

UNIVERSITY OF MANITOBA

THE REACTION OF THE CANADIAN NON FERROUS MINING INDUSTRY TO COLLECTIVE
BARGAINING AT THE INTERNATIONAL NICKEL COMPANY OF CANADA,
SUDBURY, ONTARIO

BY

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ABSTRACT

The thesis has attempted to investigate the impact of Collective Bargaining at the International Nickel Company of Canada's Sudbury operations, upon the rest of the Canadian non-ferrous mining industry.

The Collective Agreements of fifty-eight mining companies were analyzed for wage structures and fringe benefits. Various data was obtained from D.B.S. publications such as employment levels within the industry, production and prices of output, and marketing structures. Supplementing this data we developed an economic setting for the industry in question and the trade union evolution therein.

Correlation coefficients were calculated for different variable combinations as well as logarithmic charts of certain data. We also refined the Cartter-Marshall Collective Bargaining Model to make it applicable to the industry.

The results of this study indicate that INCO imposes (willingly or otherwise) its collective bargaining posture upon the rest of the industry and that the time lag is in the order of one year or less. The mechanism of transfer was investigated in terms of user costs and the posture of the United Steelworkers of America was analyzed within the industry.

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CHAPTER I

INTRODUCTION

Economists are finding it increasingly difficult to explain the causes of economic growth. Growth within a nation is dependent on the resources of that nation and how they are utilized. A cursory review of Dominion Bureau of Statistics information illustrates the role that natural resources play in Canadian economic growth. Further investigation will set forth the full impact of the non-renewable natural resources industry upon the Canadian economy.¹

A major concern to any student of the Canadian mining industry should be the lack of in-depth studies in the area of the social sciences. As our study advanced this deficiency became still more apparent, but even more difficult was the rigidity of the industry itself in supplying even the most basic information, such as labour turnover rates, frequency of grievances and arbitrations, etc.

1.1 The Problem

Canada in the past few years has reentered the field of nationalism. Such an adventure will inevitably lead to an over-view of our non-renewable natural resources industry and will cause many to ask if the corporations therein are responsive to Canadian economic conditions.

¹Richard E. Caves and Richard H. Holton, The Canadian Economy, Prospect and Retrospect (Cambridge, Mass.: Harvard University Press, 1961), pp. 30-47. The authors discuss Harold A. Innis' "staple theory" and its critical position in the Canadian economy and how non-renewable resources in Canada are but an extension of this theory.

This writer has for some time wondered if collective bargaining within this industry was responsive to Canadian market conditions, or indeed, if it was possible for it to be so. This is the area of our study.

In order to advance our project we must first define that area of collective bargaining that causes us concern. Primarily we are interested in monetary gains achieved by the worker through collective bargaining. There is however considerable difference of opinion as to whether certain features of the agreement should be categorized as monetary gains or fringe benefits. In Canada, for example, there exists a universal pension plan to which the employer by law must contribute on behalf of his employees. Is this contribution by the employer a fringe benefit, a supplemental labour cost or part of the employees "wage-package"?

The mining industry as well as many other industries in Canada has historically taken "wages" as the main segment of its labour costs. The results of this type of reasoning have been the development of a group of ill-defined benefits within the collective agreement currently referred to as "fringe benefits." During the nineteenth century, it is recorded, some employers made purely voluntary "fringe benefit" payments to their employees; such payments could be and not infrequently were stopped at will. Such volunteerism has disappeared with the advent of collective bargaining. Fringe benefits are now a critical part of the bargaining process. Their cost to the employer has increased considerably during the past twenty-five years.² Thus our first problem is to

²Current estimates suggest that the cost of fringe benefits is in the order of 25 percent of the total wage package. See Employee Benefits, published biennially by the Chamber of Commerce of the United States, Washington (1968, p. 16).

define and isolate fringe benefits and their costs. It has been argued that fringe benefits should be viewed as a cost to the employer rather than as a remuneration to the employee.³

1.2 Fringe Benefits

Our first decision was to abandon (for now) the term fringe benefits as conventionally used and to introduce in its place the category "supplementary labour costs." Later we shall reintroduce the concept of fringe benefits but in a different context. Our problem then was to determine which of the supplementary labour costs were actually part of the worker's normal earnings and which were not.

Labour costs are generally of two main types:

- 1) Payments by the employer to the employee, i.e., wages, overtime and shift differential payments, bonus payments, holiday pay and other direct cash payments.
- 2) Payments by the employer on behalf of the employee, i.e., contributions to various welfare plans and such other services.⁴

As satisfactory as this definition may seem there are problems. Under type 1 there is present a non-earning element, i.e., holiday pay, that we may refer to as supplementary remuneration. One of our problems is to differentiate between this and normal earnings. Consider the following: straight time is included in earnings as payment for time worked; we should not include overtime or shift differential payment for no corresponding time was worked. In the matter of coffee breaks and holidays with pay, the employer is making payment yet no work is being performed.

³G. L. Reid, "The Concept of Fringe Benefits," The Scottish Journal of Political Economy (February 1962), p. 209.

⁴Ibid., p. 212.

1.3 Wages

Such problems as noted above make it most difficult to clearly define what constitutes wages. Before we can hope to understand the "wage problem" we must first understand the function of wages. They are an incentive designed to achieve certain results. These are:

- 1) To increase worker output
- 2) To cause the worker to stay where he is
- 3) To cause the worker to feel it is worthwhile to acquire and use new skills
- 4) To create an incentive for quality work
- 5) To instill in the worker the capacity to take and stay with unpleasant work.⁵

Within the Canadian non-ferrous mining industry there may be a rather reasonable consensus of opinion as to what constitutes "wages" but the lack of literature and comprehensive studies suggests that an understanding of the function of the wage rate is less than optimum. Most mine managers, when asked what they include in their wage bill, will because of the methodology of mining accounting practices include just about everything, even bunkhouse and cookhouse subsidies. Such practices thus make it most difficult to establish the "wage scale" prevailing in the segment of the industry under consideration because such a figure is in reality a "total labour cost per ton mined and milled" and offers little if any basis for selective consideration of such factors as social conditions, cultural activities, types of ore body, mining methods, etc. To observe that mining costs for company X (say

⁵D. J. Robertson, "The Present Complexity of Wage Payments," The Scottish Journal of Political Economy (February 1955), p. 10.

in the Yukon) are four dollars per ton more than those of company Y (say in the Timmins area) adds nothing to our knowledge except that there is a difference. A major cause of this type of problem is the difficulty of establishing what constitutes wages.

To achieve this we must analyze in detail what constitutes wages and/or supplementary labour costs. The wage bill consists of cash wages. Supplementary labour costs are labour costs other than cash wages: these include holiday pay, welfare payments, etc.

We thus have established for this study three main sections to the collective agreement. These are:

1) Cash Wages

Include direct wages, overtime shift premiums, incentive bonus payments.

2) Supplementary Labour Costs (previously called fringe benefits)

Consist of payments by the employer on behalf of the employee for various welfare systems such as medicare, government pension schemes, educational and apprenticeship training including absence with pay for training purposes, housing, cookhouse and bunkhouse subsidies, workmen's compensation, subsidization of work clothes, scholarships, recreational facilities, company sponsored co-operatives, ambulance services and statutory and annual holidays.

3) Fringe Benefits (now reintroduced)

Clauses in the collective agreement that are concerned with: management rights, technology clauses, discrimination clauses.⁶

⁶James Bates and G. L. Reid, "Supplementary Labour Costs and Their Effect on Wage Bills," The Three Banks Review (June 1962), p. 37.

1.4 Supplementary Labour Costs

Such a listing is not to be judged as all-inclusive or definitive. Dissent and problems of allocation do exist. For example: in the matter of overtime, several collective agreements now require that the opportunity be evenly divided among the workers. If a diligent union compels a firm to rigidly enforce such a clause and that firm has a rather constant amount of overtime in its production pattern to the extent that each worker can expect a rather specific amount of earnings from overtime each pay period, then are these earnings wages or a form of "built-in" supplementary labour costs?

Supplementary labour costs can be and are used to attract workers into the "labour-short" mining industry. Suggested labour turnover rates plus the demand for new labour within the industry implies that except in the larger more-urbanized mining centers this usage of supplementary labour costs as a recruitment cost is meeting with less than the desired success. Because of the lack of data and studies within the industry we are forced to indirect proof to validate such an observation; thus, a review of the Financial Post, Northern Miner Press and most of the large Canadian daily newspapers indicates a continual program of advertising to attract personnel to the industry. Almost every advertisement gives considerable emphasis to the presence of "fringe benefits," i.e., supplementary labour costs, and extolls the superiority of that firm in these matters.

These costs of recruitment must be allocated within the financial system of the firm. Historically such costs are assigned to overhead, but should they not be charged directly to supplementary labour costs?

Failure to attract employees to one's firm does give the union added scope from which to bargain.

The present data suggests that supplementary labour costs in Canadian industry represent approximately 25 percent of the total cost of labour.⁷ Unfortunately such data is not available for the mineral industry in Canada. Even recent studies by the Federal Department of Labour admit to the lack of concise figures on these costs and their implications within the bargaining framework.

1.5 Collective Bargaining in Canadian Mining

The hypothesis that is being advanced suggests that within the segment of the metal mining industry in Canada within our study there exists a "wage setting" corporation and that collective bargaining in this corporation is not optimally responsive to Canadian market conditions. The firms within our sample represent approximately 70 percent of all Canadian metallic output which we believe to be a valid sample base (see Chapter VI).

The industry as structured within our sample is dominated by three major corporations: The International Nickel Company of Canada (hereafter referred to as INCO), The Consolidated Mining and Smelting Company of Canada (hereafter referred to as COMINCO) and Noranda Mines Limited (hereafter referred to as the Noranda Group).

A survey of the collective agreements of some 58 mining firms in the non-ferrous mining industry in Canada suggests rather conclusively that

⁷See above, note 2. There was also a Canadian study in 1959 prepared by the Industrial Relations Counsellors Service Inc., Fringe Benefits Costs in Canada. A summation of these reports indicates that "fringe benefits" now exceed 25 percent of the total wage bill and in the period 1947 to 1967 have been increasing at a rate of approximately .69 percent of payroll, per year.

INCO is the wage leader (Chapter VII). We are not suggesting that all mining firms in Canada merely duplicate the collective agreements reached by INCO with its union, but we are advancing the theory that once INCO has obtained a collective agreement, this agreement becomes the standard upon which subsequent collective bargaining within the industry is conducted. Local factors do play an important part in any collective bargaining negotiations, but these are less critical than the "wage-package." Once the "wage-package" has been negotiated other matters fall quickly into place and this "wage-package," we suggest, is dominated directly and indirectly by the results of INCO's collective agreement.

1.6 Strikes

Further suggestions of the dominating position of INCO are observed in the vigorous manner in which bargaining is conducted at INCO. Strikes at COMINCO are most rare, within the Noranda Group they take place at specific operations and do not involve the entire Noranda Group working force, whereas a strike at INCO shuts down an entire mining, concentrating, smelter and refining operation situated at Sudbury, Port Colbourne or Thompson, Manitoba. No mining operation other than COMINCO has a physical plant structure such that a strike can effectively cause the corporation to cease to operate and, as noted, COMINCO is largely strike free.⁸ The data thus clearly suggests that INCO is the focal point of

⁸A review of Strikes and Lockouts in Canada, published annually by the Economics and Research Branch of the Canada Department of Labour, Ottawa, indicates that the Noranda Mining and Smelter complex at Noranda, Quebec was closed for extensive periods in 1947 and 1953, yet Noranda's corporate flexibility is such that these strikes did not close down the entire Noranda Group. COMINCO has been largely strike free. INCO in this period has suffered three major strikes (1958, 1966 and 1969), all of which effectively shut down its entire Ontario operations. Such is INCO's structure.

collective bargaining in the mining industry, that it can be effectively "shut tight" and that it has been subject to such militant action by its employees.

1.7 Market Structure

Further studies were conducted concerning INCO's market structure. The results of such studies further affirm INCO's dominance in Canadian mining. It is the only corporation in Canadian mining that sets world prices for its prime product, nickel.⁹ Neither COMINCO nor the Noranda Group has such a capacity.

Additional investigations indicate that 60 percent¹⁰ of Canada's mining production is exported and that nickel from the INCO complex deeply influences this export-oriented marketing network.¹¹ Its executive offices are located in New York and notwithstanding its world-wide common share distribution it is an American corporation oriented to internationalism.

Such a giant corporation must have its own unique way of reacting

⁹Hugh G. J. Aitken, "The Changing Structure of the Canadian Economy," in Hugh G. J. Aitken, and others, eds., The American Economic Impact on Canada (Durham: Duke University Press, 1959), pp. 15-21.

¹⁰Canada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 610. Canada supplies some 60 percent of the free world's nickel of which some 75 percent originates from the Sudbury area which is dominated by INCO with some 60,000 tons per day of concentrator capacity.

¹¹Financial Post Corporation Service re INCO:

| Production | Lbs. of Nickel | Lbs. of Copper |
|---------------------|----------------|----------------|
| 1968 (no strike) | 408,840,000 | 382,170,000 |
| 1969 (major strike) | 382,170,000 | 208,200,000 |

Present ore reserves indicate 11 million tons of copper-nickel combined. INCO's 1970 target is 600 million lbs. of nickel per year.

to Canadian economic conditions, especially when viewed in terms of its collective bargaining posture. Our studies suggest that INCO and the union it bargains with, i.e., the United Steelworkers of America (hereafter USW), are in a very unique position, the result of which is a collective agreement that is not responsive to Canadian business cycles. We are not suggesting that INCO is a poor corporate citizen or that the USW is an irresponsible union. We are suggesting that a host of factors and forces, many originating outside Canada, are present such as to result in a collective agreement not responsive to our domestic economic conditions.

1.8 Negotiation Problems

The incident of work stoppages, legal or illegal, was studied and again a series of conditions and events were noted that are unique to the Big Three and not common to the rest of the industry. The lengthy periods of negotiation at INCO, COMINCO and the Noranda Group suggest that the development of a collective agreement is more difficult and that once agreement is reached smaller operations, as indicated by far shorter periods of negotiations, tend to "fall in line."

Capital intensive industries, of which mining is a major one, seem to have less strikes but of a longer duration.¹² The mining industry's financial base is such that it has high fixed costs and low variable costs. If any reasonable settlement can be negotiated with the union the corporation accepts the addition to variable costs because

¹²Clark Kerr and Abraham Siegel, "The Interindustry Propensity to Strike--An International Comparison," in Arthur Kornhauser, Robert Dubin, and Arthur M. Ross, eds., Industrial Conflict (Toronto: McGraw-Hill, 1954), pp. 189-212.

of the prohibitive cost of a strike.¹³

Labour supply to the industry is not a critical factor, as seen in the increased productivity within the industry. Such large capital intensity makes any strike an expensive item to the firm, and INCO being a price setter can offset higher wages by a marginal increase in the price of nickel (see Chapter II, section 2.3). Such a capacity may or may not result in wages in harmony with the economy of our nation.

¹³John Kenneth Galbraith, The New Industrial State (New York: Signet Books, The New American Library Inc., 1968), passim Chapters XVI and XVII, and in particular pp. 205-207, discuss in detail the function of prices as viewed by the corporation.

CHAPTER II

THEORY AND METHODOLOGY

2.1 Introduction

Within Chapter II we will define the role of theory and also investigate the theory of price leadership. The impact of rates and levels of recovery and the role of uncertainty within the mining industry will also be investigated within a theoretical framework and finally, we shall develop a theoretical collective bargaining model applicable to the industry in question.

2.2 The Role of Theory

The function of economic theory is to provide a frame of reference from which to view pertinent and meaningful data and upon which to launch a logical hypothesis.

2.3 Price Leadership

Within the theoretical framework of this study our first undertaking will be to investigate the nature and significance of price leadership.¹ Markham establishes three types of price leadership:

- 1) the dominant firm
- 2) the barometric firm
- 3) an extreme form of type 2.²

¹Jesse W. Markham, "The Nature and Significance of Price Leadership," in Richard B. Heflebower and George W. Stocking, eds., A.E.A. Readings in Industrial Organization and Public Policy (Homewood, Ill.: Richard D. Irwin, Inc., 1958), pp. 176-189.

²Ibid., p. 177.

The most familiar type of price leadership is that of the dominant firm operating within a monopoly framework. In such an industry there is one large producer and a group of small ones, each of which regards his own demand schedule as perfectly elastic at the price set by the dominant firm, and thus they behave as perfect competitors. The dominant firm can set any price it desires, but it will seek to maximize profits by equating MC to MR as derived from market demand.³

Price leadership does not create greater price flexibility even though it will remove the kink in the oligopoly demand curve. However, the reasoning underlying the price leadership of the dominant firm differs very little from that of a price monopolist, and even the "pricing" of partial monopolists has rigidities.

The only cure for such monopoly pricing is to destroy the monopoly power if such is economically or politically feasible. Before such an action is taken the industry base must be investigated. Markham makes the somewhat sweeping statement that every major American industry has been initially dominated by a single firm but that such power has been diffused by industrial growth and the entry of new firms. Even if this does not take place one can question whether court exposure of a price leader will lead to its correction and/or removal.⁴ Yet in the case of INCO we can note a long and continual decline in its market share. Is this the start of the long road to where nickel will be priced in the same volatile manner as copper?

Within the barometric price leadership system some firm will state

³Ibid., p. 178.

⁴Ibid., pp. 180-181.

a price and the remainder of the industry will adhere to this price only because the price reflects the market conditions at that time. Not infrequently the price setter may not be the largest firm. For example in the pricing of copper, Phelps-Dodge the number three U.S. producer has been an active price setter yet at other times Kennecott, Anaconda and/or A.S. & R.^(a) have been the price setter, only because they reflected the market conditions as they prevailed.⁵

Such action suggests the presence of some form of collusion, but in reality price collusion is far less prevalent than overt selling arrangements. In conclusion Markham states:

For the most part, therefore, the barometric price leader appears to do little more than set prices that would be eventually set by the forces of competition.⁶

Finally, there are industries that operate under a price leadership structure more inimical to the public interest than the barometric type, i.e., the price leadership is of a nature that serves cartel systems because of the presence of laws forbidding overt collusion. This type of pricing system will operate in an industry with a few firms all of such size, i.e., large, as to realize the impact of their individual pricing policies upon the industry.⁷

Entry into this industry is very restricted in order to maintain price controls. Further, the firms within the industry all view each other's product as a substitute for their own product, the result of which is adherence to the pricing policy of the industry.

⁵Ibid., pp. 182-183.

(a) American Smelting and Refining

⁶Ibid., p. 184.

⁷Ibid., pp. 185-186.

The elasticity of demand must not greatly exceed unity, because if demand is elastic then closely competing goods can remove the benefits derived from price leadership. Further, if demand is highly elastic other firms will not follow the price leader for to do so would result in less total revenue, i.e., each firm could lower price, increase its output, and achieve greater levels of total revenue.⁸ The history of copper pricing is an excellent example of this, but such actions are very absent in the nickel industry.⁹

Finally, for this type of price leadership to operate it requires that the cost curves of the firms within the industry be very similar. It should also be noted that low cost firms will not accept the dictum of high cost firms and will if possible force the high cost firms to accept a pricing system based on low cost firms. Such is the nickel industry where the price of nickel is kept at a level inducive to high cost mining. If the price of nickel were raised then INCO's share of the industry would further decline, due to the entry of marginal producers, and likely its control over price would be in jeopardy.¹⁰

The major complaint against price leadership (other than the obvious) is the suspicion that such leadership is a shadow for more insidious pricing and trading tactics. We should also further note that prices are more flexible under barometric than dominant firm price leadership and that price flexibility increases as the number of firms in

⁸Ibid., p. 187.

⁹Ibid., p. 188.

¹⁰W. Main, The Canadian Nickel Industry: A Study in Market Control and Public Policy (Toronto: University of Toronto Press, 1955), p. 132.

the industry increases.¹¹

In the light of the foregoing we can conclude that the nickel industry is dominated by INCO operating as a monopoly. As the dominant firm it is the price setter with prices inflexible downwards. During the past ten years or so several new major firms have entered the industry and this has reflected itself in some price flexibility upwards. INCO's market action tends to be one of varying output rather than price. As noted by O. W. Main,

A study of the nickel industry is essentially a study of monopoly. With the exception of short periods of price cutting during episodes of economic warfare between existing producers and those attempting to break into the market, there has never been a free market for the metal, or a price determined by free market conditions of supply and demand. From the beginning, the industry has been dominated by one company (INCO), and agreement among the producers has been the rule rather than the exception.¹²

Pricing within the copper, lead and zinc industries is of the barometric type and there is virtually no price leadership. Cartels have operated within the copper industry but not within the past twenty-five years. These three industries tend towards monopolistic competition as defined by Chamberlin.¹³

Molybdenum pricing is of the dominant firm type and is performed by Climax Mining Corporation. The presence of American anti-trust legislation plus the continual lack of supply in the post-WW II period has resulted in continual price rises, but in recessionary periods Climax has

¹¹Markham, "Price Leadership," p. 180.

¹²Main, The Canadian Nickel Industry, p. 124.

¹³Edward Hastings Chamberlin, The Theory of Monopolistic Competition (Cambridge, Mass.: Harvard University Press, 1965), especially Chapter VI, "Selling Costs vs. Production Costs."

not raised price, whereas INCO has done so on at least three occasions, i.e., 1958, 1962 and 1963.

The uranium industry has been through a period of "feast and famine," and has always operated under government contract pricing. The rapid decline in the uranium markets during the early 1960's resulted in approximately a 50 percent decline in price by 1963.

We can thus, with reasonable validity, state that the Canadian metal mining industry within our sample operates as imperfect competition.

2.4 Rates and Levels of Recovery and Uncertainty

Most minerals, and especially staple industrial minerals such as copper, lead, zinc and nickel, are producer, not consumer goods and their usage is more a function of business conditions than of price. It is reasonable to assume perfect price elasticity for the large numbers of small mines producing the above metals, but such an assumption is not reasonable for the dominant producer(s).¹⁴ Markham observed this when he stated (as previously noted) that the small firms would behave as perfect competitors but the dominant firm would behave imperfectly.

Some of the effects of this imperfect competition should be noted.

- 1) The rate of recovery¹⁵ yielding the largest total profit will be where the difference between average total unit cost and price is greatest. This is not necessarily at

¹⁴Donald Carlisle, "The Economics of a Fund Resource with Particular Reference to Mining," American Economic Review, LIV (1954), 612.

¹⁵Ibid., pp. 596-598. Rate of recovery refers to the number of tons per unit of time to be extracted from the ore body whereas level of recovery refers to the percentage of the ore body that can be extracted. No ore body can be totally extracted due to the necessity for pillars, etc.

the least-cost combination.¹⁶ The rate of production may be more, by an amount that is a function of the AUTC and AR, or it may be indeterminate.

- 2) Or the rate of recovery could be at a level below $MC = MR$ but greater than the least cost level.¹⁷

Thus in mining (as in other industries) monopoly seems to promote lower rates of recovery and higher prices and profits.

Carlisle further states:

A common situation in metal mining is that of a few workable deposits controlled by a few producers selling a standardized product in an imperfect market; it appears reasonable to believe that metal mines tend to operate at rates of recovery above the least-cost combination at least in the short run, but for most mines the uncertainty of ore is a greater deterrent to operating at optimum levels than is the monopoly-price effect.¹⁸

Carlisle also observes that the level of recovery is rather immune to monopoly price effect. Only to the extent that an increase in the level of recovery will "supply" the market will prices be affected.

A change in price should affect both the level and rate of recovery, but in practice the effect is one-sided. The adjustment to mining lower

¹⁶Ibid., p. 600 (Figure 1).

¹⁷Ibid., pp. 613-615 and Figure 1, p. 600. Ideally the firm should operate at the minimum AUTC, however due to imperfect competition, i.e., price maintenance, they are willing to operate at a level of $P = MC$, where total profits are greater, even if the marginal rate of profit is declining. The reasoning behind such actions is that today's reserves may not be reserves tomorrow, i.e., the firm(s) may lose their monopoly price effect in the future. The only way to assure ore reserves in the future is to maintain the monopoly-price effect but at a level that restricts entry. The firm(s) are also aware of the possibility of new discoveries that also may further affect their monopoly-price effect.

The mining industry thus has two problems, i.e., to operate at minimum AUTC but at maximum dollar profit. The uncertainty of future ore reserves and price structures will further motivate the industry to seek maximum dollar profits and not to be that concerned with levels of recovery.

¹⁸Ibid., p. 614.

Further to footnote 17, page 18 we should note that the monopoly pricing power of the dominant firm at $MC=MR$ may not be applicable in the long run because the firm in order to restrict entry may have to revert to a short run least cost operation. However once the firm has restricted free entry in the short run, it may revert to a long run $MC=MR$ operation. Thus the firm in a non renewable resources industry may be forced to continually review its pricing and profit seeking techniques from one of least cost to one of $MC=MR$ pricing. Part of the reason for this is that excess capacity likely exists and has the above noted effect on free entry and pricing procedures.

grades of ore due to a rise in price is difficult. Also, rising prices will attract more sub-marginal mines into production, resulting in rising cost curves, which will reduce the increments of both the level and rate of recovery. Many of these newer mines will start to shut down after removing the high grade ore, but production by the balance of the industry will be maintained at the new and higher level and price.¹⁹

Lastly Carlisle notes that quite frequently a mine can increase its level of recovery with only small capital additions and that given a price rise the rate of recovery can be quickly increased. Also, the original cost of production vis-à-vis the cost of an increase in either the existing level or rate of recovery is very small. Thus not only has the dominant large firm the capacity to raise prices it also has the capacity via either the rate or level of production to react quickly to such price rises.

2.5 Demand for and Supply of Labour

Our next consideration is to investigate the labour market as it relates to collective bargaining within the mining industry.

The demand for labour is a function of the firm's ANRP and MRP.²⁰ The supply of labour falls into two basic categories:

- 1) large integrated labour markets
- 2) isolated labour markets.

An integrated labour market is one that can draw from a labour supply which is spread over a wide geographical area, encompassing a large

¹⁹Ibid., pp. 614-615.

²⁰These concepts and terminologies will be fully explained in the ensuing section concerning the Cartter-Marshall Model of Collective Bargaining.

population, within which can be obtained the various industrial and skill-craft workers required by the industry in question. An isolated labour market can, in the short run only, draw from a limited local labour pool. If the firm desires to increase its labour force it must bring in labour from other regions and this presents recruiting problems.

In a relatively large labour market area such as Sudbury the supply curve of labour is relatively elastic because of easy entry into Sudbury and the desire of many miners to join the INCO labour force. However, when we consider the isolated mining camp the supply of labour becomes rather inelastic because unless someone quits or the mine increases production there is no employment available. Also, if the worker quits or is released there is no alternative employment. He is likely in a company house or bunkhouse which further adds to the inelasticity. In addition, an increase in the supply of labour beyond the existing level requires inducement by the firm to entice the worker to enter the isolated area. This is usually achieved by offering relatively higher incentive rates.

Our final theoretical consideration is to present the Cartter-Marshall Collective Bargaining Model and to develop a variant of it that is applicable to the Canadian metal mining industry.

2.6.1. Union Wage Preference

Fellner²¹ has suggested that union preference can be better explained by utilizing the indifference curve approach. A primary problem is to establish the shape of a union's preference curve in terms of

²¹W. Fellner, Competition Among the Few (New York: Alfred A. Knopf, Inc., 1951), pp. 252-276.

wages and levels of employment. If a union seeks only to maximize wages and is totally indifferent to the resulting employment level then the family of indifference curves (IC) will be horizontal as in Figure 2.1.

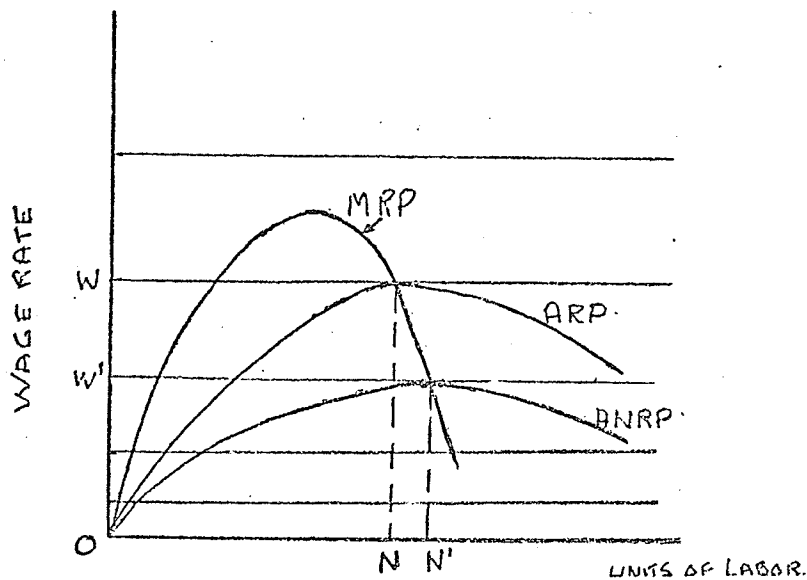


FIGURE 2.1

UNION INDIFFERENCE CURVES WHEN MAXIMIZING WAGES

Each higher IC represents a greater degree of union satisfaction. The functions are growing increasingly farther apart, which suggests that a larger increase in wages is required at each "round-of-bargaining" in order to yield as much utility as in the previous "round." With such an IC map the union can set wages unilaterally and would seek a wage level OW at the highest IC, tangent to Average Revenue Product (ARP), with an employment level = ON . In the long run union wage demands would have to decline to wages = OW' tangent to Average Net Revenue Product (ANRP) and with an employment level at ON' .²²

²²A. M. Cartter, Theory of Wages and Employment (Homewood, Ill.: Richard D. Irwin, Inc., 1959), p. 87.

The other extreme union position would be one where it sought maximum employment levels with a total disregard for wages. Under these conditions the IC's would be vertical and parallel and expanding (Figure 2.2).

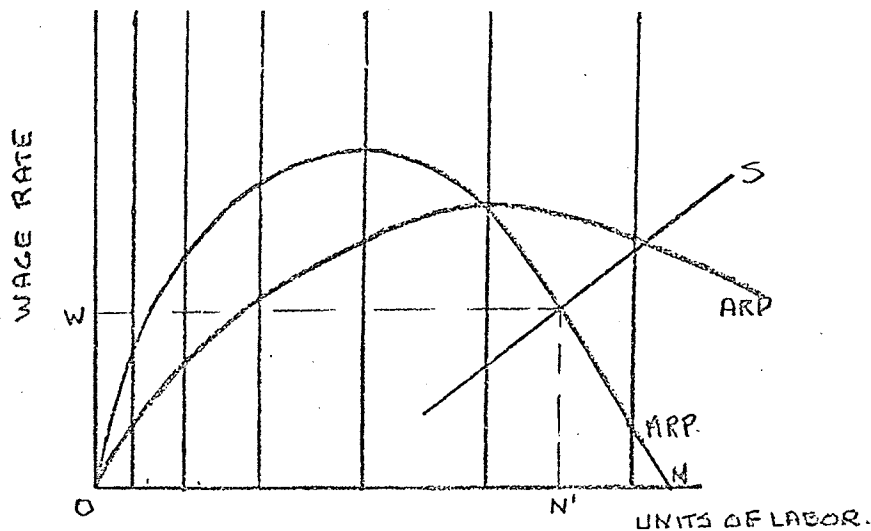


FIGURE 2.2

UNION INDIFFERENCE CURVES WHEN MAXIMIZING EMPLOYMENT LEVELS

In theory the employment level would be ON at zero wage. In reality the supply of labour, with regard for its elasticity, would establish wages at (say) OW with a corresponding employment level of ON¹.²³

It is most unlikely that any trade union would seek to operate in either of these extremes. Wages and employment levels are more imperfect substitutions (than substitutions, to some degree), thus the resulting IC would be convex to the origin with wages and levels of employment as shown in Figure 2.3. Wages will be at OW and employment at ON if the entrepreneur is able to set the level of employment unilaterally. A powerful union might be able to force employment levels to ON¹ with only a slight reduction in wages to OW¹; i.e., union power is such as to

²³Ibid., p. 88.

force the firm to operate on its ARP curve and not its Marginal Revenue curve
 curve
 Product/(MRP). Such a condition would soon lead to bankruptcy.²⁴

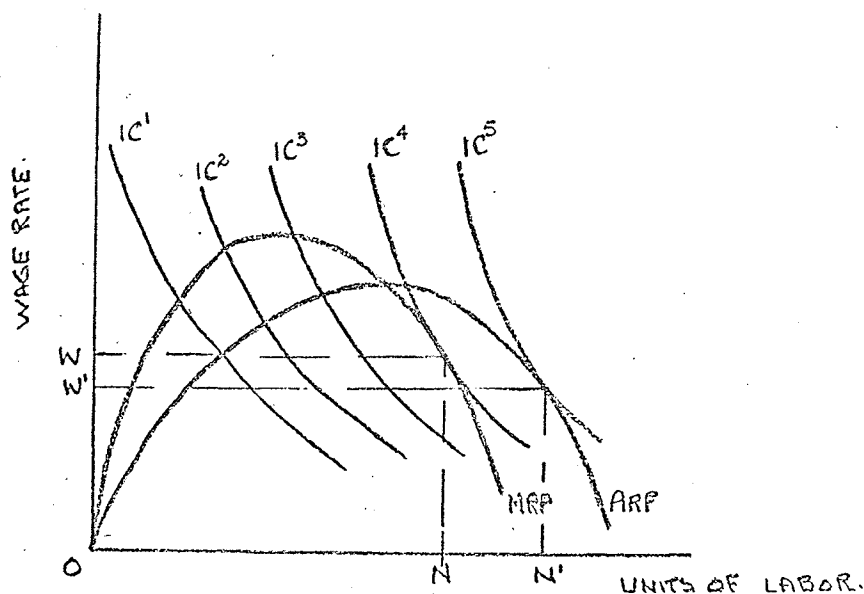


FIGURE 2.3

UNION INDIFFERENCE CURVES WHEN MAXIMIZING
 EMPLOYMENT AND WAGE LEVELS

2.6.2. Wages, Employment Levels and the Union

In order to develop the IC map of a trade union we must establish with validity how a trade union views the "trade-off" between wages and levels of employment, i.e., to what degree are they substitute "goods"?

The more valid positions are:

- 1) A union will require a large wage increase in order to accept a reduction in employment.
- 2) A union will require a considerable increase in employment to offset any wage reduction.

²⁴Ibid., pp. 88-89.

These two reasonable conditions²⁵ will result in an IC as illustrated in Figure 2.4, where P is the present wage-employment equilibrium

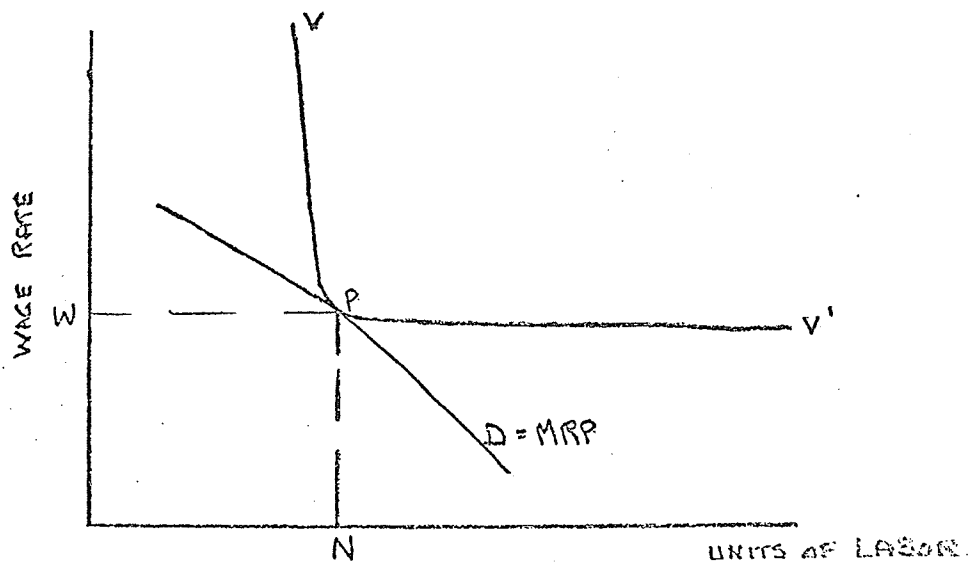


FIGURE 2.4

UNION INDIFFERENCE CURVES UNDER LOGICAL CONDITIONS

point lying on the demand (MRP) curve. Since the IC vv' is not right angled at P we can assume that wages and employment are not perfectly substitutable "goods."²⁶

Having established the shape of the IC of wages versus employment, we can seek the answer to how a union will react to increases or decreases in the demand for labour (Figure 2.5).

²⁵There may be no theoretical proof for this but empirical evidence suggests its validity.

²⁶Cartter, Theory of Wages, p. 90.

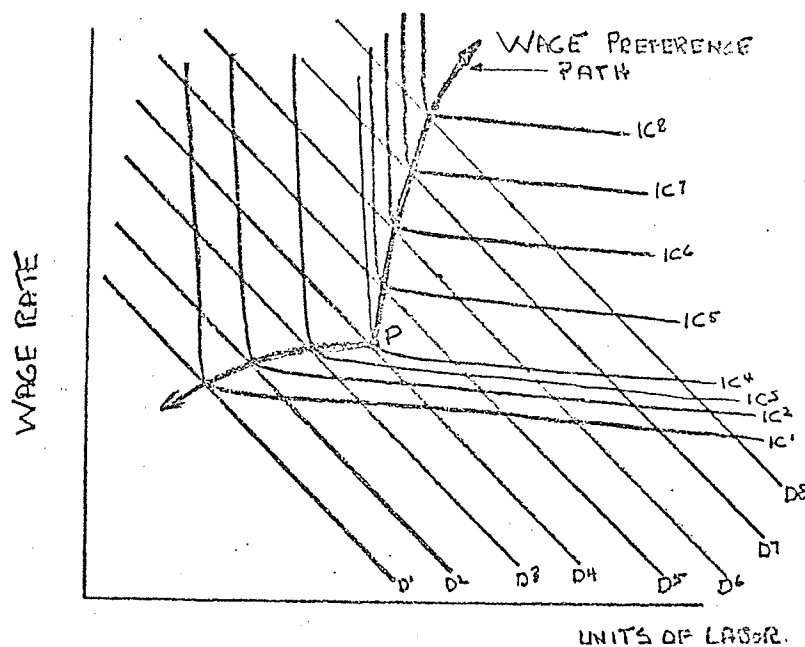


FIGURE 2.5

UNION REACTION TO CHANGES IN DEMAND FOR LABOUR

If demand for labour increases (D^4 through to D^8) the union will use the demand increase to seek primarily wage increases and will accept an increase in levels of employment (as a substitute) only if the demand is strong and substantial. If demand decreases (D^4 through to D^1) the union will resist wage reductions but accept a decline in the level of employment.²⁷

2.6.3 Union Behaviour

We are now able to predict with reasonable certainty the behaviour of a trade union given an increase or decrease in the demand for labour. In Figure 2.6, if the demand for labour shifts up to D^1D^1 the entre-

²⁷Ibid., pp. 90-92.

preneur will seek to hire more workers at the same wage rate, whereas

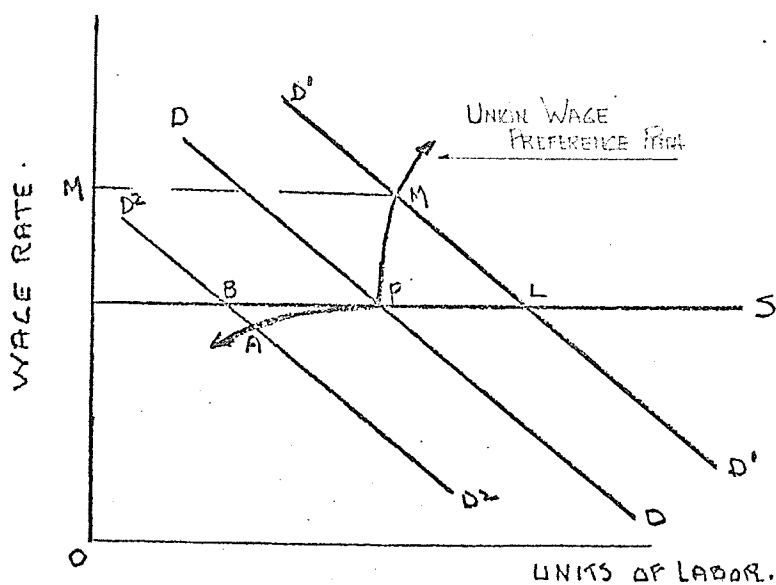


FIGURE 2.6

UNION WAGE PREFERENCE PATH

the union will seek to restrict that rate of hiring but to obtain a higher wage, OM , i.e., the union will seek to move along its kinked wage preference path. If demand for labour declines to D^2D^2 union and management will be in agreement, initially, i.e., wages will decline very little but the level of employment will decline appreciably. However, if the decline in the demand for labour continues, the union will be faced with not only excessive decline in employment but also in wages.²⁸

²⁸Ibid., p. 93.

2.6.4 Entrepreneurial Desires

A basic assumption underlying entrepreneurial satisfaction is that it is a direct function of profitability and that this can be established for the various wage rates he faces. An ARP curve is a line showing all wage-employment combinations that will exhaust total revenue (TR). Thus in Figure 2.7, various combinations of wages (W) and employment (N) with

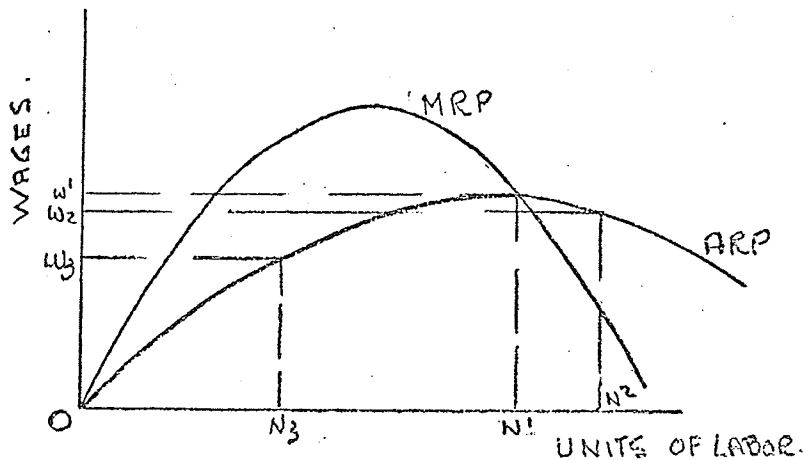


FIGURE 2.7

ENTREPRENEURIAL AVERAGE REVENUE PRODUCT CURVE

superscripts 1, 2, or 3 all exhaust TR. Thus the ARP is the limit beyond which the firm, given a choice, will not operate. Any position below the ARP will yield a residual, i.e., profit.

The ANRP curve (Figure 2.8) sets out all the wage-employment combinations that will yield zero profit to the employer, i.e., fixed costs are divided by the units of labour from which is subtracted ARP, and the result is ANRP, which is the net of all overhead costs. Thus the ANRP curve is a zero profit curve and by adding a series of rising increments of profit to the ANRP we can develop a profit map (Isoquants I, II, III . . . V, Figure 2.9) showing various levels of profit.

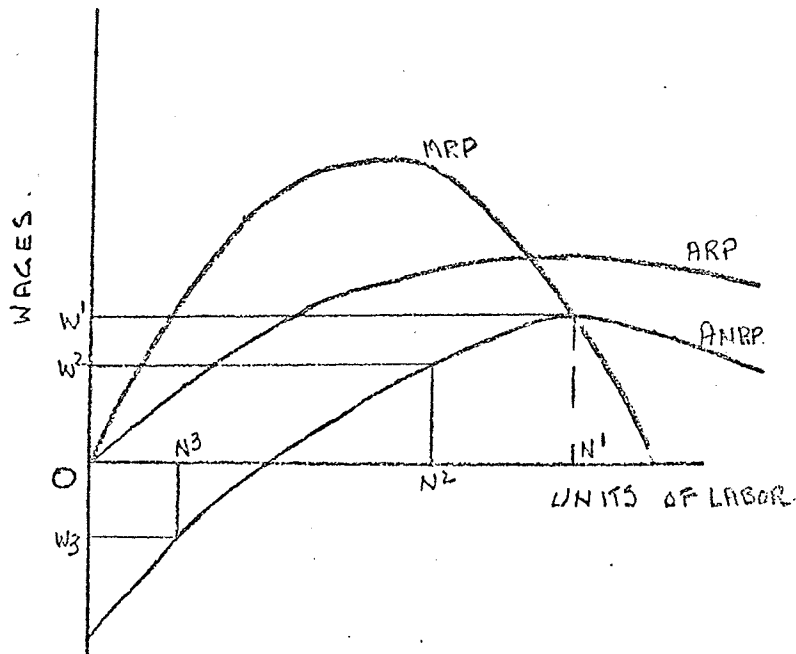


FIGURE 2.8

WAGE-EMPLOYMENT COMBINATIONS YIELDING ZERO PROFIT

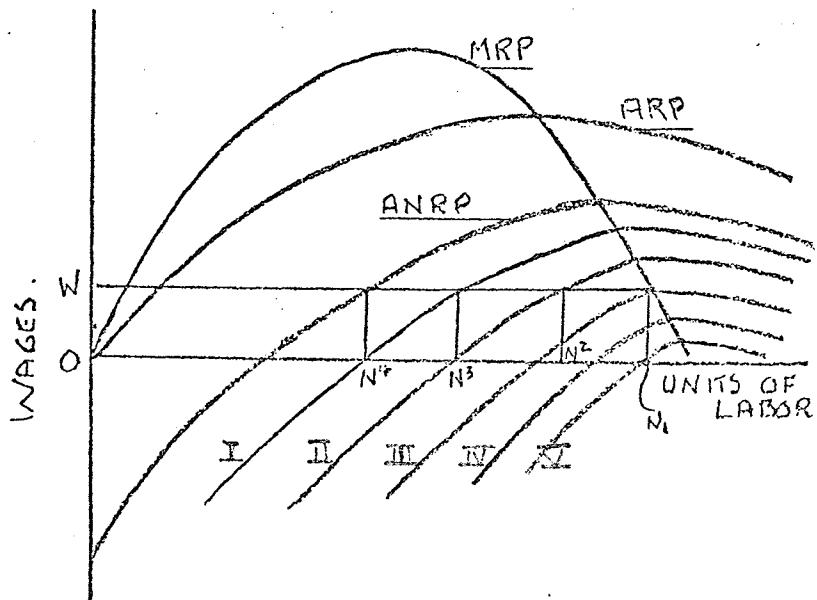


FIGURE 2.9

ENTREPRENEURIAL PROFIT MAP

We can now observe why the employer will prefer a point on the demand curve (MRP). If wages are at OW (Figure 2.9) then employment level ON^1 is the most profitable position, as it just places him on Isoquant III and also on his MRP curve. Employment levels ON^2 , ON^3 and ON^4 are all on lower profit curves with wages at OW. Any rational entrepreneur would either expand or contract his employment level to reach his demand schedule. Thus the demand schedule is the most profitable level of employment for various wage rates, with profits rising as the entrepreneur "slides down his demand (MRP) curve."²⁹

2.6.5 The Bargaining Model

We are now in a position to combine the preference maps of the trade union and the employer and to achieve a collective bargaining model. The model will be utilized under a condition of increasing demand for labour, which is the general condition in Canada. Thus in our model the ANRP curve is shifting up and the demand for labour is shifting to the right. The typical case will therefore be one of the union and the employer bargaining over the division of the increment of revenue which has arisen from the upward drift of the MRP functions of the firm's input factors. In Figure 2.10, P represents the wage-employment combination existing before the commencement of current bargaining. Superscript 1 is the old condition and superscript 2 is the current bargaining condition. We may reasonably assume that the new contract being sought will leave both the union and the entrepreneur at least as well-off as

²⁹A. M. Cartter and F. M. Marshall, Labor Economics (Homewood, Ill.: Richard D. Irwin, 1967), pp. 309-310.

before the negotiations.³⁰ Since the demand (MRP) has increased from

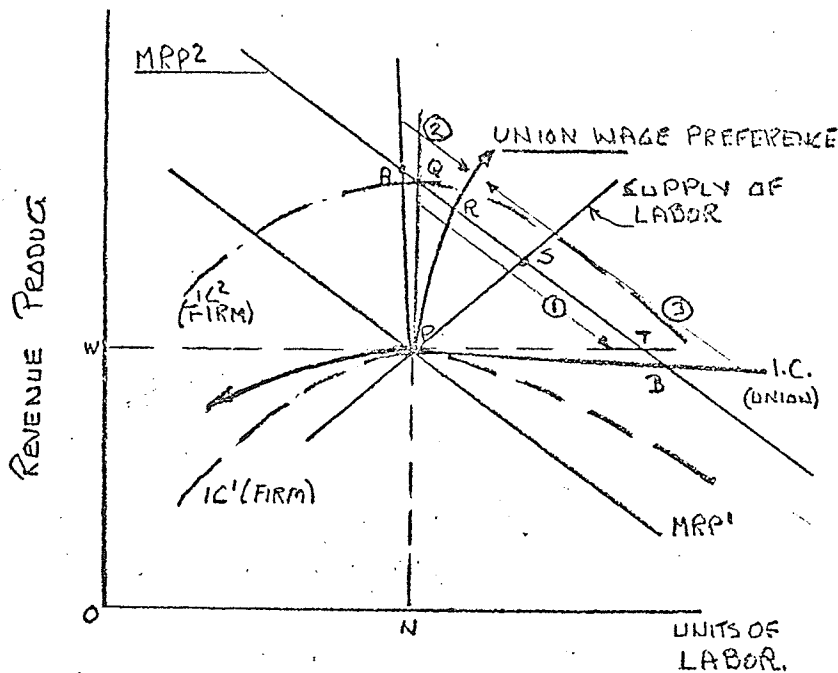


FIGURE 2.10

THE BARGAINING MODEL

MRP^1 to MRP^2 the union will seek a new wage somewhere between A and B (see Figure 2.10) with maximum union utility at R on the union's wage preference curve. If the slope of MRP^2 equals that of MRP^1 then the intersection of IC^2 and MRP^2 will be directly above the point of intersection of IC^1 and MRP^1 , i.e., Q will be directly above P, thus any new wage-employment level agreement must be at Q or to its right along MRP^2 if the entrepreneur is to have at least the same utility as in time one. Where will negotiations settle? For the employer any movement down MRP^2 (arrow 1) will yield a higher utility, but a rational employer would not seek to lower the existing wage scale, i.e., to proceed down

³⁰Cartter, Theory of Wages, p. 101.

MRP² beyond T. If he did achieve such a wage rate, i.e., between T and B, in the face of a rising demand for labour, the impact on employee morale would be disastrous. Thus the employer's range of bargaining is from Q to T, but both the union and management will reject the area A to R because although for the union it represents an area of higher wages, which the employer will reject, for both it is an area of lower levels of employment. Similarly both parties will reject the area T to B. Thus the only area of negotiation acceptable to both parties is R to T. The closer the new wage-employment combination is to T the more will be the relative gain of the employer and the closer the settlement is to R the greater the relative gain for the union.³¹

We can now introduce the supply of labour intersecting the new MRP curve, i.e., MRP² at a wage above the old level. The area of bargaining has thus been considerably reduced to RS.

2.6.6 A Variant Model

The final model that Cartter-Marshall developed must first be modified before it is applicable to the industry under study. These modifications are:

1) Cartter-Marshall's Union IC to the right of P (Figure 2.10) is downward sloping. We would agree with this condition prior to the signing of a collective agreement, i.e., the company could be in a position of being able to offer such a large increase to its labour force as to be able to obtain a reduction in potential wage increases. However, once the bargain has been signed, this section of the union IC would

³¹Ibid., pp. 102-103.

become totally elastic, i.e., the only option open to the firm would be to hire all the labour it desired at the negotiated rate.

2) The shape, i.e., elasticity, of the union wage preference path likely has a greater range of elasticity (and inelasticity) than Cartter-Marshall envisioned. This will be illustrated in the following pages.

3) The nature of the supply curve of labour, i.e., its elasticity, also has a range much greater than Cartter-Marshall envisioned. Cartter in his publication states: "Supply conditions in the labour market do have some effect upon the bargain."³² Within the Canadian mining industry (and indeed in all industry in both Canada and the United States) we would say it is a major factor.

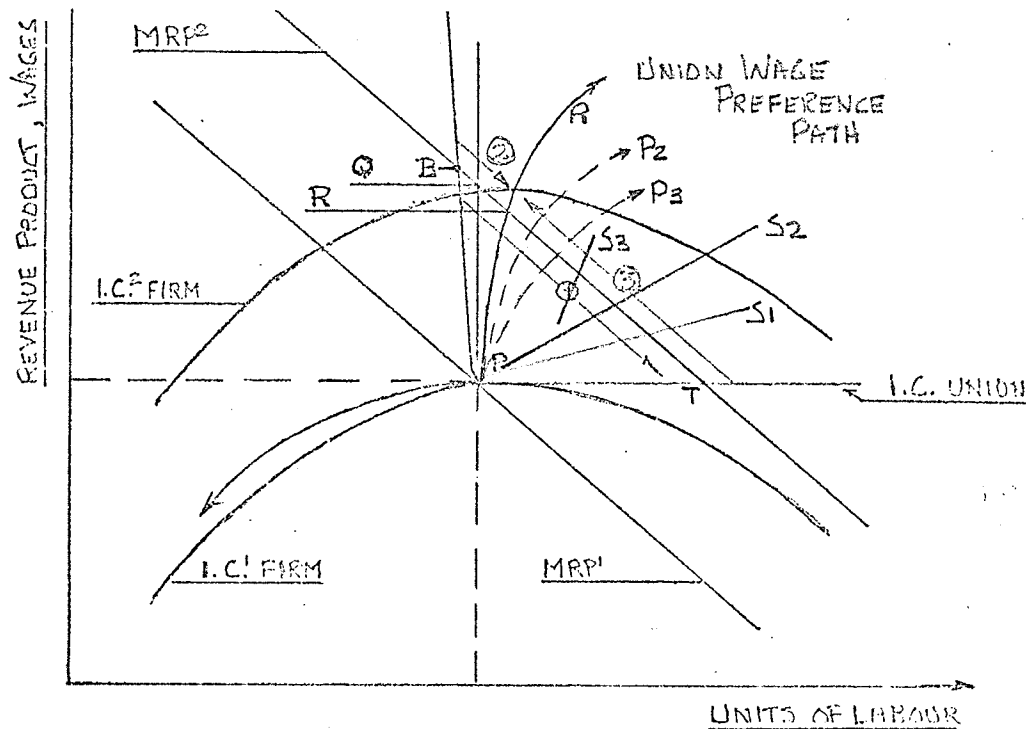


FIGURE 2.11

THE VARIANT MODEL

³²Ibid., p. 103.

Our final model thus is as shown in Figure 2.11, where the firm in demanding more labour has not the option of reducing wages.

2.7 Analysis of the Model

We will now view the model in three settings:

- 1) INCO - Sudbury
- 2) COMINCO - Kootenay Region, B.C.
- 3) An isolated mining area.

In each of these locations we shall note the behaviour of both the union wage preference path and the supply curve of labour.

Initially the adversaries were at P; however, a new round of collective bargaining is taking place. Demand for labour has shifted from MRP^1 to MRP^2 . The firm would seek to obtain a new contract at wage and employment combination T -- the union seeks settlement at R.

At INCO (Sudbury) the supply of labour is as shown at S^1 , i.e., rather elastic because of mobility into the area and the knowledge of that labour market possessed by the worker seeking employment. However the ability of INCO to raise price to cover any increase in costs plus the high fixed cost structure of INCO (and the industry) gives the union the capacity to obtain a settlement more in its favour, i.e., towards R.

It should be noted that greater union strength is closely associated with the monopoly power of the employer in its product market.

Professor J. Tait Montague states:

In the first place the more independent the employer can be in the product market (i.e., the less competitive he needs to be) the more freedom he has in the labour market. Or, put differently, the less competitive the industry, the greater the possibility of union strength. The strength of the union will be judged also by the position of the worker

within the firm, including such variables as ease of replacement, security of employment, regularity of employment, and age and other demographic characteristics of the work force.³³

This bargaining capacity is aided by the marked inelasticity of the union wage preference path, caused by the workers' realization that the demand for labour by INCO will not increase that much, therefore the prime objective of the union is monetary, which is aided by the union's "monopoly" power base.

As the location of the mine becomes more isolated the supply curve of labour becomes less elastic and the union wage preference path more elastic. In the case of the supply curve this develops because of lack of mobility into and out of the region. If the region is sufficiently isolated both the union and the company fully appreciate the necessity for an agreement.

Thus at COMINCO the supply curve may be at S^2 and the union path at P^2 and the resulting wage will be lower than that at INCO. The union has lost some of its bargaining power due to lack of labour mobility and the company has lost some of its power due to the realization that a strike will result in the loss of much of its labour force. This is further reinforced by the more competitive structure of the product market of COMINCO, i.e., zinc and lead as compared to that of INCO, i.e., nickel. This feature lessens the potential union power to set conditions independent of other producers in the industry.

Finally in the case of the isolated community, the supply curve is highly inelastic and the union path even more elastic than in the case

³³J. Tait Montague, Labour Markets in Canada, Processes and Institutions (Toronto: Prentice-Hall, 1970), pp. 159-160.

of COMINCO. The result is S³ and P³ showing very little bargaining room because both the union and the company realize the necessity for agreement and the result of no agreement, i.e., complete shut-down, no alternative work and poor mobility. Thus a contract is mandatory and more easily come by as compared to INCO or COMINCO. Wages are lower and employment levels will not change unless there is an increase in production, for no worker would make the trip "in" unless there was a definite job available. Most of the isolated mines in Canada are smaller producers, selling in a relatively competitive product market (i.e., zinc, lead and copper). Under such conditions the union has restricted potential power. Both the union and the employer tend to become "price takers" rather than "price setters" and thus become more aware of market supply and demand.

The below noted hypotheses will be investigated primarily within the terms of a wage determination model and the concepts of industrial organization are used only to explain certain areas of the central theme of the thesis; particularly the transmission of wage structures and changes within the industry under investigation.

2.8 Hypotheses

- I INCO has monopoly power and thus within limits is able to set price and to control the market via its supply policies.
- II The supply curve of labour within the industry fluctuates from rather elastic in large urban mining areas such as Sudbury to quite inelastic in isolated mining areas.

- III The bargaining power of the union declines as the supply curve of labour becomes more inelastic.
- IV Imperfect competition and a quasi form of national bargaining exist within the industry.
- V Both INCO and the USW conduct their affairs in a manner not necessarily responsive to overall Canadian labour market conditions.

2.9 Methodology

The method of analysis is comparative and descriptive. Chapter I consists of an investigation of the problems found in differentiating between certain wage structures and supplementary labour costs. Chapter III is utilized to set out the geological and historical background of the industry, while Chapters IV and V are an historical development of the growth of trade unions and industrial relations in Canada.

Chapter VI is allotted to a development of the scope and impact of the Canadian metal mining industry upon our economy. The problem of Canadian business cycles is investigated as is the market and pricing structure of Canada's major non-ferrous minerals. Within this framework the posture of the International Nickel Company of Canada is investigated.

The foundation for Chapter VII was the documentation of the collective agreements of 58 mining firms in Canada. From this information the major items within these agreements were analyzed and compared. Chapter VIII is assigned to a statistical and graphical appraisal. To test our hypothesis we will obtain a series of correlation coefficients of the several variables, i.e., real and money wages, production, product price, national employment and unemployment, metal mining labour force, wages within the industry, gross national product, non-agricultural labour force plus the firms within our final sample. Initial tests will be conducted for linearity to establish the method of statistical approach, and the statistical analysis will be conducted using both raw score percentage differences and logarithmic values.

Chapter IX presents the summary, conclusions and recommendations for future areas of study.

CHAPTER III

GEOLOGICAL AND HISTORICAL SETTING OF THE CANADIAN MINING INDUSTRY

3.1 The General Geology of Canada

Canada is naturally divided into five main regions each with its own unique geological and distinct physical structures. The five regions are: The Canadian Shield, The Plains, The Appalachian Region, The Cordilleran Region and The Innuitian Region.¹

The largest of these areas is the Canadian Shield which covers nearly half of Canada as well as parts of the Arctic Archipelago. Most of this vast region lies only a few feet above sea level with a relief of less than 200 feet. Intensive glaciation has left scattered rock outcrops, glacial deposits, muskegs and a myriad of lakes and waterways. Rock exposure in the Shield is likely less than ten percent of the surface area. The northern parts of this vast region are devoid of timber and subject to perma frost.²

The Plains region includes the Interior Plains of Saskatchewan, Alberta and the Mackenzie River, the St. Lawrence Lowlands, Hudson Bay Lowlands and the plains and plateaux of the Arctic islands. The Interior Plains are adjacent to the Canadian Shield on its western boundary

¹Canada, Department of Mines and Technical Surveys, Geology and Economic Minerals of Canada (Ottawa: Queen's Printer, 1957), p. 2. Referred to as M-1 in this study.

²Ibid., p. 1

and extend from the 49th parallel to the Arctic Ocean. These plains are flat to gently rolling, relatively treeless in the southern areas and rising to 4000 feet above sea level as they join the Cordilleran Region to the west. The St. Lawrence section is plain-like except where it is intruded by the Frontenac-Axis in the Kingston region. The Hudson Bay

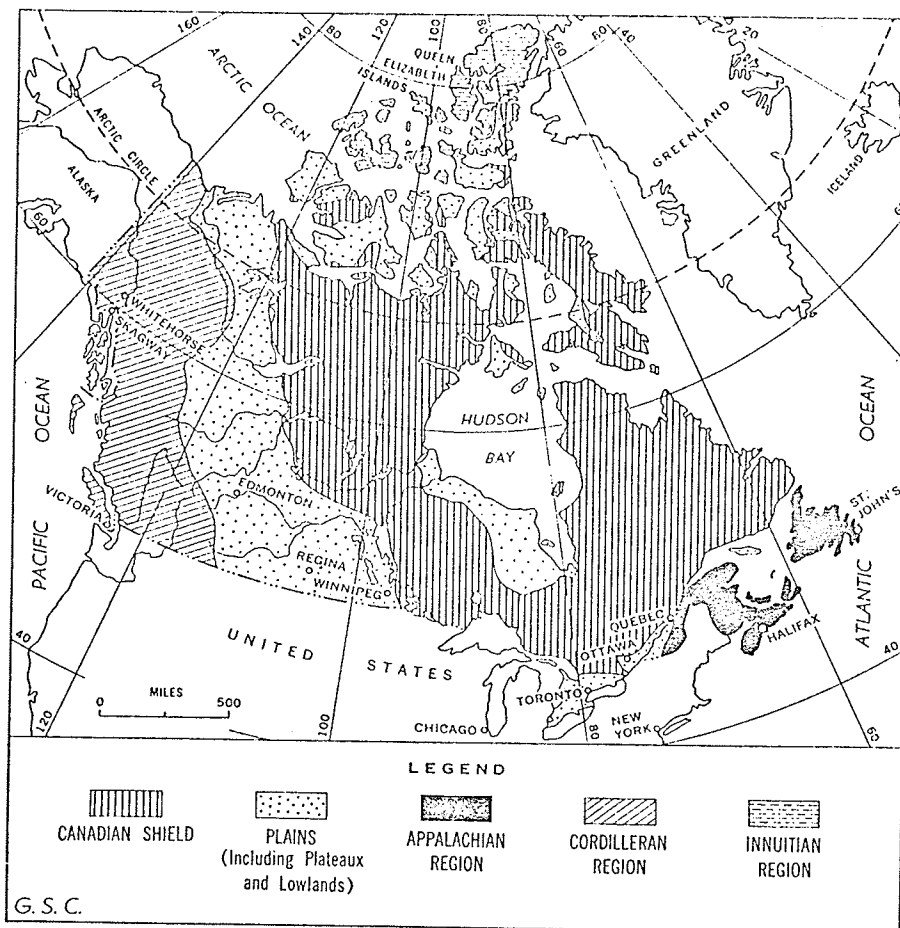


FIGURE 3.1

MAIN PHYSIOGRAPHIC AND GEOLOGICAL
REGIONS OF CANADA (M-1)

Source: Canada, Department of Mines and Technical Surveys, Geology and Economic Minerals of Canada (Ottawa: Queen's Printer, 1957), p. 2.

Lowlands are swampy and are located on the southwest shores of Hudson and James Bays.³

The Cordilleran Region lies between the Interior Plains and the Pacific Ocean and Alaska. This area is composed of three northwesterly trending units:

- 1) a western system of mountains
- 2) a central system of plateaux and mountains
- 3) an eastern system of mostly mountains.

Units 1 and 2 together comprise the Western Cordillera and Unit 3 is known as the Eastern Cordillera. In British Columbia the Eastern and Western Cordillera are separated by a deep persistent valley known as the Rocky Mountain Trench. The mountains of the Eastern Cordillera have in general a saw-tooth appearance whereas many areas of the mountain ranges of the Western Cordillera have jagged peaks and fairly level upland surfaces. The valleys are generally heavily forested and many peaks rise above the timber line. Parts of the Yukon have perma frost and within the Cordilleran Region may be found snow fields, ice fields and alpine glaciers.⁴

The Appalachian Region in Canada covers all of the Maritime provinces, the Gaspé Peninsula and most of the Eastern Townships. It is generally hilly, rising in some areas to 4200 feet above sea-level.⁵

The Innuitian Region covers most of the northern extremities of the Arctic Archipelago.⁶

³Ibid., pp. 2-3.

⁴Ibid., p. 3.

⁵Ibid., p. 3.

⁶Ibid., p. 3.

These vast areas that constitute Canada are sparsely populated except in certain areas along our southern border, the major areas of such population being the Windsor-Toronto-Montreal-Ottawa region and the Fraser River delta area.

Much of the Canadian Shield and the Cordilleran Region is virtually unexplored and accessible only by aircraft. The mineral production of these two areas represents approximately 70 percent of Canada's annual production.⁷ The known and potential mineral resources of these two areas is vast, yet an outstanding feature of the Shield is its lack of mineral fuels.⁸

The major features of the Interior Plains are the mineral fuels of Alberta and Saskatchewan and the potash beds of the latter province. The major products of the Appalachian Region are asbestos, the zinc-lead-copper-silver deposits of New Brunswick and the coal deposits of Nova Scotia.

It would be impossible in this study to review the mineral production of the Canadian Shield and the Cordilleran region. A map (M-2)⁹ is to be found in the back fly cover of this volume and a study of it will well illustrate the magnitude of the mineral extraction industry in Canada and especially in these two regions.

⁷Canada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 571.

⁸Geology and Economic Minerals (see above, note 1), p. 6.

⁹Canada, Department of Energy, Mines and Resources, Principal Mineral Areas of Canada, Map 900-A, Eighteenth Edition, 1968 (Ottawa: Queen's Printer, 1968).

3.2 Historical Outline of Canadian Mining

The first indication that Canada was a source of mineral wealth was the disclosure by the Indians to Jacques Cartier in 1534 of the presence of gold and precious stones on the Saguenay River.¹⁰ Considering the amount of exploration activity in the Cape Breton area after 1530 it is revealing that coal was not discovered until 1670.

Rich lead-silver deposits were found on the shores of Lake Temiskaming in 1686 but were uneconomical due to prohibitive transportation costs.¹¹ The first known smelter was established in 1737 at St. Maurice, Quebec. After 1763, the British continued with exploration projects that had been initiated by the French and as a result of these activities an iron furnace was established in Leeds County, Upper Canada in 1800. By 1822 industrial minerals were being mined near Paris, Ontario.¹²

The first real major impetus to mining and exploration was the formation of the Geological Survey of Canada in 1842. As a direct result of this type of assistance a substantial deposit of copper was discovered at Bruce Mines on the North Channel of the Manitoulan Island complex. During 1863 over 4500 tons of copper ore were shipped from this mine and approximately 400 persons were employed at the peak of production.

The coal fields of Vancouver Island were being developed as early as 1845 while at the other extreme of Canada we find that the mining

¹⁰Canada, Dominion Bureau of Statistics, Canada, One Hundred 1867-1967 (Ottawa: Queen's Printer, 1967, p. 143.

¹¹Ibid., p. 144.

¹²Ibid., p. 145.

history of Newfoundland dates back to at least 1857.¹³

In 1858 the first oil well had been developed at Oil Springs, Ontario and by 1865 Petrolia, Ontario had become the center of a thriving oil refining complex. Placer gold mining was being pursued on the Fraser and Thompson Rivers by 1858 and in the Cariboo District by 1861. In the same year similar discoveries were made in the Eastern Townships. The famous Silver Islet in Lake Superior was mined for \$3,000,000 worth of silver during the period 1870 to 1884 before being abandoned due to flooding. By 1887 asbestos production in Canada exceeded 4500 tons of fibre per annum.¹⁴

In 1883, while constructing the Canadian Pacific Railway through Northern Ontario, the vast copper-nickel deposits of Sudbury were unearthed. Metallurgical research led to production in 1892 and by 1902 most of the Sudbury area had been merged into the newly formed International Nickel Company.¹⁵

As a result of the completion of the C.P.R. and the Dewdney Trail from Hope to Nelson, B.C., the Rossland mining area had become active by 1889. With the completion of the Crow's Nest Pass line in 1900 by the C.P.R., and its subsequent purchase of the Trail smelter, the future Consolidated Mining and Smelting (COMINCO) had started to be assembled and 1920 saw the huge metallurgical complex at Trail start to become a reality.¹⁶

¹³Ibid., p. 146.

¹⁴Ibid., p. 147.

¹⁵Ibid., p. 147.

¹⁶Ibid., p. 151.

The Klondike gold rush of 1890 still remains one of Canada's glamour frontier events, but it was to have a short, vigorous life, ending by 1910.

The discovery at Sudbury gave impetus to the Ontario mining industry and as a result the Ontario provincial government undertook the construction of a railway from the town of North Bay to the shores of James Bay. During construction in 1903 the silver ores of Cobalt were found, to be followed in 1907 by the Gowganda discoveries.¹⁷ These events were shortly followed by the gold discoveries in the Porcupine District (1909) and the Kirkland Lake "find" in 1911.

The Flin Flon deposits were unearthed in 1913, but due to metallurgical difficulties production had to wait until the mid-1920's. The Falconbridge complex at Sudbury finds its history dating back as far as 1916. By 1927 the vast Noranda (Horne) Mine and its smelter operations were "on-stream" and destined to play a key role in the "opening-up" of Northwestern Quebec. During the 1920's the Val d'Or, Quebec and Red Lake, Ontario gold camps were developed. It was this type of mining that was destined to carry Canada through the depression of the 1930's.¹⁸

A signal of the future, yet understood by few at the time, was the discovery by Gilbert Labine of radium on the shores of Great Bear Lake (N.W.T.). Production commenced in 1932 with refining at Port Hope, Ontario.

The impact of WW II on the Canadian mining industry is dramatically set out by the following: Canada supplied 85 percent of the Allies nickel

¹⁷Ibid., p. 152.

¹⁸Ibid., p. 154.

requirements, produced 1.8 million tons of copper, 1.6 million tons of zinc and 1.3 million tons of lead. Smelter capacities were repeatedly expanded during the war years. Gold production rose to \$950,000,000 in the period 1940-1945. These figures, as impressive as they may be, are insignificant when viewed in terms of the growth of the industry from 1947 to 1967.¹⁹

The Quebec-Labrador iron ore complex started its development in 1950. This was the real birth of the Canadian iron ore industry which by 1967 had a production output in excess of 39 million tons per year. The uranium industry bloomed in Beaverlodge in the N.W.T., and in Bancroft and Elliott Lake. Market over-optimism led to over-production and serious cut-backs. Yet this industry seems assured of renewed growth during the late 1970's as man learns to harness nuclear energy.²⁰

The late 1940's and early 1950's were the "take-off" era for Canadian mining (see Table 3.1). A review of this table brings to one's mind the challenges this industry has faced and overcome.

In 1886 the value of Canadian mineral production was \$10,000,000. By 1910 it had risen to \$107,000,000, by 1945 to \$500,000,000 and by 1968 to \$4,738,789,732 (all sums in current dollars). The vitality and contribution by this industry to Canadian life is readily evident.

Canada leads the world in the production of nickel, zinc, the platinum group minerals, asbestos and nepheline syenite; it is second in the production of uranium, cobalt, titanium, gold, cadmium, molybdenum, sulphur and gypsum. It is among the first five producing coun-

¹⁹Ibid., p. 156.

²⁰Ibid., p. 157.

TABLE 3.1

DEVELOPMENT OF MINING IN CANADA 1947-1969

| YEAR | DEVELOPMENT | REGION |
|-------|-------------------------------|------------------|
| 1947 | Leduc Oilfields | Alberta |
| 1950 | Allard Lake | Quebec |
| 1951 | Giant Yellowknife Mines | N.W.T. |
| | Discovery Mines | N.W.T. |
| 1952 | Hardy Mines | Ontario |
| | Barvue Mines | Quebec |
| 1953 | Eldorado Mines | Saskatchewan |
| | Opemiska Copper Mines | Quebec |
| 1954 | Marmoraton Mines | Ontario |
| | Labrador Iron Fields | Quebec |
| | Sherritt Gordon Mines | Manitoba |
| | Aluminum Company Canada | British Columbia |
| ----- | | |
| 1955 | Gaspe Copper Mines | Quebec |
| | Texada Iron Mines | British Columbia |
| | Campbell Chigougamau Mines | Quebec |
| | Elliott Lake Region | Ontario |
| 1956 | Bancroft Region | Ontario |
| 1957 | Bathurst Mining Corporation | New Brunswick |
| | GECO | Ontario |
| | Willroy Mines | Ontario |
| | Hilton Mine | Quebec |
| 1958 | Fecunis Lake Mines | Ontario |
| | Merrill Island Mines | Quebec |
| 1959 | Henderson Mine | Quebec |
| ----- | | |
| 1960 | International Nickel Company | Manitoba |
| | Patino Mining Corporation | Quebec |
| | Caland Ore | Ontario |
| 1961 | Maritime Mining Corporation | Newfoundland |
| 1962 | Giant Mascot Mines | British Columbia |
| | Heath Steele | New Brunswick |
| 1963 | Bethlehem Copper Corporation | British Columbia |
| | Kam-Kotia Mines | Ontario |
| 1964 | Metal Mines Limited | Ontario |
| | Marbridge Mines Limited | Ontario |
| | Cupra Mines Limited | Quebec |
| ----- | | |
| 1965 | Mattagami Lake Region | Quebec |
| | Cartier Mining Corporation | Quebec |
| 1966 | Texas Gulf Mining Corporation | Ontario |
| | Wabush Mines | Quebec |
| | Pine Point Mines | N.W.T. |
| 1967 | New Imperial Mines Limited | N.W.T. |
| | B.C. Molybdenum | British Columbia |
| 1968 | Joutel Copper | Quebec |
| | Wesfrob Mines | British Columbia |
| 1969 | Anvil Mining Corporation | N.W.T. |
| | Brenda Mining Corporation | British Columbia |
| ----- | | |

Source: Canadian Mines Handbook 1969-1970 (Toronto: Northern Miner Press, 1969).

tries of the world in nineteen minerals and only the United States and Russia have a more diversified mineral output.²¹

This industry, stretching from Newfoundland to British Columbia and extending into Labrador, the Yukon and the Northwest Territories, has been among the world leaders in the development of mining technology. Before WW II the open cast method of mining had been introduced to Canada as evidenced by the Froid-Stobie open pit operation of INCO in the Sudbury area. As technology and equipment further advanced, Canadian mining in many areas became synonymous to deep mining, with depths in excess of 4000 feet being not uncommon. The industry became increasingly capital intensive and turned to the mining of increasingly lower grade ores, especially in British Columbia.

The past ten years have seen a major shift in the industry as it has increasingly sought to exploit these low grade, high tonnage open pit operations within major market structures around the world. There are those in the industry who say that underground mining is an era of the past. As we shall later see, Canada's mining giants are still primarily underground operations, although they too are turning to low grade ores with greater capital utilization.

²¹Ibid., p. 158.

CHAPTER IV

A HISTORY OF THE TRADE UNION MOVEMENT IN THE CANADIAN MINING INDUSTRY

4.1 Introduction

It appears desirable to develop an historical outline of the development of trade unions within the industry for two reasons:

- 1) Such a history may be of use to those in the industry as a means of more fully appreciating and understanding its unionism.
- 2) Our central theme in this study is that collective bargaining at INCO produces patterns not in unison with the Canadian economy.

The other party to these developments, i.e., the USW, should therefore also be subjected to investigation.

First we shall develop the growth of Canadian trade unionism and its inter-relations with its American counterpart and then we shall turn to the development of trade unionism specific to the industry.

4.2.1. Early Influences

The early trade union movements in Canada were mostly a reflection of European and British influences.¹ As Canada developed industrially the impact of the United States trade union movements began to make an

¹Canada, Dominion Bureau of Statistics, Canada Year Book 1957-1958 (Ottawa: Queen's Printer, 1958), pp. 154-193. Canada's major period of immigration was during the Laurier years. Immediately following WW II the British Isles became the largest single contributor but has subsequently been replaced by Continental Europe. The student of demography can in the same publication for the years 1958-1968 verify this shift in immigration patterns.

impression on their Canadian counterpart to where by today (i.e., 1970) there are in Canada 110 active international trade unions with a membership of 1,124,741. This membership represents 70.8 percent of all trade union membership in Canada.² As Professor John Crispo points out, if size is the main determinate of power then the "internationals" must be the locus because in the ten largest trade unions in Canada with a combined membership of 560,500 only two are national unions.³

Given this influence by United States unionism on Canadian trade unionism it should not be surprising that any historical documentation of the Canadian scene will reflect large and at times dominating American control. This pattern of influence was completed by the twentieth century yet was very significant as early as 1860. A major factor leading to the development of international trade unions in Canada was the existence of an "open border" for the worker. The American worker who moved to Canada naturally desired his own type of union structure and the Canadian worker who journeyed south and then subsequently returned to Canada soon turned to American unionism for both moral and financial support. We should observe that the Iron Moulders Union of North America was starting to establish internationals in the Hamilton-Montreal areas as early as 1861.⁴

²Canada, Department of Labour, Economics and Research Branch, Labour Organization in Canada 1965 (Ottawa: Queen's Printer, 1966), p. xii, Table 3. The same publication for 1968 shows a decline in international membership to 66.9 percent of total union membership in Canada. This shift in membership has been in favour of CLC affiliates.

³John Crispo, International Unionism (Toronto: McGraw-Hill, 1967), p. 5.

⁴H. A. Logan, Trade Unions in Canada (Toronto: Macmillan, 1948), p. 29. A detail study of this publication is recommended for those wishing to obtain more understanding of the development of the Canadian trade union movement.

The first meaningful labour legislation to be enacted in Canada came as a direct result of a strike by the Toronto Typographical Society, March 25, 1872, against the Master Printers Association of Toronto. (This Typographical Society had affiliated with the international in 1868 and according to Logan it had been rather unspectacular prior to this date.) Twenty-four members of the society were arrested for seditious conspiracy because they (the unions) were not within the jurisdiction of the British Trade Union Act (1871) and therefore lacked statutory legality. This resulted in the Canadian Parliament quickly passing two major pieces of labour legislation:

- 1) The Trade Union Act -- 1872
- 2) The Criminal Law Amendment Act -- 1872.

The essential features of these two acts were that unions in Canada were no longer illegal but recognition by the employer was not compulsory. We should note that the union which was very responsible for the achievement of this legislation was an international.

In 1871 the first city central in Canada, the Toronto Trades Assembly, was organized. The first president was J. S. Williams of the Typographical Union. The Canadian Labour Union (CLU), Canada's first labour federation, was formed in 1873 mostly because of the efforts of the Toronto Trades Assembly. Due to the depression it had run its course by 1875.⁵

During the 1870's the Knights of Labor, who had been organized in Philadelphia in 1869, started to gain support in Canada and by 1881 had established their first assembly. The Knights, because of their struc-

⁵Ibid., p. 37.

ture and ceremonial pomp, were well received in Quebec.⁶ In 1883 the Toronto Trades Assembly, now known as the Toronto Trades and Labour Council, along with major support from the Knights, set out to organize a new Canadian federation of labour. In 1886 they achieved the organization of the Dominion Trades and Labour Congress whose name was changed in 1893 to the Trades and Labour Congress of Canada (TLC). The TLC was destined to become the oldest congress in Canada and to be one of the forces behind the formation of the Canadian Labour Congress (CLC) in 1956.

Prior to the formation of the American Federation of Labor (AFL) in the United States in 1886 under the leadership of Samuel Gompers, and of the TLC in Canada in 1886, the Knights were a considered force in Canadian unionism. By 1895 the Knights were starting to decline, the final cause of their deterioration being their expulsion from the TLC in 1902, and also the fact that craft unions could better protect themselves from within the TLC than within the Knights of Labor.

4.2.2 American Federation of Labor

As the impact of international unionism and especially that of the AFL grew in Canada the locus of conflict became centered in the TLC.

Two major issues emerged:

- 1) Dualism, i.e., more than one union within a jurisdiction.

⁶It is beyond the scope of this thesis to give a detail accounting of the history of the Knights of Labor. Those wishing this are referred to the following publications: Terence V. Powderly, Twenty Years of Labor 1869-1889 (New York: Augustus M. Kelley, 1967, Reprint of Economic Classics); Norman J. Ware, The Labor Movement in the United States 1860-1895: A Study in Democracy (New York: D. Appleton & Co., 1929); Douglas R. Kennedy, The Knights of Labor in Canada (London, Canada: The University of Western Ontario, 1956).

- 2) The Western unions were becoming increasingly disenchanted with both the TLC and the AFL.

At the 1902 convention of the TLC in Berlin (now Kitchener), Ontario, the committee on the constitution recommended that in no case should there be more than one central body in any city (i.e., no dualism) and that it was to have a congress charter. At the time several cities had both the Knights' district assemblies and the councils of the TLC. A further recommendation disallowed the Knights and other unions from having representation on the TLC executive if an international were available. The result of these two resolutions was that the TLC lost 23 organizations, 12 of which were in Montreal and about half of the remainder in Quebec City. By this action the TLC became committed to AFL policies and the Knights' only remaining strength was in the province of Quebec.⁷ Other contributing factors to the 1902 split were:

- 1) The Roman Catholic fear in Quebec of international unionism.
- 2) The conflict of the AFL 'business unionism' with the more idealistic and industrial attitudes of the Knights.

The Knights' ideology was to attack wealth and capital as being responsible for the pauperization and degradation of the masses. It was built on internal debate and secrecy, which was later abandoned. It believed in political action, cooperation and arbitration, and land and money reforms. No person involved in any way in the manufacture or sale of intoxicating drink could be a member; nor could lawyers, bankers, professional gamblers or stock brokers. They were opposed to strike

⁷Margaret Mackintosh, An Outline of Trade Union History in Great Britain, the United States and Canada. A pamphlet published by that author and presented by her to the University of Manitoba Library, covering an address she gave to the Canadian Institute of Economics and Politics, Lake Couchiching, August 1938 and revised October 1942.

action until every possible means of settlement had been explored, because they saw the cost of such a strike, in terms of goods and services to its members and society as a whole, as being prohibitive. They were as much a fraternal society as a labour union, steeped in ritual as laid down in Adelphon Kruptos, i.e., the "Unwritten Word."⁸

The Crisis of 1902 was the real starting point of the rapid development of international trade unions in Canada. The expulsion of the Knights with their Quebec membership turned the labour movement in that province within itself where it developed its own unique structure.

As international unionism grew so did the TLC, but increasingly the AFL philosophy of craft unionism was forced onto the TLC. The failure of the TLC to organize the industrial worker led to violent western protests which were to culminate in the One Big Union movement in 1919. The membership of the OBU was drawn from trade unions that felt their interests could not be advanced within the craft union system. Initially the OBU membership soared yet by 1921 the organization had entered into a long and steady period of decline. Raked by dissension most of its members soon returned to the TLC.

The failure of the TLC to develop industrial unions and the fear of the radical OBU caused a considerable number of unions to join the CFL during the 1920's. Peak membership was achieved in 1923 followed by a long period of decline.⁹ During 1927 the All Canadian Congress of Labour (ACCL) was organized by President Mosher of the Canadian Brotherhood of Railway Employees (CBRE). This group had recently been expelled by the

⁸Douglas R. Kennedy (see above, note 6), pp. 14-21.

⁹Stuart Jamieson, Industrial Relations in Canada (Toronto: Macmillan, 1957), p. 42.

TLC over a question of jurisdiction in which the AFL had forced a decision. The charter members of the ACCL were the CBRE, residual groups from the OBU and other unaffiliated unions. The avowed purpose of the ACCL according to Mosher was to achieve "the complete independence of the Canadian labour movement by removing every vestige of foreign control."¹⁰ Thus once again we can note the impact of international unionism and especially that of the AFL on the Canadian union movement.

The depression of the 1930's resulted in a marked decline in union membership and bargaining power. As a result of excessive unemployment and the social alienation of the worker, the Communist Party was able to seriously infiltrate both the TLC and the ACCL. During this same period the Workers Unity League (WUL) was established by the Party. Its purpose was to foster radical unionism. It was quite successful in organizing in the resources industries, but with the advent of the Spanish Civil War the Party line was changed, the WUL was disbanded and its members were advised to join where possible either the TLC or the ACCL.¹¹

4.3.1 New American Legislation

In the United States unprecedented legislation in the field of industrial relations was unfolding. The National Industrial Recovery Act (NIRA--1933) was declared unconstitutional by the United States Supreme Court in 1935. Under a more favorable and sympathetic Supreme Court the National Labor Relations Act (Wagner Act) of 1935 was upheld. The major feature of the act was the compulsory recognition by manage-

¹⁰Ibid.

¹¹Ibid., p. 43.

ment of trade unions. During the 1935 Convention of the AFL, a group of industrial unionists within the federation, led by John L. Lewis of the United Mine Workers of America (UMWA), David Dubinsky of the Ladies Garment Workers Union (LGWU), and Sidney Hillman of the Amalgamated Clothing Workers (ACW), plus other unions from the oil, textile and metal mining industry, left the convention when the AFL refused to consider the case for industrial unions.¹² This group then formed the Committee for Industrial Organization, its purpose being to organize the industrial worker under an industrially structured union system. The AFL expelled the Committee in 1938, who then changed their name to the Congress of Industrial Organization (CIO).

4.3.2 Congress of Industrial Organization

In Canada the CIO remained within the AFL-dominated TLC until 1939, at which time the power of the AFL within the TLC forced a confrontation leading to the expulsion of the CIO from the TLC. The TLC during this period, 1935-1939, experienced increasing membership mostly from CIO union growth. In this same period the ACCL was experiencing declining membership as some affiliates and the OBU withdrew to form a new CFL.

4.3.3 Canadian Congress of Labour

In 1940 the remnants of the ACCL and the eleven CIO international unions which had been expelled from the TLC, united to form the Canadian Congress of Labour (CCL) with Mosher, of the ACCL (and the CBRE), as the president of the new congress. It is important to note that the ACCL

¹²Gordon F. Bloom and Herbert R. Northrup, Economics of Labor Relations (Homewood, Ill.: Richard D. Irwin, 1965), p. 63.

with its all-Canadian philosophy now valued survival and strength more than all-Canadianism.¹³

Much of the rivalry between the TLC and the CCL was put aside during WW II as labour put forth a united effort on behalf of the nation. Growing pains soon developed as both congresses experienced rapid expansion. When the CCL was formed in 1940 the largest affiliates were the CBRE and the UMWA. Unions such as the United Electrical Workers (UEW), the International Woodworkers of America (IWA) and the Steelworkers Organizing Committee (SWOC), which later was to be renamed the United Steelworkers (USW), were all relatively small. As the war progressed this latter union became the largest union in Canada, thus disturbing the balance of power within the CCL.

4.3.4 Communism

A far more serious issue that developed was the question of communist domination of some of the affiliates in both the TLC and the CCL. Some of the most able organizers were to be found among the communists. Their successes were localized mostly in the newer unions in electrical products, logging, mining, automobiles, textiles, fishing, shipping and the aircraft industry.

The positions taken by the CCL and the TLC were considerably different. In the CCL, bitter conflict developed as the communists came to dominate the Canadian branches of the IWA, UAW, UEW and the International Union of Mine Mill and Smelterworkers (Mine-Mill). At the same time the communists sought to obtain union support for the Labour Pro-

¹³Jamieson, Industrial Relations in Canada, p. 46.

gressive Party (LPP) which was openly communist whereas the CCL per se supported the Co-Operative Commonwealth Federation (CCF) which was purely socialist. The CCL was, however, successful in keeping the communists from gaining any key offices in the congress.¹⁴

In the TLC there existed a more tolerant position which allowed the communists to dominate several TLC affiliates such as the United Textile Workers (UTW), the International Chemical Workers (ICW), the Canadian Seamen's Union (CSU), the United Fishermen's and Allied Workers Union (UFAWU), plus several important building trade locals.¹⁵

4.4.1 Mine-Mill Expulsion

The first real open break occurred in 1949 when the CCL expelled Mine-Mill and designated the USW as the organizing arm of the CCL in the mining industry. This action in Canada preceded a similar action in the United States by several months. Once the same action had been taken in the United States then in both nations the USW was designated as the organizing arm of the mining industry.¹⁶ This was the start of the project by the USW to drive Mine-Mill from the mining industry, which reached its conclusion in 1967 when the USW and Mine-Mill merged. The final result is that the USW dominates the metal mining industry in both Canada and the United States.¹⁷

¹⁴Ibid., p. 48.

¹⁵Ibid., p. 49.

¹⁶Ibid., p. 50.

¹⁷When this thesis discusses the mining industry we are excluding the coal mining industry unless otherwise noted.

4.5.1 AFL-CIO and CLC

In 1955 the AFL and the CIO merged into the AFL-CIO. This made the same task easier to achieve in Canada, especially after the presidents of the CCL and the TLC retired, thus opening the way for a new and more equitable distribution of the senior positions on the executive. Also, the conflicts between the TLC and the CCL were not as deep-rooted as those in the United States between the AFL and the CIO. The Canadian merger into the Canadian Labour Congress (CLC) in 1956 was also precipitated by other factors:

- 1) Union membership had ceased to expand. Any hope of the trade union movement to "organize the unorganized" required a united front, i.e., a single congress.
- 2) Both the OBU and the Canadian and Catholic Confederation of Labour (CCCL) voted to affiliate to the new congress.¹⁸

A meaningful merger required that the CCCL affiliate. The history of the trade union movement in Quebec was, as previously experienced by the Knights of Labor, one of church domination which gave way during WW II to the pragmatic unionism of the twentieth century. This shift was forced onto the Quebec union movement by the gains of the TLC and the CCL outside and inside the province, which served to illustrate the inequalities between English and French workers in the same industries. This, plus the increasing activity of the TLC and the CCL in Quebec, forced the CCCL to become more militant. The result was that new and progressive lay leaders took over the senior executive positions and the clergy commenced to play a lesser role in the CCCL.¹⁹

¹⁸Jamieson, Industrial Relations in Canada, p. 53.

¹⁹If the reader wishes more detail he is referred to the text cited in note 18, pp. 53-59.

This new militancy was tested in the Asbestos Strike (1949) which is considered to be the watershed of Catholic unionism in Quebec. From that date on the CCCL found increasingly more areas of accommodation with the TLC and the CCL. When Claude Jodoin, Roger Provost and Herquette Plamondon (all French Canadians) were elected to respectively the presidency and two of the vice-presidencies of the CLC at the founding convention it was felt that at last the CCCL would affiliate. This did not materialize but there has been a larger degree of cooperation. By 1960 the CCCL had become completely secularized and changed its name to the Confederation of National Trade Unions (CNTU).²⁰

4.6.1 Early Mining Trade Unionism

In a study of the trade union movement in the Canadian metal mining industry two unions dominate. These are the USW and Mine-Mill. The latter union finds its beginning in the old Western Federation of Miners (WFM) and the USW is a protest emergence out of the AFL. If management, government and in some cases even the labour leaders more clearly understood the background and philosophy of these two unions more fruitful relationships might develop. The recent merger of the USW and Mine-Mill will make the problem more difficult and thus more expedient to unravel.

The Butte Miners' Union in convention at Butte, Montana, May 1893 was responsible for the formation of the WFM.²¹ The position of the WFM in western mining unionism was succinctly stated by the editor of the

²⁰Canada, Dominion Bureau of Statistics, Canada One Hundred 1869-1969 (Ottawa: Queen's Printer, 1969), p. 289.

²¹Philip S. Foner, The History of the Labor Movement in the United States (New York: International Publishers, 1955), II, 234.

Miner's Magazine, the official organ of the WFM, when he stated in 1901:

There never was a labor organization that encouraged such opposition from companies as we (WFM) encountered from the mining companies, opposed to organized labor.²²

The history of the WFM is one of violence and militancy.²³ Its chief strength lay in Colorado, Montana, Nevada and British Columbia (mostly in the Kootenay area). In 1900 the distribution of locals was: British Columbia 18, Colorado 27, and Montana 21. By 1910 the distribution was: Arizona 15, British Columbia 18, California 16, Colorado 19, Montana 22, and Nevada 30.²⁴

Foner's study of the WFM led him to believe that they did not in their early years reject the social milieu in which they operated. They did however seek a "socialist society under which poverty and exploitation would be abolished" and they were at all times critical of craft unions.²⁵

In 1896 the WFM affiliated with the AFL and then shortly thereafter became embroiled in the bitter Leadville strike.²⁶ The AFL failed (or refused) to support the WFM and shortly after the WFM voted to cease payment of per capita tax to the AFL. At this time the main issue from

²²Philip S. Foner, The History of the Labor Movement in the United States (New York: International Publishers, 1964), III, 393.

²³For those readers who seek a more detail accounting of the Butte Miners' Union, the Western Federation of Miners and the development of unionism in the western copper industry of the United States and Canada, they are referred to The Heritage of Conflict, by Vernon H. Jensen (Ithaca: Cornell University Press, 1950).

²⁴Foner, History, III, 401 (see footnote).

²⁵Ibid., p. 407.

²⁶Vernon H. Jensen, Heritage of Conflict, passim Chapter III.

the AFL vantage point was the socialist views of the WFM. The final result was that the WFM and the AFL became effectively split.

In May 1898 the State Trade and Labor Council of Montana successfully organized the founding convention of the Western Labor Union (WLU) of which the WFM was the first charter member. Locals of the WFM attended from as far as South Dakota and Rossland, B.C. There were 66 affiliated trade unions in the WLU, one of which was Rossland.²⁷ Thus that area has a long and colorful labour history, the understanding of which will aid in today's labour-management problems.

During 1902 the AFL informed the WLU either to affiliate with them or they (the AFL) would establish rival unions in the western copper areas with the intent of driving the WLU out of existence. The WLU's answer to this challenge was to change its name to the American Labor Union (ALU), thus becoming a nation-wide system. Much of the effort leading to this move can be credited to Eugene Debs.²⁸ The ALU platform was one of industrial unionism, political action and acceptance of the ideologies of the Socialist Party of America. Oddly the Socialist Party was not that pleased with the prospects of being associated with the ALU. The Local Quorum of the Socialist Party of America viewed the formation of the ALU with alarm because an ALU move east of the Mississippi would mean a trade union war with the AFL which they wished to avoid but which Debs and the ALU sought, as he and his followers held that the AFL was not interested in true unionism for all, and thus should be destroyed. Debs attacked the leading socialists who would not support the ALU and

²⁷Foner, History, III, 414.

²⁸Ibid., p. 418.

had them removed from the Local Quorum. The socialists who had helped form the ALU then turned to the advancement of the trade union cause without opposition (for the time being) from the Socialist Party.²⁹

Even Samuel Gompers, the president of the AFL, admitted that the federation was obtaining a poor reputation because of its conflict with the ALU. An interesting side note is that the ALU was responsible for the formation of the United Brotherhood of Railway Employees (UBRE) which later appeared on the Western Canadian scene, as well as for the formation of a lumber union in British Columbia. By 1905 the ALU was declining rapidly due to internal friction over the issue of socialism. The more radical socialists turned to the formation of the International Workers of the World (IWW). With the decline of the ALU, the WFM had no effective federation with which to affiliate and thus it also turned its energies to the formation of the IWW.³⁰

4.6.2 The IWW

The IWW was formed at Chicago in 1905. The WFM was very instrumental in its formation, the avowed purpose of which was to advance the cause of socialism. From the outset the WFM did not try to control the IWW, although the Miners were the major force behind the Workers as well as being the major financial contributor. The other major groups at the convention were the Socialist Labour Party under the leadership of Daniel de Leon and the Socialist Party of America under the guidance of Eugene Debs. Other personalities present were William D. (Wild Bill) Haywood

²⁹Ibid., p. 421.

³⁰Jensen, Heritage of Conflict, p. 160.

of the WFM; Father T. J. Hagerty, Editor of the ALU; A. M. Simons, a socialist intellectual; C. O. Sherman, the general-secretary of the UMWA; and W. E. Trautmann, the radical leader of the United Brewery Workers.³¹

By 1906 the IWW was plagued with internal conflict between the moderates of the Socialist Party of America under Eugene Debs and the outright revolutionary Marxists within the Socialist Labor Party under the authoritarian leadership of Daniel de Leon. By 1907 the WFM had withdrawn from the IWW.³² In 1908 the final break within the IWW took place over the basic issue of political or economic action. The former method of action was advocated by de Leon and his followers, all members of the Socialist Labor Party. De Leon and his group were ultimately defeated by the "Overall Brigade" of western rebels who sought economic action.

The de Leonites broke with the convention and formed a new organization and then amended the Chicago IWW constitution to their own liking, but at the same time changed its methods from one of political to one of economic action. This was the birth of the "Wobblies," a nickname for the IWW in western mining areas, a group committed to strikes, sabotage and violence.³³ They did not believe in the written contract, to them everyday struggles for wages and hours were the front line of attack.

³¹Foster Rhea Dulles, Labor in America (New York: Y. Crowell Co., 1955), p. 211.

³²"Wild Bill" Haywood remained in the WFM during the early years of the IWW but did subsequently join the IWW. He later became involved in legal entanglements with the United States government and fled to the USSR where he spent his remaining days.

³³Dulles, Labor in America, p. 212.

One may read the literature concerning the "Wobblies" and choose to become offended by their actions but they truly left their mark on the western miner and on the mining industry. In numbers they were never that large; their significance was in the revolutionary leadership they gave the miners.

With their appearance in the West a new wave of violence and bloodshed swept the western mines.³⁴ The "Wobblies," built upon "hobo" militancy, now set out to destroy the WFM, who turned to the UMWA for support and affiliation. This move failed, but was very instrumental in bringing about the affiliation of the WFM with the AFL in 1911. During this period the WFM carried out long and expensive strikes at the Homestake Mining Company (November 1909) and the Calumet & Hecla Mining Company (1912-13). As a result of these strikes the WFM was both financially and morally exhausted, and could not give support to the Arizona copper strikes of 1915. This led to a cry for "new blood" in the federation's executive.³⁵ Much of this movement was fermented by the "Wobblies."

Weakened, attacked from within and from without, the WFM declined to a shadow of its former self. Finally in July 1916 the WFM was renamed the International Union of Mine-Mill and Smelter Workers (Mine-Mill); the old preamble of the WFM constitution based on the "class struggle" was removed and replaced by a preamble setting out industrial unionism based on collective bargaining and the necessity of seeking mining legislation

³⁴Ibid., p. 214. For those wishing a more detail study of the IWW see Paul F. Brissenden, The IWW, A Study of American Syndicalism (New York: Russell & Russell, 1957).

³⁵Jensen, Heritage of Conflict, p. 372.

to improve the miners' working conditions.³⁶

The final death blow to Mine-Mill was the loss of its five locals during the Coeur d'Alene strike in August 1919. The locals had been "bored from within" by the "Wobblies," who agitated the workers to go on strike without the approval of the Mine-Mill international. That executive refused to sanction the strike mostly due to the blind hatred of its president (Moyer) for the "Wobblies." The strike was a failure, the miners turned against Mine-Mill, and thus its decline was further accelerated.³⁷

Even with the upturn in business in 1922 Mine-Mill made very few gains, mostly because of President Moyer's attitude toward the IWW, which resulted in fragmented efforts by Mine-Mill. At the same time the mining industry was turning to mass production based on unskilled workers. The hard rock miner was being replaced by the unorganized mass production type worker. The very size of the "new type" work force plus the raging conflict between the Mine-Mill and the "Wobblies" made any organizing most difficult. These many factors plus factionalism and distrust among the workers and then the depression of the 1930's led to the final collapse of the Mine-Mill. During WW I the "Wobblies" had been successful in at times restricting copper production, which led to legal action by the United States government. As a result of this, the "Wobblies" had been effectively removed from the trade union movement prior to the 1930 depression. Thus by 1930 there was no effective union system among the western metal miners due primarily to the lack of mutual respect and

³⁶Ibid., pp. 377-378.

³⁷Ibid., pp. 458-459.

trust, and also the conflicting philosophies of "business unionism" versus "syndicalism."³⁸

During this period (1900-1930) the AFL successfully dominated the United States labour movement. The "business unionism" of Samuel Gompers and the AFL was able to withstand infiltration by communists into the federation,³⁹ and the UMWA were successful in resisting similar action by the IWW.⁴⁰

Even the UMWA, however, had its radicals who became disenchanted with their leader John L. Lewis when he refused to assist the non-union striking coal miners of West Virginia, Kentucky, Tennessee and Alabama, as well as the unauthorized strikers within the UMWA. Lewis' reaction to the rebels was the expulsion of the leaders of several locals. The UMWA as a result of this internal dissension and the decline in the demand for coal saw its membership decline from 500,000 in 1922 to 150,000 in 1932.⁴¹

Gompers died in 1924 and was succeeded by William Green, who obtained the presidency of the AFL mostly because of Lewis' support. Lewis believed that Green would support industrial unionism, but once Green obtained the presidency of the AFL he continued to advocate Gompers' philosophy of "business unionism" and craft structuring within the AFL.⁴²

³⁸Ibid., pp. 462-466.

³⁹Dulles, Labor in America, p. 230.

⁴⁰Brissenden, The IWW, p. 325, note 66.

⁴¹Dulles, Labor in America, p. 249.

⁴²Ibid., p. 255.

Company unions during the 1926-27 period experienced spectacular growth. The beginning of the movement in the mining industry is closely associated with the Colorado Fuel and Iron Company of the Rockefeller Trust and the services of Mackenzie King on behalf of that organization.⁴³

With the depression, new problems arose. The American people rejected Herbert Hoover and the Republican Administration and turned to the Democrats under Franklin D. Roosevelt. New labour legislation was to be forthcoming and the image of industrial unionism was to be markedly changed in the next three decades.

4.7.1 Early Canadian Mining Trade Unionism

Unionism in the metal mining industry in Canada found its early beginnings in British Columbia. In 1895 the WFM established a branch (as previously noted) in Rossland. By 1899 there were sufficient branches in this area to form District Union 6, and by 1901 there were 18 branches in this region. Efforts were also made by the WFM to organize the Vancouver Island coal industry, but these met with failure.⁴⁴

"New Unionism" was thus at an early date present in British Columbia. This is even more apparent when we observe that the American Railway Union under the leadership of Eugene Debs was present and that Debs attended a labour rally in Vancouver in 1896.⁴⁵

⁴³Ibid., p. 256.

⁴⁴Logan, Trade Unions in Canada, p. 159.

⁴⁵Paul Phillips, No Power Greater: A Century of Labor in B.C. (Vancouver: Broadway Printers, 1967), pp. 25-26. Phillips confirms that American radicalism overflowed into British Columbia as a result of migration of Idaho and Montana miners into the Kootenay region as that district's mining activities expanded. For those readers seeking a clear and concise analysis of the British Columbia labour scene I would recommend this publication.

By 1888 ore was being shipped from the Ainsworth area to smelters at Butte and Helena, Montana and to Tacoma in the state of Washington, primarily because of available transportation. With the completion of the Northern Pacific Railway and the Great Northern Railway, feeder lines had been constructed into the Kootenay and Boundary regions. The CPR started to assemble its mineral and metallurgical complex in 1897 when it purchased from F. A. Heinze the Columbia and Western Railway, the Trail Creek smelter works and 270,000 adjacent acres of land.⁴⁶ In 1898 the Crow's Nest Pass branch line was completed.

The excessive militancy and radicalism of the WFM and later of the IWW of the western states did not really take hold in this area of British Columbia, according to some economic historians, mostly because of the Welsh, British and Cornish miners who were present and who were more experienced in the political trade unionism of Britain. Such observations are an over-simplification. The answers are not that precise because the influence of American unionism and most of its various types of philosophies had a very profound impact on the trade union movement in this our most western province. During 1898 the British Columbia government introduced the eight-hour day, which the mine operators refused to accept. The WFM in strong protest organized District 6 and struck the mine operators.

By 1902 the WFM had entered the province of Ontario and had organized Local 146 among the Cobalt miners.⁴⁷ During 1911 it once more

⁴⁶Ibid., p. 28. See also the Annual Report of the Canadian Pacific Railway Company, 1897, pp. 7-8.

⁴⁷Logan, Trade Unions in Canada, p. 160.

affiliated with the AFL⁴⁸ and by 1912 had achieved its zenith of membership in Ontario, likely in the order of 4000 members. By 1914 it had locals in Cobalt, Kirkland Lake, Sudbury and Gowganda as well as Rossland, Nelson and Trail in British Columbia. During 1915 it tried unsuccessfully to establish itself at Thetford Mines in the Eastern Townships. By 1916 it had formed District Council 17 for Ontario with headquarters in Cobalt. By 1917 the failures of the WFM (now called the International Union of Mine-Mill and Smelter Workers, i.e., Mine-Mill) started to reflect themselves in Canada, i.e., by 1919 District Council 17 was but a shadow of its former self, due not only to the decline of the international but also as a result of the rise of the One Big Union (OBU) and because of the inroads of communism and its world movement after the Bolshevik Revolution in Russia.

As previously outlined, the western affiliates of the TLC were becoming increasingly dissatisfied with that congress' position regarding industrial unionism. When that congress gave its support to the federal government's WW I conscription policy the rift was complete. The final outcome was the formation of the OBU at Calgary in 1919. Its membership grew rapidly. The entire District 6 of Mine-Mill joined the OBU as District 1 Metalliferous Miners of the OBU. With the formation of this union the AFL and the TLC commenced to withdraw charters. First the charter of the Vancouver Trades and Labour Congress (VTLC) was revoked, then the credentials of British Columbia Federation of Labour were refused by the TLC. Western unionism was now effectively cut off from the rest of Canada as well as being split and fragmented internally, as can

⁴⁸Ibid., p. 161.

be observed in the OBU's ability, because it controlled the British Columbia Federation of Labour, to force that body to disband.⁴⁹

The OBU after its initial successes entered into a period of rapid decline, caused primarily by two major events, firstly its split with the Lumber Workers Industrial Union (LWIU) and secondly its involvement, undesired or otherwise, in the Winnipeg General Strike. Socialism became prevalent in the west and even the formation of the ACCL in 1927 could not heal the rift in the western labour movement.⁵⁰

In a search of the literature certain facts become apparent. It was in British Columbia that socialism made the most gains. It was in that province that the IWW had the most success in its Canadian operations. By 1930 the Canadian labour movement was effectively split east and west. In the metal mining industry little if any unionism existed, especially in the east, and radicalism was a product of western unionism. The WUL's popularity was predominantly a western phenomenon. Thus British Columbia had been exposed to the full spectrum of various left wing "isms." Given her close geographic and economic proximity with the western United States it is reasonable to expect that the impact of the IWW and Mine-Mill philosophies would manifest itself once economic conditions improved. All these factors suggested that future metal mining unionism in that province would be "of the left." The label of communism is an accurate one, suggesting that "radical unionism" found its roots in the West, whereas its eastern counterpart was oriented towards

⁴⁹Phillips, No Power Greater, p. 82.

⁵⁰Ibid., passim Chapters 5, 6 and 7 are excellent reading for a clear understanding of the development of socialism and communism in British Columbia.

"business unionism."

4.8.1 Return to the U.S. Scene

From the end of the post-WW I depression of the early 1920's until the depression of the 1930's the AFL was in a continual state of decline. It failed and indeed was unwilling to organize the industrial worker. As technology reduced the required skills and converted many job patterns into unskilled methods, the AFL continued to concentrate on craft unionism. Membership declined, especially in industrial unions such as the UMWA and in the western metal mining unions.⁵¹ When the New Deal was enacted, Green (as previously noted), with his craft-oriented support within the AFL, was unable and actually unwilling to support the movement for industrial unionism. Such attitudes were also reflected in the TLC.⁵²

The AFL, although a weak federation in this period, did help to achieve some excellent labour legislation. In 1932 Congress passed the Norris-LaGuardia Act spelling the end to federal court injunctions and "yellow-dog" contracts, and yet oddly during this same period the AFL remained opposed to all forms of social welfare legislation.⁵³

To combat the worsening depression, the Democrats introduced the National Industrial Recovery Act. Section 7(a) of the NIRA gave industry authority to write its own code of fair competition (which proved a dismal failure). In return for giving industry such a free hand, Section 7(a)

⁵¹Bloom and Northrup, Economics of Labor Relations, p. 60.

⁵²Ibid., p. 61.

⁵³Ibid.

required that the codes contain three specific labour provisions. These were:

- 1) Employees were to be free to organize and bargain collectively without restraint or coercion.
- 2) Employees were to be free to join a union of their own choice and were not to be required to join a company union.
- 3) Employers were to conform to maximum hours and minimum wages as approved by the president.⁵⁴

The NIRA had failed even before the Supreme Court ruling of unconstitutionality in 1935, but Section 7(a) was the legislation labour had been awaiting. New union growth and enthusiasm developed, much akin to that of the old days of the Knights of Labor. Gains were made, chiefly in the area of industrial unions but within the AFL. The UMWA under the driving hand of John L. Lewis recruited 300,000 members and even organized the previous non-union areas of Kentucky and Alabama. It soon became apparent that the structure of craft and industrial unionism was so different that a central organization for industrial workers was necessary.

In 1935 after Lewis' proposal for industrial unions had been rejected by the AFL, he with other trade union leaders was successful in forming the Steelworkers Organizing Committee (SWOC) under the presidency of Philip Murray. This was the original start of the United Steelworkers (USW).⁵⁵

In 1935 the National Labor Relations Act (i.e., the Wagner Act) was approved by Congress, the President, and subsequently upheld by the

⁵⁴Dulles, Labor in America, p. 266.

⁵⁵Bloom and Northrup, Economics of Labor Relations. Read Chapter 17, "Labor and Politics."

United States Supreme Court. The act was to be administered by a three-man board to be known as the National Labor Relations Board. The essential features of the act were that it forbade the employer:

- 1) to interfere with, restrain, or coerce employees in the exercise of rights guaranteed in Section 7
- 2) to dominate or interfere with the formation or administration of any labour organization or to contribute financial or other support to it
- 3) to discriminate in regards to hire or tenure of employment, or any term or condition of employment, to encourage or discourage members in any labour organization
- 4) to discharge or otherwise discriminate against an employee because he has filed charges or given testimony under the Act
- 5) to refuse to bargain collectively with the representatives of his employees duly chosen pursuant to other provisions of the Act.⁵⁶

The act thus effectively gave recognition, compelled the employer to bargain and removed the fear of retaliation. The CIO entered into a period of rapid growth which forced the AFL to also enter the field of industrial unionism. This rapid growth in the trade union movement required organizers and most of these came from the Trade Union Education League (TUEL) or the Trade Union Unity League (TUUL) with its Canadian counterpart the WUL. Both these movements were communist fronts for the Red International. Thus to find in 1948 that communism had become a major issue in the trade union movement in both the United States and Canada should not be surprising. Much of the ability of the CIO to fight this communism can be attributed to the leadership of Philip Murray, whereas the AFL took a more tolerant view of communism and thus,

⁵⁶Ibid., pp. 751-752.

when the time came when the issue had to be faced, there were more internal conflicts within the AFL than within the CIO.⁵⁷

When the CIO was originally formed, Mine-Mill was one of the founding unions, but a very weak one with only six chartered locals in the United States and none in Canada.⁵⁸ No sooner was Mine-Mill revitalized than it was beset by leadership problems. The old leaders lacked vision, new leaders were needed. Jensen in the publication just cited at no time accuses Reid Robinson, who was elected to the presidency of Mine-Mill in 1935, of being a communist, but he does spend considerable time and detail setting out Robinson as a "fellow traveller" who built a formidable organization within Mine-Mill and thus removed the opportunity for internal revolt or reform.

It was not until 1940 that Mine-Mill experienced any "real" growth.

This resurgence was due to:

- 1) the effects of the NLRA which were beginning to develop conditions and relationships between labour and management more conducive to collective bargaining
- 2) by 1940-41 defence spending started to escalate in the United States, creating more favorable conditions for organizing.

Thus by 1941 membership in Mine-Mill had risen to 50,000 and by 1944 it stood at 97,000.⁵⁹

During the war, Murray had become the president of the CIO and by 1947 had become most concerned about the presence of communism within

⁵⁷Dulles, Labor in America. Read Chapter 17, "Labor and Politics."

⁵⁸Vernon H. Jensen, Collective Bargaining in the Nonferrous Metals Industry (Berkeley: University of California Press, 1955), p. 9.

⁵⁹Ibid., p. 22.

certain unions within the congress. Notwithstanding his efforts at the 1947 CIO Convention, no action was taken against Mine-Mill, although the CIO did take the position of strongly condemning communism.⁶⁰

Mine-Mill had refused to sign the anti-communist affidavits required under the Taft-Hartley Act and as a result of this certain mining companies refused to bargain with the union because they "were not conforming to the law of the land." This resulted in a serious secession of members out of Mine-Mill and into rival organizations. Coupled with these events was a series of long and costly strikes by Mine-Mill locals, followed shortly thereafter by the CIO's dictum that the union immediately remove all communist influences. Mine-Mill failed to comply and as a result the CIO in 1949 expelled Mine-Mill from the congress and awarded jurisdiction of the non-ferrous metals industry, including mining, milling, smelting and refining, to the USW. The United Automobile Workers (UAW) at the same time took over jurisdiction in the associated metal fabrication.⁶¹

The USW's organizational efforts in 1950 met with less than anticipated results, likely because they failed to establish a new union which would preserve the old WFM heritage and also because they dissipated their energies on the communist issue at the expense of "bread and butter" issues. Jensen also suggests that management was afraid of the power of the USW and thus gave "aid" to Mine-Mill in its battle for survival.⁶²

⁶⁰Ibid., p. 50.

⁶¹Ibid., p. 54.

⁶²Ibid., p. 56.

The failure of the USW to successfully organize the metal mines in this period gave Mine-Mill the opportunity to reconsolidate its position and by 1951 it had become a stronger union than it had been for many years. This new power was illustrated by its ability to call an effective industry-wide strike of the western metal mines on August 27, 1951. Its ability to produce such a strike caused considerable concern in the United States, but more important it forced the USW to reappraise its strategy regarding Mine-Mill.

From 1953 to 1956 Mine-Mill passed through the period that was to eventually result in its decline and lead subsequently to merger with USW. The propriety of Maurice Travis' non-communist affidavit was challenged by the National Labor Relations Board (NLRB), resulting in his resignation as secretary-treasurer of Mine-Mill. The action by the United States Department of Justice on charges under the Subversive Activities Control Act and the resulting lengthy trials were the final death sentence of this union. Membership entered a long period of decline to where, by 1960, neither Mine-Mill nor the USW had effective control within the metal mining industry in either the United States or Canada. This condition was to finally be rectified by merger in 1968.

4.9.1 The Long Road to Merger

By the early 1930's there were no Mine-Mill locals within the mining industry in Canada. The union in Canada, like the parent body in the United States, had become largely inactive except for a few active members who carried on with the occasional meeting.

Mine-Mill activity was present in Sudbury by 1936 as Local 239

which, although failing to gain recognition, was instrumental in obtaining two wage increases plus other benefits for the INCO workers.⁶³

It has been suggested by Mr. Kennedy (and this writer concurs) that the watershed in mining unionism in Canada was the Kirkland Lake strike of 1941-42. This strike by Local 240 (Mine-Mill) produced few if any tangible results for the miners. Many miners were "blacklisted" and had to move to other areas throughout Ontario, but this gave Mine-Mill a broad base across the province, of militant embittered workers upon which to build future organizational activities. The lack of response by the various levels of government in Canada to the Kirkland Lake strike resulted in an arousing of public sympathy and at the same time made the miner even more determined to achieve Canadian legislation similar to the Wagner Act. This militancy plus public support was most helpful in achieving P.C. 1003 in early 1944. This enactment set out compulsory recognition and collective bargaining but was not as all-inclusive as the Wagner Act of the United States.

Even without P.C. 1003, Mine-Mill had carried out a massive organizing campaign in the Timmins area during 1943. By 1944 eleven gold mines in the "camp" had been successfully organized. From these vic-

⁶³Much of the history of Mine-Mill has been obtained from personal interviews with Mr. Kennedy who had a long and successful career with Mine-Mill. Mr. Kennedy worked in the coal mines in Scotland, immigrated to Canada and subsequently went to work in the Canadian mining industry. He served on the Executive Board of Local 598 (Sudbury) IUMMSW and was a member of the National Executive of Mine-Mill from 1955 to 1967. With the merger of "Steel" and Mine-Mill in 1967, Mr. Kennedy joined the staff of "Steel" and is at present situated in Winnipeg. Mr. Kennedy is thus well qualified to set forth the history and philosophy of Mine-Mill. My own association with Mr. Kennedy goes back several years to when he and I sat on opposite sides of the bargaining table in the negotiation of a Collective Bargaining Agreement for Metal Mines Limited.

tories and now fortified with P.C. 1003 the "key" mining corporations were quickly organized. Consolidated Mining and Smelting Company (COMINCO), INCO and Noranda (Horne) Mines were all certified during 1944. Once COMINCO was certified the majority of the British Columbia metal mining industry followed. With INCO's certification, Falconbridge was quickly organized, and with Noranda's certification in 1944, most of the North-Western Quebec area fell to Mine-Mill. The union now entered a period of phenomenal growth as it spread across the entire mining industry of Canada. We should however take cognizance of the fact that the efforts and results of Mine-Mill in Gaspé, Eastern Township and Maritime areas were minimal.

Mine-Mill continued to grow and to prosper and was the sole effective union in the Canadian mining industry. It was one of the founding unions in the Canadian CIO just as in the United States. When the CIO was expelled from the TLC in 1939 and united with the ACCL to form the CCL, Mine-Mill followed the CIO into the CCL. It was the CCL expulsion of Mine-Mill in Canada that led to the similar expulsion of the union from the CIO in the States. Just as in the United States so in Canada the jurisdiction among the mine, mill, refining and smelter workers was awarded to the USW.⁶⁴

USW failed in its early organizational efforts in the metal mines in Canada for substantially the same reasons that it had failed in the United States, i.e.,

- 1) They failed to organize a new union which would preserve the old Mine-Mill heritages.

⁶⁴Jamieson, Industrial Relations in Canada, p. 50.

- 2) They dissipated their energies and efforts on the communistic issues rather than dealing with real issues of the day, i.e., "bread and butter unionism."

The USW subsequently reexamined their method of approach and by the early 1950's had commenced to obtain recertification in many "key" sectors of the industry. During the 1950's the Timmins, Kirkland Lake and Noranda "camps" all fell to the USW and finally during 1960 the entire INCO complex was awarded to the USW by the Ontario Department of Labour. These bitter, energy-consuming conflicts, plus lack of funds, had restricted Mine-Mill's activities in the Chibougamau area and thus it also became basically a USW "camp." Elliott Lake in its early days was a successful area of organization for Mine-Mill but as the battle continued, USW took over the area. In British Columbia the COMINCO system remained within the Mine-Mill structure and as long as this was so the USW could not make any really outstanding progress in that province.

By 1960 both groups had come to realize that their respective negotiations with various companies were being hindered by fear of attack by the other organization. During this period the first serious dialogue developed concerning the matter of merger, which became a reality in 1967. This movement in the United States has resulted in the complete unification of the two unions, whereas in Canada there is still one Mine-Mill local at Falconbridge. It is in fact the only such local in all of the North American metal mining industry. The merger went smoothly, with no resistance from the operators beyond the necessary formalities.

During the course of this author's many interviews with the personnel of the USW and also with members of the Mine-Mill who are now in the 'Steel' organization, one arrives at the following observations concerning

the merger:

- 1) If you engage in discussion with ex-Mine-Mill personnel you are informed that the merger was not an absorption by the USW, but rather a bilateral agreement wherein the philosophies of both unions were respected and preserved.
- 2) If you engage in similar dialogue with 'Steel' personnel they will give approximately the same answer except that they state that it was a necessary move on the part of Mine-Mill once they had lost the INCO complex to the USW.
- 3) There are those from both unions who feel that the marriage will end in at least a separation, if not a divorce.

Be that as it may, the mining industry is now confronted by a large, well financed, excellently organized and administrated union.⁶⁵

A major and provocative question is, how much of the old WFM, IWW and Mine-Mill heritage will find its way into this new structure? Some USW personnel hope that some of it does find its way into the USW. It is rather difficult to believe that the "more democratic concepts" of the old Mine-Mill will not at times lead to "difficulties" with the "business unionism" of the USW. Supplemental to this is the view of one USW official who stated that there was a fair degree of ill will between USW and Mine-Mill personnel and that the USW has not been able to assimilate Mine-Mill to the extent that it had anticipated. Another opinion was that the communists of Mine-Mill, who were now in the USW, were still militant and that there had been some trouble in this area, yet this same USW official felt that the communist element from Mine-Mill, while still somewhat active, had of late become disenchanted (and possibly tired) with the movement and that given time they would fit into the USW organization.

⁶⁵During December 1969 this author spent four days at the USW District 6 and National Offices in Toronto and was impressed with their efficiency and abilities.

An over-view of the USW based on certain heroic assumptions would suggest that much of the AFL--Samuel Gompers "business unionism" is very prevalent in the modern day USW. One could hardly accuse the old Mine-Mill of being a "business union," yet it did fulfill a broad and very necessary role in the metal miners' economic struggles. One USW official admitted that 'Steel' would have been sorely pressed to overcome Mine-Mill were it not that Mine-Mill had granted more autonomy to its locals and that it was this very autonomy that led to the decline of Mine-Mill. This same official also admitted that 'Steel' did not have the same degree of local autonomy as Mine-Mill and further that local autonomy and a strong union were just not compatible. His position was that the USW offered sufficient autonomy at the local level by which self-expression could be developed, but that in the face of the new and growing corporate systems and the emergence of the conglomerates it was becoming necessary to have a union structure that was highly centralized.

Given this highly centralized union, operating with less than the "desired" amount of local autonomy, and given an industry that has its power base highly centralized in a few major corporations such as the Noranda Group, COMINCO and INCO--especially the latter corporation--what type of results will flow from the bargaining table? Given the international complexities of the USW and of INCO, can these two very large, well organized and well financed bodies truly bargain in a manner compatible with the Canadian economy and its market conditions? Evidence suggests there may be a conflict and that such a structure could be adversely affecting collective bargaining in the metal mining industry

in that once the USW and INCO have a contract, the "smaller" operations have little choice but to "accept" its general terms as their guidelines, i.e., a form of industry-wide collective bargaining is now present in the Canadian metal mining industry.

CHAPTER V

THE DEVELOPMENT OF A CANADIAN INDUSTRIAL RELATIONS SYSTEM

5.1 Introduction

Industrial relations policies in Canada are controlled by either the federal or the provincial government. Each has its own area of responsibilities as set forth in the British North America Act (1867). Court interpretation of this act has assigned the major role in labour relations to the provinces and left to the federal government the residual areas, many of which are most troublesome.¹

5.2 Early Legislation

The first legislation to protect the worker in Canada came (as previously noted) as a result of a printers strike in Toronto in 1872. Legal opinion retained by the union advised that the British Statutes of 1824 (Repeal of the Combination Acts), 1825 (Revised Combination Act) and 1859 (Molestation of Workmen Act) were not applicable and thus in effect unions were illegal in Ontario. As a result of this legal opinion and the existing political situation, the Dominion Government in 1872 passed the Trade Union Act and the Criminal Law Amendments Act. The effect of these two enactments was that of "freeing trade unions from liability under the common law of conspiracy in restraint of trade." However the

¹H. D. Woods and Sylvia Ostry, Labour Policy and Labour Economics in Canada (Toronto: Macmillan, 1962), p. 19. See also note 4.

Canadian act differed from the British act in that the Canadian act only applied to those unions that registered under the act.²

The first effort by the federal government in the field of disputes settlement was the Conciliation Act of 1900. The act led to the establishment of the Department of Labour, but of more importance it gave the Minister of Labour the right to investigate the cause of a dispute, to arrange a conference between the parties to the dispute and to appoint a conciliator or board of conciliation at the request of either party. The act also gave the minister the power to appoint an arbitrator, providing both parties to the dispute so desired. The minister also had the further power to recommend, in difficult situations, using the Inquiries Act for his authority, the appointment of a commission to investigate the dispute, with the added force of all testimony to be given under oath. It is correct to say that the Conciliation Act (1900) was one of voluntary conciliation and arbitration with a lack of the coercive element--at least this was the opinion of the Deputy Minister of Labour, Mackenzie King. Yet in truth the act was very close to one of compulsory participation by both parties.³

The next major piece of federal legislation was the Railway Labour Disputes Act (1903). This enactment came as a result of a railway carmen's strike on the Canadian Pacific Railway in 1901. The enactment of 1903 set out a two-stage system. Firstly there was to be a conciliation committee to seek a settlement and secondly, failing this, a board of arbitration was to be convened. The conciliation committee was an ad

²Ibid., pp. 32-36.

³Ibid., pp. 45-46.

hoc body that could be established upon the request of either party, the municipal government, or the minister himself. The committee was of typical tripartite (Canadian) structure. If the committee failed to find a settlement, the minister could implement the arbitration sector of the act. The award of the board of arbitration was not binding but its responsibilities and procedures were arbitral in nature. The difference between the functions of the two boards (i.e., the conciliation committee and the board of arbitration) was similar to the distinction between accommodative and normative intervention.⁴

In 1906 the Conciliation Act of 1900 and the Railway Act of 1903 were combined to form the Conciliation and Labour Act. No new principles were introduced and the features of compulsory investigation--but not compulsory acceptance of the committee's report--remained in force.

5.3 Industrial Disputes Investigation Act

A strike by the Lethbridge Coal Miners during 1906 threatened to leave the prairie farmer without a winter fuel supply. This development led to further changes in the federal legislation, resulting in the enactment in 1907 of "an Act to aid in the Prevention and Settlement of Strikes and Lockouts in Mines and Industries connected to Public Utilities." The act became known as the Industrial Disputes Investigation Act, or more simply as IDIA. The main feature of this act, and one that is still reflected in Canadian industrial disputes legislation, was the policy of delay in any work stoppage until after a complete investigation.

⁴Ibid., pp. 47-49.

The two main sections of the IDIA were:

1) Section 5 (part therein)

Whenever any dispute exists between an employer and any of his employees, and the parties thereto are unable to adjust to it, either of the parties to the dispute may make application to the Minister for the appointment of a Board of Conciliation and Investigation, to which Board the dispute may be referred under the provision of the Act.⁵

2) Section 63 (part therein)

It shall be unlawful for any employer to declare or cause a lockout, or for any employee to go on strike, on account of any dispute prior to or during a reference of such a dispute to a Board of Conciliation and Investigation under the provisions of this Act.⁶

The act also spelt out who was considered an employer, i.e.,

any person, company, or corporation employing ten or more persons and owning or operating any mining property, agency of transportation or communication, or public service utility including, except as hereinafter provided, railways whether operated by steam, electricity, or other motive power, steamships, telegraph and telephone lines, gas, electric light, water and power works.⁷

Thus for the first time, Canadian industrial legislation set out a period of restraint on both strikes and lockouts. The IDIA was primarily the work of Mackenzie King who believed in the power of public opinion and that if there was a period of restraint it would give public opinion the opportunity to crystalize and be heard. The act allowed for an eventual work stoppage, but only after certain procedural matters had first been fulfilled. If the parties to the dispute did not wish to proceed to conciliation there were only two alternatives: either settle

⁵Ibid., p. 50. (Direct source: Dominion Industrial Disputes Investigation Act, Section 5.)

⁶Ibid., p. 51.

⁷Ibid.

or do nothing. To achieve a strike position, the parties to the dispute had to proceed through the conciliation board stage and then await its report. Thus the use of economic force by either party was now subject to a time restraint. A second desire of King's was to force both parties to the conciliation table; this the IDIA was most successful in achieving.

Thus we can see the impact of King's philosophy in almost all forms of Dominion and Provincial industrial legislation, i.e., public opinion must be given the time to form and to come to bear on the issue, both parties must be forced to the conciliation table, and no work stoppages are to be permitted until after the board's report. Woods and Ostry suggest that the mutual acceptance of the board was de facto recognition of collective bargaining and that this was taking place some twenty-five years before P.C. 1003!⁸

Shortly after this period the constitutionality of the IDIA was challenged, resulting in certain changes therein. In 1918 the definition of the employee was revised in order to offer him more protection. In 1911 the Montreal Street Railway Company challenged the act, but it was upheld by the Quebec Supreme Court. In 1920 the act was further amended to allow the employer to include any number of companies or corporations who acted together or who had in the Minister's opinion a common interest.⁹

In 1923 the Toronto Electric Commission challenged the validity of the act. The Ontario Court of Appeals upheld the act, but in a major

⁸Ibid., p. 54.

⁹H. A. Logan, State Intervention and Assistance in Collective Bargaining (Toronto: University of Toronto Press, 1956), p. 5.

decision that was to have a profound effect on future Canadian labour law, the Judicial Committee of the Privy Council reversed the ruling of the Ontario Court of Appeals and declared that most of the clauses of the IDIA could have been passed by provincial legislation under Section 92 of the BNA Act.¹⁰

The result of this case (known as the Snider decision) was the amendment of the IDIA by the Dominion Government. The act now was restricted to:

- 1) any dispute in relation to the employment upon or in connection with any work, undertaking or business which is within the legislative authority of the Parliament of Canada
- 2) any dispute which is not within the exclusive legislative authority of any provincial legislature
- 3) any dispute which the Governor in Council may by reason of any real or apprehended emergency declare to be subject to the provisions of this Act
- 4) any dispute which is within the exclusive jurisdiction of any province and which by the legislation of that province is made subject to the provisions of this Act.¹¹

Clause 4 is the critical clause in that it made it possible for the various provinces to pass enabling legislation by which to delegate authority to the federal government. By 1926 British Columbia, Saskatchewan, Manitoba and Nova Scotia had done so. Alberta passed its own IDIA in the same year. In 1932 Ontario and Quebec also transferred their authority to the federal government.

By 1926 the impact of certain American labour legislation was beginning to influence Canada. In that year the Railway Labor Act was passed

¹⁰For a complete coverage of the Snider case refer to the Labour Gazette, Volume XXV, pp. 241-247.

¹¹Logan, State Intervention, p. 11.

in the United States. The act in the context of our study is not important so much for the rights it designated to the worker as for the policies it introduced which were to underlie the Wagner Act.

In 1933 (as previously noted in Chapter IV) the NIRA under Section 7(a) gave the workers the right to organize and bargain. In 1935 the act was declared ultra vires by the United States Supreme Court. In the same year (1935) the National Labor Relations Act (NLRA) was passed by the congress and was subsequently upheld by the courts. This act, commonly referred to as the Wagner Act after its author, upheld among other items four basic principles of the Railway Act (1926). These were:

- 1) freedom of workers to choose their own representative
- 2) compulsory recognition
- 3) compulsory bargaining
- 4) exclusive bargaining rights.¹²

With the constitutionality of the Wagner Act upheld by the United States Supreme Court, the Canadian trade unions commenced to exert pressure on the provincial governments for similar legislation. The results were that in 1937, Nova Scotia, Manitoba, British Columbia and Quebec passed various labour acts, followed in 1938 by Saskatchewan, Alberta and New Brunswick. Ontario had already passed the Ontario Industrial Standards Act in 1935. Thus by 1937, in no small measure due to the Wagner Act, the various provinces were slowly assuming control of their own industrial relations policies.¹³ These various provincial enactments however were still a far cry from the Wagner Act in that compulsory

¹²Woods and Ostry, Labour Policy, p. 57.

¹³Ibid., p. 23.

recognition was absent.

5.4 The War Years

War was declared on September 10, 1939. On November 7, by Order-in-Council P.C. 3495, the Dominion Government extended the IDIA to cover all defence projects and industries producing war supplies. On June 19, 1940, by means of P.C. 2685, the government made a declaration of principles concerning industrial relations. The Order-in-Council recommended that reasonable wage rates and working conditions be established, that the worker should be allowed to organize and bargain collectively, that disputes be settled by negotiation or with government assistance, and that there be a grievance procedure. The government declaration carried no legal authority, i.e., it was merely a set of guide-lines. Labour charged that "employers in general disregarded the order." This resulted in labour placing its set of recommendations before the government. The outcome was P.C. 4020 (June 6, 1941). This Order-in-Council established an investigation agency that was able to handle labour problems more expediently than under the ad hoc boards of the IDIA. The Order-in-Council also allowed the Minister of Labour to unilaterally recommend or refer to a commission various threatened or actual labour disputes.¹⁴

P.C. 7307 was passed during September 1941. This enactment made strikes unlawful until a vote of the workers had been taken by the Department of Labour. The vote requirement was a simple majority. During October 1941 the government introduced P.C. 8253 which established price

¹⁴Logan, State Intervention, p. 11.

and wage controls for the duration of the war. By 1942 labour had become increasingly difficult for the union leaders to control, mostly because of the failure of management to accept and to bargain with labour in good faith. The problem was aggravated by the successes of SWOC in their organizing of 'Little Steel' in the United States and by the Kirkland Lake Strike in Ontario.

5.5 P.C. 1003

This considerable degree of labour unrest led to the passing of the Ontario Collective Bargaining Act in 1943, in the same year British Columbia amended its Industrial Conciliation and Arbitration Act of 1937. The result of these two efforts by these provincial governments was compulsory collective bargaining. As a result of these provincial actions the federal government convened a conference of the Dominion and Provincial Labour Ministers. From this conference was developed Canada's 'Wagner Act,' i.e., P.C. 1003, which

- 1) established labour's right to organize and to bargain collectively through representatives of their own choosing.
- 2) provided for a permanent board to determine the appropriate bargaining unit.
- 3) allowed for certification of representatives of the majority, with or without an election, with whom the employer had to bargain.
- 4) enunciated certain unfair practices by the employer.¹⁵

At this point P.C. 1003 then deviated from the Wagner Act in that the Canadian legislation set out checks and balances against both the employer and employee. It forbade strikes during the organizational period

¹⁵Ibid., p. 26.

and also during negotiations; it required that all collective agreements contain a grievance procedure and that if none were present the government would impose its version on both parties. The major difference between P.C. 1003 and the Wagner Act is that the Canadian act includes compulsory dispute settlement machinery whereby both partners are required to accept conciliation. Thus Mackenzie King's concept of government intervention and conciliation in order to give public opinion time to form and to come to bear on the issue was very present in the document. Compulsory arbitration was also available, subject to prior acceptance by both parties.

5.6 Industrial Relations and Disputes Investigation Act

With the cessation of the war the government's emergency powers would cease in March 1947 and labour jurisdiction would revert to the provincial governments. The Dominion Minister of Labour, The Hon. Humphrey Mitchell, convened a conference of the Provincial Labour Ministers in 1946 and from this meeting was issued a joint declaration recommending a uniform labour relations code for all of the Dominion. As a result of this declaration the federal government, in consultation with the provinces, labour and industry, in 1948 passed the Industrial Relations and Disputes Investigation Act (IRDIA). This act now became the new basic document of Canadian labour relations.¹⁶

With the end of the war and the introduction of the IRDIA, the provinces were faced with certain choices in the area of industrial relations. These were:

¹⁶Woods and Ostry, Labour Policy, p. 83.

- 1) Accept the IRDIA and apply it provincially to the extent that the BNA Act would allow.
- 2) Pass and use provincial legislation similar to the IRDIA.
- 3) Establish their own labour acts and in effect break away from federal government influence.¹⁷

Choices 1 or 2 would have resulted in a nationwide unified labour code. Had choice 1 been followed it would have been quickly defeated by a 1950 ruling of the Supreme Court of Canada which stated that the provinces could not delegate legislative authority to the federal government or vice versa.

What finally emerged was a mix of choices 2 and 3, i.e., the provinces have passed their own labour acts based primarily on the IRDIA. In some provinces certain important features of the act have been omitted. Woods and Ostry put the case succinctly:

It is hardly to be expected that without the exercise of a central authority this (unity) would be accomplished. Labour relations is power relations. In a given political jurisdiction that kind of legislation being enacted will tend to reflect the balance of political power at the time. It is most unlikely that in all provinces a similar balance of power will always prevail, and therefore produce legislative uniformity across the country.¹⁸

Thus in Canada at the present time (i.e., 1970) our labour relations policies and legislation are under the jurisdiction of the ten provinces with certain specifically defined areas being the responsibility of the federal government. Within these federal jurisdictions is (among other jurisdictions) the metal mining industry of the Yukon and the Northwest Territories.

¹⁷Ibid., p. 85.

¹⁸Ibid., p. 86.

The metal mining industry of Canada is very regionally distributed and this factor plus the existing eleven areas of jurisdiction has created a diffuse and fragmented collective bargaining system within the industry.

A more recent development in the area of federal labour relations has been the passage during February 1967 of the Public Services Staff Relations Act.¹⁹ This enactment extends to the majority of the federal public service the right to bargain collectively. We therefore are now finding the federal government becoming increasingly involved in the various provinces vis-à-vis industrial relations. Further, the presence of federal bargaining is putting pressures upon the trade unions within the various provinces that they seem to be having difficulty coping with.

During 1968 two very extensive investigations in the field of Canadian Industrial Relations were published.²⁰ The tone and complexity of these two reports, i.e., the "Woods Report" and the "Rand Report," were such as to cause one to wonder if they both concerned Canada! Certainly they reflect the growing concern in our nation regarding our Industrial Relations system. It is failing to achieve reasonable goals, and the

¹⁹Statutes of Canada 1966-67, Elizabeth (Ottawa: Queen's Printer, 1967), Chapter 12, pp. 14-16.

²⁰Canada, Privy Council Office, Canadian Industrial Relations, The Report of the Task Force on Labour Relations (Ottawa: Queen's Printer, 1969). This Report has become known as the "Woods Report" after its Chairman, Professor H. D. Woods.

The second Report is: Ontario, Report of the Royal Commission Inquiry into Labour Disputes (Toronto: Queen's Printer, 1968). This Report has become known as the "Rand Report" after the Commissioner of the Inquiry, The Hon. Ivan C. Rand, C.C.

public at large is becoming disenchanted with both labour and management. The suggestion is growing that labour per se is to blame. This writer sees the problems as being far too complex for such neat answers, but changes are needed.

CHAPTER VI

THE ECONOMIC SETTING OF THE CANADIAN MINING INDUSTRY

6.1 Introduction

The purpose of this chapter is to firstly develop and illustrate the economic parameters of the metal mining industry in Canada and to establish the degree to which it is export oriented, as well as setting out the industry's rate of growth. Secondly we will validate the sample size. A major portion of this chapter will be utilized to set forth Canadian business cycles and their close correlation to those of the United States. Finally within these foregoing dimensions we shall discuss the posture of INCO.

6.2 Economic Setting

The value of total Canadian mineral production during the year 1969 amounted to \$4,690,642,200 as compared to \$4,725,341,147 for 1968. Sub-totals for 1969 were:

| | |
|----------------------|--------------------------|
| Metallics | \$ 2,320,947,545 |
| Non-Metallics | 447,088,679 |
| Fuels | 1,461,499,937 |
| Structural Materials | 461,206,039 ¹ |

¹Canada, Dominion Bureau of Statistics, Preliminary Estimates of Mineral Production of Canada 1969. (Obtained in direct correspondence with D.B.S. during early 1970.)

The Canadian mineral industry produces some 61 different minerals; however in dollar value the major items are crude petroleum, copper, nickel, iron ore, zinc, natural gas and asbestos. These in total account for 67 percent of Canada's mineral production.² In the production of metallics, three metals, i.e., copper, nickel and iron ore, produced \$1,488,536,443, representing 65 percent of all metallic output.

Approximately 60 percent of the Canadian mineral output is export oriented and this has become our nation's leading export sector, i.e., during 1967 mineral and metallic exports amounted to \$3,470,000,000--an all-time high--and represented 31 percent of Canada's exports. The major markets were: United States 58 percent, Britain 15 percent, Japan 8 percent, and the European Common Market 8 percent.³

In terms of total 1967 mineral production the metallics contribute 50.9 percent, non-metallics 9.4 percent, fuels 29.0 percent, and structural materials 10.7 percent. Within the metallic group copper contributed 12.8 percent, iron ore 10.3 percent, nickel 10.6 percent, and zinc 7.2 percent. Petroleum contributed 20.1 percent. Thus copper and nickel rank second and third in terms of total value contributed by the principal minerals, to Canadian output.⁴

The phenomenal growth of the minerals industry can be observed by noting that, in 1945, total mineral production had a value of \$498,758,181 for a per capita value of \$41.31, and that by 1967 produc-

²Canada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 595.

³Ibid., p. 595.

⁴Ibid., p. 599, Table 5.

tion had risen to \$4,403,579,072 with a per capita value of \$215.81. Per capita value in 1966 was \$198.49 reflecting an increase of \$16.32 for 1967, being the largest post-war increase except for 1955 which was \$17.01 per capita.⁵

The index of the volume of mineral production is a method of measuring an industry's absolute growth and also its comparative growth within the nation's economy. In 1966 the mineral industries index was 393.6 (1949 = 100) as compared to 274.5 (1949 = 100) for the industrial production of the economy as a whole. The rate of increase in mining net value has been about 50 percent greater than the net value rate of increase for primary and secondary industries as a whole. As a percentage of total primary industry, net value, it has risen from 20 percent to over 30 percent since 1949.⁶

This flow of mineral wealth comes from all our provinces and territories, but primarily from three regions, i.e., Ontario, Quebec and Alberta.⁷ During 1967 Ontario's mineral production was \$1,193,036,824; Alberta's was \$996,833,364; and Quebec's \$736,033,010.⁸

Such an industry as outlined, operating on non-renewable resources, requires a constant input of capital and repair expenditures. These two demands alone represented \$1,270,000,000 for 1967.⁹ Since 1960 there

⁵Ibid., p. 596, Table 1.

⁶Canada, Dominion Bureau of Statistics, Canada Year Book 1968 (Ottawa: Queen's Printer, 1968), p. 567.

⁷Canada Year Book 1969, pp. 599-600.

⁸Ibid.

⁹Ibid., p. 596.

have been four major areas of production increase in the industry:

- 1) Copper-Molybdenum
- 2) Potash
- 3) Nickel
- 4) Petroleum

The capital expenditures required have been immense, yet the industry is constantly growing and expanding.

It is reasonable to conclude that the mineral industry, and particularly the metal industry, is a very vital and major part of our annual Gross National Product. Mineral production represents over 10 per cent of our annual output of goods and services, of which some 60 per cent is contributed by metallic products.¹⁰ Of the resources oriented industries only agriculture exceeds mining in its contribution to the Canadian economy.

6.3 Sample Size and Its Validity

From this mineral industry we have for our study extracted a segment, i.e., the non-ferrous mining industry, and subjected it to certain areas of investigation. We approached 58 mining companies (Table 6.1) for copies of their collective agreements dating back to the original date of certification or as far back as they had copies. Some thirty firms responded in a favorable manner. The remainder of the firms either refused or neglected to answer our correspondence. Support from the United Steelworkers successfully filled this deficiency.

The collective agreements studied and the minerals concerned within

¹⁰Ibid., p. 1103.

TABLE 6.1

MINING COMPANIES ENCOMPASSED IN STUDY

| | | | |
|--|---|---|--|
| <p><u>British Columbia</u></p> <ul style="list-style-type: none"> : Bethelam Copper B.C. Molybdenum : Britannia Beach Canadian Exploration COMINCO (Trail, Kimberley and Bluebell Regions) Craigmont Mines Endako Mines : Giant Mascot Mines Granisle Copper : Highland Bell Mines : Reeves MacDonald Mines Wesfrob Mines : Western Mines <p><u>Alberta, Saskatchewan, Manitoba</u> <u>and Northwest Territories</u></p> <ul style="list-style-type: none"> Anglo-Rouyn Mines Eldorado Nuclear Hudson Bay M & S International Nickel Co. Can. : New Imperial Mines Pine Point Mines Sherritt Gordon Mines : United Keno Hill <p><u>Ontario</u></p> <ul style="list-style-type: none"> Canadian Jamieson : Con. Canadian Faraday (Metal Mines) Copperfields Mining Denison Mines Falconbridge Mines | <p><u>Ontario (cont'd)</u></p> <ul style="list-style-type: none"> : GECO International Nickel Co. Can. Kam-Kotia Mines Pronto Uranium Rio Algom Mines : Tribag Mines : Willroy Mines <p><u>Quebec</u></p> <ul style="list-style-type: none"> Campbell Chibougamau Mines Gaspé Copper : Heath Steele : Joutel Copper Lake Dufault Madeleine Mines : Manitou-Barvue Mines Mattagami Lake Mines : Mines de Poirer New Hosco Mines : Noranda Mines (Horne Mine) : Normetal Mines : Orchan Mines Patino Mining Corporation : Quemont Mines <p><u>Maritimes</u></p> <ul style="list-style-type: none"> ASARCO (Buchans Unit) : Atlantic Coast Copper British Newfoundland Exploration Brunswick Mining and Smelting : Consolidated Rambler First Maritime Mining : Nigadoo Mines | | |
| <p>: These mines did not respond to the author's request for data assistance, which was subsequently obtained from the various offices of the United Steelworkers of America.</p> <p>Other mines that the author wished to include but could not obtain data either from the firm or from the USW were:</p> <table border="0" style="width: 100%;"> <tbody> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Coast Copper Grandby Mining Noranda Mines (Boss Mtn.) Red Mountain Mines Texada Mines </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> Coppercorp Willecho Mines Cupra Mines Opemiska Copper Sullivan Mines </td> </tr> </tbody> </table> | | <ul style="list-style-type: none"> Coast Copper Grandby Mining Noranda Mines (Boss Mtn.) Red Mountain Mines Texada Mines | <ul style="list-style-type: none"> Coppercorp Willecho Mines Cupra Mines Opemiska Copper Sullivan Mines |
| <ul style="list-style-type: none"> Coast Copper Grandby Mining Noranda Mines (Boss Mtn.) Red Mountain Mines Texada Mines | <ul style="list-style-type: none"> Coppercorp Willecho Mines Cupra Mines Opemiska Copper Sullivan Mines | | |
| <p>Response from the mining firms was 41 percent of the total requests solicited by the author.</p> | | | |

this survey, i.e., copper, nickel, lead, zinc, molybdenum and uranium, represent we believe a valid sample of the non-ferrous mining industry in that the value of production from these six minerals in 1969 was \$1,618,676,664 and represented 70 percent of total Canadian metal production.¹¹ Appreciating that the Platinum Group production is primarily an INCO output and that silver is closely associated to lead-zinc production it is thus reasonable to say that our sample represents in production value close to three-quarters of the total annual metal production in Canada. We therefore believe that a valid sample of the Canadian non-ferrous mining industry has been selected.

This study has not included the various fuel industries because of the presence of unique collective bargaining within those industries. Nor has the ferrous mining industry been included primarily because of its open pit mining methods whereas much of the non-ferrous mining industry is of the underground method. Finally the gold mining industry was rejected because of its federal government subsidy structure.

6.4 Canadian Business Cycles

The Economic Council of Canada in its First Annual Review defined the basic economic and social goals for Canada to be:

- 1) full employment
- 2) a high rate of economic growth
- 3) reasonable stability of prices
- 4) a viable balance of payments
- 5) an equitable distribution of rising incomes.

¹¹Same source as note 1.

The achievement of such noteworthy goals¹² is subject to an understanding and control of the Canadian business cycle and the economy they operate within.

Changes in aggregate demand and the resulting impact on resources utilization have been a dominant feature of capitalistic industrial societies. This has resulted in business cycles. Such cycles have resulted in unemployment and loss of output. If we were able to reduce or eliminate their impact on the Canadian economy we would be more consistently able to move towards the achievement of our basic economic and social goals.¹³

The Canadian economy since approximately 1960 has been experiencing an extended period of economic expansion, but our present "inflation" problem and relatively high levels of unemployment clearly indicate that business cycles are not a thing of the past.

The term "business cycles" is used so freely in everyday economic discussions as to suggest that it has been clearly and concisely defined, yet such is not the case. A study of past records shows a vast variety of experiences in business cycles. In order to have some basic grasp of business cycles we need a definition and in this respect we will use that set forth by W. C. Mitchell:

Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprise: a cycle consists of expansion occurring at about the same time in many economic

¹²Canada, Economic Council of Canada, First Annual Review, Economic Goals for Canada to 1970 (Ottawa: Queen's Printer, 1954), p. 1.

¹³Canada, Economic Council of Canada, Business Cycles in Canada, Staff Study No. 17 by Derek A. White (Ottawa: Queen's Printer, 1967), p. 2.

activities, followed by similar general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic; in duration business cycles vary from more than one year to ten to twelve years; they are not divisible into shorter cycles of similar character with amplitudes approximating their own.¹⁴

The National Bureau of Economic Research (NBER) has developed a method of identifying when an economic turning point has occurred. First seasonal fluctuations are removed from the economic time series, then "specific cycles" sitting out their "peaks" and "troughs" are identified and from this a general business cycle (reference cycle) can be developed. The period from trough (low point) to peak (upper turning point) is a period of expansion. The period from peak to the next trough is referred to as a period of contraction. Short period shallow amplitude contractions are usually termed "recessions" whereas long period deep amplitude contractions are usually termed "depressions."

Studies concerning the United States and Canada (Table 6.2) show that turning points in the Canadian economy have a high correlation with those of the United States. Over a period of almost 100 years the turning points for the Canadian economy have not, except on three occasions, diverged from the United States turning points by more than six months.¹⁵ Table 6.2 also confirms that since WW II the contraction periods have been shorter and expansion periods longer than in earlier periods. These findings are further tabulated in Tables 6.3 and 6.4. Thus the post-war period is lacking a "depression" but "recessions" are present, as

¹⁴W. C. Mitchell, Business Cycles: The Problem and Its Setting (New York: National Bureau of Economic Research, 1927), p. 468.

¹⁵White, Business Cycles in Canada, p. 35 (see above, note 13).

TABLE 6.2

U. S. and Canadian Reference Cycle Dates

| | U. S. | Canadian | Lead (-) or Lag (+) |
|--------|------------|------------|---------------------------|
| Peak | Oct. 1873 | Nov. 1873 | + 1 |
| Trough | Mar. 1879 | May 1879 | + 2 |
| Peak | Mar. 1882 | July 1882 | + 4 |
| Trough | May 1885 | Mar. 1885 | - 2 |
| Peak | Mar. 1887 | Feb. 1887 | - 1 |
| Trough | Apr. 1888 | Feb. 1888 | - 2 |
| Peak | July 1890 | July 1890 | 0 |
| Trough | May 1891 | Mar. 1891 | - 2 |
| Peak | Jan. 1893 | Feb. 1893 | + 1 |
| Trough | June 1894 | Mar. 1894 | - 3 |
| Peak | Dec. 1895 | Aug. 1895 | - 4 |
| Trough | June 1897 | Aug. 1896 | -10 |
| Peak | June 1899 | Apr. 1900 | +10 |
| Trough | Dec. 1900 | Feb. 1901 | + 2 |
| Peak | Sept. 1902 | Dec. 1902 | + 3 |
| Trough | Aug. 1904 | June 1904 | - 2 |
| Peak | May 1907 | Dec. 1906 | - 5 |
| Trough | June 1908 | July 1908 | + 1 |
| Peak | Jan. 1910 | Mar. 1910 | + 2 |
| Trough | Jan. 1912 | July 1911 | - 6 |
| Peak | Jan. 1913 | Nov. 1912 | - 2 |
| Trough | Dec. 1914 | Jan. 1915 | + 1 |
| Peak | Aug. 1918 | Jan. 1918 | - 7 |
| Trough | Mar. 1919 | Apr. 1919 | + 1 |
| Peak | Jan. 1920 | June 1920 | + 5 |
| Trough | July 1921 | Sept. 1921 | + 2 |
| Peak | May 1923 | June 1923 | + 1 |
| Trough | July 1924 | Aug. 1924 | + 1 |
| Peak | Oct. 1926 | * | |
| Trough | Nov. 1927 | * | |
| Peak | Aug. 1929 | Apr. 1929 | - 4 |
| Trough | Mar. 1933 | Mar. 1933 | 0 |
| Peak | May 1937 | July 1937 | + 2 |
| Trough | June 1938 | Oct. 1938 | + 4 |
| Peak | Feb. 1945 | n. a. | n. a. |
| Trough | Oct. 1945 | Feb. 1946 | + 4 |
| Peak | Nov. 1948 | Oct. 1948 | - 1 |
| Trough | Oct. 1949 | Sept. 1949 | - 1 |
| Peak | July 1953 | May 1953 | - 2 |
| Trough | Aug. 1954 | June 1954 | - 2 |
| Peak | July 1957 | Apr. 1957 | - 3 |
| Trough | Apr. 1958 | Apr. 1958 | 0 |
| Peak | May 1960 | Jan. 1960 | - 4 |
| Trough | Feb. 1961 | Mar. 1961 | + 1 |

* No comparable turning point.

Source: Canada, Economic Council of Canada, Business Cycles in Canada, Staff Study No. 17 by Derek A. White (Ottawa: Queen's Printer, 1967), p. 236.

TABLE 6.3

Average Durations of Canadian Peacetime Contractions and Expansions,
Selected Periods, 1873-1965

| Period | Contractions | | Expansions | |
|------------------------|--------------|------------------------------------|------------|------------------------------------|
| | Number | Average Duration (In months) | Number | Average Duration (In months) |
| 1873-96 | 6 | 24 | 5 | 26 |
| 1919-38 | 4 | 23 | 4 | 36 ⁽¹⁾ |
| 1946-65 ⁽²⁾ | 3 | 12 | 4 | 39 ⁽³⁾ |

(1) Canada is regarded as having had a long uninterrupted business expansion from 1924 to 1929. The United States, on the other hand, is regarded as having had a cyclical peak in 1926 and a trough in 1927. This difference in historical experience is an important factor in the relatively longer duration of expansions in Canada than in the United States prior to the Second World War (see Table 2).

(2) Excludes Korean War expansion and following contraction.

(3) Includes, as of December 1966, 69 months of the current continuing expansion.

Source: Same as Table 6.2, but p. 37.

TABLE 6.4

Average Durations of U. S. Peacetime Contractions and Expansions,
Selected Periods, 1854-1965

| Period | Contractions | | Expansions | |
|--------------------------|--------------|------------------------------------|------------|------------------------------------|
| | Number | Average Duration (In months) | Number | Average Duration (In months) |
| 1854-1900 ⁽¹⁾ | 9 | 23 | 10 | 25 |
| 1900-1939 ⁽²⁾ | 10 | 20 | 9 | 24 |
| 1945-1965 ⁽³⁾ | 3 | 10 | 4 | 42 ⁽⁴⁾ |

(1) Excludes Civil War and following contraction.

(2) Excludes First World War and following contraction.

(3) Excludes Korean War and following contraction.

(4) Includes, as of December 1966, 70 months of the current continuing expansion.

Source: Same as Table 6.2, but p. 37.

illustrated in Table 6.5. Further we should note that the full cycle is now in the order of forty months duration, having increased considerably.

TABLE 6.5

Business Cycles in Canada, 1873-1961

| Business Cycle Reference Dates | | Duration in Months | | | |
|--------------------------------|--------------|----------------------|----------------------|------------------------|--------------------|
| | | Contractions | Expansions | Full Cycle | |
| Trough | Peak | Peak to Trough | Trough to Peak | Trough to Trough | Peak to Peak |
| | Nov. 1873 | -- | -- | -- | -- |
| May 1879 | July 1882 | 66 ^d | 38 ^d | -- | 104 ^d |
| Mar. 1885 | Feb. 1887 | 32 | 23 | 70 ^d | 55 |
| Feb. 1888 | July 1890 | 12 | 29 | 35 | 41 |
| Mar. 1891 | Feb. 1893 | 8 | 23 | 37 | 31 |
| Mar. 1894 | Aug. 1895 | 13 ^d | 17 ^d | 36 ^d | 30 ^d |
| Aug. 1896 | Apr. 1900 | 12 | 44 | 29 ^d | 56 |
| Feb. 1901 | Dec. 1902 | 10 | 22 | 54 | 32 |
| June 1904 | Dec. 1906 | 18 | 30 | 40 | 48 |
| July 1908 | Mar. 1910 | 19 ^d | 20 ^d | 49 ^d | 39 ^d |
| July 1911 | Nov. 1912 | 16 | 16 | 36 ^d | 32 |
| Jan. 1915 | Jan. 1918 | 26 | 36 | 42 | 62 |
| Apr. 1919 | June 1920 | 15 | 14 | 51 | 29 |
| Sept. 1921 | June 1923 | 15 ^d | 21 ^d | 29 ^d | 36 ^d |
| Aug. 1924 | Apr. 1929 | 14 | 56 | 35 ^d | 70 |
| Mar. 1933 | July 1937 | 47 ^d | 52 ^d | 103 ^d | 99 ^d |
| Oct. 1938 | n. a. | 15 | n. a. | 67 ^d | n. a. |
| Feb. 1946 | Oct. 1948 | n. a. | 32 | 88 | n. a. |
| Sept. 1949 | May 1953 | 11 | 44 | 43 | 55 |
| June 1954 | Apr. 1957 | 13 | 34 | 57 | 47 |
| Apr. 1958 | Jan. 1960 | 12 | 21 | 46 | 33 |
| Mar. 1961 | (Dec. 1966)* | 14 | (69) | 35 | (83) |

* December 1966, although not identified as a business cycle peak, is treated as a peak in this Table to permit comparison of the present durations of the current expansion and over-all cycle with those of earlier cycles.

Note: Underlined figures are the wartime expansions and the full cycles which include the wartime expansions.

^d Phases or cycles influenced by depressions. Phases influenced by depression include both the contraction and the ensuing expansion. These phases have been selected by taking the Canadian phases corresponding with U. S. phases known to be influenced by depression.

Source: Same as Table 6.2, but p. 237.

The interaction of the forces of supply and demand is such that no single neat economic model can serve to explain the instabilities

generated and transmitted within the North American economy.¹⁶ It is however generally agreed that the root cause of business cycles is the volatility of investment schedules, which is a reflection of shifting aggregate expenditure patterns. Until recently the major components of our economy were personal consumption and business investment. However during the past few years government expenditures have risen to such a level as to likely enable the various governments to more successfully attack the problem of business cycles.

White in his ECC study puts the matter in its proper perspective:

It appears more appropriate to visualize Canadian business cycle experience as an integral feature of common North American experience than to regard it as reflecting the impact upon Canada of business cycles generated exclusively in the United States.¹⁷

Canada is an "open economy" and thus is very susceptible to economic transmissions via its foreign trade structure. Some 40 percent of Canada's commodity production is exported but more noticeable is the fact that 25 percent of this commodity production flows to the United States.¹⁸ The major export items are newsprint, pulp, paper, iron ore, non-ferrous metals, natural gas and electricity, all of which require large capital inputs, i.e., fixed investments, much of which flows from the United States. Table 6.6 sets out the magnitude of United States investment in Canada. Total foreign investment by 1966 was \$32,092,000,000, of which the United States has supplied \$25,724,000,000.

Brecher and Reisman in their report on Canada's economic prospects

¹⁶Ibid., p. 55.

¹⁷Ibid., p. 6.

¹⁸Ibid., p. 85.

concluded:

So interwoven are their (i.e., Canada and the United States) patterns of technology, corporate decision-making, business confidence, and consumer behavior, that cycle transmission has been far more complex and effective than would appear from exclusive concern with the more direct and tangible links.¹⁹

Also, Rosenbluth, concerning Canada's cyclical sensitivities, states:

The basic fact of dependence on the United States business conditions will remain the major feature of Canadian fluctuations.²⁰

TABLE 6.6

Foreign Capital Invested in Canada, by Type of Investment, as at Dec. 31, 1959-66
(Millions of dollars)

| Type of Investment | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 ^r | 1965 ^r | 1966 ^p |
|--|--------------------|---------------|---------------|---------------|---------------|--------------------|--------------------|--------------------|
| Government Securities— | | | | | | | | |
| Federal..... | 612 | 611 | 657 | 788 | 899 | 897 | 880 | 649 |
| Provincial..... | 1,585 | 1,632 | 1,743 | 1,862 | 2,217 | 2,564 | 2,828 | 3,171 |
| Municipal..... | 915 | 1,026 | 1,038 | 1,087 | 1,091 | 1,221 | 1,257 | 1,333 |
| Totals, Government Securities..... | 3,112 | 3,269 | 3,438 | 3,737 | 4,207 | 4,682 | 4,965 | 5,153 |
| Public Utilities— | | | | | | | | |
| Railways..... | 1,405 | 1,406 | 1,366 | 1,270 | 1,231 | 1,236 | 1,038 | 1,064 |
| Other (excluding pipelines and public enterprises)..... | 739 | 743 | 656 | 691 | 590 | 605 | 666 | 758 |
| Totals, Public Utilities..... | 2,144 | 2,149 | 2,022 | 1,961 | 1,821 | 1,841 | 1,704 | 1,822 |
| Manufacturing (excluding petroleum refining)..... | 5,726 | 6,115 | 6,446 | 6,731 | 7,074 | 7,532 | 8,366 | 9,280 |
| Petroleum and natural gas..... | 3,455 | 3,727 | 4,029 | 4,384 | 4,703 | 4,799 | 5,192 | 5,720 |
| Other mining and smelting..... | 1,783 | 1,977 | 2,094 | 2,297 | 2,347 | 2,473 | 2,555 | 2,871 |
| Merchandising..... | 878 | 872 | 917 | 972 | 1,003 | 1,092 | 1,196 | 1,297 |
| Financial..... | 2,190 | 2,380 | 2,616 | 2,658 | 2,817 | 2,503 | 2,875 | 3,135 |
| Other enterprises..... | 284 | 297 | 348 | 366 | 361 | 408 | 483 | 550 |
| Miscellaneous investments..... | 1,285 ¹ | 1,428 | 1,696 | 1,753 | 1,771 | 2,037 ² | 2,171 ² | 2,264 ² |
| Totals, Investment..... | 20,857 | 22,214 | 23,606 | 24,889 | 26,134 | 27,367 | 29,507 | 32,092 |
| United States ³ | 15,826 | 16,718 | 18,001 | 19,155 | 20,479 | 21,443 | 23,505 | 25,724 |
| Britain ³ | 3,199 | 3,359 | 3,381 | 3,359 | 3,331 | 3,476 | 3,498 | 3,518 |
| Other countries..... | 1,832 | 2,137 | 2,224 | 2,335 | 2,324 | 2,448 | 2,704 | 2,850 |

¹ New series. ² Includes \$273,000,000 of Columbia River Treaty receipts. ³ Includes some investments held for residents of other countries.

Source: Canada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 1119.

¹⁹L. Brecher and S. S. Reisman, Canada-U.S. Economic Relations (Ottawa: Queen's Printer, 1957), pp. 63-64.

²⁰G. Rosenbluth, "Changing Structural Factors in Canada's Cyclical Sensitivity," CJEPS, XXIV, No. 1 (February 1958), 21-24.

Notwithstanding these many similarities and trends between the Canadian and United States economy there is one noticeable area of difference. Canada tends to have relatively higher and more rapidly rising levels of investment (particularly in construction) during North American expansions. Also, during these investment boom periods, demand and output rise relatively more in Canada than in the United States. These areas of investment sensitivity are closely associated to our Canadian natural resources which require large blocks of capital to develop, thus reflecting the capital intensive nature of our resources oriented industries.²¹

White concludes that minor shocks caused by shifts in United States-Canada monetary policies, lack of investment responsiveness, changes in consumer taste and crop failures will continue to be present and to affect our economy. Major shocks due to wars, changes in trade arrangements and shifts in defence spending can be more controlled than in the past. Swings in demand and supply will, due to technology and labour, continue, as will swings in capital formation.²²

Supplementing Table 6.5, which sets out the time intervals of contractions and expansions from May 1879 through to December 1966, is Table 6.7 which sets out the GNP in current and constant (1949) dollars for the years 1938 through to 1967. Table 6.8 lists the GNP percentage growth per year before and after price increase adjustments, for the period 1949 to 1969 inclusive. Chart 6-1 illustrates the GNP in current and constant dollars 1949 to 1969 and Chart 6-2 shows percentage growths

²¹White, Business Cycles in Canada, p. 7.

²²Ibid., p. 13.

of GNP before and after being deflated for price changes, for the years 1949 to 1969 inclusive. Chart 6-1 also illustrates the magnitude of price increases that has been developing over time. The USW in bargaining with INCO will try vigorously to close this gap and in so doing may (we contend) conclude an agreement not in unison with Canadian cyclical behavior. This will be investigated in ensuing chapters.

TABLE 6.7

Gross National Product in Current and Constant (1949) Dollars, 1938-67

NOTE.—Comparable figures for 1927-37 are given in the 1965 Year Book, p. 1009.

| Year | Millions of Current Dollars | Millions of Constant (1949) Dollars | Year | Millions of Current Dollars | Millions of Constant (1949) Dollars |
|-----------|-----------------------------|-------------------------------------|-----------|-----------------------------|-------------------------------------|
| 1938..... | 5,278 | 8,871 | 1953..... | 25,020 | 20,794 |
| 1939..... | 5,636 | 9,536 | 1954..... | 24,871 | 20,186 |
| 1940..... | 6,743 | 10,911 | 1955..... | 27,132 | 21,920 |
| 1941..... | 8,328 | 12,486 | 1956..... | 30,585 | 23,811 |
| 1942..... | 10,327 | 14,816 | 1957..... | 31,909 | 24,117 |
| 1943..... | 11,088 | 15,357 | 1958..... | 32,894 | 24,397 |
| 1944..... | 11,850 | 15,927 | 1959..... | 34,915 | 25,242 |
| 1945..... | 11,835 | 15,552 | 1960..... | 36,287 | 25,849 |
| 1946..... | 11,850 | 15,251 | 1961..... | 37,471 | 26,515 |
| 1947..... | 13,165 | 15,446 | 1962..... | 40,575 | 28,287 |
| 1948..... | 15,120 | 15,735 | 1963..... | 43,424 | 29,740 |
| 1949..... | 16,343 | 16,343 | 1964..... | 47,393 | 31,650 |
| 1950..... | 18,006 | 17,471 | 1965..... | 52,203 | 33,834 |
| 1951..... | 21,170 | 18,547 | 1966..... | 58,120 | 36,028 |
| 1952..... | 23,995 | 20,027 | 1967..... | 62,068 | 37,038 * |

*1968..... 67,600 (Millions of Current Dollars)

1969..... 73,900 (Millions of Current Dollars)

Source: Same as Table 6.6, but p. 1093.

Chart 6-1 further re-enforces White's findings that there has been a noticeable absence of depressions as noted by the absence of high amplitude shifts, but there have been recessions as set out by low amplitude shifts as in the period 1956-1960.

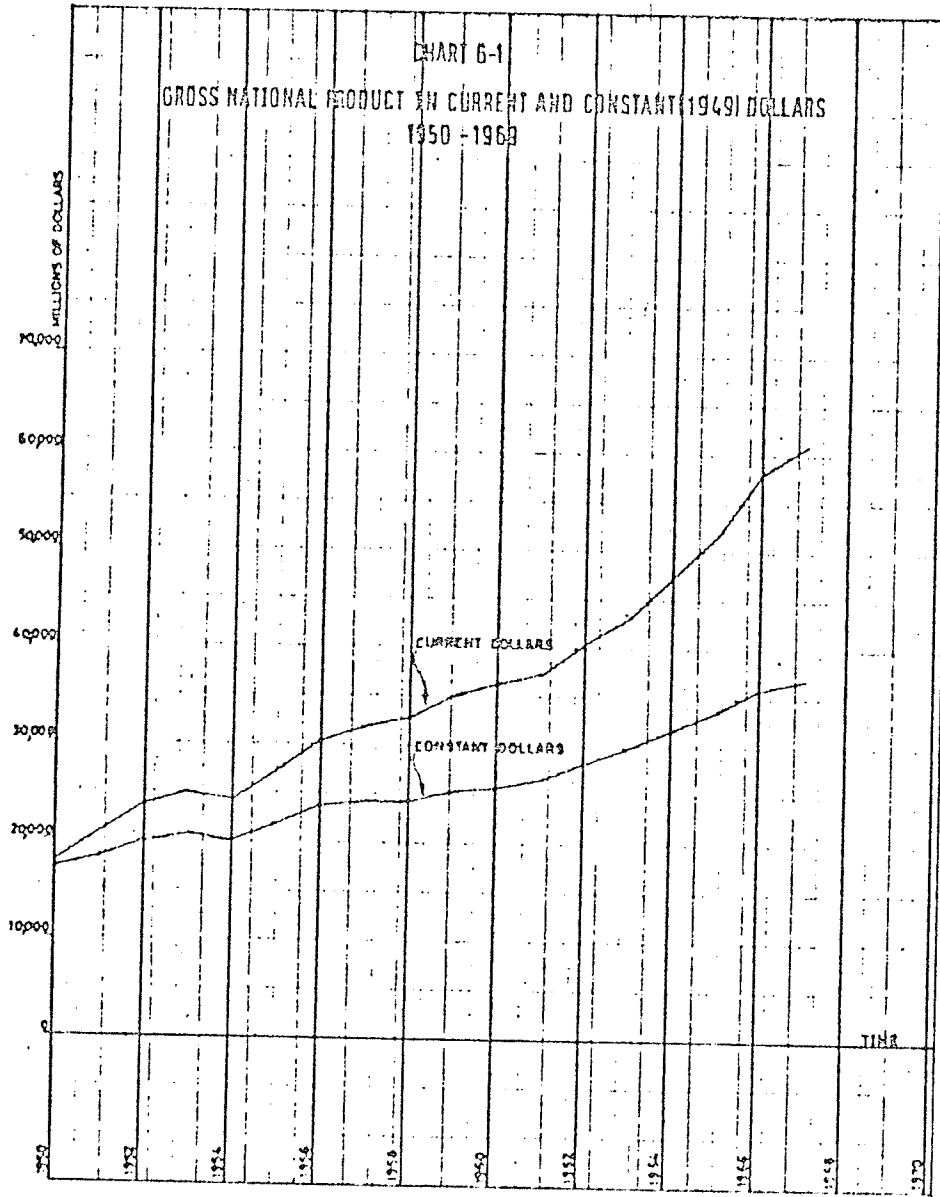
TABLE 6.8
GROSS NATIONAL PRODUCT PERCENTAGE GROWTH
IN CANADA: 1949-1969

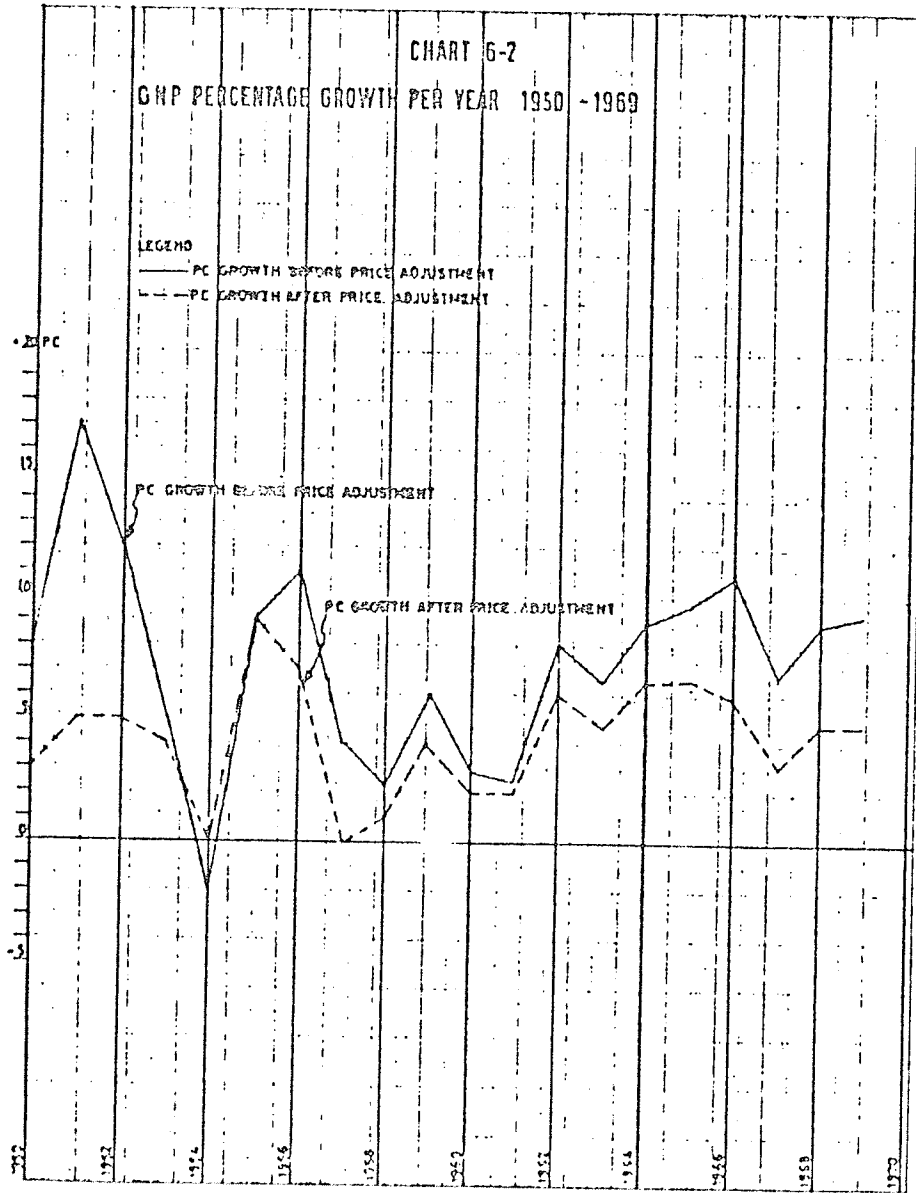
| Year | Before Price Adjustment | After Price Adjustment |
|-------------------|-------------------------------|------------------------------|
| 1949 | 4.0% | 2.0% |
| 1950 | 8.0 | 3.0 |
| 1951 | 17.0 | 5.0 |
| 1952 | 12.0 | 5.0 |
| 1953 | 5.0 | 4.0 |
| 1954 | -2.0 | -- |
| 1955 | 9.0 | 9.0 |
| 1956 | 11.0 | 7.0 |
| 1957 | 4.0 | 0.0 |
| 1958 | 2.3 | 1.0 |
| 1959 | 6.0 | 4.0 |
| 1960 | 3.0 | 2.0 |
| 1961 | 2.5 | 2.0 |
| 1962 | 8.0 | 6.0 |
| 1963 | 6.6 | 4.7 |
| 1964 | 9.0 | 6.5 |
| 1965 | 9.7 | 6.6 |
| 1966 | 10.8 | 5.9 |
| 1967 | 6.9 | 3.1 |
| 1968 ^a | 8.9 | 4.8 |
| 1969 ^b | 9.3 | 4.8 |

Sources: Canada, Dominion Bureau of Statistics,
Canada Year Book for various years
(Ottawa: Queen's Printer).

^aCanada, Dominion Bureau of Statistics,
Canadian Statistical Review (Ottawa:
Queen's Printer, May 1969).

^bSame as (a) but March 1970.





6.5 Canadian Metal Prices and Markets

Our next consideration will be to investigate the metal markets for certain Canadian metals and also the pricing mechanism. We should recall that Canada as a part of a North American economy is most susceptible to cycle transmissions. Foreign, especially United States influences are most present and may (and likely do) cause cyclical shifts which may or may not be beneficial to our domestic economy.²³

Under such a set of conditions it should not be surprising to find that Canada has little control over metal prices, except for nickel, and that this lack of control has a considerable impact on our economy. The metals we shall investigate are copper (Cu), nickel (Ni), lead (Pb), zinc (Zn) and molybdenum (Mo). Each metal's prime market will also be established, in order to set out the industry's market orientation (see Tables 6.9 to 6.13 inclusive).

A considerable part of Canada's copper production is domestically consumed; the residual is exported primarily to the United States and the United Kingdom. World copper prices are set, and at times in a very volatile manner, by the prime American producers such as Philips-Dodge, Anaconda, Kennecott and American Smelting and Refining and by the London Metal Exchange acting on behalf of the South African producers. Of the 558,071 tons of copper produced in Canada during 1969, INCO produced one-third and was Canada's largest copper producer. Canadian copper output represents approximately 10 percent of the free world output and thus has a minimal influence on world prices.

²³Canada Year Book 1969, pp. 1117-8.

TABLE 6.9

COPPER: PRICES, WORLD AND CANADIAN PRODUCTION
AND PRIME MARKETS FOR THIS OUTPUT

| Year | Yearly Average Price per lb. (Cdn.) | World Price Setter | World Production in Tons | Cdn. Production in Tons | Cdn. Production as a p.c. of World Production | Principal Areas of Consumption of Canadian Output ^a |
|------|-------------------------------------|--------------------|--------------------------|-------------------------|---|--|
| 1945 | 11.70¢ | U.S. | 2,150,000 | 215,416 | 10.0% | Major markets for Canadian output after domestic allocation are the U.S. and U.K. for concentrates. Both the U.S. and U.K. import approx. the same amounts of refined shapes. Canada consumes approx. 50 p.c. of its own output. |
| 1946 | 11.70 | & | 1,860,000 | 168,321 | 9.0 | |
| 1947 | 16½-21½ | L.M.E. | 1,976,000 | 204,000 | 10.4 | |
| 1948 | 21½-23½ | " | 2,107,000 | 218,463 | 10.3 | |
| 1949 | 19.40 | " | 2,235,000 | 239,149 | 11.3 | |
| 1950 | 21.50 | " | 2,744,500 | 261,363 | 9.5 | |
| 1951 | 26.25 | " | 2,904,000 | 269,915 | 9.2 | |
| 1952 | 33.40 | " | 3,008,500 | 257,165 | 8.5 | |
| 1953 | 28.70 | " | 3,025,000 | 251,082 | 8.4 | |
| 1954 | 26.70 | " | 3,410,000 | 332,970 | 9.8 | |
| 1955 | 37.50 | " | 3,751,000 | 358,490 | 10.5 | |
| 1956 | 41.80 | " | 4,158,000 | 390,028 | 9.4 | |
| 1957 | 29.60 | " | 4,257,000 | 396,770 | 9.2 | |
| 1958 | 25.00 | " | 4,147,000 | 379,500 | 9.1 | |
| 1959 | 31.60 | " | 4,444,000 | 434,830 | 9.9 | |
| 1960 | 30.25 | " | 4,650,000 | 439,622 | 9.4 | |
| 1961 | 29.10 | " | 4,840,000 | 439,088 | 9.0 | |
| 1962 | 30.90 | " | 5,090,000 | 457,385 | 9.0 | |
| 1963 | 31.50 | " | 5,220,000 | 458,396 | 8.8 | |
| 1964 | 33.33 | " | 5,730,000 | 486,900 | 8.5 | |
| 1965 | 37.60 | " | 6,020,000 | 517,247 | 8.6 | |
| 1966 | 45.00 | " | 4,665,000 | 509,000 | 10.1 | |
| 1967 | 47.25 | " | 5,579,000 | 592,299 | 10.1 | |
| 1968 | 48.00 | " | 5,849,000 | 620,071 | 10.0 | |
| 1969 | 51.55 | " | n/a | 558,071 | n/a | |

Sources: United States, Department of Interior, Mineral Year Book (Washington: United States Printing Office), Volumes 1945-1965.

Canada, Department of Energy, Mines and Resources, Mineral Year Book (Ottawa: Queen's Printer), Volumes 1948-1968.

^aCanada, Department of Energy, Mines and Resources, The Canadian Copper Industry, 1966 (Ottawa: Queen's Printer, 1967).

TABLE 6.10

NICKEL: PRICES, WORLD AND CANADIAN PRODUCTION
AND PRIME MARKETS FOR THIS OUTPUT

| Year | Yearly Average Price per lb. (Cdn.) | World Price Setter | World Production in Tons | Cdn. Production in Tons | Cdn. Production as a p.c. of World Production | Principal Areas of Consumption of Canadian Output ^a | |
|------|-------------------------------------|--------------------|--------------------------|-------------------------|---|--|--------|
| | | | | | | U.S. | U.K. |
| 1945 | 35.00¢ | INCO | 153,000 | 111,189 | 70.0-75.0% | 86,488 | 16,683 |
| 1946 | 35.00 | " | 127,000 | 86,031 | 70.0-75.0 | 82,203 | 13,888 |
| 1947 | 35.00 | " | n/a | 106,626 | 70.0-75.0 | 74,063 | 26,845 |
| 1948 | 40.00 | " | n/a | 137,740 | 78.0 | 96,433 | 25,555 |
| 1949 | 40.00 | " | 165,000 | 128,328 | 79 | 86,525 | 28,265 |
| 1950 | 48.0-50.0 | " | 159,500 | 122,798 | 77 | 88,543 | 21,644 |
| 1951 | 55.10 | " | 177,100 | 136,979 | 77 | 88,394 | 31,342 |
| 1952 | 55.80 | " | 190,300 | 139,813 | 70 | 95,292 | 30,952 |
| 1953 | 55.50 | " | 223,300 | 143,341 | 68 | 95,752 | 32,592 |
| 1954 | 57.50 | " | 261,800 | 177,430 | 65 | 105,906 | 32,016 |
| 1955 | 63.00 | " | 289,300 | 192,390 | 65 | 116,162 | 33,910 |
| 1956 | 70.00 | " | 311,300 | 196,372 | 65 | 112,993 | 34,003 |
| 1957 | 70.00 | " | 345,400 | 207,858 | 60 | 109,773 | 34,299 |
| 1958 | 70.50 | " | 271,700 | 153,560 | 56 | 76,139 | 39,271 |
| 1959 | 70.50 | " | 314,000 | 186,555 | 59 | 88,680 | 34,856 |
| 1960 | 70.00 | " | 358,000 | 214,774 | 60 | 69,904 | 51,626 |
| 1961 | 82.50 | " | 403,000 | 232,991 | 58 | 110,120 | 70,332 |
| 1962 | 84.00 | " | 401,000 | 237,044 | 59 | 111,558 | 54,526 |
| 1963 | 84.00 | " | 384,000 | 219,941 | 57 | 103,954 | 56,603 |
| 1964 | 84.00 | " | 423,000 | 228,496 | 54 | 116,131 | 77,031 |
| 1965 | 84.00 | " | 472,000 | 268,837 | 57 | 137,532 | 69,590 |
| 1966 | 92.10 | " | 409,200 | 234,061 | 57 | 121,081 | 69,541 |
| 1967 | 101.50 | " | 481,562 | 248,647 | 57 | | |
| 1968 | 101.50 | " | 551,548 | 263,848 | 57 | | |
| 1969 | 112.80 | " | | 263,325 | | | |
| 1970 | 137.50 | " | | | | | |

Sources: United States, Department of Interior, Mineral Year Book (Washington: United States Printing Office), Volumes 1945-1965.

Canada, Department of Energy, Mines and Resources, Mineral Year Book (Ottawa: Queen's Printer), Volumes 1948-1968.

^aCanada, Department of Energy, Mines and Resources, Nickel, Canada and the World (Ottawa: Queen's Printer, 1968), pp. 163, 170.

No effort has been made to determine if discount prices do or do not exist.

TABLE 6.11

LEAD: PRICES, WORLD AND CANADIAN PRODUCTION
AND PRIME MARKETS FOR THIS OUTPUT

| Year | Yearly Average Price per lb. (Cdn.) | World Price Setter | World Production in Tons | Cdn. Production* in Tons | Cdn. Production as a p.c. of World Production | Principal Areas of Consumption of Canadian Output |
|------|-------------------------------------|--------------------|--------------------------|--------------------------|---|---|
| 1945 | 6.5¢ | U.S. | 1,250,000 | 147,999 | 12.0% | Domestic and U.S. Markets |
| 1946 | 8.25-12.25 | " | 1,166,000 | 150,360 | 12.0 | |
| 1947 | 10.65-14.25 | " | 1,251,300 | 146,668 | 12.0 | |
| 1948 | 15.00-21.50 | " | 1,300,000 | 167,251 | 12.0 | |
| 1949 | 21.50-12.00 | " | 1,590,000 | 162,000 | 12.0 | |
| 1950 | 13.00 | " | 1,822,700 | 169,530 | 12.0 | |
| 1951 | 17.49 | U.S. & | 1,817,200 | 161,769 | 12.0 | |
| 1952 | 16.47 | L.M.E. | 2,002,000 | 164,532 | 12.0 | |
| 1953 | 13.48 | " | 2,090,000 | 195,379 | 12.0 | |
| 1954 | 14.81 | " | 2,464,000 | 240,350 | 10.0 | |
| 1955 | 15.14 | " | 2,607,000 | 222,970 | 10.0 | |
| 1956 | 16.01 | " | 2,684,000 | 207,680 | 10.0 | |
| 1957 | 14.66 | " | 2,794,000 | 199,760 | 10.0 | |
| 1958 | 14.66 | " | 2,560,000 | 186,680 | 10.0 | |
| 1959 | 12.01 | " | 2,530,000 | 186,696 | 10.0 | |
| 1960 | 11.75 | " | 2,560,000 | 204,907 | 7.5 | |
| 1961 | 10.21 | " | 2,630,000 | 182,557 | 7.5 | |
| 1962 | 9.43 | " | 2,760,000 | 211,321 | 7.5 | |
| 1963 | 10.94 | " | 2,800,000 | 198,988 | 7.5 | |
| 1964 | 13.42 | " | 2,835,000 | 206,359 | 7.5 | |
| 1965 | 15.50 | " | 2,975,000 | 303,405 | 7.5 | |
| 1966 | 15.00 | " | 2,221,800 | 302,952 | 13.0 | |
| 1967 | 14.00 | " | 2,395,400 | 323,175 | 13.0 | |
| 1968 | 13.50 | " | 2,461,000 | 363,356 | 14.0 | |
| 1969 | 15.19 | " | | 315,031 | | |
| 1970 | 16.50 | " | | | | |

Sources: See Table 6.9, sources 1 and 2.

TABLE 6.12

ZINC: PRICES, WORLD AND CANADIAN PRODUCTION
AND PRIME MARKETS FOR THIS OUTPUT

| Year | Yearly Average Price per lb. (Cdn.) | World Price Setter | World Production in Tons | Cdn. Production in Tons | Cdn. Production as a p.c. of World Production | Principal Areas of Consumption of Canadian Output |
|------|-------------------------------------|--------------------|--------------------------|-------------------------|---|---|
| 1945 | 8.25¢ | U.S. | 1,273,800 | 166,302 | 13.0% | Domestic, U.K., and U.S. markets. |
| 1946 | 9.87 | " | 1,406,500 | 168,431 | 13.0 | |
| 1947 | 12.48 | " | 1,687,245 | 185,500 | 13.0 | |
| 1948 | 14.50 | " | 1,810,300 | 195,600 | 13.0 | |
| 1949 | 12.08 | " | 1,940,000 | 288,000 | 13.0 | |
| 1950 | 13.43 | " | 2,326,500 | 311,928 | 13.0 | |
| 1951 | 17.99 | " | 2,498,100 | 340,395 | 13.0 | |
| 1952 | 16.21 | " | 2,774,200 | 366,004 | 13.0 | |
| 1953 | 10.86 | " | 2,838,000 | 399,199 | 13.5 | |
| 1954 | 10.68 | " | 3,223,000 | 403,600 | 13.5 | |
| 1955 | 12.30 | " | 3,498,000 | 476,630 | 13.5 | |
| 1956 | 13.49 | " | 3,696,000 | 464,860 | 13.5 | |
| 1957 | 11.40 | " | 3,762,000 | 450,450 | 12.0 | |
| 1958 | 10.31 | " | 3,320,000 | 425,099 | 12.0 | |
| 1959 | 11.46 | " | 3,360,000 | 396,008 | 12.0 | |
| 1960 | 12.95 | " | 3,510,000 | 405,620 | 12.0 | |
| 1961 | 11.55 | " | 3,810,000 | 443,099 | 12.0 | |
| 1962 | 11.63 | " | 3,890,000 | 501,937 | 12.0 | |
| 1963 | 12.01 | " | 3,970,000 | 497,180 | 12.5 | |
| 1964 | 13.57 | " | 4,425,000 | 729,939 | 16.5 | |
| 1965 | 14.50 | " | 4,750,000 | 911,432 | 19.5 | |
| 1966 | 14.50 | " | 4,024,500 | 1,041,762 | 25.0 | This increase in Canada's share of world production is due to the Mattagami Lake Mines (Noranda Group). |
| 1967 | 13.50 | " | 4,206,000 | 1,244,519 | 30.0 | |
| 1968 | 13.50 | " | 4,350,000 | 1,285,142 | 30.0 | |
| 1969 | 14.67 | " | | 1,196,290 | | |
| 1970 | 15.50 | " | | | | |

Sources: See Table 6.9, sources 1 and 2.

TABLE 6.13

MOLYBDENUM: PRICES, WORLD AND CANADIAN PRODUCTION
AND PRIME MARKETS FOR THIS OUTPUT

| Year | Yearly Average Price per lb. (Cdn.) | World Price Setter | World Production in Tons | Cdn. Production in Tons | Cdn. Production as a p.c. of World Production | Principal Areas of Consumption of Canadian Output |
|------|-------------------------------------|--------------------|--------------------------|-------------------------|---|---|
| 1945 | 45.00¢ | U.S. | 15,900 | 220 | | Markets are Domestic, Japan and U.S. |
| 1946 | 45.00 | & | 10,000 | 170 | | |
| 1947 | 41.50 | L.M.E. | n/a | 399 | | |
| 1948 | 41.50 | " | n/a | 0 | | |
| 1949 | 54.00 | " | 11,500 | 0 | | |
| 1950 | 60.00 | " | 15,840 | 28 | | |
| 1951 | 60.00 | " | 23,100 | 104 | | |
| 1952 | 60.00 | " | 24,420 | 148 | | |
| 1953 | 60.00 | " | 35,300 | 212 | | |
| 1954 | 60.00 | " | 35,310 | 497 | | |
| 1955 | 60.00 | " | 37,620 | 458 | | |
| 1956 | 60.00 | " | 35,150 | 463 | | |
| 1957 | 118.00 | " | 38,100 | 480 | | |
| 1958 | 118.00 | " | 28,850 | 444 | | |
| 1959 | 118.00 | " | 35,100 | 373 | | |
| 1960 | 125.00 | " | 44,700 | 379 | | |
| 1961 | 125.00 | " | 44,100 | 385 | | |
| 1962 | 125.00 | " | 37,500 | 409 | | |
| 1963 | 140.00 | " | 45,800 | 500 | | |
| 1964 | 155.00 | " | 39,500 | 614 | 1.5% | The increased output is due to mining developments in British Columbia. |
| 1965 | 155.00 | " | 49,200 | 4,700 | 9.5 | |
| 1966 | 155.00 | " | 70,000 | 10,209 | 15.0 | |
| 1967 | 162.00 | " | | 10,611 | | |
| 1968 | 162.00 | " | | 11,150 | | |
| 1969 | 162.00 | " | | 15,247 | | |

Sources: See Table 6.9, sources 1 and 2.

However when we turn to a study of nickel the situation is markedly different. Perhaps our share of free world production has been steadily declining to where it is in 1968 about 58 percent, but INCO is still the world price setter for nickel. The price of nickel (Table 6.10) has not been subject to the same movements as those of zinc, lead or copper. Similarly molybdenum prices, which are controlled by the Climax Corporation, do not show large fluctuations (Table 6.13). It would appear that a metal exposed to single corporation control does not have the fluctuations such as noted in copper, lead and zinc, suggesting that monopolistic tendencies exist in the nickel and molybdenum markets. World nickel production during 1968 was 1,103,096,000 lbs. (Table 6.10) of which Canada produced 527,696,000 lbs. representing over 55 percent, and of this INCO produced 480,840,000 lbs.²⁴ Thus INCO produced over 90 percent of Canada's output of nickel and over 50 percent of the free world's output and this output is almost totally export oriented, either to its United States or United Kingdom refining and fabricating facilities.

Preliminary D.B.S. estimates²⁵ suggest that 1969 nickel sales will be in order of \$500,000,000 of which as noted INCO will produce 90 percent, i.e., \$450,000,000. Copper output, to which INCO contributed approximately one-third, is valued in the same D.B.S. estimates at \$574,193,275 of which INCO's share will be approximately \$191,397,758. INCO's production revenue from nickel and copper alone is thus in the order of \$650,000,000 or about 28 percent of the total value of all

²⁴Financial Post Corporation Services: International Nickel Company 1969, p. 14.

²⁵See above, note 1.

Canadian metallic output. These figures contain a downward bias in that during 1969, INCO underwent a lengthy labour strike. Had this not been so, it is likely that INCO's output would represent in the order of 30 percent of all Canadian metallic production.

Our sample size was based on metallic production of \$2,320 million, but no consideration was included for the Platinum Group or INCO's iron pelletizing revenue.²⁶ It thus seems reasonable to conclude that INCO in total represents in excess of 30 percent of Canada's metallic yearly output.

6.6 International Nickel Company of Canada, Limited

We can thus readily establish that the Canadian metal mining industry is dominated by a single foreign owned mining corporation; that its production is highly export oriented; that it is able to unilaterally set world prices for its prime product, nickel, and is in fact the only Canadian mining corporation able to do so; and that a strike, because of INCO's structure, can effectively shut down the entire operation. Such a condition is unique in Canada, especially in the area of collective bargaining.

Such a structure suggests the presence of at least a quasi-monopoly. For example, INCO enjoys the power to set prices. However a monopoly should also be able to restrict output, and Table 6.10 indicates a steady decline in Canada's and INCO's share of the free world nickel production. Nonetheless if INCO is to escape the allegation of monopoly, we first must examine her smelting and refining facilities.

²⁶See above, note 1.

It requires very large and extensive ore bodies to justify the construction of such facilities. Such was the case at Sudbury for INCO and later for Falconbridge and more recently at Thompson, Manitoba. Any nickel operation not warranting these facilities must either export its concentrates or seek a custom smelting contract with either INCO or Falconbridge. The latter corporation's facilities are located near Sudbury but are considerably smaller than those of INCO at nearby Copper Cliff.²⁷

This domination by INCO of smelting and refining facilities puts the balance of the Canadian nickel mining industry in Canada in a "difficult" position. The very fact that one firm does so dominate the metallurgical facilities of the nickel industry as well as setting world prices suggests that it is some form of a monopoly. It sets price (of this there is no doubt) and can--and by its very structure does--control output. These are the criteria necessary to be a monopoly. INCO fulfills these, and the data to be presented will substantiate the claim. At the risk of being repetitive, we are not accusing INCO of being a poor corporate citizen and yet they have sought and strived to achieve their present position. Certainly if INCO were in the United States and subject to its anti-trust legislation we would no doubt have been witness to

²⁷Canada, Department of Energy, Mines and Resources, Nickel, Canada and the World (Ottawa: Queen's Printer, 1968), pp. 76 and 82. INCO's Sudbury area smelter capacity is 13,000 tons per day compared to Falconbridge's 1,600. Besides these Sudbury facilities, there are also INCO's direct electrolytic refining operations at its Thompson, Manitoba facilities.

another "Alcoa Case" as defined by Judge Learned Hand.²⁸

6.7 Conclusions

The other metals reviewed, i.e., lead, zinc and molybdenum, are of such negligible impact in terms of world markets as to imply that they have minimal influence within the meaning of this study. It may be that in the near future molybdenum will assume a more prominent role. Certainly the Canadian zinc industry, which now represents one-third of the free world output, is approaching a position where its opinions must be heard.

These four metals (i.e., lead, zinc, molybdenum and uranium) have an annual output of about \$575,000,000 or about 20 percent of Canada's metallic output, or about 35 percent of our sample size. However the output of these four metals plus copper represents the output of many firms, whereas 40 percent of our sample and 30 percent of all metallic output is attributable to INCO.

We can thus conclude with a high degree of validity that the Canadian mining industry is demand oriented, i.e., export oriented, is dominated by a foreign owned corporation, i.e., INCO, and the major market structure of the entire industry after allowing for domestic consumption is towards the United States, United Kingdom, Europe (mostly in the EEC) and more recently and especially in reference to British Columbia-Japan.

²⁸Judge Hand in the famous Alcoa Case held that striving to become big was an offence under the Sherman Act in that once the firm achieved such a position it would, and indeed would have to, act in a manner detrimental to the market.

6.8 Summary

Such an industry, dominated by one corporation, will no doubt lead to the development of restricted competition. Collective bargaining within such a corporation could, it is suggested, result in gains not in harmony with the Canadian economy. These features will be investigated in the following chapters.

CHAPTER VII

AN ANALYSIS OF METAL MINING COLLECTIVE BARGAINING IN CANADA

7.1 Introduction

The objectives of this chapter are to review the collective bargaining agreements of the firms within our sample (Table 6.1). Within this framework we have established four major groupings:

- 1) Miscellaneous Fringe and Supplementary Benefits
- 2) The Forty Hour Week and Statutory Holidays
- 3) Welfare and Retirement Plans¹
- 4) Wages.

The analysis is comparative in style, seeking to establish the "trend setter." We have also sought to examine the patterns of development, to locate the wage setter and the leader in Supplementary Labour Costs and Fringe Benefits.

7.2 Miscellaneous Fringe and Supplementary Benefits

We found in all the companies within our sample (Tables 7.2 to 7.6)¹ that recognition, management's rights, seniority clauses and a non-discrimination clause were present from the date of certification. The only variable in these sections was in the seniority clause where 14 of the 58 firms had a seniority system based on company seniority and the

¹The data for Tables 7.2 to 7.6, 7.7 to 7.10, 7.11 to 7.14, 7.15 to 7.18, 7.21 to 7.24 was all obtained from the various collective bargaining agreements of the firms as listed in Table 6.1.

remainder, i.e., 44, had company-departmental systems. It is doubtful if our Big Three (INCO, COMINCO and Noranda) has much influence in this sector.

Safety Committees have been present at INCO, COMINCO and the Noranda Group for a considerable period of time. This has likely resulted in Safety Committees becoming more accepted throughout the industry. Grievance clauses are required by law; however in our sample we found 15 mines with either 2 stage or 4 stage (plus arbitration) systems. The balance, i.e., 43, have 3 stage (plus arbitration) systems. The entire COMINCO system is 3 stage plus arbitration, INCO (Sudbury) is 4 stage plus arbitration whereas INCO (Manitoba) is 3 stage plus arbitration. Much of the Noranda Group operates within a 3 stage plus arbitration method. Thus to some degree our Big Three do influence this area of collective bargaining.

Labour Management Committees are very rare in our sample but they are present at the entire COMINCO system, at Hudson Bay Mining and Smelting and at Eldorado Nuclear. Is it INCO's and Noranda's resistance to such a clause that has retarded its spread?

All the firms in the sample collect union dues and have some form of union shop with a probationary period. After this period, the worker usually joins the union, but many contracts do not require union membership as a condition of employment. The Rand Formula² is very present in the industry. A jury duty clause is present in a few contracts but it seems to be a type of benefit that is more desired in Quebec and the

²The Rand Formula devised by Chief Justice Rand requires all workers to pay union dues but not necessarily to belong to the union unless they so desire.

Maritimes.

Job posting has been present at COMINCO and INCO for many years but has been resisted by most of the Noranda Group mines within our sample. In general its prevalence has become more noticeable during the 1960's and thus is not totally a reflection of the Big Three's attitudes, but rather is a reflection of the union's attacks on various areas held previously to be in the area of management's prerogatives.

Bonus committees, i.e., committees to consider any changes in contract rates, are becoming increasingly prevalent in the industry, as is rent control on company housing and trailers.

There remains a considerable number of different clauses (see Legend, Table 7.1) some of which are found in various contracts, but not with any great degree of consistency. The more prevalent of these are week-end premium rates, cost of living bonus, work clothes, sick leave and bereavement leaves.

In this rather broad group of benefits listed in Tables 7.2 to 7.6 we can observe the life span of the various mines and how this is further dominated by the Big Three, especially by INCO and COMINCO. Thus when a newer mine is certified there are more important "bread and butter" issues than those in the group just reviewed. Many of these benefits thus do not appear in the early history of newer mines and are more a feature of a mine that is older and whose bargaining patterns are established. They are however very present at INCO and COMINCO and the older operations and become a goal that smaller and younger operations via their unions seek to obtain. To this degree we can thus say that the Big Three is an influencing force.

TABLE 7.1
COLLECTIVE BARGAINING LEGEND

| | |
|-------------|--|
| Rec. | Recognition |
| M.R. | Management Rights |
| Sen. | Seniority Clause |
| D.Cl. | No Discrimination Clause |
| S.C. | Safety Committee |
| Gr. | Grievance Stages (3-A is Three Stages plus Arbitration) |
| L.M. | Labour-Management Committee |
| Hrs. | Hours in Regular Work Week |
| T&H. | Commencement of time and a half payments |
| D.T. | Double Time |
| S.H. | Statutory Holidays |
| Wages | First Class Miner, Top Concentrator Rate, First Class Trade |
| U.D. | Union Dues (Check Off) |
| Shift Diff. | Shift Differential:A/S,N/S,G/S. |
| B.R. | Board and Room Rate Controlled |
| M.P. | Medical Plan and Co., Share |
| R.P. | Retirement Plan and Co., Share |
| G.L.I. | Group Life Insurance and Co., Share |
| J.D. | Jury Duty Leave with Pay |
| J.P. | Job Posting |
| B.C. | Bonus Committee |
| R.C. | Rent Control |
| S.P. | Savings Plan and Co., Share |
| W.P. | Weekend Premium Rates |
| T.C. | Technological Clause |
| C.L. | Cost of Living Clause |
| S.A. | Severance Allowance |
| W.C. | Work Clothes |
| S.L.P. | Sick Leave Plan |
| O.T.C. | Overtime Clause |
| S.H. | Special Holiday and Vacation Bonus |
| Tr. Cr. | Transportation Clause |
| B.L. | Bereavement Leave |
| S.V. | Service Vacation |
| Y | Yes |
| N | No |
| + | After |

Source: From the various Collective Agreements
within the sample used in this thesis.

7.3 Forty Hour Week and Statutory Holidays

All INCO and COMINCO operations have had 40 hour work weeks since 1952 (Tables 7.7 to 7.10)³ and any new operations since that date within these two corporations have quickly become a 40 hour per week operation, whereas many of the mines within the Noranda Group have been most resistive to the introduction of the 40 hour week.

Mines that were in operation during the 1950's have only achieved the 40 hour week during the early 1960's, whereas mines that have commenced operations during the mid-1960's have quickly achieved the 40 hour week. It is the increase in wages that has made it possible for these reductions in the work week.⁴ INCO (as we shall see) is the prime leader in both these areas. To this degree then, INCO has exerted influence on the industry in its movement towards the 40 hour week. This does not exclude COMINCO as a factor; it merely states that of the two INCO plays the more dominant role.

INCO has had a prominent position with regards to statutory holidays, having eight with double time and a half (if worked) as early as 1955. However several operations, especially in British Columbia, exceeded INCO by obtaining nine such holidays (Tables 7.11 to 7.14).⁵ INCO did not rejoin this group until 1969. Thus INCO in the late 1950's and early 1960's was the standard for the industry, but had been surpassed by several firms and only recently has caught up.

³See above, note 1.

⁴As the wage rate increases, the worker is more able to afford the shorter work week.

⁵See above, note 1.

7.4 Welfare and Retirement Plans

The area of medical plans, retirement plans and group life insurance plans (Tables 7.15 to 7.18) is most difficult to analyze because most of the documents pertaining to this group of benefits are supplemental to the main collective agreements and are most difficult to obtain. In a recent study by the Canadian Department of Labour, the Director of the Economics and Research Branch states:

Only fragmentary data are available on hospital, medical and life insurance. . . . Plans for the Department call for the collection of supplementary documents and more comprehensive analysis of these "fringes" in future studies.⁶

We have made the assumption that increases in supplementary labour costs and fringe benefits have not held back wage increases. There are certain developments within collective bargaining that have aided us in making this decision.

A major set of source documents used were the studies conducted by the Chamber of Commerce of the United States entitled Fringe Benefits.⁷ Table 7.19⁸ documents these trends in the United States.

During 1959 the Industrial Relations Counselors Service published an article "Fringe Benefits Costs in Canada"⁹ listing overall fringe

⁶Canada, Department of Labour, Provisions in Collective Agreements Covering Employees in Canadian Mining Industries - 1968 (Ottawa: Queen's Printer, 1968), p. 1.

⁷Fringe Benefits, a Research Study Prepared by the Economic Analysis and Study Group, Chamber of Commerce of the United States, Washington, D.C. This report is a biennial preparation.

⁸Same as note 7 - for years as shown in Table.

⁹See Melvin Lure, "The Growth of Fringe Benefits and the Meaning of Wage Comparisons," Journal of Industrial Economics, XV-XVI (1968), 21.

TABLE 7-15
 DATE THAT VARIOUS COLLECTIVE BARGAINING AGREEMENTS WERE ENTERED INTO AT VARIOUS MINING CORPORATIONS

| | Northwest Mining | Illiana MS | Arjo Sohn | Atlantic Coast | Sashihara Copper | B.C. Industries | St. Ignace Explor. | MS | Carpell Club | Can. Explor Ltd | Mal. Knee | Can. Jamison | Pine Point Mining | Minerley Mining | Trail Mining | |
|------|---------------------|---------------|--------------|-------------------|---------------------|--------------------|-----------------------|----|-----------------|--------------------|--------------|-----------------|----------------------|--------------------|-----------------|--|
| 1972 | | | | | | | | | | | | | | | | |
| 1973 | | | | | | | | | | | | | | | | |
| 1974 | | | | | | | | | | | | | | | | |
| 1975 | | ✓ | | | | | | ✓ | | | | | | | | |
| 1976 | | ✓ | | | | | | ✓ | | | | | | | | |
| 1977 | | ✓ | | | | | | ✓ | | | | | | | | |
| 1978 | | | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | | | |
| 1980 | | | | | | | | | | | | | | | | |
| 1981 | | | | | | | | | | | | | | | | |
| 1982 | | | | | | | | | | | | | | | | |
| 1983 | | | | | | | | | | | | | | | | |
| 1984 | | | | | | | | | | | | | | | | |
| 1985 | | | | | | | | | | | | | | | | |
| 1986 | | | | | | | | | | | | | | | | |
| 1987 | | | | | | | | | | | | | | | | |
| 1988 | | | | | | | | | | | | | | | | |
| 1989 | | | | | | | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | | | |
| 1991 | | | | | | | | | | | | | | | | |
| 1992 | | | | | | | | | | | | | | | | |
| 1993 | | | | | | | | | | | | | | | | |
| 1994 | | | | | | | | | | | | | | | | |
| 1995 | | | | | | | | | | | | | | | | |
| 1996 | | | | | | | | | | | | | | | | |
| 1997 | | | | | | | | | | | | | | | | |
| 1998 | | | | | | | | | | | | | | | | |
| 1999 | | | | | | | | | | | | | | | | |
| 2000 | | | | | | | | | | | | | | | | |
| 2001 | | | | | | | | | | | | | | | | |
| 2002 | | | | | | | | | | | | | | | | |
| 2003 | | | | | | | | | | | | | | | | |
| 2004 | | | | | | | | | | | | | | | | |
| 2005 | | | | | | | | | | | | | | | | |

CONTRACTS NEGOTIATED BY NATIONAL UNION OF MINING WORKERS, LOCAL 1000, AND OTHER UNIONS

benefits as 22.2 percent of total labour costs. In the same year the Chamber of Commerce study for the United States reported "fringe benefits" as being 22.8 percent of total labour costs.¹⁰ The same series of publications indicates that by 1967 this figure had risen to 26.6 percent.¹¹

TABLE 7.19

NON-WAGE PAYMENTS BY INDUSTRY GROUP AS A PERCENTAGE
OF WAGES PAID FOR TIME WORKED

| Year | Industry Group | | |
|------|---|---|---|
| | Metal Mining, Smelting and Refining | Petroleum Production and Refining | Manufacturing Food, Beverage, Tobacco |
| 1948 | 13.2% | 17.3% | 14.3% |
| 1951 | 17.3 | 22.5 | 17.7 |
| 1955 | 25.1 | 24.3 | 19.7 |
| 1959 | 25.1 | 28.3 | 21.8 |
| 1963 | 23.7 | 28.9 | 27.0 |
| 1967 | 23.7 | 30.8 | 28.0 |

Source: Chamber of Commerce of the United States of America, Washington, D.C., Fringe Benefits, biennial report, of which only the above noted were available on direct loan from the noted organization.

In discussions with various labour economists and labour leaders we are led to believe that in general the total "fringe benefit" package in Canada is at least equal to that in the United States. Under these

¹⁰Fringe Benefits (see above, note 7), 1959, p. 10.

¹¹Ibid., 1967, p. 5.

circumstances we can reasonably conclude that supplementary labour costs and fringe benefit costs are rising in Canada at approximately the same rate as in the United States.

The rate of increase in that nation is in the order of 0.7 percent per year¹² which if continued into 1970 will result in a cost of 27.8 percent. The same study also indicates that larger firms tend to pay higher benefits than smaller firms. INCO is certainly a larger firm and it thus seems reasonable to conclude that its costs in this area are in the order of 27-29 percent of total labour costs. The American study suggests a cost per employee of between \$1800 and \$2000 per year.¹³ Based on 2000 working hours per year we can offer a crude cost for INCO for supplementary and fringe costs of approximately \$1.00 per hour worked. If we accept 1600 hours as a more reasonable datum (this figure is used to calculate the INCO pension plan), then the supplementary and fringe costs rise to \$1.25 per hour.

Normally labour economists have believed that in collective bargaining there is a trade-off between supplementary wage costs, fringe benefits and wages.¹⁴ However, during the past decade there has been certain welfare legislation introduced in Canada:

| | |
|---|----------------------------|
| Hospital Insurance and Diagnostic Services | - Effective date: 1957 |
| Canada Pension Plan | - Effective date: 1964-65 |
| Medical Care | - Effective date: 1966-68. |

¹²Ibid., p. 27.

¹³Ibid., p. 5. The average payment for fringe benefits in the United States during 1967 was \$1719 per year per employee.

¹⁴Richard A. Lester, Economics of Labor (New York: Macmillan Company, 1964), pp. 257-258.

The following table indicates the percentage wage increases that took place at the seven mines used in our final analysis (see Chapter VIII) during the same years these major welfare programs were introduced.

TABLE 7.20
PERCENTAGE WAGE INCREASES AT VARIOUS
CANADIAN MINES OVER TIME

| Mine | 1957 | 1958 | 1964 | 1965 | 1966 | 1967 | 1968 |
|--------------|------|------|------|------|-------|------|------|
| INCO | 8.7% | 1.6% | 2.7% | 2.3% | 13.5% | 4.0% | 4.2% |
| COMINCO | 2.4 | 1.9 | 6.4 | 4.5 | 8.4 | 6.7 | 5.0 |
| Noranda | - | - | 18.1 | 4.1 | 4.1 | 3.9 | 9.2 |
| Pine Point | - | - | - | 9.8 | 11.5 | 9.0 | 3.1 |
| Willroy | 6.0 | 8.8 | 2.2 | 2.1 | 8.0 | 4.0 | 4.5 |
| Rio-Algom | 6.4 | 13.2 | 2.1 | 5.0 | 4.6 | 14.4 | 3.4 |
| Lake Dufault | - | - | - | - | 3.9 | 4.1 | 8.7 |

Source: Tables 8.1 to 8.7, inclusive.

It would thus be difficult to argue that because of these public welfare plans the unions achieved less in the area of wage increases. It is this author's contention that with the introduction of these various welfare plans the historical "trade-off" concept requires review. With the major benefits now established by law, the unions in their bargaining are now seeking "minor areas" to obtain gains. These gains may be substantial but in the over-all cost structure they are no longer such major items because the foundation upon which to calculate fringe benefit costs has been established and this was achieved in periods of high wage

gains. This we suggest has shifted the emphasis to wage demands.

An analysis of Tables 7.15 to 7.18¹⁵ confirms that INCO and COMINCO are leaders in the mining industry in the area of welfare benefits. Appendix A-60 defines the 1969 contract negotiated by the USW with INCO (Sudbury) and Appendix A-61 sets out the INCO (Manitoba) pension system. It is difficult to believe that any mining company in Canada has a more comprehensive set of agreements. In our discussions with several USW officials we have been assured that INCO is the "key" firm in all collective bargaining areas and especially so in the welfare package.

The recently concluded agreement at INCO (Sudbury) was quickly duplicated at INCO (Manitoba).¹⁶ Shortly after, Sherritt Gordon called for negotiations and in concluding its agreement followed much the same trend as that set by INCO.¹⁷ Our correspondence with various mining officials leads us to conclude that most of North-Western Quebec reflects the impact of Noranda and during the past few years this firm has also increased its "welfare package."

The general agreement in the industry is a medical and group insurance scheme that the company contributes to on a 50-50 basis with the employee. Most of the pension plans are such that the employee makes some contribution, but not so at INCO. It is to our knowledge the only mining company that will by 1971 be paying the full cost of all forms of

¹⁵See above, note 1.

¹⁶The author was assured by senior USW officials that there was little use in bargaining with INCO (Manitoba) until after the INCO (Sudbury) contract was settled, and that once this was achieved the Manitoba settlement would be more a formality.

¹⁷These same officials also indicated the same attitude regarding Sherritt Gordon, i.e., once INCO was settled the pattern was established.

welfare including a pharmaceutical plan, special vacations, etc. We thus can validly argue that INCO is the trend setter in this area, and that in the coming rounds of negotiations with other firms this will reflect itself in an extensive upgrading of the welfare package within the industry.

At this point we believe that we have more than adequately set out the scope and impact of INCO upon both supplementary labour costs and fringe benefits, within the Canadian metal mining industry. It is regrettable that we are unable to establish a detailed cost of these two sectors; however the Department of Labour recognizes the lack of study in this area and hopefully will correct this deficiency. It is long overdue.

Before we commence our analysis of INCO's wage scale we should note that their shift differential, weekend premiums and service vacations are all equal to or above the industry averages, as is their regular vacation program.

7.5 Wages

If however INCO does exercise the influence we believe it does then the real area of such influence will be in wages (Tables 7.21 to 7.24).¹⁸

In 1952 the Kimberley (COMINCO) wage rates were \$1.79, \$1.84 and \$1.88 per hour (hereafter the order of presentation of wages will be first class miner, top concentrator hand and first class tradesman). INCO's were \$1.74, \$1.84 and \$2.00 per hour; no other firm was within 20 cents per hour of these rates. In 1953 COMINCO's rates were \$1.79, \$1.88 and \$1.88 and INCO's were \$1.76, \$1.87 and \$2.03. Falconbridge's

¹⁸See above, note 1.

TABLE 7-21

DATA THAT WOULD COLLECTIVE BARGAINING PACTS HAS INCREASED AT VARIOUS MINING CORPORATIONS

HOURLY WAGE RATES (FIRST CLASS MINER, TOP OCC. MAINT. FIRST CLASS TRADE)

| Year | McNamee Mining | Britannia M.S. | Anglo Reyna | Atlantic Coast | Southwest Copper | B.C. Polytechnic | Br. Inlet Promoted Exploit. M.S. | Cresthill COPR. | Can. Exploit Ltd. | Metall. Mines | Can. Jamieson | True Point Mines | Marquette Mines | Trail Copper |
|------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|--|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------|
| 1952 | | | | | | | | | 1.58 1.54 1.70 | | | | 1.67 1.62 1.65 | |
| 1953 | | | | | | | | | | | | | | |
| 1954 | | | | | | | | | 1.61 1.57 1.74 | | | | 1.64 1.58 1.61 | |
| 1955 | | 1.75 1.91 | | | | | 1.85 1.87 1.65 | | 1.66 1.59 1.59 | | | | 1.65 1.68 1.68 | |
| 1956 | | 1.87 1.79 | | | | | | | 1.77 1.77 1.81 | | | | 1.71 1.71 1.71 | |
| 1957 | 1.61 1.71 2.05 | | | | | | | | 1.81 1.82 1.96 | | | | 1.81 1.82 1.87 | |
| 1958 | 1.76 1.76 | | | | | | | | 1.85 1.88 2.01 | | | | 1.85 1.88 2.01 | 2.01 2.05 |
| 1959 | | | | | | | 2.71 1.60 2.67 | | | | | | 2.02 2.02 2.02 | 2.01 2.05 |
| 1960 | 1.73 1.78 | | | | | | 1.84 1.89 2.07 | | 1.93 1.99 2.08 | | | | 1.93 1.97 2.04 | |
| 1961 | 1.71 1.81 | | | | | | 2.07 2.55 2.52 | | 2.00 2.00 2.17 | | | | 2.00 2.00 2.08 | |
| 1962 | | | | | | | 2.11 2.17 2.45 | | | | | | | |
| 1963 | | | | | | | 2.15 2.22 2.45 | | 2.27 2.27 2.35 | | | | | |
| 1964 | | | | | | | 2.27 2.27 2.65 | | 2.34 2.34 2.31 | | | | 2.35 2.35 2.32 | |
| 1965 | 2.24 2.37 | | 2.25 2.34 2.55 | | 2.81 2.61 2.84 | | 2.16 2.16 2.41 | | | 2.45 2.46 2.57 | | 2.45 2.46 2.56 | 2.45 2.45 2.45 | |
| 1966 | 2.43 2.47 | 2.48 2.55 2.62 | 2.47 2.56 2.84 | 2.89 2.84 | | | 2.21 2.24 2.45 | | 2.55 2.55 2.57 | | | 2.55 2.56 2.61 | 2.55 2.56 2.61 | |
| 1967 | 2.47 | 2.51 | 2.78 2.87 3.11 | 2.94 2.86 | | | 2.45 2.45 2.47 | | 2.57 2.57 2.57 | | | 2.57 2.57 2.57 | 2.57 2.57 2.57 | |
| 1968 | 2.48 2.54 | 2.56 2.59 | 3.04 3.06 3.58 | 2.99 2.82 2.91 | | | 2.47 2.47 2.47 | | 2.70 2.70 2.70 | | 2.70 2.70 2.70 | 2.70 2.70 2.70 | 2.70 2.70 2.70 | |
| 1969 | 2.62 2.78 2.76 | 3.25 3.28 3.44 | 3.21 3.28 | | | | 2.37 2.40 2.40 | | 2.91 2.91 2.91 | | 2.91 2.91 2.91 | 2.91 2.91 2.91 | 2.91 2.91 2.91 | |
| 1970 | 2.74 2.91 | | 3.44 3.44 | | | | 2.65 2.65 2.65 | | 3.01 3.01 3.01 | | 3.01 3.01 3.01 | 3.01 3.01 3.01 | 3.01 3.01 3.01 | |

TABLE 7-22
 DATE THAT WHICH COLLECTIVE BARGAINING PATTERNS WERE INTRODUCED AT VARIOUS MINING CORPORATIONS
 RECORD PAGE RATES (FIRST CLASS MINE, TOP CONC. RIND, FIRST CLASS TRADE)

| Bluebell COAL | Trail A Kilbuck | Con. Rudler | Superficial Mining | Gradient Lines | Division | Eldorado | East Militate | Eschale | Relembright | First Militize | ESCO | Case Copper | Saint Masset | Scraper Copper |
|------------------|----------------------|----------------|-----------------------|-------------------|------------------------------|----------------------|------------------|----------------------|--------------------------------------|----------------------|----------------------|----------------------|-----------------|----------------------|
| 1952 | | | | | | | | | | | | | | |
| 1953 | | | | | | 1.66 1.82 1.92 | not reliable | | 1.75 1.81 2.03 | | | | | |
| 1954 | | | | | | | | | 1.79 1.90 2.01 2.05 2.15 | | | | | |
| 1955 | | | | | | | | | | | | | | |
| 1956 | | | | | | 1.72 2.15 2.60 | | | 2.19 2.11 2.13 | | | | | |
| 1957 | | | | | 1.93 2.01 2.13 | 1.97 2.15 2.15 | | | | | 1.43 1.40 1.51 | | | |
| 1958 | | | | | 2.00 2.11 2.11 2.25 | 1.85 2.55 2.55 | | | 2.18 2.25 2.50 | | | | | |
| 1959 | | | | | 2.11 2.14 2.18 | 2.09 2.14 2.42 | | | 2.41 2.40 2.65 | | 1.99 1.75 2.05 | | | |
| 1960 | | | | | 2.24 2.46 2.72 | 2.21 2.49 2.68 | | | | | 2.14 2.39 | | | |
| 1961 | | | | | 2.24 2.40 2.70 | 2.27 2.55 2.55 | | | | 1.51 1.85 1.85 | 2.21 2.35 2.51 | | | |
| 1962 | 2.41 2.48 2.55 | | | | 2.18 2.21 2.21 | 2.11 2.17 2.45 | | | | 1.62 1.72 1.87 | 2.23 2.37 2.55 | | | |
| 1963 | 2.47 2.55 2.63 | | | | 2.14 2.43 2.55 | 2.19 2.55 2.55 | | | 2.54 2.47 2.51 | | 2.30 2.44 2.41 | | | |
| 1964 | 2.47 2.55 2.63 | | | | 2.14 2.43 2.55 | 2.19 2.55 2.55 | | | 2.54 2.47 2.51 | | 2.30 2.44 2.41 | | | |
| 1965 | 2.54 2.60 2.65 | | | | 2.16 2.50 2.54 | 2.62 2.81 2.81 | | 2.77 2.87 | 2.57 2.79 2.87 | | 2.46 2.54 2.74 | | | |
| 1966 | 2.68 2.74 2.81 | | | | 2.61 2.81 2.81 | 2.74 3.03 3.03 | | | 3.01 2.94 3.07 | | | 2.43 2.53 2.64 | | 2.80 2.91 3.02 |
| 1967 | 2.81 2.88 2.95 | | | | 2.73 2.97 3.24 | 2.85 3.15 3.43 | | 3.03 3.18 | 3.17 3.06 | | | 2.65 2.76 2.87 | | 2.95 3.06 3.17 |
| 1968 | 2.84 2.91 2.98 | | | | 3.21 3.41 3.63 | 3.68 3.97 3.97 | | 3.55 3.84 3.76 | 3.79 3.72 | | | 2.90 2.99 3.10 | | 3.16 3.27 3.38 |
| 1969 | 3.44 3.44 3.52 | | | | 3.49 3.69 3.92 | 3.10 3.38 3.78 | | 3.88 4.00 | 3.49 3.66 3.74 | | | 3.19 3.28 3.39 | | 3.47 3.58 3.69 |
| 1970 | 3.54 3.60 | | | | 3.61 3.85 | 3.50 3.81 | | 4.09 4.30 | 3.74 4.05 | | | 3.15 3.35 | | 3.70 3.80 |

TABLE 7-24
 DISEASE THAT VARIOUS COLLECTIVE BARGAINING PARTIES ARE EMPLOYED AT VARIOUS MINING OPERATIONS
 HOURLY WAGE RATES (FIRST CLASS MINER, TOP CONC. HAND, FIRST CLASS TRUCK)

| Weeks (Years) | Windsor Mine | Green Mine | Copper Road | Fronto Bureau | Quasim Mining | Revere McDonald | Rite-Age Mine | Sherritt Gordon | Tribe Mine | Initial Kee Hill | Verifab Mine | Western Mine | Willing Mine |
|------------------|----------------------|---------------|----------------|------------------|----------------------|----------------------|----------------------|----------------------|---------------|----------------------|-----------------|-----------------|-----------------|
| 1972 | | | | | | | | | | | | | |
| 1973 | | | | | | | | | | | | | |
| 1974 | | | | | | | | | | | | | |
| 1975 | | | | | | 1.80 1.81 1.81 | | 1.84 1.83 | | | | | |
| 1976 | | | | | | | 1.77 1.78 1.78 | | | 1.77 | | | |
| 1977 | | | | | | 1.82 1.82 1.82 | 1.83 1.83 1.83 | 1.84 1.83 1.83 | | 1.83 1.83 1.83 | | | |
| 1978 | | | | | | 1.89 1.89 1.89 | 1.88 1.88 1.88 | 1.89 1.88 1.88 | | 1.88 1.88 1.88 | | | |
| 1979 | 1.91 1.91 1.91 | | | | 1.90 1.90 1.90 | 1.94 1.94 1.94 | | 1.94 1.94 1.94 | | 1.94 1.94 1.94 | | | |
| 1980 | 1.97 1.97 1.97 | | | | 1.99 1.99 1.99 | 2.05 2.05 2.05 | | 2.05 2.05 2.05 | | 2.05 2.05 2.05 | | | |
| 1981 | 2.01 2.01 2.01 | | | | 2.02 2.02 2.02 | 2.07 2.07 2.07 | | 2.07 2.07 2.07 | | 2.07 2.07 2.07 | | | |
| 1982 | 2.01 2.01 2.01 | | | | 2.07 2.07 2.07 | 2.12 2.12 2.12 | | 2.12 2.12 2.12 | | 2.12 2.12 2.12 | | | |
| 1983 | | | | | | 2.11 2.11 2.11 | | 2.11 2.11 2.11 | | 2.11 2.11 2.11 | | | |
| 1984 | 2.12 2.12 2.12 | | | | 2.12 2.12 2.12 | 2.18 2.18 2.18 | | 2.18 2.18 2.18 | | 2.18 2.18 2.18 | | | |
| 1985 | 2.12 2.12 2.12 | | | | 2.17 2.17 2.17 | 2.21 2.21 2.21 | | 2.21 2.21 2.21 | | 2.21 2.21 2.21 | | | |
| 1986 | 2.15 2.15 2.15 | | | | 2.12 2.12 2.12 | 2.16 2.16 2.16 | | 2.16 2.16 2.16 | | 2.16 2.16 2.16 | | | |
| 1987 | 2.15 2.15 2.15 | | | | 2.11 2.11 2.11 | 2.15 2.15 2.15 | | 2.15 2.15 2.15 | | 2.15 2.15 2.15 | | | |
| 1988 | 2.10 2.10 2.10 | | | | 2.10 2.10 2.10 | 2.14 2.14 2.14 | | 2.14 2.14 2.14 | | 2.14 2.14 2.14 | | | |
| 1989 | 2.13 2.13 2.13 | | | | 2.14 2.14 2.14 | 2.18 2.18 2.18 | | 2.18 2.18 2.18 | | 2.18 2.18 2.18 | | | |
| 1990 | 2.15 2.15 2.15 | | | | 2.15 2.15 2.15 | 2.19 2.19 2.19 | | 2.19 2.19 2.19 | | 2.19 2.19 2.19 | | | |

rates were and have remained identical to INCO's, and USW officials¹⁹ assure us that INCO was always the "key" and that Falconbridge followed suit.

By 1956 INCO's wage schedules were ahead of COMINCO's in all three categories and have remained so through to 1970 except for the years 1964, 1965 and 1968. A feasible explanation for these three years is that in 1960 the USW succeeded in winning the entire INCO (Sudbury) complex from Mine-Mill; however a long bitter struggle continued on for several years and this likely put the USW in a relatively weak bargaining position. However by 1968 the benefits of the merger were present, and thus the USW were in a strong bargaining position and could implement their decision to make INCO (Sudbury) the "key" for the entire industry, as is illustrated by their 1970 contract.

A review of Tables 7.21 to 7.24 illustrates that except for Falconbridge and COMINCO and the years noted, no mining firm has a wage schedule higher than INCO except that Denison Mines for the period 1959-65 had a higher rate for tradesmen.²⁰

7.6 Conclusions

We thus can conclude that INCO pays higher wages and offers a better program of supplementary labour costs and fringe benefits than other mining firms in Canada. However the fact that INCO is the wage leader does not prove that it is the wage setter. This we shall investigate in Chapter VIII.

¹⁹See Chapter IV, note 63.

²⁰Table 7.22.

CHAPTER VIII

ANALYSIS AND OBSERVATIONS

8.1 Introduction

Chapter VIII is utilized to reduce the original sample of 58 firms to a random sample of seven, for the purpose of obtaining a more workable statistical model. Various other data that will be used in the statistical analysis is also introduced, such as wage performances of the industry and certain firms therein, Canadian GNP (1951-1969), metal production, as well as various labour force data. Semi-log graphs are introduced in order to aid in establishing linearity of the different variables. The statistical data is utilized to support the graphical observations and both are used to analyze the posture of the various firms, but especially the Big Three.

8.2 Reduction of Sample Size

Our present sample encompasses 58 non-ferrous mining firms and three types of wage rates, i.e., first class miners, top concentration hand and first class tradesmen. Wages within these groups within a collective bargaining unit will tend to move in harmony¹ and any discrepancies that appear as a result of a new contract will tend to be "corrected" in the next round of bargaining. It would thus be reasonable to accept any one of these three rates for our statistical analysis; however within our study the majority of the workers are in the

¹Richard A. Lester, Economics of Labor (New York: Macmillan, 1964), p. 303.

first class. We have thus removed the second and third classifications without unduly biasing the sample.

Our next problem was to reduce the number of firms to a more workable size, i.e., something less than ten firms. Table 6.1 sets out the mining companies within our study. Three major corporations, i.e., INCO, COMINCO and Noranda (Horne) Mine must be retained if the sample and statistical analysis is to have validity. Within the final sample we desired to obtain as broad a coverage as possible, i.e., we wished to include large and small operators, mines in the N.W.T. and/or the Yukon, base metal mines and also some coverage of the uranium industry.

Because of incomplete data we were compelled to reject Anaconda Copper, Bethlehem Copper and Highland-Bell in the British Columbia sector. In the Central Region of Canada we rejected INCO (Manitoba) because its collective agreement is very strongly dependent on the INCO (Sudbury) contract.² Most regrettably we were forced to reject Hudson Bay Mining and Smelting due to lack of data. We approached this firm on several occasions to no avail. The union structure at HBM & S has recently undergone such a transformation that the USW were not able to be of assistance in this matter.

In the Ontario sector we rejected Falconbridge because of its very similar bargaining patterns to those of INCO.³ These patterns can also

²During the 1969 INCO (Sudbury) negotiations we asked Mr. Len Stevens, Area Supervisor, USW, when negotiations would commence with INCO (Manitoba). He most emphatically informed us that there was no sense in bargaining with INCO (Manitoba) until the Sudbury negotiations were completed, and that the Manitoba contract would be very similar to the Sudbury contract.

³In discussions with Mr. Kennedy (see Chapter IV, note 63) we have been assured that the "key" was INCO and that Falconbridge negotiations were held in abeyance until the INCO contract was signed.

be observed in a study of INCO's (Sudbury) and Falconbridge's collective agreements. Within the Ontario sector we also had to reject Copperfields Mining due to lack of data.

No operations were rejected in Quebec. In the Maritimes, Atlantic Coast Copper, Consolidated Rambler and First Maritime Mining were rejected due to a lack of sufficient data.

After completion of this process of selection we were left with a group of 42 firms plus the Big Three. Within the block of 42 firms we established three blocks. These are:

- 1) The Northwest Territories including the Yukon (Eldorado Nuclear was included in this block even though it is a uranium producer. This was done because of its geographical location.)
- 2) The remaining uranium producers
- 3) The balance of the 40 firms.

Block 1 contained 4 firms; block 2, 2 firms; and block 3, 36 firms. By random sampling techniques one firm was selected from block 1, one from block 2, and two from block 3.

The sample to be used in our final analysis was thus composed of

INCO (Sudbury)

COMINCO (not including Pine Point Mines)

Noranda (Horne) Mines Limited

Pine Point Mines

Willroy Mines

Rio-Algom Mines

Lake Dufault Mines.

8.3 Ancillary Data

Tables 8.1 to 8.7 illustrate money and real wages and percentage yearly change within both wage types, for the seven firms in question.

Table 8.8 sets forth the GNP per year, the change in GNP per year in current dollars as well as the percentage change in GNP per year after price adjustments.

Tables 8.9 to 8.14 present the price of the six metals in our study, i.e., copper, nickel, lead, zinc, molybdenum and uranium over the period 1951-1970. These same tables also show the actual change in price per year as well as the percentage change in price per year.

Tables 8.15 and 8.16 show the annual production, the annual production change and the percentage annual change in production for the six metals in question.

Tables 8.17 to 8.19 present various features of various labour force groupings with which our study has become concerned.

All the data contained in Tables 8.1 to 8.19 was utilized in our original statistical determinations. However the final results that were employed do not use all the information available due to certain results obtained which were rejected for reasons that will be later explained.

Before our study can continue two very important and basic questions have to be investigated. These are:

- 1) That INCO (Sudbury) bargains (in point of time) ahead of COMINCO. This is a necessary condition if INCO is to be a wage setter.
- 2) That the different variables we are statistically analyzing have linear conformity.

TABLE 8.1

INCO: MONEY WAGE AND REAL WAGE PERFORMANCE
(C.P.I.: 1961 = 100)

| Year | Wage Rate | Change per yr. | Percentage Change per yr. | C.P.I. ^a | Real Wage | Real Wage Change per yr. | Real Wage Percentage Change per yr. |
|------|-----------|----------------|---------------------------|---------------------|-----------|--------------------------|-------------------------------------|
| 1951 | | | | 88.0 | | | |
| 1952 | \$1.74 | | | 90.2 | \$1.99 | | |
| 1953 | 1.76 | 2.0¢ | 1.1% | 89.4 | 1.97 | - 2.0¢ | - 1.0% |
| 1954 | 1.79 | 3.0 | 1.7 | 89.9 | 1.99 | 2.0 | 1.0 |
| 1955 | 1.88 | 9.0 | 5.0 | 90.1 | 2.09 | 10.0 | 5.0 |
| 1956 | 2.19 | 31.0 | 16.5 | 91.4 | 2.40 | 31.0 | 14.7 |
| 1957 | 2.38 | 19.0 | 8.7 | 94.3 | 2.52 | 12.0 | 5.0 |
| 1958 | 2.42 | 4.0 | 1.6 | 96.8 | 2.50 | - 2.0 | - 0.8 |
| 1959 | 2.47 | 5.0 | 2.1 | 97.9 | 2.52 | 2.0 | 0.8 |
| 1960 | 2.47 | 0.0 | 0.0 | 99.1 | 2.49 | - 3.0 | - 1.2 |
| 1961 | 2.50 | 3.0 | 1.2 | 100.0 | 2.50 | 1.0 | 0.4 |
| 1962 | 2.50 | 0.0 | 0.0 | 101.2 | 2.47 | - 3.0 | - 1.2 |
| 1963 | 2.54 | 4.0 | 1.6 | 103.0 | 2.46 | - 1.0 | - 0.4 |
| 1964 | 2.61 | 7.0 | 2.7 | 104.8 | 2.49 | 3.0 | 1.2 |
| 1965 | 2.67 | 6.0 | 2.3 | 107.4 | 2.49 | 0.0 | 0.0 |
| 1966 | 3.03 | 36.0 | 13.5 | 111.4 | 2.72 | 23.0 | 9.2 |
| 1967 | 3.15 | 12.0 | 4.0 | 115.4 | 2.73 | 1.0 | 0.4 |
| 1968 | 3.29 | 14.0 | 4.2 | 120.1 | 2.74 | 1.0 | 0.4 |
| 1969 | 3.49 | 20.0 | 6.1 | 125.5 ^b | 2.78 | 4.0 | 1.4 |
| 1970 | 3.79 | 30.0 | 8.7 | 129.1 ^c | 2.94 | 16.0 | 5.7 |

Sources:

Money wage rates have been obtained from the Collective Bargaining Agreements of The International Nickel Company of Canada, Limited, Sudbury, Ontario.

^aCanada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 971.

^bPreliminary Estimates - D.B.S.

^cArithmetic Average - First half 1970.

TABLE 8.2

COMINCO: MONEY WAGE AND REAL WAGE PERFORMANCE
(C.P.I.: 1961 = 100)

| Year | Wage Rate | Change per yr. | Percentage Change per yr. | C.P.I. ^a | Real Wage | Real Wage Change per yr. | Real Wage Percentage Change per yr. |
|------|-----------|----------------|---------------------------|---------------------|-----------|--------------------------|-------------------------------------|
| 1951 | | | | 88.0 | | | |
| 1952 | \$1.79 | | | 90.2 | \$1.98 | | |
| 1953 | 1.79 | 0.0¢ | 0.0% | 89.4 | 2.00 | 2.0¢ | 1.0% |
| 1954 | 1.84 | 5.0 | 2.7 | 89.9 | 2.05 | 5.0 | 2.5 |
| 1955 | 1.90 | 6.0 | 3.2 | 90.1 | 2.11 | 6.0 | 2.9 |
| 1956 | 2.01 | 11.0 | 5.7 | 91.4 | 2.20 | 9.0 | 4.2 |
| 1957 | 2.06 | 5.0 | 2.4 | 94.3 | 2.19 | - 1.0 | - 0.4 |
| 1958 | 2.10 | 4.0 | 1.9 | 96.8 | 2.17 | - 2.0 | - 0.9 |
| 1959 | 2.22 | 12.0 | 5.7 | 97.9 | 2.27 | 10.0 | 4.6 |
| 1960 | 2.27 | 5.0 | 2.2 | 99.1 | 2.29 | 2.0 | 0.9 |
| 1961 | 2.33 | 6.0 | 2.6 | 100.0 | 2.33 | 4.0 | 1.7 |
| 1962 | 2.41 | 8.0 | 3.4 | 101.2 | 2.38 | 5.0 | 2.1 |
| 1963 | 2.47 | 6.0 | 2.5 | 103.0 | 2.40 | 2.0 | 0.8 |
| 1964 | 2.63 | 16.0 | 6.4 | 104.8 | 2.51 | 11.0 | 4.6 |
| 1965 | 2.75 | 12.0 | 4.5 | 107.4 | 2.56 | 5.0 | 2.0 |
| 1966 | 2.98 | 23.0 | 8.4 | 111.4 | 2.68 | 12.0 | 4.7 |
| 1967 | 3.18 | 20.0 | 6.7 | 115.4 | 2.75 | 7.0 | 2.6 |
| 1968 | 3.34 | 16.0 | 5.0 | 120.1 | 2.78 | 3.0 | 1.1 |
| 1969 | 3.44 | 10.0 | 3.0 | 125.5 ^b | 2.74 | - 4.0 | - 1.4 |
| 1970 | 3.54 | 10.0 | 2.9 | 129.1 ^c | 2.74 | 0.0 | 0.0 |

Sources:

Money wage rates have been obtained from the Collective Bargaining Agreements of COMINCO.

^aCanada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 971.

^bPreliminary Estimates - D.B.S.

^cArithmetic Average - First half 1970.

TABLE 8.3

NORANDA MINES: MONEY WAGE AND REAL WAGE PERFORMANCE
(C.P.I.: 1961 = 100)

| Year | Wage Rate | Change per yr. | Percentage Change per yr. | C.P.I. ^a | Real Wage | Real Wage Change per yr. | Real Wage Percentage Change per yr. |
|------|-----------|----------------|---------------------------|---------------------|-----------|--------------------------|-------------------------------------|
| 1951 | | | | 88.0 | | | |
| 1952 | | | | 90.2 | | | |
| 1953 | | | | 89.4 | | | |
| 1954 | | | | 89.9 | | | |
| 1955 | | | | 90.1 | | | |
| 1956 | | | | 91.4 | | | |
| 1957 | | | | 94.3 | | | |
| 1958 | | | | 96.8 | | | |
| 1959 | \$1.69 | | | 97.9 | \$1.73 | | |
| 1960 | 1.72 | 3.0¢ | 1.7% | 99.1 | 1.74 | 1.0¢ | 0.6% |
| 1961 | 1.75 | 3.0 | 1.7 | 100.0 | 1.75 | 1.0 | 0.6 |
| 1962 | 1.81 | 6.0 | 3.4 | 101.2 | 1.79 | 4.0 | 2.3 |
| 1963 | 1.81 | 0.0 | 0.0 | 103.0 | 1.76 | - 3.0 | - 1.7 |
| 1964 | 1.86 | 5.0 | 2.7 | 104.8 | 1.78 | 2.0 | 1.1 |
| 1965 | 2.20 | 34.0 | 18.1 | 107.4 | 2.05 | 27.0 | 15.1 |
| 1966 | 2.29 | 9.0 | 4.1 | 111.4 | 2.06 | 1.0 | 0.5 |
| 1967 | 2.38 | 9.0 | 3.9 | 115.4 | 2.06 | 0.0 | 0.0 |
| 1968 | 2.60 | 22.0 | 9.2 | 120.1 | 2.16 | 10.0 | 4.8 |
| 1969 | 2.76 | 16.0 | 6.1 | 125.5 ^b | 2.20 | 4.0 | 1.8 |
| 1970 | 2.93 | 17.0 | 6.1 | 129.1 ^c | 2.27 | 7.0 | 3.1 |

Sources:

Money wage rates have been obtained from the Collective Bargaining Agreements of Noranda (Horne) Mines Limited.

^aCanada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 971.

^bPreliminary Estimates - D.B.S.

^cArithmetic Average - First half 1970.

TABLE 8.4

PINE POINT MINES: MONEY WAGE AND REAL WAGE PERFORMANCE
(C.P.I.: 1961 = 100)

| Year | Wage Rate | Change per yr. | Percentage Change per yr. | C.P.I. ^a | Real Wage | Real Wage Change per yr. | Real Wage Percentage Change per yr. |
|------|-----------|----------------|---------------------------|---------------------|-----------|--------------------------|-------------------------------------|
| 1951 | | | | 88.0 | | | |
| 1952 | | | | 90.2 | | | |
| 1953 | | | | 89.4 | | | |
| 1954 | | | | 89.9 | | | |
| 1955 | | | | 90.1 | | | |
| 1956 | | | | 91.4 | | | |
| 1957 | | | | 94.3 | | | |
| 1958 | | | | 96.8 | | | |
| 1959 | | | | 97.9 | | | |
| 1960 | | | | 99.1 | | | |
| 1961 | | | | 100.0 | | | |
| 1962 | | | | 101.2 | | | |
| 1963 | | | | 103.0 | | | |
| 1964 | \$2.35 | | | 104.8 | \$2.24 | | |
| 1965 | 2.58 | 23.0¢ | 9.8% | 107.4 | 2.40 | 16.0¢ | 7.1% |
| 1966 | 2.88 | 30.0 | 11.5 | 111.4 | 2.58 | 18.0 | 7.5 |
| 1967 | 3.14 | 26.0 | 9.0 | 115.4 | 2.72 | 14.0 | 5.3 |
| 1968 | 3.24 | 10.0 | 3.1 | 120.1 | 2.70 | - 2.0 | - 0.7 |
| 1969 | 3.35 | 11.0 | 3.4 | 125.5 ^b | 2.67 | - 3.0 | - 1.1 |
| 1970 | 3.45 | 10.0 | 3.0 | 129.1 ^c | 2.67 | 0.0 | 0.0 |

Sources:

Money wage rates have been obtained from the Collective Bargaining Agreements of Pine Point Mines Limited.

^aCanada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 971.

^bPreliminary Estimates - D.B.S.

^cArithmetic Average - First half 1970.

TABLE 8.5

WILLROY MINES: MONEY WAGE AND REAL WAGE PERFORMANCE
(C.P.I.: 1961 = 100)

| Year | Wage Rate | Change per yr. | Percentage Change per yr. | C.P.I. ^a | Real Wage | Real Wage Change per yr. | Real Wage Percentage Change per yr. |
|------|-----------|----------------|---------------------------|---------------------|-----------|--------------------------|-------------------------------------|
| 1951 | | | | 88.0 | | | |
| 1952 | | | | 90.2 | | | |
| 1953 | | | | 89.4 | | | |
| 1954 | | | | 89.9 | | | |
| 1955 | | | | 90.1 | | | |
| 1956 | \$1.71 | | | 91.4 | \$1.87 | | |
| 1957 | 1.81 | 10.0¢ | 6.0% | 94.3 | 1.92 | 5.0¢ | 2.7% |
| 1958 | 1.97 | 16.0 | 8.8 | 96.8 | 2.03 | 11.0 | 5.7 |
| 1959 | 1.99 | 2.0 | 1.0 | 97.9 | 2.03 | 0.0 | 0.0 |
| 1960 | 2.19 | 20.0 | 9.9 | 99.1 | 2.21 | 18.0 | 8.9 |
| 1961 | 2.21 | 2.0 | 1.0 | 100.0 | 2.21 | 0.0 | 0.0 |
| 1962 | 2.24 | 3.0 | 1.3 | 101.2 | 2.21 | 0.0 | 0.0 |
| 1963 | 2.28 | 4.0 | 1.8 | 103.0 | 2.21 | 0.0 | 0.0 |
| 1964 | 2.33 | 5.0 | 2.2 | 104.8 | 2.22 | 1.0 | 0.4 |
| 1965 | 2.38 | 5.0 | 2.1 | 107.4 | 2.22 | 0.0 | 0.0 |
| 1966 | 2.57 | 19.0 | 8.0 | 111.4 | 2.31 | 9.0 | 4.0 |
| 1967 | 2.67 | 10.0 | 4.0 | 115.4 | 2.31 | 0.0 | 0.0 |
| 1968 | 2.79 | 12.0 | 4.5 | 120.1 | 2.32 | 1.0 | 0.4 |
| 1969 | 2.84 | 5.0 | 1.8 | 125.5 ^b | 2.26 | - 6.0 | - 2.6 |
| 1970 | 3.19 | 15.0 | 5.2 | 129.1 ^c | 2.47 | 21.0 | 9.3 |

Sources:

Money wage rates have been obtained from the Collective Bargaining Agreements of Willroy Mines Limited.

^aCanada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 971.

^bPreliminary Estimates - D.B.S.

^cArithmetic Average - First half 1970.

TABLE 8.6

RIO-ALGOM MINES: MONEY WAGE AND REAL WAGE PERFORMANCE
(C.P.I.: 1961 = 100)

| Year | Wage Rate | Change per yr. | Percentage Change per yr. | C.P.I. ^a | Real Wage | Real Wage Change per yr. | Real Wage Percentage Change per yr. |
|------|-----------|----------------|---------------------------|---------------------|-----------|--------------------------|-------------------------------------|
| 1951 | | | | 88.0 | | | |
| 1952 | | | | 90.2 | | | |
| 1953 | | | | 89.4 | | | |
| 1954 | | | | 89.9 | | | |
| 1955 | | | | 90.1 | | | |
| 1956 | \$1.77 | | | 91.4 | \$1.94 | | |
| 1957 | 1.89 | 12.0¢ | 6.4% | 94.3 | 2.00 | 6.0¢ | 3.1% |
| 1958 | 2.14 | 25.0 | 13.2 | 96.8 | 2.21 | 21.0 | 10.1 |
| 1959 | 2.14 | 0.0 | 0.0 | 97.9 | 2.19 | - 2.0 | - 0.9 |
| 1960 | 2.24 | 10.0 | 4.4 | 99.1 | 2.26 | 7.0 | 3.2 |
| 1961 | 2.29 | 5.0 | 2.2 | 100.0 | 2.29 | 3.0 | 1.3 |
| 1962 | 2.32 | 3.0 | 1.3 | 101.2 | 2.29 | 0.0 | 0.0 |
| 1963 | 2.36 | 4.0 | 1.7 | 103.0 | 2.29 | 0.0 | 0.0 |
| 1964 | 2.41 | 5.0 | 2.1 | 104.8 | 2.30 | 1.0 | 0.4 |
| 1965 | 2.53 | 12.0 | 5.0 | 107.4 | 2.36 | 6.0 | 2.6 |
| 1966 | 2.58 | 5.0 | 1.9 | 111.4 | 2.32 | - 4.0 | - 1.7 |
| 1967 | 2.70 | 12.0 | 4.6 | 115.4 | 2.34 | 2.0 | 0.8 |
| 1968 | 3.09 | 39.0 | 14.4 | 120.1 | 2.57 | 23.0 | 9.8 |
| 1969 | 3.21 | 12.0 | 3.8 | 125.5 ^b | 2.56 | - 1.0 | - 0.4 |
| 1970 | 3.50 | 29.0 | 9.0 | 129.1 ^c | 2.71 | 15.0 | 5.8 |

Sources:

Money wage rates have been obtained from the Collective Bargaining Agreements of Rio-Algom Mines Limited.

^aCanada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 971.

^bPreliminary Estimates - D.B.S.

^cArithmetic Average - First Half 1970.

TABLE 8.7

LAKE DUFALUT MINES: MONEY WAGE AND REAL WAGE PERFORMANCE
(C.P.I.: 1961 = 100)

| Year | Wage Rate | Change per yr. | Percentage Change per yr. | C.P.I. ^a | Real Wage | Real Wage Change per yr. | Real Wage Percentage Change per yr. |
|------|-----------|----------------|---------------------------|---------------------|-----------|--------------------------|-------------------------------------|
| 1951 | | | | 88.0 | | | |
| 1952 | | | | 90.2 | | | |
| 1953 | | | | 89.4 | | | |
| 1954 | | | | 89.9 | | | |
| 1955 | | | | 90.1 | | | |
| 1956 | | | | 91.4 | | | |
| 1957 | | | | 94.3 | | | |
| 1958 | | | | 96.8 | | | |
| 1959 | | | | 97.9 | | | |
| 1960 | | | | 99.1 | | | |
| 1961 | | | | 100.0 | | | |
| 1962 | | | | 101.2 | | | |
| 1963 | | | | 103.0 | | | |
| 1964 | | | | 104.8 | | | |
| 1965 | \$2.32 | | | 107.4 | \$2.16 | | |
| 1966 | 2.41 | 9.0¢ | 3.9% | 111.4 | 2.16 | 0.0¢ | 0.0% |
| 1967 | 2.51 | 10.0 | 4.1 | 115.4 | 2.18 | 2.0 | 0.9 |
| 1968 | 2.73 | 22.0 | 8.7 | 120.1 | 2.27 | 9.0 | 4.1 |
| 1969 | 2.90 | 27.0 | 9.9 | 125.5 ^b | 2.31 | 4.0 | 1.7 |
| 1970 | 3.07 | 17.0 | 5.8 | 129.1 ^c | 2.38 | 7.0 | 3.0 |

Sources:

Money wage rates have been obtained from the Collective Bargaining Agreements of Lake Dufault Mines Limited.

^aCanada, Dominion Bureau of Statistics, Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 971.

^bPreliminary Estimates - D.B.S.

^cArithmetic Average - First half 1970.

TABLE 8.8
CANADIAN GROSS NATIONAL PRODUCT DATA
IN CURRENT DOLLARS

| Year | GNP in Millions | GNP Change per year in Millions | Percentage Change per year Before Price Adjustment | Percentage Change per year After Price Adjustment |
|------|--------------------|---------------------------------------|--|---|
| 1951 | 21,170 | | | |
| 1952 | 23,995 | 2,825 | 12.0% | 5.0% |
| 1953 | 25,020 | 2,025 | 5.0 | 4.0 |
| 1954 | 24,871 | - 149 | - 2.0 | 0.0 |
| 1955 | 27,132 | 2,261 | 9.0 | 9.0 |
| 1956 | 30,585 | 3,453 | 11.0 | 7.0 |
| 1957 | 31,909 | 1,324 | 4.0 | 0.0 |
| 1958 | 32,894 | 985 | 2.3 | 1.0 |
| 1959 | 34,915 | 2,021 | 6.0 | 4.0 |
| 1960 | 36,287 | 1,372 | 3.0 | 2.0 |
| 1961 | 37,471 | 1,184 | 2.5 | 2.0 |
| 1962 | 40,575 | 3,104 | 8.0 | 6.0 |
| 1963 | 43,424 | 2,849 | 6.6 | 4.7 |
| 1964 | 47,393 | 3,969 | 9.0 | 6.5 |
| 1965 | 52,203 | 4,810 | 9.7 | 6.6 |
| 1966 | 58,120 | 5,917 | 10.8 | 5.9 |
| 1967 | 62,068 | 3,948 | 6.0 | 3.1 |
| 1968 | 67,600 | 5,532 | 8.9 | 4.8 |
| 1969 | 73,900 | 6,300 | 9.3 | 4.8 |

Sources: Tables 6.7 and 6.8.

TABLE 8.9
 PERCENTAGE CHANGE IN COPPER PRICES 1951-1970

| Year | Price per lb. | Change in price | Percentage change in price |
|------|---------------|-----------------|----------------------------|
| 1951 | 26.25¢ | | |
| 1952 | 33.40 | 7.15¢ | 27.0% |
| 1953 | 28.70 | - 4.70 | -14.0 |
| 1954 | 26.70 | - 2.00 | - 7.1 |
| 1955 | 37.50 | 10.80 | 40.7 |
| 1956 | 41.80 | 4.30 | 11.1 |
| 1957 | 29.60 | -12.20 | -29.1 |
| 1958 | 25.00 | - 4.60 | -15.5 |
| 1959 | 31.60 | 6.60 | 26.4 |
| 1960 | 30.25 | - 1.35 | - 4.3 |
| 1961 | 29.10 | - 1.15 | - 3.8 |
| 1962 | 30.90 | 1.80 | 6.2 |
| 1963 | 31.50 | 0.60 | 0.9 |
| 1964 | 33.33 | 1.80 | 5.7 |
| 1965 | 37.60 | 4.27 | 12.7 |
| 1966 | 45.00 | 7.40 | 19.8 |
| 1967 | 47.25 | 2.25 | 5.0 |
| 1968 | 48.00 | 0.75 | 0.2 |
| 1969 | 51.55 | 3.55 | 7.5 |
| 1970 | 59.00 | 7.45 | 14.4 |

Source: Compiled from Table 6.9.

TABLE 8.10
 PERCENTAGE CHANGE IN NICKEL PRICES 1951-1970

| Year | Price per lb. | Change in price | Percentage change in price |
|------|------------------|--------------------|----------------------------------|
| 1951 | 55.10¢ | | |
| 1952 | 55.80 | 0.70¢ | 1.3% |
| 1953 | 55.50 | - 0.30 | - 0.5 |
| 1954 | 57.50 | 2.00 | 3.6 |
| 1955 | 63.00 | 5.50 | 9.6 |
| 1956 | 70.00 | 7.00 | 11.0 |
| 1957 | 70.00 | 0.00 | 0.0 |
| 1958 | 70.50 | 0.50 | 0.7 |
| 1959 | 70.50 | 0.00 | 0.0 |
| 1960 | 70.00 | - 0.50 | - 0.7 |
| 1961 | 82.50 | 12.50 | 17.7 |
| 1962 | 84.00 | 1.50 | 2.0 |
| 1963 | 84.00 | 0.00 | 0.0 |
| 1964 | 84.00 | 0.00 | 0.0 |
| 1965 | 84.00 | 0.00 | 0.0 |
| 1966 | 92.10 | 8.10 | 9.7 |
| 1967 | 101.50 | 9.40 | 10.3 |
| 1968 | 101.50 | 0.00 | 0.0 |
| 1969 | 112.80 | 11.30 | 11.2 |
| 1970 | 137.50 | 24.70 | 22.0 |

Source: Compiled from Table 6.10.

No effort has been made to determine if discount prices do or do not exist.

TABLE 8.11
 PERCENTAGE CHANGE IN LEAD PRICES 1951-1970

| Year | Price per lb. | Change in price | Percentage Change in price |
|------|---------------|-----------------|----------------------------|
| 1951 | 17.49¢ | | |
| 1952 | 16.47 | - 1.02¢ | - 5.8% |
| 1953 | 13.48 | - 2.99 | -18.2 |
| 1954 | 14.81 | 1.33 | 9.8 |
| 1955 | 15.14 | 0.33 | 6.1 |
| 1956 | 16.01 | 0.87 | 5.7 |
| 1957 | 14.66 | - 1.35 | - 8.4 |
| 1958 | 14.66 | 0.00 | 0.0 |
| 1959 | 12.01 | - 2.65 | -18.2 |
| 1960 | 11.75 | - 0.26 | - 2.1 |
| 1961 | 10.21 | - 1.54 | -15.3 |
| 1962 | 9.43 | - 0.78 | - 7.6 |
| 1963 | 10.94 | 1.51 | 16.0 |
| 1964 | 13.42 | 2.48 | 24.8 |
| 1965 | 15.50 | 2.08 | 15.6 |
| 1966 | 15.00 | - 0.50 | - 3.2 |
| 1967 | 14.00 | - 1.00 | - 6.6 |
| 1968 | 13.50 | - 0.50 | - 3.5 |
| 1969 | 15.19 | 1.69 | 12.5 |
| 1970 | 16.50 | 1.31 | 8.6 |

Source: Compiled from Table 6.11.

TABLE 8.12
 PERCENTAGE CHANGE IN ZINC PRICES 1951-1970

| Year | Price per lb. | Change in price | Percentage change in price |
|------|---------------|-----------------|----------------------------|
| 1951 | 17.99¢ | | |
| 1952 | 16.21 | -1.78¢ | - 9.9% |
| 1953 | 10.86 | -5.35 | -33.1 |
| 1954 | 10.68 | -0.18 | - 1.6 |
| 1955 | 12.30 | 1.62 | 15.2 |
| 1956 | 13.49 | 1.19 | 8.8 |
| 1957 | 11.40 | -2.09 | -15.6 |
| 1958 | 10.31 | -1.09 | - 9.6 |
| 1959 | 11.46 | 1.15 | 11.1 |
| 1960 | 12.95 | 1.49 | 13.1 |
| 1961 | 11.55 | -1.40 | -10.8 |
| 1962 | 11.63 | 0.08 | 0.7 |
| 1963 | 12.01 | 0.38 | 3.2 |
| 1964 | 13.57 | 1.56 | 12.9 |
| 1965 | 14.50 | 0.93 | 0.7 |
| 1966 | 14.50 | 0.00 | 0.0 |
| 1967 | 13.50 | -1.00 | - 6.9 |
| 1968 | 13.50 | 0.00 | 0.0 |
| 1969 | 14.67 | 1.17 | 8.7 |
| 1970 | 15.50 | 0.83 | 5.6 |

Source: Compiled from Table 6.12.

TABLE 8.13
 PERCENTAGE CHANGE IN MOLYBDENUM PRICES 1951-1970

| Year | Price per lb. | Change in price | Percentage Change in price |
|------|---------------|-----------------|----------------------------|
| 1951 | 60.00¢ | | |
| 1952 | 60.00¢ | 0.00¢ | 0.0% |
| 1953 | 60.00 | 0.00 | 0.0 |
| 1954 | 60.00 | 0.00 | 0.0 |
| 1955 | 60.00 | 0.00 | 0.0 |
| 1956 | 60.00 | 0.00 | 0.0 |
| 1957 | 118.00 | 58.00 | 96.6 |
| 1958 | 118.00 | 0.00 | 0.0 |
| 1959 | 118.00 | 0.00 | 0.0 |
| 1960 | 125.00 | 7.00 | 5.9 |
| 1961 | 125.00 | 0.00 | 0.0 |
| 1962 | 125.00 | 0.00 | 0.0 |
| 1963 | 140.00 | 15.00 | 12.0 |
| 1964 | 155.00 | 15.00 | 10.7 |
| 1965 | 155.00 | 0.00 | 0.0 |
| 1966 | 155.00 | 0.00 | 0.0 |
| 1967 | 162.00 | 7.00 | 4.5 |
| 1968 | 162.00 | 0.00 | 0.0 |
| 1969 | 162.00 | 0.00 | 0.0 |
| 1970 | 162.00 | 0.00 | 0.0 |

Source: Compiled from Table 6.13.

TABLE 8.14
 PERCENTAGE CHANGE IN URANIUM PRICES 1951-1970

| Year | Price per lb. | Change in price | Percentage Change in price |
|------|-------------------|-----------------|----------------------------|
| 1951 | \$ 7.25 | | |
| 1952 | 7.25 | \$ 0.00 | 0.0% |
| 1953 | 7.25 | 0.00 | 0.0 |
| 1954 | 7.25 | 0.00 | 0.0 |
| 1955 | 9.50 | 2.25 | 31.1 |
| 1956 | 9.50 | 0.00 | 0.0 |
| 1957 | 10.00 | 0.50 | 5.2 |
| 1958 | 10.30 | 0.30 | 3.0 |
| 1959 | 10.50 | 0.20 | 1.9 |
| 1960 | 10.50 | 0.00 | 0.0 |
| 1961 | 10.50 | 0.00 | 0.0 |
| 1962 | 5.03 ^a | -5.47 | -52.0 |
| 1963 | 5.03 | 0.00 | 0.0 |
| 1964 | 5.03 | 0.00 | 0.0 |
| 1965 | 4.90 ^b | -0.13 | - 2.6 |
| 1966 | 4.90 | -0.13 | - 2.6 |
| 1967 | 4.90 | -0.13 | - 2.6 |
| 1968 | 4.90 | -0.13 | - 2.6 |
| 1969 | 4.90 | -0.13 | - 2.6 |
| 1970 | 4.90 | -0.13 | - 2.6 |

^aGovernment stock-piling commenced.

^bPrivate direct sales subject to Crown approval are permitted at prices in the range \$7-\$8 per lb., but this is a small part of total production.

Source: Canada, Department of Energy, Mines and Resources, Canadian Minerals Yearbook (Ottawa: Queen's Printer) for the various years shown and under the section pertaining to Uranium.

TABLE 8.15
ANNUAL PRODUCTION AND CHANGES (IN TONS AND PERCENTAGE) FOR COPPER, NICKEL AND LEAD

| Year | COPPER | | | NICKEL | | | LEAD | | |
|------|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|-------------|
| | Annual Output | Annual Change | P.c. Change | Annual Output | Annual Change | P.c. Change | Annual Output | Annual Change | P.c. Change |
| 1951 | 269,970 | | | 137,903 | | | 158,231 | | |
| 1952 | 258,037 | -11,933 | -4.4 | 140,558 | 2,655 | 1.9 | 168,841 | 10,610 | 6.7 |
| 1953 | 253,252 | -4,785 | -1.8 | 143,692 | 3,134 | 2.2 | 193,705 | 24,864 | 14.7 |
| 1954 | 302,732 | 49,480 | 19.5 | 161,279 | 17,587 | 12.2 | 218,495 | 24,790 | 12.7 |
| 1955 | 325,994 | 23,262 | 7.7 | 174,928 | 13,649 | 7.8 | 202,762 | -15,733 | -7.2 |
| 1956 | 345,860 | 28,866 | 8.8 | 178,515 | 3,587 | 2.0 | 188,854 | -13,908 | -6.9 |
| 1957 | 359,109 | 4,249 | 1.2 | 187,958 | 9,443 | 5.2 | 181,484 | -7,370 | -3.9 |
| 1958 | 345,114 | -13,995 | -3.9 | 139,559 | -48,399 | -25.6 | 186,680 | 5,196 | 2.9 |
| 1959 | 395,269 | 50,155 | 1.4 | 186,555 | 46,996 | 33.5 | 186,696 | 16 | 0.0 |
| 1960 | 439,262 | 43,993 | 11.1 | 214,506 | 27,951 | 14.9 | 205,605 | 18,954 | 10.1 |
| 1961 | 439,087 | -175 | 0.0 | 232,991 | 18,485 | 8.6 | 230,435 | 24,785 | 12.2 |
| 1962 | 457,385 | 18,298 | 4.0 | 232,242 | -749 | 0.0 | 215,329 | -15,106 | -6.6 |
| 1963 | 452,559 | -4,826 | -1.0 | 217,039 | -15,203 | -6.5 | 201,165 | -14,164 | -6.5 |
| 1964 | 486,900 | 34,341 | 7.6 | 228,496 | 11,457 | 5.3 | 203,717 | 2,552 | 1.2 |
| 1965 | 507,878 | 20,978 | 4.3 | 259,182 | 30,686 | 13.4 | 291,807 | 88,090 | 30.0 |
| 1966 | 506,076 | -1,802 | 0.0 | 223,610 | -35,572 | -13.7 | 299,622 | 7,815 | 2.7 |
| 1967 | 613,313 | 107,237 | 21.4 | 248,647 | 25,037 | 11.2 | 317,963 | 18,341 | 6.1 |
| 1968 | 633,312 | 19,999 | 3.2 | 264,358 | 15,711 | 6.3 | 340,175 | 22,212 | 7.0 |
| 1969 | 558,227 | -75,085 | -11.8 | 213,325 | -51,033 | -19.2 | 315,031 | 25,144 | 7.4 |

Source: Canada, Dominion Bureau of Statistics, Canada's Mineral Production, Preliminary Estimates (Ottawa: Queen's Printer - for years shown).

TABLE 8.16
ANNUAL PRODUCTION AND CHANGES (IN TONS AND PERCENTAGE) FOR ZINC, MOLYBDENUM AND URANIUM

| Year | ZINC | | | MOLYBDENUM | | | URANIUM | | |
|------|---------------|---------------|-------------|---------------|---------------|-------------|---------------|---------------|-------------|
| | Annual Output | Annual Change | P.c. Change | Annual Output | Annual Change | P.c. Change | Annual Output | Annual Change | P.c. Change |
| 1951 | 341,112 | | | 190 | | | | | |
| 1952 | 371,802 | 30,690 | 9.0 | 252 | 62 | 32.8 | | | |
| 1953 | 401,761 | 29,959 | 8.1 | 161 | - 91 | -35.9 | | | |
| 1954 | 376,491 | -25,270 | - 6.2 | 371 | 210 | 126.5 | | | |
| 1955 | 433,357 | 56,866 | 15.1 | 694 | 323 | 87.0 | | | |
| 1956 | 422,642 | -10,715 | - 2.5 | 420 | -274 | -39.4 | | | |
| 1957 | 413,741 | - 8,901 | - 2.1 | 437 | 17 | 4.0 | 2,290 | | |
| 1958 | 425,099 | 11,358 | 2.8 | 444 | 7 | 1.6 | 6,437 | 4,147 | 180.0 |
| 1959 | 395,008 | -29,091 | - 6.8 | 374 | - 70 | -15.7 | 13,402 | 6,965 | 108.5 |
| 1960 | 406,873 | 10,865 | 2.7 | 383 | 9 | 2.4 | 15,892 | 2,490 | 18.5 |
| 1961 | 416,004 | 9,131 | 2.2 | 381 | - 2 | - 0.5 | 12,747 | -3,145 | -19.8 |
| 1962 | 463,144 | 47,140 | 11.3 | 408 | 27 | 7.0 | 9,640 | -3,107 | -24.4 |
| 1963 | 473,722 | 10,578 | 2.7 | 416 | 8 | 1.9 | 8,429 | -1,211 | -12.5 |
| 1964 | 684,513 | 210,791 | 44.4 | 612 | 196 | 47.1 | 8,351 | - 78 | - 0.8 |
| 1965 | 822,035 | 137,522 | 20.0 | 4,778 | 4,166 | 680.0 | 7,285 | -1,066 | -12.7 |
| 1966 | 964,106 | 142,071 | 17.2 | 10,298 | 5,520 | 115.8 | 4,442 | -2,843 | -39.0 |
| 1967 | 1,111,453 | 147,347 | 15.3 | 10,688 | 390 | 3.8 | 3,931 | - 511 | -11.5 |
| 1968 | 1,159,892 | 48,439 | 4.3 | 11,232 | 544 | 5.1 | 3,738 | - 193 | - 4.9 |
| 1969 | 1,196,290 | 36,388 | 3.1 | 15,145 | 3,913 | 35.1 | 3,701 | - 37 | - 0.9 |
| | | | | | | | 3,854 | 153 | 4.1 |

Source: Canada, Dominion Bureau of Statistics, Canada's Mineral Production, Preliminary Estimates (Ottawa: Queen's Printer - for years shown).

TABLE 8.17
METAL MINING AND CANADIAN EMPLOYMENT RATES

| Year | Metal Mining Labour Force | INCO Labour Force | Metal Mining Wages (millions) | Total Canadian Labour Force (1000's) | Canadian Unemployment Rate | P.c. Change in Metal Mining Employment | P.c. Change in INCO Employment |
|------|---------------------------|---------------------|-------------------------------|--------------------------------------|----------------------------|--|--------------------------------|
| 1951 | 70,000 ^a | | 250 ^g | 5,223 ^l | 2.4% ^k | 6.1% | |
| 1952 | 72,000 | | 290 | 5,324 | 2.9 | 2.8 | |
| 1953 | 70,000 | | 285 | 5,397 | 3.0 | -2.8 | |
| 1954 | 76,600 | | 298 | 5,493 | 4.6 | 9.4 | |
| 1955 | 85,000 | | 330 | 5,610 | 4.4 | 10.9 | |
| 1956 | 86,000 | | 370 | 5,782 | 3.4 | 1.2 | |
| 1957 | 92,000 | | 413 | 6,003 | 4.6 | 7.0 | |
| 1958 | 89,000 | | 420 | 6,127 | 7.1 | -3.3 | |
| 1959 | 91,600 | | 444 | 6,228 | 6.0 | 2.9 | |
| 1960 | 91,600 | 20,390 ^e | 462 | 6,518 | 7.0 | 0.0 | |
| 1961 | 88,900 | 21,995 | 455 | 6,521 ^j | 7.2 | -3.0 | 7.8% |
| 1962 | 88,400 | 17,549 | 470 | 6,615 | 5.9 ^m | -0.6 | -20.0 |
| 1963 | 87,000 | 16,850 | 472 | 6,748 | 5.5 | 1.5 | -3.9 |
| 1964 | 87,800 ^b | 20,494 | 480 ^h | 6,933 | 4.8 | 0.9 | 21.3 |
| 1965 | 93,300 | 22,455 ^f | 578 | 7,141 | 3.9 | 6.2 | 29.5 |
| 1966 | 95,100 | 22,103 | 637 | 7,420 | 3.6 ⁿ | 1.8 | -1.6 |
| 1967 | 96,900 | 23,376 | 713 | 7,694 | 4.1 | 1.8 | 5.8 |
| 1968 | 97,600 ^c | 24,378 | 778 | 7,919 | 4.8 ^p | 0.7 | 4.2 |
| 1969 | 98,500 ^d | 25,434 | 808 | | 4.7 ^q | 0.9 | 4.2 |
| 1970 | | | | | 6.3 ^r | | |

Sources:

^aCanada, Dept. of Energy, Mines and Resources, Canadian Minerals Yearbook, 1947-1964 inclusive (Ottawa: Queen's Printer).
^bCanada, D.B.S., Review of Employment and Average Weekly Wages and Salaries, 1957-1967 (Ottawa: Queen's Printer, 1969), p. 8.
^cCanada, D.B.S., Review of Employment and Average Weekly Wages and Salaries, 1966-1968 (Ottawa: Queen's Printer, 1970), p. 7.
^dEstimate.
^eAnnual Report of The International Nickel Company of Canada, 1969.
^fAnnual Report of The International Nickel Company of Canada, for years as shown.
^gSame as note a.
^hCanada, D.B.S., Estimates of Labour Income, 1963-1970 (Ottawa: Queen's Printer, 1970), p. 6.
ⁱCanada, D.B.S., Canada Year Book 1962 (Ottawa: Queen's Printer, 1962), p. 708.
^jCanada, D.B.S., Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 768.
^kCanada, D.B.S., Canada Year Book 1962 (Ottawa: Queen's Printer, 1962), p. 708.
^lCanada, D.B.S., Canada Year Book 1967 (Ottawa: Queen's Printer, 1967), p. 742.
^mCanada, D.B.S., Canada Year Book 1968 (Ottawa: Queen's Printer, 1968), p. 756.
ⁿCanada, D.B.S., Canada Year Book 1969 (Ottawa: Queen's Printer, 1969), p. 763.
^oD.B.S., Winnipeg - by telephone.

TABLE 8.18

Estimates of the Civilian Labour Force and Its Main Components, June 1, 1939-58

NOTE.—Figures do not include persons in institutions and Indians on reserves. Figures for 1951-58 inclusive have been revised since the publication of the 1957-58 Year Book.

| Year | Civilian Population (14 years of age or over) | Civilian Labour Force (14 years of age or over) | | | | | | Persons not in the Labour Force (14 years of age or over) | |
|-------------------------|---|---|--------------------|--------------------------|--------------|-------------------|---------------------------------------|---|--------------------|
| | | Persons with Jobs | | | | | Persons without Jobs and Seeking Work | | Total Labour Force |
| | | Non-agriculture | | | Agri-culture | Total (with jobs) | | | |
| | | Paid Workers | Other ¹ | Total (non-agri-culture) | | | | | |
| '000 | '000 | '000 | '000 | '000 | '000 | '000 | '000 | '000 | |
| 1939..... | 8,122 | 2,079 | 662 | 2,741 | 1,379 | 4,120 | 529 | 4,649 | 3,473 |
| 1940..... | 8,140 | 2,197 | 643 | 2,840 | 1,344 | 4,184 | 423 | 4,607 | 3,533 |
| 1941..... | 8,086 | 2,566 | 481 | 3,047 | 1,224 | 4,271 | 195 | 4,466 | 3,590 |
| 1942..... | 8,085 | 2,301 | 494 | 3,295 | 1,139 | 4,434 | 135 | 4,569 | 3,516 |
| 1943..... | 7,871 | 2,934 | 439 | 3,373 | 1,118 | 4,491 | 76 | 4,567 | 3,304 |
| 1944..... | 7,920 | 2,976 | 373 | 3,349 | 1,136 | 4,485 | 63 | 4,548 | 3,372 |
| 1945..... | 8,018 | 2,937 | 366 | 3,303 | 1,144 | 4,447 | 73 | 4,520 | 3,528 |
| 1946..... | 8,768 | 2,986 | 481 | 3,467 | 1,271 | 4,738 | 124 | 4,862 | 3,906 |
| 1947..... | 8,993 | 3,139 | 551 | 3,690 | 1,172 | 4,862 | 92 | 4,954 | 4,039 |
| 1948..... | 9,123 | 3,225 | 543 | 3,768 | 1,186 | 4,954 | 81 | 5,035 | 4,088 |
| 1949..... | 9,254 | 3,326 | 551 | 3,877 | 1,114 | 4,991 | 101 | 5,092 | 4,162 |
| 1950 ² | 9,610 | 3,429 | 561 | 3,990 | 1,066 | 5,056 | 142 | 5,198 | 4,412 |
| 1951..... | 9,696 | 3,625 | 539 | 4,164 | 991 | 5,155 | 81 | 5,236 | 4,460 |
| 1952..... | 9,933 | 3,795 | 517 | 4,312 | 927 | 5,239 | 105 | 5,344 | 4,589 |
| 1953..... | 10,127 | 3,842 | 531 | 4,373 | 898 | 5,271 | 115 | 5,386 | 4,741 |
| 1954..... | 10,362 | 3,825 | 537 | 4,362 | 893 | 5,255 | 221 | 5,476 | 4,886 |
| 1955..... | 10,571 | 3,977 | 521 | 4,498 | 873 | 5,371 | 214 | 5,585 | 4,986 |
| 1956..... | 10,771 | 4,219 | 534 | 4,753 | 819 | 5,572 | 166 | 5,738 | 5,033 |
| 1957..... | 11,066 | 4,450 | 552 | 5,002 | 772 | 5,774 | 196 | 5,970 | 5,096 |
| 1958..... | 11,333 | 4,493 | 518 | 5,011 | 739 | 5,750 | 370 | 6,120 | 5,213 |

¹ Employers, 'own-account' and unpaid family workers.

² Newfoundland included from 1950.

Source: Canada, Dominion Bureau of Statistics, Canada Year Book 1959 (Ottawa: Queen's Printer, 1959), p. 723.

TABLE 8.19

Estimates of the Civilian Labour Force and Its Main Components, Annual Averages, 1959-68

| Year | Civilian Population (14 years of age or over) | Civilian Labour Force (14 years of age or over) | | | | | | Persons not in the Labour Force (14 years of age or over) | |
|-----------|---|---|-------|--------------------------|--------------|-------------|--------------------|---|-------------------|
| | | Employed | | | | Unem-ployed | Total Labour Force | | |
| | | Non-agriculture | | | Agri-culture | | | | Total (em-ployed) |
| | | Paid Workers | Other | Total (non-agri-culture) | | | | | |
| '000 | '000 | '000 | '000 | '000 | '000 | '000 | '000 | '000 | |
| 1959..... | 11,605 | 4,624 | 546 | 5,170 | 700 | 5,870 | 372 | 6,242 | 5,363 |
| 1960..... | 11,831 | 4,732 | 551 | 5,282 | 683 | 5,965 | 446 | 6,411 | 5,420 |
| 1961..... | 12,053 | 4,799 | 575 | 5,374 | 681 | 6,055 | 466 | 6,521 | 5,531 |
| 1962..... | 12,250 | 4,980 | 585 | 5,565 | 660 | 6,225 | 390 | 6,615 | 5,665 |
| 1963..... | 12,536 | 5,138 | 588 | 5,726 | 649 | 6,375 | 374 | 6,748 | 5,787 |
| 1964..... | 12,817 | 5,368 | 611 | 5,979 | 630 | 6,609 | 324 | 6,933 | 5,884 |
| 1965..... | 13,128 | 5,655 | 613 | 6,268 | 594 | 6,862 | 280 | 7,141 | 5,986 |
| 1966..... | 13,475 | 5,999 | 610 | 6,609 | 544 | 7,152 | 267 | 7,420 | 6,055 |
| 1967..... | 13,874 | 6,266 | 614 | 6,820 | 559 | 7,379 | 315 | 7,694 | 6,179 |
| 1968..... | 14,264 | 6,391 | 601 | 6,992 | 545 | 7,537 | 382 | 7,919 | 6,344 |

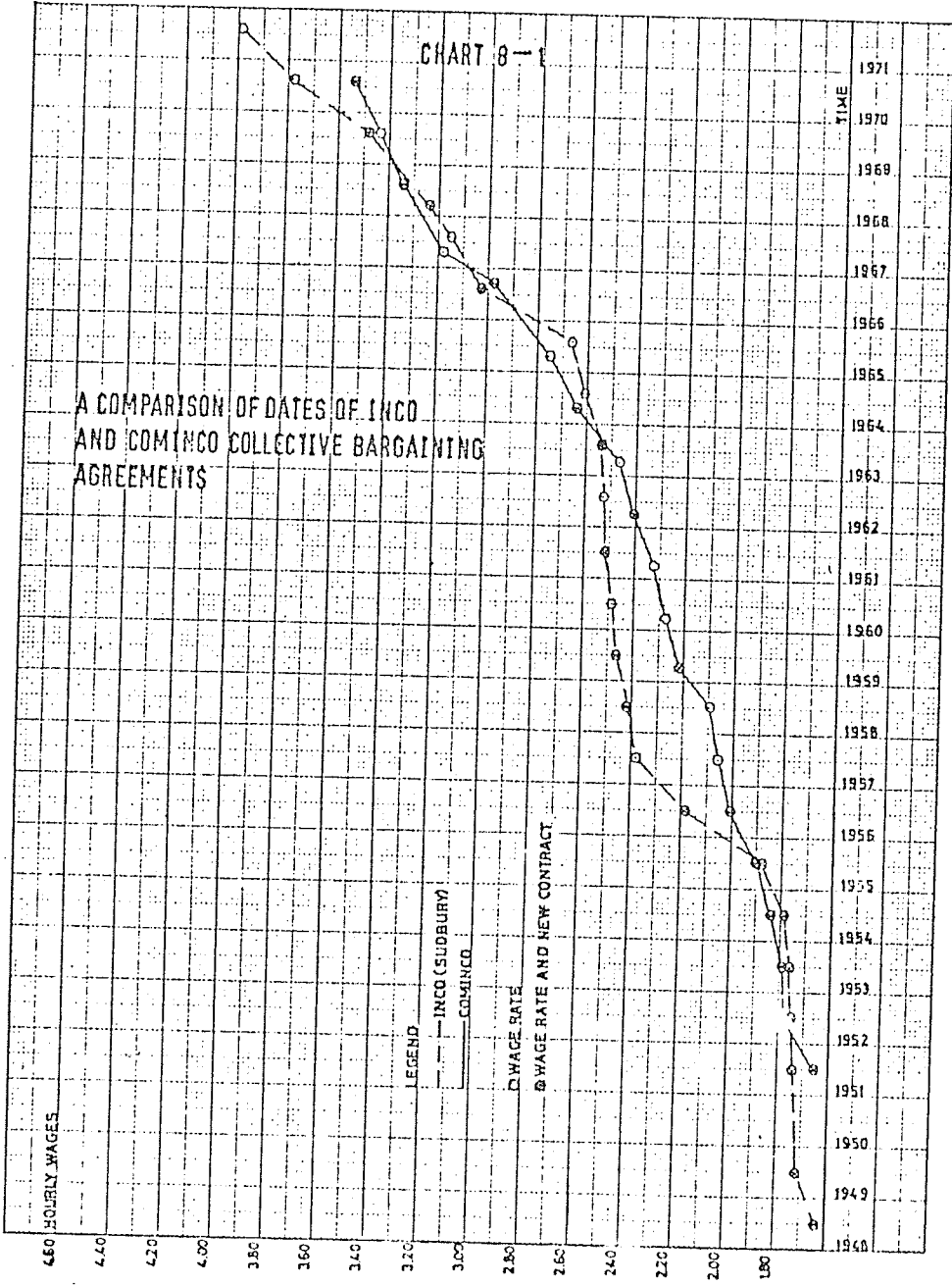
Source: Same as Table 8.18, but 1969, p. 763.

8.4.1 INCO: Wage Setter and Wage Leader

A firm to be a wage leader must either pay higher wages or have its wage structure used as a basis for that industry's wage patterns. To be a wage setter it must institute these wage patterns in such a manner (i.e., earlier) that they effectively establish wage movements within the industry. Thus to be both a wage leader and a wage setter a firm must have a wage structure that is used as a guide for the balance of the industry and it must also achieve its collective agreements before the other firms.⁴ In this manner it will also be responsible for wage movements within the industry. Bloom and Northrup note that both these types of influence can be present without a union but that it is the presence of unions that has produced wage leadership due to pressure from both labour and management.

Chart 8-1 was designed to investigate the matter posed in item (1) in previous section. As the chart shows, both INCO and COMINCO negotiated and signed contracts on the same date each year up to and including 1955, with a very slightly higher wage at COMINCO. During 1954, 1956 and 1957 the zinc market "softened" whereas the nickel market was in a period of continual improvement. These market powers plus vigorous union (Mine-Mill) bargaining allowed INCO wages to surpass those of COMINCO. At this time (i.e., 1956) both firms entered into a new and continuing practice of multi-year contracts. INCO then bargained during 1958 but COMINCO did not follow suit until 1959. During this period INCO became both the wage setter and wage leader.

⁴Gordon F. Bloom and Herbert R. Northrup, Economics of Labor Relations (Homewood, Ill.: Richard D. Irwin Inc., 1965), pp. 385-389.



INCO again bargained ahead of COMINCO, i.e., INCO "signed" during 1961, COMINCO in 1962. However COMINCO had started to close the "wage-gap," i.e., INCO's position as a wage leader was being challenged but not its capacity as a wage setter.

By now INCO had entered into its very trying labour relations period. Certification had been awarded to the USW, yet a long bitter struggle ensued, whereas COMINCO remained staunchly allied to Mine-Mill. Also, during this period the nickel market had softened but not the zinc market. During this tumultuous period INCO bargained ahead of COMINCO but the latter now had surpassed INCO as the wage leader.

During 1966 both firms bargained, with INCO slightly earlier. Initially INCO regained its leadership but soon lost it due to adverse nickel markets.

COMINCO then bargained in isolation during 1968 and lost its leadership. Both firms bargained during 1969 with INCO again the earlier one and taking over once more as the leader, a position it now (1970) holds and will hold until at least July 1972.

Thus in the period 1955 to 1972, i.e., 17 years, INCO has been the wage leader for 12 years and the wage setter for 11½ years. Prior to 1955, i.e., 1951 to 1955, wages were so close that it is questionable if any leadership existed, and since both firms signed simultaneously, no setter trends were obvious.

That INCO has normally been the wage leader there is no doubt, but why must the other firms follow its wage patterns, i.e., why do they react to INCO as a wage setter? Primarily because of the power of the union to bargain earlier with INCO and then establish it as the wage

setter and also because of INCO's price and market power which allows it to raise prices to offset rising costs.⁵ However economies of scale are such that the other firms are not able to completely duplicate INCO's wage patterns even though the union may so desire. Thus the industry moves in a trend of wages parallel to INCO or slightly converging, but once a firm approaches INCO's position in the wage scale then the union uses that firm's encroaching position to force INCO to once more move up to a new plateau of wages with new rates of increase.

We can thus reasonably conclude that INCO has been both a "leader" and "setter" in the industry except for a period after the change of unions in Sudbury and concurrently a softening of the nickel market, but that after merger in 1967 the intent of USW executives to make INCO the "leader" and "setter" has been fulfilled.⁶ The current softening of both the zinc and lead markets suggests that this trend will continue for some time, and that current developments in the nickel market will further sustain INCO's position as a price setter, wage leader and wage setter.

8.4.2. Linearity

The objective of our statistical analysis is to obtain correlation coefficients, i.e., values for r , for various sets of paired data. The statistical procedure (performed by a computerized program) is to fit a least-squares line to paired data and then to describe how well it "fits."

⁵See Chapter IX regarding transfer mechanism.

⁶During a visit to Toronto in December 1969, the author discussed the INCO (Sudbury) contract with several senior USW executives and gathered the impression that it was the pattern for future contracts, with INCO as the model mostly because COMINCO would follow and Noranda was just too tough to use as a leader and setter due to its diversified corporate structure.

If the "fit" is poor, the ratio of the two sums of squares is close to 1 and the correlation coefficient is close to 0; if the "fit" is good, the ratio is close to 0 and the correlation coefficient, i.e., r , is closer to +1 or -1. If r is negative then the least-squares line is negatively sloped, i.e., downward to the right. If r is positive, the slope is positive and upward to the right in direction. If $r = 0$ there is no correlation, i.e., the least-squares line is horizontal.⁷

A word of caution: r measures only the strength of linear relationships and does not necessarily imply a cause-effect relationship. We should therefore interpret correlation coefficients as measures of association.

In the preceding paragraph the word linearity is critical. If our statistical analysis could not be conducted on the basis of linearity then non-linear techniques would have had to be employed.

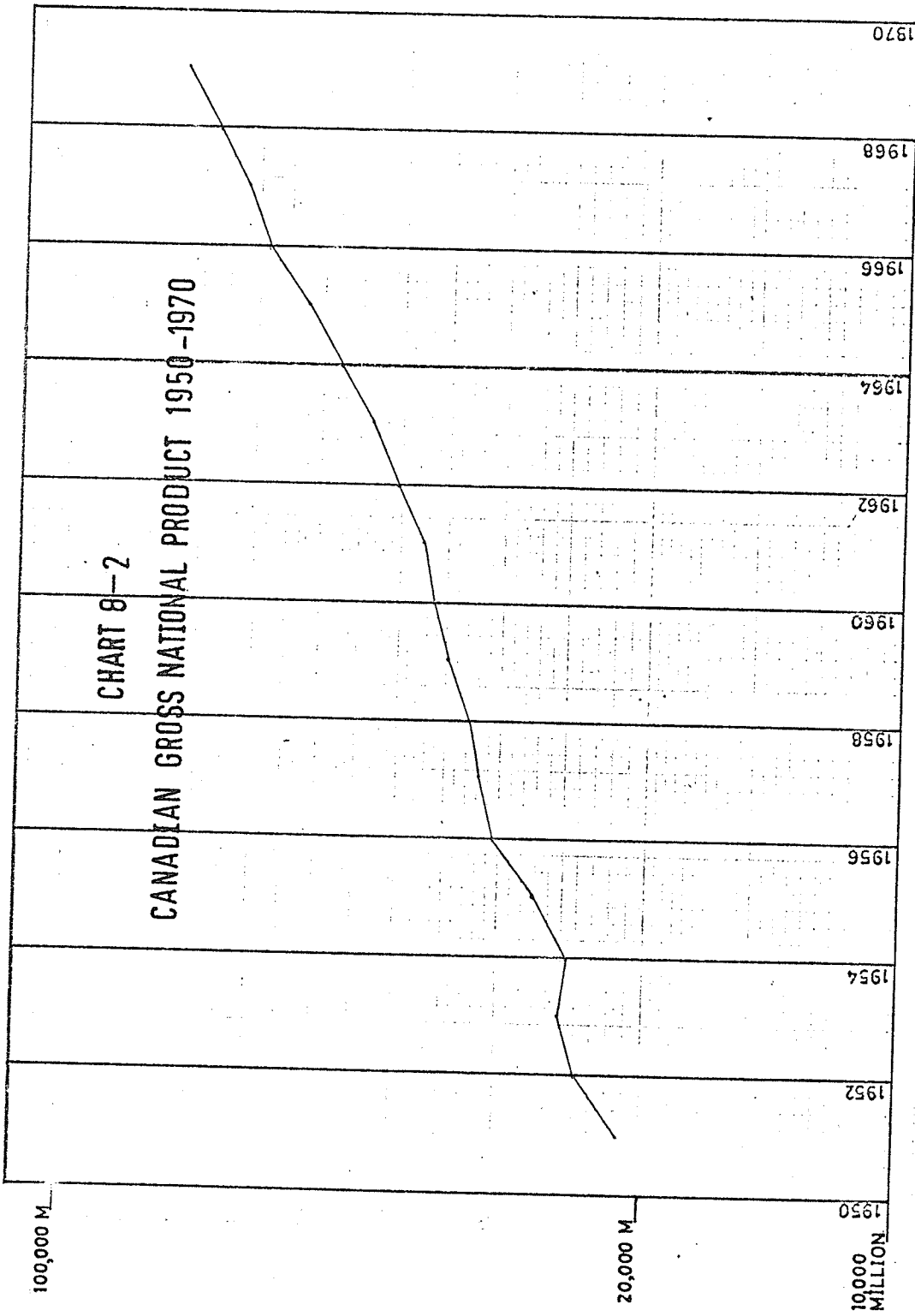
To solve this problem two approaches were taken:

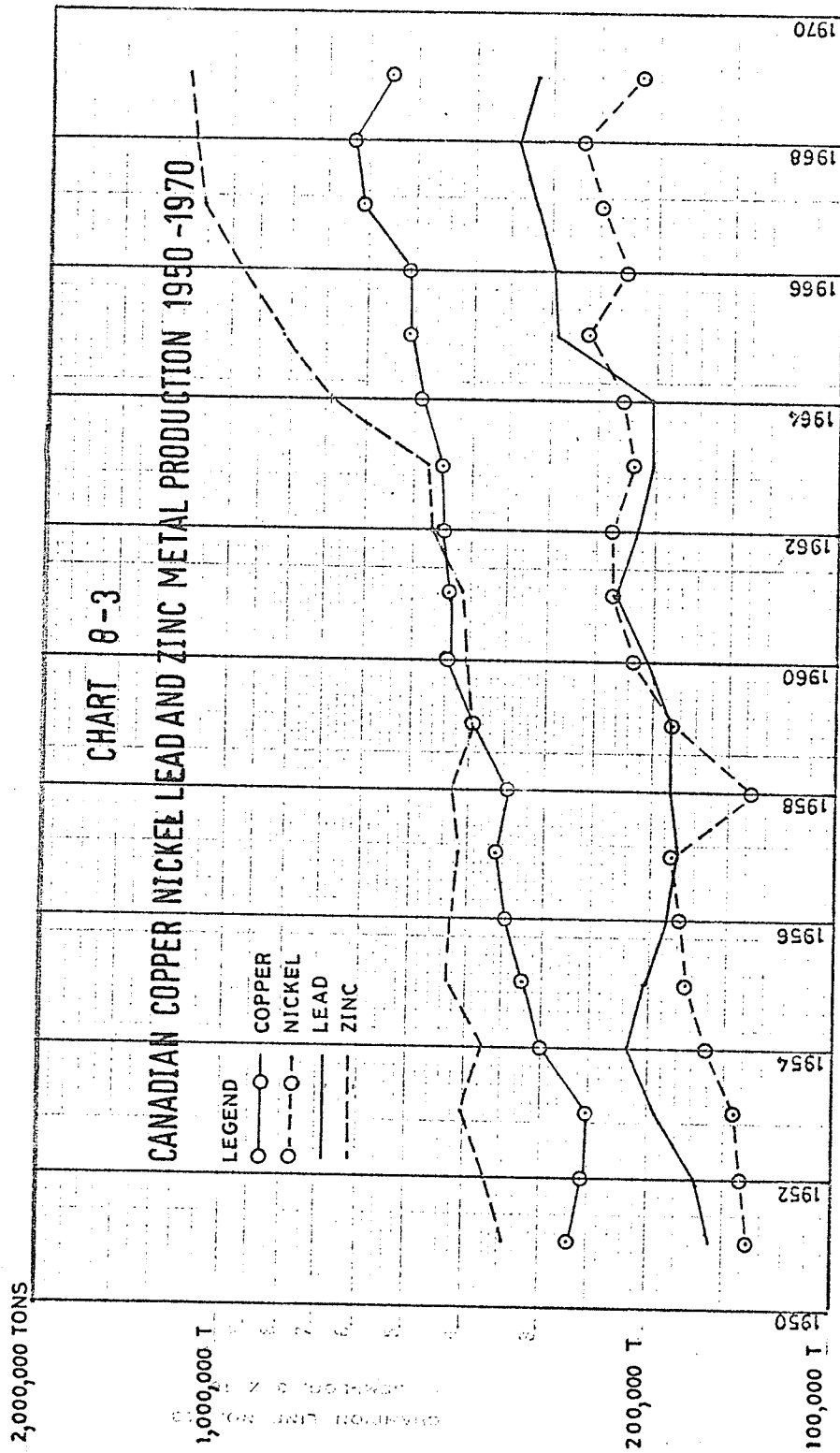
- 1) Semi-log time series graphs were developed in order to "observe" the presence of linearity.
- 2) A trial set of paired data was "run-off" using linearity formulae, and the results were observed.

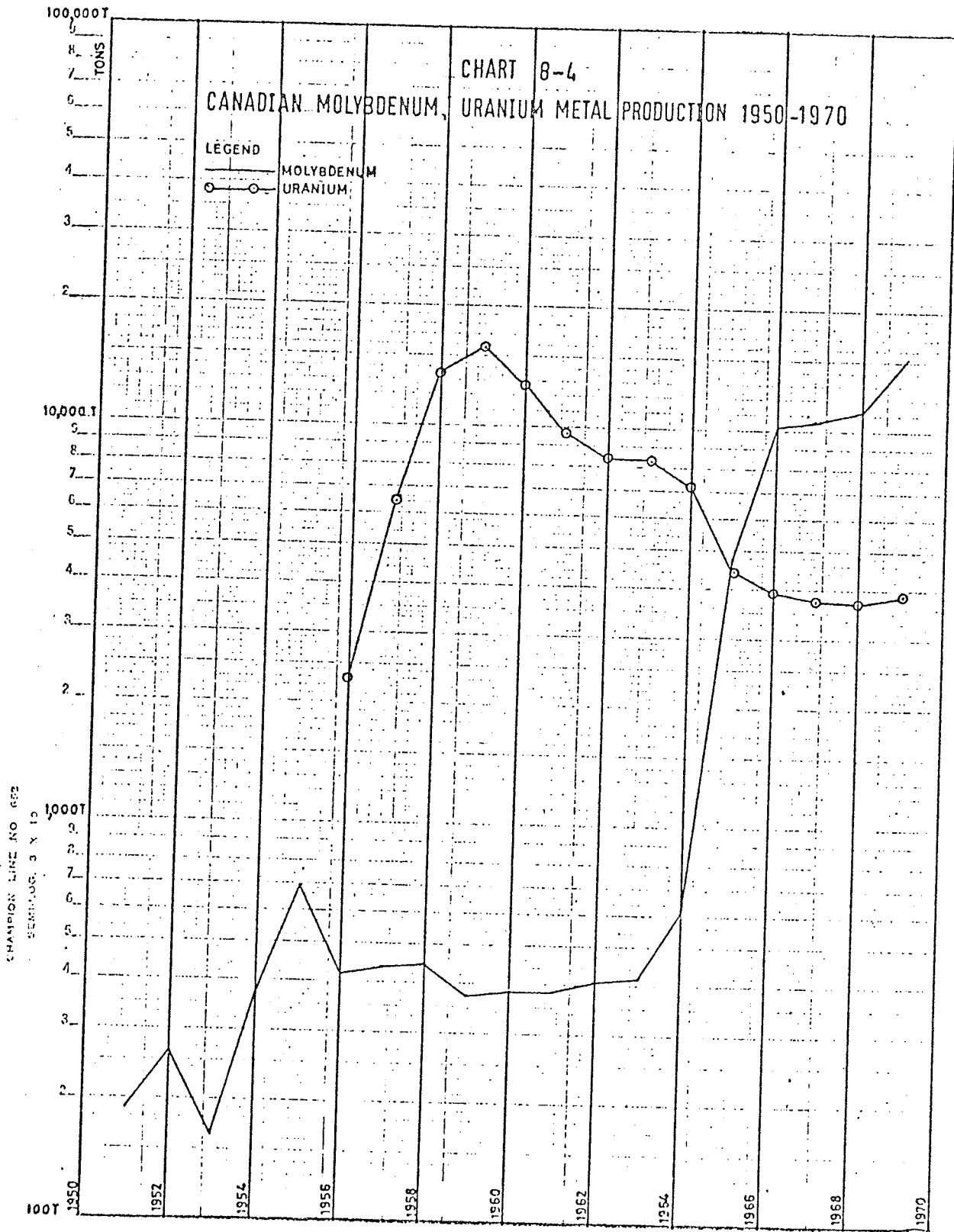
The graphs developed are set out in Charts 8.2 to 8.10. By visual observation we are able to confirm the presence of linearity and to proceed on this basis, because if paired data is plotted on log graph paper and falls "close" to a straight line it is an indication that an equation of the form $y = a + bx$ will be a good "fit."

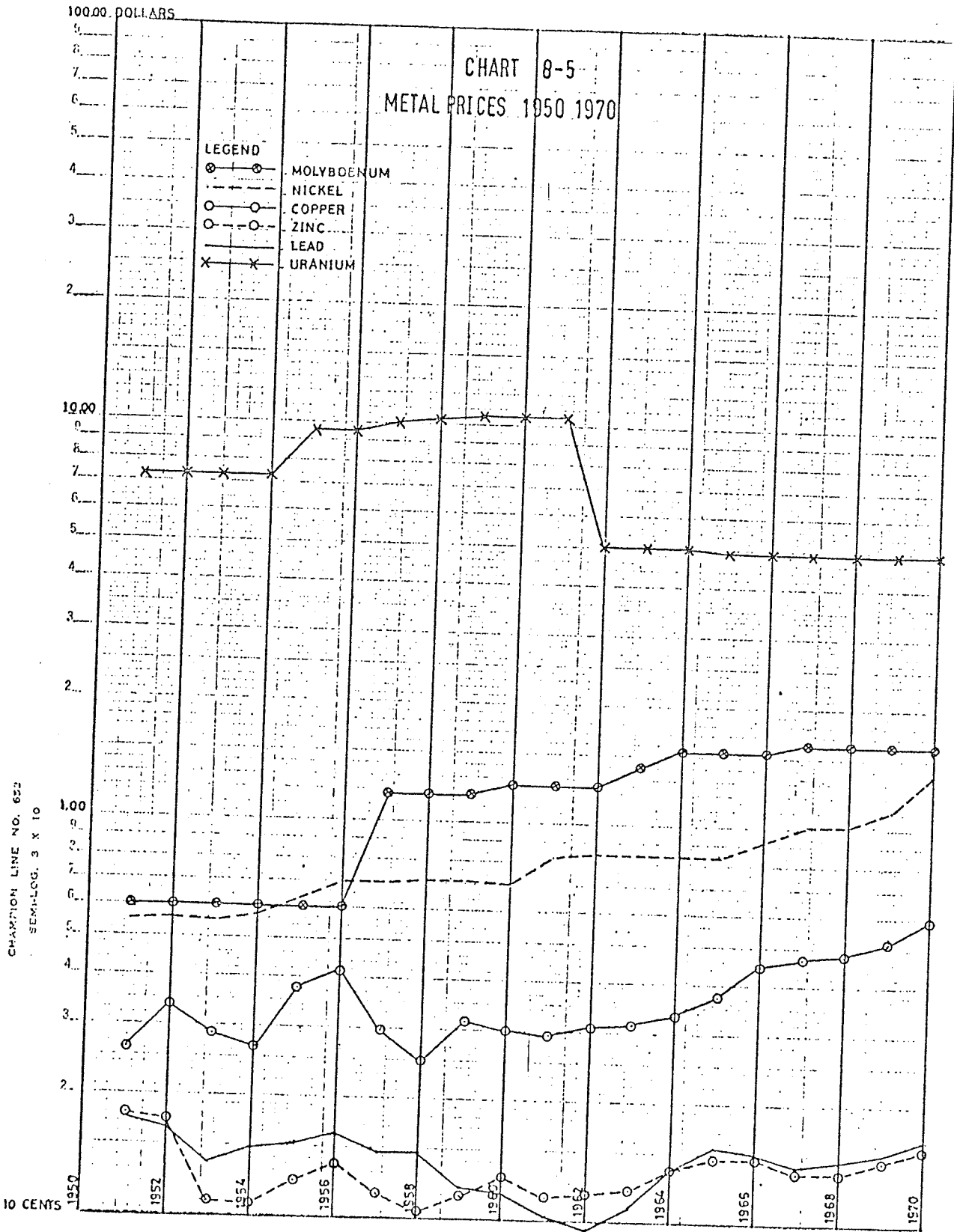
The trial sets of paired data yielded high correlation coefficient

⁷John E. Freund, Modern Elementary Statistics (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967), pp. 353-361.



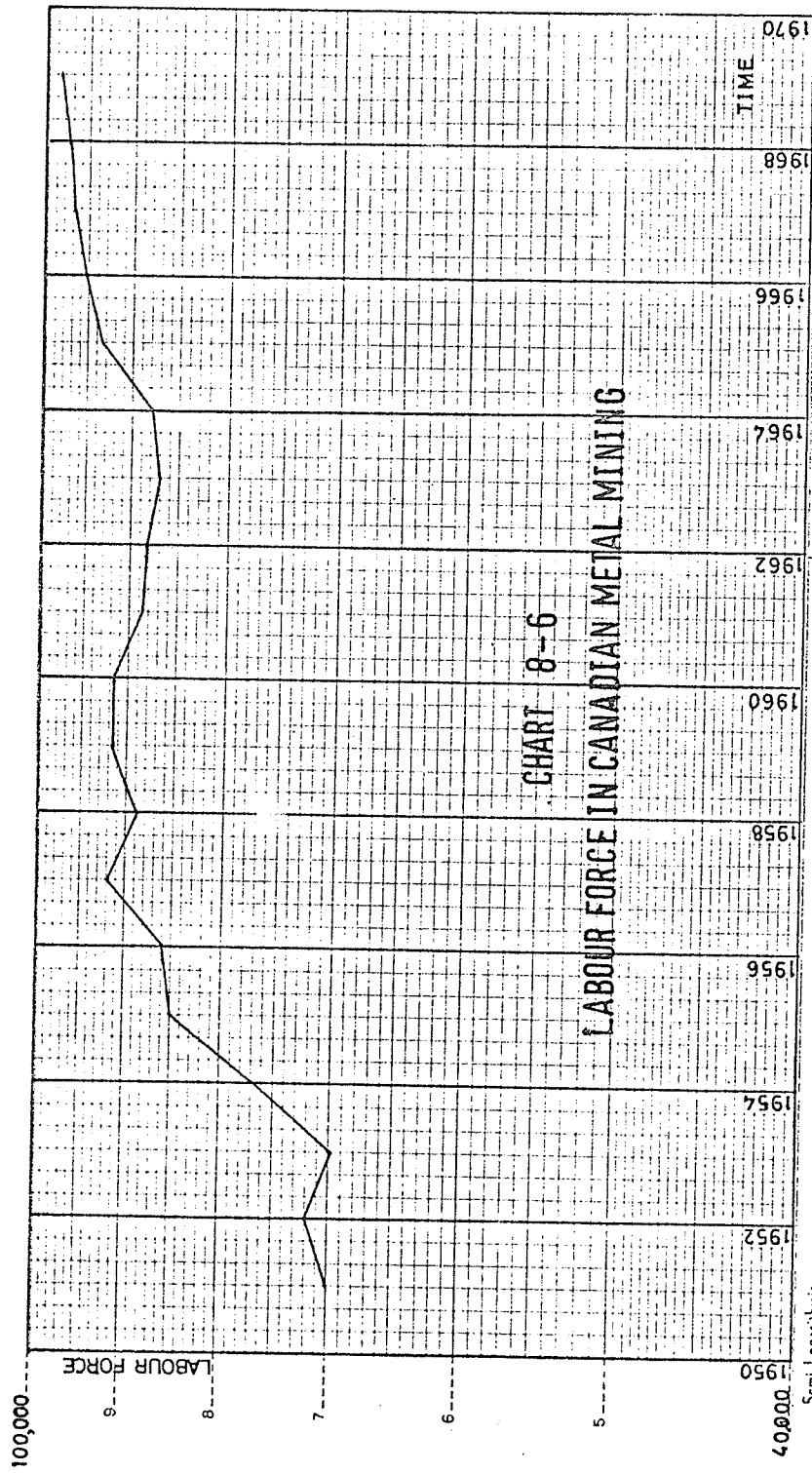




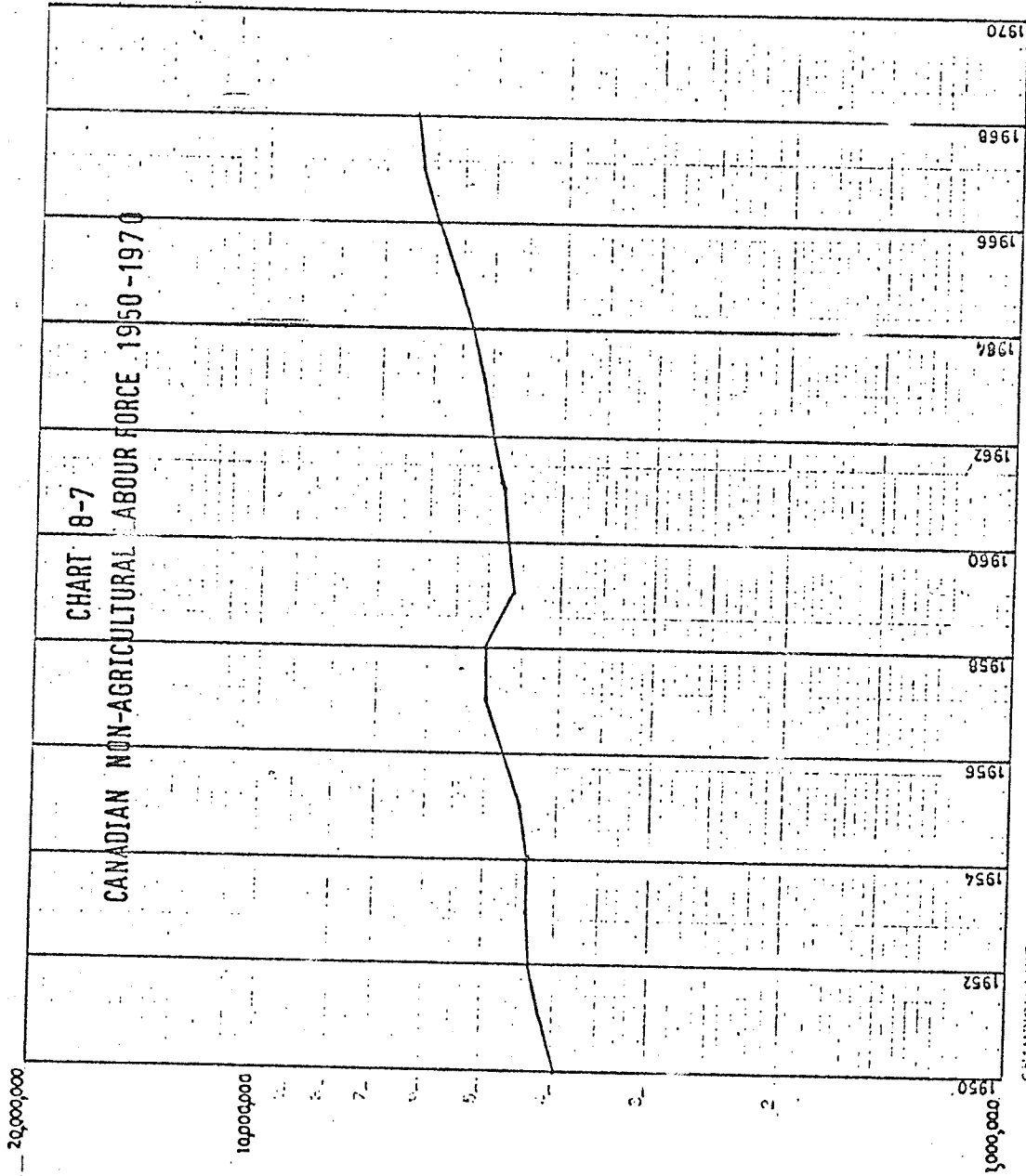


CHARTION LINE NO. 652
SEMI-LOG. 3 X 10

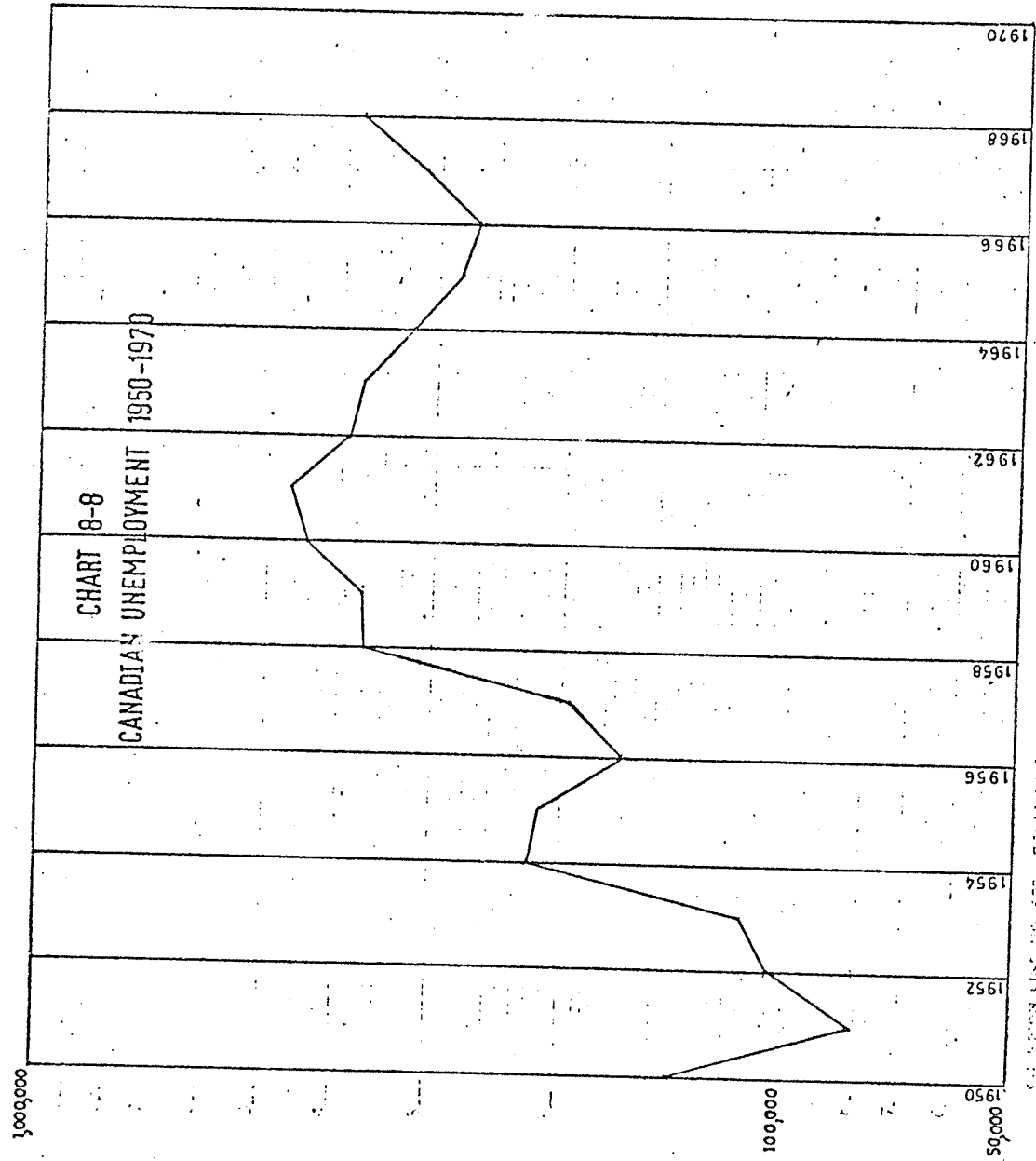
12-1181



Semi-Logarithmic
1 Cycle x 60 Divisions

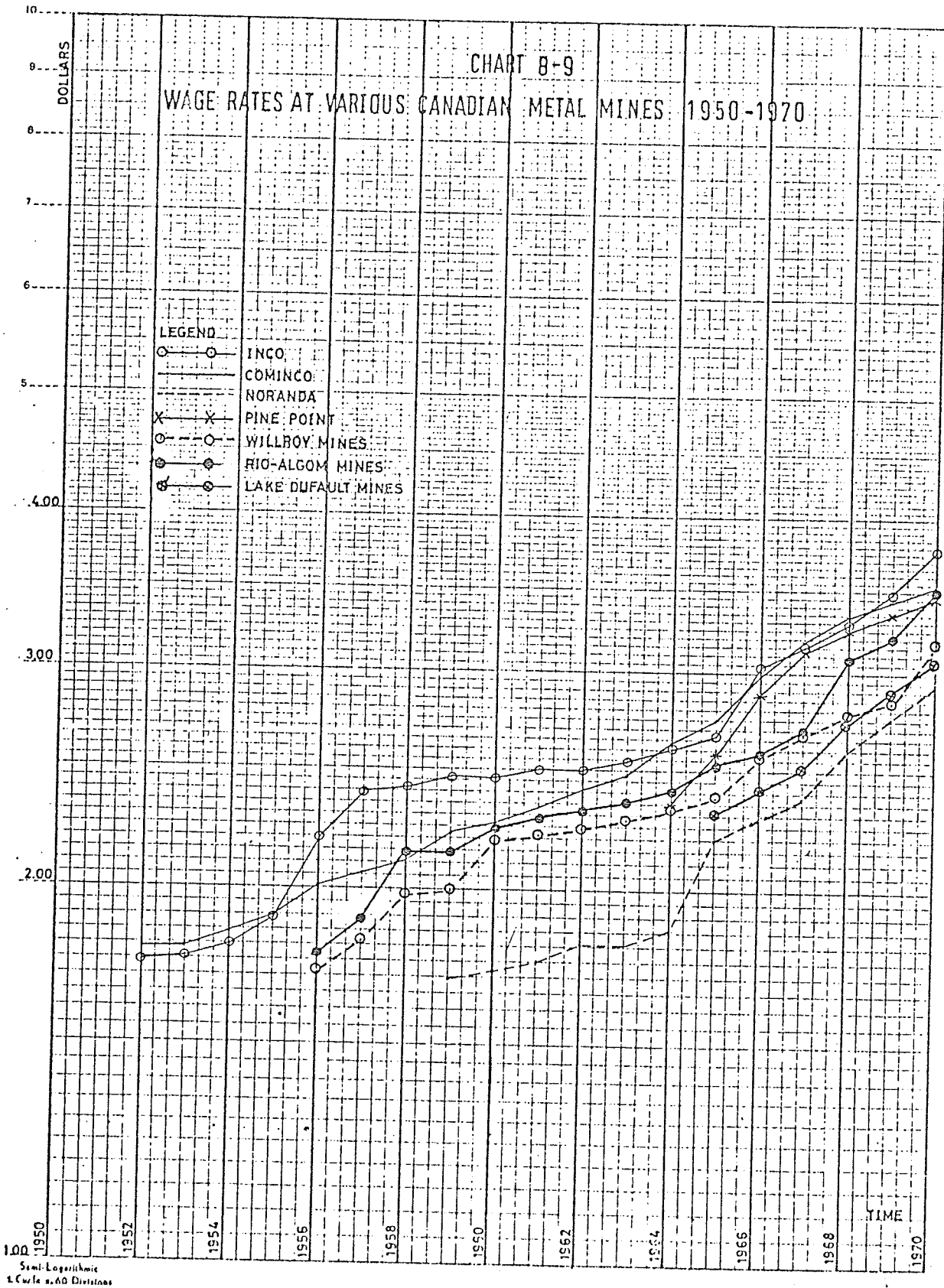


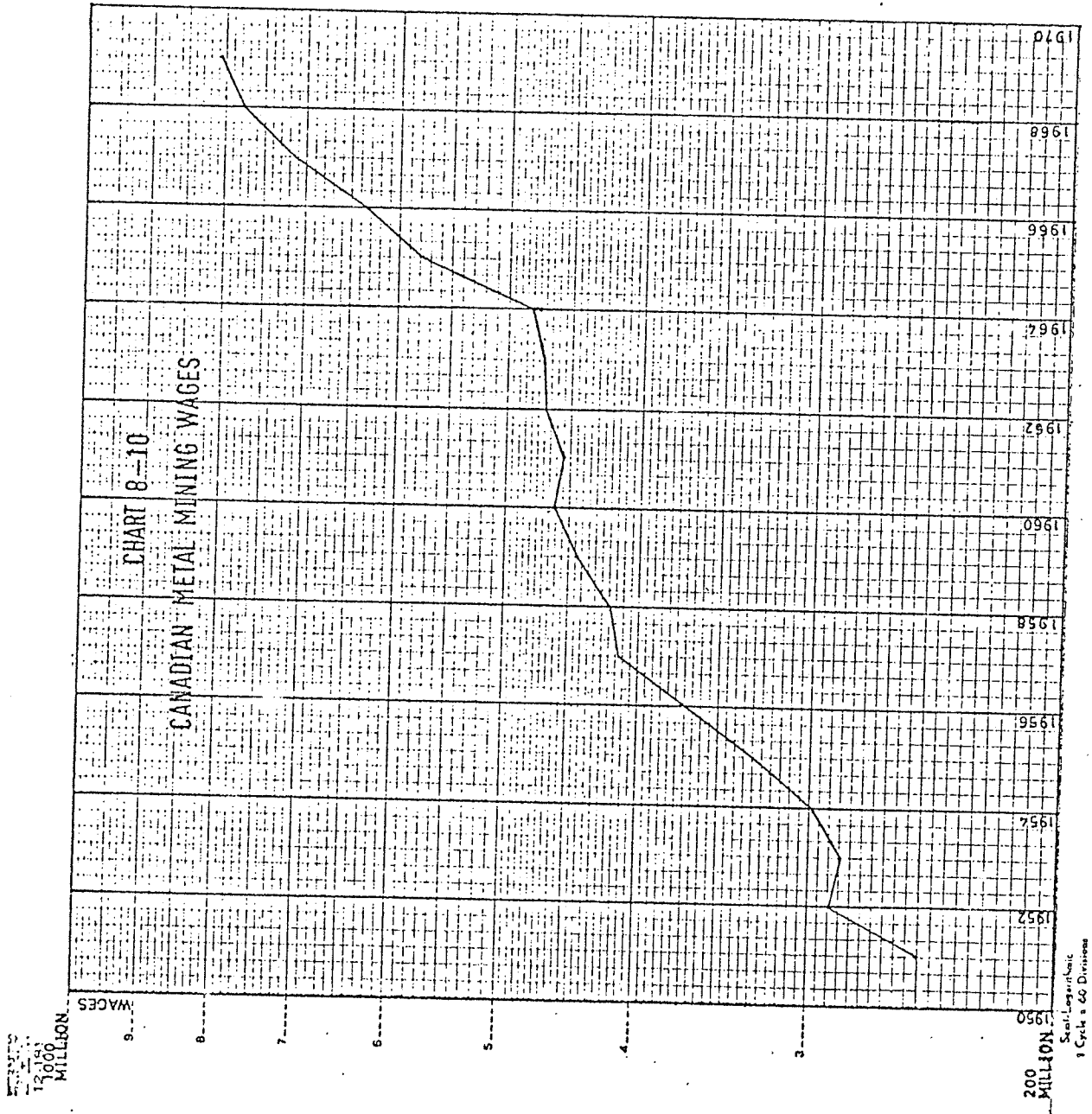
CHAMPION LINE NO. 352 - SEMI-LOG 2 X 10



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values, suggesting the presence of a good "fit." We therefore confidently were able to proceed upon the basis of linearity. The semi-log graph paper is based on logarithms and the "good fit" suggested that logarithms of our values would need to be used. This was validated upon further testing.

At the outset of our statistical analysis it became apparent that because of the short period that Lake Dufault and Pine Point Mines have been unionized (Lake Dufault was certified in late 1965 and Pine Point in mid-1964), little statistical inference would be available. For this reason the two firms are not included in the statistical tables 8.20 to 8.23. This inability of new mines (unless they are very large operations) to have that much statistical impact makes it difficult to evaluate what impact, if any, new, small to medium size operations have upon the industry. Our final sample for these several reasons thus consists of the Big Three plus Willroy and Rio-Algom Mines.

8.5 Statistical Programs

Various programs were "run off" and are tabulated in Tables 8.20 to 8.23. Within the programs we initially developed both the numerical percentage change approach (without logarithms) and the actual numerical difference (with logarithms) method.

When the results of the percentage change method were compared with the semi-log graphs (which show increasing functions), there was little relationship because the graphs set out actual increases per year, whereas the percentage change method shows only the rate of increase per year. The comparison of these two methods thus illustrates that it is not percentage differences that matters, rather it is the actual increase that

TABLE 8.20
MINING COMPANIES VS. VARIOUS VARIABLES

| Correlation | INCO (Ni) | COMINCO (Zn) | COMINCO (Pb) | Noranda (Cu) | Willroy (Zn) | Rio- Algom (Ur) |
|-------------------------|--------------|-----------------|-----------------|-----------------|-----------------|-----------------------|
| Production vs. Price | 0.861 | 0.744 | 0.138 | 0.925 | 0.792 | 0.751 |
| MW | 0.791 | 0.914 | 0.837 | 0.936 | 0.885 | -0.708 |
| RW | 0.695 | 0.912 | 0.826 | 0.878 | 0.712 | -0.497 |
| CLF | 0.851 | 0.873 | 0.799 | 0.964 | 0.948 | -0.827 |
| MMLF | 0.629 | 0.547 | 0.449 | 0.839 | 0.545 | -0.639 |
| GNP | 0.833 | 0.911 | 0.817 | 0.938 | 0.969 | -0.861 |
| Price vs. | | | | | | |
| MW | 0.953 | 0.704 | -0.094 | 0.975 | 0.766 | -0.737 |
| RW | 0.879 | 0.751 | -0.073 | 0.948 | 0.729 | -0.635 |
| CLF | 0.964 | 0.678 | -0.155 | 0.983 | 0.804 | -0.796 |
| MMLF | 0.749 | 0.513 | -0.002 | 0.902 | 0.381 | -0.087 |
| GNP | 0.964 | 0.717 | -0.082 | 0.971 | 0.809 | -0.832 |
| MW vs. | | | | | | |
| RW | 0.963 | 0.995 | 0.995 | 0.986 | 0.945 | 0.950 |
| CLF | 0.962 | 0.994 | 0.994 | 0.981 | 0.984 | 0.967 |
| MMLF | 0.841 | 0.707 | 0.707 | 0.897 | 0.260 | 0.278 |
| GNP | 0.951 | 0.997 | 0.997 | 0.974 | 0.962 | 0.949 |
| RW vs. | | | | | | |
| CLF | 0.858 | 0.987 | 0.987 | 0.938 | 0.880 | 0.852 |
| MMLF | 0.904 | 0.702 | 0.702 | 0.906 | 0.017 | 0.041 |
| GNP | 0.842 | 0.995 | 0.995 | 0.937 | 0.835 | 0.817 |

Legend: MW Money Wage
 RW Real Wage
 CLF Canadian Labour Force
 MMLF Metal Mining Labour Force
 GNP Canadian Gross National Product (Rising)

TABLE 8.21

MINING COMPANIES VS. MONEY WAGE AND REAL WAGE

| Correlation | Money Wage | Real Wage |
|---------------------------------|------------|-----------|
| INCO vs. COMINCO (1953-68) | 0.949 | 0.830 |
| INCO vs. COMINCO (1957-68) | 0.963 | 0.765 |
| INCO vs. COMINCO (1960-68) | 0.976 | 0.875 |
| INCO vs. Willroy (1957-68) | 0.912 | 0.501 |
| INCO vs. Willroy (1960-68) | 0.995 | 0.994 |
| INCO vs. Rio-Algom (1957-68) | 0.913 | 0.491 |
| INCO vs. Rio-Algom (1960-68) | 0.942 | 0.631 |
| INCO vs. Noranda (1960-68) | 0.957 | 0.828 |
| COMINCO vs. Willroy (1957-68) | 0.969 | 0.855 |
| COMINCO vs. Willroy (1960-68) | 0.990 | 0.911 |
| COMINCO vs. Rio-Algom (1958-68) | 0.957 | 0.795 |
| COMINCO vs. Rio-Algom (1960-68) | 0.953 | 0.723 |
| COMINCO vs. Noranda (1960-68) | 0.977 | 0.929 |
| Willroy vs. Rio-Algom (1957-69) | 0.973 | 0.871 |
| Willroy vs. Rio-Algom (1960-69) | 0.962 | 0.662 |
| Willroy vs. Noranda (1960-69) | 0.969 | 0.855 |
| Rio-Algom vs. Noranda (1960-69) | 0.952 | 0.763 |

TABLE 8.22
 MINING COMPANIES VS. REAL AND MONEY WAGES,
 METAL MINING LABOUR FORCE AND
 CANADIAN LABOUR FORCE

| Correlation | Real Wage | | Money Wage | |
|---------------------|-----------|-------|------------|-------|
| | MMLF | CLF | MMLF | CLF |
| INCO (1953-68) | 0.926 | 0.853 | 0.887 | 0.963 |
| INCO (1957-68) | 0.876 | 0.758 | 0.801 | 0.950 |
| INCO (1960-68) | 0.887 | 0.894 | 0.854 | 0.941 |
| COMINCO (1953-68) | 0.785 | 0.987 | 0.774 | 0.994 |
| COMINCO (1957-68) | 0.665 | 0.990 | 0.685 | 0.996 |
| COMINCO (1960-68) | 0.814 | 0.988 | 0.836 | 0.998 |
| Willroy (1957-68) | 0.353 | 0.880 | 0.570 | 0.984 |
| Willroy (1960-68) | 0.877 | 0.926 | 0.862 | 0.992 |
| Rio-Algom (1957-68) | 0.401 | 0.852 | 0.592 | 0.966 |
| Rio-Algom (1960-68) | 0.672 | 0.787 | 0.815 | 0.959 |
| Noranda (1960-68) | 0.906 | 0.938 | 0.897 | 0.981 |

TABLE 8.23
MONEY AND REAL WAGES VS. SUPPLY AND
DEMAND FOR LABOUR

| Correlation | INCO | COMINCO | Noranda | Willroy | Rio Algom |
|--------------------|-------|---------|---------|---------|--------------|
| Un. (Supply) - MW | 0.560 | 0.480 | -0.381 | 0.276 | 0.293 |
| Un. (Supply) - RW | 0.527 | 0.414 | -0.390 | 0.420 | 0.501 |
| N.A. (Demand) - MW | 0.938 | 0.989 | 0.949 | 0.948 | 0.950 |
| N.A. (Demand) - RW | 0.796 | 0.980 | 0.901 | 0.835 | 0.769 |

1954-67 N.A. vs. Un. -- $r = 0.494$

1957-67 N.A. vs. Un. -- $r = -0.004$

1960-67 N.A. vs. Un. -- $r = -0.579$

Legend:

Un. Actual persons unemployed
N.A. Non-Agricultural Labour Force

is important. Thus the percentage difference approach was rejected and the statistical program was confined to actual numerical differences, i.e., increasing totals, using logarithms.⁸

Our next undertaking will be to investigate our various hypotheses using both graphical and statistical observations.

8.6.1 Hypothesis I

INCO has monopoly power and thus within limits is able to set price, and to control the market via its supply policies.

Chart 8.5 (metal prices over time) illustrates the capacity of INCO to control the price of nickel, i.e., when we compare metal prices with metal production it is only nickel that shows the capacity to introduce price changes that are independent of output. This observation should be examined in the context that the type of ore mined, i.e., nickel, copper, zinc, etc., has little if any bearing on mining costs; thus INCO is able to set more constant prices for its product and also its prices show almost a total lack of flexibility downwards, whereas the other metals have price fluctuations as a result of market demands. Yet in a broad generalization "all orebodies of similar geology have similar mining costs after allowing for location."

The other variant to market pricing is molybdenum which has since 1957, due to the position of Climax Molybdenum, also been exposed to similar pricing techniques as that of nickel, i.e., inflexible downwards but not upwards. These are the characteristics and capabilities of a

⁸The complete set of statistical files plus other material pertaining to this thesis is on file with the Centre for Settlement Studies, University of Manitoba.

dominant firm pricing technique and, as confirmed by both Main⁹ and Markham,¹⁰ monopolistic in market structure.

Chart 8-5 also illustrates the fluctuating pricing structure of copper, lead and zinc and strongly suggests the presence of "barometric firm" pricing procedures.

This capacity of INCO to set and maintain prices not necessarily in the best interests of the total Canadian economy is further substantiated when we take cognizance of the fact that nickel output declined appreciably in 1958, 1963 and 1966 due to lack of demand, and also had little demand growth in 1962 and yet prices rose in 1958, 1962, were steady in 1963 and rose 8.1¢ in 1966. A similar type of investigation concerning lead, zinc and copper shows that prices of these metals are a function of demand, i.e., nickel via INCO is a price setter whereas zinc, lead and copper are price takers. As noted, molybdenum acts in much the same manner as nickel.

Using our statistical data to supplement these observations we can note from Table 8.20, "production vs. price," that under INCO there is a very high correlation coefficient ($r = 0.861$) which suggests that prices rise as production increases, but as previously noted, production declines do not call forth comparative price cuts. The data in this table also suggests that COMINCO is not as price conscious and is more desirous of maintaining a steady rate of production but that Noranda, highly oriented

⁹O. W. Main, The Canadian Nickel Industry, A Study in Market Control and Public Policy (Toronto: University of Toronto Press, 1955), especially Chapter IX.

¹⁰Jesse W. Markham, "The Nature and Significance of Price Leadership," The American Economic Review, XLI (1951), 179-181.

to copper production, is very aware of price and its cause-effect on production. COMINCO's steady production pattern is possibly due to its more diversified product patterns, i.e., lead, zinc and very extensive metallurgical processes, especially related chemical by-products.

Copper is a major by-product of INCO production, so much so that INCO is Canada's largest copper producer and yet this extensive copper production does not appear to hinder INCO from maintaining price patterns for nickel that, as previously noted, are inflexible downwards.

Our final observation is to note the correlation coefficient for production vs. GNP for the various firms. We are here using GNP as a proxy for overall economic demand within the nation. COMINCO (in terms of its major product zinc), Noranda, Willroy and Rio-Algom all have higher correlation coefficients than INCO, thus suggesting that, of this group, INCO is the least responsive to economic demands in Canada and is more associated to international systems.¹¹

Thus INCO is an imperfect competitor able to set price and to contract or expand supply to meet market conditions and is able to overcome any pressures requiring price adjustments by levelling prices off, and reducing output, whereas under perfect competition both prices and output would decline in the face of declining markets. INCO thus within Markham's¹² theory acts as a dominant firm behaving imperfectly, whereas the balance of the industry tends to operate as perfect competitors.

¹¹See Chapter VI, Section 6.5.

¹²Markham, "Price Leadership," p. 179.

8.6.2 Hypothesis II

The supply curve of labour within the industry fluctuates from rather elastic in large urban areas such as Sudbury to quite inelastic in isolated mining areas.

As the level of employment rises within the industry, a higher correlation with INCO wages develops, thus suggesting that the supply curve of labour is rather inelastic to the industry or else the union (USW) possesses bargaining powers which are somewhat enhanced by the increase in employment levels due to rising demand for product.

The impact of the INCO wage structure is illustrated graphically in Chart 8.9 where it can be noted that the slopes of all the wage functions are relatively identical and that some of the firms, i.e., Noranda, Willroy and Pine Point, were required to increase their wage structures "rapidly" in order to "come-in-line" with INCO. This wage trend structure is further substantiated in Table 8.21 which shows the high correlation of the industry's wage patterns to that of INCO. This trend has become even more pronounced since 1960, as shown by the "bunching of rates." That year was a key year in metal mining industrial relations as INCO was re-certified to the USW. Even Rio-Algom's correlation coefficient increased in the period 1960-68 as compared to 1957-68 (see Table 8.21) and yet this firm has no control over the price of its product, which is set by the federal government.

Our general concept of isolation is that of some lonely, sparsely populated region. Within our study such is frequently not the case. The major feature of isolation within the mining industry is the lack of mobility. For example the Whitehorse-Mayo City area of the Yukon is not a lonely, sparsely populated area in terms of the various mining

communities therein, yet labour mobility is very restricted, for where else can the miner find employment except by undertaking an extensive journey. The town of Manitowadge has a population of some four thousand and most of the services needed, yet one either works for GECO or Willroy or is faced with an extensive and costly move.

In these types of areas, which tend to dominate the Canadian mining industry, the worker has not the same opportunities for strike action or other forms of protest with his employer that the worker in less isolated areas possesses. If a strike takes place the worker has few alternatives; he must move and this is a serious decision, especially to married personnel with a family; or remain and suffer financially.

Similarly management cannot accept the cost of a strike which would result in the loss of part of his hard-won labour force. The position taken in this thesis is that such forces acting upon labour and management produce a labour supply curve that is relatively more inelastic than that found in larger and less isolated mining areas. We can further expect to find that the labour force in the former areas is recruited from a broader base (as an approximation we are suggesting the CLF) whereas the labour force in the latter areas is recruited more from a cadre of experienced mining personnel (as an approximation we are suggesting the MMLF).

We can thus argue with considerable validity that the point of entry of inexperienced personnel into the industry is in the more isolated mine sites where the operator has to "accept what he can get," and thus must operate with a less skilled labour force. However in periods of expanding mining employment, these same workers now possessing newly acquired

skills will seek to remove themselves from the more isolated regions and to find employment with firms located in areas possessing a higher degree of mobility, etc. Thus the worker has entered the industry from the CLF but can if he so desires eventually become a part of the MMLF and in doing so increase his mobility.

These observations are reenforced by Table 8.20 which shows INCO's high correlation to the MMLF (as has Noranda) whereas the remainder of our sample members are more associated to the CLF.

This tendency for the isolated mine to have an inelastic (relatively) supply curve is also a reflection of less union power than in the less isolated area. This weaker union power and different management attitude is reenforced when we note the relative absence of strikes in the more isolated mining regions, where such action has more serious consequences than in the more urbanized areas.

These several factors thus produce a supply curve of labour whose inelasticity is a function of isolation and also its elasticity is highly correlated to large populated mining regions such as Sudbury. We are not suggesting that isolation is the sole factor but it is a major one, for as isolation increases, factors such as the mine having to draw its labour from a large source, i.e., the CLF, further suggest that the level of inelasticity will increase.

If however we accept union power as a proxy for the effective supply of labour, then we would expect that the more powerful the union, part of whose power is derived from less isolation, the higher will be the relative wage rates obtained. This condition would also be accompanied by lower relative levels of employment.

If the above theory is correct then we would expect INCO (Sudbury) to pay higher wages, as compared to the more isolated mines, which it does. INCO's (Sudbury) employment levels would be relatively lower because of the impact of each marginal worker to total payroll costs, thus making INCO more critical in its hiring practices, whereas the more isolated mine, paying lower wages, would attract a less skilled worker and would have to hire more units of labour to achieve the same unit of work. Once the worker has achieved some degree of skill he would, given an increase in demand for labour, seek to migrate to a less isolated area where the standards of employment and wages are higher.

Thus where there is less isolation a strong union may have greater scope for operations resulting in higher wages and lower (relatively) employment levels, whereas in the more isolated area, wages will be lower but employment levels relatively higher. The result of these features is a more elastic supply curve of labour, due partially to union power, in the more urbanized, less isolated areas such as Sudbury, and an inelastic supply curve of labour as isolation increases and reduces union power.

8.6.3 Hypothesis III

The bargaining power of the union declines as the supply curve of labour becomes more inelastic.

The hypothesis can also be said to state that as the mine site becomes more isolated, union bargaining power per se declines. If these unions had the same "power" as that at INCO (Sudbury), would not all wage structures be very similar? Chart 8.9 shows the spread in wages and Table 8.21 reinforces this observation in that the wage correlation

tends to decline with isolation.

Entry into or exit from INCO's Sudbury labour force is less restricted because of geographical location and thus there is present a higher level of mobility than that of say Willroy, or COMINCO who would be somewhere in between. Thus a strike is unacceptable at Willroy because of the limited options available. Noranda is located in an area with some employment options and thus the elasticity of its supply curve of labour will be relatively similar to INCO's and therefore prone to hard bargaining and possible strike action.¹³

These several factors plus management attitudes will also affect the Union Wage Preference Path (UWPP),¹⁴ i.e., as the isolation factor increases, mobility will decrease due to local labour market conditions, job opportunities, seniority, etc. Thus the options available to the union become restricted. At the same time management's range of collective bargaining options is also reduced because of the cost of "hard bargaining," i.e., loss of its labour force, decline in morale and possible conflict either overt and/or covert.

The net effect of these changes from relatively elastic to relatively inelastic functions is to narrow the range of manoeuvrability for both the union and the corporation, and the more isolated the mine the more restricted is this available area of negotiation.

¹³Noranda (Horne) Mines is located in the Quebec town of Rouyn-Noranda with several mines in that location, plus labour short gold mines in the Val d'Or-Malartic area, as well as the entire Mattagami-Chibougamau area available for short-term employment in the event of a strike at Noranda.

¹⁴Refer to Chapter II, Sections 2.6.2 and 2.6.5 for a description of the UWPP.

8.6.4 Hypothesis IV

Imperfect competition and a form of quasi-national bargaining exist within the industry.

The Canadian non-ferrous mining industry is market structured upon two types of competition, both imperfect, plus a host of operators who merely follow the patterns set by the imperfect competitors. The two types of imperfect competitors are:

- 1) Monopoly - dominant firm
- 2) Oligopoly - barometric.

Category (1), i.e., monopoly, is dominated by INCO who can (and do) unilaterally set the price for nickel. This corporation, representing some 30 percent of the non-ferrous metallic production of Canada, has been able to maintain a price that is inflexible downwards, in the face of periodical market demand declines, whereas the firms that operate within category (2), i.e., copper, lead and zinc, find their product price reacting very sensitively to market demand changes. Prices within this group have been and are set by a barometric firm such as Phelps-Dodge for copper and the New Jersey Lead and Zinc Company for lead and zinc. These products are also very sensitive to movements on the London Metal Exchange. Charts 8.4 and 8.5 illustrate the capacity of nickel, i.e., INCO, to maintain a more stable price structure than that present in other metal markets.¹⁵

These actions within INCO have resulted in a form of quasi-national collective bargaining within the industry in question. Chart 8.9 illustrates the success the USW have achieved in maintaining a rather uniform

¹⁵Molybdenum, which is also single firm dominated, shows much the same pricing patterns as nickel.

industry-wide wage growth rate very similar to that of INCO. This can be further substantiated by observing Table 8.21 and noting how the MW and RW correlation coefficients of INCO to COMINCO, Willroy, Rio-Algom and Noranda have been increasing over time. We can further observe an internal high correlation of wages, real or monetary, between COMINCO, Noranda, Willroy and Rio-Algom.

Statistical programs were designed to ascertain the effect of lagging INCO wage rates, one year. Our suspicions were confirmed, i.e., any wage rate increases by INCO (Sudbury) were soon transmitted to the rest of the industry. It is doubtful if this transmission takes one year, in fact the correlation coefficients were of such a nature as to suggest that any delay that did exist was only in the order of six months or so. Similar statistical programs concerning the MMLF and the CLF vs. RW and MW with and without a one year INCO lag reenforced our findings.¹⁶

Contracts signed in Manitoba by both INCO and Sherritt-Gordon Mines reflect the impact of INCO (Sudbury), i.e., the two former firms must await the signing of a contract by the latter.¹⁷ The same conditions are present at the Falconbridge operations in the Sudbury area, i.e., Falconbridge awaits the INCO signing.¹⁸ The very recent signing of a contract at COMINCO and the report in the Northern Miner Press, which lacked detail, suggest strongly that the same pattern exists.

Thus while it is true that certification and negotiations are a

¹⁶See above, note 8.

¹⁷See above, note 2.

¹⁸See above, note 3.

provincial matter it is becoming increasingly more apparent that collective bargaining within the industry is assuming the characteristics of national bargaining, with INCO (Sudbury) as the dominant firm within the industry.

8.6.5 Hypothesis V

Both INCO and the USW conduct their affairs in a manner not necessarily responsive to overall Canadian labour market conditions.

When the supply curve of labour for the nation becomes more elastic it infers that there is a greater degree of unemployment, but the industry under study responds relatively weakly to national unemployment as can be observed in Table 2.23 where the highest correlation coefficient is 0.560. Further in periods of unemployment we should, according to the theory of competition, observe a decline in wages, number of persons employed in the industry, price of product and production. These features are not all present in periods of demand decline in the industry, i.e., wages continue to rise, employment remains relatively stable, prices level off and production is held reasonably constant.

Table 8.20 confirms the price consciousness of the industry, i.e., while there is a high correlation of production to GNP ($r = 0.833$) there is an even higher correlation of price to GNP (0.964), thus indicating that the industry is more price than production conscious.

This capacity of INCO to hold prices against the market and of the USW to obtain wage increases against the market, indicates a form of behaviour not very responsive to domestic conditions.

The various firms operating as price takers within such an industry are faced with rising costs of factors of production of which labour is

a major portion. Such behaviour by these factors of production forces these firms into a short-run position in which they must vigorously exploit their orebodies with more regard for rates of recovery than levels of recovery, resulting in the inefficient utilization of our natural resources and the development of a public image regarding the industry that is harmful to it, i.e., one of ghost towns, poor educational facilities, lack of social outlets, inferior medical services, etc. Not all these condemnations are valid at all times in all places but the necessity to engage in rapid and uneconomical exploitation does add to the industry's poor public image.

On the other hand the capacity of INCO to raise its product price to offset rising costs, even in periods of economic slack, puts it in the position of being the economic forecaster and controller of the financial and market structures of the industry. INCO to protect its monopoly position must act in such a manner, for if it failed to do so it would likely end up relinquishing its price and market power structure and no monopolist would voluntarily allow such to happen.

The USW operating within this system is fully aware of the advantages therein and has exploited the condition. However is not that the function of a union just as it is the function of INCO as a monopolist to exploit the market? In the process however Canada's mineral wealth in the hands of firms that must follow these two giants is being exploited in a manner not optimum to our economy.¹⁹

19 - See Chapter IX - User Costs.

8.7 Conclusions

In Chapter IX we shall investigate the mechanism of transfer and seek to establish how INCO and the USW behave, and the effects of such behaviour on this nation's economy.

CHAPTER IX

CONCLUSIONS

9.1 Introduction

Having stated in Chapter VIII that INCO and the USW conduct their affairs in a manner that deeply affects the Canadian economy, the question is then posed, how is this influence transferred? Our prime consideration will be in the area of user costs for it is here that the transmission develops.

9.2 Carlisle Model

Carlisle¹ presents the following model in his discussion of rates of recovery.

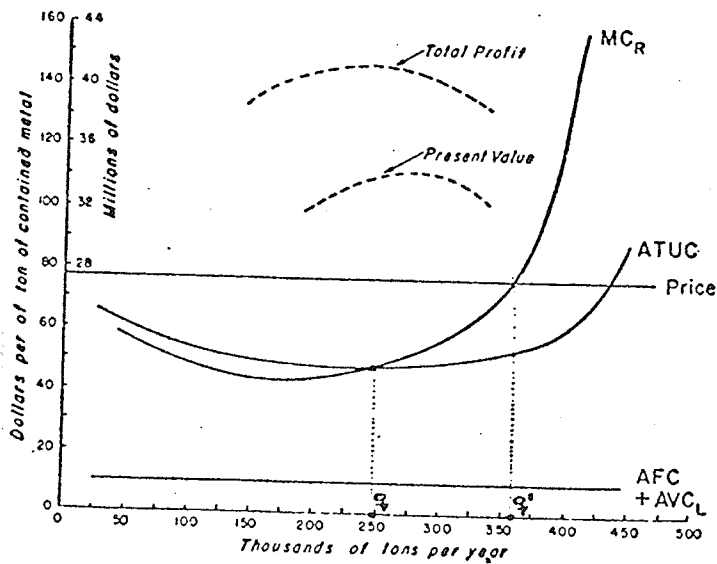


FIGURE 9.1

ALTERNATIVE RATES OF RECOVERY

¹Donald Carlisle, "The Economics of a Fund Resource with Particular Reference to Mining," American Economic Review, XLIV (1954), 600.

Economically speaking, assuming price competition the least cost rate will be oq tons per year and at this rate the largest total profit over the recovery period will be realized. However the highest current rate of profit will be at the rate of recovery where $MC = MR$, i.e., at production level oq' where aggregate profit is greatest even if marginal profit per unit of output is declining.

The first type of option according to Carlisle, seems more applicable where the demand is such that least-cost production must be followed.² The second type of option is favoured where rapid return of capital is required even at profit levels that at the margin are less than optimum. The true rate of recovery is that which yields maximum present values and this will fall between the least cost point (oq) and that of maximum profits per unit of time (oq').

9.3 User Costs

The Carlisle model tends to be too simplistic³ in that it fails to introduce in a comprehensive manner the question of user costs. As will be developed, it is this feature of mining economics that allows the nickel mining industry, i.e., INCO, to impose its position upon the balance of the industry.

A. R. Scott⁴ in his article sets out the concept of user costs, which is the Keynesian concept, being a special case of opportunity

²Ibid., p. 601.

³I am indebted to Professor M. Laub for his suggestions regarding the Carlisle model and alternative, i.e., user cost considerations.

⁴A. R. Scott, "Notes on User Costs," Economic Journal, LXIII (1953), 368-369.

costs, i.e., tangible assets which yield revenue that can be measured in monetary units, whereas opportunity costs concern goods and services and psychic as well as money net revenue.⁵ It is this feature that Carlisle failed to fully develop. Scott notes that

as long as the entrepreneur can, by changing the rate of output, add to present net revenue more than the consequent reduction of future net revenue, it is rational to continue to alter the rate.⁶

The reduction in future net revenue is measured by the user cost curve. At some point in time this and the net revenue curve will change at the same rate and that point cannot be improved upon.

A mine can choose a rate of production between zero (i.e., closing down) and that of attempting to exhaust the orebody in a single period. As periods of time go by, the manager revises his own expectations and adopts new methods based on past outlay and revenue positions and on future expectations. We are interested in the earlier decisions, for user costs are the opportunity lost when an alternative decision is carried through.⁷

An entrepreneur who is about to enter a period of decision-making will wish to know how much he should produce during the period, having an eye to the effect of this decision on net revenue in other periods, and to the ultimate effect on the present value of his enterprise, . . . he needs to know his user costs in order to make a correct decision.⁸

The entrepreneur can take the past as given but his plans for the future must be such that if matters work out as expected then each future period will yield a revenue such that suitable maximum total revenue will be obtained over the entire sequence of periods. Thus alternatives

⁵Ibid., p. 369.

⁶Ibid., p. 372.

⁷Ibid., p. 375.

⁸Ibid., p. 376.

before and after each period must be taken into account. Such decision-making is beyond the capacity of most mining firms, but not INCO for it sets price and controls the marketing mechanism for nickel and is the only mining firm in Canada that has this dual capacity.

Scott further states:

Those exploiting natural resources find that labour is hard to attract to their sites, so that they have little expectation of future alterations of the rate of output for fear of losing hard won staff, or inability to staff for sudden increases. It is thus reasonable to suppose that output will continue smoothly through subsequent periods: choices are not made about postponing output, but rather about scrapping pieces of equipment, or making relatively small changes in rates of output.⁹

9.4 INCO and User Costs

In effect Scott is saying that the user cost of these firms is not that important, i.e., the firm is very short run oriented when viewed within the non-ferrous INCO-dominated mining industry.

INCO has the capacity because of its control over prices and markets to evaluate and operate within the framework of user costs, but not the smaller mining firms or to a lesser degree even the larger firms with little or no control over prices or market.

The quotation above further verifies the inelasticity of the supply curve of labour in the more isolated areas and the more elastic supply curve at INCO (Sudbury) due to mobility, transportation facilities, social outlets, etc.

Thus the major portion of the industry in question has little choice but to be a price taker and to market their product through the system

⁹Ibid., p. 379.

of either a dominant or barometric firm. Their user costs soon approach zero, i.e., they are interested primarily in obtaining short run revenue and the largest current profit. Whether these are optimum is not an important issue. In other words, they must "make hay while the sun shines." But not INCO, which does have options to exercise and once done they become mandatory to the remainder of the industry.

This is thus the mechanism of transfer, i.e., the short run zero user cost structure of much of the industry which is a result of INCO's capacity to operate in the long run and to evaluate all costs.

9.5 The USW in such a Structure

Within this economic framework the USW is, it seems, quite prepared to function. But has it any choice? Indeed has INCO any choice? We believe not. The unique structure of the INCO complex, the weakness of our anti-combines legislation and the failure of our legislators to evaluate the record of our industrial relations policies enhance and indeed encourage such structures as INCO-USW.

In conclusion we quote from an article by William R. Pabst, Jr..

The determination of the most profitable rate of operations depends here, as elsewhere, on the marketing situation within the industry. Under the condition of perfect competition the problem of the mine owner is to exhaust the mine in an optimum length of time and to decide on the appropriate rate of exploitation at each time, under the given market prices. Likewise, the problem of the monopolist is to choose the rate of production and the price for the product, and thus the appropriate length of time in such a way as to maximize the present value of the future incomes over costs. The competitors have the incentive to exhaust the resource at a rate faster than that of the monopolist.¹⁰

¹⁰"Unstable Conditions of Competition and Monopoly in Exhaustible Resources Industries," Journal of Political Economy, L (1942), 743-744.

9.6 Conclusions and Recommendations

Thus INCO's problems are pricing and market control whereas most of the other mines' major problems are obtaining labour and rapid exploitation. Under such conditions the impact of user costs is immense, and the presence of a strong union makes the problem even more complex. As long as this structure continues to operate it seems inevitable that this system will exert forces such as to reduce collective bargaining in the Canadian non-ferrous mining industry to a form of quasi-national bargaining primarily patterned after INCO's collective agreements.

Viewed in this context INCO and the USW represent a power structure in industrial relations that will surely add to the increasing difficulties within the system and have far reaching and detrimental effects upon the future development of the Canadian metal mining industry.

Canada is on the threshold of vast expansion in the mineral industry, but unfortunately such an expansion unless vigorous remedial action is taken, will be carried out from a weak research base especially in the field of economics. I would hope that this thesis has indicated the need for such undertakings and that it will be helpful in promoting remedial measures such as the formation of government supported research within our provincial institutions, and that the industry will vigorously accept its responsibilities in such programs.

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A P P E N D I X

APPENDIX A-1

COLLECTIVE BARGAINING LEGEND

| | |
|-------------|--|
| Rec. | Recognition |
| M.R. | Management Rights |
| Sen. | Seniority Clause |
| D.Cl. | No Discrimination Clause |
| S.C. | Safety Committee |
| Gr. | Grievance Stages (3-A is Three Stages plus Arbitration) |
| L.M. | Labour-Management Committee |
| Hrs. | Hours in Regular Work Week |
| T&H. | Commencement of time and a half payments |
| D.T. | Double Time |
| S.H. | Statutory Holidays |
| Wages | First Class Miner, Top Concentrator Rate, First Class Trade |
| U.D. | Union Dues (Check Off) |
| Shift Diff. | Shift Differential:A/S,N/S,G/S. |
| B.R. | Board and Room Rate Controlled |
| M.P. | Medical Plan and Co., Share |
| R.P. | Retirement Plan and Co., Share |
| G.L.I. | Group Life Insurance and Co., Share |
| J.D. | Jury Duty Leave with Pay |
| J.P. | Job Posting |
| B.C. | Bonus Committee |
| R.C. | Rent Control |
| S.P. | Savings Plan and Co., Share |
| W.P. | Weekend Premium Rates |
| T.C. | Technological Clause |
| C.L. | Cost of Living Clause |
| S.A. | Severance Allowance |
| W.C. | Work Clothes |
| S.L.P. | Sick Leave Plan |
| O.T.C. | Overtime Clause |
| S.H. | Special Holiday and Vacation Bonus |
| Tr. Cr. | Transportation Clause |
| B.L. | Bereavement Leave |
| S.V. | Service Vacation |
| Y | Yes |
| N | No |
| + | After |

Source: From the various Collective Agreements
within the sample used in this thesis.

TABLE A-2

REVIEW OF COLLECTIVE BARGAINING AT ASALCO (Buchana Mine)

| | S.G. | Gr. | L.K. | Mrs. | TRH. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.M. | M.P. | H.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | I.G. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | Tr.Cl. | B.L. | |
|--------------------|------|-----|------|------|------|------|------|--|------|---|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 3-1-54- 2-28-55 | Y | 3-A | Y | 48 | 48 | S.H. | 5 | 1.46 1.56 1.56 | Y | 1 yr-4 days 2 days each add. year | 2-3-5 | Y | Y | | | | | | | | | | | | | | | | | | |
| 3-2-57- 2-28-59 | " | " | " | " | " | " | 5 | 1.61-1.66 1.71-1.76 1.71-1.76 | " | " | 2-3-7 | " | Y | | | | | | | | | | | | | | | | | | |
| 3-1-57- 2-28-62 | " | " | " | " | " | " | 6 | 1.66-1.68-1.71 1.76-1.78-1.81 1.76-1.78-1.81 | " | " | " | " | " | | | | | | | | | | | | | | | | | | |
| 3-2-62 2-28-65 | " | " | " | 40 | 40 | " | 6 | not available | " | " | " | " | " | | | | | | | | | | | | | | | | | | |
| 3-1-65 2-28-68 | " | " | " | " | " | " | 6 | 2.14-2.23-2.32 2.27-2.37-2.47 2.27-2.37-2.47 | " | " | 3-4-8 | " | " | | | | | | | | | | | | | | | | | | |
| 3-1-66 2-28-71 | " | " | " | " | " | " | 6 | 2.48-2.62-2.74 2.64-2.79-2.91 2.64-2.79-2.91 | " | 1 yr-5 days 2 " 10 " 3 " 21 " | 5-6-10 | " | " | | | | | | | | | | | | | | | | | | |

TABLE A-3

REVIEW OF COLLECTIVE BARGAINING AT BRITANNIA MINING & SMELTING

| | S.O. | Gr. | L.K. | Hrs. | T&H. | D.P. | S.H. | Wages | U.D. | Vacations | Shift Diff. | M.P. | R.P. | G.L.I. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | T.C.L. | B.L. | |
|----------------------|------|-----|------|------|------|------|------|--|------|--|-------------|------|------|--------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 1-10-55- 21-10-56 | Y | 3-A | N | 44 | 44 | + | 6 | 1.76 1.91 1.91 | Y | 1 yr-6 days 3 " 8 " 4 " 9 " | 4-8-8 | N | Y | 5 | | | | | | | | | | | | | | | |
| 22-10-56 21-10-58 | " | " | " | 40 | 40 | + | 6 | 1.85-1.90 2.00-2.05 2.00-2.05 | " | 1-5yr-10days 6yrs--11days 7yrs--12days | " | " | " | " | | | | | | | | | | | | | | | |
| 22-10-58 7/2 | " | " | " | 48 | 48 | + | 6 | " | " | Prov. Laws | " | " | " | " | | | | | | | | | | | | | | | |
| 6-6-66 1-9-67 | " | " | " | 40 | 40 | + | 6 | 2.48-2.58-2.73 2.75-2.86-3.01 2.75-2.86-3.01 | " | " | " | " | " | " | | | | | | | | | | | | | | | |
| 2-9-68 32-10-70 | " | " | " | " | " | " | 9 | 3.08-3.28 3.08-3.28 3.24-3.44 | " | " | 6-10-10 | " | " | " | | | | | | | | | | | | | | | |

TABLE A-4

REVIEW OF COLLECTIVE BARGAINING AT ANGLORADCOIN MINES

| | S.G. | Gr. | L.M. | Hrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.H. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | H.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.C.I. | B.L. |
|----------|------|-----|------|------|------|------|------|----------------------------------|------|------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 1-12-55 | | | | | | | 5 | 2.35-2.47-2.75 | Y | Prov. Laws & 4yrs-2wks | 3-4-5 | - | .5 | | | | | | | | | | | | | | | | | |
| 30-11-58 | | 3-A | N | 44 | 44 | Nil | 1½ | 2.54-2.67-2.97 2.66-2.80-3.12 | Y | | | | Y | | | | | | | | | | | | | | | | | |
| 1-12-58 | | | | | | | " | 3.06-3.21 | " | " | 8-10-12 | | " | | | | | | | | | | | | | | | | | |
| 1-12-70 | | | | | | | " | 3.36-3.51 3.58-3.78 | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-6

REVIEW OF COLLECTIVE BARGAINING AT BETHLEHEM COPPER CORP.

| | S.C. | Gr. | L.M. | Hrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | L.C. | C.L. | S.A. | W.C. | S.T.P. | O.T.C. | S.H. | J.C. | B.T. | | |
|--------|------|-----|------|------|------|-------------|----------------------------------|-------|------|-------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|------|--|--|
| 1-6-64 | Y | 2-A | N | 40 | + 40 | 8-S.H. ① | 2.53-2.81-2.89 | Y | | 1yr-2 weeks | 5-0-10 | | .5 | Y | .5 | | | | | | | | | | | | | | | | | |
| 1-6-67 | | | | | | 2 1/2 | 2.37-2.63-2.70 2.62-2.96-3.04 | | | | | | | | | | | | | | | | | | | | | | | | | |
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TABLE A-8

REVIEW OF COLLECTIVE BARGAINING AT BRITISH NEWFOUNDLAND EXPLORATION LTD.

| | S.C. | Gr. | L.M. | Hrs. | R&H. | D.P. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.C. | R.C. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.R.C. | S.H. | T.R.C.L. | B.L. | |
|---------|------|-----|------|------|------|----------------------|-------|--|------|------------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|----------|------|--|
| 21-3-68 | " | 3-N | N | 40 | + | S.H. 6 | 6 | 2.10-2.15 2.32-2.37 2.32-2.37 | Y | 1yr--1week 2" 1 1/2 " 3" 2 " | 6-6-6 | | .5 | | .5 | | | | | | | | | | | | | | | | |
| 22-3-71 | " | " | " | " | " | 7-S.H. G 2 1/2 | 2 1/2 | 2.30-2.50-2.65 2.52-2.72-2.87 2.52-2.72-2.87 | Y | " | 9-9-9 | | " | | " | | | | | | | | | | | | | | | | |
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TABLE No. 9

REVIEW OF COLLECTIVE BARGAINING AT BRIMSWICK MINING & SMELTING

| | S.C. | Gr. | L.M. | Mrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.R. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.C.L. | U.L. | |
|--------------------|------|-----|------|------|------|------|------------|-------------------------------------|------|--------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 1-2-65 30-11-67 | N. | 3-A | N | 41 | + 41 | 8 | S.H. 24 | 2.16-2.21 2.19-2.24 2.41-2.46 | Y | 2 yrs--1 week 3 " 2 " | 6-0-8 | | .5 | | .5 | Y | | | | | | | | | | | | | | | |
| 1-2-68 2-11-70 | " | " | " | 40 | + 40 | " | " | 2.37-2.60 ----- ----- | " | " | 7-0-9 | | " | | " | " | | | | | | | | | | | | | | | |
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TABLE A-10

REVIEW OF COLLECTIVE BARGAINING AT CAMPBELL CHEMICALS LTD.

| | S.O. | Gr. | L.M. | Hrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | Ed. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | F.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | Tr.Cl. | R.L. | |
|---------|------|-----|------|------|------|-----------------|------|--|------|-------------------------------------|-------------|-----|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 21-9-55 | X | 3-A | N | 48 | 48 | 5 | 5 | 1.65 1.57 1.65 | Y | 3yrs--1wk 4 " 2 " | 0-0-0 | Y | .5 | | | | | | | | | | | | | | | | | | |
| 3-3-57 | " | " | " | 44 | 44 | 7 S.H. 2 1/2 | 5 | 2.01-2.04-2.24 1.90-1.93-2.12 2.04-2.09-2.30 | Y | " | " | " | " | " | " | | | | | | | | | | | | | | | | |
| 17-4-62 | Y | " | " | 40 | 40 | " | " | 2.11-2.16-2.21 2.17-2.22-2.27 2.35-2.40-2.45 | Y | " | " | " | " | " | " | | Y | | | | | | | | | | | | | | |
| 3-2-65 | " | " | " | " | " | " | " | 2.31-2.53-2.63 2.37-2.41-2.51 2.55-2.59-2.69 | Y | " | " | " | " | Y | " | | " | | | | | | | | | | | | | | |
| 3-3-66 | " | " | " | " | " | 8 S.H. 2 1/2 | " | 2.77-2.92-3.14 2.83-2.99-3.21 3.04-3.21-3.44 | Y | 1yr--1 week 2yr--2 " 5yr--3 " | " | " | " | " | " | | " | | Y | | | | | | | | | | | | |

TABLE A-11(a)

REVIEW OF COLLECTIVE BARGAINING AT CANADIAN EXPLORATION LTD.

| | S.O. | Gr. | L.M. | NTP | T&H | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | J.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | Tr.Cl. | N.L. | | | |
|----------|------|-----|------|-----|-----|----------------------|------|--|------|----------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|---|---|---|
| 1-2-49 | | | | | | | | .98-1.03 | Y | 1yr--1week 2" 2 " | 5-0-8 | | .5 | 1.0 | | | | | | | | | | | | | | | | | | | |
| 30-10-51 | Y | B-A | N | 44 | 44 | 7 S.H. € 2 1/2 | " | .98-1.03 1.00-1.01 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | | |
| 1-2-52 | " | " | " | " | " | 8 S.H. € 2 1/2 | " | 1.58 1.54 1.70 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | | |
| 15-7-54 | " | " | " | " | " | " | " | 1.61 1.57 1.74 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | | |
| 15-7-55 | " | " | " | 40 | 40 | " | " | 1.66 1.62 1.79 | " | " | " | " | " | " | " | " | " | " | Y | " | " | " | " | " | " | " | " | " | " | " | " | | |
| 16-7-55 | " | " | " | " | " | " | " | 1.77-1.82-1.85 1.77-1.82-1.85 1.94-1.96-2.01 | " | Prov. Laws | 5-0-10 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | | |
| 16-7-56 | " | " | " | " | " | " | " | 1.90 1.90 2.06 | " | " | " | " | " | " | " | " | " | " | " | " | Y | " | " | " | " | " | " | " | " | " | " | | |
| 17-5-59 | " | " | " | " | " | " | " | 2.00 2.00 2.17 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | | |
| 17-5-61 | " | " | " | " | " | " | " | 2.07-2.14 2.07-2.14 2.25-2.33 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | |
| 20-2-61 | " | " | " | " | " | " | " | 2.55-2.70 2.55-2.70 2.87-3.04 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | |
| 2-11-63 | " | " | " | " | " | 9 S.H. € 2 1/2 | " | 2.91 2.91 3.41 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | |
| 2-11-65 | " | " | " | " | " | " | " | | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " |

FILE A-11(s)

REVIEW OF COLLECTIVE BARGAINING AT CANADIAN EXPLORATION LTD.

| | S.G. | Gr. | L.R. | Mrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | L.G. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | Tr.Cl. | B.L. | | |
|---------|------|-----|------|------|------|------|------|----------------|------|-----------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|
| 16-1-68 | | | | | | | = | 3.19-3.31-3.41 | " | " | 8-0-12 | | " | | | | | | | | | | | | | | | | | | | |
| 16-7-71 | | | | | | | = | 3.19-3.31-3.41 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | = | 3.63-3.76-3.86 | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-12

REVIEW OF COLLECTIVE BARGAINING AT CANADIAN GENERAL INVESTMENT COMPANY (Vestel Mines)

| | S.G. | Gr. | L.K. | Mrs. | R&N. | D.H. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | "C. | S.L.P. | O.T.C. | S.H. | W.S.I. | H.L. | | | | | |
|----------|------|-----|------|------|------|------|------|--|------|----------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|-----|--------|--------|------|--------|------|--|--|--|--|--|
| 1-6-63 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-12-65 | Y | 2-A | X | 47 | 47 | 6 | S.H. | 2.05-2.19 2.20-2.35 2.20-2.35 | Y | 1yr-1week 2 " 2 " | 0-0-0 | | Y | | Y | | | | | | | | | | | | | | | | | | | | |
| 16-12-65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-12-67 | " | " | " | 40 | 40 | 8 | S.H. | 2.19-2.66-2.79 2.35-2.86-3.06 2.35-3.07-3.22 | " | " | " | | .5 | | .5 | | | | Y | | | | | | | | | | | | | | | | |
| 16-12-67 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16-12-70 | " | " | " | " | " | 9 | S.H. | 2.96-3.13-3.30 3.17-3.34-3.51 3.39-3.66-3.93 | " | " | " | | " | | " | | | | " | | | | | | | | | | | | | | | | |
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TABLE A-13

REVIEW OF COLLECTIVE BARGAINING AT CANADIAN JAMESON MINES LTD.

| | 3.0. | Gr. | L.M. | Mrs. | T&H. | D.P. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | G.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | Tr.Cl. | B.L. | |
|---------|------|-----|------|------|------|------|-----------------|-------------------------------------|------|---------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 1-1-67 | Y | 3-4 | N | 40 | + | 7 | 7 | 2.50 2.63 2.70 | Y | 2yrs--1week 3 " 2 " | 0-0-0 | | .5 | | .5 | | | Y | | | | | | | | | | | | | |
| 31-1-69 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-1-69 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31-1-71 | | | | | | | 8 S.H. 2 1/2 | 2.70-2.81 2.84-2.95 2.92-3.04 | " | 1yr-1week 2 " 2 " 7 " 3 " | " | " | .6 | | " | | | " | | | | | | | | | | | | | |
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TABLE A-14

REVIEW OF COLLECTIVE BARGAINING AT COMINCO (Pine Point)

| | S.O. | Gr. | L.M. | Mrs. | T&H. | D.P. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | R.C. | S.P. | W.P. | T.C. | G.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.C. | R.T. |
|--------|------|-----|------|------|------|------|------|--|------|-----------------------------|-------------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|------|
| 1-7-64 | Y | 3-A | X | 40 | + | 7 | S.H. | 2.35 2.16 2.30 | Y | 1yr-1week 2" 2" | 3-4-5 | Y | .5 | Y | Y | | | | | | | | | | | |
| 3-1-65 | " | " | " | " | " | " | " | 2.58-3.14 2.66-3.31 3.11-3.76 | " | " plus 10yr-3week | 5-5-10 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " |
| 1-8-68 | " | " | " | " | " | 8 | S.H. | 3.24-3.35-3.45 3.41-3.52-3.62 3.90-4.01-4.11 | " | 1-5yrs-2weeks 5-20yrs-3" | 8-8-16 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " |
| 3-1-71 | " | " | " | " | " | " | " | | | | | | | | | | | | | | | | | | | |
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TABLE A-15

REVIEW OF COLLECTIVE BARGAINING AT COMICO (Kimberly)

| | S.G. | Gr. | L.H. | Hrs. | T&H. | D.F. | S.H. | Wages | U.C. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | Tr.Cl. | B.L. | |
|---------|------|-----|------|------|------|------|--------|---|------|-----------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 1-6-51 | | | | | | | | 1.65 | Y | 1yr-1week | 4-4-8 | | .5 | | | | | Y | | | | | | | | | | | | | |
| 30-5-52 | Y | 3-4 | Y | 40 | 40 | S.H. | 6 | 1.74 | | 2-20yrs-2 " | | | | | | | | | | | | | | | | | | | | | |
| 1-6-52 | | | | | | | 7 S.H. | 1.79 | | " | 5-5-10 | | " | | | | | | | | | | | | | | | | | | |
| 30-5-53 | " | " | " | " | " | " | 2 1/2 | 1.84 1.88 | " | " | | | " | | | | | | | | | | | | | | | | | | |
| 1-6-53 | | | | | | | | 1.79 | | 1yr-1week | " | | " | | | | | | | | | | | | | | | | | | |
| 30-5-54 | " | " | " | " | " | " | " | 1.88 1.88 | " | 2-15yrs-3weeks 16yrs-3 " | | | " | | | | | | | | | | | | | | | | | | |
| 1-6-54 | | | | | | | | Not Available | | | | | | | | | | | | | | | | | | | | | | | |
| 30-5-55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-6-55 | | | | | | | | 1.90 | | " | | | " | | | | | | | | | | | | | | | | | | |
| 30-5-56 | " | " | " | " | " | " | " | 1.95 2.00 | " | " | | | " | | | | | | | | | | | | | | | | | | |
| 1-6-56 | | | | | | | | 2.01-2.06-2.10 | | | | | | | | | | | | | | | | | | | | | | | |
| 30-5-58 | " | " | " | " | " | " | " | 2.07-2.12-2.16 2.12-2.17-2.22 | " | " | | | " | | | | | | | | | | | | | | | | | | |
| | | | | | | | | May 1958- Comprehensive Retirement Plan was Introduced | | | | | | | | | | | | | | | | | | | | | | | |
| 1-3-59 | | | | | | | | 2.22-2.27-2.33 | | | | | | | | | | | | | | | | | | | | | | | |
| 1-3-62 | " | " | " | " | " | " | " | 2.29-2.34-2.39 2.35-2.40-2.45 | " | " | | | Y | | | | | | | | | | | | | | | | | | |
| | | | | | | | | In 1962 the Kimberly Contract became part of the Trail-Kimberly Agreement | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-16

REVIEW OF COLLECTIVE BARGAINING AT COMINCO (Trail Smelter)

| | C.O. | Gr. | L.M. | Hrs. | TEH. | D.F. | S.H. | Wa&es | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.C. | S.P. | W.P. | T.G. | G.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | T.R. | R.T. | |
|--------|------|-----|------|------|------|------|------|--|------|---|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|------|--|
| 1-6-58 | Y | 3-A | Y | 40 | 40 | 7 | 2 | Oper--2.21 Trade--2.45 | Y | 1yr--1week 1-15yrs--2 wks 16yrs-- 3 " | 5-5-10 | | .5 | .5 | .5 | | Y | | | | | | | | | | | | | | |
| 3-5-59 | | | | | | | | 1959-60 C.B.A. not available 1960 the Trail Agreement became part of the Trail-Kimberly Agreement | | | | | | | | | | | | | | | | | | | | | | | |
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TABLE A-17

REVIEW OF COLLECTIVE BARGAINING AT COQUINCO (Bluebell)

| | S.G. | Gr. | L.M. | Mrs. | T&H. | D.I. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | Q.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | Tr.Cl. | B.L. |
|---------|------|-----|------|------|------|------|------|--|------|----------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 1-7-54 | Y | 3-A | Y | 40 | + | 7 | S.H. | 2,47-2,59 | Y | 1yr-1week | 4-4-8 | Y | .5 | Y | .5 | | Y | | | | | Y | | | | | | | | |
| 30-5-56 | | | | | | 2 | G | 2,38-2,50 | | 2-15yrs-2weeks | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 2,72-2,86 | | 16yrs--3 " | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 1966 -Bluebell Agreement became part of the Traill- Kimberly Agreement | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-18

REVIEW OF COLLECTIVE BARGAINING AT COMINCO (Trail-Kimberly Master Contract)

| | S.O. | Gr. | L.M. | Hrs. | T&H | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | H.G. | S.P. | W.P. | I.C. | C.L. | S.A. | W.C. | S.L.P. | O.P.C. | S.H. | T.C.I. | B.L. | | |
|---------|------|-----|------|------|-----|-------|------|----------------------------------|------|---------------------------------|-------------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|
| 1-3-62 | | | | | 4 | 7 | S.H. | 2.41-2.47 | Y | 1yr--1week | 5-5-10 | Y | Y | .5 | Y | Y | Y | | | | Y | | | | | | | | | | |
| 29-2-64 | | 3-A | Y | 40 | 40 | 2 1/2 | " | 2.48-2.55 2.55-2.62 | | 2-15yrs--2week 16yrs--3weeks | | | | | | | | | | | | | | | | | | | | | |
| 31-5-64 | | | | | | | " | 2.63-2.75 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | | |
| 31-5-66 | | | | | | | " | 2.72-2.84 2.80-2.93 | | | | | | | | | | | | | | | | | | | | | | | |
| 1-7-66 | | | | | | | S.H. | 2.98-3.18 | Y | 1yr--1week | 8-8-16 | | | | | | | | | | | | | | | | | | | | |
| 30-6-68 | | | | | | 2 1/2 | " | 2.98-3.18 3.04-3.24 | | 2-5yrs--2weeks 6yrs--3weeks | | | | | | | | | | | | | | | | | | | | | |
| 1-7-66 | | | | | | | " | 3.34-3.44-3.54 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | | | |
| 30-5-70 | | | | | | | " | 3.34-3.44-3.54 3.40-3.50-3.60 | | | | | | | | | | | | | | | | | | | | | | | |

REVIEW OF COLLECTIVE BARGAINING AT CONSOLIDATED FAMILIFE

| | S.O. | Gr. | L.M. | Hrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | G.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.O. | H.L. | | |
|---------|------|-----|------|------|------|------|------|-------------------------------------|------|---------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|------|--|--|
| 11-2-67 | Y | 4-A | N | 44 | + | 44 | 5 | 2.25-2.47 2.40-2.64 2.47-2.72 | Y | 1yr--1week 3yr--2weeks | 0-0-0 | | Y | | | | | | | | | | | | | | | | | | | |
| 11-2-59 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-20

REVIEW OF COLLECTIVE BARGAINING AT COPPERFIELD MINING CORP.

| Contract | S.C. | Gr. | L.M. | Hrs. | T&H. | D.P. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | W.C. | C.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | J.F.C.I. | U.T. | | |
|----------|------|-----|------|------|------|--------|------|-----------|------|----------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|----------|------|--|--|
| 11-11-68 | Y | 3-4 | N | 40 | + 40 | 8 S.H. | 8 | 2.43-2.53 | Y | 1yr-1week 3yr-2 " 10yr-3 " | 0-0-0 | | .6 | .6 | | | | | | | | | | | | | | | | | | |
| 11-11-68 | | | | | | | | 2.43-2.53 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 2.43-2.53 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 2.61-2.76 | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-21

REVIEW OF COLLECTIVE BARGAINING AT CRAIGMONT MINES LTD.

| | S.G. | Gr. | L.M. | Hrs. | T&H | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | Tr.G1. | B.L. | | |
|---------|------|-----|------|------|-----|---------|------|----------------------------------|------|--------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|
| 11-7-61 | | | | | | | | 2.24-2.34 | Y | Prov. Laws | 5-0-10 | | | | | | | | | | | | | | | | | | | | | |
| 11-7-64 | Y | 2-A | N | 40 | 40 | 40 S.H. | 7 | 2.00-2.08 2.30-2.42 | Y | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 1964-1966-Not Available | | | | | | | | | | | | | | | | | | | | | | | | |
| 18-1-66 | | | | | | 8/85 H. | | 2.92-3.05 | " | 1yr-1week | 7-0-11 | .5 | .5 | Y | .5 | | | Y | | | | | | | | | | | | | | |
| 16-5-68 | | | | | | 2 1/2 | | 2.92-3.05 3.25-3.40 | " | 2-4yrs-2wks 5yrs-3wks | | | | | | | | | | | | | | | | | | | | | | |
| 17-5-65 | | | | | | 9 S.H. | | 3.31-3.49-3.61 | " | " | 10-0-15 | " | " | " | " | | Y | " | | | | | | | | | | | | | | |
| 15-2-70 | | | | | | 2 1/2 | | 3.31-3.47-3.61 3.66-3.84-3.96 | " | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-22

REVIEW OF COLLECTIVE BARGAINING AT DENISON MINES LTD.

| | S.G. | Gr. | L.M. | Nrs. | R&H. | D.F. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.H. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | Tr.Cl. | B.L. |
|---------|------|-----|------|----------|----------|--------|------|----------------------------------|------|------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 30-0-57 | | | | | | | | 1.83-2.00-2.20 | Y | 1yr-1wk | 3-5-5 | | .5 | | | | | | | | | | | | | | | | | |
| 31-0-59 | Y | 3-A | K | 48 40 | 48 40 | S.H. | 6 | 2.03-2.21-2.44 2.23-2.43-2.68 | | 4yr-1wk 5yr-2wk | | | | | | | | | | | | | | | | | | | | |
| 1-0-60 | | | | | | | | 2.24-2.29-2.34 | " | 1yr-1wk | " | | " | | | | | | | | | | | | | | | | | |
| 23-6-65 | | | | 40 | 40 | 6 S.H. | 28 | 2.48-2.53-2.58 2.72-2.77-2.82 | | 2yr-2wk | | | | | | | | | | | | | | | | | | | | |
| 6-0-63 | | | | | | | | 2.34-2.39 | " | " | " | | " | | | | | | | | | | | | | | | | | |
| 31-0-65 | | | | " | " | " | " | 2.58-2.63 2.82-2.87 | | " | " | | " | | | | | | | | | | | | | | | | | |
| 1-0-67 | | | | | | | | 2.56-2.61-2.73 | " | " | " | | " | | | | | | | | Y | | | | | | | | | |
| 3-0-66 | | | | " | " | 8 S.H. | 28 | 2.80-2.85-2.97 3.04-3.09-3.21 | | plus 10yrs-3wks | | | " | | | | | | | | | | | | | | | | | |
| 1-0-68 | | | | " | " | 9 S.H. | 28 | 3.09-3.21 | " | 1yr-1wk | 5-6-6 | | " | Y | " | | | | | | | | | | | | | | | |
| 30-0-70 | | | | " | " | " | 28 | 3.21-3.33 3.63-3.75 | | 2-4yr-2wk 5yrs-3wks | | | " | | | | | | | | | | | | | | | | | |

TABLE A-23

REVIEW OF COLLECTIVE BARGAINING AT ELDOorado MINING & PErTING CO. LTD.

| Contract | C.O. | Gr. | L.K. | Hrs. | T&H | D.T. | S.H. | Wages | U.P. | Vacations | Shift Dist. | Em | M.P. | R.P. | G.L.I. | J.D. | R.P. | R.G. | R.G. | S.P. | W.P. | T.C. | G.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.C.L. | H.L. |
|----------|------|-----|------|------|-----|------|------|--|------|------------|-------------|----|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 1-1-53 | | | | | | | | 1.66 | Y | 1yr-2weeks | 3-5-7 | | .5 | Y | .5 | | | | | | | | | | | | | | | |
| 3-1-54 | | 3-A | N | 48 | 48 | S.H. | 8 | 1.82 1.82 | | | | | | | | | | | | | | | | | | | | | | |
| 1-1-56 | | | | | | | | 1.75 | " | " | 4-6-8 | | " | " | " | | | | | | | | Y | | | | | | | |
| 3-1-56 | | | | | | | | 2.05 | | | | | | | | | | | | | | | " | | | | | | | |
| 1-1-57 | | | | | | | | 2.00 | | | | | | | | | | | | | | | " | | | | | | | |
| 3-1-58 | | | | | | | | 1.86-1.95 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 1-1-59 | | | | | | | | 2.15-2.26 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 3-1-59 | | | | | | | | 2.15-2.26 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 1-1-60 | | | | | | | | 2.09-2.23-2.27 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 3-1-61 | | | | | | | | 2.34-2.49-2.53 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 1-1-62 | | | | | | | | 2.42-2.58-2.62 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 3-1-64 | | | | | | | | 1-5yrs-2wks 6yrs-3wks | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 1-1-65 | | | | | | | | 2.31-2.38-2.50 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 3-1-65 | | | | | | | | 2.57-2.65-2.79 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 1-1-66 | | | | | | | | 2.66-2.75-2.89 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 3-1-66 | | | | | | | | not available | " | " | " | | " | " | " | | | | | | | Y | | | | | | | | |
| 1-1-67 | | | | | | | | 3.10-3.35-3.46 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 3-1-67 | | | | | | | | 3.39-3.53-3.64 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 1-1-68 | | | | | | | | 3.80-3.97-4.08 | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |
| 3-1-68 | | | | | | | | Eldorado has an extensive Medical-Hospital-Pension-Transportation Allowance System operating within the C.B.A. | " | " | " | | " | " | " | | | | | | | | " | | | | | | | |

TABLE A-24

REVIEW OF COLLECTIVE BARGAINING AT ENDAKO MINES LTD.

| | S.O. | Gr. | L.M. | Mrs. | R&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.C. | R.C. | S.P. | W.P. | I.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.C. | B.L. |
|---------|------|-----|------|------|------|-------|------|----------------------------------|------|------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|------|
| 1-7-65 | | | | | | 8 | S.H. | 2.77 | Y | 2yrs-2wks | 5-0-10 | | .5 | | | | | | | | | | | | | | | | | |
| 15-4-66 | Y | 2-4 | N | 40 | 40 | 2 1/2 | S.H. | 2.58 2.87 | | 10yrs-3 " | | | | | | | | | | | | | | | | | | | | |
| 16-4-66 | | | | | | 9 | S.H. | 3.08 | " | " | 6-0-10 | | " | | | | | | | | | | | | | | | | | |
| 1-7-68 | | | | | | 2 1/2 | S.H. | 2.89 3.18 | | | | | | | | | | | | | | | | | | | | | | |
| 1-7-68 | | | | | | | | 3.65-3.89-4.09 | | 2yr-2weeks | 10-0-15 | | " | | | | | | | | | | | | | | | | | |
| 5-3-71 | | | | | | | | 3.54-3.78-3.98 3.76-4.00-4.20 | | 5yrs-3 " | | | " | | | | | | | | | | | | | | | | | |

TABLE 4-25

REVIEW OF COLLECTIVE BARGAINING AT FALCONBRIDGE MINES LTD.

| | S.G. | Gr. | L.M. | H.R. | T&H | D.T. | S.H. | Wages | U.P. | Vacations | Shift Diff. | H.R. | M.P. | R.P. | G.L.I. | J.D. | L.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.R.C.L. | R.L. | |
|---------|------|-----|------|------|-----|------|------|--|------|------------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|----------|------|--|
| 12-2-59 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12-3-59 | Y | 4-A | N | 44 | 44 | 44 | 6 | not available | Y | 1yr-lwk 5yrs-2wks | 4-6-8 | .5 | Y | .5 | | | Y | | | | | | | | | | | | | | |
| 11-9-53 | | | | | | | | 1.76 | | 1yr-lwk 3yrs-2wks 15yrs-3wks | " | " | " | " | | | " | Y | | | | | | | | | | | | | |
| 11-9-54 | " | " | " | 40 | 40 | " | 7 | 1.87 2.03 | " | | " | " | " | " | | | " | | | | | | | | | | | | | | |
| 12-2-54 | " | " | " | " | " | " | 8 | 1.79 1.90 2.06 | " | " | 5-7-9 | " | " | " | | | " | | | | | | | | | | | | | | |
| 11-3-55 | " | " | " | " | " | " | 8 | 1.88 2.00 2.16 | " | 1yr-lwk 2yrs-2wks 15yrs-3wks | " | " | " | " | | | " | | | | | | | | | | | | | | |
| 12-9-55 | " | " | " | " | " | " | " | 2.19-2.38 2.13-2.26 2.33-2.50 | " | " | 5-7-10 | " | " | " | | | " | | | | | | | | | | | | | | |
| 11-3-56 | " | " | " | " | " | " | " | 2.47 2.40 2.65 | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | |
| 12-4-59 | " | " | " | " | " | " | " | 2.54-2.61-2.67 2.47-2.53-2.59 2.73-2.80-2.87 | " | " | 5-7-10 | " | " | " | | | " | | | | | | | | | | | | | | |
| 21-4-59 | " | " | " | " | " | " | " | 3.03-3.15-3.29 2.96-3.08-3.21 3.38-3.60-3.72 | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | |
| 21-5-63 | " | " | " | " | " | " | " | | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | |
| 21-5-66 | " | " | " | " | " | " | " | | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | |
| 21-5-69 | " | " | " | " | " | " | " | | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | |
| 16-7-59 | " | " | " | " | " | " | " | 3.49-3.74-3.99 3.66-3.92-4.18 4.24-4.55-4.84 | " | " | 10-10-10 | " | " | " | | | " | | | | | | | | | | | | | | |
| 2-7-62 | " | " | " | " | " | " | " | | " | " | | " | " | " | | | " | | | | | | | | | | | | | | |

TABLE A-26

REVIEW OF COLLECTIVE BARGAINING AT FIREFIGHTER MINE

| | S.O. | Gr. | L.R. | Hrs. | R&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.C. | R.C. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | T.C.L. | U.L. | | | |
|--------|------|-----|------|------|------|------|------|-----------|------|----------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|
| 1-3-61 | Y | 3-A | N | 48 | + 48 | S.H. | 4 | 1.53-1.62 | Y | 1yr--4days 2 " 6 " 3 " 8 " | ----- | | Y | | | | | | | | | | | | | | | | | | | | |
| 1-3-63 | | | | | | | | 1.68-1.72 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 1.78-1.87 | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-27

REVIEW OF COLLECTIVE BARGAINING AT CASPE COPPER MINES LTD

| | C.O. | Gr. | L.M. | Hrs. | T&H. | D.P. | S.H. | Wages | U.D. | Vacations | Shift Diff. | Sp. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.C. | R.C. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | T.C.L. | N.L. | |
|---------|------|-----|------|------|------|------|------|----------------------------------|------|---|-------------|-----|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 10-3-66 | | | | | | | | 2.43-2.53-2.61 | Y | 1-3yrs-1wk 4-13yrs-2wks 14yrs-3wks | 5-10-10 | | Y | | | | | Y | | | | | | | | | | | | | |
| 19-3-69 | Y | 3-A | N | 40 | 40 | S.H. | 8 | 2.69-2.80-2.89 2.69-2.80-2.89 | | | | | Y | | Y | | | | | | | | | | | | | | | | |
| 16-3-69 | | | | | | | | 2.89-3.06-3.24 | | 1-10yrs-2wks 11-19yrs-3wks 20yrs-4wks | 10-15-15 | | | | | | | | | | | | | | | | | | | | |
| 17-3-72 | | | | | | | | 3.16-3.35-3.55 3.16-3.35-3.55 | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-28

REVIEW OF COLLECTIVE BARGAINING AT GECCO

| | S.O. | Gr. | L.M. | Nrs. | T&H | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | H.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.T.P. | O.M.C. | S.H. | T.C.L. | R.T. | | |
|---------|------|-----|------|----------|------------|------|------|--|------|-----------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|
| 14-1-55 | Y | 1-A | N | 48 | + 48 | S.H. | 5 | 1957-- 1.49 1.40 1.81 | Y | Prov. Laws | ----- | | .5 | | | | | | | | | | | | | | | | | | | |
| 15-1-55 | " | " | " | 43 44 | + 48 44 | S.H. | 6 | 1.82-1.99 1.62-1.77 2.09-2.28 | Y | 1yr-1wk 5yrs-2wks 6yrs-3wks | ----- | | " | | | | | | | | | | | | | | | | | | | |
| 16-1-59 | " | " | " | 44 40 | + 44 40 | " | " | 2.01-2.21-2.23 2.14-2.35-2.37 2.30-2.53-2.55 | " | " | ----- | | " | Y | | | | | | | | | | | | | | | | | | |
| 15-1-62 | " | " | " | 40 | + 40 | " | 7 | 2.30-2.35-2.40 2.44-2.49-2.54 2.63-2.68-2.74 | " | " | ----- | | " | " | | | | | | | | | | | | | | | | | | |
| 23-7-63 | " | " | " | 40 | + 40 | " | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23-7-65 | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-29

REVIEW OF COLLECTIVE BARGAINING AT GIANT MASCOT MINES LTD.

| | C.G. | Gr. | L.M. | Hrs. | T&H. | P.L. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.C.I. | H.L. |
|---------|------|-----|------|------|------|-------|------|-----------|------|-----------|-------------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 23-6-64 | | | | | 40 | 8 | \$ H | 2.28-2.38 | Y | 1yr-1wk | 6-9-12 | | | | | | | | | | | | | | | | | | |
| 25-7-66 | | 2-4 | N | 40 | 40 | 2 1/2 | \$ H | 2.31-2.41 | | 2yr-2wks | | .5 | | | | | | | | | | | | | | | | | |
| | | | | | | | | 2.39-2.49 | | 7yr-3wks | | | | | | | | | | | | | | | | | | | |
| 25-7-66 | | | | | | 9 | \$ H | 2.75-2.90 | | " | " | | | 1.0 | | | | | | | | | | | | | | | |
| 28-7-68 | | | | | | 2 1/2 | \$ H | 2.75-2.90 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 2.80-2.95 | | | | | | | | | | | | | | | | | | | | | |

TABLE A-30

REVIEW OF COLLECTIVE BARGAINING AT GRANISLE COPPER MINE LTD

| | S.O. | Gr. | L.M. | Nrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | M.P. | R.P. | G.T.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | T.C.I. | B.L. |
|----------|------|-----|------|------|------|------|------|----------------|------|------------|-------------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 1-5-66 | | | | | | | | 2.80 | Y | 1yr-1wk | 6-12-12 | | | | | | | | | | | | | | | | | | |
| 1-5-67 | | | | 40 | + | 9 | S.H. | 2.89 | | 2yrs-2wks | " | | | 5 | | | | | | | | | | | | | | | |
| 1-5-67 | | | | | | | | 2.98 | | 10yrs-3wks | | | | | | | | | | | | | | | | | | | |
| 1-5-67 | | | | | | | | 3.03-3.16 | | 1yr-2wks | | | | | | | | | | | | | | | | | | | |
| 1-1-69 | | | | | | | | 3.12-3.25 | | 5yrs-3wks | | | | | | | | | | | | | | | | | | | |
| 1-1-69 | | | | | | | | 3.22-3.36 | | | | | | | | | | | | | | | | | | | | | |
| 2-1-69 | | | | | | | | 3.47-3.70-3.85 | | | | | | | | | | | | | | | | | | | | | |
| 31-12-71 | | | | | | | | 3.56-3.79-3.94 | | | | | | | | | | | | | | | | | | | | | |
| 31-12-71 | | | | | | | | 3.67-3.90-4.05 | | | | | | | | | | | | | | | | | | | | | |

TABLE A-31

REVIEW OF COLLECTIVE BARGAINING AT HEATE STEEL MINES

| | U.C. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.T.P. | O.L.C. | S.H. | T.C.L. | B.L. |
|---------|------|----------------------------------|------|-----------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 1-6-62 | | 1.75-1.82 | Y | 3yrs-1wk | 4-6-8 | | .5 | .5 | | | | | | | | | | | | | | | | |
| 31-5-65 | | 1.72-1.75 1.85-2.05 | | 4yrs-2wks | | | | | | | | | | | | | | | | | | | | |
| 1-9-64 | | 2.05 | " | " | " | | " | " | | | | | | | | | | | | | | | | |
| 31-8-65 | | 1.97 2.30 | | | | | | | | | | | | | | | | | | | | | | |
| 1-9-65 | | 2.15-2.20-2.24 | " | " | " | | " | " | | | | | | | | | | | | | Y | | | |
| 29-1-66 | | 2.20-2.25-2.29 2.60-2.65-2.69 | | | | | | | | | | | | | | | | | | | | | | |
| 1-6-66 | | 2.44-2.68 | " | " | " | | " | " | | | | | | | | | | | | | " | | | |
| 31-5-70 | | 2.45-2.74 2.89-3.18 | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-32

REVIEW OF COLLECTIVE BARGAINING AT HUDSON BAY MINING & SMELTING

| | S.C. | Gr. | L.M. | Hrs. | T&H. | D.T. | S.H. | Wages | U.B. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.T.P. | O.L.C. | S.H. | T.C.L. | B.T. | | |
|---------|------|-----|------|------|------|------|------|----------------|------|-------------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|
| 1-1-57 | | | | | | | | 3.03-3.15-3.29 | | | | | | | | | | | | | | | | | | | | | | | | |
| 30-5-70 | Y | 4-4 | Y | 40 | 40 | S.H. | 8 | 3.34-3.49-3.65 | Y | 1yr-2wks 5yrs-3wks 10yrs-4wks | 8-12-14 | | 1.0 | 1.0 | 1.0 | Y | Y | Y | | | | | | | | | | | | | | |
| | | | | | | | | 3.59-3.74-3.71 | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-33

REVIEW OF COLLECTIVE BARGAINING AT INTERNATIONAL NICKEL CO. OF CAN., LTD. (suburbury)

| | S.C. | Gr. | L.R. | Hrs. | T&H. | D.S. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.O. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | Tr.Cl. | H.T. |
|--------|------|-----|------|------|------|------|------|--|------|------------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|
| 1-6-48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-6-49 | Y | 4-A | N | 48 | 48 | 48 | 6 | 1.65 1.76 1.92 | Y | 1yr-1wk 5yrs-2wks | 4-8-8 | Y | Y | Y | Y | Y | Y | Y | | | | | | | | | | | | |
| 1-6-49 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-6-50 | | | | | | | | 1.72 2.82 1.98 | " | " plus 25yrs-3wks | " | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-6-54 | | | | | | | | 1.76 1.87 2.03 | " | 1yr-1wk 3yrs-2wks 15yrs-3wks | " | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-54 | | | | | | | | 1.79 1.90 2.06 | " | " | 5-10-10 | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-55 | | | | | | | | 1.83 2.00 2.16 | " | " | " | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-55 | | | | | | | | 2.19-2.38 2.13-2.26 2.33-2.50 | " | " | " | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-55 | | | | | | | | 2.47 2.40 2.66 | " | 1yr-1wk 2yrs-2wks 15yrs-3wks | " | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-55 | | | | | | | | 2.54-2.61-2.67 2.47-2.53-2.59 2.73-2.80-2.87 | " | " | " | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-55 | | | | | | | | 3.03-3.15-3.29 2.96-3.08-3.21 3.38-3.60-3.72 | " | " | " | " | " | " | " | " | " | " | " | | | | | | | | | | | |
| 1-6-55 | | | | | | | | 3.49-3.79-3.99 3.66-3.92-4.18 4.24-4.55-4.84 | " | " | 10-10-16 | " | " | " | " | " | " | " | " | | | | | | | | | | | |

TABLE A-34

REVIEW OF COLLECTIVE BARGAINING AT INTERNATIONAL NICKEL CO., OF CAN., LTD. (Manitoba)

| | S.C. | Gr. | L.M. | Mrs. | T&H. | D.I. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | "C. | S.T.P. | O.L.C. | S.H. | T.C.L. | R.L. | |
|---------|------|-----|------|------|------|------|----------------------------------|--|------|------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|-----|--------|--------|------|--------|------|--|
| 1-3-61 | Y | 3-A | N | 44 | 44 | + | 6 | 1963- 2.38 | Y | Prov. Laws | 4-4-7 | | 1.0 | 1.0 | 1.0 | | | | | | | | | | | | | | | | |
| 3-9-64 | | | | | | | | 2.43 | | | | | | | | | | | | | | | | | | | | | | | |
| 1-3-67 | " | " | " | 40 | 40 | + | 8 S.H. G 24 | 2.50-2.57-2.65 2.55-2.62-2.71 2.84-2.92-3.02 | " | 2yrs-2wks 3yrs-3wks | " | | " | " | " | | | | | | " | | | | | | | | | | |
| 1-3-67 | " | " | " | " | " | " | " | 2.94-3.06-3.20 | " | " | 5-10-10 | | " | " | " | | | | | | | " | | | | | | | | | |
| 25-2-70 | " | " | " | " | " | " | 3.08-3.21-3.36 3.26-3.51-3.67 | | " | " | | | " | " | " | | | | | | | " | | | | | | | | | |
| 1-1-70 | " | " | " | " | " | " | 3.65-3.90-4.10 | | " | " | 10-10-15 | | " | " | " | | | | | | | " | | | | | | | | | |
| 1-3-73 | " | " | " | " | " | " | 3.81-4.08-4.29 4.40-4.71-4.96 | | " | " | | | " | " | " | | | | | | | " | | | | | | | | | |

REVIEW OF COLLECTIVE BARGAINING AT JOUHEL COPPER MINES LTD.

| | C.O. | Gr. | L.M. | Mrs. | R&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.H. | J.D. | J.P. | B.C. | R.G. | S.P. | W.P. | L.C. | C.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | T.O.L. | H.L. | | |
|---------|------|-----|------|------|------|------|------|----------------|------|----------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|
| 31-2-59 | Y | 3-A | N | 42 | + | 9 | 5 | 2.68-2.84-3.01 | Y | 1yr-1wk 2yrs-2wks | ---- | | .5 | | .5 | Y | | | | | | | | | | | | | | | | |
| 31-1-72 | | | | | | | | 2.81-2.98-3.16 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 3.22-3.41-3.61 | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-36

REVIEW OF COLLECTIVE BARGAINING AT KAM-KOTIA MINES LTD.

| | S.G. | Gr. | L.K. | Hrs. | TEH. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.R. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | F.C. | S.L.P. | O.R.C. | S.H. | T.C. | R.L. | |
|----------|------|-----|------|------|------|--------|------|----------------|------|-----------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|------|--|
| 25-3-63 | | | | 48 | + | | | 1.80-1.96-2.00 | Y | 1yr-1wk | 3-3-5 | | .5 | | | | | Y | | | | | | | | | | | | | |
| 7-11-65 | | | | 40 | 40 | S.H. | 6 | 1.90-2.07-2.11 | | 5yrs-2wks | | | | | | | | | | | | | | | | | | | | | |
| 7-11-65 | | | | 40 | + | | 7 | 2.20-2.27-2.32 | | 1yr-1wk | 4-5-6 | | | | | | | | | | | | | | | | | | | | |
| 31-11-67 | | | | 40 | 40 | | | 2.32-2.39-2.44 | | 4yrs-2wks | | | | | | | | | | | | | | | | | | | | | |
| 1-1-68 | | | | " | " | | | 2.41-2.48-2.53 | | | | | | | | | | | | | | | | | | | | | | | |
| 1-7-69 | | | | " | " | 8 S.H. | 4 | 2.55-2.63-2.71 | | " | 7-8-9 | | | Y | | | | | | | | | | | | | | | | | |
| | | | | " | " | 4 | 2 | 2.74-2.82-2.90 | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | " | " | 2 | 2 | 2.78-2.86-2.95 | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-37

REVIEW OF COLLECTIVE BARGAINING AT LAKE DUFALUT MINES LTD.

| | C.O. | Gr. | L.M. | Hrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.M. | M.P. | R.P. | G.L.I. | F.D. | L.S. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | F.C. | S.L.P. | O.T.C. | S.H. | T.C.I. | B.L. | | | |
|----------|------|-----|------|------|------|------|------|----------------|------|----------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|
| 15-11-65 | Y | 3-A | N | 40 | + | 8 | S.H. | 2.32-2.41-2.51 | Y | 1yr-1wk 3yrs-2wks | 5-5-10 | | .5 | | | | | Y | | Y | | | | | | | | | | | | | |
| 15-11-68 | | | | | | | | 2.33-2.42-2.52 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-11-71 | | | | | | | | 2.57-2.67-2.78 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-11-68 | | | | | | | | 2.73-2.90-3.07 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-11-71 | | | | | | | | 2.82-2.99-3.16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 3.00-3.17-3.34 | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-38

REVIEW OF COLLECTIVE BARGAINING AT MANITOW-BARVIE MINES LTD.

| | S.C. | Gr. | L.R. | Nrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.S. | S.P. | W.P. | F.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.R.O.L. | B.T. |
|---------|------|-----|------|------|------|--------|------|--|------|----------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|----------|------|
| 16-5-52 | Y | 4-A | N | 48 | 48 | 48 S.H | 5 | 1.36 ---- ---- | Y | 1yr-1wk 5yrs-2wks | --- | | Y | | | | | Y | | | | | | | | | | | Y | |
| 16-5-56 | " | " | " | 44 | 44 | " | " | not available | " | " | " | | " | | | | | " | | | | | | | | | | | " | |
| 17-5-59 | " | " | " | " | " | " | " | " | " | " | " | | " | | | | | " | | | | | | | | | | | " | |
| 17-5-60 | " | " | " | " | " | " | " | 1.59 1.62 1.74 | " | " | " | | .5 | | .5 | Y | | Y | | | | | | | | | | | " | |
| 17-5-62 | " | " | " | " | " | " | " | 1.66-1.73-1.80 1.68-1.75-1.82 1.81-1.88-1.95 | " | 1yr-1wk 3yrs-2wks | " | | " | | " | " | " | " | | | | | | | | | | | " | |
| 17-5-64 | " | " | " | " | " | " | " | 2.64-2.84-2.99 2.66-2.86-3.01 2.80-3.00-3.15 | " | " plus 10yrs-3wks | " | | " | | " | " | " | " | | | | | | | | | | | " | |
| 17-5-69 | " | " | " | 40 | 40 | 40 | 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 17-5-72 | " | " | " | " | " | " | " | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-40

REVIEW OF COLLECTIVE BARGAINING AT HIGHLAND-BELL MINES LTD.

| | E.G. | Gr. | L.M. | Wks. | R&H. | D.H. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.O. | S.P. | W.P. | T.C. | G.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | Tr.Cl. | R.L. | |
|-----------|------|-------|------|------|------|--------|--------|--|------|-----------------------------------|-------------|------|------|------|--------|------|------|------|------|-------|-------|------|------|------|------|--------|--------|------|--------|------|--|
| 20-2-50 | Y | 3-A-N | 44 | 44 | + | 44 S.H | 5 | 1.07 1.07 1.19 | Y | 1yr-1wk 2yr-2wks | 3-0-0 | | .5 | | .5 | | | | | | Y | | | | | | | | | | |
| 1-8-53 | " | " | " | " | " | " | 7 | 1.68 1.53 1.63 | " | " | 4-4-6 | | " | " | " | | | | | | " | | | | | | | | | | |
| 1-8-58 | " | " | " | " | + | 42 | 7 | 1.82-1.88 1.64-1.70 1.73-1.79 | " | " | 4-4-8 | | " | " | " | | | | | | " | | | | | | | | | | |
| 1-8-59 | " | " | " | " | + | 40 | 7 | 2.05 1.87 1.96 | " | plus 11yrs-3wks | " | | " | " | " | | | | | | " | | | | | | | | | | |
| 1-8-60 | " | " | " | " | " | " | " | 2.18 2.00 2.09 | " | " | " | | " | " | " | | | | | | " | | | | | | | | | | |
| 1-8-66 | " | " | " | " | " | " | 9 S.H. | 2.88-3.14 2.88-3.14 3.16-3.44 | " | 1yr-1wk 2yrs-2wks 5yrs-3wks | 6-10-12 | | " | " | " | | | | | 2 1/2 | " | | | | | | | | | | |
| 3-0-13-70 | " | " | " | " | " | " | " | 3.24-3.51-3.64 3.34-3.51-3.64 3.64-3.81-3.94 | " | " | 8-12-16 | | " | " | " | | | | | | 5 1/2 | " | | | | | | | | | |

TABLE A-43

REVIEW OF COLLECTIVE BARGAINING AT MATTAGAMI LAKE MINES LTD.

| | S.O. | Gr. | L.R. | Nbr. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | Di. | R.P. | R.P. | G.T.I. | J.D. | J.P. | B.G. | R.G. | S.P. | M.P. | L.C. | C.T. | S.A. | W.O. | S.L.P. | O.P.C. | S.H. | T.C.I. | R.L. | | | | |
|----------|------|-----|------|------|------|------|-----------------|----------------------------------|------|----------------------|-------------|-----|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|--|
| 12-9-66 | | | | | | | | 2.37-2.52 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-9-66 | Y | 3-A | N | 40 | 40 | + | S.H. 8 | 2.55-2.72 2.62-2.79 | Y | 1yr-1wk 2yrs-2wks | 5-10-10 | | Y | .5 | | | | | | | | | | | | | | | | | | | | |
| 14-9-68 | | | | | | | | 2.64-2.86-2.97 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-10-71 | " | " | " | " | " | " | 9 S.H. 2 1/2 | 2.81-2.98-3.16 3.08-3.26-3.46 | Y | plus 10yrs-3wks | " | | " | " | 1.0 | Y | | Y | | | | | | | | | | | | | | | | |
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TABLE A-42

REVIEW OF COLLECTIVE BARGAINING AT MINES de POIRIER, INC.

| | C.O. | Gr. | L.M. | Hrs. | T&H. | D.I. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | Tr.Cl. | R.L. | | | | |
|----------|------|-----|------|------|------|------|------------------------|-----------|------|-----------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|--|
| 12-2-69 | | | | | | | | 2.95-3.12 | Y | 1yr-lwk | --- | | | | .5 | | | Y | | | | Y | | | | | | | | | | | | |
| 22-12-71 | Y | 3-A | N | 40 | + | 7 | 3.15-3.33 3.28-3.46 | | | | | | .5 | | .5 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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TABLE A-43

REVIEW OF COLLECTIVE BARGAINING AT NEW HOSCO MINES LTD.

| | S.O. | Gr. | L.M. | Hrs. | T&M. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Dif. | B.P. | M.P. | R.P. | G.L.I. | J.P. | B.G. | R.G. | S.P. | W.P. | L.G. | C.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | Jr.Cl. | R.L. | | |
|----------|------|-----|------|------|------|------|--------|----------------|------|----------------------|------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|
| 22-5-65 | Y | 3-3 | N | 40 | 40 | + | 8 | 1.88-2.22-2.40 | Y | 1yr-1wk 3yrs-2wks | --- | | .5 | Y | 1.0 | | | | | | | | | | | | | | | | |
| 21-5-66 | | | | | | | | 2.07-2.42-2.60 | | | | | | | | | | | | | | | | | | | | | | | |
| 20-12-68 | | | | | | | 9 S.H. | 2.63-2.79-2.96 | Y | " | 10-10-10 | | | | | | Y | | | | | | | | | | | | | | |
| 20-12-71 | | | | | | | 28 | 2.83-3.00-3.18 | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 3.07-3.25-3.45 | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-44

REVIEW OF COLLECTIVE BARGAINING AT NEW IMPERIAL MINES LTD.

| | B.C. | GR. | L.M. | M.R. | TRM. | D.T. | S.H. | Wages | U.P. | Vacations | Shift Diff. | H.R. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | T.F.C.I. | B.L. | | | | | | | | | |
|--------|------|-----|------|------|------|------|------|----------------|------|--|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|----------|------|--|--|--|--|--|--|--|--|--|
| 1-1-57 | Y | 3-A | N | 44 | 44 | 8 | H. | 3.10-3.23-3.39 | Y | 1-4yrs-2wks 5-9yrs-3wks 10yrs-4wks | 6-10-10 | | .5 | | | | | | | | Y | | | | | | | | | | | | | | | | | | |
| 1-1-70 | | | | | | 6 | | 3.12-3.33-3.41 | | | | | | | .5 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | 2 | | 3.50-3.65-3.83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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TABLE A-45

REVIEW OF COLLECTIVE BARGAINING AT NIGADOO MINES LTD.

| | S.O. | Gr. | L.M. | M.R. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.H. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | I.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.C.L. | R.L. | | | |
|---------|------|-----|------|------|------|-------|------|----------------|------|-----------|----------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|
| 1-1-70 | Y | 3-A | N | 40 | + | 7 | S.H. | Dec 1968-2.20 | Y | 1yr-1wk | 0-6-8 | | .5 | | .5 | Y | Y | | | | | | | | | | | | | | | | |
| 1-16-71 | | | | | 40 | 2 1/2 | | 2.27-2.40-2.54 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 2.22-2.35-2.49 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 2.32-2.45-2.59 | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-46

REVIEW OF COLLECTIVE BARGAINING AT MORANDA MINES LTD. (HONOLULU, HAWAII)

| | S.G. | CR. | L.M. | Nrs. | TEH. | D.S. | S.H. | Wages | U.P. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.C. | R.C. | S.P. | W.P. | L.C. | G.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | Jr.Cl. | B.T. | | | | | | | | |
|----------|------|-----|------|------|------|------|------|------------------------------------|------|---|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|--|--|--|--|--|
| 28-1-52 | Y | 3-A | N | 48 | 48 | 5 | 5 | ----- | Y | 5yrs-lwk 6-20yrs-2wks 21yrs-3wks | --- | Y | Y | Y | Y | | | | | | | | | | | | | | | | | | | | | | | |
| 28-1-53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13-2-54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13-2-55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4-10-55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3-10-56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19-6-59 | | | | | | | | 1.69- 1.72-1.76 | Y | 5yrs-lwk 5-15yrs-2wks 16yrs-3wks | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-6-61 | | | | | | | | 1.91- 1.96-2.01 2.40- 2.46-2.52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7-9-62 | | | | | | | | 1.81-1.86 | Y | | --- | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6-9-65 | | | | | | | | 2.06-2.12 2.59-2.66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-10-67 | | | | | | | | 2.20-2.29-2.38 | Y | 3yrs-lwk 3-14yrs-2wks 15yrs-3wks | 5-5-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14-10-68 | | | | | | | | 2.26-2.35-2.45 2.80-2.92-3.02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-10-68 | | | | | | | | 2.60-2.76-2.93 | Y | 1-10yrs-2wks 11-24yrs-3wks 25yrs-4wks | 10-10-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14-10-71 | | | | | | | | 2.67-2.83-3.00 3.25-3.45-3.66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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TABLE A-47

REVIEW OF COLLECTIVE BARGAINING AT NORTAL MINES LTD.

| | 3.0. | Gr. | L.M. | Hrs. | TRH. | D. | S.H. | Wages | U. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.O. | S.L.P. | O.T.C. | S.H. | Tr.Cl. | | | |
|----------|------|-----|------|------|------|----|------|-------|--|-----------|--|--------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|--|--|--|
| 23-8-52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23-2-53 | Y | 4-A | N | 48 | 48 | + | S.H | 5 | --- | Y | 5yrs-lwk 6-20yrs-2wks 2lyrs-3wks | -- | Y | | | | | | | | | | | | | | | | | | | |
| 12-10-57 | | | | | | | | | | | Same Contract to 1957 | | | | | | | | | | | | | | | | | | | | | |
| 15-4-59 | Y | " | " | 40 | 40 | + | " | 5 | --- | Y | 3yrs-lwk 5-15yrs-2wks | -- | " | | " | | | | | | | | | | | | | | | | | |
| 16-4-59 | " | " | " | " | " | " | " | " | 1.91 1.99 2.35 | Y | " | -- | .5 | 1.0 | .5 | | | | | | | | | | | | | | | | | |
| 24-1-60 | " | " | " | " | " | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | |
| 25-1-60 | " | " | " | " | " | " | " | 6 | 1.94-1.99 2.02-2.07 2.39-2.45 | Y | 3yrs-lwk 4-5yrs-1wks 6-15yrs-2wks 16yrs-3 wks | -- | " | " | " | | | | | | | | | | | | | | | | | |
| 24-10-62 | " | " | " | " | " | " | " | 7 | 2.04-2.09 2.12-2.17 2.51-2.57 | Y | " | --- | " | " | " | | | | | | | | | | | | | | | | | |
| 23-10-65 | " | " | " | " | " | " | " | 8 | 2.24-2.32-2.41 2.31-2.40-2.49 2.75-2.85-2.96 | Y | 3yrs-lwk 4-13yrs-2wks 14yrs-3wks | 5-5-10 | " | " | " | | | | | | | | | | | | | | | | | |
| 17-1-56 | " | " | " | " | " | " | " | 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 16-1-69 | " | " | " | " | " | " | " | 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 17-1-59 | " | " | " | " | " | " | " | 9 S.H | 2.60-2.75-2.93 2.74-2.90-3.07 3.10-3.28-3.49 | Y | 2yrs-lwk 3-10yrs-2wks 10-24yrs-3wks | " | " | " | " | Y | Y | Y | | | | | | | | | | | | | | |
| 15-12-71 | " | " | " | " | " | " | " | 24 | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-48

REVIEW OF COLLECTIVE BARGAINING AT OCECHAN MINES LTD.

| | S.C. | Gr. | L.M. | Hrs. | T&H. | D.I. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | Q.L.I. | J.D. | J.P. | B.C. | R.C. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | T.C.L. | R.T. | |
|----------|------|-----|------|------|------|------|------|----------------------------------|------|--------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 22-5-55 | | | | | | | | 2.07-2.25-2.40 | Y | 1yr-1wk | | | .5 | | | | | | | | | | | | | | | | | | |
| 21-5-53 | Y | 3-4 | N | 40 | 40 | S.H | 8 | 2.21-2.38-2.52 2.51-2.69-2.84 | Y | 3yrs-2wks | | | | | .5 | | | | | | | | | | | | | | | | |
| 21-12-56 | | | | | | | | 2.60-2.79-2.96 | Y | 1-10yrs-2wks | 10-10-15 | | " | 1.0 | " | | | | | | | Y | | | | | | | | | |
| 20-12-70 | | | | | | | | 2.75-2.92-3.10 3.07-3.25-3.45 | | 11yrs-3wks | | | | | | | | | | | | | | | | | | | | | |

TABLE A-49

REVIEW OF COLLECTIVE BARGAINING AT PATINO MINING CORP. (Copper Band Mines)

| | S.G. | Gr. | L.M. | M.P. | TRH. | D.T. | S.H. | Wages | U.P. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | U.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.R.C. | S.H. | T.C.I. | R.L. | |
|----------|------|-----|------|------|------|------|------|--|------|------------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|
| 18-11-60 | | | | 48 | + | | 5 | 1.75-1.91 | Y | 3yrs-1wk | -- | | .5 | | | | | | | | | | | | | | | | | | |
| 31-7-62 | Y | 3-A | N | 44 | 48 | S H | 7 | 1.80-1.96 1.90-2.07 | | 4yrs-2wks | | Y | | | | | | | | | | | | | | | | | | | |
| 17-5-62 | " | " | " | 40 | + | " | 7 | 2.19-2.21-2.29 2.19-2.24-2.29 2.31-2.36-2.41 | Y | " | -- | Y | " | " | " | | | | | | | | | | | | | | | | |
| 31-7-65 | " | " | " | 40 | 40 | " | " | | | | | | | | | | | | | | | | | | | | | | | | |
| 17-5-65 | " | " | " | " | " | " | " | 2.39-2.43-2.53 2.39-2.43-2.53 2.51-2.67-2.77 | Y | 1yr-1wk 3yrs-2wks 12yrs-3wks | -- | " | " | " | " | | | Y | | | | | | | | | | | | | |
| 31-6-66 | " | " | " | " | " | " | " | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-9-69 | " | " | " | " | " | " | " | 2.86-3.00-3.21 2.87-3.04-3.25 3.00-3.18-3.40 | Y | 1-10yrs-2wks 11yrs-3wks | -- | " | " | " | " | | | " | | | | | | | | | | | | | |
| 31-5-71 | " | " | " | " | " | " | 8 | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-50

REVIEW OF COLLECTIVE BARGAINING AT FRONTIER IRONMINE MINES LTD.

| | S.C. | Gr. | L.M. | Hrs. | T&H. | D.T. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | G.L.I. | H.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.C. | R.C. | S.P. | W.P. | T.C. | C.L. | S.A. | W.G. | S.L.P. | O.T.C. | S.H. | Tr.Cl. | R.L. | | | |
|-----------|------|-----|------|------|------|------|--------|--|------|---------------------------------------|-------------|------|------|------|--------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|
| 1955-1959 | Y | B-A | N | 40 | 40 | + | S.H. 6 | 1953-2.01 2.07 2.20 | Y | 1yr-1wk 2yrs-2wks 15yrs-3wks | -- | Y .5 | Y .5 | Y | .5 | Y | | | | | | | | | | | | | | | | | | | | | |
| 20-12-63 | " | " | " | " | " | " | 6 S.H. | 2.07-2.11 2.10-2.14 2.30-2.38 | Y | " | -- | " | " | " | 1.0 | " | " | " | 1.0 | " | | | | | | | | | " | | | | | | | | |
| 4-5-66 | " | " | " | " | " | " | 7 S.H. | 2.26-2.35-2.43 2.29-2.38-2.46 2.53-2.62-2.70 | Y | 1yr-1wk 3-10yrs-2wks 11yrs-3wks | -- | " | " | " | " | " | " | " | " | " | | | | | | | | | " | | | | | | | | |

TABLE A-51

REVIEW OF COLLECTIVE BARGAINING AT QUEBEC MINING CORP. LTD.

| | C.O. | Gt. | L.N. | Hrs. | TRH. | D.S. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | M.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.C. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.O.I. | |
|---------|------|-----|------|------|------|------|------|--|------|--|-------------|------|------|--------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|--|
| 22-2-52 | Y | 4-A | N | 48 | 48 | S.H. | 5 | -- | Y | 5yrs-1wk 6-20yrs-2wks 21yrs-3wks | -- | | Y | | | | | | | | | | | | | | | | | |
| 23-2-54 | " | " | " | 44 | 44 | " | " | -- | Y | " | -- | | " | | | | | | | | | | | | | | | | | |
| 24-2-55 | " | " | " | 40 | 40 | " | " | -- | Y | " | -- | | " | | | | | Y | | | | | | | | | | | | |
| 25-2-57 | " | " | " | 40 | 40 | " | " | 1.99 2.03 2.24 | Y | 0-3yrs-1wk 4-15yrs-2wks 16yrs-3wks | 0-5-10 | | .5 | 1.01.0 | | | | " | | | | | | | | | | | | |
| 26-2-59 | " | " | " | " | " | " | " | 1.99-2.02-2.07 2.03-2.06-2.11 2.24-2.28-2.34 | Y | " | " | " | " | " | " | | | " | | | | | | | | | | | | |
| 27-2-60 | " | " | " | " | " | " | " | 2.07-2.12-2.17 2.11-2.16-2.21 2.34-2.40-2.40 | Y | " | " | " | " | " | " | | | " | | | | | | | | | | | | |
| 28-2-62 | " | " | " | " | " | " | " | 2.32-2.41-2.50 2.36-2.45-2.54 2.57-2.67-2.77 | Y | " | " | " | " | " | " | | | " | | | | | | | | | | | | |
| 29-2-66 | " | " | " | " | " | " | " | 2.74-2.90-3.07 2.80-2.97-3.15 3.00-3.18-3.37 | Y | 1yr-1wk 1-10yrs-2wks 11-25yrs-3wks | " | " | " | " | " | | | " | | | Y | | | Y | | | | | | |
| 15-1-59 | " | " | " | " | " | " | " | | | | | | | | | | | | | | | | | | | | | | | |
| 16-1-69 | " | " | " | " | " | " | " | | | | | | | | | | | | | | | | | | | | | | | |
| 16-2-71 | " | " | " | " | " | " | " | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-52

REVIEW OF COLLECTIVE BARGAINING AT FEEVES MACDONALD MINES LTD.

| | C.O. | Gr. | L.N. | Mrs. | TRH. | D.P. | S.H. | Wages | U.P. | Vacations | Shift Diff. | H.P. | M.P. | H.P. | G.L.I. | J.D. | J.P. | B.G. | H.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.T.C. | S.H. | T.F.C.I. | R.L. | | | | | | | |
|----------|------|-----|------|------|------|-----------------|------|----------------------------------|------|------------------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|----------|------|--|--|--|--|--|--|--|
| 14-10-55 | | | | | | | | 1.80 | Y | 1yr-1wk 2yrs-2wks | 5-8-8 | Y | .5 | | | | | Y | | | | | | | | | | | | | | | | | | | |
| 14-10-56 | Y | 3-4 | N | 44 | 44 | 44 S.H. | 8 | 1.80 1.80 1.91 | | | | | | | .5 | | | | | | | | | | | | | | | | | | | | | | |
| 4-2-57 | | | | | | | | -- 1.85-1.89 | Y | " plus 15yrs-3wks | 5-7-10 | " | " | 1.0 | " | | | " | | | | | | | | | | | | | | | | | | | |
| 4-2-59 | " | " | " | 40 | 40 | 8 S.H. 2 1/2 | | 1.85-1.89 1.96-2.01 | | | | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 30-10-59 | " | " | " | " | " | " | " | 1.94 | Y | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 30-10-60 | " | " | " | " | " | " | " | 1.94 2.06 | | | | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 24-11-61 | " | " | " | " | " | " | " | 2.04 | Y | 1yr-1wk 2yrs-2wks 10yrs-3wks | " | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 19-11-63 | " | " | " | " | " | " | " | 2.10 2.15 | | | | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 20-11-63 | " | " | " | " | " | " | " | 2.11-2.18 | Y | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 1-11-65 | " | " | " | " | " | " | " | 2.17-2.24 2.22-2.29 | | | | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 15-11-66 | " | " | " | " | " | 9 S.H. | | 2.60-2.75 | Y | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 16-1-66 | " | " | " | " | " | 9 S.H. 2 1/2 | | 2.67-2.83 2.82-3.00 | | | | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 15-1-68 | " | " | " | " | " | " | " | 2.97 | Y | " | " | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 15-1-69 | " | " | " | " | " | " | " | 3.05 3.28 | | | | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 15-1-69 | " | " | " | " | " | " | " | 3.20-3.32-3.42 | Y | " | 8-10-12 | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |
| 16-1-71 | " | " | " | " | " | " | " | 3.28-3.40-3.50 3.64-3.76-3.86 | | | | " | " | " | " | | | " | | | | | | | | | | | | | | | | | | | |

TABLE A-53

REVIEW OF COLLECTIVE BARGAINING AT RIO-ALCOH MINES LTD.

| | Q.D. | Gr. | L.R. | Hrs. | REN. | D.F. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.P. | M.P. | H.P. | G.L.I. | L.P. | B.G. | H.G. | S.P. | W.P. | T.C. | C.L. | S.A. | "C. | S.L.P. | O.T.C. | S.H. | T.C.I. |
|----------|------|-----|------|------|------|------------------|------|--|------|---|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|-----|--------|--------|------|--------|
| 16-7-56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16-7-59 | Y | 4-A | N | 48 | + | 48 S.H. | 5 | 1.77-1.89-2.14 2.02-2.15-2.34 2.20-2.34-2.65 | Y | 2yrs-1wk 5yrs-2wks | 3-3-5 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| 1-1-60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31-12-61 | " | " | " | 40 | + | 6 S.H. e 2 | | 2.24-2.29 2.47-2.52 2.69-2.74 | Y | " | 3-4-5 | Y | .5 | .5 | .5 | " | " | " | " | " | " | " | " | " | " | " | " | " |
| 16-7-62 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-7-65 | " | " | " | " | " | " | " | 2.32-2.36-2.41 2.55-2.59-2.64 2.77-2.81-2.86 | Y | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " |
| 16-7-65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-7-68 | " | " | " | " | " | 8 S.H. e 2 | | 2.53-2.58-2.70 2.80-2.85-2.97 3.01-3.06-3.18 | Y | 1-12yrs-2wks 13yrs-3wks | 4-5-6 | " | .6 | .6 | .6 | " | " | " | " | " | Y | " | " | " | " | " | " | " |
| 16-7-68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-7-70 | " | " | " | " | " | " | " | 3.04-3.09-3.21 3.28-3.32-2.45 3.58-3.63-3.75 | Y | 1-5yrs-2wks 6-10yrs-3wks 11yrs-4wks | 5-6-6 | " | .7 | .7 | .7 | " | " | " | " | " | " | " | " | " | " | " | " | " |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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TABLE A-54

REVIEW OF COLLECTIVE BARGAINING AT SHEPPITT GORDON MINES LTD.

| | 30 | Gr. | L.M. | Mrs. | R&H | D.T. | S.H. | Wages | U.C. | Vacations | Shift Diff. | Br | M.T. | R.T. | G.L.H. | J.D. | J.B. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | Tr.Cl. | N.L. | | | | |
|----------|----|-----|------|------|-----|------|--------|--|------|------------------------------------|-------------|----|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|------|--|--|--|--|
| 15-5-55 | Y | 3-A | N | 44 | 44 | + | 8 S.H. | 1.88 1.91 2.08 | Y | 1yr-1wk 3yrs-2wks 15yrs-3wks | 5-8-10 | | Y | Y | Y | | | | | | | | | | | | | | | | | | | |
| 15-5-57 | | | | | | | | 2.11-2.21 2.29-2.40 2.28-2.39 | Y | " | " | | .5 | Y | .5 | Y | | | | | | | | | | | | | | | | | | |
| 15-5-59 | | | | | | | | 2.26-2.30-2.35 2.45-2.50-2.55 2.44-2.49-2.54 | Y | 1yr-2wks 13yrs-3wks | " | | " | " | " | " | | | | | | | | | | | | | | | | | | |
| 4-2-60 | | | | | | | | 2.35 2.55 2.60 | Y | " | " | | " | " | " | " | | | | | | | | | | | | | | | | | | |
| 31-12-61 | | | | | | | | 2.47-2.53 2.68-2.75 2.73-2.85 | Y | " | " | | " | " | " | " | | | | | | | | | | | | | | | | | | |
| 1-7-62 | | | | | | | | 2.65 2.89 3.04 | Y | 1yr-2wks 9yrs-3wks | 5-10-10 | | " | " | " | " | | | | | | | | | | | | | | | | | | |
| 28-2-63 | | | | | | | | 2.94-3.06-3.20 3.19-3.32-3.46 3.50-3.65-3.84 | Y | " | 10-10-15 | | " | " | " | " | | | | | | | | | | | | | | | | | | |
| 28-5-66 | | | | 42 | 42 | + | " | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28-5-66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22-5-66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31-5-67 | | | | 40 | 40 | + | " | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2-5-67 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31-5-70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-56

REVIEW OF COLLECTIVE BARGAINING AT UNITED KENO HILL MINES LTD.

| | U.C. | Gr. | L.P. | M.P. | H.R. | D.L. | H.C. | Wages | U.C. | Vacations | Shift Diff. | H.P. | M.P. | R.P. | G.L.P. | W.P. | L.C. | C.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | T.C. | | | | | | | | |
|---------|------|-----|------|----------|----------|------|-----------------|----------------------------------|---|--|-------------|------|------|------|--------|------|------|------|------|------|--------|--------|------|------|--|--|--|--|--|--|--|--|
| 12-5-56 | | | | | | | | 1.74 | Y | -- | 5-6-7 | Y | .5 | | | | | | | | | | | | | | | | | | | |
| 23-5-57 | Y | 3-A | N | 48 | 48 | + | S.V. 6 | 1.74 1.83 | | | | | | | | | | | | | | | | Y | | | | | | | | |
| 1-7-57 | | | | | | | | 1.76-1.84 | Y | -- | " | " | " | | | | | | | | | | | | | | | | | | | |
| 13-6-59 | Y | " | " | " | " | " | 6 S.H. 2 1/2 | 1.78-1.84 1.92-1.98 | | | | | | | | | | | | | | | | " | | | | | | | | |
| 1-7-59 | | | | | | | | 1.89-1.95 | Y | -- | " | " | " | | | | | | | | | | | " | | | | | | | | |
| 11-5-61 | Y | " | " | " | " | " | " | 1.89-1.95 2.03-2.09 | | | | | | | | | | | | | | | | " | | | | | | | | |
| 1-7-61 | | | | | | | | 2.03-2.07-2.16 | Y | 1-5yrs-2wks 6yrs-3wks | " | " | " | | | | | | | | | | | " | | | | | | | | |
| 23-5-64 | " | " | " | 48 44 | 48 44 | + | " | 2.03-2.07-2.16 2.18-2.22-2.32 | | | | | | | | | | | | | | | | " | | | | | | | | |
| 1-7-64 | | | | | | | | 2.26-2.36 | Y | " | " | " | .55 | | | | | | | | | | | " | | | | | | | | |
| 11-5-66 | " | " | " | 44 | 44 | + | " | 2.26-2.36 2.54-2.67 | | | | | | | | | | | | | | | | " | | | | | | | | |
| 12-7-66 | | | | | | | | 2.83-2.96 | Y | 1-5yrs-2wks 6-9yrs-3wks 10yrs-4wks | 7-8-9 | " | " | | | | | | | | | | | " | | | | | | | | |
| 31-5-66 | " | " | " | " | " | " | 8 S.H. 2 1/2 | 2.83-2.96 3.06-3.19 | | | | | | | | | | | | | | | | " | | | | | | | | |
| 1-6-67 | | | | | | | | 3.22-3.40-3.50 | Y | " | " | " | " | | | | | | | | | | | " | | | | | | | | |
| 31-5-71 | " | " | " | " | " | " | 9 S.H. 2 1/2 | 3.42-3.60-3.70 3.65-3.84-3.94 | | | | | | | | | | | | | | | | " | | | | | | | | |
| | | | | | | | | | United Keno operates and extensive transportation system which has not been included in this survey | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-57

REVIEW OF COLLECTIVE BARGAINING AT WESTKOR MINES LTD.

| | C.G. | Gr. | L.M. | Hrs. | T&H. | D.F. | S.H. | Wages | U.D. | Vacations | Shift Diff. | H.B. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.G. | S.P. | W.P. | T.G. | C.L. | S.A. | W.C. | S.L.P. | O.F.C. | S.H. | T.C. | R.T. | | |
|---------|------|-----|------|------|------|----------------|----------------|-------|------|------------------------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|------|--|--|
| 26-5-67 | Y | 2-A | N | 40 | + 40 | 9 S.H. € 2½ | 3.22-3.37-3.53 | Y | | 2yrs-2wks 5yrs-3wks | 6-9-12 | Y | .5 | | | | | | | | | | | | | | | | | | | |
| 26-5-70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE A-58

REVIEW OF COLLECTIVE BARGAINING AT WESTERN MINES LTD.

| | U.C. | Wages | U.C. | Vacations | Shift Dist. | H.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.C. | S.P. | W.P. | N.C. | C.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | T.C. |
|---------|------|----------------|------|-----------|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|------|
| 27-9-66 | | 2.88-3.08-3.21 | Y | 1yr-2wks | 6-6-12 | | .5 | | .5 | | Y | Y | | | Y | | | | | | | | |
| 1-5-68 | | 2.88-3.08-3.21 | | 5yrs-3wks | " | | | | " | | " | " | | | " | | | | | | | | |
| | | 3.30-3.50-3.65 | | | | | | | | | | | | | | | | | | | | | |
| 1-5-68 | | 3.30-3.47-3.61 | Y | | | | | | " | | " | " | | | " | | | | | | | | |
| 1-5-71 | | 3.30-3.47-3.61 | | | | | | | | | | | | | | | | | | | | | |
| | | 3.75-3.95-4.11 | | | | | | | | | | | | | | | | | | | | | |

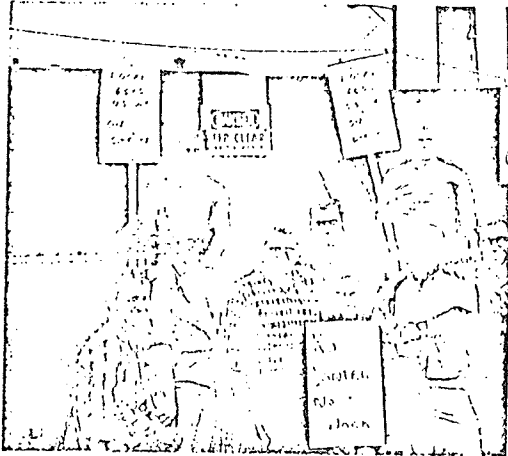
TABLE A-59

REVIEW OF COLLECTIVE BARGAINING AT WILROY MINES LTD.

| | 30 | Gr. | L.M. | Mrs. | T&H. | D.A. | S.H. | Wages | U.D. | Vacations | Shift Diff. | B.P. | M.P. | R.P. | G.L.I. | J.D. | J.P. | B.G. | R.C. | S.P. | W.P. | T.C. | G.L. | S.A. | W.C. | S.L.P. | O.L.C. | S.H. | Tr.Cl. |
|----------|----|-----|------|------|------|------|------|--|------|--|-------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|--------|--------|------|--------|
| 30-3-58 | Y | 4-A | N | 45 | + | S.H | 6 | -- | Y | 5yrs-1wk 6yrs-2wks | -- | | .5 | | | | | | | | | | | | | | | | |
| 30-3-59 | | | | 44 | 44 | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-12-59 | | | | 40 | 40 | | | 1.99-2.19-2.21 2.14-2.35-2.37 2.31-2.54-2.57 | Y | " | -- | | " | | | | | | | | | | | | | | | | |
| 15-12-62 | | | | | | | | 2.28-2.33-2.38 2.44-2.49-2.54 2.64-2.69-2.74 | Y | " | -- | | " | | | | | | | | | | | | | | | | |
| 15-3-63 | | | | | | | 7 | | | | | | | | | | | | | | | | | | | | | | |
| 15-3-65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15-11-66 | | | | | | | | 2.62-2.72-2.84 2.77-2.88-3.01 2.93-3.05-3.19 | Y | 3yrs-1wk 4-10yrs-2wks 11yrs-3wks | -- | | " | | | | | | | | | | | | | | | | |
| 23-7-69 | | | | | | | 8 | | | | | | | | | | | | | | | | | | | | | | |

Appendix-60-(1)

What We Won at Inco



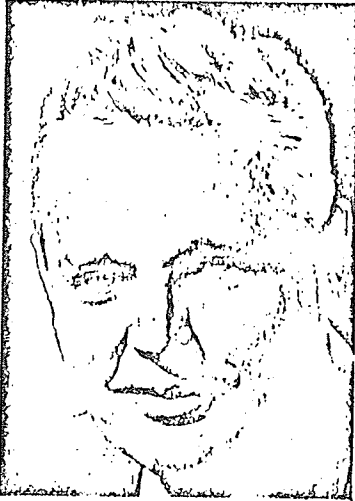
- Largest industrial settlement package of wage and benefit gains in Canada or the U.S. in 1969.
- Removal of all pension offsets.
- \$3.00 base rate immediately.
- Fully company-paid welfare program.
- A "contracting-out" article for the first time.
- New company-paid drug plan.
- Nine guaranteed statutory holidays and improved Sunday and shift premiums.
- Cost-of-Living Bonus.

This is a special bargaining report to all members of Local 1500, Sudbury and their families, from the United Steelworkers of America.

Published by: District 6, USWA

Larry Sefton, Director

A-60-(2)



LARRY SEFTON
 Director District 6
 United Steelworkers of America

To The Members of Local 6500:

I would like to congratulate the members of Local 6500, and their families, on the way in which you have conducted the affairs and accepted the sacrifices of the 1969 strike. The magnificence of your effort, your discipline, your determination and your accomplishments will go down in labour history.

The fundamental measure of our success on the picket line and at the bargaining table is in three accomplishments.

We have succeeded, in the package of wage and fringe benefits, in winning a really significant improvement in the standard of living of our members. Income and benefit increases of more than thirty per cent mean that our members and their families will be able to

enjoy and fulfill their lives in the future in many ways which were not possible in the past.

We have succeeded in carrying out a thorough review and revision of the language of the collective agreement from which our members will benefit on the job, time after time, day after day.

I am also confident that a new recognition of the collective bargaining process has come into being in the relationship between the Company and its employees, the members of our Union, which will mean that the problems of the future will be able to be handled much more effectively than would ever otherwise have been the case.

Larry Sefton,
 Director District 6,
 United Steelworkers of America.



LYNN WILLIAMS
 District Representative



HOMER SEGUIN
 President, Local 6500

L-60-(3)

Typical Annual Incomes Provided By The New Agreement

This table shows annual incomes without overtime, without shift premium, without Sunday premium, without any recognition of the increase in income provided by the Company's payment of full welfare premiums.

| | OLD AGREEMENT | EFFECTIVE NOW | EFFECTIVE OCTOBER 5, 1970 | EFFECTIVE AUGUST 23, 1971 |
|------------------------------------|------------------|------------------|------------------------------|------------------------------|
| Labour Surface (Step 1) | \$5,412.09 | \$6,264.00 | \$6,681.60 | \$ 7,245.36 |
| Driller (Step 7) | \$6,389.28 | \$7,303.82 | \$7,809.12 | \$ 8,331.12 |
| Craneman Convertors (Step 12) | \$7,203.60 | \$8,170.34 | \$8,748.72 | \$ 9,322.92 |
| Electrician 1st Class (Step 16) | \$7,855.05 | \$8,863.58 | \$9,500.40 | \$10,116.38 |

New Prescription Drug Plan Effective Immediately

A Drug Plan will be established for the first time for Sudbury Inco employees with the signing of the new Agreement. This is a benefit which was pioneered in Inco in the last negotiations in Thompson, Manitoba, when Local 6166 won a drug plan there.

Our Drug Plan is the plan provided by Blue Cross in Ontario. It is a prescription drug plan which means that it pays for all drugs which have been prescribed by a medical doctor. There is a 35¢ deductible on each prescription — the employee pays the first 35¢ cost on each prescription, the plan pays all of the remaining charge.

This plan goes into effect immediately — it is entirely paid for by the Company.

Nine Statutory Holidays All With Guaranteed Pay For RDOs

The new Agreement provides nine statutory holidays in the first year. The new holiday is Victoria Day. The Agreement also provides immediately for payment of holiday pay to employees on their regular day off.

Gains In Contract Language

Scores of different items of contract language have been improved during the negotiations. This report cannot begin to include all of them; it does attempt to highlight a number of the more important gains.

Unscheduled Short Changes Count for Weekly Overtime

Unscheduled short changes have in past contracts been paid at time and a half but have then been deducted from the total hours necessary to provide weekly overtime. This inequity has been corrected in this Agreement. Unscheduled short change hours will still be paid at time and one half, but they will also count as hours worked in the calculation of weekly overtime.

Foremen Working

The 1966 provision prohibiting foremen from doing bargaining unit work in the normal course of events has been extended to include all Company employees who are not in the bargaining unit. A new provision has been added that any area in which there are repeated violations of this provision by the Company will be the subject of a special review by the Industrial Relations Department and the Local Union Officers.

A-60-(4)

New Maintenance Department

Much bargaining time and effort has been consumed in order to ensure that the seniority arrangements for the new Maintenance Department are fair to all.

The new Reduction Section "Maintenance Department" will bring together the present Mines Mechanical Department and Copper Refining Department. The Electrical Department remains separate and carries on with its present seniority arrangements.

In establishing the new Department some employees are involved who have no previous Mechanical Department service, some are required to transfer to Operating Departments who has no previous Operating Department service and others return to Operating Departments which they left some time before. The seniority arrangements which have been worked out and are set out in the new Agreement are designed to give to every employee the best possible opportunity to exercise his seniority, and to carry with him whatever seniority is related to the choice which he makes. Employees whose jobs go out of the Mechanical Department will have the first opportunity to bid back in and will accumulate seniority. Employees who are required to return to Operating Departments which they left by request transfer will nevertheless receive credit for their earlier service. All employees in the new Department will be credited with seniority they may have earned in any of the former Departments concerned.

Permanent Seniority Provisions Now Negotiated for All New Department Start-Ups

Until now all previous Agreements have required the Company and the Union to negotiate special seniority provisions for the period of "start-up" before the normal departmental seniority provisions of the Agreement could apply.

We have succeeded in this year's negotiations in winning what we had proposed both in 1963 and in 1968 in that the new Agreement contains an Article which sets up these specific arrangements for seniority in new Departments. This new Article provides maximum times during which special seniority provisions may apply. It provides a job posting opportunity for employees wishing to fill jobs in the new Department. It also provides that employees may exercise an option to return to their original Departments without loss of their departmental seniority.

Lunch Leave for Refinery Arc Furnacemen and Copper Cliff Slag Train Crews

The Company has agreed that "lunch leave" will now be provided for the Arc Furnacemen at the Refinery in view of the impossible surroundings in which they have been expected to eat. The Company has also agreed that all members of the Copper Cliff Slag Train Crews, not just the Engineers, will be entitled to "lunch leave".

Overtime Hot Lunches

The Company has agreed to do everything possible to provide hot lunches for all employees working overtime in excess of two hours.



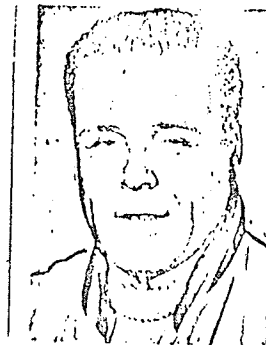
LEN BEDARD
Local 6500
Negotiating Committee

New "Concentrators, Mills and Crushing Department" Established

The new Department puts the present Crushing Plant Concentrator, Mill Concentrator, Creighton Mill and Crushing Plant, Levack Mill and Sand Fill Plant and Frood Stobie Mill all in the same Department. Employees going into the new Department will carry all of the seniority which they may have had in any of the former Departments into the new Department. The result of creating one new broader Department will be that employees will have a greatly extended opportunity for promotion to better jobs across the large Department.

Both Shift and Sunday Premiums Increased

Shift premiums and the Sunday premium are increased immediately. Shift premiums become 10¢ per hour for afternoon shift and 16¢ per hour for midnights. The Sunday premium of 25¢ in the old agreement is increased by another 25¢ to a total of 50¢ for everybody who is working a regular shift.



GUY ARSENAULT
Local 6500
Negotiating Committee

A-60- (3)

Equitable Distribution of Overtime

An important new clause has been negotiated into the agreement which provides that all employees will have an equal opportunity to work overtime if they wish. No longer can the assignment of overtime be used as either bribe or threat — the new Agreement requires the equitable distribution of overtime opportunity on the basis of working groups. We anticipate that there may be some rough edges in establishing the procedures for applying this important new gain. We are certain that the new clause will mean the end of a number of aggravating and difficult situations during the Company's present expansion.



HALDON RITCH
Local 6500
Negotiating Committee

Speedier Grievance Processing in the I.O.R.P. and the Copper Refinery

Step three of the grievance procedure has been eliminated for employees in these two plants. It should mean quicker grievance service as they now proceed directly from Step two to the top. This improvement was negotiated into the Port Colborne Refinery in 1966. It has worked well there and should be a big improvement here.

Panel of Arbitrators

A panel of seven arbitration chairmen has been added to the agreement with a provision to add three more by mutual agreement. Four of these were proposed by the Union and four by the Company (one of those accepted was proposed by both — that's why there are seven). All have agreed to act but a procedure has been set up for the removal of any who consistently fail to do so.

Safety and Health Improvements

Important improvements have been made again in these negotiations in the Safety and Health Article of the collective agreement. It now provides for officially recognized Local Union Safety and Health Committees in every Department. These Committees are entitled to have two meetings per month with Department Officials, and will be paid by the Company on the same basis as Departmental Stewards.

A new clause has also been won which provides that the Local Union will be given, on request, copies of the daily accident report sheets.

The Company is also required under the new Article to pay for time involved in medical examinations which it requires as a condition of employment.

New Training Provisions

Detailed new provisions concerning training opportunities for all employees have been written into the agreement. The Union is optimistic that these provisions will work to the benefit of a great many employees although it is likely, since the provisions are new to Inco and new to this agreement, that there may be some complications, before they work smoothly. It is the Union's intention to do everything possible to assist in having the Training Article administered as fairly and as usefully as possible.

The main features of the new Training Articles are better provision for apprenticeship training both on and off the job, the provision of special training for present tradesmen and present trades helpers, a job posting procedure for general training on various operational occupations, and Company payment in part or in full for home study courses.

The Company will be establishing, as the agreement requires, a position of Training Supervisor to whom detailed inquiries concerning training may be made and who will be responsible for the administration of the training program as required by the Collective Agreement. The Union intends to keep abreast of the progress of this new approach to training most carefully in order to ensure that the commitments contained in the Collective Agreement are carried out and that the program meets the needs of our members, in the face of the new technology.

Better Break in the Filing of Improper Grievances

Employees now have fourteen days instead of seven in which to file grievances to claim wages they should have received. We don't advocate anybody delaying such grievances — this simply guarantees an employee doesn't lose something to which he is entitled, and to check out his facts.

Stewards' On-The-Job-Grievance-Pay To Include Shift Premium

A steward's applicable hourly rate for grievance meetings on company time will now include any applicable shift premium.

A-50-(6)

Both Canada Pension Plan and Workmen's Compensation Offsets Disappear During the Term of This Agreement

C.P.P. Offset Goes

Canada Pension offsets will disappear from the Pension Plan during the third year of the Agreement, beginning on August 23rd, 1971. From that date on all Inco employees going on pension will receive the full benefit of both their Inco pension and of the Canada Pension Plan. No longer will employees going on pension have half the amount of their Canada Pension Plan pension deducted from their Inco pension. They will receive their full entitlement from both.

Phase-In Provides Bridge Until 1971

From July 10, 1969 until August 23rd, 1971 the C.P.P. phase-in benefit will provide a bridge until the C.P.P. offsets are removed. These phase-in benefits provide persons retiring during these years with a supplementary pension which increases their pension income to what it would be if the level of C.P.P. now was what it will be in 1976. This phase-in benefit will be for life.

W.C.B. Offset Removed

The Workmen's Compensation offset disappears retroactive to July 10th. Any new pensions paid since that date, and from now on, will not have Compensation pension benefits removed from them. The Pension Plan now provides that employees going on pension who are entitled to Compensation pensions will receive the full amount of both their Compensation pension and their Inco pension.

Other Pension Improvements

In addition to these major pension improvements three other important amendments have been won.

The number of hours of work required to achieve a full year of service credit for pension purposes has been reduced from 1800 hours to 1600 hours. This means that absence from work for reasons of casual leave, for example, will not be nearly as likely to result in any reduction of pension service credit. Corresponding reductions in the hours necessary for portions of a year's credit have also been applied in the schedule.

The minimum service requirement for pension eligibility has been reduced from 20 years as it was in the former agreement to 10 years.

Provision has also now been made in the Pension Plan that the time spent on negotiations by the 1969 Negotiating Committee and by all future negotiating committees will count fully for pension credits.

The Pension Plan has now been brought directly into the Collective Bargaining Agreement itself, in a new Article 21, instead of being set out in a separate agreement as was first won by the Union in the 1963 negotiations.

A-60-(7)

PENSION EXAMPLES

EXAMPLE 1

| | |
|---|-----------------|
| Age 65 — 30 Years of Service Retirement Date - July 10, 1969 | Monthly Pension |
| Basic Pension \$6 x 30 years less C.P.P. offset (\$16.25) | \$163.75 |
| Supplement \$2.50 x 30 years | 75.00 |
| Canada Pension Plan | 32.50 |
| Canada Pension Plan Phase-In | 38.96 |
| Total | \$310.21 |
| In 1970 Add Old Age Security | 79.50 |
| Deduct Supplement | —75.00 |
| Total | \$314.71 |

Note: Had the 1966 Pension Agreement continued without improvement this employee's monthly pension would have been \$271.25 initially, and \$275.75 in 1970.

EXAMPLE 2

| | |
|---|-----------------|
| Age 65 — 30 Years of Service Retirement Date - January 1, 1970 | Monthly Pension |
| Basic Pension \$6 x 30 years less C.P.P. offset (\$22.08) | \$157.92 |
| Canada Pension Plan | 44.16 |
| Canada Pension Plan Phase-In | 33.17 |
| Old Age Security | 79.50 |
| Total | \$314.71 |

Note: Had the 1966 Pension Agreement continued without improvement this employee's monthly pension would have been \$281.58.

EXAMPLE 3

| | |
|---|-----------------|
| Age 65 — 30 Years of Service Retirement Date - August 23, 1971 | Monthly Pension |
| Basic Pension — \$6 x 35 years | \$180.00 |
| Canada Pension Plan | 55.21 |
| Old Age Security | 79.50 |
| Total | \$314.71 |

Note: Had the 1966 Pension Agreement continued without improvement this employee's monthly pension would have been \$287.10.

EXAMPLE 4

| | |
|---|-----------------|
| Age 65 — 35 Years of Service Retirement Date - August 23, 1971 | Monthly Pension |
| Basic Pension — \$6 x 35 years | \$210.00 |
| Canada Pension Plan | 55.21 |
| Old Age Security | 79.50 |
| Total | \$344.71 |

Note: Had the 1966 Pension Agreement continued without improvement this employee's monthly pension would have been \$317.10.

EXAMPLE 5

| | |
|---|-----------------|
| Age 62 — 30 Years of Service Retirement Date - August 23, 1971 | Monthly Pension |
| Basic Pension — \$6 x 30 | \$180.00 |
| Canada Pension Plan | 55.21 |
| Supplement — \$2.50 x 30 | 75.00 |
| Total | \$310.21 |
| At Age 65: Deduct Supplement | 75.00 |
| Add Old Age Security | 79.50 |
| Total | \$314.71 |

Note: Had the 1966 Pension Agreement continued without improvement this employee's monthly pension would have been \$282.60 initially, and \$287.10 at age 65.

EXAMPLE 6

| | |
|---|-----------------|
| Totally Disabled Employee with 25 years Service at Any Age Under 60 and Who Is Receiving A Workmen's Compensation Pension of \$40.00 Retirement Date - August 23, 1971 | Monthly Pension |
| Basic Pension — \$6 x 25 years | \$150.00 |
| Add: C.P.P. Disability Pension | 107.82 |
| Supplement — \$2.50 x 25 | 62.50 |
| W.C.B. Pension | 40.00 |
| Total | \$360.32 |
| At Age 65: Deduct Supplement | 62.50 |
| Add Old Age Security | 79.50 |
| Total | \$377.32 |

Note: Had the 1966 Pension Agreement continued without improvement this employee's monthly pension would have been \$266.41 initially, and \$283.41 at age 65.

A-60-(8)

OUR 1969 SI

EFFECTIVE IMMEDIATELY

- ⊙ Base rate increase 40.8¢
- ⊙ Increment Increase .5¢
- ⊙ Inequity adjustments
- ⊙ Contract Language Improvements
- ⊙ Company pays 100% of hospital insurance (OHP)
- ⊙ Company pays 100% of new drug plan (Blue Cross Prescription Drug Plan)
- ⊙ Company pays 100% of new \$5,000.00 accidental, death and dismemberment insurance (A.D.&D.)
- ⊙ Company pays 100% of medical plan (OHSIP)
- ⊙ Ninth paid statutory holiday
- ⊙ Guaranteed statutory holiday pay on regular days off
- ⊙ Sickness and Accident benefit increase to \$65.00
- ⊙ Sunday premium increase to 50¢ per hour.
- ⊙ Shift premium increase to 10¢ and 16¢
- ⊙ New increases and wage structure for apprentices
- ⊙ Canada Pension Plan Phase-In
- ⊙ Workmen's Compensation offset removed from pension plan
- ⊙ Minimum service for normal pension reduced to 10 years.
- ⊙ Year of employment with pay for pension purposes reduced from 1800 hours to 1600 hours
- ⊙ Life insurance offered to employees not now covered
- ⊙ Jury duty pay
- ⊙ Special vacations begin to accrue annually

A-60-(9)

ENTITLEMENT

OCTOBER 5, 1970

- ⊙ Base rate increase 20¢
- ⊙ Increment increase .7¢
- ⊙ Sickness and accident insurance benefit increases to \$70.00 for first 4 weeks and \$80.00 for remaining 48 weeks

NOTE...

CONTRACT TERMINATES

JULY 9, 1972

AUGUST 23, 1971

- ⊙ Base rate increase 17¢
- ⊙ Increment increase .5¢
- ⊙ Canada Pension Plan offset removed from pension plan
- ⊙ Five cents cost-of-living allowance goes into effect
- ⊙ Winter vacation bonus of \$30.00 for vacation weeks between November 1st and April 30th
- ⊙ Company pays 100% of sickness and accident insurance
- ⊙ Company pays 100% of life insurance

SAMPLE RATES (full wage schedule on back cover)

| JOB TITLE | 1968 RATE | NEW RATE | OCT. 5 1970 | AUG. 23 1971 | COST-OF-LIVING |
|------------------------------------|-----------|----------|-------------|--------------|----------------|
| Labour Surface Step 1 | 2.592 | 3.00 | 3.20 | 3.37 | .05 |
| Driller Step 7- | 3.06 | 3.498 | 3.74 | 3.94 | .05 |
| Flotation Operator Step 9- | 3.216 | 3.664 | 3.92 | 4.13 | .05 |
| Stope Leader Step 11 | 3.372 | 3.830 | 4.10 | 4.32 | .05 |
| Electrician 1st Class Step 16 - | 3.762 | 4.245 | 4.55 | 4.795 | .05 |

K-60-(10)

Sick Leave Now A Contractual Right for Up To Two Years

A major gain has been accomplished in establishing officially recognized sick leave far in excess of the 14 days permitted under the old Agreement. In the old days all sick leave beyond the 14 day limit was at the discretion of the Company. Now sick leave of up to one year is a right for employees with less than 9 years of service and of up to 2 years is a right for all employees with 9 or more years of service. Provision has been retained for the extension of these limits at the discretion of the Company.

This new Article should also eliminate the unfortunate Company practice of advising people when they are sick that their seniority rights have been terminated. Now every employee will know by contractual right the minimum length of sick leave to which he is entitled.

Improved Leaves of Absence For Local Union Business

In line with the increasing activity of Local 6500 in the labour movement and the expected expansion in work force by Inco, provision has been made in the new Collective Agreement for extending the number of Local Union leaves available for Local Union business. A new leave has also been written into the Agreement to provide the accumulation of seniority while on leave of absence for attendance at the Canada Labour College.

Improvements In Temporary Promotion Provision

This clause has been improved with the addition of the word preference in relation to departmental seniority. In the Reduction and Copper Refining Sections preference will also be given, according to seniority of course, to those employees who are working on their regularly scheduled shifts.

Job Posting In the Mines Will Now Show the Number of the Working Place

The number of the stop or pillar will now be shown on job postings in the Mines Section.

Job Posting In Service Departments To Identify the Operating Department Area

Job postings in service departments, that is departments like maintenance, electrical and metallurgical, will now identify the area in which the vacancy occurs by setting out the operating department or departments to which the successful applicant will be assigned.

Additional "On-Ice" Seniority

"On-ice" seniority will now apply to a situation where it did not previously apply. Employees bumped out into the same department on successive layoffs, having returned to their own department in between, had to begin at the bottom each time in terms of their departmental seniority. Now, in such circumstances, they retain "on-ice" seniority.

Improved Procedure In Protecting Any Discharged Employee

Any discharged employee will now receive a duplicate of his written notice of discharge. If he wishes the Union to support a grievance on his behalf it means that he can immediately provide the Union with a copy of his discharge notice. Prompt, accurate information is an important element in providing job security.

Factor "B" Eliminated In Layoffs

The old factor "b" test of one employee against another has been eliminated in lay-offs. As long as an employee can do the job his seniority keeps him on the job. The Company has always administered it this way but the language was a worry. Now the language has been improved so that it's consistent with the practice.

Laid Off Employees Have Preferential Recall To All Sections

In previous agreements, laid off employees had preferred recall only to the section from which they were laid off. Those rights are retained in the new agreement, but in addition such employees on application have preferred rights to other sections — an important gain in job security.

Old Physical Ailments Can No Longer Wipe Out Recall Rights

Under all previous agreements, medical examinations at the time of recall could deny an employee his job back even for physical conditions which existed before he was laid off. Under the new agreement such conditions cannot deny an employee his right to his job — another important gain in job security.

Factor "B" Eliminated In Transfers Out of A Department

Factor "b" can no longer be used to keep a junior employee in a department when a senior employee who is going out can do the work. Now the senior employee has the contractual right to stay in the department if he can do the job, no matter what the test of relative ability may be.

Improved Seniority Protection For Incapacitated Employees

Incapacitated employees will now be able to carry their seniority in transfers from any Department in any Section to any other Department in the same or any other Section. In the old Agreement such employees could carry seniority only in transfers within the same Section. These new provisions should greatly increase their opportunities to fill jobs.

New Security II Department Discontinued

The new Agreement provides much improved seniority for employees in the event their Department or a substantial section of it is discontinued. Employees affected will now have the opportunity not only to transfer to other Departments in order of their seniority but will carry their Departmental seniority with them in such transfers.

A-60-(11)

Winter Vacation Bonus

A new off-season vacation bonus will go into effect in the last year of the Agreement. It provides a bonus of \$30 per week for all weeks of regular vacation taken in the winter months, from November 1st to April 30th. The bonus applies to regular vacation, not to special vacation. It is intended to provide some extra compensation for those who take their regular vacations at these less desirable times.



ELMER McVEY
Local 6500
Negotiating Committee

Statutory Holiday Work To Be Assigned By Seniority Choice

New provisions have been written into the agreement to govern the assignment of work on statutory holidays. Working groups will be used for this purpose — individuals will be assigned according to their seniority, their desire to work or not and the availability of those employees who can perform the work.

New Apprentice Wage Scale

For many years the Union has been protesting about the payment of rates to apprentices which were lower than basic rates in the Agreement. This dispute has now been won with Inco. The improved apprentice

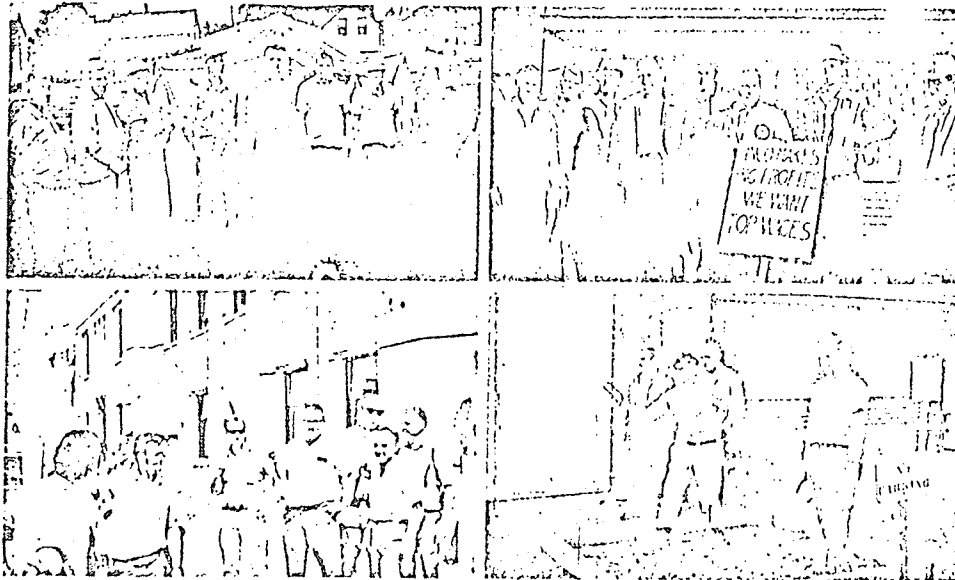
wage schedule goes into effect immediately. It provides both a starting rate equal to the base rate, and increases in rate every six months instead of just once a year.

| | JULY 10, 1968 | DATE OF EXEC. OF AGREEMENT | OCTOBER 5th 1970 | AUGUST 23rd 1971 |
|------------------------------|---------------|----------------------------|------------------|------------------|
| 4 YEAR APPRENTICESHIP | | | | |
| 1st year - first 6 mos. | 2.422 | 3.000 | 3.200 | 3.370 |
| second 6 mos. | 2.422 | 3.083 | 3.290 | 3.465 |
| 2nd year - first 6 mos. | 2.555 | 3.166 | 3.380 | 3.560 |
| second 6 mos. | 2.555 | 3.249 | 3.470 | 3.655 |
| 3rd year - first 6 mos. | 2.670 | 3.415 | 3.650 | 3.845 |
| second 6 mos. | 2.670 | 3.581 | 3.830 | 4.035 |
| 4th year - first 6 mos. | 2.826 | 3.747 | 4.010 | 4.225 |
| second 6 mos. | 2.826 | 3.913 | 4.190 | 4.415 |
| 3 YEAR APPRENTICESHIP | | | | |
| 1st year - first 6 mos. | | 3.000 | 3.200 | 3.370 |
| second 6 mos. | | 3.083 | 3.290 | 3.465 |
| 2nd year - first 6 mos. | | 3.166 | 3.380 | 3.560 |
| second 6 mos. | | 3.332 | 3.560 | 3.750 |
| 3rd year - first 6 mos. | | 3.498 | 3.740 | 3.940 |
| second 6 mos. | | 3.664 | 3.920 | 4.130 |

A-60-(12) PARITY PLUS!

It has been a hardline Union objective in recent years to achieve parity with wages in the U.S., specifically in our case with the rates paid at Inco's operation in Huntington, West Virginia. This table shows how we have now won parity plus!

| | 1969 - HUNTINGTON | 1969 - SUDBURY |
|---------------------|-------------------|---------------------|
| Labourer | 2.716 | 3.00 |
| Helper | 2.941 | 3.249 |
| Machinist 1st Class | 4.163 | 4.245 |
| | 1970 - HUNTINGTON | 1970 - SUDBURY |
| Labourer | 2.837 | 3.20 |
| Helper | 3.068 | 3.47 |
| Machinist 1st Class | 4.337 | 4.55 |
| | 1971 - HUNTINGTON | 1971 - SUDBURY |
| Labourer | To | 3.37 + 5¢ C. of L. |
| Helper | To | 3.655 + 5¢ C. of L. |
| Machinist 1st Class | Negotiated | 4.795 + 5¢ C. of L. |



EVERYONE PITCHED IN — ONE WAY OR ANOTHER

Cost of Living Bonus In Third Year

A-60-(23)

A step toward full cost of living protection in long term agreements has been achieved by the introduction of a cost-of-living bonus in the third year of the Agreement.

The clause provides that 1¢ per hour of bonus will be paid beginning August 23rd, 1971 for every .6 increase in the Consumer Price Index beginning on October 5th, 1970. If the Price Index rises 3 full points or more during that period then the full 5¢ Cost-of-Living bonus will be paid.

This is the first time that Cost-of-Living protections have been written into the two major agreements in the steel industry, at Stelco and Algoma, and in our agreement at Inco. It is the pressure of the large increases in consumer prices in recent years which have resulted in this change, along with the decisions of our policy conferences to do everything possible to negotiate Cost-of-Living protections into our long term agreements. It will now be up to the leadership and the membership to assess the value of these arrangements in terms of our future experience in these agreements, and to determine what amendments or improvements are necessary in our next round of negotiations.



O. "TERRY" MANCINI
Area Supervisor

Each Employee To Receive
Record of Union Dues Paid

The agreement now provides that each employee, prior to income tax time, will receive an individual statement of the amount of union dues he paid during the preceding year.



BOB GOWER
Local 6500
Negotiating Committee

Average Annual Income Increases By Over 30% In 23 Months

Average annual income at the end of the old Agreement, not counting overtime or premiums was \$6,389.28. As of August 23rd, 1971, under the new Agreement, this average annual income will become \$8,331.12, an increase of more than 30%!

A-60-(14)

Fully Paid Welfare Plan

International Nickel will assume full cost of all benefits during the term of this Agreement.

Another long time major objective of the Union has been accomplished in the winning of full payment by the Company for all medical, insurance and welfare benefits, including the new drug plan, during the term of the Agreement.

The Company will assume immediately the full cost of the Ontario Health Services Insurance Plan (OHSIP), the new Drug Plan, the new Accidental Death and Dismemberment Plan, the Ontario Hospital Plan (OHP) and the Blue Cross supplementary benefit plan. In addition, the Company will also make available immediately an opportunity for employees who have neglected in the past to apply for life insurance coverage to join the plan.

Sickness and Accident Benefits will be increased during the Agreement to \$65 during the first year. In the second year a new plan of benefits will go into effect which provides \$70 of benefit for the first four weeks and then increases to \$80 per week. During these first two years the Company will continue to pay 60% of the cost and the employees will pay 40%. At the beginning of the third year, on August 23rd, 1971, the Company will assume the full cost.

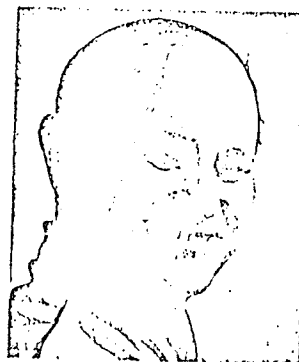
The Company will also assume the full cost of the life insurance benefits on August 23rd, 1971, at which time the entire welfare program will be fully paid by the Company. Deductions from the pay cheques of employees for these necessities will then become a relic of history.



GIB GILCHRIST
Senior
Staff Representative

Company Restricted from Using
D.I. List To Prevent Others
From Winning Job Opportunities

New restrictions have been added to the clause concerning "designated individuals" and the assignments which they may be given by the Company. Persons on the D.I. list can now fill temporary vacancies only if they have sufficient Departmental seniority to do so. They can also fill jobs by assignment under terms not normally permitted only until such time as their special training on the job is completed and in any case, whether the training is completed or not, for no longer than 6 months. This provision means the end of the abuse to the "designated clause" which has arisen in a number of cases in which employees from the D.I. list continually fill jobs which should have provided promotional opportunities for regular employees.



BILL LOCKMAN
Local 6500
Negotiating Committee

A-60-(15)

Wage Protection in Case
of Technological Change

Maintenance of wage rate protection has been written into the new agreement for those whose Departments, or a substantial portion of whose Departments, are discontinued as a result of technological change. Employees with ten years or more seniority will be guaranteed a rate not more than one step below their present rate for a year after the discontinuance, no matter what the rate of the job to which they may be assigned. This protection continues, with a reduction of one step for each year, for a period of five years. It is expected, of course, that such employees will be able, through the new training programs and through job posting, to achieve jobs which do not require any maintenance of rate, long before the five year period is up.

Protection of the Bargaining Unit Against
The Effects of Technological Change

One of the concerns of the Union has been that the Company could use technological change to take work out of the bargaining unit. This could mean: (a) that job opportunities could be denied to bargaining unit employees, (b) that the strength of the bargaining unit could be decreased by an increasing number of jobs and work functions being done outside the unit.

This entire subject was thoroughly discussed with the Company during negotiations. A number of important changes have been written into the agreement.

New jobs which include to a substantial extent the functions of old jobs will come into the bargaining unit, and all new production and maintenance jobs will be subject to a full review by the Company and the Local Union.

During the course of the negotiations, in relation to job evaluation and other matters, a variety of job inequities have been discussed. It has been agreed that the sixty jobs listed below will be upgraded, effective immediately. In addition to the inequities there have been a number of reclassifications including that of twenty Drill Fitters to Maintenance Mechanic 2nd Class.

The following have been upgraded by one step: —

MINES SECTION

Instructor School
Sand Feed Man, Surface

REDUCTION SECTION

Backtrackman
Baleman Helper Converter
Baleman Reverberatory
Balling Operator Helper
Blaster Converter
Blaster Smelter
Brakeman Charge Floor
Coal Plant Dryerman
Dewatering Man
Fircman Silicate Dissolver
Grinderman Helper
Labor Boss
Material Handler
Pluggger Runner Surface
Pyrrhotite Operator
Slusher Surface
Switch Tender
Tailings Dam Man
Track Boss Extra Gang
Track Shifter Operator
Truck Driver Service
Truck Driver Sample Met.
Pellet Loader
Recovery Operator
Reagentman
Roaster Operator
Scale Clerk Transportation
Skimmer
Trapper Rev. Bl. Fce. & El. Fco.

MAINTENANCE

Lead Welder Leader
Lead Welder 1st Class
Lead Welder 2nd Class
Lineman Leader
Lineman 1st Class
Lineman 2nd Class

COPPER REFINING SECTION

Crane Follower Yard & Transportation
Handler Pig and Slag
Furnaceman Reverberatory
Material Handler
Mould Maker
Oxygen Test Man
Parting Plant Man
Pump and Addition Agent Man
Reliefman Arc Furnace
Section Inspector
Special Inspector
Sheet Tapper
Sheet Gang
Straw Boss Yard Gang
Stripper Crane Operator
Stripper Gang
Stripper Leader
Tapper
Wheelman Anoda

The following jobs have been upgraded by two steps: —

REDUCTION SECTION

Coal Plant Operator

COPPER REFINING SECTION

Furnaceman Dore
Circulator
Head Furnaceman Anoda

A-60-(16)

FULL WAGE SCHEDULE

| STEP | 1968 RATE | NEW RATE | OCT. 5 1970 | AUG. 23 1971 | COST-OF-LIVING |
|------|--------------|-------------|----------------|-----------------|----------------|
| 1 | 2.592 | 3.000 | 3.20 | 3.370 | + 5¢ |
| 2 | 2.670 | 3.083 | 3.29 | 3.465 | " |
| 3 | 2.748 | 3.166 | 3.38 | 3.560 | " |
| 4 | 2.826 | 3.249 | 3.47 | 3.655 | " |
| 5 | 2.904 | 3.332 | 3.56 | 3.750 | " |
| 6 | 2.982 | 3.415 | 3.65 | 3.845 | " |
| 7 | 3.060 | 3.498 | 3.74 | 3.940 | " |
| 8 | 3.138 | 3.581 | 3.83 | 4.035 | " |
| 9 | 3.216 | 3.664 | 3.92 | 4.130 | " |
| 10 | 3.294 | 3.747 | 4.01 | 4.225 | " |
| 11 | 3.372 | 3.830 | 4.10 | 4.320 | " |
| 12 | 3.450 | 3.913 | 4.19 | 4.415 | " |
| 13 | 3.528 | 3.996 | 4.28 | 4.510 | " |
| 14 | 3.606 | 4.079 | 4.37 | 4.605 | " |
| 15 | 3.684 | 4.162 | 4.46 | 4.700 | " |
| 16 | 3.762 | 4.245 | 4.55 | 4.795 | " |
| 17 | 3.840 | 4.328 | 4.64 | 4.890 | " |
| 18 | 3.918 | 4.411 | 4.73 | 4.985 | " |

BASIC WAGE INCREASES

| | | | |
|-------------------|---|--|----------|
| 1st Year Increase | — | 40.8¢ plus 0.5¢ Increment | Increase |
| 2nd Year Increase | — | 20.0¢ plus 0.7¢ Increment | Increase |
| 3rd Year Increase | — | 17.0¢ plus 0.5¢ Increment | Increase |
| Three Year Total | — | 77.8¢ plus 1.7¢ Increment | Increase |
| | | Plus 5¢ cost-of-living on 3rd year wage increase | |

| | | | |
|-------------------------------|---|------------------------------|-------|
| AVERAGE WAGE INCREASES | — | 1st Year | 43.8¢ |
| | | 2nd Year | 24.2¢ |
| | | 3rd Year | 20.0¢ |
| | | Three Year Total | 88.0¢ |
| | | Plus 5¢ Cost-of-Living Bonus | 5.0¢ |
| | | Total Direct Wage Increase | 93.0¢ |

IMPORTANT NOTE —

This is only a summary of gains made. It does not include all the improvements. The articles in this document do not represent the formal or official language of the Agreement. Copies of the Collective Agreement will be provided by the Company. Every employee should get a copy and study, know and use it.



PENSION PLAN

for

Hourly Paid Employees

of

**THE INTERNATIONAL NICKEL
COMPANY OF CANADA, LIMITED**

MANITOBA DIVISION

Effective March 1, 1967

Exhibit A

PENSION PLAN
for
Hourly Paid Employees in the Manitoba
Division of the Company
Represented by
United Steelworkers of America

SECTION I

Definitions

Wherever used herein

- (a) "Company" shall mean The International Nickel Company of Canada, Limited.
- (b) "Employee" shall mean a regular, full time, hourly paid employce in the Manitoba Division of the Company represented by United Steelworkers of America.
- (c) "Continuous Service" shall mean in respect of any Employce the period of time which shall have elapsed from the later of
 - (1) the date of his first employment by the Company, or
 - (2) the date of his re-employment by the Company following his last break in service.

For the purpose of this definition a break in an Employee's service shall be deemed to have occurred

- (i) if he quits;
- (ii) if he is discharged;
- (iii) if he is laid off for lack of work;
- (iv) if he has been absent on leave of absence without pay for a period of more than 24 consecutive months, or such longer period as may be approved by the Company at the time of the granting or renewal of such leave of absence;
- (v) if he otherwise ceases to be employed —by the Company;

provided that if any Employee who has been laid off for lack of work should be re-employed by the Company within eighteen months after the date on which he was laid off, no break in his Continuous Service shall be deemed to have occurred by reason of such lay-off.

- (d) "Years of Employment with Pay" shall mean in respect of any Employee the period of time expressed in full years and fractions of a year (expressed in tenths of a year) that such Employee has, during his most recent period of Continuous Service, been employed and paid by the Company. The number of paid hours of employment constituting a full Year of Employment with Pay and the number of paid hours of employment constituting a fractional Year of Employment with Pay, in a calendar year are set forth in Appendix A.

No Employee shall continue to accumulate Years of Employment with Pay after he becomes eligible for Normal Service Retirement or Late Service Retirement or is retired on a Disability Retirement. Temporary absence from work due to accidental injury or disease incurred or contracted in the course of employment with the Company and for which the Employee receives any Workmen's Compensation benefit will be counted as paid hours of employment up to, but not after, the date when, in the opinion of a physician selected or approved by the Company, the Employee is able to return to work. During such absence the Employee will be considered as having had paid hours of employment equivalent to those which he would have had if he had worked throughout his normal work schedule but in no event in excess of 8 hours per day and 40 hours per week. Paid general holidays and vacation periods for which an Employee receives pay shall be counted as hours of employment with pay for the number of hours for which the Employee is paid. A paid hour of employment shall be counted as only one paid hour of employment even though a rate other than a straight-time rate is paid for such hour of employment.

"Equivalent Actuarial Value" shall mean an equivalent value which is computed at the rate of interest and on the actuarial tables approved by the Company for the purposes of this Plan in effect at the time the computation is made.

- (e) "Governmental Old Age Security Pension" shall mean an annuity pension or payment of a similar kind payable under the Old Age Security Act of Canada or under the provisions of any similar law of Canada or any Province thereof or of any government or political unit in respect of disa-

bility or advanced age but shall not include any Workmen's Compensation benefit.

- (g) "Workmen's Compensation benefit" shall mean any annuity, pension or payment of a similar kind payable under the Manitoba Workmen's Compensation Act or under the provisions of any similar law of Manitoba or of Canada or any Province thereof or of any other government or political unit, or any other payment made by or on behalf of the Company, by reason of injury or disease incurred or contracted in the course of employment with the Company.

SECTION II

Information

Each Employee shall file with the Company in such form and at the time or times prescribed by the Company such accurate information concerning himself and his beneficiary as may be required by the Company from time to time and no Employee or former Employee or beneficiary shall be entitled to any benefit under the Plan unless such information shall have been filed when and as required.

SECTION III

Eligibility for Retirement

(a) *Normal Service Retirement*

An Employee who shall attain age 65 and shall have at that time completed at least 20 years of Continuous Service shall be eligible to retire at his own request or may be retired at that time or at any time thereafter at the request of the Company. Any such retirement shall for the purposes of this Plan be known as a "Normal Service Retirement."

(b) *Early Service Retirement*

An Employee who shall have attained age 60, but not age 65, and shall have completed at least 20 years of Continuous Service shall be eligible to retire at his own request. Any such retirement shall for the purposes of this Plan be known as an "Early Service Retirement."

(c) *Special Early Service Retirement*

An Employee who shall have attained age 62 but not age 65 and shall then have completed at least 30 years of Continuous Service shall be eligible to retire at his own request. Any such retirement shall for the purposes of this Plan be known as "Special Early Service Retirement."

(d) *Late Service Retirement*

An Employee who shall complete 20 years of Continuous Service after having attained age 65 shall be eligible to retire at his own request or may be retired at that time or at any time thereafter at the request of the Company. An Employee who shall attain age 70 shall be retired on his 70th birthday. Any retirement provided for in this paragraph (d) shall for the purposes of this Plan be known as a "Late Service Retirement."

(e) *Disability Retirement*

An Employee not eligible for Normal Service Retirement or Late Service Retirement who shall have completed 10 years of Continuous Service and shall have become totally and permanently disabled shall (unless he is eligible for and requests Early Service Retirement) be retired for disability. Any such retirement shall for the

purposes of this Plan be known as a "Disability Retirement."

An Employee shall not have become "totally and permanently disabled" within the meaning of this Plan

(1) unless he shall have become totally disabled by bodily injury or disease so as to be prevented thereby from engaging in any occupation or employment whatsoever for remuneration or profit and unless in the opinion of a qualified physician designated by the Company such total disability will be permanent and continuous during the remainder of the life of such Employee and such physician has conveyed such opinion in writing to the Company, or

(2) if his disability has resulted from

- (i) engaging in any criminal enterprise
- (ii) his habitual drunkenness or addiction to narcotics
- (iii) his self-inflicted injury, or
- (iv) injury or disease suffered or contracted by him while on active service as a member of the armed forces of any country or association of countries.

SECTION IV

Retirement Benefits

(a) *Normal Service Retirement or Late Service Retirement*

An Employee retiring on a Normal Service Retirement or a Late Service Retirement shall, subject to the provisions of Section VI, be entitled to receive a monthly pension

for life equal to the product resulting from multiplying Three Dollars and Twenty-five Cents (\$3.25) by his Years of Employment with Pay up to the date of his retirement.

(b) *Early Service Retirement*

An Employee retiring on an Early Service Retirement shall, subject to the provisions of Section VI, be entitled to receive a monthly pension for life equal to the product resulting from multiplying Three Dollars and Twenty-five Cents (\$3.25) by his Years of Employment with Pay up to the date of his retirement, reduced by one-half of one per centum ($\frac{1}{2}$ of 1%) for each full month by which his age at the date of retirement is less than 65 years.

(c) *Special Early Service Retirement*

An Employee retiring on a Special Early Service Retirement shall, subject to the provisions of Section VI, be entitled to receive a monthly pension for life equal to the product resulting from multiplying Three Dollars and Twenty-five Cents (\$3.25) by his Years of Employment with Pay up to the date of his retirement.

(d) *Disability Retirement*

An Employee retiring on a Disability Retirement shall, subject to the provisions of Section VI, be entitled to receive a monthly pension for life equal to the product resulting from multiplying Three Dollars and Twenty-five Cents (\$3.25) by his Years of Employment with Pay up to the date of his retirement, provided that an Employee retiring on a Disability Retirement with less than fifteen Years of Employment with Pay shall receive a pension equal to that to which

he would be entitled if he had fifteen Years of Employment with Pay.

The Company may from time to time require any individual who has retired on a Disability Retirement and who has not attained age 65 to submit to a medical examination by a physician designated by the Company. Should such individual refuse to undergo any such examination or should any such examination disclose that he is no longer, in the opinion of the examining physician, totally and permanently disabled, his pension and any pension or other benefit to be paid to his beneficiary may be terminated by the Company.

SECTION V

Supplemental Retirement Benefit

In addition to the pension to which he is entitled under Section IV, an Employee retiring on a Normal Service Retirement, Early Service Retirement, Special Early Service Retirement, Late Service Retirement or Disability Retirement shall, subject to the provisions of Section VI, be entitled to receive a supplemental monthly pension until he shall become eligible upon proper application to receive a Government Old Age Security Pension; the supplemental monthly pension to which such employee shall be entitled shall be equal to the product resulting from multiplying Two Dollars and Fifty Cents (\$2.50) by his Years of Employment with Pay up to the date of his retirement, reduced in the case of an Employee on an Early Service Retirement by one-half of one per centum ($\frac{1}{2}$ of 1%) for each full month by which his age at the date of retirement is less than 65 years.

SECTION VI

Deductions

Unless waived by the Company, there shall be deducted from the total monthly pension payable from time to time to an individual under this Plan:

1. the monthly value of any Workmen's Compensation benefit to which such individual is then entitled by virtue of having been employed by the Company in any capacity, anywhere or at any time, and
2. the monthly value of any other benefit, other than a Governmental Old Age Security Pension, to which such individual is entitled, but to the extent only that such benefit was paid for directly or indirectly by the Company.

SECTION VII

Optional Pensions

Provided he makes such election in the form and manner prescribed by the Company at least 30 days prior to the date on which he first becomes eligible for Normal Service Retirement or Late Service Retirement, or at least 30 days prior to his retirement on Early Service Retirement, Special Early Service Retirement or Disability Retirement, an Employee shall be entitled to make an election which shall be effective upon his retirement to take, in lieu of the pension to which he would otherwise be entitled on retirement under Section IV and Section V, either of

Option 1:—a reduced monthly pension payable upon his retirement and during the remainder of his life with a provision that if he is survived by the beneficiary nominated by him in his election to take this op-

tion, the pension shall continue after his death at the rate applicable immediately prior to his death and be paid to and for the life of said beneficiary; the pension to which the Employee and his beneficiary will be entitled under this option shall be of Equivalent Actuarial Value at the effective date of the Employee's retirement to the pension to which he would otherwise have been entitled under Section IV and Section V, or

Option 2:—a reduced monthly pension payable upon his retirement and during the remainder of his life with a provision that if he is survived by the beneficiary nominated by him in his election to take this option, the pension shall continue after his death at one-half ($\frac{1}{2}$) of the rate applicable immediately prior to his death and be paid to and for the life of said beneficiary; the pension to which the Employee and his beneficiary shall be entitled under this option shall be of Equivalent Actuarial Value at the effective date of the Employee's retirement to the pension to which he would otherwise have been entitled under Section IV and Section V.

If an Employee who has made such an election or the beneficiary named by him in such election should die prior to the effective date of such Employee's retirement, such election shall be void and of no effect.

SECTION VIII

Widow's Pension

Upon the death prior to age 65 of a male Employee who has completed 20 years of Continuous Service, has attained age 50 and whose death occurred while in the employ of the Company, a

widow's pension will be payable to such Employee's surviving widow until death or re-marriage, provided, such widow was married to and living with such Employee for the three year period immediately prior to such Employee's death. The amount of such widow's pension, subject to the provisions of Section VI, shall be equal to (i) one-third of the disability pension which would have been payable to such Employee under Section IV if he had retired on account of disability at the date of his death and had not elected to receive pension benefits pursuant to an Optional Pension, less (ii) 2% of the figure determined in (i) for each year or fraction thereof in excess of 5 by which such widow is younger than such Employee. Such widow may be required by the Company to furnish proper proof of the Employee's death and of such widow's entitlement to the widow's pension.

SECTION IX

Vesting

Should an Employee, whose Continuous Service is broken after he has attained age 45 and has completed 10 years of Continuous Service, not be eligible for Normal Service Retirement, Early Service Retirement, Special Early Service Retirement, Late Service Retirement or Disability Retirement at the time his Continuous Service is broken, such individual shall be eligible, upon attaining age 65, to receive a deferred monthly pension for life even though he is not then an Employee, provided he shall make applications therefor in the form and manner prescribed by the Company, first at the time of, or within 30 days following, the break in his Continuous Service, and, second, after the expiration of nine months following his 64th birthday.

Subject to the provisions of Section VI, such deferred monthly pension shall be equal to the

product resulting from multiplying Three Dollars and Twenty-five Cents (\$3.25) by the individual's Years of Employment with Pay up to the date of the break in his Continuous Service. Such deferred monthly pension shall commence on the date such individual attains age 65 or upon the expiration of 30 days following the date on which his application for deferred pension made after attaining age 64 years and nine months is received by the Company, whichever shall be the later, and shall continue until the death of such individual.

SECTION X

Death Benefit

Upon receipt by the Company of proper proof of death of

1. an Employee who, at the time of his death, had at least six months of Continuous Service, or
2. a former Employee who had previously retired on Normal Service Retirement, Early Service Retirement, Special Early Service Retirement, Late Service Retirement or Disability Retirement, a death benefit of \$500.00 shall be paid to the beneficiary whom such Employee or former Employee shall have designated in a writing filed with the Company. If no such designation shall be in effect at the date of death of such individual, such death benefit shall be paid to such person or persons, if any, as the Company in its discretion may determine.

Additional Death Benefit

Upon receipt by the Company of proper proof of death of an Employee who, at the time of his death, had at least one full year of Continuous Service, an additional death benefit, amounting to \$500.00 multiplied by the number of full years

(not in excess of five) of Continuous Service which such Employee had at the time of his death, shall be paid to the beneficiary whom such Employee shall have designated in a writing filed with the Company. If no such designation shall be in effect at the date of death of such Employee, such additional death benefit shall be paid to such person or persons, if any, as the Company in its discretion may determine.

Upon receipt by the Company of proper proof of death of a former Employee who had previously retired on Normal Service Retirement, Early Service Retirement, Special Early Service Retirement, Late Service Retirement or Disability Retirement, if the amount of \$500.00 multiplied by the number of full years (not in excess of five) of Continuous Service which such former Employee had at the time of his retirement exceeds the aggregate amount of all of his pension benefits received prior to the date of his death, an additional death benefit in an amount equal to such excess shall be paid to the beneficiary whom such former Employee shall have designated in a writing filed with the Company. If no such designation shall be in effect at the date of death of such former Employee, such additional death benefit shall be paid to such person or persons, if any, as the Company in its discretion may determine.

SECTION XI

General

A request by an Employee for Normal Service Retirement, Early Service Retirement, Special Early Service Retirement or Late Service Retirement, as the case may be, shall

1. be in writing in such form as may be prescribed by the Company from time to time, and
2. be filed with the Company not more than 90 days prior to the first date on

which the Employee will become eligible for such retirement at his request, and state a date at the close of which such Employee's retirement shall become effective which shall be not less than 30 nor more than 90 days after the date of filing such request.

A request by the Company for an Employee's Normal Service Retirement or Late Service Retirement shall

1. be in writing in such form as may be prescribed by the Company from time to time, and
2. be delivered to the Employee or forwarded to him by mail at his last address recorded in the employment records of the Company, in either case not more than 90 days prior to the first date on which the Employee may be so retired at the Company's request, and
3. state a date at the close of which such Employee's retirement shall become effective.

Should both the Company and an Employee request his retirement, specifying different effective dates, the effective date of his retirement shall be the earlier of the dates specified.

The effective date of the retirement of an Employee retiring on a Disability Retirement shall be the date of acceptance by the Company of proof presented to it of the total and permanent nature of the Employee's disability. The effective date of the retirement of an Employee retiring on a Late Service Retirement at age 70 shall be the Employee's 70th birthday.

The first payment of a monthly pension payable to a retired Employee shall be for the month in which his retirement becomes effective and shall be in a pro-rated amount computed by

reference to the number of days in such month commencing with the effective date of retirement compared with the total number of days in such month. The last payment of a monthly pension payable to a retired Employee shall be for the month in which his death takes place and shall be in an amount similarly pro-rated for the period ending with the date of his death. If a retired Employee shall have elected to take an option under Section VII and shall be survived by the beneficiary nominated by him in such election, the first and last payments of a monthly pension to such beneficiary shall be in amounts similarly pro-rated by reference to the respective dates of death of the retired Employee and his beneficiary.

The last payment of a monthly pension to which any person is entitled under this Plan for the period ending at the date of his death may, at the option of the Company, be paid to the surviving spouse or a dependent of the person entitled thereto.

No person who is or who may become entitled to any pension or any other benefit shall sell, transfer, anticipate, assign, pledge or encumber any such pension or other benefit or any part thereof. Should any such person attempt to sell, transfer, anticipate, assign, pledge or encumber any such pension or other benefit or any part thereof, or should any such pension or other benefit or any part thereof be seized, attached, assigned or taken in execution in any legal proceeding against such person, then such pension or other benefit shall in the discretion of the Company cease and determine and the Company may apply or hold the same or any part thereof to or for the benefit of the spouse, child, children or other dependent or dependents of such person in such manner as to the Company may seem proper.

Should the Company at any time determine that any person entitled to a pension or any other benefit is incompetent by reason of physical or mental disability to give a valid receipt therefor, the Company may cause any or all pension or benefit payments due to such person to be made to some other person or persons designated by the Company to be used for the benefit of the person entitled. Any payment or payments so made shall be considered as having been made to the person entitled and neither the Company nor any person acting on its behalf shall be bound to see to the application of any such payment.

The Company shall determine whether and to what extent it will make provision, from time to time, for the payment of pensions or other benefits under the Plan by the establishment of a trust fund, by the purchase of insurance or annuity contracts from an insurance company or companies, by the establishment and maintenance of reserves on its own books or by any other means. No person shall have any right or interest whatsoever in or to any portion of any funds which may be paid into any trust fund or in or to any insurance or annuity contract established or purchased, as the case may be, to make provision, in whole or in part, for any pension or other benefit under the Plan except as specifically provided in this Plan or the agreement of trust or insurance or annuity contract.

Nothing in this Plan shall be interpreted as giving any person employed by the Company any right to be retained in the employment of the Company or as interfering in any way with any right of the Company to discharge any person employed by it at any time.

The Company may from time to time make, amend, repeal and enforce such rules and regulations and prescribe such forms as it may deem

necessary or proper for the efficient operation and administration of the benefits provided for in this Plan. The Company shall administer and interpret this Plan and determine all questions arising out of or in connection with it and all actions, decisions, interpretations and determinations of the Company in this connection shall be conclusive and binding on all persons having or claiming to have any right or interest in or under this Plan. The foregoing shall be subject to the provisions of written agreements from time to time in force between the Company and any collective bargaining agent representing the Employees.

SECTION XII

Termination or Modification of Plan

It is the intention of the Company to continue this Plan and to provide for payment of pensions and other benefits hereunder. Except to the extent that the Company may otherwise expressly agree in writing with the collective bargaining agent representing the Employees, however, the Company reserves the right, for any reason whatsoever and at any time or times to modify or terminate this Plan in whole or in part and to discontinue, suspend or reduce any pension and other benefit payments provided for in this Plan or any contributions to provide for such payments, but no such action by the Company shall operate to deprive any person then entitled to benefits under this Plan of any interest which he may have under the provisions of any agreement of trust or insurance or annuity contract established or purchased, as the case may be, to make provision for any pension or other benefit under this Plan.

APPENDIX A

(i) Table Applicable to Calculation of a Full Year and Fractions of a Year of Employment with Pay in the Calendar Year 1960.

| <u>Paid Hours of Employment</u> | <u>Whole or Fractional Years of Employment with Pay</u> |
|---------------------------------|---|
| 2200 or more | One Year |
| 1980 or more but less than 2200 | 9/10 |
| 1760 or more but less than 1980 | 8/10 |
| 1540 or more but less than 1760 | 7/10 |
| 1320 or more but less than 1540 | 6/10 |
| 1100 or more but less than 1320 | 5/10 |
| 880 or more but less than 1100 | 4/10 |
| 660 or more but less than 880 | 3/10 |
| 440 or more but less than 660 | 2/10 |
| 220 or more but less than 440 | 1/10 |
| Less than 220 hours | 0 |

APPENDIX A

(ii) Table Applicable to Calculation of a Full Year and Fractions of a Year of Employment with Pay in the Calendar Year 1961.

| <u>Paid Hours of Employment</u> | <u>Whole or Fractional Years of Employment with Pay</u> |
|---------------------------------|---|
| 2032 or more | One Year |
| 1829 or more but less than 2032 | 9/10 |
| 1626 or more but less than 1829 | 8/10 |
| 1423 or more but less than 1626 | 7/10 |
| 1219 or more but less than 1423 | 6/10 |
| 1016 or more but less than 1219 | 5/10 |
| 813 or more but less than 1016 | 4/10 |
| 610 or more but less than 813 | 3/10 |
| 406 or more but less than 610 | 2/10 |
| 203 or more but less than 406 | 1/10 |
| Less than 203 hours | 0 |

APPENDIX A

(iii) *Table Applicable to Calculation of a Full Year and Fractions of a Year of Employment with Pay in the Calendar Year 1962 and Subsequent Calendar Years.*

| <u>Paid Hours of Employment</u> | <u>Whole or Fractional Years of Employment with Pay</u> |
|---------------------------------|---|
| 1800 or more | One Year |
| 1620 or more but less than 1800 | 9/10 |
| 1440 or more but less than 1620 | 8/10 |
| 1260 or more but less than 1440 | 7/10 |
| 1080 or more but less than 1260 | 6/10 |
| 900 or more but less than 1080 | 5/10 |
| 720 or more but less than 900 | 4/10 |
| 540 or more but less than 720 | 3/10 |
| 360 or more but less than 540 | 2/10 |
| 180 or more but less than 360 | 1/10 |
| Less than 180 hours | 0 |

INDEX TO
PRINCIPAL PRODUCING AREAS
JANUARY 1968
(WITH NAMES OF OPERATING COMPANIES)

NEWFOUNDLAND

1. Iron Ore Co. of Canada Iron
2. Iron Ore Co. of Canada Iron
3. Consolidated Rambler Mines Ltd. Copper, Gold, Zinc
4. Atlantic Coast Copper Corp. Ltd. Copper
5. British Newfoundland Exploration Ltd. Copper
6. First Maritime Mining Corp. Ltd. (Gulbridge Mine) Copper, Zinc, Lead
7. American Smelting and Refining Company (Buchans Unit) Copper, Silver, Gold, Cadmium

NOVA SCOTIA

1. Advocate Mines Ltd. Asbestos
2. Fintkorp Co. of Canada Ltd. The Gypsum
3. Newfoundland Fluorspar Ltd. Fluorspar
4. Newfoundland Minerals Ltd. Pyrophyllite
5. Dunbar Chemicals Ltd. (Site Salt Division) Salt
6. Canadian Rock Salt Co. Ltd. The Salt
7. Little Narrows Gypsum Co. Ltd. Gypsum
8. Dresser Industries, Inc. Barite, Silver, Lead, Zinc
9. National Gypsum (Canada) Ltd. Gypsum
10. Domtar Construction Materials Ltd. (Gypsum Division) Gypsum
11. Fundy Gypsum Co. Ltd. Gypsum
12. National Gypsum (Canada) Ltd. Gypsum
13. River Hebert Coal Co. Ltd. Coal
14. Springhill Coal Mines Ltd. Coal
15. Dominion Steel and Coal Corp., Ltd. Acadia Coal Division Coal
16. Drummond Coal Co. Ltd. Coal
17. Evans Coal Mines Ltd. Coal
18. Dominion Steel and Coal Corp., Ltd. Old Sydney Collieries Division Coal
19. Dominion Coal Co. Ltd. Coal
20. Bras d'Or Coal Co. Ltd. Coal

NEW BRUNSWICK

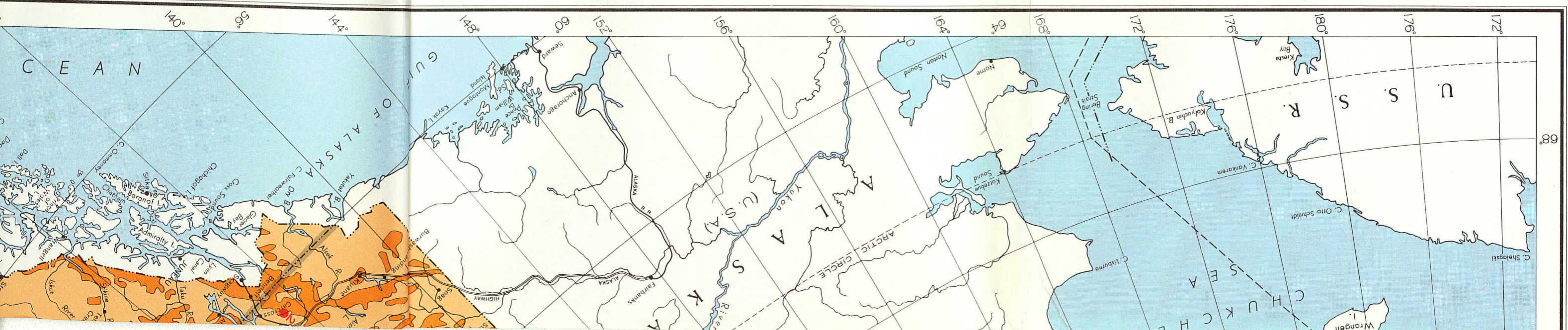
1. Cominco Ltd. Copper
2. Brunswick Mining and Smelting Corp. Ltd. Zinc, Lead, Copper, Silver
3. Nigadoo River Mines Ltd. Lead, Zinc, Copper, Silver, Cadmium
4. Heath Steele Mines Limited Zinc, Lead, Copper, Silver
5. Canadian Gypsum Co. Ltd. Gypsum
6. Avon Coal Co., Ltd. Coal
7. D.W. and R.A. Mills Ltd. Coal
8. Miramichi Lumber Co. Ltd. Coal
9. C.H. Nichols Co., Ltd. Coal

QUEBEC

1. Iron Ore Co. of Canada Iron
2. Quebec Cartier Mining Co. Iron, Titanium
3. Quebec Iron and Titanium Corp. Iron, Silver, Selenium, Tellurium, Molybdenum, Bismuth
4. Gaspe Copper Mines Ltd. Copper, Silver, Selenium, Tellurium, Molybdenum, Bismuth
5. Campbell Chibougamau Mines Ltd. Copper, Gold, Silver
6. Grandroy Mines Ltd. Copper, Gold
7. Ison Syndicate Copper
8. Merrill Island Mining Corp., Ltd. Copper
9. Norbeau Mines (Quebec) Ltd. Gold
10. Parlo Mining Corp. The Copper Rand Division Copper, Gold, Silver
11. Opemiska Copper Mines (Quebec) Ltd. Copper, Gold, Silver
12. Mattagami Lake Mines Ltd. Zinc, Copper, Silver, Gold
13. New Hosco Mines Ltd. Copper, Zinc
14. Orchan Mines Ltd. Zinc, Copper, Silver
15. Joutel Copper Mines Ltd. Copper
16. Mines de Poirier Inc. Copper, Zinc, Silver
17. Noralta Mining Corp., Ltd. Zinc, Copper, Silver, Gold, Pyrite
18. Lake Dufault Mines Ltd. Copper, Zinc, Silver, Gold
19. Noranda Mines Ltd. Copper, Gold, Silver, Selenium, Tellurium, Pyrite
20. Quebeck Mining Corp. Ltd. Copper, Zinc, Gold, Silver, Pyrite
21. Wasnamac Mines Ltd. Gold
22. Anglo American Molybdenite Mining Corp., Ltd. Molybdenum
23. Marbridge Mines Ltd. Nickel, Copper
24. Pressac Molybdenite Mines Ltd. Molybdenum
25. Barnat Mines Ltd. Gold
26. Camfro Mines Ltd. Gold
27. East Malartic Mines Ltd. Gold
28. Marban Gold Mines Ltd. Gold
29. Molybdenite Corp. of Canada Ltd. Molybdenum, Bismuth
30. Lamaque Mining Co. Ltd. Gold
31. Manitou-Barue Mines Ltd. Zinc, Copper, Lead, Silver, Gold
32. Sigma Mines (Quebec) Ltd. Gold
33. Lorraine Mining Co. Ltd. Nickel, Copper, Gold
34. New Calumet Mines Ltd. Zinc, Lead, Silver
35. Hilton Mines Ltd. Iron
36. St. Lawrence Columium and Metals Corp. Niobium (Columbium)
37. Cupra Mines Ltd. Copper, Zinc, Lead, Silver, Gold
38. Solbec Copper Mines Ltd. Copper, Zinc, Silver, Lead, Cadmium
39. Quebec Lithium Corp. Lithia
40. Baskong Quartz Products Silica
41. Industrial Minerals of Canada Ltd. Silica
42. Red Mill Industries Ltd. Iron Oxide mineral pigment
43. Broughton Soapstone and Quarry Co., Ltd. Talc, Soapstone
44. Carey-Canadian Mines Ltd. Asbestos
45. Asbestos Corp. Ltd. Asbestos
46. Bell Asbestos Mines, Ltd. Asbestos
47. Flinckote Mines Ltd. Asbestos
48. Lake Asbestos of Quebec Ltd. Asbestos
49. National Asbestos Mines Ltd. Asbestos
50. Canadian Johns-Manville Co., Ltd. Asbestos
51. Nicolet Asbestos Mines Ltd. Asbestos
52. Baker Talc Ltd. Talc, Soapstone
53. E. Montpetit et Fils Ltee. Silica
54. Union Carbide Exploration Ltd. Silica
55. Industrial Minerals of Canada Ltd. Silica
56. Canadian Refractories Ltd. Dead-burned magnesita
57. International Minerals and Chemical Corp. (Canada) Ltd. Feldspar
58. Aluminum Co. of Canada, Ltd. Magnesia, Lime

ONTARIO

1. Cochenour Williams Gold Mines Ltd. Gold
2. Dickenson Mines Ltd. Gold
3. Madsen Red Lake Gold Mines Ltd. Gold
4. Consolidated Canadian Faraday Ltd. Nickel, Copper
5. Canand Ore Co., Ltd. Iron
6. Steep Rock Iron Mines Ltd. Iron
7. Zennac Metal Mines Ltd. Zinc
8. MacLeod Mosher Gold Mines Ltd. Gold
9. Noranda Mines Ltd. Geco Division Copper, Zinc, Silver, Lead
10. Wiltech Mines Ltd. Zinc, Copper, Silver, Lead
11. Wilroy Mines Ltd. Zinc, Copper, Silver, Lead
12. Algoma Steel Corp., Ltd. The Algoma Ore Properties Division Iron
13. North Canadian Enterprises Ltd. Copper
14. Tribag Mining Co. Ltd. Copper
15. Renable Mines Ltd. Gold
16. Canadian Jamieson Mines Ltd. Copper, Zinc
17. Kam Kotia Porcupine Mines, Ltd. Copper, Zinc, Silver
18. Texas Gulf Sulphur Co. Zinc, Copper, Lead, Silver
19. Aunor Gold Mines Ltd. Gold
20. Dome Mines Ltd. Gold
21. Hallnor Mines Ltd. Gold
22. Hollinger Consolidated Gold Mines Ltd. (Hollinger) Gold
23. McIntyre Porcupine Mines, Ltd. Gold, Copper
24. Parnour Porcupine Mines, Ltd. Gold
25. Preston Mines Ltd. Gold
26. Hollinger Consolidated Gold Mines Ltd. (Ross) Gold
27. Munro Copper Mines Ltd. Copper, Zinc
28. Kerr Addison Mines Ltd. Gold
29. Lamaque Mining Co., Ltd. (Tack-Hughes) Gold
30. Macassa Gold Mines Ltd. Gold
31. Upper Beaver Mines Ltd. Copper, Gold
32. Upper Canada Mines Ltd. Gold
33. Jones and Laughlin Mining Co., Ltd. (Adams) Iron
34. Sisco Metals of Ontario Ltd. Silver, Cobalt
35. Agnico Mines Ltd. Silver, Cobalt
36. Deer Horn Mines Ltd. Silver, Cobalt
37. Glen Lake Silver Mines Ltd. Silver, Cobalt
38. Hino Silver Mines Ltd. Silver, Cobalt
39. Langis Silver and Cobalt Mining Co., Ltd. Silver, Cobalt
40. Silverfields Mining Corp. Ltd. Silver, Cobalt
41. Silver-Miller Mines Ltd. Silver, Cobalt
42. Copperfields Mining Corp., Ltd. Copper
43. National Steel Corp. of Canada Uranium
44. Denison Mines Ltd. Uranium



12. Preston Mines Ltd. **Gold**
13. Hollinger Consolidated Gold Mines Ltd. (Ross) **Gold**
13. Munro Copper Mines Ltd. **Copper, Zinc**
14. Kerr Addison Mines Ltd. **Gold**
14. Macassa Mining Co. Ltd. (Teck-Hughes) **Gold**
14. Macassa Gold Mines Ltd. **Gold**
14. Upper Beaver Mines Ltd. **Copper, Gold**
14. Upper Canada Mines Ltd. **Gold**
15. Jones and Laughlin Mining Co. Ltd. (Adams) **Iron**
16. Sisco Metals of Ontario Ltd. **Silver, Cobalt**
17. Agnico Mines Ltd. **Silver, Cobalt**
17. Deer Horn Mines Ltd. **Silver, Cobalt**
17. Glen Lake Silver Mines Ltd. **Silver, Cobalt**
17. Hino Silver Mines Ltd. **Silver, Cobalt**
17. Langis Silver and Cobalt Mining Co. Ltd. **Silver, Cobalt**
17. Silverfields Mining Corp. Ltd. **Silver, Cobalt**
17. Silver-Miller Mines Ltd. **Silver, Cobalt**
18. Copperfields Mining Corp. Ltd. **Copper**
19. National Steel Corp. of Canada **Iron**
20. Denison Mines Ltd. **Uranium**
20. Rio Algom Mines Ltd. **Uranium, Thorium**
20. Stanrock Uranium Mines Ltd. **Uranium**
21. Rio Algom Mines Ltd. **Copper**
22. International Nickel Co. of Canada Ltd. **The Nickel, Copper, Gold,**
Silver, Platinum metals, Cobalt, Selenium, Tellurium, Iron
22. Kidd Copper Mines Ltd. **Nickel, Copper**
23. Falconbridge Nickel Mines Ltd. **Nickel, Copper, Platinum metals, Cobalt, Iron**
24. Dominion Magnesium Ltd. **Magnesium, Calcium**
25. Marmora Mining Co. **Iron**
25. Union Carbide Exploration Ltd. **Silica**
2. Industrial Minerals of Canada Ltd. **Nepheline Syenite**
2. International Minerals and Chemical Corp. (Canada) Ltd. **Nepheline Syenite**
3. Canada Talc Industries Ltd. **Talc**
3. Minnesota Minerals Ltd. **Fluorite granules**
5. Canadian Gypsum Co., Ltd. **Gypsum**
5. Domtar Construction Materials Ltd. (Gypsum Division) **Gypsum**
6. Domtar Chemicals Ltd. (Sifto Salt Division) **Salt**
7. Canadian Rock Salt Co. Ltd. **The Salt**
7. Canadian Salt Co. Ltd. **The Salt**

MANITOBA

1. Sherritt Gordon Mines, Ltd. **Nickel, Copper, Cobalt**
2. International Nickel Co. of Canada, Ltd. **The Nickel, Copper, Precious metal residue, Sulphur**
3. Hudson Bay Mining and Smelting Co., Ltd. **Copper, Zinc, Gold, Silver, Cadmium, Selenium, Tellurium**
4. Hudson Bay Mining and Smelting Co., Ltd. (Chisel Lake) and (Stall Lake) **Copper, Zinc, Lead, Silver, Gold**
5. San Antonio Gold Mines Ltd. **Gold**
1. Domtar Construction Materials Ltd. (Gypsum Division) **Gypsum**
2. The Winnipeg Supply and Fuel Co. Ltd. **Silica**
3. B.A.C.M. Ltd. **Gypsum**
4. Canadian Salt Co. Ltd., **The Salt**
6. Western Gypsum Ltd. **Gypsum**
6. Pembina Mountain Clays Ltd. **Bentonite**

SASKATCHEWAN

1. Eldorado Mining and Refining Ltd. **Uranium**
2. Anglo-Royn Mines Ltd. **Copper**
3. Hudson Bay Mining and Smelting Co., Ltd. **Copper, Zinc, Gold, Silver, Cadmium, Selenium, Tellurium**
3. Shire Mines and Oils Ltd. **Zinc, Lead, Copper, Silver**
1. Domtar Chemicals Ltd. (Sifto Salt Division) **Salt**
2. Midwest Chemicals Ltd. **Sodium Sulphate**
3. Potash Company of America **Potash**
4. Sodium Sulphate (Saskatchewan) Ltd. **Sodium Sulphate**
5. International Minerals and Chemical Corp. (Canada) Ltd. **Potash**
6. Saskatchewan Minerals (Sodium Sulphate Division) **Sodium Sulphate**
7. Saskatchewan Minerals (Sodium Sulphate Division) **Sodium Sulphate**
8. Kallium Chemicals Ltd. **Potash**
9. Saskatchewan Minerals (Sodium Sulphate Division) **Sodium Sulphate**
10. Ormiston Mining and Smelting Co. Ltd. **Sodium Sulphate**
11. Sypbouts Sodium Sulphate Co., Ltd. **Sodium Sulphate**
1. Battle River Coal Co. Ltd. **Coal**
1. Manitoba and Saskatchewan Coal Co. Ltd. **Coal**
1. Utility Coals Ltd. **Coal**

ALBERTA

1. Barold of Canada, Ltd. **Bentonite**
2. Canadian Salt Co. Ltd. **The Salt**
3. Dresser Industries, Inc. **Bentonite**
1. Alberta Coal Ltd. **Coal**
2. Star-Key Mines Ltd. **Coal**
3. Battle River Coal Co. Ltd. **Coal**
3. Forestburg Collieries Ltd. **Coal**
4. Charter Coals Ltd. **Coal**
5. Battle River Coal Co. Ltd. **Coal**
6. Camrose Mines Ltd. **The Coal**
7. Coleman Collieries Ltd. **Coal**

BRITISH COLUMBIA

1. British Columbia Molybdenum, Ltd. **Molybdenum**
2. Granisle Copper Ltd. **Copper**
3. Endako Mines **Molybdenum**
4. Falconbridge Nickel Mines, Ltd. **Iron, Copper**
5. Jedway Iron Ore Ltd. **Iron**
6. Brynora Mines Ltd. **Molybdenum**
7. Bralorne Pioneer Mines Ltd. **Gold**
8. Coast Copper Co. Ltd. **Copper, Gold, Iron**
9. Zeballos Iron Mines Ltd. **Iron**
10. Mt. Washington Copper Co. Ltd. **Copper**
11. Teada Mines Ltd. **Iron, Copper**
12. Western Mines Ltd. **Zinc, Copper, Lead, Silver, Gold**
13. Brynora Mines Ltd. **Iron**
14. Cowichan Copper Co. Ltd. **Copper**
15. Anaconda Co. (Canada) Ltd. **The Copper, Zinc, Gold**
16. Giant Mascof Mines, Ltd. **Nickel, Copper**
17. Craigmont Mines Ltd. **Copper**
18. Bethlenem Copper Corp. Ltd. **Copper, Silver**
19. Slocan Ottawa Mines Ltd. **Silver**
20. Cominco Ltd. (Bluebell) **Lead, Zinc, Silver, Cadmium, Bismuth, Tin, Indium, Copper, Iron**
21. Cominco Ltd. (Sullivan) **Lead, Zinc, Silver, Cadmium, Bismuth, Tin, Indium, Copper, Iron**
22. Mastodon-Highland Bell Mines Ltd. **Silver, Lead, Zinc**
23. Uteco Mines Ltd. **Silver, Gold**
24. Gandy Mining Co. Ltd. **The Copper, Gold**
25. Red Mountain Mines Ltd. **Molybdenum**
26. Canadian Exploration, Ltd. **Zinc, Lead, Cadmium**
26. Reeves MacDonald Mines Ltd. **Zinc, Lead, Cadmium**
1. Cassiar Asbestos Corp. Ltd. **Asbestos**
2. Mountain Minerals Ltd. **Barite**
3. Barold of Canada, Ltd. **Barite**
4. Mountain Minerals Ltd. **Barite**
5. Western Gypsum Ltd. **Gypsum**
6. Pacific Silica Ltd. **Silica**
1. Crows Nest Industries Ltd. **Coal**

YUKON TERRITORY

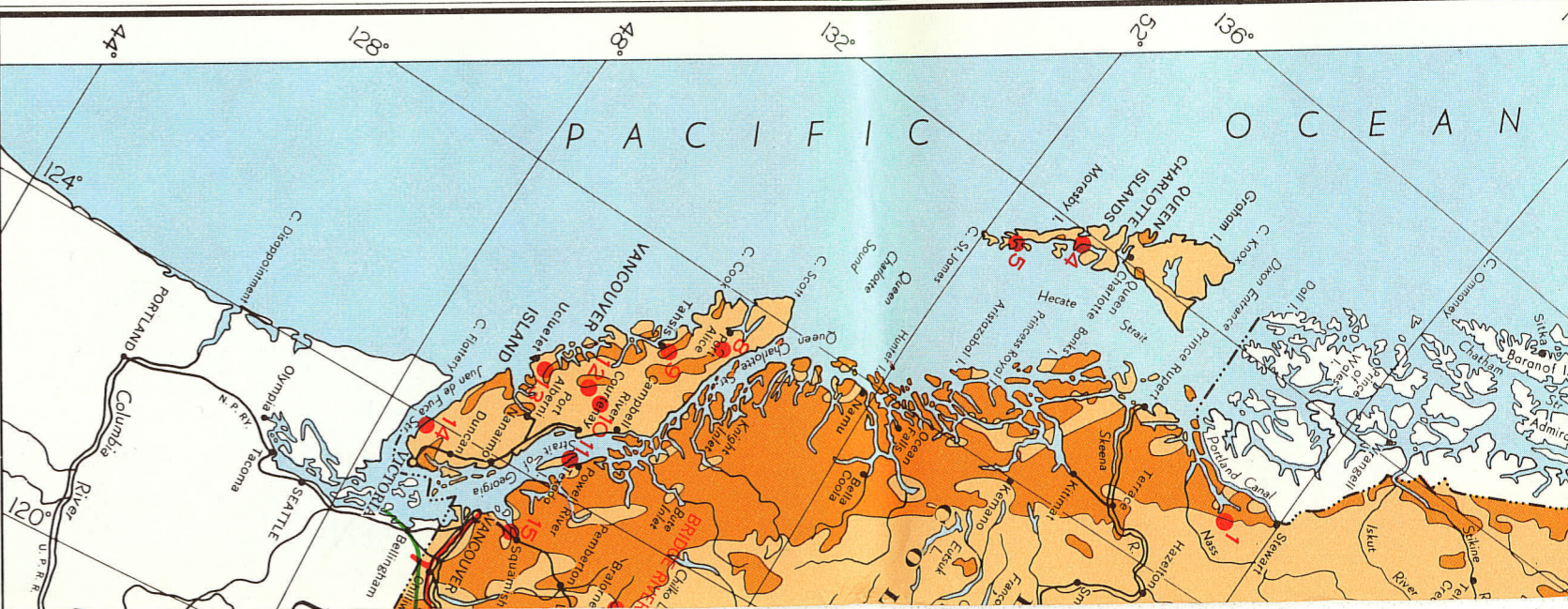
1. United Keno Hills Mines Ltd. **Silver, Lead, Zinc, Cadmium**
2. New Imperial Mines Ltd. **Copper, Gold, Silver**
1. Cassiar Asbestos Corp. Ltd. **Asbestos**
1. Yukon Coal Co. **Coal**

NORTHWEST TERRITORIES

1. Echo Bay Mines Ltd. **Silver, Copper**
2. Tundra Gold Mines Ltd. **Gold**
3. Discovery Mines Ltd. **Gold**
4. Cominco Ltd. (Con. Rycan and Voi Mines) **Gold**
4. Giant Yellowknife Mines Ltd. **Gold**
4. Lohr Mines Ltd. **Gold**
4. Supercrest Mines Ltd. **Gold**
5. Canada Tungsten Mining Corp. Ltd. **Tungsten**
6. Pine Point Mines Ltd. **Zinc, Lead**

NOTES

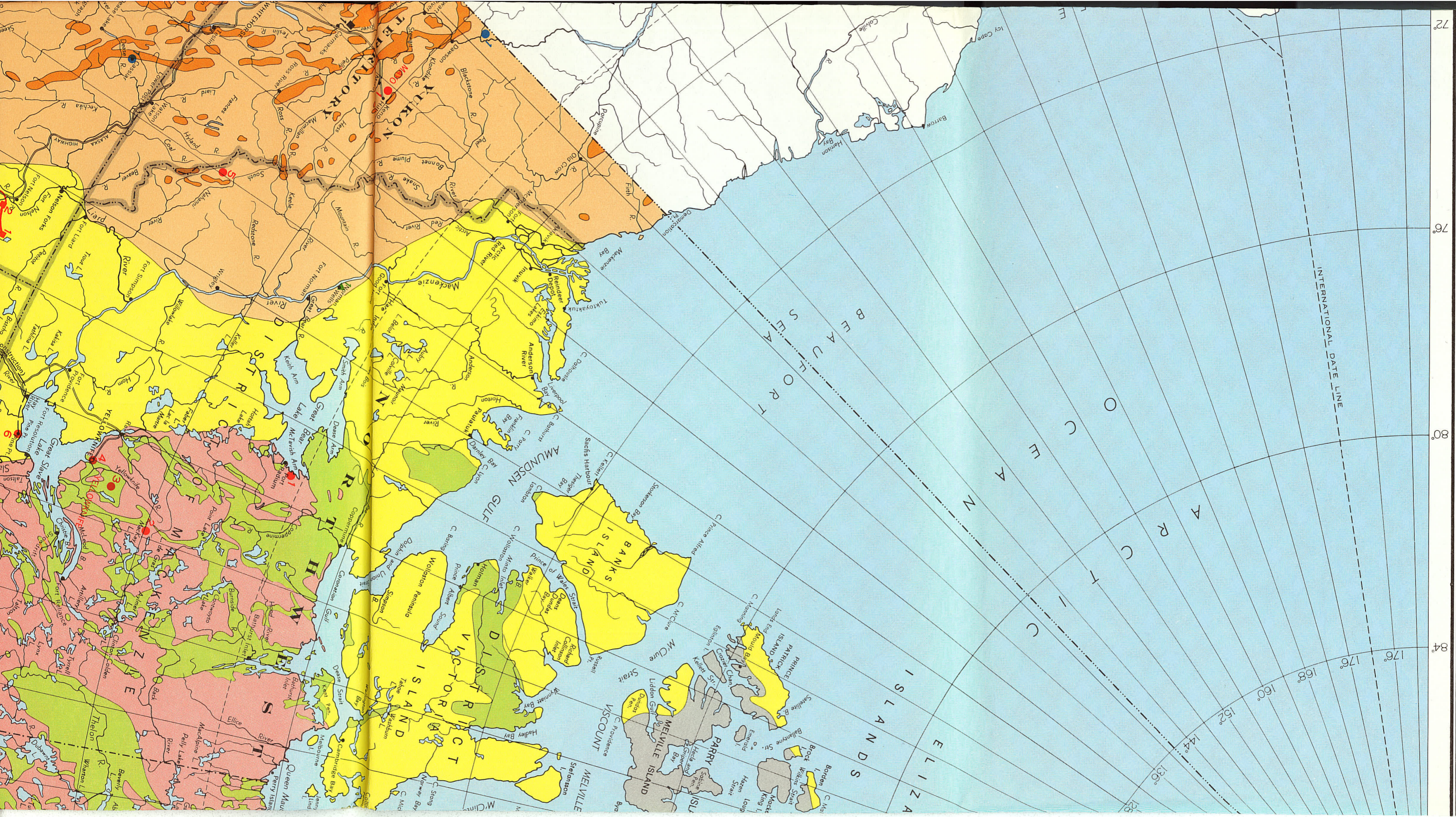
1. Most of the lode gold mines as shown also produce some silver.
2. Most nonferrous base metal mines yield small quantities of precious metals.
3. Producing areas of clay products and construction materials are not shown on map.
4. 1967 statistics are preliminary.



LEGEND

- Intrusive and undivided rocks of the Canadian Shield
- Sedimentary and volcanic rocks of the Canadian Shield
- Interior Plains, St. Lawrence Lowlands, Hudson Bay Lowland, and Arctic Lowlands and Plateaux
- Inuitian Region
- Appalachian Region
- Cordilleran Region
- Intrusive rocks within the Cordilleran Region
- Metal mine
- PORCUPINE
- Mining area
- Industrial mineral mine or quarry
- Coal mine
- Oil field
- Gas field
- Oil and Gas field
- Oil pipe line
- Gas pipe line

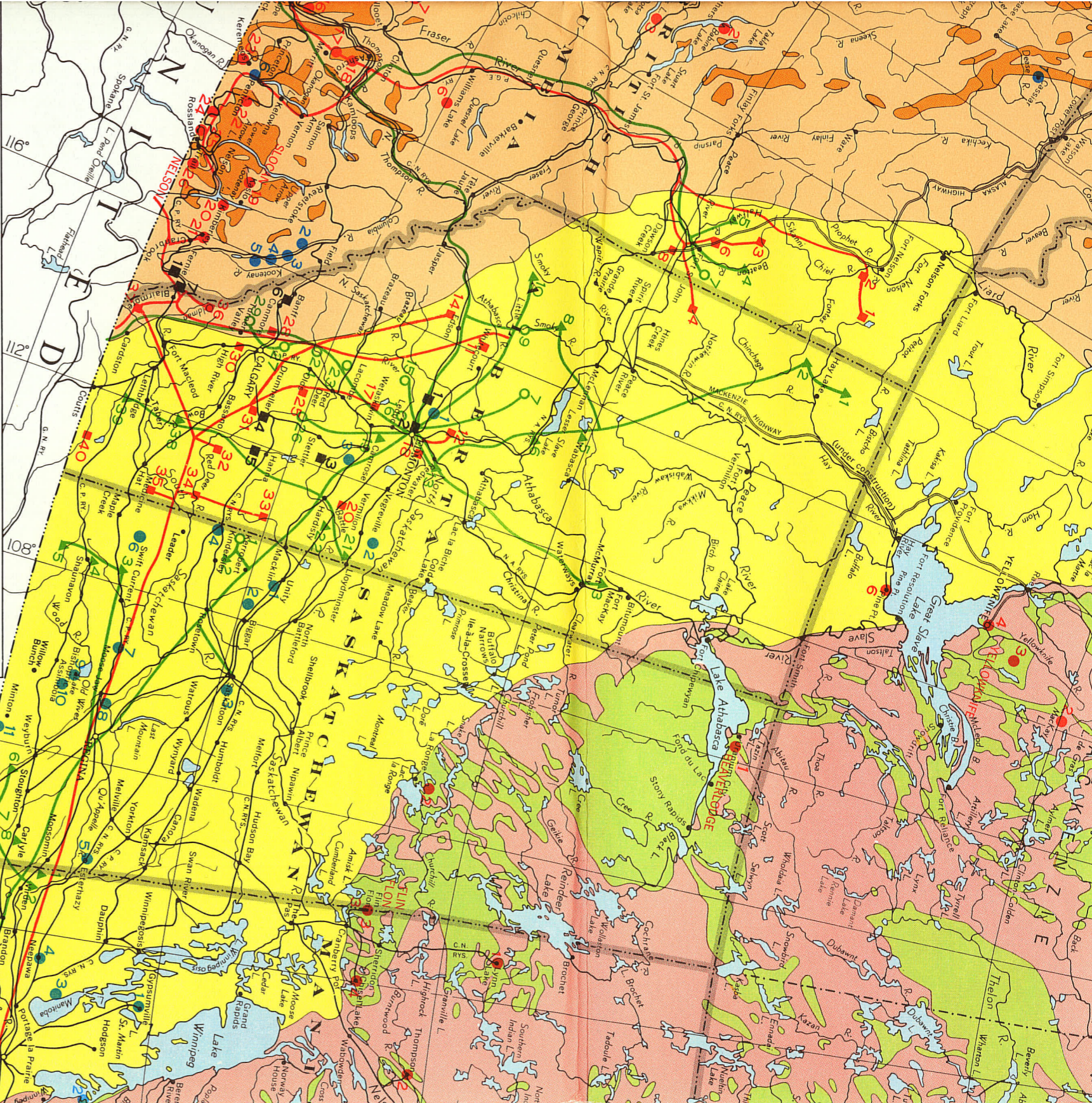
Published 1968.
Copies of this map may be obtained from the
Department of Energy, Mines and Resources,
Ottawa, Canada.



72°
76°
80°
84°
176°
176°
176°
168°
160°
152°
144°
136°

INTERNATIONAL DATE LINE

ELIZABETH ISLANDS
MELVILLE ISLAND
PARRY ISLANDS
VISCOUNT ISLAND
BANKS ISLAND
AMUNDSEN GULF
YUKON RIVER
ALASKA
YUKON TERRITORY



MINERAL PRODUCTION OF CANADA, 1967

METALLIC MINERALS

| | |
|-----------------|-------------|
| COPPER | 563,513,408 |
| NICKEL | 467,196,178 |
| IRON ORE | 455,242,942 |
| ZINC | 314,904,646 |
| GOLD | 111,483,225 |
| LEAD | 90,057,520 |
| SILVER | 63,094,821 |
| MOLYBDENUM | 49,237,508 |
| PLATINUM METALS | 37,873,670 |
| FUELS | 34,586,996 |
| PETROLEUM | 886,484,500 |
| NATURAL GAS | 198,228,000 |
| COAL | 83,621,000 |

NON METALLIC MINERALS

| | |
|---------------------------------|-------------|
| ASBESTOS | 163,011,249 |
| SULPHUR, all forms | 77,571,684 |
| POTASH | 77,346,000 |
| SALT | 28,622,206 |
| TITANIUM DIOXIDE | 23,704,420 |
| GYPSSUM | 10,761,835 |
| SODIUM SULPHATE | 6,615,494 |
| QUARTZ | 5,527,745 |
| NEPHELINE SYENITE | 4,349,320 |
| MAGNESITE, DOLOMITE and BRUCITE | 3,441,405 |

CONSTRUCTION MATERIALS

| | |
|-----------------|-------------|
| SAND AND GRAVEL | 158,129,000 |
| CEMENT | 146,401,454 |
| STONE | 104,412,290 |
| CLAY PRODUCTS | 43,549,419 |
| LIME | 16,737,960 |

MINERAL PRODUCTION OF CANADA, 1947 TO 1967

| YEAR | DOLLARS | DOLLARS | DOLLARS |
|------------|---------|---------------|---------------|
| PER CAPITA | TOTAL | TOTAL | TOTAL |
| 1947 | 51.38 | 644,869,975 | 2,190,322,392 |
| 1951 | 88.91 | 1,245,483,595 | 2,100,739,038 |
| 1957 | 131.87 | 2,100,739,038 | 2,492,509,981 |
| 1958 | 122.99 | 2,492,509,981 | 2,850,966,179 |
| 1959 | 137.79 | 2,850,966,179 | 3,060,428,547 |
| 1960 | 139.48 | 3,060,428,547 | 3,390,971,534 |
| 1961 | 141.39 | 3,390,971,534 | 3,745,470,821 |
| 1962 | 153.42 | 3,745,470,821 | 4,403,594,072 |
| 1963 | 151.13 | 4,403,594,072 | |
| 1964 | 175.79 | | |
| 1965 | 190.67 | | |
| 1966 | 198.49 | | |
| 1967 | 215.81 | | |

MINERAL PRODUCTION OF CANADA BY PROVINCES, 1967

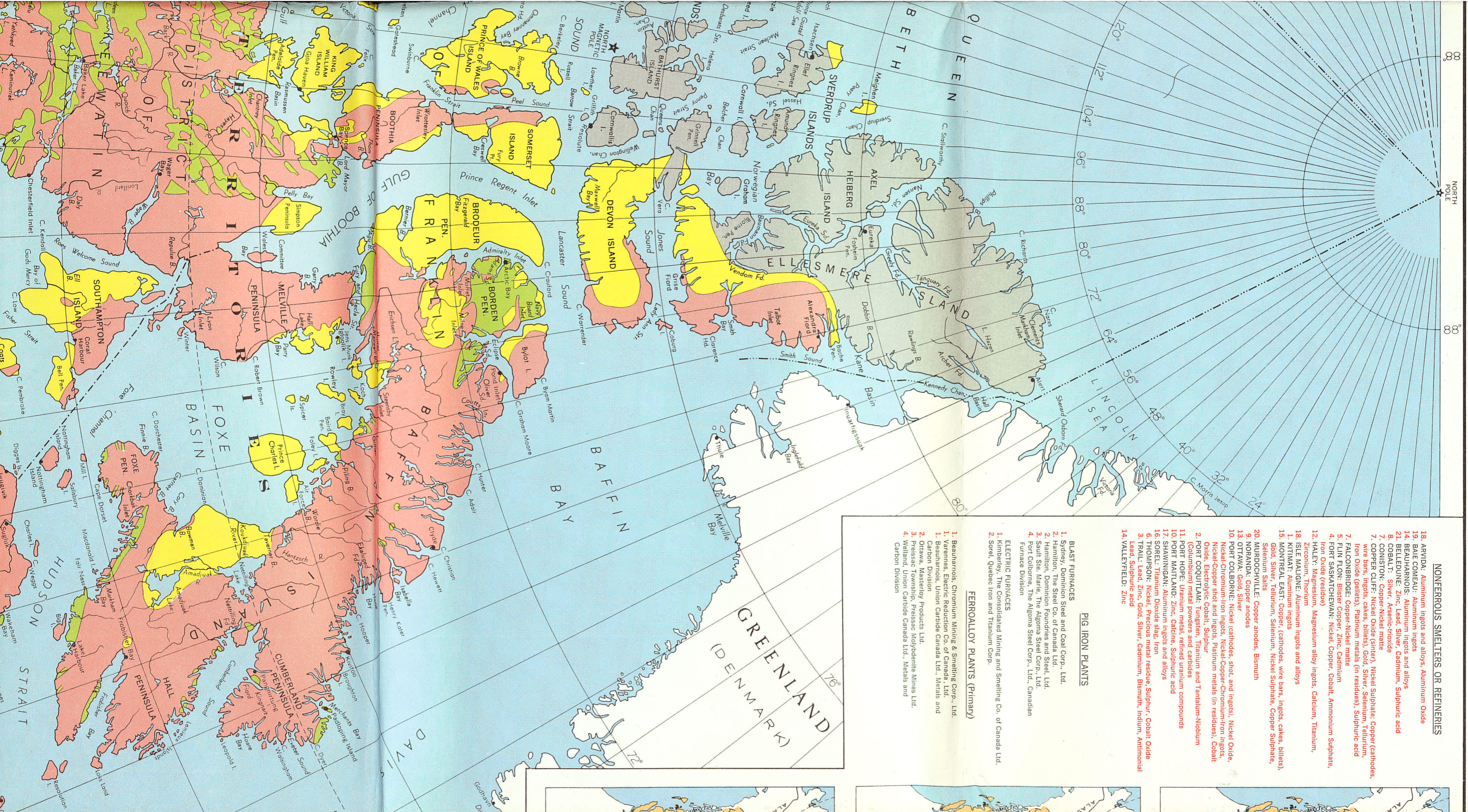
| Province or Territory | Metals | Fuels | Industrial Minerals | Total for or Territ |
|-----------------------|----------------|---------------|---------------------|---------------------|
| Newfoundland | \$ 241,826,668 | \$ — | \$ 18,012,272 | \$ 259,838,940 |
| Prince Edward I. | 316,180 | 52,042,000 | 1,704,000 | 1,704,000 |
| Nova Scotia | 67,622,776 | 7,775,500 | 27,022,063 | 79,380,000 |
| New Brunswick | 434,483,644 | 8,000 | 14,465,072 | 89,863,000 |
| Quebec | 963,136,757 | 9,778,000 | 301,541,366 | 736,033,000 |
| Ontario | 149,060,687 | 13,894,500 | 220,137,067 | 1,193,051,000 |
| Manitoba | 44,723,665 | 224,386,000 | 23,636,674 | 186,591,000 |
| Saskatchewan | 4,928 | 100,586,171 | 107,050,936 | 369,695,000 |
| Alberta | 213,804,352 | 899,777,500 | 68,567,785 | 996,833,000 |
| British Columbia | 114,261,438 | 78,458,000 | 68,567,785 | 360,830,000 |
| N. W. Territories | 14,166,071 | 810,000 | 115,071 | 14,700,000 |
| Yukon Territory | — | 21,000 | 513,000 | 513,000 |
| CANADA | 2,243,407,166 | 1,276,950,500 | 883,236,406 | 4,403,594,072 |

NORTHWEST TERRITORIES

- 1. Norman Wells Oil

BRITISH COLUMBIA

- 1. Yoyo-Koicho Gas
- 2. Clarke Lake Gas
- 3. Jadrav Gas
- 3. Lapsie Creek Gas
- 3. Beg Gas
- 3. Nig Creek Gas
- 4. Milligan Creek Oil
- 4. Peelay Oil
- 5. Blueberry Oil
- 6. Rigel Gas
- 6. Buick Creek Gas
- 7. Boundary Lake Oil Gas
- 8. Fort St. John Gas, Sulphur
- 1. Zama Oil
- 2. Rainbow Lake Oil
- 3. Bituminous Sands Oil
- 4. Worsley Gas
- 5. Nipisi Oil
- 6. Mitsu Oil
- 7. Swan Hills Oil, Gas
- 7. Judy Creek Oil, Gas
- 7. Virginia Hills Oil
- 7. Carson Creek North Oil
- 7. Carson Creek Gas
- 8. Sturgeon Lake South Oil
- 8. Snipe Lake Oil
- 9. Kayboob Oil, Gas
- 9. Kayboob South
- 10. Simonette Oil
- 11. Windfall Gas
- 11. Pine Creek Gas
- 12. Westlock Gas
- 13. Redwater Oil
- 14. Edson Gas, S
- 15. Pembina Oil
- 15. Minnehik Bud
- 16. Leduc-Woodb
- 16. Golden Spike
- 16. Bonnie Glen
- 16. Wizard Lake



NONFERROUS SMELTERS OR REFINERIES

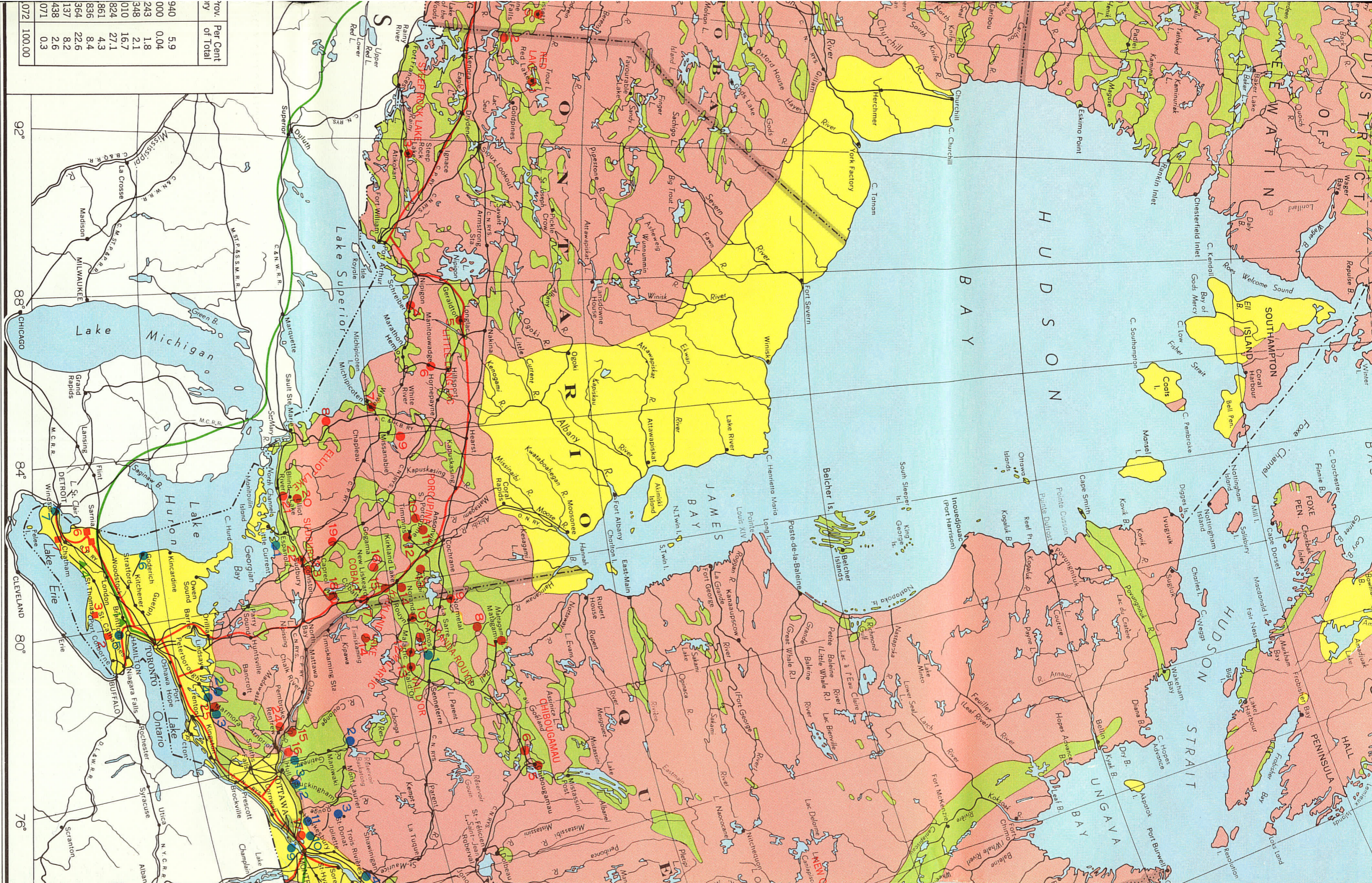
- 18. ARVIDA: Aluminum ingots and alloys, Aluminum Oxide
- 19. BAIE COMEAU: Aluminum ingots
- 14. BEAUBARONIS: Aluminum ingots and alloys
- 21. BELLEFUNE: Zinc, Lead, Silver, Cadmium, Sulphuric acid
- 8. COBALLT: Silver, Arsenic-trioxide
- 7. CONISTON: Copper-Nickel matte
- 7. COPPER CLIFF: Nickel Oxide (refined), Nickel Sulphate; Copper (cathodes, wire bars, ingots, cakes, billets); Gold, Silver, Selenium, Tellurium, Iron Oxide (residue), Platinum metals (in residues), Sulphuric acid
- 7. FALCONBRIDGE: Copper-Nickel matte
- 5. FLIN FLON: Bister, Copper, zinc, Cadmium
- 4. FORT SMYTHCHEWAN: Nickel, Copper, Cobalt, Ammonium Sulphate, Iron Oxide (residue)
- 12. HALEY: Magnesium, Magnesium alloy ingots, Calcium, Titanium, Zirconium, Thorium
- 18. ISLE MALINGNE: Aluminum ingots and alloys
- 1. KIMBERLEY: Aluminum ingots
- 15. MONTREAL EAST: Copper, (cathodes, wire bars, ingots, cakes, billets), Gold, Silver, Tellurium, Selenium, Nickel Sulphate, Copper Sulphate, Selenium Salts
- 20. MURDOCHVILLE: Copper anodes, Bismuth
- 9. NORANDA: Copper anodes
- 13. OTTAWA: Gold, Silver
- 10. PORT COLBORNE: Nickel (cathodes, shot, and ingots), Nickel Oxide, Nickel-Chromium-Iron ingots, Nickel-Copper-Chromium-Iron ingots, Nickel-Copper shot and ingots, Platinum metals (in residues), Cobalt Oxide, Electrolytic Cobalt, Sulphur
- 2. PORT COQUITLAM: Tungsten, Titanium and Tantalum-Niobium (Columbium) metal powders and carbides
- 11. PORT HOPE: Uranium metal, refined uranium compounds
- 10. PORT MAITLAND: Zinc, Calcium, Sulphuric acid
- 17. SHAWINIGAN: Aluminum ingots and alloys
- 6. THOMPSON: Titanium Dioxide slag, Iron
- 3. TRAIL: Lead, Zinc, Gold, Silver, Cadmium, Bismuth, Iridium, Antimonial Lead, Sulphuric acid
- 14. VALLEYFIELD: Zinc

PIG IRON PLANTS

- BLAST FURNACES**
- 1. Sydney, Dominion Steel and Coal Corp., Ltd.
 - 2. Hamilton, The Steel Co. of Canada Ltd.
 - 3. Hamilton, Dominion Foundries and Steel, Ltd.
 - 3. Sault Ste. Marie, The Algoma Steel Corp., Ltd.
 - 4. Port Colborne, The Algoma Steel Corp., Ltd., Canadian Furnace Division
- ELECTRIC FURNACES**
- 1. Kimberley, The Consolidated Mining and Smelting Co. of Canada Ltd.
 - 2. Sorel, Quebec Iron and Titanium Corp.

FERROALLOY PLANTS (Primary)

- 1. Beauharnois, Chromium Mining & Smelting Corp., Ltd.
- 1. Veranoes, Electric Reduction Co. of Canada Ltd.
- 1. Beauharnois, Union Carbide Canada Ltd., Metals and Carbon Division
- 2. Ottawa, Masteeloy Products Ltd.
- 3. Prentiss Township, Prentiss Molybdenite Mines Ltd.
- 4. Welland, Union Carbide Canada Ltd., Metals and Carbon Division



| NO. | Per Cent of Total |
|--------|----------------------|
| 940 | 5.9 |
| 000 | 0.04 |
| 243 | 1.8 |
| 348 | 2.1 |
| 010 | 16.7 |
| 824 | 27.1 |
| 861 | 4.3 |
| 836 | 8.4 |
| 354 | 22.6 |
| 137 | 8.2 |
| 438 | 2.6 |
| 071 | 0.3 |
| 100.00 | |

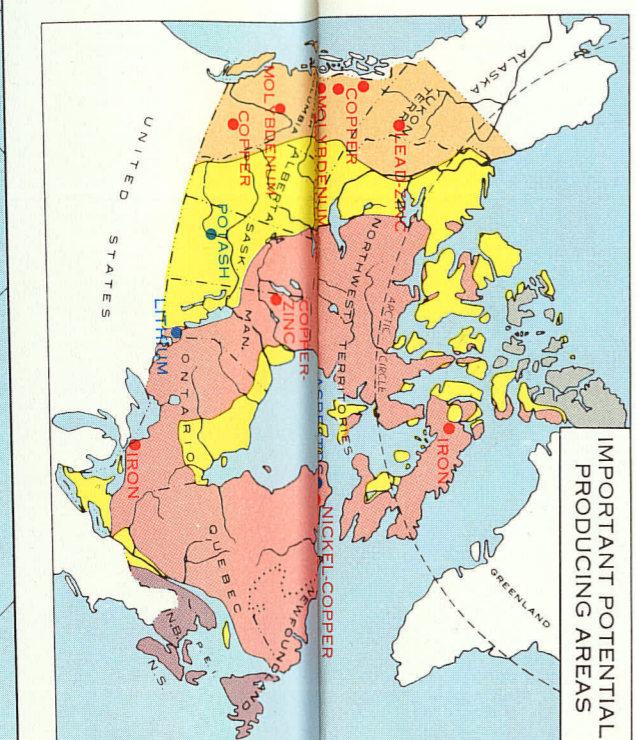
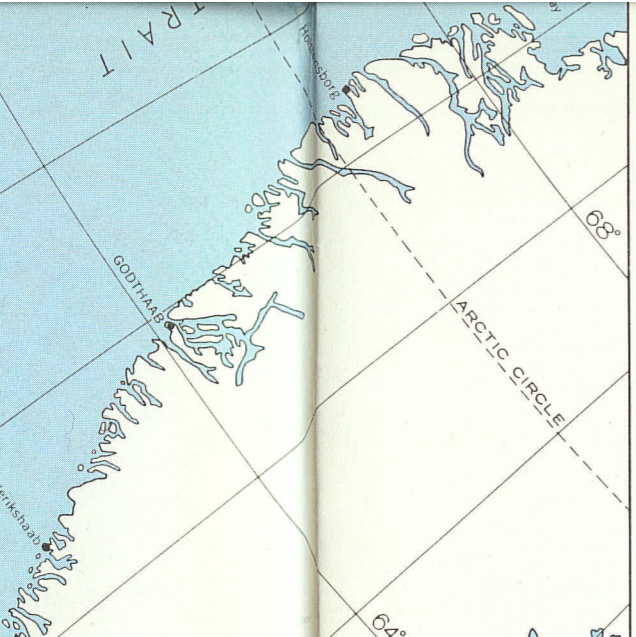
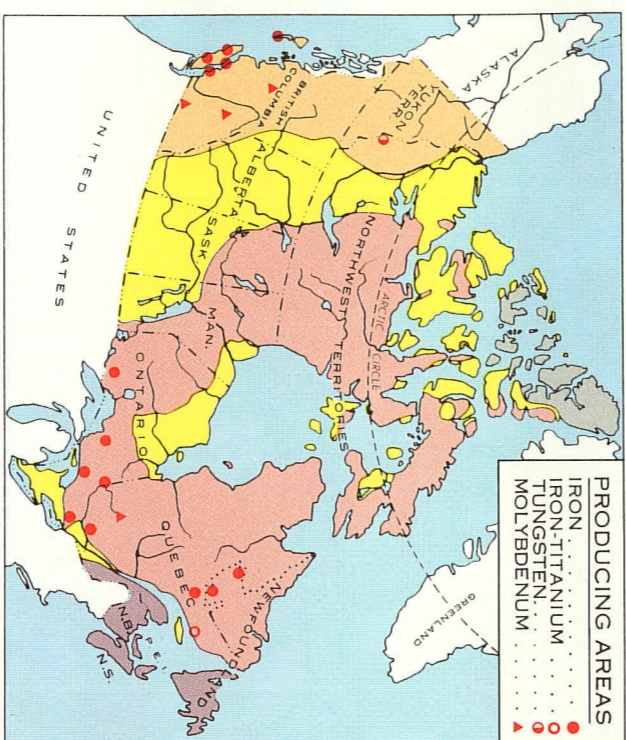
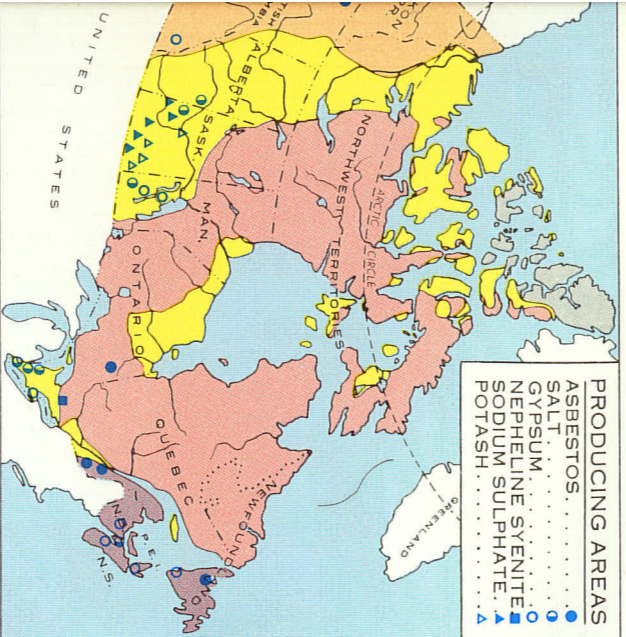
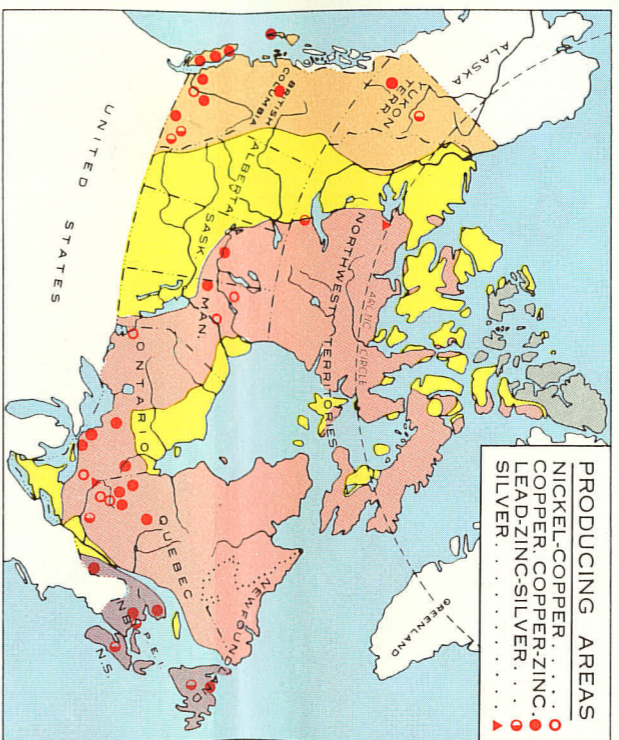
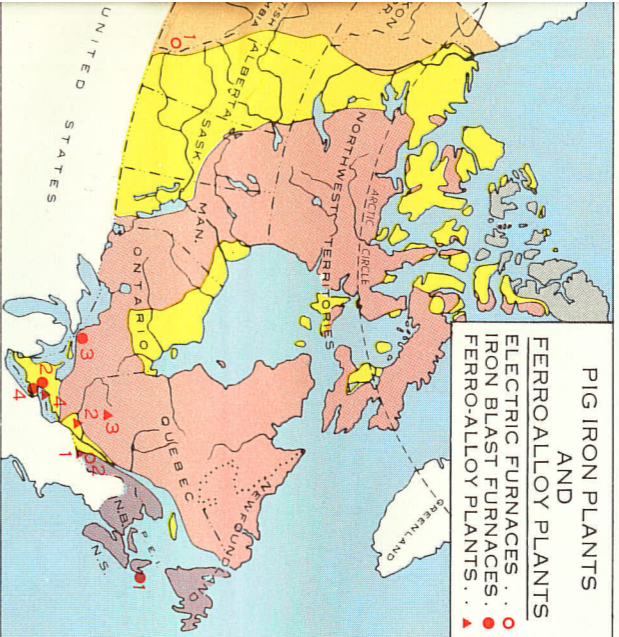
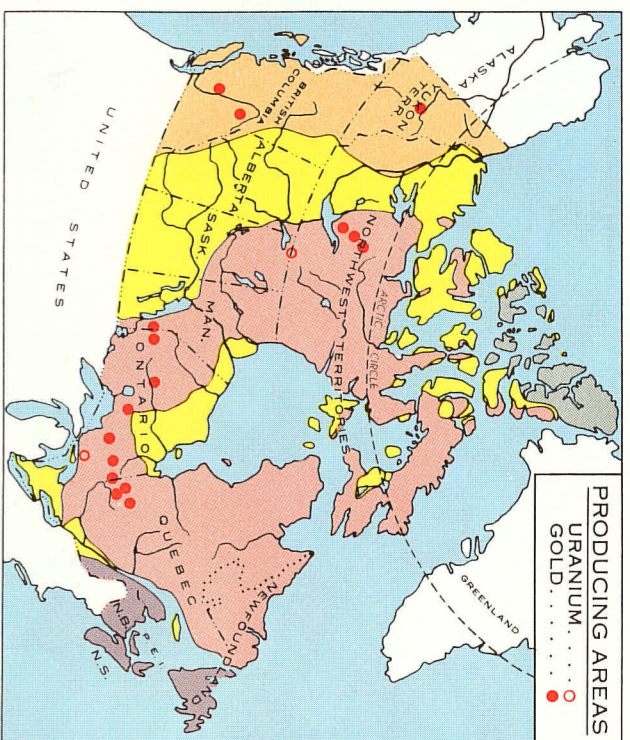
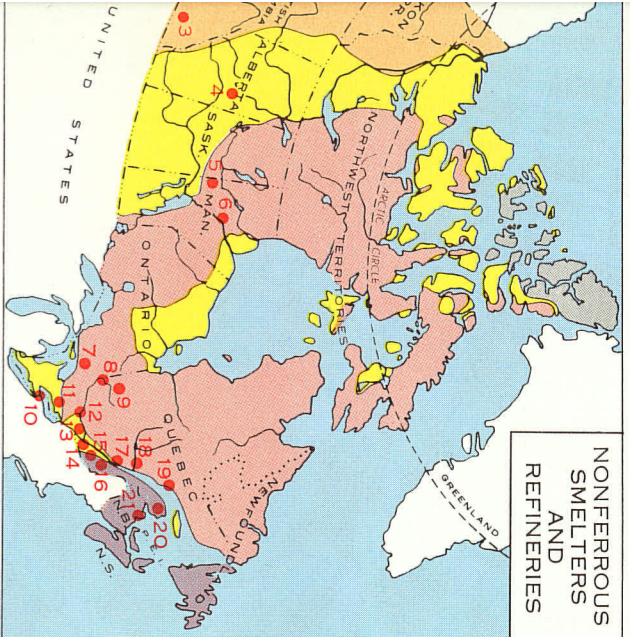
INDEX TO PRINCIPAL OIL AND GAS FIELDS
JANUARY 1968

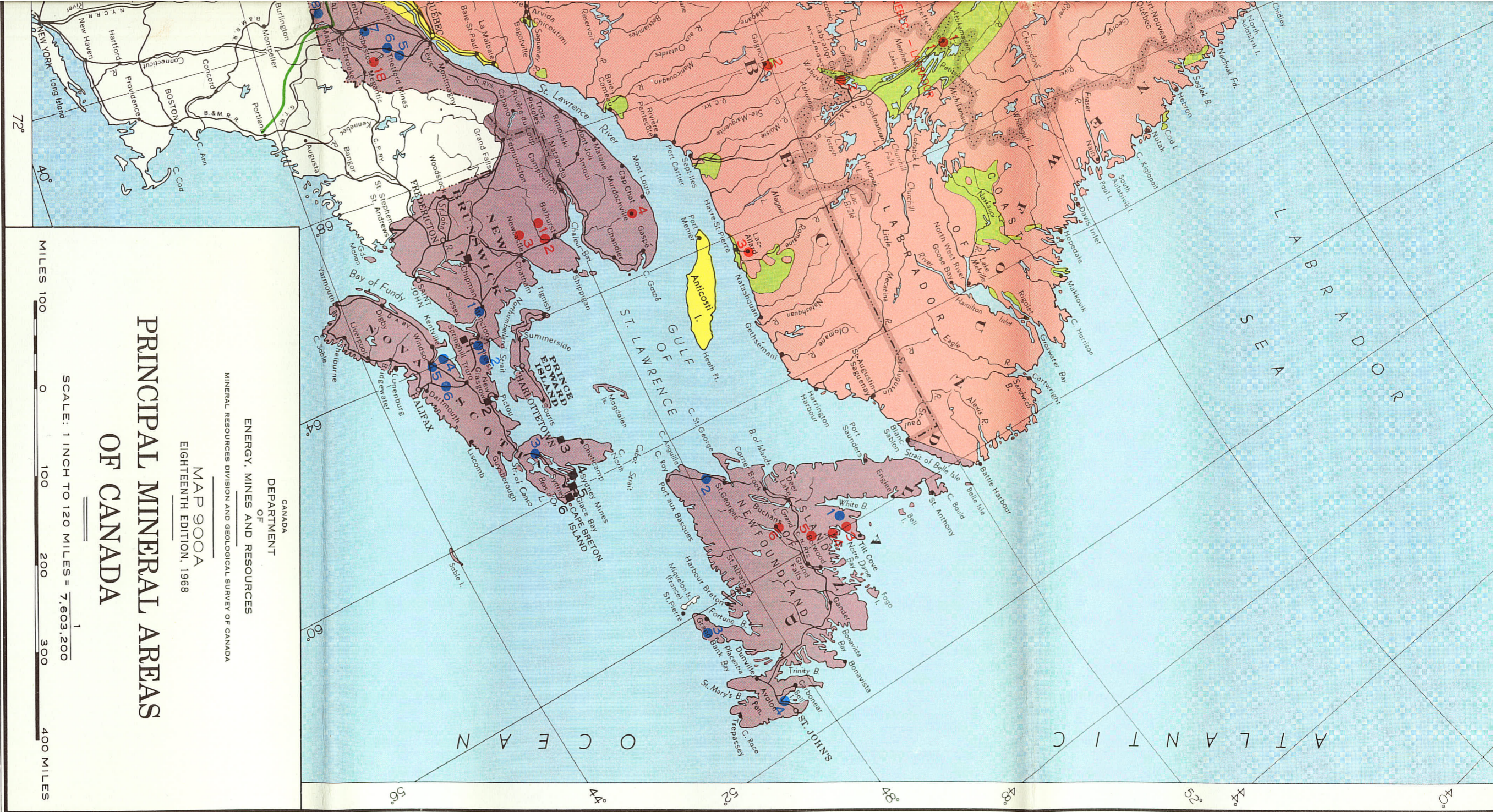
ALBERTA

- 16. Acheson Oil
- 17. Westrose South Gas
- 18. Fort Saskatchewan Gas, Sulphur
- 19. Joarcam Oil
- 20. Viking-Kinsella Gas
- 21. Lloydminster Oil
- 22. Wainright Oil
- 23. Medicine Green Oil
- 23. Medicine River Oil, Gas
- 23. Sylvan Lake Oil, Gas
- 23. Gilby Oil, Gas

SASKATCHEWAN

- 23. Garrington Oil
- 24. Innisfail Oil, Sulphur
- 24. Hamattan-Elkton Oil, Gas, Sulphur
- 24. Hamattan East Oil, Gas
- 24. Sundre Oil
- 24. Olds Gas, Sulphur
- 25. Wimbome Gas, Sulphur
- 26. Fern-Big Valley Oil
- 26. Stettler Oil
- 26. Nevis Gas, Sulphur
- 27. Crossfield Oil, Gas, Sulphur
- 27. Carstairs Gas, Sulphur
- 28. Jumping Pound Gas, Sulphur
- 28. Wildcat Hills Gas, Sulphur
- 29. Turner Valley Oil, Gas, Sulphur
- 30. Okotoks Gas, Sulphur
- 31. Hussar Gas
- 31. Courtes Gas
- 31. Wayne-Rosedale Gas
- 32. Castrod Gas
- 33. Provost Gas
- 34. Bindros Gas
- 35. Medicine Hat Gas, Sulphur
- 36. Savanna Creek Gas, Sulphur
- 37. Prancher Creek Gas, Sulphur
- 37. Lookout Butte Gas
- 38. Bantay Oil
- 40. Pendant d'Oreille Gas
- 1. Coleville-Smiley Oil, Gas
- 2. Dodsland Oil
- 3. Battrum Oil
- 3. Forster Oil
- 3. Success Oil
- 4. Instow Oil
- 5. Dollard Oil
- 5. Radcan Oil
- 6. Weyburn Oil
- 7. Steelman Oil, Gas, Sulphur
- 8. Parkman Oil
- 8. Queenstale Oil
- 8. Willmar Oil
- 8. Alda Oil
- 9. Nottingham Oil
- 9. Hastings Oil
- 9. Workman Oil
- 9. Canduff Oil





SCALE: 1 INCH TO 120 MILES = $\frac{1}{7,603,200}$

MILES 100 0 100 200 300 400 MILES

PRINCIPAL MINERAL AREAS OF CANADA

MAP 900A
EIGHTEENTH EDITION, 1968

CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES
MINERAL RESOURCES DIVISION AND GEOLOGICAL SURVEY OF CANADA

MANITOBA

ONTARIO

- 1. North Virden-Scallion Oil
- 2. Virden-Roselea Oil

- 1. Gobles Oil
- 2. Haldimand Gas
- 3. Norfolk Gas
- 4. Rodney Oil
- 4. Clearville Oil
- 5. Dawn 156 Gas
- 6. Bickford Gas
- 7. Tilbury Gas

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Geology and cartography by the Geological Survey of Canada
Printed by the Surveys and Mapping Branch