the use of nickel as a war material, and in a few such instances comment implied that the Company's management was trying to hide large

war uses behind allegedly trivial applications of nickel. For this reason I welcome this opportunity to answer the oft asked questions "Is nickel essentially a war material?" and "Would an embargo on exports of Canadian nickel prove effective in preventing war?"

In doing so let me make it very clear that I am not exercised over the loss by your Company of its proportion of the comparatively small tonnage of nickel which now enters into armaments. We would indeed welcome a situation which would be such that no part of our product would be utilized for war purposes. This, however, is a result almost unattainable in any industry and the attempt to achieve this result in the nickel industry would, as I shall point out, be futile and merely injure our all important industrial activities.

Let me further make it clear that I am not in disagreement with those who strive for the abolishment of war, nor do I question the honesty or sincerity of those who believe that this great objective can be promoted by restricting exports of Canadian nickel. However, I would observe that it is doubtful if the cause of peace is served by one country, in time of peace, using its fortuitous control of natural resources as an instrument for attempting to control or influence the economic or political life of other nations. This is but a species of economic pressure which intensifies the forces which lead to political warfare. Such efforts enhance the desire of other nations to attain economic self-sufficiency and so avoid that economic interdependence which, if wisely promoted, is the best assurance against war.

Whatever one's view may be as to this general philosophy, certainly the conception that nickel is primarily a war product, and therefore properly to be selected as a first field for experimentation, rests upon a conception of the facts as perhaps they were twenty years ago but which are not facts as of today. The hands of the industrial clock have turned rapidly since the close of the Great War. Prior to and during the war, it is true that the greater part of the world's nickel production was used in armament. Today the converse is true and all but a small part of the world's nickel is absorbed by industry for a multitude of peace-time uses.

Such armament use of nickel as survives is in connection with other metals such as steel and copper. Nickel is used because it serves as a useful alloy with these other metals. It improves the quality of steel and is a valuable

constituent in many non-ferrous alloys. We recognized that these qualities could and should primarily be availed of for industrial purposes. We did not desire to have the Company's future rest upon the narrow base of a war material.

In consequence, we have expended over the past twenty years approximately \$18,750,000 in research, development and publicity to create peace-time uses for nickel. The many new and diversified applications of nickel, reported to you in the annual reports and annual reviews which you have received in the past, furnish convincing evidence that your Company's exploitation of nickel for industrial purposes has been highly productive. It is, moreover, a fact that during this same period no attempt has been made by the Company to promote the use of nickel for armaments. The consequence has been a planned and successful revolution in the character of our business.

Nickel is of minor importance in warfare as contrasted with steel, copper, zinc and lead. Not only does but a small fraction of nickel go into armament, but the percentage that does go into armament represents a negligible percentage of the total of all metals used for armament purposes. For example, no nickel whatever is used in rifle or machine gun barrels or in bayonet steel. Nickel in bullet jackets has been replaced largely by "gilding metal", a less expensive alloy containing no nickel whatsoever. Nickel is used in large gun forgings, trucks, aeroplanes, and in armor for battleships. The alloy steels used for the purposes enumerated contain only from 1% to 5% of nickel and the amount of nickel so used is less than 10% of the world output. Thus nickel is not essentially a war metal, nor is it essential to war, whether gauged by the percentage of nickel which goes into armament or whether gauged by the percentage of armament metal which is represented by nickel.

Nickel is sold in bulk to steelmakers and alloy manufacturers throughout the world, who, in turn, sell their nickel-bearing products to numerous fabricators for final distribution to numerous users. Thus the nickel used in armament exclusively cannot be segregated successfully.

Even if it were possible to prevent any part of Canada's nickel production from ultimately finding its way into armament, this would not hinder armament production. Canada produced in 1937 about 90% of the world's nickel. The remaining 10% originated in New Caledonia, Norway, Germany, Greece, Burma, Brazil, and Tasmania. Aside from these active sources of supply, there are poten-

tial supplies in Finland and Russia, and known deposits in South Africa, Dutch East Indies, Alaska, and Korea. The current production of nickel outside of the Dominion of Canada is sufficient to meet the total world requirements for armaments. Naturally these non-Canadian fields would be further exploited if the restriction of Canadian output made such exploitation commercially profitable or nationally desirable. Moreover, if nickel should become less available to the steelmaker he would promptly, through metallurgical research, find substitutes which would result in the loss of industrial markets for nickel.

From what I have said on this controversial subject the following conclusions may be drawn:

First: Canadian nickel is neither essential to war, nor is Canadian nickel essentially a war material. War usage of nickel is a small portion of the total consumption. Nickel would be replaced as a war material should the supply be restricted.

Second: A partial embargo on Canadian nickel, either on the export of nickel specifically for war purposes, or on the export to any particular country, would be ineffectual in preventing war. The recent Abyssinian war was concluded successfully by Italy notwithstanding the fact that your Company complied strictly with an Order in Council of the Dominion Government that no Canadian nickel should reach Italy.

Third: Only a complete embargo on the export of Canadian nickel would be fully effective in preventing the use of Canadian nickel for armaments.

Fourth: A complete embargo would deprive Canadian labor and other Canadian industries of substantial income; it would deprive the Dominion, Provincial, and Municipal governments of substantial amounts of taxes, and it would irreparably impair the Canadian nickel industry. The nickel industry would be not only deprived of its total export market during the term of embargo, but would lose much of its industrial market permanently,—a market which the industry has built up over many years through its own efforts and expenditures.

Fifth: A complete embargo would stimulate an increase of competitive production of nickel from present operating mines in other countries. It would, moreover, initiate production from known nickel deposits in other

parts of the world. The markets thus lost to Canadian nickel would be secured by nickel originating outside of Canada, and by competitive metals.

Sixth: A complete embargo, or a partial embargo for a long period, would place in jeopardy the value of the nickel industry to Canada. Industries throughout the world would intensify their search for substitute metals, or by other means free themselves from dependence on a product, the supply of which could no longer be considered as reliable.

Seventh: A complete embargo, attended by disastrous consequences for Canadian industry and labor, would not achieve its objective of preventing the manufacture of nickel-bearing armaments. Production of nickel outside of Canada is adequate to cover present requirements for such purposes, and, if stimulated by lack of Canadian competition, such production would be substantially increased for armament requirements.

Eighth: What twenty years ago was essentially a war industry has now, so far as Canada is concerned, been converted into a peace industry. Its unrestricted activity in no way conduces towards war; its control or suppression would in no way minimize the possibilities of war. Such control or suppression would serve only to destroy an industry which largely and honorably contributes to the economic welfare of Canada.

Following my practice in recent years, I again submit a statement showing the geographical distribution of shares and shareholders as shown by the addresses of record on the Company's books. I have in the past explained the difficulty of estimating the actual ownership because of the shares which are held in bank or brokerage accounts. It appears, however, that if the information were available in full as regards actual ownership held in such accounts, the number of shares recorded as held in the United States as shown below, would be reduced by approximately 800,000 shares, whereas those held in Canada, Great Britain and elsewhere would be correspondingly higher,

SHAREHOLDERS			SHARES	
Number	%		%	Number
26,043	29.6	Canada	18.2	3,248,232
43,654	49.7	United States.....	46.4	8,272,791
15,744	17.9	Great Britain.....	31.7	5,640,603
2,452	2.8	Others	3.7	661,675

With unsettled conditions in nearly all countries it is impossible to conjecture what the immediate future holds in store for the nickel industry. Possessing valuable resources, an experienced organization, substantial cash

reserves and a well diversified world business, your Company is fortunate in being fully prepared to either withstand another period of trade recession or to continue its expansion of recent years.

TORONTO, March 28—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

I am assuming that you have received and examined the Report for 1938, which was mailed to all shareholders on March 13, and shall therefore extend my remarks to points of information not necessarily included in the Report.

You will have noted that net profit in 1938 of \$32,399,470.23 was \$17,900,153.58 less than the figure of \$50,299,623.81 reported for 1937. The decrease in earnings was due to a lower volume of nickel sales, to the lower prices realized for copper and platinum metals, and to the weakening of sterling in terms of the dollar.

Sales of nickel during 1938 amounted to 164,378,245 pounds, comparable with 207,700,943 pounds in 1937. This decrease is a departure from the year to year increases shown since 1932, and may in large measure be attributed to the world-wide dislocation of industry caused primarily by the fear of war.

The recession which developed in United States trade during the autumn of 1937 continued until the summer of 1938 and the Company's nickel business in that country during this period was only 38 per cent of the business for the like months of the previous year. However, there was steady improvement during the last six months of 1938. On the other hand, overseas nickel business, which seldom fluctuates to the extent of United States business, was comparatively steady, so that for the entire year under review the Company's total sales of nickel attained a level equal to 79 per cent of that for 1937. Our selling prices remained unchanged.

Copper sales of 292,129,727 pounds at 9.80 cents per pound in 1938 compare with 291,880,403 pounds at 13.20 cents in 1937. This difference in price applied to the tonnage sold accounts for approximately \$10,000,000 in terms of gross profits. The same condition to a lesser extent held for sales of the platinum metals, of which total sales in 1938

of 193,195 ounces at \$29.75 per ounce compare with 188,756 ounces at \$37.55 per ounce in 1937. The realization on platinum metals was, therefore, less by approximately \$1,500,000.

You will have noted that the item "Cash" on the consolidated balance sheet stood at \$40,422,819.29 at December 31, 1938, comparable with \$48,871,395.90 at December 31, 1937. Of this cash item, 48 per cent was invested in short term bank loans or was held by banks as time deposits carrying interest.

It is debatable how much cash should be carried as a working balance. The Company's average monthly cash disbursements for all purposes were \$9,903,670 during the past year. It should be noted, therefore, that the total cash balances are equivalent approximately to only four months outlay. Total disbursements in Canada for all purposes during 1938 were \$63,557,599.59, of which \$19,294,691.78 was paid to employees.

In this connection it should be realized that constant upkeep of mines and plants is necessary if production costs under present day conditions are to be kept from rising unduly. Adhering to this policy, requirements for capital account have entailed large outlays in the past, and outlays of this character must continue with the growth of the nickel industry.

I hear occasionally that the Company is lavish in its capital expenditures. Our capital expenditures are substantial but not lavish, and so long as it is to the interest of the Company's shareholders and the Canadian public to increase the scope of the nickel industry by developing world markets for nickel and new products containing nickel, large expenditures for plants, equipment and personnel, will be imperative.

When one realizes that we are now moving every day at our mines and smelters an average total of approximately (1938)

50,000 tons, or the equivalent of one thousand 50-ton railway cars, of ore, tailings, slag, metals, and supplies, it is obvious that any modification of plant or equipment for handling this great tonnage is in itself a major project.

During 1938 disbursements for capital account amounted to \$10,750,707.10, of which \$6,849,501.70 was expended in Canada. I stated at the meeting last March that we contemplated expending substantial amounts to effect economies through improvements in operating methods and equipment, as the only means of offsetting rising payrolls, taxes, and cost of supplies, over which management has no control.

It is of interest to note that during 1938 operating economies thus effected in our Canadian mines and smelters amounted to over \$2,000,000. It is evident, therefore, that your management is obtaining a substantial return for the shareholders on funds thus invested.

Projected expenditures in 1939 call for approximately \$10,600,000, comparable with \$10,750,707.10 expended in 1938. The major items in the program are mine development and plant construction in Finland, a new shaft and surface plant at the Garson mine, open pit mining development at the Frood mine, an underground shaft in the Creighton mine, installation of a gas producer plant at the Clydach refinery, and numerous minor improvements in our plants generally.

The mine development program in Finland is progressing satisfactorily. An adit or tunnel 8,580 feet in length, driven to reach the ore body, has been completed, together with a vertical shaft 680 feet deep connected with the adit. Many of the surface buildings, such as shops, storehouses and workmen's dwellings have been built and it is planned to complete the smelting plant during the current year.

Coincident with opening up this mine and constructing the smelting plant, a hydro-electric power development is under way. This project, estimated to cost \$2,500,000, will obviate the necessity of transporting fuel to this remote property, and at the same time furnish an ample and continuous supply of low cost power.

Since 1933 expenditures on this property have totalled \$2,975,372.86 and expenditures this year will probably amount to \$4,300,000.

Barring unforeseen emergencies, this mine, smelter and hydro-electric development will be ready for operation by the autumn of 1940.

The Company's net earnings were such that, in addition to paying \$1,933,898.75 of preferred dividends, the Board of Directors declared four dividends of 50 cents each on the common stock, amounting to \$29,156,338. Thus the Company's shareholders received in 1938 a total of \$31,090,236.75 in dividends.

As to the rate of future dividends I can only report what I have said at former meetings—"that it is the policy of your directors to make dividend disbursements compatible with the Company's current earning power, business prospects, and after provision of adequate cash reserves".

I think it will be of interest to you to hear of your Company's policy in respect to the important item of inventories appearing on the consolidated balance sheet.

You will note that the amount stood at \$32,141,057.32 at December 31, 1938, comparable with \$27,573,765.66 at December 31, 1937, an increase of \$4,567,291.66. Our inventories comprise fuels, fluxes and supplies, metals in process, and warehouse stocks of finished products.

As I stated at a former meeting, our Company is the principal source of the world's nickel supply and in consequence occupies a position quite different from that of most companies. Standby capacity is necessary to meet the demands of an expanding business, and furthermore, adequate stocks must be available always to assure prompt and continuous deliveries during periods of industrial activity. Our policy is to operate our works as nearly as possible at a uniform rate, building up stocks of nickel during periods of business recession, and liquidating stocks during periods of business activity. Aside from the protection this affords to the consumers of our products, it provides steadier work for employees, thus contributing to the solution of the problem of unemployment, which is the most serious condition that industry now faces on this continent.

At the close of last year there were 17,282 individuals employed by the Company. Since the net property account, as shown in the balance sheet, which includes mines, plants and equipment, stands at \$158,350,836 it is evident that the Company has \$9,163 invested for each employee on its pay rolls. The supervision of this investment in such a way that the principal may be safeguarded, and a fair return to the shareholder obtained, is the duty of management, and is becoming more and more a matter for close scrutiny.

The success of an enterprise, such as our Company, depends upon the proper co-operation of the three partners which constitute a modern industrial unit—management, which is charged with the responsibility of directing employee relations, financial affairs, and commercial activities; labor, which produces the product; and capital, as represented by shareholders.

Your Board of Directors and executives believe that they must endeavor to provide steady work at reasonable hours for a good wage. They believe, further, that safe working places, proper living quarters, provision for disability, sickness and old age, and hospital, recreational, and educational facilities should be furnished. As mentioned already, and as shown in the Annual Reports, the practical application of these beliefs has been for years considered essential by your management.

The employees on their part realize that the success of the Company depends largely upon the result of their efforts. Conscientious work, loyalty to management and pride of organization, constitute the contribution which your employees throughout the entire organization have given wholeheartedly to this partnership.

You, as shareholders, are the third partner in our industrial unit, representing the capital invested in the enterprise which supplies the tools without which labor becomes ineffective. It is only by co-operative efforts by all three partners that this capital can be paid its fair wage in the form of dividends. As must be realized, no existing industry could have been started without courage on the part of investors to advance the requisite funds.

In this connection I am particularly pleased to express the gratification of your management for the support rendered by shareholders during past years, and to invite their continued co-operation.

In addition to the proper integration of management, labor and shareholders, a further and equally important factor in the success of this Company is its relationships with the consumers of its products, with governments, and with the public. Your Company has considered this relationship of vital importance and has for years endeavored to give intimate and factual information concerning the Company, its policies, products and progress, and has further endeavored to deal with the consumers of our products in such a way as to prove mutually beneficial to

our respective interests.

As mentioned in the Annual Report, pensions were paid to 345 retired employees during 1938 under the Company's Retirement System Plan which has been in operation since 1928. In the desire to remind our pensioners that the Company has a continuing interest in their welfare, and that their years of loyal service have not been forgotten, representatives of the Company in Canada, Great Britain and the United States have within the past few months visited nearly all of the pensioners in their homes. I am very glad to report that on the whole our pensioners are comfortable, happy and contented in their advanced years. The condition of our Canadian pensioners is particularly gratifying. Approximately two-thirds own their own homes, the housing conditions of all are satisfactory and none has immediate need for assistance. An interesting side-light is that, on the average, each Canadian pension payment helps to provide not only for the retired employee but also for two of his dependents, so that the number of persons benefiting far exceeds the number of pensions actually paid.

The reception accorded to the Company's representatives visiting these retired men was without exception most cordial. Much valuable information has been obtained which will aid the Company in its desire to provide adequately for its old employees. These visits will be repeated periodically.

For years past I have endeavored to emphasize, in the yearly reports to shareholders and at these annual meetings, the important role that technical research and development plays in expanding the world market for Canadian nickel.

From the time International Nickel was incorporated in 1902, until 1922, metallurgical research work was carried on largely in the works, and was devoted primarily to perfecting processes and to improving the quality of products. During this period, moreover, a large part of the world's nickel consumption was used for armaments, and little effort was made to expand general industrial use.

It followed naturally, when the world war was over, that this Company found itself possessed of mines and works of great capacity, and only a limited outlet for its metals. In order to cope with this serious problem, research and market development work were expanded in many directions and

in 1922 the Development and Research division was organized with increased personnel and, as an important feature of this activity, more adequate laboratory facilities were provided. Tangible results from this new activity were rapidly forthcoming and were highly satisfactory.

By 1930 the range of research work had so extended that a large central laboratory was built at Bayonne, New Jersey, to replace an old laboratory which had become inadequate. After the acquisition of The Mond Nickel Company, Limited, in 1929, research work by that Company was intensified, and in 1936 a fully equipped central laboratory was built in Birmingham, England. This was followed in 1937 by the erection of a similar central laboratory at Copper Cliff, Ontario, which, in addition to process research, provides facilities for copper research and for the geological department.

In addition to the three central research laboratories, there are four well equipped works laboratories, located at Acton, England; Clydach, Wales; Huntington, West Virginia; and Port Colborne, Ontario; whose work is co-ordinated with that of the central laboratories in carrying out the Company's general research program. The work of these units is largely devoted to improvement of existing metallurgical processes, and to the development of new and better plant products. The Acton laboratory, in addition to its process research, is conducting an active campaign to develop new uses for the platinum metals.

The seven laboratories mentioned cost \$1,270,336 and now employ a staff of 218 mainly technically trained men. There is currently expended on research and market development activities, inclusive of supporting publicity, about \$2,500,000 each year. That these expenditures have accomplished their objective is best exemplified by comparing our sales of nickel in the decade 1919 to 1928 of 520,323,280 pounds with 1,127,682,039 pounds during the last decade, 1929 to 1938, a period in which the world suffered one of its worst industrial depressions.

It is of the utmost importance that the work of our various laboratories, and their technicians as well, be thoroughly integrated, and this has been accomplished by joint meetings of the various groups throughout the organization. As an example of this, in the autumn of 1938 a convention was held in the United States of the principal men attached to the technical staffs of the research and development organizations in London and New York, the Nickel

Information Bureaux, and the research laboratories in Bayonne, Birmingham and Copper Cliff. The series of meetings covered several weeks, during which time the individuals from overseas visited the Company's works. Questions which were inter-related between laboratories and world markets were discussed, information exchanged and programs readjusted to provide the information required. At these meetings all products of the Company, and the various markets supplied with these products, were discussed in order to correlate products to the markets more completely and to re-orient the work so as to make it more effective.

A study recently made brings out several facts of interest concerning the distribution of the Company's shares. There are at the present time 91,858 shareholders holding 17,778,651 shares of stock. Individuals hold 55½ per cent of the shares and company accounts and brokers hold 44½ per cent. Of the holdings by company accounts and brokers, the portion held for numerous individual clients is, of course, not known.

Of the individual shareholders, 80 per cent hold 100 shares or less. The combined holdings of the ten largest individual shareholders are 410,646 shares, or 2.31 per cent of the outstanding shares. The ten largest holders throughout the world—other than individuals—such as banks, investment trusts, and brokers, have 1,875,375 shares, or 10.55 per cent of the total shares outstanding. These twenty holdings are well diversified in five countries.

From these data it is clear that the Company's shares are widely distributed and that there is no evidence of any segregation of stock which might influence in any way the management of your Company's affairs.

It is well nigh impossible, in the face of unsettled conditions throughout the world, to forecast what the future holds in store for the nickel industry. In reference to our prospects I can do no better than quote from the Annual Report:

"The Company's earnings are affected by industrial trends in the North American and in the over-seas markets, by fluctuations in the world price of copper, and by the exchange value of the pound sterling in terms of the United States dollar. Taking these various factors into considera-

tion, and assuming that the probability of war is remote, our business in 1939 should parallel closely that of the past year. At least it may be said that your Company is fully

prepared in all particulars to continue its progress through this troublesome period".

TORONTO, April 24—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

The Annual Report for 1939 was mailed to you on March 13th and I assume that you are familiar with its contents and shall therefore limit my remarks mainly to situations brought about by the entry of Great Britain and this country into the present conflict in Europe.

The year under review marked the beginning of the second decade since the acquisition of the Mond Nickel Company of England, which made our enterprise truly international in character. During this period the Company made substantial progress, as evidenced by the fact that the average annual sales of our metals for the past three years exceeded those of 1929 by a wide margin.

With the outbreak of war in September your management was faced with many perplexing problems. Due to the international scope of our business, questions of currency and price controls, market restrictions and hazards of transport, called for prompt action so that we could render assistance to His Majesty's Governments in Canada and Great Britain by producing and delivering the maximum quantity of nickel, copper and platinum metals urgently required in their respective programs.

At the same time it was most desirous that the Company's business with neutral countries should be disorganized as little as possible. This is of obvious importance in maintaining our development activities in foreign fields which contributed so largely to our progress in the past decade.

Since hostilities began all export sales of nickel, copper and platinum metals have been made under Canadian Government permits and with the sanction of the British Government. Our relations with both Governments have been close and the co-operation shown by these authorities has not only enabled us to meet fully their requirements but also to continue our deliveries in other

markets with due regard to the current needs and the anticipated increased requirements of the allied countries and our most important market, the United States. As already mentioned, any serious interruption of our regular export business would severely handicap our future activities.

Referring to the Annual Report, you will have noted that sales of nickel in all forms totalled 210,194,135 pounds, an amount slightly in excess of the previous peak year 1937, in which 207,700,943 pounds of nickel were sold. The markets in the United States alone consumed 101,200,000 pounds, or 10,600,000 pounds more than in any past year. It is, therefore, significant that the peak for nickel sales may be attributed more particularly to the commercial demands in the United States than to government war requirements.

Sales of copper were 324,850,921 pounds, comparable with 292,129,727 pounds in the previous year. This amount is somewhat more than our refining capacity and was accounted for by sales from stock to meet our initial orders from the British Government. I wish to confirm press announcements that the Company contracted with the British Ministry of Supply to deliver during the period from September 1st, 1939 to September 1st, 1940 approximately 80 per cent of its output of electrolytic copper, or 240,000,000 pounds. This metal is being delivered f.a.s. Canadian port and the price, in Canadian currency, approximates that ruling on the London Metal Exchange just prior to the declaration of war. While this price is less than the present world price, it is equitable and reflects the desire of the Company to do its part in assisting His Majesty's Government during the present crisis. Should the war continue beyond the contract period the agreement may be renewed by the Ministry of

Supply, with due consideration to conditions existing at that time. All of the balance of our copper production is available for domestic requirements.

The Company is now the world's predominant producer of platinum metals. These strategic metals are of importance to the war program and are, as already stated, subject to Government control and are being dealt with in the same manner as our nickel. During the year we sold 240,778 ounces of platinum metals, comparable with 193,195 ounces in 1938. The details of prices and markets are given in the Annual Report.

The net profit for 1939, as shown in the consolidated profit and loss statement, was \$36,847,466. Since sales of nickel, copper and platinum metals were in each instance greater in quantity than in 1937, you may question why the net profit was \$13,452,158 less for 1939 than for 1937. The difference is due principally to two factors: lower realized prices for metals sold and increased taxes.

In the case of copper, for example, the average realized price in 1939 was 3.34 cents less per pound than in 1937. This difference, applied to the tonnage sold, amounts to \$10,834,870.

In the case of platinum metals, the average realized price in 1939 was \$6.30 per ounce lower than in 1937. The lower prices, applied to the respective quantities of platinum metals sold in 1939, account for \$2,269,686.

As to the item of taxes, we all know that the war must be financed and that increased taxes must be levied. The increase in our composite tax rate for 1939 over that of 1937 accounts for an additional charge of \$3,099,572 against net profit.

These three items account for \$16,204,128, thus exceeding the figure of \$13,452,158 by which the net profit for 1939 is lower than the net profit for 1937. It is therefore evident that the relative decrease in earnings in comparison with 1937 is due to uncontrollable causes.

Cash balances at December 31st stood at \$45,196,624, comparable with \$40,422,819 at December 31st, 1938. I have emphasized from time to time the wisdom of maintaining adequate cash reserves. This is more than ever desirable during this period of world crisis. In 1939 the Company disbursed in Canada for all purposes nearly \$58,000,000 of which over \$19,000,000 was paid to employees.

You will have noted that inventories stood at \$30,696,145, comparable with \$32,141,057 at December 31st,

1938. The difference was due to the reduction of stocks because of abnormal demand for metals during the early part of last autumn.

The Company's shareholders received a total of \$31,090,237 in dividends during the year 1939; four dividends on the common stock, totalling \$29,156,338, and four dividends on the preferred stock, totalling \$1,933,899.

The outbreak of war necessitated a re-examination of the Company's dividend policy because of the Foreign Exchange Control Board regulations. It is gratifying, however, to report that no change has been found necessary in this respect. Canadian currency regulations now permit the disbursement of dividends by Canadian companies to all shareholders, whether resident in Canada, Great Britain, the United States or elsewhere, out of current earnings, and, with the approval of the Foreign Exchange Control Board, the Company has continued to make dividend payments as heretofore. Our United States dollar revenues, resulting from sales in the United States of nearly one-half of the Company's nickel products, and from its sales in certain other markets, continue to provide, as in the past, the requisite United States dollar exchange for dividend disbursements.

Capital expenditures during 1939 amounted to \$8,598,286, the break-down of which appears in the Annual Report. Projected capital expenditures for 1940 are estimated at \$8,325,000, of which \$7,800,000 are allocated to Canada. Practically all of the latter amount will be expended on the mines, concentrator and smelter to provide capacity for treating up to 30,000 tons of ore per day. Our policy, now in effect, is to extract more ore of lower grade, thus extending the life of the mines. By following this practice a lower but more uniform grade of ore will be furnished to the smelters and there will be more flexibility in mining operations over a longer period of time.

To fully comprehend the scope of its activities, one must realize that the Company is now operating in Canada, Great Britain and the United States twenty industrial units, comprising power plants, mines, smelters, refineries and rolling mills. In order to keep these many plants in proper condition for maximum efficiency of operation, and to add from time to time facilities for increased output, requires annually large expenditures of cash. Expenditures for such purposes have during the period 1929 to 1939, inclusive, amounted to \$96,506,850, of which \$75,169,368 have been

disbursed in Canada. I have gone into this subject at some length in order to make it clear that additions and betterments to plants require, of necessity, each year substantial appropriations of cash, and will continue to do so if our employees, our shareholders and the country as a whole are to receive an adequate return from the Canadian nickel industry.

Events which occurred last autumn could not have been foreseen when we examined the nickel-copper property at Kolosjoki in Finland, and subsequently, in 1934, secured a concession from the Finnish Government. While we did not appraise the Kaulatunturi Mine as a great property, such as our Frood Mine, there was a sufficient tonnage of ore of a grade to fully justify development. During the six year period 1934-1939, inclusive, the ore body was opened up by a tunnel, shaft, and underground development, and a smelter and a hydro-electric power plant were under construction. Had no interruption occurred, nickel-copper matte would have been produced at this property not later than early in 1941. Since its acquisition in 1934 there has been expended a total of \$6,723,908 and it is estimated that an additional \$3,500,000 will be required to complete the project. The future of this property in Finland is problematical. Under such circumstances your Directors decided to include in Property Account the sum of \$6,723,908, representing total expenditure on the property to December 31st last, and to set aside a reserve of like amount, which reserve is provided from Earned Surplus. The item is thus shown in the financial statements in the Annual Report.

At the shareholders' meeting last year I spoke at some length on the role which development and research play in the Company's progress. As a result of our past policy of expending substantial funds on research for, and development of, new uses for our metals the Company entered this unfortunate period of hostilities in a far stronger position than it did in 1914. I believe, moreover, that it will emerge from this cataclysm far better equipped in every particular than was the case after the Great War. Although the normal development of new peace-time uses has been suspended in certain markets which are of necessity closed to us, it may not be too much to hope that as a result of war-time research, discoveries may be made which will prove to be of great benefit to our industry

when world peace returns.

The section in the Annual Report entitled "Products and Markets" is included each year in an endeavor to fully inform you and the public of the current growth and wide diversification of the uses for nickel. In this connection I may say that the "Review of the Nickel Industry", issued annually, has been most favorably received and is now regarded as an authoritative reference on nickel by numerous libraries, universities and colleges.

At the year-end the Company had an aggregate of over 18,000 employees in Canada, Great Britain and the United States. In behalf of your Directors I wish to express to all of these individuals their sincere appreciation of the loyal and valuable service rendered during this troublesome period through which we are passing. Many of our men are now serving in the Army, in the Navy or in the Air Force. Several months ago the Company announced that employees who were on the rolls at the outbreak of war, and who entered the service of the British Allied forces, would be continued as members of the Retirement System. Their service record will accrue exactly as if they were in the Company's service, and they will be covered for disability and death benefits. Further, the Company will endeavor to provide employment for all such employees who return promptly after war service. We are proud of the resolute spirit shown by these men, and their families as well, in undertaking such onerous and hazardous duties.

Nor should we at this time fail to mention our superannuated employees. You will have noted in the Annual Report that during the year 1939 there were 386 pensions and 69 death benefits paid under the Company's Retirement System. At the last annual meeting I stated that with a desire to remind our pensioners of our continuing interest in their welfare, representatives of the Company in Canada, Great Britain and the United States had visited nearly all of them in their homes. The information obtained has proved of such value in our program of providing for old employees, that we have continued to keep in close touch with them, with the result that no really necessitous cases would appear to have escaped our attention. Special cases of need have been alleviated through visits of the Company's doctors and by contributions to hospitals for their medical service.

Special allowances have been granted in the winter months and supplies of fuel provided where necessary.

During the past few months personal calls have again been made upon all of our retired employees except those whom, due to war-time difficulties or because of residence at great distance, we were unable to visit. I am very glad to report that the condition of our pensioners is most satisfactory. They are contented and possess a spirit of sincere friendship and loyalty to our Company, to whose service their working years have been devoted.

Since our last shareholders' meeting, several changes have occurred in the personnel of the Board of Directors. Vacancies on the Board were caused by the deaths of Sir Robert Mond (reported at the last meeting) and Mr. James A. Richardson, and by the resignation of Mr. William W. Mein.

At the meeting of the Board of Directors held in May, 1939, the Right Hon. Lord Catto of Cairncatto was elected to fill the vacancy caused by the death of Sir Robert Mond. Lord Catto brings to our Board and to the Mond Advisory Committee in London a wide experience in industry and finance, especially valuable to the Company during these critical times.

At the November meeting of the Board Mr. William J. Hutchinson was elected to fill the vacancy caused by the resignation of Mr. Mein, who had been a director for 18 years. Mr. Hutchinson is known to you and to the Company's entire organization, as he previously served as a director and member of the Executive Committee.

At the February meeting of the Board Mr. Harvey R. MacMillan was elected a director to fill the vacancy caused by the death of Mr. Richardson. Mr. MacMillan is well known throughout Canada and the Company is fortunate in securing such an outstanding business man to represent its interests in Western Canada.

It is with sincere sorrow that I refer again to the death of Mr. James A. Richardson on June 26th last. Mr. Richardson was an outstanding director of this Company

and brought to it throughout eleven years in office a wide financial and business experience. He will be missed as a warm friend and valued counsellor by his colleagues in the Company.

In conclusion may I quote the section entitled "Outlook" in the Annual Report, as follows:

"With the world at war, channels of trade are so badly disorganized that it is impossible to forecast with any certainty the immediate prospects for your Company.

"It may be assumed that, whether the conflict be of short or long duration, the requirements of His Majesty's Governments in Canada and Great Britain will provide, during the war, an outlet for a substantial portion of the Company's output of metals. From the long-range viewpoint, however, the Company should not rely solely on Empire markets but must now anticipate and consider conditions which all industry must face when the war is over.

"The most effective safeguard at that time against unemployment and paralysis of industry generally would be a firmly established export trade such as your Company has always enjoyed and desires to augment.

"Your nickel business has been built up through years of technical development in markets outside of Canada, and its very life depends upon international trade relations. Certain markets are obviously closed for the duration of the war, but the Company is so well equipped with plant facilities and experienced personnel that, with Government co-operation by way of easing trade restrictions, it can reasonably hope to continue without interruption, in available markets, its essential long-range program of developing and increasing the use of its products.

"Your Company will thus not only safeguard the Canadian nickel industry, but will contribute its part in fostering the Empire's foreign trade so indispensable in establishing world peace which, to be lasting, must depend primarily upon a freer exchange of commodities between all countries."

TORONTO, April 30—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

The Annual Report for 1940 was mailed to all shareholders on March 17th. In my address to-day I shall comment briefly on items mentioned in the Report, and on other matters not covered therein.

In the preparation of this Annual Report, and of the remarks I am making to-day, due regard has been given to withholding any information whatsoever which might be detrimental to the national interest during this war-time period. This policy has been followed in respect to all information mailed to shareholders, and to releases to the Press as well, since the beginning of the war. In these matters we work in close co-operation with the authorities here and in Great Britain. Much as we should like to keep our shareholders informed at all times on relevant matters in connection with the Company's progress, either by direct mailings or through the Press, we realize the necessity of strict compliance with government policy.

The most important duty of your management during the period under review, the first full year of operations under war-time conditions, was to provide an adequate supply of nickel, copper and platinum metals to meet all demands for the war programs of His Majesty's Governments in Canada and Great Britain. Furthermore, the defence program of the United States Government, in conjunction with its policy of aid to Britain, is adding heavily to the toll on our output of nickel. To meet the situation we have not only continued our program of balancing smelter and refinery capacity with mine output, but have augmented and accelerated this program by making plant extensions wherever possible and utilizing all available facilities. In addition, we are treating and refining the entire bessemer matte output of Falconbridge Nickel Mines Limited. Due to these efforts nickel output was increased in 1940, and is being further expanded this year.

Copper production resulting from increased nickel output, and from the treatment of Falconbridge bessemer matte, exceeded the capacity of our copper refinery and we found it necessary to make outside arrangements for the refining of a portion of our copper. The contract with His Majesty's Ministry of Supply for the delivery of about 80

per cent of our output of electrolytic copper, referred to in last year's address, expired on September 1st last and was renewed for another year.

In 1940 our sales of nickel in all forms were in excess of the sales in 1939, as also were the sales of copper. Sales of platinum metals, however, were lower because of restricted markets.

The Annual Report shows that the net profit for 1940 after all charges, inclusive of substantial emergency reserves, was \$35,544,772, equivalent to \$2.30 per share on the common stock after provision for preferred dividends of \$1,933,899. The common shareholders were paid \$2.00 per share and the remaining 30 cents per share transferred to earned surplus.

It is of interest to note that notwithstanding a large increase in the volume of metal sales, the net earnings per share of common stock were 9 cents lower than in 1939, due mainly to the heavy increase in taxes. The tax provision of \$21,130,703 in 1940 is equivalent to \$1.45 per share on the common stock and compares with the provision of \$11,322,121 or 78 cents per share on the common stock in 1939. This means that each share of common stock contributed \$1.45 to Government treasuries for war and defence program expenditures and for general purposes. All shareholders will agree that heavy taxation is a vital necessity in this grave emergency. The war and defence programs must be shared in by all and must be paid for in cash. Thus it is gratifying that the tax contribution of this Canadian enterprise is a substantial contribution to the war effort.

At this time great tribute should be paid to the Company's wage-earners who have made an outstanding record in support of their Governments through the purchase of Government Bonds and War Savings Certificates.

Cash on hand and in banks, time deposits, Canadian treasury bills and other short-term securities maturing in 1941, totalled \$55,680,601, comparable with \$45,196,624 at December 31st, 1939. I would emphasize again the prudence of maintaining adequate cash reserves at all times, and particularly during this period of emergency.

Inventories at the year-end stood at \$32,502,616, an increase of \$1,806,471. While inventories of refined metals showed a decrease due to the heavy demand for the war and defence programs, inventories of metals in process were considerably higher because of the enlarged scale of plant operations. Stocks of fuels, fluxes and supplies used in the Company's operations also stood at a somewhat higher figure, due partly to increased prices and partly to the need of larger quantities for increased operations.

For the third successive year dividend disbursements remained unchanged. Four quarterly dividends were paid on the common stock, and four quarterly dividends on the preferred stock, amounting to \$29,156,338 and \$1,933,899 respectively, a total of \$31,090,237. Conforming to the practice which has been maintained for 35 years, dividends were declared in United States currency.

Capital expenditures were somewhat less than in 1939. Projected capital outlay this year will provide for continuing and augmenting the program of increasing the ratio of low grade ore to high grade ore mined, and to furnish smelter and mill capacity to treat an increased tonnage from the mines.

At these meetings I have from time to time reported on the satisfactory work being done by the Company's technical division. While, owing to the exigencies of the war period, results from development activities are not currently publicized, this important work is being continued. Results are being obtained which will unquestionably prove to be a stabilizing factor in the transition of the Company's business from a war footing to a peace-time basis after hostilities are over. It is not improbable that, as in the World War, the engineer and the metallurgist will create new processes and a demand for better materials, all of which will aid the nickel industry in its return to normal progress.

At the year-end the Company had 19,269 employees, comparable with 18,123 at the end of 1939. On behalf of your Directors I wish to commend the splendid services being rendered by all of these employees throughout the entire organization. Nor can I fail to add a word of special appreciation for the high morale and resolute spirit shown by our employees in Great Britain.

As stated at a prior meeting, the Company inaugurated a retirement system plan on January 1, 1928 to provide security to employees, affording old age and disability pensions and benefit payments in case of death. This plan

has been financed entirely by your Company without contribution by employees. The reserve for this retirement system, as determined by our independent actuaries, amounted to \$16,231,418 at the year-end and is shown as a liability on the balance sheet. Against this liability government obligations and other marketable securities amounting to \$16,228,717 as at December 31st are in hand. At the time of the inception of the retirement system on January 1, 1928, and of the inclusion of The Mond Nickel Company, Limited and subsidiaries on June 1, 1929, there was a total of 172 superannuated employees on the pension rolls. Since those dates 429 employees have retired on pension, 205 pensioners have died, leaving 396 on the rolls as at the year-end.

A plan of contributory sickness and non-occupational accident insurance for all employees of the Company and subsidiaries whose remuneration is on an hourly or piece-work basis was inaugurated in 1937 and continues in effect. This insurance provides a weekly income during absence from work because of sickness or non-occupational accident. The Company contributes approximately 50 per cent of the premium cost. Although the plan is optional it is gratifying that 13,789 of 14,284 eligible employees, or 97%, elected to participate. During the year 5,855 employees participated in the cash benefits stipulated in the plan.

In employer-employee relations the matter of accident prevention is of great importance. Your Company has made large expenditures in carrying on a campaign in which every employee plays his part. This investment accrues to the benefit of every employee and shareholder in that there are less accidents per shift worked, less lost time per accident, and lower compensation costs. In the Mining and Smelting Division, where the great majority of our employees carry on their duties, and where the occupational hazards are necessarily greater, a study of the results of the campaign over a five-year period shows that through the untiring and ceaseless vigilance of the superintendents and the whole-hearted co-operation of their respective staffs with the workmen, the benefits have been really astonishing notwithstanding the acceleration of operations necessitated by the war emergency. Your management considers organized accident prevention to be one of the most important social obligations of industry.

In closing I wish to emphasize that the policy

of this Company during the period of the war is to produce sufficient nickel to meet the war-time requirements of Canada, Great Britain and of the United States; to supply the needs of industry to the fullest degree that national requirements will permit; to maintain all of the plants and equipment in the best working condition; to foster a spirit of co-operation between employees and management throughout the various branches of the organization; to

expand research and development efforts concerning uses for your Company's metals; and to conserve the financial resources to the fullest extent that the present world situation permits. If this policy is followed it is logical to assume that when the war is over we will be prepared to meet post-war economic adjustments with a minimum of disturbance, and to continue the progress of the Company in peace-time industry.

TORONTO, April 29—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

We are now in the third year of a devastating war, a war which differs greatly from earlier conflicts in that it is a contest of machines as well as of men. A prompt and adequate supply of ships, tanks, guns and planes from the industrial front at home is vitally necessary if battles are to be won, whether on sea, on land or in the air. Our Company is an important war supply unit in that its products enter into most of the implements of mechanized warfare.

The status of the Nickel Company in industry has changed completely since 1939. During the twenty years following the last world war our activities were directed toward the creation of commercial uses for nickel. We were successful to such an extent that nickel became almost exclusively a peace-time metal and was no longer classified as essentially a munitions metal. The Company gained a prominent place in peace-time industry.

The superior qualities inherent in the various types of nickel bearing steels and in the many non-ferrous alloys of nickel which have been developed are those very properties sought by manufacturers of war equipment. Thus for the duration of the war we are once more a munitions industry, with all of our nickel and copper being used to advantage in the war effort. However, when the war is over industry will have gained a far greater knowledge than heretofore of the characteristics of nickel, which should assure the continued use of the metal in a multitude of engineering applications. In the meantime, producers of non-essential supplies can no longer secure any nickel whatsoever.

The Annual Report of the Company for 1941 which was mailed last month, and the series of letters sent to shareholders throughout the year, contain all of the information which in the national interest it is deemed advisable to disclose during this period. My remarks to-day will, therefore, be restricted to comments on matters with which you may be already somewhat conversant.

At past meetings I have referred to our long-term program of balancing smelter and refinery capacity with mine output, and of extracting a more uniform grade of ore to insure greater flexibility in mining operations over a longer period of time. The program was carefully planned, having in mind the economic future of the Company.

As I have already stated, the major problem facing industry in the United Nations at this time is the problem of immediate production. The nickel industry is no exception. Our metals are of vital importance in the production of essential equipment for our armed forces. It has therefore become necessary, because of the exigencies of war, that our long-term economic plan be altered and that all of our efforts be concentrated on a prompt increase in output.

To meet the unprecedented demand for nickel we have undertaken an expansion program which will involve a capital outlay of nearly \$35,000,000. This calls for opening additional ore properties, sinking of mine shafts and the installation of surface and underground plant and equipment, as well as the enlargement of concentrating, smelting and refining works. When this expansion

program is completed our capacity will be increased by approximately 50,000,000 pounds of nickel per year over the 1940 output. This rate of production will be attained in 1943.

Experience leads to the belief that our augmented productive capacity will be far in excess of the industrial requirements of the world after the termination of the war. Costs and overhead charges are likely to be substantially higher. It must be realized also that under this production program the Company is paying an enormous toll in the form of non-replenishable ore reserves.

To compensate in a measure for this unavoidable disruption of our long-term economic program of operations, the Government of the Dominion of Canada has permitted us to amortize within a five-year period the amount of the expansion program expenditures up to a total of \$25,000,000. We have adhered to the policy of financing this and all other expansion programs with the Company's own funds.

Concurrently with the speeding up of operations and plant expansion our research activities have likewise been accelerated. Technical problems dealing with new applications of nickel are being currently solved in co-operation with governmental departments. Throughout all of this work the most economical use of nickel is being emphasized. Technicians and sales executives have been loaned to the Governments for aid in perfecting the plans of allocation of nickel to producers of war equipment. Moreover, our technical men are working with consumers who are using nickel for the first time, in order that the metal may be effectively and conservatively used. Our field service men are also aiding in every way possible those of our customers who have been deprived of nickel. By recommending new compositions in steel or substitute materials many of these concerns can continue to exist and will undoubtedly return to using nickel after the war.

In September last our contract with the British Ministry of Supply for delivery of the major portion of our output of "ORC" electrolytic copper was renewed for another year. The terms remain the same as in the original contract, delivery f.a.s. Canadian port at a price, in Canadian currency, approximating that ruling on the London Metal Exchange just prior to the declaration of war, with allowances for increases in costs over pre-war costs. The terms of this contract are also applicable to

our deliveries of copper in Canada for munitions production. The price realized is substantially less than the price ruling in the United States. This difference in price applied to our large tonnage amounts to a substantial sum which may be considered as our portion of the Canadian Copper Producers' contribution toward winning the war.

All of our mines and plants in Canada were operated at full capacity throughout the year. Furthermore, to augment nickel production we treated and refined the entire bessemer matte output of Falconbridge Nickel Mines, Limited, for which we had provided additional facilities.

We have also provided a new plant at our Huntington Works in the United States, primarily for refining raw material supplied by the Metals Reserve Company, a United States Government agency.

Our Huntington Works is on a full time war production basis. More than \$3,000,000 has been appropriated for equipment to turn out special materiel for the United States Army and Navy. I am pleased to report that this Works was one of the first fourteen plants in the United States to receive from the Bureau of Ordnance of the United States Navy its "E" pennant signifying excellence. This honor was awarded in recognition of quality of product and prompt fulfillment of requirements.

Our plants in Great Britain are all on a war footing and are working continuously on a full time basis. All activities, including research, are carried on with the full sanction and co-operation of the Government. In spite of the risks of ocean transport I am pleased to report that since the beginning of the war our losses at sea have been trifling, due to well protected ocean lanes.

Notwithstanding increased sales the net profit dropped from \$35,544,772 to \$34,356,401, a decrease of \$1,188,371. This is accounted for largely by higher taxation, by special provision for short-term amortization of war-time capital expenditures and by higher production costs. While our costs have risen since the outbreak of the war they continue to be satisfactory in view of the pressure on operations due to increased war requirements.

Tax provision for the calendar year 1941 was \$26,328,792, an increase of \$5,198,089 over the preceding year. This provision amounted to \$1.80 per share of common stock compared with \$1.45 in 1940. It will be noted that the accrued tax liability at the year-end stood at the staggering total of \$29,900,520.

The portfolio of government securities maturing subsequent to 1942 was increased from \$2,553,131 to \$7,626,277. Cash and short-term securities maturing in 1942 were increased from \$55,680,601 to \$63,005,115, or \$7,324,514. In the portfolio of short-term securities we carry substantial quantities of Canadian Treasury Bills and United States Tax Notes in anticipation of tax payments.

Our Company takes pride in the part it is playing in Canada's war finance. We are an important factor in the source of foreign exchange in the form of United States dollars and we are large holders of Dominion Government bonds. The war finance of Canada has been admirably planned and executed with a view to placing War Loans with the public and throwing a minimum of burden on the Chartered Banks. It is our policy to retain as nearly as possible all of the War Bonds that we acquire. In September 1939, we held \$8,000,000 of Dominion Government securities and on April 1st, 1942 these holdings were in excess of \$23,000,000. During the period we have subscribed to \$24,200,000 of Dominion War Loans, inclusive of the loan just issued.

Inventories rose from \$32,502,616 to \$34,785,800, or \$2,283,184. This increase occurred in the supplies and other items purchased for use in operations and new construction required by our production expansion program. The metal inventory, including both finished metals and metals in process, decreased approximately \$650,000.

Capital expenditures during 1941 totalled \$11,739,041 and it is anticipated that such expenditures for 1942 will be substantially higher. Our program provides for the major portion of these expenditures to be made at the mines and smelters, and, as already mentioned, an increased production will be available by this year-end.

For the fourth successive year our dividend policy remained unchanged and dividends were declared in United States currency in conformity with the practice which has been maintained for thirty-six years. Four

quarterly dividends were paid on each class of stock and amounted to \$1,933,899 for the preferred and \$29,156,338 for the common, a total of \$31,090,237.

At the year-end your Company had 21,898 employees in Canada, Great Britain and the United States, comparable with 19,269 at December 31st, 1940.

Although our activities are essential to the war effort many of our employees have preferred military service and thus far over 2,200 have joined the armed forces. I report with deep regret that a number of these young men have died in service.

Our employees are supporting the war effort not only physically but financially as well. Not less than \$4,000,000 in War Bonds and War Savings Certificates have been purchased by the employees in our various plants and offices since the war began in 1939. In addition liberal contributions have been made to war relief organizations.

The gratifying results of the year under review could not have been achieved without the united effort and whole-hearted co-operation of these employees as a group. They have had to make many sacrifices, and undergo many hardships, especially those in Britain, in making this splendid contribution to the war effort. I therefore take pleasure in expressing, on behalf of your Board of Directors, sincere and hearty commendation of the services rendered.

The reserve for the Retirement System amounted to \$18,408,661 at the year-end, and against this liability government and other securities of \$18,384,431 were held as at that date. As stated at former meetings, this Retirement System is financed entirely by the Company without contribution by employees. It was inaugurated in 1928 to provide security to employees by affording old age and disability pensions, and benefit payments in case of death. There were 425 employees on the superannuation rolls at the end of the year, as compared with 396 at the end of 1940.

We have continued to keep in touch with our pensioned employees by having representatives of the Company visit them in their homes. I am glad to advise you that as a group the pensioners appear to be living in circumstances which are very satisfactory. Needy cases are given special attention and we endeavor to show these retired men that their many years of faithful service are

not forgotten and the Company retains a sincere interest in their welfare.

The plan of contributory sickness and non-occupational accident insurance, for all employees whose remuneration is on an hourly or piece-work basis, has been in effect since 1937 and continues to be a popular measure. This insurance provides a weekly income during absence from work on account of sickness or non-occupational accident and the Company contributes approximately 50 per cent of the premium cost. During the year 6,804 employees participated in the cash benefits stipulated in the plan.

Our position in the post-war period will, I believe, depend largely on the manner in which we conduct our affairs during the war. The engineering uses of nickel in war materials are similar to those in peace-time industry, and a peace-time world must eventually be rebuilt. A sound procedure to guide this Company would appear to be—*First*, to enter the post-war period with ample financial resources—*Second*, to avoid debt with the attendant danger of fixed charges in a possible subsequent period of

depression—*Third*, to enter the post-war period with the lowest production costs attainable. This calls for plant efficiencies all along the line, which will aid our war effort and our future as well—*Fourth*, to retain the good will of consumers of nickel, many of whom have been held to be engaged in production non-essential to the war.

We shall make every endeavor to conserve and strengthen the financial structure of the Company. Substantial emergency reserves will be established as business conditions permit and cash and other assets will continue to be built up to the end that we may be prepared to meet circumstances as they may arise from the war or in its aftermath.

During the war, however, the first obligation of every corporation, as of every individual, is to give the utmost support to his Government in the prosecution of the war. Your management recognizes this obligation. Our specific duty is to produce the maximum quantity of metals essential to the war effort. In the vigorous performance of this duty we shall continue to devote the full measure of our resources and experience.

TORONTO, April 28—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

In reviewing the activities of your Company during the third year of the war a course must be followed which, within the limitations imposed by governmental controls and rules of censorship, will furnish to shareholders and the public sufficient facts on which to base an appraisal of the Company's management and operations. It follows that the Annual Report which you recently received is again necessarily limited in its scope as contrasted with reports issued in pre-war years. As at former shareholders' meetings, I shall comment on the Company's activities in so far as I am free to do so.

Before embarking on corporate affairs I wish to report on the recent change in our executive staff here in Canada. Mr. Donald MacAskill, who had been our General Manager for eleven years and Vice-President for seven years, was forced by ill health, after having served the Company since 1906, to retire from active service last

autumn. We had hoped that as a member of your Board of Directors we would continue to have the benefit of Mr. MacAskill's experience. His physical condition proved to be much more serious than had been anticipated and resulted in his death in January. Your Board of Directors gave expression to their deep regret at the loss of their colleague in the adoption of the following resolution:

"RESOLVED, that there be inscribed in the records of this Corporation an expression of personal loss which the members of the Board have suffered in the sad death of Donald MacAskill. By his abilities and industry, his great qualities of leadership and personal integrity, he rose through the ranks to take charge as Vice-President and General Manager of all of the Company's operations in Canada. Under his direction a wartime expansion program was started and achieved in record

time, assuring to the United Nations vital supplies of nickel far beyond those conceived possible in times of peace. Throughout his career he served this Company with all of his strength until physical illness, aggravated by the burdens of the war, brought his life to a close. We shall always admire his achievements and respect his memory as a great and modest man."

Mr. MacAskill had built up a fine operating organization and upon his retirement we were fortunate in having a man who had served the Company for thirty-one years, and who had been his assistant for the past eight years—Mr. R. L. Beattie—to succeed him. I am sure the Company's operations in Canada will continue to have the best of supervision.

Your Company also suffered a grievous loss in the death of Mr. Seward Prosser, who had served as a Director for thirty years. A resolution adopted by the Board of Directors in respect to Mr. Prosser appears on page 9 of the Annual Report.

Since the very start of the world conflict in the summer of 1939, every effort has been made to maintain an uninterrupted output of nickel and to increase our mining, smelting and refining capacity. Our metals are essential to the prosecution of the war and our current output of nickel and copper, now at its maximum, is being consumed in the production of essential war matériel. During the past year the first consideration of your management has been to co-operate in every possible way with the Governments it serves. Several of our staff who have a broad knowledge of nickel bearing alloys have been released to agencies of the Governments for the duration of the war. Their years of experience in developing metallurgical products for peace-time industry have proved to be most effective preparation for solving problems arising in current war production.

At the last Annual Meeting I discussed at some length the expansion project which had been undertaken at an estimated cost of \$35,000,000 to increase our output of nickel in all forms by 50,000,000 pounds per annum over the 1940 production rate. I am pleased to report that this work is being promptly and satisfactorily completed and we are already producing nickel at the rate which was forecast last year. It is, moreover, gratifying to say that no financial aid from Government or from banks has

been needed for this program.

Capital expenditures in 1942, principally for the expansion program, were \$12,009,497, comparable with \$11,739,041 in 1941. Depletion and depreciation provisions, including special amortization, amounted to \$13,073,587. These reserves, you will note, offset the year's capital expenditures. Corresponding disbursements in 1943 will show a substantial decrease and should not exceed \$9,000,000.

Distribution of nickel, now restricted to essential war uses, remains entirely under the direction of governmental agencies. Heavy demand continues, and at times seems to be insatiable. The impression held by the public may be that an acute shortage of nickel has existed and still exists. The facts are that, while we have strained our production facilities to the utmost, essential deliveries of nickel have been made promptly and no shut-downs of essential war production are known to have occurred due to failure of nickel supply. The situation in recent months has progressively improved, due to our increased output, to the accelerated return of nickel bearing scrap to steel mills and to the constructive conservation measures which have been adopted by governments and industry.

The salvage and utilization of scrap is of paramount importance at this time. Your management stressed this matter in its year-end Review, which received wide publicity.

I mentioned at last year's meeting that we had provided additional facilities to refine the bessemer matte output of Falconbridge Nickel Mines, Ltd. and certain nickel bearing materials supplied by Metals Reserve Company, an agency of the United States Government. This work is being continued. We also have arrangements made or pending to treat nickel ore from several small Canadian properties on a toll basis. Although these individual tonnages are small, the aggregate of nickel thus obtained may prove to be very helpful.

We continue to be the largest producer of copper in the British Empire and the world's largest producer of the platinum metals. Arrangements for the sale of our entire output of copper for British and Canadian war uses have been continued. The platinum metals are important war

materials and governmental control of their deliveries has been imposed.

Referring now to the Annual Report, which was mailed to you on March 15th, I shall comment briefly on the financial statements. It may be noted that net profit after provision for taxes is \$33,301,829, comparable with \$34,356,401 in 1941. While the dollar volume of business in 1942 was only slightly less than the previous high figure of 1941, costs increased to an amount greater than could be offset by gains from operating efficiencies. The great increase in taxes is exemplified by a comparison with 1937, the most profitable year in the Company's history. In 1937, when our average selling prices were higher and production costs lower, profit was \$60,650,514 before tax provision of \$10,350,890, whereas in 1942 profit was \$57,781,114 before tax provision of \$25,079,285. A comparison of dividends and taxes per share of common stock for the same years is even more striking. In the year 1937 shareholders received \$2.25 per share and tax provision amounted to 71 cents per share, while in 1942 shareholders received \$2.00 per share and taxes were \$1.72 per share.

On December 31st, cash and time deposits, Canadian Treasury bills, British and United States tax notes, and other securities stood at \$62,219,245, comparable with \$70,631,392 a year ago, a decrease of \$8,412,147. This reduction was caused mainly by mandatory payments of \$7,216,092 of taxes to the Canadian Government which under former procedure would not have become due and payable until the present month—April. Had it not been for the prepayment of taxes, a step, incidentally, towards the very desirable pay-as-you-go basis, our cash balances at the year-end would have shown little decrease since December 31, 1941. The actual cash position may be considered satisfactory after capital expenditures of \$12,009,497, tax payments of \$32,973,020 and inventory increases of \$4,402,650 during the year.

In 1942 the Dominion Government issued two Victory Loans for public subscription, which realized very nearly \$2,000,000,000. This amount is by far the largest sum ever raised by public flotation in the history of Canada and when considered in the light of the heavy burden of existing taxation it is an outstanding achievement. Your Company has furnished support to

all war loans, our subscriptions to the two loans in 1942 totalling \$20,000,000. Employees' subscriptions through payroll deductions in all of our plants and offices have further augmented the purchase of war bonds. Total subscriptions from this source in 1942 amounted to approximately \$1,600,000.

We have continued to adhere to the policy of maintaining our portfolio of securities in a liquid position in order to be financially prepared to meet contingencies which may arise. Our holdings consist principally of Government securities, more than 95 per cent of which mature before 1948.

Our exports are the source of sizable amounts of United States dollars and during the year under review our sales of United States currency to the Foreign Exchange Control Board of Canada were the highest since the outbreak of the war. It is gratifying to report that our operations render assistance to the Government in meeting its foreign exchange requirements.

A recent statement by the Minister of Finance shows that Canada's United States dollar position has improved and that during the last nine months of 1942 about one-half of the United States dollar resources lost since September 15, 1939 has been recovered. This new trend is principally a result of the "Hyde Park Agreement" and of the increased purchases of Canadian dollar securities by residents of the United States. These developments are indicative of the high regard in which Canada's financial policy is held in the United States.

The output of nickel, in common with that of other essential metals, depends upon an adequate supply of suitable labor. In the countries in which we operate there has been an acute labor shortage. This shortage has affected not only our mining, smelting, refining and rolling mill divisions, but also our offices, laboratories and technical personnel. Plans for relief were adopted in Canada, among them the release of miners from the gold camps to work in our mines and a change in the law which now permits the employment of women in the mining industry. This latter was very helpful and we are now employing over 700 women in our various operations in Canada, as well as substantial numbers in Great Britain and the United States. The work performed by these women has been satisfactory and has proved an important

factor in maintaining the output of nickel. We have also retained in active employment men who normally would have applied for old age retirement but who gladly waived this privilege and continued to serve.

For years past our employees at Copper Cliff and Port Colborne have maintained, through their employee welfare and benefit associations representing the various operating units, a close relationship with the management.

Last autumn an agreement was negotiated at Copper Cliff with the United Copper Nickel Workers, an independent body organized by the welfare associations to represent all hourly rate employees. The agreement covers hours of work, wages, seniority, collective bargaining, vacations and other basic conditions of employment.

This action was followed by negotiation of a similar agreement at Port Colborne with the Port Colborne "Inco" Employees' Welfare Association, an independent body representing the hourly rate employees.

These agreements have been consummated and should prove to be an important contribution to our war effort, as they serve to promote more effective communication and fuller co-operation between the Company and its employees.

It is my belief that recognition of the principle of collective bargaining is not only desirable but is in the best interests of both management and employees. I think that equal opportunity should be open to both wage earners and business men to organize to advance their respective interests. Both, however, should be controlled by equitable laws if management-employee relationship is to be kept in harmonious balance and the public interest is to be properly served. This is indeed the crux of the labor problem.

The increasing demand for our metals has resulted in a corresponding increase in the number of employees. At the year-end this number was 23,098, as compared with 18,123 at the beginning of the war and 11,325 in 1929. Since the start of the war more than 4,000 of our employees have entered the armed forces of the United Nations.

There were 479 individuals on the Retirement System pension rolls at the end of the year, as compared with 425

at the end of 1941. We have continued to keep in touch with our pensioned employees by having Company representatives visit them in their homes and have given special attention to needy cases.

The plan of contributory sickness and non-occupational accident insurance, for all employees whose remuneration is on an hourly or piece-work basis, was continued through 1942 and has now been in effect for over 5 years. This insurance provides a weekly income during absence from work on account of sickness or non-occupational accident and the Company contributes approximately 50 per cent of the premium cost. During the year 7,377 employees participated in the cash benefits stipulated in the plan.

I regret to report that our accident experience in 1942 was not as favorable as it has been in recent years. This was due to the fact that labor turnover was heavy, that we had to engage large numbers of inexperienced workmen, and that all of our plants worked at high pressure in order to attain maximum output.

Recently an authoritative source stated that over 11,000 workers in the United States alone are killed or injured every day. The appalling fact is that during 1942, while on the job, over 18,000 employees were killed in accidents and over 1,750,000 employees were injured. Moreover, though not generally appreciated, the number of accidents in homes is more than twice those which occur in industrial plants. Accidents in the United States in 1942, from all causes, in all places, resulted in 93,000 deaths and injuries to 9,300,000 persons. When these figures are equated in terms of man-days and their equivalent in tanks, planes and ships, the results are staggering. May I take this opportunity to appeal to you in behalf of accident prevention in your plants and in your homes. Quite apart from the humanitarian aspect, industry and the public as well can perform a great war service by organizing to help stop this slaughter of sorely needed industrial manpower.

You will have noted in the Proxy Statement and in the Annual Report reference to the funding of the Company's Retirement System.

At the Annual Meeting in 1937 I reported on the Retirement System, which has now been in operation for 15 years, providing security to employees in the form of

old age and disability pensions and benefit payments in the case of death. The System has been financed entirely by the Company without contributions by employees. I advised that the Directors were giving consideration to the irrevocable setting aside of all or part of the funds required to meet the accrued liabilities under the pension plan for past service. As an important step in this direction, the portion of the accrued liability which previously had not been reserved was set aside in 1937 by transfers from earned surplus, and, as shown in the Annual Report furnished to shareholders in 1938, specific securities held under the control of your Board of Directors were included on the asset side of the balance sheet as a new item under the heading "Securities Held Against Retirement System Reserve". The subsequent years of service of employees, and the corresponding annual appropriations for the Retirement System, brought the total Retirement System liabilities and assets on the balance sheet to approximately \$18,400,000 at December 31, 1941. In 1942 the current appropriation to the Reserve amounted to \$2,980,261.

I am glad to report that the Directors decided in 1942 to complete the program by establishing an independent trustee Retirement System. Three Trusts were created under separate agreements—one in Canada, one in Great Britain and the third in the United States—to receive contributions made from time to time by the Company to finance the Retirement System, and initial contributions totalling \$2,928,438 were made to the Trustees from the Reserve. By this procedure tax relief provisions under the laws of Canada, the United Kingdom and the United States have been availed of by the Company. It is the present intention of the Board to transfer to these Trusts in 1943 and future years amounts sufficient to provide for the currently accruing Retirement System liabilities, and over a period of years also to transfer to the Trustees substantially the remaining balance in the Reserve at December 31, 1942 amounting to \$18,150,275. If the Directors in their discretion determine to take such action further tax savings are expected to result.

The initial Trustees under both the Canadian and the United States Trust Agreements comprise Messrs. John Foster Dulles, William J. Hutchinson, R. Samuel McLaughlin, Ross H. McMaster and Britton Osler, K.C., all of whom are directors of the Company. The

initial Trustee under the British Trust Agreement is Mond Nickel (Retirement System) Trustees Limited, a subsidiary of the Company.

I am sure the shareholders will endorse the view of the Directors that this action represents a forward step in discharging the Company's social responsibilities and one which over the years will be beneficial to shareholders and employees alike. You will be asked later in this meeting to record your approval of the continuance in 1943 and subsequent years of this funding plan adopted by your Directors.

The item on the balance sheet, "Securities Held Against Retirement System Reserve", will henceforth decrease annually by the value of securities transferred by the Board of Directors to the Trustees of the pension fund. The offsetting liability item on the balance sheet, "Retirement System Reserve", will likewise decrease annually by the amount of pension liability discharged through the transfers to the Trustees.

At this time, with ultimate victory certain, we must further intensify rather than slacken our efforts to end the war. It is, moreover, the duty of industrial management to prepare now for the return of peace. This your Company is doing and I believe that our accomplishments during the war, coupled with intelligent planning at this time, foreshadow equally satisfactory accomplishments in the post-war period. One needs only to visualize the endless procession of trucks, tanks, planes and ships moving to the fighting front in order to realize the diversified usage of nickel in war matériel. The principal reason for this great demand for nickel is its intrinsic value as an alloying metal. More manufacturers are now using nickel than ever before and are becoming familiar with its qualities. It is quite probable that many war-time uses of to-day will become peace-time uses of to-morrow. I believe that sufficient new applications, including many originating in the war period, will persist to offset former peace-time uses lost to competitive substitutes such as plastics and other metals and alloys. In this connection it must be realized that most countries are now engaged in research on a scale never before attained. The best technical brains in the world, supported by adequate funds, are exerting great efforts to create new products. Nickel is being used in much of this experimentation and the results obtained will be of value

to us in the post-war world.

As part of its commercial activities your Company has heretofore advertised extensively in Canada, Great Britain and the United States. By continuing this advertising on a reduced scale we have been able to participate in governmental activities furthering conservation, technical assistance to war production, health and safety. At the same time we have kept alive our trade-marks and maintained the good-will of the various industries which we serve.

Our sales groups are also maintaining close relations with our customers, and are assisting them in their problems of supply and allocations. Our technical staff has been co-operating with present and former users of nickel and nickel alloys in giving counsel concerning substitution of less strategic materials for those formerly

used and in the adaptation of new specifications to altered conditions. Our research personnel are engaged on problems connected with war production. The work of all three of these groups is basic to our post-war prosperity. Moreover the development of new products is also receiving such consideration as is possible with due regard to our war responsibilities.

All of these essential activities will have been pursued in vain if the political, industrial and financial leaders of the United Nations do not through wise statesmanship and by concerted action strive, without delay, to secure a just and durable peace. They must keep production flowing and create a sustained consumer demand for goods as we enter the post-war period. The thought and energy of your Management is being directed toward the accomplishment of these vital objectives.

TORONTO, April 26—ROBERT C. STANLEY, Chairman and President of THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED, made the following address to shareholders at the annual meeting of the Company this afternoon. He said:

The Annual Report that you received recently shows that your Company is sound and indicates that your management's principal desire is to render real help in the war efforts of the Governments of Canada, Great Britain and the United States.

Production of nickel in 1943 approximated the all time high of the previous year, notwithstanding that during the last six months the output from our mines dropped 10 per cent below their increased capacities. The decline was due to a shortage of labour as well as to the fact that we had to use many inexperienced workers.

Deliveries of nickel in all forms amounted to 265,000,000 pounds, which was 55,000,000 pounds greater than the amount reported for 1939. In order to obtain this nickel it was necessary to mine 12,100,000 tons of ore in 1943 (34,400 tons per average working day), as compared with 7,300,000 tons (21,700 tons per average working day) in 1939. Adding nickel from other sources, which we also refined, the total nickel for war use produced or refined by this Company in 1943 was nearly 300,000,000 pounds.

Government requests in 1941 to increase our output of nickel by 50,000,000 pounds per annum received special attention during the past three years. The task has been accomplished except for further mine expansion necessary

to maintain this production.

It is gratifying to state that war requirements, the sole and vital demand we are presently serving, are being fully satisfied. Prices of nickel throughout this crisis have remained at levels prevailing for many years. Production costs have risen and are still rising. Moreover, in expanding operations a heavy financial burden has been assumed.

Copper deliveries in all forms, including copper in "Monel" matte and copper refined for others, amounted to 316,000,000 pounds, compared with 336,000,000 pounds in 1942. All refined copper was delivered to the United Kingdom and Canada, the latter using about 70 per cent. The output was marketed under the control of the Canadian and United Kingdom authorities.

World demand for platinum was greater than in 1942. There was also a greater demand for palladium, principally in dentistry and jewelry. It is of particular interest that palladium is now entering into the manufacture of jewelry in increasing quantities. Restriction of platinum essentially to war uses has aided in bringing this about but the merit of palladium in this field should justify its continued use.

Our refineries and rolling mills in Canada, Great

Britain and the United States are available for the war needs of the governments of these countries. In Canada and the United States we have treated ore and matte from outside properties and we are now negotiating for ore with several other mining interests.

Cash and time deposits, Canadian treasury bills, British and United States tax notes and other securities at the close of the year amounted to \$64,086,020, compared with \$62,219,245 on December 31, 1942, an increase of \$1,866,775.

Our portfolio of securities consists mainly of government issues, the greater part of which are short-dated. It has been the consistent policy of your Company to maintain its finances in a liquid condition so as to meet any eventualities which may arise. In accordance with this policy 90 per cent of our securities holdings mature before 1949.

The securities markets in Canada were dominated during 1943 by the financing of the Dominion Government for the prosecution of the war. Two Victory Loans were offered for public subscription and resulted in cash applications aggregating \$2,692,000,000.

Your Company has continued to support the Victory Loan campaigns of Canada to the full extent of its ability. We are glad to report that in Canada, Great Britain and the United States over 78 per cent of our employees have subscribed over 7 per cent of our pay-rolls to War Loans through pay-roll deduction plans.

An analysis of the financial statements in the Annual Report shows that the sum of \$171,372,523 was realized from the Company's business. This sum was utilized as follows: pay-rolls, supplies, services and retirement system \$106,514,693; taxes based on income \$20,059,089; wear and usage of plants and ore reserves \$12,671,537; provision for post-war readjustments \$1,000,000; dividends \$31,090,237; balance held \$36,967; the total aggregating \$171,372,523.

The profit and loss statement shows that net profit was \$31,127,204, as compared with \$33,301,829 for 1942. From this profit there were deducted the 149th to 152nd (inclusive) dividends on the preferred stock, \$1,933,899, and the 102nd to 105th (inclusive) dividends on the common stock, \$29,156,338. Thus 99.88 per cent of the net profit was disbursed to shareholders. You may be interested in the comparable percentage for the past five years. In 1939 dividends paid from net profit were 84.38%; in 1940 they were 87.47%; in 1941 they were 90.49%; in 1942 they were 93.36% and in 1943, as just stated, they

were 99.88%, a five year average of 90.81%. I mention these figures because they stress the high percentage of available profit paid to shareholders, a step that can be taken only when the cash position permits and when there remain sufficient funds to maintain the plants in the best of condition and to carry the Company through a business reversal.

On November 12th last I mailed a letter to shareholders stating that because of increasing costs it was quite probable that our earnings would be less and that it might be necessary to lower the common dividend. Your directors gave this matter most careful consideration and decided that in the best interests of the Company it would not be prudent under present conditions to appropriate funds from our surplus account to aid in paying dividends. The consequence was that the common dividend payable March 31st was reduced from 50 cents to 40 cents per share. I mention this because, while mailing such a letter was unusual, the response from shareholders was most satisfactory.

The inventory figures stand at \$42,798,709, as compared with \$39,188,450 in 1942, \$34,785,800 in 1941 and \$32,502,616 in 1940. Expanded operations necessitate larger stocks of all kinds. Higher production costs account for a portion of the increase and war-time purchase prices on commodities, such as fuels, fluxes and general supplies are also a factor.

Capital expenditures were \$5,445,248 and were much less than the \$12,009,497 in 1942 and the \$11,739,041 in 1941. The amount required for 1944 will approximate \$6,000,000. The principal items now under way in Canada are the deepening or sinking of shafts and the development of levels at the Garson, Murray and Stobie Mines. Construction of employees' houses at the Levack Mine and Creighton Mine is also under way. During the past five years more than \$43,000,000 has been expended by the Company to expand production.

We have recently installed at the Huntington Works a 4,000 ton extrusion press at a cost, including housing and accessories, of \$1,250,000. We believe this press, one of the largest in the United States, will develop new business, as does our 2,000 ton extrusion press which was installed in 1937 at the Zenith Works, Scotland. The press in the United States is now an aid in war work and should be extremely valuable in the post-war period.

At our Annual Meeting two years ago I stated that war requirements of nickel by the United Nations forced the discontinuance of our long-term economic mining

plan—that we had undertaken a production expansion program involving a capital outlay of nearly \$35,000,000—and that this program called for the opening of additional ore properties, the sinking of mine shafts and the installation of surface and underground plant and equipment, as well as the enlargement of concentrating, smelting and refining works. I emphasized that under this production expansion program the Company is paying a great toll in the form of non-replenishable ore reserves.

I mention this drain on our ore reserves which is serious but not irreparable. It would be less pronounced if we had not suffered a severe labour shortage which prevented mine development work so necessary in times of accelerated ore production. With the end of the war in sight, as we all hope, a long life still lies ahead for the Company's mines.

I also stated that "to compensate in a measure for this unavoidable disruption of our long-term economic program of operations, the Government of the Dominion of Canada has permitted us to amortize within a five-year period the amount of the expansion program expenditures up to a total of \$25,000,000".

There has been considerable confusion over the term "special amortization", which, after all, is merely accelerated depreciation, writing off in five years or less this cost of production which must eventually be applied against earnings, and is usually written off in ten to twenty years. A war-time production expansion program results in larger output, heavier sales, increased earnings and greater taxes. Special amortization agreements permit the writing off of special war-time capital expenditures during the years when the output and sales are abnormally high as the result of these expenditures. By relieving future earnings from the burden of these war-time expenditures, post-war earnings and taxes are made greater and war-time earnings and taxes are made less than otherwise would be the case. Special amortization allowances are a war-time necessity. They make it economically possible to provide the metals in the quantities so vitally needed to win the war and they prevent excess capacity from becoming unduly burdensome when the war ends. No one who is interested in the post-war success of Canadian industry can intelligently oppose them.

Operating a mine while fighting a vital war presents more difficulties perhaps than is the case in any other industry. Demand for the product is so excessive that it becomes impossible to maintain ore reserves, without which output cannot be increased to meet economic

conditions. The mining of "wasting assets" calls for renewed activity on the part of the prospector. Surely the importance of the prospector's work has not been fairly appraised when 84 per cent of Canada's current mine production is coming from discoveries made prior to 1920. This condition truly invites disaster. Government regulations which affect the prospector should be changed without delay if Canada's great future as a metal producer is to be assured.

With the world at war, and our metals used strictly for war purposes, it might not seem necessary to incur the expense of advertising. However, experience has taught us that the name of the Company and its products must appear constantly in the international market and the good-will of our customers retained when we are forced into a long suspension of commercial trading.

During the past year your management continued to be concerned about the international post-war situation and with the necessity for the establishment of a just and durable peace by our political leaders. We believe that nations which can co-operate in waging war can co-operate in keeping peace. The hope for a better world depends on such co-operation, and can be realized only if the people of the United Nations demand it from their governments.

During 1943 a widespread public relations campaign was carried on by us in Canada, the United Kingdom and the United States in the interest of securing a post-war peace in which industry can prosper. That this publicity stimulated interest was evidenced in 92 editorials and by a great number of letters received. Aside from the public service rendered, I believe that the Company has received real benefit from its sponsorship of this campaign.

Nickel and other products of this Company, like those of many other Canadian industries, find their principal markets through the channels of international trade outside of Canada. The years prior to the war witnessed a steady growth of obstacles to international trade such as tariffs and exchange restrictions. During the war actual control and restriction of deliveries of many products is essential. These obstructions to trade between nations are all the creation of governments and are felt primarily by industry and labour.

I trust that with the conclusion of this war and through the co-operation of national governments we may see this trend reversed and that we may have termination or relaxation of these controls and restrictions and obstacles to trade for which there is no justification. I wish most earnestly to solicit the sympathetic attention

and consideration of the Canadian Government, as well as that of all national governments, to this serious problem. Indeed, I consider that if Canada's nickel industry is to regain the world markets which it once enjoyed, considerable relaxation of these trade restrictions must be secured for Canadian industries.

A year ago the general feeling was that it was necessary to win the war promptly and not to consider post-war planning until the Axis was about to capitulate. Since that time a decided change has taken place and it is now felt that an "unconditional surrender" is certain, and that in addition to war work definite plans for the post-war period are imperative. Your Company is working diligently on this project through its technical, development and sales departments. I believe that we are capable of gaining sufficient new business from our war work to make up for any losses to competitive materials. Our metallurgical processes are being studied with the idea of making all possible improvements which may lead to lower costs of production. Following the last world war many process improvements were made and there still exist numerous opportunities to alter plants and equipment and thus make desired savings.

Our research laboratories have been busy primarily on government work and during such other time as was available in solving steel, alloy and other metallurgical problems which we believe will aid us when the war is over.

I repeat that our first job is to win the war. This duty has not changed, though much is being done to prepare for peace.

We had at the end of the year, in all our works, 22,205 employees, men and women. In Canada we had 13,243 men and 920 women. We have now in the armed forces over 5,000 employees, including over 3,500 from our Canadian plants. We are doing our best to arrange for these men and women to return and resume full-time employment.

By June our construction work had progressed to such an extent that the maximum capacity for which we were striving had been attained. However, during the last half of the year it was impossible to hold sufficient men or to secure enough new employees to conduct maximum operations. Before the summer was over we found ourselves 2,000 men short of requirements and our nickel in mine production was down 2,000,000 pounds per month. All efforts to remedy the shortage were made as quickly as possible and are continuing. Fortunately,

sufficient nickel was refined to meet the requirements of the United Nations and stock was actually accumulated at Port Colborne from August to the end of the year. This stock, in keeping with Government policy, cannot be released for consumption.

I said last year "It is my belief that recognition of the principle of collective bargaining is not only desirable but is in the best interests of both management and employees. I think that equal opportunity should be open to both wage earners and business men to organize to advance their respective interests. Both, however, should be controlled by equitable laws if management-employee relationship is to be kept in harmonious balance and the public interest is to be properly served. This is indeed the crux of the labour problem."

Since that time the Canadian labour movement has made rapid progress. The Dominion Government and also the Provincial Governments have considered the subject and have passed certain legislation. It is of interest to report that in May, 1943 we presented a labour brief to Ottawa advocating Dominion-wide labour legislation establishing standards of responsible conduct for employers and labour organizations alike. We believe that this action has served to assist in the establishment of a sound pattern in the field of capital-labour relations.

Under the Ontario Labour Law collective bargaining elections were conducted at Copper Cliff and Port Colborne. As a result of the elections two Local Unions affiliated with the International Union of Mine, Mill and Smelter Workers were certified as the collective bargaining agents. Thus, our employees are organized and already contracts have been negotiated at Copper Cliff and Port Colborne respecting wages, hours, seniority, grievance procedure, and other basic conditions of employment necessary to keep a close relationship between management and labour. These agreements were entered into after most careful study of our operating and employer-employee problems. They give balanced consideration to the interests of employees and to the duty of the Company to exercise effectively the functions of management. We believe that with the same good-will hereafter as was evidenced in the negotiations, the agreements will promote continued harmony in the relations between the Company and its employees.

At last year's meeting I mentioned the shocking number of accidents occurring in both homes and industrial plants. I regret to report that our own accident experience, in spite of our best endeavors, was less favorable than in

1942. The explanation for this lies in the large number of inexperienced workers.

I have maintained that accident prevention is one of the most important obligations of industry. It is fortunate indeed that at the present time the National Safety Council in the United States is conducting an accident prevention campaign that is securing remarkable results.

At last year's meeting I discussed the Company's Retirement System, and named the initial Trustees. This valuable system for the benefit of the employees, financed entirely by the Company, has completed its sixteenth year of operation. The balance in the hands of the Trustees at the beginning of last year was \$2,907,528, to which were added contributions of \$5,105,187 by the Company and \$129,558, the income from the securities held. There was deducted therefrom \$294,424 for pensions, disability and death benefits, leaving a balance of \$7,847,849 at the year-end. In addition to the amounts held by the Trustees, government bonds and other marketable securities of \$16,296,205 are held against the Retirement System Reserve directly by the Company under the control of the Board of Directors. During the year an aggregate of \$365,844 was disbursed by the Trustees and from the Company Reserve in payment of 540 pensions and 106 death benefits. In 1943 pensions were granted to 63 employees, 27 for service and 36 on account of disability.

Contributory sickness and non-occupational accident insurance for all employees whose remuneration is on an hourly or piece-work basis has been in effect for over six years. This insurance provides a weekly income during absence from work on account of sickness or non-occupational accident. The Company contributes approximately 50 per cent of the cost. During the past year cash benefits were paid in 9,623 cases.

The Canadian succession duty is a matter to which we have given much attention and about which I directed a special letter to shareholders on November 10th. You will recall that under the new rulings of the Dominion and Ontario authorities, United States investors are subject to succession duties unless they keep their certificates in the State of New York where our United States transfer agency is maintained or unless the shares are represented by so-called "street certificates". Representations have been made by the Company to the Canadian authorities urging them to revert to their earlier policy so that all United States holdings will again be free of these duties. I think it is important that everything possible should be done to bring about an early reversal of the ruling now

in effect. A complicating factor is that the Federal Government of the United States, and certain of the States, have long been pursuing the similar policy of assessing inheritance taxes against Canadian shareholders in United States corporations. The Company has advocated to the authorities both at Ottawa and Washington the consummation of a further international convention to remove reciprocally these burdens of multiple taxation from both United States and Canadian investors. We understand that this matter is still under consideration and that progress has been made in arriving at such an international agreement.

It is with sincere regret that I bring to your attention the death of Mr. Britton Osler, K.C., on December 11th last. Mr. Osler was a distinguished Canadian long active as a director of this Company. The following resolution passed by your Board of Directors expresses the feelings of the directors and the executives of the Company who dealt with him:

"RESOLVED, that in the death of Mr. Osler we have lost an intimate friend and wise counsellor. For more than thirty years he acted as Canadian Counsel and for the last twenty-one years as a member of the Board of Directors. He served on the Advisory Committee and on the Executive Committee, and he was a Trustee of the Retirement System. In addition to the distinction with which he advised on matters of law, the executives came to rely upon his judgment in business, finance and public affairs. As a Director he took a prominent part in formulating the policies of the Company. Throughout the period in which he served the organization, his personal qualities of integrity and character greatly inspired the admiration of his associates.

"We record Mr. Osler's death with sincere personal sorrow, and pay tribute to him for the many and great contributions he made to the progress of the Company."

The Company also lost an outstanding executive in the death of Mr. Albion James Wadhams on August 22nd last. Mr. Wadhams served the Company for forty-two years and ably led the Development and Research Division from its inception in 1922 until his death in 1943. As I have said at these meetings from time to time, the success of this Company has depended in large measure on the outstanding work of its technical division which Mr. Wadhams conducted so skillfully.

What the future holds in store for us is naturally problematical. I think the simplest way to state our post-war position is to repeat the closing paragraphs of the Annual Report, which were:

"The construction work in the Sudbury District aside from development in two new mines, has been substantially completed so that now, if we have sufficient employees, the Company can produce its maximum output. Your Company's cash position is excellent, it has no fixed debt, its plants are in good repair and are equipped

for low cost production, and measures have been pursued to retain the good-will of consumers of nickel. In comparison with its position after the first World War, the present status of the Company is much sounder in many particulars.

"Our immediate job is to help win the war and to aid in securing a just and durable peace. When this has been accomplished, the Company is well prepared to carry on its business successfully into a long period of world peace."

On the occasion of the Annual Meeting of the Company, which was held at Toronto on April 25, 1945, Mr. Stanley made the following address:

On March 19th there was mailed to each shareholder of record in this Company a copy of its Annual Statement for 1944, and it is hoped that this report has been carefully read.

Annual Reports A recent commercial survey on another company's yearly report to its shareholders might be mentioned at this time. This survey deals with a company which expends a substantial sum of money each year on its report. The recorded results of this survey are surprising. The annual report was considered excellent by the company which prepared it. The survey stated that only about a quarter of the annual reports were read and that the average time consumed in perusing them was about thirty minutes. The survey further stated that the remarks of the President were found to be of most interest, followed in order by financial statements, drawings to illustrate operations, and finally charts, which were rated of least importance. Incidentally, the company considered the charts to be outstanding and believed that they would prove of great interest to its shareholders.

I agree with this survey and believe that it is in the best interest of our Company to limit the yearly report to little more than a comprehensive exhibit of the finances, and furthermore, to expand the address of the President at the Annual Meeting of Shareholders.

Directors During 1944 our Board of Directors suffered severe loss through the deaths of John R. Lamb, Esq., and Colonel The Honourable Henry Cockshutt, who

had each served our Company for many years. The help and friendship of these eminent men will be missed by their colleagues on the Nickel Board. I am pleased to report however that the first of these vacancies has been filled by the election to our Board of one of Canada's most prominent citizens, George W. Spinney, C.M.G., of Montreal. The second vacancy will be filled in due course.

It is with extreme sorrow that I mention the recent death of James Lincoln Ashley, Esq., which occurred on the 6th of last month. Mr. Ashley had been a Director since June 1913 and was known and loved by all of his colleagues. He served this Company as an Executive and Director for forty-three years and will be greatly missed. I trust that his fine character will long be an example for his many friends in the Nickel Company.

Co-operation with Governments Since 1939 the war has taken our entire time and we have worked constantly with the Governments at Ottawa, London and Washington. The war is now in the twilight of its duration and we are proud to record that at no time have we faltered in our efforts to help win a complete victory as quickly as possible.

Trade Obstacles Before mentioning our production figures for the year 1944, I should like to quote the paragraphs in my last year's address dealing with obstacles to international trade, inclusive of a plea made to the Canadian Government to eliminate trade restrictions as soon as it is possible to do so:

"Nickel and other products of this Company like those of many other Canadian industries, find their principal markets through the channels of international trade outside of Canada. The years prior to the war witnessed a steady growth of obstacles to international trade such as tariffs and exchange restrictions. During the war actual control and restriction of deliveries of many products is essential. These obstructions to trade between nations are all the creation of governments and are felt primarily by industry and labour.

"I trust that with the conclusion of this war and through the co-operation of national governments we may see this trend reversed and that we may have termination or relaxation of these controls and restrictions and obstacles to trade for which there is no justification. I wish most earnestly to solicit the sympathetic attention and consideration of the Canadian Government, as well as that of all national governments, to this serious problem. Indeed, I consider that if Canada's nickel industry is to regain the world markets which it formerly enjoyed, considerable relaxation of these trade restrictions must be secured for Canadian industries."

Nickel Output

During 1944 we produced 284,701,556 pounds of nickel in all forms from all sources, which compares with 296,438,177 pounds in 1943. The decrease from 1943 was due entirely to lack of manpower in Canada, which amounted at times to approximately 2,000 men, or about 13 per cent of the requisite force.

Manpower Shortage

It should be realized that a shortage of men in a mine is a very serious matter and means positive curtailment of mining. Unless stopes are continuously developed, production must be lowered until this necessary work is done. A mine which employs a system of back-filling such as ours cannot risk bad accidents and consequently the filling of stopes cannot lapse. It must be emphasized that our loss of production was unavoidable.

Copper Output

Copper produced in 1944 in all forms from all sources, was 310,468,465 pounds, comparable with 318,598,596 pounds in 1943, and now that the war with Germany is closing, the revival of commercial business with the United Kingdom and Continental Europe must be actively pushed. It is indeed unfortunate that, except for war-time arrangements, Canada's copper is barred from the United States, our adjacent

and economic market, by a duty of 4 cents per pound. It is in Canada's interest that the Government at Ottawa should endeavour to bring about a removal of this trade barrier.

With a large tonnage of scrap available and great war devastation existing in many countries, it may be assumed that the copper market will have a slow recovery. I think we should realize, however, that there has been a heavy withdrawal of ore from all copper mines during the war and this, I believe, will in time serve to improve the price structure in the industry.

A sure way to increase the uses of copper is to accelerate research and development in the copper industry, as has been done since the last war in the nickel industry. The Copper Development Association in London has been active since 1933 and we understand that plans are now being made to expand its organization in order to assist in selling copper. When this project is announced by the Association, producers and fabricators of copper should promptly provide sufficient funds to complete the plan.

Platinum Metals

Your Company is now rated the largest producer of platinum metals in the world. Our future refining of these metals at Copper Cliff in Canada and Acton in England will depend upon the future production of nickel. Platinum, iridium and rhodium continue to be utilized in a wide variety of military uses to the exclusion of jewelry and the arts. These military applications include equipment for the manufacture of glass fibre, various electronic devices and aircraft ignition, as well as numerous applications which cannot now be disclosed. Palladium is being used for electric contacts and certain catalytic applications. Sufficient palladium is available for jewelry, where it has gained broad acceptance for rings, settings for jewels, and for large pieces where its lower density is advantageous. The use of both platinum and palladium in dental alloys continues at a high level and the demand continues for the remaining platinum group metals, which have numerous highly specialized uses. Research, advertising and improved selling methods have introduced these metals to the public and sales over the past decade have increased rapidly. In addition to the platinum group metals we had sales of gold amounting to 61,838 ounces and of silver amounting to 1,784,633 ounces.

Financial

At the close of 1944, current assets totalled \$132,861,730 and after deducting therefrom current liabilities of \$26,151,119, working capital was

\$106,710,611, compared with working capital of \$96,935,202 on December 31, 1943, an increase of \$9,775,409. Of this increase \$6,861,423 is represented by higher holdings of cash, short-term securities and government securities which aggregated \$70,947,443 on December 31, 1944, compared with \$64,086,020 at the end of 1943.

As I have mentioned in previous years, it is the policy of your Company to maintain a liquid financial condition. In conformity with this policy, our securities are mainly short-dated issues, the greater part of which consist of government obligations. Of our total holdings of securities at the year-end 64 per cent mature in 1945 and 98 per cent are due before 1950.

Canadian Government Financing

During 1944, the Dominion Government offered for public subscription two Victory Loans which met with favorable response and realized over \$2,900,000,000 in cash applications. This large sum, combined with revenue from taxation estimated as being at the rate of \$2,400,000,000 per annum, is an indication of the magnitude of Canada's war effort in which she can justly take pride.

The Victory Loan campaigns in Canada received full support from this Company. In addition, our employees in Canada, Great Britain and the United States continued their whole-hearted co-operation towards War Loans through pay-roll deduction plans. It is gratifying that over 76 per cent of the Company's employees have subscribed the equivalent of 10.7 per cent of their annual pay for purchasing bonds and war savings certificates. More than 85 per cent of our Canadian employees made subscriptions amounting to nearly 14 per cent of our total Canadian pay-rolls.

Profit and Loss

Our consolidated Profit and Loss Statement shows that the total income was \$170,909,719 in 1944 as compared with \$171,372,523 in 1943. Total costs, inclusive of depreciation, amortization, depletion, retirement system, contingencies, insurance, other purposes, and taxes, were \$143,982,067 as compared with \$140,245,319 in 1943. The difference of \$26,927,652 between total income and total costs is the net profit earned in 1944, as compared with \$31,127,204 earned in 1943. The decrease of profits in 1944 from 1943 is brought about largely by higher pay-rolls, higher fuel costs and higher supply prices, none of which is controllable. It might be said here that the return to employment of our experienced personnel now serving in the armed forces

will substantially increase operating efficiency.

Dividends

On November 12, 1943 I mailed a letter to our shareholders stating that earnings were decreasing and that it might be necessary in 1944 to lower the common dividend. This fore-warning was appreciated, as indicated by communications received. The earnings estimated for the first quarter of 1944 were 44 cents per share. This amount being less than at the rate of \$2.00 per annum, your Directors after due deliberation reduced the quarterly dividend on the Common stock from the rate of \$2.00 per year to \$1.60 per year. The earnings on the Common stock in 1944 were in the first quarter 44 cents per share, second quarter 43 cents per share, third quarter 40 cents per share and fourth quarter 44 cents per share. It may be noted that profits for the year exceeded the new dividend rate but were less than \$2.00 per share.

Inventories

Total inventories of \$43,151,780 are comparable with figures of \$42,798,709 in 1943, \$39,188,450 in 1942 and \$34,785,800 in 1941. While the metal inventories of December 31, 1944 exceeded those of 1941 by \$6,500,000 the weight of copper and nickel in 1944 was actually less than that on December 31, 1941 by 4,600,000 pounds. The inventories of supplies December 31, 1944 exceeded the similar item of 1941 by \$2,000,000. These increases were caused by higher pay-rolls and higher prices for supplies. Fortunately, we have no excessive amounts of war materials which will have to be scrapped or sold at a loss.

Capital Expenditures

Capital expenditures in 1944 were \$4,652,127 as compared with \$5,445,248 in 1943 and with \$12,009,497 in 1942. The amount required for 1945 will approximate \$6,000,000. Of the 1944 expenditures approximately \$3,000,000 was applied in the War Expansion Programme of the Canadian plants. In order to complete this entire work there remains to be expended approximately \$4,000,000, principally required for mine development and mine equipment. In this connection, it will be recalled that by agreement with the Government of the Dominion of Canada we are amortizing \$25,000,000 of these expenditures over a five-year period. Of this amount, \$20,000,000 had been applied by the end of 1944.

Extrusion Press

At the last Annual Meeting I called your attention to the installation in the Huntington

Works, West Virginia, of one of the largest extrusion presses in the world, at a cost of \$1,250,000. The operations of this press in producing seamless Monel, Nickel, Inconel and Copper tubing have been devoted exclusively to United States Army and Navy requirements. The production of seamless tubing for ordnance shell bands was of such importance that at the request of the Army Service Forces of the United States an additional 2,750 ton extrusion press was purchased for the account of the Army and placed in operation in December, 1944 for the production of shell bands exclusively. Installation of the additional press has required the Company to construct substantial extensions to the extrusion and cold draw buildings and to install a new 200,000 lb. draw bench and a radiant tube annealing furnace. Current orders in hand for Army and Navy shell bands assure continued operation of both presses for several months.

This emergency war production has necessarily interfered with the progress of our development of extruded products for commercial uses. It may be expected however that when we again have the opportunity to concentrate on this development we will find that an expanded range of seamless tubing products in our various alloys can be supplied to industry, as has been done for several years by our Zenith Works, Scotland.

Rolling Mills and Foundry We look upon the output of the Birmingham and Huntington rolling mills, which includes many new alloys and new products, as constituting a fertile field for post-war business. We have in mind particularly marine and chemical uses which have increased so rapidly during the war.

I wish to report also that our Bayonne (New Jersey) Foundry is producing welding electrodes and miscellaneous castings from our various alloys. This output has increased steadily for several years and we believe it will continue to expand. In order to round out the output at this plant, equipment is now being installed for the production of precision castings.

Employees At the end of the year, in all our works, we had 21,881 employees, men and women, which is comparable with 22,205 a year earlier. In Canada the force was 13,000 men and 1,009 women. We have now in the armed forces over 5,500 employees, including nearly 4,000 from our Canadian plants. We are doing our best to arrange for these men and women to return and resume full-time employment.

The satisfactory progress of our industrial development depends largely on the proper co-ordination of its

three constituent groups—management, labour and shareholders. I wish to advise that hourly rate production employees in all of our plants in Canada, the United Kingdom and the United States are now covered by formal collective bargaining agreements with organized labour unions. The two agreements covering the employees in the Mine, Mill, Smelter and Copper Refinery at Copper Cliff and in the Nickel Refinery at Port Colborne, which were reported in my last annual address, together with an agreement negotiated in August, 1944 by our Horseshoe Lake Mining Co., Ltd. covering the employees at Ormiston, Sask., served to complete this coverage.

Our experience in operating under these various agreements has been generally satisfactory. However, the strike which occurred at Huntington Works in August, 1944 is an exception. This strike, the first in the twenty-two years' history of the Huntington Works, was brought about through factors beyond the control of the management and was in violation of the Union's contractual commitments to the Company. The strike caused a complete cessation of production of critical war matériel in the entire plant for a period of approximately 12 days. Refusal of the Local Union's membership to obey the order of the War Labor Board to disband the picket lines and return to work resulted in the temporary suspension of the Local's autonomy by the National Organization and at the same time control of the plant passed into the hands of the U. S. Army under an executive order of the President of the United States effective on August 29, 1944. The General Manager of our Works was appointed as Manager for the Army. Although production was resumed immediately, control of the plant was not returned to the Company until October 14, 1944. I might add that there was no financial loss to the Company as a consequence of the Army's control of operations. However, the loss of critical war production for 12 days is not a matter to be measured in terms of dollars and cents.

Accident Prevention Although the rate of operations continued at a high level, with many inexperienced men and women employed, our Frood and Creighton Mines established low accident records last year. Both mines are among the leading contenders for the John T. Ryan Trophy, awarded annually to the Canadian metal mine with the best safety record. Administered by the Canadian Institute of Mining & Metallurgy, the award is presented to the underground mining operation having

throughout the year the lowest number of compensable accidents of over six days duration per thousand men employed.

It is gratifying to state that fatal accidents in all of our Canadian mines during 1944 were the lowest recorded in the past decade. I am also pleased to report that total accidents in our Canadian plants have lessened and the experience for 1944 is considerably better than that for either of the past two years.

Retirement System

I have made it a practice at these annual meetings to give a brief report in regard to the Company's Retirement System. This System provides security to employees in the form of old age and disability pensions and benefit payments in the case of death. Throughout the period of seventeen years over which the System has been in operation, it has been financed entirely by the Company without contributions from its employees. Since 1942 the System has been implemented by a programme of irrevocably setting aside in trust the funds required to meet actuarially computed liabilities. The late Britton Osler, K.C. was succeeded as a Trustee under both the Canadian and United States Trust Agreements by H. C. F. Mockridge, Esq., a Director of the Company. John P. Bickell, Esq. and J. C. Traphagen, Esq., both Directors of this Company, were also elected to the Board of Trustees of the Retirement System.

The balance in the hands of the Trustees at the beginning of the year was \$7,847,849, and during the year they received contributions from the Company of \$4,348,998. The transactions of the Trusts, taking into account all benefits disbursed and all income from investments, resulted in an excess of disbursements over such income of \$33,267. The year-end balance in the hands of the Trustees was \$12,163,580. In addition to the holdings by the Trustees, Government Bonds and other marketable securities of \$15,526,074 are held against the Retirement System Reserve directly by the Company under the control of the Board of Directors. Thus the total assets of the System amount to \$27,689,654.

In the three years that the trusteeship has been in operation an aggregate of \$1,105,558 was disbursed either by the Trustees or the Company in the payment of pensions for 664 former employees and of 328 death benefits. The pensions granted to employees retiring in 1944 numbered 106, of which 63 were service pensions and 43 disability pensions. Benefits were paid during the year for 123

cases of death.

Ore Reserves

Due to its effort to speed victory, our Company during the war has diminished its ore reserves and has been forced to handle enormous tonnages of lower grade ore to supply the nickel requirements of the United Nations. The inability to expand ore reserves by continuous mine exploration is due to our labour shortage, which I have already mentioned. During the five years since the war started, nearly 1,000,000 feet of diamond drilling have been completed in a programme to secure future supplies of nickel ore. When the ore which has been discovered by this diamond drilling is proven, the additional tonnage determined may be as great as the loss in ore reserves caused by the extraordinary ore consumption during the war.

Venezuelan Exploration

As I have previously reported to you, nickel is one of the most widely disseminated elements in the earth's crust, but compared with other metals the workable concentrations are limited. It is essential that the uses which research has created for nickel throughout the world be assured of stable and adequate sources of supply for many years to come. In the circumstances, this Company is constantly on the alert to detect nickel ore deposits of sufficient importance to justify commercial development.

During the year one of the deposits inspected by the Company's geologists gave evidence of justifying exploration. We have secured the exclusive exploration and mining rights and are making the necessary investigations by core drilling and trenching to determine whether the deposit, which is located in Venezuela, South America, is suitable for commercial development.

Petsamo Mine

Last year, under the terms of a treaty between the U.S.S.R. and Finland, the territory in which the Petsamo Mine is located was returned to Russia. As the result of negotiations between Canada, Great Britain and the Soviet Government, Russia agreed to pay Canada for transmittal to The International Nickel Company of Canada, Limited \$20,000,000 (U. S. currency) over a period of six years. On the balance sheet in the Company's Annual Report a reserve of \$6,723,908 was shown, entitled "Reserve for property expenditures in Finland" and the mine was carried at the same figure in the Property Account. When we were forced to leave Finland in 1939, it would have taken an additional

\$3,500,000 and more than a year to bring the mine into production, and the total cost of the property would then have been about \$10,000,000. Our plan was to make Bessemer matte in Finland, which was to be shipped for refining to Canada. Inasmuch as the territory in which the Petsamo Mine is located has been ceded to Russia, I think that Russia's agreement to make the compensation payments is fair and equitable and should not be criticized. Nevertheless, my opinion is that in the long run our Company would be better off with the Petsamo Mine than with the \$20,000,000.

Prospecting As you know, I mentioned at last year's annual meeting the vital necessity of securing Government aid for prospectors. Since the last non-ferrous ore discovered in Canada, which is now being used, is nearly a quarter century old, it is certain that this important matter requires prompt attention. In an endeavour to stimulate public thought on this problem, I recently offered an article on "the prospector" to our press, and I trust those who read this article will voice their opinions as widely as possible.

At the same time I wish to urge those who are interested in Canada's great mining industry to stop and think of the "wasting assets" upon which their business is dependent. The point to be emphasized is that when the ore goes, profit and jobs go also. It is moreover fair to state that unless our taxing authorities give due recognition to the wasting nature of mining assets, irreparable harm will come to the Canadian mining industry.

International Taxation I have stated that the removal of unnecessary restrictions and barriers to international trade is in my opinion necessary for the future of Canadian industrial development. I am pleased to call to your attention two improvements in this respect which have occurred during the past year in the field of international taxation.

Succession Duties (Estate Taxes) In the first instance, by joint governmental action at Ottawa and Washington, the burden of multiple succession duty taxation on Canadian and United States investors has been reduced. An understanding was entered into between the Dominion Government and the United States Federal Government which in general allows a United States shareholder in a Canadian company to subtract the amount of his Dominion succession duty tax from the

United States Federal estate taxes. The agreement is reciprocal so that in general it allows a Canadian shareholder in a United States company to subtract the United States Federal estate taxes from his Dominion succession duty.

The Convention does not touch on the problems presented by the rulings of the Ontario succession duty authorities. These rulings in their general applications to the United States investor in this and other companies in Ontario, impose Provincial succession duty in addition to Dominion and United States Federal and State succession or estate taxes. The Supreme Court of Ontario has decided, however, that the Ontario succession duty could not be validly imposed on shares transferable on registries outside of Canada. The decision was unanimously affirmed by the Court of Appeal for Ontario in February of this year. I am informed that the possibility of an appeal from this decision to the higher courts is under consideration by the Provincial authorities. In the meantime the Ontario succession duty status of many United States investors necessarily remains confused. As I reported at this meeting last year, the Ontario authorities have advised that the shares of this Company owned by non-residents and represented by certificates located in the State of New York are exempt from succession duty liability. I believe that in the long run the Province of Ontario would have much to gain by accepting the decision of the Court of Appeal and accordingly reverting to the policy which it followed for many years prior to 1941 that non-residents are not to be taxed on Canadian shares which are transferable at any place outside of the Province.

I am hopeful also that in time the national governments both at Ottawa and Washington will recognize the advantages of entirely relieving investors from the burden of succession or estate taxes imposed by jurisdictions other than those in which they reside. I regard the Convention as a step forward, but it fails to eliminate the international irritations and misunderstandings resulting from the present situation in which investors in one country are drawn into unfamiliar and complicated taxation imposed by another country.

Income Tax The second forward step in the removal of unnecessary barriers to international trade is the amending of the income tax law so as to give relief to Canadian companies for taxes paid outside of Canada by their foreign subsidiaries. Heretofore it has been true in general that a Canadian company operating

outside of Canada through a subsidiary was required to pay full Dominion income tax on the earnings received from the subsidiary which already had been taxed in the foreign country. The United States corporate income tax laws for many years have given appropriate relief for the foreign taxes paid. As a result Canadian enterprises desiring to do business outside of Canada through subsidiaries were unable to compete on an equal footing with United States companies which can engage in business in their own country or in Canada or enter foreign markets under more equitable tax conditions. I am very glad that the Dominion income tax law was amended last year to remove this inequitable double taxation which interfered with the proper development of foreign markets and foreign business for Canadian enterprises.

White Metals We now live in an age of white metals and I believe that our own nickel copper alloy, Monel Metal, which we originated in 1905, has been a major factor in establishing this age. What was needed to enlarge the white metal field was a steel that would not rust. Such a steel, known as "Stainless Steel", containing an appreciable amount of nickel, was introduced commercially in about 1926 and in recent years its use has grown very fast. The non-ferrous nickel copper alloys, together with the ferrous alloy, stainless steel, are finding new fields of application and their metallurgical advance has been rapid. Of the stainless steels, the one containing 18 per cent chromium and 8 per cent nickel is the best known. We have not in the past made this steel and moreover we do not expect to enter the field of stainless steel production.

Stainless Steel Our interest in the expansion and continued success of stainless steels is very definite and during the past year we have established a section in our Development and Research Division to co-operate with the steel industry in developing technical data of interest both to producers and consumers of stainless steels. This, we believe, will be a great help to our

post-war business as we feel that stainless steel making will be an important division in the steel industry when peace returns.

Conclusion In this address, which attempts to call to your attention many items of interest which have occurred during the past year, it is proper that our post-war prospects should be reviewed. However, before the future is considered, our most serious job still remains with us. We must win this war, for it continues to be our principal objective as it has been since 1939.

The growth of nickel sales has been substantial and continuous since our Development and Research Division was established in 1922. It may be assumed that in a young Company such as ours this increase will continue if supported by able management and by diligent research. This trend of sales growth in the nickel industry greatly exceeds that shown by most other metals. Our sales have increased very regularly and very rapidly since commercial business was resumed after the last war. As an example, the over-all rate of progress during the years 1929 to 1937 inclusive was 65 per cent. Research has been conducted steadily for many years and we again plan to enlarge our technical staff. We have major research laboratories in three countries and seven plant laboratories, all of which are well equipped and well manned. In these laboratories old products are improved, new products are devised, processes are revised, and at all times general research work is continued. No plant re-conversion from war-time products to peace-time products is required. Problems of post-war work and new products have been considered and plans for procedure have been projected.

In conclusion, I am able to say that we face the future with confidence and that we believe the "trend of sales growth in the nickel industry" will continue, and with proper research, advertising and selling activities will assure satisfactory consumption of our many products in a world at peace.

On the occasion of the Annual Meeting of the Company, which was held at Toronto on April 24, 1946, Mr. Stanley made the following address:

THIS COMPANY IS ONE OF THE LARGEST enterprises in Canada and moreover, from the standpoint of aid rendered to the United Nations, it has been a most important war industry. It is also a well known fact that the scope of our various operations calls upon every phase in the economic life of Canada. Now, as peace returns, the sale of our metals constitutes a great factor in Canadian export trade.

For the past six years we have conducted our mining, smelting and refining operations so as to furnish without failure the nickel requirements of the United Nations. Last year, in May, our German enemies were vanquished and shortly afterwards, in August, the Japanese collapsed. During this long conflict our mining program which had been in effect for many pre-war years was altered drastically in order to increase the quantity of our metal output.

The extent of our war effort is forcibly illustrated by the fact that the tonnage of ore which we mined during the war equalled that mined by this Company and its predecessors during the preceding fifty-four years of their existence.

DIRECTORS Before commenting further on the affairs of the Company during 1945 I regret to inform you that the strain of war again has stricken our Board of Directors. In addition to the vacancy which had remained from the death of the Honourable Henry Cockshutt, two further deaths occurred during the year: Messrs. James L. Ashley and D. Owen Evans, M.P. These men, as recorded in the Annual Report, had served the Company as executives with distinction for many years. The vacancies have been filled by the election of Lord Margesson, P.C., M.C., of London, England, Mr. James Stuart Duncan, President of Massey-Harris Company, Limited, Toronto, Canada, and Dr. William T. Griffiths of London, England. Dr. Griffiths, who succeeds Mr. Evans, was elected a Vice-President of this Company and now occupies also the posts of Chairman and Managing Director of our British subsidiary, The Mond

Nickel Company, Limited.

WAR PRODUCTION Rapid changes in the Company's activities took place when fighting ended. It was necessary to adjust production, which had been increased from an average of 192,000,000 pounds of nickel per annum during the pre-war period 1936 to 1939, to an average of 292,000,000 pounds of nickel per annum during 1941 to 1944. At the present time the production of an extra 100,000,000 pounds of nickel per annum, if not consumed, would quickly fill our warehouses and force a complete shutdown, such as actually occurred for a year's time at Copper Cliff after the first world war.

NICKEL PRODUCTION Nickel in all forms from all sources produced by the Company in 1945 amounted to 251,746,277 pounds. I should add that during the six years of war we furnished the United Nations with 1,500,000,000 pounds of nickel. In August, after the war was won, Government controls in Canada, the United States and the United Kingdom were removed and consumers were again free to purchase nickel. Nevertheless, due to the reconversion problems of our customers, metal stocks accumulated rapidly. Output from Copper Cliff was curtailed promptly and prior to the year-end production was reduced to about 12,000,000 pounds monthly, a drop of nearly 50 per cent from our war-time production.

It is of interest to note that no major problem exists in scheduling the production of nickel because of excessive supplies of scrap nickel. Fortunately, the broad diversification of uses for nickel results in the absorption of scrap as produced. This condition is universal throughout industry, even to the point where scrap containing as little as 1 per cent of nickel is readily utilized.

Industrial relations have been critical generally and in consequence the demand for nickel has been stifled to a great extent. Our overseas markets, normally representing more than one-half of the total world

nickel consumption, were completely disrupted during the war.

The manner in which consumers of nickel and nickel alloys rallied around International Nickel when dealing with the supply of metal available is evidence of the good-will which prevailed throughout the war and which the Company still enjoys.

I can do no better than repeat what I said to you last year: "Increasing sales will continue if supported by able management and by diligent research."

COPPER PRODUCTION

Our copper output from all sources, including copper in Monel metal matte, was 271,657,087 pounds in 1945, compared with 310,468,465 pounds in the previous year. Producers of the red metal are now considering actively its future use, and research and development of copper markets may be expected. Canadian copper producers face difficult problems because of the United States tariff wall, the purchase by Washington of large tonnages produced in South America, and the important and adverse effect of foreign exchange, particularly in the United Kingdom and throughout the sterling area.

PLATINUM METALS

The sale of 381,741 ounces of the platinum metals is comparable with 303,394 ounces sold in 1944. Aside from important war uses the increase in the sale of jewelry that occurred has led to an appreciation of the value and utility of the platinum metals in the manufacture of jewelry. Owing to the demand for platinum as a war material the metal palladium became much better known and has in many instances been accepted in its place. It may be said that increased activity in producing and creating markets for platinum metals has made International Nickel a leader in the platinum industry. This recognition has spread throughout the precious metals markets of the world.

GOLD AND SILVER

The sales of gold from our ores were 58,179 ounces and silver 1,601,476 ounces, compared with 61,838 ounces and 1,784,633 ounces respectively in 1944. Although not commonly associated with nickel, nevertheless silver has become an important product of interest to shareholders. Much publicity has been given to discussions on the shortage of silver and an increase in price has resulted from these discussions. It is becoming clear that governments which heretofore were dependent upon silver for coinage are now turning to nickel as a substitute.

SELENIUM AND TELLURIUM

We mine, refine and sell two other metals—selenium and tellurium. Of the former we produced 168,000 pounds as compared with 65,000 pounds in 1944. The glass industry uses selenium as a decolorizing agent for glasswares and, combined with cadmium, for the production of ruby glass. Another important use is for rectifiers in the electrical industry. It is also used in paint pigments and in free-machining steels. Selenium and tellurium are receiving attention for further market developments.

MILL AND FOUNDRY PRODUCTS

During last year the total weight of products from our rolling mills at Huntington, West Virginia, Birmingham, England, and Glasgow, Scotland, was 73,184,989 pounds, comparable with 81,078,050 pounds in 1944. The Development and Research Division and a progressive Sales Division are actively exploiting Monel metal and other nickel alloys.

The total weight of castings, welding electrodes and alloys produced at the Bayonne, New Jersey, foundry was 3,325,495 pounds as compared with 3,592,994 pounds in 1944.

The extrusion press at Huntington, of which I spoke last year, did some remarkable work in 1944 and 1945 in producing 5 inch to 8 inch shell bands from extruded copper and copper-zinc alloy. There were produced 6,900,000 bands weighing 28,000,000 pounds. These operations were of major importance in relieving a "bottleneck" in shell production during the critical period of the German conflict. Our specially designed 4000 ton extrusion press provided an entirely new and very rapid method of producing shell bands. It is now possible to push the development of extrusion techniques for new alloys and extruded products. We are confident that in addition to our standard materials there will be an increasing peace-time demand for products from this press.

BALANCE SHEET

Our balance sheet as of December 31st, 1945 shows current assets totalling \$140,311,459. After deducting therefrom current liabilities of \$18,121,016 the working capital is \$122,190,443 compared with working capital of \$106,710,611 on December 31st, 1944, an increase of \$15,479,832. Of this increase \$8,565,388 is represented by holdings of cash, short-term securities and

government securities which aggregated \$79,512,831 on December 31st, 1945, as compared with \$70,947,443 at the close of 1944.

PROFIT AND LOSS The consolidated profit and loss statement shows a total income of \$148,962,999 in 1945 as compared with \$170,909,719 in 1944. Total costs, inclusive of depreciation, amortization, depletion, retirement system, contingencies, insurance, other purposes, and taxes, were \$123,952,061 as compared with \$143,982,067. The difference of \$25,010,938 between total income and total costs is the net profit for 1945 as compared with \$26,927,652 earned in 1944. The decrease of profits from the previous year is due largely to the advent of the reconversion period and to higher pay-rolls and higher fuel and supplies prices, none of which is controllable.

INVENTORIES At the year-end inventories stood at \$44,455,656 comparable with \$43,151,780 at December 31st, 1944. This increase of \$1,303,876 is due principally to a stock of electrolytic nickel which accumulated rapidly after VE Day, before process curtailment became effective. Higher pay-rolls and higher supply costs are also contributing factors.

CAPITAL EXPENDITURES Capital expenditures for 1945 amounted to \$2,999,282 comparable with \$4,652,127 in 1944. The funds to be expended in 1946 are estimated at \$8,000,000. Results of process experiments in a research pilot plant proved conclusively that a new section should be added to our Copper Cliff smelter. Plans have been prepared and the plant is estimated to cost approximately \$7,500,000. This improvement is directly the result of research work, and will show a substantial saving in smelting operations.

Our strong cash position enabled us to expand our production facilities during the period of the war. Capital expenditures amounted to more than \$40,000,000, all of which was provided solely by the Company. It should be appreciated that the outlay of this money helped to assure maximum war supplies for the United Nations.

DIVIDENDS Quarterly dividends on the common stock were paid during the year at the rate of 40 cents per share. The year's profit, after \$1,933,899 for preferred dividends, left \$23,077,039 which was

\$248,031 less than the common dividends of \$23,325,070. It accordingly was necessary to draw on earned surplus for the amount of this deficiency.

WAR LOANS During 1945 the Canadian Government offered for public subscription \$2,850,000,000 of Victory Loans which met with favorable response and realized \$3,591,000,000 in cash subscriptions. This large sum combined with revenue from taxation, estimated at \$2,304,000,000, measures Canada's very substantial war effort.

The Canadian War Loans in eleven campaigns during the war raised \$12,935,000,000. Our Company subscribed for \$99,200,000 of these bonds, including \$19,000,000 for the two loans issued in 1945. It is pleasing to report that in 1945 over 70 per cent of the Company's employees subscribed to the equivalent of 12.6 per cent of their annual pay for purchasing war bonds and certificates. More than 85 per cent of our Canadian employees made subscriptions of over 18 per cent of our total Canadian pay-rolls.

INDUSTRIAL RELATIONS Progress in our contractual relations with the labor unions in Canada, the United Kingdom, and the United States has been generally satisfactory. However, I must report an illegal strike in violation of the United States War Labor Disputes Act at our Huntington Mill during November 1945. This was settled and the mill is running as usual. I am pleased to say that the plant's management brought this irresponsible action to a satisfactory conclusion.

COLLECTIVE BARGAINING The International Nickel Company believes in genuine and straightforward collective bargaining, it believes in fair wages, and it believes in proper hours of work. I do not think that our employees support the theory of "More Pay for Less Work." It is well known that in many instances where this theory has been tolerated operating costs have increased so much that profits have shrunk to such an extent that unemployment threatens. It does not appear to be generally understood that the average employer's principal complaint is not over high wages as such, but rather over low production.

A great change should take place in collective

bargaining. Discussions should be conducted in a calm atmosphere and not in one charged with artificially created emotion. The mutual objective of bargaining is the satisfactory continuation of work, and work cannot go on in the proper spirit if management and labor have allowed themselves to act and speak as if they were bitter enemies. The employer should enter negotiations with his grievances and demands for the security and rights of management of his company, while the wage earner enters negotiations with his grievances and demands concerning working conditions.

If meetings are properly conducted an agreement should be reached that will be fair to both sides and results will be satisfactory, and should be lasting. However, a continuation of strikes, together with low production and low profits, can lead only to unemployment, depression, and possibly to a change in the form of government. A change in the form of government would be most serious both to wage earners and to employers. Should such a change occur wages would be fixed permanently by the government, the government would ultimately manage companies and free enterprise would be over. The usefulness of labor unions would be ended and management would lose its power to promote the development and progress of industry.

I wish to emphasize that these observations are not made to criticise the way in which collective bargaining agreements have been settled at our plants. On the contrary, it is with much satisfaction that I am able to report that throughout the year the principles of straightforward collective bargaining were observed.

FEMALE EMPLOYEES Employment of female workers in certain of the Canadian operations ceased with the repeal of the Dominion Order in Council under which such employment had been made permissible as a war measure. The loyal and efficient work performed by female labor was summarized extremely well in a speech made by Mr. R. L. Beattie, our Vice-President and General Manager at Copper Cliff:

"Production of nickel and copper in sufficient quantities to assure an Allied victory would have been impossible had the women not stepped into the employment breach early in 1942, when labor was critically short, and the need of our products on the battlefronts steadily increasing."

SERVICE MEN The return of service men imposes obligations which the Company is endeavoring to meet in a spirit worthy of the debt that is owed to these men. With this in mind a representative, himself a service man, has been appointed in each plant to serve as an intermediary between the Company and the ex-service employee. His duty is to see that the ex-service man is returned to work in the most suitable position and to aid him during the first months of his employment. To date 1,350 men have returned and of 3,770 still in service probably 2,250 will return.

QUARTER CENTURY CLUB This Nickel enterprise is now 60 years old, has 16,000 employees, and many of its employees have had long terms of service. A happy result has been the organization of the "Quarter Century Club." This organization was started in Canada in 1930 and followed in the United States and Great Britain during 1938. Employees are eligible for membership upon completion of 25 years of continuous service and when matriculated they receive a gold button emblematic of their membership. The Club now has 336 Canadian members, 637 British members and 116 American members, a total of 1,089.

PROSPECTING There has been no legislative action in Canada during the year designed to encourage and increase prospecting activity. At the last two annual meetings I attempted to direct public opinion to the great necessity of rendering aid to prospectors. The fact that must be realized still is that Canada's great mining industry cannot live unless the prospector continues to do his initial mining work.

ORE RESERVES Due to war conditions our ore reserves have not been published for several years. The figures reported as of 1938 indicated 212,368,000 short tons of ore containing 6,806,000 short tons of nickel-copper. You will recall that at the last annual meeting I mentioned the completion of a large footage of diamond drilling. This drilling was done in an endeavor to offset the loss in ore reserves brought about by the heavy war demand for nickel. It is gratifying to report that this objective has been accomplished and the reserves as at December 31st, 1945 were 217,373,000 short tons containing 6,866,000 short tons of nickel-copper.

There has been brought to my attention occasional criticism that our exploration policy has not been

sufficiently broad. These criticisms are far from being justified, as the following facts indicate.

ALASKA HIGHWAY EXPLORATION

Following a preliminary survey of the area adjacent to the Alaska Military Highway, a comprehensive study of this territory was made late in 1943 and was actively carried on during the field seasons of 1944 and 1945. Two sizable parties properly equipped with the necessary means of transportation and each headed by two competent geologists covered several interesting areas, totalling more than 2,700 square miles. The fact that nothing was found of particular interest to our Company emphasizes that prospecting is expensive, time consuming and not necessarily remunerative.

VENEZUELAN EXPLORATION

At the last annual meeting I mentioned that the Company had secured exploration and mining rights on a property located in Venezuela, South America. Active exploratory work during the past year has disclosed an appreciable tonnage of nickel ore of the silicate type. A large sample of this ore has been received at our research pilot plant in Canada, for chemical and metallurgical testing. Determining the merits of this property must necessarily await the results of experimental work. Completion of a careful appraisal of the various other factors affecting this mining development and operation in South America is of course also necessary.

RUSSIA

Last year I drew to your attention that the territory containing the Petsamo Mine in Finland had been ceded to Russia, under a treaty between Russia and Finland. The U.S.S.R. agreed with the Canadian and British Governments to pay for this property twenty million United States dollars in equal semi-annual amounts over a period of six years. The first two payments, aggregating \$3,333,400, were made in 1945.

ACCIDENT PREVENTION

We are well organized to continue an aggressive campaign to lower the number of accidents in our plants and in our homes. This we consider always an important duty of industry. That we are showing progress is indicated by the awards made to us of the John T. Ryan trophies for "Mine Safety" at the annual meeting of the Canadian Institute of Mining and Metallurgy. In 1944

our Froid Mine won the Regional Award in Ontario and won second place in the Dominion honours. Four of our mines—Froid, Creighton, Levack and Garson—secured the top four places in the Ontario Regional Competition. In a word, we had a lesser number of accidents than ever before and I believe that our accident record is exceptional and shows that strict attention is being given to safety rules and regulations.

RETIREMENT SYSTEM

You are familiar with the Company's Retirement System which provides security to employees through old age and disability pensions and by benefit payments in the case of death. The System has been in operation for eighteen years and is an important link between the Company and its employees. During this period we have had a total of 1,056 pensioners and we have paid benefits on the deaths of 1,311 persons. The total disbursements for these pensions and benefits amounted to \$4,488,887. The disbursements for 1945 from the Trust Funds and from the Company's reserve totaled \$534,134 and covered 717 pensions and 185 death benefits.

There have been occasional questions directed at our Retirement System because of the pensions that accrue to principal officers. The fact is that of the \$4,488,887 which has already been distributed during the life of our Retirement System only \$106,584 has been paid to such officers, which means, I regret to say, that most of them have died in service. We are convinced that men who spend the best years of their lives in advancing Company interests should, when retired, receive a pension, certainly not so meagre as to cause a complete change in their standard of living. Particularly is this needed at a time when income taxes are so high that very little can be saved out of income earned.

Trust funds were established in 1942 for the purpose of implementing the Retirement System. Each year the Company irrevocably contributes and sets aside in trust the funds required to meet the actuarially computed pension liabilities. The balance of funds in the hands of the Trustees at the beginning of the year was \$12,163,580. During the year they received contributions from the Company of \$4,699,588. The other income and realizations of the trusts exceeded the disbursements for pensions and benefits by \$8,390. The year-end balance in the hands of the Trustees was \$16,871,558. In addition to the holdings of the Trustees,

government bonds and other marketable securities of \$13,712,936 are held against the Retirement System directly by the Company under control of its Board of Directors.

The sum of these two amounts totals \$30,584,494 which has been taken from earnings over the past eighteen years to provide security for all of our employees.

PENSIONERS Just a word about our superannuated employees. In a desire to remind them individually that the Company continues to hold an interest in their welfare, and that their years of loyal service have not been forgotten, representatives of the Company each year have visited nearly all of them at their homes. I am pleased to report that they are comfortable and contented in their advancing years. The condition of our Canadian pensioners is particularly gratifying. A large percentage of them own their own homes and the housing conditions of all are satisfactory and none has need for assistance. The reception accorded to the Company's representatives who made the visits was, without exception, most cordial. Much valuable information is being obtained and recorded from these visits, which aids the Company in its determination to provide adequately for these old employees.

NON-OCCUPATIONAL INSURANCE In order to provide security while off the job as well as while on the job a "Group Non-Occupational Accident and Sickness Insurance" plan was initiated in Canada in 1937, and shortly afterwards in the United States and Great Britain. Under this plan the wage earner in Canada and the United States pays 75 cents monthly and the Company pays the balance of the cost. Benefits of \$15.00 per week are paid when disabilities are not compensable by Workmen's Compensation. Weekly benefits are paid for any necessary part of a maximum of thirteen weeks. Since the plan was inaugurated a total of \$1,459,000 has been paid to 55,909 cases. Last year cash benefits were paid to 8,438 employees and this insurance cost the Company \$189,000. I am certain that no money was spent to better advantage.

ADVERTISING With war-time sales restrictions removed, advertising plays an important part in our development of commercial markets. Product advertising in trade papers and by direct mail will be carried on as heretofore.

For many years we have used general advertising to stimulate the development of world markets for nickel. During the past years a general advertising program has been placed in Canadian and United States publications. This activity is being continued with the objective of informing the public how nickel contributes to the conveniences and the necessities of daily life. Nickel can be looked upon as a friendly metal which is generally invisible. Therefore, in the Company's future advertising and publicity there may frequently appear the phrase, "Nickel, Your Unseen Friend."

MOTION PICTURES This Company since 1928 has produced and circulated some forty motion pictures. These pictures tell the story of nickel from mine to finished product and show our plants and operations. Some of the applications of nickel are described. Through a distribution system these pictures have been made available without cost to theatres, technical schools, colleges and universities, and engineering and industrial organizations. It is gratifying to note that the certified attendance at the showings of these pictures has reached a total of over one hundred and ten million people. Perhaps even more gratifying are the many favorable comments received from among this vast audience and their popular demand for more pictures.

At the Annual Meeting Mr. Stanley made the following statement instead of reading the information in reference to Ontario "Succession Duties" which is printed on pages 19 and 20 and begins with the words "I regret to report" and ends with the words "United States transfer agency".

I am happy to report that the Company was informed today that the Government of Ontario has decided to relieve our United States shareholders from the burden of paying Ontario succession duties on our stock.

In my view this action of the Ontario Government is a step forward in the elimination of the international irritations and misunderstandings which result when investors in one country are drawn into unfamiliar and conflicting taxation imposed by another country.

On May 15th a letter in reference to Canadian succession duties was sent to the United States shareholders.

SUCCESSION DUTIES Last year I called to your attention the fact that by joint governmental action at Ottawa and Washington, United States shareholders in Canadian companies are entitled in

general effect to subtract the amount of the Dominion succession duty tax from the United States Federal estate taxes. Reciprocal relief is extended by Canada to Canadian shareholders in United States companies. I regret to report that the Ontario authorities have not yet seen fit to relieve our United States shareholders from the burden of paying Ontario succession duty. This duty is superimposed upon succession and estates taxes payable by the shareholders to the state of residence and to the United States Federal Government.

You may recall that in February of last year the Court of Appeals of Ontario decided unanimously that the Ontario succession duty could not be validly imposed on our shares owned by a United States resident and transferable on a registry in the United States. Adherence to this decision would in my opinion have been a step forward in the elimination of the international irritations and misunderstandings which result when investors in one country are drawn into unfamiliar and complicated taxation imposed by another country. However, the Ontario authorities have appealed the decision to the Privy Council, in Great Britain, which is not expected to act much before the end of this year. In the meantime the Ontario succession duty status of many United States investors remains confused. This confusion discourages the investment of American capital in Ontario. As previously reported, however, the Ontario authorities have exempted from Ontario Succession Duty such non-resident owned shares of this Company as are represented by certificates which are physically located in the State of New York where we have our United States transfer agency.

RESEARCH Before discussing our development and research activities I wish to quote from a letter received from a shareholder, who writes:

"I should like to see included each time the explicit statement that industrial research and development are dividend insurance for the shareholders and job insurance for the employees. It is only by constant repetition that we can get this idea across both to the shareholder and to the employees."

This excellent statement depicts our policy. Industrial research is a heavily intensified factor of post-war development and will certainly be productive of new uses for nickel. I am confident that our recent large expansion of research work will be fully justified and

will be assisted by the return of experienced key men who had been loaned to the governments. This conviction is supported by our own experience and by the knowledge that more and more research is the policy of many of the largest corporations in Canada and in the United States.

We believe that the best way for management to offset increasing wages and decreasing labor efficiency is by process improvement developed through research. This matter of process improvement continues to receive constant attention.

The total cost of our Development and Research Division was \$1,834,114 in 1945 as compared with \$1,624,490 in 1944. The personnel required numbered 490, comparable with 413 in the previous year.

TRADE BARRIERS I have referred to the impact of tariffs and trade barriers on our international business. However, I fear that the public has little knowledge of these barriers which persist to the detriment of the Canadian nickel industry. The Canadian market of itself is inadequate to keep our plants in operation and our employees working for more than a small fraction of a year. The industry is dependent on its markets outside of Canada, and to regain these markets promptly is one of our most important post-war efforts.

Our copper is excluded from the commercial copper market in the United States by a 4 cent tariff wall, and our nickel sales in the United States are burdened with 2½ cents per pound import duty. In virtually all important consuming countries our attempts to re-establish trade are generally hampered by complicated and in some instances prohibitive foreign exchange restrictions and high import tariffs. I cannot emphasize too strongly that the industries of Canada pray that the Government at Ottawa be unremitting in its efforts to expand world trade. This can be aided by reducing exchange restrictions and by eliminating unnecessary tariffs and other governmental trade barriers.

RECONVERSION Reconversion has meant to us little more than the delay required for our customers to reconvert. Our post-war plans which have taken much time and attention are now being put into effect. The problem of re-creating and developing a demand for nickel in overseas markets is receiving special attention, principally from our London office.

New applications, such as the use of "low alloy steels" in place of carbon steels, will require nickel. Two great technical developments, Radar for locating distant objects and Loran for determining one's position, will make peace-time travel by plane and ship safer and better, while micro-wave beam transmission, perfected during the war, will broaden communications. All of these devices employ nickel and nickel alloys in the numerous amplifying tubes and in many cases nickel or platinum is used in the powerful transmitting tubes.

New alloys containing nickel for high temperatures such as gas turbines will be necessary. Heavier electroplating in the automotive and electrical industries requires more nickel. Stainless steel to which we have devoted much technical study will require a large tonnage of nickel. Nickel for coinage is now receiving special attention in all parts of the world.

In addition to the consumption of refinery output there is reason to believe that our mill products will be in demand. For example the maintenance of navies and merchant marine ships will require a large tonnage of Monel metal and other nickel alloys. Large quantities of these products will also be consumed by the petroleum and chemical industries.

CONCLUSION In conclusion a word should be said as to what is expected in the future. We must put into effect promptly many post-war plans which were originated and fully discussed as time allowed during the war. Emphasizing what I have

already said, our Development and Research Division has been increased substantially by the addition of a number of technicians.

With the sudden end of the war our stock of metal increased rapidly before production could be curtailed properly. At the same time there was trade obstruction by tariffs and by exchange restrictions. However, it is pleasing to state that now there are a great number of uses for nickel which did not exist before the war.

During pre-war years, starting in 1921, commercial consumption of nickel through research, development and engineering sales grew to approximately 90 per cent of the total world market. This compares with a previous nickel consumption of about 90 per cent for armament uses and 10 per cent for commercial applications.

During the recent war nickel was a vital necessity for the armed services, and even after our great war increase of 100,000,000 pounds per year there was no excess of nickel to meet the demands of the United Nations. The reason for this great consumption is the beneficial qualities imparted to steel and to non-ferrous alloys by the addition of nickel.

As these facts are realized it may be assumed that as the period of re-adjustment proceeds Canada's great nickel enterprise, now well fortified in every particular, will resume its upward trend and continue to occupy its place as an expanding industry.

On the occasion of the Annual Meeting of the Company, which was held at Toronto on April 30, 1947, Mr. Stanley made the following address:

THE YEAR 1946 was the first full post-war year. During this period much has been done in all parts of our Company. Markets for the metals we mine have changed. A new major nickel product has been developed, prices of our output have been adjusted and much has been accomplished by our

Development and Research Division.

We have had a terrific world war lasting six years which has borne heavily on this well established Canadian international industry. While the fighting has ended, we have not yet achieved the kind of a

peaceful world for which we fought. To get that will require continued effort and sacrifice, and a demonstration of the capabilities of a free society.

DIRECTORS I refer with regret to the death of Thomas Morrison, Esq., an able director known and loved by all, who had served the Company with distinction for thirty years. I wish to report that Mr. Morrison's place on the Board of Directors has been taken by Laurance S. Rockefeller, Esq.

ANTI-TRUST SUIT In my letter to shareholders of June 7th, 1946 I reported that the United States Department of Justice had initiated a civil anti-trust proceeding in the Federal Court in the State of New York against this Company, its United States subsidiary and three of its principal officers. The Company filed its answer in the proceeding on October 23rd, 1946, denying any violation of the United States anti-trust law. On this occasion I would simply repeat that we are confident the United States Courts will not sustain the position taken by the Department of Justice.

NEW PRODUCT During the past four years intense research in our laboratories and plants in Canada developed a new product, nickel oxide in sinter form. A plant to produce this material is being constructed at Copper Cliff and should be completed this year. The Nickel Oxide Sinter will afford a new form of nickel for alloy steel and stainless steel making.

NICKEL PRICE The price of electrolytic nickel in the United States had not been changed since 1926, except for a small duty reduction in 1939. It was necessary to adjust the price to offset the substantial cost advances during recent years in mining, smelting and refining. Our contract price for electrolytic nickel from Port Colborne has been set at 35 cents per pound, equal to the previously published spot price. The new figure includes the existing 2½ cents United States import duty which the Company continues to absorb. The price to general contract customers was formerly 31½ cents per pound. A point of international interest is that the United States price of nickel has now been brought into line with the world price, which remains at £ 190 per long ton in London.

NICKEL SALES For the greater part of the year nickel production was about 50 per cent of

capacity but during the final quarter output was raised to over 75 per cent of capacity. Sales were low during the first half of the year due to strikes in our principal consuming industries, such as steel and automotive. Sales of nickel in all forms amounted to 201,103,234 pounds compared with 201,572,987 pounds in 1945, about equal to the maximum sales in the pre-war years. The geographical distribution of our nickel sales has changed greatly. Russia, formerly one of our important markets, has not been taking our nickel since the end of 1945 and is developing the Petsamo nickel mine. Both Japan and Germany have been eliminated completely as industrial consumers. Sales in the United States and many smaller countries have increased.

COPPER SALES There is a strong world demand for copper and this Company is endeavoring to renew its export trade with former customers in the United Kingdom and on the Continent.

Our refined copper sales in 1946 were 149,777,060 pounds comparable with 215,723,220 pounds in 1945. The major portion of our sales of export copper is being made under contracts with the United Kingdom Ministry of Supply and these contracts for the year 1947 now cover 75 per cent of our exportable production. The balance is sold in European and other foreign markets.

Copper prices improved during 1946. This improvement has continued. During the year while the world price advanced from 11¾ cents (f.a.s. New York) to 19.7 cents per pound, the Canadian price remained unchanged at 11½ cents (Montreal). In January, 1947 the Canadian ceiling price was raised to 16⅝ cents in comparison with the world price of 20 cents.

PLATINUM METALS Sales of the platinum metals in 1946 were 320,794 ounces, comparable with 381,741 ounces in 1945. When platinum price control was removed last April the United States market rose to the world price. This was occasioned by a general shortage due to war use and demand from the jewelry trade. The United States demand for platinum will, we think, continue.

Palladium held its place in the jewelry trade notwithstanding available platinum and white gold. Its position in dentistry and in the electrical field was strengthened during the war.

GOLD AND SILVER Sales in 1946 were 46,159 ounces of gold and 1,062,004 ounces of silver, comparable

with 58,179 ounces and 1,601,476 ounces respectively in 1945. Removal of the price control of silver in Canada last April permitted us to obtain the world price. As stated last year the high price of silver has resulted in the use of nickel as a monetary substitute in many countries.

SELENIUM AND TELLURIUM Our ores also contain selenium and tellurium which we refine. During the year we sold 279,103 pounds of selenium as compared with 169,688 pounds in 1945. As stated last year selenium is used in producing glassware, for rectifiers in the electrical industry, for paint pigments and in free-machining steels. Tellurium is used in the manufacture of hard rubber, lead alloys and free-machining copper. The amount sold in 1946 was 7,617 pounds compared with 5,930 pounds in 1945.

MILL AND FOUNDRY PRODUCTS The total of our world sales of mill and foundry products in 1946 was 70,528,539 pounds as compared with a yearly average of 69,721,798 pounds during the war period. To gain efficiency the United States sales order department for mill products was moved from New York to Huntington, W. Va. By this change we provide greatly improved service for our customers and also make a substantial saving. The sales order department of the foundry was moved to Bayonne, N. J., which quickens deliveries and pleases our customers.

A plant for the manufacture of precision castings has been completed in Bayonne and operations have started. These castings provide intricate cast shapes which require no finishing. The castings are accurate and have the appearance of machined metal. The initial capacity of this plant is 25,000 pieces per week.

Another foundry product, Ni-Rod Welding Electrode, developed principally through research, was established last year. This rod is for welding cast iron and we believe that research has developed a very valuable nickel product.

CAST IRON AND NICKEL STEEL Consumption of nickel in cast iron, particularly Ni-Hard for abrasion resistance and high nickel bearing Ni-Resist for corrosion resistance, expanded substantially.

The various alloy steels were the leading outlet for nickel. There has been a large increase in the tonnage of high strength rolled steels containing nickel, which are used in the transportation industries. The triple

alloy steels (containing nickel, chromium and molybdenum), of war-time development, have been retained to a considerable extent in the post-war period. With the older high alloy grades these steels provide, in a single series of alloy steels, performance to meet a wide range of industrial engineering requirements.

NIMONIC ALLOYS The Nimonic alloys developed in the Mond laboratories were adopted in Great Britain during the war as standard material for blades and other parts in jet engines and gas turbines. Aircraft equipped with Nimonic blades hold the world's speed record. The use of Nimonic is being extended to engines designed for commercial development. In the United States we have developed another high temperature alloy, known as Inconel X, which is being widely used for forged disks, for sheets in combustion chambers and tail pipes. It is being tested for forged blades. The strength and corrosion resistance of Inconel X is being applied to other high temperature components, such as springs which operate up to red heat.

STAINLESS STEEL Another group of nickel-containing alloys which I have mentioned at previous meetings and which offer promise of even greater usefulness are the stainless steels. The chromium-nickel grades, which currently comprise more than two-thirds of the total tonnage produced, hold great interest for the steel industry and for this Company particularly.

These versatile alloys combine permanence and pleasing appearance with strength properties, formability and weldability of value to manufacturers of a wide range of equipment. The utilization in quantity of such steels for consumer products for the home, restaurants, hotels and public institutions has been supplemented by a growing industrial consumption in transportation, chemical, paper and pulp, textile and many other industries. In these markets a large percentage of all stainless steels used contain nickel and the nickel content is 8 per cent or more.

Stainless steel production in the United States has shown steady growth and it reached roughly 550,000 ingot tons in 1946. This production volume is five times as great as that of 1936 and it consumed over half the nickel supplied to the steel industry which is still the largest single consumer of this metal. To make this large tonnage of stainless steels in excess of 40,000,000 pounds of primary nickel were required.

A section has been established in our Development and Research Division to co-operate with the steel industry and with users of stainless steels. Our interest in the expansion and continued success of stainless steels is very definite.

ELECTRO-PLATING

Recovering rapidly from drastic war curtailment nickel plating consumed about 75 per cent more nickel last year than the pre-war average. The plating industry is increasing the production rate and is buying new plating equipment and generators. Consumption is mainly for the nickel protective base used under chromium on automobile trim and in such fields as electrical appliances, furniture and plumbing. Automobiles are by far the largest outlet. Labor saving Bright Plating processes were introduced by distributors of nickel anodes before the war and are now being improved by their service laboratories. Among other technical advances, our Huntington mill has improved an anode bar for high speed plating which has almost trebled the demand for rolled anode bars. Typical new developments supplementing the decorative field are the building up of worn shafting, nickel electro-coated chemical equipment and special electro-deposited shapes. These and other new developments will help maintain a useful plating tonnage.

TRADE BARRIERS

Unless Canada and the United States, whose interests and aspirations have so much in common, can take the lead in removing trade barriers between themselves, other nations are not likely to act along such lines. The tariffs on the movement into the United States of the products of our own Company are outstanding examples of trade barriers. These barriers can and should be removed for the benefit of the importing as well as the exporting nation.

The United States now bars Canadian copper from the United States market by a duty of 4 cents per pound. This barrier is retained notwithstanding that the United States is now consuming more copper than it produces and it appears that this is likely to continue. The duty has forced Canadian producers to establish regular market outlets in other parts of the world and has prevented the United States consumer from having equal access with others to the great Canadian source of supply. Permanent removal of the copper duty would help protect the dwindling United States supply and remove from the consumers the risks of shortages in this important and strategic metal. It would lift from the

Canadian producers the burden of transporting their copper to distant markets instead of to the logical adjacent market in the United States.

The United States also imposes a duty of 2½ cents per pound on the importation of refined nickel despite the small production from any United States territory. Thousands of United States consumers would benefit by the removal of this duty. Costs would be reduced and they would be encouraged to increase the use of high-quality nickel containing products. Correspondingly, the demand for Canadian nickel would be stimulated and Canadian production and employment would be placed on a firmer foundation. We have been co-operating with United States consumers of nickel in an attempt to bring about a prompt removal of this duty. We have announced that our policy will be to pass on to our customers the amount of the duty saving when achieved.

General tariff negotiations are now proceeding at the International Trade Organization meeting in Geneva and I urge the Canadian Government to bring about the elimination of tariffs against Canadian mine products, particularly the United States 4 cent tariff on copper and the 2½ cent tariff on nickel.

Our shareholders can assist in the efforts of this Company to have these duties removed and to promote generally the flow of world trade. They should support in every way possible the elimination of unnecessary governmental trade barriers.

SUCCESSION DUTIES

On May 15th last I addressed a circular letter to our United States shareholders advising them of the policy announcement by the Treasurer of Ontario relieving them from liability for Ontario succession duties. I am glad to be able to report to you at this time that a decision was rendered on October 10th, 1946 by the Privy Council in Great Britain. This decision established that shares in our Company held by a decedent domiciled in any state of the United States are not liable to Ontario succession duty.

The Dominion of Canada has entered into special agreements with the United States and Great Britain under which the estates of our shareholders resident in both countries are subject to Dominion succession duties. However, in accordance with the provisions of the agreements, the amounts of the Dominion succession duties may in general be subtracted from the Federal estate taxes in the case of deceased United States

shareholders, and from the British death duties in the case of deceased British shareholders. The United States agreement is effective from June 14th, 1941 and the United Kingdom agreement, with certain qualifications, is effective from January 1st, 1945.

FINANCIAL The Funded Debt of Canada stood at \$3,388,000,000 on March 31st, 1939 and at \$16,807,000,000 on March 31st, 1946. The increase in the debt of the United States is in even greater proportion. These onerous loads will continue to present difficult problems to industries and taxpayers in both countries for years to come.

A fact that should be stressed in discussing Company finances is that our operating costs have increased materially during the past ten years, due to factors beyond our control. Furthermore, having in mind that all of our financial figures are stated in United States dollars, the recent exchange adjustment which lifted the Canadian dollar to parity with the United States dollar has, in turn, lifted our Canadian costs by about 10 per cent. On the other hand, cost increases have been partially offset by process improvements. Recent increases in our metal prices will help materially.

BALANCE SHEET Our balance sheet at the year-end shows current assets of \$154,976,764 and current liabilities of \$16,980,702. This indicates working capital of \$137,996,062 as compared with \$122,190,443 on December 31st, 1945, an increase of \$15,805,619. Total cash and securities amounted to \$94,405,336 as compared with \$79,512,831 last year.

Inventories at December 31st, 1946 were \$44,658,827 as compared with \$44,455,656 for 1945.

PROFIT AND LOSS The total income for 1946 was \$134,429,340 as compared with \$148,962,999 for 1945. Our total costs inclusive of depreciation, depletion, retirement system and taxes based on income were \$104,747,988 as compared with \$123,952,061 in 1945. The difference between total income and total costs shows \$29,681,352 of net profits for 1946 as compared with \$25,010,938 for 1945.

Perhaps for clarity we should show how this Company's income for 1946 was used. The total income was \$134,429,340. This was expended as follows: pay-rolls, supplies and services \$84,797,936; retirement system \$2,614,464; taxes based on income \$10,246,531; capital expenditures \$3,775,509; depreciation and

depletion \$7,089,057; shareholders \$25,258,969 and balance \$646,874; total \$134,429,340.

CAPITAL EXPENDITURES Capital expenditures for 1946 were \$3,775,509 as compared with \$2,999,282 for 1945. A larger outlay in 1947 will be approximately \$10,000,000. The increase is due principally to a requirement of about \$8,000,000 for completing the plant to manufacture Nickel Oxide Sinter for the market and intermediate sintered products for our nickel refineries. A further major item is the general rehabilitation of the Mond plants costing about \$1,000,000. We will continue changing in the Port Colborne electrolytic refinery from a nickel sulphate electrolyte to a nickel chloride electrolyte. This work is about 80 per cent done.

DEPRECIATION AND DEPLETION Depreciation and depletion properly calculated are important charges in determining our costs. The former is an amount which varies with the nature of the assets involved and experience largely determines the figure adopted. Depletion is taken on our books as follows: a factor is determined by dividing the book value of the ore reserves by the pounds of metal contained. The annual depletion reserve is then determined by multiplying the sales of metal made during the year by this factor. Our figures were depreciation \$5,366,416 and depletion \$1,722,641 comparable with \$5,230,014 and \$1,926,323 respectively in 1945.

DIVIDENDS We have of record 82,595 common shareholders and 8,069 preferred shareholders, including individual persons and others such as nominees and institutions. For the common the average record holdings of individual persons is 82 shares, and for the preferred (on the \$100 par basis) it is 19 shares.

Quarterly dividends on the common stock were paid at the rate of 40 cents per share. The 1946 profit, less \$1,933,899 paid for preferred dividends, left \$27,747,453, which, after disbursing \$23,325,070 for common dividends, left \$4,422,383 for earned surplus. The Board of Directors has changed the date of payment of common dividends in general from the last day of the quarter to the 10th day before the end of the quarter.

RETIREMENT SYSTEM The Company's Retirement System, on which I have reported to you annually for many years, had no unusual changes

during 1946. During the 19 years in which the System has been in operation, we have paid pensions to 1,187 persons and death benefits to 1,420 beneficiaries. The total payments for pensions and death benefits amounted to \$5,046,333 to the end of 1946.

Until 1942, your Company assumed direct responsibility for the payment of both pensions and death benefits. Toward such payment no employee before or since that date has made any financial contribution. As reported to you at that time, it was deemed advisable to commence the irrevocable transfer to Trustees of the assets of the Retirement System. As a result of such transfers to date, the balance in the hands of the Trustees at the beginning of 1946 amounted to \$16,871,558 and during the year a further sum of \$3,790,371 was contributed by the Company. There was an increase of \$1,217,757 in the assets of the Trusts arising from the adjustment of the rate of exchange of the Canadian dollar. The income earned by the Trusteed Funds was \$158,287 in excess of disbursements for benefits during 1946 and the balance at the year-end amounted to \$22,037,973. To this sum in the hands of the Trustees should be added \$13,286,112 in Government and other high grade securities which are still held under control of your Board of Directors against the Retirement System liabilities.

ACCIDENT PREVENTION

We continued in 1946 an aggressive campaign to lower the number of accidents in our mines and plants and in our homes. That progress is being made is indicated by the fact that our Levack Mine last year won the John T. Ryan trophy for "Mine Safety" which is the Dominion honour awarded at the annual meeting of the Canadian Institute of Mining and Metallurgy. Our five mines—Levack, Creighton, Frood, Garson and Murray—won the top five honours in the Ontario Regional Competition with the Levack Mine taking first place. In a word, we had a lesser number of accidents than ever before. This record is exceptional and shows the effect of the special attention that is being given to safety rules and regulations.

EDUCATION

For the past six years post-graduate scholarships have been given by this Company to students in three Canadian universities: Queen's, Toronto and McGill. A further program of co-operation has now been established with educational institutions in Canada, Great Britain and the United

States which offer courses in mining, metallurgy and engineering.

The objects are to assist in the better training of scientists; to extend their knowledge of nickel, copper, platinum and the platinum metals; to encourage applications of the results of research to metallurgical industries.

This enlarged program will begin in 1947 and we trust will continue for many years. It will include fellowships for post-graduate study and a wide distribution of our technical publicity.

In Canada the three scholarships are awarded annually. Exhibits and technical publicity will be given to libraries, faculties and students in 20 educational institutions. The distribution of technical papers will be under the direction of our Development and Research Division.

For Great Britain a fund has been established for resident and traveling fellowships over a period of years. The fund will be administered by a committee representing five British technical societies, and The Mond Nickel Company, Limited.

In the United States six two-year fellowships will be awarded bi-annually over a period of twelve years.

During the same period exhibits and technical publicity will be distributed to the libraries, to 1,200 teachers and to 25,000 students in more than 50 educational institutions. As in Canada, this work will be under the direction of our Development and Research Division. As rapidly as possible the program of publicity will be offered to all engineering schools.

EXPLORATION There is a vast quantity of nickel in the earth's crust, the amount being in excess of copper, zinc and lead combined. Unfortunately, nickel does not segregate as many other metals do. Where nickel concentration does occur either of two types of ore are found. The first contains sulphide minerals such as we have in our Canadian mines and the second contains oxide minerals such as are found in the mines of New Caledonia. Sulphide and oxide ores usually require different methods of nickel refining. The former, such as ours, require fire methods and the latter, particularly when low grade, require wet methods.

In our continuing search for mineral deposits, we have been the first company in Canada to adopt the

use of the airborne magnetometer. This equipment, used as a war-time development for the detection of submarines, has been demonstrated to be a useful peace-time means for reconnaissance surveys in geophysical prospecting. By this method large areas can be rapidly surveyed and the location of such anomalies as may be present can be accurately determined. We have already flown many linear miles of airborne magnetometer prospecting and much additional work of this character is contemplated.

Further exploratory work has been done on the Venezuelan nickel deposit. As yet we have no conclusive results. We are still studying this property.

ORE RESERVES The Company's proven ore reserves on December 31st, 1946 stood at 217,142,000 short tons as compared with 217,373,000 short tons last year. Diamond drilling has been increased and it is quite possible that more reserves will be developed in this way.

COINAGE Among the outstanding developments in nickel coinage during the year were: the substitution of pure nickel for part of the silver coinage in India; the resumption by Canada of the issuance of pure nickel five-cent pieces; the replacement of the British silver coinage by a cupro-nickel issue; the resumption by the United States of minting the pre-war five-cent piece in cupro-nickel and the resumption by Luxembourg of the issuance of one-franc pieces in cupro-nickel. France has also made use of cupro-nickel in minting new ten-franc pieces. Many other countries are contemplating the use of, or the return to, pure nickel or nickel alloy coinage.

It seems clear, from the views expressed in the Press and in Parliament during the passage of the British coinage bill, that pure nickel was generally accepted as being the best metal for coinage. Nickel would probably have been chosen for the British coinage had it not been for the fact, as stated by Government spokesmen, that the British Mint was not equipped to handle pure nickel whereas it could start production of cupro-nickel coins without delay.

Pure nickel is well suited for coinage because of its appearance, resistance to wear and difficulty of counterfeiting. The fact that it is strongly magnetic further aids this last quality. The metal has been used in alloy form for coinage purposes since 1850 and the first pure nickel coins were issued in 1881. Up to the present

time, over one hundred governments have used nickel, either in its pure state or as an alloy, as a part of their coinage systems at some time during their monetary history.

PUBLIC RELATIONS Our Company has always believed that free enterprise, carried on with a full sense of responsibility to the public, offers the greatest opportunity for advancing the well-being of our people. Too little has been done by those in positions of leadership in business and industry to provide the public with the facts on the integrity and benefits of the free enterprise system. We have established a Department of Public Relations to give information on the meaning to the public of the operations and activities in which we are engaged. I believe this department will prove of great aid in securing the good-will and friendship of the vast public.

LABOR RELATIONS This Company's negotiations with organized labor are a most important function of its management. With regard to labor relations, it is gratifying to report that our experiences under collective bargaining agreements with various unions representing the production employees at our plants in Canada, the United Kingdom and the United States have been generally satisfactory, despite the disturbed labor conditions so prevalent in industry. There is no reason why this should not continue in the future, providing, of course, that genuine collective bargaining prevails. Provision should be made that such labor legislation as may be enacted consequent to the current governmental deliberations in both Canada and the United States will be equitable to management and labor alike, and will be impartially administered. The interests of both labor and management must be promoted and the public must be protected against abuses by either.

ADVERTISING Trade paper advertising, direct mail activities and participation in industrial shows are important adjuncts to our sales and development work.

Our national advertising in newspapers and magazines, which we started in 1932 to inform Canadians what nickel means to Canada, has been continued. The 1946 series indicates that only 3 per cent of the nickel mined in Canada is consumed within the country. It stresses the importance of exporting

Canadian goods to make possible the importation of goods required in Canada.

Our national advertising in the United States in newspapers, farm papers and magazines with circulations totaling 30,000,000 informs the public of the contributions which nickel is making to everyday life.

Advertising in Great Britain is being used effectively as part of the educational and promotional means of assuring nickel's part in re-building the position of British products at home and in world markets.

In compliance with requests for general information about nickel we distributed in pre-war years over 15,000 copies of a pamphlet "The Story of Nickel." To meet continuing demands for information about nickel there has been prepared a booklet "The Romance of Nickel" which has been made available recently. The first printing has been exhausted and a second edition is now being prepared.

The Canadian Mining Journal featured International Nickel in a post-war special issue last year. It is primarily of a technical nature and is believed to be as complete an article about a mining company as has ever appeared.

Circulation of motion pictures produced by the Company has been continued. Audiences totaling 4,000,000 have attended these showings in 1946. A new picture "Nickel Tales" has been prepared and is being shown in Canada and in the United States.

The Company's promotional program is costly but we think necessary and profitable. Expenditures in 1946 were \$2,232,178 as compared with \$1,736,853 in 1945.

RESEARCH Research has played a very important role in the progress of this Company and it has proven good insurance for its prosperity. We have a striking example by comparing market conditions to-day with those which existed after the first World War. We then faced re-adjustment without a backlog of industrial uses for our products and found market opportunities extremely limited. To-day our products are in real demand and many new uses are in a state of development. Modern industry progresses more effectively with nickel and its alloys.

The efforts directed toward developing markets cover a broad range, from forward-looking fundamental research which may have no immediate commercial applications, to the more specific type where improved products or new uses are objectives.

While many ideas are worked out in the research laboratories, development work on the application of these ideas to industry is an equally important phase of the Company's activities. Although laboratory results feed development work, it is equally true that the problems and possible uses of nickel discovered in development work stimulate further research. It is important to have close contact with industry and with the engineers, metallurgists, managers and those others responsible for selecting materials. This has resulted in the expansion of our Development and Research Field Sections to twelve units located in important industrial centers in Canada and in the United States. There has been an expansion of our development organization in England and the re-establishment of Technical Bureaus in France, Italy and Belgium.

A major aspect of our research program is the development of process improvements in our own plants. We now have three large international research laboratories and seven plant laboratories, all located in Canada, the United Kingdom or the United States. Only by constant research directed towards the more efficient recovery of our metals is it possible to offset increasing cost factors over which we have no control.

CONCLUSION I have endeavored to discuss many important matters which your management faced during the year 1946. In concluding my remarks I cannot accurately forecast the future of our business but I will venture an opinion on the present difficult industrial conditions.

To my mind what industry vitally needs is increased production caused by a continuity of operations. This can only be brought about by a prompt change of mental attitude on the part of our citizens. Then I think a solution can be attained by proper new laws, fair to labor, management, customers and shareholders alike. The world which we cherish is passing through great and serious changes and has amassed enormous debts

during the past ten years. It is now evident that we must work harder and longer and possibly accept less

remuneration for our efforts. Only in this way I think can prosperity be continued.

On the occasion of the Annual Meeting of the Company, which was held at Toronto on April 28, 1948, Mr. Stanley made the following address:

INTERNATIONAL NICKEL Your organization is a Canadian international mining company which has branches in Great Britain and in the United States. In Canada the Company employed 12,750 individuals during 1947. It used great quantities of materials in its Canadian plants. Operating and construction supplies were consumed as follows: 617,600 tons of coal, 170,500 tons of coke, 16,000,000 gallons of fuel oil, 41,540,000 board feet of mine lumber and timber, 20,300 tons of steel, 14,400 tons of chemicals and explosives, 1,151,300 tons of fluxes and \$11,200,000 of miscellaneous supplies. We consumed 119,300 electric horsepower. Freight of \$6,000,000 was paid to Canadian railroads. Canadian taxes and Government duties amounted to \$13,600,000. Expenditures for plant improvements in Canada aggregated \$8,100,000. Altogether, the cost of conducting our operations in Canada, including wages and salaries, totaled \$81,000,000.

In addition, 4,000 persons were employed and \$20,000,000 were spent to conduct our business and operate our plants in Great Britain and Europe. Furthermore, 3,000 individuals were engaged and \$35,000,000 were expended in selling our products and operating our plants in the United States.

Thus, 19,750 employees and \$136,000,000 were required in 1947 to run the entire Company.

MILL AND FOUNDRY PRODUCTS We refine in our plants nickel, copper, cobalt, selenium, tellurium, gold, silver and the platinum metals. The Company's rolling mills and foundries process part of these metals into rolled nickel, Monel, Inconel, Nimonic and other alloys. Sheets, rods, tubes, wire,

forgings and castings are made. These commodities are produced in our rolling mill at Huntington, West Virginia, in our Wiggin rolling mills at Birmingham, England, and Glasgow, Scotland, and in our foundry at Bayonne, New Jersey.

Sales of mill and foundry output were 76,818,491 pounds in 1947 compared to 70,528,539 pounds in 1946.

Our mill products have had a steadily expanding growth for many years. Among current demands for Monel that of the petroleum industry is important. Monel and "K" Monel are being employed in the corrosive oil wells of West Texas in pumps, sucker rods, gas lifts, balls and seats of valves and for other pieces of equipment.

The consumption of Ni-Rod for welding cast irons has expanded appreciably and provides a production item of importance for the Bayonne Works.

During the year, the 25th Anniversary of the beginning of production at the Huntington Works was observed. An Open House, the first since the war, attracted about 17,000 persons, a fifth of Huntington's population, including many families of our employees. A real interest in our activities was shown by the visitors.

WHITEHEAD METAL PRODUCTS Our wholly owned United States subsidiary, Whitehead Metal Products Company, Inc., employing a force of 437 persons, distributes our nickel and mill products, as well as non-company metals, throughout the north-eastern states. This company has done extremely well and in 1947 sold 38,654,533 pounds of metals.

**ALLOY
METAL
SALES**

Alloy Metal Sales Limited, a subsidiary with its warehouse in Toronto, distributes nickel and nickel alloys throughout central Canada. Its sales have increased steadily for the past four years and are in step with the increasing commercial activity of the country.

**UNITED
KINGDOM
PLANTS**

I spent five weeks during the early fall last year in Great Britain. It gives me great pleasure to tell you that improvements have been made in the carbonyl nickel process at the refinery in Clydach, Wales. A new copper sulphate plant has been built and the headquarters of the Chemicals Division has been expanded. Costs have been lowered.

Our Wiggin rolling mill in Birmingham, England, is operating at record peace-time capacity and is doing a large business in blanks for nickel coinage. Its plant in Glasgow, Scotland, is also busy. Wiggin continues to be the largest producer of wrought nickel products in Europe.

The precious metals refinery at Acton, England, is running satisfactorily and great attention is being spent on establishing low costs for refining our platinum metals.

Birlec Limited, our electric furnace manufacturing company, a subsidiary of The Mond Nickel Company, Limited, is located in Birmingham, England. At this plant, orders are being received which assure another profitable year.

NICKEL

The Company's principal metal is nickel. Sales of this product in all forms in 1947 were 205,278,868 pounds, comparable with 201,103,234 pounds in 1946. This volume was attained without trade with Germany, Russia or Japan.

Our United States price was stable from 1926 to 1946 when an increase was made to 35 cents a pound. A reduction of $1\frac{1}{4}$ cents per pound became effective January 1st, 1948 simultaneously with a like reduction in the United States import duty on refined nickel provided for in the recently signed reciprocal trade agreement between the United States and Canada. Our United States price for electrolytic nickel from the Port Colborne, Ontario, refinery then became $33\frac{3}{4}$ cents per pound instead of the previous price of 35 cents per pound. Prices of nickel abroad remained unchanged.

Constant attention is given to improvements in process to help offset a steady increase in costs. It has been the policy of the Company to seek a price for its products which, while fair to the producer, contributes to the growth of the market. Our work in exploration and development of new uses for nickel progresses steadily and we believe the trend of consumption will continue to show an upward course. Nickel requirements of the United Kingdom showed the same proportionate rise as in the United States.

COPPER

The strong world demand for copper continued throughout the year. This Company's "ORC" brand (Ontario Refining Company) in regular and special shapes enjoys an excellent sales position in world markets.

Our refined copper sales in 1947 were 220,671,157 pounds, comparable with 149,777,060 pounds in 1946. After supplying a high level of requirements for Canadian fabricators, 75 per cent of our exportable production was sold under contracts made with the United Kingdom Ministry of Supply. The balance went to European and other foreign markets. A small tonnage was shipped to the United States following

suspension of the 4 cent import duty for a two year period until March, 1949.

On November 17th, 1947, announcement was made of the reduction of the United States duty on copper from 4 cents a pound to 2 cents a pound to take effect when the suspension of the 4 cent duty expires on March 31st, 1949.

Copper prices strengthened further in 1947, the world price advancing from 19.7 cents (f.a.s. New York) per pound to $21\frac{1}{2}$ cents after reaching a peak of $25\frac{3}{4}$ cents in April and May. The Canadian ceiling price of $11\frac{1}{2}$ cents (Montreal) was raised to $16\frac{5}{8}$ cents in January and this ceiling was later removed in June, since which time the price in Canada, as in the United States, held at $21\frac{1}{2}$ cents over the remainder of the year.

COBALT

A plant to recover cobalt was brought into operation at Port Colborne last June and is now making approximately 15 tons of metal in oxide per month.

Sales of selenium in 1947 were 225,362

SELENIUM AND TELLURIUM pounds, compared with 279,103 pounds in 1946. Market demand for selenium, employed particularly in glass, rubber, pottery and the electrical industries, was strong. It is also used as an addition to steel and copper to aid machinability. Recently it has been used in horticulture as an insecticide.

Tellurium is likewise recovered from our ores, of which 16,420 pounds were sold in 1947 as compared with 7,617 pounds in 1946. It is used in manufacturing hard rubber, lead alloys and free-machining copper.

The price of selenium advanced last July from \$1.75 per pound to \$2.00 per pound while tellurium remained at \$1.75 per pound throughout the year. Sales were principally in Canada, the United Kingdom and the United States.

GOLD AND SILVER Sales in 1947 were 43,184 ounces of gold and 1,384,384 ounces of silver, comparable with 46,159 ounces and 1,062,004 ounces respectively in 1946. Our silver is sold in Canada and in the world markets. Our gold is currently sold to the Royal Canadian Mint at Ottawa.

The Emergency Gold Mining Assistance Act, recently adopted by Parliament at Ottawa, provides that for excess production of gold mines over prescribed basic amounts, assistance payments are to be made of one-half the amount by which the cost of gold production exceeds \$18 per ounce. The payments apply only to mines in which the gold production represents 70 per cent or more of the value of the output of the mine and, therefore, are not applicable to our Company.

PLATINUM METALS We are the largest producers in the world of the platinum metals. Our sales of these metals have decreased somewhat from the peak of 1945. They occupy a strong position in industry for many uses, such as the manufacture of chemicals, glass fibers, electronic and ignition devices, catalysts, jewelry and dental alloys.

From current reports, we estimate that 375,000 ounces were sold in the United States during 1947, as compared with 485,000 ounces in 1946.

NICKEL OXIDE SINTER The new process plant which I mentioned last year will be completed at Copper Cliff before the year-end. Nickel Oxide Sinter contains approximately 75 per cent of nickel

and is a densely sintered nodular nickel oxide which has been developed particularly for use in the manufacture of alloy steels. The material was initially introduced to the producers of rolled and forged alloy steel during the early part of 1947. Nickel Oxide Sinter has been generally accepted by the steel industry and is now used in the manufacture of both stainless and alloy steels. Consumers report that it is employed as a furnace addition to both cold and molten metal charges in either open hearth or electric furnace practice. It is expected that the use of Nickel Oxide Sinter by the steel industry will increase as our new production facilities become available. In the meantime the sinter we sell is produced in a pilot plant.

It is estimated that the volume used during the twelve months of 1947 for steel making contained approximately 12,500,000 pounds of nickel.

Production of roasted and sintered material for Huntington's Monel requirements was undertaken in the last quarter of 1946. Total production of this material for Huntington in 1947 contained approximately 20,000,000 pounds of nickel and for Clydach 12,000,000 pounds of nickel. Bessemer matte shipments were then, for all practical purposes, discontinued.

OXYGEN SMELTING The direct flash smelting of nickel and copper sulphides with oxygen-enriched air and with commercial oxygen as a replacement for conventional reverberatory furnace smelting has been the subject of active research. In the initial stages, such research was confined to laboratory scale experimentation. Early in 1947, pilot plant operations were undertaken with a view to establishing the merits of the process for volume production. The results have been most promising, fully justifying a continuance of these activities.

NICKEL PLATING The amount of nickel used in nickel plating during 1947 in Canada and the United States was approximately 22,000,000 pounds, which exceeded the highest annual pre-war consumption by about 8,000,000 pounds. New developments by our customers include nickel plated seamless steel tubing, nickel plating on wood, plastics, aluminum and zinc, and increased thickness of nickel deposits to improve resistance to corrosion.

NICKEL IN STEEL

The steel industry consumed nearly 50 per cent of our sales of primary nickel. Of the amount consumed in the United States somewhat over half was used for the stainless steels. Production of alloy steels other than stainless was large, the volume in each of the past two years having been at levels appreciably above pre-war production. In 1947, production exceeded 6,500,000 ingot tons and in about half of this steel nickel was used in amounts from ½ per cent to 5 per cent.

"Triple Alloy" steels (Ni-Cr-Mo) continue to be widely used. High strength low alloy corrosion resistant steels enjoyed a substantial use where weight savings are desirable. Applications include railway freight and passenger cars, hoisting booms and earth moving machinery, truck tanks and crawler tractor parts.

The Company has just issued a second edition of "Nickel Alloy Steels" which has been sent to steel executives and technical personnel. This book took much time and effort to prepare and we believe will be of great help to steel-makers and steel consumers.

STAINLESS STEELS

Output of the stainless steels continues at high levels. In the United States, production exceeded one-half million ingot tons for the third consecutive year. Two-thirds of this production was in the chromium-nickel types having nickel contents of 8 per cent or more. It is estimated that over 35 million pounds of primary nickel were required to make this steel.

The Company's work in co-operation with producers and users of stainless steels has been recorded. A book of 309 pages with 224 illustrations was published under the title "Forming of Austenitic Chromium-Nickel Stainless Steels." This volume has been enthusiastically received by the industry.

We likewise contributed to the establishment of a permanent stainless steel exhibit in the Architects Building, Park Avenue, New York, which will shortly be opened to public inspection.

Stainless steel has found large markets in food processing, in the chemical, petroleum and paper industries and in railway passenger cars. It is also widely used in home appliances and in the architectural field.

CAST IRON

The use of nickel in cast iron reached a consumption of over 11,000,000 pounds in 1947, which is the highest since this development was started some 20 years ago. A large factor in this increase is the growth in the use of Ni-Hard in the mining industry.

The high nickel corrosion resistant iron, Ni-Resist, and the low expansion type, Minovar, both marketed under our trade names, are constantly finding new applications.

NICKEL ALLOYS IN JET ENGINES AND GAS TURBINES

The turbo-jet engine or gas turbine handles hot gases under high stress and it is necessary to provide metals with unusual strength and resistance to the effects of hot gasses. Wrought alloys which can be used for the hot parts of the turbo-jet engines and gas turbines contain nickel. There are some cast alloys that contain no nickel but in these there is a high percentage of cobalt.

At Huntington Works, a 70 per cent nickel alloy, Inconel X, has been developed for gas turbine applications. In England, our Wiggin plant is producing Nimonic 80 and other high nickel alloys, which are the standard materials for certain parts of all British engines. Inconel sheet in the United States and Nimonic 75 sheet in Great Britain are used extensively in other parts of jet engines. This relatively new field cannot fail to create a demand for nickel alloys.

FINANCIAL

International Nickel does its business in three principal countries all having different currencies. The Company's accounts are stated in United States dollars and its dividends are declared in that currency. In keeping with our original charter, issued in 1902, the Letters Patent of the present Company require that preferred dividends be paid in United States dollars. This has been done since payments started in 1906. Dividends on the common stock were started in 1909 and since that time dividend declarations have been in United States dollars.

Our mining, smelting and the bulk of our refining is done in Canada in Canadian dollars whereas 67½ per cent of our nickel output is sold for United States dollars. Of the balance, 27 per cent is sold in

England and elsewhere for sterling and the remaining 5½ per cent is sold in Canada and elsewhere for Canadian dollars.

BALANCE SHEET Our balance sheet of December 31st, 1947 is the 46th annually published. It shows \$167,124,979 of current assets and \$23,029,769 of current liabilities. These figures show a working capital of \$144,095,210, comparable with \$137,996,062 in 1946. Total cash and securities were \$96,824,825 as compared with \$94,405,336 in 1946.

Inventories of \$53,916,223 at December 31st, 1947 compare with \$44,658,827 at December 31st, 1946.

PROFIT AND LOSS Total income for 1947 was \$167,483,797 and for 1946 was \$134,429,340. Total costs, inclusive of depreciation, depletion, retirement system, provisions for contingencies and taxes based on income were \$133,980,331 in 1947 comparable with \$104,747,988 in 1946. The difference between total income and total costs shows \$33,503,466 of net profits for 1947 as compared with \$29,681,352 in 1946.

DEPRECIATION AND DEPLETION The items of depreciation and depletion, which I explained fully last year, are extremely important as they furnish proof of the financial maintenance of our properties. During 1947, a depreciation reserve of \$5,477,085 and a depletion reserve of \$2,156,375 were provided. These figures compare with \$5,366,416 and \$1,722,641 respectively during 1946.

CAPITAL EXPENDITURES Capital expenditures in 1947 were \$9,568,796, comparable with \$3,775,509 in 1946. The greatest item was \$4,172,840 for our new process plant at Copper Cliff. A second item of importance was a \$1,000,000 housing programme at Copper Cliff which is now practically completed. A further sum of \$468,381 was used for rehabilitating the Mond plants. It is estimated that capital expenditures in 1948 will be \$12,000,000.

DIVIDENDS There were of record 81,367 common shareholders and 7,832 preferred shareholders at December 31st, 1947. Common stock holdings of individuals average 82 shares and preferred (on the \$100 par basis) 19 shares.

Quarterly dividends of 40 cents per share were paid on the common stock and \$1,933,899 was paid in dividends on the preferred stock. There was also an extra dividend of 40 cents per share declared on the common stock and paid with the quarterly dividend on December 20th, 1947.

EXPLORATION Nothing is more necessary to a mining company than an active exploration department. As a result of seeking new ore, this Company has in the past 15 years proven some 130,000,000 tons of ore or about 9,000,000 tons per year. This is about the average rate at which we are now extracting ore. To-day we have as much proven copper-nickel ore reserves as we had 15 years ago. Our proven reserves at December 31st, 1947 totaled 221,843,000 tons.

We must have ample ore for many years ahead to supply the nickel markets which we have developed. With this thought in mind, we are making airborne magnetometer reconnaissance surveys in Canada. We have already flown over the Sudbury Basin, the Porcupine area and several areas in Manitoba. It must be realized that this is merely an air survey to pick out possible ore locations in large areas. The so called anomalies, very few of which indicate ore, must subsequently be examined and very possibly diamond drilled.

As I have already said, nothing is more important than finding new ore continuously. At present, our exploration throughout the world is costing about \$1,000,000 annually.

VENEZUELA We have continued during the past year our study of the Venezuelan nickel deposits.

PETSAMO A supplementary agreement was entered into on September 29th, 1947 between the Canadian and Russian Governments. The payment dates of the remaining amount due for our interest in the Petsamo Mine were re-scheduled. Including the April, 1948 instalment the Company will have received a total of \$10,666,800 and there will remain payable by the Russian Government a total of \$9,333,200. This amount will be payable in eight equal instalments, the final due December 31st, 1951.

RETIREMENT SYSTEM

We are proud of our Retirement System for employees which was started in 1928. At the outset, our pension reserve appeared as a liability on our balance sheet and this subsequently was offset by an item of government bonds on the asset side. In 1942, a programme was started of separating the retirement system assets from the Company and placing them in the hands of Trustees. Pension funds now amount to \$38,492,895, of which \$27,991,179 is in the hands of Trustees and \$10,501,716 on the Company's balance sheet. Transfers are being made from this latter amount to the Trustees in annual instalments. All of our employees are members. Our system is non-contributory and we have had many years of experience in handling retirements.

During the 20 years in which our Retirement System has been in operation we have paid pensions to 1,296 persons and death benefits to 1,545 beneficiaries.

LABOR

The labor relations in all of our plants continued to be generally satisfactory. We have collective bargaining agreements at all plants carefully defining the rights and obligations of the employees and the Company. The contracts have been lived up to in good faith by both sides.

Having in mind the possible revision of existing labor laws, I wish to emphasize that any new legislation enacted must adequately protect the rights of all parties — labor, management, shareholders and the public — if it is to succeed. Biased legislation can serve no useful purpose. Furthermore, there is a definite need that people be educated in plain language as to what their respective rights are and the corresponding protection afforded by law.

GROUP ACCIDENT AND SICKNESS INSURANCE

In 1937 the Company entered into a group accident and sickness contract with the Metropolitan Life Insurance Company. Under this contract, employee subscribers in Canada and the United States whose earnings are based on an hourly rate receive weekly cash benefits when unable to perform their duties by reason of non-occupational accident or sickness. This was followed by a plan in Great Britain. The Company shares the premium cost with the employees. Evidence of the demand for this type of insurance lies in the fact that 94 per cent of our

eligible employees are insured. During 1947, cash benefits were paid to employees in 5,345 cases.

GROUP LIFE INSURANCE

In 1928, the Company contracted with the Aetna Life Insurance Company for a group life insurance policy on its employees in Canada and the United States. Under this policy, employees are entitled to subscribe for \$2,500 of life insurance, without medical examination, on a low premium group basis. The policy also provides benefits for permanent total disability. Death and disability benefits in 1947 amounted to \$284,000.

ACCIDENT PREVENTION

Nothing in plant operations is more important than the observance of safety rules and regulations. It gives me pleasure to report that in 1947 our Levack Mine won, for the second consecutive year, the John T. Ryan Trophy for "Mine Safety." This Dominion honour is awarded each year by the Canadian Institute of Mining and Metallurgy. Our five mines in this competition — Levack, Garson, Creighton, Murray and Frood — in the order mentioned won top Dominion honours. I am naturally very proud of this distinction which is proof that we are properly organized and trained to prevent accidents.

PUBLIC RELATIONS

We have doubled the personnel engaged in our public relations departments in Canada, Great Britain and the United States. Of course, every department of our entire international enterprise is concerned in public relations in some way. An example of one phase of our public relations in the United States is the talks and addresses given by Company representatives. These have averaged at least one a week given before industrial, civic, technical, educational and other groups.

ADVERTISING

We have continued product advertising in trade papers, as well as exhibits in selected industrial shows. Direct mailing of our publications has also been effective. We consider our general advertising as a very necessary aid in selling the Company's products.

It is our responsibility to inform the general public of the contribution which the nickel industry makes

towards creating a better world. An objective in Canada has been to tell Canadians how our development of markets for nickel contributes to the country's economy. In the United Kingdom, we feature the availability of technical information and assistance to help improve the efficiency of processes and the quality of British products. In the United States, emphasis is placed on creating a friendly feeling towards nickel and the Company.

We find that nickel booklets create an interest in nickel. Several books have been published recently and the latest entitled "The Romance of Nickel" is now being constantly requested. Our technical publications enjoy wide circulation and command respect.

EDUCATION The Company's educational programme which I mentioned last year has been most successful and is being continued under the direction of our Development and Research Division. Our technical publications are being supplied to teachers and students in the engineering courses of 75 educational institutions. A total of 10 fellowships have been awarded to universities and colleges in Canada, Great Britain and the United States.

DEVELOPMENT AND RESEARCH The progress of this Company is one of the outstanding triumphs of industrial research. Besides central research laboratories in Canada, the United Kingdom and the United States, International Nickel is sponsoring nickel research in twelve colleges in the United States and also has fellowships in six universities. This indicates that one of the major activities of the Company is to maintain an extensive Development and Research Division. This organization is in close touch with the scientific and technical developments in many fields of industry. With our French, Belgian, Swiss and Italian bureaux active, progress has been made towards unifying our market development throughout Europe.

Plans are now completed for the broadening of the activities of this division and for research laboratory expansion. Of special interest is the projected electrochemical laboratory in Bayonne, New Jersey, which will facilitate research in nickel plating.

I think a report of the number of technical inquiries received by this division in 1947 will indicate the mag-

nitude of this work. Our Development and Research branches in Canada and the United States received 44,000 inquiries and the Mond branches received 8,000 inquiries during this period. These inquiries were by personal contact, by letter and by telephone. These 52,000 inquiries, an average of 1,000 per week, help materially to create markets for the Company's products.

CORROSION A large portion of all nickel alloys find their engineering application due in part to their corrosion resistance. As a result, much of our laboratory work and our field studies are devoted to this important field. Our salt water corrosion testing station at Kure Beach, North Carolina, has attained world-wide interest. This is due to the results secured in sea water and in salt air exposure.

BUSINESS AND INDUSTRY IN EUROPE Markets in Europe have been adversely affected during the year by currency difficulties. Earlier in the year electrolytic nickel could be sold in Sweden and Switzerland for United States dollars, and France and Czechoslovakia were enabled by loans from Canada to purchase electrolytic nickel for Canadian dollars. Later, the exhaustion of the loans and diminishing dollar balances have brought such sales almost to a standstill.

These currency difficulties have resulted in a continuance of government control of business. In nearly all countries, goods purchased from abroad require individual government sanction.

Throughout Europe industry has been handicapped by a shortage of power and a shortage of labor. Not only has coal been scarce, but insufficient snowfalls in winter and rainfalls in summer have seriously curtailed water-produced power in Switzerland, Italy, France and Scandinavia. Inadequate and slow-moving transport due to worn-out rolling stock, temporary bridges, inferior fuel and, latterly, inadequate river and canal water, have also been retarding influences. In Sweden, the streams have been too low to float wood for fuel.

These conditions are not without their effect on the sales of our products, and it may be anticipated that, when they improve, demand will increase in some directions.

TRADE BARRIERS —TARIFFS A year ago this month general tariff negotiations were instituted among twenty-three nations at the Inter-

national Trade Organization meeting in Geneva. The meeting brought forth a most significant and comprehensive three-year tariff agreement covering more than ten thousand items of world trade. Six nations, Canada, the United States, the United Kingdom, Belgium, Luxembourg and the Netherlands have already put the new tariff schedules into effect. Some eighty-five per cent of the value of Canada's current exports to the United States and seventy per cent of the United States' exports to Canada are affected by the agreement. Of direct and immediate importance to the business of this Company is the cutting in half of the 2½ cents per pound United States duty on the importation of refined nickel. The duty saving achieved is being passed on to the consumers of refined nickel in the United States. The remaining 1¼ cent duty on refined nickel continues, however, as an unnecessary burden which should be removed completely.

By action of the United States Congress last year, the 4 cents per pound duty on imports of refined copper was suspended until March 31st, 1949. Under the new trade agreement the copper duty also has been cut in half so that at the end of the suspension period it will be limited to a maximum of 2 cents per pound. It is of importance to the future of Canada's export trade in copper and to the copper consumers in the United States that this remaining obstacle to the movement of copper into the United States should be removed. The imposition of the United States import duty in 1932 drove Canadian copper out of the United States, which is one of its logical and economic markets. Until there is assurance that Canadian copper will be permanently free of duty or excise tax on imports into the United States, regular market outlets for a share of the Canadian production cannot effectively be developed

in the United States.

The economies of Canada and the United States have become more and more interdependent. Canada is and should continue to be the best customer of the United States. The economy of the United States likewise requires a great volume of Canada's production. The importance of promoting the exchange of goods between the two countries requires, I believe, that both should move more rapidly in the direction of some economic arrangement which will permit the removal to the greatest possible extent of tariffs and governmental restrictions on the two-way flow of trade across the international boundary.

CONCLUSION I have endeavored to tell you of many incidents which occurred during the past year. In the talk that you have just heard, our employees have been but briefly mentioned. This gives me now an opportunity to emphasize a word of greeting and appreciation to the men and women who produce nickel. They, by their diligence and ability, have given our Company world prominence.

The year just ended has marked the advance of many of our young men to posts of greater responsibility. This means that the Company continues to be enterprising and vigorous. Our labor and customer relations will continue to improve and we will keep the shareholders accurately informed on the activities of the Company.

I believe that the policy your Company is pursuing to gain economic stability is a valuable contribution towards the maintenance of the much desired free enterprise system.

*On the occasion of the Annual Meeting
of the Company, which was held at
Toronto on April 27, 1949, Mr. Stanley
made the following address:*

**BRIEF FACTS
ABOUT INCO**

The International Nickel Company of Canada, Limited, together with some twenty active subsidiary companies, conducts its operations mainly in Canada, Great Britain and the United States. It is the largest producer of nickel in the world, the leading producer of platinum and palladium and is fifth among the world's copper producers. Other metals extracted in limited quantities from the same ore are: gold, silver, ruthenium, iridium, rhodium, selenium, tellurium and cobalt. Its well-known mines in the Sudbury District are: Frood, Stobie, Creighton, Levack, Garson and Murray.

Besides these mines the Company operates two smelters, a nickel refinery, a copper refinery and four hydro-electric power plants in the Province of Ontario. In Great Britain it has a nickel refinery, a precious metals refinery, a rolling mill plant, an extrusion plant and an electric furnace manufacturing plant; and in the United States a rolling mill plant and a foundry. Three large research laboratories and seven plant laboratories are located in Canada, Great Britain and the United States.

**DIRECTORS'
INSPECTION
TRIP TO
COPPER CLIFF**

Early last autumn seventeen members of your Board of Directors made an inspection trip to the Company's mining, smelting and copper refining plants in the Sudbury District. Three directors journeyed from Great Britain, eight from the United States and six from Canada. This was the first time in many years that such a large gathering of directors has met at Copper Cliff.

**NEW
DIRECTORS**

It is with great sorrow that we record the deaths during 1948 of two of our directors, William Nelson Cromwell, Esq., who served as a member of the Board since 1904, and George W. Spinney, Esq., C.M.G., who joined our Board in 1944. Dr. Donald Hamilton McLaughlin, of San Francisco, President of Homestake Mining Company, was elected to succeed Mr. Cromwell. Edwin G. Baker, Esq., of Toronto, Chairman of the Board of Moore Corporation, Limited, succeeded Mr. Spinney.

**ANTI-TRUST
SUIT**

At the Annual Meeting two years ago I referred to the suit instituted against us on May 16th, 1946, by the United States

Department of Justice. I was pleased last July to notify all shareholders that this suit had been terminated without trial and without any finding that we had violated any law. The termination of the suit was brought about by agreement between the Company and the United States Department of Justice to a mutually satisfactory Consent Judgment entered in the United States District Court for the Southern District of New York on July 2nd, 1948.

**ROLLING MILL
PLANTS**

Operations at our Huntington Works, West Virginia, were maintained at high levels throughout the year, production being the largest achieved in this plant except during the war years. The Wiggin rolling mill plant in Birmingham, England, likewise operated at close to capacity.

**HUNTINGTON
WORKS**

The high output of Monel, rolled nickel and Inconel at our Huntington Works reflected a continuing upward trend in demand. Particularly was this evident in the case of Inconel compositions (nickel-chromium) which are more difficult to produce than Monel and nickel. In order to increase our over-all plant capacity, the operations of melting, ingot overhauling, and ingot forging have been expanded. This necessitated the installation of a 1250 kva high frequency induction melting furnace, two additional milling machines and an expansion of ingot forging facilities.

Major uses of rolling mill products are in durable articles for the home and in equipment for the chemical, laundry, power, petroleum and steel industries. Aircraft uses of Inconel and Nimonic (nickel-chromium) increased.

**BAYONNE
WORKS**

Our progress in precision castings has been good. New equipment of the most modern type has been added to the Bayonne, New Jersey, Works of the Company in addition to our regular casting equipment. This gives a monthly capacity of approximately 50,000 pieces, in many shapes and sizes, weighing from a few ounces to three pounds each.

**BRITISH
PLANTS**

Clydach

Production in our plants in Great Britain showed a progressive increase during 1948. An additional nickel salts department was brought into production in September at our Clydach, Wales, refinery. Work is now proceeding with

a view to further increasing the thermal efficiency of the Mond nickel refining process.

Wiggin At our Wiggin rolling mill plant in Birmingham, England, and our Zenith extrusion plant in Glasgow, Scotland, output and sales reached high figures. Nickel coin blanks, nickel anodes, Monel and the Nimonic alloys figured prominently in their sales.

Acton Production of platinum metals and gold at our precious metals refinery at Acton, England, was at an all-time high in 1948, exceeding that for 1938 by 13 per cent. Production costs showed a decline from the previous year, but were higher than in 1938 due to increased labor and supply rates.

Birlec Our electric furnace manufacturing company, Birlec Limited, at Birmingham, England, had a good year and the outlook for 1949 is promising. Favorable results from its Australian and Swedish branches are anticipated.

NICKEL
Sales An exceptionally high peace-time demand for nickel, the Company's principal metal, continued throughout the year. Our world sales of nickel in all forms in 1948 were 240,098,274 pounds, compared with 205,278,868 pounds in the year 1947. Over 90 per cent of this total was consumed in the United States, Great Britain and Canada. Consumption outside of these three countries was only a small fraction of pre-war volume.

Although demand for nickel in 1948 put pressure on the immediate supply available, it is believed the supply met actual consumption needs. In this connection, it is interesting to note that in the United States, our largest field, consumers, who in no year prior to 1939 required over 91,000,000 pounds, were provided with 177,000,000 pounds in 1948.

Yield of Nickel Per Ton of Ore Mined To continue a large and steady supply of nickel, your Company during the past decade has been forced to mine ores of lower grade. This may best be illustrated by the fact that 43 pounds of nickel were obtained from each ton of ore mined in 1938, while in 1948 this figure had dropped to 27 pounds, despite our success in maintaining the proportion of nickel recovered from this ore.

Price War-time demands placed a heavy drain on the ore reserves of most metal producers. In the case of nickel the necessity of mining underground ores of considerably lower grade than in the pre-war years resulted in an upward trend in costs. This trend was further accentuated by the increased costs of supplies, services and labor. In spite of the many plant and process changes introduced to effect economies an upward revision in the price of nickel became necessary.

Effective July 22nd, 1948, the contract price for electro-

lytic nickel from the Port Colborne refinery was increased in the United States to 40 cents a pound, the price which prevailed prior to 1921. This includes 1¼ cents per pound United States import duty. At the same time the United Kingdom price was increased to £224 per long ton.

COPPER
Sales Canada has in recent years greatly increased her position as an important copper consumer. As a result, our sales of copper for Canadian consumption in 1948 were some 115,000,000 pounds, or 90 per cent greater than before the war.

Demand for copper during the year remained firm. The Company's refined copper sales in 1948 were 219,130,830 pounds, compared with 220,671,157 pounds in 1947. About 52 per cent of our copper was sold in Canada and 48 per cent exported in 1948. A portion of our exports went to the United States. During 1947, 49 per cent was sold in Canada and the balance exported mainly to Great Britain and the Continent.

Price The selling price of copper in the United States advanced 2 cents a pound to 23½ cents early in August, 1948. It had been 21½ cents a pound since mid-1947. The price of copper in the United Kingdom remained at £132 per long ton, delivered consumers' works, until September 30th, when the Ministry of Supply increased the price to £140 per long ton.

Tariff on Copper and Nickel The United States tariff on copper imports continues as a handicap against Canadian producers, preventing the effective development of outlets for Canadian copper in the United States market. The copper tariff has been suspended temporarily but should be removed permanently from the United States statute books for the mutual benefit of American consumers and Canadian producers. The remaining 1¼ cents United States duty on refined nickel is also a trade obstacle which we must strive to have removed, particularly since the United States is dependent on Canada as the source of supply for this strategic metal.

COBALT Our plant at Port Colborne for the recovery of cobalt is now producing about 15 tons of metal in oxide monthly and an increase in output of this important element is contemplated. A large portion of this metal produced at our Clydach plant is sold in the form of cobalt salts. Cobalt alloys find use in jet engine parts, seals for hard glasses, tools and hard facing materials. Among biological uses, a trace of cobalt is said to improve the activity of penicillin in attacking certain rugged micro-organisms, and a trace of it also appears to be essential in foods for live stock.

SELENIUM AND TELLURIUM Sales of selenium in 1948 were 103,687 pounds, compared with 225,362 pounds in 1947. Tellurium sales were 12,608

pounds last year, against 16,420 pounds in 1947.

GOLD AND SILVER

The Company's gold and silver production was sold at prevailing prices for these products during the year. Sales of gold in 1948 to the Royal Canadian Mint were 35,747 ounces and in England 2,340 ounces, a total of 38,087 ounces, compared with 43,184 ounces in 1947. Sales of silver were 1,320,754 ounces, against 1,384,384 ounces in 1947.

PLATINUM METALS

The platinum market during the year was subject to many price changes and, at times, to unusually heavy demands from trade throughout the world. The range in quoted prices was from \$66 to \$101 per ounce. The supply at times appeared to be inadequate, with the usually substantial Russian exports apparently absent from the western markets.

The platinum metals continued to be used for many industrial purposes, including catalysts, spark plug electrodes and electrical contacts, as well as in jewelry.

Your Company's activity in the promotion of palladium in the jewelry, dental and electrical fields assisted greatly in the sales of this metal. Palladium is an outstanding electrical contact metal and finds a wide use in the relays of the telephone system where it is employed in contacts in all circuits carrying voice currents. Rhodium, another of the platinum group metals, finds application as a contact metal where sliding contacts are involved, as in various types of radar equipment.

The glass industry, particularly in the production of optical glasses and glass wool, is relying more and more on platinum for resistance to erosion by the molten glass and for maintaining the highest purity in the glass itself. The actual consumption of platinum in these operations is very small, but substantial amounts are required for plant expansion.

The great possibilities in the uses of rayon create an additional demand for platinum and for rhodium, as modern spinnerets are largely made of a 10 per cent rhodium and 90 per cent platinum alloy.

Total sales of the platinum metals in the United States in the year 1948 are estimated at 350,000 ounces, as compared with 387,000 ounces in 1947.

NICKEL OXIDE SINTER

Our Orford process served well for many years in the production of the major portion of the world's nickel requirements. However, we have developed a better process. A plant has been built for the separation of copper, nickel and platinum metals in matte by subjecting the matte to controlled cooling, flotation and magnetic separation. The matte flotation operations in the new nickel oxide sinter plant commenced in September and are rapidly approaching full-scale production, practically replacing the Orford process. This has been a process change of major

significance. The transfer of sintering operations from Port Colborne to Copper Cliff will soon be completed.

The early applications of nickel oxide sinter were concentrated in the manufacture of the chromium-nickel stainless steels. These have been supplemented by growing use in the manufacture of electric furnace and open hearth alloy engineering steels. It is believed that the past year has amply demonstrated the usefulness and economy of the new nickel oxide sinter. This product comprised more than 40 per cent of the United States steel makers' total nickel consumption.

FLASH SMELTING

Further progress has been recorded in the flash smelting of nickel and copper flotation concentrates with oxygen. As announced last May, results obtained in our pilot unit have justified the planned construction of an oxygen plant and of an initial flash smelting furnace on a commercial scale. The new process will permit a considerable saving in coal requirements, and at the same time will serve both to increase the production of sulphuric acid and to enable the production of liquid sulphur dioxide from furnace exhaust gases by Canadian Industries Limited. This represents another step forward in the maximum utilization of our ores, an objective to which we are devoting continuing and fruitful research.

CARBONYL IRON POWDER

During the war, our British subsidiary The Mond Nickel Company, Limited, used its long experience in carbonyl chemistry to produce carbonyl iron powder for the British Government. Mond has now purchased the plant, constructed by the Government for the manufacture of this powder, to meet a considerable peace-time demand in Great Britain. Iron powder made by the carbonyl process has unique electro-magnetic properties which are of value in electrical and radio engineering.

ENGINEERING STEELS

In Canada, Great Britain and the United States, the production of alloy engineering steels was maintained at high levels throughout the year. The total for the three countries was approximately nine million ingot tons, of which it is estimated around 40 per cent contained nickel. Thus a significant portion of our nickel production was consumed by the manufacturers of alloy engineering steels.

These steels, which are represented by a wide range of compositions, continued to provide the performance needed in essential parts of aircraft engines, automobiles, power generation machinery, railroad transportation equipment, earth moving and road building machinery and farm equipment such as tractors.

HIGH STRENGTH LOW ALLOY STEELS

A contribution to the high level of production of alloy steels in 1948 was the wider acceptance of the high strength

low alloy steels for applications where increased strength and savings in dead weight are of advantage. The steel industry in the United States produced and marketed an appreciable tonnage of these steels for structural parts of machinery and equipment.

These steels, which are not quenched and tempered before use, are marketed under trade names and have a wide range in chemical compositions, many of them containing from one-half per cent to more than two per cent nickel.

STAINLESS STEELS

The combined production of stainless steel ingots in Canada, Great Britain and the United States reached an all-time peak. Total volume was approximately 700,000 ingot tons in 1948. With about two-thirds of this volume in the chromium-nickel grades a demand in excess of 40 million pounds of nickel was created, roughly 50 per cent of the total nickel consumed by the wrought steel industries in the three countries.

The complexion of the stainless steel markets remained much the same last year as in 1947. New applications were made and high level production was maintained by a broad range of previously established uses. Thus there now continue to be important outlets for chromium-nickel stainless steels in the chemical, petroleum and food processing industries, in ground and air transportation and in the home appliance fields. Markets for the wrought stainless steels were supplemented by demands for stainless steel castings, all of which created significant demands for nickel.

NICKEL PLATING

Sales of nickel for plating increased, attaining a rate two and a half times higher than pre-war. Improved plating operations and better resistant coatings have encouraged wider use in modern design. Such articles as durable automobile bumpers still account for the largest consumption. The relatively small tonnage in corrosion and wear resistant industrial coatings, deposits for mechanical use, and particularly electro-formed articles, continues to increase and these uses show promise for future markets.

CAST IRONS

The importance of the cast iron industry as a market for nickel has been recognized for many years and the use of nickel in this field has made steady progress. Moreover, in the past few years certain of these long-time developments have been accepted by industry on the economies of the services shown and this has resulted in important expansion in the consumption of nickel in these fields. The use of Ni-Hard for abrasion resistant parts, such as mill liners, grinding balls and other parts used in the preparation of ore, has grown. During the past year and a half western United States copper producers have become important customers and have

expanded their use of nickel from a nominal amount to a substantial quantity.

Ni-Resist, the austenitic corrosion resistant iron, has shown a substantial growth in new fields of application. It is now considered as a standard production item.

GAS TURBINES AND JET ENGINES

High temperature materials furnish an outlet for nickel in the aircraft industry. The gas turbine industry in Great Britain has been very active during the year and progress has been made with several new developments in which the Nimonic alloys, produced at our Wiggin plant, have been prominent. Nimonic 80 and 80A still remain the standard accepted alloys for the rotor blades of all turbo-jet and turbo-prop aircraft engines in present production. Increasing quantities of the Nimonic alloys are being employed for the turbine blades, combustion chamber components and other vital parts of these engines.

Last year I mentioned the development of a 70 per cent nickel alloy, Inconel X, by our Huntington Works for applications in the gas turbine and jet engine fields. This alloy was produced during 1948 for application in gas turbine rotors, blades and bolts, where strength and resistance to high temperatures are essential. Between two and three hundred aircraft jet engines of one design, in which Inconel X was used for the hot turbine blades and structural bolts, have been built. These engines have an excellent record of performance.

Inconel X has also been found to possess outstanding spring characteristics at temperatures higher than those which are considered commercially practical for the more commonly used spring materials.

Notwithstanding the engineering advances in jet engines and gas turbines, the reciprocating engine actually remains the work-horse, and most of the world's flying is being done with engines of this type, utilizing platinum electrode spark plugs. The platinum electrode plug permits smooth running at very lean and efficient fuel mixtures and also provides exceptional resistance to fouling, so that this type of plug is in wide demand for aircraft use.

CUPRO-NICKEL ALLOYS AND NICKEL SILVER

The shipments of nickel to the brass industry were greater in 1948 than in 1947. The commercial development in Great Britain and the United States of the new 90-10 cupro-nickel alloy is helping to broaden the fields for this type of material. It supplements the well-known 70-30 cupro-nickel which has established itself for heat exchanger applications in steamships and in power plants.

The peace-time uses of nickel silver are also increasing in the manufacture of the better quality silver plated ware, zippers, keys and electrical equipment.

COINAGE During 1948 the most interesting coinage event in Europe was the passing of the Act in Holland authorizing the use of pure nickel for the 10 and 20 cent coins. Holland thus became the first European country since the war to issue new pure nickel coins. In Belgium an issue of new coinage has been authorized including the use of cupro-nickel for the 5 and 1 franc denominations.

In the Indian Dominions the issue of the one rupee, half rupee and quarter rupee pure nickel coins has continued throughout the year. Further orders for pure nickel blanks for these coins have been received from both India and Pakistan covering their requirements into 1950.

ELECTRONICS With the progress in television, radar and electronic computers, new demands have arisen for materials; and special nickel alloys, including non-magnetic materials, have been developed to meet new requirements. In addition, many computers utilize magnetic recording for storing information and reference data. Here again nickel alloys are being used, including an electro-deposited nickel-cobalt alloy and a specially processed 18 per cent chromium and 8 per cent nickel stainless steel in the form of recorder wire. This cold worked wire is also being used in sound recorders in the home because it is a good permanent magnet and is also strong and rust resistant.

FINANCIAL During 1948, as in previous years, the greater part of our sales were made for United States currency, while most of our operating costs were incurred in Canadian dollars. We thus continue to be a substantial supplier of United States currency to the Canadian economy. The Marshall Plan or European Recovery Program has aided the flow of United States currency and has played an important part in the improvement of Canada's hard currency reserve position. We believe that this Program is making a substantial contribution towards the restoration of Western Europe and its trade.

During the year under review there was no change in the Canadian or British Official Rates of Exchange for United States currency. Interest rates rose slightly in both Canada and the United States during the first 10 months of the year. This enabled the Company to show some improvement in the much depressed income from the securities in its working capital.

BALANCE SHEET The Company's balance sheet at the year-end shows current assets of \$180,814,012 and current liabilities of \$29,288,328. This indicates a working capital of \$151,525,684, comparable with \$144,095,210 on December 31st, 1947. Total cash and securities amounted to \$96,515,183 as compared with \$96,824,825 in the previous year.

Inventories of \$66,056,185 at December 31st, 1948 compare with \$53,916,223 at December 31st, 1947.

NET EARNINGS The total income for 1948 was \$198,329,310 as compared with \$167,483,797 for 1947. Our total costs, inclusive of depreciation, depletion, retirement system, provisions for contingencies and taxes based on income, were \$159,220,906 in 1948, comparable with \$133,980,331 in 1947. The difference between total income and total costs shows \$39,108,404 of net earnings for 1948 as compared with \$33,503,466 in 1947.

The Company's income for 1948 was used as follows: pay-rolls, supplies and services \$127,774,705; retirement system, \$3,364,783; taxes based on income \$20,157,931; depreciation and depletion \$7,923,487; dividends \$31,090,237; and balance of \$8,018,167 retained for future requirements; total \$198,329,310.

DEPRECIATION In accordance with traditional accounting procedure the Company has continued as heretofore to treat its depreciation cost as being a percentage of the low original costs of properties which are being worn out, rather than a percentage of their higher replacement values. Having regard to the higher cost levels which now prevail, the traditional accounting procedure results in the inclusion in costs of production of amounts substantially less than those necessary to replace the properties worn out.

As stated in our Annual Report, your Board of Directors fully recognizes the necessity for conserving sufficient amounts from the Company's income to match the replacement value of the properties worn out in the process of production. The effect of the financial and accounting policies of your Board will, it is hoped, achieve this objective.

CAPITAL EXPENDITURES In the last 20 years the Company's capital expenditures have totaled \$154,000,000. Less than \$16,000,000 of this sum was provided by the sale of new stock and the balance of \$138,000,000 was provided from earnings re-invested in the business and from reserves. The Mond properties were added in 1929. During the 20 years the property account, before reserves, has risen from \$76,272,530 to \$276,440,111.

Capital expenditures in 1948 were \$14,080,479, comparable with \$9,568,796 in 1947. The largest item was \$5,066,403 for the Company's new process plant at Copper Cliff. It is estimated that capital expenditures in 1949 will approximate \$18,000,000.

About \$750,000 was expended last year on our housing programme for employees in our mining communities. Directors during their visit to our Copper Cliff plant last autumn authorized an additional \$2,000,000, making a total of \$4,500,000 for housing in recent years. Since 1943 more than 230 housing units have been provided for or have been completed. The new appropriation will take care of about 150 additional units,

principally in Copper Cliff, Levack, Creighton and Garson.

LUMBER COMPANY ACQUISITION The Company is dependent on great quantities of mine lumber and timber, using over 40,000,000 board feet in the past year. For the purpose of protecting our future needs we have acquired Geo. Gordon & Co. Limited, a lumber company which is capable of supplying an important portion of our requirements for the next 20 years. This company is now a wholly owned subsidiary and has been included in our consolidated accounts since September 1st, 1948.

SHAREHOLDERS There were of record 82,122 common shareholders and 7,540 preferred shareholders at December 31st, 1948. Common share holdings of individuals average 82 shares and preferred (on the \$100 par basis) 18 shares.

No one individual shareholder of the Company owns more than one-half of one per cent of the total outstanding common or preferred shares. Over 95 per cent of these shares are held by residents of Canada, Great Britain and the United States.

DIVIDENDS Total dividends paid on the common shares in 1948 amounted to \$29,156,338, or \$2.00 per share, the same as in 1947. Four quarterly dividends of 40 cents per share were paid on the common shares, with an extra dividend of 40 cents per share in December. Dividend payments on the preferred shares totaled \$1,933,899.

ORE RESERVES The Company's proven ore reserves on December 31st, 1948, stood at 246,177,000 short tons as compared with 221,843,000 short tons a year previous.

EXPLORATION Our activity in geological exploration is being intensified in Canada and throughout the world. We have staked claims in the Lynn Lake and other areas in the Province of Manitoba but it will probably be some time before it will be possible to determine whether there is ore of commercial value in these properties.

VENEZUELA During the past few years we have been investigating an ore deposit in the Provinces of Miranda and Aragua, Venezuela, South America. We continue to hold exploration and mining rights on this property. Further study is necessary to determine whether the deposit is suitable for commercial development. The knowledge we have gained from experiments on the treatment of Venezuelan ores has been of major help to our Research Division in its work to improve our processes for treatment of ore.

PETSAMO MINE Including the April, 1949 instalment payment under the agreement between the Canadian and Russian Governments, the Company has

received \$13,000,100 for its interest in the Petsamo Mine. There remains a balance of \$6,999,900 payable by the Russian Government. This amount is payable in six equal instalments, the final one December 31st, 1951.

EMPLOYEES Employee relations in all of our plants and offices in Canada, Great Britain and the United States continue to be excellent. There are 68 employees who have served the Company for forty to fifty years, 426 for thirty to forty years, 2,216 for twenty to thirty years and 5,631 for ten to twenty years. Membership in the Quarter Century Club at the year-end was 1,354. This splendid record has contributed greatly to the high quality of our products and the success of the Company.

In Great Britain there were 672 members of the Quarter Century Club at the year-end, a gratifying proportion of the total membership. Over 1,600 of the 3,900 British employees have been with us longer than ten years.

LABOR Labor relations at all of our plants in 1948 were generally satisfactory. New collective bargaining agreements were negotiated and executed for all plants in Canada and the United States, with the exception of the Huntington Works. At Huntington, the existing agreement covering hourly paid employees was extended to February 19th, 1950.

RETIREMENT SYSTEM The Company's Retirement System has been in operation for twenty-one years and is an important link between the Company and its employees. During this period we have had a total of 1,434 pensioners and we have paid death benefits to 1,661 beneficiaries. The total disbursement for these pensions and benefits amounted to \$6,418,583. The disbursements for 1948 from the Trust Funds and from the Company's reserve totaled \$719,721 and covered 996 pensions and 116 death benefits.

Pension funds now amount to \$42,188,078, of which \$33,060,889 is in the hands of Trustees and \$9,127,189 is still in the Company's hands.

ACCIDENT PREVENTION In Dominion-wide competition for the John T. Ryan Trophy for "Mine Safety" our mines in 1948 won third to seventh places in the following order: Creighton, Levack, Murray, Frood-Stobie, Garson, thus maintaining the excellent safety work that has been a feature of our mining operations.

In our British plants there has been a progressive decrease in the number of serious accidents. At all of our plants, our Company has been carrying on a safety campaign in which every employee plays a part. This has lessened the number of accidents and is an activity much appreciated by employees, helping to make them more safety minded.

Educational co-operation has become an

EDUCATIONAL PROGRAMME established part of the activities of our Development and Research Division. Our technical literature and exhibits have been given to all of the 101 universities and colleges in Canada and the United States which offer accredited courses in mining, metallurgy or chemical engineering, and to 84 other schools which have requested assistance. A total of 18 fellowships has been awarded in Canada, Great Britain and the United States.

ADVERTISING In addition to our product advertising in trade and technical publications, as well as exhibits at industrial shows, we have continued our national institutional advertising programmes in newspapers, magazines and other publications in Canada, Great Britain and the United States.

MOTION PICTURES Your Company has had produced and circulated over the past several years a series of motion pictures that show its plants and operations in Canada and the United States and also many applications of nickel and its alloys. In 1948 these pictures were shown to some 5,000,000 people.

DEVELOPMENT AND RESEARCH There is a constant change in the requirements of industry; abandonment of an old process may close the door on a certain market for nickel, or conversely a new process may open new opportunities. It is, therefore, necessary to keep in contact with the active development units of many large industries, such as automotive, aviation, steel, chemical, metallurgical, petroleum and railway. We must be sure that proper consideration is given to the engineering properties of nickel alloys in the construction of new plants, revision of processes and in manufactured products. Generally it is necessary to be in touch with these developments long before they are announced to the public, for often when this occurs the blueprints and material specifications are already set and it is difficult to make a change. The expansion of industrial activity in Canada, Great Britain and the United States and world-wide rehabilitation will call for many new plants. This should maintain a substantial demand for nickel-containing products for some time in the future.

The post-war expansion programme of our Development and Research Division is nearing completion. The number and personnel of the Technical Field Sections in Canada and the United States have been increased. The expansion of the technical personnel in Great Britain and of the European Technical Bureaux is substantially completed. Sufficient personnel has been trained and is now in a position to keep in close touch with developments in all of the important industrial centres.

Nickel research in outside organizations is being continued in twenty educational institutions.

LABORATORY EXPANSION PROGRAMME It has been found through past experience that for each man placed in the technical field sections another is required in the laboratory to properly back up the field efforts in the way of solving problems which are presented to us and the developing of new technical information. To maintain this balance, expansion of our Bayonne, New Jersey, research laboratory was essential. A new building has been provided for electrolytic plating research and development. The heavy expenditure on this new building and equipment evidences the importance to the Company of nickel plating, both as to the present markets and as a field for further expansion in the use of nickel.

SPHEROIDAL GRAPHITE CAST IRON Our research laboratory at Bayonne has, after many years of study and investigation, developed a remarkable and novel cast iron product with a unique combination of engineering properties. The new development involves an ingenious process for producing the new iron in the as-cast condition with graphite in an unusual spheroidal form. For centuries, cast iron has been one of the most widely used ferrous engineering materials but, as is well-known, it has had certain disadvantages due to limitations in strength and toughness which metallurgists have been endeavoring to overcome and to improve. This accomplishment of our research laboratory solves an outstanding problem and fulfills a goal which the metallurgical world has sought ever since nodular graphite was produced in malleable iron by long-time annealing. Commercial operations involving the new process have been conducted on an industrial scale in foundries with complete success. The results indicate that this discovery may produce profound changes in the ferrous metal industries, and provide a new engineering material.

PLANT AND OPERATING RESEARCH Research is constantly being carried on by the Company, not only toward improvements in existing methods and the establishment of new processes in all plants, but also toward betterments in mining methods. Our Mining and Smelting Division has been very active in this field for the past few years and has as a consequence many improvements to its credit.

BUSINESS AND INDUSTRY IN EUROPE Business in Europe continues to be affected by a variety of currency problems. On the Continent lack of United States dollars and sterling affected sales early in the year, but there was some recovery later.

The first effect of announcement of the Marshall Plan

was restrictive on European business, since countries likely to receive United States dollars postponed orders for dollar commodities as long as possible, awaiting details of the proposal. It is to be expected, however, that demand for nickel will increase as the Plan progresses towards its objective of revivifying European industry and business and increasing European economic unity.

CONCLUSION In conclusion I wish to express my sincere

appreciation to our employees who have shown great interest in the welfare of International Nickel during the past year. These employees are, with a few exceptions, in Canada, Great Britain and the United States, and each has made a contribution towards helping the Company serve our international markets.

Great improvements have also been made in our processes. In every particular we are well prepared to meet future demands of the world nickel markets.

*On the occasion of the Annual Meeting
of the Company, which was held at
Toronto on April 26, 1950, Mr. Stanley
made the following address:*

**CANADA'S
MINING
INDUSTRY—
NICKEL'S
CONTRIBUTION**

Mining is the third largest industry of Canada, being exceeded only by agriculture and forestry. More than 90 per cent of the nickel produced in Canada is sold to other countries. Since the greater portion of this goes to the United States or is sold elsewhere for United States dollars, nickel causes a constant flow of these dollars to Canada. Thus the Canadian nickel industry is one of the chief sources of United States dollars so essential for the maintenance of Canada's foreign trade. During the past three years our exports of metal have returned \$168,000,000 to Canada.

DIRECTORS

Last year I told you of the inspection trip made by 17 of our Directors from Canada, Great Britain and the United States to our Canadian plants. This year visits of our principal executives and officers between the United States, Canada and Europe have been increased and have assisted our world effort.

During the year Sir Otto E. Niemeyer, of London, was elected a member of the Board to succeed the late Lord Melchett and R. Ewart Stavert, Esq., of Montreal, President of The Consolidated Mining and Smelting Company of Canada, Limited, was named in place of Ross H. McMaster, Esq., of Montreal, whose resignation was regretfully accepted. Lord Melchett had been a member of the Board since 1928 and Mr. McMaster since 1934.

FINANCIAL

Our Financial Statements have always

been and are regularly expressed in United States currency. For this reason it became necessary to re-state certain of our assets and liabilities following the announcement last September of new official exchange rates for Sterling, and subsequently for Canadian and other currencies. These exchange adjustments resulted in a net charge of \$7,425,234 against "Contingent, Exchange, Insurance and Other Reserves." The price structure, in terms of United States currency, however, was not impaired by the currency revaluation which occurred.

**BALANCE
SHEET**

The Company's balance sheet on December 31st, 1949 showed current assets of \$160,311,913 and current liabilities of \$22,898,057. Net working capital was \$137,413,856, comparable with \$151,525,684 on December 31st, 1948. Total cash and securities amounted to \$74,412,855 as compared with \$96,515,183 at the previous year-end.

Inventories were \$68,804,660 at December 31st, 1949, compared with \$66,056,185 at December 31st, 1948.

**NET
EARNINGS**

The total income for 1949 was \$184,052,188, as compared with \$198,329,310 for 1948. Our total costs in 1949 inclusive of all provisions, including taxes based on income, were \$151,799,874, comparable with \$159,220,906 in 1948. The difference between total income and total costs shows \$32,252,314 of net earnings for 1949 as compared with \$39,108,404 in 1948.

The Company's income for 1949 and 1948 was used as follows:—

	1949	1948
Pay-rolls, Supplies and Services	\$122,196,760	\$124,774,705
Retirement and Other Reserves	3,433,063	6,364,783
Taxes based on income ..	17,975,014	20,157,931
Depreciation and Depletion	8,195,037	7,923,487
Dividends	31,090,237	31,090,237
Balance retained for future requirements ...	1,162,077	8,018,167
Total used	<u>\$184,052,188</u>	<u>\$198,329,310</u>

DIVIDENDS Total dividends paid on the common shares in 1949 amounted to \$29,156,338, or \$2.00 per share, the same as in the two preceding years. Four quarterly dividends of 40 cents per share were paid on the common shares, with an extra dividend of 40 cents per share in December. Dividend payments on the preferred shares totaled \$1,933,899.

CAPITAL EXPENDITURES Capital expenditures in 1949 were \$18,553,851, comparable with \$14,080,479 in 1948. By countries expenditures were: \$15,014,072 in Canada, \$2,272,881 in the United States and \$1,266,898 in Great Britain and in other countries. It is estimated that capital expenditures in 1950 will approximate \$22,000,000.

CANADIAN HOUSING Our housing project in the Sudbury District has made good progress. Approximately \$914,000 was expended last year on this home building programme for employees in our mining towns.

MINES AND CONCENTRATOR The Annual Report has already drawn attention to the extensive work in preparing our underground mines for greater production to compensate for the nearing completion of our working of the low-grade Frood-Stobie open pits and to the construction of the new concentrator at the site of the Creighton Mine. These major projects will continue to be pushed forward actively in 1950.

MATTE FLOTATION The change from the Orford process to the new matte flotation process for the separation of nickel and copper was finally completed in July of last year. The entire output of nickel is now handled by this new process, which is working satisfactorily.

NICKEL OXIDE SINTER Since the introduction in the year 1946 of nickel oxide sinter as a source of nickel for alloy steel manufacture, a large volume of nickel in this product has been consumed by

alloy steel makers in the United States and Canada.

FLASH SMELTING An oxygen plant and an initial flash smelting copper furnace are now in the process of construction at Copper Cliff, Ontario, and should be in operation during 1951.

IRON ORE STUDIES As noted in my Address to you last year, a major objective of our research efforts is the maximum utilization of our ores. In this connection thorough study is being given to methods which will permit output of high grade by-product iron ore.

ROLLING MILL PLANTS In addition to primary metals (nickel, copper, the platinum metals, gold, silver, selenium, tellurium and cobalt) from the Canadian plants, the Company produces wrought and cast products in its rolling mills and foundries in the United States and Great Britain. Chief among these are: Monel for a wide variety of high strength and corrosion-resisting equipment; malleable nickel for anodes, coinage and chemical equipment; Inconel for heat-resisting applications; the Nimonics and Inconel X for gas turbines, jet engines and other special high temperature applications requiring maximum resistance to stress (creep) and oxidation; Brightway for resistance heating; and nickel-iron thermal expansion alloys.

HUNTINGTON WORKS At Huntington we entered the year 1949 with an open order book of 13,000,000 pounds, reached a low of 5,600,000 pounds in July and had orders of 9,900,000 pounds on December 31st. Shipments, the equivalent of production, fell from a high of 6,000,000 pounds in January to a low of 2,600,000 pounds in July, during plant vacation time, and moved upward to 5,100,000 pounds in December, 1949. The average monthly shipments in 1949 were 4,500,000 pounds, as against 6,000,000 pounds in 1948.

The 1949 sales from the Huntington Mill continued to emphasize the importance of the rolled nickels and nickel-chromiums. Exclusive of nickel for plating, Monel approximated 60 per cent of the output, rolled nickel 20 per cent and Inconel and the Nimonics 20 per cent.

The refinery expansion programme referred to last year was completed in 1949. In the Cold Drawing Department, tube production and annealing facilities have been increased about 25 per cent. In the Merchant Mill, new improved coiling facilities have been provided for handling wire rod from the 9-inch mill.

BAYONNE WORKS The expansion of the Precision Casting Department building, to provide additional space for casting production and for supplies

storage, has been completed.

Ni-Rod "55" welding electrode, developed by the Development and Research Division to complement the Ni-Rod electrode for welding cast iron, was brought into full-scale production during the first half of 1949.

The Bayonne Foundry, supplying precision castings, is now well established. Continued activities on expanding markets for this type of product offer good opportunities for profitable business. Precision castings are now used largely for jet engine parts.

BRITISH PLANTS
Clydach Nickel production at our Clydach, Wales, refinery for the year 1949 was 49,400,000 pounds, an increase of 9,600,000 pounds over 1948. At the beginning of the year Clydach brought a further unit into operation and the additional output, together with the general improvements being introduced, enabled costs to be reduced.

Wiggin Output at the Wiggin rolling mill plant in Birmingham, England, showed a reduction of about 12½ per cent. The reduction was spread over all products except the Nimonic alloys, the demand for which is increasing with the further development and production of jet engines for aircraft.

Acton Operations at our precious metals refinery at Acton, England, continued at capacity throughout 1949. Costs were up somewhat owing to increases in the prices of acids and other raw materials. Production of palladium and silver showed a reduction from 1948, with platinum and rhodium higher.

Birlec This large electric furnace plant at Birmingham, England, continues to operate most efficiently. It again had a good year, deliveries being some 7 per cent higher than in 1948, and the volume of orders on hand should ensure good results in 1950. The Swedish branch is being reorganized. There has been improvement in orders taken by the Australian branch.

NICKEL
Diversity of Uses All of the nickel and copper which we sell is from the output of our mines and smelters in the Sudbury District, Ontario. Nickel is used in more than 3,000 ferrous and non-ferrous alloys to impart one or more of its characteristics to these alloys. The percentage of nickel in the alloys ranges from 99.7 per cent in malleable nickel to 0.20 per cent in a hardenable silver alloy.

Consumption by Fields Nickel thus finds its way into a very great number of industrial applications. In the United States, Canada and Great Britain the steel mills take approximately a third of the total, including substantial amounts for stainless steels. Deliveries of high nickel content rolling mill products and nickel for electro-plating together account for about 40 per

cent. Somewhat smaller percentages are used for gray iron, steel and non-ferrous castings, heat and electrical resistance alloys, nickel silver and cupro-nickel, magnets, batteries, chemical products, coinage, and other miscellaneous alloys.

During the year 1949 more than 85 per cent of our refined nickel was consumed in the United States, Great Britain and Canada. Consumption levels were generally less than those of 1948 and did not remain steady throughout the twelve months, but fluctuated as a consequence of inventory changes on the part of consuming industries, work stoppages and uncertainties in the business outlook in the United States. Demand was maintained at peak levels during the first four months of the year; subsequent mid-year contraction was followed by recovery in the fourth quarter.

Sales Total sales of nickel in all forms for the entire year were 209,292,257 pounds as compared to 240,098,274 pounds for the year 1948. However, while the volume of nickel sales in 1949 in the United States and Canada was down from the preceding year, it exceeded the average of the pre-war years 1936 through 1939 by about 70 per cent. Outstanding were the increases in platers supplies and in that proportion of the steel industry's requirements represented by the stainless steels. Volume in these classes was 160 per cent higher than in the pre-war years mentioned.

Consumption of nickel in Great Britain remained at about the same level as in 1948. Usage by the steel industry increased by 13 per cent which was offset by lower amounts for coinage and anodes. Compared with the pre-war period the consumption in Great Britain has gone forward over 35 per cent.

Deliveries to Continental Europe were about double those of 1948 despite currency difficulties. However, the disruptions caused by the war continue to adversely affect the consumption of nickel in Continental Europe and have limited our deliveries in these markets to 40 per cent of the pre-war average.

COPPER
Sales Sales deliveries of refined copper during the year amounted to 221,075,080 pounds, in comparison with 219,130,830 pounds for the year 1948. Of the total approximately 30 per cent was delivered to Great Britain and the balance to the Canadian, United States and other markets. The Company's "ORC" brand of vertically cast special shapes, which provide economies in processing and a high quality of end product, continued to enjoy an excellent reputation and good demand in all of these markets.

Price The market price of copper in the United States

dropped sharply in several stages between late March and June of 1949 from 23.5 to 16 cents per pound, but had recovered by early November to 18.5 cents, remaining on a firm basis at that level at the close of the year. Prices in Canada throughout the year were equivalent to those quoted in the United States, rising 10 per cent above United States dollar quotations after revaluation of the Canadian dollar in September, and closing the year at 20.35 Canadian cents per pound. Not only was the average market price of copper lower than in 1948, but our costs were higher due to increased wages and higher prices for supplies.

Tariff The United States import tax of two cents per pound on copper has been suspended until June 30th, 1950. Copper requirements of the United States have, throughout the post-war period, rather consistently exceeded domestic primary and secondary production, and this fact, as pointed out last year, clearly justifies the continued suspension or permanent removal of the tariff, which constitutes an unnecessary and undesirable trade obstacle between Canada and the United States.

COBALT At a time when there is great interest in cobalt for products such as alloys for jet engines, medicinal and other applications, our cobalt recovery at Port Colborne, Ontario, is being increased and this should result in additional sales in 1950. Our cobalt is sold principally overseas either as oxide or as salts, produced by our Clydach, Wales, refinery.

SELENIUM AND TELLURIUM Selenium deliveries in 1949 were 117,636 pounds, compared with 103,687 pounds in 1948. A total of 9,191 pounds of tellurium was sold in 1949, against 12,608 pounds in 1948. Sales were in Canada, Great Britain and the United States.

CARBONYL NICKEL AND IRON POWDERS Deliveries of carbonyl nickel and iron powders produced in Great Britain have continued at about the same rate as in 1948. The extension of television service and reorganization of telephone systems on the Continent are providing opportunities for the further application of appropriate grades of iron powder.

PLATINUM METALS The Company continues to be an important producer of platinum metals, supplying world markets with platinum, palladium, rhodium, ruthenium and iridium. These precious metals are recovered as by-products of our nickel and copper refining.

Sales by the Company of platinum metals in 1949 were 214,735 ounces, as compared with 199,560 ounces in 1948.

The markets for platinum metals are principally in the United States, where approximately half of all the platinum metals are used for chemical and electrical purposes. In these industrial services, the platinum metals have repeatedly demonstrated economic advantages, the high initial cost being largely offset by a high value in the form of scrap. The use of platinum metals for industrial purposes augments their important and long established use in jewelry and adornments, giving diversification to the market.

The European market for platinum metals has grown with post-war reconstruction. Consumption has increased especially in the dental, electrical and chemical fields. In 1949, manufacturers of dental alloys greatly increased their consumption of palladium.

GOLD AND SILVER Sales of gold and silver were respectively 34,146 ounces and 1,097,487 ounces in 1949, as compared to 38,087 ounces and 1,320,754 ounces in 1948. The metals were sold regularly throughout the year at prevailing prices.

ENGINEERING STEELS The United States and Canadian production of alloy steels, other than stainless, was somewhat lower in 1949 than during the preceding year, but no significant changes were observed in the metallurgical pattern of these steels. With somewhat more than 40 per cent of the total tonnage estimated to have contained nickel, a significant market was provided.

So-called low alloy high strength rolled steels, generally employed without heat-treatment, are now finding applications in farm equipment, including mechanical corn pickers, combines and loaders, as well as being of considerable value in the construction of transportation equipment.

The high level of automobile production in the United States during 1949 accounted for an appreciable part of the demand for alloy steels including those containing nickel. Such steels, however, found new outlets, among which were applications resulting from the mechanization of coal mining and the greater use of diesel locomotives by railroads. Steels with about 5 to 9 per cent of nickel have given excellent performance in sour oil wells in the form of tubing and as sucker rods.

Progress has been made in engineering by specifying the use of 8½ per cent nickel steel for service at liquid air temperatures and several pressure vessels have been made and installed in commercial plants. The prospect of increased use of commercial oxygen in large volumes in the metallurgical and petro-chemical industries indicates a continuing demand for this steel which gives such high strength and great toughness at these frigid temperatures.

STAINLESS STEELS The largest volume of production of stainless steels is in the United States which for the last four years has held at an average of about 550,000 ingot tons. Volume last year was somewhat below this average, but with roughly 60 per cent of the total production in the nickel-chromium varieties, a very large consumption of nickel was maintained.

The character of the stainless steel markets has remained much the same during recent years and again important outlets included the chemical, petroleum and food processing industries, transportation equipment and the home appliance fields. However, new uses are found each year and one of general interest during the year was the completion at Schenectady, New York, of a building with stainless steel walls. An extension of this field of application may be expected to provide additional outlets for the popular 18-8 chromium-nickel types.

In Great Britain production of wrought corrosion and heat-resisting steels continues at maximum capacity with the demand still considerably in excess of supply and order books are filled for months ahead. The two principal producers of stainless steels in Great Britain are committed to erect and operate under joint management a new stainless steel rolling mill which will increase considerably plate and sheet rolling capacity. The high level of demand for stainless steels was maintained throughout 1949.

A larger consumption of chromium-nickel stainless steels within France in 1949 was reported.

NICKEL PLATING The nickel plating industry is a large user of nickel and is third in quantity used. The growth of electro-plating as a user of nickel is the result of research and sales activity and the improvement in the standards of plating throughout the world. The automotive industry accounts for the largest consumption of nickel for plating purposes.

Long-time atmospheric corrosion tests are being completed which demonstrate the advantages of heavy coatings of nickel on steel to resist a wide variety of atmospheric conditions encountered by automobiles, especially on bumpers and other trim.

Nickel electro-deposition in Great Britain has been stimulated by the export requirements of the motor and cycle industries, and lessened somewhat by the general economic conditions which necessitated reduced production of domestic consumer goods. On the Continent, the plating industry has been endeavoring to restore its production to pre-war levels and to take advantage of modern equipment and methods to increase its capacity and to improve the quality of its product.

In the field of alloy cast irons an upward trend

CAST IRONS of use was observed in specialty products such as Ni-Hard in mining equipment. Performance to date suggests that additional markets will be acquired with the expansion of operations in the beneficiation of iron ores.

Following successful trials, Ni-Hard is being increasingly adopted for mill liners, grinding balls, etc., in the cement industry in Great Britain and elsewhere abroad. Particularly successful results have been obtained in India.

Demand for nickel for the corrosion-resisting cast irons known as Ni-Resist remained at satisfactory levels.

GAS TURBINES AND JET ENGINES The aircraft industry uses substantial quantities of nickel in engineering and stainless steels, in heat-resisting alloys, such as Nimonic 75 and Inconel, mostly in sheet for combustion chamber liners and exhaust pipes and other Nimonic alloys and Inconel X for highly stressed parts operating at elevated temperatures.

CUPRO-NICKEL ALLOYS AND NICKEL SILVER An example of the extent to which nickel-containing materials are employed in modern ship construction is afforded by the Peninsular & Oriental S. N. Co.'s 28,000 ton twin-screw passenger liner "Himalaya" which sailed on her maiden voyage on October 6th, 1949. Built by Vickers-Armstrong Ltd., she is the largest vessel in the P. & O. Line's fleet. Monel and high nickel content heat-resisting steel were used for turbine blading. The latter material was also used for nozzle vanes, and gear pinions were made of nickel steel. Cupro-nickel was used for condenser and oil cooler tubes, and substantial amounts of nickel silver were employed for ornamental and structural fittings.

During 1949 cast and wrought nickel silver metal again took its place in the architectural field following restriction during the war period.

COINAGE Since 1881, in which year Switzerland had the distinction of issuing the first coin to be made of pure nickel, 42 countries have used pure nickel for 124 different coins.

In 1949 the Spanish Government took the initial steps to implement its re-coining programme, and in July the first issue of pure nickel 5 peseta coins took place.

In Holland the issue of pure nickel 10 and 25 cent coins continues and they are being well received by the people.

During 1949 Burma decided to employ pure nickel for the half and quarter rupee coins, the blanks to be supplied by our British subsidiary, Henry Wiggin &

Company, Limited, and the coins to be minted at the Royal Mint.

India has continued the issue of coinage in pure nickel and cupro-nickel, and during the past four years over one thousand million coin blanks have been produced for striking in India. The issue of the new coinage will not be completed for some years and will involve altogether many thousands of tons of nickel.

ELECTRONICS Television is using larger quantities of rolled nickel, with indications that the amount will continue to increase. Pure nickel is being used for the cathodes of the camera and picture tubes of television equipment due to its ability to retain its strength and stiffness at high temperatures (1650° F.) and also because it serves as an excellent base for the oxide coating which gives off the electrons. In addition, the small amplifier tubes used in television transmitting and receiving equipment employ pure nickel cathodes, nickel or nickel plated anodes, and nickel grids and lead wires.

SHAREHOLDERS At December 31st, 1949 there were of record 80,438 common shareholders and 7,271 preferred shareholders, without, however, counting the many thousands of persons for whom our shares are held by institutions, banks and brokers. Total employees in all countries on December 31st were 20,043. Thus there were more than four INCO shareholders of record for every employee.

Common share holdings of individuals average 80 shares and preferred (on the \$100 par basis) 18 shares.

ORE RESERVES The Company's proven ore reserves on December 31st, 1949, stood at 251,805,000 short tons, as compared with 246,177,000 at the end of 1948.

EXPLORATION Our sales of nickel have exceeded 200,000,000 pounds per annum in each of the past 10 years. In view of this heavy consumption of ore it is natural that our expenses for prospecting for new ore bodies have become costly. Due to intensified exploration in 1949 this item was \$1,554,000, as compared with \$1,057,000 in 1948.

The Company's geological exploration programme is being increased in the Sudbury District, where our mines are located, as well as in other parts of Canada. Our exploration during the year outside of Canada has not resulted in any discoveries of interest. We must, however, continue to explore for nickel knowing that more nickel must be found to assure a longer supply for the uses which we have developed and are developing.

There were regular payments during the year

PETSAMO MINE from Russia for the Petsamo Nickel mines. The total received to December 31, 1949 amounted to \$14,166,750, reducing the balance to \$5,833,250, of which \$2,333,300 is scheduled for payment in 1950 and \$3,499,950 in 1951.

EMPLOYEES Employee relations in all plants are excellent. The total number of employees at the year-end was 13,063 in Canada, 3,973 in Great Britain and 2,885 in the United States. During 1949 our Comptroller, F. P. Bernhard, retired after 50 years of continuous service, at which time he had served the Company longer than any other active employee.

Membership in the Quarter Century Club throughout the international organization at the end of the year was 1,531. In 1949, 82 additional employees qualified as members of the Club in Canada, 52 in Great Britain and 78 in the United States.

The practice of maintaining contact with all our pensioners in Canada, Great Britain and the United States has been continued and has caused expressions of appreciation.

RETIREMENT SYSTEM We adopted a formal pension system in 1928 and have been making regular provision for its cost for 22 years. The result is that there is now held in trust for the retirement of our employees a fund of \$34,756,959 provided by the Company and in addition there has been set aside by the Company on its books a reserve of \$6,663,284. During the year 133 employees were retired on pension under the provisions of the Company's Retirement System, 115 death benefit payments were made to the beneficiaries of employees who died in service or as pensioners, and pensions were paid to 1,080 service and disability pensioners.

ACCIDENT PREVENTION The Company continues to give special attention and daily emphasis to the most important subject of accident prevention by appropriate safety campaigns and instructions. Accidents continue to decrease in our Canadian operations and also in the United States and Great Britain. In all operations the lost-time accident frequency per million man-hours worked in 1949 was 26, compared with 30¾ for 1948. Lost-time through accidents, therefore, has materially decreased.

DEVELOPMENT AND RESEARCH No organization can grow and develop without great emphasis upon research and development. In this 20th century vigorous prosecution of development and research is essential to the maintenance of progress in industry. Competition among constructional materials, both metallic and non-metallic, has never been more aggressive. It is

particularly appropriate now that we have reached the mid-point of this rapidly changing century, to review our Company's development and research policies through the past 50 years.

From 1902, when the Company was organized, the mutually supporting branches of development and research were conducted as a small department. The need for greater effort appeared after the first World War and was met by the organization in 1922 of a separate Development and Research Department in New York, with a technically trained staff. From the beginning it has been a factor of great importance in the Company's large expansion. The department, now a division, has had a parallel history of expansion in facilities and personnel to maintain a leadership in industrial research. It has been a leader of its type among the metal industries.

The activities have spread into Canada, into Great Britain and into Continental Europe. There are now three major research laboratories, at Copper Cliff, Ontario, at Bayonne, New Jersey, and at Birmingham, England; there are large liaison groups in New York and London; there are twelve Field Sections throughout the United States and Canada and there are centers of technical information in Paris, Bombay, Brussels, Milan and Zurich.

Our station at Kure Beach, North Carolina, which was organized in 1935, is the largest of its kind in the world and is the center of research for materials which will give useful service under marine conditions.

A similar growth of research and experimental testing has taken place in our mining operations and in the various smelting, refining and processing plants on both sides of the ocean. There are seven research laboratory groups at the various plants.

The combined development and research staff in North America, including those engaged in research and experimental testing, now numbers 404 men and women, of whom 178 are technologists. Corresponding activities in Great Britain and Europe occupy the time of another 308 men and women, of whom 174 are technical, thus making the total number engaged in development and research and experimentation in all operations mentioned 712 persons.

New products for world markets and savings in production costs result from our activities. From both angles improvements in Company position have been gained.

The Bayonne, New Jersey, laboratory building expansion programme, mentioned last year, has been brought to completion. Additions to personnel have been made both there and in New York to meet the requirements of our broad programme which encompasses all of the

Company's interests. Advances have been made involving new products from our mills, corrosion studies, nickel chemicals and catalysts, platinum metals, non-ferrous alloys, new information on stainless steels, constructional alloy steels, and outstandingly in cast irons.

Throughout the Company's plant operations in Canada, Great Britain and the United States the technical groups are accomplishing much in conserving our ore resources and improving production processes.

We can look forward to the second half of the century with confidence that we shall make continued highly satisfactory progress as a result of the efforts of our development and research work.

EDUCATIONAL PROGRAMME This activity of the Development and Research Division continues to expand and includes 125 universities and colleges in Canada and the United States. Our technical literature is used by teachers and students for reference and class-room work. A significant fact which illustrates well the reception of the programme by the schools is that of the 98 schools which had used the technical literature during 1948, all continued to use literature for new students during 1949 and 27 schools were added to the programme. An additional 84 schools requested, for special purposes, copies of many of our technical publications.

A total of 14 fellowships has been awarded in Canada, Great Britain and the United States. In Canada and the United States these were for study in the fields of nickel, copper and the precious metals. The awards in Great Britain were made for travel in Canada and in the United States to study new metallurgical developments.

DUCTILE CAST IRON Last year I mentioned the invention of spheroidal graphite (ductile) cast iron, which exhibits a new combination of engineering properties. During 1949 patents were granted on this invention in the United States and other countries, and patent applications have been made in Canada and many other countries where there is sufficient industrial development to warrant such applications.

Considerable progress has been made during the year in introducing to industry the new product and the process for making it, through appropriate licensing agreements. We have granted licenses to over fifty foundries in the United States, Canada, and elsewhere, and many other foundries are now actively considering procuring licenses.

It is believed that this new type of cast iron product has a bright future and should serve to raise considerably the level of engineering properties available to industry in

cast iron products.

**BUSINESS
IN EUROPE**

Nickel deliveries to Continental Europe in 1949 were about double those of 1948 despite the currency difficulties which persisted throughout the year. It is hoped that with the settlement of new arrangements for payment under the European Recovery Program the difficulties of the past will be diminished.

The last year has again witnessed Germany as an important consuming market. Until the middle of the year, nickel was imported direct by the Joint Export-Import Agency, but permission has now been given for individual

firms to enter into contracts, and we are given an opportunity of regaining direct contact with consumers.

CONCLUSION In closing I will repeat the concluding remarks in the Annual Report for the year: "As we change from a seller's market to a buyer's market, it is a satisfaction to know that we are well prepared to meet this great difference in our metal business. We have a well co-ordinated organization for operations, sales and development and research, which, together with our publicity programme and our Continental Information Bureaux, stands prepared to develop both our new and our old markets for the many products of International Nickel Company."

On the occasion of the Annual Meeting of the Company, which was held at the Royal York Hotel, Toronto, on April 25, 1951, Dr. Thompson made the following address:

**1950 — YEAR
OF TRANSITION**

The year under review was a year of transition from civilian to defence economy. During 1950 world business in all metals developed at a rapidly increasing rate, as rearmament demands were added to those of industry. Concurrent with this increasing demand, we went into full production at our Canadian plants and at our subsidiary operations in the United States and the United Kingdom.

By mid-year, with the outbreak of hostilities in Korea, the calls for our nickel had increased to the point where unofficial rationing became necessary. This was followed in the United States by governmental imposition of consumption and end-use limitation orders similar to those imposed on aluminum, cobalt, copper and other metals. In Canada and the United Kingdom, likewise, distribution and use of nickel and other metals have been limited in conformity with government policies designed to give priority to defence needs and to conserve the supply.

We entered the current year with a ready market for all of the nickel, copper and platinum which we could supply, and with large unfilled orders at our three rolling mills.

As in World War II, the defence requirements of Canada, the United Kingdom and the United States are supported by a supply of Canadian nickel which far

exceeds the supply believed available to countries behind the Iron Curtain. In fact it can be said that as a result of what the Canadian nickel industry has done in developing its mines and processes, the free world has overwhelming nickel superiority.

**NICKEL
DELIVERIES**

During the year our deliveries of nickel established a new peace-time peak record. Deliveries in all forms totaled 256,410,543 pounds, an increase of 47,118,286 pounds over 1949.

**COPPER
DELIVERIES**

Our refined copper deliveries in 1950 were 212,947,394 pounds, comparable with 221,075,080 pounds in 1949. Most of our deliveries were made in Canada and the United Kingdom and the remainder in the United States and other markets. Approximately 50 per cent of our copper was delivered in Canada for consumption by brass and wire mills. In the United Kingdom, control over the purchase and sale of copper has continued to be exercised by His Majesty's Government.

**PRICE AND
WAGE INCREASES**

In order to compensate for mounting costs, the price of electrolytic nickel from the Port Colborne refinery and of nickel pellets from the Clydach, Wales, refinery was increased twice during 1950, on May 31st and on

December 13th, both concurrent with negotiated wage increases at our Company's mines and plants in Canada. Our uniform world price is expressed in different countries in terms of Canadian dollars, sterling and United States dollars. These increases lifted our price of nickel to 50½ cents per pound, in terms of United States currency, which in the United States includes the 1¼ cents per pound import duty.

With the strengthening in demand for copper, world prices advanced in 1950, the export price in the United States rising to 24½ cents per pound.

You have seen in graphic form, in the Annual Report, how the percentage increases in our prices for nickel and copper compare with the percentage increases in our costs, in the prices of competitive materials and in the general price level. As I have said in reply to questions at previous Meetings, the price which we ask for nickel results from the consideration of a number of factors including the recovery of cost increases, the necessity of protecting our competitive position against alternative metals and materials and the long-range importance of having our trade accept our prices as being reasonable.

PLATINUM METALS

The Company's deliveries of platinum, palladium, rhodium, ruthenium and iridium totaled 267,316 ounces in 1950 as compared with 214,735 in 1949. The world supply of platinum group metals is obtained from such widely scattered locations as Canada, South Africa, Russia, Alaska and Colombia. The five platinum group metals that we produce are recovered as by-products of our nickel and copper operations, and are refined at our Acton, England, refinery.

As was true for many other commodities, the demand was much enlarged at mid-year, and leading dealers in the United States found it necessary to ration their supply of platinum. The Company increased its deliveries of platinum as far as possible.

BY-PRODUCTS— GOLD, SILVER, COBALT, SELENIUM AND TELLURIUM

Deliveries of gold by the Company were 36,586 ounces in 1950 as compared to 34,146 ounces in 1949. Deliveries of silver were 956,928 ounces in 1950 and 1,097,487 ounces in 1949. These metals were sold at prevailing prices.

Cobalt concentrate is another by-product recovered in our production of nickel and copper. The recoveries, which are in limited quantity and only of minor importance in relation to the total world supply, are refined as various chemicals at our Clydach, Wales, refinery. We also recovered and delivered minor quantities of selenium and

tellurium.

NICKEL PRODUCTION PROGRAMME

For the second time within a decade your Company's production facilities are being taxed to the utmost by abnormal demands for nickel. Today, as during World War II, these are being engendered primarily by defence requirements of the Western Nations, but are augmented also by heavy civilian requirements. Although all military requirements are being met — in addition to substantial deliveries to stockpiles — the abnormal over-all demand has exceeded the current nickel supply.

Until 1939, the Company was mining principally from four of its present underground mines, the Frood, Creighton, Levack and Garson.

The heavily increased requirements of World War II were met by calling upon these underground mines and by greatly accelerating ore production from the Frood-Stobie open pits, which we had started to mine in 1939. Daily ore production from the pits was increased from the 6,000 tons-per-day, originally planned, to 20,000 tons-per-day during the war years. As a consequence of the heavy war drain upon the open pits and of their large post-war output, it is anticipated that by 1953 the only surface nickel deposits owned by the Company in Canada will have been exhausted.

The current inflated demand for nickel, therefore, has come when we have no new surface deposits such as these which can be called upon for additional output, thus shortening the period during which we must complete our major mining programme, initiated more than ten years ago, of replacing the pits with the equivalent underground capacity necessary to preserve the Company's current rate of production of nickel.

It is this extensive and time-consuming programme of securing maximum nickel production capacity throughout a period of change-over, from the mining of both surface and underground ore to the mining exclusively of underground ore, which is engaging the Company's fullest and most active efforts today, and must continue to do so for several years.

The magnitude of this programme will be appreciated when it is pointed out that by 1953 the Company expects, in capacity operation, to be hoisting about 13,000,000 tons of underground ore annually, which will be over double the amount of underground ore hoisted annually in the past. As mentioned in the Annual Report, this is about three-quarters of the total amount of copper ore hoisted

from underground operations in 1949 by all mines within the United States.

The carrying through of this programme requires many major changes in both mining and metallurgical methods, some of which have yet to be worked out completely. One major change will be the mining by low cost methods of underground ore bodies of lower-grade than we have ever worked in the past — notably at Creighton Mine, where block caving methods will be employed.

To handle these lower-grade ores at Creighton, a new shaft is being completed and a ten-thousand ton mill has been erected from which the concentrates are pumped 7½ miles to the Copper Cliff reduction plant.

One mine, the Murray, was brought into production during 1950. A new and major portion of the Frood-Stobie Mine—the Stobie section—will be brought into production as the programme progresses.

Many new sections of our mines will be opened up and put into production.

Shafts at each of the Levack, the Garson and the Murray Mines are being deepened and the necessary development work undertaken to permit mining of additional sections of these mines. These shafts are being deepened a combined total of about 3,700 feet. A new inside shaft was started during the year at the Levack Mine.

In addition to problems presented by the economical underground mining of increased tonnages of lower-grade ores, important process changes will become necessary in their mill and smelter treatment. Active work has been under way for some time on these process projects, several of which are under pilot plant development.

One major process project under pilot plant study is the development of a process for the economic recovery of nickel from nickel-bearing pyrrhotite together with the production of by-product iron ore.

During the year the by-product production of sulphuric acid from our smelter gases was increased.

A process change which will soon be in operation is the oxygen flash smelting of copper concentrates. A 300 ton-per-day oxygen generating unit and a new copper

concentrate smelting furnace of novel design should be completed before the end of this year and when completed will permit recovery of sulphur dioxide as a by-product.

A very important feature of the programme of your Company in Canada is the provision of new housing for employees. Since 1941 the Company has spent over \$4,300,000 for the construction of new housing at its Copper Cliff and adjacent properties. An additional \$2,700,000 has been authorized and is now being expended. Near Creighton, where extensive new plant additions are being installed, a new town site "Lively" is being developed, named in honour of Charles E. Lively, an Inco veteran of thirty-five years of service.

This whole programme of development of production facilities in Canada was actually initiated during the war years but had to be sharply curtailed because of the pressure for production. No effort consistent with maintenance of production has been spared to accelerate its completion. To date some \$100,000,000 has been spent, chiefly on this programme, \$30,000,000 more has been authorized, and it is expected that still further important capital expenditures will have to be made. Of the capital expenditures to be made in 1951 fully \$17,000,000 will be spent on the programme.

Summing up, your Company has under way at its Canadian plants a major programme of expansion of underground mining capacity, and an accompanying programme of metallurgical process changes. These will not, however, directly result in a major increase of refined nickel production, beyond the increase of about a million pounds per month, or 5 per cent. This increase will be realized before the year-end and is made possible by emergency facilities now being installed.

It is your Company's objective to carry through the major programme without interrupting current production, which we expect to maintain at maximum capacity and which by the end of 1951 should be larger than in any peace-time year.

ORE RESERVES AND EXPLORATION Notwithstanding the fact that ore-reserve tonnages have to date been fully maintained, the realization that mines are a wasting asset keeps the Company actively engaged in exploration for new sources of nickel.

This involves, as a primary measure, continuous

geological work on our known deposits together with intensive studies of the geology of the Sudbury Basin, supplemented by drilling campaigns wherever it is considered that the effort is justified by the possibility of finding ore, or in some instances, by the objective of adding to our knowledge concerning geological structures which are related to nickel deposits. Starting from the Sudbury District, we have extended this work to other parts of Canada and have examined, or are actively prospecting, a number of localities. In connection with this work our Company was recently granted exploration rights in a large area of the Ferguson Lake District of the Northwest Territories. Extensive exploration of the area will commence during the coming summer.

An important feature of our exploration programme in the Sudbury area is at our Crean Hill Mine, which has been shut down since 1919. The mine is being de-watered and the shaft reconditioned, after which comprehensive exploration will be carried out to determine its ore possibilities.

In addition to this exploration in Canada we are continuing our geological studies in other parts of the world. As part of this campaign we have done considerable work in Africa over the past three years.

Ore reserves at the year-end stood at 252,859,725 short tons compared with 251,805,157 short tons at the end of 1949. The nickel-copper content stood at 7,669,219 short tons compared with 7,630,009 at the end of 1949.

Steady improvement in our mining and metallurgical methods over the past twenty years has made it economically possible to use ores of lower-grade than could have been considered in the past.

FINANCIAL *Canadian Foreign Exchange.* During 1950 world confidence in the future of the Canadian economy expressed itself vigorously in transfers of foreign funds into the Canadian market. These transfers, which emanated in the main from New York, made the 10 per cent premium on United States funds, with which the year had started, quite unrealistic. In recognition of this, the Government of Canada beginning on October 2nd, 1950, permitted the market to determine the rates of exchange in Canada for the United States dollar and the pound sterling. That this progressive development continues to inspire confidence in financial centers is reflected by the relative

stability which has prevailed in the quotations for the Canadian dollar and in the continuing movement of capital into Canada for investment purposes. The year 1950, which began with the United States dollar at a premium of about 10 per cent in Canadian currency, ended with a premium of less than 5 per cent.

Balance Sheet. The Company's balance sheet showed by comparison with the previous year-end that current assets had increased \$27,106,607 and current liabilities \$14,190,769. Cash and securities increased \$25,769,937 and inventories, on the other hand, showed a reduction of \$4,149,532.

Earnings Statement. As reflected in our statement of earnings for the year, our net earnings increased \$16,513,535 over 1949; the cost of pay-rolls, supplies and services increased \$18,894,359; and taxes based on income increased \$9,622,601. The net profit of \$48,765,849 was equivalent to \$3.21 per share on the common stock, compared with \$2.08 per share for 1949 and \$2.55 for 1948.

Capital Expenditures. It is estimated that capital expenditures in 1951 will exceed \$20,000,000. Such expenditures in 1950 were \$18,683,606, an increase of \$129,755 over 1949. By countries expenditures last year were: \$16,604,594 in Canada, \$1,519,928 in the United States and \$559,084 in the United Kingdom and other countries.

Dividends. You have all had the Annual Report and have noticed the amounts of cash and other resources possessed by the Company and, undoubtedly, some of you have queried whether these amounts are necessary to the proper conduct of the business, or whether they should not in part be paid out in dividends. Before reaching a conclusion on this point, you should remember the changes which have taken place in world economic conditions. As you have noticed in the Annual Report, the wages we pay have more than doubled. Coincident with this, there have been increases in the cost of supplies, in taxes and in other expenses, with the result that much larger amounts of money must be continuously tied up in the business. Capital expenditure for the same amount of equipment costs much more per unit than it did pre-war. With all this in mind, you can see that it is not possible to make exact comparisons of today's cash resources with those of pre-war years. Our major transition programme

already mentioned has taken substantial sums of money and heavy additional capital expenditures will be required during the next several years to carry this project through to completion.

The foregoing facts must all be taken into consideration by your Board as the dates come along for declaring dividends. The shareholders will appreciate that it has always been the desire on the part of the Directors to pay out as large an amount of money in dividends as they consider advisable in the light of their responsibility to assure the continuing supply of nickel and the continuing progress of the Company.

Common and preferred dividends paid since January 1st, 1929, after the present Company had become the parent corporation, have totaled \$507,000,000 to the end of 1950, out of net earnings of \$619,000,000.

During 1950 four quarterly dividends of forty cents per share were paid on the common shares, with an extra dividend of forty cents in December, the same as payments in the past three years. Four regular quarterly dividends of \$1.75 per \$100 of par value were paid on the preferred shares.

Receipts for Petsamo Properties. Up to the end of 1950, we received payments aggregating \$15,333,400 in compensation for our nickel properties in the territory ceded by the Finnish Government to the Soviet Union. The balance due after these payments is \$4,666,600, of which \$3,499,950 is payable in three equal installments during 1951, and \$1,166,650 represents amounts which are overdue and should have been paid in 1950. The Soviet Government suggested that this overdue portion of 1950 payments would be remitted only in sterling, which is not in accordance with its undertaking to pay in United States dollars and is precluded also by the United Kingdom Exchange Regulations. The overdue amounts for 1950 are accordingly under discussion between the Canadian and Soviet Governments.

Apart from the foregoing references there should be no need to repeat at this time the presentation of our financial affairs already given in the Annual Report which

was mailed last month to all shareholders and has been furnished to those in attendance at this Meeting.

Our primary contributions to the rearmament of the free world are nickel and other metals produced by the Company's plants in Canada. Our rolling mills and foundry in the United States and the United Kingdom are likewise heavily engaged in defence production, their contributions consisting of special nickel alloys whose peace-time usefulness translates readily into military applications.

During World War II, many of the products from our rolling mills went into ships for a two-ocean navy; emphasis has now been directed to jet plane production. This has produced a corresponding shift in the types of the alloys coming from our three rolling mills — at Huntington, West Virginia; Birmingham, England; and Glasgow, Scotland — in the direction of the unique high temperature resisting alloys presently required. For many years our research staffs in the United Kingdom and the United States have been conducting studies in the high temperature properties of metals for jet engines, as well as for gas turbines and guided missiles. At the same time our rolling mills have become specially skilled in "custom tailoring" high temperature aircraft engine alloys in rolled forms. Our Bayonne, New Jersey, Works has also acquired extensive experience in the production of high temperature sand cast alloys and precision castings which likewise are required in jet engines.

Our rolling mills are established at locations which enable us to properly serve the widely differing needs of thousands of United States and United Kingdom customers and to thereby exploit most effectively the opportunities for Canadian nickel in the field of high nickel alloys. The location of these plants is of the utmost importance, in fact fundamental to their success. Unless they were located so as to permit the closest of communication with and of deliveries to their customers, they could not operate under modern conditions, when a mill or foundry must be immediately responsive to a customer's need for small but essential changes of any product and for the most rapid delivery.

Current jet engine models need two or three times the nickel ordinarily found in reciprocating engines. Part of this nickel is contained in our Inconel and Nimonic alloys which our own rolling mills are producing in

increasing quantity, while part of it forms an important element of the heat-resisting stainless steels and other alloys produced by our customers' mills for vital components of jet planes.

In addition to Inconel and Nimonic alloys, our rolling mills are producing malleable nickel for such electronic uses, as radio tubes and radar parts, and substantial quantities of Monel alloys for condensers, evaporators, salt water lines, pumps and other naval applications.

Improvements of the nickel refining units at our Clydach, Wales, refinery were continued and important modifications were completed with resulting improvements in efficiency and capacity.

Of the precious metals, platinum is most important to defence because of its use as a catalyst, in contact points and other applications. Production of platinum and other precious metals, refined at our Acton, England, refinery, is at capacity. Likewise, the Birlec plant at Birmingham, England, continues at capacity production. This plant produces arc-type and induction melting furnaces, and a wide range of industrial heating and annealing furnaces.

Our Company has entered into arrangements to design a pilot plant at Huntington, West Virginia, for the account of the United States Atomic Energy Commission. These government-owned facilities will be leased to and operated by the Company.

The high nickel alloys produced in the Company's plants in the United States and the United Kingdom are only a fraction of the nickel-containing alloys produced by industry generally and available for military and civilian use. One of the largest outlets for nickel is in stainless steel which has a multiplicity of military as well as civilian applications. The rearmament of the free world is substantially increasing the needs for stainless steel in the aircraft programme, ordnance and combat vehicles and other military equipment. More than 800,000 ingot tons of stainless steel were produced in the United States in 1950, an all-time peak. The percentage of this stainless represented by nickel-bearing grades was reduced from two-thirds to approximately 55 per cent and yet the actual tonnage of nickel-containing alloy exceeded both 1948 and 1949.

Alloy steel ingot production in the United States was about the same as in 1948 and over 40 per cent larger than in 1949. Direct military applications include armour plate, gun forgings, gun mounts, airplane and tank engine parts, etc. The growing need for nickel in defence applications has led to conservation measures in the form of significant changes in the metallurgical pattern of alloy steels for civilian requirements. The use of more complex alloys with lower nickel content is growing and users of standard nickel alloy engineering steels are now using these substitutes for a portion of their requirements.

In addition to their work on high temperature metals required for jet engines, our research staffs directed their work increasingly in 1950 to materials required for national defence. Although conservation of the nickel supply for needs of national defence made it necessary for us to suspend many of our development and research activities aimed at immediate markets for nickel, all laboratories are engaged in solving current problems involving use of nickel materials and are continuing to develop much information on the behavior of nickel and its many alloys in industrial applications.

The significance we attach to our salt water testing programme, which we have been operating for the past 15 years at Kure Beach, North Carolina, is reflected by the fact that in 1950 we built and formally opened a new marine corrosion testing station at Harbor Island, near Wilmington, North Carolina. Tests are not confined to our own products, but include other metals and alloys, wood, plastics and fibers, ropes and protective coatings of all sorts. One result of our Kure Beach tests of immediate interest was that we were able during the year to provide data to government departments which formed a basis for the introduction of a copper-nickel alloy containing 10 per cent nickel for many marine applications where an alloy containing 30 per cent nickel had been used.

DUCTILE IRON The engineer now has an additional material — Ductile Iron — to use along with steel, cast iron and malleable iron. With this new material, a development resulting from extended research by this Company, the engineer has an improved opportunity in the selection of engineering materials to harmonize the determining factors of availability, cost, manufacturing requirements and service performance.

Ductile Iron has an appreciable use for parts of agricultural equipment. Its largest production to date has been in the manufacture of shock resistant equipment, as anvils, side frames, bases and other components of forging hammers. Some of these parts weigh 50 tons. The number of different articles already made in Ductile Iron is estimated at several thousand. Examples include ingot molds, pipe, pipe fittings, gears, crankshafts and chemical equipment.

To date over 125 foundries in 15 countries in the free world are working with this new material.

COINAGE As recorded in the Annual Report, the year 1951 marks the bicentennial of the isolation of nickel by Axel F. Cronstedt. Canada's new 1951 five-cent pieces, coins of pure nickel commemorating this 200th anniversary, were issued by the Royal Mint at Ottawa early in 1951. These coins are being made from processed nickel on hand at the Mint and the issue will not affect Canada's current supply of nickel for industry.

NUMBER OF EMPLOYEES The total number of employees in Canada at the year-end increased 1,966, or 15 per cent, over the number at the end of 1949. At the year-end, we had 15,029 employees in Canada; 4,134 in the United Kingdom; 3,242 in the United States, and 98 in other countries, or a total of 22,503.

Of this number, 8,530 had served the Company for ten or more years and 1,251 were members of the Company's Quarter Century Club, signifying twenty-five or more years of service.

ACCIDENT PREVENTION Accident prevention has continued to be considered an integral part of the Company's operations and the results in the year 1950 show further improvements in the accident records of all divisions.

DIRECTORS The Honorable John Foster Dulles, a Director of the Company since 1925, resigned from the Board on May 1st, 1950, following his

appointment by President Truman as Consultant to the Secretary of State of the United States. Sir William T. Griffiths, a Director since 1945, also withdrew from the Board at the year-end.

On May 1st, 1950, Mr. George C. Sharp, a member of the firm of Sullivan & Cromwell, the Company's general counsel, was elected a Director.

Mr. R. L. Prain, O.B.E., Chairman of Rhodesian Selection Trust Limited, and Chairman and Managing Director of Mufulira Copper Mines Limited and Roan Antelope Copper Mines Limited, was elected a Director and a member of the Advisory Committee of the Company on February 27th, 1951.

ROBERT C. STANLEY Mr. Robert C. Stanley, who presided at these Annual Meetings as President or Chairman of the Board for the past twenty-eight years, died on February 12th, 1951. He contributed a lifetime of distinguished service to Canada and the Nickel Industry. We have reproduced in the Annual Report the tribute paid to him by the Board of Directors when he retired from the Presidency in 1949.

Many at this Meeting, and many who will read this Address, were his friends. He will be remembered by them with respect and affection.

CONCLUSION In the Annual Report and this Address to Shareholders we have presented another chapter in the history of the Company. From them you can learn what has happened in the year 1950, what your Company is currently doing to maintain its position as a dependable source of nickel and other essential metals, and how we are striving to play our part in the present troubled times. Your Company is in a strong financial position with good mines and modern plants — efficiently staffed and with a long-established and wide-spread system of distribution. These will continue to serve effectively in the future as they have in the past.

On the occasion of the Annual Meeting of the Company, which was held at the Royal York Hotel, Toronto, on April 30, 1952, Dr. Thompson made the following address:

**FIFTIETH
ANNUAL
MEETING**

This meeting marks an auspicious occasion in the history of our Company. It is our fiftieth Annual Meeting since the formation of International Nickel. When the Canadian Copper Company, at Copper Cliff, Ontario, and the Orford Copper Company, at Bayonne, New Jersey, were joined in March, 1902, the nickel industry was a small, unimportant business, producing materials chiefly for naval armament, coinage, nickel plating and nickel silver. Nickel steels, which were later to become the chief nickel consumer, were only in their infancy.

While the use of nickel dates back some 200 to 300 years before the beginning of the Christian era, it was not until the early part of the 19th Century that nickel became of any importance in the life of Europe. In the first half of that century electroplating was discovered and the manufacture of the versatile alloy of nickel, copper and zinc, formerly known as German Silver and now as Nickel Silver, commenced in various parts of Europe. Our oldest subsidiary, *Henry Wiggin & Company, Limited*, founded in 1835, was a pioneer in this development. The next important date in the nickel industry was 1875, when the rich nickel silicate ores of New Caledonia were first shipped and that island assumed the predominant position, which it retained for about thirty years. While the discovery of nickel in Canada near Sudbury, in Northern Ontario, was recorded about 1848, Canada's real nickel history did not commence until 1883. The Sudbury District then underwent the history common to all new mining districts. Mines were discovered, smelters built, and venturesome pioneers risked and lost their money in attempts to mine, smelt, and refine a most refractory ore producing a product which, when it was ready for sale had to be offered to an almost non-existent market.

Canada climbed to the acknowledged first place in the production of nickel in 1905 — three years after the Canadian nickel-copper ores and the then best method for their separation into nickel and copper (the so-called Orford Process) were brought together in International Nickel. This position has been maintained since that time. In 1905 Canadian nickel production was at a rate of slightly over 1,500,000 pounds per month. Today this Company alone is producing 21,000,000 pounds per month and total Canadian production is over 23,000,000 pounds monthly.

A half century ago, at the time of Inco's formation, the town of Sudbury had a population of approximately 2,000. It has grown with its nickel industry so that it now is a city of upwards of 50,000. Practically all residents of the entire Sudbury mining area, about 70,000, derive their living directly or indirectly from nickel.

1951 —
RECORD YEAR The Company's fiftieth year, 1951, was outstanding, with new high records for net earnings and dividends. Wages paid and capital expenditures reached new all-time highs, and income taxes, which registered much the sharpest increase of all, were larger than in any preceding year. The net earnings of \$62,875,000, or \$4.17 a share on the common, compared with the previous peak in 1937 of \$50,299,000, or \$3.31 per share. Production of nickel was further increased and more ore was mined from underground than in any previous year.

NICKEL Although our production of nickel was increased, our deliveries of 243,800,000 pounds were some 12,500,000 pounds less than in 1950. In that year the Company was able to draw on stocks of refined nickel accumulated from operations in 1949 when demand was slack and governments were limiting their purchases for stockpile. Deliveries to the trade in 1951 in the form of primary nickel increased almost 8,000,000 pounds, while nickel in our rolling mill and foundry products decreased over 20,000,000 pounds as our mills in England, Scotland and the United States progressively converted to defence production at the expense of peace-time alloys and certain end-uses of high nickel alloys were suspended or officially prohibited.

Costs and Price New union agreements were negotiated in May, reducing the work week from 44 to 40 hours for all our hourly employees in Canada and increasing substantially their take-home pay. As a result of the shorter work week, it was necessary to add to the number of employees required to conduct our operations. To compensate for the increases in costs which resulted from these union agreements and from higher costs of materials, supplies and other items, the price of nickel in all markets was raised 6 cents per pound at mid-year, bringing our United States duty paid price of electrolytic nickel to 56½ cents per pound.

Subsequently, in December, wages for all our hourly employees in Canada were again increased.

Distribution During the first six months of the year, the distribution of our nickel in all markets was handled directly by the Company. After satisfying defence orders and other items accorded government priority, the remainder of the supply was distributed equitably, having regard to historic patterns of use and relative needs. With the expansion of defence requirements, the National Production Authority at Washington took over the allocation of all the nickel supplies in the United States, beginning at mid-year. Under its direction, somewhat less than one-half of the supply which the Company provided in the United States was delivered for direct defence and atomic energy requirements. A portion of the balance was for the national stockpile and industrial programmes which gave support to the defence production. The amount remaining each month since the beginning of allocations has been delivered to the civilian economy in accordance with government instructions.

Distribution in Canada and the United Kingdom was also carried out under direction from the Governments concerned. Beginning in the fourth quarter distribution on an international basis proceeded in accordance with the allocations recommended by the International Materials Conference and concurred in by the Canadian Government.

In all fields, the distribution and consumption of nickel have felt the impact of the defence efforts of the free world.

Steels Steel mill products are a vital segment of both civilian and military economies and continue as the largest nickel consuming field.

Engineering Alloy Steels Engineering alloy steel ingot production in the United States in 1951 was some 20 per cent greater than in the previous year. However, voluntary conservation by industry and subsequent imposition of government controls lowered the average amount of primary nickel used per ton of alloy steel ingots. The net result of these changes was that the consumption of primary nickel in engineering alloy steels was somewhat less than in 1950.

Stainless Steels The production of stainless steels in 1951 was at an all-time peak. Output in the United States was in excess of 900,000 ingot tons. Of this amount some 45 per cent was of grades which contained nickel, compared with 60 to 70 per cent in recent years. This reduction was due primarily to

governmental prohibition of many applications of nickel-chromium stainless steels, but, due to shortages of stainless steel scrap, the consumption of primary nickel in this field is estimated to have been somewhat larger than in 1950.

Nickel Plating The amount of nickel consumed in the plating field in 1951 was down about 60 per cent from 1950. This sharp reduction was occasioned by governmental prohibition of nickel plating for decorative purposes and by the use of thinner nickel coatings in other applications.

Gas Turbines and Jet Engines Nickel alloys were used in all jet and reciprocating airplane engines produced in 1951. Our plants and research organizations in *Birmingham, England; Glasgow, Scotland; Bayonne, New Jersey; and Huntington, West Virginia*, have been devoting much effort to meeting the demands of the builders of gas turbines and jet engines. Greater efficiency, measured in power output per pound of engine, has required materials which will perform reliably at high temperatures under mechanical stress. Included in the materials developed by our Company for these purposes are the Nimonic and Inconel groups of high nickel alloys, and other special purpose compositions.

Nickel Silver and Copper-Nickel Base Alloys Government restrictions prohibiting the use of nickel silver for purely decorative purposes and reducing the permitted nickel content to the minimum required for corrosion-resistance and strength resulted in substantial curtailment in the production of nickel silver for civilian uses.

As a conservation measure, a copper-nickel alloy containing only 10 per cent nickel with from 1 to 1¾ per cent iron has been adopted by the United States Navy as acceptable for condenser tubing. However, the copper alloys containing 30 per cent nickel, previously used for this purpose, continue to be specified where their corrosion-resistance, strength and welding characteristics are essential.

Electronics The greatly expanding electronics industry consumed significant quantities of nickel and nickel alloys during 1951. In this, as in other fields, nickel conservation was necessary, but by reason of the specialized properties required, other materials could not always be substituted with fully satisfactory results. As part of its contribution to conservation the Company initiated production of nickel-clad steel strip and nickel-clad wire as temporary substitutes for solid nickel in this field.

Cast Irons Ni-Hard, the nickel abrasion-resisting iron, and Ni-Resist, the nickel corrosion-resisting iron, developed by the Company, met recognized needs in defence-supporting industries, such as mining, cement, ceramics, power, metal working and chemical processing, and in engine parts and other applications.

Ductile Iron There has been much interest in and increasing utilization of magnesium-containing Ductile Iron, a cast material of great usefulness, invented and developed by members of our research staff.

More than 150 companies in 17 countries are licensed under the Company's patent rights.

Our Rolling Mill and Foundry Products The amount of nickel provided to the market in our rolling mill and foundry products in 1951 was about 25 per cent less than in 1950. This was due mainly to end-use restrictions and the changing character of the orders on these plants and also to voluntary suspension of deliveries of some standard products, such as Monel and malleable nickel, and downgrading of others. Production emphasis was placed upon the increasing demands for regular and special high temperature alloys, such as the Nimonic and Inconel alloys, for the aircraft industry.

The volume of high nickel alloys supplied by our United States subsidiary from its *Huntington Works* in West Virginia to the aircraft field was more than two and a half times that furnished in 1950. This was made possible by our providing new and expanded facilities as well as utilizing existing equipment previously employed in the production of regular products for other fields. The quantities of Nimonic supplied by our United Kingdom subsidiary, *Henry Wiggin & Company, Limited*, from its plants in *Birmingham* and *Glasgow* were doubled. On the other hand, production of rolled anodes at the Wiggin plants was reduced approximately 50 per cent and the output of strip for nickel coinage was completely suspended.

Both these subsidiaries offered new heat-resisting alloys with lower nickel content to promote the conservation of nickel.

Re-Establishment of Peace-Time Applications It will be evident from the foregoing that certain of our long-established uses have been restricted by conservation measures, the percentages of nickel in various steels and alloys have been reduced, and the normal ratio of distribution between our primary nickel and other forms of nickel has been disturbed. Furthermore, new market developments have had to be restricted or temporarily suspended.

These conditions ultimately will impose on our sales and development departments the burden of readjustment and re-establishment of normal industrial uses. We faced this situation at the ends of both World Wars and, while this readjustment will require a major sales and development effort, we feel confident that most of the older uses can be re-established or can be more than replaced by new ones. It is to be hoped that as the industry returns to a normal market the various restrictive measures to which we have just referred will be wisely and promptly dropped.

COPPER Our deliveries of refined copper in 1951 of 236,900,000 pounds were 24,000,000 pounds greater than in 1950. Canadian consumers received 55 per cent of the total, the balance being marketed in the United Kingdom, the United States and Continental Europe. By the latter half of the year, buyers in all these markets were subject to governmental allocations or import controls. During the fourth quarter the International Materials Conference began to make recommendations for the international allocations of copper.

Price The quoted export price in the United States and elsewhere increased from 24½ to 27½ cents following an accord announced in May between the United States and Chilean Governments increasing the price of Chilean copper imports to the latter level. Due to heavy demands, however, considerable tonnages moved into European markets at substantially higher prices creating a dual price situation of so-called "official" and "free" price levels. Domestically refined copper in the United States remained frozen at 24½ cents throughout the year under price ceiling regulations.

Tariff The United States import tax of two cents a pound was again temporarily suspended by Act of Congress, effective from April 1st, 1951 until February 15th, 1953. It is to be hoped that this unnecessary trade obstacle between Canada and the United States, as well as the tariff on refined nickel, soon will be permanently removed.

Supply Outlook Over 300,000 tons of copper per annum are expected to be added to present world copper production over the period of the next three years, if the expansion programmes on which copper producers have embarked throughout the world are carried through to completion. Looking beyond that period, further increases in production are included in these programmes. Many trade authorities have already voiced the feeling

that world copper production is heading for a situation in which copper may be in over-supply.

PLATINUM METALS Platinum, palladium, rhodium, ruthenium and iridium, produced by the Company as by-products in the refining of nickel and copper, continued in heavy demand throughout 1951. Total deliveries of 375,000 ounces were 108,000 ounces more than in 1950.

Canada, South Africa, Colombia, Alaska and Russia continued as the principal sources of the platinum metals. A programme to greatly increase its production was announced by the major South African producer.

The Company's production of platinum was maintained at capacity and the entire output was sold. The bulk of our deliveries was made to the United States market. This precious metal finds its main industrial applications in the production of glass fiber, electrical contacts, spark plugs, rayon, instruments and other items required for defence purposes. Of great and increasing interest during the year was the use of platinum catalysts in the production of high octane gasoline. Ten units of this type are now in operation and 20 more are in either the construction or the design stage.

Our deliveries of palladium exceeded those for any previous year. This important member of the platinum group was employed on an increasing scale for electrical contacts, catalysts and other industrial purposes, as well as for jewelry and dental applications.

During the month of December there was held in Brussels a highly successful exhibition of palladium jewelry, which was opened in the presence of government officials (to whom the question of a hallmark is of interest), manufacturing jewelers and other important guests. The exhibit comprised pieces of palladium jewelry made by leading Belgian manufacturers, with a display also of British-made items.

OTHER BY-PRODUCTS Beginning with the last quarter of the year, the Company's production of gold was sold abroad, pursuant to the new regulations of the Government at Ottawa permitting export sales of gold free of governmental price control.

Cobalt concentrate, one of the by-products recovered in limited quantities from our nickel and copper production, is refined and produced in marketable form at our refinery in Clydach, Wales. The resultant products consisting of salts and oxides are distributed from the United Kingdom.

Other by-products recovered included silver, selenium and tellurium.

PROGRESS OF TRANSITION PROGRAMME The Company's huge undertaking of changing over to completely underground mining, initiated over ten years ago,

progressed well during 1951 and is ahead of schedule, despite slow deliveries of material and the heavy demand for nickel, copper and our other metals. The project was designed to provide sufficient capacity by the end of 1953 to replace open pit production. This replacement requires us to more than double the maximum underground ore capacity which we had in any year prior to 1951.

Details of the progress of this project and the work completed have been covered in the Annual Report. Prominent among these were the bringing into production of the *Stobie Section* of the underground *Frood-Stobie Mine*, the completion of the new *Creighton* ore hoisting shaft, crushing plant and concentrator and the production of ores from the lower grade portion of the *Creighton Mine* by low-cost caving methods. In this new portion of our mining operations, as a result of extensive experimentation and tests, we have been successful in economically handling and treating lower grade ores than we have been mining in the past either from underground or surface.

Through the progress in the expansion of our underground capacity, we have now lifted the volume of ore we are mining from underground and surface combined to over one million tons a month, or a present annual rate of between 12,000,000 and 13,000,000 tons. We will be able to obtain this entire quantity solely from underground when we complete our underground expansion and discontinue open pit mining. This will insure our ability to maintain the 21,000,000 pounds of monthly nickel production which we reached at mid-year through the installation of emergency facilities.

Our transition programme requires important revisions in ore treatment as well as in mining practices. Many changes affecting both phases of the programme still remain to be made.

Process and plant research at the various Company mines and plants have continued to effect benefits in our operations. The Annual Report has noted the advances we are making on certain developments such as the economic recovery of nickel from nickel-bearing pyrrhotite together with the production of by-product iron ore and the by-product production of liquid sulphur dioxide from our smelter gases.

You will have read in the Report that the *oxygen flash smelting* of copper concentrates—a process change which I mentioned at last year's Meeting—was put into operation during the year. For this purpose a 300 ton-per-day oxygen generating unit and a flash smelting furnace of novel

design were completed.

OTHER PLANT OPERATIONS Operations of the copper refinery at Copper Cliff were maintained at a higher rate than in 1950. Through changes in operating practice, the quantity of slag required to be returned to the smelter for further treatment was lowered considerably, resulting in substantial savings.

At the *Port Colborne nickel refinery* output of electrolytic nickel showed an increase over 1950. Losses in production were cut considerably due to fewer power interruptions. Plans have been completed for construction of a new research laboratory building at this refinery.

Our *nickel refinery at Clydach, Wales*, was operated at maximum capacity during the year, with nickel output the highest on record. There is a healthy and growing demand for carbonyl iron powder, one of the products of this plant.

At the *Company's precious metals refinery in Acton, England*, production of platinum metals and gold from concentrates and intermediate products showed an increase. Operations are continuing at capacity and further improvements in plant facilities are under way.

Our wholly-owned subsidiary, *Birlec Limited, of Birmingham, England*, was started in 1927 under the name of Birmingham Electric Furnaces, Limited. In the 25 years since its formation, Birlec Limited has gradually expanded until it now manufactures a line of electrically and gas-fired industrial furnaces especially designed for the heat treatment, annealing and other processing of metallic parts used in the manufacture of automobiles and other means of transportation, the heat treating of small pieces, such as drawn shells, and the enameling of ceramics. This subsidiary is now also manufacturing a full line of arc melting and smelting furnaces, together with adsorption dryers for gases. Many Birlec furnaces are sold throughout the world, representing one of the ways in which the Company is helping the United Kingdom to meet its needs for export business.

Foundry operations at our *Bayonne Works in New Jersey* were maintained at a high level. Production increases of more than 100 per cent were shown for sand castings and fittings, over 30 per cent for welding electrodes and about 50 per cent for precision castings.

FINANCIAL In my remarks here last year I noted that in 1950 confidence in the future of Canada's economy had expressed itself so vigorously by the inward flow of foreign funds that the Government had decided

to abandon its fixed rate of exchange for United States currency. From that time (October 2nd, 1950) the market was free to determine the rates of exchange in Canada for United States dollars and for Sterling although the exchange control and its regulations continued in authority. Subsequently restraints on foreign travel and on certain imports and capital transfers were relaxed, and finally in mid-December 1951 the Government announced that foreign exchange control was abolished.

From the standpoint of those engaged in foreign trade this may well be considered the major event of 1951. Of the many countries which resorted to exchange control as a war-time expedient, Canada has become the first to abandon it—the first to restore a completely free currency. In apportioning credit for this fine achievement it should not be forgotten that since the War the Canadian Budget has been balanced annually, debt has been retired each year and undue expansion of credit has been avoided. These policies have had their share in creating an atmosphere favorable to foreign investment in Canada's resources. Before leaving this subject I should like to quote from an important statement made before Parliament by The Honorable Douglas Abbott, Minister of Finance:

"We would be better advised not to rely on exchange restrictions but rather on the general handling of our domestic economic situation to keep us in reasonable balance with the outside world and to maintain the Canadian dollar over the years at an appropriate relationship with foreign currencies."

Canadian currency began 1951 at about 5 per cent discount from the United States dollar. It ended the year practically at parity.

Capital Expenditures Capital expenditures in 1951 were the highest for any year in the Company's history. They totaled \$23,700,000, and compared with the previous high of \$21,400,000 in 1929. The principal expenditures were \$15,880,000 for our Canadian programme of major expansion in the mining and treating of underground ores plus \$3,090,000 for the building of homes for our employees in the Sudbury District, required by our expansion programme.

It is estimated that capital expenditures for 1952 will exceed \$20,000,000.

Depreciation We maintain our plants at the highest level of operating efficiency. In consideration of this and of our periodic engineering surveys as to the condition and probable life of property items, it is felt that the provisions which are being made for depreciation are adequate to write-off the cost of these assets over their

useful lives. Your Directors recognize that replacement cost of those of our properties which in time will have to be replaced may be very different from their initial cost. In this connection, it is significant to note that of the net balance of all property items remaining to be depreciated fully 58 per cent pertains to capital additions made to our properties during the years 1947 to date, when costs of materials and construction were at high levels compared with previous years.

Dividends In the Annual Address last year I referred to the necessity for the Company to maintain ample cash resources in a time of general inflation and discussed the various items, including the cost of replacing capital items, which make necessary the accumulation and retention of these resources. Part of my statement was as follows:

The shareholders will appreciate that it has always been the desire of the Directors to pay out as large an amount of money in dividends as they consider wise in the light of their responsibility to assure the continuing supply of nickel and the continuing progress of the Company.

Fortunately in the year just passed your Directors were able not only to maintain this desirable position, but also to increase the quarterly dividends on the common shares and also the amount of extra dividend paid out at the year-end.

Distributions on the common shares totaled \$37,900,000, or \$2.60 per share, and were larger than in any previous year. In each of the four preceding years dividends of \$2.00 per share were paid. Four regular quarterly dividends of \$1.75 per \$100 of par value were paid on the preferred shares.

DEVELOPMENT AND RESEARCH Development and research were conducted on a very small scale in the years following the organization of International Nickel in 1902. The Company's first research laboratory was built in Bayonne, New Jersey, in 1906. After the first World War, when we faced readjustment without a backlog of industrial uses for our products, it was evident that greater effort was needed and in 1922 a separate Development and Research Division was organized in New York. A similar division in the United Kingdom and a number of bureaux of information and other centers for dissemination of technical information were subsequently established. This pioneering development activity, started 30 years ago and now carried on in some 13 countries, has made a distinct contribution to technological advance in these countries with resulting benefit to their local industries and to

Canada's export trade.

Our development and research programmes during the past year were geared closely to the rearmament efforts and needs of industry under the present systems of allocation of the supply of nickel and restrictions on its use. The requirements of metal conservation in the present defence economy brought pressing problems for our customers and ourselves. The use of "leaner" steels and the adoption of alloys of lowered nickel contents have brought questions of processing, of attainable properties and of substitutions of alternate materials that are calling for much work in the Company's laboratories in Canada, the United Kingdom and the United States, and for co-operation of its field technical staffs with industry.

DIRECTORS There have been several changes in our Board of Directors.

Mr. I. C. Raymond Atkin, Vice President, Director and Member of the Executive Committee of J. P. Morgan & Co. Incorporated, and The Honorable Lewis W. Douglas, Chairman of the Board of Trustees, The Mutual Life Insurance Company of New York, and former American Ambassador to the Court of St. James, were elected Directors on July 9th, 1951.

On January 22nd, 1952, Mr. Gordon R. Ball, Vice President, General Manager and a Director of the Bank of Montreal, was elected a Director.

Mr. Andrew V. Stout resigned as a Director on May 7th, 1951, having rendered devoted and valuable service on the Board since 1923, and on the Executive Committee since 1934.

JOHN P. BICKELL Mr. John P. Bickell, a prominent figure in Canadian mining, who was a Director of the Company since 1929 and a member of the Executive Committee since 1944, died on August 22nd, 1951. He contributed much to the progress of the Company and his financial sagacity aided materially in the sound management of investments by the Retirement System's Board of Trustees, of which he was Chairman. Mr. Bickell attended many of these Annual Meetings since joining the Board. As mine owner, financier, executive of international repute and generous philanthropist, his death was a distinct loss to Canada, and our Company has lost a strong advisor and the Directors a sincere friend. He was a personal friend of many here present who remember him with warm regard.

OTHER SOURCES OF NICKEL From my earlier remarks you have heard that our Company has increased its nickel production to 21,000,000 pounds per month. Other present and potential producers in Canada

and elsewhere also are engaged in programmes for increasing the free world's nickel production. Already a part of this new output has started to come on the market, but much of it will not be available for some time.

Canada's second largest nickel producer, *Falconbridge Nickel Mines Limited*, is presently engaged in a programme which, as recently reported, is designed to increase its refined nickel production to a rate of 35,000,000 pounds annually. In February, 1952, it was announced from Washington that Falconbridge had signed a contract with the Defense Materials Procurement Agency of the United States Government under which the United States is to be supplied 50,000,000 pounds of refined nickel over the next nine years.

Sherritt Gordon Mines Limited is developing its deposits in the Lynn Lake area of Northern Manitoba and plans are said to call for initial production near the end of next year. The company, which is reported to have a contract with the General Services Administration at Washington, will construct a refinery near Edmonton, Alberta, with an annual capacity of 17,000,000 pounds of refined nickel.

Early this year, General Services Administration announced that the *United States Government's World War II Nicaro nickel project* in Cuba had resumed production. It is stated that this operation, which was closed down in 1947, is expected to be producing at an annual rate of about 30,000,000 pounds of nickel in oxide later in the year.

A new cobalt, nickel and copper separation plant of the *National Lead Company* at Fredericktown, Missouri, is scheduled for operation in the first half of 1953. This is expected to add over the next five years a cumulative total of slightly over 9,000,000 pounds of nickel.

According to trade reports, increased output is anticipated from the nickel mines in New Caledonia, in the South Pacific. The nickel production in 1951 of the principal producer, the *French firm S.A. Le Nickel*, is estimated to have been approximately 14,000,000 pounds.

Stimulated by the demand for the metal, there are a number of other nickel properties under development in Canada, Oregon, Alaska and elsewhere. Surveys are also under way of undeveloped sources of nickel, including those which are not regarded as commercial under present conditions.

Our own Company is continuing with increased vigor its search for new deposits of nickel in Canada and elsewhere. In 1951 more money was expended for this purpose and our *exploration work* was both more intense and more widespread than in any previous year.

The United States Bureau of Mines estimates *Russian nickel production* to be of the order of 50,000,000 pounds per annum, including the production which we were in process of providing and which was lost to this Company and to the free world when the Petsamo District of Finland was ceded to the Soviet Government at the end of World War II. By comparison total production of nickel in Canada is currently at the annual rate of over 275,000,000 pounds. This equals the average production during the five war years (1940-1944) and exceeds the average production of the five pre-war years by more than 80,000,000 pounds.

When the programmes for still further increases of production now under way in Canada, Cuba and elsewhere are realized, the total annual production in the free world will be roughly 375,000,000 pounds, an increase of over 150,000,000 pounds, or more than 65 per cent, above the corresponding production of the pre-war years.

Canada's contribution to the overwhelming superiority of the free world in the field of nickel is marked by the facts that Canada's production is five times the amount estimated for Russia and that Canada's 80,000,000 pound increase achieved since the pre-war years is by itself far in excess of the entire estimated Russian production.

CONCLUSION I think that it is not generally recognized that no mineral deposit, great or small, has any real value until the metals in the ground have been brought to the surface, refined and sold with profit. For many metals, such as gold, silver, copper, lead and zinc, the vital problem ends with the production of refined metals ready for the market. For a relatively new metal such as nickel the problem is entirely different. Even after the nickel is refined and ready for sale there is no large ready market except the one which has been, in large part, created by this Company.

Beginning in an organized way some thirty years ago your Company started to create a peace-time market for nickel. That this effort was successful is evidenced by the steady growth of the market since that time. In fact it can be stated that the present stringency is due in part to our efforts to convert to profitable use a great mineral deposit which had only a limited value until your Company expended the time, money and effort necessary to create the markets wherein nickel could be sold to the profit of producer, consumer and Canada alike.

Sooner or later we will see a recession in general business which will affect the nickel trade. I have full confidence—supported by the experience of the past—that

the nickel industry is capable of emerging from this recession stronger than ever with new, important peace-time applications. But this will not happen by itself. This Company must continue to search out, win and hold markets for nickel in all parts of the world. I

trust that other producers and those newly coming into the field will feel, as we have, that production carries with it the responsibility for developing and expanding the market for nickel.

On the occasion of the Annual Meeting of the Company, which was held at the Royal York Hotel, Toronto, on April 29, 1953, Dr. Thompson made the following address:

**ANOTHER
OUTSTANDING
YEAR**

Nineteen fifty-two was another outstanding year in the Company's history. For the third successive year we maintained production at capacity and supplied more than 75 per cent of the nickel used by the free world. In the last three years, in response to an unprecedented demand, the Company delivered a total of nearly 100,000,000 pounds more nickel than the amount which we delivered over any prior three-year period, exclusive of World War II. Our 1952 deliveries of nickel in all forms totaled 249,000,000 pounds, an increase of more than 5,000,000 pounds over 1951.

The net earnings for the year were \$58,891,000, or \$3.90 a share on the common stock, which were exceeded only by those of \$62,875,000, or \$4.17 a common share, in 1951. The reduction in 1952 earnings was the result of increased production costs and of the reduced value of the United States dollar relative to the Canadian dollar.

**COSTS AND
NICKEL PRICES**

During the year the same influences which adversely affected our costs in the post-war period continued to prevail. Wages were again increased in general conformity with the wage pattern in the three countries in which we operate plants. The costs of supplies and services, such as freight and electric power, also rose. In addition, the weakening of the United States dollar in relation to the Canadian dollar had an unfavorable effect on the Company's earnings. Much the greater part of our operating costs is incurred in Canadian dollars while the major portion of our sales is made basically in United States dollars or the equivalent thereof in sterling or other currencies. As noted in the Annual Report, the average rate for the Canadian dollar for the year 1952 was around \$1.02 (in terms of United States currency), compared with approximately 95 cents in 1951. Accordingly, a larger amount of United States dollars from the proceeds of the sales of our products was required to meet our Canadian costs.

Throughout the year the price of nickel remained unchanged at the level prevailing during the latter half of 1951. On January 14, 1953, however, and pursuant to earlier discussions with the governmental authorities at Ottawa, the price was raised 3½ cents (United States) per pound. This brought our United States price for electrolytic nickel to 60 cents per pound, including the 1¼ cents United States import duty. Substantially equivalent prices were made effective simultaneously for our Canadian, United Kingdom and other markets.

FINANCIAL The Company has consistently endeavored to maintain a strong cash position. In the light of the world-wide inflation which has characterized the post-war period, this policy has proven to be well justified. With the continued rise in costs, including wages, more cash is required to carry on our operations and to defray the expense of our capital expenditure programme. It is certain that our cash resources must be sufficient to meet not only our operating and capital expenditure programmes but also to cover future contingencies.

**Foreign
Exchange** Last year I commented on the successive steps taken by the Canadian Government resulting in foreign exchange control being abolished in December, 1951. We have now experienced a full year during which rates of exchange in Canada have been determined by market forces. As a result of the pronounced improvement in Canada's overall balance of payments position during 1952, the Canadian dollar was consistently strong, averaging, as I have just stated, around \$1.02 in terms of United States currency and closing at the year-end at approximately \$1.03, compared with about 99 cents at December 31, 1951.

After some twelve years of controls, business has had to adjust itself to exercising anew its own judgment in dealing with exchange. The strength of the Canadian

dollar has created problems for exporters as the proceeds of sales abroad in foreign currencies have provided a lesser amount of Canadian dollars out of which costs in Canada must be met. Stability in rates would be beneficial for those engaged in foreign trade provided this condition resulted from natural economic causes. I believe that in the long run the benefits resulting from free exchanges outweigh the disadvantages arising from fluctuating rates.

Dividends During 1952 four quarterly dividends of 50 cents per share were paid on the common shares, with an extra dividend of 60 cents in December. The total of \$37,903,000, or \$2.60 a share, was the same as the previous annual high mark established in 1951. In each of the four preceding years dividends of \$2.00 per share were paid. Four regular quarterly dividends of \$1.75 per \$100 of par value were paid on the preferred shares.

NICKEL Distribution of nickel throughout the year was made internationally in accordance with allocations recommended by joint action of the Canadian and other member Governments of the International Materials Conference. Approximately 68 per cent of the free world's supply was allocated to the United States and over 18 per cent to the United Kingdom, Canada and other Commonwealth countries.

The needs of military programmes and defence-supporting industries and the build-up of government reserves required continuation of conservation and end-use restrictions. The consumption of nickel, therefore, did not reflect free markets.

From free-world supplies of primary nickel, which were larger in 1952 than in the previous year, significant quantities were, however, made available to the civilian economy after taking out amounts allocated for the defence programmes and making deliveries to the United States Government stockpile.

Major Nickel Consumers As in the recent past, the steel industries of the United States, the United Kingdom and Canada continued to consume the largest quantities of nickel. However, the defence programmes in 1952 emphasized a growing demand for non-ferrous alloys containing nickel.

Engineering Alloy Steels Production in the United States of alloy steel ingots in 1952 was somewhat less than in 1951.

A large measure of conservation of nickel in the United States had already been achieved in the engineering alloy steels in 1951, first under voluntary industry actions and

subsequently under government controls.

Of the alloy steel ingot production in 1952, a lower percentage of these steels contained nickel than in the immediate post-World War II period. The primary nickel consumed, however, is estimated to have been about the same in 1952 as in the preceding year.

Stainless Steels During recent years the stainless steels have provided a steadily growing market for primary nickel. Increases in nickel consumption have been especially marked in the United States where in 1952 the stainless steels required more nickel than was consumed in any other single field.

Production of nickel-chromium stainless steels in the United States was greater in 1952 than in 1951. The amount of primary nickel consumed in these stainless steels is estimated to have been somewhat larger.

Much of the recent demand for nickel-chromium stainless steels has come from the defence programmes, especially for aeronautical and naval use. Many of the ordinary peace-time outlets were restricted under United States Government controls.

A comparable situation has been observed in the United Kingdom where reduction in civilian consumption was more than counterbalanced by uses for rearmament as, for example, in aircraft engines and in the chemical engineering field.

Nickel-Plating Deliveries of nickel to the electroplating industry in 1952 continued under government restrictions. The quantities delivered in the United States, the United Kingdom and Canada were each about the same as in 1951. As a result of the restrictions, consumption both in 1951 and 1952 was much less than in other post-war years.

While the plating industry was able to continue its operations at a greatly reduced rate, the amount of nickel allowed under allocations did not permit coatings of sufficient thickness to provide high quality performance. Continued efforts were made to substitute other coatings, such as bright electroplated zinc, improved deposition of copper plus chromium, and new tin-nickel alloys. They have not produced results which are as satisfactory for protection or in appearance as those obtained with nickel-plating of conventional thickness. We believe that with the return of more nearly normal conditions this use of nickel can be rapidly and completely re-established.

Gas Turbines and Jet Engines The production of military aircraft in the United States, the United Kingdom and

Canada in 1952 consumed large amounts of nickel-containing alloys, including engineering alloy steels, stainless steels and complex heat-resistant, or "super", alloys.

A large quantity of the primary nickel for aircraft alloys in the United States is consumed by the steel industry, which uses it in the manufacture of special jet engine alloys, as well as in stainless steels and low alloy steels.

High nickel alloys of the Nimonic and Inconel types produced in our plants in the United Kingdom and the United States have been required in such large volume as to necessitate expansion in production facilities.

Additional nickel consumption can be foreseen in gas turbines and aircraft jet engines for other than military uses. British commercial transports equipped with jet engines, containing special alloys developed and produced by our United Kingdom subsidiaries, are now in regular scheduled airline operations. Experimental gas turbines in locomotives have been sufficiently satisfactory to justify production orders for such equipment.

Insistent need for more powerful and efficient aircraft engines has imposed on our research facilities (in Birmingham, England; Glasgow, Scotland; Bayonne, New Jersey, and Huntington, West Virginia) the task of developing heat and corrosion resisting alloys for jet engine service to operate at even higher temperatures than those now encountered. New alloys to meet these requirements have been offered to engine manufacturers for test.

Nickel Silvers and Copper-Base Alloys Fabricators of copper-base alloys did not operate at capacity throughout the year, due to shortages of other materials and the limitations on nickel. There was an enlarged demand, however, for cupro-nickel tubing for the defence programmes. The increased quantities of nickel required for this purpose more than offset the reduction in the nickel allowed in nickel silver alloys for civilian flatware and other applications, with the result that the total consumption of nickel by fabricators of copper-base alloys was greater than in 1951.

Nickel Catalysts and Nickel Compounds Nickel catalysts are of great importance in the manufacture of oleomargarine, soaps, pharmaceuticals and synthetic organic chemicals. Consumption of nickel in this field increased during 1952 over the previous year. Nickel compounds were used in larger amounts in alkaline storage batteries and electronic devices, and in about the same quantities as previously in ceramic products.

Cast Irons Differing trends were shown during 1952 in the three major areas of use of nickel in cast irons.

Nickel consumed in the manufacture of engineering cast irons was somewhat less than in 1951. On the other hand, the corrosion resisting irons of the Ni-Resist group consumed more nickel in 1952 than in the previous year, reflecting the need for these high nickel alloy cast irons in preparedness and supporting programmes.

The abrasion resisting irons, such as Ni-Hard, continued in 1952 to consume nickel at about the rate shown in 1951, partly as a result of high operating rates in the mining, metal and cement industries.

Ductile Iron Ductile Iron, the magnesium-containing cast iron discovered and developed by members of International Nickel's research staff, continued to attract wide interest and was used in considerably greater tonnage in 1952 than in the previous year. Many new fields of use were uncovered. There are now more than 200 companies in 19 countries licensed to produce this product.

Re-establishment of Peace-time Applications Present government restrictions on end-uses of nickel for electroplating, in stainless steels and high nickel alloys, in copper-base and aluminum-base alloys and in engineering alloy steels have, except in special cases, temporarily stopped effective development of new uses. Some of our peace-time markets have been lost, but only temporarily. Some may have been permanently diminished or even permanently lost. But we will discover new fields and certain uses, at present small, will be greatly expanded as the preparedness demand decreases.

The concentration on preparedness has widened the range of our experience with many alloys in many fields and under sometimes novel conditions. This accumulated knowledge and experience will be invaluable to us when nickel again may be supplied without restrictions for all peace-time requirements. They have completely confirmed the outstanding role of nickel in the modern industrial world.

COPPER Deliveries Deliveries of refined copper in 1952 of 234,300,000 pounds closely approximated those of 236,900,000 pounds in the previous year. Our Canadian consumers, as in 1951, received 55 per cent of the total. The remainder continued to be marketed in the United Kingdom, the United States and Continental Europe.

Price Following the release of copper from price control in the United States in February of this year, the Canadian Government discontinued its official policy with respect to the price of copper for consumption in Canada. Thereupon, your Company increased its price to domestic consumers in Canada from the previously existing 29½ cents (Canadian) per pound to 33½ cents (United States). This brought our domestic price into conformity with the price at which the United Kingdom Ministry of Materials had been buying copper from Commonwealth producers. The prevailing United States export and domestic prices, as quoted by the *Engineering and Mining Journal* at the time of preparation of this Address, were approximately 34½ cents for export and 30 cents for United States domestic consumption. Considering the volume of our copper sales, I think it is unnecessary to emphasize the influence which changes in the price of copper have on the earnings of the Company.

Tariff The United States import tax of two cents a pound on copper was again temporarily suspended. Under the new Act of Congress the suspension will continue until June 30, 1954, although the President would be required to reimpose the tax if the average domestic price in the United States for any month should fall below 24 cents a pound.

Future Markets With freedom of copper from all controls and the end of bulk buying in the United Kingdom, which may occur this year, our competitive position as a seller of copper should remain strong. The Company has been able to readily sell its refined copper in preferred markets, and for the most part to regular customers of long standing. The recognized quality of our metal and our capacity to produce a wide range of vertically cast special shapes will be very helpful in future competition.

Concern has been expressed that the market will be unable, in the face of increasing competition from aluminum, stainless steels and similar materials, to absorb the expected enlargement of world copper production. My experience with this type of competition is that in the long run good development and sales efforts on any one commodity tend to expand the markets for all. The developing of markets for copper in the coming years will be helped greatly by the high cost of construction, maintenance and repair, and the consequent economy resulting from the use of more permanent materials.

PLATINUM METALS Our production of platinum and palladium, the two principal platinum group metals, as well as of rhodium, ruthenium and iridium, continued at a high level.

Deliveries of all these metals combined totaled 287,000 ounces in 1952, compared with 375,000 ounces in 1951, and 267,000 ounces in 1950.

The Company's output of platinum and palladium was sold mainly in the United States market. Since the outbreak of hostilities in Korea, Canadian platinum, as in previous emergencies, has been a mainstay in supplying United States requirements for defence and defence-supporting purposes. Large additional quantities of platinum metals are produced and sold in world markets by other free-world countries, including particularly South Africa, and also Colombia and Alaska.

This year is the 150th anniversary of the discovery of palladium by the British scientist, William Hyde Wollaston, who found this precious metal in association with native platinum. Within a few years, he and his business partner, Smithson Tennant, also discovered rhodium, iridium and osmium. Of the six platinum metals, only ruthenium escaped their notice. These discoveries were an outgrowth of Wollaston's successful effort to produce malleable platinum for commercial use without resort to melting.

Today, 150 years after its discovery, palladium is a precious metal important in both industry and the arts and we have become its principal producer. It has many uses in electrical switching apparatus, as a catalyst in chemical processes, in dentistry, and in jewelry and adornments. These established uses are being further developed and new ones discovered.

OTHER BY-PRODUCTS The Company's output of gold was sold abroad, in accordance with Canadian Government regulations permitting export sales of gold free of governmental price controls. Deliveries of gold were 42,300 ounces, as compared to 38,000 ounces in 1951.

Silver deliveries were 1,076,000 ounces, against 1,027,000 ounces in the previous year. Our silver was sold at prevailing market prices and very largely in Canada.

The recovery of cobalt concentrate has been substantially increased as a result of process improvements at our Port Colborne, Ontario, refinery. This concentrate,

which is not of major importance in relation to the total world supply, is refined as salts and oxides at our Clydach, Wales, refinery.

Other by-products recovered in minor quantities from our nickel and copper production are selenium and tellurium. An acute shortage of selenium supplies continued throughout 1952, the requirements of the electrical industry having been exceptionally heavy.

PROGRESS OF MINING EXPANSION PROGRAMME The Annual Report has referred to the progress we have made during the year in various phases of our underground mining expansion programme. This programme, financed entirely out of the Company's own resources, has made possible our current annual production rate of approximately 250,000,000 pounds of refined nickel.

We have reported in recent years that the mining of our open pits was expected to be completed by the end of 1953. It has now been determined that it will be practicable to mine more ore from the surface than we had previously anticipated and, therefore, the life of the pits will be somewhat extended.

EXPLORATION As can be noted from the Annual Report, we have approximately doubled our expenditures for exploration as compared with the previous year.

In the Sudbury Basin, where we have six operating mines and large holdings of mining lands, our exploration activities were intensified. Geological and geophysical studies have been actively pursued within the areas immediately adjacent to our operating properties and in the vicinity of other known ore occurrences. Extensive studies also have been made of other locations within the Basin where geological structures and information justified further exploration or diamond drilling.

Added to these activities has been the work undertaken in the Northwest Territories on the exploration concession which we received from the Canadian Government in 1951, and referred to in our Annual Report of that year. Due to the remoteness of this area, exploration is both difficult and expensive. For example, it has been necessary to establish permanent winterized camps and to replace the conventional methods of ground transportation with thoroughly reliable air transportation.

You have probably seen references in the press to our work at Mystery Lake in northern Manitoba. This investigation is still in the preliminary stages and all that has been determined is the presence of a large low-grade

nickel deposit, non-commercial under present conditions. Exploration is being actively pursued to determine the extent of the deposit and to search for possible enrichment of ore grades.

We must continue to make heavy expenditures for exploration in order that the huge tonnages of ore which are being consumed each year by our operations may continue to be replaced.

PLANT OPERATIONS With the continuation of peak demand for nickel, our smelters at Copper Cliff and Coniston, Ontario, and our refineries at Copper Cliff and Port Colborne, Ontario, and Clydach, Wales, operated continuously throughout the year so as to maintain the Company's production at full capacity.

Two important process developments at Copper Cliff — the recovery of nickel and iron ore from nickeliferous pyrrhotite and the oxygen flash smelting of copper concentrates — were referred to in the Annual Report. The oxygen flash smelting project has already reached the point where by-product liquid sulphur dioxide is being delivered to the Canadian trade. The pyrrhotite process has been carefully tested by pilot plant procedures and we are now taking the steps necessary for designing a first production unit.

As a result of major alterations completed during the year, the operating efficiency of our nickel refinery at Clydach has been greatly improved. In addition, encouraging results obtained on a pilot scale have warranted the installation of a full-scale unit which is expected to result in savings in the cost of producing nickel at this refinery. The alterations in the department dealing with the recovery of cobalt and copper have been completed and this department is now in full operation, enabling the oxides and salts of these metals to be more efficiently extracted and recovered.

The capacity for production of rhodium, ruthenium and iridium at the precious metals refinery in Acton, London, has been increased by about 75 per cent. By the introduction of a new and modified process, these metals will now become available in increased quantity and of greater purity. Considerable progress was made during the year in the conservation of acids and reagents used in the refining of precious metal concentrates.

Birlec Limited, of Birmingham, England, a wholly-owned subsidiary, celebrated its twenty-fifth anniversary in 1952 with its total volume of sales at an all-time high record. This plant produces arc-type and induction melting furnaces, a wide range of industrial heating and annealing

furnaces, and dryers.

With the expanded facilities mentioned at this time last year and continued high levels of demand for defence, the output of our Huntington Works in West Virginia was more than 15 per cent above that of 1951. Nickel-chromium alloy production was higher, most of which went to the aircraft industry. The volume of high nickel alloys supplied by our subsidiary, Henry Wiggin & Company, Limited, from its plants in Birmingham, England, and Glasgow, Scotland, was the largest which this company has ever recorded, with the Nimonic series of alloys, principally for the aircraft industry, figuring prominently in the total.

Operations at our Bayonne Works in New Jersey were higher than a year ago. This plant is an established source of high temperature alloys in sand cast forms and precision investment-castings for industrial and aeronautical components. Demand for welding electrodes another important product, continued to increase. Production facilities during 1952 were enlarged to provide for current demands and also anticipated increased sales.

DEVELOPMENT AND RESEARCH

Development and research efforts continued to be directed largely toward the problems encountered in rearmament and in the adjustments required by civilian producers faced with the necessity of using emergency alternates in place of the materials with which they have been familiar. It is interesting to note that, even in these times of prolonged restrictions on the use of metals, it has proved impracticable to satisfy many of the requirements of industry in terms of other alloys containing less nickel. Appreciable knowledge of the usefulness of nickel has been gained which, coupled with the fruits of long-term research projects, will be of great assistance in promoting future markets when conservation measures are no longer in effect.

Nickel would not now enjoy its high standing as an alloying element had we not deliberately set out to bridge the gap between pure science and industrial practices. What is learned in development and research laboratories and also in the field is assembled and made known to both

scientists and industrialists through our technical service sections located in various key industrial areas in the United States and Canada, and technical information centers located in the United Kingdom, Belgium, France, Italy, Germany and five other countries. The oldest of these information centers, Centre d'Information du Nickel, of Paris, France, celebrated its twenty-fifth anniversary during the year.

Educational Service Activities

The Company's educational service activities are now in their seventh year and are used by 175 universities and colleges in Canada, the United Kingdom and the United States which offer accredited courses in engineering subjects. These institutions are supplied currently with up-to-date technical information for faculties, students and libraries. Each institution has received nickel alloys for laboratory study and a comprehensive exhibit of nickel-containing materials.

The scope of this service is expanding and includes literature for 75 other degree-giving schools, including technical institutes, for science teachers in many secondary schools and for public libraries. In some institutions, special lectures and assistance in organizing courses in metallurgy have been given.

Fifteen fellowships for study in the fields of nickel, copper and the platinum metals are currently in effect in Canada, the United Kingdom and the United States.

OUTLOOK

Each year we have endeavored to present to our shareholders a continuing picture of the Company's development and of its part in the fields of mining, refining and selling nickel, copper and the platinum metals. I think it has been apparent for many years that our basic belief has been that nickel is one of the fundamental metals of the modern world and that the number of places in which it can be used is limited only by our imagination and our will to seek them out. We still are animated by the conviction that there are many uses for nickel as yet undiscovered and that by determination and persistent effort these new uses will be found and developed profitably. Your Company is in a strong position, both in material resources and in skilled and experienced personnel, to successfully continue this task.

On the occasion of the Annual Meeting of the Company, which was held at the Royal York Hotel, Toronto, on April 28, 1954, Dr. Thompson delivered the following address:

**1953 —
YEAR OF
PROGRESS**

In 1953 the Company again enjoyed a period of substantial progress marked particularly by important achievements in expansion of our production facilities and development of process improvements. The output of nickel, our principal product, was maintained at capacity for the fourth consecutive year, ore mined was at a new high and proven ore reserves at the year-end were the highest in the Company's history.

Our nickel producing capacity at the end of the year was at an annual rate in excess of 275,000,000 pounds, compared to about 250,000,000 pounds at the close of 1952. Deliveries of nickel, all to countries of the free world, also showed an increase over the previous year. Our ability to provide additional plant capacity and the progress achieved in our mining expansion programme made it possible for us to enter into a five-year contract with the United States Government for "quick" delivery of 120,000,000 pounds of metallic nickel and 100,000,000 pounds of electrolytic copper. Initial shipments under the contract were made in January, 1954.

Construction of a pyrrhotite treatment plant was begun in the Copper Cliff, Ontario, area. Using a process developed by the Company's research staff, the plant will recover iron ore higher in grade than any now produced in quantity in North America. To assure adequate sources of nickel in the years to come, the Company continued its aggressive search for new ore deposits.

Net earnings for the year of \$53,694,000, or \$3.54 a share on the common stock, were the third highest in the Company's history and its strong financial position was well maintained. In 1952 net earnings were \$58,891,000, or \$3.90 a common share. Net earnings were down in spite of increased sales, principally because of higher operating costs but also in consequence of substantially increased provision for depreciation due to the large expansion in the post-war years in our plant investment. There was also a substantial increase in the cost of exploration during 1953 as compared to 1952 and of contributions to the Retirement System caused by the greater number of employees.

**COSTS AND
NICKEL PRICE
Costs**

The larger operating costs during the year were occasioned by the generally higher cost of labor and materials. Wage

increases were again made in general conformity with the wage pattern in the three countries in which we operate plants.

The history of any progressive mining operation such as ours is the history of a continuing race between technical improvements and rising costs, especially higher wage rates and higher taxes which appear to be an outstanding characteristic of current times. In a period of currency inflation, such as we have experienced over the past years, wages rise at a very steep rate and are closely followed by the costs of other services and supplies, while taxes take their inevitable toll. But processes cannot be improved and costs lessened at the same speed. Before any major change in process can be introduced there must be a comparatively long period covering first laboratory studies and pilot plant testing, then the construction of plant and the installation of equipment to utilize the process and finally the actual starting of the operation on a commercial scale. These successive steps are inevitably time consuming, especially in a period such as we have been passing through. For 1953 the net result was a decrease in earnings in spite of a record volume of sales.

Price The Company's price for nickel continued unchanged at the level of 60 cents (United States), or its equivalent, established in January, 1953. This price is up by 3½ cents per pound from the 1952 level.

The price of nickel and its relation to production cost and market opportunities constitute a subject which your management has constantly under review and it is obvious that many different factors must be evaluated. First, it cannot be overlooked that considerable new nickel production capacity will have been established during the next few years and this may well prove to be temporarily in excess of market demand. Also, nickel is in world-wide competition with other steel alloying elements and with a wide variety of other metals such as copper, zinc and tin, or even such diverse materials as wood, glass and plastics. In considering the temporary financial advantage which would arise if the price were higher than at present, one must always weigh the long range adverse effect on the Company's established trade and its retarding influence on new developments. In a business such as ours, in which there are always new developments in the making, and where markets must be expanded to sustain additional

nickel production capacity, it is also important that, so far as possible, the price basis remain stable over some period of time, resisting pressures in either direction. I would emphasize that it is of major importance that the price of nickel should at all times reflect not only short-term but also long-term considerations.

FOREIGN EXCHANGE

In 1953 the Company's products sold for consumption outside of Canada accounted for more than 85 per cent of our net sales. At the Annual Meeting last year, I pointed out that the bulk of our products is sold basically in United States dollars and that the greater part of our operating expenses is incurred in Canadian currency, with the result that the Company's earnings are affected adversely or favorably depending on whether the Canadian dollar appreciates or depreciates in terms of United States currency.

The average rate for the Canadian dollar in 1953 of about \$1.01 $\frac{3}{4}$ in terms of United States currency was not far from the average rate of approximately \$1.02 $\frac{1}{8}$ in the preceding year. Accordingly, the rate of exchange was not a material factor when comparing 1953 earnings with those for the year before.

DIVIDENDS

Common and preferred dividends paid to December 31, 1953, in the 25 years from January, 1929, after the present Company had become the parent corporation, have totaled \$623,118,000, out of net earnings of \$794,655,000. The latest common dividend of 50 cents per share, paid on March 20 of this year, was the 153rd distributed on that stock.

Four quarterly common dividends of 50 cents per share were paid during 1953, together with a year-end extra dividend of 35 cents, making a total of \$34,258,000, or \$2.35 a share. In each of the two preceding years common dividends of \$37,903,000, or \$2.60 a share, the highest for any year, were disbursed. In 1950, and in each of the three preceding years, dividends of \$2.00 per share were paid on the common stock.

INVENTORIES

You will have noticed that the value of our inventories has increased some \$8,984,000, standing at \$112,397,000 at the year-end. This is another indication of the influence of inflation on industry and illustrates very strikingly the growing necessity of employing larger and larger amounts of money in conducting a business. In the past two years our inventories have increased by approximately \$30,000,000.

NICKEL

Deliveries

The Company's deliveries of nickel in all forms during 1953 amounted to 251,417,000 pounds. This volume was about 13 per cent greater than the average for the five years immediately following World War II.

Distribution Distribution of nickel to different countries until the end of September, 1953, was made in accordance with allocations recommended by joint action of the Canadian and other member governments of the International Materials Conference. Although the Conference made no recommendations for the final quarter, distribution by the nickel industry in the last three months of 1953 followed the pattern established by this Conference. Its activities terminated at the year-end. Approximately 66 per cent of the free world's supply of nickel in 1953 went to the United States and a total of about 17 per cent to Canada and the United Kingdom.

Restrictions on Civilian Uses

Restrictions on the distribution and end-use of nickel were relaxed by the Canadian Government in August, and in October all use and purchase controls on the metal in Canada were lifted. The United States Government, in October, revoked controls on the civilian use of nickel in that country, effective November 1, and shortly afterwards the United Kingdom and most European countries took somewhat similar action.

In the United States since November 1, nickel deliveries have been made first to meet defence production requirements and stockpile contracts with the government. The supply remaining for civilian purposes after providing for these heavy and abnormal demands has been found to be definitely inadequate. As a consequence, the period of restriction of "peace-time" uses for nickel is being prolonged to the detriment of civilian markets.

Major Nickel Consumers

The steel industries of the United States, the United Kingdom and Canada, in the production of engineering alloy steels, stainless steels and jet engine alloys, were again the largest consumers of nickel.

Engineering Alloy Steels

Consumption of nickel in engineering alloy steels in the United States during 1953 was slightly higher than in 1952. As the year progressed it was possible for steel producers to make some progress toward restoring the regular nickel content of their products. With the easing of government end-use restrictions, emergency steels were replaced by the higher nickel content standard steel alloys for some heavy duty uses.

Twice within a period of 14 years the urgency of military requirements has resulted in the downgrading of nickel alloy steels. Upon release from government

restrictions, the manufacturers who use these steels have tended to restore the original nickel specifications. This has not occurred to the full extent, with the result that there has been over the years a reduction in the amount of nickel used per ton of steel made. However, there has been a greater over-all use of alloyed steels instead of carbon steels and many of the lower nickel-containing steel compositions have developed uses and fields of their own which were previously not economically open to steels with higher alloy content.

Stainless Steels The defence programmes of the United States, the United Kingdom and Canada accounted for an appreciable proportion of the 1953 production of chromium-nickel stainless steels. The military and atomic energy programmes continued to absorb large amounts of these steels for applications in which their ability to resist heat and corrosion, coupled with high strength properties, was of major importance. Jet engine and air-frame parts depend upon nickel-containing stainless steels for satisfactory performance at greater speeds and higher temperatures.

The United States production of all types of stainless and heat-resisting steels in 1953 exceeded 1,000,000 ingot tons, a record annual volume. About 40 per cent of this was composed of nickel-bearing grades which consumed some 45,000,000 pounds of nickel. With the return of more ample supplies of nickel the market for these materials should have further satisfactory expansion.

Nickel-Plating Because of defence requirements in the United States, industry did not receive sufficient nickel to enable electroplaters to provide nickel-plating of a quality comparable to that attained in times when nickel supplies were adequate for their needs.

There have been concentrated efforts in the metal finishing trade during periods of restricted use of nickel to find new decorative coatings other than nickel. These efforts are continuing but substitute coatings with characteristics equivalent to nickel-plating have not yet been found and the industry is eager to receive greatly increased supplies in order to resume nickel-plating of a quality either comparable or superior to that reached prior to the Korean conflict.

Gas Turbines and Jet Engines The Company has become a principal producer of heat-resistant alloys for the aircraft industry. Our alloys meet a wide range of jet engine requirements for materials of construction and they are used in turbine buckets and vanes, combustion chambers and after-burners.

It is reported that every British aircraft gas turbine has rotor blades made of one or another of the Nimonic nickel-chromium alloys produced by one of our United Kingdom subsidiaries and these alloys find widespread use wherever jet engines are produced. In Canada, Inconel "X" is used for turbine buckets and in the United States this nickel-chromium alloy has been adopted for turbine wheels in the turbo-compound engines used in transatlantic and transcontinental air transports, as well as for important parts of military jet engines.

Nickel Silvers and Copper-Base Alloys The removal of government restrictions has entitled nickel silver producers to return to the 18 per cent nickel-containing grades, insofar as available supplies make this possible, replacing the 10 per cent variety which was the only type permitted under government orders.

The requirements of industry for higher pressures and temperatures in power plants and in applications such as industrial heat exchangers call for better materials. This has increased the demand for the cupro-nickel alloy containing 30 per cent nickel which has good strength and a demonstrated ability to withstand the effects of both temperature and corrosion.

Electronics Stimulated partly by defence requirements, but also by growth in peace-time needs, there has been an increasing interest in nickel and nickel-containing alloys by the electrical and electronics industries. Currently important uses include cathode ray tubes, permanent magnets, non-magnetic materials, alloys with special expansion properties, springs in telephone apparatus and many other specialized applications. Color television is expected to require increased numbers of amplifying tubes. These as well as the picture tubes and other components contain nickel.

Cast Irons The major uses of primary nickel by the iron foundry industry are in special irons, like Ni-Resist, a nickel-containing alloy resistant to corrosion and heat, and Ni-Hard, an abrasion-resisting nickel-chromium cast iron, and in the engineering cast irons. Total primary nickel consumption by this industry in the United States in 1953 was about the same as in 1952. When nickel once again becomes more freely available, this industry can offer opportunities for further development and larger outlets for nickel.

Ductile Iron Steady progress continued to be made in Ductile Iron, a cast material of great usefulness, invented and developed by members of our research staff. Licensees under the Company's patent rights at the end of 1953 numbered over 250, in more

than 20 countries.

Nickel Applications in Atomic Energy

Since the beginning of the development of atomic energy, nickel has played an important part, particularly in the concentration and processing of atomic fuels.

A large amount of nickel is used in a variety of forms, including nickel-plated coatings, Monel, Inconel and nickel-containing stainless steels. Nickel and nickel alloys are required in pilot plant units for application of atomic energy for generation of power. The ultimate construction of commercial scale plants could, therefore, open a further outlet for nickel.

COPPER Deliveries

Our 1953 deliveries of 234,349,000 pounds of copper were maintained at approximately the same high level as in the two previous years. Canadian consumers received about 45 per cent of this total, the balance going principally to the United Kingdom, and also to Continental Europe and the United States.

Price After price controls on copper had been removed in the United States in February, 1953, the Canadian Government discontinued its official policy with respect to the price of copper for consumption in Canada. Following some fluctuations, the price in both countries settled during April and held at approximately 30 cents (United States) per pound throughout the balance of the year. In the United Kingdom, the Ministry of Materials relinquished its copper controls and on August 5 dealings in copper were resumed on the London Metal Exchange after a lapse of 14 years. Following a short period of price uncertainty, quotations on that Exchange steadily improved and at December 31, 1953, the price was the equivalent of 29½ cents (U. S.).

Future Markets

The re-establishment of direct relationship between producer and consumer in the United Kingdom has been welcome and term arrangements for the supply of the Company's "ORC" special shapes have been made with a number of important consumers there. In 1953 the Company contracted with the Defense Materials Procurement Agency of the United States Government for the delivery of 1,666,000 pounds of electrolytic copper per month. These deliveries started in January, 1954, and are scheduled for completion in 1958, making a total of 100,000,000 pounds.

PLATINUM METALS

Despite the small concentration of platinum metals in the Company's ores, the refining

methods are so efficient and the tonnages of ore treated are so large as to make it a leading producer of these precious metals.

The Company supplies the free world with platinum, palladium, rhodium, ruthenium and iridium. Our deliveries of these metals in 1953 were approximately 270,000 ounces, against 287,000 ounces in 1952. The United States is the principal market for the platinum metals, with its chemical, electrical, dental and jewelry fields being the major consuming industries.

Known for many years as a precious metal used for fine jewelry, platinum serves today in many other ways. One of its new and important uses is as a catalyst in producing high-octane gasoline and other petroleum products. Substantial quantities of platinum already are serving the oil refining industry which has undertaken a large expansion programme based on the use of platinum catalysts.

The consumption of palladium in the United States and Canada is almost as large as the consumption of platinum. Palladium is employed principally for contacts in electrical apparatus. Important additional quantities are used for chemical purposes and in jewelry and dentistry.

There was a softening in the market prices for platinum and palladium in the United States during the first quarter of 1954. In March platinum was \$84-\$87 per ounce and palladium was approximately \$21 per ounce, as compared to \$91-\$93 for platinum and \$22-\$24 for palladium at the close of 1953.

OTHER BY-PRODUCTS

Gold and Silver

Gold production of the Company was sold at prevailing prices, mostly abroad and in accordance with Canadian Government regulations permitting exports of gold for sale at free market prices. Silver was in good demand and was sold either through established trade sources or to the Ottawa Mint.

Cobalt The recovery of cobalt from our ores is increasing as a result of improvements in refining techniques. This important by-product has been used, since ancient times, as a coloring agent in glass and pottery. Currently its largest single use is in cobalt-nickel-chromium-base alloys which are required in the manufacture of high temperature, high strength materials, particularly as applied to the jet aircraft engine. The second largest single use is in the manufacture of the cobalt-nickel-aluminum-iron permanent magnets used in radios, motors, generators and numerous other

industrial applications. Cobalt is utilized in major amounts in high-speed cutting tools and as a drier in paints, varnishes and high-grade printing inks. It holds unusual promise also in agriculture where it is considered an important additive to the feed of cattle and sheep in regions where the soil is deficient in this element.

EXPLORATION AND ORE RESERVES Proven ore reserves at the end of 1953 stood at 261,541,000 short tons, compared with 256,355,000 short tons at the end of 1952. The nickel-copper content stood at 7,816,000 short tons, compared with 7,795,000 short tons at the end of 1952.

The nickel-copper content of our ore reserves was first reported in the Annual Report for 1937, when total ore reserves were 206,397,000 short tons containing 6,739,000 short tons of nickel-copper.

Our annual deliveries of nickel in all forms rose from 125,577,000 pounds in 1929 to 251,417,000 pounds in 1953. In these 25 years the Company mined 187,000,000 tons of ore. From the foregoing figures it is clear that, following a quarter century of generally rising production for an increasingly growing market, we have successfully replaced in our ore reserves an amount greater than the vast quantity of ore mined and thus entered 1954 with the highest reserves both in tonnage of ore and of contained nickel and copper in the Company's history. This, of course, has not been done without a continuous and planned programme of intensive work in the Sudbury Basin embodying geological and geophysical surveys, followed by diamond drilling, and in addition widespread exploration elsewhere throughout Canada and in other countries where geological conditions suggest the presence of nickel or where it is reported. Over the last few years we have conducted this work with even more vigor and will so continue.

PLANT OPERATIONS Our smelters, refineries, rolling mills and other plants operated at full or near capacity throughout the year, with the exception of the Bayonne, New Jersey, Works, where operations were interrupted by a strike lasting almost two months.

Copper Cliff The construction of a \$16,000,000 plant, near Copper Cliff, Ontario, for the recovery of nickel and of iron ore from nickeliferous pyrrhotite was begun in September. It will treat 1,000 tons per day of pyrrhotite concentrates in the first unit of an operation which will ultimately yield about 1,000,000 tons yearly of high-grade iron ore as a by-product of nickel recovery. Higher in grade than any now recovered in quantity in North America, this iron ore will contain

at least 65 per cent iron natural and less than 2 per cent silica. It will command a premium price for direct use in open hearth and electric furnace steel production in Canada and the United States.

The process newly developed by the Company for this production represents an outstanding advance in nickel extraction metallurgy and a major step forward in the maximum utilization of our ores. Nickel recovery processes in current operation reject the iron content of the ore in slag or residues. By our new process a substantial burden is removed from the smelter by reducing the amount of iron which must be removed in slag. The resulting increase in smelter capacity enabled us to assume the contract, signed in May, 1953, to provide the Defense Materials Procurement Agency of the United States Government with 120,000,000 pounds of nickel and 100,000,000 pounds of copper during the five years ending in 1958.

At the year-end a larger oxygen flash smelting unit designed to treat all copper concentrates was placed in operation at Copper Cliff. Rich sulphur dioxide gas from this process was delivered to the adjacent plant of Canadian Industries Limited for production of liquid sulphur dioxide. Approximately 37,000 tons of liquid sulphur dioxide were produced and shipped to paper plants in Ontario and Quebec.

Port Colborne The output of electrolytic nickel at the Port Colborne, Ontario, refinery showed an increase over 1952. A new research laboratory was completed during 1953, permitting more extended study of refining procedures.

Clydach At the Clydach, Wales, refinery a new improved wet treatment process is used to treat residues in place of the Orford process which was discontinued during the year. This represents the final passage in the life of the historic Orford nickel-copper separation process, dating back more than 60 years and on which the Canadian nickel industry was founded. Its replacement by better methods is indicative of the progress which we are making in nickel recovery processes.

Wiggin The output at the Wiggin rolling mill in Birmingham, England, in 1953 was at a high level. During the year a new process laboratory was brought into operation.

Acton At the Company's precious metals refinery at Acton, England, process research continued to improve current operating methods and to initiate more economical techniques.

Birlec The large electric furnace plant of Birlec Limited, at Birmingham, England, had an excellent year. Works extension undertaken during the year provided much needed additional manufacturing space. Among

contracts received in 1953 were those for a battery of large annealing furnaces for South Africa for processing ferro-alloys, a battery of electric heat-treatment furnaces for Mexico, and a 20-ton arc furnace for Sheffield, England. Construction is under way of a 60-ton arc melting furnace, the largest to be built in Great Britain.

Huntington Total tonnage of all alloys produced by the Huntington, West Virginia, Works in 1953 was greater than in 1952. A larger proportion of products was in the nickel-chromium alloys and a large part of the increased demand originated in the aircraft industry. With the continued search for better aircraft performance, requirements for nickel alloys are under repeated change, and in this regard we maintain active research and development programmes. In 1953, as in recent years, new alloys were under development and field tests.

Bayonne At our foundry in Bayonne, New Jersey, the year was one of declining demand. It is expected, however, that with continuing sales efforts and the prospect of improvements in production techniques resulting from expanded technical activities, operations will achieve more satisfactory rates.

DEVELOPMENT AND RESEARCH The money we have spent in research over the years has brought great rewards. Many new uses have been found for our products; new products and new and improved metallurgical processes have been developed.

Development and research personnel continued to assist customers in the use of the lower nickel-content materials to which they were restricted under government regulations on uses of nickel. Also, certain long-term developments were instituted looking to the time when much larger civilian consumption will be required to sustain the growing production capacity for nickel. This work has been seriously hampered because stockpile as well as large military demands have claimed a prior call on the supply, limiting the amount of nickel currently available for civilian applications.

In the United Kingdom, the United States and Canada research has been extensive in the field of high temperature alloys which now are used widely in jet engines and are desired also for commercial gas turbines. At our Huntington Works these studies have led to the development of new wrought high temperature alloys which are now under

field test and which it is hoped will contribute improved performance to jet engines.

Our Mond laboratories and our Clydach refinery have developed a special type of nickel powder now being commercially employed in a sintered plate nickel-cadmium battery, which offers good behavior at very low temperatures and for high discharge rates. This new battery complements the long-established Edison nickel-iron storage battery.

A new procedure for producing a heat-treatable nickel-phosphorus alloy for hard surface nickel electroplating has been developed by our research laboratory at Bayonne. This new electroplate, which is initially very hard, can be heat-treated to practically double its hardness. Another development recently completed is a 10-year co-operative research programme with aluminum alloy producers which developed a nickel-plating that bonds so strongly with appropriate aluminum alloys that the composite materials may be deep drawn and later finished with chromium plate. This is expected to open a new market in the plating of aluminum appliances and furniture when nickel becomes more freely available.

DIRECTORS Your Company suffered the loss of two Directors during the year by the deaths of Mr. R. Leslie Beattie on June 10 and Mr. Reg Halladay on December 31. Our deep regret in these losses is recorded in the minute books of the Company and in the Annual Report.

On July 6, 1953, Mr. J. Roy Gordon, Vice-President and General Manager of Canadian Operations, was elected a Director.

Mr. Theodore G. Montague, President of The Borden Company, was elected a Director of the Company on April 5, 1954.

OUTLOOK Metallurgy and research are a means of revealing and employing the latent worth possessed by nickel, which in many instances does what no other metal can do. It is on this premise that further progress of the nickel industry largely depends. Your Company, as the world's leading nickel producer, has for over half a century devoted much time and effort to its search for new applications for the metal. As I have said before, it is to be hoped that other producers and those newly coming into the field will feel, as we do, that production carries with it the responsibility for developing and expanding the market for nickel.

*The following Address was delivered by
Dr. John F. Thompson at the Annual Meet-
ing of the Company, held at the Royal
York Hotel, Toronto, April 27, 1955:*

**1954 — AN
OUTSTANDING
YEAR**

It is indeed gratifying to be able to report at this Meeting that 1954 was the best year in the history of the Company. Deliveries of nickel, net earnings and common dividend payments all attained record levels. Substantial progress was achieved in process and plant improvements, research and development activities were further strengthened, and exploration work in the never-ending search for new sources of nickel bore encouraging results.

For the fifth consecutive year, our nickel production was continuously maintained at capacity. Deliveries of 282,000,000 pounds of nickel in all forms were the greatest made by the Company in any year. Ore mined during the year and proven ore reserves at the end of the year were at new highs.

Besides increasing our production capacity to provide 24,000,000 pounds of additional nickel annually through 1958 for the United States Government stockpile, the Company contracted with that Government to deliver by August, 1955, a minimum of 4,500,000 pounds of nickel refined from concentrate produced by Sherritt Gordon Mines Limited in excess of the quantity it required for processing at its refinery. However, as a result of improvements to our procedure for treating this concentrate, International Nickel will be able to increase these deliveries to at least 5,000,000 pounds.

From International Nickel's five underground mines and open pit in the Sudbury area of Ontario came a record 14,456,000 short tons of ore during 1954, resulting in the highest annual production of nickel and an impressive output of 12 other elements — copper, platinum, palladium, rhodium, ruthenium, iridium, gold, silver, cobalt, selenium, tellurium, and sulphur in the form of sulphur dioxide and sulphuric acid.

In the Chairman's Annual Address to Shareholders in 1948 it was stated that promising research on oxygen flash smelting of our sulphide concentrates

justified further effort in this field. It is pleasing to report that this decision has been fully vindicated by the results of a methodical programme proceeding in stages from a small pilot plant furnace through furnaces of gradually increasing capacity until the present unit, with a daily rating of about 1,000 tons dry solid charge, was placed in operation. During the year over a quarter of a million tons of copper concentrates were oxygen flash smelted in our new furnace at Copper Cliff, with major economies including a saving of 60,000 tons of coal and with accompanying large-scale recovery of sulphur as liquid sulphur dioxide.

Construction of the \$16,000,000 pyrrhotite treatment plant near Copper Cliff, which will employ the Company's atmospheric pressure ammonia leaching process, is proceeding on schedule. It is expected that the first commercial shipment of our high-grade iron ore pellets to the steel industry will be made before the end of the current year.

Production of electrolytic cobalt was initiated in 1954 at the Port Colborne, Ontario, refinery, marking the first commercial output in Canada of this form of cobalt. This is in accordance with our established policy of producing our metals and other products in the purest commercial grades to enable us to satisfy the most exacting requirements of industry.

As a result of aerial exploration work conducted by us for The American Metal Company, Limited, we obtained a 25 per cent interest in a lead-zinc-copper discovery made by that company in 1954 in the Province of New Brunswick, Canada.

FINANCIAL Our Financial Statements have always been expressed in United States currency in accordance with a practice dating from 1902 when the original Company was incorporated. The rate for the Canadian dollar during the year in terms of United States currency averaged approximately \$1.02¾, as compared with an average of about \$1.01¾ for 1953.

Net Earnings Net earnings established a new high

of \$65,295,000, not including \$1,865,000 non-recurring capital gain from the sale of a subsidiary. These earnings were up \$11,600,000 over 1953. The principal reasons for this increase were our substantially expanded output and the termination of excess profits taxation in the United Kingdom and the United States. Reduced expenditures for exploration and mine development and cost savings in the smelting of copper concentrates were further factors contributing to the improvement.

Dividends Preferred dividends of \$1,933,000 were paid in four quarterly distributions at the rate of seven per cent per annum of the par value of the preferred shares.

Common dividend payments of \$42,276,000 were the highest ever made by the Company. Four quarterly common dividends of 50 cents per share were paid, together with a year-end extra dividend of 90 cents, making a total of \$2.90 a share. In 1953 common dividend payments totaled \$2.35 a share. For both 1952 and 1951 dividends were \$2.60 a share, representing up to that time the highest annual distributions.

On February 7, last, your Board of Directors announced that the dividend on the common stock for the first quarter of 1955 had been increased to 55 cents per share. This and the year-end extra dividend were in line, as I have pointed out at previous Meetings, with the desire of the Directors to pay out as large an amount in dividends as they consider wise in the light of their responsibility to assure the continuing supply of nickel and therewith the continuing progress of the Company.

Capital Expenditures The Company's capital expenditures of \$22,257,000 were the second highest for any year and it is expected that they will continue at a high rate for some time to come. Such heavy expenditures are essential in large mining operations, such as ours, involving as they do the constant developing of mines, including sinking of new shafts and other mining activities, as well as the replacement of plants and equipment. Large sums also are needed for improvements in processes and equipment for the purpose of maximum utilization of our ores and increased efficiency. These

latter expenditures constitute investments made with the expectation of a very satisfactory rate of return.

Inventories While our inventories at the year-end were \$6,880,000 lower than the record high year-end inventories of \$112,397,000 in 1953, they were \$40,862,000 greater than at the end of 1950. This increase in the four-year period is indicative of the present-day need for employing increasingly larger amounts of capital in conducting a business.

NICKEL Price As noted in the Annual Report, the Company announced on November 24, 1954, an increase in its price of electrolytically refined nickel to 64½ cents (United States) per pound, including the 1¼ cents United States import duty which is paid by the Company. On the same date a general upward revision of the prices of mill and foundry products was announced.

At last year's Annual Meeting I stated that it is of major importance that the price of nickel should at all times reflect not only short-term but also long-term considerations. Inflation and the rising costs of labor and supplies which have been accumulating since the outbreak of World War II have necessitated several price increases. In the light of price levels prevailing for other and competitive materials, we believe that the existing nickel price is fair and reasonable and one which will encourage the maintenance and development of the markets of the Company and those of its customers for nickel and nickel-containing products.

Supply As previously stated, the Company's deliveries of nickel in all forms set a record at 282,000,000 pounds. This was some 30,000,000 pounds over our deliveries in 1953.

It may not be generally realized how much nickel the free world takes for stockpiling and defence purposes. Last year, for instance, these takings accounted for some 40 per cent of the total free world supply. However, since the total supply was up and there was less demand upon industry for defence production, the over-all result was that the supply of nickel for civilian applications was improved, even though complete satisfaction of all civilian requirements was not possible.

While stockpiling is expected to continue, there are indications that the scheduled intake for this purpose may be modified and that after defence requirements have been satisfied more nickel will be available this year for civilian applications than in 1954. This is an encouraging development. Your management feels today, as it always has, that adequate defence preparedness is impossible without a healthy nickel-consuming civilian industry. The value of such an industry was clearly demonstrated twice within the last 15 years, during World War II and during the Korean conflict. Today, however, government stockpiling and defence requirements have, of necessity, weakened part of this important market by restricting the amounts of nickel available for civilian purposes. Many manufacturers, in the fear that relief would be long delayed, have been endeavoring to eliminate nickel in new design plans for their products. If this situation continues it can only have consequences detrimental to the security of the free world. In times of national emergency it is necessary not only to possess the required strategic materials, but it is equally necessary to have the trained manpower, technical knowledge and facilities to use them most effectively. The developments which are improving the supply for civilian purposes are, therefore, of very real importance in maintaining this industry in a healthy condition.

Distribution Although there were no government controls on civilian uses of nickel during 1954, distribution of your Company's metal was guided by the principles that adequate supplies must be made available to meet defence production requirements and government stockpiling contracts, and that civilian customers — large or small — in all parts of the free world must receive fair and equitable treatment. In distributing its supply the Company has taken into account the patterns established among and within the various countries prior to the conclusion of the functions of the International Materials Conference in the final quarter of 1953, and also the changing conditions since that time.

The present enormous and abnormal requirements for defence and stockpile purposes make distribution a difficult task. But however exacting it may be, it is essential to the continuing success of the Company that our customers everywhere believe that we are

doing our best and that we are bringing to this task experience gained in years of co-operation with consumers of nickel. We have lived with and supplied many of the principal users for our whole business life, many have been served for long periods and still other users have newly entered the industry. We have many small customers whose needs we are serving and who constitute an important and growing part of the consuming market. These small consumers are essential to a rounded and healthy industry. Not only do they provide special products and services but they hold out the prospect of introducing new developments in the uses of nickel and of becoming in time consumers of a larger portion of the world's nickel supply.

The Company and its predecessors have been supplying nickel to the trade for nearly 70 years. The insufficiency of the limited supply for civilian purposes remaining under existing conditions not only is a present handicap to many of our customers but is potentially harmful to our long-range business by impairing the development and expansion of markets for nickel and weakening the nickel-consuming industries in the countries which constitute our markets. Apart, therefore, from our feeling of responsibility, pure self-interest demands that we conduct the distribution of our supplies impartially and with the best skill at our command.

*Free World
Nickel
Production*

Since 1949, prior to the Korean conflict, the free world production capacity for nickel has been increasing at a substantial rate and is expected to continue to increase for the next several years. From an estimated annual production of 267,000,000 pounds in 1949 it advanced to approximately 390,000,000 pounds in 1954 and is expected to increase by 1958 to at least 450,000,000 pounds. This substantial increase in nickel productive capacity should give assurance to consumers of nickel of an adequate supply in the future.

For over 50 years Canada has led all other countries of the world in the production of nickel. Its output of the metal last year was at a record high, amounting to more than four times that of the rest of the free world combined.

The increase in International Nickel's annual productive capacity since the year prior to Korea has amounted to over 40,000,000 pounds. In addition to

our Company's extensive production activities, which last year resulted in nickel deliveries of 282,000,000 pounds, various other present or potential producers have nickel development projects under way.

During 1954, according to published statements, Falconbridge Nickel Mines Limited was engaged in an expansion programme designed to increase its annual nickel production to 55,000,000 pounds or more by about 1960; the refinery of Sheritt Gordon Mines Limited at Fort Saskatchewan, Alberta, with an 18,000,000-pound annual nickel capacity, began operation in July and produced 3,965,000 pounds of refined nickel by the year-end; National Lead Company announced completion of a nickel-copper-cobalt refinery at Fredericktown, Missouri, and in its annual report for 1954 issued last month stated that start-up operations were in progress; the United States Government announced that the capacity of its plant at Nicaro, Cuba, was being expanded by 75 per cent over the plant's rated annual capacity of about 28,000,000 pounds of nickel; also the United States Government agreed to provide funds for the construction and operation by Freeport Sulphur Company of a pilot plant to test a process of that company for obtaining nickel and cobalt from ore deposits owned by it at Moa Bay, Cuba. The annual report of The M. A. Hanna Company for 1954 stated that a limited amount of ferronickel ingots containing 40 per cent nickel was produced by the end of the year at its plant near Riddle, Oregon, and it reported that indications are the plant will enter commercial production in 1955. It is understood that nickel production by the French firm, S. A. Le Nickel, in New Caledonia, approximated 18,500,000 pounds in 1954. There was also some nickel production in other parts of the free world, especially in Japan which obtains most of its nickel ores from New Caledonia.

*Principal
Nickel
Applications*

The scientific advances made in the past decade, in such fields as gas turbines and jet aircraft, electronics, atomic energy, transportation, power, petroleum and chemicals, are altering the pattern of nickel's applications throughout the world. The most important present-day uses for nickel throughout the free world may best be illustrated by its applications in the United States, which is the largest

consuming country. Based on preliminary figures issued by the United States Bureau of Mines, the principal uses of nickel in 1954 were in the production of nickel alloy steels, including stainless steels, which accounted for 36% of total consumption; malleable nickel and nonferrous alloys, including copper-base alloys, nickel silvers and high nickel alloys such as "Monel" and "Inconel", 30%; and electroplating, 16%. Then followed high-temperature and electrical resistance alloys, which took 7%; cast irons, 4%; catalysts, 1%; and magnetic alloys, 1%. Various miscellaneous applications accounted for the remaining 5%. In view of developments in the newer uses of nickel it is expected that some of today's smaller applications will grow to increasing prominence in years to come.

*Fiftieth
Anniversary of
"Monel"*

The year 1955 marks the Fiftieth Anniversary of the first production by the Company of its well-known high nickel-copper alloys, which have been marketed under its trade mark "Monel". They owe their origin to the late Mr. Robert C. Stanley, a former Chairman and President of this Company, and the trade mark applied to them was taken from the name of the late Mr. Ambrose Monell, who at the time of their development was President of International Nickel. The extraordinary combination of properties of these alloys, including their resistance to corrosion, good mechanical properties and pleasing appearance, has won for them a world-wide market.

The successful development of "Monel" resulted in the construction of the Company's rolling mill at Huntington, West Virginia, in 1921.

These alloys were the forerunners of many nickel alloys now being produced by the Company, such as those marketed under the trade marks "Inconel", "Nimonic", "Incoloy" and others. They have played an important part in the development of many of the world's fundamental industries and the experiences gained in promoting "Monel" formed the foundation of our successful activities in developing markets for nickel.

COPPER International Nickel's deliveries of refined copper during the year amounted to 253,275,000 pounds. Canada continued to be a growing market for our copper and took about 45 per cent of the Company's output. The remainder was shipped to the United Kingdom, the United States and Continental Europe.

Price The published price of primary copper in Canada and the United States during 1954 held steady on a 30 cents (United States) per pound basis. In the first quarter of 1955 the price of copper in these two countries rose to 36 cents (U. S.).

The copper price on the London Metal Exchange in 1954 opened the year at £252 per long ton, equivalent to 29.1 cents (U. S.) per pound, reached a low on January 18 of £216, or 27.1 cents, and a high on October 5 of £310, or 38.8 cents. Copper was quoted on that Exchange during the first quarter of the current year as high as £368, equivalent to 45.9 cents (U. S.).

PLATINUM METALS Our combined deliveries of platinum metals were approximately 263,000 ounces. The United States is the chief market, but Canada, the United Kingdom and several Continental European countries are also important consumers.

The market prices for several of the platinum metals declined during 1954, largely as a result of increased supplies from non-Canadian sources. The price of platinum fell during the year approximately \$10 per troy ounce from the opening published price of \$91-\$93 (United States).

Legislation in Italy establishing the hallmarking of palladium places this precious metal in that country in a similar category to platinum in the jewelry field. We expect that this is only the first step toward the time when the hallmarking of palladium will be established in all European countries.

In February of this year the Royal Ontario Museum, in Toronto, in co-operation with

International Nickel, opened an extensive platinum metals exhibit at the Museum which tells the story of these precious metals in two parts — historic and modern. The third in the Museum series on Canadian mineral industries, it will be on view for approximately one year.

ADVERTISING AND FILMS Since 1932 the Company has endeavored through institutional advertising to present to the Canadian public the story of our activities and their contribution to Canadian life. We plan to reproduce in book form this year a sufficient number of these advertisements to indicate the philosophy underlying the advertising and consequently the philosophy upon which the operations of this leading Canadian Company are based. The book will be distributed principally to Canadian libraries, newspaper and magazine editors, government officials and industrial leaders. Institutional advertising in newspapers and magazines is also employed in the United States and the United Kingdom to bring to public attention nickel's role in the economic life of these countries.

For many years the Company has also used trade and technical publications in Canada, the United States, the United Kingdom and other countries as media for advertising designed to stimulate the development of world markets for nickel and other Company products. More recently our advertising activities have been extended to include radio. The Company's advertising programme is supplemented by magazines, pamphlets and other publications which it prepares and distributes.

For more than 25 years films have also been used to tell the story of nickel. These motion pictures have been produced for showing to technical, industrial and educational groups. The latest, in sound and color, is entitled, "Mining for Nickel".

EXPLORATION During the year an active exploration campaign for new nickel deposits was conducted by the Company in several parts of the world. In Canada, our work was especially

concentrated in the Sudbury Basin of Ontario, in Manitoba, in Saskatchewan and in the Northwest Territories.

We began work in northern Manitoba in 1946 in the Lynn Lake area. Since that time the initial small-scale reconnaissance has been expanded into the present large exploration programme centered in the Mystery Lake region which is about 180 miles northeast of The Pas, Manitoba, and some 40 air miles north of Thicket Portage on the Hudson Bay Railway.

Our programme in Manitoba is still being pressed and has reached the stage where it has been decided to carry out exploration underground at our Moak Lake property. At an estimated cost of \$2,000,000, a prospect shaft is being sunk to a depth of 1,300 feet with development scheduled on two levels where crosscutting, drifting and diamond drilling will be done.

DEVELOPMENT AND RESEARCH

To keep ahead of today's accelerated scientific and technological progress, International Nickel's development and research

work was intensified during the year. Additions were made to our research staffs which we plan further to augment during the current year. As part of our extensive development and research activities, we now maintain Technical Information Centers in 11 countries, the latest having been established last year in Johannesburg to serve South Africa and central Africa.

Since most of the Company's alloys and many others of which nickel is a part are used for their corrosion-resisting properties, an important phase of our research activities is the evaluation of the corrosion-resisting properties of engineering materials. Extensive knowledge on this subject permits us to render an important service to our customers. This research work is constantly under way and we have a current file recording more than 218,000 individual corrosion tests.

Besides the tests we are constantly making in our laboratories and those being conducted by us co-operatively in industrial plants, we also carry out salt water and atmospheric corrosion research at our "Kure Beach" Corrosion Testing Station, near Wilmington, North Carolina. Established 20 years ago, this station has become recognized as the most extensive research project of its kind in the world, and its studies have resulted in a saving to industry of many millions of dollars. At present there are some 3,000 specimens undergoing sea water tests and 27,000 specimens undergoing atmospheric tests at this station, sections of which have been rebuilt and enlarged following extensive hurricane damage last October.

OUTLOOK

The Company has been engaged over the last five years in a constant endeavor to increase and maintain its nickel production at the highest possible level. Along with this effort there has also been activity in preparation for the day when the world will have more nickel available than it will then require and new markets will again become the Company's immediate concern. The task of developing new markets, like the task of increasing the supply of nickel, is not something which can be done overnight but requires sustained activity over a period of years. Fortunately this activity does not in any way impede our production of larger amounts of nickel.

This programme for future selling is based on and supported by many years of continuous work in the surveying of markets, the development of technical information and the strengthening of channels of distribution. It is becoming increasingly recognized by our customers that when we supply nickel we also supply, as part of our service to the trade, commercial and technical information which makes the path of the consumer easier and more profitable. Knowing that no metal is commercially valuable unless it can be bought at some readily accessible point of distribution in the forms in which it is to be used, we have been building for more than 45 years a world-wide network of distributors and information centers which render wider and more efficient

services than any other metal company.

It is on this rounded basis of sound ore reserves, large and efficient production, skilled and experienced distribution supported by ample research and technical services that we expect to contribute, in the future as in the past, our full share toward making available one of the great metal resources of Canada

and of the world.

The year 1954 was a most successful one and the prospects for the current year are encouraging. The present demand for nickel and its extreme usefulness in many applications augur well for the future of the industry.

*The following Address was delivered by
Dr. John F. Thompson at the Annual Meeting of the Company, held at the Royal York Hotel, Toronto, April 25, 1956:*

CANADIAN LEADERSHIP IN NICKEL

The year 1955 marked the fiftieth anniversary of Canada's leadership in world nickel production. The combined total deliveries of this important metal by all Canadian producers were at a record high estimated at 557,000,000 pounds, or somewhat over 80 per cent of the free world supplies. In 1905, when Canadian output overtook that of New Caledonia, which had been the dominant factor for about 30 years, Canada's nickel production was 19,000,000 pounds, or about 1,500,000 pounds per month. Deliveries by International Nickel alone last year averaged over 24,000,000 pounds of nickel per month, or 290,000,000 pounds for the year. This set a new high record and represented over 65 per cent of the free world's supply. In addition, the Company made available 10,400,000 pounds of metallic nickel by converting, into more usable forms of nickel, quantities of sinter and concentrates supplied by other producers.

INCO'S MOST SUCCESSFUL YEAR

In 1955, International Nickel enjoyed the most successful year in its history, with high deliveries of the Company's two principal products — nickel and copper — and increased output of most of the other elements obtained from its ores. Net earnings and common dividend payments exceeded those of any previous year. Considerable progress was again

(1954)

made in plant and process improvements and in development and research activities. Ore mined from underground was at a record level. Proven ore reserves at the close of the year were at a new high.

Our search for new sources of nickel was continued on an extensive scale. Although nickel was first discovered in the Sudbury District of Ontario more than 100 years ago, the Company continues to find ore in this area and vigorously pursues its exploration for nickel, not only in the Sudbury area but throughout Canada and other parts of the world.

FINANCIAL

Net Earnings

Net earnings of \$91,566,000 in 1955 were \$26,271,000 higher than the previous peak established in 1954.

The largest single contributing factor in this substantial increase was the high price prevailing for copper, the Company's second most important product, deliveries of which were at a post-war high. Also contributing to the increased earnings were record nickel deliveries, the higher price for refined nickel prevailing since November, 1954, and greater deliveries of such by-products as platinum metals and cobalt.

(1955)

The Company's total income of \$419,387,000 for 1955 was applied as follows: pay-rolls, supplies and services, \$239,894,000; retirement and other reserves, \$8,625,000; taxes based on income, \$60,205,000; and depreciation and depletion, \$19,097,000. Of the remainder, \$34,964,000 were retained for use in the business and \$56,602,000 were paid out in dividends.

Dividends Common dividend payments in 1955 of \$54,668,000, or \$3.75 a share, were the highest for any year.

The 200th consecutive quarterly dividend on the preferred shares was paid in November, 1955. The preferred dividend payments for the year amounted to \$1,934,000.

Capital Expenditures Reflecting the growing necessity of employing increasingly larger amounts of money in conducting a business, our capital expenditures in 1955 exceeded those of any previous year. Expenditures of \$26,894,000, of which \$23,686,000 were spent in Canada, compare with total expenditures in 1954 of \$22,257,000 and the previous high of \$23,737,000 in 1951. Capital expenditures of \$25,000,000 to \$30,000,000 are estimated for 1956.

It will be necessary to continue to make heavy capital expenditures. As I have mentioned at these Meetings, such expenditures are essential in mining and metallurgical operations as large as those of our Company. There is the continuing developing of mines, including the sinking of new shafts and other activities; provision must be made for new plants and facilities, and older plants and equipment must be replaced or modernized from time to time. These things must be done if the Company is to remain strong and to grow. And as costs throughout the world continue to rise, expenditures must increase in proportion. This is especially striking when obsolete equipment or units must be replaced with new. As typical of such expenditures, we are now engaged in a complete rebuilding of the power

facilities and the installation of new production equipment at Clydach, Wales, at an estimated total cost of about \$4,500,000. In time this will be followed by the rebuilding of other units of the Clydach refinery for purposes of plant modernization. Fortunately the policies we have followed place us in a sound financial position to meet these present and even larger anticipated demands for capital funds.

**ROYAL
COMMISSION
BRIEF**

In response to an invitation from The Royal Commission on Canada's Economic Prospects, Mr. Henry S. Wingate, President of the Company, appeared before that body in Toronto on January 25, 1956, to present and comment on a brief prepared by the Company on the position and problems of the Canadian nickel industry. The brief had a twofold purpose: first, to provide the Commissioners with basic information regarding the Canadian nickel industry; and second, to draw attention to problems affecting its present and future well-being. Copies of the brief have been printed and are available to shareholders upon request.

**NICKEL
Price**

The belief that nickel prices should not be dominated by short-term considerations to the detriment of the necessarily long-term planning by nickel consumers has been an important factor in the progress of the nickel industry. In making necessary price adjustments from time to time, International Nickel has made every effort to follow rising cost trends as conservatively as possible, always bearing in mind that nickel-containing products are competitive with many that are made of other metals and materials and must be priced competitively if the position of consumers of nickel is not to be jeopardized. The Company, therefore, is continuing its long-established policy of selling at prices which encourage the development and expansion of uses for nickel. We believe that the future, as nickel supply and demand come into balance, will confirm the wisdom of this policy.

The Company's United States base price for nickel was increased by 4½ cents to 64½ cents (United States) per pound, effective November 24, 1954, and continued at that level throughout 1955. This price includes the 1¼ cents United States import duty which is paid by the Company. The increase was reflected in earnings for the year. To compensate for changes in foreign exchange rates and to keep the Canadian domestic price of nickel in accord with Canada's basic export price, adjustments in price, for consumption in Canada, were made during 1955. Higher prices for alloys produced at our rolling mills were established during the year to compensate for higher costs.

Supply It has been estimated that about 40 per cent of the free world's available supply of nickel is currently absorbed by free world defence and United States stockpiling requirements. Of the 1955 total free world supply, including both commercial production and government subsidized production, approximately two-thirds went to the United States and one-third to Canada, the United Kingdom and other countries of the free world. A substantial part of the nickel going to the United States was used for its defence production and stockpile requirements.

The greater industrial activity throughout Europe and North America increased the 1955 demand for nickel in every established field of interest. Slightly more nickel was available for civilian applications than in 1954. In meeting the large and increased defence requirements, substantial assistance was provided in the United States through the action of the United States Government in diverting to industry for the entire year of 1955 approximately 24,000,000 pounds of nickel originally scheduled for its stockpile. Further diversions amounting to 31,000,000 pounds have been announced for the first half of the current year.

A review of nickel in the United States for the years 1946-56, published by the United States

(1955)

Department of Commerce, dated December, 1955, expresses the view that the United States stockpile acquisition schedule for 1956 should be modified downward and that this modification would be in the interests of maintaining a mobilization base as well as permitting growth on the part of nickel-consuming industries in the United States.

Distribution Distribution of our nickel in 1955 was again guided by the principle that adequate supplies must be made available to meet defence production requirements and government stockpile commitments, and that civilian customers in all parts of the free world must receive fair and equitable treatment. It is vital to the Company's present and future well-being that we so conduct this activity as to make clear to all customers, both civilian and governmental, that we are doing our best to follow faithfully such a policy.

In addition to marketing its own production, International Nickel, as an accommodation to the needs of users of nickel, arranged with Sherritt Gordon Mines Limited, on cessation of their arrangement with the United States, for continuation of refining and delivery to industry in the United States and Europe of premium-price nickel. This arrangement has continued into 1956. Also in December, 1955, pursuant to the request of the United States Government, International Nickel arranged for the delivery to industry in the United States of a portion of the nickel destined for the stockpile under Inco's premium-price contract with that Government. In net effect these special quantities were provided to industry for the account of Sherritt Gordon and the United States Government, respectively, and at substantially the same premium prices as were applicable to the corresponding special production delivered to the United States during the year.

*Nickel
Uses*

Consumption of nickel by uses in the free world in 1955 was approximately as follows: stainless steels, 30 per cent; engineering

alloy steels, 17 per cent; high-nickel alloys, 16 per cent; electroplating, 15 per cent; copper-base alloys, 6 per cent; jet engine alloys, 5 per cent; cast irons, 5 per cent, and industrial chemicals and miscellaneous, 6 per cent. This consumption was fundamentally affected by the abnormal conditions arising through defence and stockpile requirements and inadequate supply.

Principal Free World Nickel Producers Estimated total free world production of nickel in 1955 attained a new high of about 430,000,000 pounds. International Nickel deliveries amounted to 290,000,000 pounds, not including approximately 8,000,000 pounds refined on toll for Sherritt Gordon Mines Limited and additional amounts processed from materials supplied by others. Estimates of 1955 deliveries by other principal Canadian producers are: Falconbridge Nickel Mines Limited, 42,000,000 pounds, and Sherritt Gordon Mines Limited, 17,000,000 pounds. Other free world supplies came chiefly from the United States Government's plant at Nicaro, Cuba, 30,000,000 pounds; Hanna Nickel Smelting Company in Oregon, 6,500,000 pounds; and from New Caledonia ores, 35,000,000 pounds, of which some 13,000,000 pounds were refined in Japan. The foregoing figures are based upon company or government reports or other published statements.

Free world production of nickel in 1956 is expected to continue to increase, with estimated output of about 445,000,000 pounds. This would represent gains of some 15,000,000 pounds over 1955, 175,000,000 pounds over pre-Korean 1949 production and 155,000,000 pounds over 1945, the last year of World War II.

Since the end of World War II, Canadian nickel producers have increased their annual rate of production by some 95,000,000 pounds, of which International Nickel accounted for 55,000,000 pounds. The gain in Canadian output has been the

greatest factor in the total increase in the free world's supply. The increase from other sources, such as New Caledonia, Cuba and the United States, has also been considerable. The indicated over-all effect of new nickel expansion programmes under way or contemplated is likely to be a further increase in the proportion of the free world's nickel produced outside of Canada.

Future of Canada's Nickel Industry Looking to the future of Canada's nickel industry, I believe you will be interested in the following excerpts from our Company's brief presented to The Royal Commission:

"The experience of The International Nickel Company during the last fifty years has demonstrated that the expansion and development of the industrial uses of Canadian nickel could not have been achieved without sustained research and development and constant advances in Canada with respect to mining, metallurgical and exploration operations, and without correspondingly extensive advances in research and development, supported by comprehensive marketing service, in the centres of industrial activity. The areas of best opportunities for stimulating demand for nickel have been and still are North America, the United Kingdom and Europe. If Canada's nickel industry is to continue to prosper all of these activities must be intensified . . .

"We are confident that with constant advances in efficiency of production and in exploration for ore, combined with continuation of an aggressive research and development and marketing programme to maintain and expand existing world markets for nickel, the Canadian nickel industry will continue to prosper and go forward . . ."

COPPER Deliveries Copper is International Nickel's second most important product. Deliveries of refined copper in 1955 amounted to 263,000,000 pounds, a post-war high, and an increase of almost 10,000,000 pounds over 1954. Canada consumed the bulk of our production —

nearly 60 per cent — the balance going principally to the United Kingdom, our second largest market, and the United States.

Price Primary copper sold at new high prices during 1955. Strikes in the copper-producing industries of the United States, Chile and Africa caused production losses and this, with the record demand, resulted in higher prices and a tight market. As increases in production come into the market during the current and coming years there should be a better balance between supply and demand.

PLATINUM METALS Platinum group metals — platinum, palladium, rhodium, ruthenium and iridium — are among the elements produced by the Company from its ores.

Deliveries of platinum metals by International Nickel in 1955 set a new high record at 445,000 ounces, a gain of 182,000 ounces over 1954. The United States continued as the largest market, with the United Kingdom, several Continental European countries and Canada also being important consumers.

The industrial demand for platinum has grown rapidly during recent years. The success of platinum as a catalyst for reforming petroleum products brought a great and far-reaching demand for this metal. This has been particularly evident in the United States and the United Kingdom.

Palladium demand increased substantially in 1955. The use of this precious metal was extended in several industrial fields, especially for contact points in automatic electrical apparatus.

OTHER BY-PRODUCTS In February, 1956, we began the sale of high-grade iron ore from the first unit of the Company's iron ore recovery plant near Copper Cliff. The first large-scale shipments of sintered pellets of this iron ore were

made to two Canadian companies — the Algoma Steel Corporation, Limited, at Sault Ste. Marie, and The Steel Company of Canada, Limited, at Hamilton.

Our high-purity electrolytic cobalt has been favorably received by the trade since production was initiated at the Port Colborne, Ontario, refinery in 1954. Cobalt deliveries in all forms of 1,637,000 pounds in 1955 set a new high record and compared with 1,317,000 pounds in the previous year. Sales by our United Kingdom affiliate increased about 10 per cent over 1954.

Other by-products recovered from our ores include gold, silver, selenium and tellurium. Extreme shortages of selenium continued during 1955 and prices increased substantially.

As in past years, sulphuric acid and liquid sulphur dioxide were produced from our smelter gases by Canadian Industries Limited. Its production of liquid sulphur dioxide from these gases was at a new high of 74,000 tons in 1955.

PLANT OPERATIONS The Company's smelters and refineries again operated at capacity throughout 1955. To make all possible contribution to current nickel supplies, International Nickel will again this year operate at maximum capacity.

The Annual Report contains data on the Company's production facilities in Canada, the United Kingdom and the United States. Among the highlights reported are: record underground ore production of 12,759,000 short tons, which was an increase of 771,000 tons over 1954; at our Creighton Mine, development was started for mining below the 68 level, which is 5,425 feet below surface; and commercial production at our iron ore recovery plant began in February, 1956.

At the Port Colborne refinery, the output of electrolytic nickel showed an increase over 1954,

and at our Clydach refinery, in Wales, production of nickel pellets was at a new high. Output of precious metals at our refinery in Acton, London, was at a higher level than in the preceding year. Special attention was given to the electrodeposition of rhodium for industrial applications.

The demand for products of our rolling mills at Birmingham, England, Glasgow, Scotland, and Huntington, West Virginia, continued to exceed production due to limited availability of nickel. These plants now produce some 100 nickel-containing alloys. The Nimonic* and Inconel* series of nickel-chromium alloys produced at these rolling mills maintained their outstanding positions in the aircraft industry.

EXPLORATION International Nickel's expenditures for exploration over the past 10 years totaled \$31,000,000, distributed approximately as follows: \$2,500,000 for geophysical work, principally airborne, \$11,500,000 for surface diamond drilling and \$17,000,000 for all other exploration. The average annual rate of expenditure for this purpose over the past three years has been approximately \$5,500,000, contrasted with an average of about \$2,000,000 annually in the preceding seven years.

The Company maintained its exploration work at a high level in the Sudbury District of Ontario and during the year completed 522,000 feet of drilling. By the year-end, the exploration shaft on our property at Moak Lake, in the Mystery Lake area of Manitoba, was completed to a depth of 1,325 feet and stations were cut at the 700 and 1,300-foot levels. Further exploration of this property is being continued through the driving of some 10,000 feet of exploration drifts and a large footage of diamond drilling at these levels. This work is time-consuming and it is therefore still too early to have much definite information. However, the results to date confirm the desirability of sinking the exploratory shaft.

Using mostly the standard procedures we have developed for airborne geophysical surveys, followed by geological studies and, if advisable, exploration by diamond drilling, we have continued our work in the Northwest Territories, Saskatchewan, Quebec and Ontario, and in a number of foreign countries.

It is our intention to continue exploration efforts on a major scale.

DEVELOPING MINERAL DEPOSITS "Factors in Developing a Mineral Deposit" was the subject of an address I was privileged to deliver before The Empire Club of Canada in Toronto early this month. I expressed the view that deposits of minerals are of no value unless the metals recovered from them can be marketed at a profit. Nickel is an example of what has been accomplished in this respect. The Sudbury Basin deposits, which today yield the largest part of the world's nickel, were once considered worthless because no established market existed for the metal. It has required a great deal of time, effort and money to bring nickel to its present status. We have had to build up a rounded organization covering exploration, mining, smelting, refining, research, technical field service and, of great importance also, a world-wide sales and distribution system to dispose of the Company's various products.

This requires the expenditure of large sums of money. Since the Company began its major programme of mine development and expansion during World War II, our capital expenditures have totaled \$220,000,000. As previously stated, capital expenditures in 1955 were about \$27,000,000. Last year exploration costs approximated \$5,000,000 and almost \$8,000,000 were spent on development and research activities. Expenditures of large amounts must be continued if nickel is to achieve and maintain its proper place as an industrial metal. I have said before, but would like to repeat, that it is my firm belief that the size of the world's nickel market is

limited only by the imagination and the amount of capital, work, energy and skill which the world's nickel producers are prepared to put into its expansion.

OUTLOOK For our consumers, the future of nickel supply is a vital question. It is an almost impossible question to answer with assurance since many conflicting factors, including defence demands, purchasing for stockpile, general industrial activity and the coming into production of new nickel-producing facilities, play such a vital part. However, the facts that free world nickel production will probably increase and that purchasing for stockpile

may be moderated suggest that there should be more nickel available for industry in 1956 and even more in 1957.

The results of our first quarter operations will be mailed to all shareholders and released to the press next month. Although exact figures are not yet available, sufficient is known to permit me to say that earnings for the first quarter will exceed those of the comparable period of 1955, which were the highest for any first quarter. All indications are that again in 1956 the Company will make an excellent showing.

*The following Address was delivered by
Dr. John F. Thompson at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 24, 1957:*

**HISTORIC
YEAR**

For the Company 1956 was a historic year. Net earnings reached a new high, ore production was the greatest for any year and deliveries of our two principal products—nickel and copper—were at high levels. In spite of the record ore production our ore reserves were increased.

The year saw the beginning of the development by the Company in northern Manitoba of two nickel mines and related surface plants which by 1960 will give International Nickel a second nickel mining operation, exceeded in importance only by its Sudbury District enterprise, in Ontario, which is the largest in the world. Our exploration activities have shown that there are fairly wide variations in the grades of nickel ore in different parts of the Inco Manitoba deposits. By mining these ores on a schedule based on the policy of continuous operation over many years, it will be possible to mine an average grade of ore with respect to nickel content which will compare favorably with the ores we have been mining in the Sudbury District in recent years. However, these deposits contain very small quantities of copper, while Sudbury ores are high in copper content. In our

published figures on ore reserves as of December 31, last, no allowance was made for any ore developed in northern Manitoba. The Manitoba project, together with expansion already under way in the Sudbury District, is scheduled to lift Inco's annual nickel-producing capacity to 385,000,000 pounds in 1961.

Net earnings for the year of \$96,296,000, or \$6.50 a share on the common stock, showed an increase of \$4,730,000 over the previous peak year of 1955. As has been the case since 1902, our accounts last year were again expressed in United States currency.

Deliveries of nickel in all forms in 1956 totaled 286,000,000 pounds. These were the second highest for any year, being exceeded only by the 290,000,000 pounds in 1955, when the Company delivered in excess of its production by depleting working stocks. In addition, Inco made available to industry in 1956 some 7,700,000 pounds of nickel which it smelted and refined from concentrates supplied by another Canadian producer.

In the United States, the largest nickel-consuming country, nickel needed for military production in 1956 was fully provided for and required a much larger

amount than in 1955. Fortunately, the increase in nickel shipments diverted from the scheduled intake for the United States Government stockpile was greater than the increase in defence demand, resulting in a larger amount of nickel for civilian purposes. So far this year there has been a still further increase in the supply for civilian purposes from all sources.

PLANTS Our smelters, refineries, rolling mills and other plants in Canada, the United Kingdom and the United States operated substantially at capacity throughout 1956. As indicated in the Annual Report, many plant expansions and improvements were under way or initiated.

During the year we completed arrangements with Falconbridge Nickel Mines Limited under which Inco will mine the ores from a deposit lying in part under Fecunis Lake in the northern part of the Sudbury Basin. Part of this deposit is owned by Falconbridge and part by Inco. Under the proposed procedure it will be possible to mine these ores more economically as to cost and especially to completely remove the ore lying on the boundaries which otherwise under Ontario law would have to be left to maintain a common party wall. All the mining will be done by Inco and our ore will be hoisted through our shafts. The Falconbridge ore will be delivered to them and hoisted by them through their shafts.

**INCO'S
FOURTEEN
ELEMENTS** At the time of the formation of the Company 55 years ago, practically all of its production was nickel and copper. Minor amounts of the precious metals were also produced. The rest of the components of the ore mined were for the most part rejected in waste rock and slags or lost in gases.

While this was a wasteful procedure from one point of view, it was a necessary one since the metallurgical art had not progressed to the point where these products could be separated profitably or, in fact in some cases, separated at all. As a result, practically all of the gold, silver and other precious metals such as platinum, palladium, iridium, ruthenium and rhodium were wasted or recovered in part in the nickel and sold without the Company receiving any recompense for them. Selenium, tellurium and sulphur were discharged in the waste gases.

Cobalt either went into the slags or was part of the nickel sold. Iron was rejected in slags. In time, however, extraction methods were developed which permitted at least a partial recovery of some of these materials. Changes in demand also provided a market for some elements which, at the beginning, were deleterious impurities to be removed only at the expense of extra cost.

Today, 14 elements are recovered from our ores. The more complete recovery of these elements is one of the factors weighed in every consideration of metallurgical change. Sulphur, which until 1930 was burnt in the open air, is now in part being sold to others who utilize it in the manufacture of sulphuric acid and liquid sulphur dioxide, and extensive experiments are under way to determine whether it can in the future be recovered economically in its elemental form. On the basis of our knowledge at this time, there are no further elements to be recovered from our present known ores, but the future holds promise for the recovery of greater quantities than we are recovering today.

**NICKEL
Price** The price of nickel and its relation to production costs and market opportunities are under constant review by your management and it is obvious that many different factors must be evaluated in this regard. On December 6, 1956, the Company increased its price of electrolytic nickel by 9½ cents (United States) per pound, from the Port Colborne, Ontario, refinery, to 74 cents (United States) per pound, including the 1¼ cents United States import duty paid by the Company. The price was advanced on November 24, 1954, by 4½ cents per pound. With the December increase the equivalent price in Canadian currency became 70 cents per pound. The price in the United Kingdom for nickel pellets from the Mond refinery at Clydach, Wales, was raised to £600 per long ton, delivered consumers' works.

The United States Government in marketing nickel from its Cuban operations and the other Canadian producers in supplying their nickel to the trade in the United States are selling at prices which are generally in line with ours. However, a considerable quantity of high-cost nickel produced under premium-price contracts with

the United States Government is being provided to the trade on the basis of the higher prices provided in these contracts. Besides this, relatively unimportant quantities of nickel come on the world market at prices greatly in excess of those just mentioned. Our policy of selling our production at reasonable prices is consistent with the large production which we must move year after year and the responsibilities which stem from our position in the industry. We have an obligation to our shareholders and customers to see that there is a perpetuation and growth of the market in the future at reasonable and stable prices at which satisfactory profits can be realized, markets can be held and important consumers can be reassured that they can plan well ahead for the economic use of nickel.

International Nickel's increase of some 100,000,000 pounds of total annual nickel capacity will have been largely achieved in 1960. Based on this program and announced expansion plans of other producers it is expected that total free world nickel-producing capacity in 1961 will approximate 650,000,000 to 675,000,000 pounds. Assuming defence demand remains at its present level and that nickel is not taken in 1961 for government stockpiling, the 1956 rate of world civilian consumption of nickel will have to be increased by more than 75 per cent in order to absorb the output resulting from the expected expansion in nickel-producing capacity.

It is evident that a huge new demand must be stimulated. Our Company for many years has been developing new markets and new applications and is intensifying these efforts. I have mentioned before that nickel is in world-wide competition with other alloying elements and with a wide variety of other materials, even such diverse materials as wood, glass and plastics. Certain existing and potential uses of nickel may be impeded even by the 74-cent price established in December, and the extent of these occurrences must be carefully watched by the nickel industry. The industry must in the years ahead be even more aggressive in striving to reduce costs and in preparing itself for the time when the upward trend of nickel prices is stopped or even turned back. Thus I cannot emphasize too strongly again that it is of major importance that the price of nickel should at all times reflect not only short-term but also long-term considerations.

Shortage for Civilian Uses

One of the most discussed subjects at present in connection with our industry is the shortage of nickel for civilian requirements. It is recognized that the shortage to a very large degree is due to defence requirements, particularly in the United States. As we have pointed out in the Annual Report and in various publicity releases, International Nickel is doing its utmost to relieve this shortage. Other nickel producers, both present and potential, are also working actively to get more nickel to the market. What the future defence requirements will be and just what the relation of supply and demand will be when these facilities all come into operation are quite uncertain. It is your Company's definite policy to do all in its power to bring an early end to this shortage by finding and opening new sources of nickel, by expanding capacity and improving methods of mining and smelting and by working to help the trade in the most efficient use of nickel.

COPPER

The 1956 deliveries of copper were at a post-war high of 271,000,000 pounds, an increase of more than 8,000,000 pounds over 1955. Our copper was sold mainly in Canada, with the United Kingdom our second largest customer.

The average price realized by the Company in 1956 was higher than in 1955 and was a major factor contributing to the increased earnings. Our price of copper in Canada at the end of the first quarter of this year was lower than our average price for the year 1956. Since copper is Inco's second most important product, any changes in the price of the red metal and the volume of our production have a substantial bearing on earnings. It should be borne in mind that the extent of our copper production is always controlled by our nickel production. Because of the many imponderables, it is not possible at the moment to accurately forecast copper prices.

PLATINUM METALS

Deliveries of platinum metals—platinum, palladium, rhodium, ruthenium and iridium—were 371,000 ounces, down 74,000 ounces from 1955. So far this year prices for platinum have been lower than the average of the 1956 prices published in the United States of approximately \$104 per troy ounce.

Over the past 20 years there has been a gradual but steady change in the markets for platinum, with industrial applications progressively and steadily surpassing the older market for jewelry. At the beginning of this period it was estimated that of the free world's total consumption 25 per cent was used in industry. It is estimated that by 1956 this percentage had risen above 85 per cent. This resulted partly from some decrease in the amount of platinum used in jewelry but, more importantly, from the discovery of new industrial applications, such as in the apparatus used in manufacture of artificial fibers of rayon and glass and, in recent years, the very extensive use of platinum as a catalyst in reforming petroleum products. The platinum industry is constantly searching for new industrial uses for the purpose of providing a market for the present large production and the predicted substantial increase in world output.

IRON ORE The year 1956 saw the first shipments of pellets from the Company's new iron ore recovery plant near Copper Cliff, Ontario, 10 years after commencing our research for a process. This newest of our plants is playing a key role in making possible the Company's high nickel output.

DEVELOPMENT AND RESEARCH For many years the uses of nickel were restricted to relatively few applications, such as nickel alloy steels, nickel silvers, coinage and plating, which consumed most of the world's nickel. Not only have much time and effort been expended by our development and research groups in enlarging these fields, but also in the development of new and equally important ones.

A prominent use of nickel today is in the high-temperature field, where service requirements are rigid, particularly in jet aircraft and industrial gas turbine engines, and in atomic energy and power equipment. Because nickel imparts generally beneficial effects at high temperatures to the strength, stability and corrosion resistance of metals, practically all accepted high-temperature alloys incorporate appreciable percentages of this element. As industry continues the trend to higher temperatures, nickel-containing high-temperature alloys will attain even greater significance.

Less striking to the public eye, but of great importance to industry and to the Company's prosperity and profits,

are the almost innumerable, smaller applications in which nickel finds a part. In these cases nickel is used because it confers a unique property or combination of properties thereby providing the most nearly ideal material for the required use. In the aggregate these small applications consume large amounts of nickel and perhaps more importantly they have often formed an introductory link with other uses where nickel has had a larger application.

Our development and research work is an essential part of the Company's activities and has produced most valuable results. We are intensifying this work.

MANITOBA PROJECT The December 10, 1956, letter to shareholders and the Annual Report contained information on our Manitoba project. We regard this undertaking as one of the important events in our Company's history and one which will have a significant effect on future operations and progress.

It is gratifying to be able to report that the development of this project is proceeding on schedule and according to plan, with a working force to date of 500 men engaged on various phases of the undertaking. The task of transporting a tremendous tonnage of equipment and supplies into the mining area by tractor train during the winter freeze-up was completed successfully, and construction work is going forward with the utmost speed. Plant sites have been cleared, accommodations for construction workers have been provided, temporary shops and storage buildings have been erected, and work is under way on roads and foundations for permanent structures. Sinking has been started of a production shaft and a development shaft at the Thompson Mine. On the 700, 1,000 and 1,300-foot levels of the exploration shaft sunk in 1955, development work for the Moak Lake Mine has commenced, including preparatory work for the sinking of the production shaft.

The right-of-way has been cleared and the roadbed started for a 30-mile Canadian National Railways spur from Sipiwesk, on the C. N. R. Hudson Bay line, to Thompson. This spur line is scheduled to be in operation by the year-end. Construction of a 22-mile Company-owned railway between Thompson and Moak Lake will begin during this year.

A railroad spur is also under construction from the C. N. R. Hudson Bay line to a site on the Nelson River, where The Manitoba Hydro-Electric Board will construct dams and a plant to provide power essential to the development of northern Manitoba, including the power necessary for our new operations. Initial generation of power at this plant is scheduled for early 1960.

Opening one of the great remaining frontiers in North America, International Nickel's mining operations in Manitoba are expected to have a broad impact on the economy of the Province. Besides adding substantially to the Province's mineral output, the Thompson-Moak Lake undertaking will open up an entire new area of hydro-electric power development. Provision by The Manitoba Hydro-Electric Board for power in excess of the Company's requirements is expected to attract other industries, such as forest industries, to a vast area that up to the present has been almost totally devoid of industrial production. The influence of International Nickel's new project will be felt by the entire area and the future changes will be far-reaching in their effect.

The complexion of the Hudson Bay port of Churchill will undoubtedly undergo a change. Churchill was built as a grain-shipping port, with a predominantly one-way freight movement during a very limited shipping season. With the advent of power development and settlements in northern Manitoba, Churchill may very well become a busy port with a thriving two-way exchange of freight between western Canada and the United Kingdom and the Continent.

EXPLORATION Expenditures for exploration in 1956 were at a record high level, due principally to increased activity in the Manitoba area. There was also greater exploration activity in the Sudbury District of Ontario, Northwest Territories, and other parts of Canada. The Company has a concession for prospecting in approximately 600 square miles in the Coppermine River District of the Northwest Territories. Our world-wide search for nickel is continuing. Inco's prospecting activities for 1957 are expected to be as extensive as in 1956.

Last year our exploration expenditures were \$8,247,000, of which Manitoba accounted for \$4,374,000.

In 1955 we spent \$5,182,000 on over-all exploration activities.

FINANCIAL

Redemption of Preferred Stock

During the year, the Board of Directors, acting pursuant to the discretionary responsibility granted to them under the Company's Charter, called for redemption on February 1, 1957, all of the \$27,628,000 outstanding 7 per cent preferred stock at 120 per cent of the par value plus an amount equal to accrued dividends from November 1, 1956, to the redemption date.

The preferred stock had a history dating back to the formation of International Nickel in 1902. It was widely held in Canada, the United Kingdom and the United States, and the Board has always been appreciative of the support given to the activities of the Company by the preferred shareholders during the long period of years the stock was outstanding. It was for this reason that the action of the Board was taken only reluctantly and after very careful consideration of all the factors in the situation.

Since the time when the preferred stock first became redeemable, the matter of its redemption was periodically reviewed by the Board of Directors. In the two-year period prior to redemption the Company's cash rose by some \$75,000,000. At the same time, our discoveries in Manitoba, and the plans we developed for a large nickel operation there, considerably clarified our probable cash requirements. Under the circumstances the Board felt that it would not be justified in failing to retire the preferred shares out of the increased holdings of cash.

Capital Expenditures

The Manitoba nickel project, together with expansion and improvement programs elsewhere in Canada and at our plants in the United Kingdom and the United States, will require for 1957 by far the greatest capital outlays by the Company in any single year. It is presently estimated that \$50,000,000 will be required in this regard for 1957. Capital expenditures in 1956 amounted to \$23,021,000. In addition \$34,742,000 was set aside for the redemption of all of the outstanding preferred stock.

**Ontario Tax
Legislation**

The Province of Ontario recently introduced legislation, effective in 1957, to increase the existing top Mining Tax rates by 3 per cent. Under the Canadian Income Tax Act this tax is allowable only as a deduction from taxable income with the result that the main burden of this increase falls directly on the Company.

The Province also introduced an entirely new Corporations Tax of 11 per cent on net income earned in Ontario. Under the Canadian Income Tax Act this tax is recoverable as a tax credit to the extent of only 9 per cent of Ontario income taxable under such Act; the remaining 2 per cent is allowed neither as a tax credit nor as a deduction from taxable income and to that extent represents double taxation on the Company's income.

After recognizing the credit for Ontario Corporations Tax as allowed, and the deduction for Mining Tax, under the Canadian Income Tax Act, it is estimated that the new legislation will increase the Company's tax bill substantially, by perhaps as much as \$3,000,000 in 1957.

This added tax burden in Ontario is highly discouraging in the face of the efforts we are making to hold down our costs and keep the marketing of our Sudbury production in a favorable competitive position with substitute materials and with nickel and copper production from areas outside of Canada where labor and tax costs are far less onerous.

OUTLOOK

**1957 Earnings
Prospects**

Earnings for the first quarter of 1957 are expected to make a satisfactory showing although they may not reach the figure of \$23,702,000, or \$1.63 a share on the common stock, reported for the fourth quarter of 1956. Lower copper prices and a strike at our Huntington Works, in West Virginia, starting in January and continuing until the end of March, were adverse factors affecting the earnings for the first quarter. The recent nickel price increase is one of the factors which has had a favorable effect on earnings for the quarter and should have a similar effect for the year.

**Canada's
Pre-eminent
Nickel Position**

Canada has enjoyed a pre-eminent position in the nickel industry since 1905. Each year the percentage of the free world's nickel which comes out of Canada makes an imposing figure. This may reasonably be explained by the following: First, the presence of large and valuable nickel deposits in Canada and the fact that they came to public attention at an early date. Second, the fact that the Canadian producers since the beginning of the industry have displayed confidence in the future and a willingness to risk large sums of money on that future. Third, the recognition by the Canadian industry of its dependence on export markets for nickel and on its continuously taking the necessary steps to create and expand these markets.

Our export trade still represents by far our largest market. But the volume of our products sold in Canada in recent years has been increasing, reflecting both the general expansion in the Canadian economy and the increased efforts of our sales, service and distribution centers throughout the country.

The extent of the confidence your Company has in the future of nickel is clearly evident from the comprehensive activities it has undertaken to develop simultaneously both sources of supply and markets for the metal. Regardless of International Nickel's relative position in the industry, it is our firm intention to continue striving not only to enlarge existing markets and uses but to build up new ones as well. Increasing amounts of nickel undoubtedly will be used by the civilian industry in the future. Certainly, this could be more readily accomplished if all producers of the metal worked toward that end. For our own part, we will endeavor to produce more nickel, sell more nickel, find new and broader applications for nickel and do our best to furnish users with their full requirements. It is our firm belief that this Company will be selling nickel in the future in larger quantities than ever.

*The following Address was delivered by
Dr. John F. Thompson at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 30, 1958:*

**YEAR OF
CONTRASTS**

Although 1957 was a year of sharp contrasts, the Company made substantial progress and earnings were the third highest in its history.

Certain developments were favorable; others unfavorable. Fortunately, the former are of great future importance, while the unfavorable occurrences can be considered to be more or less temporary.

The Company's nickel deliveries were close to the all-time peak and copper deliveries attained a post-war high. Proven ore reserves were at a new high level at the year-end. Work on our new nickel project in Manitoba proceeded on schedule.

Copper and platinum, which we recover simultaneously with nickel and which contribute much to the Company's earnings, suffered sharp price declines during the year. The base price of nickel, however, remained unchanged.

The market for nickel started the year with an over-demand so substantial that some consumers continued to pay premium prices to obtain the supplies they urgently needed. It ended with nickel in over-supply.

Nickel had been in short supply for civilian purposes for the greater part of the period since the Korean conflict began in 1950. This had been due to heavy demands for defence purposes coupled with large governmental stockpiling programs. While the extraordinary demand lessened our selling problem, it also impeded our work in creating and developing markets for the future. Some of these markets were already known and merely awaited organized development. However, market development requires a continuing and assured source of supply. Because the supply of nickel available to our customers was below that needed for established commercial applications, the amount that could be devoted to new uses was insufficient to permit launching such uses on the scale required to bring them to the stage of commercial development. The effect was to retard our whole development program and to stop some projects

altogether. The abundant supply available since last autumn enables us once again to proceed aggressively with our program to develop new uses for nickel and nickel-containing products.

**Manitoba
Project**

I should like to point out that the development of an increased supply of nickel differs entirely from an increase in capacity in certain other industries. In these industries, essentially all that is needed is the courage and decision to proceed and the necessary financial resources. In the case of nickel, the known deposits of a type suitable to our processes are comparatively rare, or of an insufficient grade or too small in size to add an appreciable supply over a period of years. Knowing the importance of the need, this Company searched for years for a nickel deposit large enough to make a real addition to world supply. This search was prosecuted vigorously — for a long time without success. As part of this search we turned our attention to Manitoba where for many years our discoveries consisted of sizable but non-commercial deposits. We persisted, and after a 10-year search and expenditures of \$10,000,000 in this area, a commercial deposit was finally located. Within 10 months of this discovery, which occurred early in 1956, we had carried on sufficient exploration to justify announcing on December 5, 1956, our decision to proceed with the Manitoba development. This work has now been under way for over 16 months and will be carried to completion.

I have spoken of our exploration in Manitoba, but actually this is only a part of the world-wide exploration which we have been carrying on for years in recognition of the need for further sources of supply. In 1957 our exploration expenditures were the highest in our history. This large-scale exploration program is being actively pursued.

Continuing favorable results in the exploration program at our Thompson Mine in Manitoba have led us to the decision to concentrate our efforts on bringing this property into production. The Manitoba project's entire scheduled annual output of 75,000,000 pounds of nickel

will, therefore, come initially from the Thompson Mine. The progress that has already been made in Manitoba is of vital importance to the future of the Company and is on schedule. Our expansion in Manitoba and Ontario will increase our annual nickel production capacity to 385,000,000 pounds by 1961.

In summary, the past year was one which saw temporary conditions reduce our immediate profits, but also one which afforded us the opportunity, particularly in the latter part of the year, to do those things essential to the development of a future increased market for nickel and the preparation of our production facilities to take care of this anticipated increased demand.

DIRECTORS During 1957 the Company suffered the loss by death of two directors, Dr. Paul D. Merica, who had retired as President in April, 1954, and Mr. I. C. Raymond Atkin. These vacancies on the Board have been filled by the election of Mr. Ellmore C. Patterson and Mr. Lance H. Cooper.

FINANCIAL Net earnings for 1957 of \$86,100,000, or
Earnings \$5.90 per common share, were the third highest in our history, and the Company's strong financial position was well maintained. In the previous year net earnings were at a record high of \$96,300,000, equivalent to \$6.50 per common share, after provision for dividends on the preferred shares which were called for redemption on February 1, 1957. Net earnings were lower principally because of greatly reduced copper prices. Also adversely affecting earnings were reduced deliveries and prices of platinum metals, a strike of 11 weeks' duration at the Huntington Works in West Virginia in the United States, and the rate of exchange between Canadian and United States dollars. These were offset in part by larger copper and nickel deliveries and by higher prices, established in December, 1956, for nickel and rolling mill and foundry products.

Foreign Exchange Fluctuations in the rate of exchange between the Canadian and United States dollars have an important bearing on our earnings. The bulk of the Company's products is sold for United States dollars, or their equivalent in other currencies. On the

other hand, the larger proportion of our expenditures is in Canadian dollars. As a result, when the value of the U. S. dollar falls in terms of the Canadian dollar, our sales produce fewer Canadian dollars from which to meet our expenditures. The reverse takes place, of course, when the value of U. S. currency appreciates. During 1957 our conversions into Canadian dollars produced on the average about 2½ per cent fewer Canadian dollars than they would have produced in 1956.

Dividends Common dividends paid in 1957 totaled \$3.75 per share, the same as in the two preceding years. Total disbursements for the year were nearly \$55,000,000.

Capital Expenditures Our construction programs in Manitoba and in the Sudbury District of Ontario have benefited because of greater availability of equipment and supplies and quicker deliveries. We have accordingly been able to accelerate certain phases of our Canadian construction activities.

It is estimated that capital expenditures in 1958 will be between \$60,000,000 and \$70,000,000. In 1957 they were \$43,900,000, the highest for any year, as compared with \$23,000,000 in 1956. The larger part of our 1958 capital expenditures will be made in this country, with resulting benefit to the Canadian economy.

Inventories You will have noticed in the Annual Report that inventories on December 31, 1957, stood at \$132,900,000, compared with \$115,300,000 a year previous, an increase of \$17,600,000. Metals, finished and in process, comprise the largest part of our inventories. As the world's largest supplier of nickel, our aim is to maintain stocks adequate to assure prompt and continuous delivery. It is also our policy to have fully adequate producing capacity as well as to operate our plants at as uniform a rate as possible, building up stocks of nickel and other products during periods of lessened business activity, and drawing on these stocks during periods of accelerated activity. The inventory growth reported above is the result of adherence to this policy. By early 1958 we had reached the point where, without curtailment of production, inventories would soon have become excessively large. Since it is essential that our consuming trade be reassured as to nickel's

ready availability, our reduction of production at the end of the first quarter of 1958 was delayed until we could be certain of having ample stocks on hand. The curtailments of production have been handled in a manner which will enable us to increase production when necessary without delay.

NICKEL Supply

Last August I informed shareholders that there were, to us, unmistakable signs that the supply and demand position for nickel was tending to equilibrium more rapidly than generally had been anticipated. This was borne out in subsequent months which saw a turnabout. During the latter part of 1957 the free world supply of nickel, after meeting defence requirements, exceeded civilian demand. In the United States, the largest market, the demand for civilian purposes was greater than the supply during the early months of 1957, but by year-end supply for these purposes exceeded demand. This change was brought about by record free world supplies of nickel, sharply reduced defence demands and the release to industry of much of the nickel under contract for delivery during the year to the United States Government stockpile. Some nickel was also released from the strategic reserves of the United Kingdom for distribution in that country. While free world defence requirements were substantially lower than in 1956, civilian consumption increased until the end of the year.

The total 1957 supply of 295,000,000 pounds to the United States was the largest ever available to that country. It exceeded total civilian and defence consumption during the year by approximately 50,000,000 pounds. Supplies available in 1958 will again substantially exceed the consumption. The United States Government has announced its objective for 1958 of diverting to industry all of its scheduled stockpile intake, but it appears unlikely that a market demand will exist for more than a portion of this supply. Early this year, with Government approval, the procedures under which our nickel had been distributed in the United States since 1953 were discontinued and we have since been free to make unrestricted deliveries.

Sales and Distribution

The Company has the dual problem of satisfying the nickel demands of large, long-established customers and also of

making the metal available in small quantities to a great number of users whose consumption in the aggregate is an important segment of our business, and from whose ranks may be expected to come the other large-quantity consumers of the future. Of great importance in this connection is our large number of distributors strategically located throughout the world who are in constant close touch with nickel consumers and are able to supply them promptly with both products and technical assistance.

Market research has always been an important function of the Company. During 1957 this work was expanded. The development of markets to absorb the additional large amounts of nickel scheduled to become available in 1960-1961 requires an early systematic approach, since it takes a number of years to increase existing markets or to develop new markets, and even longer to develop new products and properly introduce them to industry. Present markets which lend themselves to more rapid expansion are receiving immediate attention.

Price

For some years there have been various prices for nickel in the world market and different terms have been used to define them. In general, "market" price nickel has been referred to as nickel sold at prevailing published prices. Today this price is 74 cents (United States) per pound. Then there is nickel sold at what have been called "premium" prices. This is nickel contracted for by the United States Government at prices higher than market price, either to encourage the production of nickel from new sources or to compensate the producer for increased costs necessary to obtain quickly the nickel needed for stockpile purposes. In addition to these there also has been other nickel offered and sold in small quantities at higher and irregular prices.

Our United States market price for electrolytically refined nickel, which has been in effect since December 6, 1956, is 74 cents (United States) per pound, including the 1¼ cents United States import duty. This Company has sold its nickel at market price with the exception of the nickel produced from otherwise non-commercial ore for the United States Government and sold at prices in accordance with the terms of a contract announced by that Government in June, 1953.

The Company's market price for nickel is based on a number of factors. These include production costs, the necessity of protecting our competitive position against alternative materials, and the importance of having industry accept our prices as reasonable and, as far as possible, stable.

Tariff At present the United States Government levies a duty of $1\frac{1}{4}$ cents per pound on refined nickel imported into that country, but the duty does not apply to nickel oxide or nickel in such partially refined forms as slurry or matte. Nickel is not mined in important amounts in the United States, and it has to import most of its requirements from Canada and from Cuba. Imports from Canada are principally in the form of fully refined metallic nickel, but imports from Cuba are now, and in the future are expected to be, in the form of nickel oxide or partially refined nickel, a substantial portion of which will be further refined into metallic nickel in the United States. The effect of the duty is thus to favor Cuban nickel by imposing a $1\frac{1}{4}$ cents per pound burden on Canadian metallic nickel. It is to be hoped that the United States will forego unnecessary tariffs on nickel and other metals, particularly on nickel, where the tariff effectively discriminates against Canadian production, which is by far the largest source of United States supply.

One of the most important developments during the year was the agreement for the establishment of the European "Common Market" (European Economic Community) under which six European countries have undertaken to eliminate progressively tariffs and trade quotas against each other and to maintain a common tariff against outsiders. Discussions are also taking place between the six Common Market countries and 11 other countries of Western Europe for the creation of a "Free Trade Area" with each country reserving the right to determine its own tariffs on imports from non-member countries. It is too early to discuss the possible effects of these developments upon our activities in Europe. Of course, these important matters will continue to receive our careful attention.

COPPER While copper deliveries in 1957 increased to a post-war high of 280,800,000 pounds, the

average price realized was considerably lower than in the two preceding years.

Nearly 75 per cent of our copper was sold in Canada and the United Kingdom, the remainder being marketed in the United States and other countries.

PLATINUM METALS The Company supplies the free world with platinum, palladium, rhodium, ruthenium and iridium. Platinum prices in the United States declined during 1957, from about \$104 to \$77 per troy ounce. A substantial increase in the supply of non-Canadian platinum, mainly South African and Russian, occurred at a time when demand was receding from the peak attained a few years ago after oil refiners recognized the economic advantage of using platinum as a catalyst in new processes for upgrading today's gasoline.

It is noteworthy that South African platinum mining operations have been considerably reduced since last August. It appears that South Africa's output of platinum metals will fall, at least temporarily, below that of Canada which until recent years had led free world production for many years.

COBALT Deliveries of cobalt in all forms reached a new high of 2,400,000 pounds in 1957, compared with 1,500,000 pounds in 1956.

The considerable increase in world supplies of cobalt has led to the formation of the Cobalt Development Association. Your Company has joined this association to help, through research and the dissemination of technical data, in expanding the uses of cobalt by developing larger markets.

PLANT OPERATIONS Throughout the year our smelters, refineries, rolling mills and other plants operated at full or near capacity, with the exception of the Huntington Works in West Virginia in the United States, where operations were interrupted by a long strike. Throughout the strike, materials for defence were shipped, enabling military equipment contractors to meet scheduled production without interruption.

The Company's expansion and improvement programs in Canada, the United Kingdom and the United States were continued during the year, as noted in the Annual Report. One of the highlights of these activities is the work being undertaken at the Hereford Works in England, which was acquired in 1956 from the British Ministry of Supply by Henry Wiggin & Company, Limited, a United Kingdom affiliate. Beginning this month, all of Wiggin's melting operations are being concentrated at this plant. Our plans call for the ultimate transfer of all Wiggin production to Hereford.

Port Colborne Anniversary

The year 1958 marks the fortieth anniversary of the beginning of operations at our refinery at Port Colborne, Ontario.

Its establishment in 1918 gave the Company complete facilities in Canada for the production of nickel from ore to refined metal. Prior to that time refining operations had been conducted at Inco's former plant at Bayonne, New Jersey.

Over the years, refining capacity at Port Colborne has been repeatedly increased and, equally important, many process improvements have been achieved. The first commercial production of electrolytic nickel at this refinery commenced in 1922. In 1942 the industry's first chloride-bearing electrolyte was placed in commercial operation. In 1947 by-product cobalt oxide production was initiated, followed in 1954 by electrolytic cobalt production.

We announced this year the development of a new process for the electrorefining of nickel by direct electrolysis of nickel matte. This process eliminates high-temperature oxidation and reduction operations and permits recovery, for the first time in nickel refining, of elemental sulphur and of selenium. The process is now in commercial operation in a section of the Port Colborne nickel refinery. This accomplishment is one of the more important process advances made through our continuing research efforts.

RESEARCH

Much is heard these days concerning science and research and the increasing part they

will play in the world of the future. From the standpoint of our Company, research — process as well as product research — is only one essential part of a very much more complicated picture. Certainly research is important, but it is equally important that its results should not be sterile, nor its beneficial effects unduly delayed. For research to contribute its full share, it is necessary that new processes be adopted promptly and that new products be put without delay into commercial form and made available for sale in all parts of the industrial world. Of equal importance is the fact that the consuming trades must be informed of these new products and that technical information concerning them be made readily available to permit their proper use. Thus, we look upon research as one of the first links in a long, intricate and essential chain, by which the resultant process or product of the research is made economically useful to the public and commercially profitable to the Company. In recent years, we have been intensifying still further our work in the fields of both process and product research.

In 1957, a Chair in Chemical Metallurgy was established by the Company at Columbia University, New York. This Chair has been designated by the University Trustees as the Stanley-Thompson Chair of Chemical Metallurgy, in honor of Mr. Robert Crooks Stanley, who at the time of his death in 1951 was Chairman of the Board of International Nickel, and me. The first incumbent of the Chair is Dr. Jack Henry Schulman, O.B.E., formerly Director of the Ernest Oppenheimer Laboratory at Cambridge University, England.

In taking this action the Company is supporting fundamental research in the chemical and physical surface aspects of many problems in mineral beneficiation and extractive metallurgy. The Chair will encourage research contribution to basic knowledge in these important fields, which we believe will have a direct bearing on many of the Company's activities. This represents a particular extension of our broad program of research in universities and research institutions in Canada, the United Kingdom and the United States. Currently the Company is participating in over 30 such projects.

FIRST
QUARTER
EARNINGS

The final figures for operations in the first quarter of 1958 are not complete, but it can be stated that earnings will be substantially lower than the \$20,100,000, or \$1.38 per common share, reported for the preceding quarter — the three months ended December 31, 1957. The reduction in earnings is due principally to the sharply reduced demand for nickel and rolling mill and foundry products, and a further slight decline in copper prices.

NICKEL
OUTLOOK

Few elements have received the continuing attention which has been given to nickel since Canada assumed the leadership in nickel production over 50 years ago. This metal, from a lowly beginning as an "unwanted" material, has been developed into one of the most significant alloying elements ever discovered and its progress, particularly in the last quarter century, has been outstanding in the metal field. This progress has been accomplished

through our intensive exploration for new deposits, research for more efficient methods of mining, milling, smelting, and refining of the metal, and for recovery of its many by-products, but primarily through research for and development of new applications and markets, world-wide sales efforts and distributing facilities, and a planned program of technical service, advertising and publicity to acquaint and advise customers and potential consumers how to use nickel profitably and to the best advantage.

As a part of their purchases of nickel, Inco customers always have had, and will continue to have, available to them our technical knowledge and assistance and the benefit of our many years of experience in the creation and expansion of markets for nickel. We have been building this unique, rounded program for many years and are bringing our fullest energies to bear in maintaining and expanding it for the benefit of our customers and shareholders.

*The following Address was delivered by
Dr. John F. Thompson at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 29, 1959:*

RESUME
OF 1958

Sharply reduced nickel demand in 1958 forced the Company to operate substantially below capacity during the year. Production was curtailed three times and, for a period of three months, our mines and plants in Ontario were shut down by a labor strike. These conditions, together with lower prices and reduced deliveries of copper and platinum metals, resulted in the lowest earnings for any year since 1949.

Our sales in 1958 totaled \$322,000,000, down \$120,800,000 from the previous year. Net earnings were \$39,600,000, equal to \$2.71 per common share, compared with \$86,100,000, or \$5.90 per share, in 1957. Four quarterly dividends, each of 65 cents per share, totaling \$2.60 per share, were paid in 1958, compared

with \$3.75 per share in each of the three preceding years.

The Company's stocks of nickel rose very rapidly in the first nine months because of lower consumption, heavy inventory liquidation by consumers, and also because we continued to produce at rates above the demand. During the period of the strike, which began on September 24, we were, therefore, able to supply our customers with their full requirements of nickel. The strike was settled on December 22 and production of nickel ready for shipment to market was begun early in January, 1959.

Our deliveries of nickel in all forms in 1958 amounted to 205,800,000 pounds, contrasted with 290,100,000

pounds in 1957. Refined copper deliveries were 210,600,000 pounds, against 280,800,000 pounds in the previous year.

Construction work continued on schedule at the Company's new mining project at Thompson, Manitoba, which is scheduled to start operations next year and to come into full-scale nickel production at an annual rate of 75,000,000 pounds in 1961.

NICKEL Abundant supplies of nickel throughout the free world for both civilian and military purposes, as well as vigorous development work on new markets, characterized the nickel industry during 1958. Total nickel consumption in the free world was approximately 320,000,000 pounds, the lowest since 1954, compared with a record 415,000,000 pounds in 1957. The principal causes of the decrease were a business recession, mainly in the United States, which had a pronounced effect upon the production of durable goods, and a further decline in consumption of nickel for defence requirements. Because of heavy inventory liquidation by consumers, nickel deliveries were substantially lower than actual consumption. Demand was down also in Canada and the United Kingdom, but held up well on the Continent.

NATURAL GAS Earlier this month we started using natural gas instead of oil as a fuel in the multi-hearth concentrate roasters in the Copper Cliff, Ontario, smelter. This is the first step in the substitution of natural gas for oil in a number of the Company's metallurgical operations at Copper Cliff, and is an example of the economies and improvements we are constantly effecting. Long-term studies of the potential use of natural gas in these operations resulted in arrangements making provision for delivery to us of up to 10,000,000 cubic feet per day of this fuel now made available by the recently completed pipeline from western Canada.

INFLATION, COSTS AND PRICES One of the most serious situations confronting all of us is the inflation arising from a number of causes. This is not the place for a broad discussion of this subject, but we all

recognize that over-expenditures by governments with accompanying excessive taxation plus unrestrained demands for wage increases can only result in higher costs and higher prices. Your Company has endeavored to keep its nickel prices in line, only raising them in an amount consistent with rising costs. In this connection, I should like to point out that the wage increase recently made effective following the settlement of the strike at our Ontario mines and plants did not result in an increase in our price for nickel. It is to be hoped that restraint will be shown, particularly by the major unions and major companies, in the various labor negotiations scheduled this year.

MANITOBA PROJECT Underground development and construction of surface and town facilities at Thompson, Manitoba, are proceeding on schedule. Favorable results in the exploration of the ore bodies revealed that the Thompson Mine would be capable of meeting the planned objective of the Manitoba project of 75,000,000 pounds of nickel annually. This made it advisable to postpone work at the nearby Moak Mine and concentrate on the rapid development at Thompson. The railroad grade from Thompson to Moak Mine, however, was completed, but track installation is being deferred. This right-of-way for a future railroad is being used as a truck road to service the area's exploration camp which is located at Moak Lake.

The Manitoba project, which is being financed from Company funds and without any government subsidy or government guarantee of a market, will be the world's second largest source of nickel, exceeded only by the Inco operations in the Sudbury District of Ontario.

In the 29 months since active development work has been under way, the Company has expended in excess of \$60,000,000 on this project and, in addition, it has advanced \$20,000,000 to The Manitoba Hydro-Electric Board to assist in financing the development of power facilities in the area. Expenditures by the Company for the Manitoba project for the balance of the year are estimated at over \$30,000,000.

It has now been decided to construct an electrolytic nickel refinery at Thompson with a capacity of up to 75,000,000 pounds of nickel per year, the initially scheduled capacity of the Manitoba project. In the original program, decision on the process to be used was deferred until completion of experimental studies. These studies have led us to the decision that electrorefining would be the most suitable and economical procedure. In making arrangements for electric power, the Company included refining in its estimated requirements from the Kelsey hydro-electric plant being built by The Manitoba Hydro-Electric Board on the Nelson River 53 miles from Thompson.

The refining process to be employed was developed by research scientists and engineers of the Company. Its suitability has been demonstrated by commercial operation since December, 1956, in a section of our nickel refinery at Port Colborne, Ontario. A main feature of the process is the direct electrolysis of nickel matte, which eliminates high-temperature oxidation and reduction operations. Nickel sulphide of low copper content from Bessemer converters will be cast directly into sulphide anodes and electrolyzed for the production of high-quality nickel.

I cannot emphasize too strongly the long-range importance of the Manitoba project to the Company and to the nickel industry in general. Consumers of nickel must be assured of plentiful supplies in the years ahead if the full market potential of the metal is to be realized. Nickel production capacity must be capable of meeting surges in demand that will arise during the anticipated upward trend in nickel consumption. The prompt completion of our Manitoba project, which will increase the Company's total annual nickel production capacity to 385,000,000 pounds beginning in 1961, will contribute greatly to the attainment of this goal. But we set no ceiling on the demand that can be created for nickel and we must do whatever is necessary to assure that future supplies will always be more than adequate. As a consequence, we are actively continuing our exploration in Canada and throughout the world for still further sources of nickel.

MARKET DEVELOPMENT

The Company's market development efforts in the field of nickel uses were further intensified in 1958. Assured nickel

supplies made it possible to place greater emphasis on the commercial development of past research achievements and to shorten the time between laboratory findings and their use in market expansion.

Steps were also taken toward substantially increasing research, both for basic knowledge in our field and for specific technical developments, designed to protect and expand existing markets or develop new ones.

We continued to sponsor projects in outside laboratories to supplement our own work and to co-operate closely with steel producers and other nickel consumers in development of new and improved nickel-containing products. The Company, along with other metal mining companies, participated in the support of sponsored research on uses of cobalt, selenium and tellurium, by-products of its Canadian operations. During 1958 it also joined with other major North American copper producers in initial steps leading to the development of a program to broaden and increase the market for copper. This supplements the work which has been carried on for many years by the Copper Development Association in Great Britain, of which our United Kingdom affiliate, The Mond Nickel Company, Limited, has been a member since its inception.

**FOREIGN
EXCHANGE** During the year the average rate of exchange for the Canadian dollar was approximately \$1.03 (U.S.) as compared with an average of about \$1.04 $\frac{1}{4}$ in 1957. Accordingly, we realized during 1958 about 11 $\frac{1}{4}$ per cent more on our conversions of United States dollars into Canadian dollars than we would have in 1957.

At the close of the year the Bank of England announced that all sterling owned by non-residents of the sterling area arising from commercial transactions would be freely convertible. Similar announcements by the leading countries in Continental Western Europe relating to the convertibility of their currencies were made at the same time. These measures further removing restrictions on currencies are welcome steps in the liberalization of world trade.

The European "Common Market" (European Economic Community), which I mentioned at this Meeting a year ago, began to operate on January 1, 1959, when a treaty became effective through which France, West Germany, Italy, Belgium, the Netherlands and Luxembourg agreed to abolish all internal customs barriers within the next 14 years, and to permit the free flow of labor and capital which, together with equalization of industrial conditions, wages, etc., will tend to build the six nations into an industrial and perhaps, in time, a political unit.

As a result of this treaty there have been many significant developments in these countries. That these will have a profound effect both on the size and the geographical distribution of the nickel market on the Continent is certain. There has also been an accelerated movement by many companies, chiefly from the United States, to establish branches and factories inside the area, or to combine with established European companies so as to obtain the advantage of operating within the framework of the Community.

We have no manufacturing facilities of our own within the European Economic Community, but many of the largest consumers in that area have been users of Inco's nickel for about 60 years, with all the friendly commercial relationships that this implies. Over 30 years ago we established four Nickel Information Bureaux in this area to supply technical information concerning nickel and further the expansion of the nickel market. These Bureaux are staffed by nationals of their respective countries. They function through personal contacts and participation in the work of technical societies. Their activities are supplemented by distribution to a large and carefully selected technical audience of technical information and periodicals published in the languages of the areas in which they circulate.

While the establishing of the European Economic Community will result in a general liberalization of commercial relationships inside the six countries, there is the possibility that they might maintain a common tariff wall against manufactured products from the rest of the world with resulting general deleterious effects on the

world's trade. Your Company feels that the interests of all concerned are best served by a free flow of materials across national borders unencumbered by tariffs or quotas. Two examples of unnecessary restrictive tariffs, both of which work to the detriment of Canada, are the United States tariffs of $1\frac{1}{4}$ cents per pound on refined nickel and 1.7 cents per pound on refined copper. Both tariffs, while especially harmful to Canadian exports of these metals to the United States, are also harmful to consumers in that country who are thereby denied, to that extent, full access to a geographically natural source of supply.

The Government of the United Kingdom is consulting other governments with the aim of establishing a system of economic co-operation, embracing the six Common Market countries and 11 other European countries now outside the Common Market, designed to expand and maintain the free-trade principles of the Organization for European Economic Co-operation without its political implications.

DIRECTORS The Hon. J. Kenneth Weir, C.B.E., Chairman of G. & J. Weir Holdings Limited and G. & J. Weir, Limited, of Glasgow, Scotland, was elected a Director and member of the Advisory Committee of the Company on February 2, 1959. He succeeded his father, The Rt. Hon. Viscount Weir, P.C., G.C.B., who resigned after distinguished service as a Director since 1928. Lord Weir has been extended the emeritus title of Honorary Director of the Company.

OUTLOOK While figures for first quarter operations of 1959 are incomplete, net earnings for this period are expected to show an improvement over the corresponding quarter a year ago when they totaled \$12,200,000, equal to 83 cents per common share. Contributing factors to the expected improved earnings for the first quarter were a sharp surge in demand for nickel in the United States, higher prices for copper and increased sales of platinum metals. We must bear in mind, however, that some of this was brought about by the building up of inventories by industry as protection against the possibility of labor disturbances this year in basic industries, particularly in the United States.

It is anticipated that the world demand for nickel will continue through 1959 at a rate higher than in

1958. This, together with improved prices for copper and platinum metals, should result in a satisfactory year.

*The following Address was delivered by
Dr. John F. Thompson at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 27, 1960:*

1959
RESULTS

Net earnings for the year 1959 were the fourth highest in the history of the Company, amounting to \$85,100,000. This was an increase of \$45,400,000 over 1958.

As a result of a world-wide rise in industrial activity, our deliveries of nickel in all forms last year reached a new peak at 317,000,000 pounds, contrasted with 205,800,000 pounds in 1958. Strong demand in Europe largely offset the effect of the prolonged steel strike in the United States. Copper deliveries of 252,400,000 pounds in 1959 were 41,800,000 pounds higher than in 1958. Copper prices in free world markets averaged about five cents per pound higher than in the preceding year.

Platinum and palladium prices recovered substantially because of increased demand and apparent changes in selling policy by the Soviet Union with respect to these and other metals. Deliveries of platinum metals totaled 384,600 ounces, contrasted with the post-war low of 145,400 ounces in 1958. Nickel and high-nickel alloy rolling mill and foundry products, produced by the Company in the United Kingdom and the United States, continued to constitute a substantial part of our business. Deliveries of these products in 1959 amounted to 67,800,000 pounds, about 14 per cent above the previous year.

THE FIFTIES —
DECADE OF
PROGRESS

The decade of the Fifties was one of progress for our Company. We are now on the threshold of a new decade with even greater promise. Our new nickel development in Manitoba, improvements in production procedures, including some quite radical in nature, re-organized marketing and distribution activities and more intensified research—both process and product—will all contribute to continued growth.

Our annual capacity for nickel production has been increased materially during the past 10 years. In addition, completion of the Thompson project in Manitoba in 1961 will provide the Company with initial capacity for a further 75,000,000 pounds of nickel per year.

Deliveries of nickel increased from 209,300,000 pounds in 1949 to 317,000,000 pounds, a new high, in 1959. Copper deliveries advanced from 221,100,000 pounds in 1949 to the post-war high of 280,800,000 in 1957. Annual deliveries of platinum metals in the decade averaged 315,000 ounces, with a high of 445,000 in 1955. Deliveries for the 10 years totaled 2,670,000,000 pounds of nickel, 2,450,000,000 pounds of copper and 3,150,000 ounces of platinum metals.

Annual earnings in the 10 years 1950-1959 averaged \$68,800,000, or about \$4.70 per common share, and common dividend payments averaged \$42,700,000, or over \$2.90 a share, including year-end extra payments.

Over the 10-year period, the Company maintained its customary strong financial position and, looking to the future, returned to the business substantial amounts for exploration, plant expansion and modernization, and process improvements. The strong financial position enabled the Company to proceed in December, 1956, with the new nickel development project in Manitoba and also to retire in February, 1957, all of the outstanding preferred stock which necessitated a cash outlay of \$34,700,000 — both without recourse to outside financing. The preferred stock had a history dating back to the formation of International Nickel in 1902.

Capital expenditures of \$320,000,000 were made in the 10 years chiefly to increase nickel production capacity and improve operations at our plants in Canada, the United Kingdom and the United States. Of this amount almost 30 per cent was expended for the Thompson, Manitoba, development.

With the imminence of production from Manitoba, the Company during the latter years of the 1950's intensified its market development activities and market research throughout the world with the aim of creating and increasing markets for nickel or recovering those lost to other materials during the years when defence and government stockpiling took a disproportionate amount of all available nickel. The Company's marketing, sales and product research staffs have been expanded and realigned, and certain changes have also been made in its world-wide distribution system. The object of these activities has been to increase sales of nickel by helping producers and manufacturers of nickel-containing products to expand their sales. These efforts are already producing gratifying results in the face of keen competition from other metals and materials. We believe this work will continue to assist in substantially increasing the demand for nickel in the current decade as well as further establishing the Company in its traditional position of working to aid its customers.

**CO-OPERATION —
MARKET
DEVELOPMENT
AND RESEARCH**

Your Company has always placed great importance on the development and expansion of markets for its products. Because we are the principal producer of nickel, we have been the leader in developing the nickel market. The Company has always sought and welcomed the co-operation of others in development work designed to expand and create uses for nickel.

Typical of these efforts was the "Gleam of Stainless Steel" promotion in early 1959 conducted in co-operation with leading department stores in key cities in the United States and Canada, and manufacturers of housewares and stainless steel producers. This was designed to increase the use of nickel stainless steel consumer products. A similar program was undertaken in the United Kingdom by our affiliate, The Mond Nickel Company, Limited. Because of the success of this promotion, it is being repeated this year on an even larger scale.

Promotional activities are also being pursued vigorously in other nickel-consuming fields. For example, a drive is under way to strengthen public preference for quality nickel-chromium plating in all applications, since the most satisfactory chromium plate requires an adequate underlay of nickel.

Besides operating its own laboratories, the Company also conducts research in outside laboratories to supplement its own work and co-operates closely with steel

producers and other nickel consumers in the development of new and improved nickel-containing products. We actively support the work done by many technical societies, such as the American Society for Testing Materials and the American Electroplaters' Society in the United States; the British Iron and Steel Research Association and the British Non-Ferrous Metals Research Association in the United Kingdom, and the Canadian Standards Association and the Canadian Welding Bureau in Canada.

International Nickel is also active on an international scale in co-operative efforts to broaden and increase the market for copper, of which we are one of the world's large producers. In tonnage, our copper production is second only to nickel among the 14 elements the Company recovers from its ores. The Mond organization is a founder member of the Copper Development Association in Great Britain started in 1933. International Nickel is a charter member of both the Canadian Copper and Brass Development Association formed in 1958 and the Copper Products Development Association recently organized in the United States.

As a producer of cobalt, selenium and tellurium, International Nickel is also a member of the Cobalt Development Institute, a world-wide group meeting in Brussels, and of the Selenium and Tellurium Development Committee.

Through membership in various technical committees, the Company maintains liaison with technical societies and also interested government departments in Canada, the United Kingdom, the United States and other countries. I am sure I can say that whenever and wherever throughout the free world there is a technical gathering of interest to the nickel industry and its customers there will be an International Nickel representative in attendance to offer co-operation.

**MANITOBA
PROJECT**

Mine development at Thompson, Manitoba, proceeded on schedule throughout 1959. Since the beginning of exploration work the total amount of diamond drilling completed at the Thompson Mine up to the end of 1959 was over 280,000 feet. Up to the year-end, some 95,000 feet, or about 18 miles, of development advance had been driven. The 2,100-foot production and the 1,100-foot development shafts were connected at four levels. Development of stopes and other operations preparatory to mining are under way and will continue into the latter part of this year.

During 1959 the mill building and the smelter building were completed with the major portion of equipment installed. Construction of the electrolytic refinery at Thompson has proceeded rapidly, and production of electrolytically-refined nickel from this refinery is scheduled for the first part of 1961.

Construction of the Kelsey power station by The Manitoba Hydro-Electric Board progressed satisfactorily during 1959. A fire, originating in construction material, in January, 1960, will cause only slight delay in delivery of the first power to Thompson. Initial delivery of power to us from Kelsey, which is 53 miles northeast of Thompson, is scheduled for June, with full output early in 1961.

Rapid strides were made during the year in the development of the town of Thompson, which will provide facilities for 2,000 Inco employees and their families as well as for individuals employed by other firms. Thompson will be the most modern community in Manitoba. The town is located within the Local Government District of Mystery Lake, established under Manitoba law and administered by an administrator appointed by the Province.

As a contribution to the development of Thompson, the Company is providing and clearing the land, and is defraying the cost of town planning, utilities engineering and installation of various basic facilities required in such a town. These include underground storm drainage and sanitary sewer systems, a domestic water supply system, roads and sidewalks, a modern water treatment plant, a sewage disposal plant, a town administration building, a fully-equipped 32-bed hospital designed for expansion to 64 beds, and three completely-equipped elementary schools plus one high school.

The Company's total expenditures to carry out the extensive activities involved in all phases of the Manitoba project since development work was started in December, 1956, have amounted to over \$100,000,000 to date. It was originally estimated at the time the Manitoba project was in the planning stage that our total cost would be \$115,000,000. The Company's subsequent decisions to provide a refinery in Manitoba with a capacity of 75,000,000 pounds and to further enlarge the planned facilities at Thompson will bring the total cost to Inco to approximately \$125,000,000.

EUROPEAN FREE TRADE AREAS

A second European free trade area — the European Free Trade Association — has recently been organized and plans to effect the first tariff reductions among its members around the beginning of July. The association is composed of the United Kingdom, Sweden, Norway, Denmark, Switzerland, Austria and Portugal. Representatives of these seven countries had met in Stockholm, Sweden, in November, 1959, when a treaty was drawn up to abolish, within 10 years or earlier, tariffs and other obstacles to the mutual trade of these nations. The new grouping has become known as the "Outer Seven," because of its geographical location relative to the "Inner Six" — France, West Germany, Italy, Belgium, the Netherlands and Luxembourg — associated in the "Common Market," or European Economic Community, which began lowering trade barriers among its members when it started to operate in January, 1959.

While a common purpose of both groups is the gradual removal, within each group, of tariffs and import quotas on industrial products, in other respects there are profound variations. Fundamentally, the "Outer Seven" is endeavoring to promote free trade among its members with a minimum of commitments on their part regarding economic and financial policies; the "Inner Six," on the other hand, seeks to use free trade as an instrument of broader economic — and, eventually, political — integration.

Members of the "Outer Seven" may retain their individual tariffs toward outsiders, change them at will, and conduct their own commercial negotiations with other countries. Conversely, the "Inner Six" is to establish common tariffs with respect to the rest of the world, and is to have a unified commercial policy.

In recent years Europe has been going through a period of great and growing prosperity with resulting high demands for nickel. With the beginning of the implementation of the "Common Market" and the European Free Trade Association, new elements are introduced, the effects of which can at the moment still only be surmised.

Much will depend on the actions taken, that is, on whether these countries will create protected markets against the rest of the world, or whether their basic impulse is to create a world in which all can trade freely. Added to this is the question of the increase in the material standard of living in Europe and through-

out the world. At present, opinion seems to be divided between those who believe that these markets will be greatly restricted and those who believe that expansion of demand in Europe will continue to such an extent as to overwhelm any other features.

VISIT OF QUEEN ELIZABETH II Our Company was honored on July 25, 1959, by the visit of Her Majesty Queen Elizabeth II and His Royal Highness Prince Philip, Duke of Edinburgh, to our Frood Mine in the Sudbury District during their Royal Tour. Her Majesty and His Royal Highness went underground to view operations in the same mine visited by Her Majesty's parents 20 years previously.

By gracious permission of the Queen a post-doctoral fellowship was established by International Nickel called "The Queen Elizabeth II Fellowship (The International Nickel Company of Canada, Limited, Royal Tour, 1959)." The fellowship is administered by The Canada Council, of Ottawa. The purpose is to enable the successful candidate to follow an original line of research in the earth sciences. This special fellowship is over and above our regular program in support of education.

DIVIDENDS — STOCK SPLIT During 1959 four quarterly dividends of 65 cents per share each and a year-end extra dividend of 40 cents were paid. The total of \$3.00 compared with \$2.60 per share paid in 1958 and \$3.75 per share in each of the three preceding years. For the first quarter of 1960 the dividend was raised to 75 cents a share, equivalent to a rate of \$3.00 per year.

Later at this Meeting you will be asked to approve the splitting of the 15,000,000 presently authorized common shares, both issued and unissued, on a two-for-one basis into 30,000,000 shares and the increase of the authorized common shares as so subdivided from 30,000,000 to 36,000,000 shares by the creation of 6,000,000 additional shares. These 6,000,000 additional shares are for use in the future at the discretion of the Board of Directors which has, however, no present plans for the issue of any of these shares. By the two-for-one split and corresponding decrease in market price per share it is expected that the distribution of the shares in the hands of investors in Canada, the United States, the United Kingdom and elsewhere will be wider than if this action were not taken.

Upon the giving of such approvals by shareholders the Company will promptly make application for the grant of Supplementary Letters Patent by the Secretary of State of Canada confirming the split and increase of authorized capital, and it is anticipated that such Supplementary Letters Patent will be issued on or about April 28, 1960. As a matter of mechanics in effecting the split, shareholders will not be required to turn in their present share certificates but each of such share certificates will represent, after the split, the same number of shares as appears on its face and each shareholder of record at the close of business on the day the Supplementary Letters Patent are granted will receive an additional share certificate or certificates for an aggregate number of shares equal to the number of shares held at such close of business. Such additional share certificates will be mailed to shareholders as soon as practicable after the grant of Supplementary Letters Patent.

If these actions are taken, it is the intention of the management to recommend to the Board of Directors at a meeting to be held in Winnipeg on April 30 that there be declared a quarterly dividend on the new shares of 37½ cents per share. At this rate the expected dividends on the new shares would total \$1.50 per year, equivalent to \$3.00 per share on the present shares. The meeting in Winnipeg will be the first which the Board has held in Manitoba. It presages the opening of our Thompson project in Manitoba.

FIRST QUARTER EARNINGS Net earnings for the first quarter of 1960 will be significantly higher than the \$16,900,000 reported for the first quarter of 1959. While nickel deliveries in March tapered off slightly from the extraordinarily high levels of the first two months, the rate of deliveries for the quarter was greater than our production.

OUTLOOK The free world nickel supply situation has undergone important changes from the period of a few years ago when the industry had difficulty in meeting simultaneously the demands for both current consumption and stockpiling. Following a period of diminished demand in 1958, demand rose sharply in 1959. This expanding demand permitted the United States Government to make available some of its surplus nickel thereby reducing the Government's excess accumulation.

It is expected that demand for nickel during the remainder of 1960 will continue high. This demand can be more than satisfied by the industry's increased productive facilities and by the available nickel supplies. Looking at the situation for 1961 — Inco's Manitoba project will come into production and, although nickel operations in Cuba are now hampered, other nickel producers are also increasing their capacities and further developing their operations toward an even higher pro-

duction rate.

Development work on the applications of nickel during 1959 was conducted on a more highly organized and efficient world-wide basis. The current expansion in nickel use, spurred on by marketing and research activities, should continue. These efforts will provide a foundation for absorbing the new nickel supplies and augur well for the progress of the nickel industry in the decade which we have now entered.

*The following Address was delivered by
Henry S. Wingate, Chairman and Chief
Officer of the Company, at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 19, 1961:*

The Annual Meeting comes this year at a most auspicious time. Thompson, Manitoba, has started to produce. This is the best news I can bring to this meeting and to the many thousands of shareholders who will receive a copy of these remarks.

At the Annual Meeting four years ago we reported on the progress of our construction in northern Manitoba and said that the new project was scheduled to start nickel production in 1961. On March 25 of this year the nickel mining and refining enterprise at Thompson was formally dedicated, officially marking the first nickel production. In a matter of weeks, I expect the plant to be turning out nickel at a rate of more than 75,000,000 pounds a year.

I would like to express publicly our appreciation to these distinguished guests who participated in the dedication ceremonies:

The Honourable Duff Roblin, Premier of Manitoba.

The Honourable Paul Comtois, M.P., Minister of Mines and Technical Surveys.

The Honourable Walter G. Dinsdale, M.P., Minister of Northern Affairs and Natural Resources.

The Honourable Charles H. Witney, Minister of Mines and Natural Resources, Province of Manitoba.

Mr. Robert Simpson, M.P., Member for the Churchill District.

I also acknowledge with appreciation the messages sent to us at the ceremonies by the Prime Minister of Canada; the President of the Board of Trade of the United Kingdom; the Secretary of Commerce of the United States; the Ministers of Trade and Commerce and of Veterans Affairs of Canada; the United States Ambassador to Canada; and all the many other friends from whom we heard.

As Chairman of this meeting, I also want to pay tribute to our Senior Vice-President, Ralph D. Parker, and to our Vice-President and General Manager of the Manitoba Division, James C. Parlee, for the magnificent job they have done in bringing this new enterprise into being; and to extend our congratulations to Dr. John F. Thompson, who was Chairman and Chief Officer of the Company when the project was started, and for whom it has been named.

The start of nickel production at Thompson is the major event, but there are also other events of more than passing interest to the shareholder occurring since the Company's Annual Report for 1960 was released six weeks ago.

On March 7 an experimental United States Government airplane—the X-15—crossed the skies at the

greatest speed ever attained by a manned vehicle, 2,905 miles per hour. The metal skin of the airplane reached a temperature of 700° Fahrenheit during flight, yet retained its strength. This metal skin is made of "Inconel X" alloy, one of a series of high-strength high-temperature nickel alloys developed by our research staff and produced in our rolling mills. As a commentary on the versatility of nickel, another nickel alloy we have developed is for use in storing liquefied gases at temperatures as low as 320° Fahrenheit below zero. This is a 9 per cent nickel steel which we successfully demonstrated in 1960.

Then, on March 16, the Company announced a new nickel steel for applications involving exceptionally high pressure and stress. Containing 18 per cent nickel as well as lesser amounts of cobalt and other elements, this new steel has a combination of properties never before realized in other compositions. This new material was developed in our product research laboratories and will be freely available to the steel industry.

The fact that these developments occurred in the same month that the Thompson project went into production symbolizes International Nickel's activities both as a producer of nickel and as a builder of new markets for nickel. These developments illustrate the interplay of those forces which, over the years, has resulted in the continual lifting to higher levels both of the demand for nickel and of the world's capacity for producing nickel.

It is fitting that the new project should be the subject of major attention at this meeting. This enterprise is a very valuable addition to our assets — with important meaning to the Company and its shareholders, to Canada, to one of its great Provinces, and to nickel users everywhere.

The future of our entire business rests on two pillars — our ore reserves, and the markets for nickel. The Thompson project has added substantially to our ore reserves, and will for years continue to do so. At December 30, 1960, our proven ore reserves stood at a record of 290,273,000 short tons. This included for the Thompson mine 25,000,000 short tons, with a nickel-copper content of 742,500 short tons. This

addition to our ore reserves is particularly significant since our major effort in Manitoba has been on preparing for production at the earliest possible date; and we have not concentrated on proving up as ore reserves the potential of ore in the Thompson mine or elsewhere in the area. Our decision in 1956 to undertake the development was based on our outlook that the nickel ores to be found in the Thompson-Moak Lake area would sustain our operations in Manitoba for many years to come. What we have learned in the intervening years about the ore deposits supports and strengthens our original judgment.

Thompson is the second largest producer of nickel in the world. Only our own Sudbury District operations here in Ontario are larger. Thompson increases our total nickel production capacity substantially. It provides us at the same time with multiple sources of nickel supply. It therefore plays a dual, important role in giving assurance to nickel users of the reliability of nickel supplies, which is essential to the maintenance and future growth of the demand for nickel. Moreover, our new operation has come at a most useful time, for nickel production capacity in Cuba has ceased for the present to be available to the western world.

Our interest in assuring reliability of supplies was a factor in our decision to acquire and sell nickel belonging to the United States Government or its suppliers. These acquisitions, and their sale without profit at the same market prices at which we sell our own nickel, have helped to satisfy market demand and to build new markets pending the nickel production from Thompson. As a result, in 1960, we delivered a record of nearly 352,000,000 pounds of nickel, including over 51,000,000 pounds of purchased nickel. These and the similar further acquisitions continuing in 1961 lessen the United States Government's accumulations of surplus nickel and, at the same time, help us to build a strong stock position, which provides additional assurance to nickel users of the reliability of nickel supplies.

The Thompson project has special meaning also to our activities abroad, particularly in the United States and Europe. Since Canada's nickel require-

ments represented, even before our new project came into being, only a small fraction of Canada's production, we will have to find markets elsewhere for all of the 75,000,000 pounds which Thompson newly adds to our production. We are carrying on major market development programs in many world areas in an effort to build a demand sufficient to absorb our large exportable production. These programs are proceeding through our rolling mill operations in the United States and the United Kingdom and through our sales and technical service offices and distributors and agents located throughout these markets and also in Germany, France, Sweden, Italy and other industrial countries of the world.

The fine relations which throughout the Company's history have been maintained between Canada and the United States have greatly facilitated and strengthened our ability to sell our nickel production. We therefore view with particular satisfaction every sign of still greater mutual understanding between the two countries. These signs include the visits between the Prime Minister of Canada and the President of the United States, the establishment and operation of official Canadian-United States committees at a high governmental level, and the newly-signed convention between the two countries on estate taxes.

The construction and completion of Thompson also turn out to have been well timed from the viewpoint of the Canadian economy. It is creating many employment opportunities for Canadians at this time of special need. It is also providing the basis for producing a still greater inflow of foreign exchange to assist in alleviating Canada's imbalance in international payments.

Nickel has long been a major producer of foreign exchange for Canada because the bulk of Canadian nickel production is sold in markets throughout the world. The completion of our new enterprise not only gives Canada more nickel for its export trade; it also encourages continued confidence in Canada's producers by demonstrating anew to nickel consumers that Canada is the world's most dependable source of nickel supply.

Significantly, too, we may expect Thompson to have

an important effect on the Company's prospects because of the extension which it represents in the life of our Company and the additional nickel it enables us to produce on which we can realize a profit. The full effect on our earnings of our enlarged capacity will, however, probably not be felt in 1961. While the indications are that our total deliveries in 1961 will be as large as a year ago, they will still include about 40,000,000 pounds of nickel which were acquired from others at market prices and are not from our own production.

This means that we probably will not sell in the present year the full amount of our own current production. The unsold nickel production will nevertheless be available for future years. The increase in the amount of nickel which Thompson provides will, therefore, have its full — even if delayed — effect upon our earnings.

I should also remind you that under the law our earnings from the Thompson project will be exempt from Canadian Federal income tax for the first three years. This assurance of exemption was one of the important factors in our original conclusion that we were justified in undertaking this great venture.

Until 1959 the Company's sales had never been as large as 300,000,000 pounds of nickel in a single year. In 1960 our deliveries passed the 350,000,000-pound mark. For the future our organization is geared to still higher deliveries.

In conclusion, I would like to direct your attention again to our forward outlook as expressed in the Annual Report:

"Our assessment of the short-range outlook shows the demand on us for nickel in the first few months of 1961 at about the same average monthly rate as during the last six months of 1960, or about five to ten per cent under the rate for all of 1960. European nickel demand continues strong. The looked-for improvement in United States demand, particularly from the steel industry, has not yet come but we expect that it will during the year. For the entire year our present view therefore

is that we are likely to deliver as much nickel produced from our own mines and plants as we delivered in 1960, as well as again delivering a substantial quantity of nickel, not contributing to earnings, which we will have acquired under arrangements lessening the United States Government's accumulations of surplus nickel.

"We expect our copper deliveries will not contribute as much to profits as in 1960. The prospects are encouraging for our sales of rolling mill products and platinum metals."

The following Address was delivered by Henry S. Wingate, Chairman and Chief Officer of the Company, at the Annual Meeting of the Company, held at the Royal York Hotel, Toronto, April 18, 1962:

On the same day that our 1961 Annual Report went to press, and with much of the world on watch, a free world astronaut was rocketed into space. He orbited the earth three times, re-entered the atmosphere and was recovered.

This coincidence has symbolic significance for the shareholders of International Nickel gathered here today at this Annual Meeting. For the American Mercury Project dramatizes, in a way, the new role for nickel created by modern science. The skin of the capsule which carried Colonel Glenn through space and became red hot on re-entering the atmosphere was made of a heat-resistant high-nickel alloy. The Atlas rocket that launched the astronaut was sheathed with nickel stainless steel less than 1/25th of an inch thick, and nickel tubing formed the walls of the thrust chamber in the rocket engines. The era we are entering will make spectacular and heavy demands for materials to be exposed to extremes of temperatures and stresses. For us it is an era of promise because of the unique qualities present in nickel and in nickel alloys, and of our ability as a Company to assist the

Our outlook for 1961 is no less encouraging than when these words were written for the Annual Report. I am also glad to be able to say that there are now some indications that the looked-for improvement in United States demand for nickel has commenced. Our earnings figures for the first quarter of 1961 are not yet available. The information we have, however, indicates that net earnings for the first quarter should compare not unfavorably with the \$18,000,000, or 62¢ per common share, reported for the last quarter of 1960.

industries of the world in solving their rapidly changing materials problems.

My principal remarks to you today, however, are on a different type of development, an economic development outside the realm of the natural sciences.

This is the movement for the unification of Europe—the European Economic Community, generally referred to as the European Common Market. While much has been written about the general effect of this unification movement on Canada, on the Commonwealth as a whole, and others, I want to say a few words as to what effect we think the Common Market will have directly on International Nickel.

The Common Market consists of six countries—France, West Germany, Italy, Belgium, the Netherlands and Luxembourg—and began operation three years ago. Its purpose, aside from its political implications, is to form these six nations into a single economic entity, with common economic policies and with free trade among the member nations and a

common tariff applicable to all outsiders. Comprising the industrial heart of continental Europe, the Common Market has a population almost ten times that of Canada and nearly equal to that of the United States. It will become an even greater economic factor if it is joined by the United Kingdom and other non-member European nations.

Our experience to date indicates, and most observers agree, that freedom of trade among the member nations and the removal of the overhanging threat that rival industries will be artificially stimulated or protected on a purely national basis, will inspire a marked increase in industrial activity in the Common Market and a real and substantial increase in the standard of living. Many important enterprises from other parts of the world are building industrial facilities in Europe, confident that they can share in the opportunities presented and contribute to their development. This forward progress will mean a greater demand for nickel and for the other products which we produce. The economic growth within the Common Market, therefore, in and of itself, will have a direct and beneficial effect upon the business of this Company.

The extent to which we can directly benefit from this growing market for our products, however, will depend not only upon our own efforts but upon the tariff wall or other devices which the Common Market will maintain against outsiders. These effects will vary from product to product.

Insofar as our principal product is concerned, I am pleased to say that with a few exceptions primary nickel will be duty free on entering the Common Market. One exception is nickel anodes for electroplating, and another exception is nickel powder. A Common Market tariff unfortunately applies to both of these products. However, the great bulk of primary nickel produced by us—electrolytic nickel, nickel pellets and nickel oxide sinter—will enter the Common Market duty free.

In contrast to the Common Market, two other major nickel-consuming countries maintain tariffs against most forms of primary nickel. The United States, the largest nickel market, continues to maintain a tariff on all forms of primary nickel except nickel oxide

sinter; and, unfortunately, the recently concluded GATT (General Agreement on Tariffs and Trade) negotiations in Geneva made no change in this situation. Another major nickel-consuming country, Japan, has a tariff barrier so high as effectively to prevent any substantial importation of refined nickel into that country. On the other hand, most European countries outside the Common Market have no tariff on the most common forms of primary nickel.

An important part of our business is the production and sale of nickel-containing rolling mill products produced at our plants in the United States and the United Kingdom. The Common Market tariff wall will constitute a serious obstacle for these products, since they will be dutiable at substantial rates. In this connection in particular, the decision as to whether the United Kingdom joins the Common Market is of major significance to our Company. We have highly modern rolling mills in the United Kingdom for the production of nickel and high-nickel alloys to the most exacting requirements. These facilities are in the course of expansion and another two years of construction will be required before we realize their full planned capacity. If the United Kingdom joins the Common Market, our expanded rolling mills in that country will be inside the Common Market. They will be supplied with duty free primary nickel produced at our refineries and will be able without tariff obstacles to sell their products not only in the United Kingdom but throughout the whole area of the Common Market. This great widening of the duty free market is far more important to us than the tariff protection on rolling mill products we now enjoy for our local market within the United Kingdom. Also, if the United Kingdom joins, our nickel refinery in Clydach will be within the Common Market. This will provide a greater inducement for Common Market customers to purchase our refined nickel. This will enable our refinery to market its products, both those presently produced as well as any different forms we hereafter may produce in response to metallurgical or commercial developments, duty free throughout all of the Common Market. If, on the other hand, the United Kingdom does not join, the marketing area for our rolling mills will be largely restricted to the United Kingdom and countries outside the Common Market,

and our Clydach refinery will also be outside the Common Market.

Another of our principal products is refined copper. We are gratified that there will be no tariff interfering with the sale of this product in the Common Market. Whether or not the United Kingdom joins the Common Market, Europe will undoubtedly continue as the major market for our copper exports, particularly since a tariff tends to exclude our copper from the United States.

The last of our principal products requiring mention is the platinum metals. These metals will be admitted duty free into the Common Market, as in fact they are into most of the principal industrial countries of the free world.

It will be apparent from what I have said that the Common Market, with free trade among the member nations but with a common tariff applicable to outsiders, will have many favorable and some adverse effects upon this Company. The balance, however, we believe is decidedly on the favorable side, particularly if the present negotiations between the United Kingdom and the Common Market authorities result in the United Kingdom's becoming a member. This fact—that the Common Market will on balance have a favorable effect upon the Company—is of special importance to us, because our business and operations here in Canada and the employment that we provide can be perpetuated only if we are successful in marketing abroad the metals we produce.

I turn now to some of the developments since we issued the Annual Report. Last month we sold our warehousing subsidiary in New York, Whitehead Metals, Inc., to Metal Goods Corporation of St. Louis, Missouri. Like Alloy Metal Sales Limited of this city, the sale of which was noted in the Annual Report,

Whitehead is engaged in the business of warehousing and distributing ferrous and non-ferrous metals produced by others as well as our own metals. Under its new ownership, Whitehead, which has served us for over 40 years, will continue as one of the warehousers and distributors of our products in the United States.

The outlook for our 1962 business continues to be favorable. The possibility of a major steel strike in the United States with consequential industrial unsettlement has been removed. North American demand for our nickel is running well ahead of the rate for 1961. For the time being, however, this is offset by lower European demand, with the result that for all areas demand in the first quarter will not reach our record high rate for last year but will be as strong as that for our next best year 1960. As for copper, our total deliveries everywhere should be well above last year.

In summing up the overall effects, I am glad to say to you that the financial results of all of our operations for the first quarter are likely to show the second highest quarterly earnings we have had in our history. In view of the international nature of our operations, final figures for sales and earnings for the quarter are not yet available. They are in preparation and will be ready in about four weeks.

Finally I bring you special news of present and future importance about our production of nickel in Manitoba. For the first quarter production exceeded the planned capacity of the facilities by 20 per cent. Our ability to lift our Manitoba production from its planned annual capacity of 75,000,000 pounds to an actual output of over 90,000,000 pounds and, if demand requires, to bring our combined Ontario and Manitoba production to 400,000,000 pounds, has now been demonstrated.

The following Address was delivered by Henry S. Wingate, Chairman and Chief Officer of the Company, at the Annual Meeting of the Company, held at the Royal York Hotel, Toronto, April 17, 1963:

The Annual Report noted that during the first month and a half of this year our rate of nickel deliveries in the United States improved substantially and in Europe it reached a perceptibly higher level than in 1962. We now know that our world-wide deliveries for the entire first quarter of 1963 were nearly 85,000,000 pounds, or more than 10 per cent higher than those of the final three months of 1962. In terms of deliveries of nickel of our own production on which we make a profit, the increase was more than 15 per cent.

This improvement is encouraging. Nevertheless, our rate of nickel deliveries is below our production capacity, and the principal objective of the Company is to increase the demand for and thus the consumption of nickel throughout the free world. The steps the Company is taking extend over a wide range. We are expanding our research facilities and are intensifying our efforts to invent new nickel-containing materials. We have teams of specialists working to develop new uses for both old and new nickel-containing materials and to expand markets for specific nickel-containing products. We are active in providing both technical data and technical service to actual and potential nickel users. We are giving strong promotional and advertising support to specific nickel applications and are stressing nickel's contribution of quality. We have added to our technical and development offices and personnel in both established and new territories.

All of these efforts to increase the consumption of nickel by broadening the markets for our customers' nickel-containing products comprise what we call "market development", and I would like to make a few remarks today about what our market development activities mean in practical application.

The maraging steels offer a good example of what is involved in developing a new nickel-containing material and then trying to create a market for it. These steels are a family of new, ultra high-strength steels

containing 18 to 25 per cent nickel which were invented in our laboratories. The maraging steels possess a level of toughness and resistance to brittle fracture previously unavailable at such high strength levels. Additionally, they are easy to weld and to machine and, unlike other steels, do not have to be subjected to quenching and tempering to develop their exceptional combination of properties. "Maraging" is a word coined from *martensite*, a technical term for the metallurgical structure which provides the basic strength of these steels, and from *age-hardening*, a term describing the mechanism which increases their basic strength to a high level.

After the maraging steels were invented and their unique properties recognized, a series of laboratory tests was made to ascertain and record their exact properties at various strength levels. The resulting technical data was then made available to scientists and engineers directly and through technical bulletins and the presentation of papers before technical societies. The technical data, along with samples of the maraging steels, were also presented to steel companies to interest them in producing the new steels commercially, and to consumers to interest them in the commercial use of the new steels. At the present time a substantial number of steel companies are offering the maraging steels on a commercial basis, and our specialists are working to get the new steels specified in applications where their properties are advantageous. The maraging steels show great promise. How large a market they will open up for nickel cannot yet be predicted however, and there is much work ahead of us.

The market development work exemplified by our maraging steel program had its beginnings more than half a century ago. In 1905 International Nickel initiated a somewhat similar program in order to develop and secure commercial acceptance of a then new

corrosion-resistant nickel-copper alloy marketed under the trademark Monel. This original Monel alloy was later developed into a family of nickel-copper alloys and they are now in widespread demand for applications which were undreamed of when the first member of the family was introduced to the industrial world. More than 700,000,000 pounds of nickel have been consumed by these nickel-copper alloys, which were so solidly founded and so versatile that they have continued decade after decade to maintain an important place in a constantly changing market. This record stands as a testimonial to the great heritage which is ours in the field of market development.

A fairly recent example of our market development work followed the invention in our laboratories of Ductile Iron (S. G. Cast Iron), a cast iron with markedly improved properties resulting from the addition of small amounts of magnesium. While many Ductile Iron products contain no nickel, we found that the introduction of magnesium into the iron is greatly facilitated by the use of a nickel-magnesium addition agent. Since Ductile Iron was first introduced to the foundry industry, we have had experts working with the foundry industry to give assistance in the techniques of producing Ductile Iron and in using nickel-magnesium addition agents, and also to demonstrate the advantages of using nickel as an alloying element. The production of Ductile Iron throughout the free world is growing rapidly. Through this new material, Ductile Iron, we have created a market for nickel which will continue to increase and already amounts to more than 6,000,000 pounds per year.

These are examples of specific market development programs which date from the beginning of the century to the present. We are of course at work now on a large number of programs, embracing all of the major fields of nickel usage—such as construction and machinery; consumer products; the petroleum, chemical and processing industries; the electrical and electronic industries; automobiles and architecture. Many of these programs involve well-established nickel-containing materials and some involve new materials. They include the use of stainless steel in truck tanks, beams for highway bridges, and street light poles; nickel chemicals as agricultural fungicides;

nickel-iron alloy piping for liquid hydrogen at missile bases; a columbium-hardened nickel-chromium alloy for aircraft jet engines and rockets; nickel-cadmium batteries for cordless appliances; stainless steel and nickel-plated steel furniture; nickel utensils and other articles produced by electroforming; cupro-nickel tubing for institutional hot water heaters. Experience indicates that some of these current programs will lead to the creation of new nickel markets, while others may not.

I hope the examples I have reviewed will give you a better understanding of the varied and complex activities which we undertake in order to increase the demand for nickel. This work must go forward, because new and larger markets for nickel will always be vital to the continued growth of the Company.

The development of these markets has an important effect upon a Canadian national problem currently the subject of wide discussion, namely, Canada's balance of international payments. Since markets for Canadian nickel are for the most part located outside of Canada, and our sales of nickel are therefore Canadian exports, our activities result in the bringing of a large amount of foreign exchange into Canada. In 1962, for example, after the payment of our foreign liabilities, including dividends to non-residents of Canada, our operations resulted in the bringing into Canada of foreign exchange equivalent to more than \$220,000,000. In the same year Canada's total current balance of international payments showed a deficit of \$848,000,000. In other words, except for the operations of our Company in developing foreign markets, the deficit in Canada's balance of international payments in 1962 would have been 25 per cent greater. To the extent that our efforts to develop new and larger markets for nickel are successful in the years ahead, as they have been in the past, our contribution to Canada's balance of international payments will continue to increase.

It is our conviction that these new and larger markets for nickel will be developed and that the time is not far distant when we will need to produce even more nickel than our present production capacity can provide. We are continuing most actively, therefore, our search for new or enlarged nickel deposits capable

of being brought into production, not only in the areas of our present mines but also in other parts of the world both within and outside of Canada.

Turning to another aspect of our operations, I want to refer to our continuing major program of process research in Canada to improve operating performance, to effect operating economies, and to counteract cost increases outside of our control. Important improvements have recently been completed or are currently under development.

The most important is the current expansion of our iron ore recovery plant. By diverting increased amounts of pyrrhotite to the expanded iron ore recovery plant where it is converted to a salable product, major cost savings are achieved because costly treatment of this material and its ultimate loss as a waste slag are avoided.

Notable improvements have also been made in our Sudbury District mining and smelting operations, at our Nickel Refining Division in Port Colborne, and in our recently-completed nickel project in Manitoba. At

our mines, the use of self-supporting cemented sand fill provides improved ground support and will lower mine timber consumption. In our reduction operations, the extending utilization of natural gas, the use of fluid bed roasting processes and the benefits from modernization programs have resulted in higher metallurgical efficiencies and in decreased costs. At Port Colborne, the production of reduced nickel from Copper Cliff fluid bed oxide has eliminated burdensome melting and calcining operations. In Manitoba, the use of electric steam generators operating on off-peak power is resulting in a substantial saving in steam heating costs, and in both Ontario and Manitoba we are experiencing savings through the replacement of high explosives by ammonium nitrate-fuel oil blasting agents.

Turning, in conclusion, to what we see ahead, I would like to refer to the outlook for 1963 which appears in the Annual Report. We continue to expect in the current year to deliver more nickel than we did in 1962, and the prospect remains good that deliveries of nickel of our own production will be the highest we ever have recorded.

*The following Address was delivered by
Henry S. Wingate, Chairman and Chief
Officer of the Company, at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 22, 1964:*

In many ways 1963 was an outstanding year for our Company. Our earnings, the dividends paid to shareholders; the amount of nickel of our own production delivered to international markets, all reached record highs. We can be gratified with this performance. However, we have no intention of being complacent over the results, but intend to do whatever is necessary to move forward to new levels. At this time, therefore, I want to take the opportunity to review with you some of the major projects we are undertaking which will add to the strength and growth of the Company and to its earnings potential and will enable us to serve our customers better.

Highly important among these projects is the development of a new mine, presently called the Birchtree mine, in an ore body which we have discovered in the Thompson area of Manitoba. This is the first public announcement of the discovery of this ore body, which is separate and distinct from our Thompson mine. While the Birchtree mine is not expected to be comparable in size to our Thompson mine, the grade of the ore is good and the indicated quantity is sufficient to warrant immediate mining. We will start the sinking of a production shaft at Birchtree by midsummer of this year. The mine should be ready for production in 1968.

We are not taking steps to increase our milling, smelting and refining facilities in Thompson since we do not presently plan an increase in total production from the Thompson area when the new mine comes into operation. However, it will be of great value to have our Thompson operations no longer dependent upon a single mine, and we will be in a stronger position to expand our total production from that area if and when the need arises. The new mine can be served from the town of Thompson and therefore a new town site is not required.

In the Sudbury District of Ontario, we are continuing our mine development program, and I have several announcements to make relative to our progress in that area.

First, we will bring into production this year our new Crean Hill mine. When operations start this year, Crean Hill will become our seventh producing mine in Ontario. The Copper Cliff North mine—which is actually the underground portion of an ore body already being surface-mined and known as the Clarbelle mine—is under development for future production. Further, the Creighton mine, our oldest mine, is being extended to new lower levels—deeper underground than any ore body ever mined in the Sudbury District. These three mining projects will enable us to maintain our present production capacity in the Sudbury District.

Also in the Sudbury District we will begin construction this year of a new oxygen-producing plant which will bring our total oxygen-producing capacity to over 1,100 tons per day, or more than three times the capacity of our present plant. This step is part of a major program to extend the use of oxygen at our Copper Cliff smelter. As a result we will sharply increase the efficiency of fuel utilization in our smelting operations and, in addition, be able to initiate other important process improvements. It is anticipated that the greater use of oxygen will materially assist in counteracting the upward trend of overall costs.

Another new project in the Sudbury District arises from our development of a new form of primary nickel, nickel oxide sinter 90. This will make available another important alternative form of nickel for the various technological practices in modern steel mak-

ing. The new product, a modified form of our present nickel oxide sinter 75 which we will continue to market, is an intermediate product of extractive metallurgy containing about 90 per cent nickel and with lower impurities and lower oxygen content. Already produced in large pilot plant operations and proven in tests at the plants of steel producers, nickel oxide sinter 90 is expected to be used mostly in the production of wrought alloy steels and stainless steels. A plant at Copper Cliff to produce the new intermediate product in tonnage quantities has been authorized and will be completed by the end of 1965.

Nickel oxide sinter 90 adds significantly to the Company's wide range of specialized primary nickel products for particular applications. These products include electrolytic nickel, nickel pellets, nickel oxide sinter 75, nickel oxide, nickel anodes for plating, nickel powders, "S" or "SD" nickel, nickel shot, "F" nickel and nickel chemicals.

Overseas, a forward capital expenditures program now being engineered encompasses an important modernization project at our nickel refinery at Clydach, Wales. This involves a departure from techniques the Company previously has employed for the reduction and volatilization phases of the carbonyl extraction process for the production of refined nickel in pellet or powder form. New equipment will be installed, replacing existing multi-hearth furnaces, which will be capable of processing one-half of the present nickel output of the refinery. Hydrogen, instead of water gas, will be used as a reducing agent in the new operations. A number of buildings are to be erected to house the new equipment and the related activities such as materials handling, process control and instrumentation, as well as a unit for the production of hydrogen.

Turning to our rolling mill divisions, we have two major programs underway. One is the modernization and concentration at Hereford in the United Kingdom of the rolling mill operations formerly carried on at Birmingham and Glasgow as well as at Hereford. The program will be completed this year with the installation of a hot sheet mill. The second program, at our Huntington, West Virginia, plant, consists of the construction of a new rolling mill and forging press, to

be completed this year, and the installation of new facilities for the production of sheet and strip, to be completed in 1965.

Finally, we are in the midst of significant expansion of our research facilities, with new research laboratories in the Ontario Research Community outside of Toronto and in Sterling Forest, near Suffern, New York. The new laboratories will help to safeguard and advance the position of nickel and of the users of nickel in a world of rapidly changing science and technology.

Completion of the projects which I have touched on will require capital expenditures of more than \$90,000,000.

Some of these projects will be completed in 1964, others a year or more afterwards, but all will contribute to and are in fact essential for our further growth and prosperity. Indeed, our disbursement of over \$100,000,000 in dividends to shareholders and in taxes to governments for the past year would not have been possible without other similar capital projects in the past. During the past ten years our outlays for exploration and capital projects exceeded \$500,000,000, or an average of \$50,000,000 per year. In other words our yearly capital outlays in this period were as much as one-half of our 1963 dividend and tax payments. In thinking about this, you will appreciate that the potential of a company such as ours cannot be realized without substantial capital outlays such as we have made in the past and are again making this year.

The Company's most important single project during the past decade was, of course, the new nickel production center at Thompson, Manitoba. In addition to the great new industrial developments which International Nickel has brought into being in Manitoba, we have for all practical purposes completed in Thompson, in fulfillment of our commitment to the Province, a sub-divided and fully-serviced town of first quality for a population of some 8,100 people, all in accordance with Province-approved plans. In so doing, we have provided the town of Thompson with paved roads and sidewalks, with water, sewage and utilities systems, and with public buildings and schools called for by the plans. The entire capital cost of approximately \$9,000,000 which we have spent on these community projects has been provided by the Company. This sum is \$1,000,000 more than we had represented

to the Province of Manitoba that we would expect to expend in this undertaking.

As a result of what we have done, property values have been created at Thompson enabling the town to realize, through the sale of town lots, the entire capital cost of enlarging the original town layout sufficiently to look after an additional population of approximately 3,000. Thus, the total existing town layout will be equipped to accommodate a population of approximately 11,000 people, with no capital burden whatsoever having been placed on the town of Thompson or on the Province.

There is one additional matter I would like to bring to your attention today. In 1960 our geologists discovered gold mineralization in the Northwest Territories on Lake Contwoyto—located about 60 miles below the Arctic Circle and roughly 250 air miles from Yellowknife and from the nearest road. The discovery has been carefully evaluated and the conclusion reached is that, while this is an important find likely to be worked some day in the future, it is not economic to open up a mine there at the present time because of the inaccessibility of surface transportation. If a road or a railroad had existed near the deposit we would be proceeding now with a mining program.

At the outset of these remarks I referred to our record earnings in 1963. The year 1964 has started very well for the Company. Our deliveries of nickel in the first quarter were the highest for any quarter in our history. We expect our deliveries for the full year also to set a new record. The demand for copper and platinum-group metals is strong, and deliveries of iron ore from our new plant are setting new highs. Other factors which we expect to have a favorable effect upon our 1964 earnings are the probably continuing higher copper price levels and the improvements in prices for platinum-group metals. On the other hand, we will have increased depreciation charges and higher wages and other costs. Further, the tax savings resulting from the "new mines" exemption from Canadian income tax applicable to earnings derived from our Thompson mine operations will end on June 14 of this year.

Before saying what I can regarding the earnings for

the first quarter, may I remind you that our quarterly earnings within a given year vary considerably, and in fact over the past ten years our third quarter earnings have averaged well below those of the other quarters because of vacation shutdowns of many of our customers' plants and other seasonal factors. Prefaced with this comment, which I suggest you keep in mind in assessing our prospects for the whole year, I am glad to report that the first quarter earnings will be much the highest we have had in any

quarter in our history. While final figures have not yet been arrived at, our best estimate is that the earnings for the quarter will approximate \$34,000,000, compared to \$25,000,000 in the first quarter of 1963 and \$29,000,000 in the final quarter of 1963.

As we enter the second quarter, industrial activities throughout the free world are continuing at a high level, and all the indications are that we should have another fine year.

*The following Address was delivered by
Henry S. Wingate, Chairman and Chief
Officer of the Company, at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 21, 1965:*

Our practice at annual shareholders' meetings is briefly to review the Annual Report and the developments since the Report was issued. Before doing so, I should like to say some things about the various economic and social benefits which we, as an important private mining and marketing corporation, make possible in the countries and areas in which we operate.

The record of this Company in creating earnings that over the years have assured a profitable return to the shareholders and continuing work for our employees is a source of much satisfaction. Our economic well-being stems partly from our ability to locate and develop ore reserves, and partly from our ability to develop and maintain outlets for our products, and sell them on a worldwide basis in a constantly changing market.

Profits are a powerful evidence of the value of the products and services offered to the public. Yet profits are not the whole story of a business corporation in today's world. Because of its determination to maintain and augment its earnings capability and because of the profit incentive, a corporation creates economic and social advantages for countless publics outside of its shareholders and employees. Corporate enterprise to be successful

must and does accomplish its economic goals in socially worthwhile ways.

We at International Nickel are quite aware that in the long run the best interests of society also serve our best business interests. And, conversely, it does not escape us that a free enterprise corporation such as ours pays social dividends as well as shareholder dividends. In fact I suspect the social dividend is the greater of the two.

Born as all of us are to the concepts of individual responsibility, initiative and free enterprise, we may not always see these important truths in terms which are concrete.

Just what are these social dividends that flow from activities such as ours? Some of them are the direct and normal results of any business activity. Others are the special contributions which are made by our products and by our distinctive approach to marketing them. Finally there are those which have little direct connection with immediate commercial objectives but are carried on because we think we have a responsibility to the public in the areas where we operate—a responsibility to ourselves as well as to others. May I review with you what we are doing in each of these broad categories and why.

International Nickel and its affiliated companies now have operations in some 14 different countries. The size and the nature of these operations vary considerably. Our contributions to the public interest are correspondingly different in each place.

As a mining and refining Company, our initial purpose is to search out new mineral resources and to turn them into usable wealth—for the benefit of the Company and the consumers, certainly, but also for the benefit of those who will reside and work in the surrounding area, the citizens of the home or host country. An ore deposit, whether buried beneath the permafrost, or covered by tropical growth, or in readily accessible areas, may represent potential benefits. But the deposit is without value until it has been located and exhaustively examined, until its minerals can be economically extracted and processed, and until distant markets of sufficient size and prospects of long life can be established for its products.

Without International Nickel's continuing exploratory drive, its capital resources, its willingness to take risks, and its marketing and other skills, the Mystery Lake District of Manitoba could still be a wilderness of muskeg and frozen lakes. We discovered the ore there, learned how to recover the nickel from it, and found ways to market the nickel throughout the world. Thus was created usable wealth, jobs, an increased spirit of regional pride, tax revenues, opportunities for service industries, and—most dramatically—the town of Thompson. As I noted in my address here last year, we spent many millions of our own money to create a planned community for some 8,000 persons. We furnished it with schools, a hospital, and other public buildings, with utilities systems, with roads and an airport.

Out of the wilderness we created a livelihood and a home not only for those who work directly for the Company and for their families, but also for the operators of the stores and shops of all kinds, the theater, the hotel, and the radio-broadcasting station, and for those who supply all the other goods and services needed to support a town.

The Thompson project touched off a full economic development in which other business firms have enthusiastically participated. Today there are 140 such businesses serving this area. Thus, for Manitoba, International Nickel's pioneering has returned manifold benefits. It has led to a self-generating economic growth which is transforming the entire area.

Few stories can match Thompson, of course, as a concrete example of direct economic benefit. But International Nickel has contributed even more extensively during the last eighty or more years to the economic growth of the Sudbury District of Ontario. Not the least of our contributions is the great investment we have made from our earnings in the continuing development of advanced mining and processing methods. This has led us to economic ways of converting low-grade, and previously worthless, materials into valuable resources. Thus over the years, the Company's investments have compounded Sudbury's original wealth.

I have been speaking about our mining locations. The Company is also an important factor in many other areas, such as Huntington, West Virginia, Clydach, Wales, and Hereford, England. In each of these areas International Nickel's presence makes significant contributions to the local economy.

In short, economic stimulation for the community is an Inco by-product. It is related to our responsibility of running a continuing and growing business, in harmony with the interests of the region where our facilities are located. We know we must be and we are responsive to local conditions and local needs.

Along with our existing ore reserves and our worldwide markets, men and ideas are our most important assets. Because the Company attempts continually to stay in the vanguard on every front of our business, we require highly competent employees at every level. Also, because men interact with their surroundings, we try, insofar as our influence can be effective, to maintain a satisfying and stimulating environment in which to work and live.

The support International Nickel extends to local charities and cultural institutions is an aspect of this recognition. A university in Sudbury, a hospital in Toronto, the United Fund in Huntington, the Churchill Memorial Fund in Great Britain and similar causes in other countries where we have operations, receive our financial help.

A related concept underlies our extensive program of educational support, which has several rather different components, each fashioned to a particular purpose or need.

In Canada and the United States, we maintain a program of four-year college scholarships, awarded on a competitive basis to children of our employees.

A large part of our aid-to-education effort is extended to engineering and science, both in categories of specific importance to the Company such as extractive metallurgy and in more general fields such as mathematics. Our activities range from the sponsorship of summer programs in mathematics and science for some 400 Canadian high school teachers—to undergraduate scholarships, graduate research fellowships, and postdoctoral research fellowships in advanced metallurgy and allied sciences. The postdoctoral program is currently operating in France, Germany, and Australia. We plan to extend it to Belgium, Italy, and elsewhere. In France we participate in the support of the new Institute of Advanced Study-Europe, located near Paris.

The largest aggregate share of our investment in educational institutions, however, takes a different form. In Canada, we undertake rather general support to colleges and universities, particularly in the communities with which we are directly involved. Within the last three years, for example, we have announced a major unrestricted grant to the University of Manitoba and a grant of \$2,500,000 to facilitate the launching of the new Laurentian University of Sudbury, together with grants to other institutions. In the United States and in the United Kingdom, where different educational patterns prevail, we make selected grants to universities and private liberal arts colleges outstanding for their leadership. Many of these do not have a close technical

relationship to our industry. But we know it is essential to the future of business that growing scientific competence must be balanced by growth in man's understanding of himself and his capacity to manage his technical achievements and his environment.

Related to these programs is our sponsorship of graduate fellowships in educational administration and in international relations. And outside the formal educational structure, there is our support of public affairs organizations such as the Canadian-American Committee, the Canadian Institute of International Affairs, the Council on Foreign Relations, the Committee for Economic Development, the National Bureau of Economic Research, and the Atlantic Institute.

Beyond the various types of public activities which we support as a corporate entity, and beyond the spur we provide to the general economic development of the local and national communities where we operate, there is a third far-reaching category of our contributions to the public at large. I am referring to our product research and market development work . . . how it provides industry with more efficient materials with which to work . . . how it provides consumers with better-quality products and an improved standard of living . . . how it is continuously searching for new compositions to meet the needs of the future.

By way of illustrating what is involved, look back with me for a moment to Leonardo da Vinci. He was perhaps the greatest all-around genius the world has ever known. He understood the basic principles of experimental science a century before Francis Bacon, and he foreshadowed recent studies into the principles of aeronautics. Yet the overwhelming bulk of his magnificent achievements remained buried and unused for generations in his notebooks.

To a considerable extent, the problem was that his insight, his imagination, the quality of his ideas were not matched by the quality of the materials of his era. Only in our generation, for example, has the development of high temperature alloys made possible one of Leonardo da Vinci's most startling

dreams—the gas turbine engine, which is the basis of our so-called Jet Age.

The point is that scientific progress requires not only new ideas but also suitable materials and technology if it is to have useful value.

So far as I am aware, there are no Leonardo da Vincis on International Nickel's payroll. However, we have I think had the good fortune to achieve a considerable number of successes in developing better materials and processes to meet the problems of today as well as of the future.

I have already mentioned the role of high temperature alloys in the development of the gas turbine engine. Many of these can be directly attributed to the work of our research staffs.

Our invention of 9 per cent nickel steel has permitted a similar breakthrough in the storage and transmission of liquefied natural gas at super-refrigerated temperatures. This has made it possible for countries such as France to obtain quality fuel at acceptable cost. It has enabled gas-producing countries such as Algeria to find a suitable market.

Corrosion-resistant alloys which we have developed have been tightly linked with the increasing use of highly potent liquid fertilizers. Recently our products have been found to have an even more direct application to agriculture. With our active cooperation, authorities in India are perfecting a method involving nickel chemicals to control blight disease in tea plants.

Our creation of ductile iron, a marked improvement over traditional gray cast iron, has revitalized the cast-iron foundry industry all over the world.

Our development of the maraging steels has provided a material strong enough and tough enough to bear the stresses of the solid propellants now being used in United States space exploration.

It is not enough, however, to provide materials that are adequate. Present-day scientists and plant operators are calling for the superior. The search is on all over the globe, with inconceivable rapidity, for new solutions to old problems.

We at International Nickel have some ideas about the things others are aspiring to accomplish in years to come—and about the ways in which nickel can help to make those aspirations come true. Thus, one day, not too far off, man will learn how at acceptable cost to obtain water from the sea for irrigation and for human consumption—and nickel alloys will help to make it possible.

Someday we will be able to recover the immeasurable mineral riches of the sea—and nickel alloys, now being developed for oceanographic research, will help to make it possible.

Someday we may learn also how to operate an electric stove on a voyage to Mars or an automobile without a liquid-fueled engine, using solar generators or fuel cells, with nickel-cadmium batteries serving to store the power and make it available as needed.

The Company is working toward the day when low-cost corrosion-resistant materials can be used indefinitely in the open air without any loss in appearance. We are working toward the creation of entirely new families of alloys by combining nickel with metals such as columbium, molybdenum, tungsten, and tantalum in the hope of achieving materials with performance qualities superior to those of any alloys we know today.

Some of these goals may not be achieved soon. Some may elude us altogether. But if it can be done at all, I believe International Nickel will be in the forefront of the effort. It is our business to move with and ahead of the times.

How do we convert these visions into usable realities? Research is part of the answer but, as I have intimated, the basic asset required is to have men and ideas.

Accordingly, throughout the world, our scientists are encouraged to play an active role in technical and scientific societies. Our market development

officers work in close collaboration with the marketing staffs of our customers. All contribute their knowledge and their ideas but, at the same time, learn what is on their colleagues' minds and thus help us to understand where tomorrow's needs may lie and how we can satisfy them.

We distribute information as widely as possible about our technological advances and about the novel applications for our products. We encourage our scientists to publish and make available to the entire scientific and technical community the results of their major research studies. Likewise, we offer technical assistance directly to those mills and other metal-consuming industries which desire to take advantage of the accumulated knowledge at our disposal.

Our new office in Spain, for example, is taking an active part in that nation's drive to develop fully its primary and secondary industries. The establishment of nickel-using industries there is not only good for the Spanish economy but good for nickel today as well as tomorrow.

In looking at this sketch of the Company's contributions to the public good, we must keep in perspective the role of government in matters affecting the overall economies and the general welfare. As a responsible corporate citizen we recognize our obligation to handle our affairs in a manner which will aid and promote governmental policies adopted in the interests of all. At the same time, it is vital that governments recognize and respect our need, in common with those of other industries which must invest large sums and plan for a long-term future, to be protected against unstabilizing treatment. If business has one fundamental necessity in order to take risks, in order to finance large expenditures and to plan its long-term operations successfully, it is the assurance that rules and agreements once settled upon will be carried out with justice according to their terms.

In business-government relations, the government's role is to maintain policies which are fair and equitable for all, giving private industry a full opportunity to operate profitably for the benefit of its shareholders and the public alike. As this Com-

pany's long experience with national governments, provinces, states and municipalities has amply demonstrated, government and business can work together for the common good.

I hope that all I have said will convey why we at International Nickel believe that good corporate citizenship and good business each requires and supports the other.

* * * *

I would like to turn my further remarks to the Annual Report for the year we have just completed and the developments since then.

For us, 1964 was a tremendous year. Earnings reached \$135,768,000, the largest for any enterprise in Canada. Dividend disbursements were increased to \$81,251,000. The market stepped up its take of our nickel by over 90,000,000 pounds, with the world consuming far more nickel from all sources than ever before. And the year-end saw us in the midst of significant increases of our employment rolls.

As mentioned in the Annual Report, the Company will expend some \$100,000,000 during this year in an intensified program of mine development, plant expansion and modernization, exploration, research and market development. All of the projects initiated are progressing on schedule, including the stepped-up development of our new Birchtree Mine at Thompson.

We said in the Annual Report that we would be reaching a conclusion this year regarding the opening of further new mines. I am glad to report that we have decided to start the sinking of shafts this year for two new mines not previously announced, the Coleman Mine in the Sudbury District and the Soab Mine located west of the Grass River some 40 miles south of Thompson.

At Copper Cliff, the major addition to our oxygen-producing plant will come into operation in September; our new Nickel Oxide Sinter 90 plant will

also be ready for production by August. At Clydach, Wales, our modernization project at the nickel refinery is expected to be completed in mid-1966. And just outside of Toronto, construction has now started on the new laboratory we are establishing as part of the Sheridan Park Ontario Research Community. This facility will be ready for occupancy early next year.

We are confident that these and the other projects sharing in this major expenditures program will make significant contributions to the stability and future of our Company.

The demand for our products which prevailed during late 1964 has continued into the first part of this year. I am able to report that our deliveries of nickel during the first three months of 1965 again reached an unprecedented high, surpassing even the previous record established in the final quarter of 1964. In the month of March, we delivered more nickel to our customers than in any other single month in our history.

Deliveries of our other major products—copper, platinum-group metals and iron ore—are continuing at very high levels. During the first quarter there has also been a strong increase in demand for our Hunt-

ington and Wiggin high nickel alloy rolling mill products.

In the United States the accelerated demand for nickel came fully as much from other industries as it did from the steel industry. However, the present uncertainty in the steel industry's labor relations has caused the accumulation of reserves and building-up of inventories of nickel-containing steels by North American producers and users of steel. Accordingly, a portion of the record deliveries we have made thus far in 1965 would ordinarily have been made over the rest of the year. This should be taken into consideration in assessing our prospects for the balance of the year. Having expressed this word of caution and although final figures are not yet available, I am pleased to report to you we expect our earnings for the first quarter will establish a new quarterly high. They will amount to about \$37,000,000 or \$1.25 per share, compared with \$33,710,000 or \$1.14 per share in the last quarter of 1964.

Barring an unlikely prolonged strike in the steel industry in the United States, we believe we can expect the remainder of 1965 to be a period of intensive business activity. There is reason to think, therefore, that we are on our way to another year of most satisfactory overall results.

*The following Address was delivered by
Henry S. Wingate, Chairman and Chief
Officer of the Company, at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 20, 1966:*

The Next Decade

1965 was a good year. Earnings and our dividend payments to shareholders reached new highs. Earnings were \$143,794,000 of which \$90,311,000 was paid out to shareholders. Services to industry throughout the free world, as measured by our deliveries of nickel and by the assistance we give to the enlargement of markets for nickel-containing products, were greater than ever before. Free world

consumption of nickel last year rose to a total which is now estimated at over 750,000,000 pounds, a very sizable increase over the preceding year.

Our deliveries of iron ore pellets reached a new high, and while our deliveries of copper and platinum-group metals were somewhat below 1964 levels, they were at a very satisfactory rate. Our rolling mills in Hereford, England, and Huntington, West Virginia, delivered fully 15 per cent more of their

products than in the previous year. Our contributions to our Canadian economy in the forms of payrolls, purchases of supplies and services, taxes, and foreign exchange were the greatest in our history.

Nickel Deliveries at New High

1966 will also be a busy year. As the year opened, some of us felt the market for nickel would level-out at the high plateau to which it had climbed so rapidly. It has not, and in the first quarter of this year we will have delivered more nickel to our customers than in any previous quarter in the Company's history. We are also experiencing high levels of activity with our other products.

In contrast to 1965, a significant volume of our nickel deliveries in 1966—and more so in the second quarter than in other quarters—will be made from nickel acquired from the United States Government stockpile. These represent essentially in-and-out transactions at very close to cost. Therefore, our costs and expenses may be expected to represent a higher percentage of our net sales. Our earnings figures for the first quarter will not be final for a few weeks, but I am able to report at this time that we estimate the earnings for the quarter to be approximately \$38,500,000 as compared with last year's first-quarter earnings of \$37,480,000.

Labor Negotiations to Begin

Looking to some of the developments during the remainder of the year . . . we will be entering into a new contract covering our hourly paid employees in our mines and plants in Ontario. Our present contract with the United Steel Workers of America expires July 9, and negotiations will begin shortly looking to a new contract involving an upward adjustment in wages.

As I said, we have been experiencing a gratifying and unprecedented call for nickel from our customers. And while we expect this to continue, it is likely that there will be some lightening in orders during the summer vacation season. The demands of our customers have been and are being serviced promptly, except in a few special situations; for example, where transportation difficulties, as a result of the long truck strike in Ontario, have caused delays—or where we have not been able to provide im-

mediately the particular types and sizes of nickel specified. Our ability to satisfy our customers' current needs is facilitated by our own inventory, our increased production, and the sizable amounts of nickel which we have purchased.

Effect of New Canadian Budget

On March 29, the new Canadian Budget was announced. It includes, among other provisions, less favorable capital cost allowances, a beneficial reduction in the sales tax on production machinery and a refundable five per cent tax on cash generated. In 1966 and 1967, the effect of the first two provisions would, in our case, just about cancel each other out. The five per cent tax on cash generated is in the nature of a loan to the Federal Government. It would call for payments by us to the Government in the order of \$12,000,000 over an 18-month period beginning in May of this year. Under the proposed budget, this would be returned with interest within 36 months after October 1967. This tax, when paid, would become an account receivable and, therefore, would not adversely affect our earnings. It would reduce the cash available to us, but our financial position is such that we will be able to move ahead on essential expansion and development programs.

Programs for Long-Range Growth

As we look to this year and beyond, decisions made four or five years ago, with the objective of making full and effective use of the ore potentials we have discovered, will result in continuing increases in our mining and ore-treatment capacity—and thereby contribute to our own and to Canada's sound, long-term growth. Although I have reported before in some detail on the expansion and development programs underway, I would like to mention them briefly here.

Expansion in Ontario

Under these capital programs we are scheduled to spend in Canada this year over \$40,000,000 on mine expansion and development and about \$30,000,000 on expansion and improvements in our surface plants. Together, these represent an increase of some \$30,000,000 over 1965's construction programs. In Ontario, our Totten mine has come into production

and our MacLennan mine will be producing from underground as well as from open-pit operations by June. The development phase of our Copper Cliff North mine continues looking to production by mid-1967. Development is proceeding on the new Little Stobie mine, and construction of the new mill to serve this mine and the Frood-Stobie is also under-way. Both are scheduled for completion in 1968. Contracts have been awarded to initiate replacement of multi-hearth roasters with fluid bed roasters, and for additional matte-separation facilities at Copper Cliff.

Expansion in Manitoba

In Manitoba, we are moving ahead in the further development of our Thompson mine. We expect to complete the sinking of the No. 3 shaft this year and work is under-way for deepening the No. 1 shaft. Both of our new mines there, Birchtree and Soab, are scheduled to come into production in 1967, and installation of a new electrolyte purification system at the Thompson nickel refinery is just about completed and will be in operation very soon.

New Research Unit in Canada

Additionally, we are spending over \$3,000,000 to complete and put into operation this fall a research laboratory, located at Sheridan Park, west of Toronto. It will be devoted primarily to research in extractive metallurgy and geological and geophysical research, but we will carry on there certain types of product research. In the United Kingdom and the United States, we plan to spend about \$16,000,000 in necessary expansions and improvements, including the completion of a major modernization program at our nickel refinery in Clydach, Wales. This represents a program comparable to last year's in the United Kingdom and a significant reduction in our United States program.

The development of our Guatemalan property has further advanced. Engineers are designing the plant and making field investigations to determine foundation conditions for its exact location. Concurrently, we are proceeding to formulate the necessary arrangements for financing.

Intensified Exploration

Our exploration activities are going ahead at a very high rate—nearly twice that of 1964 and considerably higher than last year. While we have teams in various parts of the world, the bulk of our exploration efforts is concentrated in Canada, not only because we are here and the prospects are good here; but also, in no small part, because of Canada's policies which encourage and provide very real incentives in this regard.

Looking to the Future

I would like now to turn to the more distant future and to say something about the decade ahead of us and what we must do and expect. Reading the future is at best an art, yet there are trends which can be foreseen. Understanding these can help us plan for our future prosperity and growth.

Impact of Science and Population

Among the forces shaping the world of tomorrow are the incessant progress of science and technology, the conversion into reality of the research advances of the past few years, and the overwhelming expansion in world population which is spiralling at a geometrically progressive rate. By 1980 it is estimated that there will be 200,000,000 more people in the Western Hemisphere alone, and that the population of the entire world will have jumped 1,000,000,000 from the present 3,300,000,000.

These figures are not mere cold statistics. They represent human beings—human beings with the aspiration to upgrade themselves towards the very limit of their capabilities, and, thereby to win a better standard of living. As a result, many of the efforts of the next decades will be concerned with the optimum utilization of the world's resources to nurture these aspirations and needs of men and women everywhere. A great adventure, therefore, lies ahead, especially for the industries who must locate and develop the resources and the raw materials, and harness their properties to engineering needs.

Essential Role of Nickel

Look at our central product, nickel. Over the last 60 years this element has made a contribution to nearly every activity or essential through which men fulfill their potential and improve their environment. Food and water are two such essentials. Nickel-containing materials help cultivate, fertilize, irrigate, harvest, process and transport food all over the world. As far as water is concerned, they are vital to the desalination processes that are increasingly providing a thirsty and parched world with fresh sources of supply.

Thus, even at the present level of progress, the need for nickel ten years from now, on a per capita basis, will grow—and, proportionately, most rapidly in those regions of the world which only now are approaching the industrial activity and abundant life characteristic of the countries surrounding the North Atlantic.

At the same time, the special properties of nickel will be under consideration by the highly industrialized and developed areas of the world. Nickel will find its place in nuclear plants, in exploration of the last great frontier on earth—the sea, and in our efforts to conquer space.

Nickel Will Compete With Other Materials

Remember, however, that industry's basic need will be for materials—any material that can meet its stringent requirements. More and more, the choice will be made by materials specialists capable of selecting the one most suited to a specific use from an ever-increasing array of competitive materials.

It is reasonable to expect that the whole gamut of metals and non-metals will be making stronger bids than ever to satisfy these demands. Some areas where nickel is presently used will be lost to this vigorous competition. In others, the advantages of nickel will be readily recognized, and the accumulated knowledge of its properties will favor its use. It is up to us to make sure that its qualities are recognized and exploited so that we do not lose out in the highly competitive materials contest. Certainly

the competition in the future will be no less real than it is today.

But the horizon of opportunity for future uses of nickel is wide and bright. And the fact remains that society's needs for this metal—because of what it contributes—will in the decade ahead be an underlying force with significant and vital implications for International Nickel. This fact emphasizes that a major goal of our organization must be to provide the supplies of nickel demanded by present and future markets. This will test the skill, acumen and perseverance of our geologists, our mining experts, our process engineers, our financial people and our entire management.

More Nickel for Broader Markets

Our search for nickel must be a perpetual operation. It must be extended to the farthest reaches of the earth, to ever greater depths beneath its surface, and even under the sea—to all types of nickel ores, ranging downward to complex low-grade sulphide ores and to low-grade nickel-bearing laterites. It is probable that, in addition to our expanding operations in Canada and our project in Guatemala, we will in the decade ahead have mining and processing operations in other parts of the world.

Prices and Increased Production

The necessity for moving ahead rapidly towards the development of the plentiful low-grade ores will challenge us to continue progressively to find even better ways for separating and processing these ores than the very efficient ones we have today. This must be done to offset the predictably steady increases in wages and salaries, in the cost of services and supplies and in the cost of the equipment required. It may well be that, in time, increases in the price of nickel will be required to maximize production of the ores available.

Many important changes will transpire in our smelting and refining operations. Our pioneering and widespread use of oxygen in liquid-phase pyrometallurgy is but a first step in this direction. Our operations will also be affected by a growing need

to vary the types and forms of our products. The introduction of Nickel Oxide Sinter 90 last year, and, earlier, of "S" (or "SD") nickel for the electroplating and electroforming industries are examples of our efforts to satisfy the changing and more specialized needs of consumers.

Of course, over the next decade, the world of politics and economics will also be in rapid motion. New markets will open up for both raw materials and manufactured products. International trading will become more complex, but, more important to us and to business everywhere, the trading will be far more extensive.

The Crucial Incentives

In preparing for the future, our Company is fortunate to have a solid history of accomplishment to build on. The investments in our business that we have made in the past and those that are programmed provide the basis for the long-term maintenance and further growth of our large production capacity. Our past record of profits, commensurate with our risks, encourages us to think that we will be successful in planning future operations in a way which will insure an adequate profit incentive for the large amount of capital that will be called for. The special incentives offered by governments to those who explore and open new mines—which have made an unquestionable contribution to the speed and success of new production—will be fully as crucial in the future.

The Need for

Talent and Ability

I do not know whether the overall pace of future events will accelerate and out-distance that of recent years, but if we grow in the next decade as we have in the past, I know only one way for management to insure our future in this environment. That is to make every effort to have and to develop strong, talented people—and enough of them—in our organization.

We require people with broad and specialized skills in mining and extractive metallurgy, in the natural and engineering sciences, people skilled in marketing, in accounting, in government relations, in finance, in commercial and other affairs.

We must develop managers . . . men as capable of directing others as they are in using their own specialized skills . . . men capable of formulating and carrying out overall corporate objectives. I can predict that there will be an ever-growing need for people with international backgrounds and experience—in many cases multi-lingual—but, primarily, able to adjust to and understand the different national environments and capable of fashioning what we do there so that our operations will be successful and welcome.

Thus the development of men for posts of special and wide responsibility is an important task facing our management. We must succeed in this rapidly for, as my remarks have indicated, the next decade is going to be a very busy one.

*The following Address was delivered by
Henry S. Wingate, Chairman and Chief
Officer of the Company, at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 19, 1967:*

The very rapid growth in the use of nickel we have been witnessing the past few years—a rate of growth unequalled by any other major metal—underlies the problems and the opportunities facing our Company today.

As you know, world nickel consumption in 1966 reached a record high—some 70 per cent higher than

the plateau in consumption that prevailed in the 1960-1962 period. Likewise, our nickel deliveries in 1966 were of record proportions—but not all of the nickel we delivered was produced by us. Because of strikes and the shortage of labor in the mining industry, we lost over 80 million pounds of nickel production last year. This loss, coupled with the fact that our large in-

ventories of finished nickel were nearly depleted, meant a serious reduction in deliveries of Company-produced nickel. Our record total deliveries of 500,200,000 pounds included approximately 100 million pounds of U. S. Government surplus nickel on which there was no profit to the Company. As a consequence, earnings were lower than in the previous two years. Because of reduced earnings and because of large existing and contemplated capital expenditures, the Board of Directors did not declare an extra year-end dividend in 1966. Dividends for 1966 were \$2.80 per share, down 25 cents from the preceding peak year.

New Mines in Canada and Elsewhere

I think shareholders will understand that we are doing everything possible to maintain and increase production from existing facilities and to develop new sources of nickel. Here in Canada we are developing new mines, and we are expanding established operating mines. In Canada alone, our capital expenditures will exceed \$100,000,000 this year.

And we are active in other parts of the world as well. In Guatemala, substantial progress is being made. I shall refer to that progress later. In Minnesota, we are working around the clock to determine the feasibility of developing low-grade copper-nickel deposits. In Australia, we are crowding forward in our efforts, and I now feel, with some optimism, that within a year we will know whether we will be warranted in shifting from the exploration phase into the development stage. I should note, too, that we are engaged in exploration activities in the British Solomon Islands. Finally, we are continuing to strive for an appropriate arrangement with French and New Caledonian interests, satisfactory to the French Government, for the development of New Caledonia's extensive and untapped lower-grade deposits.

Developing High-Cost Ores

Consideration of most of these potentials and of much of our Canadian expansion was assisted by an increase in the price of nickel. The increase, effective November 1, 1966, was the first since 1961. It has allowed us to recover, in part, increased costs and to make a start on projects to develop low-grade but extensive deposits, such as the new Pipe mine, some 20 miles south of

Thompson, Manitoba. It is clear, as one looks ahead, that the mounting world requirements for nickel will require increased reliance on lower-grade, high-cost ores such as these.

I have spoken in the past of the value and accomplishments of our research efforts in developing new uses for nickel. The success of these efforts is obvious today; and, of course, they are continuing, with an eye on new markets tomorrow and the tomorrow after that. At the same time, we have been carrying on another type of research with great vigor—that is, research on new and improved methods for getting ore out of the mines and improved processes for extracting nickel and other metals from the ore.

The year 1966 marked the completion of our new J. Roy Gordon Research Laboratory at Sheridan Park, Ontario. This is part of a complex of extractive metallurgy research and pilot plant facilities in Canada, which we believe is unmatched anywhere in the world. Our research facilities have made important contributions to the Company in the past and will make still greater ones in the future. They hold, we believe, great promise for the development of further new and improved extractive processes for both sulphide and lateritic ores. I am glad, as well, to report that we have recently completed the major modernization project at our Clydach, Wales, nickel refinery.

What does all this production, exploration and research activity mean in terms of future deliveries? Because our inventories of finished nickel are virtually gone, our deliveries in the immediate future will have to rest on production.

In 1970, we will have completed in Canada our already announced program of expanding our existing mines, increasing the capacity of our surface facilities and bringing in new mines. Additionally, we are currently studying still further Canadian expansion plans. Altogether with what we are planning, we look forward in 1970 to increased production in Canada of some 100 to 150 million pounds of nickel annually above that which we expect to be able to deliver from our production this year. I would emphasize that this increased production is exclusive of our projects outside of Canada, one or two of which should come into production in the early 1970's and thus provide further substantial increments in production capacity.

Despite these very real causes for optimism, it is apparent that while we and other nickel producers will have progressively more production in the years ahead, the increase in supply will be unable in the immediate future to match the increase in consumption if it continues at the dramatic, surging pace that we have witnessed in the last four years.

Thompson Complex Expanding

A substantial portion of our increased production in the years ahead will come from our Thompson complex. Thompson today is a modern city with a population of 11,700. Its modern plants, engineered to safeguard against air and water pollution, represent an investment of over \$200,000,000. Many millions more have been invested by individuals, other companies and the Federal and Provincial governments. Thompson has become the fourth largest city in Manitoba and is increasingly the focal point of the development of the Nelson River area of northern Manitoba.

At the present time, Thompson produces about 110 million pounds of refined nickel annually. It was originally scheduled to produce 75 million pounds annually. By the end of 1969 the expanded Thompson complex, including, in addition to the original Thompson mine, the new Soab and Birchtree mines (both of which will be approaching operation by the end of this year) and the Pipe mine, will be producing approximately 170 million pounds of nickel annually.

By that time our plans call for investing over \$100,000,000 more in mines and facilities in the Thompson area, and the population of the town will be 6,000 greater than today. Our annual payroll will be about \$20,000,000 greater, and exports of the Thompson complex's products will be contributing well over \$100,000,000 annually to Canada's balance of payments.

No Inco Ghost Towns

It is worth noting that Thompson did not exist when we convened here for our Annual Meeting ten years ago. That fact is a sharp reminder to all of us of the vital role a company plays in the economic and social spheres through the development of resources. Economic and physical growth has been great, of course, in the Sud-

bury area. But because it has been an addition to an already large complex, it is less obvious and less dramatic than in Thompson. Still less visible in the Sudbury District are the great strides and risks taken in the face of relentless depletion of ores to preserve production levels and, where possible, to increase production levels, with resultant benefits to the community as well as to ourselves. We have not in the past created ghost towns anywhere, and we have no intention of doing so in the future. We are constantly at work investing money and taking risks to find and prove up new reserves so that we can continue to sustain on a long-term basis the communities that have grown into being around our operations.

Encouraging Mining Ventures

The need is for more Thompsons — and sooner, not later. Where and how they will grow will be determined by two factors. First, of course, the ore bodies must be discovered — Thompson was born from ten years of exploration in the area. But secondly, and just as importantly, government policies, present and prospective, must encourage their discovery and development. For example, we are encouraged to look hard at low-grade deposits in Minnesota because United States Federal tax legislation, like that in Canada, recognizes the highly different conditions affecting the mining industry, and because the State government and citizens are working to evolve a tax program that will help make the development of these ores possible.

Progress in Guatemala

I have just returned from Guatemala. I am pleased to report that there, too, the government, determined to speed the development of the nation, sees clearly the values to the country and to its citizens that will flow from a large nickel-producing operation. There, as here, nickel production can make a significant contribution, not by its consumption at home, but by the direct and indirect employment and the stimulation to the domestic economy that will result from producing a product to serve expanding world markets.

I am happy to report that much progress has been made in resolving important issues in Guatemala. A

mining code has been enacted, comprehensive mining regulations have been issued and we have concluded arrangements permitting the construction of port facilities at the Port of Matias de Galvez. I am optimistic after my talks with senior government officials in Guatemala that the few remaining problems will be quickly resolved and soon we will be in a position to proceed with the building there of a large mining and processing project. It would represent initially an investment of over \$100,000,000 and an annual production of fully 50 million pounds of nickel.

Markets for Canada

International Nickel was formed to develop a great Canadian resource. In so doing, it has, we believe, made a very real contribution to Canadian life — to Canadian growth. This could not have been done without foreign markets; without Canadian and foreign investors, from the United States, Europe and elsewhere; and above all, without stable and long-term Canadian governmental policies that encouraged the search for ores and their subsequent development.

Ours is an international company chartered and based in Canada. The bulk of our payroll, taxes and investment, however, is in Canada. The Company operates large, integrated mining, processing and research facilities in Canada. Canadians have more money invested in our Company than in any other Canadian company except Canada's largest public utility. It exports nearly 95 per cent of its nickel and large amounts of other metals, and thus makes a very substantial contribution to Canada's balance of payments. The Company's large exports have been to a very considerable degree the product of planned efforts over the years to develop markets for nickel throughout the world. We also have important operations in many other countries, including processing plants, rolling mills, and very extensive market development and metallurgical research activities, which are crucial in the creation and expansion of markets for nickel.

Contributions to Canadian Life

While I see ahead the development of important non-Canadian ore bodies by International Nickel and other producers, Canadian nickel production is capable of

continuing to grow and in so doing, will continue to make its strong economic and human contributions to Canadian life; and the operations in the other countries also will, of course, contribute not only to the progress of the particular countries and areas outside of Canada, but to the Company's growth and earnings and thus also make their contributions to Canada.

Often there is a real contribution that cannot be measured in economic terms. For instance, in addition to our direct participation in Expo 67, we take some pride in what we have been able to do through our subsidiaries in promoting Expo. We have used our advertising time and space in Europe and the United States to tell the world of Expo 67. At least some of the visitors to Montreal will be there as a result of these efforts, and I might add, from what I have seen, they will not be disappointed when they get there. This is Canada's Centennial Year, and we, like other companies, have participated in special programs in the cities where we or our subsidiaries have offices and facilities. One very special Centennial project of ours is a series of scholarships to young Canadian artists. These young Canadians will perform with established artists on three, one-hour color television shows on the Canadian Broadcasting Corporation. They are talented performers, whom I have had the pleasure of meeting.

Carter Commission Recommendations

I would not want in an address to shareholders to fail to mention the recently released Report of the Royal Commission on Taxation — more commonly known as the Carter Commission Report. The Report contains recommendations to the Canadian Government concerning tax changes proposed to be made by it and by the Provinces. The recommendations are most extensive and interlocking. If enacted, they would result in a very revolutionary restructuring of Canadian taxation policies. Any such restructuring obviously would hold most significant and far-reaching implications for all Canadians and for Canadian companies and their shareholders. While I do not wish at this stage to discuss them in depth, we are organizing ourselves to be in a position in the future to give detailed and responsible comments concerning them.

It is enough to say now that I believe that our studies

of the Commission's recommendations will lead us to conclude that, if enacted, they would seriously retard industrial growth in Canada, and most particularly, they would retard the mining industry's ability to continue in the future to make as substantial a contribution as in the past to Canada's development, growth, and ability to provide a progressively better life for its citizens.

Governmental Policies and Industrial Growth

The soundness of government fiscal and taxation policies, and their stability as a foundation for long-term plans and investments, do have a very real bearing on whether, where, and when mining projects are started, maintained or expanded. Where ore bodies do not exist, no amount of encouragement by governments can bring them into being. Conversely, however, the existence of ore in the ground does not mean that it will be found. And if it is discovered, it does not necessarily follow that it will be developed and thus create jobs, payrolls, homes — a whole new industry, and with it secondary industries. And whatever is discovered will inevitably be exhausted and must hopefully be replaced by timely new discoveries.

The function of International Nickel is to provide metals to meet man's needs. In so doing, we make a direct and valuable contribution — and in the process, many indirect but equally valuable contributions. But neither we nor any business operate in a vacuum — alone — or independently of society. It controls us.

How well we perform our function — how large our contribution — rests not on our abilities alone. Governmental policy does have very much to do with how much we do, how fast we grow, where we grow — how great our contribution will be. It is, therefore, vitally important that the policies of governments towards business be based on an objective appraisal of the effects the policies will have on business decisions and actions. And it is important that changes in policies be such that they do not undermine the foundations on which business expansion and growth have been predicated. Abrupt or drastic changes in such policies can slow or reverse existing business growth and expansion, and additionally, they can bring into question the future stability of government policies. The reasonable expectation of such stability is critical in undertaking commitments in securing long-term capital, and in assuming the risks which underlie business expansion and growth. Without such growth, business cannot make its maximum contribution to society.

Business is not the only force which contributes to society, but I know that it has made substantial contributions in the past. To me, it is certain that given a reliable and reasonably stable climate of encouragement, business will continue, as it must, to make such contributions. To me, it is certain also that our shareholders, along with others who constitute our Company, share your management's sense of pride in the past contributions of International Nickel and share also in the determination that the Company continue to be successful and profitable. Only then will it be in a position to make its greatest contribution to society.

*The following Address was delivered by
Henry S. Wingate, Chairman and Chief
Officer of the Company, at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 17, 1968:*

Since we were here together a year ago, your management has dealt and continues to deal with a most unusual number of situations. The number is impressive of itself, but the variety and scope even more so. Let me list a few:

—We have moved ahead rapidly in expanding our Canadian production facilities. We plan to spend in Canada \$160,000,000 on them this year—and about the same in 1969.

—We have gone into debt for the first time in 32 years and have raised \$150,000,000 by the successful sale of debentures.

—We have researched and made public a whole new family of superplastic alloys. Despite the current tightness of supply, we continue without pause to do the basic work which will allow us to develop future expanded markets for nickel.

—After competing with a number of companies from different countries, an understanding was reached with the Indonesian Government awarding to us the right to negotiate a contract to investigate and if possible to develop the nickel deposits of Sulawesi in Indonesia.

—We have read, and comprehended, a most sweeping proposal, announced shortly before our last meeting, for the almost complete redirection of Canada's tax system, and we have, I believe, produced and submitted a most comprehensive, pragmatic and constructive commentary on it.

—We have formed and made a start in staffing a new organization of our own in France to pursue our interests in the proposed new French-Canadian company to develop New Caledonia's nickel ores. Drilling work on the island in behalf of that company is underway.

—We have experienced the devaluation of the pound sterling and responded to all the pricing and monetary ramifications it has brought about. The Company suffered no losses as a result of the devaluation.

—We have started work on modernization of our precious metals refinery near London.

—We have had a highly successful year of operations at the new modernized carbonyl line at the Clydach, Wales, nickel refinery.

—We have brought forward our development of a new mine in Shebandowan, Ontario, to the point where we are prepared today to announce publicly our plans to put it into operation.

—We have worked hard to minimize hardships to our customers by allocating our available nickel as fairly as we know how. But this is a palliative at best. The only real answer lies in having enough nickel to meet all the requirements of all our customers—and this we expect to do.

—We have had teams working with governments or official bodies in many places, including: Perth, Australia; Sudbury; Guatemala City; Ottawa; Winnipeg; Hereford, England; Paris; Toronto; Washington; Burnaugh, Kentucky; London; Ely, Minnesota and elsewhere. Our goal in all of these efforts with government bodies is to find ways to conduct our business effectively and profitably, and at the same time, to be a contributing and welcome factor wherever we operate.

—We have authorized and started to build new \$30,000,000 facilities for vacuum induction melting and hot extrusion of tubing at our Burnaugh, Kentucky, plant. We first launched this special-purpose production plant in 1964.

—We have made operative two new additions to our process research capability—a new laboratory at Clydach, Wales, and a process research station at Port Colborne, Ontario.

New Situations and New Approaches

Of course, there is nothing basically new in these types of situations. We have negotiated with governments and

official bodies before. We have expanded our facilities before. We have long developed new alloys and done many of the activities I have outlined.

What is new is the pace, volume and variety. The impetus behind them is, as I said in the Annual Report, "rising demand, rising production—including production outside of Canada—the utilization of lower-grade ores, the increasing importance of extractive metallurgical techniques and the need for very large capital investments." None of these are sudden or new factors. They are trends that have been mounting and that will continue in the future.

But their impact is very real, and it is different—not just an increasing scale over what we have done before. The major new factor is the coming of production outside of Canada. We have long been a multinational marketing organization; we will soon be a multinational production organization. This will call for new organizational approaches rather than just an enlargement of the old. Our goal remains the same—to extract metal from the earth and turn it into forms that fill man's needs; but the new problems and the means of solution in organizational terms require new approaches. We are actively evolving these with key employees throughout the organization.

We are accelerating the work we are already doing to expand and use more efficiently our managerial talents. This means moving people to positions of increased and better defined responsibilities, and in some cases, attracting talent from outside the organization. But the need is not only for more, but for an increased variety of talents, and increasingly for organizational relationships that will allow these talents to be effectively and directly brought to bear on the various situations with which we must deal. We are evolving—and will continue to evolve—these relationships so that the very real talents that are in our organization today can be utilized to their fullest, and so that we can maintain effective policy control without stifling initiative and drive. Implicit in such efforts must be a widely held understanding of Company objectives to act as a guide to decision making and for actions in the many different fields and localities in which we operate.

Financing for Expansion

Now, if I may, I would like to comment specifically on a few of the items I have mentioned—and on some I have not. Firstly, our outside financing. This financing was necessitated by our larger than ever expansion program in Canada and the United States, but primarily in Canada. Our capital expenditures have increased each year for the last five years. In 1967, they were \$146,000,000, and in 1968 and 1969 together they could be on the order of \$400,000,000. In the past we have financed our capital expenditures out of internally generated funds, and at the same time, paid dividends to shareholders averaging, in recent years, over 60 per cent of our net earnings. These internal funds were not sufficient to meet our capital requirements, and thus the outside financing. Because of the highly uncertain world and U.S. monetary situation, the debentures were priced to yield 6.85 per cent, which is historically a high yield, but I am glad to say they sold well and rapidly.

If, as confidently expected, we continue large capital expenditures in the future, we must anticipate doing further financing. Its nature and timing will depend on how our requirements develop and on our assessment of the available resources of the world's financial markets in the future.

Growing Production Capability

Last year I outlined, in what I said here, the Company's strong contribution to Canada's economy. This contribution will continue, for while it is clear that in the future we will have production outside of Canada, it is also abundantly clear that Canadian ores will be the base of our production for many, many years to come. Our current investment in Canadian facilities is designed to sustain existing production and increase our productive capability, so that in the latter part of 1971 we will be able to deliver from our Canadian facilities at a rate in excess of 600,000,000 pounds of nickel per year. It involves nine new mines and related surface facilities and will represent an investment in Canada alone this year and next of more than \$300,000,000. This new investment is one measure of the increase in our contribution to Canada's economy.

The growth in our contribution, of course, goes be-

yond the new capital investment. It will mean increased employment, greater activities for all the many supporting secondary and service industries, and more taxes, as well as a larger contribution to Canada's balance of payments as production and export shipments of our products increase. Our ability, based on our record and our prospects of financial strength, to raise in the U.S. market the needed capital, is an indispensable cornerstone in our project to expand our Canadian facilities and thus to do our part in the further strengthening of the economy of Canada.

We are involved in exploring or developing properties in Australia, the British Solomon Islands, Guatemala, Indonesia, Minnesota and other parts of the world. While we are engaged in this far-flung, worldwide work, it is perhaps possible to lose perspective regarding the exploration we are doing within Canada. Although our exploration expenditures outside Canada were the largest in our history, and some 25 per cent of the total, our exploration in Canada was very large—in fact, comparable to any previous year.

New Mine at Shebandowan

A new addition to our expansion program is our plan to open a mine in Shebandowan, Ontario. This new mine will represent a total investment of some \$31,000,000 and is the result of \$4,350,000 in exploration work. The ore body lies partially under the southwest corner of Lower Shebandowan Lake. Drilling has so far delineated a medium-size ore deposit containing both copper and nickel, and comparable in grade to that which we are now mining at our Sudbury operations. Drilling operations are continuing to extend the indicated potential reserves. We will know more about them when we have extended our drilling downward from the 1,000-foot level of the present shaft.

We will very shortly commence sinking a production shaft to the depth of about 2,000 feet on the south shore of the lake. This shaft will be located about one mile from the present exploration shaft. Our plans call for a mill, close to the mine, from which dried concentrates will be hauled by truck some 10 miles to the rail point of Shebandowan and then shipped to the Sudbury area for processing. We estimate that three years will be required to sink the production shaft to the necessary

depth and to construct the mill. At the end of that time, we would expect full operation involving some 400 to 500 employees. During the construction period some 300 men will be employed by the construction companies involved.

It is possible that we may have to dam a small portion of the lake. We have been in touch with officials in the Ontario Water Resources Commission and the Ontario Department of Lands and Forests about our plans, and will periodically keep those involved in the area informed. In fact, at this very moment, two of our people are meeting with a group of officials and prominent people of the area to discuss our plans with them.

Tax Incentives and Economic Growth

Inherent in these expansion plans—indeed in all the development of our properties over the years—have been the stable and predictable tax incentives that Canada has for many years provided for mining companies. These have been a vital element in the growth of Canada's extractive industries and in their unusual contribution to Canada's economic growth. They continue to be so.

Major elements of the incentives have been brought under question by the Carter Commission's proposals. Since I talked with you last, we have not only read and digested the Carter Report, a considerable feat, I might add (in total some 2,575 pages, plus the pertinent background studies), but have submitted an extensive brief commenting on it. To prepare this brief we put together a team representing many talents and including a number of distinguished consultants. This examination led us to question the basic philosophy of the report in relation to Canada's needs. More specifically, we found ourselves in strong disagreement with the Commission's assumptions regarding the mining industry and the results that it predicted would flow from the proposals it made affecting the industry. We feel its proposals to eliminate completely the long-standing incentives for the mining industry would be enormously damaging, not only to the industry, but to Canada's economic growth, and in the long run would result in less, not increased, tax revenues from the industry.

We are most hopeful that our suggestions and com-

ments are being heeded and have proved useful to the government and that the tax provisions we will be operating under in the future will continue to encourage the type of development and expansion we have seen in the past, and which is well illustrated by our present Canadian expansion programs. The relevance of taxation in any country is especially critical today when companies such as ours are obliged to resort to foreign financing to pursue their hopes for expansion, and are exploring and developing deposits in many parts of the world, and, therefore, must weigh possible alternative investments.

In August of last year the Ontario Committee on Taxation published its report. Early this year we submitted our comments on it. Our interest is obvious, for we pay approximately 60 per cent of the mining taxes in the Province. Overall, we found many of the Committee's proposals practical and imaginative. However, we found ourselves in disagreement with some of its recommendations, particularly its proposed taxation of the mining industry. In our submission we suggested certain alternative proposals—particularly a proposal to subject surface processing facilities to municipal property taxes. Heretofore most of these facilities have been exempt. This proposal of ours, designed to assist the municipalities in which we operate, has understandably attracted considerable attention and interest.

In all these taxation matters—and they are not confined to Canada—I would stress that we do not oppose change as such, nor is it our purpose to avoid paying our fair share of the costs of government. What we strive for is recognition that taxation programs affecting the mining industry must be formulated around the realities of the industry—particularly the unique risks involved in exploration and the long-range and very large capital investments that must be made. Because of the plain fact that the extraction industry can and does make highly important contributions as a stimulator of the economic growth of the area or the country in which it operates, our belief is that taxation programs should consciously be shaped to encourage the industry's growth. Such a

tax policy will not only produce wide benefits in many direct and indirect ways, but will also generate tax revenues for the areas and the countries involved far larger than under a policy not shaped to stimulate growth.

Projects Outside of Canada

The past few months were highly significant in terms of prospective longer-range production programs outside of Canada. The understandings reached for exploration and, to the extent possible, the development in New Caledonia and Indonesia were important initial steps toward major increases in the world's supply of nickel. I can add that significant progress, and much of it since we gave notice of today's meeting, was also made in our arrangements with the Guatemalan Government for the construction of mining and transformation facilities capable of having Guatemala enter the ranks of major nickel producers. Work proceeded also in the hope of our being able to develop our Minnesota copper-nickel leases. While a great deal remains to be done on each of these projects, and the prospects for no one of these can be predicted with certainty, we are determined that production from one or more of these will be making important contributions to the world's nickel supply in the first half of the 1970's.

Our near-term expansion of production capability based on our Canadian properties, and our longer-term expansion based on new production facilities outside of Canada and within its borders, mean that we will be in the position in the future of being able to meet our customers' orders for nickel. We are today producing more nickel than ever before, and our production will rise further this year, particularly in the second half of the year.

While we avoid making forward earnings predictions, it is a fact that we expect increases in our nickel production this year. This should be a helpful force in the efforts of our entire organization to achieve for 1968 a higher record of earnings than in 1967.

*The following Address was delivered by
Henry S. Wingate, Chairman and Chief
Officer of the Company, at the Annual
Meeting of the Company, held at the
Royal York Hotel, Toronto, April 23, 1969:*

My intention today is to speak only briefly on immediate operations and results, and then to devote most of my remarks to broad subjects of long-range importance to your Company and the mining industry.

I have comments on four matters that have occurred or require updating since the publication of the Annual Report:

First, the agreement formally establishing Compagnie Francaise Industrielle et Miniere du Pacifique, known as "Cofimpac," was signed on March 14. This is the formal organizational step in the establishment of a company in which we will provide and have 40 per cent of the equity and be responsible for 70 per cent of the debt capital. The balance will belong to and be the responsibility of French private and governmental interests. International Nickel is to provide the technical direction of this company and is to be entitled to 50 per cent of its profits and be required to market 50 per cent of its product. Over the next 12 to 18 months Cofimpac will conduct a feasibility study with the goal of establishing facilities capable of producing up to 100,000,000 pounds of nickel annually from the hitherto untapped laterite ores of New Caledonia.

This is a most significant project, not only for us, but for France, New Caledonia, and nickel consumers. It is the consequence of more than 10 years of effort to find a basis for our bringing our abilities to bear for the development of these laterite deposits. It represents a new form of partnership for us, but we think that the results of the feasibility study will be positive and that a sound foundation has been laid for a new large nickel-producing company.

Secondly, I wish to announce that after careful consideration starting shortly after the last Annual Meeting, we have decided to supplement the pension payments of our pensioners in Canada and the United States who retired in 1964 or before. This represents special assistance to some 2,000 ex-employees and widows of pensioners. The percentage of increase for each pension will vary, graduating progressively from 4 per cent for 1964 pensioners to 25 per cent for pre-1951 pensioners. Somewhat similar adjustments to increase the purchasing power of pensions were made for pensioners in the United Kingdom in 1965. The last such adjustments for North America were made in 1955.

Thirdly, a brief report on our current labour negotiations in Ontario. As you know from the Annual Report, we suggested and the union agreed to beginning bargaining sessions nearly a month earlier than required. As a result, bargaining began on March 18. The contract involved is for the 17,200 hourly-paid employees at the Company's mining and refining operations in the Sudbury District and Port Colborne. The present contract expires July 10. At this stage, I can say that meetings are being held regularly—in fact, one is in session today at the President Hotel in Sudbury—and the discussions have been conducted with mutual respect and in a favorable atmosphere.

Fourthly, just a brief comment on the nickel supply-and-demand situation as we now see it. It is highly unlikely that supply and demand will come into balance in the next 12 months.

Assuming no production problems related to our current labour negotiations, we expect our own deliveries in 1969 to be some five per cent higher than last year's. In 1969, all nickel producers will probably put into the market from 50,000,000 to 60,000,000 pounds more than they did in 1968. We can expect to see somewhat higher yearly increases in 1970, 1971 and 1972.

Favorable Government Policy Essential

And now, if I may, I would like to discuss with you the longer-range matters which I mentioned as being of importance. I sense that in this world of instant communications and of rapidly changing points of view, many of us in the mining industry perhaps have proceeded too long on certain assumptions that were becoming invalid. We have been inclined to assume as a matter of course that our special problems—as well as our special contributions to the common good—are understood and appreciated by the general public and by its representatives in government. Were we to continue to take too much for granted, I am afraid we could risk losing the broad public support that has been the basis for government policies toward our industry—policies that must be maintained if the mining industry is to continue to make its very significant contributions to Canadian society.

The mining industry in Canada has for many years lived and prospered and made its forward plans under certain tax provisions designed to encourage exploration and to recognize the large capital requirements of the industry and the long time period between discovery and production. This nation has provided this economic climate because it has recognized the unusual cause-and-effect relationship that exists between the value of minerals produced and the value of the total output of the nation—the relationship between mining expansion and growth and the high Canadian standard of living. Incidentally, may I say that the mining industry is not the only one which government policy purposely encourages. Agricultural subsidies and tariff protection for many other industries are examples of purposeful government policy to encourage a given segment of the economy for the common national good.

Mining Industry Benefits Canada

The relationship between mining growth and a high standard of living is due to the unique historic role which the industry has played. It is the far-reaching, complex role of an explorer and developer of the wilderness, an employer of manpower in large numbers, an investor in facilities and equipment, a technological innovator, an industry heavily dependent on and committed to penetrating foreign markets, a large and dependable earner of foreign exchange, and a potent generator of secondary domestic industries and services. In short, it is a fact beyond argument that through the years the mining industry has been the focus of the economic development in this country.

As the distinguished Canadian-born economist, Neil H. Jacoby, observed in a recent monograph, the prevailing view among contemporary economic theorists is that "economic growth through the development of 'leading industries' by private enterprise and government is the optimum route to overall economic growth by countries in the Western world."

Dr. Jacoby went on to say that the vast outlays which have been made by minerals firms in Canada through the years, in exploration and development, have in turn induced "further outlays in refining, smelting, pipelines, railroads, water transport, construction, and secondary and tertiary producer and consumer goods industries. Mineral discoveries have caused dozens of new cities and towns to spring up in the Canadian northlands."

Thompson's Contributions

Let me illustrate Dr. Jacoby's findings in concrete terms. In 1956 we pushed the button, so to speak, on what is now Thompson—today the third largest community in Manitoba, a modern city and still growing—18,000 people and will in the not-too-distant future be 30,000. Here truly is an example of opening the North. And if one thinks the benefits are confined to that area, let me give you a few examples of orders that our Thompson project placed on suppliers throughout Canada. You will immediately visualize what these mean in terms of jobs, investment, and the resultant taxes paid by firms and individuals.

Last year, for instance, our Thompson project placed orders

on

*Dominion Bridge in Winnipeg for some \$4,000,000
for structural steel,*

on

*Hawker Siddeley in Sydney, Nova Scotia for over
\$1,500,000 for ore cars,*

on

*Atco Industries in Calgary, Alberta for a half million
dollars' worth of bunkhouse trailers,*

on

*Algoma Steel at Sault Sainte Marie, Ontario for grind-
ing rods, reinforcing steel and steel rails for some
\$670,000,*

on

*MLW-Worthington in Montreal for \$650,000 for rail-
way locomotives.*

I could go on, I suppose, for an hour listing our Thompson expenditures across the nation for supplies and equipment of all types, which last year totaled almost \$100,000,000.

And in the process, Thompson alone produced about \$90,000,000 worth of exports and in so doing, it alone made possible the import of all the citrus fruits enjoyed in Canada, whether they be fresh, canned or concentrated—or alternatively, if you will, it alone made possible nearly enough foreign exchange to allow the import of all the tea and coffee drunk in Canada.

The point I want to make is simple. Thompson might not have yet or ever occurred—it might never have been discovered. It took 10 frustrating years and \$10,000,000 to find an ore body. And remember, no one knew it existed. But even assuming discovery, could it have been developed then? The area was remote—facilities nonexistent—nickel was in good supply—new large Cuban operations were about to come into being, with assurance of favored access to the United States market.

The decision to move ahead at that time could have gone the other way. I can personally attest to this, for I actively participated in it and remember how close we came to not going ahead when we did. Clearly, under the conditions then existing, there would have been no justification for our moving ahead if we

were not working in a country with a long history of stability and long-standing taxation policies which encouraged such a move. Their predictability, as well as their form, was an essential element.

Tax Policies of Concern

I would be less than candid if I did not say that today the uncertainty of future tax policies is a very real source of concern to all of us in the mining industry. Speaking as Chairman of your Company, let me say we have and will have close, hard decisions to make on exploration and on the development of new properties. These decisions will be seriously affected by any fundamental change in Canada's tax policies affecting the mining industry—the industry for which Canada is renowned throughout the world.

It is disturbing that radical changes in tax policy affecting our industry are advocated by some, but the lesson to us is that somehow we have not been wholly successful in accomplishing an understanding by others of the realities of our industry. There is no easy answer to this, but I do suggest we must give increased attention to it. My own belief is that although almost everyone labours under some bias, dispassionate and well-reasoned analysis, supported by hard information, generally will be received by, and prevail with, fair-minded people in the government, in the press, in the academic community, and among the great public at large.

Mining Involves Unique Risks

We must somehow become more successful in explaining the fact that mining ventures involve unique risks, whether undertaken by an established company or by one seeking its first strike. We must work harder to gain public understanding of the immense capital costs required to realize the potential which an ore body may represent. And we must strive to have the public understand the implications of the very long time period between discovery and production in a mining project.

These three aspects—special risks, high capital costs, and long lead time—together with the demonstrated contribution this lead industry has made for the progress of Canada, are the essential underpinnings for public understanding of the mining industry.

We must be sure that those whose decisions vitally affect the mining industry make their decisions based on these realities of the industry. Also taken into consideration should be the fact that competition among different mining locations around the world is of growing intensity, and relative cost factors, including tax policies, together with governmental cooperation, generally will significantly affect the choice of one location compared to others. Illustrative of this is a statement by the Ontario Minister of Mines, The Honourable Allan F. Lawrence, who recently told the legislature that development of an iron ore property in the Nakina area, 150 miles northeast of Port Arthur, had been delayed by difficulties in arranging financing "due to certain doubts that exist in the minds of people in other countries respecting Canadian tax policy and even provincial policy, respecting resources in this province."

It is particularly difficult for a financially successful company like International Nickel to be convincing in its efforts to explain why its prospects may be damaged by changes in public policy. It is difficult for others to comprehend that today's financial results reflect in great part discoveries and risks taken as long as 20 to 30 years ago, and that properties being investigated and facilities being constructed today must form the foundation for achievements years from now.

Necessity of Developing New Techniques

The challenge presented today by declining Canadian nickel ore grades, which require development of superior processing techniques if we are to remain competitive, is another aspect of the industry that is not easily understood by persons without experience in the mining industry. Perhaps I am overly sensitive, but I frequently find myself irritated by the lack of reality shown by those who fail to understand the contribution that mining companies make in turning previously useless earth into ore bodies. By significant improvements in mining methods, highly technical processing breakthroughs and creative marketing, the industry has turned what was 10 years ago useless rock into a national resource.

Our industry needs to pay constant attention not only to a gap in effective communications and to improving the understanding of those who control the conditions which affect us, but also to keeping our policies in harmony with the public interest.

It is one thing, for example, to resist tax proposals which would sharply alter cost structures, reduce returns on investment and restrict access to capital markets or reconvert marginal ores into useless material, thus adversely affecting the industry's preparedness and capacity to develop new mines and future markets. It is quite another to respond always negatively when asked to bear a share of the growing costs of public services.

Mining Industry's Responsibilities

The mining industry must appropriately recognize its responsibilities to the communities in which it operates. That is why we responded to the recent discussion of ways to raise additional funds for local services in Ontario by suggesting that local authorities be granted the power to tax surface facilities of mining companies. We feel that this departure from long-established practice, involving a substantial increase in our own tax obligations, is an equitable way of providing needed governmental revenues—without weakening the basic structure of the industry, as might have resulted from certain other proposals that had been suggested.

Sound policy on the part of the mining industry must rest also with recognition that custody of a natural resource, even though largely created by your own innovations, involves a kind of public trust. Certainly, it is we who provide the know-how, the capital and the willingness to risk in order to make these resources of value, but the fact remains that the minerals, for whatever they may be worth now or in the future, are not the sole property of the mining industry—they belong in part to a nation, a people, and in a larger sense, to the world.

Utilization of Mineral Resources

Mineral resources in high concentration forms are limited. This means they must be utilized most professionally and intelligently. We must continue to press forward to find ways to utilize all of them. Our objective must be to throw away nothing of value—to allow nothing to be bypassed in our mining, to end up in the tailings pit, to escape up the chimney or onto the slag pile. Our methods must cold shoulder the quick, short-term profit if it means waste, and we must reject the quick-in, quick-out ghost town approach. This at times has done untold damage to our industry, and this is why wherever your Company mines, our operations are geared to the long term and, as much as present technology allows, to the extraction of all values from the ore.

Concern With Environmental Pollution

And we must do our job and still meet what society expects of us. Environmental pollution is an example. Mining companies have been accused of destroying the land, of poisoning the water, of spewing fumes into the air. While those of us in the industry can correctly point out that the effects of environmental pollution have not been fully understood, that there are numerous causes of pollution beyond industry, that public expectations change, and that technology has not always been and may not be available to solve the problem, I think we must also concede that improvement of the practices of the mining industry has not always been sufficiently rapid.

Your Company, recognizing the depressing effects of environmental pollution, is determined to have a good record in the area of pollution abatement, and we have been giving this matter high priority.

For the past decade, for example, our Agricultural Department has been experimenting with and successfully applying methods for reclaiming sterile mine tailings through use of techniques for growing plants without soil. As a result, today hundreds of acres of tailings area have been converted to pasture land, and those who live in the vicinity are no longer plagued with dust storms.

We have adopted techniques to prevent pollutants from our mines from entering nearby lakes and streams, and at Sudbury we are now utilizing a recirculation system which conserves more water than the city itself annually consumes.

We have recently announced plans to build a 1,250-foot chimney, tallest in the world and approximately the same height as the Empire State Building in New York, to serve our Copper Cliff smelter complex. The chimney, by highly effective dispersion, will assure that air in the Sudbury area will be cleaner than that of any other industrial community in Ontario.

And the world's mining industry must deal realistically with the natural desire of each nation to encourage the optimum processing and treatment within its own territory. What the optimum is, is not always a simple matter, for marketing and historical and overall economic factors must also be considered, if the end result is not to be counter to each nation's objectives. Over the years I am proud of our accomplishments in meeting Canada's natural desire to maximize the work performed here, and I would add that as we plan mining in other countries, we intend to respect their desire to maximize the processing and treatment in their own country.

Need for Young Talent

There are other areas we must attack. For example, it is a striking and depressing fact that at the present time in all of Canada there are only 155 young people enrolled in undergraduate mining courses in the nation's institutions of higher learning, of whom it is expected that only 39 will receive undergraduate degrees in mining engineering this year. And the nation's largest university has closed its undergraduate department of mining engineering because not enough students were interested to justify its continuance. This same most serious trend is occurring in the United States.

The starting place in seeking answers to this and other related problems facing us is objective self-inspection. Such self-inspection shows an industry which, justly or unjustly, is never-

theless thought of by many as not excelling in sensitivity to human beings and in awareness of the public interest, nor in modern technology or modern management methods. It also necessarily shows an industry which requires tough, hard work, often in remote locations.

This says to me that, yes, we must get across the story of what we in fact have done in the past and what we are now doing—and what we face ahead—but beyond that we increasingly must utilize all the modern skills of training and personnel management to develop and update individual abilities and to motivate each person so he can contribute effectively and rewardingly. We at International Nickel are initiating new and improved programs in the area of individual performance appraisal, management development and training to meet these needs.

We must also push, at maximum possible speed, programs to mechanize and automate our business. I might add that few—too few outside the business—are aware of how much of this has already been done or is under way.

It is increasingly important that we study carefully how to make our industry rewarding and attractive to the young, capable minds of today with special emphasis on the unique qualities of our business—its increasing demand for highly-qualified research and scientific talent, its worldwide scope, its operations

in remote places and its unique opportunity to contribute to a national economic growth.

I think we must also develop further our capacities and abilities in community and area advancement—our position is often unique as the sole or key industry in an area. We must keep ourselves equipped to do our part in creative community and area planning and development—and do so without creating debilitating dependence on “the Company.”

Our own long-term interests demand that we address ourselves to these many needs. As an industry, our opportunities are as great as any, and better than most, to contribute to the world's well-being. We can be the key factor in the economic growth in developed and underdeveloped countries—we can be a real force in creating wealth—we can make major contributions in creating jobs for human beings—jobs which they can perform with satisfaction and dignity. We have the opportunity to modernize the outlook of our industry, to better define and constantly improve its relationship with the community, with all the people who constitute the industry and with the times in which we operate. To do this—and to do it soundly—is in the interest of shareholders, employees, customers and the communities and nations in which we operate. Doing this is an imperative that all of us in International Nickel recognize and are determined to accomplish.

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