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The Sudbury Area To The Great Depression: Regional Development On The Northern Resource Frontier

Peter Vaino Krats

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THE SUDBURY AREA TO THE GREAT DEPRESSION:
REGIONAL DEVELOPMENT ON THE NORTHERN RESOURCE FRONTIER

by

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Submitted in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy

Faculty of Graduate Studies
The University of Western Ontario
London, Ontario
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ABSTRACT

An historical study of the Sudbury area of Northern Ontario raises important questions about the interplay of frontier North and settled South. Did progress in the "Nickel Belt" rely on outside-directed staples exploitation, or did local initiative play any part? What sort of society emerged -- urban or rural, chaotic or tranquil? Questions such as these guide this thesis, which adopts a narrative coverage of local events from prehistory to the Great Depression. Changes in the resource sectors, administration and society are emphasized, for these best reflect the successive stages of areal development from a Northern "wilderness" to a modern region.

This broad-ranging survey reveals both the strengths and shortcomings in the standard analysis of the resource frontier. According to these assessments, Canada's mid-north was home to a mainly urban population that was dependent on outside staples exploiters. Yet in the Nickel Belt, a varied economy was highlighted by a farm sector which assumed proportions belying the area's supposed, mining-induced ecological devastation. Outside-sponsored mining and forestry also produced much local progress. Even the monopolization of the nickel industry brought more good than harm; though INCO showed scant sympathy for area residents, the day-to-day needs of a huge industry and the stability assured by the lack of competition were a great boon to the Nickel Belt. Aid from the senior governments resulted in yet more gains; the combination of public and private resources produced an economic and social infrastructure comparable to much older, more populated regions: Sudbury, because of its various advantages and despite the absence of mineral works, achieved local metropolitan status even as it fell into dependency on INCO. That centre's

fate, and the less-heralded events across the Nickel Belt, show the merits of an intermingling of the metropolitan, staples and dependency approaches along lines which pay far greater heed to the real accomplishments, rather than the perceived costs, of Northern, resource-based development.

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The convoluted path which has taken this dissertation to fruition has left me indebted to many individuals and institutions. The D.B. Weldon and Natural Science Libraries at the University of Western Ontario were of great help as were the mining and regional collections at Laurentian University. The Regional Room at the Sudbury Public Library was all that a researcher could ask, containing a wealth of easily accessible material. Not so the municipal archives -- if that term can be applied to basements and attics -- although those in charge did their best to accommodate my repeated visits. And Fr. Robert Toupin provided a quick, friendly introduction to the Archives de la Compagnie de Jésus, du Canada-français located at the Université de Sudbury.

Research, of course, is only part of a thesis; I would like to acknowledge the guidance of Dr. Morris Zaslow through much of the text. Professors Erick Hahn, Peter Neary and Fred Armstrong provided a judicious combination of criticism and support. General encouragement also came from friends, both on and off campus, and especially from Aino and Voitto Krats, whose patience and continuing enthusiasm concerning this thesis surely ranks as a supreme example of parental understanding.

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that the ore bodies resulted when the sulphides occupied various lines of weakness during post-volcanic, secondary geological events. Two major theories were proposed. D.W. Dickson (1902) and C.W. Knight (1916) argued for the injection of the sulphides during downfaulting through hydrothermal processes; work by W.H. Collins (1928-34) and H.C. Cooke (1946) was in general agreement. But in the 1920s, T.C. Phemister proposed separate intrusions of magma from the same reservoir; in 1938 A.B. Yates largely concurred but introduced the notion of joint hydrothermal and metamorphic origins. These views soon superseded Coleman's in situ theories, and with various refinements the theory of multiple magmatic intrusions continues to draw support.⁵

But the catalyst of that activity would become open to debate. Until the 1960s geologists believed that subsurface pressure was the causal factor; in 1962 R.S. Dietz introduced the concept of the Sudbury structure as an astrobleme (meteor crater). He proposed that about 1.7 billion years ago a four kilometre, nickel-iron meteorite exploded and created a shallow crater some 30 miles long and 2 miles deep. The partially liquified meteorite impressed itself upon the crater walls, thus becoming the ore deposits. Magma triggered by the impact welled into the crater bowl, burying these ores; the remaining basin gradually filled with sediment until the resulting compression "deformed" the crater into an oval.⁶ This new view offered solutions to various unsolved problems and has won many adherents, though many who accept the impact theory still argue for magmatically intruded ore deposits. Ironically, the theory sparked much new geological work, resulting in new evidence of an endogenous origin for the Sudbury Igneous Complex. Thus the debate started a century ago still continues unabated.⁷

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INTRODUCTION

The Setting

The Sudbury Basin of Northern Ontario is one of the geological wonders of the world; an understanding of human history there requires a recognition of its natural riches. That, in turn, raises the issue of physical boundaries. Though that part of the Lake Huron coastline lying between the French and St. Mary's Rivers had long-established settlements, a smaller region about the Sudbury geological basin drew notice only in the 1880s. That area -- the "Nickel Belt" -- has been most often defined as including communities and rural settlement directly influenced by local mining. Oiva Saarinen, a geographer, has called for a more carefully defined Sudbury umland including all areas where "economic and socio-cultural activities are closely linked" with Sudbury.¹ But his methods -- questionnaires and surveys -- are not available to the historian, whose evidence reflects the boundaries applied by earlier commentators. For the most part, then, I consider developments within a 1700 square mile region that lies between North latitude 42°20' to 45' and West longitude 80°31' to 81°45' -- from Hutton and Hess Townships on the north to Laura and Servos Townships in the south; from Nairn Township in the west to Dryden Township in the east. Centred by the Sudbury (geological) Basin, the region lies on the Canadian Shield, some 35 miles north of Lake Huron, 205 miles north of Toronto, 365 miles northwest of Montreal, and 155 miles east of Sault Ste. Marie. But it would be a mistake to consider this area as "settled" in 1931 or indeed by 1988, for in common with most of the Canadian Shield, areas more distant from rail or road axes often remain without permanent human presence. To understand this still largely empty land one must come to terms, however briefly, with its physical setting.

Few areas are so geologically complex as the Sudbury Basin; perhaps none have received so much contradictory analysis. Though mineralization was reported by Alexander Murray of the Geological Survey in 1856, detailed study began only after a flood of prospecting beginning in 1883 indicated the extent of the local deposits. In 1888 Robert Bell and his assistants began three seasons work that culminated in the first detailed geological map of the region. Bell's map clearly displays the oval outline of the Basin, though he did not immediately recognize the corresponding shape of the Sudbury Igneous Complex (nickel irruptive). Bell proposed that the deposits were of volcanic origin, with a magmatic separation of the various series.² Studies in the 1890s expanded on Bell's findings; these were further refined by A. E. Barlow, who proposed an igneous, gravitationally differentiated origin for the ore body, while allowing for some rearrangement of the deposit through secondary geological processes.³

Barlow's work, widely circulated by the Geological Survey, drew the plaudits of A.P. Coleman, who was studying the region for the Ontario Bureau of Mines. Coleman concluded that the Sudbury area deposits were all interconnected (i.e. a Sudbury Basin) via a single sheet of irruptive rock or its offsets that was some 35 miles long, 17 miles wide and 1.5 miles thick, the North and South "ranges" merely being the exposed rim of this massive sheet, the hollow of which had been filled by sedimentary, Whitewater series rocks. "The theory of magmatic separation accords best with the facts" argued Coleman, with "some subsequent re-arrangement of ores by solution and redeposition."⁴

Coleman's work soon became the orthodox view; but his reference to secondary processes reflected a considerable body of work that ran counter to a straightforward magmatic theory. As early as 1887 J.H. Collins proposed

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that the ore bodies resulted when the sulphides occupied various lines of weakness during post-volcanic, secondary geological events. Two major theories were proposed. D.W. Dickson (1902) and C.W. Knight (1916) argued for the injection of the sulphides during downfaulting through hydrothermal processes; work by W.H. Collins (1928-34) and H.C. Cooke (1946) was in general agreement. But in the 1920s, T.C. Phemister proposed separate intrusions of magma from the same reservoir; in 1938 A.B. Yates largely concurred but introduced the notion of joint hydrothermal and metamorphic origins. These views soon superseded Coleman's in situ theories, and with various refinements the theory of multiple magmatic intrusions continues to draw support.⁵

But the catalyst of that activity would become open to debate. Until the 1960s geologists believed that subsurface pressure was the causal factor; in 1962 R.S. Dietz introduced the concept of the Sudbury structure as an astrobleme (meteor crater). He proposed that about 1.7 billion years ago a four kilometre, nickel-iron meteorite exploded and created a shallow crater some 30 miles long and 2 miles deep. The partially liquified meteorite impressed itself upon the crater walls, thus becoming the ore deposits. Magma triggered by the impact welled into the crater bowl, burying these ores; the remaining basin gradually filled with sediment until the resulting compression "deformed" the crater into an oval.⁶ This new view offered solutions to various unsolved problems and has won many adherents, though many who accept the impact theory still argue for magmatically intruded ore deposits. Ironically, the theory sparked much new geological work, resulting in new evidence of an endogenous origin for the Sudbury Igneous Complex. Thus the debate started a century ago still continues unabated.⁷

Whatever its origins, the oval Sudbury structure, with a sedimentary central "cap", is one of the world's greatest mineralized zones.⁸ The "rim" and its offsets contain nickel, copper, iron, gold and trace amounts of a dozen other minerals, while the "Great Fault" in the central basin contains low-grade base metals. Scattered deposits of gold and other minerals are or were also present at points outside the Nickel Rim, with low-grade iron deposits particularly prevalent to the north. Over the millenia, both the Rim and the Canadian Shield beyond were eroded, the last severe scouring ending some 11,000 years ago as the latest Ice Age came to a close. These glaciers and earlier erosion left a physiography not unlike that now extant. The Nickel Basin, a rocky rim surrounding an interior basin of some 94,000 acres, forms nearly half the study area. The western part of this "Valley" is a flat, clay plain; the centre is composed of coarser soils broken by small hills, and the eastern Valley is very flat but sandy. North of the Valley a rugged series of hills form the North Range, a rough terrain broken only by five drainage basins that channel water south. To the Valley's east, the nickel "rim" is much less evident, because of a sand-gravel overburden covering the rock. The South Range (merging into the North at the Basin's westerly limit) is neither so rough as the North nor so flat as the East; low-to-moderate hills are broken by long, narrow lakes and quite level "pockets" of glacial drift. In all directions, the "rim" eases rather imperceptibly into the Precambrian physiography typical of the remainder of the region.

The entire region drains south into Georgian Bay through several watersheds. Three watersheds -- Junction, Whitson and Whitewater -- drain the region's centre; the Onaping drains the northwest. All four enter the Vermilion River, which itself drains the western portions of the

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region as a tributary to the Spanish River. To the east lies the Wanapitei watershed, while the Nickel Belt's southern periphery lies within the Whitefish-Penage watershed. These systems and more than 100 associated lakes follow patterns imposed by the terrain -- Valley waterways are slow-moving and tortuously circuitous while the swift-flowing rivers elsewhere in the region feature numerous small rapids and falls.

Alongside all the waterways, rich accumulations of alluvial soil and an ameliorating climate helped prompt the emergence of an extensive flora following the latest Ice Age. Organic humus then speeded the entry of a mixed forest characteristic of the transition zone between deciduous and boreal types. Large pines -- white pine occasionally reached nine feet in diameter -- the "firs", and tolerant hardwoods covered the higher elevations; cedar and tamarak were prevalent in wetter zones. The underlying fauna also included both northern and southern species, their abundance determined by the immediate circumstance. Not surprisingly, this flora supported fauna representative of both north and south zones -- mammals, birds, fish and even reptiles were quite abundant.⁹ The least common factor in this ecological diversity was man, represented by the small number of Amerindian people who were an integral part of their environment.

Two Views of Local History

The development of the Sudbury area paralleled the opening of the Canadian North as a whole: an "empty" wilderness was transformed through the exploitation of its enormous resources and a modern society was produced. Railway builders, miners, lumbermen and farmers wrought tremendous change, as did international entrepreneurs seeking profit and provincial officials who nurtured dreams of an "Empire Ontario." Railways, roads and telecommunications lines were installed, forests were cut, farms were opened and, most

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Long delayed domestic nickel refining, not to mention a landscape scarred by ruthless exploitation of its resources, have made the Nickel Belt a powerful symbol among latter-day Canadian nationalists. They decry the governmental incompetence or weakness that encouraged monopoly formation in the nickel industry. That monopoly, the nationalists complain, increased local dependency, crushed potential rivals, and left the strategic nickel industry in the hands of foreign (i.e. American) interests.²³ Marxist analysts like Julian Laite and Wallace Clement go on to argue that monopoly control helped to finance the introduction of full capitalist industrialism, thereby concentrating profits in a few, outside hands and blunting the ability of miners to alter local circumstances.²⁴

Obviously, there is another side to the story. The Marxist critiques offer no real alternative to modernization in mining and implicitly assume that the labour force was interested in united action. The discussion of failed labour movements made below suggests otherwise. Nationalist critics, meanwhile, suggest that given a different regulatory setting other firms would have left more of the Nickel Belt's riches in Canada. Yet, as will be shown, there was a marked absence of Canadian firms with the finances, technical expertise and market connections that would have permitted successful nickel production. Even the provincial-government concentrated its local influence on transportation, administration and colonization, leaving the high capital mining field to private concerns.

In any case, as Warren Jestin has argued, the "benign neglect" of late 19th century policymakers was a natural consequence of earlier North Shore failures, slow recognition of nickel's importance, the belief in unlimited resources, and an inevitable time lag between concern and effective government action. Given these circumstances, it is worth noting that

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elsewhere in the Nickel Belt. Lawmakers and Southern social organizations limited "frontier" freedoms. Thus both the Nickel Capital of the World and the region surrounding Sudbury were dependent, exploited and underdeveloped. In the classic tradition of Northern Canada, the Nickel Belt was a hinterland of the South, an outpost of foreign economic power; in short, a source of wealth rather than a wealthy place.

Theory and Themes

These disparate depictions indicate the merits of a detailed study of the Sudbury area. A survey of the Nickel Belt's rise provides insights into many of the great themes of Canadian history, including metropolitanism, the staples trade, the advance of the frontier, and northern development. Many subsidiary issues -- the railways' role in development, the character of northern agriculture, the effectiveness of the public purse in opening Canada's hinterland, the foreign control of strategic Canadian resources -- are also brought into sharper focus. Detailed analyses of these and other issues awaits further local and regional study, for the North has been neglected by most historians. Still what follows suggests that the standard assessments of Northern and resource based development are in need of revision. And as Fred Dahms has shown with respect to south-central Ontario, regional studies of this sort are of great aid in understanding both the individual community and the larger, national setting.¹⁰ Even the specific details can be of wider relevance. In Sudbury's case, for instance, one can trace the rise of a mineral industry from the exploratory stage to the fully-industrialized state.

Study of regional development raises issues of definition. Like most historians, I have considered development in its broadest sense, including physical and economic expansion, the related increase in population,

together with the subsequent spread of administration, services and social institutions. The costs of development, as noted, were highlighted by the destruction of the local flora and fauna, and especially by the declining Amerindian culture. The driving forces behind the development were both local and distant, public and private.

Regionalism is a more complex concept. Geographers, sociologists, economists and other social scientists, while taking some note of political and social factors, emphasize environmental and economic determinants in defining a region. Historians, on the rare occasions that they define the term at all, usually assume much broader definitions which focus on human factors.¹¹ Here a region is held to be defined by natural, functional, administrative and cultural factors, and especially a conscious awareness of an area's uniqueness, either by the inhabitants or, in the case of historical commentaries or reports, by the viewer. By these criteria, the Nickel Belt clearly constituted a region, for it featured a relatively specific physical and economic character, while Sudbury served as an administrative, commercial and social focal point. Moreover, documentary evidence available to the historian leaves no doubt that since the 19th century both local residents and outside observers have considered the Nickel Range a unique, richly endowed resource region.

What the Sudbury region did share with other Canadian resource areas was a quintessentially "Northern" character, dictated by what W.L. Morton termed "the action and reaction of settled south and wilderness north."¹² The notion of northerliness is developed most fully by Louis-Edmond Hamelin, who has proposed a statistical measure of northerliness -- the "valeurs polaires" (VAPO). The VAPO, in turn, defines the extent of the ecumene, or the

terrestrial space viewed with respect to the facts of habitation, exploitation, organization, and culture. In brief, the ecumene, rooted in an ecological background, becomes a complex and changing combination, with demographic, economic, cultural, and even subjective inputs.

R.J. Gajda provides a simpler definition, categorizing the ecumene as the "permanently settled, developed part of Canada."¹³

Both approaches place the Sudbury area well within the undeveloped North in 1880; by 1930 it was part of the elongated series of residential, exploitative and linkage ecumenes that stretched along the railway lines traversing the Canadian Shield. Yet even in 1930 the outskirts of the Nickel Belt were little changed from 1880, with only the short distance from settlement mitigating against a high VAPO. And the region as a whole lay well within the area popularly and administratively identified as Northern Ontario; local residents often displayed the dissatisfaction with the level of aid from senior governments and a sense of outside control of local destiny common to all Northerners.

This unease was a manifestation of the metropolitan control of the Canadian North. The Sudbury Region was no exception: government officials in Toronto or Ottawa could and did introduce new, unwanted legislation with no regard for local wishes. The Nickel Belt's economic well-being, meanwhile, was at the mercy of businessmen living in Toronto, Montreal, New York or London. Outside decision making is just one aspect of metropolitanism, an approach to urban-regional history that has obvious applicability locally. Metropolitanism evolved from a rejection of Frederick Jackson Turner's frontier thesis in favour of an organic interdependency between metropolis and hinterland with progress directed from the settled centre. N.S.B. Gras, firmly rooted in the ecological approach of Chicago sociologist Robert Park, first put forward this notion in 1922,

but it was Donald C. Masters' The Rise of Toronto (1947) that drew wider attention. In 1954 J.M. S. Careless' broader statement on metropolitanism, incorporating aspects of the Laurentian and staples schools, brought the concept an air of orthodoxy.¹⁴

Careless recognized that hinterlands were subservient to their metropolitan centres, but he maintained that there was an interdependency inherent in the relationship. Other scholars, in contrast, have emphasized the exploitation of Canadian hinterlands. A.R.M. Lower, for instance, depicted an "assault" on the forest by metropolitan forces interested only in profit.¹⁵ The notion of Canadians as exploited "hewers of wood and drawers of water" gained renewed intellectual credibility during the nationalist critique of foreign ownership so prevalent during the 1960s and 1970s. Taking their cue largely from the Third World studies of Andre Gunder Frank, these critics pointed to outside control, local under-development and the expropriation of surpluses as "proof" of regional economic dependency.¹⁶ The fragile economy and ecological devastation of the Nickel Belt offered a "perfect" example, at least according to Bruce Hodgins and Jamie Benedickson, of just such a dependent, exploited region.¹⁷

The Nickel Belt also provides an ideal setting for studying the single-industry town. These centres have been much studied in the United States, where scholars like Arnold Alasen have discerned various categories of dependent communities, ranging from squatters hovels to "model" company towns.¹⁸ In Canada the sociologist Rex Lucas has contended that most mine towns, mill towns and rail towns are not urban insofar as urban "connotes size, excitement and variety." On the other hand, Larry McCann and James Simmons, both geographers, place these communities at the "front line" of the Canadian urban experience in that all Canadian centres ultimately

depended on staples production. Beyond this integral role in "a global system of resource extraction," these towns were agents of metropolitanism, transmitting economic and cultural forces from the outside while serving their own small hinterlands.¹⁹

In Gilbert Stelter's view, the transmission of metropolitan forces was a natural role for these dependent centres, which he identifies as "colonial" towns. Following earlier hints by Lower and the work by Americans Carl Bridenbaugh and Richard Wade, Stelter contends that these "colonial" towns defined the frontier.²⁰ This "urban frontier" also drew the attention of Careless, who argued that "a frontier came into being under metropolitan impetus as the tying of territorial raw resources to outside markets through the mediation of investment and technology." Mining, he argued, required an especially "committed extractive frontier" because of its greater mechanical and manpower requirements.²¹ The Nickel Belt, home to many mining camps, provides an excellent test for the notion of an urban frontier and many examples of dependent, single-industry communities.

The dependent resource frontier, argues H.V. Nelles, was just one of the failings of the "politics of development" as practised by successive Ontario governments intent upon opening up New Ontario. Spurred on by dreams of an "Empire Ontario" and fearful of CPR-based incursions from Montreal, provincial officials sanctioned massive timber sales and liberal mineral policies while providing major aids to railways, roads and agricultural settlement. Yet government actions intended to ensure greater local returns -- the Sawlog Act, for example -- occurred only when businessmen found the "positive state" in their best interests. For the most part, concludes Nelles, the nickel firms' antagonism toward the positive state held off various attempts to "Canadianize" the Sudbury-area works.²²

These and other theoretical issues make the Sudbury Region an ideal setting for urban studies.

Yet for all its "urban" character -- typical of the Northern resource-dependent setting -- the Nickel Belt was more than a barren wasteland featuring scattered, often ephemeral resource communities. Agriculture, in fact, was a real factor in the local economy; its progress provides an interesting, often overlooked example of farming in Ontario's North. The politics of development once again come to the fore: the notion of simultaneous exploitation of the forest and the field resulted in liberal settlement terms and much Colonization Road construction. For all the failed expectations of the provincial officials -- "timber farming" and land abandonments were widespread -- much was accomplished. Indeed, the local agrarian experience provides an excellent test for the notion of the North as a region of "marginal" agriculture. Michael Troughton, a geographer, and other students of northern agriculture have concluded that farming was the result, not the cause, of regional economic expansion. They stress the reliance on resource markets and outside income, especially from forestry. According to their analyses, Northern agriculture was a dependent economic sector, doomed to fail when new machines changed the nature of farm production and improved transport facilities introduced new competition.³⁰ Was farming in the Nickel Belt just another manifestation of the "boom and bust" cycle so common in the North, albeit on a longer time scale?

While "boom and bust" sequences are prominent features of the Nickel Belt history, there is no mistaking the general progress made through mining, forestry and agriculture. Study of that progress, along with the winners and losers, reveals many themes common to the larger provincial

Ontario, unlike Quebec, did apply some sanctions on the mineral industry.

Thus Alexander Dow has downplayed the importance of lax public policy in INCO's rise, giving credit instead to that firm's internal management for creating a large market for nickel and thereby building a powerful concern.²⁵

Dow's conclusions bring to mind earlier, positive assessments of INCO's monopoly control. In the Thirties, Alex Skelton lauded INCO's might, terming it in "the best interests of the industry itself of the consuming public, and of the contemporary industrial and social order."

Two decades later, Oscar W. Main's classic study of the nickel industry concluded that monopoly had produced far steadier progress in the Nickel Range than the constant fluctuation of more competitive mineralized zones.²⁶

Far earlier, as we shall see, Sudburians had applauded INCO's successes, much preferring the local income generated by a foreign monopoly to the uncertainties of half-baked Canadian schemes. This praise should not surprise, for Sudburians were the major beneficiaries of the Nickel Belt's rapid expansion. Indeed, Sudbury provides a good case study of a regional centre's evolution. Urban growth has been much analyzed, with various authors explicitly or implicitly adopting the urban concept as a setting, entity or process. In Canada, the study of urban centres revolves mainly about the metropolitan thesis discussed earlier. While Donald Davis has recently questioned the explanatory powers of that model, many students of Canadian urban places have made use of the four stages of urban growth first put forward by N.S.B. Gras, albeit in an order differing from the original proposal. Students of regional development have also looked to Jacob Spelt's excellent analysis of the emergence of urban systems and the rise and fall of urban centres within south-central Ontario.²⁷

It is not possible here to summarize all the approaches to urban studies that have emerged in the past two decades, but there is no mistaking that the urban centres of the Nickel Range provide good tests for their explanatory powers. Gras' model helps to explain Sudbury's rise: that centre's initial and locational advantages, its central place on the transportation network, its locally important marketing and financial (i.e. banking) roles and even some light manufacturing brought it local dominance. And a committed local leadership -- a factor emphasized by A.F.J. Artibise -- did what it could to sustain Sudbury's local metropolitan status.²⁸

Yet the Nickel Belt contained many other communities, some of which occasionally rivalled Sudbury in importance. Best known were the "company towns", where corporate control assured considerable order and prosperity at the cost of complete control by the sponsoring firm. But there were many other towns and villages. "From the very beginning", Carl Wallace has argued, "the Sudbury region was a diversity of physically separate, heterogeneous communities."²⁹ Evidence presented here supports his view: "classic" mining towns were in the minority, outnumbered by communities dependent upon the interplay of resource exploitation, railway-generated income, as well as various social and commercial functions. Study of these small communities, often overlooked by urbanists, raises important theoretical issues. Were they, as ~~Rex~~ Lucas has suggested in relation to latter-day centres of similar sorts, merely agglomerations of humanity, lacking true urban diversity? What role did these centres play in the large metropolitan system? Did these small foci, with tiny markets, transport and other Grasian functions of their own, achieve some degree of urban status? Or, if their dependency and limited roles precluded being truly urban, what of Sudbury? Was it, too, something less than an urban centre?

These and other theoretical issues make the Sudbury Region an ideal setting for urban studies.

Yet for all its "urban" character -- typical of the Northern resource-dependent setting -- the Nickel Belt was more than a barren wasteland featuring scattered, often ephemeral resource communities. Agriculture, in fact, was a real factor in the local economy; its progress provides an interesting, often overlooked example of farming in Ontario's North. The politics of development once again come to the fore: the notion of simultaneous exploitation of the forest and the field resulted in liberal settlement terms and much Colonization Road construction. For all the failed expectations of the provincial officials -- "timber farming" and land abandonments were widespread -- much was accomplished. Indeed, the local agrarian experience provides an excellent test for the notion of the North as a region of "marginal" agriculture. Michael Troughton, a geographer, and other students of northern agriculture have concluded that farming was the result, not the cause, of regional economic expansion. They stress the reliance on resource markets and outside income, especially from forestry. According to their analyses, Northern agriculture was a dependent economic sector, doomed to fail when new machines changed the nature of farm production and improved transport facilities introduced new competition.³⁰ Was farming in the Nickel Belt just another manifestation of the "boom and bust" cycle so common in the North, albeit on a longer time scale?

While "boom and bust" sequences are prominent features of the Nickel Belt history, there is no mistaking the general progress made through mining, forestry and agriculture. Study of that progress, along with the winners and losers, reveals many themes common to the larger provincial

or national experience. Transportation issues are a case in point. Peter George and various American scholars have questioned the necessity of precedential rail lines, but the CPR clearly played a crucial role in revealing the Nickel Belt's riches and permitting their exploitation. Railway construction also helped to determine metropolitan control: the construction of rail lines to Toronto confirmed that city's hold over the Sudbury region. Roads, by contrast, were in no way as influential as in the south or even, as Geoffrey Wall has shown, on the southern fringes of the Canadian Shield.³¹

The extensive railway network crisscrossing the Nickel Belt was just one aspect of the interplay of resource exploitation, commerce, administration and social expansion which brought an "island" of the white man's ecumene north, leaving a circumstance not unlike that of the longer-settled South. The unfettered, often-destructive "progress" spread outward, opening new areas and exploiting new resources in a manner not unlike that suggested for all of New Ontario by Lower and, later, Nelles. But this was not the liberal, Turnerian frontier nor the unsettled mining setting described by S. Dale Clark.³² Most local residents quickly re-established their old way of life, and they bemoaned the antics of a "floating" population consisting of transient labourers and fortune seekers. Cultural transfer permeated even the smallest centres, the Anglo-Saxons, French Canadians, and a myriad of "foreigners" each brought their own customs, language, institutions and lifestyles. The society which emerged was more complex than the sum of its parts; it produced a regional character, a sense of belonging.

This sense of place should not be overstated, because ethnic and class tensions remained. For all its newness, the Nickel Belt was much

like the rest of populated Canada, influenced by the conflict between French and English, wartime and immigration caused xenophobia, the emerging labour movement, the social gospel, prohibition, changing tastes and cultural mores; in short, by the various threads running through Canadian society prior to the Great Depression. But to understand the whole, one must gain a full grasp of its constituent elements. Most national issues receive only passing attention here, with the thesis focusing on the physical economic, administrative and social expansion unique to the Nickel Range.

Historiography

Detailed study of the Sudbury Region is clearly helpful in understanding larger issues, but detailed comparisons and analyses must await further work in Northern Canadian history. Students of Northern history face no shortage of information: the Bibliography of Ontario alone offers many avenues of research.³³ And coverage of specific topics -- the mines, railways, Churches, fur trade, resource towns -- abounds. But the evidence is scattered among periodicals, serials, official publications or specialized articles and monographs; the excellent bibliographic essay in Morris Zaslow, The Opening of the Canadian North gives some indication both of the wealth of information that is available and its scattered nature. Dr. Zaslow's volume, Harold Innis and A.R.M. Lower, Settlement and the Forest and Mining Frontiers, and Anna Wright, "The Canadian Frontier, 1840-1867", provide the best general coverages of Northern Ontario development.³⁴ H.V. Nelles, The Politics of Development and the less critical Richard Lambert and Paul Pross, Renewing Nature's Wealth consider resource development in Ontario from administrative perspectives.³⁵

The basic outlines available in these monographs can be supplemented by more specific examinations of Northern settings. Three types of studies predominate. First, various works assess northern development from a provincial or regional framework. Examples include Morris Zaslow's theses on the Mackenzie Basin and the work of his students; John Wedley on northern British Columbia and Bruce Hunter on New Manitoba. Denis M. Watson's "Frontier Movement and Economic Development in Northeastern Ontario, 1850-1914" approaches the issue from a geographer's perspective.³⁶ A second category of works is the local study: the work of Peter Sinclair on the Clay Belt, Louis Marie Bouchard on the Saguenay region, or George Tripp on the central interior of British Columbia, come to mind.³⁷ Third is the investigation of the resource frontier: along with the aforementioned Innis and Lower, see F.W. Howay, W.N. Sage and H.F. Angus, British Columbia and the United States: The North Pacific Slope from Fur Trade to Aviation.³⁸ Of course, numerous American scholars have studied resource regions: Duane Smith, Rocky Mountain Mining Camps and Rodman Paul, Mining Frontiers of the Far West are two frequently cited monographs.³⁹

Local history, meanwhile is dealt with in the previously cited studies by Barlow, Coleman and Main, as well as the Report of the Royal Ontario Nickel Commission.⁴⁰ Many details and biographies can be found in the works of the Société historique du Nouvel-Ontario and the Sudbury District Historical Society.⁴¹ A growing number of academic theses -- by Gail Cuthbert-Brandt on the French Canadians, Peter Krats on the Finns, Eileen Goltz on Copper Cliff, and Gwenda Hallsworth on forestry, to name just a few -- have added new insights.⁴² Wider coverages are Edwin Higgins, and Frank Peake, Sudbury Then and Now, D.M. LeBourdais, The Sudbury Basin and the recent Graeme Mount, The Sudbury Region. All these are written

for a popular audience.⁴³

Despite the growing body of literature, one work stands out: Gilbert Stelter, "Community Development in Toronto's Commercial Empire: The Industrial Towns of the Nickel Belt, 1883-1931." This is the sole attempt to discuss regional development within broader frameworks like the "urban frontier" and metropolitan approaches. Stelter's work links the Nickel Belt's progress with the larger region and with forces beyond.⁴⁴ As a preliminary work, the paper naturally raises more questions than it answers; Stelter's insistence that Sudbury was a "company town" served as an early motivation for this thesis.

Format

With cultural assessment of local history limited to one thought-provoking article, and a wealth of largely unexploited sources to tap, a rigid application of one or another conceptual framework seemed a premature approach to the Nickel Belt's history. Instead, while remaining cognizant of larger themes, I have opted for a narrative history of the Sudbury area that emphasizes resource exploitation, physical and administrative expansion, as well as community development.

The narrative is divided into five chronological periods. Chapters One and Two (to 1885) provide a background, first discussing the opening of the North Shore of Lake Huron, then gradually focusing on the dawn of the Sudbury area under CPR auspices. The rapid expansion of the resource industries is highlighted in Chapters Three and Four (1886-1902); the frontier society, and the expansion of administrative and social services also figure prominently. Chapter Five (1903-13) recounts the growing sophistication of a nickel industry priming for Armageddon; similar gains in forestry, agriculture, transportation and local administration produced

unprecedented stability. Wartime and its aftermath (1914-1922) are the foci for Chapter Six. War-inspired boom was followed by peacetime "bust", but not before the growing might of the nickel duopoly gave the region a permanence belying its brief history. The gains were unequally distributed: Sudbury emerged from wartime as the unquestioned central place of the Nickel Belt, while the decline of forestry and the consolidation of mineral operations spelled the end for many centres. The concentration of business and population in Sudbury quickened during the recovery of the Twenties. That recovery, and the subsequent onset of the Great Depression, are the themes of Chapters Seven and Eight (1923-1933). Expanded commercial markets for nickel brought record profits to the nickel duopoly; propelled by continuing rationalization of local operations, along with financial and other considerations, the nickel firms moved toward merger. The creation of a giant new INCO, and the consolidation of operations nearer Sudbury, brought that community unprecedented prosperity and sophistication. But in joining the rest of the Nickel Belt in its dependence on the industry, Sudbury weakened its long-held claim to being something more than a company town. An increased reliance on INCO, then, marked a new stage in Sudbury's history; the Great Depression displayed the painful consequences of having become the Nickel Capital of the World.

NOTES

¹Orva Saarinen, "A Geographical Basis for Regional Planning in the Sudbury Area," (M.A. diss., University of Western Ontario, 1966), 6-7.

²Alexander Murray, "Report for the Year 1856, of Alexander Murray, Esq., Assistant Provincial Geologist, addressed to Sir William E. Logan, Provincial Geologist," Geological Survey of Canada (GSC), Report of Progress 1853-54-55-56 (Toronto: John Lovell, 1857), 180-81; Robert Bell, "Report on the Sudbury Mining District," GSC, Annual Report, 1890-91, Part I, Report F, 9-17.

³Alfred E. Barlow, "Report on the Origin, Geological Relations and Composition of Nickel and Copper Deposits of the Sudbury Mining District Ontario, Canada," GSC, Annual Report, 1901, Part H, 51-132.

⁴See A.P. Coleman, "The Nickel Industry: with special Reference to the Sudbury Region, Ontario," Canada, Department of Mines, Mines Branch, Report, No. 170, 1913. The quote is from idem, "The Sudbury Nickel Field," Ontario, Annual Report of the Bureau of Mines (1905): Part III, 17.

⁵Among the most recent overviews is: P.E. Giblin, "History of Exploration and Development, of Geological Studies and Development of Geological Concepts," The Geology and Ore Deposits of the Sudbury Structure, eds E.G. Pye, A.J. Naldrett and P.E. Giblin (Toronto: Ministry of Natural Resources, 1984), 3-24.

⁶Robert S. Dietz, "Sudbury Structure as an Astrobleme," Journal of Geology 72 (July 1964): 412-34.

⁷See, for example, the studies in E.G. Pye, A.J. Naldrett and P.E. Giblin, eds., The Geology and Ore Deposits of the Sudbury Structure (Toronto: Ministry of Natural Resources, 1984).

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¹⁰ Fred A. Dahms, "Regional Urban History: A Statistical and Cartographic Survey of Huron and Southern Bruce Counties, 1864-1981," Urban History Review (UHR) 15 (February 1987): 254-268.

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¹³ Louis-Edmond Hamelin, Canadian Nordicity: It's Your North, Trans. William Barr (Montreal: Harvest House Ltd., 1978), 47 and passim; Roman T. Gajda, "The Canadian Ecumene - Inhabited and Uninhabited Areas," Canada, Department of Mines and Technical Surveys, Geographical Branch, Geographical Bulletin, no. 15, 1960, 5-18. See also Pierre Biays, Les marges de l'oekoumene dans l'est du Canada (Quebec: Les presses de l'Universite Laval, 1964).

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resources that brought demands for better access to the lands north of Georgian Bay. Road and water routes seemed impractical, so both public and private interests looked to a Shield-traversing railway to open the "wilderness" and allow the exploitation of its apparently abundant resources.

I

AMERINDIANS, FURS, MISSIONS

Most of the human history of the North Shore predates the written record, but archaeology and the writings of the first Europeans to meet the local Anishnabe provide some clues. A long-standing cultural continuity was shattered by the coming of the fur trade, which reduced the self-sufficiency of the North Shore bands and introduced excessive use of alcohol. Hard on the traders' heels were the missionaries who questioned the very tenets of Amerindian life. But the disease, alcoholism, wretched poverty and spiritual confusion of the North Shore bands raised few concerns among the white population. Indeed, the Indian Affairs administration applauded the end of the "old" ways and helped to orchestrate the withdrawal of the Amerindians to small Reservations, thereby completing the decline of their culture.

The Amerindian Experience

The North Shore, often thought to have a short human history, had been inhabited since about 8,000 B.C., when big-game hunters reached its shores. This culture gradually adjusted to easing climatic conditions and rapid forest growth: the Shield Archaic culture, still predicated on the exigencies of hunting and fishing, dates to 6,000 B.C.² An essentially unbroken progression from the Palaeo-Indian through the Shield

⁴⁶ Gilbert Stelter, "Community Development in Toronto's Commercial Empire: The Industrial Towns of the Nickel Belt, 1833-1931," LUR 6 (June 1974): 3-53.

CHAPTER ONE

OPENING THE NORTH SHORE

Introduction

The Sudbury region drew public attention only after the Canadian Pacific Railway (CPR) project began in the 1870s, but far older forces played a hand in its emergence. The "wilderness" that Sandford Fleming boasted of conquering had a considerable history, with both public and private efforts made to exploit its apparent riches.¹ Indeed, the gains of the CPR construction period were only the latest links in a continuing chain of development on the North Shore. The following two chapters consider these earlier events and their result -- the quick opening of the Sudbury region to resource exploitation and white settlement. The ease and rapidity of the transition from wilderness to pioneer settlement indicates that the pre-railway developments were of considerable importance and deserving of greater study than they have yet received.

* * *

The early history of the Sudbury region is that of the North Shore on a smaller scale. Abundant fur resources attracted traders who disrupted the age-old environmental harmony. The human victims of this upheaval were the local Amerindians, whose culture fell into decline as traditional lifestyles were questioned or abandoned at the behest of fur traders, missionaries and public officials. The last, pressured by southern politicians and speculators, encouraged the exploitation of the forests and minerals of the North Shore, hastening the end of the fur trade era. Dreams of resource wealth and provincial expansion led to calls for a better understanding of the interior; the resulting surveys revealed

late 1879 or early 1880. Attendance was a chronic problem but the school continued to operate; by 1885 a new building was in use.²⁵ But a more active governmental presence also provoked problems. Neither senior level of government wanted responsibility for the cost of increased Indian annuities; the bickering increased in 1877 when the North Shore bands, meeting at Killarney, launched efforts to collect back payments for the years 1850 to 1875.²⁶ The Indian Affairs Department and the provincial Crown Lands Department also squabbled over the extent of the Whitefish Lake Reserve. When the Federal Government commissioned a survey in 1883 Thomas Johnson, Assistant Commissioner of Crown Lands, requested it be delayed since his department "not being aware of an Indian Reserve there," had subdivided portions of the reserve preparatory to settlement. Unless an "arrangement" was made, "complications might arise owing to the influx of settlers along the C.P. Railway." The plea of ignorance found little favour in Ottawa, and the survey was completed. The band tried to protect its interests: sub-chief Joseph Cabayette travelled to Ottawa in 1887 to submit the band's grievances to the Deputy Superintendent-General of Indian Affairs; unfortunately the exercise won the band little but a lesson in the machinations of government.²⁷

The local native population hardly could overlook these disputes and the physical impact of nearby railway and lumber work, and by 1884 began to "realize that a great change is taking place in their conditions."²⁸ The smaller Tagawinini (Lake Wanapitei) band did not even try to prevent such change, abandoning the region to join the Wikwemikong Band on Manitoulin Island.²⁹ The Whitefish Lake Band, numbering some 150 persons,

Archaic cultures culminated in the Woodland culture, present locally by about 900 B.C. The early Woodland peoples relied on domelike stick-based dwellings, birchbark canoes, snowshoes and toboggans, all reflecting an emphasis on mobility. Their bows, dogs, pottery and utensils of wood and bark supported an existence based on hunting, fishing and wild food gathering. Over the centuries trading ties with the Iroquoian peoples to the south introduced agriculture and various tools to the later Woodland, or Algonkian, peoples. But the Algonkian bands, loosely aligned by clan, lifestyle and language, were quite different from the formal tribal designations of the Iroquoian peoples. Early European observers, more familiar with the latter, mistakenly attached tribal labels to the various Ojibwa (Anishnabe) clan groups inhabiting the North Shore. These clans were well adapted to withstand the rigours of the Pre-Cambrian Shield, though the rugged environment influenced the whole of Ojibwa life, including a belief system tied to unusual natural phenomena. Their lifestyle, in short, closely resembled that of the pre-contact cultures, though European tools reached the North Shore years ahead of the builders.³

New tools were but the first of many changes whose rapidity remains open to question.⁴ It is clear, however, that the arrival of the European transformed the "late Woodland" into a "Pan-Indian" culture. Greatly increased Amerindian fur gathering created serious inter-tribal conflicts which, aggravated by European technology and alliances, culminated in the dispersal of the Hurons. Fur gathering also upset the natural balance: the exchange of countless pelts for utensils, clothing, food and liquor made the upper Great Lakes Indians rely increasingly

upon the trading post for their survival. At these posts, the fur trader and the missionaries attacked the very tenets of their existence, albeit from very different perspectives.⁵

The local Ojibwa were but one of the hunting clans on the North Shore. The Outouwan of Manitoulin Island and the mainland clans -- the Nipisirini, Achiligouan, Outimagami, Nikikouek, and the Oumisagi -- were surely familiar with the study area though it was the home of the Amikwa (Beaver), first mentioned in the Relation of 1636.⁶ The Amikwa were comparatively recent arrivals, having dwelt previously on the Beaver Islands of Lake Michigan, but their clan quickly won acclaim among the Indian nations as "one of the noblest in all Canada." But between 1654 and 1660 and again shortly after 1672 they were forced to abandon their established area because of Iroquois attacks. The Amikwa returned in some numbers by the 1630s, establishing a main village at Lake Penage. Gathering furs, fishing, collecting wild foodstuffs, growing vegetables and dwelling in temporary structures, the small band had little physical impact when spread over a far-flung hunting territory of over 4,000 square miles.⁷ The historical record, too, is meagre, though the Amikwa received early attention from the French for their role in inaugurating the Ottawa-French River fur route in 1656 and in the ceremonies marking French sovereignty in 1671. Fathers Louis André and Henri Nouvel made much closer investigations while conducting special missions among the Amikwa in 1671 and 1672. Early cartographers, thus informed, named a major North Shore river (seemingly the Spanish) the "Amikoue", considerable recognition for a very small group: together the Amikwa, Oumisagi and Achiligouans numbered only about 400 souls in all.⁸

With the departure of the Jesuits, the tiny band escaped notice from 1680 until about 1800, when its seasonal excursions to La Cloche, a traditional North Shore location for fishing and worship, attracted the attention of travellers like George Heriot (1807) and the Rev. Adam Elliot (1835). Some band members aided the British during the War of 1812, the band attended the annual dispensing of gifts, and likely the meeting in 1836 where Sir Francis Bond Head proclaimed British control of Manitoulin Island.⁹

Far more influential for the band was the new, permanent Hudson's Bay Company post established at Whitefish Lake in 1827. Recognizing its opportunity, the band moved its main village north from Lake Penage to a site adjacent the post, for the band by then had a lifestyle that was, in white man's terms,

wild and uncultivated; they hunt furs during the great part of the year for the Hudson's Bay Company. In the winter they live principally on the precarious and scanty hunt of hares, partridges and occasionally they kill reindeer; in the summer months they subsist mostly on fish; and many of them are clothed in hare skins sewed together with bass wood bark. It can scarcely be said that those tribes who resort annually to the borders of Lake Huron have any fixed place of residence, for though many of them endeavour to cultivate small patches of corn and potatoes... they seldom remain more than two or three weeks in the same encampments.¹⁰

Furs provided trade goods, but the trade drew the Indian ever closer to the fur trader, to the dismay of J.M. Keating, Assistant Superintendent of Indian Affairs, whose report on Lake Huron Indians (1839) noted that:

The traders rob them of their stock, and leave them often without either clothing or provisions... Were it possible to prevent any improper advantage being taken of the Indians by the fire [water?] traders, another blessing would be conferred upon them, but secluding them totally from their temptation and manoeuvres would be the only remedy, and one most difficult of execution.¹¹

The number of Indians affected was quite small; estimates made in 1839 suggest a North Shore Indian population of less than 2,000 with only about 100 souls frequenting the study area.¹²

The small Indian population won few allies though in 1830 Sir John Colborne complained that the North Shore had "long been shamefully neglected." Clerics, meanwhile, complained about "traders who do not spare ardent spirits", and "the evil example set before them by the whites who live amongst them."¹³ Adding to these woes was a scarcity of furs that left the Indians "constantly exposed to the severest privations."¹⁴ Circumstances grew so dire that Thomas G. Anderson noted in 1847 that cancellation of the Government gifts to the Indians "would not only heap misery on wretchedness, but ere long, deprive them of existence."¹⁵ Some North Shore Indians tired of this "precarious subsistence"; their unrest and more compelling political and business demands for an opened northern frontier finally prodded the hesitant administration into action. First it placated the mineral and timber interests by providing special protection for their North Shore holdings. "This necessity", the Governor complained, "would not have arisen if before concessions of mining privileges had been made in the District in question the claims of the Indians had been fully investigated and adjudicated upon."¹⁶ Alexander Vidal and T.G. Anderson were directed on 4 August 1849 to "ascertain the expectations of the Indians with a view to the final action of the Government upon the same."¹⁷

The Vidal-Anderson report of 5 December 1849 opposed cash payments, with their potential for abuse, and recommended instead the reservation of certain tracts for the native population. In due course the Executive

Council State Book for 16 April 1850 recorded that

The Committee of Council are of the opinion that Mr. Robinson should endeavour to negotiate for the extinction of the Indian title to the whole territory on the north and northeastern coasts of Lakes Huron and Superior -- and that in case that be unattainable that he should obtain a cession of the territory as many miles inland from the coast as possible.¹⁸

William B. Robinson, M.P.P. and brother of Chief Justice John B.

Robinson, undertook this task with vigour but without any extraordinary concern for the welfare of the Indians, whose counsellors he described as "evil disposed persons." Robinson, despite a reputation for fairness and honesty, was not a disinterested party -- he was a former fur trader, the brother-in-law of the Superintendent of Indian Affairs, and closely associated with mining concerns that held properties in both Lakes Huron and Superior.¹⁹ Not surprisingly, the terms of the agreement of 9 September 1850 were hardly generous: the Indians of Lake Huron received a £ 200 downpayment and a perpetual annuity of £ 600, with a provision for increases should the territory ceded "at any future time produce an amount which will enable the Government... without incurring loss to increase the annuity."²⁰ There were technical problems as well, highlighted by a poor understanding of the location of inland reservations. Vidal and Anderson had reported that the Whitefish Lake reserve lay "Between the Lake Band and the height-of-land about White Fish Lake", while the Robinson Treaty of 1850 granted Shawenakishick's Whitefish Lake band "a tract of land now occupied by them, and contained between two rivers, called Whitefish River and Wanabitaseke, seven miles inland." Neither description was very exact, and the actual extent of the reservation remained unknown despite an Order-in-Council of 14 July 1851 that called for the survey of all the North Shore reservations. J.S. Dennis

and J.W. Keating were chosen for the survey, but when Dennis resigned for "family" reasons before the task was finished, the Whitefish Lake and nearby Wanapitei reservations remained unsurveyed.²¹

The lack of survey was somehow appropriate, for the populations of these inland reserves received scant official attention after William Robinson's statement of disbursements for 1850, the initial tabular statement on the interior bands. Chief Shawenakeshick's band, excluding the Chief and his family, numbered 40 adults and 24 children. Tagawinini's band, included with the Dokis band though reported to be "from Onebing", included ten men and women, thirteen children plus the Chief and his family. Family groups hunted, fished and gathered the region's flora; permanent "garden locations" like those at Vermilion, Whitefish and Fairbank Lakes provided corn, potatoes, and beans. Needed goods were acquired in exchange for maple syrup or, more often, furs.²²

Thus occupied, the band was largely overlooked until 1871, when the census reported 133 Indians living at about ten locations, most notably Vermilion, "Wanabetting", and Whitefish Lake.²³ The Band -- now led by Chief Shawmauquoum (Shainowquom) -- had found "no opportunity for religious or moral training", but neither had more insidious forces taken hold. The band was considered "orderly and well behaved", a sharp contrast to the alcohol-induced problems that were more prevalent nearer the coast.²⁴

These assessments of the Whitefish Lake band reflected greater attention on the part of the Indian Affairs Department, which in the mid-1870s began providing detailed reports on the "progress" of the band. The Department also raised treaty annuities from about \$1.00 to \$4.00 per capita in 1875 and opened a school at Whitefish Lake in

late 1879 or early 1880. Attendance was a chronic problem but the school continued to operate; by 1885 a new building was in use.²⁵ But a more active governmental presence also provoked problems. Neither senior level of government wanted responsibility for the cost of increased Indian annuities; the bickering increased in 1877 when the North Shore bands, meeting at Killarney, launched efforts to collect back payments for the years 1850 to 1875.²⁶ The Indian Affairs Department and the provincial Crown Lands Department also squabbled over the extent of the Whitefish Lake Reserve. When the Federal Government commissioned a survey in 1883 Thomas Johnson, Assistant Commissioner of Crown Lands, requested it be delayed since his department "not being aware of an Indian Reserve there," had subdivided portions of the reserve preparatory to settlement. Unless an "arrangement" was made, "complications might arise owing to the influx of settlers along the C.P. Railway." The plea of ignorance found little favour in Ottawa, and the survey was completed. The band tried to protect its interests: sub-chief Joseph Cabayette travelled to Ottawa in 1887 to submit the band's grievances to the Deputy Superintendent-General of Indian Affairs; unfortunately the exercise won the band little but a lesson in the machinations of government.²⁷

The local native population hardly could overlook these disputes and the physical impact of nearby railway and lumber work, and by 1884 began to "realize that a great change is taking place in their conditions."²⁸ The smaller Tagawinini (Lake Wanapitei) band did not even try to prevent such change, abandoning the region to join the Wikwemikong Band on Manitoulin Island.²⁹ The Whitefish Lake Band, numbering some 150 persons,

did its best to eke out an existence with a lifestyle tied clumsily to the emerging pattern of resource extraction. They remained

mainly hunters, with them agriculture being comparatively a new occupation followed to only a very limited extent... [Nevertheless] excellent crops are raised, considering the rough mode of cultivation ... These Indians earn money during the summer voyaging for the Hudson's Bay Company and acting as guides and canoeists... In winter many live at their hunting ground, a few only remaining at their village.³⁰

So long as the band tried to retain its old ways -- all adult males were trappers in 1891 -- its members were reported "badly off." But gradually some local Indians adapted to the economic pressures and entered the lumber, mineral, and railway activities where their old skills remained useful, relying on hunting, fishing and cultivation to supplement their income. The mingling of the old and the new drew the praise of the Indian Affairs Department, which in 1897 boasted about 35 "clean", "comfortable" buildings plus two schools and churches. As the officials who reported these developments often equated progress with the adoption of white man's ways, they concluded the band was "decidedly improving in general status" as its members entered the labour market and adopted more "standard" lifestyles.³¹ The real gains were more dubious, for by 1910 "the Indians were not a prosperous tribe." But the mixture of cultures would have to suffice until the pressures of mid-twentieth century culture would impose a new series of challenges.³²

These latest troubles were merely the epilogue to a centuries-long cultural decline brought on by the arrival of the white man. Fur trade conflicts, alcohol, over-hunting and the resulting dependency of the native population left a "pan-Indian" lifestyle that was a hollow mockery of the earlier Anishnabe culture. Then the missionaries and administrators,

while opposed to the excesses associated with the fur trade, undertook to reduce this cultural remnant by gathering the dependent and spiritually confused Amerindians on small Reservations where they would not interfere with the onslaught of the explorer and the speculator from the south.

The Fur Trade

There was no such "protection" for the fur trader, for whom the entry of industrial Canada meant the end. Perhaps this was fitting, for the arrival of the fur traders themselves had a devastating effect on the existing native culture. The trade created even greater pressures with the Hudson's Bay Company's strategy of creating a "fur desert" to protect more valuable lands to the north. This strategy ultimately brought large scale trapping into decline on the North Shore; the entry of industrial Canada ended its importance for ever.

The local influence of the fur trade was of long standing, for European trade goods penetrated the North Shore before Etienne Brulé "discovered" Georgian Bay in 1610. Fort Saint Ignace, established in 1627, and the Indian flotilla which inaugurated the Ottawa-French River route in 1656, confirmed the place of the North Shore in the French Poste du Nord network.³³ These widely scattered posts relied heavily upon Indian middlemen like the Amikwa -- "toujours bons amis de nos coureurs de bois." Efficient middlemen enabled the French to ship hundreds of packs of furs from the North Shore each season. So great was the trade that by 1722 beaver were in short supply on the North Shore. These furs, however, were delivered by the Indians to the posts along the major water routes, so the interior of the North Shore remained poorly understood.³⁴

The onset of British control brought major changes. Men based on the coastline were dispatched all around the North Shore by 1768, and George Cowan, Government-appointed interpreter for the Lake Huron Indians, established permanent trading locations by the 1780s, including La Cloche. Construction of a North West Company post there in 1790 confirmed La Cloche as the key distribution site for the North Shore and the southern terminus of the standard land and water route to Fort Timiskaming.³⁵ That more northerly fort, meanwhile, sent traders south, seeking the ever-scarcer beaver. Alexander Gordon, of the North West Company travelled south from Fort Timiskaming almost to Lake Huron in the spring of 1790, remaining for some time at Lake Wanapitei.³⁶ Other traders ventured inland from southern localities so that the North Shore became "a hunting preserve for the fur trading companies."³⁷

This situation was not at all to the liking of the Hudson's Bay Company, which acquired the North West Company operations with the amalgamation of 1821. Fortunately for Hudson's Bay, the British government declared the North Shore off-limits for American firms.³⁸ Because the "petty trader" remained a nuisance, Governor Simpson of the Hudson's Bay Company suggested a new "defensive" strategy of creating a "fur desert" in regions adjoining white settlement and exposed to possible competition. After some dispute -- the Lake Huron District was assigned to the Southern Department in 1822, then to Montreal control from 1823 to 1826 -- Simpson's view prevailed. The strategy resulted in a chain of North Shore posts that included

La Cloche, Isle au Sable, Saguingue, Lake Nipissingue, White Fish Lake, Green Lake, Grand House and Grand Lac. The first... is the principal and only permanent post, the others being changed occasionally, in which we are influenced by the movements of the opposition and during the summer abandoned.³⁹

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Fur gathering excursions from La Cloche and Timiskaming provided further vigilance: a Fort Timiskaming sponsored post operated at Lake Wanapitei for the 1822-1823 season.⁴⁰ To avoid overlapping authority the area was left thereafter to the La Cloche post, which established a temporary post at Whitefish Lake no later than September 1824. The Whitefish Lake operation received greater company attention when a Newmarket-supplied trader, apparently a Mr. Vapeur, penetrated to Lake Penage about September 1827 with a "formidable" outfit. The Hudson's Bay Company responded by building a permanent post on Whitefish Lake, squarely on the route between La Cloche and Fort Timiskaming, which provided convenient access to the Spanish, Vermilion, Wanapitei and Whitefish river systems.⁴¹ Over the next half-century, the post was under the charge of Alexander McKay, William Cowie, Henry Sayer, Charles Côté, Olivier Fleurier, Joseph Boyer, Thomas Ross and others, the "changing of the guard" being most frequent in the 1830s and 1840s when disgruntled employees turned to independent trading. By 1830 independent traders had established a "more or less permanent" post near Whitefish Lake and the Hudson's Bay Company, bemoaning the "hordes of petty Adventurers who infest the district", resorted to "runners" to compete with ten or more independent locations in the region. This was a costly proposition, and most North Shore posts lost money by the 1830s; but the Company continued to offer high prices and commit some of its best traders to the district in an effort to "hunt the frontier area so hard as to keep competition out."⁴² Liquor was a common tool, much to the disgust of missionaries like the Rev. C.C. Brough, who noted in 1840 that traders "inculcate proportionably lying, drunkenness [sic] & c. upon the poor Indians."⁴³ Hudson's Bay employees also intimidated Indians bold enough to trade with its competitors. Angus M. Anderson, an independent

trader based at Lake Nipissing, complained in 1836 in a sworn statement

that in the month of May in the year following [1836] he went to an Indian named Naw-way-geshick - who was...about 80 or 90 miles from Lake Nipissingue - to purchase some furs which he was aware the said Indian had in his possession... the Indian refused, saying "I dare not do so -- if the Big Trader (meaning the Hudson [sic] Bay Company) finds out, or even thinks that I have sold furs to any but his own people, he will beat or kill me, or otherwise ill treat myself and family ... I would rather deprive myself and family of what things we actually want, and which you sell to us much cheaper than the Big Trader does, than run the risk, of being killed or beaten half to death by the Big Trader and his people.⁴⁴

The North Shore bands responded by abandoning the traditional conservation methods in favour of wholesale destruction of wild life. Governor Simpson conceded in 1841 that "the Lake Huron...district is much exhausted in fur-bearing animals", but he felt it still necessary to maintain operations there "as a means of checking encroachments of rival traders on our more valuable interior districts."⁴⁵

This strategy saw many furs taken to the Whitefish Lake post, which remained relatively productive despite fierce competition from independent traders; indeed, about 1850 a very solid trader's house and a series of outbuildings were built on a sizeable clearing. The post -- on a 135 acre company claim -- was situated near, but well within, the north boundary of the still unsurveyed Whitefish Lake Reserve. It secured some \$5,000 business as late as 1861, taking in beaver marten, otter, mink, many muskrats, and a few fishers, lynx and foxes, most at auxiliary posts - Larchwood, Onaping and Post Lake -- built at strategic points on the region's waterways.⁴⁶ But years of over-trapping and the increasing pressure of civilization were taking their toll: the transfer of Lake Huron operations to the Montreal Department in 1857, cash payment for furs and the servicing of the La Cloche post by steam-ship all were admissions of changing times.

New revenues earned through aid to Government geologists and surveyors -- hastening the exploration of the North Shore and the recognition of its potential -- further speeded its demise. To worsen matters, after the signing of the Robinson Treaty of 1850 the Hudson's Bay Company was condemned as a "squatter." The firm fought for its property rights but it could do little except watch its interests being overwhelmed.⁴⁷

The encroachment of civilization and a half-century's severe exploitation eventually took its toll. By the 1880s the Whitefish Lake Post was unable to break even despite the opening of new satellite post at Lake Wanapitei (1879) intended to protect the trade of White Fish Post, the Indians who formerly went there being cut off from White Fish Lake by the C.P.R." Completion of the CPR's Algoma Branch brought other changes: The Whitefish Lake Post was moved two miles north in 1887 to a bluff just south of the Branch, where it served as a general store rather than as a fur post. The auxiliary posts were simply abandoned: Lake Wanapitei in 1891, Larchwood in 1892, Onaping and Post Lake soon after; on 31 May 1896 the Whitefish Lake post itself was closed. Income generated through trapping nevertheless remained an inextinguishable, if increasingly minor part of the economy of the region. The furs were sold to independent dealers, or dealers with direct contacts to Hudson's Bay or the Revillon Frères, until the much later era of the large scale fur auctions. The "petty" trader therefore emerged victorious from the struggle with the Hudson's Bay Company. Unfortunately, the victory was only a pyrrhic one.⁴⁸

The rise and fall of the fur trade was crucially important to the local Anishnabe, who served the trade well, first as middlemen and later in direct trade. But they suffered grievously for their efforts as traders provided alcohol and introduced corrupt and intimidating practices

in an effort to gain every last fur on the North Shore. But that policy also spelled the end of profitable fur trading in the region, and even relatively efficient sites like the Whitefish Lake Post were in decline well before the entry of the CPR marked a final end to the industry as a major factor in the local economy.

The Missionaries

Clerics all along the North Shore contributed to the troubles of the fur trade, for they were among the most vigorous opponents of dubious trading techniques. These complaints began in the 17th century as Jesuit missionaries welcomed the opportunity to spread the Christian faith among the Amerindians of the North Shore. While they decried the "evil" influence of the fur trader, these clerics failed to perceive that they too were undermining the very tenets of Amerindian life. Their "successes", coming mainly in the 19th century, quickened the decline of the Amerindian culture just as surely as the more secular forces at work on the North Shore.

The first missionaries to work among the North Shore Amerindians won much acclaim, for though few in number they were indefatigable and often daring. By 1622 both Fr. Joseph Le Caron and Fr. Guillaume Poulain had ventured to Georgian Bay to minister to the Nipissings. The Jesuits began similar work in 1632; in 1636 Fr. J.A. Poncet established the Mission du Saint Esprit at the site of modern-day Sault Ste. Marie, with work east of there being organized as the Mission du Saint Pierre in 1648. Under the auspices of the Mission, Fr. Poncet in 1648-49 became the first white man to overwinter on Manitoulin Island. The Mission faltered thereafter until Fr. Rene Menard's passage west in 1667 helped to revitalize the North Shore and more westerly effort. In 1671 Fr. Louis André established

the Mission du Saint Simon on Manitoulin Island, soon succeeded by Fr. Henri Nouvel, who spent part of the winter of 1671-72 in the company of the Amikwa. The Mission was maintained until about 1696, when it declined because of Cadillac's emphasis on the Detroit and Michilimackinac posts. The North Shore effort was "silent" from about 1704, though a nominal "mission among the Outaouais" persisted until at least 1756.⁴⁹

British control and the ensuing withdrawal of the Jesuits left the North Shore with little or no Christian missionary work until the 1820s, when the new work was initiated by the Protestant churches. The effort began very slowly: the Church of England in 1827 refused a native request to post a clergyman at Drummond Island.⁵⁰ By 1830 native-born Methodist preachers took the lead, their work making "Protestantism for the first time a live option to the local Indians."⁵¹ The Methodist initiative drew a quick response from the Church of England's newly organized "Society for the Conversion of and Civilization of the Indian." The Society's plans for a mission and associated village at La Cloche fell asunder when George Archibald, who toured the North Shore for the Society, recommended against the scheme.⁵²

Concern for "civilizing" the Amerindians while protecting them from the white man's evils once again came to the fore in 1835 when Sir John Colborne declared Manitoulin Island an Indian sanctuary. T.G. Anderson and the Rev. Adam Elliot worked there until 1836, when the newly arrived Sir F. Bond Head ordered their withdrawal. That action proved a boon to Fr. J.B. Proulx, a Roman Catholic priest from Penetanguishene who arrived on the island in 1835 or 1836. He was followed by four Methodist missionaries in July 1837. Having lost their advantage, T.G. Anderson and the Rev. C.C. Brough re-established the Church of England mission at Manitowaning

in 1838. Father Proulx by then was resident priest at Wikwemikong, where he worked alone until J.P. Chone, s.j. arrived on July 1844; J.U. Hanipaux, s.j., followed in August 1845.⁵³

The Whitefish Lake band was among those influenced by these and later missionaries. Rev. Adam Elliot met Chief "Showinckejick" and his band at La Cloche in 1835 but gave few details.⁵⁴ Thirteen years later Fr. Joseph Hanipaux once again "discovered" the band, "qui nous ne connaissions pas encore et qui sont dans la cercle de notre mission", and made plans to visit them on their seasonal sojourns at La Cloche. In 1850 he found that a trader had already reached the band so that "à mon arrivée au camp, tous les hommes et une partie de femmes étaient ivres." Dismayed but not discouraged, he convinced the dubious but amiable adults to allow him to minister to the children. Hanipaux almost immediately baptized eleven youngsters. The following year he again sought out the band, hoping to "gagner le vieux chef de la peuplade du Lac Poisson blanc." Despite competition from a Church of England minister out of Manitowaning, probably the Rev. F.A. O'Meara, he soon claimed success.⁵⁵

"Victory" over the Protestants came often. By 1861 the Church of England's missionary effort, facing nearly constant fiscal crisis, had only two workers among the native population of Lakes Huron and Superior. The Presbyterian Church, meanwhile, had no native mission by 1870.⁵⁶ Only the financially strapped but better organized Methodists managed some gains, due in part to the dedication of their native born missionaries.⁵⁷ The Methodists' hard won gains, however, paled before those of the 23 Jesuits who served the Wikwemikong mission before 1880. Their endeavours on the North Shore benefitted from the Jesuits organizational structure

and personal commitment, their historic 17th century contacts with the region, plus the sophisticated interpretation of the gap between the sacred and the secular. Put briefly, the Jesuits -- unlike the Protestant missionaries -- were not greatly concerned that the Indians maintained their long-established lifestyles so long as they accepted baptism.⁵⁸

Thus, in 1857, Rev. Hampaux reported 48 Roman Catholic converts among 93 Whitefish Lake Band members, while he claimed that the Tagawanini band included sixteen Catholics, three Protestants and sixteen "heathens."⁵⁹ But those figures were inflated by the Indians' still vague understanding of Christianity and Jesuit enthusiasm: in 1871 three-quarters of the Indians "scattered throughout the interior" maintained their traditional beliefs.⁶⁰

Well meaning yet disruptive efforts to convert the Whitefish Lake Indian band gained momentum as the frontier was pushed ever nearer to its traditional territories. Jesuit missionaries from Manitoulin Island redoubled their efforts: in 1875 J.C. Phipps, Northern Superintendent of Indians Affairs, reported that "the visit of one of the Roman Catholic Missionaries to the White Fish Lake Indians had been productive of much good - the Chief and the greater part of the Band, who had before been Pagans, having become Christians."⁶¹ The easy access provided by the CPR brought more Jesuits and renewed Methodist efforts, including the construction of chapels by both Churches. Still, the traditional beliefs were not universally disavowed until the late 1890s, and in many forms they have continued to influence band members.⁶²

Remnants of a spiritual heritage -- constantly questioned by visiting clerics -- was small compensation for the losses suffered by the Amerindian population. The Christian missionary, no less than the fur trader or

Indians Affairs agent, brought to near ruin an Anishnabe culture with a 9,000 year heritage. Much of the damage was done in a few generations, for the isolation of their hunting grounds spared the Whitefish Lake band from the worst effects of "civilization" until the 19th century. But then the intrusive pressure from the south began to mount: the signing of the Robinson Treaty opened the band's former hunting territories to an all-out assault by explorers, speculators and administrators.

II

EXPLORATION, ADMINISTRATION, TRANSPORTATION

The construction of an "all Canadian" route for the CPR -- the decisive factor in opening up the Sudbury region -- was the culmination of persistent calls for a transportation link traversing the interior of the North Shore. These pleas were of recent standing, because the nature and limits of these lands remained poorly understood until well into the 19th century, when business and political pressures from the south led to a series of explorations and surveys there. Favourable depictions of the North Shore prompted an unprecedented surge in speculation and settlement along its coast, necessitating the introduction of administrative structures already in place to the south. Some minimal jurisdiction and government services were the result, but local residents and the proponents of a "greater" province remained unsatisfied and sought better transportation links between north and south. When the inadequacies of road-building schemes became apparent, the empire builders looked instead to the railway as a means of opening the northern frontier to settlement and exploitation.

Explorations

Furs and native souls drew white men to the North Shore for centuries before scientific curiosity and the need to define the boundaries of the

province resulted in the first significant exploration of what in 1788 remained a "great solitude, little known or frequented."⁶³ Optimism concerning the extension of settlement led to the first inland surveys; these hinted at considerable resources. More thorough explorations were ordered and the almost unflinching positive reports that resulted generated a belief in the North Shore as a land with rich natural bounty, albeit beyond easy reach.

The "great solitude" that was the North Shore first received scrutiny through Captain Henry Bayfield's surveys (1817-1821), John Bigsby's scientific tour (1819-1820) and David Thompson's surveys (1821).⁶⁴ These efforts lessened the coastline's mysteries and prompted public attention. In the Upper Canadian Legislature, Messrs. Baldwin and Wilmot in 1823 urged expansion of the province's borders to James Bay and the Lake of the Woods, to be met by a government report (1825) which bluntly characterized the North Shore as "bleak, barren and inhospitable."⁶⁵ This pessimism soon was erased by a revival of economic optimism: in 1834 the House of Assembly requested that exploring parties be sent out "to penetrate from different points on the North Shore of Lake Huron, in continuous right lines, some fifty or sixty miles into the heart of the country."⁶⁶ Lieutenant John Carthew of the Navy led the northernmost exploration, reporting upon "the land lying between Matchedash Bay and French river, Lake Nipisang [sic] and the North Shore of Lake Huron towards La Cloche." This and other surveys provided much new information, but Jas. Wyld's map of the Province (1845) still termed the North Shore a "great tract of wilderness."⁶⁷

The growing interest in the North Shore demanded fuller understanding of this "wilderness". In 1849 the Crown Lands Department ordered Alexander Vidal -- already familiar with the coast because of mineral and Hudson's

Bay post surveys -- to determine

as far as practicable. Whether or not there be locations in which may be rendered available for tillage exist in the vicinity of the mining tracts or otherwise in situations which may some short time hence be opened for settlement....

The general impression which exists is that the section of the Country bordering the British side of Lakes Huron and Superior to the northward is sterile in an extreme degree, and positive information from reliable sources is highly desirable.⁶⁸

One "reliable" source was already at work, for Alexander Murray, Assistant Geologist to the Geological Survey, explored the North Shore of Lake Huron in 1847 and 1848. His traverse of some 60 miles up the Spanish River in 1848 resulted in passing mention of a "third tributary" to the Spanish taking rise "near White Fish Lake" -- an early reference to the Vermilion River. Eight years later, Murray returned to the region, and his geological research provided the first detailed map of the French, Wanapitei, Whitefish and Spanish watersheds.⁶⁹

Though an indefatigable worker in his own right, Murray benefitted from the work of A.P. Salter and his assistants being undertaken for the Crown Lands Department.⁷⁰ Salter, for instance, was able to provide Murray with a reliable sketch map of the "eastern branch" of the Spanish River (the Vermilion). Salter's reconnaissance of the area grew out of an Order-in-Council of 9 June 1855: "the object contemplated", Joseph Cauchon wrote, "is the discovery of lands adapted for settlement." The survey, the Commissioner added, would "be the means of adding considerably to the at present very limited degree of information regarding the country north westerly of Lake Huron."⁷¹ Salter lost no time in starting his work that season: in 1855 he explored the coast and various rivers, including "many miles" up the Spanish. The following season, Salter explored tracts further inland, producing various meridional lines about the Hudson's Bay post

at Whitefish Lake and exploring lands "inland upon either side" of the French, Whitefish, Vermilion and Spanish Rivers. While Salter spent four months thus occupied, his assistants, surveyors James Johnston and Arthur Jones, spent the summer and fall exploring other parts of the North Shore. The following year T.W. Herrick spent much of the summer in the area under study, while T.N. Molesworth traversed the area in June.⁷²

Most of these explorers tried to counter pessimism about the North Shore.⁷³ In the late 1840s Murray reported considerable stands of timber and significant areas of arable land. His later report noted "the presence of an immense mass of magnetic trap" just north of Whitefish Lake -- the first report of the future Creighton ore body.⁷⁴ A.P. Salter, meanwhile, reported that

on both sides of the East Branch of the Spanish River to White Fish and Round lakes, there is also a very fine tract of land. From this to the mouth of the Whitefish River, ... there are numerous long narrow lakes which traverse the country. These are recommended by high rock hills for the most part timbered with red and white pine.

His brief preliminary report concluded: "I cannot do anything like justice with the country, which though in many places rugged and rough yet presents in numerous sections much of interest to the explorer and very little to merit his condemnation." His assistants joined the chorus: T.W. Herrick was especially impressed with the "superior" quality of timber about Lake Penage.⁷⁵

The optimistic reports of "extensive tracts of land fit for settlement", "Valuable timber", and a "salubrious" climate gave a timely boost to the growing interest in the North Shore. The prevailing optimism made its way to the maps of the day, which provided the first accurate depictions of local lakes, rivers and various other topographical features. The accuracy of the notes on soil and timber was more questionable, but the

notations found on various maps and in many reports reinforced the growing belief among leading Anglo-Canadians of the richness of the unsettled lands to the north and west.⁷⁶

The timber stands of the North Shore were of particular interest to lumbermen and speculators: by 1859 the first inland timber berths -- six by six miles square -- were depicted on maps.⁷⁷ These depictions, relying on Salter's base lines, grew more accurate as the boundaries of the individual berths were surveyed by men like Walter Beatty, who in 1870 surveyed berths just west and south of the study area. The great timber sale of 1872 brought many new surveys including an examination of the North Shore "from the mouth of French River to the Sault Ste. Marie ... to ascertain whether or not any timber had been cut on lands belonging to the Crown not under license." William Bell, in 1873, surveyed berths 61, 60 and 40 (later Tilton, Halifax and Servos Townships), noting the presence of much pine and other timber, though these often were marred by fire damage. His report, however, concluded that the generally broken terrain was "not suitable for settlement." Further work of this sort, rarely as critical, meant that by 1877 the Crown Lands Department could provide considerable detail on the timber, soils and topography of the region.⁷⁸ Detailed information of the North Shore, a far cry from the ignorance prevalent fifty years earlier, provided compelling evidence of the rich resources in the region. But exploration alone could not "open" the region; what was needed was the imposition of governmental authority over these wild lands. Order, in turn, might encourage the introduction of a transportation route that penetrated beyond the coastline.

Administrative Beginnings

The "incursions" of the fur trader, missionary and explorer into the North Shore interior led inevitably to the extension of governmental authority over the region. Surveys, the last elements of the exploratory era, facilitated the imposition of governmental order. At first this authority was haphazard but the excitement generated by the explorations and the resources they revealed necessitated a far greater administrative presence. Districts were formed and legislation passed or modified as the legislators in the south tried to extend their effective jurisdiction to include the North Shore.

Nominal authority was of long standing: in June 1671 the French claimed "the Lakes Huron and Superior, Manitoulin Island, and all the other countries, lakes and streams adjacent thereto, both those discovered and those which may be discovered hereafter."⁷⁹ This proclamation later placed the North Shore well within the territories the Treaty of Paris ceded to Great Britain, but the region was ignored until a growing American threat spurred the imposition of outside authority. Fort St. Joseph, built in 1796 because of the British withdrawal from Michilimackinac, provided some minimal administration and services, including the first mails on the North Shore. Civil administration began with the appointment on 8 May 1807 of Joseph Chinguy as customs collector for "St. Joseph's and St. Mary's" at the "Head of Lake Huron." Chinguy and later, intermittently-named, appointees faced minimal duties and received like compensation.⁸⁰

The growing interest in the North Shore minerals and timber after 1840 and the resulting "boom" necessitated a greater administrative presence than that provided by Joseph Wilson, who served the North Shore as a "sort

of one-man local government by default."⁸¹ A harried Wilson requested in 1846 that the region be included within the District of Simcoe for judicial purposes. The Provincial Executive Council, aware of the increasing role of the various governmental branches on the North Shore, concurred on the grounds that the population of the area "does not warrant the establishment of a local administration."⁸²

A far greater extension of administrative activity followed the signing of the Robinson Treaty. In 1851 the Commissioner of Crown Lands recommended organizing the Territory on the North Shores of Lakes Huron and Superior recently surrendered by Indians with the view to raising funds to pay the Indian annuity. As a preliminary step, the Reserves made by the Indians should be surveyed to prevent the encroachment of squatters and to enable this Department to decide on applications for Timber Locations now before it.⁸³

As a first step, Simcoe County was enlarged to include lands north to the French River. Two years later a House Committee studying the country north of Lake Superior recommended that Sault Ste. Marie be made a judicial seat for "all the miners and other settlers on Lake Huron and Lake Superior."⁸⁴

The same year saw the passage of an Administration of Justice Extension Act

for the general well-being and protection of those who may resort thither for purpose of settlement or temporary residence connected with mining, lumbering, or other business pursuits and to deter evil disposed persons from inciting the Indians and half-breeds frequenting or residing in these tracts of country to the disturbance of the public peace.

The bill, enacted on 14 June 1853, made "better provision for the Administration of Justice in the unorganized tracts of County in Upper Canada" by the creating of a system of Provisional Judicial Districts and the related bureaucracies, but no action was taken.⁸⁵ Continuing interest in the North Shore forced the government to act: The Temporary Judicial District

Act was passed in 1857. Under this legislation the "Temporary Judicial Districts of Algoma and Nipissing were proclaimed on 12 April 1858. The District of Nipissing included the lands beyond the organized counties north and east of the most westerly mouth of the French River to the northern and eastern limits of the Province. Algoma, which became a Provisional Judicial District on 24 August 1859, was an even larger District, comprising those parts of the Province west of Nipissing.⁸⁶

The creation of the judicial districts supposedly provided an improved 'administrative framework,' but progress was confined to such tentative gestures as the creation in 1861 of a Free Port that embraced "not less than 800 miles of coast" from Waddell's Mills to the westerly Canadian limit of Lake Superior. Its purpose was

to encourage the settlement of our western territory, to foster the mining interests, to facilitate trade with the Red River settlement and the northwest, to encourage the fisheries on Lakes Huron and Superior and to establish a market at which the miners on the American shores of Lake Superior might find it advantageous to purchase their supplies.⁸⁷

Such extensive jurisdictions were normal for the North Shore, where the small, widely scattered population (untaxed until the 1870s) was doomed to suffer from government niggardliness. Prior to 1867 the impact of the government agencies and proclamations was concentrated at Sault Ste. Marie. While other ports also boasted justices of the peace, Indian agents, customs officials and postmaster, one man often held all of these poorly remunerated positions.⁸⁸

The pace of jurisdictional change in the northern district quickened after Confederation. New Districts -- Muskoka, Parry Sound, Thunder Bay and Manitoulin -- were in place by the 1880s, as was the County of Haliburton. Ontario's final victory in the boundary dispute with Manitoba saw the

northern boundaries of Algoma and Nipissing extended to the shores of James Bay.⁸⁹ Adjustments to district boundaries were pragmatic actions, reflecting progress in the settlement of the north.

Legislators and administrators also strove to serve and profit from the different northern realities, so many statutes were amended to provide limiting clauses, exemptions or other special conditions for the north. Municipal law set the tone by allowing for the sparser population and -- with elections scheduled in July -- the poorer weather of the North.⁹⁰ Sometimes northern circumstances were accommodated by not applying new Acts: Section 514 of "The Municipal Institutions Act" (1873) stipulated that Northern municipalities were exempted from the new Act's provisions.⁹¹ Pragmatic adjustment was evident in "The Unorganized Territory Act", which detailed many special rules for northern justice. Equally important, special clauses in acts respecting liquor, taxation, lands, health and many other topics adapted the standard legislation to make it more suitable to the north. Thus the full gamut of legislation, appropriately adjusted, was gradually brought to bear upon the inhabitants of the northern Districts.⁹²

New legislation and administrative structure was in place by 1880, but real gains were limited to a tiny coterie of officials -- badly paid and often indifferent -- overseeing a huge, sparsely populated area. Nowhere did governmental authority penetrate far beyond the coastline. Thus government officials, no less than the politicians or speculators, looked for ways to impose their will over the untouched lands that lay beyond the reach of coastal travel.

Early Transportation on the North Shore

Travel on the North Shore by 1850 usually meant a trip along the coast. All parties interested in the region wanted better access to the interior, but how was this to be accomplished? Road schemes were launched with considerable fanfare; but, as the years passed with little progress, dreams of a Shield-traversing railway came to the forefront.

Transportation routes on the North Shore in 1850 were not unlike those described by Fr. Gabriel Druillettes two centuries earlier.⁹³ Regular steamship service, begun by 1848, traced the same coastal routes plied by earlier voyageurs; travel in the interior still was limited to age-old methods utilizing rivers, lakes and portages.⁹⁴ The situation was wholly unsatisfactory to the politicians and speculators of the Province, for without improved access the interior -- with its evident timber and mineral potential -- remained beyond the effective control of the Province and an inaccessible barrier to the much-vaunted Prairies beyond. Provincial officials therefore argued the need for roads to bridge the gap and at the same time facilitate exploitation of North Shore resources and extend agricultural settlement there.⁹⁵ Duncan Sinclair's road survey west from Mattawa via Lake Nipissing to the mouth of the French River was praised as establishing "an important communication between the Ottawa and Lake Huron."⁹⁶ Sinclair worked on the survey through ~~1856~~, all the while urging the Government to "assume the duty of making a main road in every Range of new Townships and sell the land as cheap as possible to actual settlers."⁹⁷ He was not alone in this thinking, for at the suggestion of the Minister of Agriculture (1857) and in anticipation of land surveys plus ensuing settlement, the Crown Lands Department launched surveys of a "Great Northern Road", intended to link the North Shore with the settled portions of the

Province. A.P. Salter was ordered to survey a route from Sault Ste. Marie east to "Waddle's Mills", "as near the shore as you may find land fit for settlement and as the nature of the country will permit." The Government also announced that lands along the route could be sold in Township blocks.⁹⁸ But the Great Northern Road was useless if it ended at the Spanish River; what was needed was "a road upon the North Shore of the Georgian Bay connecting the settlement west of French River with those in the County of Simcoe."⁹⁹ The Government in 1862 proposed a road "on to the Parry's Sound, and from thence to Sault Ste. Marie"; J.W. Fitzgerald's survey, completed in 1865, was run just south of the region under study. The road would have provided a link to the lands north of Lake Penage which, according to Fitzgerald, "included a fine tract of land, covered with heavy timber, extending for a long distance." But a general economic slump blunted the interest in the Great Northern Road and in proposals for roads north through the Bruce Peninsula and Manitoulin Island or west from the Ottawa Valley. In any event, the difficult terrain and the large stretches of unpopulated country made these roads impractical. Work was limited to the Great Northern Road and even it was serviceable only about Sault Ste. Marie, though a rough trail extended somewhat further east; on the eastern end an equally primitive trail stretched between Parry Sound and the Magnetawan River.¹⁰⁰

The obvious inadequacies of road-based travel lent credence to Shield-traversing railway schemes that had circulated since the 1830s and became more serious by the 1860s: a provincial committee on northern mining conditions (1866) proposed granting railway developers alternative blocks of lands in the north. Confederation brought new administrative circumstances,

and hope continued as schemes were concocted for railways into or across the Shield.¹⁰¹ The most important of these, initiated by Dom. Stat. 36 Vic. 1873, C. 71, provided for the construction of a railway line from Lake Nipissing to the Pacific Ocean. The Canadian Pacific Railway's main thrust was a line through to the Prairies and British Columbia, but the decision to follow an "all Canadian" route necessitated the line traversing Northern Ontario.

The CPR scheme was a logical consequence of the long series of explorations and the introduction of administration prompted by the growing interest in the resources of the North Shore. Lands that were "wilderness" in 1800 and still little known in 1830 were depicted in considerable detail on maps published in the 1860s. The Crown Lands Department plus Geological Survey Branch also provided much, sometimes exaggerated news concerning the timber, mineral and agricultural potential of the region. Real or imagined, these resources were extremely enticing to southern businessmen and speculators, whose pleas roused a somnolent government to appoint a few administrators and extend legislation to the North Shore. Immediate gains were limited to the shoreline, but the interior, having protected its secrets for so long, stood on the brink of unprecedented intrusion by the Canadian Pacific Railway.

CONCLUSION

By 1870 the North Shore interior remained much as it had been for centuries, but the CPR's construction plans were about to end that continuity. Once the railway was in place, the long-sought natural riches of the interior would attract entrepreneurs, workers and settlers, necessitating major additions to the almost inconsequential administration and

government services that had emerged on the North Shore. Thus the North Shore as a whole, and the Sudbury region in particular, was on the verge of lightning quick "progress" that nevertheless displayed a marked continuity with earlier developments. The victims of earlier progress -- the Amerindian and the fur trader, not to mention the flora and fauna -- would be overwhelmed as the railway plans of southern businessmen and politicians opened the North Shore.

NOTES

¹ Fleming claimed that in 1870 the region was "but little less strange than the Mountain Regions." Sandford Fleming, Report on Surveys and Preliminary Operations of the Canadian Pacific Railway up to January, 1872 (Ottawa: MacLean, Rogers & Co, 1877): 43.

² No local evidence of the Palaeo-Indian culture has come to light because of limited archaeological research and the destructive acidity of the Shield soils. Shield Archaic relics have been found at Long Lake and near Garson. Helen Devereaux, "Sudbury: The Last Eight Thousand Years," Polyphony 5 (Spring-Summer 1983): 17-20; Kenneth C.A. Dawson, "A History of Archaeology in Northern Ontario to 1983 with Bibliographic Contributions," Ontario Archaeology an Eleven thousand year archaeological outline (Ottawa: National Museums of Canada, 1972), 18-36; R.C. Harris, ed., Historical Atlas of Canada, Vol. 1, From the Beginning to 1800 (Toronto: University of Toronto Press, 1987), plates 6-8.

³ This is a very brief, general sketch of a complex topic. Wright, 38-108; Harris, ed., plates 9, 14; Kenneth C.A. Dawson, "Prehistory of the Interior Forest of Northern Ontario," Boreal Forest Adaptation, ed., A. Theodore Steegman (New York: Plenum Press, 1983) 55-84; Charles Bishop, The Northern Ojibwa and the Fur Trade: An Historical and Ecological Study (Toronto: Holt Rinehart and Winston, 1974), 3, 7-8; Conrad Heidenreich, Hurononia: a History and Geography of the Huron Indians (Toronto: McClelland and Stewart, 1976), 219-277; George Quimby, Indian Life in the Upper Great Lakes: 11,000 B.C. to A.C. 1800 (Chicago: University of Chicago Press, 1960), 1-8, 88-99; George Quimby, Indian Culture and European Trade Goods: the archaeology of the historic period in the western Great Lakes region (Madison: University of Wisconsin Press, 1966), 118-124. There are many other pertinent studies.

⁴ George Quimby and Harold Hickerson suggest that the northern bands fared better than those closer to white settlement. Cornelius Jaenen and Charles Bishop present a dissenting view, with Jaenen, in particular, proposing that a very great cultural disintegration occurred. Bishop, 3-10; Quimby, Indian Culture, 126; Cornelius Jaenen, Friend or Foe: Aspects of French-Amerindian Cultural Contact in the Sixteenth and Seventeenth Centuries (Toronto: McClelland and Stewart, 1976), 196 and passim; Harold Hickerson, The Chippewa and their neighbours: a study in ethnohistory (New York: Holt, Rinehart and Winston, 1970), 177.

⁵ General coverages include: Bishop, 108-113; Quimby, Indian Culture, 147-158; Jennifer Brown, "Northern Algonquians from Lake Superior and Hudson [sic] Bay to Manitoba in the Historic Period," Native Peoples: the Canadian Experience, ed. R.B. Morrison and C.R. Wilson (Toronto: McClelland and Stewart, 1986), 214-218.

⁶ There are many spellings of these clan names. Heidenreich, map 42; R.B. Orr, "Algonquin Sub Tribes and Clans of Ontario," Thirty-Third Annual Archaeological Report 1921-22, ed. R.B. Orr (Toronto: King's Printer, 1922), 30-31; Reuben Gold Thwaites, ed., The Jesuit Relations and Allied Documents; Travels and explorations of the Jesuit Missions in New France, 1610-1791, 76 vols. (Cleveland: Burrows, 1896-1901; repr. New York: Pageant Book Co., 1959), 10:322, 18:231, 33:149, 47:317, 54:133.

⁷ Pierre F.X. de Charlevoix, Journal of a Voyage to North America (London: R. & J. Dodsley, 1761), 2:47; P. Camille de Rochemonteis, ed., Relations par lettres de l'Amerique septentrionale (annees 1709 et 1710) (Paris: Letougey et Ane, 1904), 114; Harris, ed., plates 35, 38; Thwaites, ed., Jesuit Relations, 42:75, 93; 43: 145, 44:251, 55:137, 153, 155, 56:95, 99, 57:243, 60:215, 61:99; Antoine Dennis Raudot, "Memoir Concerning the Different Indian Nations of North America," letter 45, Quebec, 1710, in W. Vernon Kinietz, The Indians of the Western Great Lakes (Ann Arbor: University of Michigan Press, 1972) 370. On the band's oral traditions, see Edwin J. Higgins (in collaboration with The Whitefish Lake Indian Reserve), Whitefish Lake Ojibway Memories (Cobalt: Highway Book Shop) (hereafter Higgins and WLIR), 27, 31.

⁸ Thwaites, ed., Jesuit Relations, see notes 6, 7 and 49. The River "Amikoue" (spelling varies) is evident on many period maps. Also see Dollier de Casson and De Brehaut de Galinee, "Exploration of the Great Lakes 1669-1670", Ontario Historical Society Papers and Records 4 (1903): 85. On the role of the Amikwa as middleman see James H. Coyne "The Pathfinders of the Great Lakes", Canada and Its Provinces, Vol. 1 New France, ed. Adam Shortt and Arthur G. Doughty (Toronto: Glasgow, Brook & Co., 1914), 70; Benjamin Sulte, "Decouverte de Mississippi en 1659", Transactions of the Royal Society of Canada 9 (1903): 5. For more general information on Indians as middlemen in furs: Bishop, 9-10; Arthur J. Ray and Donald B. Freeman, Give Us Good Measure": an economic analysis of relations between the Indians and the Hudson's Bay Company before 1763 (Toronto: University of Toronto Press, 1978), 23-26.

⁹ The gifts were initially distributed at Michilimackinac, then Drummond Island, St. Joseph's Island, and finally Manitowaning (from 1836). John Coates, "Number of Indians resorting to Michilimackinac (10 September 1782)," Michigan Pioneers and Historical Collections 10 (1908): 635 and the various government reports cited below. The participation of local Indians in these activities is noted in Joseph Hanipaux, Manitowaning, to Pere provincial, 5 November 1849, Lettres des nouvelles du Canada 1843-1852, ed., Lorenzo Cadieux (Montreal: Les editions Bellarmin, 1973), 600. George Heriot, Travels through the Canadas (London: Richard Phillips, 1809; repr., Toronto: Coles Publishing Co., 1971), 197; Adam Elliot, "Journal of the Rev. A. Elliot Travelling Missionary, Home District," 23 June 1835, The Stewart Missions; A Series of Letters and Journals Calculated to exhibit to British Christians, the Spiritual Destitution of the Emigrants Settled in the Remote Parts of Upper Canada, ed W.J.D.

Waddilove (London: J. Hatchart & Son, 1838), 83. On Bond Head and early Indian policy: James Douglas Leighton, "The Development of Federal Indian Policy in Canada, 1840-1890," (Ph.D. diss., University of Western Ontario, 1975), 28-36; R.J. Surtees, "Indian Reserve Policy in Upper Canada, 1830-1845," (M.A. Diss., Carleton University, 1966), passim. Other band contacts with white man are postulated in Higgins and WLIR, 39, 51-52.

¹⁰ Thomas G. Anderson, 15 May 1837, quoted in "Return to an Address of the Honourable The House of Commons, dated 11 June 1839; for Copies of Extracts of Correspondence Since 1st April 1835, Between the Secretary of State for the Colonies and the Governors of the British North American Provinces respecting the Indians in those Provinces," Great Britain, Parliament, Sessional Papers, (SP), 1839, no. 93, p. 145.

¹¹ J.M. Keating, "Mr. Superintendent Keating's answers to the queries of the Commissioners of 1840," River St. Clair, 17 November 1839, "Report on the affairs of the Indians in Canada," Journals of the Legislature Assembly of the Province of Canada (hereinafter, JLAC), 1847, app. T, sub-app. 22.

¹² This estimate is based on: Harris, ed., plate 69; Surtees, 15; Thomas G. Anderson, "Answers of Mr. Superintendent Anderson, to the Questions of the Commissioners of 1840," Manitowaning, 20 December 1839, 4 February 1840, JLAC, 1847, app. T, sub-app. 24.

¹³ Sir John Colborne to Sir George Murray, 14 October 1830, "Return to several Addresses to His Majesty, dated 19 March 1834; for Copies or Extracts of all such Reports from the Governors or Lieutenant-Governors of British Possession in North America... as may throw light on the present state of the Aboriginal Tribes resident in His Majesty's Dominion in North America...", Great Britain, Parliament, S.P., 1834, no. 617, p. 129. The cleric quoted was the Rev. Frederic O'Meara. Frederic O'Meara, "Evidence of the Rev. F. O'Meara (respecting the Indians at Manitoulin.)," Manitowaning, 2 February 1843, JLAC, 1847, app. T, sub-app. 36.

¹⁴ "Past and Present Condition of the Indians," Section II, "Indians of Canada West," "Report on the Affairs of the Indians in Canada, Laid Before the Legislative Assembly, 20th March 1845," JLAC, 1844-45, app. E.E.E., n.p..

¹⁵ Thomas G. Anderson, quoted in "Recommendations," "Report on the affairs of the Indians in Canada," JLAC, 1847, app. T, Part I, note.np. The reports of 1834, 1839 and 1845 (notes 10, 13 and 14) further confirm the poverty of the North Shore Indian. Also: Joseph Hanipaux and M. Ferand, "Report upon the Present State of the Great Manitoulin island and upon that of the Nomadic Bands of Tribes on the Northern Shore of Lake Huron," "Report of the Commissioners appointed under 9 Vic., C.38, to Investigate Indians Affairs in Canada," JLAC 1858, app. 21, sub-app. 26.

¹⁶The notation was signed "E.H.". Province of Canada, Executive Council State Books, 19 November 1949. PAC, RGL, EI Vol. J, 491.

¹⁷The study was authorized by "Order-in-Council of 4 August 1849. J.H. Price (Montreal) to Alexander Vidal, Port Sarnia, 7, 29 August 1849, Crown Lands, "Instructions to Surveyors," Book 5, reel 125, pp 140-44. This and future references to the Crown Lands records are based on microfilm copies, D:B. Weldon Library, University of Western Ontario, London, Canada.

¹⁸Alexander Vidal and Thomas G. Anderson, "Report of Commissioners appointed to investigate the claims of Indians on the north shores of Huron and Superior," 5 December 1849, Crown Lands, "Letters Received," Roll 21, vol, 18, reel 169. pp 425-449, 519-520; Province of Canada, Executive Council State Books, 16 April 1850, PAC, RGI, EI, vol K, 181.

¹⁹Debate on the merits of the Robinson Treaty began soon after its signing, was reawakened in the 1880s, and continues today. Ottawa Citizen, 11 March 1886; [Kelly Roy?], Ontario Indian, 2 (1979), 14; Kelly Roy, "Kidackimanan (Our Land)," Ontario Indian 3 (1983): 250; Boyd Richardson, "The Indian Ordeal: A Century of Decline," The Beaver 67 (Feb.-March 1987): 24-26. The fullest biography of Robinson is Julia Jarvis, "Robinson, William Benjamin," Dictionary of Canadian Biography vol 10, 1871-1880, ed. Marc La Terreur (Toronto: University of Toronto Press, 1972), 522-623.

²⁰Canada, Indian Treaties and Surrenders from 1680 to 1890 (Ottawa: Brown Chamberlin, Queen's Printer, 1891), 149.

²¹On the Reserve locations: *ibid.*, 150; Vidal and Anderson, "Report," 446; Crown Lands Department, "Tracing Shewing Indian Reserves N. shore of Lake Huron," August 1849, Montreal. Crown Lands, "Indian Reserve Surveys," in "Surveys" reel 109, p. 2497. On the aborted survey: J.H. Price to J.S. Dennis, 6 June 1851, Crown Lands, "Letters Relating to Surveys," vol. 1, reel 137, p. 382.; J.H. Price to J.S. Dennis, Crown Lands; "Instructions to Surveyors," Book 5, reel 125, p. 204; A. Ross to J.S. Dennis, 18 June 1853, Crown Lands, "Instructions to Surveyors," Book 5, reel 125, p. 223.

²²William B. Robinson, "A Statement in detail of the Expenditure of 5,000 less 800 - refunded - disbursed by William B. Robinson, Esq. to the Indians on Lake Superior," 26 September 1850, JLAC, 1851, app. II. Notwithstanding the title of the statement, Vouchers 8 and 11 concern the Whitefish Lake and Tagawinini bands north of Lake Huron. On the band's lifestyle, see the various government commissions cited above (Notes 10, 11, 13, 15) and Diane Delorme, "Les Indiens du nord-est Ontario au IXXe siecle," Document historiques de la Société historique du Nouvel Ontario (hereafter Document historique) no. 73 (1981): 1-10.

²³ PAC, RG 31, Census 1871, reel C-10, 023, East Algoma District, Spanish River sub-district, schedule No. 1, pp 21-28. The numbers are rough estimates only because the enumerator relied on Hudson's Bay employees for information on the "40 families" of Indians "scattered throughout the interior of the country." (p. 21). Varied spelling of geographical locations adds to the difficulties.

²⁴ Canada, Department of the Interior, "Report of the Deputy Superintendent General of Indian Affairs," (hereafter Indian Affairs), 1874, app. 6, p. 33; 1875, app 5, p. 15.

²⁵ Indian Affairs, 1879, 298; 1880, 21, 306. Later reports provide additional details on the school, its teachers, and attendance.

²⁶ Canada, Parliament, "Return... dated 22 April 1879... of all correspondence between the Government of the Dominion and the Government of Ontario, in reference to the arrears due to the Indians or due to the Dominion on account of Indian Land claims on Lakes Huron and Superior," SP, 1879, no. 127; Canada, Parliament, "Return... dated 15th February 1882: For all Correspondence which has taken place in the past two years... in reference to the arrears due to the Indians of Lakes Huron and Superior," SP, 1882, no. 76; Ontario, "Return... of all correspondence between the Government of Ontario... and the government of the Dominion... respecting any claim for arrears or annuities due... for relinquishing of territorial rights on the shores of Lakes Huron and Superior," SP 1884, no. 81.

²⁷ The issue was linked to the jurisdictional dispute over local timber rights. Thos. Johnston, Toronto, to L. Van Koughnet, Ottawa, 11 August, 1883, Crown Lands "Letters Relating to Surveys," Vol, 15, Reel 140, p. 243. Also see Chapter 2 on the rise of administration.

²⁸ Jas. Phipps, Northern Superintendent, Indians Affairs, 1884, 7.

²⁹ There were six dwellings on the Wanapitei Reserve in 1885 but by 1889 the band was reported to have merged with the Wikwemikong band. Some members remained behind: E.J. Rainboth reported two families living in the Reserve in 1893. Indian Affairs, 1889, Northern Superintendency, 6, Holy Cross Roman Catholic Mission, "Calendar of the principal events at Wikwemikong Mission, 1836-1837," 1 September 1889, photocopy, Regional Collection, Sudbury Public Library, 127; E.J. Rainboth, "Report and Field Notes for Norman Township," 1893, Crown Lands, "Surveys," Book 13, No. 1586.

³⁰ Indian Affairs, 1890, Northern Superintendency, 6.

³¹ The Methodist Church sponsored a church and school just north of the Reserve at Naughton; the Roman Catholic edifices were within the Reserve. The manuscript census for 1891 lists all adult males as "trappers". PAC, RG 31, Census 1891, reel T-6323, Algoma East Division, Hallam to Graham.

Townships, 5-11. The annual reports of the Indian Affairs Department provide yearly assessments of the band's "progress."

³² J.H. Stovel, A Mining Trail 1902-1945 (np: privately printed, 1956(?)), 12. In 1910 Stovel was the manager of the Long Lake Gold mine, just east of the Reserve. He arranged considerable trade with the band for fresh meat, fish and berries. Higgins and WLIR, 91-148, provides the Band's own perspective.

³³ Harris, ed., plate 35; Coyne, 70; Ernest Voorhis, Historic Forts and Trading Posts of the French Regions and of the English Fur Trading Companies (Ottawa: Department of the Interior), passim. There are many studies of the fur trade, including Harold Innis, The Fur Trade in Canada: An Introduction to Canadian Economic History, rev. ed. (Toronto: University of Toronto Press, 1956). William Eccles has led the criticism of Innis's work and provided new information on the trade. W.J. Eccles, Essays on New France (Toronto: Oxford University Press, 1987), includes several pertinent works.

³⁴ Louis-Antoine de Bougainville, "Memoire sur l'etat de la Nouvelle-France (1757)," Rapport de l'archiviste de la province de Quebec (1923-24) (Quebec: L.A. Proulx, 1924), 52-53; Sulte, 5; Coyne, 70; M. Pachot noted the shortage of furs. M: Pachot, "Extrait d'une lettre de M. Pachot," Quebec, 27 October 1722. Découverte et établissement des français dans l'ouest et dans le sud de l'Amerique septentrionale (1614-1754): Memoires et documents originaux Vol, 6, ed. Pierre Margry (Paris: Jouaust et Sigaux, 1887), 514.

³⁵ The change of fur trade technique is noted in Guy Carleton, "Official Report as to the French Posts of the Interior, 1768", 2 March 1768, Ontario Boundaries Before Privy Council, 1884: Joint Appendix of Documents (n.p: n.p, 1884?), 609, 611 (Bound copies in D.B. Weldon Library, University of Western Ontario). Cowan was also known as John Baptiste Constant, Constance, de Douagne. Murray, 18 n. 93; E.A. Cruickshank, ed., The Correspondence of Lieut. Governor John Grave Simcoe with Allied Documents (Toronto: Ontario Historical Society, 1925), 2: 75 n. 1. On La Cloche: T.J. Patten, "Hudson's Bay Company Post, La Cloche," Mer Douce No. 11 (January 1923): 17, 28; Voorhis, 97.

³⁶ Elaine Mitchell, Fort Temiskaming and the Fur Trade (Toronto: University of Toronto Press, 1977), 38, 138.

³⁷ The characterization is from Anna Wright, "The Canadian Frontier 1840-1867," (Ph.D. diss., University of Toronto, 1943), 34. Among those active at various times were the North West Company, the American Fur Company, the Michilimackinac Company and many independent operators from Drummond Island, Newmarket, Penetanguishene and elsewhere. Fur trade histories make occasional reference to the area: see, for example, David Lavender, The Fist in the Wilderness (Garden City: Doubleday, 1964), 291, on the American Fur Company.

³⁸The British Parliament on 2 July 1821 closed the border to American traders in retaliation for an Act of Congress of 29 April 1816 doing much the same in the opposite direction. Lavender, 328; Kenneth W. Porter, John Jacob Astor: Business Man (New York: Russell & Russell, 1966), 2:716.

³⁹Gov. George Simpson, to Hudson's Bay Committee, London, 5 September 1827, quoted in Murray Leatherdale, Nipissing from Brûlé to Booth (North Bay: North Bay and District Chamber of Commerce, 1975), 154. The defensive strategy is best summed up in Harold Innis, "Introduction," Minutes of Council: Northern Department of Rupert's Land, 1821-1831, ed. R. Harvey Fleming (Toronto: The Champlain Society, 1940), xlii-xlv, li-lv. Also see E.E. Rich, The History of the Hudson's Bay Company 1670-1870 (London: Hudson's Bay Record Society, 1959), 2: 432-437, 521; Mitchell, 157-159; J.S. Galbraith, The Hudson's Bay Company as an Imperial factor, 1821-1860 (Berkeley: University of California Press, 1957), 39-41

⁴⁰Mitchell, 145

⁴¹The post was on the west side of Whitefish Lake alongside the creek to Cleark Lake (Lat. 40°22'48"). Geological Survey of Canada (hereafter GSC), Topographical Plan of Part of the Spanish and Whitefish Rivers by A. Murray, Esq., Asst. Prov. Geologist 1848-56 (Montreal: G. Matthews Litho., 1857) 80 chains = 1 inch. Innis "Introduction," lv; Mitchell, 146, 159; Higgins and WLIR, 49, 60-61.

⁴²Rich, 2: 433, 521; Glyndwr Williams, ed., "The 'Character Book' of Governor George Simpson 1832," Hudson's Bay Miscellany 1670-1870, ed. Glyndwr Williams (Winnipeg: Hudson's Bay Record Society, 1975), 219; Sir George Simpson, Red River, to Hudson's Bay Committee, London, 20 June 1841, London Correspondence Inward from Sir George Simpson, 1841-42, ed. Glyndwr Williams (London: Hudson's Bay Record Society, 1973), 20; John D. Cameron, La Cloche, to James Hargrave, York Factory, 25 April 1841, The Hargrave Correspondence 1821-1843, ed. G.P. de T. Glazebrook (Toronto: The Champlain Society, 1938), 345. On Whitefish Lake: M. Baurdry, "Historical Background of Hudson's Bay Post Whitefish Lake," manuscript, 21 October 1973, Regional Room, Sudbury Public Library; Chris Blomme, "The Hudson's Bay Post at Naughton, Ontario," Archaeological Notes 78-6 (Nov-Dec. 1978): 41.

⁴³Charles Crosbie Brough, Manitowaning, to Bishop John Strachan, Toronto, 24 March 1840 "The Manitoulin Letters of the Reverend Charles Crosbie Crough," ed. Rundall M. Lewis, Ontario History 48 (Spring 1956): 75. A similar report that cited the Hudson's Bay Company is Joseph Hanipaux, Wikwemikong, to F. Studer, Paris, 30 April 1852, Lettres des nouvelles missions, 813. Government-sponsored committees and reports confirmed that "whiskey" was used at most trade meetings, and was often bartered for furs. See, for example, Hanipaux and Ferand, section 51, part 3.

⁴⁴ Angus M. Anderson, sworn statement before Andrew Mitchell, J.P. Penetanguishene, 24 September 1836. Civil Secretary's Correspondence, Upper Canada Sundries, PAC RG 5, A1, vol, 169, pp 92616-92617. See also *ibid.*, vol, 172, pp 94079-94080 for a letter supporting this contention..

⁴⁵ Sir George Simpson, Red River, to Hudson's Bay Committee, London, 20 June 1841. London Correspondence Inward from Sir George Simpson, 20; J.D. Cameron, La Cloche, to James Hargrave, York Factory, 26 April 1842, The Hargrave Correspondence, 397 characterizes the trade as "worsers and worsers."

⁴⁶ Blomme, 42; George Stock, "Whitefish Lake Post 1827-1896, Naughton Ontario," manuscript, n.d., Regional Room, SPL; C.S. Reid and Thor Conway, "The Status of Fur Trade Archaeology in Northern Ontario," Northern Ontario Fur Trade Archaeology: Recent Research, ed. C.S. Reid (Toronto: Ontario Ministry of Culture and Recreation, 1980), 5, 19; Leatherdale, 164-165; Robert Trott, The Story of Onaping Falls (Sudbury: Acme Printers, 1982), 107-108; Globe 4 June 1898, p.6; Ernest Ingersoll, The Canadian Guide Book Part II: Western Canada (London: William Heinemann, 1892), 23. Higgins and WLIR, 62-63. There is a photo (1889?) of the Whitefish Lake post in Dominion Illustrated, 8 June 1889, 357. The information on business done in 1861 from the manuscript Canada West Census, 1861, RG 31, C-1091, 478 (Algoma District) enumeration District No. 4, Manitoulin and the North Shore, 4.

⁴⁷ William M. Dawson used the term "squatter" in testimony before the Select Committee on the Company. Great Britain, Parliamentary Report from the Select Committee on the Hudson's Bay Company: together with the Proceedings of the Committee, minutes of evidence, Appendix and evidence. SP 1857, Session 2, vol, 15, app 8, p. 394. Also: Mitchell, 202; Galbraith, 39-41; Hartwell Bowsfield, ed., The Letters of Charles John Brydges 1879-1882: Hudson's Bay Company Land Commissioner (Winnipeg: Hudson's Bay Record Society, 1977), xxvi n.6, 214. A study of the firm in the latter half of the 19th century is Gary Sealey, "History of the Hudson's Bay Company 1870-1900," (M.A. diss., University of Western Ontario, 1970), see esp. 235-236.

⁴⁸ The firm maintained a store in Sudbury until 1898. Shirlee Anne Smith, Winnipeg, to Mary Shantz, Sudbury, 20 October 1876, Regional Room, SPL; Blomme, 41; Stock; n.p.; Beaudry, 6-8. On later fur trapping: Ralph Bice, Fur: the trade that put Upper Canada on the map (North Bay: Ontario Trappers' Association, 1983).

⁴⁹ A dozen or more Jesuits worked near the Amikwa territories, with 24 or more stationed at Sault Ste. Marie during the 17th century. Thwaites, etc., Jesuit Relations is the key source. For Sault Ste. Marie 52: 199-201; 54: 127-147; 55: 95-97; 117-131; 56: 107-113; 57: 207-237; 58: 255-263. On Saint Esprit 21: 239-249; 25: 205-233; 27: 47-61; 30: 109-125; 35: 179-181; 55: 147-155; 57: 203-247. On the mission to the North Shore

see 33: 149-155. On St. Pierre 33: 155; 35: 177. On the North Shore Mission of the Apostle (1671-72) 56: 93-105; 57: 239-247; 61: (95-101). On St. Simon 55: 133-135; 59: 217. There are many other scattered references. Among the many secondary works dealing with these Jesuits is John Webster Grant, Moon of Wintertime: Missionaries and the Indians of Canada Since 1534 (Toronto: University of Toronto Press, 1984), 7-64. Harris, ed., plates-34, 35, 38 indicates geographical locations.

⁵⁰The petition was refused in part because the military intended to abandon Drummond Island in favour of St. Joseph's Island. Reply to petition, unsigned, Civil Secretary's Correspondence, Upper Canada Sundries, PAC, RG 5, A1, vol, 86, pp 47127-47128.

⁵¹John Webster Grant, "Rendezvous at Manitowaning," The Bulletin (of the Committee on Archives of the United Church of Canada) no. 28 (1979): 27. The best known Methodist workers were John Sunday, John Paul and David Savage.

⁵²John Strachan, "Religious State of the Indians in Upper Canada," 7 May 1838, The Arthur Papers ed. C.K. Sanderson (Toronto: University of Toronto Press, 1957), 1:112, no. 166; H.A. Seegmiller, "The Colonial and Continental Church Society in Eastern Canada," (Ph.D. diss., General Synod Board of Examiners, Windsor, Nova Scotia, 1966), 516; Grant, "Rendezvous", 27-28.

⁵³Grant, Moon of Wintertime, 85-86, 90-91; Grant "Rendezvous", passim; Seegmiller, 516-520; Wesleyan Methodist Church. Wesleyan Methodist Missionary Society The Report of the Wesleyan Methodist Missionary Society 1838 (London: P.P. Thomas for the Society, 1839), 87, 91-96. Lorenzo Cadieux and Robert Toupin, "Les robes noir à l'île du Manitou 1853-1870", Document historique no. 75 (1982), 8-12.

⁵⁴Elliot, "Journal," 83.

⁵⁵Joseph Hanipaux, Wikwemikong, to P.A. Rubillon, Paris, 30 September 1848, 18 October 1850 Lettres des nouvelles missions, 541, 665; Joseph Hanipaux, Wikwemikong, to F. Studer, Paris, 1 September 1851, *ibid.*, 748-749.

⁵⁶As late as 1880 the Church of England's Diocese of Algoma (founded 1873) "waged a daily struggle, not so much to keep pace with present necessities as to overtake the neglect of past years." Howard Tucker, North-West Canada (London: Society for the Propogating of the Gospel, 1882), 1. One general study is Seegmiller, 518-551. On the Presbyterians: John S. Moir, Enduring Witness: a History of the Presbyterian Church in Canada (Hamilton: The Presbyterian Church, 1974), 157, 163. On the weakness of both: Maurice Cabana-Proulx, "Les églises protestantes au Nouvel-Ontario avant 1900," Documents historique no. 73 (1981): 43-47.

⁵⁷ The Methodist gains are most evident in the statistics on religious affiliation provided by the Indian Affairs Department, which show considerable gain, especially between 1880 and 1900. But by 1910 the Roman Catholics had regained any lost ground. See also Cabana-Proulx, 46-47 and below, note 62.

⁵⁸ The Jesuit outlook is summarized in Grant, Moon of Wintertime, 81, 90-91. Their activities are summarized in Lorenzo Cadieux and Robert Toupin, *passim*. Holy Cross Roman Catholic Mission, "Calendar of the... Wikwemikong Mission" provides a detailed account of these activities.

⁵⁹ Holy Cross Roman Catholic Mission, "Calendar of the... Wikwemikong Mission," 20 April 1857.

⁶⁰ The manuscript census reported 95 "pagans", 31 Roman Catholics, six claiming allegiance to the Church of England and only one Methodist. A decade earlier the entire North Shore Indian population, as recorded, included 225 Roman Catholics, 217 "heathens", and 78 Protestants. Canada West Census, 1861, PAC, RG 31, C-1091, Algoma Enumeration District no. 4, folios 1-14; Census of Canada, 1871, RG 31 C-10,023, Algoma Enumeration District, Spanish River sub-district, 21-28. The Indian Affairs Department, in contrast, reported the Whitefish Lake band "wholly" without Christian allegiance in 1874. Indian Affairs, 1874, app. 6, p. 33.

⁶¹ Jas. C. Phipps, quoted in Indian Affairs, 1875, app. 5, p. 15.

⁶² The manuscript census for 1891 reported 99 Roman Catholics, 23 Methodists and no "pagans". Census of Canada, 1891, RG 31 T-6323, Algoma Enumeration District, Graham to Hallam, 5-11. Indian Affairs statistics show a similar trend, though giving the Methodists some brief gains:

<u>Year</u>	<u>Roman Catholic</u>	<u>"Pagan"</u>	<u>Methodist</u>
1888	100	48	--
1893	88	19	31
1898	132	8	9
1903	145	-	13
1908	155	-	13
1913	168	-	--

Indian Affairs, 1888-1913.

⁶³ Captain Gother Mann quoted in Don W. Thomson, Men and Meridians: The History of Surveying and Mapping in Canada (Ottawa: Queen's Printer, 1966), 1:185.

64 Ruth McKenzie, "Introduction," The St. Lawrence Survey Journal of Captail Henry Wolsey Bayfield 1829-1853, ed. Ruth McKenzie (Toronto: The Champlain Society, 1984), xvii-xxiii; John T. Bigsby, "Notes on the Geography and Geology of Lake Huron," Transactions of the Geological Society (London) 5 (1821): 175-208; John T. Bigsby, "Geological and Mineralogical Observations on the North West Portion of Lake Huron," American Journal of Science and Arts 3 (1821): 245-272; David Thompson, "The Journal of David Thompson," vol. 17, June July 1821, PAO Microfilm copy, Regional History Room, D.B. Weldon Library, University of Western Ontario. William R. Wightman, Forever on the Fringe: six studies in the development of the Manitoulin Island (Toronto: University of Toronto Press, 1982), 3-9, provides a good summary of the early state of knowledge and early explorations on the North Shore.

65 Upper Canada, House of Assembly, Journals, 1823-24, 29 December 1823, 589; Sir James Carmichael Smyth, "Extract from Smyth's Report on Water Communications (1825), Muskoka and Haliburton, 1615-1875, a collection of documents," ed. Florence B. Murray (Toronto: The Champlain Society, 1963), 33.

66 Upper Canada, House of Assembly, Journals, 1833-34, 4 January 1834, 59-60.

67 Jas. Wyld, A Map of the Province of Upper Canada describing all the New Settlement Townships &c., with the Countrie Adjacent, from Quebec to Lake Huron (London: Jas. Wyld, Geographer to Her Majesty, 1895), Scale: 20 miles = 1 inch. J.P. Hurd (?) (illegible), Toronto, to William Hawkins, 15 July 1835, Crown Lands, "Instructions to Surveyors," Book 4, reel 125, p. 324. The reports on these surveys are in Upper Canada, House of Assembly, Journals, 1836, app. 3, No. 125; 1836-37, app. 37, part 21; 1839, app., 87-97.

68 J.H. Price, Montreal, to Alexander Vidal, Port Sarnia, 29 August 1849, Crown Lands, "Instructions to Surveyors," Book 5, reel 125, pp 143-144. On earlier work: D.B. Papineau, to Alexander Vidal, Port Sarnia, 11 May, 25 June, 6 August 1847, 20 April 1848, *ibid.*, 82-83, 85-86, 98, 107. The growing interest in the North Shore is summarized in Wright, "The Canadian Frontier," 52-59.

69 Alexander Murray, "Report of Alexander Murray, Esq. Assistant Provincial Geologist, addressed to W.E. Logan, Esq., Provincial Geologist, Geological Survey of Canada (hereafter GSC), Report of Progress 1847-48 (Montreal: Lovell & Gibson, 1849), 93-124; *idem*, "Report of Alex. Murray, Esq. Assistant Provincial Geologist, addressed to W.E. Logan, Esq., Provincial Geologist," GSC Report of Progress 1848-49 (Toronto: Lovell & Gibson, 1849), 7-46 see esp. 31; *idem*, "Report for the Year 1856, of Alexander Murray, Esq., Assistant Provincial Geologist, addressed to Sir William E. Logan, Provincial Geologist," GSC Report of Progress 1853-54-55-56 (Toronto: John Lovell, 1857), 145-190, esp. 155-166.

⁷⁰ Albert Pellow Salter was born in England in 1816 or 1817; he came to Canada in 1834 and qualified as a Land Surveyor in 1844. He had not been north until 1854. His key assistants on the North Shore surveys were P.S. Donnelly, Arthur Jones, T.W. Herrick, and T.N. Molesworth. Lou Sebert, "The Mapping of Northern Ontario," Bulletin of the Association of Canadian Map Libraries, No. 47 (June 1983), 2.

⁷¹ Joseph Cauchon, Quebec, to A.P. Salter, [Chatham?] 18 June 1835, Crown Lands, "Instructions to Surveyors," Book 5, reel 125, p. 257.

⁷² Albert Pellow Salter, "Report made to the Crown Lands Department by Albert Pellow Salter, P.L.S., upon the Country bordering upon the North Shore of Lake Huron, recently explored by that Gentleman," 26 January 1856, JLAC, 1856, app. 37; idem, "Provincial Land Surveyor Salter's Report of Survey of a Base Line north of Lake Huron," Report of the Commissioners of Crown Lands, (hereafter Crown Lands), JLAC, 1857, app 25, sub-app R, 262-267; James Johnston, "Report of James Johnston, Esq., P.L.S. to A.P. Salter, Esq., P.L.S. for the year 1856", ibid., 267-269; Arthur Jones, "Report of Arthur Jones, Esq., P.L.S. to A.P. Salter, Esq., P.L.S., for the year 1856," ibid., 269-272; T.N. Molesworth, "Field Notes and Diary of the Survey and Exploration of the North Shore of Lake Huron", Goderich, 3 December 1857, Crown Lands, "Surveys," Book 19, no. 1913, reel 65; Thomas Wallis Herrick, "Field Notes and Diary of the Survey & Exploration of the North Shore of Lake Huron," Toronto, 20 December 1857, Crown Lands, "Surveys" Book 13, no. 1907, reel 64. Most of these reports -- sometimes slight abridged or with altered titles -- are in "Return to an Address of the Legislative Assembly... [of] Documents in connection with the sale of Timber Berths on Lake Huron," Ontario, SP, 1873, no. 11, 21-43. See also Crown Lands, 1872, for reprints.

⁷³ John W. Keating, who accompanied John S. Dennis on the Indian Reserve surveys of 1852, was a notable exception. He forecast that "unless at some future period mineral wealth is discovered within its bosom the surface throughout the whole extent can never resound to the busy hum of industry. No sturdy settler will tread the North Shore of Lake Huron, and it is to its waters alone that the adventurer must turn for profitable [sic] employment." John W. Keating, Chatham, to R. Bruce, Superintendent General Indian Department; Quebec, 2 December 1852, Crown Lands, "Letters Received," Book 19, reel 169, p.51.

⁷⁴ Murray, "Report," 1848, 49 passim. On the ore see Murray, "Report" 1856, 180.

⁷⁵ Albert P. Salter, Chatham, to Crown Lands Department, Toronto, 19 September 1855, Crown Lands, "Letters Received," Roll 21, vol. 19, reel 169, 103; Thomas Walter Herrick, "Report," 51-52.

⁷⁶ GSC, Index to the Plans showing the Exploration on the North Shore of Lake Huron (Montreal: Geo. Matthews, Litho., 1857), Scale: 10 miles = 1 inch; GSC Plans of Various Lakes and Rivers Between Lake Huron and the River Ottawa to accompany the Geological Report for 1853-54-55-56 (Toronto: John Lovell, 1857), sheet 2; GSC, Topographical plan of Part of the Spanish and White Fish Rivers by A. Murray, Esq., Asst. Prov. Geologist 1848-56 (Montreal: G. Matthews, Litho, 1857), Scale: 80 chains = 1 inch. Thomas Devine (Crown Lands), Reduction of Plan of Exploration of the North Shore by Albert Pellow Salter (Montreal : G. Matthews, Litho, 1856), Scale: 6 miles = 1 inch. Information on these maps was used as early as 1857: Thomas Devine, (Crown Lands), Map of the North-West Part of Canada (Toronto: MacLean and Co., 1857), Scale: 50 miles = 1 inch.

⁷⁷ Thomas Devine, (Crown Lands), Government Map of Canada from Red River to the Gulf of St. Lawrence. (Quebec and Toronto: Thompson and Co., 1859), Scale: 30 miles = 1 inch (Approx). The six-by-six mile township system was adopted on 6 August 1866 "as it possessed the decided advantages of uniformity, regularity and economy." "Report of a Committee of the Executive Council," in "Copies of all Orders in Council and Regulations Concerning the Management of Crown Lands and Timber Which are Now in Force Either in Whole or In Part," Ontario, SP 1884, no. 112, p. 5.

⁷⁸ Ontario, Crown Lands [Map to Accompany "Report on Timber Berths"], incomplete copy, Regional collection, Laurentian University Library, no details available. This map, on a scale of about 6 miles = 1 inch, has detailed notation on timber, soil and topography for almost all of the study area. On the general examination: Thomas A. Johnson, Toronto, to A.P. Salter, Chatham, 17 February 1873, Crown Lands, "Instructions to Surveyors", Book 7, Reel 126, p. 279. William Bell and his party arrived at Whitefish Lake on 20 August 1873. William Bell, "Field Notes of Timber Berths 60, 61 and 44, 1873", Pembroke, 30 January 1874, Crown Lands, "Surveys", Book 4, no. 1930, reel 65.

⁷⁹ Simon Francois Daumont, Sieur de St. Lussou, "Record of the Taking Possession, in the King's Name, of the Counties of the West and North 1671," Ontario Boundaries Before Privy Council, 1864, 619.

⁸⁰ Fred Armstrong, Handbook of Upper Canadian Chronology, rev. ed., (Toronto: Dundurn Press, 1985) 220, 225.

⁸¹ Joseph Wilson handled customs, the mails, Indian Affairs, and other duties including those of a "preventive" officer. R.A. Douglas, ed., John Prince: A Collection of Documents (Toronto: The Champlain Society, 1980), 128n; Armstrong, 225.

⁸² Executive Council Canada State Book, 17 March 1847, RAC, RG I, E1, vol, F, 421. Wilson's request, made on 11 December 1846, is noted in this memorandum.

⁸³ J.H. Price, Toronto, to His Excellency the Governor General in Council 6 June 1851, Crown Lands, "Letters Relating to Surveys", Vol. 1, reel 137, p. 382.

⁸⁴ Report to a House Committee on the Country north of Lake Superior," quoted in Douglas, ed., 123. On the extension of Simcoe County: Province of Canada. Statutes, 1851, 14-15 Vic., c. 5, schedule A, ss.20.

⁸⁵ Province of Canada. Statutes, 1853; 16 Vic., c. 176, preamble.

⁸⁶ Nipissing District was divided into Division No. 1 -- south of the Mattawa River - Lake Nipissing - French River line -- and No. 2 -- the remainder of the district. Province of Canada, Statutes, 1857, 20 Vic., c. 60. The Districts were proclaimed on 12 April 1858. Canada Gazette 17 (17 April 1858): 676-677. On Algoma becoming a Provisional Judicial District: Canada Gazette 18 (27 August 1859): 2070.

⁸⁷ "Report of Thos. Worthington, Assistant Commissioner of Customs and Excise and A. Brunel, Associate Inspector of Ports, to R.S.M. Bouchette, Commissioner of Customs and Excise," 8 August 1863, in "Return to an Address of the Honourable the Legislative Assembly, dated 17th August, 1865, for Copies of Documents Related to Free Ports," 14 September 1865, Province of Canada SP 1863, No. 37, 16. See also C.E. Anderson, "Report on the Free Port of Sault Ste. Marie," 10 October 1864, *ibid.*, 25-49.

⁸⁸ Return of an Address... dated 19 March 1860... [of] any information that it may be proper to communicate on the subject of the new District of Algoma," 13 April 1860, Province of Canada SP 1860, no. 36; Anderson, *passim*; Douglas, ed., Iv.

⁸⁹ The Temporary Judicial Districts of Muskoka and Parry Sound were created in 1868 and 1869, the Provisional Judicial District of Thunder Bay in the session of 1870-71, Haliburton in 1874 and Manitoulin - consisting solely of island -- in 1888. Ontario. Revised Statutes of Ontario 1877. c.5 55. 43-47; 1897, c.3. ss 44-50. More exact detail is available in the individual statutes.

⁹⁰ Ontario Statutes 1869. 33 Vic., c. 25; 1871-72. 35 Vic., c. 37.

⁹¹ Ontario Statutes 1873, 36 Vic., c. 48, s 514.

⁹² The increasing sophistication of legislation affecting Northern Ontario is apparent in comparing statutes like "The Unorganized Territory Act" through the succeeding Revised Statutes of Ontario. Compare, for example, the sophistication of R.S.O. 1897, c. 109 to earlier versions.

⁹³ F. Gabriel Druillettes in Thwaites, ed., Jesuit Relations, 44: 243. The route used the Spanish River and a "series of lakes" to ascent to the Mattagami River.

⁹⁴ Wightman, 32.

⁹⁵ The idea of an overland route across the North Shore interior dated at least from 1827, when Chief Factors McBean and Cameron, of La Cloche and Timiskaming, suggested a trail be opened between the respective posts. Mitchell, 145-146. Talk of a French River canal began by the 1830s and soon reached the stage of formal surveys; nothing was done beyond the issuance of maps and reports. Eric Jarvis, "The Georgian Bay Ship Canada: A Story of the Second Canadian Canal Age, 1850-1915," Ontario History 69 (1977): passim. Wright, "The Canadian Frontier," passim., provides excellent coverage of the growing determination to "open up" the Shield frontier.

⁹⁶ Bureau of Agriculture, "Roads in the Eastern and middle section of Upper Canada to be opened by the Colonization grant," 30 September 1854, "Return to an Address... dated 25 September 1854, praying that His Excellency will be pleased to be laid before the House a Statement in detail of the objects to which the sum of 60,000, (or any part thereof), appropriated in the Session of 1852-53, for opening up the Waste Lands of the Province, has been applied," JLAC, 1855, app. M.M, n.p.

⁹⁷ Duncan Sinclair, "Field Book, Report, and Diary of Exploration Line for Road from the Mattawa River to Lake Huron, 1856", Toronto, 29 May 1856, Crown Lands, "Surveys," Book 15, no. 1909, reel 64, p.6.

⁹⁸ P.M. Vankoughnet, Toronto, to A.P. Salter, Sault Ste. Marie, 12. July 1859, Crown Lands, "Letters Relating to Surveys," vol. 41, reel 137, p. 267. New instructions provided a more westerly terminus at the Spanish River: idem, Toronto, to A.P. Salter, Toronto, 31 May 1859, "Instructions to Surveyors," Book 5, reel 137, pp. 404-406. The Minister of Agriculture: Executive Council State Books, 16 June 1857, PAC, RG1, E1, vol. R, 494. The land grant scheme is noted in Wright, "The Canadian Frontier," 166-167.

⁹⁹ J. Stoughton Dennis, "Report and Field Notes of the Survey of the Muskoka Road Line," Toronto, 19 April 1861, Crown Lands, "Surveys," no. 2211, reel 78.

¹⁰⁰ The Great Northern Road is discussed briefly in Commissioner's report, Crown Lands, 1859, 12, 17; 1865, x, xvii-xviii; Fuller reports are: A.P. Salter, "Report of P.L.S. A.P. Salter, on the Roads and Surveys on the North Shore of Lake Huron," Chatham, 10 January 1860, Crown Lands 1859, app. 18; idem, "Report on Colonization Roads in the District of Algoma," 2 February 1861, Crown Lands, 1862, app. 39c. On the survey: J.W. Fitzgerald, "Report, Diary and Field-Notes of Exploration Line between Spanish River and Parry Sd., 1865", Penetanguishene, 7 September 1865,

Crown Lands, "Surveys", Book 11, no. 1905, reel 64. Some 70 miles of road -- of poor quality -- had been built by 1867 at a cost of \$79,000. Murray, ed., Muskoka and Haliburton, 189. The road from the Ottawa Valley failed to progress beyond the surveys noted about (nt 97). The Bruce Peninsula - Manitoulin Island route was promoted by William Spragge during the 1860s. Wightman, 57.

101. The land grant scheme is cited in Morris Zaslow, The Opening of the Canadian North 1870-1914 (Toronto: McClelland and Stewart, 1971), 13. Many of the early rail schemes are listed in Robert Dorman, A Statutory History of the Steam and Electric Railways of Canada 1836-1937 (Ottawa: King's Printer, 1938). Also see Wright, "The Canadian Frontier," 90; G.P. de T. Glazebrook, A History of Transportation in Canada 2nd ed. (Toronto: McClelland and Stewart, 1964), 2: 42-45; Sandford Fleming, Confidential Memorandum on the Canadian Pacific Railway (Ottawa: I.B. Taylor, 1874,) app. A.

CHAPTER TWO

THE DAWN OF THE SUDBURY REGION

The changes caused by the entry of the Canadian Pacific Railway (CPR) crews into the North Shore far exceeded those produced by the Amerindian, fur trader or explorer. The CPR brought not only tracks and stations but also an administrative and service framework that only gradually was replaced by governmental authority. The Syndicate's needs resulted in the felling of local forests and attracted the first farmers; "cuts" made through the rocky terrain drew attention to local mineral deposits. Like the CPR, early lumbering and mining operations were directed from elsewhere; these industries alleviated the depression that followed the completion of the CPR. Natural resource exploitation was an incentive for further transportation, communications and administrative gains that, in turn, determined the early community and social structures so crucial to later developments in the Sudbury region.

TRANSPORTATION, COMMUNICATIONS AND ADMINISTRATION

Progress on the North Shore, insofar as the businessman and administrator perceived it, depended on easy access to the interior. Thus the "all Canadian" CPR route, necessitating a line across Northern Ontario, received much praise. But praise often became criticism as the Syndicate struggled to conquer the rugged Canadian Shield; all the while being distracted by political scandal and near-constant economic crisis.¹ Survey of the Shield-traversing route was not completed for more than a decade, and notwithstanding hard-driving managers plus quick, often shoddy construction techniques, the line took several years to complete. Major reconstruction would follow, but by 1883 the CPR brought the Sudbury area rail service,

telecommunications plus locally useful roads, shanties and other facilities. As its crews pushed the frontier ever forward, the Syndicate also moved to provide the administration and services needed on its transcontinental route. Both senior levels of government moved to impose their authority over the newly-opened region but some time would pass before these governments wrested control from the CPR; local input took longer still.

The Entry of the CPR

Traversing the North Shore with a railway line necessitated surveys to determine the most suitable route through the rugged terrain. The CPR's survey crews first pierced the North Shore in 1871, with parties seeking routes northwest from Mattawa and east from the Sault. William Murdock, who led the latter party, crossed the Spanish River at "McGee's Creek", then followed the creek east for eighteen miles before turning southeast near "Whitefish Holme" Lake en route to the French River. Two years later CPR crews worked northwest from Lake Nipissing to the Pic River.² New surveys commissioned in 1876 examined the country lying between the French and Pic Rivers. Thomas Ridout, leading the southernmost team, angled northwest through the local area between the 46th and 70th miles of his survey.³ Marcus Smith, meanwhile, led a party in from the east to the junction of the Wanapitei River and Salter's base line. There he turned west and followed a line defined by the Long, Round and Whitefish Lakes to the Vermilion-Spanish River system, which the party descended to Lake Huron.⁴

The French-to-Pic River route was retraced in 1877 because misadventures associated with the Georgian Bay branch focused the Syndicate's attention on a "height of land" main line, with a branch to Sault Ste. Marie providing connections with the American midwest.⁵ Surveys of this North Shore

branch began in 1879, with Alfred Brunel leading his party from the junction of the Spanish and Vermilion Rivers east along the latter and the north shores of the "Long Lakes" to the Wanapitei River, then almost due east. Brunel returned in June 1880, tracing a line west from the Wanapitei by way of Long and Round Lakes and the Vermilion River.⁶

More surveys fixed the precise position of the branch. W.A. Ramsey surveyed west from the Wanapitei in 1881, while G.H. Middleton ran a line in from the west. Their detailed studies proved invaluable, for in November 1881 the CPR concluded that the height of land route was impractical and "all but finally decided" to locate the main line by way of Sault Ste. Marie.⁷ The "new" line was projected

across the Sturgeon River, immediately below the falls; thence in a north-westerly direction along the course of the Veuve River, and by the north branch of the same, to near the Wahnapiatae River in Township 47 [Dryden] and crossing the latter river at the township line between Townships 47 and 55 [Neelon]; thence in a southwesterly direction by the northerly side of Long Lake to near the west line of Township 62 [Broder]; thence westerly through Township 70 [Waters]; thence southwesterly, crossing the Vermilion River in Township 77 [Graham] and continuing in the same course to the left bank of the Spanish River, near the Big Bend; thence by the left bank of the last mentioned river, and crossing the same near the south line of Township 99 [Nairn] thence, still following a south-westerly course.⁸

The difficult terrain immediately north of Sault Ste. Marie necessitated yet another change west of Algoma Mills -- the line was to "follow near the course of the Mississaga River; and generally near to the North Shore of the Lake Superior."⁹

The lands north of the Mississaga also proved too intractable for quick, easy railway construction so new surveys, launched in mid-1882, retraced the earlier French to Pic River surveys; the main line would "follow the Algoma Mills location from Callander to Wahnapiatae River, 82 miles, thence in a direct line for about 336 miles... [to] near the Pic River." The remainder of the North Shore line was once again designated

a branch line.¹⁰ This decision, the culmination of many surveys as well as fiscal and political conditions, placed the junction of the main and Algoma lines near the north shore of Long Lake, perhaps in Broder or Waters Townships. The grade survey crew -- led by W. Ramsey -- went off course, however, and ran the line north of a fairly large lake in the future Township of McKim, so the junction was placed some miles northeast of the intended position.¹¹

The grade survey crew passed through the area in September 1882, blazing a trail that was followed early in 1883 by the trail cutters. By that date the westbound construction crews, led by James Worthington, were at Sturgeon Falls; Harry Abbott's crews had graded 60 miles of line east from Algoma Mills.¹² Both foremen urged their crews towards the junction of the main line and the Algoma Branch, which the CPR on 15 February 1883 designated as Sudbury Junction. The efforts of 3,350 men and 253 teams saw one third of the 140 mile gap between Algoma Mills and Sturgeon Falls tracked by April 1883; the work was "pushed forward with redoubled activity" after the snow melted.¹³ Indeed, James Worthington hoped to reach Sudbury in August, and some progress was evident: the "end of iron" was 24 miles east of Sudbury by late July and within 16 miles of the junction a month later. More than 40 miles of track, meanwhile, was in place east of Algoma Mills as Harry Abbott "pushed" his crews "with his accustomed energy."¹⁴ Abbott's "energetic" approach was not always appreciated by his employees, making it "rather a tedious business to keep the navvies at work."¹⁵

Labour unrest and the difficult terrain took their toll: by mid-September the main line track end remained ten miles east of Sudbury though the advance guard had prepared the grade as far as Cartier. In his

determination to advance the main line, James Worthington ignored his twenty-mile responsibility on the Algoma Branch. Still, the track east of Sudbury was not finished until November 24, a month or more behind schedule. The first work train arrived four days later, and a mixed rail service was initiated on December 10.¹⁶

On the Algoma Branch, meanwhile, the CPR stopped work because its newly acquired line to Owen Sound offered a better Lake Huron port while progress on the main line lessened the utility of the branch as a conduit for materials delivered by water.¹⁷ The branch was completed early in 1884, but "only up to a standard necessary to retrieve the engines and rolling stock at the [Algoma] Mills end, and also use up supplies of ties and timber." When floods destroyed the just-finished track near Naughton in May 1884, the railway's critics attacked the shortsighted expenditure by the CPR of \$3 million on "hasty and improper construction" on the branch.¹⁸

Ironically, critics of this "recklessness and mismanagement" applauded the transfer of Harry Abbott -- the manager of the branch work -- to the main line. James Worthington, Abbott's predecessor, had been roundly criticized for poor management skills; he reportedly "was too harsh with some people under his charge and too easy with others." Far worse from the perspective of the CPR was an inspection in mid-March 1884 which determined that Worthington's use of numerous small, independent crews promoted inefficiency. Worthington did not long withstand these attacks from within and without; he "resigned" or was "superseded", effective 1 May 1884. His legacy was a line tracked at least 22 miles and ballasted an additional 50 miles beyond Sudbury.¹⁹ Harry Abbott took charge of the section crews -- "the adventurous Finns, swarthy Italians, loquacious

French Canadians, and sturdy British navvies" -- numbering perhaps 6,000 men, and undertook to complete earlier work and forge ahead. The railhead advanced five miles past Cartier by June 20 and construction trains ran as far as Pogomasing by September 20. The stretch northwest from Sudbury came into regular service in October 1884; by then side tracks, water tanks and finished station houses were in place as far west as Cartier. With the virtual completion of local facilities, the CPR shifted its construction office from Sudbury to Biscotasing on 21 November 1884. Abbott's crew met east-bound workers led by John Ross in May 1885; the line would be opened somewhat later.²⁰

Completion of the CPR line enabled travellers to journey in comfort from Sudbury to Ottawa and Montreal, or to the Lakehead and beyond. Local travel, meanwhile, benefitted from the railway's tote roads -- the first cut out by early February 1883 from Lake Nipissing to Algoma Mills via the future Sudbury Junction. This and other tote roads, utilizing railway bridges, fords, or CPR scows to cross the rivers, enabled teams and riders to "travel with rough regularity"; if not any great speed. Opened east, west and northwest of Sudbury, these roads -- along with the parallel railways -- defined the early travel axes of the region.²¹

These transportation axes were also paralleled by the CPR telegraph line, built northeast from Algoma Mills to "beyond" the Spanish River by early March 1883 and to Sudbury several months ahead of the track. Early service was notoriously slow: in April 1884 "three days to 100" was "good time on the wires." But it must have become reasonably efficient by 1886, when the CPR launched commercial telegraph operations, abruptly reducing the isolation of the Sudbury region and thereby enhancing the local quality of life.²²

The Introduction of Administration and Services

Rapid progress on the CPR railway and telegraph lines, bringing the Sudbury region and its resources within easy reach of older-settled areas, jolted speculators, businessmen and settlers into action. The influx of population, though welcomed by railway and government officials alike, created an urgent need for effective administration where none had existed. The CPR was first to move, imposing its will under federal statute. The Syndicate lost interest with the completion of construction, so both the federal and the provincial governments took charge, sometimes representing conflicting interests. And the still tiny local populace did their best to win the services that were commonplace in longer-settled regions.

Though nominal authority over the North Shore interior was well established by 1880, the first real imposition of order came from the CPR. Nowhere was the Syndicate's will more absolute than at Sudbury, where, in 1883 it made formal application for

parcels or tracts of land and premises situated lying and being in the township of McKim... comprised of Lots number five, six and seven in the Third Concession... and also Lots number five, six and seven on the Fourth Concession... containing in all one thousand, nine hundred and twenty acres.²³

While the Crown Lands Department dithered over the claim, James Worthington established quite autocratic control, firing an employee who dared to build a shanty on the area claimed and forcing a merchant to locate outside of the "Flat" immediately surrounding the junction point. As late as April 1884 Worthington prohibited "any private buildings being erected within a mile each way of the station."²⁴ Such complete control was sanctioned by federal statute, the Public Works Act having been put into force along "the located line of the Canadian Pacific Railway (Eastern

Division) between Algoma Mills and Callender Station" on 1 February 1882.²⁵ Practical factors enhanced the CPR's early authority, for it owned most buildings, offered the only practical transportation option and was the major, often sole, employer at its stations.

The Syndicate's overbearing influence was partially offset by its provision of services. At Sudbury, for example, the CPR built stores, boarding houses, and a hospital manned by W.H. Howey, a doctor in its employ. "Civility", meanwhile, was maintained through Justice of the Peace James Worthington -- the local construction foreman -- and railway detective Sam May, on hand early in 1883. Those persons dealt with by these men were held in a company-built jail constructed in 1883. Fire protection, too, was a CPR responsibility, though the "bucket brigade" and central fire bell provided only minimal aid from the frequent fires afflicting Sudbury.²⁶

The federal authorities also introduced their own services, with the Dominion Police helping to enforce the Public Works ban on alcohol.²⁷ Mail service, too, kept abreast of the CPR construction crews: Herbert Gilroy opened the Sudbury office on 1 April 1883. Complaints about the "crying evil" of mail that took from five days to six weeks in passage lessened as regular rail service brought improved postal delivery and the introduction of a money order service at Sudbury. The new service and the opening of a post office at Cartier on 1 January 1886 marked the start of a new era of improving mail service.²⁸

Ontario also extended an administrative presence into the region. Provincially-funded township surveys began in 1882 with T.O. Bolger's survey of Dryden Township; within two decades all but two local townships had been subdivided into lots. Flaws in these surveys, while common,²⁹

were minor annoyances when compared with the piecemeal introduction of provincial services to the region. Policing was ineffective, with Stipendiary Magistrate Andrew McNaughton and Provincial Constable Frank Moberly unable to keep bootlegging or other crimes in check despite the provincial acquisition of the CPR-built jail in 1884.³⁰ Nor was the Province very helpful in opening Sudbury's first school, its beginnings financed through a collection gathered by local Catholics on 19 February 1884. The school was opened in their chapel early in March; in September 1885 the overcrowded pupils moved to the old log CPR office, an "unsuitable building, badly lighted and furnished with bad desks." District School Inspector R. George Scott found these conditions unacceptable since "the population of the place is sufficiently large to support a good school"; he also condemned the school's bilingual character. This criticism hastened the separation of pupils along religious lines which would characterize the educational circumstance of the ensuing decades.³¹

If the response of the Education Ministry to local needs was limited to criticism, the Crown Lands Department was plainly intrusive. It angered local pioneers with their large sales to the CPR and, in blissful ignorance of Treaty rights, the Department sold timber limits covering the whole of the Whitefish Lake Indian Reserve. Then in 1886 the Federal Indian Affairs Department sold the same timber rights to H. Robillard, M.P. for Ottawa City, and J. Riopelle, who turned their \$315 investment into a sale of \$43,000.³² This question of jurisdiction -- and of the two levels of patronage -- wound up before the courts, where Mr. Justice Ferguson decided in favour of the Dominion. The Province, compelled to compensate those who had purchased its timber berth licenses, abandoned its related attempt to gain more "settlement" lands at the expense of the Whitefish Lake band.³³

Intergovernmental squabbles of this sort were largely the result of the Ontario's "politics of development", policies challenged by the writings of H.V. Nelles. Numerous narrower studies suggest more specific failings in Provincial policy. Primitive communications, inadequate governmental machinery, and explosive growth ensured that the "metropolitan systems of aid and advice...frequently faltered in the northern districts." As C.M. Wallace bluntly puts it:

Ontario did not regard its north as simply another frontier...to be integrated into the main stream. The northern wilderness was Ontario's inexhaustible "treasure chest" with resources for the emerging industrial south. The northern fiefdom was to be controlled from Toronto, economically, socially and politically. This is one of the reasons that municipal government in the north has been a marginal success at best. The nineteenth century structures designed for slow growing agricultural communities were imposed, in part, on the instant towns and single enterprise communities, many with short fuses, without much thought to their appropriateness.³⁴

Wallace's modern view would have rung true to Aeneas McCharles, who a century earlier had complained that the "District of Algoma is virtually a timber preserve", treated by the Government as a "conquered country." That approach, he reported, "found a new movement being inaugurated, which is nothing less than the formation of the district into a new and separate Province." Separation from old Ontario would become a recurring theme in the North.³⁵

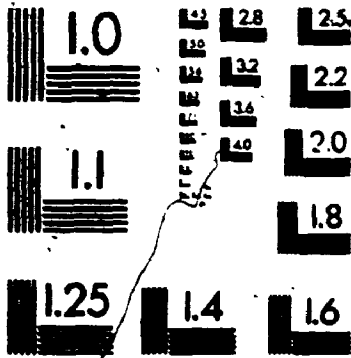
Critics of the government could also vent their displeasure through the polls, though the vote was even more fraught with corruption than elsewhere in Ontario. There were, of course, both Federal and Provincial jurisdictions to consider. The BNA Act established a new Federal riding of Algoma, corresponding geographically to the Provisional Judicial District of Algoma, but the District of Nipissing was without federal representation.³⁶ Provincially, local citizens were in the huge riding of Algoma until the redistribution of 1866 placed them in Algoma East. There was

no mention of Nipissing District in the Representation Act until the Mowat government established Nipissing riding in 1889.³⁷

Provincial and federal elections gave the local electorate a rare chance to vent their anger at what they saw as indifferent or even callous administration, but there was little opportunity to address local concerns. The residents of McKim Township, most living in Sudbury, did form a township council when the Public Works Act was cancelled locally on 11 March 1885. But for the time being, the council had neither sufficient finances nor authority to provide more than rudimentary local services.³⁸

Local administration, no matter how basic, offered evidence of the rapid progress about the region. The early CPR autocracy wore out its welcome even as the Syndicate lost interest in maintaining control. Both senior governments moved to fill the vacuum; while sometimes clashing over jurisdictions, the services provided by their respective bureaucracies were a major advance for a region that in 1882 boasted no effective administrative presence. This advance, no less than the influx of population, was the result of the success of the CPR. That success was hard earned: numerous surveys and slow, costly construction earned the Syndicate many opponents. But it persisted and by 1885 the Sudbury region was linked both east and west to a transcontinental rail system, with a dormant Algoma Branch awaiting future connection to the American mid-west. Beyond the provision of transportation and communications, the CPR shed new light on the varied natural resources of the region. This publicity, in concert with the federal and provincial efforts to promote Northern Ontario, prompted the first local exploitation of the forests, fields and mineral deposits.

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II

FORESTRY, FARMING AND MINING

Construction of the CPR opened the Sudbury region to exploitation by various economic actors. First and foremost, most 19th century observers anticipated that the Sudbury region soon would boast many timber concerns and add new lands to Ontario's agricultural landscape. Early developments were promising: the newly arrived lumber firms provided good markets and seasonal employment for pioneer settlers while clearing the land for what would be -- or so it was argued -- more permanent agricultural endeavours. Some speculators, however, looked beyond the imposing forests and "fertile" soils to the region's innumerable rocky hills, convinced that a centuries-old dream of mineral wealth could be fulfilled. That interest ensured close inspection of each rock cut opened by the CPR crews and exploration of the numerous rust-stained hills near Sudbury. A rush of prospecting and speculative acquisitions left most known properties in only a few hands, but the opening of the first small mines convinced many observers that mining would eventually supplant forestry as the key complement to a local agricultural industry.

Pioneer Agriculture

Interest in farming the North Shore seems an unlikely prospect to modern experts who dismiss its agricultural potential, pointing to poor soils and unfavourable climate.³⁹ But 19th century observers, who viewed agricultural settlement as a concomitant with regional development, held no such doubts because successful Indian and Hudson's Bay gardens were seen as "proof" of the fertility of the region. By 1856 Provincial

officials eager to promote farming on the North Shore were "prepared to lay out on the lands surveyed and in course of survey on the North Shores of Lakes Huron and Superior tracts for settlement, through which roads will be run, and along which free grants will be made."⁴⁰ Only a few observers felt it necessary to temper their optimism. In 1864 C.E. Anderson reported that:

taking into consideration the soil, the climate, and the geographical position of the territory, I feel justified in saying that although the country is capable of supporting, in the aggregate, a considerable agricultural population, and of affording and supplying them with the necessities of life, still, the success of the farmer in that territory will, in a great measure, depend on his having a good customer for his produce within a reasonable distance, and such he is only likely to find in the mining population. Thus, the settlement of the country by agriculturalists, may be considered mainly dependent on the successful working of its mines.⁴¹

Dreams of a greater Ontario left no room for doubt; the Free Grants and Homesteads Act was seen as the way of extending Ontario's influence over then-empty lands.⁴² Surveys reporting "much good land broken by ridges" (1877) and the enthusiasm of Crown Lands officials created even more interest. The press, too, reported a "clay country" comprising "probably not under 50 per cent" of the North Shore, where "the settlers will find the climate, forests and soils to which he has been accustomed in his old Ontario home."⁴³

Optimism reached new heights in 1884 with the publication of The Algoma District, a Crown Lands pamphlet, which reported that lands near the Vermilion River had a "very inviting appearance both as regards soils and timber," and that local "grain, root crops and Indian corn flourished... to perfection."⁴⁴ Township surveyors, too, were resolutely optimistic, reporting that even the roughest townships contained "pockets" of land suitable for agriculture. Contemporary observers were especially impressed

With the level stretch of land in the heart of the geological basin, known then and now as the "Valley." Smaller areas alongside the Vermilion and Wanapitei rivers were also promoted, not only for their quality and ready availability, but also for the access provided by the railway and the markets the railway and the extractive industries offered. At the same time, the influx of French Canadian settlers into the North made "Ontario based" settlement a matter of some contemporary urgency: a Toronto group was formed in 1885 to promote anglophone settlement in Nipissing. The provincial government, reacting to the interest generated by these factors, appointed J.D. Cockburn its agent for "that part of the District of Nipissing lying north and west of Lake Nipissing" on 20 June 1884 and opened a Crown Land Agency in Sudbury on 21 May 1886 in the charge of Thomas Froot.⁴⁵

These men and later appointees oversaw the disposal of lands made available under the Lands Act of 1853 and 1859 and their later amendments. In addition, lands in Lorne and Nairn Townships were available from 1889 to 1895 under the terms of the Railway Aid Act of 1889 (52 Vic. c 35). Sales lands were available to bona fide settlers for between 50 cents and \$2.00 per acre. Then in 1906 the first of eleven townships was placed under the Free Grants and Homesteads Act, which granted 160-acre lots to settlers who fulfilled a five-year residency requirement, cleared fifteen acres, and constructed a house of at least 320 square feet. The Land Acts also reserved pine and mineral rights for the Crown, a provision lifted in 1908 in those lands thought valuable only for agriculture. Later on, other lots would be granted under the Returned Soldier Settlement Scheme and in the 1930s under relief programmes.⁴⁶ The availability of land for farming changed for several reasons. On 29 November 1890 the

Provincial Government temporarily withdrew local Crown lands in a belated effort to prevent undue speculation and monopolization of control. Lands were also withdrawn to "protect" timber, and, later, to shield mining firms from pollution-related damage claims.⁴⁷

Area lands, then, were available to settlers as sales and free lands within a context of public land withdrawals and private speculative acquisitions, with "squatting" adding to local settlement totals:

It is a difficult matter to arrive at the actual number of settlers who located on land...for the reason that in some sections considerable settlement has taken place where the land has not been formally opened for settlement. This was notably the case in the District of Nipissing between Sudbury and Sturgeon Falls and to a considerable extent also in Eastern Algoma...[where] empty townships have as many as 30-50 settlers with homes and clearings.⁴⁸

"Squatting" certainly was common near Sudbury, where the newly appointed land agent was kept busy processing applications from townships where settlement had preceded the surveyor. Moreover, hasty surveys, though understandable in view of the clamour for land, necessitated re-surveys or arbitrary decisions by the Surveys Branch. Several settlers in Sudbury -- "squatters" according to the Branch -- were informed that their applications would be dealt with after the CPR grant was processed. The decision raised much ire, but little could be done; in any event, most of the land near Sudbury fell into private hands soon after sales were permitted in July 1884. While some of these lands were considered "excellent" for farming, men like Fred Eyre, William Holditch, and Marcel Belanger were probably aware of the speculative value of their quarter-section lots.⁴⁹

Local forests attracted another type of speculator, the "timber farmer", who under cover of cultivating the land removed any marketable timber and then moved on to a new allotment.⁵⁰

Speculators were never in short supply, but many pioneers actually looked to begin farming. The flat, black loam of the Valley enticed two hardy squatters -- Joseph Hawes and Christopher Crizes -- to precede the track laying crews.⁵¹ Another score of men began taking up Valley lands by July 1883. These pioneers -- mainly French Canadians from the Ottawa Valley -- were reported "in a fair way of doing well" by mid-1885.⁵²

East of Sudbury, meanwhile, most lands adjacent to the CPR line in Neelon and Dryden Township were taken up by 1886. To the west, the closure of the Algoma Branch delayed settlement until 1886 and 1887, when pioneers like Mikko Myllymaki entered Snider, Waters, Denison and Drury Townships.⁵³

The pioneers who shaped the rural landscape north, east and west from Sudbury were mainly men of "small means" who had left the railway crews or moved north along the line. Their new life was very rudimentary. When possible, farmers cleared lands near lumber operations, hoping to supply the camps with food and fodder. Winter work was a further incentive. This "second" occupation meant that most "farms" had just a few acres cleared. Some settlers, however, chose a quicker, though soil damaging alternative, "burning off the land... seeding thickly (without logging or regular clearing) and then putting on stock as soon as the grass takes."⁵⁴ While techniques varied, the success of the pioneer farmer was not determined solely by his own skill and determination. Other factors included the availability of suitable soils, water supply and acceptable transport. Effective land policy and sufficient capital to manage some improvements were also crucial in determining the fate of pioneer agriculturalists in the Sudbury region.⁵⁵ But the key factor in local agricultural success was the quick spread of lumber operations, which cleared lands for settlement and created markets for agricultural produce.

The Start of Forest Exploitation

Lumbering, of critical importance to local settlers and businessmen alike, was well established on the North Shore by 1860, with small lumber mills dating to at least 1835. Reciprocity and the potential of a growing midwestern American market drew lumber operators and speculators to locations on the Spanish, Whitefish, Wanapitei and French Rivers. But 90 percent of these timber licenses lapsed because of non-payment and only a few new mills were built. These mills supplied a small local market, often cutting timber "indiscriminately...without license" to stave off bankruptcy.⁵⁶ North Shore timber operations expanded enormously after 1864 when shipments to the United States began. Three firms based on the Whitefish and Spanish Rivers cut 89,000 pine logs in 1870-1871 and employed 120 men at their North Shore mills. Such large scale cuts, bringing the Province almost \$11,500 in timber revenues (1863-1871) from areas just south and west of the Sudbury area, inevitably drove the lumbermen inland.⁵⁷

The province earned a far greater sum on 15 October 1872, when timber rights to 5,031 square miles of the North Shore were auctioned for an average price of about 18 cents per acre, or \$117-per square mile. The area auctioned included

all unsold and unlicensed lands of the Crown north of Lake Huron and north of French River, and west of the Indian Reserve on Lake Nipissing, to the eastern boundary of the Township of Aweres and Vankoughnet, extending north from the Indian Reserve on Lake Nipissing, an estimated distance of 24 miles, thence due west to the northeast angle of the Township of Vankoughnet.⁵⁸

The great timber auction did not lead to the immediate felling of local forests because of concerns about their quality, quantity and their considerable distance from Georgian Bay. No local berths had seen the woodman's axe by the late 1870s, when the construction plans of the CPR prompted a marked increase in the value of berths along the railway route.⁵⁹

The Crown Lands Department, paying little heed to the new enthusiasm, failed to extend its regulatory presence beyond the Georgian Bay coast until 1882, when it appointed Peter L. Campbell "wood ranger" for the North Shore.⁶⁰ The minimal regulatory presence came too late, for the CPR construction crews cut timber from both Indian lands and privately held Timber Berths without permission. While the Whitefish Lake Indian band failed to gain satisfaction, John B. Miller sued the CPR for unauthorized cutting in Berths 85 and 92. According to his counsel, B.B. Osler, the CPR

constructed the Sudbury Junction branch of their line diagonally through the two townships -- a distance of about thirteen miles -- without any kind of leave from the plaintiffs. They cut down and appropriated to their use thousands of timbers, and took and left just what they saw fit.

The railway acknowledged some unauthorized cutting and offered \$2,700 in compensation; the plaintiff sought \$52,000, so the solicitors were left to wrangle over a fortune.⁶¹ Most CPR timber cutting, however, was undertaken in berths where the railway held the timber license. McKim Township was a case in point. In 1883 and 1884 two crews, 75 men in all, cut two "rafts" of square timber within two miles of Sudbury Junction. Three years later the Syndicate still had "several parties cutting logs" in the township.⁶²

Some firms cut both for the CPR and for sale. Leach & Brown were cutting east of Sudbury by July or August 1883, and sawing lumber at their mill on Minnow Lake. Potter's Mill on the north shore of Lake Ramsey, McCormack's mill on Junction Creek, and Thompson's mill on the Whitson River at Chelmsford also profited from railway purchases. Some lumber went to local builders, for log structures rapidly went "out of fashion." The emerging mining industry also made small purchases and promised brighter

days to come.⁶³ Sales to more distant markets were a difficult course for small mills, though a routine matter for bigger lumber operations. A major firm entered the region in the season of 1884-85, Messrs. Timmins and Gorman being the pioneers of the lumber trade on the ~~Wanapitae~~. These Mattawa-based lumbermen cut square timber from the Wanapitei watershed through 1886-87 and their product, shipped by rail, was well received. Other firms followed hard on their heels. Hale and Booth began cutting pine in Graham Township in 1885-86 and the Emery Lumber Company cut some 80,000 logs from berths along the Wanapitei River. Favourable reports on the timber of the region plus good prices encouraged other firms to begin pine-cutting operations.⁶⁴

These new operations had a marked physical impact beyond their clearings. Lumber camps were "islands" of settlement in a still-empty region and the firms opened many of the first roads in the area, which they were empowered to make wherever they deemed necessary. Though unplanned, largely unimproved, and poorly maintained, as befit their wintertime use, many of these tote roads (with later improvements) became important cogs in the regional transportation network.⁶⁵ Even so, the roads, clearings and lumber provided by the wood-cutting firms were but a small portion of their overall influence. Farmers and villagers alike looked to these firms for employment and markets, so much so that the industry assumed a dominant place in the local economy following the departure of the CPR crews. But the pace of cutting seemingly dictated a relatively quick end to forest-based prosperity, so the local population cheered the early indications of the mineral potential of the region.

Early Mining: Prospecting and Promotion

Rapid investigation of the gossan-stained hills of the Sudbury region was no surprise because the search for ore had a long, if unsuccessful, history on the North Shore. Minerals were sought by white men as early as 1668 and interest was inspired overseas in 1770 by Alexander Henry's copper mine at Mamainse Point on Lake Superior.⁶⁶ Its quick failure left investors wary until copper was discovered on Lake Superior's south shore in the early 1840s; the high costs and inhospitality of northern Lake Superior focused attention on the North Shore of Lake Huron instead.

Though the depression of the late 1840s killed this first "copper rush",

the need for better communications as a preliminary for development had been shown, and... a group of the leading figures in the political and commercial life of the province had gained a personal interest in the development of the north shores of Lake Huron and Lake Superior... Those who took part in the copper rush... suddenly glimpsed a new field of enterprise ... They never lost their interest in the new region. Henceforth for them the Province of Canada included the Upper Lakes.⁶⁷

In 1853 these parties won mineral regulations "as liberal as those established and exacted by the American Government."⁶⁸ Liberal terms and higher copper prices revived the North Shore industry but the deposits remained concentrated in a few hands, notably The Montreal Mining Company. That firm's financial troubles led it to close the Bruce Mines in 1855, but small scale operations persisted until the Civil War and a five cent per pound duty cut off the American market.⁶⁹

In response the Provincial government abolished mineral exploration fees while tightening the patent conditions and imposing a royalty on ores to discourage speculation. The restrictions drew the ire of the industry plus threats of mine closure. The tactics won the day: Ontario's General Mining Act of 1869 abandoned Crown reservation of gold and silver

deposits and eliminated royalties, taxes and duties on mining in exchange for a price of \$1 per acre. "The public claim upon the resource," argues H.V. Nelles, "had been completely surrendered at the request of the industry -- an action sanctioned in the interest of development." The only large scale development during the 1860s, however, was by West Canada Mining, which made major improvements at its Wellington mine and works before low copper prices and poor ores dashed its hopes. Operations ceased in 1876 and three decades of copper interest came to a halt because of poor markets, isolation, limited ore bodies, and technological shortcomings.⁷⁰

The same factors meant that the Sudbury area deposits, though discovered and reported in 1856, were promptly forgotten.⁷¹ Then in mid-1883 Francis Crean, a timber ranger for the CPR, recognized a rock in James Worthington's office as a sample of copper pyrites. Tests in Ottawa were positive, so Crean and shanty foreman "Jack" Flanagan located the source of the ore one Sunday in August 1883. William Montgomery, a "timber boss" asked John Loughlin and Thomas Murray, M.P.P. to patent the site in return for a quarter share, with Montgomery, Crean and Flanagan each receiving one quarter. Upon arriving in camp, Murray, through Harry Abbott, offered the three locators \$100 each for the site. When they refused, Abbott threatened to fire them. "As we had good jobs," Crean recalled, "and I said we can get some more, we let it go." The property in question later became the Murray mine.⁷²

Crean and company were not alone in their curiosity about the "stained" rock outcrops of the region. Judge Andrew McNaughton and Dr. W.H. Howey sent samples from one such outcrop to Dr. A.R.C. Selwyn, hoping to confirm their worth. Selwyn, the Director of the Geological Survey, discounted

them as almost worthless iron sulphate carrying insignificant amounts of copper and nickel-sulphides. Neither, he reported, were present in quantities sufficient to justify mining.⁷³

Selwyn's pessimistic, seemingly ignorant opinion did not stop timber rangers and others familiar with the country from taking up the easily recognized stained outcrops. Indeed, "a great many prospectors took up land... so long as there was rock there of Huronian formation." Lots rumoured to contain ore often were claimed sight unseen, as in 1883 when J.H. Metcalf and W.M. McAllister applied for portions of Denison, Creighton and Snider Townships.⁷⁴ These claims were not registered until surveys were complete, by which time the "rush" was on. George Thompson applied for a "miner's license to work a claim" in McKim Township on 8 February 1884; seventeen days later John Loughrin, Thomas and William Murray, and Harry Abbott applied for the site they had obtained from Crean and his companions. The more important finds in 1884 included the Crean Hill, Howland, Totten and Frood mines. The Copper Cliff, Mount Nickel, Stobie and Evans mines were located in 1885 while the massive Creighton deposit was obtained as part of a speculative claim filed by Metcalf and McAllister. The future Victoria and Vermillion mines were claimed in 1887 by Henri Ranger, and the Chicago mine was located by Ben Boyer in 1888.

The fairly complete coverage of the South Range drove prospectors to investigate more distant outcrops. Most prospectors looked to the North Range, where serious prospecting began in 1887. By 1890 James Stobie had filed several claims, most notably the Big Levack. Michael Winder-Kenisaw, the best known Indian prospector, located the Strathcona and Ross properties while Isaac Whistle and Arthur Belfeuille found the Whistle deposit. These successes brought many prospectors to the North Range,

resulting in claims scattered about Capreol, MacLennan, Norman, Wisner, Hutton, Bowell, Foy, Hess and Harty Townships.

The forces pushing the search north also sent prospectors to the Basin's eastern flank, where R.S. Donally found ore in Falconbridge Township in November 1887. Further exploration there and in regions bordering Lake Wanapitei was delayed since the Province and the lumber firms were reluctant to "open" these pine-laden townships to mineral exploration. The Emery Lumber Company, for instance, prevented any action on Donally's discovery. Emery had good cause to worry, for the Crown Lands Department and other observers complained that prospectors neglected, or even intentionally set, forest fires that thinned underbrush and cleared cover from the rocky outcrops.⁷⁵ Prospectors gained access to the eastern flank in the mid-to-late 1890s, for once the better pine was cut the lumber companies lost interest. The considerable glacial overburden on the eastern edge of the Basin proved more trying and left important deposits like the Falconbridge undeveloped for decades to come.

Prospecting continued all around the Basin but the sharp eye and "bush" skills of the "old" prospector gave way to an increasing reliance on geological maps; claim cancellations, too, were studied with an eye to potentially valuable properties. These methods aided a final flurry of discoveries in the 1890s, including the Garson, Gertrude, Sheppard and North Star deposits. The last, claimed in 1898 by Aeneas McCharles, marked the end of the "discovery era" in the Sudbury Basin during which time prospectors had claimed several hundred thousand acres and had located over 50 nickel-copper deposits.⁷⁶

Many finds came too late to benefit the prospector because of "blanket" claims dating from Metcalf and McAllister's acquisitions of 1883. Blanket

claiming reached new heights after Sam Ritchie arrived in 1885; he held options on 97,000 acres in 1885-1886. While most options were dropped, the Canadian Copper Company, of which Ritchie was President, still held 10,000 acres by 1888. Aeneas McCharles saw these purchases "as an attempt to monopolize all the mines in the district... discouraging further prospecting and... keeping other mining companies out."⁷⁷ Wholesale blanket application "virtually locked up the rest of the range" by 1890 through the following technique:

Some capitalist in Toronto will make what is called a 'blanket application' in the Crown Lands office for a block of several claims on the range on mere speculation not paying a cent on it. A prospector comes along, and not knowing that the land is applied for he goes over it, and if he discovers mineral on any part of it he writes to the department for the claim. But the Government, instead of letting him have it, will notify the first or blanket applicant that such a piece is applied for by another party, and must be paid for - generally within 30 days - if he wants it. The latter will naturally infer that the new applicant must have found mineral on that particular claim or he would not be after it, and so pays for it, thus getting the benefit of the poor prospector's hard work perhaps for a whole season. Blanket applications are the curse of the range.⁷⁸

Naturally, the system raised suspicions as to the legality of some of these purchases, with suggestions that Sudbury area properties were "reserved for capitalists and friends of the Government." By December 1888 the most "practical explorers" had left the Sudbury area, or so it was argued,

not so much on account of the flies or for want of success, but mainly because of the great uncertainty of getting a claim after finding anything on it. All the prospectors between Sudbury and the Sault got the impression that there was a "ring" in the Land Office in Toronto that manipulated all desirable mining claims for the benefit of themselves and their friends.⁷⁹

Though Aubrey White, then Assistant Commissioner of Crown Lands, immediately denied these charges, such suggestions of impropriety continued: William McVittie complained in 1891 that patents granted to a "Mr. Finkle" were

fraudulent. "Mr. Finkle's name", he argued, is "merely used by a ring of Government officials and others to obtain mining claims that prospectors apply for." Reports that James B. Morrison bribed officials to obtain certain properties further tarnished the reputation of the Department, despite its resolute denials.⁸⁰

Corruption and blanket claiming were serious burdens to the prospectors of the area, who worked a district where mining involved large capital expenditure. "If a prospector happens to find a good body of ore," Aeneas McCharles noted, "the only thing he can do with it is to try and sell it."⁸¹ While a few prospectors earned small fortunes, most accepted "pitifully meagre" sums for their claims, most often from mine brokers. J.H. Metcalf and W.B. McAllister were the first brokers; William McVittie, Robert Tough, and Aeneas McCharles were among the more successful. After they obtained properties, the brokers sometimes developed them in hope of drawing investor interest. Buying low, the mine brokers used these improvements, as well as exaggeration and unwary financiers, to sell high.

The job of promoting the mines was well underway in May 1884, when a "Special Correspondent" to the Globe wondered if Sudbury might not become a "Booming mining city." A newly optimistic Dr. Selwyn and the noted British geologist Dr. T.G. Bonney travelled to the area in July and August respectively; both reported favourably on the deposits. The owners of the Murray claim also ensured that their "mine" was shown to any influential travellers who were so inclined; as a result of "the apparent richness" of the deposit speculators took up all the adjacent lots.⁸² A boom seemed imminent to E. Odium, who in 1885 expressed

a deep and growing conviction that Sudbury will yet be the centre of an enormous mining region. The ores are found in unlimited quantities ... Hundreds and hundreds of acres have already changed hands. There

are thousands of acres located and secured. The labourer and the comparatively poor adventurer have been selling out "claims" which are going steadily into the hands of the enterprising rich man. Several experienced and wealthy gentlemen hold at present thousands of acres, and others are daily pushing into the country.

Already the shrewd Yankee is on the ground. The keen New Yorker is at the present moment laying his fingers on the acres of mineral wealth now manifested to the world by the enterprise of our statesmen and the gentlemen managing the inter-oceanic railway.⁸³

This "keen New Yorker" was working a "copper" location in Drury Township owned by men who were "too jealous of their prize to even make public its location." The location had been discovered in the spring of 1884 by F.C. Crean, Gus and Theodore Harwood, and J.P. Boland; James Worthington and Harry Abbott soon bought partial interests. The Crean-Harwood (often Krean-Harwood) became the first real mine of the region when Stewart Webb, linked by marriage to the Vanderbilts, optioned the deposit early in 1885. Payment was due in six months. Work began about May 1885 with mining engineer John Hurd supervising 22 men. A shaft was sunk 60 feet before Hurd made his decision. "The New York gentlemen" who financed the mine "abandoned it and relinquished their lease on the advice of their manager." The patent holders receiving nothing, for the option was dropped just prior to the six-month deadline.⁸⁴

This failure did not blunt local enthusiasm, for other locations had also been "improved." J.H. Metcalf and W.B. McAllister hired three men to open two pits at the Fly Lake mine in June 1885. Four Finns were added to the crew at the end of June, and the enlarged group worked through the summer. Small scale "enhancement" work also took place at several other sites. The busiest locations were the Eyre, where a "few shots were put in", and the Mineral Hill, where stripping began about September.⁸⁵

These beginnings, however tentative, drew the attention of a "seemingly

irrepressible" speculator. Samuel J. Ritchie, an entrepreneur from Akron, Ohio, came to Ontario in 1881; he found hickory and opportunity to his liking at Coe Hill, north of Trenton. To gain access to these resources, Ritchie reorganized the Prince Edward County Railway as the Central Ontario, then justified its expansion by selling 400,000 tons of iron ore from unproven deposits. Large investments from Thomas W. Cornell, Stevenson Burke, and Henry B. Payne financed these dreams. Trouble was in the offing: as Ritchie later recalled, the Hastings Country

iron ores contained so much sulphur as to be unmarketable, and I commenced a systematic search for other mineral deposits, which, under the terms of the charter of the railway, the railway could own and operate and by such conveyance of property I might support and protect the securities of the railway.

In this effort... I had a considerable search of the country made... I found some copper ores taken from a cut in the Algoma Branch of the Canadian Pacific Railway at what is now Worthington Station, and other specimens taken from a cut in the main line of the Canadian Pacific Railway at what is now known as the Murray mine. ... These samples I had analyzed and found them very rich in copper. I at once proceeded to have these deposits located. While doing so I found that W.B. McAllister and J.H. Metcalf of Pembroke, Ontario, had located and taken up a number of these deposits.... which I purchased.⁸⁶

Ever the optimist, Ritchie spent freely, acquiring options and properties at a prodigious rate. His backers soon sought to "rein" him in, establish clearer control of the newly acquired deposits and do some small scale mining: Ritchie, Payne, Cornell, Burke, G.J. Allen and Henry P. McIntosh incorporated The Canadian Copper Company in Ohio on 5th January 1886.⁸⁷

Ritchie's activities raised interest in the Sudbury area ores to new heights. By November 1886 it was

expected that the great copper find will boom the town in the Spring. Ten car loads are being shipped from the mine every day. ... The Eyre mine has been sold to the firm represented by Mr. Ritchie, and liberal offers have been made for the Harwood and Kream mine, and also for the Froud [sic] and Tough mine, but the owners refused to sell for the terms offered. It is reported that Mr. Van Horne, of

the C.P.R. is interested in the mine worked by Mr. Ritchie and that a new rival company is being formed, of which Messrs. Jas. Worthington and Duncan McIntyre will be members.⁸⁸

Such optimism was the latest statement of faith in the resources of the region, differing only in magnitude from the praise heaped upon the lumber industry and agriculture. The faith seemed justified by progress in all three industries. The forests produced considerable local income, providing markets and jobs that partially offset losses in the railway sector. Its future seemed bright, for near "limitless" stands of timber remained quite near Sudbury. Agriculture, while primitive and small in scale, nevertheless generated much interest because much "good" land remained and the resource industries offered unparalleled markets. Mining, meanwhile, offered the immediate, short-term benefits inspired by a "boom" and promised far greater long-term gains. Little wonder, then, that the local populace promoted mining at every opportunity. That public encouragement was also extended to lumbering and agriculture as the pioneer residents of the Sudbury region forecast a bright future for the tiny communities that were their new homes.

III

COMMUNITY DEVELOPMENT

By 1885 the Sudbury region featured growing forest, agricultural and mining economies, but there was no mistaking the tremendous influence exercised by the CPR. The Syndicate had "opened up" the region, its trains and telegraph brought longer-settled Canada within easy reach, and its officials had provided the lion's share of early administration. The CPR was even more intimately linked with local community development, for its stations became villages, their layout determined by company surveys and arbitrary decisions by CPR officials. Thus Sudbury, chosen as the

"headquarters" camp, immediately became the dominant local community, while minor stations were predestined to mediocrity or even to disappear. The early population, too, reflected the needs of the CPR: ethnically polyglot work crews formed overwhelming majorities and then moved on, leaving behind a francophone and Irish blend drawn up the line from the Ottawa Valley. While a number of pioneers chose to settle on the land, more were attracted to the station sites and, by 1886, were meeting the manpower requirements of the lumber mills and the first mines. In short, urban settings preceded rural settlement in the Sudbury area, adding to the difficulties faced by the administrators and clerics who struggled to provide civil and spiritual order. Their efforts, plus the economic opportunities offered by the blend of ongoing resource and railway activities, helped to create an emerging sense of place in the emerging villages of the Sudbury region, prompting further improvements to both their social and physical settings.

The Physical Beginnings of Local Communities

The first villages to emerge in the Sudbury region were a direct result of the CPR's construction techniques, which saw camps -- little more than a rough cabin and stable -- constructed at six mile intervals. Every second camp was somewhat larger, boasting blacksmith, harness and carpentry shops, a combination office and store, plus a boarding house for the more skilled employees. The "general headquarters" were established at longer intervals; the junction of the main and Algoma Mills lines was a logical choice for such a camp.⁸⁹

Some railway camps failed to progress any farther. Early in 1883 "Vermillion Crossing", eighteen miles west of Sudbury, included "two or three log houses, its boarding shanty with an uncivil mistress, its stables

and the C.P.R. store." But it disappeared soon after the railway crews departed because it was not one of the CPR's designated station locations.⁹⁰

Nor did all stations achieve communal status. Maps dating from 1883 to 1885 note not only the relatively permanent stations like Stinson, Wahnapiatae, Romford, Sudbury, Chelmsford, Onaping, Windy Lake, Cartier and Whitefish but other now-forgotten Algoma Branch stations like Shawlands, Carlisle, Nabum, Fournier, Tennyson and Lockwood.⁹¹

Even more permanent station sites -- apart from the local headquarters at Sudbury -- made slow progress. By October 1883 Romford, a "crossing station" just east of the junction, consisted of four small buildings. Wahnapiatae, a middle-sized construction camp, boasted an office, store, boarding house, camp, station house and two other buildings. Correctly anticipating large timber shipments, the Syndicate, "anxious to have plenty of room for shipping and siding to hold load cars" requested 24 acres for Wahnapiatae station.⁹² This pattern was repeated at stations throughout the region, their success being determined by location, accessible resources, and CPR decisions. The last was most evident in Cartier -- originally named Archer -- which in 1884 was:

an embryo village of log and canvas houses, but certain yet of a bright and favoring future. It takes its appellation from the handle of Mr. Archer Baker's name, his position as General Superintendent of the Eastern Division entitled his name to this distinction. Archer is the dividing line between the Eastern and Western divisions of the road and here will be built repair shops, roundhouse, turntables and a labyrinth of tracks, to dress it out becoming so important a position.

The CPR acquired a square mile of land at "Cartier Division Station" on 6 July 1885. Its role as a divisional point -- later boosted by timber operations -- made Cartier one of the more important early communities in the region.⁹³

Two local stations already displayed the advantages of good hinterlands. Chelmsford, in the heart of the timber and agricultural lands of the Valley northwest of Sudbury, quickly became a focal point for lumbermen, farmers and, in turn, for the merchant and missionary drawn by the earliest residents.⁹⁴ In contrast, a settlement just north of Shawlands station on the Algoma Branch relied on mining. The first buildings at "the Butte" mine dated from at least June 1885. Various trails were surveyed and cut in 1885 and the Butte was renamed Copper Cliff as Sam Ritchie and his backers launched mining operations there.⁹⁵

But progress at these camps paled before the rapid advances at Sudbury Junction, where Jessie (Josiah?) Smith, a CPR scout, built a first small cabin in January 1883. Advance crews soon erected a larger building on the site, which included some good pine groves, some burned cover, scrubby bush and Junction and Nolin Creeks. The creeks gave the land a boggy, insect-infested character but the ready supply of water and nearby gravel and timber commended the site as a temporary rail camp.⁹⁶ Sudbury Junction boasted a population of only fifteen to twenty men by March 17, but soon the camp became home to some of the crews working on the CPR line and to many of the officials, necessitating enlarging the half-acre clearing to some 30 acres and the construction of "about a dozen" houses. These dwellings formed a focal point in a growing village, that "M", who travelled the CPR route in July 1883, described:

At the head of the lake we see a clearing in which a half dozen hewn log houses stand in a semicircle. It is Sudbury Junction. There is a telegraph station, a C.P.R. store, several handsome hewn log cottages, and the neatest log "hotel" I ever put my foot in... A large frame structure is being erected for the C.P.R. officers and behind us there are many log shanties where gangs of laborers live... There are a few acres of fair land about the station which is beautifully situated and the prettiest spot I have seen, for a stopping place, all the way from Ottawa.⁹⁷

But for the most part Sudbury remained physically unprepossessing, a reflection of the Crown Lands Department sale of 470 acres of land to the CPR, with 300 acres sold to the Roman Catholic Diocese of Peterborough. The decision to sell the CPR and the Church all the land immediately surrounding the junction -- over the protests of early settlers -- left an indelible mark on Sudbury.⁹⁸ The large land patents resulted in a very low building density, giving Sudbury a straggling appearance, clusters of shacks and tents being interspersed between areas of mud, bush, the rubble of construction, and the residue of cut and burned trees. The few "streets" were simple dirt trails and most people got their water from a spring at the gravel pit, though a few wells were being dug. Junction and Nolin Creeks, which flowed through the village, had rapidly been fouled by construction and lumbering residue plus their use as open sewers. By the autumn of 1884, then, the setting remained primitive:

Though Sudbury can boast of a court house, gaol, hospital (on a rather diminutive scale), a public alarm in the form of an immense steel triangle, and a host of unlicensed whiskey holes, we have some hesitancy in terming it anything other than a "clearing". The population is transient and uncertain. Picture to yourself an immense camp meeting ground of primitive style, in the centre place three respectable frame buildings, which around the outskirts of the woods, in the shadow of the hills extend a fringe of log houses and tents, leaving an immense open space unoccupied and you will have some idea of Sudbury.⁹⁹

Reports on Sudbury grew even gloomier with the removal of the CPR general headquarters to Biscotasing. As more and more of the Syndicate's crews moved on and the Algoma Branch was abandoned, newspaper reports prophesied that the "stirring little railroad town" of Sudbury was doomed to "insignificance."¹⁰⁰ But Sudbury's pioneer citizens were of a different mind, viewing the Catholic church, school, jail and hospital as signs of permanence; they made personal commitments to the village. John Frawley,

for example, launched the first private store and erected one of the first substantial frame houses in Sudbury. Others did much the same, especially following the initiation of regular rail service. In short, Sudburians moved to overcome the removal of the general headquarters, with the lumber industry and mineral speculation providing much needed economic sustenance, and the railway remaining a major aid to local commercial aspirations.¹⁰¹ With Sudbury maintaining the initial advantage it had won as the general headquarters, the battle for local metropolitan status was over before it had begun.

Societal Beginnings

Sudbury's early advantages as the general headquarters also assured its dominant role in local societal developments. Cleric and administrator alike served the region from Sudbury, stunting the social progress at other local stations. But Sudbury's society, no less than that of the region, was quite unsophisticated, with frequent incidences of bootlegging, prostitution, and gambling, as evidenced by 110 convictions at "Sudbury" in 1883. These vices gave the local population an unenviable reputation:

The people of Sudbury are, one might say, as uncouth as their surroundings. Working up along the line, imbibing all the roughness incident to navy life, the settling down in a permanent home does not relieve them from the unsavory odor of their former experience, their language and action being far from cultivated or urbane.¹⁰²

But the pioneer residents, numbering only five families in the summer of 1883 and 56 families the following spring, deserved little blame: they were vastly outnumbered by the force of up to 6,000 men at work on the railway.¹⁰³

These men, many of French Canadian or British extraction, but including Italians, Finns, Greeks, Ukrainians, Poles, Germans, Jews and others, had a "rough" reputation that was an embarrassment to the missionaries

who accompanied them.¹⁰⁴ The Jesuits, the most prominent clerics on the line, ventured well past the "end of iron" to minister to the work crews. Fr. Joseph Specht may have held a service at Sudbury as early as February 1883; he remained in and around Sudbury until August. His replacement, Fr. Jean-Baptiste Nolin, set about establishing a more permanent "Saint Anne of the Pines" parish. The first high mass was celebrated on August 15, the first marriage on September 12, the first baptism on October 11, and a combined chapel and presbytery was opened in November 1883. Catholics farther afield -- including the mainly Catholic CPR work crews -- were not overlooked: Fr. Francis X. Santerre served the Algoma Branch of the CPR, Fr. Louis J. Côté worked areas east of Sudbury, and Fr. Nolin worked north along the main line of the CPR. A residence for the three Jesuits was opened on 2 March 1884.¹⁰⁵

The successes enjoyed by the Jesuits were a sharp contrast to the trials of the Protestant denominations, discouraged by a "permanent" population of two Protestant families in 1883 and only six by the spring of 1884. But a few Protestant student workers did venture into the area, including Donald Dewar, a Presbyterian and perhaps "the first minister who held a religious service in Sudbury." Other Presbyterian students ventured forth intermittently prior to the longer service of Samuel Rondeau (1884-1888) and William Hay (1885-1887).¹⁰⁶ Anglican worshippers, meanwhile, looked forward to the visits of Gowan Gilmor, who held his first service in Sudbury on 7 October 1883. The occasional ministrings of S.N. McAdoo and Andrew Galley had to suffice for local Methodists.¹⁰⁷ Even so, the Methodist effort far surpassed that of the Baptist Church, which found the northern frontier environment rather too harsh for its liking. After several years of minimal activity, Rev. Alexander Grant,

the Superintendent of Baptist Home Missions, finally visited Sudbury:

He found one or two families of Baptists. One of the men was at that time the leading merchant in the town. He offered to purchase a lot and build a church if the Home Mission Board would agree to maintain preaching. Mr. Grant felt however, that the number of Baptists and the general condition of the town, as well as the condition of the boards [sic] finances, would not warrant the Board in undertaking the work at that time.¹⁰⁸

Such hesitancy was understandable, for church leaders, no less than government officials, were reluctant to commit large sums of money to a potentially ephemeral camp. But committed pioneers and a natural bounty of lumber, fields and minerals helped to assure Sudbury's permanence. This mixed economic base also resulted in a greater occupational and social variety than would have been possible in a CPR-dominated setting.¹⁰⁹ Sudbury by 1885 boasted clerics, businessmen and administrators with region-wide influence; its facilities and services, while quite rudimentary, far surpassed any other local station. Its junction location also gave Sudbury a tremendous initial and -- if the Algoma Branch was re-opened -- future advantage. The smaller stations, while little more than a few shanties, were surrounded by abundant natural resources. Thus their residents, while recognizing Sudbury's advantages and primacy, shared with Sudburians a belief in the future progress of their community and the region.

CONCLUSION

An unyielding belief in the richness of local resources carried the pioneer settlers of the Sudbury region through the slump that followed the heady days of railway construction. Besides, just three years after the arrival of the first CPR trail cutters, the local populace could point to railway, telegraph and mail service, villages with some social and

administrative services, plus various fledgling businesses. New sown fields, an active lumber industry and much-praised "copper" mines heightened local optimism. But how long would the local timber stands withstand ruthless exploitation; would the mines prove out; and could farming succeed on the Shield? Notwithstanding their pioneering optimism, these questions surely troubled the newly-arrived residents of the Sudbury region.

NOTES

¹ There are numerous histories of the railway. The most detailed is Harold Innis, A History of the Canadian Pacific Railway (Toronto: McClelland and Stewart, 1923; repr. Toronto: University of Toronto Press, 1971). The spirit of the day is caught in Pierre Burton, The National Dream: The Great Railway 1871-1881 (Toronto: McClelland and Stewart, 1970) and idem, The Last Spike: The Great Railway 1881-1885 (Toronto: McClelland and Stewart, 1971).

² James Rowan, "Detail Report on the Survey made in the Woodland Region during 1873" Canadian Pacific Railway, A Report of Progress on the Explorations and Surveys up to January 1874, ed. Sir Sandford Fleming (Ottawa: Maclean, Roger & Co., 1874), app. I, 199; idem, "Progress Report on the Surveys made in the Eastern Section." ibid., app. F, 156-160; W.W. Austin, "Report on Examination made between Lake Nipissing and River Pic, Lake Superior, in the years 1873 and 1874" Report on Surveys and Preliminary Operations of the Canadian Pacific Railway up to January 1877, ed. Sir Sandford Fleming (Ottawa: Maclean, Roger & Co., 1877), app. N, 204-05; William Muzdock, "Report on Exploration during 1871" Report Documents in Reference to the Canadian Pacific Railway, ed. Sir Sandford Fleming (Ottawa: Maclean, Roger & Co., 1880), 304.

³ Thomas Ridout, "Exploration Between French River and the Mouth of the River Pic, Lake Superior", Report on Surveys and Preliminary Operations of the Canadian Pacific Railway up to January 1877, app. Z (B), 364-65. Ridout sought as "direct a course as practicable."

⁴ Marcus Smith, "Progress Report on Surveys Carried on During the Year 1876", ibid., app. Z(A), 358-61.

⁵ Marcus Smith, "Report on survey operations and on the progress of construction, for the year 1877", Report and Documents in Reference to the Location of the Line and a Western Terminal Harbour, ed., Sir Sandford Fleming (Ottawa: Maclean, Roger & Co., 1878), 19. Faulty work on the Georgian Bay Branch, intended to terminate at the French River mouth, led to its abandonment in 1879. Innis, 88 n.2; Donald Wilson, The Ontario and Quebec Railway: A History of the Development of the Canadian Pacific System in Southern Ontario (Belleville: Mika Publishing, 1984), 33.

⁶ Alfred Brunel, "Report on Exploration During Winter of 1879 and 1880", Report and Documents in Reference to the Canadian Pacific Railway, app. 18, 297-302; idem, "Report to Collinwood Schreiber," Ottawa 13 December 1880. Canada, "Returns to Orders of the House of Commons Relating to the Canadian Pacific Railway" Sessional Papers (hereafter SP), 1880-81, no. 23d, pp. 15-17.

⁷ George Stephen, 21 November 1881, quoted in Canadian Pacific Railway Official Memorandum Respecting the Position and Prospects of the Canadian Pacific Railway (Montreal: The Canadian Pacific Railway Co., 1882), 2. Also: Canada, Annual Report of the Minister of Railways and Canals (hereafter Railways and Canals), 1882, p.7; Edwin Higgins and Frank Peake Sudbury Then and Now (Sudbury: The Sudbury District Chamber of Commerce, 1977), 10. The census of 1881 found G.H. Middleton, W.A. Ramsey plus two other civil engineers - Frank Busted (?) (illegible) and E.F. Caddy and a crew of six labourers near Spanish River. PAC, RG 31, Census 1881, Reel C-13282, Algoma East District, Spanish River Sub-District, 11.

⁸ Canada, "Sessional Papers Relating to the Canadian Pacific Railway," SP 1883, no. 27, p.17; 36-37, 157-58.

⁹ Canada, "Communication from the Secretary of the Canadian Pacific Railway Company, dated Montreal, 30 March 1882", Canada, SP 1882, no. 482, n.p. Also in *ibid.*, 1883, no. 27, p. 14.

¹⁰ Collingwood Schreiber, 26 September 1882, quoted in Railways and Canals, 1882, app. 3, p.7. For a concise and critical discussion of these often-changed plans: Edward Borron, "Report of E.B. Borron, Stipendiary Magistrate, on Part of the Basin of Hudson's Bay Belonging to the Province of Ontario," SP 1883, no. 39, p. 37.

¹¹ D.M. LeBourdais, The Sudbury Basin: Story of Nickel (Toronto: The Ryerson Press, 1953), 23. Thus Lake Ramsey was first known as "Lost" Lake: Globe 13 September 1884, p.6.

¹² Railways and Canals, 1882, app 3, p.7, 10. Abbott and Worthington were employed by the North American Railway Construction Company, a sub-contractor to the CPR, through November 1883; the Syndicate then took direct control. Abbott had started work at Algoma Mills late in 1881. Omer Lavallee, Van Horne's Road (Montreal: Railfare Enterprises, 1974), 105-06, 109.

¹³ Ottawa Free Press, 4 May 1883. On the naming of the junction: Montreal Star 16 February 1883. The progress of construction is summarized in Charles Drinkwater, "Report Respecting the Canadian Pacific Railway", Canada, SP 1883, no. 27e, 171-172.

¹⁴ Railways and Canals 1883, app. 3, p. 8, 11. Canada, "Return concerning the Canadian Pacific Railway," SP 1884, 31k. The CPR's progress drew considerable press coverage: Globe, 20 July 1883; Montreal Star, 5 June; 19, 28 July; 4, 11 August 1883; Toronto Mail, 18 July 1883; Ottawa Free Press, 4 May; 30 July; 21 August 1883; Perth Courier; 29 June; 22 August 1883. On Abbott's methods: Winnipeg Free Press, 2 August 1883, p.6.

¹⁵ Toronto World, 21 August 1883; Globe, 16 July 1883; Railway World 9 (22 September 1883): 1001. The Globe reported "riots", and little wonder: arduous work, relentless insects, and low wages -- \$2 to \$3 per week -- were the norm.

¹⁶ Passengers could take the construction train as far as it travelled: Ottawa Citizen, 21 November 1883. On the first train: LeBourdais, 5. On regular service: Ottawa Free Press, 5 December 1883; Montreal Star, 6 December 1883; Ottawa Daily Citizen, 15 January 1884. On the progress of construction: Railways and Canals, 1883, app. 3, p.8; 1884, app. 3, p.9; 12; Canada, "Return concerning the Canadian Pacific Railway," SP 1884, no. 31f, p. 31, 34.

¹⁷ The CPR acquired the Toronto, Grey & Bruce line on 26 July 1883 through a 999 year lease. Wilson, 40. Skilled employees were removed from the Algoma Branch by year's end: Collingwood Enterprise, 17 January 1884.

¹⁸ Globe, 28 May 1884, 3-4; Lavallee, 119, 134. The six mile stretch of the Algoma Branch from Sudbury to the Naughton station, under the supervision of James Worthington, was the last to be finished because Worthington concentrated on the main line. Montreal Star, 6 December 1883; "Return concerning the Canadian Pacific Railway", SP 1884, no. 31, p.31, 248.

¹⁹ On Worthington: Globe, 14, 28 May 1884; Lavallee, 129, 131. The main line railhead was ten miles west of Sudbury by the end of 1883 and 22 miles beyond on 1 May 1884. Montreal Gazette, 6 December 1883; Globe, 15 April 1884; Lavallee, 128, 134; "Return concerning the Canadian Pacific Railway," SP 1884, no. 31, pp 17-18; Montreal Star, 28 May 1884.

²⁰ On the workforce: Globe, 15 April 1884, p.3. On the line: Globe, 14, 28 May, 8 December 1884; Ottawa Citizen, 30 May, 21 October 1884; Ottawa Free Press, 2 August, 19 September, 14 November 1884; Railways and Canals, 1884, app. 3, p.9.

²¹ The first east-west tote road, "traversing this vast wilderness, hither to terra incognita", permitted wagons to travel "in safety and without any difficulty" from Sturgeon Falls to Algoma Mills, Montreal Star, 16 February 1883. The tote roads received a more realistic description from "M", who used them in his travels in 1883. See, for example, "Through Algoma with the Canadian Pacific Railway" Montreal Star 3 August 1883. The survey maps of Dryden (1882), Neelon, Snider, Waters, McKim, Graham, Lorne (1883-84), plus other local townships depict these tote roads as "waggon" or "good waggon" roads. A few minor branches, like one from the main line to Whitewater Lake in Snider Township, do not parallel the track.

²² The telegraph line occasionally swung some distance from the railway tracks, presumably to take advantage of easier terrain. See, for example, the survey map of Snider Township, Crown Lands, "Township Surveys", reel 110, D.B. Weldon Library, University of Western Ontario, London, Canada. The progress of the telegraph is reported in the Globe, 5 March 1883, 15 April 1884; Toronto Mail, 20 December 1883, p.4; Innis, 243.

²³ James Allen, Sturgeon Falls, October 1883, "Plans & Descriptions re Station Grounds Can. Pacific Ry." Crown Lands, "Surveys", Book n.a., no. 2167, reel 74. The plan notes totals both of 1,920 and 1,910 acres. Francis Bolger reported an even larger claim of "one mile in every direction from Sudbury Junction." This, presumably, would total four square miles, or 2,560 acres. F. Bolger, "Report and Field Notes, McKim Township," Penetanguishene, 26 October 1883, Crown Lands "Surveys", Book 20, no. 1548, reel 50.

²⁴ Globe, 14 May 1884, p.4; Ottawa Free Press, 2 May 1884.

²⁵ Canada Gazette 15 (4 March 1882): 1314. The Act's provisions were maintained until 1885 at Sudbury and until 1887 at points farther northwest. The Act was reimposed locally during the reconstruction of the Algoma Branch in 1887. Canada Statutes, 1885, cx; 1887, clxxx1; Canada Gazette 20 (21 May 1887): 2149-50.

²⁶ LeBourdais, 27-35; Higgins and Peake, 14-25; Gilbert Stelter, "The Origins of a Company Town: Sudbury in the Nineteenth Century," Laurentian University Review, 3 (February 1871): 3-9; Florence Howey, Pioneering on the C.P.R. (Ottawa: Mutual Press, 1938), passim; and various works published by the Société historique du Nouvel-Ontario (hereafter Documents historique).

²⁷ In August, 1886, for instance, three members of the Dominion Police -- "whiskey detectives" -- raided Sudbury and "made a haul." Ottawa Free Press, 7 August 1886.

²⁸ Postal service on the North Shore dated from the mails handled by the British force stationed at St. Joseph's Island in the 1790s. Most coastline villages won postal service between 1840 and 1860; inland service followed the CPR crews. Frank W. Campbell, "Northern Ontario Post Offices to 1895", BNA Topics (Jan.-Feb. 1948); idem, Additional Data About Northern Ontario and Keewatin Post Offices to 1895 (Laurence, Kansas: Miller Print Shop, 1952); Max Rosenthal, "The C.P.R. In Nippissing [sic] and Algoma - The First Post Offices," The Canadian Philatelist 21 (Jan.-Feb., 1970): 51-52, 63-66. On local service: Canada Gazette 16 (28 April 1883): 1789; Globe, 27 December 1883, 15 April 1884.

²⁹ Following Bolger's lone local survey in 1882, six townships were subdivided in 1883, eight in 1884 and seven in 1885; 21 more surveys in the ensuing two decades left only Dieppe and Eden Townships without a

detailed survey. But the hasty surveys proved troublesome: A.P. Coleman concluded that most were "carelessly done," and Crown Lands officials berated surveyors for neglecting to attend to their instructions. A.P. Coleman, "The Sudbury Nickel Deposits," Ontario Bureau of Mines, Report, (hereafter OBM), 1903, 237. On the official reaction to the "badly done" surveys: Thos. Johnson, Assistant Commissioner Crown Lands, Toronto, to Francis Bolger, Penetanguishene, 19 December 1883, Crown Lands, "Letters Relating to Surveys," vol. 15, reel 140, 325; Aubrey White, Assistant Commissioner Crown Lands, Toronto to Joseph De Gurse, Straight Lake, 21 July 1888, *ibid*, vol. 17, reel 141, 622.

³⁰ Ontario, Annual Report of the Inspector of Prisons and Public Charities upon the Common Gaols, Prisons and Reformatories of the Province of Ontario 1884, 3, 39; Ontario, Public Accounts of the Province of Ontario (hereafter Public Accounts), 1884, 78. Andrew McNaughton was named Stipendiary Magistrate "along the Canadian Pacific Railway" in May 1883. The Sudbury area was divided between the Nipissing and Algoma Division Courts. Ontario, Annual Report of the Inspector of Division Courts for the Province of Ontario, 1883, 54. For the beginnings of local policing, the best source is: Edwin Higgins, Twelve O'Clock and All's Well: A Pictorial History of Law Enforcement in the Sudbury District, 1883-1978 (Sudbury Regional Police Association, 1978), 3.

³¹ R. George Scott, "Extract from Report of R. George Scott, Esq., Inspector" Ontario, Report of the Ministry of Education, 1886, 56; also see 1887, 134; J. Raoul Hurtubise, "Les ecoles bilingues du Sudbury" Document historique 28 (1954): 21.

³² John Augustus Barron, M.P. for Victoria North, requested a return of all correspondence respecting the Indian land; unfortunately it was not printed. Canada. S. 1887, no. 20c. His lengthy critique of the federal government's actions is in Canada, House of Commons, Official Report of the Debates of the House of Commons of the Dominion of Canada 50-51 Vic., 6 June 1887, 802-803. Also: Ottawa Citizen, 25 April 1889. Gwenda Hallsworth, "A Good Paying Business' Lumbering on the North Shore of Lake Huron, 1850-1910 with particular reference to the Sudbury District," (M.A. diss., Laurentian University, 1983), 31.

³³ For more on the infringements on Reserve rights see: Edwin Higgins and The Whitefish Lake Indian Reserve, Whitefish Lake Ojibway Memories (Cobalt: Highway Book Shop, 1982), 130-135, plus Chapter One, Notes 26 and 27. On the legal wrangles: Toronto Mail 5 September 1887; 15, 18 September 1888; Ottawa Free Press, 22 January 1889; Ottawa Citizen 25 April 1889. R.H. Klock & Company was one firm receiving compensation (\$13,000): Ontario, Public Accounts, 1897, 401.

³⁴ Carl Wallace, "Introduction," Laurentian University Review 17 (February 1985): 1; John Abbott, "Hostile Landscapes and the Spectre of Illiteracy: Devising Retrieval Systems for 'Sequestered' Children in Northern Ontario 1875-1930," An Imperfect Past: Education and Society in Canadian History, ed. J. Donald Wilson (Vancouver: Centre for the Study of Curriculum and Instruction, 1984), 182. H.V. Nelles, The Politics of Development: Forests,

Mines and Hydro-electric Power in Ontario, 1849-1941 (Toronto: Macmillan, 1974).

³⁵ Aeneas McCharles, "The Mining Region," Toronto Mail, 7 May 1891, p.8. Also: ibid., 7 October 89, p.8; 27 June 1891, p.7. No adequate study of Northern Ontario unrest has thus far been written.

³⁶ W.G. Dean, ed., Economic Atlas of Ontario (Toronto: University of Toronto Press, 1969), plate 105, maps 1, 2, 3.

³⁷ Ibid., plate 106. Ontario, Statutes 1889, 52 Vic., c.3. The creation of Nipissing riding followed considered "agitation." See: Globe 5 January 1885; Ottawa Free Press, 21 August 1885; Ottawa Citizen 17 January 1885, 20 November 1886.

³⁸ Because fire destroyed the earliest township records, various dates have been suggested for the formation of McKim Township Council. Strong circumstantial evidence points at the spring of 1885; the Council certainly existed by 1886. Olivier Leduc, "Jean-Etienne Fournier", Documents historique 5 (1944): 27; Ottawa Free Press, 8 June 1888; Ontario, "Statistics of Ontario Municipalities," Annual Report of the Bureau of Industries for the Province of Ontario, 1892, (Toronto: Warwick Bros. & Rutter, 1894), Part VII, 21.

³⁹ Only ten percent of soils within a 56 kilometre radius of Sudbury rank as arable, with none in the best "class 1" category. The frost-free season averages about 100 days, and precipitation is rather heavy during the harvest period. Environment Canada, "Canada's Cities and their Surrounding Land Resources," The Canada Land Inventory Report 15 (1979): 58-59; Richard P. Baine, "The Settlement of the Sudbury Region," (M.A. diss., University of Toronto, 1952), 68.

⁴⁰ Province of Canada, Executive Council State Books, 16 June 1857, PAC, RG1, E1, vol. K, 494. Interest in the agricultural merits of the North Shore dated to 1776, when some Loyalists inquired about its "rich" soils. Stephen Harvey, "The Role of Agriculture in the Settlement of Rural Northern Ontario: The Algoma Case Study," (M.A. diss., University of Western Ontario, 1985), 50.

⁴¹ C.E. Anderson, "Report on the Free Port of Sault Ste. Marie," 10 October 1864, Province of Canada SP 1865, no. 37, p.28.

⁴² Ontario, Statutes, 1867-68, 31 Vic., c.8, s.5. Greater awareness of the North Shore's mineral and lumber potential, plus the depression which took hold in the 1870s, also shifted settlers' attentions toward the region. William Wightman, Forever on the Fringe: Six Studies of the Development of the Manitoulin Island (Toronto: University of Toronto Press, 1982), 82.

⁴³ Thomas Johnston of Crown Lands claimed in 1883 that Algoma included "large tracts of land suitable for agriculture, ... the best water and the most salubrious climate." Johnston, Toronto, to Peter Axford, Kent City, Michigan, 15 February 1883, Crown Lands, "Letters Relating to Surveys", vol 4, reel 140, pp 118-119. The general tenor of Crown Lands reports was no less positive. For typically optimistic press reports: Ottawa Citizen, 21 November 1883; Globe, 4, 17 April 1884; 7 March, 31 October, 23 November 1885; Montreal Star, 3 August 1883, Toronto World, 16 January 1886, Perth Courier, 3 October 1884..

⁴⁴ Ontario. Department of Crown Lands, The Algoma District and that Part of the Nipissing District north of the Mattawan River, Lake Nipissing and French River, Their Resources, Agricultural and Mining Capabilities (Toronto: Department of Crown Lands, 1884), 21-22. This was just one of many Provincial pamphlets promoting the North. The Federal government also did its part: Canada. Department of Agriculture, Muskoka and Lake Nipissing Districts: Information for Intending Settlers (Ottawa: Department of Agriculture, 1880).

⁴⁵ On the appointments: Crown Lands, 1886, .viii; Ontario Gazette 17 (21 June 1884): 361. The surveyors' reports were published in the annual Crown Lands Report. A few of the many press assessments include: Globe, 24 July 1883, 7 March, 31 October 1885; Toronto World, 16 January 1886; Perth Courier, 3 October 1884. On the issue of French colonization see Montreal's La Minerve, 19 March 1884, p.4 and the Toronto World, 6 November 1885, p.1; Toronto News, 3, 9 November 1885.

⁴⁶ Richard Lambert and Paul Pross, Renewing Nature's Wealth: A Centennial History of the Public Management of Lands, Forests & Wildlife in Ontario 1793-1967 (Toronto: Hunter Rose, 1967), 85-86, 95-100; H.V. Nelles, "The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1890-1939," (Ph.D. diss., University of Toronto, 1969), 104-05. Crown Lands, 1901, iv; 1906, vii; 1908, vii; 1911, vi; 1912, vii. McKim Township was the first local township to be opened, with sales commencing in July 1884. Ibid., 1884, vii. By 1931, eleven townships had won free grant status, with another 22 open to sales; thirteen remained closed to settlement.

⁴⁷ On pollution withdrawals: Matt Bray, "The Province of Ontario and the problem of Sulphur Fumes in the Sudbury District: An Historical Perspective," Laurentian University Review 16 (February 1984): 83. The withdrawal of lands receives periodic mention in the Crown Land Reports and in Nelles, "Politics", 761, n. 142, 144; Sudbury Journal, 10 June 1897.

⁴⁸ Thomas Southworth, "Report of the Director of Colonization," Ontario, SP 1900, no. 29, p. 11.

⁴⁹ See Thomas Johnston's replies to the requests of Fr ed Eyre, William Holditch, Marcel Belanger and others: Crown Lands, "Letters Relating to Surveys," vol. 15, reel 140, p. 266, 289-290, 299, 307, 316, 334, 371. The letters date from September 1883 through March 1884. The surveyor of McKim Township characterized the land near Sudbury as "excellent": Francis Bolger, "Report and Field Notes McKim Township", Penetanguishene, 26 October 1883, Crown Lands, "Surveys", Book 20, no. 1548, reel 50.

⁵⁰ The timber farmer was common throughout Northern Ontario: see the historical assessment in Province of Ontario Report of the Ontario Royal Commission on Forestry 1947 (Toronto: King's Printer, 1947), 8.

⁵¹ Joseph Hawes (also spelled Horze, Hoize) was a trapper, apparently born in Vermont. Though he made a "flimsy" claim to much of the Valley, his small farm buildings were located in Lot 12, Concession III of Balfour Township. Perth Courier, 3 October 1884; Globe, 4 November 1893; Joseph de Gurse, "Field Notes of the Township of Balfour," Sarnia, 13 September 1884, Crown Lands, "Surveys", Book 2, no. 915, reel 23, p. 24. Christopher Crizes (Crites, Critze) settled in Lot 1, Concession IV, Dowling Township. W.R. Burke "Field Notes Township of Dowling," Ingersoll, 30 October 1885, Crown Lands, "Surveys", Book 32, no. 1128, reel 34, np; Cheryl Young, "Larchwood: A Local History," unpublished manuscript, Regional Room, Sudbury Public Library, (hereafter SPL) 197-(?), 11.

⁵² Francis Bolger, "Field Notes of Blezard 1885", Penetanguishene 12 November 1885, Crown Lands, "Surveys" Book 40, no. 959, reel 26. Jeanne Vaillancourt, Chelmsford 1883-1983 (Ottawa: Le Club 50^e de Chelmsford, 1983), 40; Tina Koivu, "A History of Chelmsford, Ontario", unpublished manuscript, SPL, 1974, p.1; Lionel Seguin, Historique de la paroisse de Chelmsford (St. Charles (?): The Diocese of Sault Ste. Marie, 1945), 20; "Chelmsford file", Archives de la Compagnie de Jesus du Canada-Francais (ASJCF), Universite du Sudbury, file B-2-8.

⁵³ Myllymaki was the first local Finnish settler: Toronto World, 4 May 1886; Sudbury Journal, 4 August 1892. The early settlement is summarized, albeit very optimistically, in Canadian Pacific Railway Company, Description of Lands for Settlement in Algoma and Western Ontario (Montreal: The Canadian Pacific Railway Co., 1887), 8-9. Two early reports of settlement: Globe, 31 July 1883; Ottawa Free Press, 2 September 1885.

⁵⁴ Ibid., 10. The Ottawa Free Press, 9 January 1886, noted that most pioneer settlers were of "small means", often former CPR employees.

⁵⁵ The factors determining agricultural success receive some discussion in various works, including: Morris Zaslow, The Opening of the Canadian North 1870-1914 (Toronto: McClelland & Stewart, 1971) and his forthcoming study which continues this history. Also see A.R.M. Lower and Harold Innis, Settlement and the Forest and Mining Frontiers (Toronto: The Macmillan Company, 1936); Michael Troughton, "The Failure of Agricultural settlement

in Northern Ontario," Nordia 17 (1983): 141-51; Thomas Barton, "Agricultural Landscapes of the Sudbury Area, Ontario," Illinois State Academy of Science Transactions (1941): 130-137; Harvey, *passim*.

⁵⁶ Crown Lands, 1872, ix. For the Department's view of timber development on the North Shore to date date: *ibid.*, ix-xii. On the history to 1864 see the detailed returns in the Crown Lands Reports and those printed separately in Province of Canada, Journals of the Legislative Assembly of the Province of Canada (hereafter JLAC). For example: "Huron and Superior Territory", "Return of the Woods and Forests Branch", Crown Lands, 1856, app. P. The best secondary account is: Arthur R.M. Lower, The North American Assault on the Canadian Forest: A History of the Lumber Trade Between Canada and the United States (Toronto: The Ryerson Press, 1938), 122, 177-80.

⁵⁷ Ontario, "Return... of the amount realized from Timber Dues, Sales of Timber Limits, and Licenses, and all other charges or revenue arising from Timber and Lumber in Muskoka, Parry Sound, and Algoma Districts, ... from the 1st of January 1863, to 31st December, 1871," SP 1873, no. 75, 2; Manuscript Census, 1871, East Algoma, Killarney and Spanish River Sub-Districts, PAC RG31, Vol, 918-919, Schedule G, reel C-10023; Lower, 177; Hallsworth, 12-13; Canada Lumberman 27 (November 1906); Canadian Statesman, July 1868, copy, SPL.

⁵⁸ Ontario, "Documents in connection with the sale of Timber Berths on Lake Huron," SP 1873, no. 11, p. 15. The sale was sanctioned through an Order-in-Council of 3 August 1872. *Ibid.*, 10.

⁵⁹ See, for example, a flurry of advertisements for Timber Berths located along the CPR line: Ottawa Free Press, 19 April, 26 September 1883, plus the replies to inquiries about local timber in Crown Lands, "Letters Relating to Surveys", vol, 16, reel 141. For analyses of the 1872 sale and its impact: Nelles, "Politics", 30-33; Lower, 141; Hallsworth, 9-10, 48-49; Denis La Forge, "L'industrie forestiere dans le Nord-est avant 1900," Documents historique 74 (1981): 6.

⁶⁰ G.B. Cowper, Chief Clerk, Woods and Forests Branch, testifying before the Standing Committee on Public Accounts. Ontario. Journals of the Legislative Assembly, 1884, app. 3, p. 15. Prior to 1882 "periodic" spring visits had been the only sign of Provincial authority.

⁶¹ Toronto World, 12 June 1884; Ottawa Free Press, 14 February 1884; Hallsworth, 31; Cowper, 16.

⁶² Canada Lumberman, January 1887; Ottawa Citizen, 21 November 1883; Hallsworth, 107; Francis Crean, Montreal, to R.H. Arthur, Sudbury, 30 January 1933, Local History Scrapbook No. 1, SPL. Pioneer settlers also supplied woodstuffs to the CPR: Globe, 26 February 1884, p.2; Toronto Mail, 12 July 1886, p.1.

⁶³ Charles Dorion, The First 75 years: A Headline History of Sudbury, Canada (Ilfracombe, Devon: Arthur H. Stockwell, 1958), 1, Howey, 93, 117; Vaillancourt, 245.

⁶⁴ Thomas Hale, an "upper Ottawa" lumberman, reported that the local pine was "of a very good quality, and I may say of almost unlimited extent." Ottawa Free Press, 6 February 1886. On Timmins & Gorman: *ibid.*, 21 February, 21 March, 8 August, 18 November 1885, 6 February 1886. On Emery: Canada Lumberman, January 1887; Perth Courier, 17 December 1886; Ottawa Free Press, 6 February 1886; H.R. McEvoy, "Field Notes and Report, Timber Berths N. Boundaries 48 & 56, Algoma 1886," St. Mary's, 31 December 1886, Crown Lands, "Surveys," Book 27, no. 1952, reel 66. On Hale and Booth: Douglas Santala, "Population and Settlement of the Waters-Whistefish Planning Area," (B.A. diss., Laurentian University, 1971), 12.

⁶⁵ William Bell considered the lumber roads to be vital in opening up the countryside for settlement: W. Bell, "Field Notes of the Survey of the North and West Boundaries of Berth No. 40 in the District of Nipissing," Pembroke, 20 January 1886, Crown Lands, "Surveys", Book 3, No. 1929, reel 65, np. The writer is personally aware of the crucial early role of lumber roads in the settlement of Louise Township.

⁶⁶ The Amerindian population, meanwhile, had made use of Lake Superior copper long before Superintendent Talon authorized the 17th century search. These early activities are summarized in Ontario, Report of the Royal Commission on the Mineral Resources of Ontario and Measures for their Development (hereafter Mineral Resources Commission) (Toronto: Warwick and Sons, 1890), 92-93. Also: James A. Mulholland, A History of Metals in Colonial America (University, Alabama: University of Alabama Press, 1981), 41-42, 52.

⁶⁷ Anna Wright, "The Canadian Frontier: 1840-1867", (Ph.D. diss., University of Toronto, 1943), 42. Detailed tabular statements include Province of Canada, "Return... of the persons who have received licenses for opening and working mines... Lakes Huron and Superior", JLAC, 1851, app. 11; *idem.*, "Mining Locations on Lakes Huron and Superior... 31 December 1854" in "Return... [re] Waste Lands of the Province," *ibid.*, 1854-55, app. MM; "Return.. showing all lands sold or agreed to be sold as mining locations upon the Coasts of Lakes Huron, Nipissing and Superior," *ibid.*, 1857, app. 24. The best secondary accounts are: Wright, 36-41 53, 76-77; Dianne Newell, "Technological Change in a New and Developing Country: A Study of Mining Technology in Canada West - Ontario, 1841-1891," (Ph.D. diss., University of Western Ontario, 1981), 71-82; and *idem.*, Technology on the Frontier: Mining in Old Ontario (Vancouver: University of British Columbia Press, 1986), 59-69.

⁶⁸ Province of Canada, JLAC, 28 July 1851, p. 201. The regulative process is outlined in Ontario, Mineral Resources Commission, 263-65.

⁶⁹ William Gibbert's reports on North Shore mining locations provide much detail. Crown Lands, 1868, app. 29; 1861, app. 32; 1862, app. 43. Also: Province of Canada, "Statement of Mining Locations, on North Shore of Lakes Huron and Superior... 3 March, 1864", SP 1864, no. 52. Secondary accounts include Wright, 76-77, 176-78; Newell, "Technological Change", 82-86; idem., Technology 69-72; Ontario, Mineral Resources Commission 93-97.

⁷⁰ Newell, "Technological Change," 74-85; Nelles, "Politics", 35-38; O.W. Main, The Canadian Nickel Industry: A Study in Market Control and Public Policy (Toronto: University of Toronto Press, 1955), 7-10; Mineral Resources Commission, 265-268; Ontario, Journals of the Legislative Assembly 1867-68, app. 4, 95-99; Ontario, SP 1868-69, no. 16, 2-4; H.C. William, "The Bruce Mines, Ontario 1846-1906", Journal of the Canadian Mining Institute (hereafter JCMI) 10: (1907): 149-69.

⁷¹ Alexander Murray, "Report for the Year 1856, of Alexander Murray, Esq., Assistant Provincial Geologist, addressed to Sir William E. Logan, Provincial Geologist," Geological Survey of Canada, Report of Progress 1853-54-55-56 (Toronto: John Lovell, 1857), 180-81, 189; Albert P. Salter "Provincial Land Surveyor Salter's Report of Survey of a Base Line north of Lake Huron," Crown Lands, 1857, app. R, 265. Much of the relevant detail is reprinted in Ontario Report of the Royal Ontario Nickel Commission (hereafter RONC) (Toronto: King's Printer, 1917), 28-30.

⁷² Francis C. Crean, letter to editor, Northern Miner, 2 October 1930, p. 2; idem., "Sudbury Nickel Mines," Montreal Gazette, 3 December 1890, p. 7. Aeneas McCharles, "The Nickel Range," Toronto Mail, 19 September 1891; p. 10. William Montgomery told much the same tale in 1886: Toronto Mail, 25 November 1886; Ottawa Citizen, 27 November 1886.

⁷³ LeBourdais, 36; RONC, 30.

⁷⁴ J.W. Evans, "The Early History of Mining in the Sudbury District," JCMI 7 (1904): 496; Main, 11-12, 136 n. 37; Thos Johnson, Toronto, to George Thompson, Renfrew, 15 February 1883, Crown Lands, "Letters Relating to Surveys", vol 15, reel 140, p. 367. The discussion on claims is a brief summation of the voluminous material available on both important and unsuccessful "finds". The best general sources are LeBourdais, 36-47; RONC, 30-55; Robert Stephenson et al. "A Guide to the Golden Age: Mining in Sudbury, 1886-1977," unpublished manuscript, Department of History Laurentian University, 1979; W.J. Gorman, "Early Sudbury Discoveries and the Men Who Made Them," Northern Miner, 11 September 1930, 2-3.

⁷⁵ Some fires, notably the great conflagrations of 1864 and 1871, predated the prospector. Lambert and Pross, 205. The Crown Lands Reports made several, sometimes veiled, references to the relationship between fire and prospector. See, for example, Crown Lands, 1897, viii. Also, RONC, 32.

⁷⁶ Main, 11; Nelles, "Politics", 23, 28-29; Mineral Resources Commission 309-10. Prospecting, of course, continued, at least as a speculative venture, with many more thousands of claims filed after 1900. But all but one or two of the major deposits had been discovered by that date, with some 135,000 acres disposed of by the government by 1891: Toronto Mail, 7 May 1891, 8.

⁷⁷ Aeneas McCharles, "The Nickel Range", Toronto Mail, 19 September 1891, p. 10. On Ritchie's acquisitions: A.P. Coleman, "The Sudbury Nickel Field," OBM 1905, Part III, 169.

⁷⁸ Toronto Mail, 2 April 1890, p.2. Other published reports on "blanket" claiming include: ibid., 26 May, 3 December 1888, 3 December 1889, 4 July 1890, 6 August 1890, 19 September 1891; Toronto Empire, 18 June 1888; Montreal Gazette, 29 November 1890; Toronto World, 17 January, 20 April 1888; Globe, 6 February 1886, 8 December 1890; Mineral Resources Commission, 257.

⁷⁹ Toronto Mail, 3 December 1888, 3.

⁸⁰ Toronto World, 26 February 1897, 6. On McVittie's charges: Toronto Mail, 1 May 1891, 6. Also: ibid., 3 December 1890, 3; Montreal Gazette, 29 November 1890, 10.

⁸¹ Aeneas McCharles, "The Nickel Mines of Northern Ontario," Engineering and Mining Journal 73 (17 May 1900): 694; idem., Bemocked of Destiny: the actual struggles and experiences of a Canadian pioneer, and the recollections of a lifetime (Toronto: William Briggs, 1908), 102. On the "meagre" prices: Lourdais, 47. But the brokers fared better: the ten leading brokers had earned a combined \$193,000 by 1889. Toronto Mail 1889, p.6. Little wonder that O.W. Main concluded that the Mining Act "favoured the speculator against the prospector." Main, 11.

⁸² Globe, 20 September 1884, 4. Perth Courier, 3 October 1884. Geological Survey of Canada (hereafter GSC) Report of Progress of the Geological and Natural History Survey and Museum of Canada 1882-83-84, p.4.

⁸³ E. Odium, "The Mineral Wealth of Ontario," Toronto Mail, 26 June 1885, 3.

⁸⁴ ibid.; Globe, 20 September 1884; Northern Miner 2 October 1890, 2; Canadian Mining Review (hereafter CMR) 3 (October 1885): 10; ibid., 3 (November 1885): 10; Main, 12; J.W. Evans, "The Early History," 496.

⁸⁵ Evans, "The Early History," 496-97; Perth Courier 3 July, 30 October 1885; Ontario, "Mines and Mining Operations," Annual Report of the Bureau of Industries for the Province of Ontario, 1886, 378, 79; RONC, 35-39, 63;

Thomas Jacobson, interview, Canadian Rakentajia, ed. William Eklund (Toronto: Finnish Organization of Canada, 1983), 27-28; Main, 12; Ottawa Citizen, 15 October 1886; Alfred E. Barlow, "On the Nickel and Copper Deposits of Sudbury, Ontario", GSC, Annual Report, 1890, 125s.

⁸⁶ Ritchie told this tale, with slight changes, several times. This version is quoted in Coleman, "The Sudbury Nickel Field", 169-170. Ritchie claimed to have been first attracted to the area after examining rocks picked up by Thomas Tait, secretary to William Van Horne, in the spring of 1883. LeBourdais, 50-51. Ritchie's earlier activities are dealt with at some length in J. Plummer and A.R. Capon, Desperate Venture: Central Ontario Railway (Belleville: Mika Publishing, 1979) 7, 33, 44-48, 79, 82. Also see: RONC 61; F.C. Crean, "Sudbury Nickel Mines", Montreal Gazette, 3 December 1890, p.7; J.F. Thompson and N. Beasley, For the Years to Come: A Story of International Nickel of Canada (New York: G.P. Putnam's 1960), 28-29. Most histories credit Ritchie for Canadian Copper's early success: LeBourdais, 59; Gilbert Stelter "The Origins of A Company Town: Sudbury in the Nineteenth Century", Laurentian University Review 3 (February 1971): 13-17.

⁸⁷ Thompson and Beasley, 30,43. The firm received permission to operate in Canada immediately: Canada Gazette 19 (23 January 1886): 1058; Canada Statutes, 1886; 49 Vic., c. 99. By the end of 1886 Ritchie had acquired the Stobie, Froot, McAllister, Buttes, Evans, Creighton and other prospects, and had failed in a bid to purchase the Murray. These acquisitions cost at least \$175,000, while additional properties were paid for by issuing company stock. Ontario, "Mines and Mining Operations," 1886, pp 378-80; CMR 4 (October 1886): 5; J.D. Evans "The Genesis and Development of Mining in the Sudbury District", Proceedings of the Association of Ontario Land Surveyors (1894): 85-86; idem., "The Early History," 496. James Lumsden, Through Canada in Harvest Time (London: T. Fisher Unwin, 1903), 3; Globe, 16 January 1886, 9; Toronto Mail 26 June 1885, 3; Ottawa Free Press, 15 November 1886; Ottawa Citizen, 30 July 1886; Perth Courier, 30 October 1885; Coleman "The Sudbury Nickel Field", 169.

⁸⁸ Perth Courier, 5 November 1886. The rival firm mentioned is the earliest form of the Dominion Mineral Company.

⁸⁹ Higgins and Peake, Sudbury Then and Now, 12

⁹⁰ M., "Through Algoma with the C.P.R.: From Sudbury Junction to the Spanish River", Montreal Star, 3 August 1883; W.O. Johnston, "Report and Field Notes, Graham Township," Whitby, 27 October 1883., Crown Lands "Surveys", Book 26, no. 1241, reel 38, p.4.

⁹¹ Canadian Pacific Railway, Map of Part of the Dominion of Canada Showing the Through Line of the Canadian Pacific Railway and Its Connections (Montreal: Canada Bank Note Company, 1884), Scale: 1 inch = 100 miles;

idem, Land in Algoma, foldout map; Home Knowledge Association, "North-Western Part of Ontario," The Home Knowledge Atlas (Toronto: Home Knowledge Assoc., 1888), 24-25. There are numerous other examples.

⁹²For plans and memoranda on these and other stations, see Allen, "Plans & Descriptions re Station", np.

⁹³Perth Courier, 3 October 1884; Globe, 7 March 1885, p.6; Toronto Mail, 4 August 1885, p.4; Crown Lands, 1885, app 17, p.26

⁹⁴Histories of Chelmsford include Vaillancourt; Sequin; Koivu; and Tina Castonguay, "Chelmsford", Documents historique 4 (1944), 12-29.

⁹⁵Bob Boudignon, "The Butte", unpublished manuscript, SPL, passim, provides the most concise, accessible discussion of Copper Cliff's beginnings. The mining history is recounted in Chapter Three. Sam Ritchie, ever the promoter, may have opted for this particular name in light of the fame of the Copper Cliff mine at Eagle River, Michigan, which had earned \$2.6 million between 1848 and 1870. Otto Foute, Sault Ste. Marie and Its Great Waterway (New York: G.P. Putnam's, 1925), 417.

⁹⁶There may have been two trapper's cabins on the site prior to the first CPR crew's arrival. Sudbury Star, 2 August 1930, p.2. Most later descriptions of the half-acre clearing that was Sudbury in March 1883 are based on Howey, 50, 53, 58-59; and J.B. Waddell, "Histoire de la paroisse St. Anne," unpublished manuscript, 1933 (?) ASJCF, File B-3-8, p.5. The Montreal Star, 16 February 1883, states that Sudbury was chosen as the station name "today".

⁹⁷M., "With the C.P.R. through Algoma," Montreal Star, 4 August 1883. For details: Bolger, "Report and Field Notes, McKim Township," 63; Sudbury Journal, 6 May 1909; Sudbury Star, 3 December 1927, p.24; Stelter, "Community Development", 6; Thompson and Beasley, 362. Higgins, Sudbury Then and Now, 11-25.

⁹⁸Stelter, "Origins", 6-7; See also note 23. Despite much delay, the Department misunderstood the local setting, for several CPR buildings were on land that was allotted to the Church; these were reacquired by purchase.

⁹⁹Globe, 13 September 1884, p.6. The village setting is best depicted by James Allen's survey (c. 1884), which covers some 165 acres at a scale of one inch to 400 feet. Allen, "Plans & Descriptions re Station", np. Also see the photographs in Howey, 50-51, 112-117, plus Accession no. 324 in the Photograph Archive, SPL. Other contemporary depictions can be found in Ottawa Free Press, 2 May 1884 and the Perth Courier, 3 October 1884.

¹⁰⁰ Ottawa Free Press, 2 May 1884. Also: Perth Courier, 14 August 1884; Globe, 13 September 1884.

¹⁰¹ By 1886 Sudbury boasted over 50 houses, various large commercial buildings, a Roman Catholic church, a jail-courthouse, hospital and the like, plus some semblance of order. Photograph Archive, SPL, Accession. no. 197: On the progress: LeBourdais, 27-33; Howey, 51, 56-57, 93-94, 112-122; Dorion, 1-5, 10-14; Baine, 38-39; Stelter, "Origins", 8; Louise Heroux, "Aperçu sur les origines de Sudbury, 1883-1904," Documents historique 2 (1943): 11-15; Brandt, "French Canadian Institutions", 9; B.H. Frawley, "La famille Frawley," Document historiques 5 (1944): 42.

¹⁰² Ottawa Free Press, 2 May 1884. Also: *ibid.*, 24 July, 1 November 1884; Globe, 29 October 1884, 8; LeBourdais, 27; Howey, 110-111.

¹⁰³ Crime fell sharply as the railway crews moved on: only three men were sentenced to a term at the Sudbury jail in 1884. Ontario. Annual Report of the Inspector of Prisons..., 1884, 16-17. The Globe, 29 October 1884, 8, set the railway workforce at 7,000 men; other estimates run from 3,000 men upward. References to early society are scattered throughout the general works on Sudbury; church histories are also helpful. But "vice" is usually given very short shrift.

¹⁰⁴ There is some suggestion that Harry Abbott brought in more immigrants than had James Worthington, but the latter man certainly praised Finns as some of his best workers. Heroux, 15-16; W.J. Wills, "Annual Report of the Ottawa Immigration Agent", Report of the Minister of Agriculture, 1883, app. 3, 21. The two best sources on local ethnic history, including some reference to these earliest rivals, are: Mary Stefura, ed., "Sudbury's People", Polyphony 5 (Spring-Summer 1983), *passim*, and Donald Dennie, ed., "Aspects of Ethnicity in Northeastern Ontario," Laurentian University Review 15 (November 1982): *passim*.

¹⁰⁵ Waddell, 14-24, 33, 58; Alphonse Raymond, "Paroisse Sainte-Anne de Sudbury - 1883-1955", Documents historique 26 (1953): 5-6; Lorenzo Cadieu, "Les fondations du diocèse du Sault Sainte Marie," *ibid.*, 6 (1944): 24. See also the wealth of material - daily records and the like - in the Jesuit Archives (ASJCF) at the Université du Sudbury. For example, Fr. J.B. Nolin "Diarium" 1885-89, ASJCF, file C-2-7.

¹⁰⁶ John Crawford Cochrane, Trails and Tales of the Northland (Toronto: the United Church, 1934), 43. Also: Rev. Allan Findlay, "The Muskoka Field", Acts and Proceedings Eleventh General Assembly Presbyterian Church in Canada (1885) (Toronto: The Church, 1885) app. 1, xvii: Sudbury had been transferred from the Presbytery of Lanark and Renfrew to the Presbytery of Barrie in 1884. *Ibid.*, iv. On Rondeau and Hay: *ibid.* (1886), app. 1, vii; (1887), app. 1, vi.

¹⁰⁷ Gowan Gilmor to P.F. Bull, Sault Ste. Marie, 29 November 1927, copy SPL; Ernest Newton-White, Gilmor of Algoma: Archdeacon and Tramp (Brampton: Anglican Diocese of Algoma, 1967 (?)); P.F. Bull, The Church of England in the City and District of Sudbury (Sudbury: Porter Publishing Co., 1936), 8; Frank A. Peake, The Church of the Epiphany: A Century of Anglican Witness (Sudbury: Journal Printing, 1982), 2. On the Methodists: Cochrane, 42-45; The Christian Guardian, 13 June 1883, p. 1191; 20 January, 29 December 1886; Graeme S. Mount and Michael J. Mulloy, A History of St. Andrew's United Church (Sudbury: Journal Printing, 1982), 1-3.

¹⁰⁸ The Canadian Baptist 57 (26 May 1911): 5; *ibid.*, 37 (4 June 1891): 1.

¹⁰⁹ Stelter, "Origins", 12; Brandt, "The Development of French Canadian Social Institutions," 9.

CHAPTER THREE

REAPING NATURE'S BOUNTY, 1886-1902

Introduction

As 1885 drew to a close, the natural resources of the Sudbury region remained largely untouched, but their exploitation seemed assured by the easy access and publicity provided by the CPR. By 1902, it was obvious that the region was singularly blessed, its minerals, forests and even the soils having brought much local prosperity. The nickel and copper ores seemed particularly bountiful, bringing work in the mines and smelting works. But not all was well: most of the value generated by the ore went elsewhere, and the combined might of Canadian Copper and Orford left the path to nickel riches strewn with failures. That tandem soon captured an effective monopoly of the North American nickel industry, enabling it to raise and lower Sudbury area production as needed; the formation of INCO promised even more arbitrary actions. Successive failures in gold and other mineral ventures provided strong evidence that the local mining economy relied on the nickel giant's success. Fortunately, forestry provided crucial economic sustenance during the mineral industry's difficulties. Though pulpwood and other new products extended the industry's life, the forests were fast receding. But the bare landscape revealed "rich" soils and a provincial policy intent on agricultural settlement in the north attracted pioneer farmers who hoped to take advantage of the markets provided by the fast-rising nickel camps.

THE NICKEL INDUSTRY 1886-1894: THE STRUGGLE FOR CONTROL

That the nickel industry would be so important to the Sudbury region was not even dreamed of in 1886, for Canadian Copper remained an as-yet-unproven firm, uncertain of the extent or character of the deposits they were working. A first crisis -- the copper ores were found to be tainted with nickel -- passed when research on nickel-steel offered solutions to both metallurgical and marketing problems. Canadian Copper now faced various competitors, but the combination of salesmanship, effective lobbying with governments, improved technologies, plus ruthless price-cutting left it alone in the field. Despite complaints about the American monopoly over a metal crucial to armour and armament, neither the Dominion nor Provincial governments moved to maintain Canadian control of the industry. Before long only Ludwig Mond's new nickel venture stood in the path of a local nickel monopoly; even it was threatened when International Nickel (INCO), a force unparalleled in worldwide nickel mining, was formed in 1902.

The Beginnings

Sudbury's emergence as a mining centre was hardly a sure thing in 1886, for Canadian Copper was the sole active firm, and it started small. A tiny workforce led by Sam Ritchie's relations and friends made improvements to the Copper Cliff mine site and built a one-mile railway spur linking it to the dormant Algoma Branch, which was rehabilitated by the CPR to provide service for the mine. Mining began on 20 May 1886; a crew peaking at 85 men drove a 40 foot quarry and a 100 foot angled shaft before winter weather brought work to a halt. Shipments of hand-picked ore began in mid-September -- 3,307 tons were exported by November.¹ At the Stobie,

meanwhile a "fair quantity" of ore was mined but only samples were removed because access was limited to a single, rough road. Other sites on the fire blackened, bleak hills surrounding the two mines were explored, but none were developed because finances were tight.²

Sam Ritchie confronted this problem by publicizing Canadian Copper: he told the press that "one of the most wonderful copper mines in the world has been discovered near Sudbury Junction."³ Exaggeration grew exponentially as newspapers reported the fall visit to Sudbury by Lady Macdonald, William Van Horne, Sir George Stephen and Sir Charles Tupper. The Montreal Star claimed on 28 September 1886 that there were "over 50,000,000 tons in sight, or more copper than will supply the world for years to come." "It is the opinion of experts," the Star went on, "that the Sudbury discovery will before many months close all competition."⁴ Sir Charles Tupper added that

on Saturday last in company with Mr. Van Horne . . . and the Minister of the Interior (Hon. Thos. White), I visited a copper mine at Sudbury Junction. . . I saw there actually a mountain of copper, an inexhaustible supply of raw material, the ore yielding, as I am informed, 15 percent of pure copper pyrites. Where yesterday it was simply a desert, you will have in a very short time a population of 20,000 people.⁵

Some Toronto papers were more reticent since Sudbury remained in Montreal's hinterland; travel from Toronto was much less convenient than over the direct CPR line from Montreal. The Toronto Mail questioned "The Alleged Copper Bonanza", branding the Copper Cliff mine a speculative billboard "not selected on account of its special promise but merely because of its convenient situation."⁶ The strongest warning, ironically, came from a Sudburian, who claimed

the Sudbury boom will probably rank high in the future history of Canada as an illustration of how a great good by being exaggerated becomes a crying evil. That the Sudbury mines are extensive, and

probably valuable, is beyond dispute. But the length, the breadth and the height thereof have been so greatly contorted that a mine owner will hardly know his own property hereafter. The efforts made by the C[anadian] C[opper] C[ompany] to conceal the real value of the property they had acquired, together with the desire of the Canadian Pacific Railway to boom the Algoma Branch, have led to the magniloquent descriptions so freely emanating from Montreal.

Mingling warning with promotion, the "resident" urged Toronto investors to act with "caution but promptitude" for "there are still at least as much more equally rich and accessible [deposits] in the market."⁷

When warnings included pleas for fresh investment, and exaggerated reports abounded in the regional, national and even the international press, it was hardly surprising that the Sudbury region was "hunted over by bands of explorers," bringing

boom days for Sudbury -- somewhat yeasty and unsettled, 'tis true, but many fortunes were plucked out of that fever, and many mining claims stand as souvenirs...enduring memorials of a brief mad pyrensy [phrensy?] that had Sudbury for its pulse.⁸

The speculation came to an abrupt halt during the winter of 1886-87 because of the disappointing quality of the first ores removed. The first 3,000 tons of Canadian Copper ore were so low in copper content that it was necessary to select the richest ore by hand; 1,000 tons of this "cobbed" ore averaged seven percent mineral content. Worse, the tests on the ore proved disastrous. H.H. Vivian of Swansea, Wales, could do little with it, while Nichols Chemical of Long Island, New York, produced a "pale, pinkish-gray unsalable material." Orford Copper, which ran tests at Capelton, Quebec, and in the United States, discovered that the ore contained not only copper but from 2.5 to 4 percent nickel, a combination that rendered standard refining processes ineffective. Besides, there was almost no market for nickel. By December 1886 the "tainted" nature of the ore was public knowledge.⁹

A sharp decline in ore shipments ensued in 1887 so Canadian Copper -- the only alternative being ruin -- dispatched Ritchie on a campaign to discover a means of nickel-copper refining and develop a market for nickel. To maintain public confidence, Canadian Copper made marked improvements to its mining plants, installing steam-driven machinery and constructing numerous structures at the Copper Cliff and Stobie mines, including the company office, transferred from Sudbury to Copper Cliff. A third mine -- the Evans -- was opened up in the fall. Transportation links also improved with the completion of a CPR spur line from Sudbury to Stobie early in 1887 and the construction of a tramway from the Evans to Copper Cliff. With construction and development work taking precedence, ore production continued at the level established in 1886. Nevertheless, this led to an "immense" ore stockpile, for the only major deliveries were a 1,000 ton shipment -- probably to H.H. Vivian of Wales -- plus a 1,200 ton shipment to Orford Copper.¹⁰

Canadian Copper's sales were no better in 1888 but improvements continued. All three mines were enlarged and the "extensive building operations" included a new rockhouse at the Evans, which was connected to the Algoma Branch and Copper Cliff by a 3,000 foot rail spur. The ore from these still small mines -- 100 tons daily -- far surpassed Canadian Copper's needs; the small market was supplied by shipping unusually rich, hand-picked ore.¹¹ But company officials recognized the need to reduce the ore both for the sake of cheaper transport and to provide a cost-effective means of eliminating "waste rock" -- sulphur burdened iron pyrites -- prior to refining. To that end, Canadian Copper hired E.D. Peters, a metallurgist, as General Manager of operations. In July 1888 Peters ordered ground cleared east of the Copper Cliff mine for roast yards and a smelter.¹²

The roast yards were fired in August 1888. To explain the process: the ore was hand sorted prior to roasting; then it was

put through a 15 by 9 Blake break, set to about 1 3/4 inches, a revolving screen sizes it into "coarse" "ragging" and "fines", the three sizes essential for heap roasting, and the ore is loaded onto railroad cars that run on an elevated trestle over the roast ground, so that it is dumped on elevated platforms near the heaps and wheeled onto the latter very cheaply ... The pine [for fuel] is procured very cheaply... about a cord is needed for 20 tons or more of ore... The piles usually contain 600 to 800 tons of ore and have to be carefully covered with ragging and fines, the latter being applied almost continuously for the first forty-eight hours to prevent too quick a heat. ... Such a heap burns about fifty days. ... A sunken railroad alongside the heaps conveys the roasted ore to the side hill on which the smelter is located, and high enough so that the cars of ore are dumped directly into the bins back of the furnace.¹³

"No man in America," Peters boasted, "is heap-roasting half this amount." Peter ignored serious flaws.¹⁴ Heap roasting produced a thick, acrid sulphur smoke that was ruinous to surrounding vegetation and perhaps harmful to health. Adults reported some breathing difficulties, though the Toronto Star claimed that "the sulphur seems to pickle their lungs and keep off pulmonary complaints." It conceded that "little babies die at an appalling rate, or live for a stunted growth." Louder complaints were issued over the loss of potential revenues through the leaching of iron and other minerals; Dr. Alfred Selwyn was among the first to criticize heap-roasting as a "wasteful" procedure in October 1888.¹⁵

Next came smelting the roasted ore. Peters supervised construction of a smelter that was "blown in" on December 24, 1888; two eight-man crews could process 100 tons daily by February 1889. Matte shipments began on 22 March; like the ore, it was shipped to various purchasers, the most prominent being Orford.¹⁶ But shipments remained small, so the 30,000 to 50,000 ton ore stockpile was replaced by another one of matte:

tons of matte were piled up in the smelter yard at Sudbury -- 9,000 tons so it was said. As security for bank loans it had no value,

so small was the market. Company overdrafts at the banks amounted to as much as \$300,000 all being secured by the personal endorsements of Henry B. Payne, Stevenson Burke and Thomas W. Cornell ... To keep the company going the three men had pledged their individual fortunes.¹⁷

Thompson and Beasley's book casts these men in a heroic light; the addition of the reduction works enhanced Canadian Copper's productivity and advertised "the permanency and profitable character of Sudbury's mining industries."¹⁸ Besides, good news was emerging from a century of research on nickel. "The Alloys of Nickel and Iron," a paper James Riley presented before the British Iron and Steel Institute in 1889, played a crucial role in opening new nickel markets by publicizing the first systematic tests on nickel steel. Riley concluded that nickel steel's

non corrodibility will render it invaluable...together with its strength both elastic and ultimate...these metals are equally important to the shipbuilder and the civil engineer... Then as regards the requirements of the military engineer, I am inclined to state firmly that there has not yet been placed at his disposal materials so well adapted to his purpose, -- whether or armour, or of armament -- as those I have brought under your notice.¹⁹

This growing evidence of nickel's importance sparked renewed interest in the Sudbury area's prospects.

Excitement Over Nickel

Montreal investors were the first to react; the Dominion Mineral Company was organized in January 1889. It bought the Worthington mine about May and the Blezard soon afterward. Some buildings were raised at Worthington but work centred at the Blezard, where 300 men ran a pit "full force" and also erected roast yards and a smelter.²⁰ Dominion was not alone in entering the field, for early in 1889 H.H. Vivian, a well-known British metal firm, optioned the Murray prospect; following ore tests in Swansea, Wales, the mine was purchased outright. While a work-force of 150 men removed 2,000 tons of ore from "extensive surface workings",

shaft sinking began at the Murray mine and the firm's first roastery was built. The yard was fired in October 1889, with the roast ore stockpiled awaiting the future construction of a smelter.²¹

The efforts of H.H. Vivian and Dominion Mineral did not unduly upset the management at Canadian Copper; indeed the Toronto Mail reported in December 1889 that the firms "get along very harmoniously."²² Canadian Copper had little cause for alarm; new nickel markets were emerging, its known reserves were 260 times those of Dominion Mineral and 2,700 those of H.H. Vivian, and its mines were the largest, most productive and best equipped in the field. In 1889 the Copper Cliff mine was pushed beyond 500 feet in depth and all three Canadian Copper mines were said to be "booming." The No. 1 (East) smelter, meanwhile, was supplemented by a second furnace, blown in on September 4. Together they reduced 41,079 tons of ore in 1889 to not less than 5,909 tons of matte. Six hundred tons of the matte were sold by June, with the overall total shipped kept confidential at company request.²³

Canadian Copper probably regarded the entry of new competition as an inevitable, if unwelcome, consequence of Sam Ritchie's promotions. Ritchie, quick to grasp the significance of the metallurgical work relating to nickel steel, arranged that the news be "heralded all over the civilized world." He also travelled to Washington intent on convincing B.F. Tracy, Secretary of the United States Navy, of the advantages of nickel-steel. The intrigued Tracy ordered Lieutenant B.H. Buckingham to join Ritchie's forthcoming tour of Europe, the touring party being rounded out by Canadian Copper president T.W. Cornell and Sir Charles Tupper, now High Commissioner for Canada in Britain. Ritchie's travelling companions proved susceptible to his promotions, the ever sanguine Tupper even anticipating that a

"governing supply of nickel" would permit Canada to "control the character and efficiency of the guns and navies of the world." Krupp and Le Nickel, though less effusive, expressed interest in acquiring the Canadian Copper deposits.²⁴ Most importantly, Buckingham's positive report led the U.S. Navy to test nickel steel. Commander William Folger, Chief of the Ordnance Bureau, soon reported that the trials had

indicated the probable superiority of nickel steel over simple steel. In order that the Department might be in a position to take immediate advantage of the results of these very important experiments Congress was at once requested to appropriate \$1,000,000 for the purchase of nickel ore.

This appropriation having been made, the Department stands ready to adopt nickel steel armor, should further trials conclusively prove its superiority.

The Navy ordered Buckingham and Folger to tour the Sudbury area; their report provided early evidence of Canadian Copper's highly advantageous position.²⁵

But that conclusion was overlooked by many investors, who saw only that the report confirmed the enormity of the local deposits. A series of visits by distinguished parties in 1889 and 1890 brought still more excitement, the visitors marvelling at the "unexpected extent of the works and the quantity of ore already mined."²⁶ They were equally impressed by the efficient transportation links built by the mining firms. "All the large mines," reported the Toronto Mail, "have switches leading out from Sudbury, and some [Canadian Copper and Dominion] own locomotives and rolling stock of their own."²⁷ The positive publicity led inevitably to speculation. By November 1889 Sudbury was "full of wild rumours and stories about discoveries, sales, prospects, and what not", and a year later a visitor reported that:

the attention of all hands have been devoted to finding and selling nickel properties. I was told shortly after I got here that every second person in Sudbury had a nickel mine. In mingling with the people I have been led to believe the proportion is altogether too low.²⁸

As in all mining booms, real gains fell far short of dreams. About a dozen firms -- with a combined capital in excess of \$2.4 million -- were organized between 1890 and 1892. Most firms and less formal "wildcat" efforts accomplished nothing whatever, or had a few drill holes or small pits to show for monies spent. Two or three concerns managed to raise a few hundred tons of ore before succumbing to the lack of transport and reduction facilities, high costs and still-limited markets.²⁹

One new firm overcame these obstacles long enough to become an effective nickel matte producer. Boston and Chicago capitalists purchased the "Chicago" mine in 1890 and had this Drury Township site, five miles north of Worthington, under development by early 1891. The introduction of steam power enabled 25 employees to remove 4,000 tons of ore by year's end. Following this preliminary work the Drury Nickel Company was incorporated, and full scale mining -- ten cuts worked by 90 men -- was underway by 1892. Roast beds were ready by March and a 60 ton smelter by mid-year; the matte was shipped to the Emmens metal plant in Ohio. When that plant failed, Drury was forced to sell 3,500 tons of matte to Joseph Wharton at only eleven cents per pound. The resulting losses closed Drury late in 1892; Wharton, impressed with the quality of the matte, helped to re-capitalize the firm. But the damage had been done: after intermittent operations Drury Nickel found itself "under the lock of liquidation" by August 1894.³⁰

Drury's troubles were only too familiar to the executive at H.H. Vivian, where a promising beginning quickly faltered. In September 1890

an 80 ton settler was blown in, raising the company's workforce to about 200 men. All was not well, however, for Vivian's local management suffered from too-frequent changes, and the firm was operating on a cost-saving but primitive basis. Visitors to Murray mine were "struck by the old fashioned way in which the English firm was carrying on its work. Everything seemed to be done by hand." These methods assured that the Murray mine remained quite small, with "very little work ever done underground below 50 feet and none at all below 100."³¹ Matters were made worse by the low grade of the deposit; to overcome the inadequacy, Vivian commissioned investigations of other deposits and it installed a bessemerizing converter, the first such application in North America, to improve the grades of its matte. A second furnace further enhanced its reduction capability. Despite these improvements, the poor ores and low prices, plus high costs, small scale operations and "the disadvantage of an administration 4,000 miles away" wearied the firm's executive. The operation was abandoned in 1894, though the Murray property remained in company hands until 1907 as the firm sought to recoup some of an estimated \$400,000 loss on its nickel mining venture.³²

H.H. Vivian's fate was shared by Dominion Mineral, though the companies' circumstances differed. By 1890 Dominion's Blezard mine was fully operational, featuring the first use of electricity at an Ontario mine. Recapitalization of the firm in 1890 permitted even more progress: the Worthington mine was opened and the Blezard smelter was fired in April 1890. The matte was of the "best" quality and Dominion's works were quite efficient, but the firm lacked markets. When Joseph Wharton cut his purchases in mid-1891, the resulting financial strain led to the Blezard mine being closed that fall. A company reorganization led to resumption of mining

but by the fall of 1892 both the Blezard and Worthington mines were closed while Dominion reduced inventory. Recognizing the futility of marketing its matte in a piecemeal manner, Dominion's directors looked to adopt Ludwig Mond's nickel-carbonyl refining process, but the price was too high. Then the Blezard mine "gave out" and an enlarged Worthington mine still did not provide enough ore for full scale operations. So Dominion launched a search for alternative deposits while it tried to cut expenses. When Wharton cancelled his remaining matte purchases in 1894, Dominion ran out of options. Its directors, though reluctant to abandon their plans, had no option but to close Worthington mine in 1894; the roast yard was closed before the year was out and the smelter in July 1895.³³

Incipient Nationalism

Canadian Copper's vigorous effort to improve its prominent position in the mining side of the nickel industry was the most important factor in the failure of Dominion Mineral, H.H. Vivian and the many smaller firms, though their own inadequacies also came into play. Canadian Copper's tactics included vigorous promotion and the lobbying of governments for more favourable legislation. From 1886 onward, Sam Ritchie worked against domestic refining of nickel. Prime Minister Macdonald complained privately to Ritchie that "We cannot allow you Americans to come up here and take our resources and leave us nothing but stumps and holes in the ground"; Canadian Copper threatened to abandon its Sudbury operations should an export tax on nickel ore be imposed.³⁴ Having received assurances from Macdonald that no such tax was forthcoming, Ritchie gave vague promises respecting refining the nickel ore in Canada. These assurances were blatantly false, for Ritchie appeared before the Ways and Means Committee of the United States Senate in January 1890 to argue for a duty against nickel

refined in Canada. His testimony also helped cancel the import tax on unrefined nickel imposed in 1889, thereby further protecting the company's American refining interests. ³⁵

These two-faced tactics might have gone unnoticed but for Ritchie's boundless enthusiasm. Recognizing that domestic refining of nickel held popular appeal in Canada, he began in 1890 to promote a scheme linking Sudbury nickel with the Hastings County iron ores in which he held a major interest. Canada, Ritchie argued, could virtually control the world nickel-steel market if the senior levels of government provided aid to build the requisite railway and plants. Ritchie's grandiose and self-serving scheme drew some support from the public, but he faced the wrath of the other executives of Canadian Copper, who felt that his latest scheme threatened to destroy the company's well-developed strategy against refining in Canada. Nor were these Ohioans convinced of the fiscal soundness of Ritchie's plans or of their own ability to retain a controlling interest. Ritchie soon lost his place on the board and his position in the firm, and the new executive moved early in 1891 to repudiate his nickel-steel scheme. An embittered Ritchie counter-attacked, charging Canadian Copper with violating its charter by not refining its ores in Canada. ³⁶

The opening salvo in the long battle between Ritchie and Canadian Copper was only one aspect of the "nickel question." By 1889 the concentration of known nickel deposits in a few hands raised fears about monopoly control of the metal. ³⁷ Rumours of negotiations intended to create a "ring" controlling nickel worldwide stirred the Ontario government into action. Premier Mowat and Arthur Sturgis Hardy, his Commissioner of Crown Lands and his successor as premier in 1896, offered arrangements whereby

"the United Kingdom should acquire a substantial, possibly a controlling, interest in the nickel deposits of this Province." The provincial government was willing to grant all the Crown-held nickel-bearing properties in the district "subject to such arrangements for the establishment in Ontario of nickel-steel works or manufacturers." To facilitate such activity, the Province withdrew all unsold lands from sale in December 1890 and introduced a royalty on ores. But the reserve was rescinded in July 1891 when the Admiralty refused the offer, citing a lack of promising deposits.³⁸

The Province retained the royalty on ores but actively operating firms seemed unconcerned. Ian Cameron, manager of the Dominion Mineral works, dismissed the royalty as a "bagatelle."³⁹ Local businessmen and mine brokers, however, launched "indignation meetings" to protest the royalty. The loud protests and a deputation of leading citizens who met with A.S. Hardy to plead for more favourable legislation had no impact, for Hardy believed that the nickel royalty would "afford a revenue to the Province which will ward off the bugbear of direct taxation for many years."⁴⁰

Local resentment against the royalty reflected the "dullest season of the range since mining first started", with local employment and gross wages for 1893 down 25 percent from the boom days of 1890.⁴¹ While many local observers laid the blame on restrictive legislation and the slow acceptance of nickel steel, others accused Canadian Copper directors "of using their influence to keep others out", pointing to the successive failures of its competitors. For its part, Canadian Copper rarely bothered to placate its critics, concentrating instead on opening its huge deposits and improving its plant.⁴²

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That effort was aided by Robert M. Thompson, president of Orford Copper. Thompson convinced his friend, Navy Secretary B.F. Tracy, of the rightness of Ritchie's views on nickel steel; Tracy, in turn, obtained a \$1 million appropriation to purchase refined nickel and test nickel steel plate. He awarded the refining contract to Orford Copper, which had a ready supply of matte by virtue of earlier contracts with Canadian Copper. With this support, Orford was able to introduce the "tops and bottoms" refining process which remained in use for more than 50 years. Armed with a ready supply of nickel, guaranteed sales to the U.S. Navy and a superior refining method, Thompson set out to secure part of the European market -- then dominated by Baron Adolphe de Rothschild's Le Nickel -- for Orford. He instituted a series of price cuts that lowered the price of nickel from 70 cents per pound (1891) to as little as 16 cents by 1895.⁴³

Canadian Copper, meanwhile, gained a guaranteed contract for 4,500 tons of matte for which it ultimately received \$321,321.86. This unprecedented income helped reduce inventory; periodic mine shutdowns speeded the reduction in supply, cut labour costs and facilitated improvements at Canadian Copper's works. These manoeuvres brought the firm substantial profits -- \$250,000 in 1891 alone, when it paid a first-ever dividend.⁴⁴ Yet Canadian Copper professed to be in financial difficulties, citing its fixed price contracts with Orford and its otherwise small markets. The firm was rather a "junior" partner in the pairing with Orford, a status that led to negotiations with British and European steel makers for an alternative market before the price war on nickel undercut those other firms' ability (or need) to enter the Sudbury field on their own account. The low price was even more devastating on Canadian Copper's attempts

to establish an independent refining capacity at an experimental plant in Cleveland.⁴⁵

For all these problems, however, the firm's actions were not those of a financially strapped operation. All three of its mines were expanded steadily, and despite production gains only the Stobie was closed during the economic downturn in 1893. By 1894, the Evans, Stobie and Copper Cliff were running "full blast". Canadian Copper also enlarged its reduction plant, one instance being the installation of a Bessemer process works at Copper Cliff in 1892. Notwithstanding a rather ramshackle appearance, by 1894 the Copper Cliff plant was a cost-effective means of reducing the firm's abundant ore supply; a future market for the resulting matte was secured when Canadian Copper's contract with Orford was renewed in 1894.⁴⁵

The contract renewal, technological improvements, the naval sale and superior deposits secured Canadian Copper a growing primacy in nickel mining; in 1894 it produced about 45 percent of the world's nickel. Orford, meanwhile, used its new refining process and the naval sale to match Le Nickel. The price war plus superior ores, processes and finances ensured the failure of the many firms organized to take advantage of new-found interest in nickel. These failures aroused concern, but little effective action on the part of the Federal and Provincial governments. Thus when Thompson and Rothschild reached an agreement on prices and market share, the Orford-Canadian Copper tandem assumed a crucial role in the world-wide nickel cartel and virtual monopoly control over the North American nickel industry.

II.

CONSOLIDATING THE NICKEL MONOPOLY, 1894-1902

Canadian Copper's near monopoly on the mining side of the North American nickel industry brought little growth to the local economy -- still low prices, continuing metallurgical puzzles and the slow acceptance of nickel-steel kept nickel mining on a small scale. Nickel-copper ore production stagnated at about 100,000 tons annually between 1894 and 1897; less than 50,000 tons of matte were produced over the four-year span. Canadian Copper cut costs in an effort to cope with sluggish markets: plant improvements were scaled down or cancelled and workers were let go. Employment declined from 655 in 1894 to well below 500 in 1895 and 1896, then recovered slowly though still remaining below the 1893 level. Wage rates followed a similar pattern. The across-the-board cuts helped the firm remain profitable: Canadian Copper shareholders received some \$750,000 in dividends from profits of \$5,245,000 earned between 1892 and 1897.⁴⁸

The Nickel Question

Canadian Copper's profitability at a time of local recession rekindled the nationalist sentiments of the early 1890s. These sentiments were set ablaze by testimony before the Ways and Means Committee of the U.S. House of Representatives, which in 1896-97 considered the merits of duties on unrefined nickel imported into the United States. R.M. Thompson of Orford opposed any such duty, claiming that Canadian Copper's sales were "purely as patriotic a thing as was ever done by any set of men in America." He produced figures showing that "the interest of the United States is four times as great as that of Canada in the working of the [Sudbury] mines."⁴⁹ Stevenson Burke, president of Canadian Copper, naturally agreed. Pointing to the long-established tie between the U.S. Navy and Canadian

Copper, he went on to argue that

a duty upon either nickel ore or nickel matte would result necessarily in the refining of this product in Canada, or in Great Britain, or in Germany... We have preferred to have this work done in this country. We have preferred to give our people the benefit of it;... if a duty should be put upon nickel ore or nickel matte, why that is the end of it coming to this country.⁵⁰

The testimony had the desired result: nickel ore and matte were exempted from duty, while refined nickel still drew a fifteen cent per pound charge.

This victory in the U.S. Congress angered many Canadians, including T.W. Gibson of the Ontario Bureau of Mines, who argued that

the United States is not the only country in which there is a market for nickel, and while Congress may frame a tariff to secure the greatest good to Americans, it cannot check enterprise elsewhere. The most natural suggestion that will arise in the minds of Canadians who may read the statements of Messrs. Thompson and Burke is... the possibility of producing refined nickel and copper from the ores of Ontario mines. ... It is worth enquiring whether the more expensive and probably more profitable part of the industry might not also be carried on in the country which supplies the raw material.⁵¹

These words surely pleased Sam Ritchie, embroiled in legal wrangles with Canadian Copper in which he would "lose, lose and lose again."⁵² He also organized the Canadian Consolidated Copper and Nickel Company 1897, hoping to create a domestic nickel-steel industry, but investors were wary of his ceaseless dreams. Ritchie was more successful in the public arena, where his regular, lengthy diatribes against Canadian Copper and in favour of Canadian refining drew an ever more positive response. The growing nationalist sentiment helped to fuel Canadian reaction to the American Dingley tariff: the recently installed Laurier Liberal government imposed retaliatory duties on logs, pulpwood and on ores or mattes being exported from Canada. The legislation posed a real threat: Daniel McKeown, American Consular Agent at North Bay, reported on 30 March 1898 that "the actions of the Canadian Copper Company indicate that they look

for such legislation because their shipments this month have been only limited by the [railway] car supply.⁵³ Application of the new duty, however, awaited an implementing Order-in-Council, so the firm had time to act. Canadian Copper and Orford, with support from Ludwig Mond and H.H. Vivian, launched private campaigns against the export duty, while publicly threatening to close the Sudbury operations should it be imposed. Laurier, taking these arguments to heart, decided by June 1898 against imposing the nickel-copper duties.⁵⁴

Laurier's decision shifted debate to the provincial arena, where the Liberal government's Sawlog Act made imposing a "manufacturing condition" for nickel a politically feasible option. But Premier Hardy, fearful of arousing bitter controversy, did not act. The succeeding Liberal George William Ross government, spurred on by Archibald Blue of the Mines Bureau, moved in 1899 to improve its much-maligned policy. Noting that more than two-thirds of the value generated from Sudbury ores went to the United States, Blue suggested that Ontario should again approach the British Admiralty concerning refinery development; press for enactment of the federal duty and require a manufacturing condition for future grants. The last suggestion was irrelevant since the key Sudbury nickel deposits were already in private hands; the others proved impracticable.⁵⁵ Undaunted by this failure, prominent Hamilton Liberals led by John Patterson, A.T. Wood and Attorney General John Gibson -- all members of a nickel-steel consortium formed in that city -- convinced Ross to impose license fees on nickel ore, and matte that would be reimbursed if the raw material was refined in Canada.⁵⁶

The fee was clearly aimed at Canadian Copper, which was not slow to act. It claimed to lack the technical capacity to refine in Canada

and sought support from the Conservative opposition. When J.P. Whitney, the Conservative leader, proved unsympathetic, Canadian Copper renewed its threats of closure. The threat drew Sudbury area residents and the mining press squarely on the side of Canadian Copper, but Ross also found allies like the Monetary Times, which praised the new fees. The Government's resolve strengthened further on 7 May 1900 when Laurier informed Ross he had "no intention of disallowing your Mines Act, though representation to us has been rather vociferous."⁵⁷

Laurier's attitude was tested by an appeal for disallowance filed on September 13 which claimed that the provincial amendment was "fatal to the nickel industry in the districts of Algoma and Nipissing", and an unconstitutional encroachment upon the federally regulated field of trade and commerce.⁵⁸ Canadian Copper's allies also claimed that disallowance would improve federal Liberal fortunes while preserving existing nickel operations. Both, they argued, were more valuable than the unproven plans of the Hamiltonians. Federal Justice Minister David Mills concurred: on 11 April 1901 he recommended disallowance. Heated negotiations brought an order-in-council allowing a court test, but Ross had second thoughts. Legal scrutiny could prove a public embarrassment; so could Attorney General Gibson's link with the Hamilton interests. Economic realities also played a role. The recovering nickel industry now included a new Canadian processing component, the Ontario Smelting Works. "The quid pro quo for agreeing to build a Bessemer smelter at Sudbury," argues Christopher Armstrong, "was the dropping of the new fees." The amendment became a dead letter, repealed by the new Whitney government in the Mines Act of 1906.⁵⁹

The "nickel question" was of great import to the Sudbury area, where local attitudes initially did not mirror those of Canadian Copper's executive.

On 24 February 1898, a Sudbury Journal editorial favoured refining in Canada. "We know," wrote James Orr, "that with the exception of one company, the people of this district... are almost unanimously in favour of such action."⁶⁰ But Canadian Copper's threats of plant shutdown soon hardened local attitudes against any "restrictions" on the industry. Domestic refining lost any remaining local appeal because of the increasing prosperity of the nickel industry. The success of nickel-steel armour in the Spanish American War, plus improving copper prices, led to sustained progress from 1898 to 1901. The value of nickel and copper production rose from \$559,710 in 1897 to \$2,449,050 in 1901; small wonder that Sudbury's leading citizens regularly travelled south with resolutions in support of Canadian Copper. James Orr was among those persuaded: by 1901 the Sudbury Journal claimed that "the question of nickel refining had been settled.... the refining of nickel in Canada is not feasible."⁶¹

Renewed Competition

But many outside investors were attracted to the burgeoning industry. Some of the competition posed no real threat to Canadian Copper, lacking sufficient capital to launch operations or, like the Canadian Nickel Company, being content to acquire properties on a speculative basis, with no intention of mining them. Other firms were more aggressive. The Trill Mining and Manufacturing Company worked the Chicago mine and the Great Lakes Copper Company opened the Mount Nickel mine; low ore grades, poor management and smelter failures crushed these inadequately financed firms.⁶² Technological failure also dogged the Hamilton consortium that had been so persistent a political foe of Canadian Copper. Its smelter at Worthington, built in 1900, proved useless; the Hoepfner refinery was no better. These results coupled with their losses in the political arena, saw the syndicate abandon

operations by October, 1901.⁶³ These failures hardly slowed the rush of speculative capital hoping to take advantage of the booming nickel market. The best known of the speculators was Thomas Edison, who spent considerable time seeking a suitable ore deposit before moving on to new ventures.⁶⁴

Another famous entrepreneur was less cautious: Francis Hector Clergue became interested in the nickel region while seeking a handy source of sulphur for his pulp mill at Sault Ste. Marie. He then learned of the Sjostedt process, which produced sulphur from nickelferrous pyrrhotite while leaving a ferro-nickel by-product. The process required copper-free ore; as the McVittie mine seemed suitable, it was purchased in October 1897. To market the ferro-nickel by-product, Clergue decided to establish a nickel-steel plant and agreed to sell Krupp steel at \$15 per ton -- "a very low figure." Development at the McVittie (renamed the Gertrude) began in 1899, then quickened after the Clergue-owned Manitoulin & North Shore Railway reached the mine early in 1901. But as work progressed the copper content of the ore was found to increase, so Clergue opted to roast and smelt the ore, then ship it to Sault Ste. Marie where ore from Helen Iron mine would be added to achieve a proper balance for ferro-nickel. These plans saw mining operations shift to the Elsie mine, where the first ore was shipped on 26 October 1901. The Elsie produced 250 tons of ore daily by January 1902; it was crushed at the Gertrude mine, then shunted by narrow gauge railway to a nearby roastyard. The roasted ore was stockpiled until a 160 ton smelter was fired in June 1902. These were substantial operations, employing about 170 men.

Typically, Clergue decided to expand the mining operation. His crews sought new ore deposits in Levack, MacLennan, Drury and Trill Townships.

Meanwhile the smelter was enlarged to a 300 ton capacity and improvements were undertaken at the Elsie pit, necessitating the removal of the Elsie camp to a safer distance. While the Elsie was enlarged, three shifts worked the re-opened Gertrude mine. These promising operations came to a halt on 18 September 1903 because the Clergue-organized Lake Superior Corporation was unable to meet the demands of its bankers. The collapse of Clergue's multi-faceted empire closed the Sudbury-area works despite his efforts at refinancing them through Vickers-Maxim, a British armament firm.⁶⁵

One competitor alone had the money, business acumen, metallurgical knowledge and market connections to organize a successful nickel operation. Ludwig Mond became interested in nickel after accidentally discovering the nickel-carbonyl refining process in 1889. Initially he rejected independent operation, offering the process in turn to Dominion Mineral, Canadian Copper and British steel manufacturers. But their offers were unacceptable and Mond also was unsuccessful in his attempt to purchase matte from Canadian Copper, so he decided to enter into active nickel mining operations on his own account. A world-wide examination of available nickel deposits culminated in the purchase of the McConnell property in Denison Township. This and other properties were purchased by January 1899, a "trumped up" suit by R.G. Leckie of Orford Copper was settled, and development of the McConnell began. Exploratory drilling started in April 1899; two shafts, various buildings and seven miles of road were soon in place. By late 1900 the renamed Victoria mine stood ready, awaiting the completion of an 11,000 foot tramway to connect it with Mond's new roastyards. Fire soon damaged the ore tramway, so a more elaborate yard was built midway between the mine and the company smelter, built at Victoria Mines, just

south of the original yards. The entire works were ready in July 1901.⁶⁶

Mond financed the early work -- and the acquisition of eighteen additional properties -- from his personal fortune; not surprisingly, he looked for ways to reduce his burden. The Mond Nickel Company was incorporated in Great Britain on 20 September 1900 and the immediately oversubscribed \$600,000 stock offering of 17 May 1901 provided much needed capital.⁶⁷ But there were many costs to be met. Development of the Victoria works required major expenditures on materials, not to mention 300 salaries. The new refinery in Swansea, Wales, plagued by technical and labour difficulties, further strained company resources. Since the refinery could accept only 2,403 tons of matte in 1902, matte was stockpiled at Victoria Mines and ore production slowed accordingly. Many men were laid off at the Victoria mine in April, more in December. When the smelter also closed, Mond's total local workforce had fallen to 77 men. But a still optimistic Ludwig Mond authorized exploration work at the Little Stobie, Garson and North Star mines in 1902. Soon, there were other signs of progress:

The Swansea refinery troubles were overcome, permitting the Victoria Mines smelter to be restarted on 1 March, 1903; the Victoria mine remained closed pending the refining of stockpiled matte.⁶⁸

A Nickel Giant

Mond Nickel's troubled beginnings were a marked contrast to the revitalized operations at Canadian Copper. Political threats, booming markets and competitive pressures aside, Canadian Copper had to act; its old mines were failing. Small deposits near Copper Cliff were opened as a temporary measure until two larger, more distant deposits were opened. The No. 3 (Frood) mine was opened in the fall of 1899; 107,942 tons of ore were raised before it too was closed in favour of the Creighton, where stripping

commenced after access was afforded by the Manitoulin & North Shore Railway in 1900. The first ore was shipped in mid-1901.⁶⁹ Along with these new mines came improvements to the firm's reduction plant. Together, the new No. 3 roast yard, a new "West" smelter, and the Ontario Smelting Works (built by Orford Copper) concentrated matte to 80 percent metal content, double the previous grade. These new works allowed Canadian Copper to smelt 900 tons of ore daily; since the Creighton mine could produce 1,200 tons a day, operations at other mines were curtailed.⁷⁰

Orford Copper's role in building the Ontario Smelting Works revealed its close ties to Canadian Copper. Orford also bought local ore deposits and cancelled any ongoing development, prompting charges of collusion between the two firms to freeze out potential competition. Orford's crude attempt to thwart Ludwig Mond's purchase of the McConnell deposit added credibility to these accusations.⁷¹ The interlocking of Canadian Copper's proven mining operations with Orford's refining and marketing skills appealed to R.M. Thompson of Orford, who approached Standard Oil in 1901 looking for financial support for such a merger. Rebuffed, he turned to United States Steel, offering it a controlling interest in Orford Copper, the Nickel Corporation and the Société Minière Caledonienne in return for capital. He persuaded Joseph Wharton, a customer of Canadian Copper since 1897, to bring the American Nickel Works to the merger. More importantly, the support of Stevenson Burke could deliver Canadian Copper and its subsidiaries to the new combine.⁷²

The U.S. Steel negotiators were impressed, for the combined yearly earnings of these firms was in excess of \$1 million. An option was signed on 7 December 1901, and the "chief capitalists" of U.S. Steel purchased

the controlling interest for \$9 million on 28 February 1902. The International Nickel Company of New Jersey, Limited, was incorporated on 29 March 1902, with a capitalization of \$24 million. The firm issued \$27.72 million in first mortgage bonds and stock, the excess enabling J.P. Morgan & Company, the backers of the deal, to "retain control without being required to invest anything in the new company."⁷³ The combination of U.S. Steel, the House of Morgan and the major North American producers of nickel set the stage for growth which promised to surpass by far the gains made since 1886.

Development of the Sudbury Basin deposits to 1902 was aided by lax government regulations, which encouraged the early, if rather fortuitous acquisition of key properties by Canadian Copper. Ontario's "benign neglect", combined with the geographically concentrated resource, provided a favourable setting for monopoly formation. More stringent regulations may have captured greater revenues for the government, but it seems unlikely that foreign control could have been prevented without slowing the expansion of the mines. The repeated failures of mining on the North Shore bred indifference among Canadian entrepreneurs which, when compounded by ignorance of the Sudbury Basin's true wealth, led to the alienation of the deposits to foreign speculators.

This surrender seemed insignificant until metallurgical research revealed the new promise in nickel steel, prompting a brief struggle for control in which Canadian Copper was victorious. While that firm's deposits were the best and most easily mined in the region, ore supply was rarely a critical factor in failure. Instead, insufficient capital, technological failures and small markets were the telling factors. Canadian Copper,

in concert with Orford, overcame these difficulties, benefitting especially from the crucial purchases by the U.S. Navy. These sales, plus Orford's price war, gave the two firms an insurmountable advantage in the absence of government action directed against them. Self-centred "nationalists" like Sam Richie and the Hamilton group sought such action, but Canadian Copper and Orford pooled their economic and political might to overcome the challenge. The formation of International Nickel marked the final consolidation of the associates' strength, increased dramatically by the financial power of U.S. Steel and J.P. Morgan. As the "Nickel Trust" proceeded to build further on the foundations its predecessor companies had laid, the local populace would look on with understandable attention.

III

NATURAL WEALTH ABOUNDS

The Sudbury region's other natural resources provided economic sustenance for a local populace intrigued by but often hurt by the arbitrary job losses and pay cuts endemic in a monopolized nickel industry. Minerals other than nickel and copper generated considerable publicity while employing prospectors, miners and labourers; local farmers and businessmen benefitted from the new markets. Mineral induced booms -- especially gold "fever" -- were quite lucrative but very volatile; the excitement rose and died abruptly with little, sometimes no, ore produced.

The "green gold" of the forests provided far more jobs and more durable markets. Lumber operations were of greater consequence to many local villages than mining, which was a long-term success at only a few camps. Further, the introduction of new woodstuffs markets, especially pulpwood, ensured a continuing role for the forest economy despite the fierce pace of the assault on the pine stands. Though the employment and income

came at a great cost -- the local landscape was denuded -- little thought was given to the ecological damage. Area residents, like most Canadians of the day, saw the forests as limitless and appreciated the trees only for their economic worth. So long as some trees remained, this rationale seemed sound, for the forest industries were a steadying force in a local economy rocked by the boom-and-bust scenarios of the mining industry.

Besides, agriculture was the logical successor to the forest industries, or so then conventional wisdom argued, benefitting from the land clearing done by the lumbermen. Certainly, this was the long-standing view of the provincial government, which encouraged settlement of the "rich" lands near Sudbury, pointing to the nearby lumber and mining markets for farm produce. Little wonder that a steady stream of settlers -- sharing a common view with the lumbermen and miners -- sought to exploit the natural riches of the Sudbury region.

Gold

Nowhere was the exploitative urge more evident than in gold mining: a mere hint of that metal could bring great excitement, making it an important counterbalance to the periodic recessions in the nickel industry. For instance, the pessimism brought by the discovery that Sudbury's copper was "tainted" by nickel was alleviated by September 1887 by Henri Ranger's find of rich gold ore in Denison Township. Ranger, Robert Tough and James Stobie received their patent for the "Vermillion" mine on October 9, undertook site preparation and recruited A.G. Duncan, an experienced mining engineer, who set out on a search for investors. Duncan persuaded Volney Foster, Robert Hill and several other wealthy Chicagoans, who formed the Vermillion Mining Company. Encouraged when the mine yielded \$8,000 in gold, they invested \$70,000 in new equipment. By the summer of 1888 three

shafts and a three-stamp gold mill kept 40 men busy while the owners of the mine promoted their property. "We reckon we have an El Dorado at Sudbury," "Colonel" Hill remarked, "and I am surprised to see so few Canadian capitalists in the mines in that quarter."⁷⁴ In answer to concerns about declining gold assays and limited production, 1889 brought new diamond drilling, electro-magnetic tests and an expansion of the workforce to 60 men. The tests showed not only gold but positive indications of platinum, nickel and copper. The varied ore body worried Sam Ritchie, who was aware that solid financing made Vermillion Mining a potential rival to Canadian Copper. He began acquiring the new company's stock, "freezing out" the Chicagoans by obtaining a controlling interest from Robert Tough in May 1889. As Canadian Copper needed no new ore, the mine was soon closed.⁷⁵

The Vermillion mine's brief moment of glory inspired industry, scientific and newspaper coverage of the gold finds. Reputable individuals were caught up in the excitement: Thomas Johnson, Assistant Commissioner of Crown Lands, proclaimed Denison Township "one of the richest mining districts every discovered."⁷⁶ Such accolades brought a frenzied gold rush that by April 1888 attracted 1,000 or more "city dudes and others, who knew nothing practically about exploring" to Sudbury. They were too late, for all through the winter of 1887-88, speculators bought up claims, sites unseen, for miles around the Vermillion mine.⁷⁷

Though the rush displayed the worst signs of a head-long search for riches it did result in 40 or so gold "finds" by mid-1888, most by independent miners or newly organized firms like the Sudbury Mining Company.⁷⁸ Only a few sites had enough ore to warrant continued operations. The Creighton Gold Mining Company made the largest investment, sinking a 160 foot shaft near the Vermilion River and installing a three-storey gold mill.

Unfortunately, the gold ore petered out late in 1893, further drilling proved futile and the mine was closed permanently by November 1894.⁷⁹

The other major gold works were the brainchild of Robert A. Ahn, a "plausible, high talking fellow" who convinced both the Simpson brothers -- experienced gold miners -- and Toronto-based speculators that the Algoma Gold Mining and Reduction Company was a sound venture. But the plant was plagued by technical failures (and fraud?), and the "awful bungle" was liquidated in April 1892. These failures, the absence of available lands and the decline of Vermillion Mining all served to bring the gold rush to a halt.⁸⁰

But gold retained its allure: by 1894 speculators were drawn to the Lake Wanapitei area, where small pits produced some "free gold" and earned considerable notice in the Toronto press.⁸¹ Even more excitement was generated upon the discovery of a relatively rich Vermilion River placer bed in Hanmer Township; by March 1898, some 50 to 60 prospecting parties were on the upper reaches of the river. The gold "discoveries" were boons both to speculators -- more than a dozen gold mining firms were organized between 1894 and 1898 -- and to a local mining economy hurt by a stagnant nickel industry.⁸²

Gold fired many dreams, but true optimists looked to a "coal" seam first reported in July 1896. Late in October 1896, the Ontario Bureau of Mines dispatched Professor A.P. Coleman to the "find"; his journey triggered an avalanche of hysterical reports. The Toronto World headlined that "Ontario Has Coal Sure! Toronto's Supply Will Come From Sudbury"; the Globe and Toronto Star were equally optimistic.⁸³ Coleman's conclusion that the deposit consisted of a small quantity of anthracitic carbon --anthraxolite -- hardly slowed the pace of speculation. Three or more firms were in the field by December 1896, sinking shafts and erecting

buildings at several locations. The Citizen's Gold and Coal Company was the most persistent, carrying on its work well into 1898 and thereby earning local plaudits for its "faith and pluck."⁸⁴ But "pluck" did not produce markets for the poor-quality carbon, so the firm slowly withered into oblivion. Its demise provided yet more proof that the Sudbury region's less common minerals, for all their allure, could not by themselves sustain practical mining operations.⁸⁵

The Forest Industries

Local timber operations rarely drew excited comment, but the great stands of pine, spruce and the boreal tree species were the steady force in the local economy. Indeed, by 1886 Sudburians were "indignant" over the newly imposed Federal export duty on woodstuffs, fearing it would cause the "suspension of operations on which they so much depended." Their fears proved unwarranted, for a burgeoning mid-western American market kept markets strong notwithstanding the tax. Local timber proved attractive to lumbermen because of its good quality, the ease of access via the CPR, the availability of several good winter courses for moving the timber to Georgian Bay and, not least, the rapidly diminishing timber supplies farther south. Added to this was the provincial government's eagerness to dispose of its remaining unlicensed stands before they were lost to fires ignited by prospectors, the railway, or settlers clearing land. When the federal duties were removed in 1890, interest increased and a full-fledged lumber boom ensued.⁸⁷

The boom brought considerable prosperity to the Sudbury region, small railway stations being transformed into bustling lumber villages by the arrival of more than 30 large firms. On the west of Sudbury, centres like Naughton, Whitefish, Worthington and Nelsonville (later, Nairn Centre)

served as bases for firms cutting on or near the Vermilion and Spanish Rivers plus Penage and Fairbank Lakes. East of Sudbury, Wahnapiatae was home to firms cutting north and south along the Wanapitei River watershed. Many of the same firms cut the fine quality pine in the Valley and its environs, where Azilda, Chelmsford, Larchwood, Cartier and even smaller centres reaped local benefits from the unrelenting assault on the forest. Even Sudbury enjoyed direct benefits as the remaining pine forests in McKim, Broder and other nearby townships were felled.⁸⁸

Smaller operations also grew more numerous. They milled timber locally, selling it to the railway -- a Mr. Matheson sold 50,000 ties in 1897 -- and to the local building market. By 1891 eight small firms, employing about 100 men in all, worked near Sudbury, while similar operations elsewhere in the region made the small and medium sized mill an important part of regional economy.⁸⁹

The mines also required vast quantities of woodstuffs -- cordwood for their roast yards and steam engines, plus ties, poles, beams and lumber. At first the mining firms harvested nearby wood supplies, notably the dried, burnt pine, and they remained reluctant to call in commercial lumbermen to take charge. When Dan O'Connor acquired the timber limits close to the Canadian Copper roast yards, the firm became "aware how tenuous its right to timber were and of the need to obtain timber licenses on its own account." Accordingly, Canadian Copper obtained control of the McKim timber limits in 1895 and, later, limits in other townships. These were harvested by subcontractors: a first contract for 5,000 cords went to John Frawley in November 1895. Canadian Copper's experience was not lost on Ludwig Mond: the Mond Nickel Company purchased timber limits in Denison Township in the spring of 1900.⁹⁰

Yet more trees were felled as the boreal tree species gained added value thanks to the opening in 1894 of a groundwood pulp mill at Sault Ste. Marie. Pulpwood gained more prominence by the unsuccessful efforts of T.M. Kirkwood and D.L. McKinnon to develop a pulpmill near Sudbury in 1896. Then in 1899 W.J. Sheppard and J.R. Barber, president and vice president of the Georgian Bay Lumber Company, organized the Spanish River Pulp and Paper Company. The Province, on 21 November 1899, awarded the firm:

the right for a period of twenty-one years from the date hereof to cut and remove spruce [,] poplar or whitewood and banksian or jack pine six inches and upward in diameter... from those portions of the lands of the Crown ... along the Spanish[,] Vermilion and Onaping Rivers, in the District of Algoma, and along the extensions and tributaries of the said rivers.

The Company in return agreed to erect a pulp mill with an annual capacity of no less than 20,000 tons, employing 250 persons for at least ten months of each year. The new industry also gave rise to the Vermillion River Boom Company, organized in 1902.⁹¹ Such companies, ironically, slowed the development of a more diversified local timber economy since the "improved" rivers sent their logs "hurtling" to mills downstream.

With improved waterways and the lesser option of railway shipment restricting the progress of manufacturing, the local forest industry dealt mainly with the removal of square and waney timber or simple logs. Most large scale operations were run in a similar manner. Late summer saw the first crews start out for the timber limits and by mid-September crews of 25 to 100 men began felling trees. Later in the fall, and until the camp broke up at Christmas, skidders gathered the timber into large piles. During the winter, smaller crews of teamsters used frozen tote roads to move the logs to a nearby lake, stream or river. With the onset of milder

weather and spring breakup, river drivers steered the logs down the rivers to Georgian Bay, where they were boomed for further shipment or milled.⁹²

The most sophisticated methods were found at the large operations, which built chutes and dams on waterways, plus tote roads, scows and large "depots." By 1891 the big firms also used "alligators" -- steam powered logging tugs -- and Emery Lumber built the "Wahnapitae and North Western Railway" to transport logs in Dryden, Falconbridge and Garson Townships. That railway was in operation by 1889; later extensions afforded access to more timber. The line, as befitted its use, featured steep grades, sharp curves and narrow-gauge (30 inch) tracks that were taken up and relaid as needed. The ramshackle line, served by three locomotives, remained in use until the early 1900s, by which time it was

perhaps the only railway in the Province having no direct connection with any other road. It was once built down to the C.P.R., but a bridge at that end of the road has become unsafe, so that the last mile or two of the railway have been abandoned.⁹³

Facilities like the Wahnapitae and North Western helped to alleviate local concerns about the absence of local manufacturing. Besides, Sudbury was

the main business centre of an immense lumbering district that stretches from 50 miles north of us south to the Georgian Bay; from 40 miles east on the main line of the C.P.R. to 200 miles northwest on the same line, and 125 miles southwest and west on the Soo branch.⁹⁴

But as the local pine stands disappeared, it became apparent that the removal of major operations from smaller local centres would cripple their economy. So residents of these villages were gratified as the pine cutters were succeeded, in due course, by firms cutting pulpwood or lumber, ties, poles, cordwood and other woodstuffs for local use. This industrial sequence, using different tree species, kept forestry a welcome economic force as

the 20th Century dawned. True, such "eccentrics" as Aeneas McCharles vilified the lumbermen as "the vandals of North America", who left

either a trangled scrub or dirty burnt land growing up with thick scrub... [The] principle of getting the last dollar out of the pine for revenue purposes, by selling it to the Yankees ... is regarded as wise policy on the part of the Government, but unborn generations of Canadians have rights in this grand heritage of timber, and the country will need it very badly indeed before long.⁹⁵

But the economic rationale usually reigned supreme: most observers equated scarred, burnt hillsides with regional progress.

Agricultural Settlement

Agriculturalists also applauded the removal of local forests. Any aid to farm settlement was welcomed, for in 1886 the Sudbury region boasted only a few pioneer farmers. Their accomplishments were praised in CPR's promotional pamphlets, which portrayed the area as "possessing splendid tracts of lands, free from rocks or rolling stones, and with rich soil." Provincial immigration agents, meanwhile, promoted the Sudbury area as "well adapted for settlers with a family and a small amount of capital." Similar promotions continued to appear, none more effusive than the two pamphlets published by the Algoma Land and Colonization Company that extolled the North Shore as a "wonderfully productive" area.⁹⁶ This promotional onslaught overwhelmed critics like Aeneas McCharles, who in 1893 dismissed eastern Algoma as

a barren wilderness of rocks and swamps, unfit for settlement, except by the inhabitants, who work in the lumber camps during winter, and thus earn enough money to keep the wolf from the door. But such farms as they have -- merely for homes and not to make a living out of -- would be curiosities anywhere else.

And even McCharles admitted elsewhere that "nearly every lot" in the Sudbury area contained patches of good land.⁹⁷

In the later 1880s a steady stream of settlers began the laborious process of clearing and improving these arable lands, the greatest gains being made in the Valley, where settlement advanced to a point that Phineas Coyne could build a grist mill at Chelmsford in 1886. Coyne also promoted the Valley at the Canadian National Exhibition of 1886, winning praise as "an enterprising farmer who takes great trouble in endeavouring to make the large, fertile and level tracts of land near him known to the public." The Valley's agricultural potential attracted about 400 persons -- 57 families -- by the late 1880s, the most aggressive of whom were pushing far from the CPR line, lands being taken up at Fairbank Lake and at Blezard Valley by 1888.⁹⁸ Progress continued: by 1891 the Valley boasted about 81 farms, with 1,500 acres of improved land devoted largely to oats, hay, peas, potatoes and turnips. The agrarian population, mainly French Canadian, with a small minority of Scottish, Irish and German settlers, rapidly began displaying the features of a farming community -- Rayside and Balfour Township farmers organized an agricultural society by 1892. New colonization roads, meanwhile, facilitated pioneer settlement in the northeastern portions of the Valley. A few settlers were established in southwest Hanmer Township by 1894, and the improvement of the Blezard Road, begun in 1896, brought many more people to Blezard and Hanmer Townships. A few of these newcomers were Polish immigrants, while the francophone majority was bolstered by the efforts of Rev. C.A.M. Paradis through the auspices of the Colonization Society of Ontario.⁹⁹

The forces that fired agricultural settlement in the Valley also were active in other parts of the area, though mineral speculation proved a hindrance to settlement. Large portions of the South (mineral) Range

were claimed for that purpose, putting much arable land beyond the settlers' reach. Speculative holdings were especially extensive west of Sudbury where the Vermillion gold rush saw much of the land included in "blanket" claims. The rush of claiming caught the few settlers already on the western periphery somewhat unaware: in 1890 Mikko Myllymaki was forced to give up a half-interest in his Denison Township farm to prevent a mineral speculator from gaining title to all of it. This "stalwart Finlander" had the last laugh, however, for in 1892 he sold his remaining property to another speculator for \$10,000 and headed for New Finland, Saskatchewan. By that time the work of other, less newsworthy settlers created a nascent agricultural community numbering some 30 families; half of these were French Canadians, the remainder (excepting Myllymaki) were from Scottish and Irish backgrounds.¹⁰⁰

Settlement to the west of Sudbury gained momentum when persons attracted by the nickel boom of the early 1890s took up land between Whitefish and Worthington. By 1894 the livestock population of the new Union Municipality of Drury, Denison and Graham attained such proportions that council was compelled to pass a bylaw defining a livestock owner's pasture rights and fencing obligations. Farm settlement, however, was almost completely limited to the Whitefish-Worthington section; in 1893 there were no settlers between northern Creighton Township and Whitefish. This was no surprise, for that area had no roads nor railways. Nor were there any settlers in Nairn or Lorne Townships: both were almost entirely in the hands of mineral or lumber interests. There were expectations of a considerable surge of settlement once a land "freeze" protecting timber was lifted in 1899, inasmuch as French Canadian and Finnish pioneers were already

settling in Louise Township -- most near the Vermilion River.¹⁰¹

Agricultural settlement was more hesitant east of Sudbury, where suitable lands adjacent to the CPR line were scarce. The census of 1891 reported only eleven farms between Appleby and Neelon Townships, only 258 acres of which were improved. These farms were divided between settlers of French Canadian, Irish and Scottish extraction, pioneers who surely welcomed a new wave of settlement north to the sandy plains in Garson Township. By 1895 these new settlers and their compatriots in Dryden and Neelon helped to organize an Agricultural Association also including farmers from nearer Sudbury.¹⁰²

While agriculture remained in its infancy on the eastern flank of the region, settlers nearer Sudbury formed a more vibrant agrarian community. Farming in McKim dated from 1883, while the first pioneers settled in Neelon and Waters by 1886. There was also some activity in Snider during the 1890s, though the nearby roasting yards and extensive land holding by mining firms were limiting factors. By 1891 these "core" townships comprised the largest farming community in the region, with more than 4,000 acres of improved land and perhaps 100 farms. And the significance of the community grew from mid-decade as considerable land was taken up in Waters, Neelon and northern Broder Townships.¹⁰³

The steady if unspectacular agricultural progress reflected land hunger, promotion of the agricultural opportunities and especially the advantages offered by the regional resource industries. Of course, not all landholders were committed to agriculture. Holding "farm" land in order to seek minerals was not uncommon; neither was "timber farming", where "settlers" stripped lands of their marketable timber and then moved on. But many pioneers found the natural resource industries an unparalleled

aid in their effort to establish farms. Wages could be earned in the winter at lumber camps, or work could be had at the mines. Both industries also provided markets for produce and woodstuffs from the farm. Little wonder that the Globe concluded in 1890 that the Sudbury region included much

good farming country, which is attracting settlers in considerable numbers. The disadvantages of pioneer settlement are reduced to a minimum by the fact that railway communication is already provided, and as there is a fine local demand in the mining, lumbering and other industries for all that the farms produce the farmers have every opportunity to achieve success.¹⁰⁴

E.J. David, Commissioner of Crown Lands, reiterated this theme in 1899, pointing out that:

The condition of the mining industry is very closely related to the prosperity and progress of the agricultural communities of New Ontario. The market for the animal and vegetable products of the farm which is provided by the operations of the great lumber company ... has its counterpart in the demand for the same class of supplies to which a successful mining industry give rise. ... Thus the three great natural industries of Ontario, lumbering, mining and agriculture, may be said to be inter-dependent.¹⁰⁵

Certainly the mine and lumber workforces provided larger markets, but there was a price to pay. The "superior" prices paid for certain farm produce led farmers to grow these saleable crops, especially oats, year after year. Winter work, meanwhile, limited stockholding, meaning that little manure was produced to revitalize the soil. Thus the rich but thin northern humus -- already damaged by accidental and land-clearing fires -- was depleting in quality. Matters were made worse by the sulphur smoke emanating from the roast yards, which damaged crops as early as 1888.¹⁰⁶

But while lands near the yards were soon rendered barren, most settlers remained optimistic, for the region offered markets and workplaces unmatched

in Northern Ontario. It remained to be seen whether these advantages could propel local agriculture beyond the pioneer, subsistence stage.

CONCLUSION

Fast improving farms, massive forest-cutting operations and a mineral industry featuring the world's greatest nickel reserves -- such was the natural bounty of the Sudbury region. Extracting these resources wrought great change. The landscape was devastated -- hills denuded of trees were burned by sulphur smoke emanating from the roastyards and smelters of a half-dozen nickel firms. Mines, pits and the residue of the mining plants added further physical damage. A few critics also pointed to the small local benefit: logs were processed elsewhere and the fight for local processing of the nickel ore had made little headway. But most area residents remained unconcerned about the lack of local manufacturing because the forest and mineral industries brought many jobs plus excellent markets for local farmers and merchants. Meanwhile, the many persons drawn to the resource-based opportunities helped to expand the Sudbury region's human landscape. It is to these new transport and communication links, administrative and social services, plus the communities affected, that we shall now turn.

NOTES

¹ Eugene Coste, "Statistical Report on the Production, Value, Exports and Imports of Minerals in Canada During the Year 1886 and Previous Years", Geological Survey of Canada (GSC) Annual Report 2 (1886), Report 5, 25s; J.H. Collins, "On the Sudbury Copper Deposits", Quarterly Journal Geological Society 44 (September 1887): 835; John D. Evans, "The Early History of Mining in the Sudbury District," Journal of the Canadian Mining Institute (JCMI) 7 (1904): 497; Canadian Mining Review (CMR) 4 (October 1886):5; Ontario "Mines and Mining Operations," Annual Report of the Bureau of Industries of Ontario (1886), Part V, 379-80; idem, Report of the Royal Ontario Nickel Commission (RONC) (Toronto: King's Printer, 1917), 61, 63; Alfred E. Barlow, "On the Nickel and Copper Deposits of Sudbury, Ontario," (hereafter "Nickel and Copper Deposits") GSC, Annual Report 5 (1890-91) Report 5, 125s; Ottawa Free Press, 8 June 1886; Toronto Mail, 12 27 July, 29 September 1886; Ottawa Citizen 15 July 1886; Globe, 27, 29 September, 3 November 1886; Manitoulin Expositor, 13 November 1886, 1 January 1887.

² John Thompson and Norman Beasley, For the Years to Come: A Story of International Nickel of Canada (New York: G.P. Putnam's, 1960), 36, 43; Ontario, "Mines and Mining Operations [1886]," 378-80; RONC 63; Alfred E. Barlow, "Report on the Origin, Geological Relations and Composition of the Nickel and Copper Deposits of the Sudbury Mining District Ontario, Canada," (hereafter "Report") GSC, Annual Report 14 (1901), Report H, 25-28; W.A. Hooker, "Report on the Properties of the Canadian Copper Company, 1886," quoted in Bob Boudignon, "The Butte," unpublished manuscript, Regional Room, Sudbury Public Library (SPL); n.d., 6; Toronto Mail, 12 July 1886; Ottawa Citizen, 15 July 1886; Manitoulin Expositor, 13 November 1886.

³ Montreal Gazette, 22 September 1886; Montreal Star, 22 September 1886; Toronto World, 23 September 1886; Toronto Mail, 23 September 1886. Ritchie's emphasis on speculation rather than production was a factor in Canadian Copper's slow start: Oscar W. Main, The Canadian Nickel Industry: A Study in Market Control and Public Policy (Toronto: University of Toronto Press, 1955), 17; H.V. Nelles, "The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1890-1939," (Ph.D. diss., University of Toronto, 1970), 42-43; Toronto Mail, 29 October 1889, 5.

⁴ Montreal Star, 28 September 1886. Other reports include ibid., 29 September 1886; Toronto Mail, 27 September 1886; Monetary Times 20 (8 October 1886): 412; The Engineer (London) 62 (5 November 1886): 373; Economist 41 (23 October 1886): 1320-21. Other newspapers carried similarly enthusiastic reports - the Warton Echo, 1 October 1886 is just one example.. Also see John D. Evans, "Notes from John D. Evans Diary," (hereafter "Diary") 25 September 1886, SPL; Thompson and Beasley, 39. Evans was the Canadian Copper Company's first engineer.

⁵ Montreal Gazette, 30 September 1886.

⁶ Toronto Mail, 29 September 1886, 1; Globe, 27 September 1886,

⁷ "Sudburian", Letter to the editor, 1 October 1886, Toronto World, 4 October 1886, 2.

⁸ Toronto Star, 2 October 1902, 1; Globe 27 September 1886, 8. On the "boom": Manitoulin Expositor, 13 November 1886; 1 January 1887; Ottawa Free Press, 12 November 1887.

⁹ The London, England based Canadian Gazette, 2 December 1886, was one of the first publications to report the "tainted" ores. The local ores consist mainly of a nickel-iron sulphide (FeNi_9S_8) [a copper-iron sulphate (CuFeS_2) and an iron sulphide (Fe_7S_8)]. W.H. Dennis, A Hundred Years of Metallurgy (London: Gerald Duckworth & Co., 1963), 200. The dire consequences of "nickel tainting" are part of the INCO legend, but both company officials and the American Geological Survey saw good profit potential in the metal: Globe, 21 August 1888; Ottawa Citizen, 4 October 1889; United States Geological Survey, Mining Resources of the United States (1887): 127. On the need to "cob" the ore: Ottawa Free Press, 2 December 1886. On the test results: RONC, 38, 61-62. Thompson and Beasley, 36-37; Main, 16; Barlow, "Report," 26.

¹⁰ GSC; Report on the Mining & Mineral Statistics of Canada (compiler and title varies; hereafter Mining & Mineral Statistics) (Ottawa: Queen's Printer) (1887): 21s; Barlow, "Report," 25-26; Robert Bell, "Report on the Sudbury Mining District 1888-90", GSC, Annual Report 5 (1890-91), Part I, Report F, 51-52; A.P. Coleman, "The Sudbury Nickel Field," Annual Report of the Ontario Bureau of Mines (hereafter OBM) 1905, Part III, 170, 179; Cheryl Daminato et al., A Bit of the Cliff: A Brief History of the Town of Copper Cliff Ontario 1801-1972 (Sudbury (?): Copper Cliff Museum, 1982, 84-85; John D. Evans, "The Genesis and Development of Mining in the Sudbury District," Proceedings of the Association of Ontario Land Surveyors (1894): 86; idem, "Diary," 28 May 1887; RONC, 63; CMR 5 (April 1887); Ottawa Free Press, 10 August, 3, 15 September 1887; Toronto Mail, 5 April 1887.

¹¹ Ontario, Report of the Royal Commission on the Mineral Resources of Ontario and Measures for their Development (hereafter Mineral Resources Commission) (Toronto: Warwick & Sons, 1890), 80-90; Barlow, "Report," 26; Bell, 51-52; CMR 6 (March 1888): 38; 6 (July 1888): 86; 6 (August 1888) 93; 6 (December 1888) 133; Monetary Times 22 (21 September 1888): 328-329; Toronto Empire, 23 June, 9, 18 July 1888; Ottawa Free Press, 16 July, 15 August 1888; Perth Courier, 27 July 1888; Globe, 21 August 1888; Toronto Mail, 22 August 1888.

¹² CMR 6, (July 1888): 86; Toronto World, 23 27 July 1888; Perth Courier, 27 July 1888; RONC, 63, 64; Coleman, "Sudbury Nickel Field," 139. The Monetary Times 20 (8 October 1886): 701 was the first (?) publication to announce plans for a smelter. Peters had studied metallurgy at the University of Freiburg and had worked at various mining areas prior to signing on with Canadian Copper. Mineral Resources Commission, 404; Thompson and Beasley, 49; Edward Peters, Modern American Methods of Copper Smelting (New York: Scientific Publishing, 1891).

¹³ Edward Peters, "Nickel Ores of Sudbury," United States Geological Survey, Mineral Resources of the United States, (1888): 113-14 is the earliest of many descriptions. For a detailed discussion of this and other early reduction techniques: William D. McIlveen et al., "Early Roasting and Smelting Operations in the Sudbury Area - An Historical Outline," unpublished manuscript; Ontario Ministry of the Environment, Sudbury Office, 198- , not paginated.

¹⁴ Quoted in Thompson and Beasley, 51. By the end of 1888 more than 1,200 tons of ore were roasting and a year later the yard consisted of 30 beds of ore -- ranging from 600 to 800 tons apiece -- spread over a space of one-half mile by 100 feet. CMR 6 (December 1888): 133; Montreal Resources Commission, 379; John Frossard, The Nickel Ores of Sudbury (Canada) (London: George Philip & Son, 1893), 42; Donat M. LeBourdais, Sudbury Basin: The Story of Nickel (Toronto: The Ryerson Press, 1953), 52; Barlow, "Nickel and Copper Deposits," 132s-134s.

¹⁵ Toronto Mail, 22 October 1888. In October 1888 John Evans referred to the Copper Cliff railway station as "Hades station." Evans, "Diary", 15 October 1888. But the process was effective, producing matte for about 35 to 40 cents per ton: Manitoulin Expositor, 25 August 1888; Ottawa Citizen, 4 October 1889; Coleman, "Sudbury Nickel Field," 179-83. The impact on health is noted in Sudbury Journal, 5 October 1899; Barlow, "Report," 191-92; the quote is from the Toronto Star, 2 October 1902.

¹⁶ James MacArthur, who had trained under Sir Henry Bessemer, was in charge. Other matte purchasers included Joseph Wharton (Philadelphia), H.H. Vivian (Swansea), Henry Wiggins (Birmingham), Le Nickel (Iserlohn), Chas. Tennant (London). RONC, 64-65. Thompson and Beasley, 52-53; Coleman, "Sudbury Nickel Field," 138-39. On the plant: CMR 6, (July 1888): 86; 6 (December 1888): 133; Mineral Resources Commission, 379-81, 404-05; Frossard, 42; Edward Peters, "The Sudbury Ore Deposits," Transactions of the American Institute of Engineers 18 (1889-90): 282; idem, "Nickel Ores," 114-115; Fort William Journal, 23 February 1889; Manitoulin Expositor, 15 November 1889.

¹⁷ Thompson and Beasley, 59.

¹⁸ Toronto Empire, 9 June 1888.

¹⁹ Riley was the manager of the Steel Company of Scotland. James Riley, "The Alloys of Nickel and Iron," Journal of the Iron and Steel Institute 1 (1889): 58-59. On the significance of Riley's work: Thompson and Beasley, 53-54; Mineral Resources Commission, 384-86; LeBourdais, 54-55; Main, 20-21; Barlow, "Nickel and Copper Deposits," 138s. For a quick summary of the research preceding Riley: Coleman, "Sudbury Nickel Field," 165.

²⁰ Dominion Mineral was incorporated in April 1889; the main backers were from Montreal and London. Several had close ties to the CPR. Canada, Statutes, 1889, 52 Vic.c.102; CMR 8 (September 1889): 109. For details on its early activities: CMR 8 (June 1889): 71; 8 (August 1889): 101; 8 (September 1889): 109; 9 (January 1890): 7; Ontario, Report of the Inspector of Mines for the Province of Ontario (1890) (hereafter Inspector of Mines), 13-14; Canadian Mining Manual (hereafter CMM) (1890-91): 67; GSC, "Summary Report of the Geological Survey of Canada" (1889), GSC, Annual Report 4 (1888-89): 32; GSC, Mining & Mineral Statistics (1890): 121s; RONC 34, 39, 91; Jules Garnier, Mines de nickel, cuivre et platine du district de Sudbury Canada (Paris: Imprimerie Chaix, 1891), 17; William Folger and B.H. Buckingham, Report of Commander Folger and Lieut. Buckingham to the Secretary of the United States Navy, Upon the Nickel and Copper Deposits of Sudbury, Ontario [1890] (Ottawa: Free Press Book & Job Print, 1898), 17-18; Monetary Times 22 (21 September 1888): 329; Toronto Mail, 11 June, 25 July, 3 December 1889; Montreal Gazette, 27 July, 21 August 1889; Manitoulin Expositor, 27 July, 16 November 1889.

²¹ The Vivians worked the Murray for more than a year prior to being licensed to work in Canada. Canada, Statutes, 1890, 53 Vic., c.104. On the firm's progress: CMR 8 (August 1889): 101; 8 (September 1889): 109; 9 (February 1890): 21; Ontario, Inspector of Mines, 12-13; CMM (1890-91): 80; GSC, Mining & Mineral Statistics (1890): 121s; Barlow, "Nickel and Copper Deposits," 125s, idem, "Report," 30; Folger and Buckingham, 18-19; Bell, 52; RONC, 30, 90; McIlveen, n.p., Manitoulin Expositor, 27 July, 16 November 1889; Toronto Mail 3 December 1889.

²² Aeneas McCharles, "The Mining Region," Toronto Mail, 3 December 1889.

²³ Canadian Copper reportedly earned "a fine margin of profit" -- Erastus Wiman claimed the firm "cleared" \$1,000 per day. Toronto Mail, 7 October 1889; Erastus Wiman, Facts and Figures for Farmers (Toronto: National Publishing Co., 1890), 21. The shipments are cited in GSC Mining and Mineral Statistics (1890): 121s. For details on Canadian Copper's operations: CMR 8 (January 1889): 8; 8 (June 1889): 71; 9 (January 1890): 7; Ontario, Inspector of Mines, 11; GSC, Mining & Mineral Statistics (1889): 30s; Bell, 51-52; Barlow, "Nickel and Copper Deposits," 133s-135s; idem, "Report," 26; Frossard, 34-35; Folger and Buckingham, 10-13, 20; Fort William Journal, 23 February 1889; Manitoulin Expositor, 27 July, 16 November 1889.

²⁴ Sir Charles Tupper is quoted in RONC, 6. "Heralded" is Ritchie's term: Coleman, "Sudbury Nickel Field," 171. The group visited the works of the Societe Le Nickel, Krupp, The Steel Company, H.H. Vivian, Henry Wiggins, Jessop, and Rio Tinto. Thompson and Beasley, 55-60; Coleman, "Sudbury Nickel Field," 175-179. For more details: RONC, 5-6; Alexander Skelton, "Nickel," International Control in the Non-Ferrous Metals, ed. W.Y. Elliot, et al. (New York: Macmillan, 1937), 114, 129-30; Toronto Mail, 3 September 1890, 8, 16, 25 March 1892; Globe, 17 February 1894.

²⁵ United States Congress, House Executive Documents, 51st Congress, 2nd Session, 1890, Document 1, Part 3, Navy, Report, Bureau of Ordnance, app., p. 253. See also: Folger and Buckingham, passim; Thompson and Beasley, 61, 66, 71; Evans, "Diary," 3-7 October 1890; Globe, 1 June 1897.

²⁶ Monetary Times 24 (12 December 1890): 717. The visitors included Admiral J.-M.-A. de Cuverville of the French Navy, members of the Toronto Board of Trade, the Iron and Steel Institute of Great Britain, the American Institute of Mining Engineers, plus various CPR officials and politicians. Thompson and Beasley, 61; Ottawa Citizen, 4, 5 October 1889; Toronto Mail, 7 October, 12 December 1890, 22 August 1891; Manitoulin Expositor, 1, 15 November, 20 December 1890; Globe, 10 December 1890.

²⁷ Toronto Mail, 12 December 1890.

²⁸ Globe, 8 December 1890. The earlier report was by Aeneas McCharles, letter to the editor, 28 November 1889, Toronto Mail, 3 December 1889.

²⁹ There are hundreds of newspaper reports on these firms as befit their speculative nature. For basic details see RONC, 35, 36, 40, 43, 45, 47; GSC, Mining & Mineral Statistics (1891): 115ss; (1892): 113s; Barlow, "Report", 33-34, 37; Ontario, Inspector of Mines, 14; OBM (1891): 229-230; (1892): 249; The names, dates of incorporation and capitalization can be compiled from OBM (1898): 7-13; Ontario, "List of Joint Stock Companies incorporated...", Report of the Secretary and Registrar of the Province of Ontario (hereafter Report of the Secretary and Registrar), published yearly; and Northern Miner Press, Canadian Mines Register of Dormant and Defunct Companies (Toronto: Northern Miner Press, 1960), passim. Local businessmen attempted to ease reduction problems by forming The Sudbury Custom Smelting Company, but it foundered for lack of capital. GSC, Mining & Mineral Statistics (1891): 115ss; Sudbury Journal, 11 February, 31 March 1892.

³⁰ Sudbury Journal, 9 August 1894. For details: CMR 10 (April 1891): 99; 11 (March 1892): 44, 50; 11 (October 1892): 176-77; 11 (November 1892): 191; 12 (August 1893): 133; 12 (November 1893): 198; 13 (January 1894): 17; 13 (August 1894): 139; 13 (October 1894): 210; 13 (December 1894): 242; CMM (1893): 351, 362-63; (1896): 235; OBM (1891): 230-32, 236; (1892): 248; (1893): 190; (1894): 249; (1895): 222; (1896): 276-77; Thomas Baycroft, "Report of the Examination of the Chicago Nickel Property, 1892," SPL; Toronto Mail, 10 February, 6, 22 August, 3 November 1891, 9 April 1892; Sudbury Journal, 26 March, 9 April, 28 May, 8 October 1891, 27 October, 3 November 1892, 13 July 1893.

³¹ H.W. Edwards, letter to the editor, Engineering and Mining Journal (EMJ) 77 (3 March 1904): 353. Edwards was manager at the Murray in 1892. The "old-fashioned" methods are reported in Toronto Mail, 12 December 1890; Toronto Empire, 12 December 1890; Folger and Buckingham, 18-19. For more detail: OBM (1891): 246; CMR 9 (February 1890): 21; 9 (November 1890): 154; CMM (1890-91): 80; Globe, 12 December 1890; Manitoulin Expositor, 15 November 1890.

³² The management problems are outlined in RONC, 30, Barlow, "Report," 31-32; Toronto Mail, 26 October 1890; GSC, Mining & Mineral Statistics (1891): 115ss. Details are available in ibid., (1890): 121s; (1891): 115ss; (1892): 113s; (1893-4): 95s; OBM (1891) 231-33; (1893): 186-88; (1895): 273; RONC, 30, 90; Bell, 52; Barlow, "Nickel and Copper Deposits," 133s; idem, "Report," 30-33; Sudbury Journal, 19 March 1891, 13 July 1893, 9 August 1894, 19 August 1897; Toronto World, 30 October 1896, 3 May 1897; D.T. Merry, A Merry Family Omnibus (Shrewsbury: n.p., 1974), 150-55; McIlveen, n.p.

³³ Differences within the management may also have been a factor in the failure: Toronto Mail and Empire, 28 June 1899; Barlow "Report", 34; Skelton, 130. The 1890 recapitalization was from \$100,000 to \$500,000. Canada, Statutes, 1890, 53 Vic.c.99. For more on Dominion's rise and fall: CMR 10 (May 1891): 132; 10 (November 1891): 246; 11 (March 1892): 50; 11 (October 1892): 176; Ontario, Inspector of Mines, 13-14; OBM (1891): 230-32; (1892): 247-48; (1893): 186; (1895): 273; CMM (1893): 36; GSC, Mining & Mineral Statistics (1890): 121s; (1891) 110s; (1892): 113s; (1893-4): 95s; RONC, 34, 39, 45, 91; Bell, 52; Barlow "Nickel and Copper Deposits," 133s; idem, "Report," 33-35; Frossard, 36; Toronto Mail, 2 October 1890, 10 February, 3 November 1891, 9 April 1892; Montreal Star, 30 October 1890; Manitoulin Expositor, 15 November 1890; Toronto Empire, 13 December 1890; Sudbury Journal, 9 April, 13 August 1891, 27 October 1892, 13 July 1893, 9 August 1894.

³⁴ Sir John A. Macdonald to Samuel Ritchie, quoted in Nelles, "Politics," 155; also see the Globe, 19 February 1900. Ritchie maintained a steady pressure on Macdonald through his own letters plus those of his allies -- these total more than 50 between 1887 and 1891. Thompson and Beasley, 41; H.V. Nelles, The Politics of Development: Forest, Mines & Hydro-Electric Power in Ontario, 1849-1941 (Toronto: Macmillan, 1974), 23;

Sir John A. Macdonald Papers, PAC, MG 26, Nominal and subject finding aids, microfilms C-4810-4814. Ritchie also used the press to report Macdonald's "assurances" that no taxes, duties or the like were forthcoming: Ottawa Free Press, 19, 24 January 1887, 7 November 1890; Toronto News, 24 January, 12 December 1890; Toronto Mail, 28 October 1890. Ritchie also arranged free passage for American coke and machinery: Toronto Mail, 27 June 1889; CMR 8 (June 1889): 71; OEM (1893): 189 n.1. Little wonder, then, that Folger and Buckingham, 5-6, concluded that "Ritchie's relations to the Canadian Government were such that he could obtain advantageous terms."

³⁵ Toronto News, 31 January, 6 February 1891; Nelles, Politics, 89; Main, 51-53; Coleman "Sudbury Nickel Field," 136-43.

³⁶ In the Toronto Empire, 29 June 1891, Ritchie accused Canadian Copper of using "every known means of treachery, falsehood and disreputable conduct" to avoid refining in Canada. For other public outbursts: Montreal Gazette, 26 October 1891; Toronto Mail, 2, 4, March 1893; Toronto Empire 3 March 1893; Globe, 28 August 1897. On the court challenge: James Capon and Alan Plomer, Desperate Venture: Central Ontario Railway (Belleville: Mika Publishing, 1979), 98-100, 105-06. Ritchie's nickel-steel schemes are discussed in: Toronto Mail, 13 November 1890, 31 January 1891; Montreal Gazette, 19, 26 November 1890; Toronto Empire, 31 January, 13 April 1891; Globe, 31 January 1891; Monetary Times 12 December 1890; John Patterson, The Nickel-Copper Industry in Canada (Ottawa: n.p., 1898), 2-3; Thompson and Beasley, 53, 61-62, 73, 74; Nelles, Politics, 90.

³⁷ Toronto Mail, 19, 26 September, 3 December 1889; The Engineer (London) 70, (14 November 1890): 400.

³⁸ RONC, 8-10; Main, 22; Nelles, "Politics," 739 n.71; CMR 9 (December 1890): 169; Skelton, 166-69; Canadian Annual Review (1914): 461.

³⁹ Journal of the General Mining Association of the Province of Quebec (1893-94): 208.

⁴⁰ Arthur S. Hardy, quoted in "Ontario Legislative Assembly Newspaper Hansard," (hereafter Newspaper Hansard), 24 April 1891, microfilm copy, University of Western Ontario. On local resentment: Sudbury Journal, 14 March 1891, and reports by local correspondents in the Toronto newspapers. Aeneas McCharles led the way, continuing his fight against all restrictive mining legislation: Toronto Mail, 14, 18 April, 7 May 1891.

⁴¹ GSC, Mining & Mineral Statistics (1890): 121s; (1891: 110vs-111ss, 115ss; (1892): 112s; (1893-4): 93s; RONC 63; OEM (1893): 186-88; Toronto Mail, 3 December 1890, 6, 22 August, 3 November 1891; Montreal Star, 27, 28 October 1893, Sudbury Journal, 4 January 1894; Main, 41. Production fell less sharply than employment because of improved mining and reduction methods. The "slump" in fact was only a return to normal after the speculative boom of 1889-91.

⁴²On its action see below, notes 44 and 46. The charges of monopoly were raised in the Montreal Herald, quoted in LeBourdais, 83; Sudbury Journal, 24 December 1895; Toronto Telegram, 11 November 1896. Canadian Copper was notoriously secretive; in 1911 company spokesman Alexander Gray admitted the firm "had not felt at liberty to confide its successes to the public." Alexander Gray, Organization and Equipment of the Canadian Copper Company (Toronto: n.p., 1911): 14-15. The firm's critics were less charitable, arguing that Canadian Copper had "made a big thing of its operations, but that for obvious reasons [discouraging competition] it has hidden all knowledge of its success from the public." Toronto World, 30 December 1896, 7.

⁴³Orford had dealt with nickel since 1877, both at Orford Township in Quebec and at Constable Hook, New Jersey. R.M. Thompson acquired full control of a debt-ridden Orford in 1887; in so doing he assumed a 100,000 ton ore-refining contract with Canadian Copper. He therefore set about finding a more profitable and efficient means of refining nickel-copper ore than the extant "wet" processes and, with knowledge gained from William Tatro's patents (1877), plus information from former employees of the British nickel manufacturers, he developed the "tops and bottoms" process. The Naval contract financed its refinement. Thompson and Beasley, 20-25, 34-36, 43, 55, 61, 68, 89-90, 95; LeBourdais, 67-69; RONC 84; OBM (1892): 136-44; Main, 27, 141, n.58, 59. The price war is outlined in Skelton, 132; Thompson and Beasley, 93; Main 34-35; CMM (1898): 177; Frank B. Howard - White, Nickel: An Historical Review (Princeton: D. Van Nostrand Co., 1963): 309.

⁴⁴Main, 37; CMM (1893): 338-41; Thompson and Beasley, 66, 75, 102-04. The money-saving slowdowns were in addition to the regular winter shutdowns. CMR 11 (October 1892): 176; OBM (1891): 23-32; (1892): 243; (1893): 182; Main, 27; Sudbury Journal, 4 June, 13 August 1891; INCO Triangle 1 (September 1936): 2.

⁴⁵Canadian Copper first established a bessemerizing works at Copper Cliff in 1892, then Jules Garnier, Carl Hoepfner, and D.H. Browne, in turn, worked on refining processes. The firm did sell a "50-50" nickel-copper alloy from 1893 to 1897. Gray, 11; Thompson and Beasley, 85-88, 102, 108, 113-14; RONC, 64-65. Canadian Copper's "junior partner" status is discussed in *ibid.*, 88, 101-04, and, more sceptically, in Main, 141 n. 70.

⁴⁶Thompson and Beasley, 101; Sudbury Journal, 9 August 1894; CMR 9 (January 1890): 7; 9 (April 1890): 47; 11 (October 1892): 176; 11 (November 1892): 191; OBM (1891): 244, (1892): 230-32; (1893): 182; (1894): 246; GSC, Mining & Mineral Statistics (1890): 121s; (1891): 114s; (1892): 113s; (1893-4): 95s; Barlow "Nickel and Copper Deposits," 143s; CMM (1894): 354; Gray, 12; Frossard, 33-35, 42; Garnier, 12-14; LeBourdais, 60; H.A. Hilyard "The Nickel Region of Canada," Canadian Magazine 1 (4, 1893): 308-10.

⁴⁷ OBM (1900): 215.

⁴⁸ The Mine Contract and Investigation Company, The Gold Fields of Ontario and the Mining of the Province (Toronto: The Company, 1899), 33; Main, 37; Gray, 17. The Sudbury News criticized these profits in an editorial quoted in the Toronto World, 12 January 1897. The mid-decade slump is outlined in OBM (1895): 273; (1896): 276; GSC, Mining & Mineral Statistics (1896): 106s; (1897): 142s; Canadian Engineer 4 (March 1896): 28.

⁴⁹ OBM (1896): 43-44.

⁵⁰ Ibid., 45.

⁵¹ Ibid., 46.

⁵² Plomer and Capon, 106. For more on the legal wrangle, which continued until Ritchie's death in 1908, ibid., 100, 105-07, 121-24, 128, 137, 165; Thompson and Beasley, 73-74, 114.

⁵³ Daniel McKeown, North Bay, to Ernest Wakefield, Orillia, 30 March 1898, United States Department of State, "Consular Despatches: Orillia 189301906," United States National Archives, microfilm T-642. A typically lengthy Ritchie diatribe is in the Toronto Mail and Empire, 31 January 1900. His arguments are summarized in Patterson, 1, 3-4, and Samuel Ritchie, The Question of Export Duties on Nickel and Copper Mattes (Ottawa: n.p., 1898). See also Thompson and Beasley, 114-116, 121; RONC, 11-12; Skelton, 167; Main, 40-41; Nelles, Politics, 90; David Yudelman, Canadian Mineral Policy Past and Present: The Ambiguous Legacy (Kingston: Queen's University Centre for Resource Studies, 1985), 127.

⁵⁴ Nelles, Politics, 90-92; idem., "Politics," 155-156, 763 nt.166; Main, 53-54; RONC, 11-12; Thompson and Beasley, 116-120; Canadian Copper Co. The Nickel Question: Shall Nickel Matte be Subjected to an Export Duty (n.p., n.p., 1898); Christopher Armstrong, "The Politics of Federalism: Ontario's Relations with the Federal Government, 1896-1941," (Ph.D. Diss., University of Toronto, 1972), 124, 128, 633 n.71, 634 n.77; David O. Trevor, "Arthur S. Hardy and Ontario Politics, 1896-1899," (M.A. Diss., University of Guelph, 1973), 127, 129, 160 n.11,12.

⁵⁵ Papers, Orders-in-Council and Correspondence on the Mining and Treatment of Nickel and Copper Ore in the Province of Ontario (Toronto: np, 1899), 18; CMR 18 (December 1899): Nelles, Politics, 92-93; Trevor, 129, and on the earlier controversies over mining, 81-92; Skelton, 167; Canadian Annual Review (1914): 461; Main, 55.

⁵⁶ The fees were enacted through Ontario, Statutes, 1900, 63 Vic.c.13.s.3. For more details: J. Castell Hopkins, ed., Morang's Annual Register of Canadian Affairs 1901 (Toronto: G.N. Morang, 1902), 43-46; Nelles, Politics, 93; RONC, 13; Armstrong, 143; Thompson and Beasley, 124-25. For discussions of the turn-of-the-century "nickel question" as a whole: Nelles, "Politics" 155-181; Armstrong, 123-136. Warren Jestin, "Provincial Policy and the Development of the Metallic Mining Industry in Northern Ontario, 1845-1920," (Ph.D. diss., University of Toronto, 1977), 110-119, and *passim*, is a more positive assessment of the policy.

⁵⁷ Sir Wilfred Laurier, Ottawa, to George Ross, Toronto, 7 May 1900, quoted in Armstrong, 128. Whitney's views are outlined in Newspaper Hansard, 20 February 1900; Nelles, Politics, 94. For reactions to the fees: Monetary Times, 11 May 1900; CMR 19 (January 1900): 7; 19 (February 1900): 33; 19 (April 1900): 61-67, 92-97; 19 (May 1900): 101-11; Canadian Mining Institute, "The Nickel Question," Proceedings of the Canadian Mining Institute 3 (1900): 224-48.

⁵⁸ W.R.P. Parker et al., "Petition from W.R.P. Parker and others to His Excellency the Governor General in Council," Correspondence Reports of the Minister of Justice and Orders in Council Upon the Subject of Provincial Legislation 1896-1920, comp. Francis Gisborne and Arthur Fraser (Ottawa: F.A. Acland, 1922), 2:12. Also see *ibid.*, 8-13, and Anonymous, Memorandum so to Disallowance of 63 Vic. (Ont), Chap.13, whereby certain License Fees on the Business of Mining are Imposed or Authorized (Toronto(?): n.p., 1900(?)).

⁵⁹ Armstrong, 131. General coverage includes: *ibid.*, 128-143; RONC 15; Main, 55-59; Nelles, Politics, 93-107; *idem*, "Politics," 155-181; Jestin, 110-119.

⁶⁰ Sudbury Journal, 24 February 1898. Orr still believed that Canadian Copper had a right to work for monopoly. *ibid.*, 24 December 1895. For more pointed criticism by area residents: Toronto Telegram, 11 November 1896; Globe, 7 May 1898. The anti-Canadian Copper resolution of the Township Council of Drury, Denison and Graham was the most aggressive criticism of the firm's "practical monopoly" and policies. Union Municipality of Drury, Denison and Graham, "Council Minutes," 4 February 1899. The full text was published in the Sudbury Journal, 9 February 1899.

⁶¹ Sudbury Journal, 24 January 1901. Frank Cochrane, Mayor of Sudbury and, later, a powerful provincial and federal politician, drafted a Sudbury Town Council motion that condemned "restrictions" on the nickel industry. Town of Sudbury, "Minutes of the Council," 10 March 1898. The resolution is quoted in Scott Young and Astrid Young, Silent Frank Cochrane: The North's First Great Politician (Toronto: Macmillan, 1973): 27. Also see: Sudbury Journal, 7 April 1898, 28 April 1900; Newspaper

Hansard, 19 April 1900; Toronto Mail and Empire, 9 December 1899; Nelles, Politics, 94; idem., "Politics," 762 n. 155. Some Sudburians had been steadfast critics of provincial mining policy through the 1890s. Toronto World, 19, 29 January, 13 April 1897, Globe, 30 January 1897. Also see above, note 42. On the fast improving mineral economy: Toronto Telegram, 9 August 1899; Aeneas McCharles, "Nickel," Mineral Industry 7 (1898): 524; Main, 41-42; RONC 63; and the reports of the OBM and GSC. The immense superiority of nickel-steel armour was confirmed in the Battles of Manila Bay and Santiago de Cuba. Main, 31-32, Thompson and Beasley, 121.

⁶² For details on these firms see OBM, GSC, Mining & Mineral Statistics; there are many newspaper references, especially in the Sudbury Journal. Brief coverage is available in Barlow, "Report" 35, 38, RONC, 38, 92; Coleman, "Sudbury Nickel Field," 144; Main, 39-40.

⁶³ The Hamilton consortium -- the Hoepfner Refining Company, The Nickel Copper Company of Ontario, and The Nickel Steel Company of Canada -- received more attention than any other quick failure, perhaps because of its backers' political activism. The best general accounts include: RONC, 92-93; Barlow, "Report," 38; Coleman, "Sudbury Nickel Field," 144; Thompson and Beasley, 122-25; Main, 42-43; J.W. Bain, "A Sketch of the Nickel Industry," OBM (1900): 221-222. For details see the OBM; GSC, Mining and Mineral Statistics; CMM (1900): 314, 468, 481; plus newspaper and mining press accounts. The Sudbury Journal gave the firms considerable coverage: 8 June, 30 November 1899, 1 February, 8 March, 21, 28 June, 23 August, 6, 13 September, 8, 15, 22 November 1900; 13 June 1901; 17 July 1902. On the firms' liquidation: Ontario Gazette 41 (21 March 1908): 333; 41 (16 May 1908): 527-28.

⁶⁴ Edison maintained his search from 1901 through 1904. Sudbury Public Library, "Thomas A. Edison and Sudbury, Ontario: Documents," unpublished manuscript, SPL; LeBourdais, 6-7, 62-63, 138; Thompson and Beasley, 78-79, 130, 216; Coleman, "Sudbury Nickel Field," 144; Sault Star, 15 September 1904.

⁶⁵ Clergue is discussed in Duncan McDowall, Steel at the Sault: Francis H. Clergue, Sir James Dunn, and the Algoma Steel Corporation 1901-1956 (Toronto: University of Toronto Press, 1984), *passim*, see esp. 28-49; Margaret Van Every, "Francis Hector Clergue and the Rise of Sault Ste. Marie as an Industrial Centre," Ontario History 56 (1964): 191-202; Donald Eldon, "The Career of Francis H. Clergue" Explorations in Entrepreneurial History 3 (April 1951): 254-65; Nelles, "Politics," 111-14, 238-40. Also see Francis Clergue, An Instance of Industrial Evolution in Northern Ontario, Dominion of Canada (Toronto; n.p., 1901). The "very low figure" is cited in The Mine Contract and Investigation Company, 34. General accounts of Lake Superior's activities around Sudbury include: Barlow, "Report", 38-40; RONC, 31, 33, 44, 47, 93-95; Coleman, "Sudbury Nickel Field," 143-44; Thompson and Beasley, 126-29.

For details see the OBM and GSC, Mining & Mineral Statistics, plus newspaper accounts -- the Sudbury Journal and Sault Star provide coverage from 1897 through 1908, while the Toronto newspapers provide considerable coverage during the collapse of September-October 1903. The Globe, for instance, notes the links to Vickers-Maxim; Globe, 25 September, 3 October 1903. On the collapse and later sale of the mineral properties: Nelles, "Politics," 238-40; Heaton's Publishing Co., The Annual Financial Review (1906): 158; (1907): 161; Ontario, "Return... showing the names of all persons at Sault Ste. Marie or elsewhere..." Sessional Papers (SP) 1904, no. 65, passim; Ontario, "Return... [re Lake Superior Company]," ibid., 1904, no. 85, passim.

⁶⁶ Biographies of Mond include: John M. Cohen, The Life of Ludwig Mond (London: Methuen, 1956); Jean Goodman, The Mond Legacy: A Family Saga (London: Weidenfeld and Nicolson, 1982), 1-86, 257-58. On the Mond process: Ludwig Mond, "On Nickel Carbon Oxide and Its Application in Arts and Manufactures," The Engineer 72 (28 August 1891): Sir William C. Roberts-Austen, "Nickel Extraction by the Mond Process," OBM (1899): 106-120; Dennis, 205-208. The offers to other firms are noted in Thompson and Beasley, 108; LeBourdais, 71; Main, 43; Cohen, 201. The progress through 1901 is summarized from OBM (1901): 96, 144; (1902): 21 n.3; Sudbury Journal, 23 February, 25 May, 3 August, 19, 26 October 1899, 5 April, 3, 31 May, 26 July, 8 November, 20 December 1900; Cohen, 204, 207, 210; RONC, 40, 79-80; Coleman, "Sudbury Nickel Field," 142-43; Barlow, "Report," 40-41; Thompson and Beasley, 105-13, 135-37. There are numerous references in the mining and general press. The "trumped up" suit is cited in EMJ 68 (12 April 1899): 199. The choice of names for the smelter and mine sites was rather unfortunate: Victoria Mines, the smelter village, all too often was confused with the Victoria mine, two miles to the north, where the adjoining village was named Mond.

⁶⁷ Cohen, 210; Thompson and Beasley, 137; RONC, 82; Barlow, "Report," 41; Sudbury Journal, 20 December 1900; CMR 19 (November 1900): 256; 20 (May 1901): 136; CMM (1900): 489-90.

⁶⁸ OBM (1902): 283-84; (1903): 96; Aeneas McCharles, "Nickel," Mineral Industry 11 (1902): 487; RONC, 40, 44, 51; Barlow, "Report," 41-43; Cohen, 207, 210, 228. There are many additional reports on Mond's activities.

⁶⁹ The Evans mine was closed in 1899, the Stobie in 1901 and the Copper Cliff was being worked of its "last" ore. Sudbury Journal, 7 October 1897, 2 June, 27 October 1898, 27 April, 2 November, 14 December 1899, 29 August, 4 September 1901; CMR 17 (June 1898): 173; 18 (May 1899): 130; 19 (June 1900): supplement; OBM (1899): 34-35; (1900): 97-98; (1902): 256, 279-80; GSC, Mining & Mineral Statistics (1898): 125s; RONC, 30-39, 64; Barlow, "Report," 26-27.

⁷⁰ CMR 17 (June 1898): 173; 19 (June 1900): 257; Bain, 216-221; GSC Mining & Mineral Statistics, (1902): 178s; Barlow, "Report," 28; McIlveen, n.p.; Sault Star, 31 October 1901; Sudbury Journal, 22 November 1900.

⁷¹ Orford, or its new subsidiary -- The Canada Mining and Metallurgical Company -- purchased the Stobie Falls, Kirkwood and other properties (1898 - 1900); any ongoing development was abandoned. OBM (1899): 36; (1900): 99-100; (1901): 120; GSC, Mining & Mineral Statistics (1898): 126s; RONC, 46, 67-69; CMM (1900): 454.

⁷² Main, 45-46, 74-75, 128; Thompson and Beasley, 140-44, 148-49; Barlow, "Report", 28-29; Coleman "Sudbury Nickel Field," 140-41; RONC, 67-70; Globe, 21 March, 4 April 1902.

⁷³ Main, 45; Coleman, "Sudbury Nickel Field," 172; Skelton, 133.

⁷⁴ Robert Hill, quoted in Perth Courier, 15 June 1888, 3. The first mention of the find is in the Ottawa Free Press, 3 September 1887. ON work through 1888: CMR 5 (November 1887): 11; 5 (December 1887): 17; 6 (January 1888): 16; 6 (April 1888): 51; 6 (May 1888): 63; 6 (June 1888): 72; 6 (July 1888): 85; 6 (August 1888): 85; 6 (December 1888): 133; Manitoulin Expositor, 16, 23 June, 6 July 1888; Toronto World, 19 January, 11 February, 8 March, 4 May, 8 June, 16 August; 6 October 1888; Toronto Mail, 26 May, 1, 15 June, 16 August 1888; Globe, 16 August 1888; Monetary Times 22 (21 September 1888): 329.

⁷⁵ CMR 6 (December 1888): 133; 8 (August 1889): 101; CMM (1890-91): 174-75; Mineral Resources Commission, 113, 309, 433-35; Bell, 51f; Toronto Mail, 9 April, 11 June 1889, 6 August 1890, 10 February, 22 August 1891; Manitoulin Expositor, 27 July, 16 November 1889; Montreal Gazette, 31 October 1889; Sudbury Journal, 21 April 1892; Toronto Telegram, 11 November 1896. Canadian Copper intermittently worked the Vermillion for ore rich in the rare earth metals; no more than a few hundred tons were removed by 1913. A.P. Coleman, The Nickel Industry with Special Reference to the Sudbury Region, Ontario (Ottawa: Government Printing Bureau, 1913): 44-45.

⁷⁶ Thomas Johnson, n.d., quoted in Toronto World, 11 January 1888. Various newspapers were caught up in the excitement: Perth Courier, 28 October 1887, 17 February 1888; Toronto World, 17, 23 January, 23 April, 2 May 1888; Ottawa Free Press, 2 March 1888; Montreal Gazette, 2 April, 1888.

⁷⁷ The quote is from the Toronto Mail, 22 September 1888. On the "Frenzy" see; ibid., 26 May, 3 December 1888; Toronto World, 11 June 1888; Manitoulin Expositor, 23 June 1888; Ottawa Free Press, 8 June 1888. By 1889 the speculators were looking elsewhere: CMR 8 (August 1889): 101; Montreal Gazette, 24 April 1889.

⁷⁸ Manitoba Free Press, 6 July 1888. At least nine firms, capitalized at over \$500,000, were organized. Ontario Report of the Secretary and Registrar (1888): 11-12. Independent miners added to the total number of sites worked, investigated, or merely held on speculation. CMR 6 (August 1888): 93; 8 (January 1889): 8, 8 (July 1889): 86, 8 (August 1889): 101; Monetary Times 22 (21 September 1888): 329; Manitowlin Expositor, 15, 19, 21, 26 May 1888; Fort William Journal, 26 May 1888; Globe, 7, 22 1888. E. D. Kindle, "Gold Occurrences of Ontario East of Lake Superior," Canada, Department of Mines, Memoir no. 192, (Ottawa: King's Printer, 1936), 92-99.

⁷⁹ OBM (1891): 9, (1892): 236, (1893): 45-47, (1895): 261; CMR 12 (May 1893): 102, 12 (November 1893): 197, 13 (November 1893): 219, 14 (February 1895); CMM (1893): 351, (1895): 261, Globe, 4 November 1893, 1; P.E. Hopkins, "Ontario Gold Deposits," Ontario Department of Mines Report (1921), Part II, 7.

⁸⁰ Sudbury Journal, 21 April 1892. The Simpsons' small gold pits in Graham Township had produced a little gold in 1888-89. Ahn convinced them to mine "platinum" from these pits for refining at his mill. The backers of the Toronto-based Fairbanks-Consolidated Mining Company were Ahn's other victims. The Algoma Reduction fiasco ruined Aeneas McCharles' dreams of a new mining metropolis at Nickel City, - the well laid out, picturesque site soon was deserted. OBM (1891): 225, SC Mining & Mineral Statistics (1890): 140s; (1891): 115s; Toronto Mail, 22 August 1888, 11 June 1889, 2 October, 3 December 1890, 19 September 1891; Sudbury Journal, 26 March, 29 October, 5, 12 November 1891, 25 February, 21 April, 2 June 1892; Globe 29 October 1892; McCharles, Bemocked, 124. Ahn went from Nickel City to the Commercial Mining Company in Nairn Township, then to the placer gold deposits on the Vermilion River; the "plausible, high-talking fellow" also worked other mineral fields. Toronto Mail, 19 September 1891, Toronto World, 18 November 1896, Sudbury Journal, 25 February 1892; J.B. Gordon et al. "Gold Deposits of Ontario," Ontario Geological Survey Mineral Circular, No. 18, Part II, 1979, 64-65.

⁸¹ The Toronto press, especially the Toronto World, gave these "wildcat" pits considerable coverage during the winter of 1896-97, apparently because of promotion by Sudburians. Stock speculators in Toronto helped to feed the excitement. Toronto World, 29 October, 17, 29 November, 1, 8, 15 December 1896; 16 January, 3, 23 February, 2 March, 30 April, 10, 26 May 1897; Toronto Star, 18 November 1896, 14, 19 January 1897; Toronto News, 19 January 1897; Globe, 21 November, 18 December 1896, 4, 20, 21 January, 23 March 1897; John F. Whiteside, "The Toronto Stock Exchange to 1900: Its Membership and the Development of a Share Market," (M.A. diss., Trent University, 1979): 201-227. The mines were small -- the Comstock, one of the largest, produced only about \$5,000 worth of gold. Sudbury Journal, 18 April 1895, 29 October, 17 December 1896, 2 June 1898; J.B. Gordon et al. 62, 73-74, 99; B.O. Dressler, "Geology of Lake Wanapitei Area," Ontario Geological Survey Report, 213 (1982): 103-112.

⁸² N.S. Jenkins discovered the placer bed in 1896; the Great North Mining Company, with which he was associated, worked it from 1897 until at least 1908. There are numerous newspaper references but the best general coverages are A.P. Coleman, "The Vermilion River Placers," OBM (1900): 151-59; Arthur H. Gracey, "Placer Gold on Vermilion River," OBM (1897): 256-59; J.B. Gordon et al. 64-65. The gold beds yielded "just enough to tantalize but not sufficient to repay the hardest worker." Saturday Night, 23 May 1908, 5. The firms can be identified from lists published in the OEM (1898): 7-13 and yearly in Ontario, Report of the Secretary and Registrar.

⁸³ Toronto World; 30 October 1896; Globe 29, 30 October 1896; Toronto Star, 30, 31 October 1896. The "coal" was first brought to public attention in early July 1896: Toronto Star; 10 July 1896. The Toronto News was alone in remaining pessimistic; the Toronto World remained optimistic longest, not expressing doubts about the coal find until 7 December, 1896.

⁸⁴ OBM (1898): 141; CMM (1897): 366; Sudbury Journal, 16 October, 5 November 1896; LeBourdais, 91.

⁸⁵ There were reports of diamonds, silver, molybdenite, and numerous other minerals. Sudbury Journal, 13 December 1900; Toronto Mail, 2 October 1890; Globe, 8 August 1888; Ottawa Free Press, 5 June 1888, and many other reports. "Galena" (lead-zinc) finds were less fanciful -- the "Balfour zinc mine" produced at least 300 tons of ore in 1898. Monetary Times 22 (21 September 1888): 329; Manitoulin Expositor, 1 November 1890; OBM (1899): 33; Toronto World, 3 November, 29 December 1896; Toronto Star, 13 November 1896; Globe; 18 December 1896; Sudbury Journal, 21 April 1898, 6 February 1902.

⁸⁶ Ottawa Free Press, 6 September 1886. The duty is discussed in A.R.M. Lower, The North American Assault on the Canadian Forest: A History of the Lumber Trade Between Canada and the United States (Toronto: The Ryerson Press, 1938), 154-59; R. Craig Brown, Canada's National Policy 1883-1900: A Study in Canadian-American Relations (Princeton: Princeton University Press, 1964), 188-211; Nelles, Politics, 63-64.

⁸⁷ Lower, 153-156, 171-179. Considerable detail on the North Shore industry is available in Gwenda Hallsworth, "A Good Paying Business: Lumbering on the North Shore of Lake Huron, 1850-1910 with Particular Reference to the Sudbury District," (M.A. diss.; Laurentian University, 1983). Aubrey White, Assistant Commissioner of Crown Lands, noted on 21 June 1892 that prospectors were "most careless and dangerous in using fire, sometimes even wantonly starting it with a view... to expose the formation." Ontario, "Return...." dated the 12th April, 1893; shewing the timber berths offered for sale at the sale of 13th October, 1892...

Ontario, SP, 1893, no. 62; p.5. His view is corroborated by the Ottawa Free Press, 8 June 1886, 8 June 1888; Garnier, 3; Main, 11; Keith Winterhalder, "Environmental Degradation and Rehabilitation in the Sudbury area," Laurentian University Review 16 (February, 1984): 17-18.

⁸⁸ The Sudbury Journal, 29 October 1891, reported that "all over the district Americans are purchasing timber limits." The transition from speculative to active holding of local berths can be traced through the Returns published in the Sessional Papers of Ontario. See: Ontario, SP 1881, no. 47; 1873, no 11; 1878, no 24; 1887, no 34; 1892 no. 62; 1893 no. 92, 1898, no. 58; 1904, no. 68. By 1891 the manuscript census reported five major lumber firms, employing well over 1,000 men, plus numerous smaller employers. Manuscript Census, 1891, Ontario, Nipissing, Subdivisions I, J. PAC. RG 31, Reel T-6355; *ibid.*, Algoma, Eastern Division, Subdivision H; Algoma, Western Division, Subdivisions AA¹, AA², PAC. RG 31, Reel T-6325 (hereafter "Manuscript Census, 1891"). Almost every issue of the Sudbury Journal makes some mention of one or more of these operations. For details prior to its 1891 start: Manitoulin Expositor, 13 November 1886, 16 November 1889; Ottawa Free Press, 17 March 1887, 18 January 1888; Toronto Mail, 13 October 1887; Perth Courier, 17 December 1886; Fort William Journal, 12 July 1889. The best general coverage is Hallsworth, *passim*; Thomas Thorpe, "A Review of the Logging and Pulp Operations in Sudbury District during the Years 1901-1950," unpublished manuscript, 1950(?), 1-9.

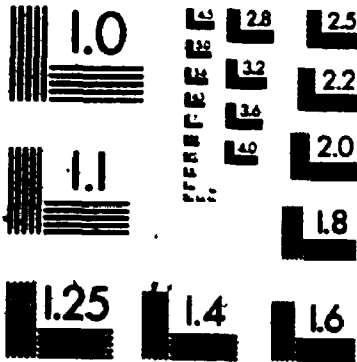
⁸⁹ "Manuscript-Census, 1891" Nipissing, Subdivision J. "Tps Blezard and McKim," *passim*. On the sale of ties: Sudbury Journal, 30 December 1897. Local farmers sold over \$168,000 in cordwood to the CPR in 1890-91. Toronto Empire, 12 December 1890.

⁹⁰ Hallsworth, 122-23; Ottawa Free Press, 22 November 1888; Sudbury Journal, 2 May, 28 November 1895, 3 May 1900.

⁹¹ "Agreement Between Her Majesty Represented by The Honourable the Commissioner of Crown Lands for the Province of Ontario and The Spanish River Pulp and Paper Company," Ontario, SP, 1900, no. 50, p. 4-5. The earlier local efforts are noted in Hallsworth, 117-118; Sudbury Journal 30 December 1897. On the new interest in the pulp industry: T.W.G. [ibson] "The Hinterland of Ontario," OBM (1894): 103-04; J.A. Guthrie, The Newsprint Industry: An Economic Analysis (Cambridge: Harvard University Press, 1941), 3-16. The Boom Company proved quite a success: organized in 1902, it was still operating in 1930. Sudbury Journal, 12 March 1902; Sudbury Star, 1 March 1930.

⁹² Donald MacKay, The Lumberjacks (Toronto: McGraw-Hill Ryerson, 1978): 73-143. Local references include: George Thompson, Up to Date or the Life of a Lumberman (Peterborough: The Times Printing Co., 1895), 84-85; Sudbury Journal, 6 April 1893, 2 March 1899; Toronto Mail, 11 May 1889; Ottawa Free Press, 12 January 1889; Toronto News, 1 April 1893.

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⁹³ A.P. Coleman, "Fourth Report on the West Ontario Gold Region," OBM (1898): 137; E.M. Burwash, "Geology of the Nipissing-Algoma Line," OBM (1896): 167; Thompson, 82; R. Addington, "Map of Old Logging Railway Lines," unpublished, SPL, Scale: 1 inch = .25 miles. On the "Alligator": Toronto Star, 15 April 1897; Collingwood Enterprise, 10 April 1899. "Manuscript Census, 1891," Nipissing, Subdivision J, "Tps Blezard and McKim," lists a "steam tug engineer," p. 66.

⁹⁴ Sudbury Journal, 18 April 1901.

⁹⁵ Aeneas McCharles, Bemocked of Destiny; the actual struggles and experiences of a Canadian pioneer, and the recollections of a lifetime (Toronto: William Briggs, 1908), 174-75. The Sudbury Journal, 6 October 1892, recognized forestry as a "fleeting" industry, but still saw it as a source of wealth until mining expanded, and a "good second" to mining thereafter.

⁹⁶ The Algoma Land and Colonization Company. Algoma! The New Northwest! Algoma Farmers Testify (Sault Ste. Marie: The Company, 1892). A shorter second edition was published in 1894. The first quote is from: The Canadian Pacific Railway Company. Description of Lands for Settlement in Algoma and Western - Ontario (Montreal, The Company, 1887), 8-9; the second: Ontario, "Report of the Department of Immigration," (1887): 16.

⁹⁷ Aeneas McCharles, "The Nickel Range," Toronto Mail, 22 August 1891, 10. His more critical assessment is printed in the Manitoba Free Press, 13 March 1893 and in C.L. Johnstone, Winter and Summer Excursions in Canada (London: Digby, Long & Co., 1894), 159-60.

⁹⁸ Toronto Mail, 11 September 1886, 4; Fort William Journal, 19 January 1889; Manitoulin Expositor, 16 November 1889.

⁹⁹ Bruce W. Hodgins, "Unconventional Priest of the North: Charles Paradis, 1848-1926," His Own Man: Essays in Honour of Arthur Reginald Marsden Lower, ed. W.H. Neick, and Roger Graham (Montreal: McGill-Queens University Press, 1974), 138-141; Toronto Star Weekly, 2 August 1924, 17; Sault Star, 17 October 1901. Details from "Manuscript Census, 1891," Algoma, Western Division; Subdivision AA, "Tps Chelmsford and Cartier," and Canada, Census of Canada 1890-91, vol. 2, table XVI; vol. 4, tables II, III. Sudbury Journal, 22, 30 April 1891, 21 September 1893, 28 March 1895, 6 August 1896, 16 June 1898, 9 February, 27 July 1899, 23 October 1902; Globe, 3 November 1894; Toronto World, 30 October 1896; Mgr Stephane Cote "Histoire de Chelmsford," Document historique de la société historique du Nouvel-Ontario (Document historique) 4 (1944): 14; Huguette Parent, "Le Township de Hanmer 1904-1969," ibid., 70 (1979): 12, 30, 45.

¹⁰⁰ On the claims see Chapter II. On Myllymaki: Toronto Mail, 22 September 1888; Sudbury Journal, 4 August 1892; Peter Krats, "Sudburyn Suomalaiset: Finnish Immigrant Activities in the Sudbury Area, 1883-1939," (M.A. Diss., University of Western Ontario, 1980), 32-33, 57 n. 50. On demographics and crops: Toronto Mail, 26 September 1891; "Manuscript Census, 1891," Algoma, Eastern Division, "Tps Hallam & Graham"; Canada, Census of Canada, 1890-91 vol. 2, table XVI; vol. 4, tables II, III.

¹⁰¹ Union Municipality of Drury, Denison and Graham, "Council Minutes," 2 June 1894; "Bylaws," No. 17; Sudbury Journal, 13 July 1893, 14 March 1895, 15 December 1898.

¹⁰² "Manuscript Census, 1891," Nipissing, "Tps Appleby, Hagar, Awrey, Hawley, Dryden, Dill & Nelson [sic] [Neelon]"; Canada Census of Canada 1890-91, vol. 2, table XVI, vol. 4, tables II, III; Coniston Historical Group, The Coniston Story (Sudbury: Journal Printing, 1983), 1-4. The "Agricultural Association of the United Townships of Blezard, Dryden, Garson, McKim and Nealon [sic]" received \$50.00 from the Town of Sudbury in 1895. Town of Sudbury, "Minutes of the Council," 1 August 1895. This little-known effort, which persisted to about 1902, was the precursor to the agricultural society incorporated in 1904.

¹⁰³ Ontario, Department of Crown Lands, Our Northern Districts (Toronto: the Department, 1899), 71; Waters Women's Institute, "Local History," (Tweedsmuir Series), unpublished manuscript, 1970, SPL, n.p.; "Manuscript Census, 1891," Nipissing, "Tps Blezard and McKim (including Sudbury & Broder)"; Canada, Census of Canada 1890-91, vol. 2, table XVI, vol. 4, tables II, III; Ottawa Free Press, 8 June 1888; Toronto Mail, 12 July 1886, 6 September 1889.

¹⁰⁴ Globe, 12 December 1890; Toronto Mail, 22 September 1888; 22 August 1891; Sudbury Journal; 23 June 1842; Ontario, Ontario as a Home for the British Tenant Farmer (Toronto: Warwick and Sons, 1888): 32. On timber farmers: Richard Lambert and Paul Pross, Renewing Nature's Wealth: A Centennial History of the Public Management of Lands, Forests & Wildlife in Ontario (Toronto: The Hunter Rose Company for The Department of Lands and Forests, 1967), 308, 310.

¹⁰⁵ E.J. Davis, Report of the Commissioner of Crown Lands for the Year 1899 (Toronto: Warwick Bros. & Rutter, 1900), viii.

¹⁰⁶ Sudbury Journal, 30 April 1891, 6, 13 August 1896, 5 October, 9 November 1899; Barlow, "Report," 191.

CHAPTER FOUR

THE ADVANCE OF SETTLEMENT, 1886-1902

Introduction

The Sudbury region experienced a marked population increase between 1886 and 1902, a gain propelled by the resource economy and accompanied by major changes to the local setting. The much-enlarged local populace, buoyed by the immediate gains offered by the resource economies, rarely questioned their long-term potential, or even the growing reliance on a single mining firm. Instead, they sought better living conditions. Their efforts plus those of the senior governments brought improved transport and communications, more active administration, new physical and social services, and a more diverse social order. While the quality of life was enhanced throughout the Nickel Region, the new functions, services and social institutions, plus the heavy manpower requirements of the resource industries, saw the gains concentrated in urban settings. Various villages, each with its own minor hinterland, retained small roles; but the greatest benefits came to Sudbury, which used its initial advantage and central location to good effect. The result, by 1902, was an urban hierarchy with Sudbury exercising metropolitan dominance over the surrounding area.

I

PHYSICAL, ADMINISTRATIVE AND SOCIAL ADVANCES

Improved transport and communication facilities were crucial aspects of regional progress. Better railways, roads and communication aided the exploitation of local resources while reducing both local and regional isolation. Easier access, plus economic opportunity, drew more and more people to the region, prompting increased activity by all three levels

of government; the result was major gains in physical and social services. And the larger population worked to create a more satisfying social order. Religious and secular groups all tried to improve the quality of life; the increased social diversity inevitably created new social divisions. Even dissension, however, added new scope and sophistication to local society, further enhancing the physical, administrative and social progress that by 1902 brought the Sudbury region far beyond the pioneer days of 1886.

Transportation and Communications Improvements

With the CPR providing a direct line to Northern Ontario for Montrealers, Ontario entrepreneurs moved to construct their own rail link to the evident, if often exaggerated, resources of the Shield. Though the federal Minister of Railways and William Van Horne both urged a line between Toronto and Sudbury, that route entailed much rock cutting, so the backers of the Northern & Pacific Junction Railway opted for a line to North Bay. Early in 1887 the N & PJ was leased to the Grand Trunk syndicate, giving the GTR a means of dominating north-south trade in Ontario.¹ The CPR immediately surveyed a route from Kleinburg to Sudbury, dubbing it the Claremont Branch; however, on assessing the cost of the new line the CPR decided to arrange a shipping deal with the GTR.²

Less cautious persons busily promoted north-south railways. Sam Ritchie hoped to secure a rail link between Sudbury and his Central Ontario Railway, but the CPR stood steadfastly in his way so his pleas for federal and provincial aid fell on deaf ears.³ The same influence also made other railway schemes abortive: the Peterborough, Sudbury and Sault Ste. Marie; the Toronto, Sudbury and Northwest; the Toronto, Sudbury and Pacific;

and the locally organized Sudbury & Nipissing Railway. Regional "resource" railway schemes -- the Mineral and Timber, the Worthington and Onaping, the Sudbury & Wahnapiatae, the Nickel Belt, and the Nickel Range railways -- were no more successful.⁴

In the meantime, the CPR was developing its own program for the Sudbury region. Short spurs were built to service local mines,⁵ and the dormant Algoma Branch was re-opened in 1886, though the weekly train from Sudbury to Algoma Mills averaged only eight miles per hour because of the wretched state of the track. Fortunately for local travellers, the CPR took steps to rebuild the line and extend it to Sault Ste. Marie and the midwestern American market beyond. The upgraded line was in full service by late 1888, providing the Sudbury region a third long-distance travel axis.⁶

A fourth rail option seemed imminent in 1899 because F.H. Clergue had acquired the long defunct Manitoulin & North Shore Railway (M & NSR) and re-organized it on a grand scale. A new Federal statute authorized branches northwest to the Algoma Central Railway, northeast to Lake Temagami, and south via Manitoulin Island and ferry to Meaford. Local enthusiasm for the M & NSR ran high, especially after the senior levels of government pledged the line \$11,400 per mile constructed. Work commenced in May 1900; a year and some \$220,000 later the line reached Gertrude mine, fourteen miles west of Sudbury. A large ore, freight and passenger business was to no avail when Clergue's financial empire collapsed: the M & NSR was "virtually at a standstill" for the latter part of 1903. But it at least held out the promise of a second western alternative to road-based travel.⁷

Such alternatives were eagerly sought because the widely scattered tote roads of the 1880s had barely sufficed for pedestrian or equine travel,

and for delivery of goods by wagon or stone boat. Northern pioneers, naturally enough, were dissatisfied with the state of affairs. Aeneas McCharles, writing from Nickel City in 1890, complained that "there is not a foot of road for fifty miles along the mining range here. The railroad is our only highway. Even funerals have to go along the track." More dispassionate reports were only slightly less critical. William Folger and B.H. Buckingham of the U.S. Navy reported in 1890 that "there are no roads, excepting in the immediate vicinity of the railways, and the country is accessibly only on foot, except where trails have been cut." These trails, they reported, ranged from those "on which a cart might have passed" to ones so bad as to be "difficult of access on horse-back."⁸

The evolution from such trails to proper roads was slow and laborious. Early roads snaked "over logs and rocks, through muskegs and streams"; extensive "corduroy" construction made them almost impassible in wet weather. Even if travel was possible, it was

not an unusual thing to find yourself forced into driving say twenty miles to a point about eight miles distant from your starting place. This is bad enough, but... one finds at the end of the journey that the whole nervous and muscular system have been demoralized by jolting over rocky boulders, stumps of trees and obstacles of similar nature.⁹

The poor conditions, reflecting the absence of a systematic approach towards road construction, led to calls for aid from the Colonization Branch.

It responded in 1889 by providing \$2,117.45 for a road from Sudbury to Chelmsford. While the Branch's report lauded this "very good and useful road", local observers complained that not nearly enough was being done.¹⁰

Still, the Colonization Roads programme moved forward. Three early roads were pushed outward from the CPR lines -- from Whitefish to Lake Penage (1890); the Wahanpitae to Lake Wanapitei Road (1891); and the

Whitefish-Larchwood Road (early 1890s). These roads raised some concerns in Sudbury's business community -- the Sudbury Journal denounced the Whitefish-Larchwood Road as "useless" -- until it became evident that all three new routes traversed areas that were too poor to offset Sudbury's advantages as the hub of several continually improved road axes. One such axis was the Sudbury-Chelmsford Road that was slowly extended northwest towards Cartier. The Sudbury-Bleazard Mine Road, first funded in 1890, was extended to Lake Wanapitei by the mid-Nineties, with a branch run north to Hamner and Capreol Townships. Improvements to the old CPR tote road also aided travel east and west of Sudbury. By 1894 it had been rebuilt as far east as Wahnapiatae and to Nairn Centre on the west.¹¹

Some funds and effort, meanwhile, were devoted to settlers and mining roads that fanned out from these main arteries. Not surprisingly, the areas best served by roads were the five newly organized township municipalities, which regarded road building as a major priority. Township sponsored road work began very shortly after incorporation; by 1902 the monies so far spent plus statute labour -- valued at \$1 per day -- totalled over \$38,000.¹² The financially impoverished township councils naturally pushed what they could upon the Province, which proved quite responsive: cumulative Colonization Road spending on local routes exceeded \$62,000 by 1902.¹³

Notwithstanding the monies and effort expended, local spokesmen like James Orr remained vehement critics of the state of area roads, Orr, for instance, suggested that memorials be raised to the men who laid out the Sudbury-Rayside Road. "Any effort made to pick out a worse location," he went on, "must have ended in failure."¹⁴ His sarcasm might have been better directed at the absence of roads south of Sudbury or the state

of less-used routes: in 1899 the ten mile journey from Blezard mine to northwest Hanmer Township took a full day, and travel remained impossible for wagons holding more than 1,500 pounds of freight.¹⁵ Even the most rudimentary roads, however, continued the process of opening up the gaps between the rail axes. Thus much progress was evident, for by 1902 there were many miles of road where only a few rude trails had existed in 1886.

Communication, too, made considerable strides, though the telegraph remained a local CPR monopoly. The mail provided a wider-ranging service: by 1902 there were eighteen local post offices.¹⁶ And a much faster communications mode appeared: Dominion Mineral installed an in-plant telephone service in 1889 or 1890, and Canadian Copper soon followed suit, installing a telephone system at its Copper Cliff works. Then the M & NSR opted to install telephone rather than telegraph dispatching service along its trackage. Soon, a more public service began to take shape: private lines were installed in Sudbury by 1897, and in 1899 the Bell Telephone Company sought a civic franchise there. That franchise was granted in 1901, but not to Bell -- instead it was awarded to the Sudbury Building Supply Company, owned by local lumberman W.A. Evans. Days later Evans sold his service to Bell, which soon reached a new agreement with the town. Bell's system with 61 subscribers began operating in April 1902.¹⁷ Its beginnings provided strong evidence of the growing maturity of the regional transport and communications infrastructure.

The Spread of Administration and Services

Governmental authority and services expanded in lock step with growth in the local population and economy. Federal services, for example, kept pace with local progress -- improved mail distribution was the most widespread and welcome change. But the federal setting was little affected apart from

the formation of the new Nipissing riding in 1892; it was extended west almost to Algoma Mills in 1893.¹⁸

Ontario, meanwhile, periodically redefined the District setting, the changes being consolidated in The Unorganized Territory Act, 1897, which gave full Territorial District status to Algoma, Nipissing and Manitoulin. Each District included a part of the nickel region, a divided jurisdiction that provoked many local complaints. But the criticism often proved ineffective because the provincial electoral boundaries remained unaltered despite the local population gains. The province was quicker to provide monies for local roads, schools, justice and health services.¹⁹

But these grants often included the delegation of authority to local administrators ill-equipped for the task. This was especially the case in unorganized townships like Broder, Cartier, Dryden or Snider, which by 1902 possessed only road and school boards. These boards operated under several provincial statutes. The Assessment Act (later, the Statute Labour Act) permitted unorganized townships with 20 or more "resident landowners" to elect a road board to oversee statute labour and ensure that any funds from commutations of such labour were applied to the township roads. Rural school boards were somewhat different. A Stipendiary Magistrate or a School Inspector, or both, could "form a portion of a township or of two or more adjoining townships into a school section." Such sections were not to exceed 25 square miles; the Act provided reduced school taxes for those persons living more than three miles from a school.²⁰

These statutes were, at best, marginally adequate in developing road and school systems. Despite provincial assistance, most rural schools were poorly built, badly maintained and minimally equipped. To cut costs

some school boards established bilingual schools that did not comply with provincial regulations. Also, the financially-strapped school boards left practical education to the Ontario's "summer mining schools" and to Alfred Fitzpatrick's "Reading Camp Association."²¹ Local supervision of road construction was no more satisfactory: funds often were inadequate and few residents willingly worked on roads except those they habitually used.²²

Statutory labour was but one failing of the unorganized township format. Policing was left to occasional visits by roving provincial constables and health concerns were left to the provincial Sanitary Regulation in Unorganized Territory Act. All this was not surprising: most settlers could spare little time, and less money, on "civic" needs. Meetings were held irregularly since board members were busy or away at work; in franco-phone and immigrant enclaves, township boards operated in the vernacular, much to the dismay of provincial bureaucrats.²³

Many of these problems also afflicted the incorporated townships. Following the example set in 1885 by their peers in McKim Township, the residents of Balfour and Rayside Townships both opted for incorporation in 1890. The Union Municipality of Drury, Denison and Graham was organized in 1893; the united Townships of Nairn, Lorne and Hyman followed suit in 1896. While nominally equal to townships in the counties, these northern municipalities, with tiny tax bases and councils loath to borrow money, were hard-pressed to provide civic services. But local taxes and effort, together with Provincial aid, brought improved roads and new schools; some township municipalities even managed other services. Township reeves often served -- ex officio -- as justices of the peace, and most organized townships boasted a constable, albeit one paid little apart

from the fees he collected. Township councils also tried to deal with health and social concerns -- perhaps appointing a Medical Officer, building a "pest house", or providing occasional, rather penurious aid to the "poor and indigent."²⁴

Aid was more readily forthcoming in villages where one company -- usually a mining concern, but sometimes the CPR or a lumber firm -- played a key role. The Drury Nickel Company established the first "model" camp in 1891: "Travers" featured good housing, abundant good water and then-superior sanitary arrangements. This was a refreshing change from the average camp, where there was "altogether too much typhoid and other filthy diseases." Since better living conditions lessened worker unrest, company paternalism soon became an important administrative force within the region. Better housing, superior schools, better physical layout and various social services, including company doctors, were the result. Company paternalism reached new heights at Victoria Mines, where by 1902 Mond Nickel had provided "good" housing, schools and even utilities, all placed in a company-planned setting.²⁵ Canadian Copper, in contrast, was less eager to pay for improvements: its executive sought in 1901 to incorporate Copper Cliff in an attempt to relieve the firm of taxes imposed by McKim Township. The Province assented to town status on 15 April 1901. Any savings were short-lived, for in 1902 the new INCO executive took a decidedly different tack, deciding to make Copper Cliff the "showplace" of its Canadian operations. Accordingly, it began funding new protective and health services plus various physical improvements. There was a price to pay for such "generosity": the residents of Copper Cliff and other company-improved communities, already facing the "imperious will" of the sponsoring firms, now depended upon them for housing and services.²⁶

Sudburians avoided such arbitrary regimes by quickly organizing an independent community administration. Sudbury was a police village by 1891, and in January 1892 a "company of 100 associates" petitioned for town status. These men, mainly businessmen and professionals, achieved their objective: Royal assent for town incorporation came on 14 April 1892. The local leadership did not stop with the formal imposition of order; instead, thoughtful (and optimistic) town councils imposed comparatively high tax rates and showed a willingness to borrow significant monies to finance major town projects. Provincial contributions added extra dollars. The funds so gathered permitted civic expenditures about six times greater than those of all other local administrations combined.²⁷

This faster rate of spending brought many gains. The old log public school was replaced in 1889 by a "handsome, two story frame building"; local plus provincial funds also saw a separate school established that year.²⁸ Nor were other social services overlooked. The poor and indigent of Sudbury were marginally better off than their counterparts elsewhere in the nickel region; local health services, too, were centred in Sudbury. Concern over public health led in 1891 to a local petition requesting that the province aid in opening a public general hospital. When the province was unresponsive, two private facilities -- the "Sudbury" (1892) and "Algoma and Nipissing" (1894) hospitals -- were established. The latter, renamed the "Sudbury General Hospital", was granted provincial funding in 1895. It was leased in 1896 to the St. Anne's Roman Catholic parish; the Grey Nuns of Ottawa took charge. The old debts of the hospital proved daunting, however, so the Sisters opened a new facility -- St. Joseph's -- in 1898; it was destined to operate until the 1970s. The Sudbury Hospital, meanwhile, continued operations until 1905, and the

Sudbury General until 1913.²⁹

Sudbury's protective services were less advanced, though by 1891 the community named Frank Gange as its first "constable." The position was maintained after town incorporation, but there was rapid turnover of personnel because the constable was poorly paid -- receiving \$400 per annum -- given his additional duties as engineer of the fire engine, tax collector, sanitary inspector, caretaker of the town hall, fire marshall and general civic servant. Though the constable was given the title of "chief of police" in 1894, no increase in salary was given, and the "force" had to make do on less than \$1,000 between 1893 and 1902.³⁰

Policing, however feeble, implied incarceration, which meant the Sudbury "lock up", because the outlying municipalities had, at best, only makeshift jails. The Sudbury jail, unfortunately was in a state of disrepair by 1887; repeated criticism led by 1891 to calls for a new building. The debate closed when the old jail burned down in 1892; a new two-storey brick building with ten cells for men and two for women was ready by February 1893. The much-improved facility filled local needs and served as a "common gaol" for Nipissing, Algoma and Manitowish as well.³¹

Sudburians welcomed the new social and protective services, but garnered greater benefits from extensive additions to local physical services. The streets and boardwalks of Sudbury were much improved and lengthened, and the local council also moved to provide water, illumination and waste removal. After town incorporation, a public meeting called for a waterworks system upon concluding the local wells were unreliable and the water of Nolin and Junction Creeks unfit for drinking. The town fathers also hoped that a dependable supply of water would lower the fire insurance rates.³²

A commissioned report by Willis Chapman, a Civil and Sanitary Engineer, confirmed the hazards and estimated that a waterworks could be established for about \$25,000. He also offered an alternative solution -- the installation of water, sewer and electrical services at an estimated cost of \$35,000.³²

Chapman's second option was quite attractive because electrical service was becoming recognized as essential to more efficient work and better living. Local mining firms began installing electrical equipment in 1889, while Sudbury first received a proposal for an electrical utility in January, 1892.³³ Though the Royal Electrical Light Company's offer was refused, the intrigued citizenry was quick to support Chapman's three-tiered utilities plan. Public meetings and a referendum on 21 August 1894 -- 70 percent approved -- supported a waterworks, sewage and electrical utilities bylaw. Town Council awarded a contract for all three services to M.N. McCarthy and W.H. Plummer on 3 May 1895. The cost was low -- \$40,650 -- but the results were rather less fortunate. Though the centre of town was serviced with sewers in 1895, the discharge into Nolin and Junction Creeks left such foul water that the CPR unsuccessfully sought an injunction in 1896 to stop the use of the sewers. Even so, the sewage system marked McCarthy and Plummer's greatest success. Construction of the waterworks and electrical system proved too much for the firm: Sudbury had to take over the still-incomplete systems in 1896, replace faulty equipment and complete construction. These costly improvements were something of a gamble -- Sudbury was the first Ontario municipality to own and operate its electrical plant -- but Sudburians viewed the effort and expense as both necessary and indicative of Sudbury's local metropolitan status.³⁴

Social Institutions

The more complex social order brought on by population and economic gains also confirmed Sudbury's dominant position, for most institutions placed their regional headquarters in the town. The Roman Catholic cause, for instance, looked to a flourishing St. Anne's parish in Sudbury for leadership. Encouraged by a fast-rising membership, the Jesuit fathers in charge of St. Anne's began work on a larger church building. The scale of the new church delayed its opening until 1889; the structure, considered "the principal ornament of our town", was a source of pride to local Catholics who were mainly French Canadian with a strong Irish Canadian minority. The prosperous parish, constituting about 70 percent of Sudbury's population in the early 1890s, showed no hesitation in rebuilding after the church was destroyed by fire in 1894. The new building, dedicated less than nine months after the fire, was home to more than 1,000 parishioners.³⁵

Roman Catholics also made significant gains at Chelmsford, where St. Joseph's parish boasted a church by 1892, home to Jesuit missionaries and, from 1897, resident priests. Their promotion of the Catholic faith throughout the Valley resulted in the organization of the St. Rosaire parish at Blezard Valley in 1902. The Jesuits had also toiled at Copper Cliff since 1887, first in private homes, then in a house remodelled for church use. The French Canadian, Italian and East European congregation moved to better quarters when the St. Stanislaus Kostka Church was opened in 1898. A far wider Jesuit effort brought Roman Catholic services to every permanent settlement -- most boasted churches or chapels -- plus the more temporary local camps.³⁶

The Jesuits' successes drew vigorous, if at times unsuccessful, reactions from the Protestant denominations. The Presbyterian Church, for example,

appointed Samuel Rondeau to full-time service in Sudbury in 1887. His work and that of summer workers resulted in the opening of St. Andrew's Church in 1889. That tiny congregation was forced to revert to mission status from 1896 to 1901 because of decline in membership occasioned by economic depression. Economic recovery once again permitted the hiring of a full-time pastor in 1901. Presbyterian gains were even more hesitant in Copper Cliff, where in 1897 the ten-year-old mission was forced into an unpopular union with St. Andrew's. The forced merger invigorated Copper Cliff's Presbyterians, who built the Knox Church in 1899, hired a full-time pastor in 1900, and achieved independent status in 1901. Such accomplishments freed more funds for mission work in the outlying communities. These missions were of long standing: Samuel Rondeau held occasional services at Cartier and Murray Mine in 1887. Later on, missions of varying duration were established at Worthington, Blezard, Victoria Mines, Chicago Mine, Frood, Mount Nickel, Mond, Stobie Mines and other camps, where Presbyterian gains were directly proportional to local mining success. But even at Whitefish, Nairn Centre, Cartier and Wahnapiatae -- locations less intimately connected with mining -- successes were few. The Chelmsford Field, -- a "French evangelical" mission including the entire Valley -- was an especially sterile ground for the Presbyterians.³⁷

The trials of the Presbyterians were well known to their Methodist compatriots, with whom they shared "Union Churches" at Murray Mine and Copper Cliff. Though the two churches agreed in 1893 to avoid overlapping their mission work, duplication was unavoidable in the new field.³⁸ The Methodists, like the other churches, looked first to Sudbury, where Silas Huntington supervised the construction of a church in 1886. The Rev. F.S. Harris, appointed as full time minister in 1887, soon boasted that

Sudbury was "the headquarters of a vigorous and aggressive church"; but the congregation remained small, with only 58 members in 1902. Nevertheless, it was the spiritual base for the outlying Methodist circuits. Work at Copper Cliff began in 1887, yet when the former Union Church was acquired by the circuit in 1899, the local membership numbered less than 50 souls. The Algoma Branch circuit, dating from 1887, included small mission stations at Whitefish, Nelson, Naughton and other points on the CPR line. The Chelmsford circuit, despite the initiation of "French work" and the construction of a church in that village in 1899, was smaller still. Thus Methodist membership for the entire region, just 55 in 1889, increased only to perhaps 150 by 1902.³⁹

Still, the Methodist gains outstripped those of the Church of England, which had no permanent local presence until 1890, when a small frame church was opened in Sudbury. By 1900 "a most gratifying spirit of devotion and enterprise", spurred on by effective priests, pushed the small congregation to the verge of self-sustenance. In Copper Cliff, meanwhile, services were held in the school and then the Union Church; a small church was raised in 1900 or 1901. Elsewhere in the region Anglicanism was limited to occasional services at Murray, Stobie, Victoria Mines, Nairn Centre, Wahnapiatae and, less often, at Chelmsford.⁴⁰

The Baptist Church, meanwhile, still professed in 1901 to "have neither the men nor the money" to launch Sudbury-area services, notwithstanding the presence of local Baptists "very anxious... and willing to make sacrifices to this end."⁴¹ Their failure is rather surprising since less well established denominations made gains. Salvation Army missionaries arrived in Sudbury in 1895 and within four years the Army was also at work at Stobie Mine and Copper Cliff.⁴² The latter centre also was home

to Finnish Lutheran services dating from 1887 and organized as the "Wuoristo Seurakunta" (Mountains congregation) of the Suomi Synod (Finland Synod) in 1897.⁴³ Immigrant churches -- instruments of accommodation to new circumstances -- also displayed the still-strong ties most persons felt towards religion in the late 19th century. But many local residents, finding that the churches could not meet their varied needs, looked for further sustenance elsewhere.

Secular organizations

Secular activities often proved more tempting to the local populace than the call to spiritual guidance. Informal group activities dated from the earliest days of white settlement, while the earliest associations -- the "Hollow Log Club" in Sudbury and the "Yellow Club" in Copper Cliff -- were social clubs catering to the small local elites.⁴⁴ These soon were replaced by formal organizations from the South: by 1894 James Orr boasted that Sudbury had more lodges than any other Canadian town of its size. The outlying communities also had members in some of these lodges, for most Sudbury-based societies considered themselves regional organizations. But the Orange Order especially, and some other societies, established separate lodges in Copper Cliff and other local communities. Wherever they were located, these associations often attracted specific groups, usually along ethnic and religious lines.⁴⁵

Ethnocultural divisions apparent in the lodges also afflicted a multitude of more general organizations. For their part, the francophone population steered clear of many associations, and launched their own groups, beginning with the St. Jean-Baptiste Society (1891?) which promoted French Catholic ideals while providing a mutual aid service for its members.⁴⁶ Immigrants, too, moved to protect their culture by establishing

their own philanthropic, recreational and mutual aid mechanisms. Finnish immigrants in Copper Cliff led the way: the successful "koira torppa" (blind pigs) were challenged by the "raittiusseura" (temperance society). Copper Cliff's Local 80 of the Finnish National Temperance Brotherhood of America, organized in 1894, became the centre of local Finnish activity. Its hall, built in 1895, was much used and its mutual aid plan copied by local groups like the "Yhtynyt Lehmaa Yhristysk" [sic], a mutual cattle insurance association organized about 1900.⁴⁷

Economic status, too helped to determine associational memberships. Local sporting clubs were attractive to the entire population -- hockey, lacrosse, baseball, curling, shooting, and "trotting" associations all flourished by the 1890s. Politics garnered a wide audience through district-wide Conservative and Liberal Associations plus groups like the "Liberal Independent Club of the Townships of Rayside and Balfour." But the Sudbury Literary Institute and the Sudbury and McKim Township Board of Trade, both organized in 1892, catered to the fledgling local elite. Local farmers, meanwhile, organized the Rayside and Balfour Agricultural Society (1893) and the Agricultural Association of the United Township of Blezard, Garson, McKim, and Neelon (1895).⁴⁸

Labour Conditions

Local miners were in a more difficult position, for the strength of the mining corporations plus the boom and bust cycles of the industry made labour unrest a generally futile venture.⁴⁹ The ethnic heterogeneity of the workforce also worked against worker solidarity: early mining crews were "cosmopolitan in every respect." In 1891 Canadian-born workers barely outnumbered those born elsewhere; still, persons with a British background dominated, followed by French Canadians, Finns and a handful

of employees from many other nations. As the decade wore on, East European and Italian workers gained prominence in the reduction works and in the labour-intensive occupations.⁵⁰

Whatever their origins, these workers were regarded by the mining firms merely as another production expense, with arbitrary authority and dangerous, disease-ridden work conditions the rule. Most employers were indifferent or worse: in 1889 E.D. Peters, Manager of Canadian Copper, joked about a near-fatal accident at one of the company's mines. And the roast yards that Peters designed were innocent of labour saving devices, fed by wheel barrow at the very meagre contract price of twenty cents per ton of ore handled. Though the gradual introduction of mechanized operations at the yards and other works eased the physical burden, the early machines, explosives and other devices were notoriously dangerous. To make matters worse, the new techniques increased per-capita production; this gain, along with cost cutting slowdowns and corporate failures, left a large pool of surplus labour that ensured stable or even declining wage rates. Thus, the adoption of the ten-hour day, as opposed to the twelve-hour day, saw real incomes fall. By 1897, for instance, drill runners earned \$1.90 per day, compared with \$2.10 in 1888. Sustained nickel sales commencing in 1897 did bring much new employment -- from 535 men in 1897 to 2,284 in 1901. But the abundant labour supply permitted wages -- already lower than "elsewhere" in 1899 -- to fall to new lows by August 1900. Only then did some recovery occur: wages averaged from \$1.50 to \$2.00 per day by 1902. Not all workers were affected equally, because the nickel industry's increasingly technological work sites brought new skills to the fore while others became outmoded. On the whole, however, the shift to a capital-intensive mining industry made wages an ever-smaller part

of company expenses.⁵¹

Little wonder, then, that some anger was directed toward the mining firms' "unjust exactions" against their employees. This "oppression", the Sudbury Journal argued in 1891, could be eliminated by "knowledge on the part of the men of their rights and unity amongst themselves in upholding them." Five years later the paper published a critique of Canadian Copper's mistreatment of its workers. Canadian Copper soon put a stop to such comments: James Orr complained that "any man... who raises a voice or a hand against the imperious will of this corporation is certain to be... severely boycotted." He probably felt the pressure, for by August 1900 the Sudbury Journal approved Canadian Copper's firing of "useless" (i.e. troublesome?) men. Most employees at the firm, declared Orr, were "well-satisfied with the treatment they receive."⁵²

Despite dismissals and blacklisting, the long hours, dangerous conditions and low wages provoked countervailing efforts: by 1897 a "worker's organization" held twice-monthly meetings at the Finnish Temperance Hall in Copper Cliff. Then, on 20 July 1899, miners at Canadian Copper's Evans, Copper Cliff and MacArthur mines went on strike, demanding a fifteen percent wage increase. Though the strike "fizzled out" and the ring-leaders were fired, a precedent had been set. Further pay cuts in October 1901 caused another fruitless "jump" by some Canadian Copper employees. Once established the pattern of spontaneous unrest and corporate reaction would continue until labour organizers began orchestrating the workers' efforts.⁵³

Vices

Continuing corporate control and nearly intolerable conditions saw many workers look to the "vices" for pleasure and relief. Most "sinful" activity went unrecorded, but some insights are provided by the region-wide

increase in licensed taverns -- up from only two in 1883 to eighteen in 1902 -- notwithstanding a thriving bootlet market. Easy access made liquor a major nuisance, linked to gambling, prostitution and assault. These activities disgusted the Rev. W.T. Wilson, who in 1886 reported on the "Shocking State of Affairs at Sudbury." By 1889, though, the Toronto Mail concluded that:

Sudbury, though a railroad and mining centre, and on the northern frontiers of civilization, is a moral, law-abiding town. Of course there is a good deal of drinking after pay day at the mines, but very little rowdyism, fighting, or crime of any kind. As compared with the average [sic] mining town in the West it is a quiet, orderly place.⁵⁴

The statistical record is less generous, suggesting that liquor-induced crime was common, thefts and violent crimes endemic. Contrary to popular believe, "Foreigners" were not a major nuisance -- almost 90 percent of those charged were Canadians, British or Americans. Still, clergymen and others trying to impose a "higher" moral standard blamed these "outsiders" for the success of institutions like the "houses of entertainment for lonely men" and for the fast-rising rate of convictions.⁵⁵ But the general public remained indifferent or even hostile to "clean up" campaigns. The prohibition plebiscites, for instance, were largely disregarded: only 40 percent of those eligible voted in 1894, a mere 27 percent in 1898. And by 1898 the local "dry" vote was five percent below the figure for all of Nipissing, and twenty percent below the Ontario average.⁵⁶

These results and the large increase in convictions resurrected Sudbury's reputation as a "wide open town" that was the central place of a region with a "frontier" society. But the high rate of convictions, at least in part, reflected improved policing; meanwhile, the local prohibition movement's weakness had much to do with the lukewarm support given it by the Roman Catholic

hierarchy. Local society, in fact, showed much greater sophistication in 1902 than during the pioneer days of the 1880s. The widespread church activities, the many successful voluntary organizations and even the more spontaneous entertainment and workers' activities -- all promised even more development in the new century.

II

COMMUNITY DEVELOPMENT

Progress made in the Sudbury region, notwithstanding the much-touted agricultural settlement, was best measured in the emergence and expansion of its urban centres. Improved transport and communication, enlarged administrative and social functions and especially resource exploitation prompted growth in existing centres and the emergence of new communities. The number of functions which any community fulfilled -- administrative, social and economic -- generally determined its importance and, often, its continued existence; "company town" status added a special function that sometimes overrode other factors. The concentration of functions in certain locales soon created an urban hierarchy with several tiers. Railway and resource villages had very narrow spheres of influence; multi-function villages served larger, but still limited hinterland. Copper Cliff, Canadian Copper's local operations' base, boasted a commercial and social infrastructure rivalling that of Sudbury, but it remained highly vulnerable to downturns caused by poor resource markets or corporate strategies. Sudbury, in contrast, escaped the brunt of these market and corporate inspired regressions because its initial advantages and central location permitted a region-wide commercial, administrative and institutional influence. Sudbury's advantage grew because its successful, optimistic residents

enlarged their homes and businesses, welcomed new or bigger institutions and elected municipal politicians who presided over locally unprecedented urban improvements. The result, by 1902, was a community with "civic pretensions" -- in appearance, function and attitude Sudbury was the metropolitan centre of the Nickel Belt.

Railway Centres

The railway stations were the oldest white settlements in the area, established to fulfil the needs of the CPR rather than in response to optimal local circumstances. Not surprisingly, those placed where no developable resources were nearby remained of little or no significance, while others grew in keeping with local progress. Small railway centres like Naughton, Cnaping, Windy Lake, Rayside, and Larchwood, whose raison d'être were the marketing and servicing of rather limited hinterlands, remained little more than a railway and telegraph stations. Azilda, benefiting from farm and lumber business drawn to its location on the CPR line, was the most prosperous of these minor railway centres, with perhaps 100 residents by 1902, loosely clustered about a hotel, sawmill, general store, school and post office.⁵⁷

But even Azilda had a substantially lesser role than five mixed-function railway villages -- Cartier, Chelmsford, Nairn Centre, Wahnapiatae and Whitefish -- that by 1902 served distinct local hinterlands. Cartier remained most closely associated with the CPR, as befitted its role as a divisional point on the main line; it also was a local service and marketing centre for points north of the Nickel Basin's northernmost "rim". Nairn Centre, Whitefish and Wahnapiatae served similar service and sales roles in regions blessed with considerable lumber and mineral activity. Chelmsford made even greater gains as the focus for the lumbermen, prospectors and

especially the farmers drawn to the rich and varied resources of the Valley. All five villages were quite similar with populations averaging 100 in 1891 and 200 a decade later. Private subdivision plans, usually grid-iron surveys fronting the railway, provided nominal order; while various edifices -- schools, churches, post offices, stores, mine and lumber company offices and "good" houses -- complemented the local CPR facilities. Hotels and boarding houses attracted a large business from the region's "floating" population; small scale retailing and crafts together with a few light industries -- a creamery in Chelmsford and a brickyard in Whitefish -- added yet more permanence. But the many signs of progress and stability were illusory: regular depressions occurred in the village economies when nearby resource operations were closed.⁵⁸

• The Resource Camps

Economic downturns were far worse in centres that relied on lumber alone: once the local timber stands were cut, nearly all these camps failed. A few -- Blezard Valley, Hanmer and McFarlane Lake among others -- possessed sufficient nearby farm lands to coalesce by 1902 into tiny, road-based agricultural villages.⁵⁹ But the heavy manpower requirements of mining operations made the mine camp the more common resource-village setting in the Sudbury region. Over 40 mine camps had emerged by 1902, though most mines failed so quickly that the associated camps were very short-lived. Even when practical mining occurred, uncertainty and isolated locales checked the emergence of full-scale communities. Speculation sometimes played a role: the Vermillion Mining Company, for instance, declared its gold mine off-limits to all but company personnel. Its directors, hoping to profit further from the gold rush of 1888, established a townsite

on the Algoma Branch and christened it "Ranger." But the gold boom ended and Ranger was stillborn.⁶⁰

Not all mine camps failed immediately, though even the "successes" were ramshackle aggregations of houses, shanties, boarding houses and other necessary buildings. The oldest such camp was Worthington, dating from 1885 and much enlarged when Dominion Mineral let contracts in 1889 for mine buildings and accommodation. New private housing, a "fine" hotel, a post office and a school became the centrepieces of "quite a village" before Dominion ceased local operations in 1894. Though the forest industries and Worthington's local service and market functions maintained a small measure of prosperity, village residents were gladdened when in 1900 the Hamilton nickel syndicate erected their smelter in Worthington. But it soon closed, beginning a long, slow decline in the village.⁶¹

More successful mining ventures naturally brought more vigorous communities. The Stobie mine, Canadian Copper's most productive mine prior to 1900, featured more than ten houses by 1888, and continuing operations prompted the development of a small community. By 1902 "Stobie Mine" featured telegraph and mail service, a school, a saw mill, a general store and a grocery, all of which enabled it to persist even though Stobie Mine was closed in favour of the far larger Creighton deposit.⁶² The first crews arrived at Creighton in late 1899; by 1901 Creighton included modern mine buildings and just to the south a hamlet of private dwellings and boarding houses. Built by Canadian Copper, the "first rate permanent mining camp" even bore some stamp of order, for the cottages, three general stores, school and post office were arrayed in "a regular arrangement... along streets."⁶³

Another significant mining camp, this one built by the Mond Nickel Company, emerged just southwest of the Victoria mine. The camp, known as Mond, was on a gravel-laden hillock featuring a small creek. By June 1899 it included accommodation for 85 men. Regular ore production began in 1900; by 1902 Mond was home to French and English Canadians, Finns, Swedes, Russians and other persons. The mixed assemblage drew the attention of pioneer merchants -- a store was operating by 1901 and the various religious denominations soon organized services. These and other social activities began to create a sense of community in the still-fledgling camp.⁶⁴

"Smelter Towns"

Two miles south of Mond lay Victoria Mines, Mond Nickel's smelter village -- one of eight such mineral-industrial sites that operated before 1902. These "smelter towns" were required because local ore contained large quantities of "waste" mineral and rock. Cost-effective mining of necessity required the elimination of this heavy, bulky material prior to refining. But reduction was very costly and most milling-smelting centres were shortlived. Nickel City, an ambitious dream of Aeneas McCharles, was a well-planned site that housed a royal metals reduction plant. But the gold and platinum mill was an utter failure and an embittered McCharles watched Nickel City quickly fade.⁶⁵

Other industrial sites suffered slower failures. Drury Nickel's "Chicago" works, built about 1891, included a company store, a school, sawmill and a score of houses; it was deserted after Drury's failure in 1894. The unusually clean and healthy site was refurbished in 1896 for use by employees of Trill Mining and Manufacturing, but that firm soon collapsed and the camp was once again abandoned. Similar fates awaited

other smelter camps. Murray Mine -- site of H.H. Vivian's local works -- reached considerable if rough proportions before that firm stopped operating. Dominion Mineral's Blezard complex, with 50 dwellings in 1890, was larger and more orderly than Murray Mine but it, too, disappeared after Dominion's failure. Two new industrial camps -- Great Lakes' "Mount Nickel" and Lake Superior's "Gertrude Mine" -- emerged during the nickel boom of the late 1890s. Both shared the fate of earlier "smelertowns", though agriculture and local timber operations sustained Gertrude Mine until about 1914.⁶⁶ Notwithstanding the frequency and rapidity of their failures, these industrial villages had a significant role in the early urban fabric of the Sudbury region. At their peaks, these centres were home to hundreds of people; they featured businesses, schools, post offices, churches and various social institutions that in an era of limited transportation options made them important islands of urban civilization in a still-primitive countryside.

Among the greatest gains were made at the aforementioned Victoria Mines, where plant construction began in early 1900. By 1901 the Rev. Allan Findlay, Superintendent of Northern Ontario Missions for the Presbyterian Church, discovered that "where twelve months ago there could be seen only rocks and stumps and scrubby bush, there is now quite a village of good houses, with waterworks and electric lights." Mond Nickel financed the work and established a 320 acre, **E**ridiron townsite plan; it also ensured that village residents -- perhaps 1,000 in all -- enjoyed the benefits of a school, community hall, various churches and comparatively efficient transportation and communication. The sulphur smoke generated by Mond's smelter was not welcome, and even here the firm proved helpful: it moved the roastyards further north in 1901. Victoria Mines, therefore, was

a state-of-the-art industrial site, at least by local standards; little wonder that businessmen were quick to establish stores and services at the village.⁶⁷

Copper Cliff

Only one local industrial community surpassed Victoria Mines in size and amenities. Copper Cliff, the home of Canadian Copper's major works, started in late 1885 with the development of the Copper Cliff (formerly Butte) mine; by August 1886 there was "quite a settlement... among the rocks and rubbish." There were two focal points: Shantytown; a rambling assortment of shacks southeast of the mine, and Copper Cliff, where better built housing was arranged along the street and lot lines surveyed by John Evans, Canadian Copper's chief engineer. The latter was home to an almost exclusively Anglo-Saxon office and technical staff; Shantytown housed a more heterogeneous group of miners and labourers. In 1887 and 1888 the opening of the Evans mine and the construction of a smelter created two new settlement foci. The Canadian Copper assisted in the construction of housing at Smelter, Evans and Copper Cliff. Many workers nevertheless chose to live at Shantytown, near their compatriots and further away from the paternalism of the firm. By 1888 the various settlements, soon known collectively as Copper Cliff, included about 500 inhabitants; in the face of continuing growth, Canadian Copper belatedly moved to bring greater order (and control?) to Shantytown, where streets and lots were surveyed in the spring of 1890. Copper Cliff nevertheless remained primitive, with a few better frame dwellings and the Company's "clubhouse" in sharp contrast to perhaps 40 cellarless log houses and numerous boarding houses. The dirt "streets" were narrow with few boardwalks and houses fronting immediately upon the thoroughfares. There were no public amenities, but

plenty of dirt, rocks, stumps and persistent sulphur smoke.⁶⁸

But there was prosperity too, for Canadian Copper's newly won contract with the U.S. Navy brought plant and workforce enlargements. By 1891 Copper Cliff included numerous new houses, a half dozen general stores, several barbers, tailors and shoemakers, a post office, a bakery and a billiard hall. Most businesses were on Serpentine Street, near the better housing; a few shops were in Shantytown and Smelter. Social institutions also became more numerous: the combination school and community hall/church was supplemented by the Roman Catholic and Union Churches, the Finnish Temperance Hall, plus numerous ethnically homogeneous boarding houses and "blind pigs."⁶⁹

Construction of a social institution or a business soon demanded considerable optimism, for Canadian Copper cancelled company-sponsored improvements and introduced periodic layoffs in an attempt to cope with low-profit nickel markets. The faith proved well placed: Canadian Copper's minimum employee requirements ensured relative prosperity even in the mid-1890s, after which peace in the nickel industry and the success of nickel-steel plate as armour brought a new boom. By 1898 "scores of new houses" were being erected at Copper Cliff, making it, or so the Sudbury Journal claimed, "by far the busiest and most prosperous place in Northern Ontario."⁷⁰

This building boom included new housing hard by the new smelter and roast yard that became known, for obvious reasons, as "Italy." Another cluster of homes was christened Orford since most of the residents were employees at the new Ontario Smelting Works built by Orford Copper. While these locations grew, the Evans and Smelter settlements declined after the mine and "old" smelter were closed in 1899 and 1903, respectively.

These changes brought a far greater population density to Copper Cliff, with many of its 2,000 or so residents living within a half mile of the Copper Cliff mine. Higher densities exacerbated the problems associated with unimproved streets, poor housing and the absence of civic services. Company officials and their families enjoyed rather better surroundings, but no one escaped the acrid sulphur fumes. Indeed, the No. 2 yard (1899) was built in "the worst possible location", just upwind of the residential areas; the situation deteriorated when the No. 3 yard was opened several years later. In 1902 F.R. Du Caillaud, a French nobleman with speculative holdings in the area, observed that "je n'ai rien vu du plus lugubre que ce village minier. Est-ce ici les portes d l'enfer?"⁷¹

Most observers, however, viewed the smoke as an unavoidable price for prosperity, signs of which were seen in more new houses, a new railway station and four new churches. Business was booming: by 1902 Copper Cliff had eight general stores plus four groceries; various other stores and services included a bank and a newspaper -- the Copper Cliff Courier. These stores and services were directed at a heterogeneous population showing fairly distinct residential and occupational segregation:

Office, managerial, and supervisory personnel, as well as some of the miners were Anglo-Saxon. These people lived in Copper Cliff, Evans Mine and Orford settlements. Labouring jobs in the smelter, at the roastyard, and in the mines were usually held by European immigrants and French Canadians, many of whom spoke no English. Of these non-Anglo-Saxons, the Finnish Polish and Ukrainian groups lived in separate sections of Shantytown. The Italians had settled in the Crow's Nest; French Canadians and Ukrainians lived at the East Smelter.⁷²

This polyglot community surely welcomed the town improvements and plant expansion launched in 1902 by the new INCO executive. These changes would bring a new maturity to Copper Cliff, but for now its residents looked to Sudbury, five miles to the east, for many commercial, social and

administrative services.

Sudbury

Sudbury, in fact, had retained the advantage won in the earliest days of white settlement: by 1886 it was easily the largest local community with more than 50 dwellings plus several hotels, churches and businesses. Still, following the departure of the CPR crews, Sudbury was "gradually settling down...to a country village with a tributary rural population." The quiet was broken by the copper boom of late 1886, which left Sudbury "in a perfect fever of mining excitement": a "floating and stationary population of well on to 3,000" faced exorbitant prices for food and lodging. Little wonder that four new hotels were ready by December 1886 and the "nine or ten" stores were "all seeming to do considerable business."⁷³

The excitement led the CPR to commission a survey of the village: James C. Morris, following Syndicate policy, produced a gridiron survey centred by the railway lines and bounded by the Nolin and Junction Creeks. Ignoring the uneven terrain and even existing structures, the survey established 6,000 square foot lots with 66 foot wide streets and 20 foot lanes. The CPR further influenced Sudbury's physical character by building the Stobie branch that defined street patterns northeast from the village core. To worsen matters the CPR kept most of its large property holdings off the market, hoping to secure better prices at some later date, adding further pressure to an already tight real estate market. The patchy settlement which resulted made the provision of services more difficult than had Sudbury been more densely settled. The CPR's speculative land freeze also seemed ill advised from a business point of view because the news of "nickel tainted" copper brought the mining excitement to a quick end.⁷⁴

With the slump in mining activity, Sudbury's permanent population of somewhere between 300 and 1,000 persons looked to lumber, agriculture and the railway for sustenance. But these alternatives lacked the spectacular force of mining: the Globe concluded in September 1887 that without mining Sudbury's development "will almost necessarily be slow." Accordingly, Sudburians welcomed the steady, if slow, progress at Canadian Copper's nearby works and were heartened when "gold fever" created the "wildest excitement" in October 1887.⁷⁵

Gold seekers soon outnumbered the permanent population; they found a village standing

in the midst of a clearing not more than 100 or 150 acres in extent. The streets, if such they may be called, being destitute of road or sidewalks, run at all angles, and with the exception of the block facing the station are built at considerable intervals, thus giving the place a straggling appearance. All of the buildings are built with fresh lumber from the mill.⁷⁶

The new arrivals, men "almost equally divided between examining specimens, talking of finds and drinking whiskey", faced greatly inflated prices for goods and especially housing: real estate values quadrupled between 1887 and 1890. But the boom years took their toll: by July 1889 Sudbury was "practically at a standstill... rents are too high and people are kept from coming here because they cannot get houses to live in." The situation then eased because the CPR, which received much criticism for its land policy, decided land prices had peaked: In October 1889 it renewed the sale of its lots.⁷⁷

The resumption of sales was well timed, for new nickel markets rekindled mining excitement. Prospectors, speculators and ne'er-do-wells again streamed into Sudbury; this third mining boom helped to finance more permanent improvements. Sudbury, as the Manitoulin Expositor

described it in November 1890, was the regional marketing, administrative and social centre: "a town of about a thousand inhabitants, well laid out, good streets, pretentious buildings, first rate stores, four hotels and a busy, pushing, energetic population." But a Globe correspondent who visited the "Nickel Metropolis" a month later was less impressed:

A glance at the town shows that it has grown up too rapidly to allow for any unnecessary style. The object of the builder in every case seems to have been to get the home into habitable condition, leaving such matters as architectural style and decorative embellishment to follow when time for them could be better spared. One consequence is that Sudbury has even more than its share of the ugliness of the ordinary new town thrown down in mid-forest.

Sudbury, he conceded, was prosperous, but its high land costs and "dear" living reminded him of Mark Twain's graphic depiction of Virginia City.⁷⁸

Sudburians took little note of such criticism, or of the dismal physical state of the community' haphazard buildings, little order, no services and much filth were the norm. Their attention was directed instead to the rapid decline in the nickel boom; the "flush times" were over by late 1891. Sudburians, weary of Canadian Copper's "monopoly" and the "failure" of Provincial mining policy, tried unsuccessfully to establish a "custom smelter" intended to entice new nickel mining operations. But the economic downturn continued unabated and most fortune seekers left for greener pastures, leaving the permanent population to reassess the state of their community. A new pride of place emerged, accompanied by a determination to ensure Sudbury's position as "the coming metropolis of this great country." First and foremost came the call for town status. Sudbury, the local

elite argued, merited incorporation because it was

rapidly increasing in population and by reason of its central location in the nickel mining district... and its position as the junction of the Algoma branch of the Canadian Pacific Railway is likely to become an important business, mining and railway centre.⁸⁰

The fight for incorporation was won in 1892. The new town consisted of 2,560 acres; plenty of room remained for development, for only 380 acres were subdivided by 1894. Three distinct areas had taken shape: the first was the "old village near the railway station, a mix of commercial and residential buildings home to various nationalities. To the north-east, "French Town" was taking shape, and to the southeast a privileged Anglo-Saxon few enjoyed the relative cleanliness and view provided by residence near Lake Ramsey. Most buildings were of frame construction and 57 percent were rented, a not surprising statistic in that more than 85 percent of the residents would move on between 1893 and 1905. Notwithstanding this mobility and the still large numbers of woodsmen, miners, and prospectors who descended seasonally upon Sudbury, the town began taking on a more urban character. Brick and brick-veneer buildings were erected, building densities increased, and the Town Council oversaw the introduction of a wide range of urban services.⁸¹

Soon Sudbury's businesses, already serving lumber, railway, farm and commercial markets, grew more successful by meeting the demands of the nickel, gold, coal and other mining ventures of the mid-1890s. A

Sudbury Mining News editorial caught the prevailing spirit of optimism,

it claimed that there was

no question as to the future of Sudbury, situated in the midst of an inexhaustible supply of high grade nickel ore, which is mined by a company whose operations are a wonder to the visitor. To the west of us lies the Chelmsford plain, underlaid with a bed of coal, which in all probability, the present generation will not see

exhausted; to the east but a short distance are the Wahnapiatae gold fields, from which gold bricks will be turned out the coming summer as regularly as a roller mill turns out flour. In addition to the rich mineral wealth, we have vast quantities of pine and spruce right around us. With all these natural resources Sudbury is bound to become the "City of the North."⁸²

Optimism led to extensive land speculation on the outskirts of the settled portion of the town. Businesses, meanwhile, were expanded and improved to meet the challenge of new competition. By 1902 the combination of old and new gave Sudbury a comprehensive, regionally dominant commercial base, featuring over 100 businesses -- double the total of the "boom" days of 1891.⁸³

One new enterprise -- newspaper publishing -- helped to publicize Sudbury's progress. Two earlier publishing failures did not dissuade James ("Jimmy") Orr, who on 5 March 1891 published a first issue of the Sudbury Journal. It remained without local competition until 1894, when the Sudbury News (later the Sudbury Mining News) was established by H.J. French, who soon sold it to the Templeton brothers. The News and the Journal had powerful impacts on Sudbury, leading and reflecting public opinion and fostering local pride, albeit from fiercely competitive stances. The publishing battle ended temporarily in January, 1899, when fire destroyed the News' printing shop; a revamped News appeared in 1905. The fierce battle for readers saw both newspapers expand far beyond Sudbury: by 1899 the Journal served fifteen "surrounding" communities.⁸⁴

Thus the newspaper, like Sudbury's businesses, social institutions and government offices, gave Sudbury a regional role belying its small size -- the town's population was barely 2,000 by 1902. The local "metropolitan" status was self-perpetuating; once Sudbury-based businesses or institutions won regional roles, they improved their services and

facilities, further enhancing their regional dominance. By 1902, then, Sudbury had a permanent, almost sophisticated aura, especially when compared with the rude communities and countrysides that surrounded it.

The steps to this local dominance were summarized in a rather sarcastic Toronto Star report of 2 October 1902. After the mines were discovered, the report began,

the lumber companies kept their offices there...[and] the mining offices blossomed out... Brick buildings grew as if by magic; hotels and restaurants multiplied; business, which had jogged along sluggishly took forward at a hard gallop, two new banks thought it worthwhile to edge in... Sudbury filled up with mining engineers and prospectors; finally nine lawyers settled there, a sure sign that pickings were good. Since that time have been added churches, hospitals, paved streets, newspapers and the hundred and odd refinements and comforts of an advanced civilization.⁸⁵

Though the article chided Sudbury for its civic pretensions, its statements testified that the once-rude railway camp had entered the 20th century as the vigorous, multi-function central place of the Nickel Belt..

Sudbury asserted increased metropolitan influence over the Nickel Range because its location at the hub of the much improved transport and communications axes made it the logical base for a growing range of administrative, social and commercial functions. But the movement of goods, people or information still posed some problems, so the Nickel Belt's many mixed function villages remained local market, service and social centres -- often as adjuncts of Sudbury-based activities. Resource-based communities served similar functions, but notwithstanding often considerable facilities and large populations they existed mainly at the behest of the sponsoring firm. Thus "company towns", neither so important as Sudbury nor so small as the mixed function villages, formed the most volatile tier in a local urban hierarchy that provided abundant support for W.R.

Wightman's contention that progress on the Canadian Shield "sponsored urban rather than rural population increase."⁸⁶

CONCLUSION

Urban growth was the result of the rapid exploitation of the forest, soils and mines of the region. Sudbury, just a village in 1886, was perhaps the most successful town in New Ontario by 1902. The prosperity extended to the smaller centres, and even to the ~~pioneering farm~~ sector which enjoyed produce markets second to none in New Ontario. The good times resulted in a much-increased population; their efforts, plus outside aid, led to an improved physical and social infrastructure. The progress, while rapid, did not satisfy the local population which saw the natural riches of the region as a passport to an even better way of life. Achieving greater yet more stable progress in the Nickel Belt, while coping with monopoly control of the nickel industry, a declining timber supply and the difficulties of farming in the North, posed a monumental challenge for the future.

NOTES

¹ Archibald William Currie, The Grand Trunk Railway of Canada (Toronto: University of Toronto Press, 1957), 316-18; Grand Trunk Railway Company, Special General Meeting to be held Thursday, 23rd February, 1888 (London: The Company, 1888), 2-4; Poor's Manual of Railroads (1888): 991, 1004. On a possible GTR line to Sudbury: Globe, 26 January 1884, 18 May 1886. Interest in a rail line north is evident in the Toronto Board of Trade, Report... of the Toronto Board of Trade 1885, (Toronto: Hunter, Rose & Co, 1886), 33.

² Canadian Pacific Railway (CPR), Annual Report (1888), 17, 31-33, foldout map; idem (?), The Canadian Pacific Railway: Its Geographical and Financial Position (London: Bates, Hendy & Co., 1888), map, n.p.; G.P. de T. Glazebrook, A History of Transportation in Canada (Toronto: Ryerson Press, 1938; repr. Toronto: McClelland and Stewart, 1964), 2:110; Donald Wilson, The Ontario and Quebec Railway: A History of the Development of the Canadian Pacific System in Southern Ontario (Belleville: Mika Publishing, 1984), 84, 129; Canada Gazette 21 (11 February 1888): 1776; Toronto Empire, 9 February 1888, 10 August 1888; Ottawa Free Press, 16 July 1888; Toronto News, 20 August 1888.

³ James Plomer and Alan Capon, Desperate Venture: Central Ontario Railway (Belleville; Mika Publishing, 1979), passim, see esp. 83, 94, 98; Robert Dorman, A Statutory History of the Steam and Electric Railways of Canada, 1836-1937 (Ottawa: J.O. Patenaude, 1938), 152; Canada, Statutes, 1888, 51 Vic., c. 64.

⁴ Despite provincial and federal offers of aid, plus the participation of such notables as Frank Cochrane (The Sudbury & Nipissing) and William H. Hearst (The Worthington and Onaping), the railway schemes were stillborn. For details see the respective Statutes plus Dorman, passim, and Noel Butlin, Finding List of Canadian Railway Companies Before 1915 (Washington: Bureau of Railway Economics, Association of American Railroads, 1953), 8-9, 14-20, 26-31.

⁵ By 1890 all operating mines had rail service. Toronto Mail, 12 December 1890. On the CPR spurs: CPR, Annual Report (1886): 36, 38; (1887): Schedule A, n.p.; (1888): 29; Poor's Manual of Railroads (1888): 960, 963; (1889): 931-34.

⁶ Upgrading the Algoma Branch cost at least \$1,274,986. CPR, Annual Report (1887): Schedule A, n.p. Mixed freight-passenger trains travelled the Branch from 1886 through April 1888; the line then was closed to passenger traffic until further improvements were completed in the summer of 1888. CPR, Annual Report (1886): 15-16, 38; (1887): 15; (1888): 29; Canada, Statutes, 1886, 49 Vic., c. 9; *ibid.*, 1887, 50-51 Vic., c. 56. Newspaper coverage includes: Toronto World, 18 May 1886, 15 January 1887, 4 May, 15 June 1888; Toronto Mail, 12 July, 26 November 1886, 5 October 1887, 2, 19 January, 22 September 1888; Globe, 13 June 1888.

⁷ Clergue acquired control of the M&NSR through Canada, Statutes, 1901, 1 Edw. VII, c. 74. On the line's long road to operating status: Dorman, 25-27. Local and outside observers lauded Clergue's optimistic plans. See: Town of Sudbury, "Minutes of the Council," (hereafter Sudbury, "Minutes"), 21 February 1900; J. Castell Hopkins, ed., Morang's Annual Register of Canadian Affairs 1901 (Toronto: George N. Morang & Co., 1902 388-89. Clergue proposed lines through much of north-central Ontario: Ontario, Crown Lands Department, Map of the Province of Ontario, Canada 1902 (Toronto: The Copp Clerk Co., 1902(?)), Scale: 1 inch = 40 miles. For details on construction and early operations: Canada, Annual Report of the Department of Railway and Canals; Ontario, Report of the Commissioner of Public Works for the Province of Ontario (hereafter Public Works). For much detail on the line at the time of Clergue's failure: Ontario, "Return of Documents in Connection with the Bill respecting Aid to the Algoma Central and Hudson Bay Railway," Sessional Papers (hereafter SP), 1904, no. 85, passim, see esp. app. T.

⁸ Aeneas McCharles, "Nickel City," Toronto Mail, 3 September 1890, p. 8; William F. Golfer and B.H. Buckingham, Report of Commander Folger and Lieut. Buckingham to the Secretary of the United States Navy, Upon the Nickel and Copper Deposits of Sudbury Ontario [1890] (Ottawa: Free Press Book & Job Print, 1898), 6, 15-16. Most of the existing trails are depicted on Geological Survey of Canada (GSC) Province of Ontario Districts of Algoma and Nipissing (Sudbury Sheet) (Map Sheet 130) (Ottawa: Mortimer & Co. for the GSC, 1891) Scale: 4 miles = 1 inch. For local complaints see: Toronto Mail, 7 May, 6, 22 August, 1 December 1891.

⁹ Toronto World, 4 May 1888; Globe, 3 December 1892. Local road improvement followed a pattern not unlike the earlier experience to the south. There, as Thomas McIlwraith has observed, earlier settlers melded traditional procedures with local expedients. Thus stone boats preceded wagons and scows were precursors to bridges. Similarly, the primitive trails and tote roads, through local and provincial effort, were replaced by gravelled and, later, hard-surfaced routes. And statute labour was abandoned in favour of better local and even more sophisticated provincial control. Thomas McIlwraith "Transportation in the Landscape of Early Upper Canada," Perspectives on Landscape and Settlement in Nineteenth Century Ontario, ed. J. David Wood (Toronto: McClelland and Stewart, 1975), 51-52; W.J. Fulton, "History of Ontario Roads," Annual Report of the Association of Ontario Land Surveyors 50 (1935): 141-48; Ontario, Report of the Royal Commission on Transportation (Toronto: King's Printer, 1939), 36-56.

¹⁰ As early as 1886 Thomas Froot called for a "judicious outlay" by the Superintendent of Colonization Roads. Globe, 20 February 1886. There were many later pleas for provincial aid; Aeneas McCharles' regular columns in the Toronto Mail were most prominent. On the road to Chelmsford: Ontario, Report of the Commissioner of Crown Lands of the Province of Ontario (hereafter Crown Lands), 1889, app. 39, p. 63, 69; *ibid.*, 1890, app. 35, p. 69; Ontario, Public Accounts of the Province of Ontario (hereafter Public Accounts), 1889, 261; Montreal Gazette, 27 July, 21 August 1889. The

Copper Cliff Road also received \$153 worth of work: Ontario, Public Accounts, 1889, 257.

¹¹Sudbury Journal, 13 July 1893. See also *ibid.*, 6 September 1894. The brief discussion of road construction that follows is based heavily on the annual "Report of the Superintendent of Colonization Roads" in Crown Lands plus the fiscal details available in the Public Accounts. Contemporary maps and Ontario, Report of the Bureau of Mines, (hereafter OBM) are helpful as well.

¹²"Road Expenditure in Townships," in Ontario, Report of the Commissioner of Highways, 1903, 99-100.

¹³Funding totals compiled from Colonization Road reports and the annual Public Accounts. The Town of Sudbury also provided a few hundred dollars for road work beyond its jurisdiction. Sudbury, "Minutes," 6 June 1895, 3 July 1899. Sudbury Council also requested extra provincial aid for routes connecting Sudbury to Rayside Township and Lake Wanapitei. *Ibid.*, 5 February 1900, Toronto World, 22 February 1897. The Township Municipalities did much the same. In 1894 the Drury, Denison & Graham Council requested aid from John Boyd, Colonization Roads inspector based in Thessalon; three years later Reeves Belanger and Lacoste of Balfour and Rayside Townships travelled to Toronto seeking additional funds. Union Municipality of Drury, Denison & Graham, "Council Minutes," 5 May 1894; Toronto Star, 22 February 1897.

¹⁴Sudbury Journal, 20 July 1899.

¹⁵C.C. Fairchild, "Surveyor's Report, Township of Bowell," 1 November 1899, Simcoe, in Crown Lands, 1900, app. 22, p. 39.

¹⁶According to the various gazetteers and business directories most of the local CPR stations boasted telegraph service. The spread of postal service can be traced through the annual Canada Official Postal Guide (Ottawa: Government Printing Bureau).

¹⁷Dominion Mineral's Blezard mine featured the first in-plant telephone service; rival firms quickly followed suit. Ontario, Report of the Inspector of Mines for the Province of Ontario (1890) (hereafter Inspector of Mines), 14. On Sudbury's telephones: Sudbury, "Minutes," 12 April, 8 June 1899, 31 December 1901, 20 January 1902; Sudbury Journal, 15 June 1899, 9 January, 3 April 1902. Evans' telephone subscribers numbered just 23 persons, so John and Richard Doe were added to reach the mandatory figure of 25 subscribers. Sudbury Star, 2 August 1930; Charles Dorion, The First 75 Years: A Headline History of Sudbury, Canada (Ilfracombe, Devon: Arthur H. Stockwell, 1959), 260. Canadian Copper's private system at Copper Cliff was linked to Bell's service in Sudbury almost immediately. Town of Copper Cliff, "Town Council Minutes," (hereafter Copper Cliff, "Minutes"), 8 May 1902; Cheryl Daminato et al., A Bit of The Cliff: A Brief History

of the Town of Copper Cliff Ontario 1901-1972 (Sudbury (?): Copper Cliff Museum, 1982), 13.

¹⁸ Canada, Electoral Atlas (Ottawa: Department of Public Printing and Stationary, 1895), Map 64, Scale: 32 miles = 1 inch. Canada, Statutes 1892, 55-56 Vic., c. 11, s.2 (m); 1893, 56 Vic., c.9.

¹⁹ Ontario, Statutes, 1897, 60 Vic., c. 19. The Colonization Roads funding is discussed above. Local schools first received provincial grants about 1889; at least 22 area schools were funded in 1902. For more details on the Sudbury jail see below; the region was divided between the Nipissing and Algoma Division Courts. Sudbury was the sole local seat for those Courts until 1898, when Chelmsford became the seat of Division 5 of the Algoma Court. Ontario, Report... Inspector of Division Courts, 1898, p.5. The Province also funded various local officials, including Stipendiary Magistrates, Provincial Constables, a fisheries overseer, several forest rangers, clerks, bailiffs and the like. The Sudbury General Hospital received provincial grants commencing in 1895. The best evidence of increased provincial spending is in the Public Accounts. See also the reports of the various departments and branches of the government.

²⁰ This is a very simplified version of the regulations governing unincorporated townships as outlined in The Assessment Act, The Statute Labour Act and The Public Schools Act. The sections relevant to "unorganized" Northern townships remained largely unchanged from 1887 through 1927. Ontario, Revised Statutes of Ontario, 1887, c. 193, ss. 102-118, c. 225, ss. 41-50; ibid., 1927, c. 239, ss 10-30, c. 323, ss. 41-46.

²¹ For instance, the Rev. E.D. Pelletier, a Presbyterian, complained in 1895 that the Cartier public school was "practically a Roman Catholic school" where most instruction was in French. Presbyterian Church in Canada, "Report of the Board of French Evangelization, Acts and Proceedings of the General Assembly of the Presbyterian Church in Canada (hereafter General Assembly) 1895: app. 12, p. 1. The first "summer mining school" was held in Sudbury and Copper Cliff in July 1894; the Bureau of Mines maintained these practical classes for more than a decade. See the reports on "Summer Mining Classes," (author and title vary) in OBM, 1894-1908. By 1900-01 Alfred Fitzpatrick had established his first "Reading Camps" near Nairn Centre. Labour Gazette 3 (December 1902): 473-74; Sault Star, 31 August 1901.

²² For example see Lorne Township, "Pöy tä kirja tehty Lorne Townshipin Tie Commissionien kokouksessa," (Minutes of the Lorne Township Road Commission's Meetings), 5 May 1921, point VII. Carelessness, poor organization and constant bickering led to the quick abandonment of statutory labour by organized municipalities; the unincorporated townships had no option but to make do. On the inadequacies of statute labour for road construction and maintenance: A.W. Campbell, Report of the Provincial Instructor in Road Making, 1896, 5, 11-14.

²³ See Ontario, Statutes, 1889, 52 Vic., c. 43, s. 1, 3; ibid., 1901, 1 Edw. VII, c. 35. There are few extant records from the unorganized townships. The Lorne Township records, written in Finnish, are a happy exception. On the irregular meetings see the entry for February 1925, when no meeting was held because everyone was away at work. Statutory road and school board meetings were held in Finnish in Lorne, Louise, Broder and perhaps other townships. Sudbury Star, 21 July 1917; Vapaus, 10 January 1927; Lorne Township. "Pöytäkirja tehty Lorne townshipin yleisessä kokouksessa," (Minutes of the Lorne Township General Meetings). Presumably the mainly francophone unorganized townships used French, as did the neighbouring incorporated township councils.

²⁴ The township incorporations can be traced through the Ontario Gazette, local records, or more conveniently, in Sawchuk and Peach (Inc.), Nickel Basin Planning Study (Toronto (?): Ontario Department of Municipal Affairs, 1967), app. I. Detailed municipal statistics are available in Ontario, "Statistics of Ontario Municipalities," Annual Report of the Bureau of Industries for the Province of Ontario (hereafter Statistics of Ontario Municipalities). On the status of Northern townships: Charles Conniff James, "Some Notes on the Growth of Municipal Institutions in Ontario," Annual Report of the Bureau of Industries, 1896, app. 3, p. 21. Absentee landholding reduced local revenues: Municipal World 9 (April 1899): 63-64. Local histories and township minutes outline the painfully slow extension of municipal services.

²⁵ Canadian Mining Review (CMR) 11 (November 1892): 191; See also the Toronto Mail, 30 November 1892, which reported it was "high time" that Ontario clean up the Sudbury area mines. On Victoria Mines: William Makinen, "The Mond Nickel Company and the Communities of Victoria Mines and Mond," Industrial Communities of the Sudbury Basin, (Sudbury and District Historical Society Publication No. 2) (Sudbury: The Society, 1986), 27-31; Rev. Allan Findlay, "Report of Rev. Dr. Findlay, Superintendent of Northern Ontario Missions," Presbyterian Church in Canada: General Assembly (1901): app. 1, pp. 11-12.

²⁶ Ontario, Statutes, 1901, 1 Edw. VII, c. 51; Sudbury Journal, 4, 18 April 1901; Copper Cliff, "Minutes," 22 September 1902, 26 January 1903; Eileen Goltz, "Copper Cliff: The Pioneer Period" Industrial Communities of the Sudbury Basin (Sudbury and District Historical Society Publication No. 2) (Sudbury: The Society, 1986), 18-19; Damiano et al., 19, 24-25.

²⁷ Ontario, Statutes, 1892, 55 Vic., c. 88; Sudbury Journal, 14 January, 17 March, 7 April 1892. The move to incorporate made good sense because Sudburians were already paying about three-quarters of McKim Township's fast-rising tax levy. Manitoulin Expositor, 15 November 1890; Sudbury Journal, 24, 31 December 1891, 14 January, 15 September 1892. General coverage of the Town Council's actions include: Donat M. LeBourdais, Sudbury Basin: The Story of Nickel (Toronto: The Ryerson Press, 1953), 77-81;

Edwin Higgins and Frank Peake, Sudbury Then and Now; a pictorial history of Sudbury and area 1883-1973 (Sudbury: The Sudbury & District Chamber of Commerce, 1977), 49-50, 57-58; Gilbert Sterter, "The Origins of a Company Town: Sudbury in the Nineteenth Century," Laurentian University Review (hereafter LUR) 3 (February 1971): 20-22; Carl Wallace "Sudbury: The Northern Experiment with Regional Government," ibid., 17 (February 1985): 87, 90. See also Sudbury, "Minutes," passim, which reveal great interest in civic improvement. Expenditures calculated from Ontario, Statistics of Ontario Municipalities, 1891-1902.

²⁸ George Grant, "Extract from Report of Rev. George Grant, Inspector," Ontario, Report of the Minister of Education, 1890, 209. Also: ibid., 1889, 140; Ontario Public Accounts, 1889, 86, 91, 100; Toronto Mail, 3 December 1889; Robert H. Arthur, "The Schools of Sudbury," The Establishment of Schools and Colleges in Ontario, 1792-1910, ed J. George Hodgins (Toronto: L.K. Cameron, 1910), 2:59.

²⁹ Sudbury, "Minutes" contain occasional references to "Poor & Indigent" and "relief" Committees. See, for example, 9 March 1896, 4 June 1897. On hospitals: Huguette Parent, "L'hôpital Saint-Joseph de Sudbury 1896-1975," (M.A. diss., Laurentian University, 1985), 60-63; Ontario, Report upon the Hospitals of the Province, 1896, pp 125-27; ibid., 1897, p. 162; Sudbury Journal, 18 February 1892, 1 December 1898, 30 November 1905; Sudbury Star, 28 May 1913.

³⁰ The fire department, meanwhile, was a fully volunteer group; it did boast a pumper truck and fire hall. Manitoulin Expositor, 15 November 1890; Sudbury, "Minutes," 20 April 1893; Edwin Higgins, The Sudbury Fire Department 1883-1976 (Sudbury: Private printing, 1976 (?)), not paginated. On policing: idem, Twelve O'Clock and All's Well: A Pictorial History of Law Enforcement in the Sudbury District (Sudbury: Sudbury Regional Police Association, 1978), 5; Sudbury, "Minutes," 15 February 1894.

³¹ Ontario, Public Works, 1867, 10; 1890, 12; 1892, 20; 1893, 23; Ontario, Report upon the Common Gaols, Prisons and Reformatories of the Province, 1887, 65; 1889, 72-73; 1890, 64; 1891, 64; 1892, 79; 1893, 78; Ontario, Public Accounts, 1892, 275; 1893, 285. The "common gaol" status was put in place through Ontario, Statutes, 1895, 58 Vic., c. 13, s. 35.

³² On the need for better services: Sudbury Journal, 2, 30 April 1891. On the early Town Council efforts: Sudbury, "Minutes," 10 October 1893, 7 June 1894; Sudbury Journal, 26 October 1893; L.V. Rorke, "Sudbury Waterworks," Proceedings of the Association of Ontario Land Surveyors (1898): 135; Sudbury Star, 26 November 1910.

³³ The Blezard mine was the first Ontario mine equipped with electricity. Ontario, Inspector of Mines, 14. Murray mine also had electric lights before 1890 was out: CMR 9 (November 1890): 154. J.A. Farlinger's work for the Royal Electric Light Company is noted in the Sudbury Journal, 16 June 1892.

³⁴ Sudbury, "Minutes," 10 October 1893, 21 August 1894, 29 February 1896; Sudbury Journal, 16 August 1894, 9 May 1895, 23 July, 10 December 1896; Rorke, 135-139; Neville Barnett, "History of Hydro in Sudbury 1895-1966," unpublished manuscript, 1967, Regional Room, Sudbury Public Library (hereafter SPL).

³⁵ Sudbury's 400 or so Catholics made up three-quarters of the village population in 1887. The Catholic Record, 1 October 1887; Le Devoir (Montreal), 18 August 1925, 18 August 1925. St. Anne's Church extensive dimensions quickened the expansion of Catholic-sponsored educational and community activities. Fr. Louis Heroux, "Aperçu sur les origines du Sudbury," Documents historique de la Société historique du Nouvel-Ontario (hereafter Documents historique) 2 (1943): 20. On the building of the church: Ottawa Free Press, 17 September 1887, 8 June 1888; Toronto World, 14 September 1889. The extent of the Roman Catholic effort is readily apparent in the Jesuit Archives (ASJCF) located at the Université du Sudbury. Useful general studies are: Alphonse Raymond, s.j., "Paroisse Sainte-Anne de Sudbury -- 1883-1955," Documents historique 26 (1953); J.B. Waddell, s.j., "Histoire de la paroisse St. Anne," unpublished manuscript, 1933 (?), ASJCF file B-3-8.

³⁶ The ASJCF files provide details on all these missions. Local parish histories provide more accessible information. See, for example, Fr. Laurent Martin, "La paroisse Notre-Dame-du Rosaire," Documents historique 24 (1952): 36-41; Fr. Lionel Seguin, Historique de la paroisse de Chelmsford, Ontario (Sault Ste. Marie(?): The Diocese, 1948).

³⁷ Local histories and newspaper coverage provide much information, but the best sources are Presbyterian Church in Canada, "Presbytery of Algoma Minutes," microfilm copy, Laurentian University Library, Sudbury; idem, General Assembly, 1886-1902. The latter contains not only statistical tables but very useful "Home Mission" and "French Evangelicization" reports. On Sudbury see: Graeme Mount and Michael Mulloy, A History of St. Andrew's United Church (Sudbury: Journal Printing, 1982); other local United Church histories are either very limited in scope or non-existent.

³⁸ Frank Peake and Robert Horne, The Religious Tradition in Sudbury (Sudbury: Journal Printing, 1983), 40. Two of the earliest "Union Churches" were at Copper Cliff and Murray mine: OBM (1893): 188; Maurice Cabana-Proulx, "Les église protestantes au Nouvel-Ontario avant 1900," Documents historique 73 (1981): 46.

³⁹ Christian Guardian, 8 June, 21 September, 19 October, 1887, 7 November 1888, 27 March 1889; Methodist Church of Canada, "Nipissing District Minutes 1888-1898," microfilm copy, Laurentian University Library, Sudbury; idem, "Report of the Superintendent of Missions for New Ontario," Journal of Proceedings of the General Conference of the Methodist Church; idem, Proceedings of the Montreal Annual Conference of the Methodist Church 1895; idem, Proceedings of the Toronto Annual Conference of the Methodist

Church 1899, 1902.

⁴⁰ Dominion Churchman, 2 December 1886; 23 February 1888; Church of England in Canada "Report of the Missionary Bishop of Algoma," Journal of the Proceedings of the Provincial Synod of the Church of England in Canada, 1886-1901. The quote is from ibid., 1898, 123. Also: Algoma Diocese, Church of England, Journal of Proceedings of the Triennial Council of... the Diocese, 1892-1904; P.F. Bull, The Church of England in the City and District of Sudbury (Sudbury: Porter Publishing, 1936), 16-18; Robert Lumley, ed., Look Unto the Rock: A History of All Saints Anglican Church 1900-1980, Victoria Mine [sic] Coniston (Sudbury: The Northern Press, 1981); Frank Peake, The Church of the Epiphany: A Century of Anglican Witness (Sudbury: Journal Printing, 1982).

⁴¹ Baptist Convention of Ontario and Quebec, The Baptist Year Book, 1901, 49.

⁴² War Cry, 17 June 1899, cited in Peake and Horne, 34; Sudbury Star, 7 July 1969; Robert G. Moyles, The Blood and Fire in Canada: A History of the Salvation Army in the Dominion 1882-1976 (Toronto: Peter Martin Associates, 1977), 280.

⁴³ Area Poles also received a few Catholic services in their own language. Mary Stefura, ed., Towards Sudbury's Centennial 1883-1983 (Sudbury: Sudbury Regional Multicultural Centre, 1982), 11; Henry Radecki, "Polish Immigrants in Sudbury, 1883-1980," Polyphony 5 (1, 1983): 49. The most detailed history of the Finnish effort is Lauri Pikkusaari, Copper Cliff in Suomalaiset ja Copper Cliffin Suomalainen Evankelis-Luterilainen Wuoristo-Seurakunta (Hancock: Suomalais-Luterilainen Kustannusliike, 1947).

⁴⁴ Higgins and Peake, 49; Daminato et al., 53.

⁴⁵ The Orange Order, for instance, has been credited with perpetuating the Protestant-Irish identity even in the frontier setting of New Ontario. Donald Dennie, "The British in Northeastern Ontario: the ubiquitous minority," LUR 15 (November 1982): 75; Cecil J. Houston and W.J. Smyth, "The Orange Order in Nineteenth Century Ontario: A Study in Institutional Cultural Transfer," University of Toronto, Department of Geography, Discussion Paper 22 (1977): passim, esp. p. 51. Orr made his claim in the Sudbury Journal, 5 July 1894. Little wonder: by 1891 Sudbury boasted more than ten lodges, including the IOOF, OUW, AOOW, IOFC, CMBA, RT of T, Masons, Orange Order, and Sons of Scotland. ibid., 5 March, 4 November 1891. Copper Cliff featured the Good Templars, Orange Order and several other societies by 1892. ibid., 7 January, 19 May 1892; Daminato et al., 53-55.

⁴⁶ Société St.-Jean-Baptiste, Sudbury, "Minutes," ASJCF, file C-2-1, sub-file "Divers." For more information see: Gail Cuthbert-Brandt, "J'y suis, j'y reste': The French Canadians of Sudbury, 1883-1913," (Ph.D. diss., York University, 1976), 225; idem, "The Development of French Canadian

Social Institutions in Sudbury, Ontario 1883-1920," LUR, 11 (February 1979): Passim, esp. 19-20; Gaetan Gervais, "Les Franco-Sudburois, 1883-1983," Polyphony 5 (1, 1983): 21-23.

⁴⁷"Pöytäkirja tehty Oikeuden Ohje seurallen Copper Cliff," (Minutes of the Proper Way Society Copper Cliff), 1895-1907, Finnish Canadian Historical Society Collection Drawer 3, Box 4A, 4B, Public Archives of Ontario (PAO); "Yhtyny Lehmaa Yhristyks [sic]" (United Cow Effort) Records, 1900-1907, privately held by Mr. Richard Stephenson, Whitefish, Ontario.

⁴⁸The Sudbury Journal contains numerous references to local and distant sporting events. Organized sporting clubs dated from no later than 1889. Dorion, 239-42; LeBourdais, 103-105; INCO Triangle 43 (May 1984): 8-9; Frank Pagnucco, Home Grown Heroes: A Sports History of Sudbury (Sudbury: Miller Publishing, 1982). The Liberal Independent Club is cited in the Sudbury Journal, 17 November 1892. On the Sudbury Literary Institute: Dorion, 228. Work toward Board of Trade had begun by 1891, although formal registration with the Secretary of State awaited 1895. Sudbury Journal, 19 March 1891, 7 February 1895, 30 March 1895; LeBourdais, 89; Higgins and Peake, 59. The Rayside and Balfour Agricultural Society was a year old in September 1893; the larger Association received \$50 from the Sudbury Town Council in 1895. Sudbury Journal, 21 September 1893; Sudbury, "Minutes," 1 August 1895.

⁴⁹On the difficulties involved in organizing miners: David J. Bercuson, Fools and Wise Men: The Rise and Fall of the One Big Union (Toronto: McGraw-Hill Ryerson, 1978), 29; Brian F. Hogan, "Hard Rock and Hard Decisions: Catholics, Communists and the IUMMSW - Sudbury Confrontations," The Canadian Historical Association: Annual Conference Proceedings on Microfiche (1985), fiche no. 53, p.1; Douglas Baldwin, "A Study in Social Control: The Life of the Silver Miner in Northern Ontario," Labour/Le travailleur 2 (1977): 103-05.

⁵⁰Quote: Toronto Mail, 12 December 1890. The impressionistic evidence available in newspaper reports and the OBM is confirmed by the manuscript census. It indicates that French Canadians were most numerous, followed by Anglo-Saxon Canadians, then the Finnish, Irish, Scottish, American, German and Welsh born. The census takers, unfortunately, did not maintain standard occupational descriptions; this factor, plus other flaws in the census, limits my sample to 409 men and boys. Half were mine labourers; one quarter were "miners". Skilled workers and company officials made up most of the remainder; imprecise census terminology left the reduction workforce seriously under-represented in the sample. This difficulty, plus the relative absence of labour-intensive, systematic mining in 1891, may account for the small number of Italians and East Europeans then associated with local mineral activities. Canada, Manuscript Census, 1891, Ontario, Nipissing, Subdivisions I, J, PAC RG 31, Reel T-6355; *ibid.*, Algoma, Eastern Division, Subdivision H; Algoma, Western Division, Subdivision AA¹ AA² PAC RG1, Reel T-6323.

⁵¹ Peters' brand of "humour" is reported in the Ottawa Free Press, 4 October 1889. The audience of mining engineers was quite amused by the near fatalities. The early open "cuts" were very cold and wet. ibid., 18 May 1888. On the roast yards: David H. Browne, quoted in LeBourdais, 60. Improvements came both from efforts to increase productivity and to ease worker unrest. The Drury Nickel Company, while shortlived, deserves credit for being a leader in "treating its men well." Toronto Mail, 3 November 1891. On the new techniques: Barlow, 186; Joseph Boldt, The Winning of Nickel: Its Geology, Mining and Extractive Metallurgy (Toronto: Longmans Canada, 1967), 88-93; plus the various reports in the OBM. On wages see OBM; Toronto Mail 29 October 1889, 6 August 1891; Sudbury Journal, 8 October 1891, 21 September 1899, 30 August 1900; Sault Star, 31 October 1901; CMR 19 (November 1900):25, 21 (August 1902): 209; Canada, Labour Gazette 1 (February 1901): 286; INCO Triangle 1 (September 1936): 6.

⁵² Sudbury Journal, 9 April 1891, 27 February 1896, 5 October 1899.

⁵³ On the 1897 group: Yrjo Raivio, Kanadan Suomalaisten Historia (Thunder Bay: The Finnish Canadian Historical Society, 1979), 2:40; "Pöytäkirja Tehty Oikeuden Ohje seurallen Copper Cliff," (Minutes of the Proper Way Society Copper Cliff), 14 January 1899. On 1899: Sudbury Journal, 20, 27 July 1899. On 1901: Sault Star, 23 October 1901. The first "contact" by mine unions predated 1900: in the late fall of 1899, the "Six Miners' Unions of Kootenay" published pleas that Sudbury-area miners "stay away" during the ongoing labour troubles. Sudbury Journal, 23 November 1899.

⁵⁴ Toronto Mail, 7 October 1889. For Rev. Wilson's view: ibid., 23 November 1887. For other positive assessments of the "well behaved and law abiding" citizenry: ibid., 26 September 1891; Sudbury Journal, 20 February 1902. Yet the local newspaper admitted in 1899 that the area had more liquor outlets than "the strict letter of the law allows. This was done on account of the large floating population." Sudbury Journal, 20 April 1899. About 50 to 80 percent of the local taverns were in Sudbury -- their numbers fluctuated according to local economic fortunes. Ontario, Report of the Inspector of Liquor Licenses, 1886-1902.

⁵⁵ For attacks on the "foreign element" see: Toronto World, 14 September 1889; Sudbury Journal, 19 September 1901. Between 1884 and 1898 a total of 1,139 persons were charged at Sudbury. Of these, 65.0 percent were Canadian, 10.1 percent Irish, 6.1 percent English, 4.5 percent American, 3.7 percent Scot and 10.6 percent of "other" nationalities. Sudbury ranked 49th provincially (on a raw number basis) in 1887 with only 4 convictions; it ranked fourth by 1901 with 331 convictions. Ontario, Report upon the Common Gaols, Prisons and Reformatories of the Province, 1884-1902. Despite occasional criticism of the "cesspools of social evil" dotting the area, convictions on prostitution-related activities were relatively rare; most convictions were on charges of being "drunk and disorderly." For comments see the Christian Guardian, 19 September 1888; Sault Star, 17 October 1901.

⁵⁶ Ontario, "A Return from the Records of the Votes cast 'Yes' and 'No' on the question of Prohibition, on 1st January last, under 56 Vic., cap. 41," Sessional Papers (SP), 1894, no. 70, p. 4, 25; Canada, "Report of the Prohibition Plebescite held on the 29th day of September 1898...", SP, 1899, no. 20, pp 74-75; Peake and Horne, 78-79.

⁵⁷ The various commercial directories provide much detail. See, for instance, Might Directories, Ontario Gazetteer and Director; idem, Province of Ontario Gazetteer and Directory; Ontario Publishing and Advertising Co., Ontario Gazetteer and Directory; Bradstreet Company, Bradstreet's Commercial Ratings... Dominion of Canada; Dun & Bradstreet, Reference Book; Dun & Wiman, Reference Book; R.L. Polk & CO., Ontario Gazetteer and Business Directory; J. Lovell & Son, Lovell's Business and Professional Directory of the Province of Ontario. The microfilm collection plus the Regional Room of the D.B. Weldon Library, University of Western Ontario, contain many issues of these annual/biannual publications. Here and throughout the thesis, discussion of communities and their businesses relies heavily on these directories; detailed citations are kept, to a minimum for reasons of space. Local histories are equally helpful. See, for example, Cheryl Young, "Larchwood: A Local History," unpublished (?) manuscript, 197-(?), SPL; Robert Trott, The Story of Onaping Falls (Sudbury: Acme-Printers, 1982).

⁵⁸ Newspaper reports and the directories cited in note 56 provide much additional detail. Survey plans for these villages are available in: Sudbury District Registry Office, "Subdivision ["M"] Plans," unpublished file, 1886-1931. Microfilm copies available at the Main Library, Laurentian University. See plan M-3 for Whitefish; M-4 for Chelmsford; M-9 for Wahanpitae; M-33 for Nairn Centre. Local histories include: Seguin; Jeanne Vaillancourt, Chelmsford, 1883-1983 (Ottawa: Le Club 50 de Chelmsford, 1983); Albert Crick, The History of Nairn, 1896-1966 (n.p.: Privately printed, 1966); Debbie Mathias, A History of Cartier (Sudbury (?): Cartier Citizens' Organization, 1975).

⁵⁹ These farming centres were first noted in the directories about 1900. Some villages were subject to formal survey. On Blezard Valley see: William Walter Stull, "Plan of Subdivision of Part of East Half Lot 11, Conc. VI Township of Blezard," plan prepared for William Balcourt, 1902, Scale: 2 chains = 1 inch. In Sudbury District Registry Office, "Subdivision ["M"] Plans," M-25. Parish histories and newspaper reports supplement the following local histories. Leo Legault, "Blezard Valley," Documents historique 24 (1952): 29-40; Huguette Parent, "Le township de Hanmer 1904-1964," ibid. 70 (1979); N. Mallette, "History of McFarlane Lake," McFarlane Lake Bystander 1 (September 1961): 7, 17, 1 (October 1961): 5, 11.

⁶⁰ Forty camps is a conservative figure: with more than 80 locations opened, combined with the heavy manpower requirements of mining, there may even have been more rudimentary mine camps. Most of the sites opened or explored are listed in Robert Stephenson et al. A Guide to the Golden Age:

Mining in Sudbury, 1886-1977 (Sudbury: Department of History, Laurentian University, 1979), app. 1. Also see the maps published by the Ontario Bureau of Mines and the Geological Survey of Canada. On Ranger; Monetary Times 22 (21 September 1888): 329; Toronto World, 8 March 1888.

⁶¹ Worthington was established at or near a station site that the CPR had designated Fournier and was initially known as Crean-Harwood location. Toronto World, 23 January 1888. There is a wealth of information available on Worthington, which the local municipal council boosted in 1893 as having "recently become the centre of mining operations in the district of Algoma... also one of the most important business [sic] points on the Algoma Branch." Drury, Denison and Graham, "Minutes," 18 December 1893. Apart from numerous references in the directories see the Ontario Bureau of Mines Reports. Newspaper reports add more details. Especially good references are: Toronto Mail, 11 June 1889; Manitoulin Expositor, 27 July 1889; Sudbury Journal, 27 October 1892, 29 June 1893, 9 August 1894, 2 May 1895, 16 November 1899, 28 June, 22 November 1900, 13 June 1901.

⁶² Ottawa Free Press, 3 September 1887; OBM (1892): 245; Michigan Directories, Province of Ontario Gazetteer and Directory (1895): 724; Ontario Publishing and Advertising Co., Ontario Gazetteer and Directory (1901-02): 906. Directory listings continue well into the Twenties; they suggest the persistence of a tiny service community.

⁶³ On the first crews: K.G. Asialla, "Sudbury, Copper Cliff ja ympäristö," (Sudbury, Copper Cliff and surrounding area), unpublished paper, 1956, Finnish Canadian Historical Society Collection, PAO, Drawer 7, Box 19, no. 6, p. 38. On Creighton's early beginnings: OBM (1902): 240, 279-90; Ontario Publishing and Advertising Co., Ontario Gazetteer and Directory (1903-04): 221-222. The quote is from W.L. Goodwin, "Summer Mining Schools," OBM (1903): 57.

⁶⁴ Makinen, 26, 32-33; John M. Cohen, The Life of Ludwig Mond (London: Methuen, 1956), 204; A.C. Sturney, The Story of Mond Nickel (Plaitow: The Carven Press, 1951), 17; Engineering & Mining Journal 67 (10 June 1899): 692, 68 (12 August 1899): 199; Alfred E. Barlow, "Report on the Origin, Geological Relations and Composition of the Nickel and Copper Deposits of the Sudbury Mining District, Ontario, Canada," GSC, Annual Report 14 (1901), Report H, 40-41; OBM (1903), 268.

⁶⁵ McCharles' attempts at promoting Nickel City as a "health and pleasure resort" were, in the main, thwarted by the felling of local timber and the pollution associated with the Victoria Mines roast yards and smelter, five miles to the west. Aeneas McCharles, Bemocked of Destiny: the actual struggles and experiences of a Canadian pioneer and the recollections of a lifetime (Toronto: William Briggs, 1908), 124; Toronto Mail, 11 June 1889; Sudbury Journal, 26 March 1891; J. McFadden, PLS, "Plan of Nickel City: Being Subdivision of North Part of Lot 9 Concession 2 Township

of Graham Algoma," unpublished survey for A. McCharles, 21 August 1890. Scale: 200 feet = 1 inch. In: Sudbury District Registry Office, "Subdivision ["M"] Plans," M-2.

⁶⁶ Ontario, Inspector of Mines, 12-14; OBM (1891): 232; (1893): 188; (1896): 276; (1900): 99; (1902): 65, 208; CMR 11 (November 1892): 191; Manitoulin Expositor, 16 November 1889, 15 November 1890; Sudbury Journal, 9 August 1894, 23 April 1896; Sault Star, 2 January 1902. One of the few references to Mount Nickel, described in 1900 as "the centre of a network of new mines," is in Presbyterian Church in Canada, General Assembly (1900): app. 1, p. 8. For photographs: SPL Photograph Archives, Accessions no. 725, 834; "Photos -- Sudbury file," ASJCF, no file number; Journal of Canadian Mining Institute 5 (1902): 535 plus the OBM.

⁶⁷ Makinen, 27, 30-31; Findlay, 11-12; Barlow, 42; Sudbury Journal, 5 April 1900; Hiram Hixon, "Plan of Subdivision of Part of the North Half of Lot 8 Conc. II Township of Denison, Algoma," unpublished survey for the Mond Nickel Company, 20 (?) July 1901, Scale: 100 feet = 1 inch. In: Sudbury District Registry Office, "Subdivision ["M"] Plans," M-34; Globe, 10 April 1902.

⁶⁸ The quote is from George C. Wright, A Canadian Tour: A Reprint of Letters from the Special Correspondent of The Times (London: Times Publishing: 1886), 11. Wright was at Copper Cliff on 30 August 1886. The description of early Copper Cliff relies heavily on Goltz, 2-10; Daminato et al., 27, 29, 33; J.E. McKerrow, "Reminiscences of the Early Days," INCO Triangle 12 (January 1953): 4-5, 12 (February 1953): 12-13. Also helpful are: Bob Boudignon, "The Butte", unpublished manuscript, n.d., SPL, 3-4; John D. Evans, "Notes from John D. Evans' Diary," (1886-1893), unpublished manuscript, n.d., SPL, passim; John F. Thompson and Norman Beasley, For the Years to Come: A Story of International Nickel of Canada (New York: G.P. Putnam's, 1960), 294-96.

⁶⁹ Goltz, 6-9, 12; San & Wiman, Reference Book (September 1890): 42; (July 1890): 72. Church, institutional ethnic and other histories add additional information.

⁷⁰ Sudbury Journal, 27 October 1898; Goltz, 8-15. See above for details on the nickel industry.

⁷¹ Frederic Romanet du Caillaud, Sudbury, letter to wife, 14 June 1902, quoted in Lorenzo Cadieux, s.j., Frederic Romanet du Caillaud: "Comte" de Sudbury (1847-1919) (Montreal: Les editions Bellarmin, 1971), 68. On the ill-place roast yards: William D. McIlveen et al. "Early Roasting and Smelting Operations in the Sudbury Area -- An Historical Outline," unpublished manuscript, Ontario Ministry of the Environment, Sudbury Office, 198-, not paginated. On the general setting: Goltz, 6, 11; Daminato et al., 7-8; McKerrow, passim; INCO Triangle 5 (July 1945): 4-5; 6 (November 1946): 4; Toronto Star, 2 October 1902; James Lumsden, Through Canada in Harvest Time (London: T. Fisher Unwin, 1903), 317. Two of many photographs

are in INCO Triangle 13 (March 1954): 6; SPL Photograph Archive, Accession no. 856.

⁷²Goltz, 15; see also p. 20. On the businesses: Ontario Publishing and Advertising Co., Ontario Gazetteer and Directory (1901-02): 211; Dunn & Wiman, Reference Book (January 1901): 60; Sudbury Journal, 6 June 1901, 16 October 1902. The Courier's first issue emerged on 1 March 1902; no copies remain extant. A McKim Ltd., The Canadian Newspaper Directory (1907): 47; Daminato et al., 16; Sudbury Journal, 6 March 1902.

⁷³Toronto Mail, 12 July 1886; Ottawa Citizen, 29 October 1886; Manitoulin Expositor, 13 November 1886; Ottawa Free Press, 11 November 1886; Perth Courier, 17 December 1886. For more details on the 1886 "boom" see Chapter Three. Business was picked up by August 1886, when the Ottawa Citizen, 7 August 1886, predicted that Sudbury was "likely to have a large accession to its population" on account of the mines.

⁷⁴The original survey, while easily made because concession lines could be used for reference, contained various inaccuracies, including misplacing the Junction and Nolin Creeks. See: C.P.R. "Plan of Sudbury composed of Parts of Sub-divisions of Lots 5 and 6 in the 3rd Con. and Lots 5 and 6 in the 4th Con. of the Township of McKim," 29 December 1886, Scale: 200 feet = 1 inch. A good reproduction is in Higgins and Peake, 20. On the survey: Stelter, "Origins", 8; LeBourdais, 31; Antonio Presenza, "Sudbury: Pattern of Urban Growth 1883-1941," unpublished essay, Laurentian University, 1971, p. 23; Dennis Cuomo, "The Evolution of the Planning Process in the Sudbury Area; The Roles of the Principal Actors," (B.A. diss., Laurentian University, 1980), 6. The survey was made about August 1886; Ottawa Free Press, 6 September 1886. The land freeze was in place by November 1886; Perth Courier, 5 November 1886.

⁷⁵Virtually every contemporary source provides a different population figure; this reflects the difficulty in determining the "permanent" as opposed to the "floating" population. The quote is from the Globe, 3 September 1887. For Sudbury's business sector in 1887: Dun, Reference Book (July 1887): 275; (September 1887): 150. On the gold boom: Perth Courier, 28 October 1887 and Chapter III.

⁷⁶Toronto World, 23 April 1888.

⁷⁷Globe, 21 August 1888; Toronto Mail, 25 July 1889. The impact of the CPR real estate policy was noted in: Toronto Mail, 25 July, 29 October 1889; CMR 8 (September 1889): 108; Manitoulin Expositor, 15 November 1890.

⁷⁸Globe, 8 December 1890. The earlier quote is from the Manitoulin Expositor, 15 November 1890. The latest boom and its immediate impact on business is summarized in Toronto World, 14 September 1889; Toronto Mail, 3 December 1889. In the ensuing eighteen months, both the population and the business sector trebled in size. Compare Dun & Wiman, Reference Book (January 1890): 285-86 and *ibid.*, (September 1891): 159-60.

⁷⁹Sudbury's physical state received more detailed description in Stelter, "Origins" 19-21; Higgins, Twelve O'Clock, 5-6; McKerrow, 2; Higgins and Peake, 48-49; Thompson and Beasley, 76-77; LeBourdais, 76-77 plus other local histories. Also see the earlier discussion on municipal services. LeBourdais, 33, concluded that the smelter was "practically a civic enterprise." Also see Sudbury Journal, 11 February, 31 March 1892 and Chapter Three.

⁸⁰Ontario Statutes, 1892, 55 Vic., c. 88, preamble. Sudbury was described as "the coming metropolis" in the Sudbury Journal, 12 March 1891 (editorial). For more on the price of place: Stelter, "Origins", 30; Jules Garnier, Mines de nickel, cuivre et platine du District de Sudbury (Canada) (Paris: Imprimerie Glaix, 1891), 3; Sudbury Journal 2, 16 April 1891.

⁸¹Stelter, "Origins" 23; Presenza, 20; Cuthbert-Brandt, "J'y suis, j'y reste," 191; Sudbury Journal, 26 October 1893, 27 December 1894. By 1892 there were some 4,000 men employed at mining and timber camps in the "immediate vicinity" of Sudbury. Globe, 29 October 1892. The depiction of Sudbury and its sectors is a synthesis of numerous descriptions, statistical records and other sources. The photographs in the SPL Photograph Archive and the "Photos-Sudbury File," ASJCF provide striking evidence of Sudbury's growing permanence. On the transition from pioneer village to urban centre see especially Heroux, 20-22; Stelter "Origins," 23-24.

⁸²Sudbury Mining News, n.d., (April 1897(?)), quoted in Toronto World, 3 May 1897.

⁸³The number of businesses was compiled from Dun & Wiman, Reference Book (January 1901): 250 and Ontario Publishing and Advertising Co., Ontario Gazetteer and Directory (1901-02): 922-24. Thus Sudbury, by 1902, had over 50 businesses for every 1,000 persons resident there.

⁸⁴The Sudbury Journal was preceded by the Sudbury Star (1890(?)), a reprint of the North Bay Star, and the Sudbury Sun (1891), a reprint of the Nipissing Times. The latter, also known as the North Bay Times, was the oldest newspaper in Northeastern Ontario, dating from March or early April of 1886. Perth Courier, 9 April 1886; Gary Peck, "Not So Distant Past," scrapbook of newspaper history columns, SPL, no. 191, 21 March 1981; A. McKim & Co., The Canadian Newspaper Directory (1899): 102.

⁸⁵Toronto Star, 2 October 1902.

⁸⁶ William R. Wightman, Forever on the Fringe: Six Studies in the development of the Manitoulin Island (Toronto: University of Toronto Press, 1982), 143.

CHAPTER FIVE

BEYOND THE PIONEER AGE:

THE SUDBURY REGION IN THE PRE-WAR ERA

Introduction

The Sudbury region made sharp new gains during the pre-war era, propelled by the rush to Armageddon that provided excellent markets for its natural bounty. Not all its residents fared equally well from a much-improved transport and communications network or from a major expansion of commercial, social and administrative activity. Smaller, mixed function villages, their supply and service roles usurped by Sudbury, were left with only minor agricultural and timber hinterlands to exploit. These were precarious economic bases: the pace of timber cutting heralded its impending decline and Sudbury provided an increasingly attractive market for a fast modernizing farming industry. The mining towns had no such concerns. Booming armament sales financed the expansion and modernization of the nickel industry, though the closely aligned efforts of INCO and Mond left no room for competition. Gold and iron mines, meanwhile, added to mineral employment rolls already swollen to unprecedented proportions and to the roster of company towns. But these centres, dependent on mineral markets and the dictates of the sponsoring firm, had only minor regional roles. Sudbury, in contrast, used its position at the hub of transport and communications facilities to assume dominant commercial, social and administrative functions. By so doing, Sudbury, though lacking any mines and home to few miners, nevertheless cemented its status as the centre of a world-renowned Nickel Belt.

A MATURING MINERAL INDUSTRY

In 1903 the local mineral industries were still vying with the forest industry for dominance, but the incorporation of International Nickel (INCO) foreshadowed future greatness. The "Nickel Trust's"-only local challenge came from Mond Nickel, which survived various initial difficulties to join INCO as a member of the worldwide nickel cartel. Both firms soon moved to supply more nickel to an armament-hungry world bent on war. The large markets necessitated more efficient production and, in turn, major improvements to local works. While the efficiency gains increased per-capita production, the rapid expansion of nickel sales nevertheless brought many new jobs. Speculators were less fortunate -- their would-be nickel firms were crushed by the market control exercised by INCO and Mond. Their failures drew renewed cries for Canadian control of an increasingly important industry; meanwhile, more practical businessmen assessed the potential of other local minerals, notably gold and iron. By 1913 their successes paled before the unprecedented sophistication and proportions of operations at Mond and especially at INCO.

The Nickel Duopoly

The optimism surrounding INCO's incorporation dimmed when local operations were suspended pending analyses of their worth and in response to then weakening markets. But the gloom soon lifted: INCO, having strengthened its market share by entering the Entente du Nickel (a worldwide nickel sales cartel), moved to improve its local works.¹ New rail lines were a first step: INCO's private rail lines were nearly 29 miles long by 1913, with the much enlarged and modernized Copper Cliff plant system featuring electrically powered ore carriers.² The widespread use of electricity

was possible because an INCO subsidiary -- The Huronian Company -- provided hydr-electric power to replace Canadian Copper's antiquated steam power plants. A hydro plant was built at High falls on the Spanish River in 1904-05; with the addition of two new turbines in 1907, it provided adequate supplies of hydro-electricity for a decade.³

The ready power supply aided mining at Creighton, where year-round operations at the No. 2 shaft enabled record ore production to be secured even as the workforce shrank. Soon, however, INCO needed an effective balance for the highly nickeliferous, basic ore from Creighton; the Crean Hill's copper-laden, acidic ore seemed suitable so stripping there began in January 1905. Within two years the carefully executed work, employing as many as 400 men, resulted in a substantial modern mine. Quickening armament sales and plant improvements brought a doubling of ore production between 1907 and 1913, all but a little of the ore coming from the two new mines. Production at Crean Hill doubled in 1908, then was maintained at that level, but this yield was insignificant when compared with the Creighton -- easily the biggest mine in the Nickel Basin. When tests indicated that the Creighton ore body was "pinching out", worried executives hurriedly authorized redevelopment of the No. 3 (Frood) mine in 1910; further testing determined the true extent of the Creighton body and the No. 3 mine was closed in 1913.⁴

New, more productive mines implied improved production facilities. By late 1904 a large, modern roast yard and a new, twin-furnace smelter were fully operational; a third furnace was fired in 1906 and two more were under construction. The opening of a plant to reduce silver ore from Cobalt (1906) further enhanced Copper Cliff's reputation as "next to Sault Ste. Marie in industrial importance in... Algoma." INCO accrued

higher praise with the installation of a new reverberatory furnace and the largest basic converter in North America; by 1913 these additions made INCO's local works "among the most complete and 'up to date' in the world."⁵

These capital improvements were financed both by improving sales (especially in Europe) and the issuance of more company stock. A fiscal reorganization in 1912 was especially important: INCO more than trebled its common shares from \$11.6 million to \$38.0 million. The reorganization eliminated the last vestiges of the dormant Anglo-American, Orford and Vermillion subsidiaries; the old International Nickel Company was superseded by The International Nickel Company. The change from a holding to an operating firm -- Canadian Copper remained in place as its Canadian subsidiary -- earned INCO some \$9 million in cash and served notice that the nickel giant was not ready to rest on its laurels.⁶

Mond Nickel, however, was not deterred by INCO's gains because the British firm's private funding, separate markets and technological capabilities offered good potential once various start-up problems were solved. The Entente du Nickel evidently concurred: Mond was permitted to join the cartel in 1904. With quickening sales consuming a backlog of matte, local facilities that had been shut through much of 1902-03 were reopened. A small crew began work at the North Star mine in April 1904, the Victoria mine was drained in October and in December Mond Nickel resumed use of its Victoria Mines smelter. Full-scale mining at the Victoria resumed in 1905; when an inefficient steam powered mining plant hampered work, Mond turned to its other properties. The Garson, which tested out well, was equipped with a 225-foot shaft and modern machinery by 1907; the Canadian Northern Ontario Railway (CNOR) spur to the mine, along with the CPR and

M & NSR lines west of Sudbury, provided transport. Mond Nickel also looked to other firms for power supplies. Company officials examined Sudbury Power's facilities, but opted instead for Wahnapiatae Power, which first delivered hydro-electricity to the Garson in 1907.⁷

Mond Nickel nevertheless organized the Lorne Power Company to overcome the shortfall in steam-generated electricity at the Victoria Mines complex and permit an increase in smelter capacity from 60,000 to 140,000 tons per annum. Lorne Power developed the Wabageshik Falls site on the Vermilion River; it started producing power in 1909.⁸ A second power plant was added to the Wabageshik hydro-electric station in 1911 as ore production at the Victoria -- "by far" the deepest mine in Ontario -- and a smaller, more cost efficient Garson doubled between 1907 and 1913. Mond sought even more ore: the Frood Extension, North Star, Worthington, Kirkwood and Levack mines were under development by 1913. The quickening pace of mining necessitated replacement of the antiquated smelter at Victoria Mines. After two years work, a new plant at Coniston, with rail connections to both the CNOR and CPR, was fired on 13 May 1913. Its opening was symbolic of the decade-long rise of Mond Nickel from a struggling mining firm to a world-class nickel producer.⁹

The plant improvements at Mond and INCO facilitated quickening commercial and especially armament sales: between 1908 and 1913 locally produced nickel-copper values rose from \$2.9 million to \$7.1 million. The rapid increase confirmed the Sudbury Basin's stature as the greatest source of nickel ore in the world, and won the praise of T.W. Gibson of the Ontario Bureau of Mines. He termed

the nickel mining of the Sudbury region... the most important branch of the industry in Ontario, employing, as it does, more capital and labor and turning out a product having greater value than any other.

The stage of development... and the skilful manner in which it is conducted by the companies... reflects credit upon their courage, persistence, and good management.¹⁰

INCO and Mond shareholders were equally satisfied: INCO earned a cumulative profit of over \$18 million between 1903 and 1913, and Mond over £ 1 million through 1913.¹¹ But neither earnings nor praise brought the local nickel industry widespread public fame. "The most productive and profitable metal-mining enterprise in the British Empire", Ralph Stokes noted, had

not maintained the significance in the public eye that is its due. The wane of interest is not inexplicable. Closely controlled by two companies..., free from the influence of competition, of stock market fluctuation, or labour disturbance, the field has quietly and steadily advanced without seeking or receiving the questionable advantage of public appreciation.

The Engineering and Mining Journal laid the blame for the public disinterest squarely on INCO, claiming the American firm controlled the sale of all local nickel production.¹²

Competition in Nickel

Not all speculators overlooked the field: between 1903 and 1913 about twenty short-lived attempts were made to penetrate the local nickel industry. Most of these firms were stillborn, others managed only some exploratory mining. These firms were stymied by weak financing, poor ore bodies and technical failures, any one of which could be fatal given the market control held by INCO. The Ontario Nickel Company showed more promise: in 1907 it opened the Totten mine and started work on a "wet" process refinery at Worthington before funds ran out. But the nickel giant took no chances: INCO established the United Nickel Company as a "paper" firm to control nickel lands; United Nickel won statutory permission to retain mineral properties without developing them.¹³

One group of investors -- the Dominion Nickel-Copper Company, financed by J.R. Booth, M.J. O'Brien and others -- presented a real challenge to the giant. The firm quietly acquired the former Clergue, Vivian and "Hamilton" properties and began developing the Whistle mine in 1907. As that deposit lay four miles east of the CNOR, the Nickel Range Railway was organized to service the mine. The line was ready in 1910, by which time Wahnapiatae Power had supplied hydro-electric power to the Whistle.¹⁴

These improvements boosted the saleability of the firm; in September 1912 Dominion Nickel-Copper was sold to "interests represented by Messrs. [J.A.] Holmes and [Arthur?] Wilson", who formed The British America Nickel Corporation (BANCO) on 2 July 1913. Organized by F.S. Pearson, J.F. Taylor, E.R. Wood and others, BANCO's assets included 17,600 acres of mining lands (with 6.8 million tons of proven reserves), control of the Hybinette electrolytic refining process and capitalization reportedly totalling some \$30 million. The new firm nevertheless strove for production economies: the Whistle mine and the Nickel Range Railway fell into neglect as BANCO instead reopened the more central Murray mine early in 1913. By May a nearby plant site -- Nickelton -- was under construction. From the outset BANCO executives looked to the government for assistance in the struggle against INCO and Mond, but the federal finance minister, Thomas White, soon rejected a bounty on nickel. This rejection, together with the economic depression of 1913 which cut the supply of investment capital, left the firm in dire straits. In January 1914 E.R. Wood reported it was "absolutely impossible to proceed further on present lines with this nickel business." BANCO suspended all operations on 31 August 1914.¹⁵

In light of the market and financial control exercised by the nickel cartel, several entrepreneurs chose instead to exploit other local deposits. Though the search for placer and "free" gold continued, the Canadian Exploration Company, which acquired the just-discovered Long Lake gold mine in 1908, was the sole commercial success. By 1910 a small modern mining plant was ready at Long Lake; good results quickened the pace. Soon a twenty-stamp mill powered by hydro-electricity produced an average 120 tons of ore daily.¹⁶ Meanwhile the low-grade iron deposits in Hutton township attracted attention: six mining firms were organized between 1903 and 1907. The isolation of the deposits, however, precluded development until William Mackenzie and Donald Mann acquired a large block of Moose Mountain Mining Company shares in 1905. The noted railway entrepreneurs extended their CNOR north to Hutton Township, permitting on-site development to begin in 1906: the Moose Mountain mine produced 60,000 tons of ore by May 1908. The low-grade iron was stockpiled awaiting concentration, first by hand and then, after hydro-electricity was introduced in 1910, by magnetic cobbing. Poor results led to the closure of the mine in 1911; 250 men lost their jobs. Most, however, worked on the subsequent installation of a Gröndal concentrating and briquetting plant which improved the product. Higher-grade iron resulted in sales that allowed mining to be resumed in the last quarter of 1912.¹⁷

Mining: The Methods and the Men

Though mining iron, gold and other ores brought some investment and employment, the local mining economy looked mainly to the nickel industry, whose new mines and plants achieved unprecedented sophistication. At Creighton mine, for instance, work proceeded in short order from open cut,

pit and deep glory hole mining to deeper, shaft-based underground operations. Deep mining permitted year-round work which rapidly evolved from crude overhand stoping to shrinkage mining, where ore was accumulated until the overhand stope was complete. The Crean Hill was even more modern: the first "engineered" mine in the region, it featured considerable preliminary diamond drilling to determine the location and extent of the ore body, which was mined from regularly spaced drifts. Improvement was also evident at the Mond Nickel mines, which featured full electrification and extensive mechanization. Meanwhile the new works at Copper Cliff (INCO) and Coniston (Mond) brought local reduction facilities to world-class standards. Even the smaller firms made gains: the Long Lake mine featured an efficient cyanide mill and the Moose Mountain plant was of a very modern design. In short, the local mineral industry -- never a low cost venture -- had become even more capital intensive.¹⁸

Along with capital expenditures, local mining firms faced rising labour costs. Work on new mines and plants brought new jobs; the increased labour demand brought better wages and more secure employment. Employment at the local mines exceeded 3,500 men in 1913, about three times the number a decade earlier; gross wages reached \$3.3 million a year. Skilled workers and "bonus" miners earned wages well in excess of the \$3 per day average; most smelter labourers earned less than the average. Reduction plant personnel still worked twelve-hour days, but in 1911 INCO adopted an eight-hour day for its miners and Mond soon followed.¹⁹

Finns, Italians, Poles and "Austrians" were the most numerous among the immigrants who comprised 90 percent of the workforce; half to two-thirds of them knew little or no English, so they did the work, while Canadians were "bosses and engineers." Immigrants often favoured, or were assigned to,

particular jobs: the Italians were especially evident in the smelter, the Finns performed mine development and timbering, and the Poles did the mucking (ore haulage). All were reported content, with "no quibbling" about conditions -- reports that quite ignored spontaneous unrest and the slow emergence of the Western Federation of Miners.²⁰

The Nickel Question

If the non-mining public found little complaint in the corporate dominance over employees, there were calls for an Empire source of nickel and more especially for Canadian nickel refining. Some critics blamed the Laurier government for the nickel cartel's control of sales, arguing that INCO should be compelled to refine nickel domestically.²¹ On the other hand, in 1904 and 1907 the British government pressed Ontario to assert control over nickel properties and exports in case of "national emergency." But all significant nickel properties had long since been patented and control of exports was outside provincial jurisdiction. When Ontario instead held out the Metal Refining Bounty Act, INCO and Mond ignored the limited incentives offered for domestic refining.²² The failure of these incentives and the growing magnitude of the nickel operations brought renewed criticism of the foreign-controlled industry. One of the most outspoken critics was Eugene Haanel, Director of the Mines Branch of Canada, and a long-time proponent of more efficient Canadian mining. "We may well be proud of possessing the deposits of the Sudbury region", he wrote:

but really, of what particular and special benefit are these deposits to our Country? We mine the ore, smelt it into matte and send it as such out of the country. If we want nickel or nickel steel we have to import it. The employment of an inconsiderable number of men is all we get out of these splendid deposits. Not alone are they of little material benefit to the country, as it is presently exploited, but the method practised is exceedingly wasteful. Anyone who has

been in the region and examined the method of heap-roasting employed must have been struck with the wastefulness... valuable contents are leached out... [as] dissolved sulphate of copper and nickel... while the valuable sulphur dioxide destroys all vegetation in the vicinity.²³

Such criticism led the Select Standing Committee of the House of Commons on Mines and Minerals to study the nickel industry in 1910. In their testimony before that committee, Arthur Wilson and John Patterson blamed the market and financial control of INCO and its allies for

tens of millions of tons of valuable and proved ores lying idle, not because it is inaccessible, or because of the want of a market or the lack of any process of treating it, but simply that it is impossible to induce capital to embark on the enterprise against such a powerful combination.²⁴

INCO spokesmen Wallace Nesbitt and A.P. Turner claimed that no combine existed; a letter from Mond Nickel corroborated that view. Unable or unwilling to decide between these contradictions, the committee neither took nor recommended action. Its inaction drew mixed reaction: local mining entrepreneurs voiced strong criticism of the nickel cartel, but many observers looked at the prosperous nickel operations and reiterated the arguments put forth by INCO spokesmen.²⁵ Both views would attract more adherents as the World War brought new market pressures and heightened patriotic vehemence.

The anticipation of war had wrought great changes on the mineral industry. The once-struggling nickel firms had grown prosperous thanks to record sales to arms and armament makers. These sales strained local production facilities, so both INCO and Mond opened new mines and built new plants, all featuring upgraded technology which brought even more profits. Little wonder, then, that INCO and Mond brooked no competition. Some entrepreneurs looked to other metals, with only BANCO, its hopes resting on war-inspired government aid, remaining as a potential threat

to the nickel duopoly which was the driving force of the local mineral industry.

II

"GREEN GOLD": THE RENEWABLE RESOURCES

Local residents, for all their interest in mining, quite often benefitted in equal measure from forestry and agriculture. Prosperous pine-cutting firms and flourishing pulpwood operations, not to mention cordwood cutting, small scale lumbering, mine supply and tie production, brought large sums of money and much employment to the region. Forestry also provided jobs and markets for settlers attracted by favourable publicity and readily available land. Their progress and the continued improvement of older farms resulted in a greatly enlarged agricultural sector. Growing urban markets, in concert with declining yields and sales of fodder, quickened the introduction of new crops and techniques, changes which hinted at the commercialization of agriculture. But much pioneering work remained.

The Forest Industries

Local pine cutting, in contrast, had achieved industrial maturity: seventeen or so firms employed some 11,000 men in the 1903-04 season, with Sudbury serving as perhaps the key lumber base in Ontario. Little wonder that the editor of the Copper Cliff Courier, no stranger to mining, reported that

lumbering operations in this district are, or should be, considered our first line of defence, and although mining is probably a more fascinating and a better advertised industry, it cannot be said that it has yet taken first place in the hearts of the business people of Sudbury.²⁶

The ensuing decade brought continued prosperity: 30 or more major firms committed much time, money and expertise in "harvesting" the local pine stands. To the west of Sudbury the stands near Lake Penage were

especially valuable -- Victoria Harbour Lumber paid \$1 million for its shoreline berths. Meanwhile, the Wanapitei watershed east of Sudbury remained remarkably productive: the Lake Wanapitei timber slide moved about 1.2 million sawlogs in a 114 day span and many more logs were felled south of the slide. The firms cutting pine also worked north of Sudbury: by 1902 Crown Land surveyors reported ongoing destruction of the pine stands beyond the North Rim of the Sudbury Basin. The magnitude of the pine-cutting operations -- the total cut for the 1903-13 period probably exceeded one billion feet -- contributed greatly to local incomes. But this was a comparatively short-lived prosperity, for soon the nearby pine forests were gone and the firms moved on.²⁷

Fortunately for the local economy, the vast frontal assault on the pine stands was accompanied by the growing success of the Spanish River Pulp and Paper Company. That firm, with about 7,375 square miles of limits on the Spanish and Vermillion River watersheds, began work on its Espanola pulp mill in 1901; construction difficulties delayed its opening until 1905. The firm's persistent financial woes eased through the sale of some timber rights for \$2.16 million; its fortunes improved in 1909 when its timber lease was extended and it was given permission to cut jack pine and tamarac for wood products as well as pulp. By 1913 the reorganized Spanish River Pulp and Paper Mills had opened a 200-ton paper mill at Espanola and acquired control of the Sturgeon Falls and Sault Ste. Marie pulp mills.²⁸

While pulpwood operations and large-scale pine cutting were of crucial importance to the local timber economy, many individuals also profited from local markets for lumber, ties, mine timbers and cordwood. There were perhaps fifteen sawmills "about" ("autour de") Sudbury in 1903, ranging

from one or two man operations to fairly large mills at Sudbury, Larchwood, Coniston and Capreol. These local mills produced over 31 million board feet of lumber in 1909, plus 10 million pieces of lath products and other items. Ties also remained important, especially with the new CPR and CNOR lines: the Coniston Woodworks Lumber Mill was one operation directly attributable to the railway markets. The mining industry also needed ties, timbers, poles, construction lumber and especially cordwood. The Haight & Dickson Company was a major beneficiary, cutting these woodstuffs for INCO in six townships. Mond Nickel also used much timber and even the smaller mining firms needed cordwood and other woodstuffs. The Canadian Exploration Company, for example, contracted in 1910 for 7,500 cords of wood for use at its Long Lake gold mine.²⁹

These alternative timber markets helped to change the character of the industry workforce; Finns, Poles and others joined the French Canadian majority. Seasonal labour, "recruited from the agricultural districts, and... paid in accordance with prevailing agricultural standards", kept wages low. Cordwood cutters earned about \$1.00 per cord in 1910 and the average lumberman earned perhaps \$33 per month in 1913, up from \$26 in 1902. This remained small compensation for working ten or more hours a day, six days a week. The ill-paid immigrant pulpcutters introduced new tools -- easily portable "swede" saws replaced axes -- but the river drives remained a mainstay for both the lumber and pulwood industries.³⁰

With the logs floated to mills outside the region, forestry retained its "boom and bust" character: seasonal influxes of men, money and sometimes chaos descended on area communities.³¹

Towards Commercial Agriculture

Settlers naturally gravitated to areas cleared by these crews. Much hard work ensued -- removing stumps, draining land, building homes and barns. In the absence of capital, subsistence agriculture was the only practical option for pioneer settlers whose efforts supplemented the fast commercializing farm sector nearer Sudbury.

South of Sudbury a small wave of settlement was precipitated once the CNOR and the CPR announced their plans for rail connections southward; more settlers followed after Broder and Dill Townships were designated free grant townships in 1906 and 1909. The same forces were at work east of Sudbury, where Neelon and Garson Townships, crisscrossed by existing and proposed railway lines and declared open to free grants in 1906, proved especially attractive. By contrast, there were no free grant townships west of Sudbury; settlers there had to purchase new lands or assume properties abandoned by pseudo-agrarian "timber farmers." Settlement nearer Sudbury, meanwhile, was further advanced: farmers in Waters and McKim Townships dominated their respective municipal councils.³²

That was also the case on the flat, often fertile lands of the Valley, north of Sudbury, which boasted both a well-entrenched farming community and extensive areas of pioneer settlement. The Province, perhaps at the urging of Frank Cochrane, Minister of Lands, Forests and Mines and local M.P.P. placed seven Valley townships on the free grant lists between 1906 and 1912. Adding to the lure of free land was the improved access provided by new Colonization roads and the newly built CNOR.³³

The twin inducements proved very effective: by 1913 the Valley featured at least 600 farms, or double the number of a decade earlier. The Shield farm sector was hardly less vibrant, with about 380 farms by 1913. New

farms were especially prominent: 678 locations were made (1906-13) in the free grant townships, with 95,696 acres granted and 9,662 acres purchased. By 1913 patents were issued on 427 locations while only 125 were resumed.³⁴

The pace of farming progress can be measured through data from the 1911 census which, because the 1901 census is of little use concerning agriculture, must be compared with data from 1891. Farm numbers were up more than three fold and improved lands almost four times to 33,570 acres. Over half of the farms and two-thirds of the improved lands were in the Valley, which produced more hay, oats, barley, potatoes, mixed grain, turnips and field peas than the remaining local farms. Much of the remainder came from McKim, Waters, Neelon, and Broder townships, where the spread of farming on the rougher Shield terrain resulted in larger acreages in pasture and increased livestock holdings.³⁵ Notwithstanding these very real distinctions, farmers throughout the area benefitted from expanding markets and good yields that by 1911 resulted in an agricultural community which produced nearly \$1 million in crops and boasted lands, buildings and livestock worth about \$5 million.³⁶

Human factors, naturally enough, had a hand in local progress. Finnish farmers, for instance, retained many of the mixed crop, intensive farming techniques used in their homeland. These tendencies took on added local significance because the Finns were very active settlers whose "land hunger" was fired by the need to supplement erratic resource-based incomes, provide for old age, and answer cultural imperatives carried from Europe. The Finn, A.P. Coleman told Toronto's Empire Club, "as soon as he can, takes" up 160 acres and builds him a shack and gets a cow or two." Many such Finns went to Waters, Louise, Lorne and Broder Townships during the pre-war years, slowly carving out Finnish enclaves.³⁷

The progress of Finns and other settlers sometimes overshadowed the difficulties afflicting many local farmers. Foremost was industrial pollution: the promising farm sector east of Sudbury was ruined by Mond Nickel's decision to build a new smelter in Neelon Township. Five farms and surrounding land -- 3,700 acres in all -- were purchased in 1911, effectively ending farming near Coniston. Sulphur fumes from older local works had already caused "severe damage" in Rayside, Snider, Neelon, McKim and other townships; oats were specially hard hit.³⁸ Even without the damage, oat production, though a necessity in an era of horse powered farming and transportation, was becoming both less bountiful and less profitable. Overproduction and the resultant soil exhaustion cut yields, while an increasingly mechanized mining industry weakened the once-limitless market and reduced prices paid. Thus oats, though still one quarter of the local crop in 1911, produced just one sixth of the total crop value.³⁹

These difficulties and the continuing wasteful methods of "timber farmers" -- francophone farmers were most often blamed -- led to calls for better regulated, more "scientific" farming. Proponents of post-subsistence farming began making their presence felt: provincial funds aided the Sudbury District Agricultural Society (1904) and sponsored visits by Farmers' Institutes representatives in 1908. The appointment in 1912 of W.H. Ross as first ever District Agricultural Representative was of greater significance. Ross and later "Ag Reps" encouraged better agricultural practises and the use of superior seed and livestock. Progress was slow: subsistence farmers were little affected because of isolation or, in the ethnic enclaves, by a poor understanding of English or French. In any case the fresher soils on these farms and the minute incomes earned gave less opportunity and lent less urgency for change. Still, many

immigrant farmers already practised the superior techniques of their homelands and some progress was made among the larger farming population. Potatoes, which were sulphur resistant, produced good yields and could be stored easily for later sale, won new favour. Poultry and dairy production also increased because of the growing urban market.⁴⁰

Though influence of scientific agriculture and changing markets were just being felt, they foreshadowed a new day for local farming. The 30-year farms in the Valley and in McKim Township naturally were far more advanced than the locations just granted; both, however, contributed to an agricultural sector of real productive and economic importance. That sector gained new prominence as timber cutting wreaked havoc upon the local forest, for only Sudbury -- timber operations base for much of north-eastern Ontario -- was immune from the recession brought on when the local forests were gone. Area farmers, equipped with new techniques and new crop strategies, seemed positioned to move to a fully commercial status by taking advantage of Sudbury's prosperity, remnant timber markets and especially the booming mineral industry.

III

BUILDING THE INFRASTRUCTURE: EXPANDED ADMINISTRATION AND SERVICES

The population attracted to the mines, forests and fields of the Nickel Belt both needed and demanded major changes to the regional setting, including the easier movement of people and the provision of improved services. Construction of new rail lines provided additional long-distance travel options and helped to account for enhanced communications services. As local train travel remained inadequate, the roads were much expanded and modernized with local money and effort supplemented by provincial funds. Meanwhile, all three levels of government influenced and were

affected by changes in fields as varied as electoral representation, justice, education, social programmes and physical services. For their part, the increasingly paternalistic mining firms introduced modern if authoritarian administration and services to their company towns. Though the Nickel Belt as a whole made major strides, Sudbury was the focal point of the expanded administrative and service presence, a status reflecting its central place on the fast-improving transport and communications network of the Nickel Range.

Transportation and Communications

Sudbury's reputation as a regional transportation and communications centre, well entrenched by 1902, grew more credible by 1913 as some very real inadequacies were addressed.⁴¹ Extension of railway mileage was the single most influential gain because most other transportation and communications media were aligned with the tracks. Local needs were well served when the Manitoulin & North Shore Railway (M & NSR) quickly recovered from its virtual dormancy with the reorganization of the parent Lake Superior Corporation. The line's short mileage allowed flexible scheduling that won the M & NSR considerable business hauling INCO ore, other freight and an average of over 5,000 passengers yearly. Plans to extend the line to Manitoulin Island via the Crean Hill and Victoria mines and the Espanola pulp mill promised additional revenues; besides, the M & NSR had to extend its line by 1908 or lose its charter. The rails were laid as far as Crean Hill by 1910 and the line -- renamed the Algoma Eastern Railway (AER) in 1911 -- reached Victoria mine in 1912, Espanola in early 1913, and Little Current later that year.⁴²

The success of the M & NSR encouraged various other railway schemes. The still-undanted F.H. Clergue tried to float bonds for an ambitious

Canada Central Railway, whose statute of incorporation called for lines from Sudbury to Toronto, the Lakehead, the Albany River, Manitoulin Island and other points. But like most post-collapse Clergue ventures, the railway was stillborn.⁴³ Other dreamers sought a rail link with the new mining centres north of Sudbury. A private Sudbury-to-Cobalt scheme, organized in 1907, quickly faded and the provincially owned Temiskaming and Northern Ontario, after three separate surveys, rejected local appeals for a line north from Sudbury.⁴⁴

By that time the CPR was extending new rail service from the south. The CPR line -- a revival of the Claremont Branch of the 1880s -- was made imperative because the new Grand Trunk Pacific gave the Grand Trunk syndicate east-west running rights, thereby threatening the CPR's running rights on the GTR's North Bay-to-Toronto line. The CPR surveyed potential routes in 1902 and 1903, won a lawsuit brought against the new line by Mackenzie and Mann, and in 1905 started construction. The French River proved a particularly difficult obstacle, but the Bolton-to-Romford line was opened on 15 June 1908.⁴⁵

William Mackenzie and Donald Mann had opposed the new CPR line as it provided direct competition for their new CNOR scheme.⁴⁶ When they promised in 1902 to complete that line in "twelve to eighteen months", local politicians rallied to their aid; ironically, Mackenzie and Mann planned to bypass Sudbury in favour of a direct route to their iron mine. Though work on the line was underway by 1904, the difficult terrain between Sudbury and Parry Sound delayed the opening of the CNOR until 2 July 1908, just two weeks after the inauguration of the CPR line. Mackenzie and Mann regained local favour with the construction of several local spurs -- a Sudbury-to-CNOR service began in 1909 -- and their national prestige

rose with the addition of an Ottawa-to-Port Arthur line to their trans-continental system. This route, explored in 1905 but then left in abeyance, passed through the northeastern corner of the Sudbury area, with a major facility at Capreol. Construction began in September 1912 and the Canadian Northern was opened in 1914.⁴⁷

Local spokesmen were loud in their support for this and other lines because they offered much improved long-distance travel options. Regional rail service won far fewer plaudits: freighting ore usually took precedence so local passenger service was infrequent and inconvenient -- area travellers who took the train to Sudbury often faced an overnight stay before their return journey. Complaints about the "rotten" service drew sporadic results: both the CPR and CNOR established "locals" only to have them prove uneconomic and be cancelled. Even the best local passenger service -- that of the AER -- was nicknamed the "Agony" because of its slow pace and frequent stops.⁴⁸

Travellers frustrated by poor local train service turned increasingly to the local roadways. The heavier traffic, largely horsedrawn but including the first primitive motorized vehicles, necessitated major road improvements, featuring mechanized equipment, steel or concrete bridging and greater care in surveying, aligning and levelling the routes. A pragmatic emphasis on key routes evolved by 1907 into formal Trunk Road planning. Provincial monies -- three-quarters of the total expenditure -- were spent largely on these Trunk Roads, with statute labour and, increasingly, local taxes committed to improving the second class and "side" roads. From 1907 the Township municipalities also benefitted from by-law grants which provided Provincial funds to match (in varying ratios) their local spending. Together, the local and provincial spending on roads -- just \$5,246 in 1903 --

rose to \$121,757 in 1913; the 1903-1913 total neared \$400,000.⁴⁹

These expenditures brought much progress. By 1913 the Trunk Road east and west of Sudbury was in "splendid" condition between Coniston and Copper Cliff, as befitted the heavy traffic between Sudbury and these industrial sites; it was tolerably good as far west as Nairn Centre and east beyond Wahnapiatae. Trunk Roads also ran from Sudbury northwest to Larchwood, northeast to Lake Wanapitei, and north to Hutton Township. A road linking Creighton mine and Copper Cliff, built by INCO in 1903 and upgraded to a "good highway road" in 1907, was another important route. In short, only areas south of Sudbury lacked good quality Trunk routes by 1913. And where Trunk Roads failed to penetrate, the local township municipalities built and improved many miles of good if often meandering roadway that linked farms, villages, mines, smelters and resource camps. Tributary to these "second class" routes were the "side" roads built by the local statutory road boards. These useful though often thinly spaced roads were, in turn, linked to primitive mining and lumber routes that afforded some minimal access to almost all of the Sudbury region. Local residents still bemoaned the inadequacies of local roads, but by 1913 the improvements had brought these routes well beyond the pioneer age.⁵⁰

Road improvement even aided local communications by permitting the opening of the first "cross roads" post offices, but most of the 22 offices opened between 1903 and 1913 still remained closely aligned with the railways.⁵¹ Faster communications, too, kept pace with the expansion of rail service; the CNOR introduced the Canadian Northern Telegraph Company and the CPR provided telegraph service on its Toronto to Sudbury route, bringing to 21 the number of local telegraph offices.⁵² The AER, in contrast, extended

its telephone line to Crean Hill, Mond, Nairn Falls and points beyond. The railway had a working agreement with Bell Telephone Company, as did the INCO system. By 1905 Bell acquired a full franchise for Copper Cliff, a logical complement to its operation in Sudbury. It later gained access to the Chenier (later Chelmsford) Telephone system, in service since 1909, and the Mond Nickel system at Coniston, installed in 1912. The introduction of long-distance service to North Bay in 1907 and to Sault Ste. Marie in 1911 made the telephone even more popular: about 1,000 were in use locally by the onset of war.⁵³

The growing popularity of the telephone was a sure sign of the greater expectations brought on by improvements in the transport and communications media. Its still-restricted availability also revealed the limits of progress: long, twisting, dirt roads separated many rural settlers from the nearest telecommunications line, or even a post office. Still, that road likely was better than in an earlier day and it was linked to a fast-expanding road system. Major roads paralleled the railways, while second-class roads fanned outward from the various communities along the half-dozen rail axes. These centres featured a good range of travel and communications options, but even they fell far short of the gains made at Sudbury. By 1913 that town, at the hub of road, rail and communications systems, possessed these services on a scale comparable to that available in longer settled portions of Ontario.

Toward a Modern Order

Sudbury also was the focal point of administrative change: the fast-rising population -- townspeople, villagers and farmers alike -- demanded or made necessary more and better action on the part of all three levels of government. Some actions were mildly coercive -- improved policing

and inspections, for example -- while others brought welcome physical or social services. While the federal and especially the provincial authorities remained influential, the establishment of additional municipalities and statutory boards increased local control. This gain, however, was offset by the growing influence, both welcomed and restrictive, of the mining firms. Whatever the source and whether or not it was welcomed, by 1913 local residents faced a sophisticated array of administration and services that provided further evidence of the pioneer era's passing.

Population increase implied jurisdictional change, especially with respect to the redistribution of electoral ridings. The old Federal Electoral Districts of Algoma and Nipissing drew much criticism for being too physically and demographically large for proper representation. The Laurier government addressed these complaints in 1903, only to divide the Sudbury area rather clumsily between Nipissing and a new Algoma East riding.⁵⁴ Provincial electoral boundary changes were more frequent. In 1902 many local voters were transferred from Nipissing riding to a new Manitoulin constituency; the Representation Act of 1908 fixed the northern limit of Manitoulin at a more southerly point to accommodate a new Electoral District of Sudbury. The few voters in Burwash, Secord and Tilton Townships found themselves in a new Sturgeon Falls riding.⁵⁵

Judicial boundaries were narrowed to conform with the new provincial constituencies and to keep pace with local needs. A Provisional Judicial District of Sudbury was proclaimed on 20 April 1907; the Sudbury Divisional Courts were established in 1908. Boundary adjustments in 1908, 1910 and 1912 reduced the extent of the District while 10 Edw. VII c. 2 s. 51 renamed it the Territorial District of Sudbury.⁵⁶ As District seat, Sudbury was a logical base for various governmental services, a role symbolized

by the construction of imposing provincial and federal buildings. The new facilities were regional bases for various officials, including the Ontario Provincial Police officer assigned to Sudbury on 1 January 1910; these men were important if overworked factors in regional administration.⁵⁷

Provincial school inspectors, for instance, presided over the twenty or more public and separate schools opened between 1903 and 1913, ranging from one-room log buildings to large frame and brick structures.⁵⁸ Ontario also funded "rural school libraries" and the large public libraries at Sudbury, Copper Cliff, Nairn Centre and Victoria Mines (about 1913 the last was moved to Coniston).⁵⁹ But public funds offered little support to Frontier College employees like Norman Bethune, who was stationed in 1911-12 at Lake Penage, teaching English and other subjects to his fellow Robinson lumber camp workers.⁶⁰

The operations of the regular school system, meanwhile, were harmed by the fluctuations inherent in the resource based economy, which

sorely tested a school system which had been designed to serve the needs of agricultural communities. Small populations which fluctuated rapidly in response to the export cycle of natural resources were hard pressed to initiate and sustain school sections. In many cases their efforts were impeded by inadequate inspectorial supervision and differences in municipal organization which distinguished northern districts from southern counties; by company domination of some settlements and widespread absentee landholding; and by provincial governments or a Department of Education which were often reluctant to concede that northern conditions required prompt alterations in global policies. Consequently many of the problems which hampered the extension and improvement of the school system in the last quarter of the nineteenth century persisted well into the twentieth.⁶¹

Sudbury area schools were also troubled by more basic problems: their students had to cross unbridged rivers and other obstacles to attend schools with inadequate facilities and overworked teachers. Many school-aged children, moreover, knew little or no English but were reprimanded when they used their native tongue. Such children often were left with a poor

command of both languages because of indifferent attendance and the early termination of schooling. Imperious school inspectors compounded the problems: District School Inspector L.A. Green, for example, replaced a Quebec-trained teacher at Mond in 1908 despite the protests of the school board and local parents, who praised her skill with that mine camp's ethnically heterogeneous children. Her dismissal reflected concerns both for more "expert" teaching -- what Robert Stamp terms the "cult of efficiency" -- and the growing antipathy toward French-language instruction in Ontario. Both trends imposed major burdens over the weakly financed school boards of lightly settled areas.⁶²

Sparse populations hindered the provision of all local services, especially if local residents were convinced that the additional tax burdens of municipal status brought them few gains. This argument appealed to the residents of eleven local townships who between 1903 and 1913 opted for statutory road and school boards, with their limited advantages but correspondingly small responsibilities and costs.⁶³ On the other hand persons living in Waters, Hammer, Neelon, Garson and Blezard Townships deemed the statute boards insufficient and instead chose incorporated status; Chelmsford achieved town status in 1910 and Frood Mine followed suit on 31 December 1913. By then nearly 80 percent of the local population lived in incorporated municipalities and most of the remainder in statute board townships.⁶⁴

But the advantages of local control were blunted by maladministration or worse. Allegations of fraud against tax collectors and poorly kept records raised serious doubts about local government practices.⁶⁵ Inept administration was compounded by small tax bases that restricted township spending to an average of just under \$4,900 per annum (1903-11).⁶⁶

Most funds were directed to physical improvements, notably roads and bridges or, less often, public buildings, sidewalks, sanitation and drainage. Social service spending, meanwhile, was restricted almost exclusively to education. Public health and charitable services were perfunctory at best, while local policing remained largely ineffectual despite the opening of two new municipal jails.⁶⁷ The situation was much the same in Chelmsford, where physical improvements and education received nearly all of the small public purse. Other Chelmsford services were confined to a few tiny charity grants and the cost of a town constable first appointed in 1910. The complete lack of fire fighting facilities proved disastrous in 1912 when fire destroyed much of the business district in the town.⁶⁸

Administering the Company Town

Some communities in the Township municipalities and even in the unorganized townships were able to boast of far more satisfactory services and facilities thanks to the largesse of one or another mining firm. Sellwood, which was a village in unorganized Hutton Township, featured good streets, "walking paths", electricity, telephones, a first rate school and other public buildings, all supplied by Moose Mountain Mining. Much the same services and facilities were provided at Mond Nickel's works, with the fully serviced, planned community at Coniston marking a locally unprecedented stage of corporate paternalism. INCO, not to be outdone, provided comparable physical and social services at its mines and hydro-electric site; the Town of Frood Mine displayed a civic infrastructure comparable with Coniston.⁶⁹

The residents of these comparatively well-serviced centres paid little or no taxes, but there was a price to be paid all the same. The sponsoring firm, for instance, controlled local law enforcement: D.A. Cowcill, Moose

Mountain's office manager, was "the law" in Sellwood. Mond Nickel officials performed similar duties at Mond, while the firm employed its own "police" at Victoria Mines, Worthington and Coniston. INCO, too, provided de facto law enforcement at its mines.⁷⁰ Policing, moreover, was just one aspect of company-dominated urban settings. Sellwood was "administered by the company"; its residents had no say in the matter. Where company towns were situated in Township municipalities, the local administrations were not able to resist pressures from firms that were so vital to the tax rolls and for local employment. Councillors in Neelon-Garson naturally paid close heed to Mond Nickel's wishes after that firm spent over \$300,000 developing the Garson mine and the Coniston works. Administrators in Drury, Denison and Graham faced even greater pressure because Mond and INCO were crucially important at Victoria Mines, Crean Hill, Mond, Worthington and elsewhere in the Union Municipality. Similar pressures buffeted McKim and Blezard Township councils and they surely overwhelmed the statutory boards of unorganized townships where the mining firms operated.⁷¹

The Town of Copper Cliff was also affected by both the positive and negative aspects of company-town status: the Town Council sanctioned improvements but INCO supplied most of the money, supplies and actual work. The results were quite impressive; streets and sidewalks were improved, electric street lights and sewer drains were installed, and a new water-works provided a badly needed alternative to Copper Cliff creek, condemned in 1906 as "foul, unclean and polluted." Public buildings -- large schools, a library, a hospital, a fire hall and a jail -- were erected while civic "clean up" efforts began to improve the town's appearance. Because of INCO's active role in Copper Cliff's affairs -- it paid perhaps two-thirds

of tax levies on top of the services it provided directly -- the residential tax rate in Copper Cliff was the envy of the other municipalities.⁷²

At the same time, INCO's largesse left "Cliffites" irrevocably subject to the whims of the giant nickel firm. Even policing was amended to suit its needs: when the town police "needed" assistance, INCO employees were sworn in as "special constables." The 1904 strike by Italian labourers was one such occasion: when the strikers ignored preliminary attempts to "restore order", several INCO employees were sworn in and the strike leaders were arrested. This ad hoc arrangement was formalized in 1908 by Copper Cliff By-law No. 53, which empowered INCO watchmen to serve as unpaid Town constables.⁷³ The By-law was not opposed, for INCO had taken firm control of municipal affairs after a Council motion of 1 April 1905 had dared to question the company's actions. Those who "hold views opposite to the said Company", the motion read, were discharged from work or hampered in their business and real estate transactions. Legislation was called for "to remedy the evils at present existing [sic] as they do to the detriment of the people." This brave motion brought independent municipal politics at Copper Cliff to an abrupt close; after 1905 acclamation of INCO officials to Town Council became the "custom" and quick, unquestioning action on INCO's requests the norm.⁷⁴

The Company spokesmen naturally emphasized the positive aspects of INCO control. "By promoting fellowship and loyalty among employees", Alex Gray wrote in 1911,

the management had created a settlement with a united purpose, and instead of doubts which prevailed in earlier years, there is harmony and determination. Only so many stores are allowed. Schools and churches of divers denominations evidence the permanency of the residents. There is no room at Copper Cliff for mischief-makers. When a public building is needed the company provides it -- and then taxes itself

to pay for it. Roughly speaking the company provides three-fourths of the taxes. Residences and living quarters are made attractive, and at reasonable rentals. There is a club house and hospital... nothing is left undone to promote the comfort, health and sanitation of the community.⁷⁵

Saturday Night concurred, reporting that INCO's "civic despotism" was "of the most amiable and felicitous character."⁷⁶ Many employees of the large mining firms were unconvinced; they chose to live in "shacktowns" just outside the limits of corporate control. Such persons, sacrificing low-cost services in favour of freedom, kept living costs low by accepting community life featuring few or no services.⁷⁷

Services in Sudbury

In the absence of mineral plants, Sudburians also remained comparatively free from corporate pressures, but in their haste to acquire a full range of services they sorely missed the large corporate tax base: taxes rose by about 350 percent between 1903 and 1913, yet Town Council relied heavily on voluntarism and outside funding. Senior levels of government financed the erection of imposing new edifices -- a large court house, registry office, and a federal building -- and the Province helped fund Sudbury's schools, including its first high school (1907). Post secondary education, including a nursing programme and Le Collège du Sacré Coeur, was supplied by the Roman Catholic church. St. Joseph's Hospital, too, relied on a combination of Catholic and provincial funding. Voluntarism sustained other charitable pursuits: Sudbury's churches and benevolent associations financed aid to the needy and led the way when the local Children's Aid Society was organized in 1907. Social services, in short, were supplied in a manner "most economical to the Town."⁷⁸

The town fathers could have been more generous because Sudbury's finances were in good order and its per capita debenture debt only half

the Ontario average. But a higher level of social service spending would have politically unwise since the residents in neighbouring Copper Cliff were served about as well at one-fourth the residential tax rate. So Sudbury Town Council committed most of its spending to the services demanded by those with far greater political influence than the needy. Policing was upgraded: a full time Chief, aided by a new Board of Police Commissioners (1911), oversaw the expansion of service into new subdivisions and new night patrols. Six men were on the force by 1913. The twelve-man fire brigade remained inadequate volunteer service; still, full-time Chief Joseph Fowler's very public profile resulted in the construction of a new firehall and the purchase of superior equipment. The introduction of better building and fire codes, along with improved water works, were further aids. Along with the waterworks, large sums were devoted to improving the sewerage system including new sanitation facilities as well as the streets, sidewalks and schools.⁷⁹ The provision of sufficient electrical power also remained a special concern, for the town-owned power plant was unreliable. After lengthy negotiations with the Sudbury Power Company, the town fathers opted in 1905 to buy electricity from The Wahnapiatae Power Company, backed by William McVittie and Frank Cochrane. Hydro-electricity brought better lighting, appliances and other features of modern life. But Sudburians chafed against the monopoly -- and high charges -- of Wahnapiatae Power; a local deputation met with Adam Beck in 1913, unsuccessfully requesting a public "hydro" development for the Nickel Range.⁸⁰

The quest for more power displayed the civic confidence that brought Sudbury municipal services second to none locally. Copper Cliff and the lesser company towns, too, were islands of superior services and facilities

in a still rough-hewn countryside. The financially strapped township municipalities and the Town of Chelmsford managed far less; all nevertheless tried to improve their settings. Added to this was the region-wide work of the senior governments, which gained a higher profile with the formation of the District of Sudbury. Additional government representatives and offices enhanced Sudbury's permanence and influence while concurrently quickening the extension of road, mail and school services to the rural settlements. Though a tremendous gap remained between the complex infrastructure that served Sudburians and that available to pioneer settlers on the region's flanks, everywhere there were indications of the maturing administrative infrastructure of the Nickel Range.

IV

A MORE COMPLEX SOCIAL ORDER

Social institutions of all descriptions helped to fill the gap left by the remaining inadequacies of regional administration. This, of course, was no surprise: voluntarism remained much in vogue. The spread of social institutions -- and the services they provided -- kept pace with local demographic expansion. The Churches led the way: devout men sought to defeat "wickedness" and now, influenced by the social gospel, they tried to provide wider social aid. Their diligent work brought greater vibrancy to local religious life, but indifference to religion remained common; even churchgoers were attracted to competing social organizations. Successes varied, but recreational and fraternal groups, "class" or "national" organizations, and many other institutions added to the social fabric of the Nickel Range. Most groups mounted their campaigns from Sudbury, further confirming that town's local metropolitan status.

The Churches

No group made greater progress or had a larger influence than the Roman Catholic church, which benefitted from the devotion of the Jesuits and the local Catholic majority. The new Diocese of Sault Ste. Marie, founded in 1904, was headed by Bishop David J. Scollard; his apparent favouritism towards Irish Catholics soon angered many of the mainly francophone and immigrant members of the Diocese. For the time being, however, language and national tensions only simmered and local parishes prospered, with St. Anne's in Sudbury -- home to 3,920 persons by 1913 -- assuming a preponderant role. Smaller parish churches in Copper Cliff, Chelmsford and Blezard Valley and several chapels continued to serve Catholics; new facilities were provided at nine locations. Catholics in rural areas, resource camps and centres without chapels were visited by roving Jesuit missionaries. The new St. Paul's church in Victoria Mines, for example, was the base for work with some 500 Catholics at eleven locations. The work was spiritually and physically demanding, but the efforts of the Jesuits and the parish priests saw the Catholic word spread throughout the Nickel Range.

The Protestant churches, too, had their successes, not the least of which was the extension of the social gospel. This sense of wider social mission gained momentum as the new century dawned. Local Protestant churches established "reform", "home missions", prohibition and other boards. Inter-church work like that of the Dominion Temperance Alliance or the Social Service Council further demonstrated the new concern for the everyday world. A belief in the wider social responsibility of the church therefore won plaudits for the Salvation Army, which by 1913 had popularized aid to the unfortunate: its campaigns drew moral and financial support from

other denominations.⁸²

This widening world view was one factor in the progress of the major Protestant denominations -- Presbyterian, Methodist, Anglican and Baptist. Each of these Churches maintained an interest in "French" work, primarily in the Valley, but to little avail; all four denominations also moved to provide services at the various camps and villages. The Baptists, however, failed and Anglicanism fell well short of the extent of the Methodist circuits or the good coverage achieved by the Presbyterians. Still, their combined efforts left few communities without one or more protestant places of worship. But the forays brought limited successes: small, fluctuating memberships were signs both of the resource economy and the varying abilities of a constantly changing clergy.⁸³ Circumstances were happier in Copper Cliff, where the Protestant cause benefitted from a new appreciation for Christian endeavour among INCO officials due either to their own convictions or an appreciation of the social control inherent in religious doctrine. Knox Presbyterian, the Anglican St. John the Divine, and the Copper Cliff Methodist Church all fared well, with fast rising memberships and various physical improvements.⁸⁴

Only the Baptists cause faltered -- they focused their limited resources on Sudbury, which they considered "one of the wickedest towns in Ontario" and a stronghold of "Rome." This bleak assessment belied considerable gains by Sudbury's Protestants. Church memberships rose sharply and the newly prosperous congregations moved to improve their facilities. The Methodists were first, erecting a fine, twin-towered building in 1907. Three years later, St. Andrew's Presbyterian built an even more impressive stone church, three times more costly than the Methodist edifice. Not to be outdone, the smaller Protestant denominations launched their own

building campaigns. The Baptist congregation, not organized until 1907 and suffering from a rapid turnover of leadership, nevertheless managed to purchase the old Methodist church, which was relocated and renovated in 1911. And a new Church of the Epiphany -- a brick and stone building opened in 1913 -- was a source of price (and debt) for Sudbury's Anglicans. While it was costly, church construction proved a boon to all four churches: membership soared in response to the new houses of worship.⁸⁵

The prosperity of the mainstream churches still left the problem of the "foreigner." The "Slavs" drew the attention of the Roman Catholics: Polish language services were held at St. Stanislaus Koszka Church in Copper Cliff and the Catholic hierarchy sought accommodation with local East European Greek Catholics. Bishop Scallard approved the construction of the Church of St. Nicholas in 1907; the substantial frame church, located in Copper Cliff, was consecrated in 1909. The Catholic hierarchy also provided encouragement to the growing Italian community; the first Italian mass at the new St. Elizabeth's church in Copper Cliff was celebrated on 1 January 1914.⁸⁶

The Protestants, too, sought the immigrant. Local Baptists, because of their financial straits, were unable to launch a planned mission among the East European peoples; a "Scandinavian" mission was organized but made few gains. Itinerant Lutheran pastors, meanwhile, began German-language services in 1907; local Presbyterians mounted a Chinese mission (1911) and very successful Finnish services. The latter success was directly attributable to the arrival of Rev. Arvi Heinonen, who began preaching in Copper Cliff on 1 June 1913. By year's end he had attracted quite a following through his travels to 18 preaching stations.⁸⁷⁻

Heinonen's successes drew the ire of the Finnish Lutherans who maintained a strong Wuoristo congregation in Copper Cliff while extending services to the mining camps and the new agricultural settlements in Waters, Broder and Louise Townships. The enlarged congregation launched a church-building drive that resulted in one of the largest religious edifices in Copper Cliff. Among ethnic groups only the small Jewish population made comparable gains, welcoming Rabbi Henry Atlas in 1905. His successor, Rabbi David Wychevski, officiated at the opening of the Shaar Hashomayim Synagogue in 1914.⁸⁸

Despite some gains by institutions outside the mainstream of Canadian religious life and the wide-ranging work of the establishment churches, no denomination could be entirely pleased with the state of local spiritual life. While memberships were up, there was no guarantee of commitment: the Baptist W.F. Roadhouse complained in 1907 that local spiritual life "seems to be almost nil. A thoroughly worldly type of church member predominates." Worse, from the Churches' viewpoint, many persons were indifferent or openly hostile to church activities, with only one-third of the population being members of a church.⁸⁹

Secular Activities

Those who abandoned or ignored the church often looked to other social institutions, old and new, which assumed every-increasing prominence in the decade before the war. Fraternal, ethnic, business, political, recreational and other associations gave the region a more varied character than the informality of pioneer society. Groups might defend a cause, provide mutual aid, champion new ideas, or merely entertain -- the success of these myriad endeavours was yet further sign of the maturation of the human landscape.

Fraternal and mutual aid societies continued to flourish. A few such societies established lodges in Copper Cliff, and the Orange Lodge made "gratifying" gains, opening lodges at Victoria Mines, Larchwood, Sellwood and Nairn Centre. Few groups could match that record: the very active Odd Fellows and Free Masons, the newly organized Local Council of Women, and other groups relied on Sudbury-based facilities. The Women's Council, like most fraternal societies, catered mainly to the British socio-economic elite.⁹⁰

French Canadians, meanwhile, were active in institutions devoted to protecting their cultural heritage. The Société St. Jean Baptiste was superseded by groups with increasingly aggressive "French Rights" stances; these groups welcomed the Congrès d'Education des Canadiens française d'Ontario and the formation of the Association Canadienne française d'éducation de l'Ontario. Local "French Rights" work was led by Fr. Guillaume Label, who played a major role in the Catholic Bilingual Association and in the ensuing 1910 Congrès. But it was his organizing of ten bilingual schools that won him the most notoriety. The Toronto Telegram and Toronto Star both condemned Label's work, claiming that the new schools were French, not bilingual. F.W. Merchant's report concurred and went on to criticize the poor quality of the teaching staff at the schools. Local criticism was more muted: these schools were in "almost wholly French" areas, school regulations limited the use of French mainly to the lower Forms, and in Sudbury, at least, succeeding curates as superintendents of the Separate Board, "did not champion the use of French in the school, for fear of alienating their English-speaking parishioners or incurring the displeasure of their Irish bishop."⁹¹

But Bishop David Scollard and other Irish members of Ontario's Catholic hierarchy nevertheless urged action to ensure "English" education. The re-elected Whitney government, armed with this support and the Merchant Report, introduced Regulation 17 in 1912.⁹² In virtually eliminating French-language education in Ontario, Regulation 17 fulfilled the worst fears of local francophones, who were already unhappy with the English-only status of the Sudbury High School. Its opening in 1907 prompted the establishment of special French classes in 1909 and the acclamation of Felix Ricard -- an outspoken proponent of French Rights -- to the Sudbury Separate School Board a year later. Encouraged by the 1910 Congrès, Ricard, Fr. Lebel and Dr. Raoul Hurtubise spear-headed the drive against Regulation 17. They cheered the founding of the long-sought Collège du Sacre Coeur and hosted the Congrès-des Canadiens français du Nouvel Ontario in February 1913; its success led to more demands for the division of classes according to mother tongue. These events led Le Droit to claim that "les Canadiens français de Sudbury sont plus décidés que jamais à résister à l'anglicisation systématique." This new, aggressive attitude not only fostered new institutions and activities, but provided leadership opportunities for the growing francophone elite.⁹³

Far less visible "ethnic" elites benefitted from leadership roles in associations whose influence was limited to their own communities. Local Italians and Finns were the first to establish formal societies to ameliorate the stresses of immigrant life. Residents of the "Italian colonies" of Copper Cliff, Creighton and Victoria Mines drew acclaim for the Italian Benefit Association of Copper Cliff (1906) and an "Italian Orchestra" founded before 1912. But the local press also reported very critically and luridly on the activities of the "black hand" society said

to be terrorizing local Italians. The Finnish societies also drew a mixed reception. Praise for their temperance, youth and self-improvement (edistys) groups was soon replaced by criticism of the Finnish Socialist Organization of Canada (FSOC) which by 1913 featured eight Sudbury-area branches with more than 400 members. Though the Sudbury Star concluded by 1911 that Finns were "invariably socialists", the FSOC members were mostly "hall socialists" who supported their organization as a bastion of Finnish language and culture, not for its ideological perspective.⁹⁴

Thus, language and cultural concerns helped promote the establishment of various institutions prior to the First World War. Various groups co-operated with others -- Finnish halls and the Finnish church in Copper Cliff were often used by non-Finns. Mutual support was also forthcoming; thus Finns and Italians in Copper Cliff provided facilities and music for several concerts in aid of the Anglican congregation's building fund.⁹⁵ But more formal inter-ethnic discourse was hindered by language difficulties and differing traditions.

Barriers were especially evident in business. British residents dominated the Sudbury Board of Trade and the Retail Merchants' Association, while the francophone and ethnic merchants catered to their own select markets. Even finances were affected. Giovanni Zeppieri -- a merchant in Sudbury -- was known by 1907 as the "Italian banker", while in 1913 caisse populaires were established by area francophones at Blezard Valley, Chelmsford, Hanmer and Sudbury. The latter reflected growing interest in co-operative endeavour: the Farmers' Co-Operative Company of Blezard Valley was organized in 1912, while immigrant groups considered forming their own producers and consumers co-operatives.⁹⁶

The labour force of the region found joint effort far from easy: even the crafts, service and railway unions made slow progress, only ten short lived unions having operated by 1913. Workers employed in the resource industries were ignored by the craft unions and the fast-declining Knights of Labour made little local impact. Spontaneous unrest like the 1904 strike at Copper Cliff by Italian labourers did attract the attention of the Western Federation of Miners (WFM) by 1905 but to no avail. The mines and plants, in fact, acquired a reputation for labour peace, in contrast with the more active Cobalt union movement. Company spokesmen credited corporate paternalism for this peace, while Ralph Stokes argued that it provided

a striking illustration of the labour policy followed in Canada. The great majority of Sudbury's labouring community are continental Europeans-- thrifty, contented and hard working. ... There are no unions. These physically and mentally stolid foreigners appear to provide satisfaction and receive it. In their dread of strikes, likely to interrupt the steady rate of profit accumulation, they give the agitator meagre encouragement... The Sudbury labour position, though industrially sound, is politically deplorable, and reflects one of the ugliest features of Canada's liberal immigration policy.

But Stokes' haughty, racist condemnation of these workers overlooked continuing unrest among area miners and smeltermen which coalesced into a mine union movement. Finns already acquainted with the union movement led the way: their successful spontaneous strike in 1909 at Mond's Garson mine provided the impetus for a more formal unionization effort beginning in 1910. The movement gained strength in 1912 during Provincially sponsored meetings concerning the implementation of an eight-hour day at the mines. The WFM leadership, already embroiled in the Porcupine Strike, was reluctant to act, but local pressure won out: Garson Local 182 and Sudbury Local 183 of the WFM received official sanction in April 1913. Over 200 members were on their rolls.⁹⁸

Union members drew the wrath of local employers, so even more than other workers they welcomed the relaxation associated with the various forms of recreation. Male athletic endeavours, especially baseball and hockey, drew large participatory and spectator support; ladies athletics remained something of a novelty. Immigrants launched their own sporting clubs; the Finns manifested the greatest institutional tendencies; with members of six or more sporting clubs starting a long Finnish domination of wrestling, running and skiing. Quieter recreational pursuits, while cutting across ethnic lines, often attracted persons with money as well as enthusiasm. The Sudbury Fish and Game Protective Association (1906), the Sudbury Riding and Driving Park Association (1910), the Sudbury Horticultural Society (1911) and the Onaping Fishing and Hunt Club (1913) were examples. Support for fairs, dances, concerts, theatre and movies more often cut across social boundaries.⁹⁹

These fledgling associations and entertainments still could not conceal the rough-hewn nature of the society. Though no new liquor licenses were granted after 1906, taverns remained a prominent part of local communities and grew larger in response to demand. Illegal liquor also remained easily available. Plentiful liquor supplies were an attraction to the large transient population and local residents; the result was much drunkenness and, inevitably, disorder. Liquor was also associated with institutions like "the bad place on Stobie Road", but local authorities were slow to act against "vice." "The question of houses of ill-repute," the Sudbury Journal noted in 1906, "is a difficult one to handle or discuss, and this place will have to keep on wrestling with it." Money was the key factor: "vice", not to mention legitimate taverns, liquor wholesalers and breweries, enriched local coffers. But public drunkenness, vagrancy and petty thefts

could not be ignored: more than 5,000 convictions were recorded between 1903 and 1913, a figure surpassed only in Ontario's largest centres.¹⁰⁰

Most local crime was blamed in liquor, so several attempts were made to lessen its deleterious impact. The Finnish temperance movement boasted societies in Copper Cliff, Creighton and Mond before infighting between conservative and radical members weakened the effort. The Roman Catholic clergy tried unsuccessfully to promote a temperance society, but had more success with a pragmatic Association pour protéger les filles d'Hotels. Protestant temperance efforts were of longer standing, but no more successful: the Ontario referendum on the Liquor Act (1902) drew little local interest (three in four did not vote) and only 35 percent of the votes polled chose the "dry" option. This setback blunted local work until the Sudbury District Temperance Alliance set out in 1913 -- after four years preparatory work -- to invoke "dry" status through local option. But it soon foundered, the victim of popular indifference and jurisdictional difficulties associated with the District-wide effort.¹⁰¹

The Nickel Belt therefore remained "wet", further confirming its "frontier" reputation. Everyday life, however, had taken on a far more sedate quality than in an earlier day. Disorder remained, but much of it was brought on by the seasonal influx of the resource workforce. Permanent residents -- especially the miners -- still frequented the taverns and even more "evil" places, but there were numerous new or improved social, mutual aid and recreational opportunities in the communities and even in rural areas. The enhanced social options lifted all of the Nickel Belt well beyond the pioneer era: still, there was one major beneficiary, Sudbury, which by 1913 boasted at least 61 voluntary associations, large new churches, dynamic lodges, new theatres and many other facilities,

displayed social assets not unlike those of older Ontario towns -- a further indication of its dominant place in the Nickel Range:

A HIERARCHY OF COMMUNITIES

Hamlets, villages and towns all changed markedly because of the resource industries' successes, the associated population boom, and enlarged transport, communications, administrative and social networks. Each community had its own character, but there were several general types according to their reliance on the railway, forest, agriculture, minerals or a mixed economy. The railways and agriculture brought stability, but relatively limited growth; mines and forests brought prosperity or even a boom, but in the long run proved unreliable. A mixed economic base lessened the risks inherent in depending on a single resource, though smaller mixed-function communities were threatened by the ever-strengthening grasp of Sudbury's businesses and services. Even those centres made prosperous by well-established mineral operations -- the "company towns" -- were unable to ignore competition from Sudbury, whose numerous functions, central location and superior transportation links helped consolidate its local hegemony.

Mixed Function Centres

Transportation services had dictated progress in the Sudbury region ever since the construction of the CPR main line, and many communities continued to benefit from railway connections. Capreol, sixteen miles north of Sudbury, owed its prosperity directly to rail construction: work on the CNOR line saw it double in size in 1908. Three years later the Canadian Northern construction brought another, bigger boom because Capreol was selected as a divisional point on that road. ¹⁰² Other railway stations

⁹³ A.P. Coleman, "Fourth Report on the West Ontario Gold Region," OBM (1898): 137; E.M. Burwash, "Geology of the Nipissing-Algoma Line," OBM (1896): 167; Thompson, 82; R. Addington, "Map of Old Logging Railway Lines," unpublished, SPL, Scale: 1 inch = .25 miles. On the "Alligator": Toronto Star, 15 April 1897; Collingwood Enterprise, 10 April 1899. "Manuscript Census, 1891," Nipissing, Subdivision J, "Tps Blezard and McKim," lists a "steam tug engineer," p. 66.

⁹⁴ Sudbury Journal, 18 April 1901.

⁹⁵ Aeneas McCharles, Bemocked of Destiny; the actual struggles and experiences of a Canadian pioneer, and the recollections of a lifetime (Toronto: William Briggs, 1908), 174-75. The Sudbury Journal, 6 October 1892, recognized forestry as a "fleeting" industry, but still saw it as a source of wealth until mining expanded, and a "good second" to mining thereafter.

⁹⁶ The Algoma Land and Colonization Company. Algoma! The New Northwest! Algoma Farmers Testify (Sault Ste. Marie: The Company, 1892). A shorter second edition was published in 1894. The first quote is from: The Canadian Pacific Railway Company. Description of Lands for Settlement in Algoma and Western - Ontario (Montreal, The Company, 1887), 8-9; the second: Ontario, "Report of the Department of Immigration," (1887): 16.

⁹⁷ Aeneas McCharles, "The Nickel Range," Toronto Mail, 22 August 1891, 10. His more critical assessment is printed in the Manitoba Free Press, 13 March 1893 and in C.L. Johnstone, Winter and Summer Excursions in Canada (London: Digby, Long & Co., 1894), 159-60.

⁹⁸ Toronto Mail, 11 September 1886, 4; Fort William Journal, 19 January 1889; Manitoulin Expositor, 16 November 1889.

⁹⁹ Bruce W. Hodgins, "Unconventional Priest of the North: Charles Paradis, 1848-1926," His Own Man: Essays in Honour of Arthur Reginald Marsden Lower, ed. W.H. Neick, and Roger Graham (Montreal: McGill-Queens University Press, 1974), 138-141; Toronto Star Weekly, 2 August 1924, 17; Sault Star, 17 October 1901. Details from "Manuscript Census, 1891," Algoma, Western Division, Subdivision AA², "Tps Chelmsford and Cartier," and Canada, Census of Canada 1890-91, vol. 2, table XVI; vol. 4, tables II, III. Sudbury Journal, 22, 30 April 1891, 21 September 1893, 28 March 1895, 6 August 1896, 16 June 1898, 9 February, 27 July 1899, 23 October 1902; Globe, 3 November 1894; Toronto World, 30 October 1896; Mgr Stephane Cote "Histoire de Chelmsford," Document historique de la société historique du Nouvel-Ontario (Document historique) 4 (1944): 14; Huguette Parent, "Le Township de Hanmer 1904-1969," ibid., 70 (1979): 12, 30, 45.

NOTES

¹ Ontario, Report of the Royal Ontario Nickel Commission (Toronto: King's Printer, 1917), (hereafter RONC), 67-70. See also Chapter Three, esp. note 72. Some industry analysts viewed the slowdown as an effort to reduce the stockpiles; INCO, in contrast, claimed it provided time to assess the "badly located.. and costly" equipment at Canadian Copper's works. INCO, First Annual Report (1903): n.p.; Mineral Industry 11 (1902): 487; Ontario, Report of the Bureau of Mines (hereafter OBM) (1903): 17, 57; Globe, 4 April 1902. One student of the non-ferrous metals describes the cartel as "hardly more than an agency of Inco." Lotte Muller-Ohlsen, Non-ferrous metals (Cambridge: Woodhead-Faulkner Ltd., 1981), 240. Also see Alex Skelton, "Nickel," International Control in the Non-Ferrous Metals, eds W. Y. Elliot et al. (New York: Macmillan, 1937), 134-35; Eugene Staley, Raw Materials in Peace and War (New York: Council on Foreign Relations, 1937), 227-28; Oscar W. Main, The Canadian Nickel Industry: A Study in Market Control and Public Policy (Toronto: University of Toronto Press, 1955), 74-75; Sault Star, 20 August 1903.

² Local mineral industry firms had broad powers of rail construction. INCO's Huronian Power subsidiary, for instance, was empowered to build railways "to connect any mine or mine property which now is or shall hereafter be open for development within... Algoma and Nipissing" with the CPR, M & NSR, or INCO's smelters. Ontario, Statutes, 1902, 2 Edw. VII, c. 101, s. 9. On the expansion of INCO's rail network: Alexander Gray, Organization and Equipment of the Canadian Copper Company (Toronto (?): n.p., 1911), 27; OBM (1905): 71; (1906): 64; (1907): 64, (1912): 107; Engineering and Mining Journal (EMJ) 82 (1 September 1906): 21; Saturday Night, 16 May 1908; Sault Star, 21 January, 11 April 1904; Sudbury Journal, 19, 26 April 1906:

³ Ontario Statutes, 1902, 2 Edw. VII, c. 101; OBM (1905): 10; (1906): 62; Hydro-Electric Power Commission of the Province of Ontario, Fifth Report: Algoma, Thunder Bay and Rainy River Districts (Toronto: Legislative Assembly of Ontario, 1907), 9, 11, 45; RONC, 71; Canadian Mining Review (CMR) 23 (31 October 1904): 206; Sault Star, 13 October 1904.

⁴ INCO also secured a little ore from its no. 2, no. 3, Evans and Vermillion mines; quartz flux for its furnaces was quarried at Kelly Lake, then Waters Township, and, after 1908, from Dill Township. OBM (1903): 119, 121; (1904): 83, 85; (1905): 10, 70-70; (1906): 11-12, 64; (1907): 14, 63-64; (1908): 20, 71-73; (1909): 21, 85-87; (1910): 25, 83-84; (1911): 26-27, 41, 89-91; (1912): 23, 107; (1913): 24-25, 102-03; (1914): 113-114. See also: Canada, Department of Mines, Mines Branch, Report on the Mines and Metallurgical Industries of Canada (later, Annual Report on the Mineral Production of Canada) (hereafter Canada, Mines Branch, Report). Along with the classic studies by Alfred Barlow and A.P. Coleman, see: William J. Taylor, "The Greatest Nickel Mine in the World," Sault Star, 16 May 1908; L. Stewart, "The Creighton Mines of the Canadian Copper Co., Sudbury District, Ontario," Journal of the Canadian Mining Institute

-- Azilda, Larchwood, Naughton, Onaping, Turbine and Sullwood Junction -- made some gains thanks to practical and social functions which attracted nearby lumbermen, farmers and miners.¹⁰³ Soon, however, both these centres and the older railway villages of Cartier, Nairn Centre, Wahnapiag and Whitefish were stagnant or even in decline because of the outward spread of forestry, the consolidation of mining activities and their inability to compete with Sudbury's growing might.¹⁰⁴ Only Chelmsford, which drew upon the entire Valley for timber, mineral and farm based income, managed to sustain its growth.¹⁰⁵

Farming also resulted in small "crossroads" villages. In the poorer, Shield-based agricultural zone, villages like McFarlane Lake, Rheault and Coniston coalesced; their residents looked to forestry as well as farming for sustenance. Timber-based activities also boosted agrarian villages in the Valley: settlements like Boninville, Brunetville and Blezard Valley all featured a school, general store and blacksmith shop. Quicker gains were possible where railway service came into play: Hanmer grew rapidly after the CNOR was extended north, coalescing by 1911 into a "wholly french" collection of "about a half a hundred cottages, a general store, and a hotel" that served as a commercial, transport and communications and social base for much of the northeastern Valley.¹⁰⁶

Resource Communities

Unlike Hanmer, resource camps usually lacked economic options: their primary concern lay in coping with the vicissitudes of a single-resource economy. Forest operations benefitted most communities, but camps that were wholly dependent on them generally failed to achieve more than bunkhouse status. The greater manpower requirements of mining necessitated larger camps, but these, too, disappeared when the mines closed. A few new camps emerged

including Quartzite, the Canadian Exploration Company's camp at its Long Lake gold mine, "Whistle" (sometimes Nickleton) at the Dominion Nickel-Copper mine of the same name, and Quartz, the village near the INCO quartz quarry in Dill township. Only Pine and Quartz -- in the thinly populated northern and southern peripheries, respectively, of settlement -- achieved some limited persistence. ¹⁰⁷

But even the busiest camp dwindled to insignificance when compared to the villages associated with important mines. Creighton, benefitting from the great success of that huge deposit and the large employment that resulted, became the largest mining village. Mond prospered because of the scale of Victoria Mine operations, and the residents of Worthington, disappointed by the failure of the Ontario Nickel Company in 1908, gained renewed optimism in 1913 when Mond Nickel reopened the Worthington mine. Large scale mining also produced "instant" communities at Crean Hill, Garson and Frood Mine. Corporate surveys established street and house locations, although the older portions of the villages showed less order and company supplied housing, halls and services were common features. Each village also featured private housing, businesses and social activities; all, however, relied to some degree on corporate sanction. So did the village residents, a heterogeneous lot with Anglo-Saxons numerically in the minority though dominating the positions of authority. Creighton, for example, had more Italian, Finnish and Polish residents than those of British background. Ethnically segregated housing and social activities heightened the cosmopolitan atmosphere. ¹⁰⁸

Centres that boasted reduction facilities also featured the international flavour and company dominance so evident in the mining villages. Here, too, corporate decisions and mineral markets were crucial in determining

the fate of the villages. Sellwood, the Moose Mountain Company village, prospered and faltered as iron prices rose and fell. Nickelton (formerly Murray) grew "like a mushroom overnight" early in 1913, but was "all but deserted" by August because BANCO_ founded. Similarly, Victoria Mines flourished until Mond Nickel opted to build new reduction works at Coniston, which boomed while Victoria Mines failed. These market or corporate inspired "adjustments" could ruin the private businesses and institutions whose operators had been attracted by healthy economies and active, heterogeneous populations. And the ethnic workers living in fair-to-poor quarters faced hard decisions -- they could abandon their ethnic enclaves to journey to new work sites or stay in hope that the latest slowdown was not permanent. Company officials were better informed and more secure, be they occupants of "palatial" manager's residences or the mainly Anglo Saxon "bosses" living in company-built housing. Notwithstanding the uncertainty corporate control caused, it did have some positive features. Housing in the industrial villages was often superior to that nearby, especially in areas surveyed and serviced by the mineral firms. More importantly, the jobs made available to employees at the reduction works provided income that paid for goods and services, supported various institutions and generally enhanced their economic and social well-being.¹⁰⁹

Copper Cliff

INCO's local headquarters was in many ways similar to the industrial villages, though on a larger scale. A prosperous business sector -- merchants, contractors and professionals -- relied on the income generated by the nickel works and sometimes at other INCO plants. No businessman, however, was as utterly dependent on INCO as were the mine and smelter employees

who formed 74 percent of the Copper Cliff workforce in 1903, 71 percent in 1911. These INCO workers gave Copper Cliff society all the characteristics of a resource town. The heavily male population, with 1.82 males to every female in 1911, featured much ethnic heterogeneity. Italian, Finnish, East European and other ethnic enclaves were common in the working class neighbourhoods while the Anglo Saxon supervisory force dwelt mainly in better housing northwest of the Serpentine Street business district. Company-built halls, various churches and other institutions provided recreational opportunities and helped to redevelop a community that in 1902 had been "the very abomination of desolation." Sizeable corporate expenditures financed many physical improvements and helped to introduce various social services; the booming nickel works employed more and more men, bringing unprecedented prosperity and sophistication to the commercial sector. But INCO saw no advantage in excessive growth and by 1913 was limiting the growth of the town through its control of real estate. Nor was there any room in Copper Cliff for persons who questioned INCO's administrative or workplace strategies.¹¹⁰

The "Nickel Metropolis"

Sudbury welcomed many of those who ran afoul of INCO, for administrators and businessmen there were less reliant upon the mineral industry than their regional compatriots. The civic leadership was committed to commerce: between 1904 and 1913 over 60 percent of the men nominated for civic office were directly tied to commerce or merchandising: only four percent of the nominees listed ties to the mineral industry. Professionals, "gentlemen" and even craftsmen were nominated more often.¹¹¹ These politicians were ecstatic when the completion of the AER, CNOR and CPR lines enhanced Sudbury's commercial base. New warehouses, lumber company

offices, diamond drilling firms and numerous stores were opened; a brickyard, foundry, explosives plant, brewery, soda works, flour mill and several planing mills added an industrial base. The new lines, better roads, telecommunications and newspaper service -- the Journal, Mining News and new Star (1909) had 3,500 subscribers by 1910 -- also enlarged Sudbury's transport and communications functions. With the formation of the new District of Sudbury in 1907 the town assumed an administrative importance that more closely matched its long-time dominance in commercial and social affairs. ¹¹²

Fast increasing commercial, administrative and social activity brought Sudbury a reputation as "the Coming City of the North." In 1909 W.E. Norton, Superintendent of Home Missions for the Baptist Church, reported that:

the term "growing" does not give an adequate idea of what is going on at Sudbury. And yet it would be unfair to say it is booming. The causes producing the rapid growth and development of this town are of such a character that permanency is practically a certainty. Businessmen and bankers all recognize this and are making large investments of capital in real estate and in the erection of first class buildings. ¹¹³

The building boom -- 840 buildings worth \$2.5 million were erected between 1906 and 1913 -- initially spread outward since the CPR left 500 acres in the heart of Sudbury in "a vacant, wild unimproved state." Another large, empty tract of land owned by the French nobleman F.R. du Caillaud exacerbated the situation, leaving "a town of magnificent distances." The CPR finally began its own housing development in 1910, probably in response to the high real estate values created by Sudbury's progress and the speculative land policies. Notwithstanding such speculation, Sudbury forged ahead. Substantial new brick and stone buildings, hard-surfaced, well-serviced streets and a clear sense of metropolitan dominance

over the Nickel Range gave Sudbury a permanent, bustling character.¹¹⁴

Sudbury's mixed economic, social and administrative roles attracted a population quite unlike that of other local communities. Most Sudburians directed their energies to merchandizing, transportation or manufacturing; only 3.5 percent of the workforce was employed in mining. Persons of British extraction made up just over half the population in 1911, while another 36 percent were French Canadian. Individuals from other backgrounds, then, made up only about ten percent of the population, though local observers felt that the census understated Sudbury's Scandinavian, Italian, Polish, Russian and Chinese populations because of their transient character.¹¹⁵ These "foreigners" drew considerable criticism in the local newspapers for the crowded, filthy condition in which they lived, although W.E. Mason of the Sudbury Star conceded that high rents associated with land speculation were partly to blame. Besides this "foreign quarter" near the CPR main line, the Town also included a fast-expanding French Canadian enclave northeast of the business sector, and the prestigious "mansions" of the Anglo-Saxon socio-economic elite, built on the north shore of Lake Ramsey.¹¹⁶

CONCLUSION

These mansions, while unrepresentative of the average Sudburian, nevertheless spoke volumes about the town's increasingly entrenched metropolitan dominance and the prosperity which the Nickel Range was enjoying thanks to its booming resource industries. By 1913 mining had achieved unprecedented production, sophistication and diversity. The forests, meanwhile, brought large profits to numerous pine, pulp and smaller cutting operations. Farmers benefitted from both industries: the markets and seasonal labour they provided

quickened agricultural progress while the growing urban market hinted at the commercialization of farming. Economic prosperity brought many gains. New roads reached out to the settlers and were linked to a fast-improving collection of railways, roads and communications that pushed back the physical frontier. The rapid spread of administration and social institutions did the same to the social frontier. Progress and prosperity were the local bywords: new and better farms, larger communities, also new institutions, businesses and services all combined to raise living conditions to a standard resembling that of longer-settled regions. Optimism prevailed in the Nickel Range even when upheaval in central Europe evoked talk of war. The onset of hostilities would put this optimism to the test.

NOTES

¹ Ontario, Report of the Royal Ontario Nickel Commission (Toronto: King's Printer, 1917), (hereafter RONC), 67-70. See also Chapter Three, esp. note 72. Some industry analysts viewed the slowdown as an effort to reduce the stockpiles; INCO, in contrast, claimed it provided time to assess the "badly located.. and costly" equipment at Canadian Copper's works. INCO, First Annual Report (1903): n.p.; Mineral Industry 11 (1902): 487; Ontario, Report of the Bureau of Mines (hereafter OBM) (1903): 17, 57; Globe, 4 April 1902. One student of the non-ferrous metals describes the cartel as "hardly more than an agency of Inco." Lotte Muller-Ohlson, Non-ferrous metals (Cambridge: Woodhead-Faulkner Ltd., 1981), 240. Also see Alex Skelton, "Nickel," International Control in the Non-Ferrous Metals, eds W. Y. Elliot et al. (New York: Macmillan, 1937), 134-35; Eugene Staley, Raw Materials in Peace and War (New York: Council on Foreign Relations, 1937), 227-28; Oscar W. Main, The Canadian Nickel Industry: A Study in Market Control and Public Policy (Toronto: University of Toronto Press, 1955), 74-75; Sault Star, 20 August 1903.

² Local mineral industry firms had broad powers of rail construction. INCO's Huronian Power subsidiary, for instance, was empowered to build railways "to connect any mine or mine property which now is or shall hereafter be open for development within... Algoma and Nipissing" with the CPR, M & NSR, or INCO's smelters. Ontario, Statutes, 1902, 2 Edw. VII, c. 101, s. 9. On the expansion of INCO's rail network: Alexander Gray, Organization and Equipment of the Canadian Copper Company (Toronto (?): n.p., 1911), 27; OBM (1905): 71; (1906): 64; (1907): 64, (1912): 107; Engineering and Mining Journal (EMJ) 82 (1 September 1906): 21; Saturday Night, 16 May 1908; Sault Star, 21 January, 11 February 1904; Sudbury Journal, 19, 26 April 1906:

³ Ontario Statutes, 1902, 2 Edw. VII, c. 101; OBM (1905): 10; (1906): 62; Hydro-Electric Power Commission of the Province of Ontario, Fifth Report: Algoma, Thunder Bay and Rainy River Districts (Toronto: Legislative Assembly of Ontario, 1907), 9, 11, 45; RONC, 71; Canadian Mining Review (CMR) 23 (31 October 1904): 206; Sault Star, 13 October 1904.

⁴ INCO also secured a little ore from its no. 2, no. 3, Evans and Vermillion mines; quartz flux for its furnaces was quarried at Kelly Lake, then Waters Township, and, after 1908, from Dill Township. OBM (1903): 119, 121; (1904): 83, 85; (1905): 10, 70-70; (1906): 11-12, 64; (1907): 14, 63-64; (1908): 20, 71-73; (1909): 21, 85-87; (1910): 25, 83-84; (1911): 26-27, 41, 89-91; (1912): 23, 107; (1913): 24-25, 102-03; (1914): 113-114. See also: Canada, Department of Mines, Mines Branch, Report on the Mines and Metallurgical Industries of Canada (later, Annual Report on the Mineral Production of Canada) (hereafter Canada, Mines Branch, Report). Along with the classic studies by Alfred Barlow and A.P. Coleman, see: William J. Taylor, "The Greatest Nickel Mine in the World," Sault Star, 16 May 1908; L. Stewart, "The Creighton Mines of the Canadian Copper Co., Sudbury District, Ontario," Journal of the Canadian Mining Institute

11 (1908): 567-85; Gray, passim; Thomas W. Gibson, "Int. Nickel -- Past and Present," Saturday Night, 4 October 1930. On the need to "balance" the ores: OBM (1911): 26-27; Financial Post, 30 December 1911; Gray, 21.

⁵Quotes: Labour Gazette 4 (June 1904): 1219; Alfred Wilson, "The Copper Smelting Industries of Canada," Canada, Mines Branch, Report, no. 29, 1913, 33. Some plant changes were implemented out of necessity: The Ontario Smelting Works and the West smelter were destroyed by fire in February and June of 1904. INCO leased the dormant Mond Nickel smelter at Victoria Mines until the new Copper Cliff smelter was ready. For details on INCO's local reduction works: OBM (1903):121; (1904): 84; (1905): 69; (1906): 63, 65; (1907): 65; (1908): 73; (1911): 91; (1912): 106; (1913): 104; Gray, 37-40; CMR 24 (June 1905): 146; 25 (2 September 1906): 42; Sudbury Journal, 3, 10 December 1903, 17 January 1906; Sault Star, 14, 21 January, 11 August 1904, 18 January 1906; Before closing in 1913, the Cobalt plant treated nearly 24,000 tons of ore, recovering 41.3 million ounces of silver and considerable copper, nickel and arsenic. Arthur A. Cole, The Mining Industry in that part of Northern Ontario served by the Temiskaming and Northern Ontario Railway 1912 (Toronto: L.K. Cameron, 1913), 66-68. For operating details see Cole's earlier reports in Ontario Report of the Temiskaming and Northern Ontario Railway Commission, 1906-11.

⁶John F. Thompson and Norman Beasley, For the Years to Come: A Story of International Nickel of Canada (New York: G.P. Putnam's, 1960), 166; Financial Post, 12 July 1913; RONC, 67-76; Houston's Publications, The Annual Financial Review (1914): 706.

⁷Naturally, Mond did employ a considerable length of yard trackage at its mines and works. On Mond's progress see: OBM (1902): 284; (1903): 123-25; (1904): 86; (1905): 71; (1906): 65-66; (1907): 66-67; (1908): 20, 75-76; Barlow, 42; Labour Gazette, 4 (June 1904): 1219, 5 (August 1904): 155, 5 (December 1904): 596; Sudbury Journal, 24 April 1902, 7 April 1904; Sault Star, 13 March 1902, 21 January, 14 April 1904; Saturday Night, 23 May 1908; Mond Nickel Company, The Mond Nickel Company Limited (n.p.: n.p., 1914) (hereafter Mond (1914)), 4-8; idem., The Mond Nickel Company Limited (n.p.: n.p., 1918) (hereafter Mond (1918)), 6-9; Skelton, 134; Staley, 278.

⁸Ontario Gazette 41 (7 March 1908): 290; OBM (1907): 67; (1908): 20, 75; (1909): 87-88; Sault Star, 14 November 1907; Saturday Night, 23 May 1908; Mond Nickel Company, Mond (1918), 6. On the increased smelter capacity: Financial Post, 17 June 1927.

⁹OBM (1908): 20, 75; (1909): 23, 87; (1910): 28; (1911): 27, 91-92; (1912): 23, 111; (1913): 24-25, 104-05; (1914): 112, 117-120; RONC, 497; Mond Nickel Company, Mond (1914), 8-14; idem, Mond (1918), 7-15. The new properties were costly: Mond paid \$750,000 for the Levack mine; the Froid Extension brought Frank Cochrane, William McVittie and Louis (?) Laforest

a reported \$100,000. Sudbury Star, 24 September 1910; Financial Post, 15 November 1913. On Coniston, see below and Sudbury Star, 9 April 1910; Sudbury Journal, 1 February, 25 July 1912; Financial Post, 30 December 1911, 24 May 1913; Michael Solski, "Coniston," Industrial Communities of the Sudbury Basin (Sudbury: Sudbury & District Historical Society, 1986), 46-48.

¹⁰ OBM (1911): 48. Production statistics are available in the OBM and in the RONC.

¹¹ Financial Post, 19 July 1913; RONC, 7.

¹² Ralph Stokes, "Metal Mining in Canada," The Canadian Magazine 30 (January 1908): 208; EMJ 93 (13 April 1912): 760. For similar sentiments see: Sault Star, 15 September 1904; Canadian Mining Journal (CMJ) 29 (15 August 1908): 387.

¹³ The new firms were reported in the annual list of new firms in the OBM; also see Ontario, Report of the Secretary and Registrar of the Province of Ontario and Canada, "Synopsis of Letters Patents Issued to Companies Incorporated under 'The Companies Act' . . .," Report of the Secretary of State of Canada (hereafter Canada, "Letters Patents Issued"). In 1908 Ontario Nickel was superseded by the equally unsuccessful Mineral Development Company. Some of the many sources on the competition are: OBM (1907): 67; (1908): 78; Ontario Gazette 39 (17 November 1906): 1269; Sudbury Journal 23 May, 24 October 1907; Canada Gazette 41 (11 January 1908): 1773; Sudbury Star, 5 February 1913; RONC, 569-70, 595; Main, 69-70.

¹⁴ Dominion Nickel-Copper shared the cost of a private hydro-electric line from the Wahnapiatae plant with Moose Mountain Mining. Sudbury Star, 16 July 1910. See also: OBM (1908): 78; (1909): 89; (1910): 28; (1911): 93; (1912): 112; (1913): 105, 113; Canada, "Letter Patents Issued," 1907, pp. 208-10; Ontario Gazette 41 (1 February 1908): 129; Sudbury Journal, 2 May 1907; Saturday Night, 23 May 1908, 20 August 1911; Financial Post, 9 January 1909, 8 March 1913; RONC, 87, 94-95. On the railway: Ontario, Statutes, 1910, 10 Edw. VII, c. 147; OBM (1910): 28, 86; (1911): 93; RONC 87, app. 120; Financial Post, 8 January 1910.

¹⁵ The quotes: OBM (1913): 25; E.R. Wood, letter to James H. Dunn, 16 January 1914, quoted in Duncan McDowall, Steel at the Sault: Francis H. Clergue, Sir James Dunn and the Algoma Steel Corporation 1901-1956 (Toronto: University of Toronto Press, 1984), 115. For more on BANC's start: ibid., 114-117; Main, 70; H.V. Nelles, The Politics of Development: Forests, Mines & Hydro-Electric Power in Ontario, 1849-1941 (Toronto: Macmillan, 1974), 352-53; OBM (1913): 25, 105; (1914): 112, 121; Cobalt Nugget 24 March, 19 April, 12, 14, 26, 27 May 1913; Sudbury Star 5, 12, 19, 22 February, 7 May 1913; Financial Post, 8 March, 24 May 1913; Saturday Night, 20 September 1913; Canadian Annual Review (hereafter CAR) (1913): 43, Canada, Mines Branch, Report (1913): 72; Skelton, 72; Canadian Mining Manual (1917): 233.

¹⁶ The backers of The Chelmsford Coal, Gas & Oil Company were the latest victims of the elusive "coal" seam. OBM (1911): 50; Sault Star, 1 December 1910; Sudbury Star, 8 March 1911. Placer mining on the upper reaches of the Vermilion River continued from 1902 until at least 1913. Sault Star, 26 January 1905; Globe, 2 August 1907; Toronto News, 6 July 1908; Sudbury Star, 12 July 1911, 7 May 1913. The Vermilion River Gold Dredging Company seems to have been the major actor: Ontario Gazette 43 (20 August 1910): 1413-14. On the Long Lake mine: M.B. Baker, "Long Lake Gold Mine, Sudbury District," OBM (1917): 258-274; Eino Nissila, Pioneers of Long Lake (Sudbury: n.p. 1987), 2. J.H. Stovel, A Mining Trail 1902-1945 (n.p.: n.p., 1956(?)), 10-12; OBM (1909): 45, 85; (1910): 83; (1911): 9; (1912): 112; (1913): 101; (1914): 112, 122.

¹⁷ The presence of iron ores was well known: W.G. Miller, "Iron Ores of the Nipissing District," OBM (1901): 177. Other firms included National Iron and Nickel (1903); Hitton Mining (1903); Vermilion River Iron Ore (1906); North Range Nickel & Iron (1906); Onaping Iron Ore (1907). See the annual lists of company information in the OBM. On Moose Mountain: OBM (1907): 16; (1908): 22; (1909): 90; (1910): 87; (1912): 112; (1913): 28, 106; (1914): 112, 123; Canada, Mines Branch, Report, (1907-08): 318-19; E. Lindeman, "Moose Mountain Iron-Bearing District Ont.," Canada, Mines Branch, Report, No. 303; Crowell & Murray Co., The Iron Ores of Lake Superior (Cleveland: Penton Publishing, 1914), 257; Sudbury Journal, 15 January 1903, 1 June 1911. Globe, 2 August 1907; Saturday Night, 23 May 1908, Toronto Star, 6 July 1908. For background on Mackenzie and Mann see George Roy Stevens, History of the Canadian National Railways (New York: Macmillan, 1973), 171-82.

¹⁸ RONC, 212-27; Samuel Price, Report re Limitation of the Hours of Labour of Underground Workmen in the Mines of Ontario (Toronto: L.K. Cameron, 1913), 4-6, 12; Gray, passim; Canada, Mines Branch, Report (1907-08): 385-93; Sault Star, 1, 15 March 1906; EMJ 92 (5 August 1914): 245; F.A. Jordan, "Milling Moose Mountain Iron Ores," in Crowell & Murray, 64-67; Baker, 258-74; Joseph R. Boldt, The Winning of Nickel: Its Geology, Mining and Extractive Metallurgy (Toronto: Longman Canada, 1967), 88-106. The reports of Alfred Barlow, A.P. Coleman, the RONC and especially the annual OBM add much detail.

¹⁹ Statistics compiled from the OBM. On the eight-hour day: OBM (1912): 106. Also: Price, 4-5; Canada, Board of Inquiry into Cost of Living, Report (Ottawa: King's Printer, 1915), 580-83.

²⁰ Not surprisingly the report of "no quibbling" came from an INCO spokesman: Gray, 27. While detailed statistics on the nationality of the mineral industry workforce are lacking, the report on deaths and injuries in the OBM provides a good indication of the local circumstance. Between 1903 and 1913 the 603 men killed or injured included 152 Italians, 147 Finns, 106 Poles, 108 "English-speakers," 55 non-Polish East Europeans, and 35 men of other backgrounds. Also see: Ralph Stokes, Mines and Minerals of the British Empire (London: Edward Arnold, 1908), 323; A.P. Coleman,

"Ontario Mines and Miners," Empire Club of Canada Addresses 1911-12 (Toronto: Warwick Bros & Rutter, 1913), 163; E.T. Corkill, testimony, in Sir William Ralph Meredith, Interim Report on laws relating to the liability of employers to make compensation to their employees for injuries received in the course of their employment (Toronto: L.K. Cameron, 1912), 166; Canada, Census of Canada, 1911, vol. 6, Table V, 176-77.

²¹ Toronto News, 23 November 1903; Sault Star, 13 October 1904; CAR (1904): 545. Meanwhile, pro-industry figures like Frank Cochrane condemned any and all impositions against the nickel firms. Globe, 7 May 1902.

²² RONC, 15-18; Ontario, Statutes, 1907, 7 Edw. VII, c. 14

²³ Eugene Haanel, "Possible Economies in Production of Minerals of Canada," Canada, Commission of Conservation, Annual Report, 1910, pp 67-68. Haanel drew harsh criticism from industry spokesmen: Nelles, 333; Main, 81. Others supported his contention: see the anti-INCO sentiments in Saturday Night, 28 March 1909.

²⁴ Canada, House of Commons, "Proceedings of the Select Standing Committee of the House of Commons on Mines and Minerals," Journals, 1909-10, app. 5, pp 12-20. The quote is on p. 13.

²⁵ Ibid., 21-43. For assessments of the Committee: RONC, 18-19; Sault Star, 21 March, 1 April 1912; H.V. Nelles, "The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1890-1939," (Ph.D. diss., University of Toronto, 1969), 524-29. The Sudbury newspapers paid the Committee surprisingly little heed, perhaps because of their conviction that there was "plenty" of room for new nickel firms. Sudbury Star, 19 February 1913.

²⁶ T.K. Dickenson, Copper Cliff Courier, Christmas issue, 1903. Copy in Regional Room, Sudbury Public Library (hereafter SPL). The totals reported for firms and men employed varied widely: the Globe, 10 April 1902, reported, 5,000 men within a 30 mile radius of Sudbury. Clearly, however, Sudbury was a key lumber centre: in 1904 it hosted the general meeting of the Georgian Bay and Ottawa Valley lumbermen. Sudbury Journal, 28 July 1904.

²⁷ Gwenda Hallsworth, " 'A Good Paying Business': Lumbering on the North Shore of Lake Huron, 1850-1910 with Particular Reference to the Sudbury District," (M. A. diss., Laurentian University, 1983), 8; Ontario Report of the Commissioner of Public Works for the Province of Ontario (hereafter Public Works), 1905, 57; 1906, 43; 1907, 53; T.B. Speight, "Survey of Outline of Townships, District of Algoma," Ontario, Report of the Commissioner of Crown Lands of the Province of Ontario, 1902, app. 18, pp 38-39. The best general sources of local lumber operations are Hallsworth; Thomas Thorpe, "A Review of the Logging and Pulp Operations in Sudbury District During the Years 1901-1950," unpublished manuscript,

Department of Lands and Forests, n.d.; J.P.G. de Lestard, "A History of Sudbury Forest District," Ontario, Department of Lands and Forests, District History Series, no. 21, (Toronto: The Department, 1967).

²⁸ Papermaking made good gains because of technical improvements, increased literacy, growing urban markets for paper, and provincial restriction of pulpwood exports. John A. Guthrie, The Newsprint Industry: an Economic Analysis (Cambridge: Harvard University Press, 1941), 3-16; L. Ethan Ellis, Print Paper Pendulum: Group Pressure and the Price of Newsprint (New Brunswick, New Jersey: Rutgers University Press, 1948), 18-69. On Spanish River: Eileen Goltz, "Española: The History of a Pulp and Paper Town," Lauréntian University Review (LUR) 6 (June 1974): 75-77, 83, 85; Globe, 31 October 1901; Saturday Night, 19 November 1910; Sudbury Star, 3 December 1910; Sault Star, 8 May 1912; Houston's Publications, Annual Financial Review (1911): 246-47; (1912): 283-84; (1913): 294-95; (1914): 295.

²⁹ Hallsworth, 94-95; Benoit Brouillette, "La région minière de Sudbury," L'actualité économique 11 (January 1937): 234; Thorpe, passim; Solski, 45; Sudbury Journal, 9 April 1903, 7 November 1907, 11 July 1911; Canada Lumberman, 1 February 1910; Sudbury Star, 13 July, 31 August 1910. Local histories provide details on many of the small mills.

³⁰ Guthrie, 154, provides the quote on pulpcutters. Similarly, Thomas Edison concluded that local farmers, with "nothing to do winters," would "work cheap." Thomas Edison, "Edison's Notes on His Visit to Sudbury District," Edison Documents, SPL, p.3. For wages in the lumber industry: Canada, Board of Inquiry into Cost of Living, Report of the Board (Ottawa: J. de L. Tache, 1915), 1:566-67; Sudbury Journal, 7 August 1902. Forestry techniques are outlined in Donald Mackay, The Lumberjacks (Toronto: McGraw-Hill Ryerson, 1978).

³¹ In the spring of 1911, for instance, lumbermen flocked to Sudbury, and "money flowed around freely." Sudbury Journal, 30 March 1911.

³² Positive publicity also quickened the pace of settlement: in 1913, local municipalities helped finance a booklet extolling the agricultural virtues of the North Shore. Canada, "Report of the Superintendent of Immigration," Annual Report of the Department of the Interior 1913, Part II, 132-33. On the declaring of free lands: Ontario, Report of the Minister of Lands, Forests and Mines (hereafter Lands, Forests and Mines), 1906, vii. Shield areas had been "frozen" to protect their timber also came on the market. Sudbury Journal, 13 July 1905. See the minutes of McKim and Waters Township Councils for evidence of the preponderant role played by farmers.

³³ In 1902 Cochrane, then Conservative candidate for Nipissing West, pledged his support for more local free land. Toronto World, 7 May 1902. The free townships were: Blezard, Broder, Garson, Neelon, Balfour, Rayside, and west half of Capreol (1906); east half of Capreol (1908); Morgan (1911);

Lumsden (1912). Ontario, Lands, Forests and Mines, 1906, vii; 1908, vii; 1911, vi; 1912, vii. Local histories are of great aid in outlining the character of Valley settlement. See, for example, Jeanne Vaillancourt, Chelmsford, 1883-1983 (Ottawa: Le Club 50 de Chelmsford, 1983), 251-56.

³⁴ Calculated from "Statement showing the number of Locatees and of acres located; of purchasers and of acres sold; of lots resumed for non-performance of settlement duties; and of patents issued under The Free Grant and Homesteads Act," Ontario, Lands, Forests and Mines, 1906-13.

³⁵ Canada, Census of Canada, 1890-91, vol. 2, Table XVI, 272-73, 292-93; vol. 4, Table II, 36-37, 56-57; Table III, 144-45, 164-65; *ibid.*, 1911, vol. 4, Table I, 7-8, 16-17; Table II, 56-57, 74-75; Table III, 144-47, 160-63; Table IV, 232-35, 248-51. Indications of commercial farming included the growing number of butter and cheese factories, not to mention the opening of a 2,000 barrel-per-day flour mill in Sudbury (1910?). Lionel Seguin, Historique de la paroisse de Chelmsford, Ontario (Sault Ste. Marie (?): The Diocese, 1948), 59; Saturday Night, 17 September 1910, Financial Post, 24 May 1913.

³⁶ Calculated by cross-referencing Census figures for 1911 (note 35) with District values available in Ontario; "Agricultural Statistics," Annual Report of the Bureau of Industries for the Province of Ontario (hereafter Bureau of Industries), 1911, Part I.

³⁷ Coleman, "Ontario Mines and Miners," 163. For succinct explanations of "land fever" among the Finns see: K. Suutarinen "Sudburya Seutuinen Suomalaiset," Canadian Suomalainen, ed. Niilo Tuomenksa (Sudbury: Finnish Canadian Historical Society, n.d.), 13; William Eklund, Canadian Rakentaja (Toronto: Canadian Suomalainen Jaijesto, 1983), 451. For English-language discussions see Oiva Saarinen, "Finns in Northeastern Ontario with Special Reference to the Sudbury Area," LUR 15 (November 1982): 43-45; Peter Krats, "Finnish Rural Life in the Sudbury Basin," Paper presented at the Agricultural History of Ontario Seminar, Guelph, 1983.

³⁸ By 1906, "severe" sulphur-caused damage in McKim, Neelon and Rayside Townships prompted calls for indemnity payments from INCO to local farmers. By 1909 the District Sheriff was arbitrating such claims; circumstances changed abruptly during World War I. Sudbury Journal, 10 October 1910, 12 July 1906; Mathew Bray, "The Province of Ontario and the Problem of Sulphur Fumes in the Sudbury District: An Historical Perspective," LUR 16 (February 1984): 82-83. On Coniston: Solski, 46. Speculative land holding also remained a hindrance: in 1907 virtually all of Nairn and Lorne Townships were in the hands of miners or lumbermen. Sault Star, 16, 23 May 1907.

³⁹ Calculated from Census figures (1911) and District values in Ontario, "Agricultural Statistics," Bureau of Industries, 1911, Part I.

⁴⁰ Thomas F. Barton, "Agricultural Landscapes of the Sudbury Area, Ontario," Illinois State Academy of Science Transactions (1941): 136; Sault Star, 14 April 1904; Ontario, "Reports of the Farmers Institutes," Annual Report of the Department of Agriculture, 1909, vol. 2, Part 4, inner part II, 14. On the first "Ag Rep": Ontario, "Report of the Minister of Agriculture," ibid., 1912, vol. 1, Part I, 34; Sudbury Journal, 6 June 1912; Ontario Public Accounts of the Province of Ontario (hereafter Public Accounts), 1912, 286. The Finns won particular praise for their farming skills: Barton, 136; Krats, *passim*.

⁴¹ Toronto Star, 2 October 1902.

⁴² Canada, Statutes, 1905, 4-5 Edw VII, c. 120; 1912, 1-2 Geo V, c. 111; Dale Wilson, "Algoma Eastern Railway," Nickel Belt Rails 1 (1979): 4-13, 42; EMJ 73 (17 May 1902): 694; Sault Star, 23 July 1908; Financial Post, 7 December 1912, 1 February 1913; Canadian Railway and Marine World, January 1913, 20; July 1913, 331. For details on the construction see Ontario, Public Works, 1906, 50; 1909, 54; 1911, 54; 1912, 40. Also: Canada, Annual Report of the Department of Railways and Canals, 1906-13. For operating statistics see ibid., 1902-13; and Poor's Manual of Railroads, 1902-13.

⁴³ Ontario, Statutes, 1902, 2 Edw. VII, c. 69; ibid., 1903, 3 Edw VII, c. 5, c. 92; ibid., 1906, 6 Edw VII, c. 19; Sault Star, 16 July, 6 August 1903; Donald Eldon, "The Career of Francis H. Clergue," Explorations in Entrepreneurial History 3 (15 April 1951): 263.

⁴⁴ The private scheme is outlined in: Ontario Gazette 40 (16 February 1907): 183; ibid., 40 (23 March 1907): 326. Sudburians praised the scheme as potentially offering "a great help to the development of this section of New Ontario." Town of Sudbury, "Minutes of the Council," (hereafter Sudbury, "Minutes,"), 2 March 1908. On the public line: Ontario, Report of the Temiskaming and Northern Ontario Railway Commission, 1907, 30; 1908, 12; Sudbury Star, 3, 5 March 1910. A route north remained a "cherished" dream: ibid., 13 May, 8, 11 November 1911. Indeed, an equally unsuccessful push for a T & NOR line from Sudbury to Shining Tree emerged in 1914: Sudbury Journal, 19 March, 30 April 1914.

⁴⁵ Ontario, Public Works, 1904, 25; 1905, 58; 1906, 48; 1907, 54; 1908, 76; Poor's Manual of Railroads (1908): 761; (1909): 743; Canadian Pacific Railway, Annual Report, 1906, p. 7; Donald Wilson, The Ontario and Quebec Railway: A History of the Development of the Canadian Pacific System in Southern Ontario (Belleville: Mika Publishing, 1984), 129-130; 134-39. The CPR also considered at least two routes northwards from Sudbury, one of which was intended to service the Moose Mountain site: ibid., 139; Sault Star, 6 August 1903; EMJ 97 (10 January 1914): 153.

⁴⁶ The CNOR was a revitalization of the James Bay Railway schemes of the 1890s that had received "strong local support." See: Ontario, "Return, Correspondence, and general information in respect of the application for grants of money..." Sessional Papers (hereafter SP) 1899, no. 78, pp. 14-15; Sudbury, "Minutes," 13 July 1899; Sudbury Journal, 13 January 1898; George Roy Stevens, Canadian National Railways (Toronto: Clarke, Irwin, 1962), 2: 35, 43, 56-57.

⁴⁷ Sudbury, "Minutes," 29 August 1903; McKim Township, "Township Council Minutes," 29 January 1904; Town of Copper Cliff, "Town Council Minutes," (hereafter Copper Cliff, "Minutes"), 25 January 1904. The Sudbury Board of Trade and Balfour Township Council also added their support. Sault Star, 18 February 1904. On the line's progress: Ontario, Public Works, 1905, 58; 1906, 48; 1907, 54; 1908, 77; Toronto News, 10 April 1902; Globe 4, 6 July 1908. Sudburians were "quite aroused" when it became known that the CNOR would bypass their town. Sudbury Journal, 16 November 1905; Sault Star, 23 November 1905. For more on local aspects of the CNOR and the CNR: Stevens, 2: 57, 76-77, 81; T.D. Regehr, The Canadian Northern Railway (Toronto: Macmillan, 1976), 257, 264. Canadian Northern Railway Company, Annual Report, Toronto, 1911-14.

⁴⁸ Sudbury Journal, 20 November 1902, 4 March 1909, 12 June 1913; Sudbury Star, 1 March 1910; William Makinen, "The Mond Nickel Company and the Communities of Victoria Mines and Mond," Industrial Communities of the Sudbury Basin (Sudbury: Sudbury & District Historical Society, 1986), 33, 38.

⁴⁹ Ontario, Annual Report of the Commissioner of Highways, Ontario (later, Annual Report on Highway Improvement in Ontario), 1904, 131, 156; 1907, 100-03; 1910, 75, 85; Ontario, "Report of the Superintendent of Colonization Roads," Public Works (hereafter "Colonization Roads Report"), 1903-14; Ontario, Public Accounts, 1903-14. On the Trunk Road concept: Ontario, "Colonization Roads Report," 1902, 30; Sudbury Journal, 22 November 1906; Ontario, Statutes, 1907, 7 Edw. VII, c. 17.

⁵⁰ The description of local roads circa 1913 is based on the ever-optimistic Colonization Road reports plus more critical comments in local newspapers and the OBM. Contemporary maps provide a good, though often incomplete, indication of the extent of the local roads. On the cost of road construction: Ontario, "Colonization Roads Report," 1913, 47. Thus it was no surprise that in 1912 even the main east-west North Bay - Sudbury - Sault road had had "breaks" T.W. Wilby, A Motor Tour Through Canada (London: John Lane, 1914), 138-40.

⁵¹ Canada, Canada Official Postal Guide, 1900, 1905-08, 1911, 1913, 1916.

⁵² Stevens, 2:78; Canada, "Telegraph Statistics of the Dominion of Canada, 1912," SP, 1913, no. 20f, 8-20; idem, Department of the Interior, Atlas of Canada 1906, map no 11; idem, Atlas of Canada 1915, 34.

⁵³ Ontario, "Telephone Statistics" Annual Report of the Ontario Railway and Municipal Board, 1910-13; Canada, Department of Railways and Canals, Telephone Statistics of the Dominion of Canada, 1911-13; Bell Telephone Company, "Telephone Directories, Sudbury Area," microfilm copies, SPL; Sudbury Journal, 7 October 1909, 16 November 1911; Sudbury Star, 11 November 1911. The Chenier system provided phone service to Chelmsford, with single lines to Blezard Valley, Boninville, Azilda and Hanmer.

⁵⁴ Canada, Statutes, 1903, 3 Edw. VII, c. 60 s. 24, 32; W.G. Dean, ed., Economic Atlas of Ontario (Toronto: University of Toronto Press, 1969), plate 105.

⁵⁵ Ontario, Statutes, 1902, 2 Edw VII, c. s. 3-4; *ibid.*, 1908, 8 Edw VII, c. 2, s. 41, 72, 73; Dean, ed., plate 106.

⁵⁶ Ontario Statutes, 1907, 7 Edw VII, c. 25; *ibid.*, 1908, 8 Edw VII, c. 33, s. 32; *ibid.*, 1910, 10 Edw VII, c. 2, s. 51; *ibid.*, 1912, 2 Geo V, c. 21; *ibid.*, c. 22. Sudburians actively sought a new District: Sudbury, "Minutes," 15 January 1906. On the court: Ontario, Annual Report of the Inspector of Division Courts for the Province of Ontario, 1908, 25, 55-56; Sudbury Journal, 27 February 1908.

⁵⁷ Canada, Report of the Minister of Public Works, 1909, Part II, 11; 1913, Part II, 14; 1914, Part III, 46; Sudbury Journal, 12 December 1912; Sudbury Star, 12 November 1913. On the provincial Court House and associated structures: Ontario, Public Works, 1907, 7; 1909, 29; Municipal World, 18 (August 1908): 171; *ibid.*, 22 (November 1912), 247. See the various Departmental reports for evidence of local activity, plus the Public Accounts. On the new O.P.P. officer: Ontario, Public Accounts, 1910, 62. Servicing as a regional centre had some negative implications: during the serious smallpox outbreak of 1900-1902, Sudbury was home to a "government Tent Hospital"; the region was among the hardest hit in the province. Ontario, Report of the Provincial Board of Health of Ontario, 1901, 12, 13, 21, 28-29.

⁵⁸ Ontario, Report of the Minister of Education, Province of Ontario 1903-13; idem, Schools and Teachers in the Province of Ontario, 1911-13; Sheila Prusila et al., "Vintage Schools: A Preliminary Survey of Schools Operating in the Sudbury Basin 1880-1930," unpublished manuscript, 1981, SPL.

⁵⁹ Sudbury's first library operated from late 1895 to 1897; a new facility was opened in 1912. Copper Cliff had a library by 1896, Nairn Centre by 1899 and Victoria Mines by 1902. Later on, libraries in Worthington (1917(?)) and Capreol (1918) provided what T.W. Leavitt termed "social

civilizing forces ennobling the community." T.W. Leavitt, "Annual Report of the Inspector of Public Libraries," 1909, 152. These reports, included in the Report of the Minister of Education, provide details on local libraries. Ontario, Public Accounts, gives fiscal details. Also: Sudbury, "Minutes" 10 December 1895; Sudbury Journal, 7 January, 24 June 1897; Isabel McLean, "Half a Century of Library Service in Sudbury," Ontario Library Review 46 (1962): 156-57.

⁶⁰ Marjorie Z. Robinson, "Norman Bethune and Frontier College, 1911-1912," Norman Bethune: His time and his legacy, eds. David Shephard and Andree Levesque (Ottawa: Canadian Public Health Association, 1982), 32-36; Alfred Fitzpatrick, The University in Overalls: A Plea for Part-time Study (Toronto: Hunter Rose, 1920), app. A.

⁶¹ J. Donald Wilson, "Introduction," An Imperfect Past: Education and Society in Canadian History, ed. J.D. Wilson (Vancouver: Centre for the Study of Curriculum and Instruction, 1984), 5.

⁶² The depiction of local education is based upon various contemporary sources and local histories as well as informal discussions with now-elderly residents. On Mond: John Abbott, "Accomplishing 'a Man's Task': Rural Women Teachers, Male Culture, and the school Inspectorate in Turn-of-the-Century Ontario," Ontario History 78 (December 1986): 323. On the growing professionalization of teaching: Robert Stamp, The Schools of Ontario, 1876-1976 (Toronto: University of Toronto Press, 1982), 74-96; the phrase is from p. 85.

⁶³ Road or school boards, or both, were formed in Broder, Burwash, Capreol, Creighton, Dill, Fairbank, Falconbridge, Hutton, Louise, Lumsden and Morgan Townships. See Ontario Public Accounts, for records of provincial aid to these townships. Lorne township residents, meanwhile, decided to withdraw from their union with Nairn Township and to resume unorganized status. Ontario Gazette 41 (19 September 1908): 1030.

⁶⁴ Figures calculated from census totals. For a chronological list of incorporations, see: Sawchuk and Peach, Inc., Nickel Basin Planning Study (Toronto(?): Ontario Department of Municipal Affairs, 1967), app. I. For details on Chelmsford: Ontario Gazette 42 (24 December 1909): 1466-67; Sudbury Journal, 30 December 1909. On Froid Mine: "Procedure File no. 2015," Annual Report of the Ontario Railway and Municipal Board, 1913, 287.

⁶⁵ Chelmsford's books were in "a very loose and negligent condition"; Hanmer and Balfour Townships' records were "scarcely legible"; and often in French. Ontario, Annual Report of the Provincial Municipal Auditor (hereafter Municipal Auditor), 1911, 27-32, 66-69, 130-38.

⁶⁶ Ontario, "Statistics of Ontario Municipalities," Bureau of Industries, 1903-13; idem, "Municipal Statistics," Report of the Bureau of Labour of the Province of Ontario (hereafter, Bureau of Labour); idem, Municipal Bulletin, 1906-13.

⁶⁷ See note 66 for statistical sources; the Municipal Bulletin is especially useful. Township minutes and local histories add much detail, provincial spending gives some clues as to local concerns. Balfour and Nairn Townships, for example, both sought and obtained provincial funds towards the construction of locally-maintained jails. Ontario, Public Accounts, 1904, 162; 1905, 246; idem, Annual Report of the Inspector of Prisons and Public Charities upon the Prisons and Reformatories of the Province of Ontario, (hereafter Inspector of Prisons), 1904, 11; 1905, 12.

⁶⁸ Ontario, Municipal Bulletin, 1910-13; idem, "Municipal Statistics," Bureau of Labour, 1910-14. The latter indicates that Chelmsford spent an average of only \$20 per year on sanitation. Policing was a greater concern: Town Bylaw no. 2 appointed a Constable. Ontario, Municipal Auditor, 1911, 67. See Vaillancourt; passim for many details.

⁶⁹ On Sellwood: Sudbury Star, 23 March 1932; Colin Clay, "Capreol and Surrounding Area," Historic Sudbury 1 (1979): 44-46. On Victoria Mines and Mond: Makinen, 31-39; Ron Brown, "Victoria Mines," Ghost Towns of Ontario. Volume 2: Northern Ontario & Cottage Country (Toronto: Cannon Books, 1983), 78-80. Coniston's services are outlined in RONC, 81; Solsky, 46, 48. Gray, 19, discusses Crean Hill. The best source on Frood Mine is: Town of Frood Mine, "Town Council Minutes," see esp. 1914. See also: Sudbury Journal, 22 February 1914; Saturday Night, 4 October 1930. Local histories, the OBM, the mining press and the newspapers all provide more details on these and other company towns.

⁷⁰ Makinen, 39; Sudbury Star, 17, 21 May 1913, 23 March 1932.

⁷¹ RONC, 81; Makinen, 40; Sudbury Star, 23 March 1932.

⁷² Copper Cliff, "Minutes," reveal many improvements. Also see the town bylaws. For example: No. 23 (policing), no 32 (Fire brigade). The "foul" creek is cited in *ibid.*, 3 March 1906. Additional details are in: BONC, 75; OBM (1904): 54; LeBourdais, 99; Cheryl Daminato, et al., A Bit of the Cliff: A Brief History of the Town of Copper Cliff 1901-1972 (Sudbury (?); Copper Cliff Museum, 1982); Eileen Goltz, "Copper Cliff: The Pioneer Period," Industrial Communities of the Sudbury Basin (Sudbury: Sudbury & District Historical Society, 1986), 91; Jim Elliot, "The Role of the International Nickel Company of Canada Ltd., in the Municipal and Community Services of Copper Cliff," unpublished essay, Laurentian University 1969, p.2. Copper Cliff's tax rate (9 mills) was "said to be the lowest in Ontario." Sudbury Star, 12 November 1913. For details: Gilbert Stefter,

"Community Development in Toronto's Commercial Empire: The Industrial Towns of the Nickel Belt, 1883-1931," LJR 6 (June 1974): 42.

⁷³ Copper Cliff, "Minutes," 13 January 1908. INCO's role in policing kept the town force small: in 1912 Copper Cliff boasted only a three man force. Sudbury Journal, 12 December 1912.

⁷⁴ Copper Cliff, "Minutes," 1 April 1905. For a critique of INCO's influence see Ontario, Department of Public Records and Archives, "Newspaper Hansard", Legislature of Ontario, 19 April 1905. The Sudbury Star, 31 December 1918, noted that "electing company officers had been 'the custom' since 1906. See also Saturday Night, 16 May 1908; Stelter, 41. For a list of municipal politicians, see Daminato et al., 71-73.

⁷⁵ Gray, 27-28.

⁷⁶ Saturday Night, 16 May 1908.

⁷⁷ These fringe towns drew few comments and, quite naturally, produce no civic records. Thus, relatively little is known about Cinnottville, Dogpatch, Norman, Warsaw and the like -- fringe towns, respectively, of Copper Cliff, Creighton, Capreol and Levack.

⁷⁸ Sudbury, "Minutes," 3 July 1913. Ontario, "Statistics of Ontario Municipalities," Bureau of Industries, 1903-13; idem, Municipal Bulletin, 1906-13; idem, "Municipal Statistics," Bureau of Labour; 1903-13. The senior government's roles are outlined above -- see notes 57-59. Departmental reports and Ontario, Public Accounts, provide annual details on provincial activities. On St. Joseph's Hospital see Huguette Parent, "L'hôpital Saint-Joseph de Sudbury," (M.A. Diss., Laurentian University, 1985). The most detailed account of the Collège is Gerald Blais, "Le Collège du Sacré-Coeur, Sudbury, Ontario," (M.A. diss., University of Ottawa, 1968). The beginnings of the local Children's Aid Society are outlined in Ontario, Report of the Superintendent of Neglected and Dependent Children of Ontario, 1907, 62.

⁷⁹ Sudbury, "Minutes," 3 June 1907; 24 June, 26 July 1911; 20 April 1912; 23 June 1913; Town of Sudbury, "By Laws," no. 159; 285; 286 are just three examples of an active municipal administration. Also: Sudbury Journal, 27 April, 3 August 1911, 20 February, 23 June 1913; Labour Gazette 5 (October 1904): 346; Sudbury Star, 26 November 1910; Financial Post, 29 November 1913; Edwin Higgins, The Sudbury Fire Department 1883-1976 (Sudbury: n.p. 1976 (?)), n.p.; idem, Twelve O'Clock and All's Well: A Pictorial History of Law Enforcement in the Sudbury Area (Sudbury: Sudbury Regional Police, 1978), 13, 21; Charles Dornon, The First 75 Years: A Headline History of Sudbury, Canada (Ilfracombe, Devon: Arthur H. Stockwell, 1959), 51-54, 160, 261-62.

⁸⁰ Sudbury, "Minutes," 6 June, 11 July, 13, 26 September 1904; Sudbury, "By Laws," no. 160; Sudbury Journal, 22, 29 November 1900, 29 October 1903, 14 July 1904; CMR 23 (31 October 1904): 205; Sudbury Star, 4 February, 17 November 1904; OEM (1905): 10; (1906): 62; Hydro Electric Power Commission of the Province of Ontario, Fifth Report: Algoma, Thunder Bay and Rainy River Districts (Toronto: Legislative Assembly of Ontario, 1907), 12, 13, 25; Neville Barnett, "History of Hydro in Sudbury 1895-1966," unpublished manuscript, 1967, SPL, 11-14. On the search for more power: Sudbury, "Minutes," 29 November 1913; Financial Post, 29 November 1913; Sudbury Journal, 15 January 1914.

⁸¹ Bishop Scollard, not surprisingly, rejected the claims of bias as untruths. And he did encourage continued francophone colonization in Algoma. La Patrie (Montreal) 21 May 1907. On Scollard: Robert Choquette, La foi: gardienne de la langue en Ontario, 1900-1950 (Montreal: Les éditions Bellarmin, 1987), 32, 52-53. On the Victoria Mines work: Victoria Mines [Parish] Status Onimarum, 1903, located in the Jesuit Archives, Université de Sudbury (ASJCF), file D-6-8. Between 1905 and 1909, one Jesuit visited an average of 23 camps annually, ministering to an average of 75 men per camp; two-thirds of the men were Roman Catholics. St. Anne's Parish Historie/Diarum, ASJCF, file D-6-8, p 111. Local and parish histories, especially those in the Documents historique du Nouvel-Ontario (hereafter Documents historique), add much detail. Key newspaper references include: Sudbury Journal, 26 March 1908, 2 October 1913; Le Droit (Ottawa) 10 July, 23 August, 6 November, 4 December 1913. A statistical source is Le Canada Ecclesiastique; almanack annuaire du clergé Canadien (1905): 166-69; (1907): 203-06.

⁸² Frank Peake and Robert Horne, The Religious Tradition in Sudbury (Sudbury: Journal Printing, 1983), 79; Richard Allen, The Social Passion: Religion and Social Reform in Canada, 1914-28 (Toronto: University of Toronto Press, 1971); Canadian Baptist, 5 December 1912.

⁸³ For areas outside of Sudbury and Copper Cliff, published church records indicate about thirty Presbyterian stations, nine Methodist, five Anglican and one Baptist; these supported even-smaller preaching points. There were at least six Presbyterian, four Methodist, four Anglican and two "union" chapels or churches scattered about the Nickel Belt. Baptist Convention of Ontario and Quebec, The Baptist Year Book, 1903-13; Church of England, Journal of Proceedings of the Triennial Council of the Church of England in the Diocese of Algoma, 1904, idem, Journal of Proceedings of the Synod of the Diocese of Algoma, 1914; Methodist Church of Canada, Proceedings of the Toronto Annual Conference of the Methodist Church, 1903-14; Presbyterian Church in Canada, Acts and Proceedings of the General Assembly of the Presbyterian Church in Canada, 1903-14.

⁸⁴ Based on the sources cited in note 83, church minutes, and local histories. By 1907 INCO had provided aid to the Finnish Lutheran church. Saturday Night, 16 May 1908.

⁸⁵ Canadian Baptist, 19 August 1909. The annual reports of the various denominations provide much detail -- see note 83. Horne and Peake, 21-37, provides an overview.

⁸⁶ The St. Annie's Histoire/Diarium reports increasing numbers of Italians, Poles "Ruthenians" and "Syrians" in the parish. ASJCF, file D-6-8. See also Le Droit (Ottawa), 6 November 1913. On the immigrant work: Maurizio A. Visentin, "The Italians of Sudbury," Polyphony 5 (1, 1983): 32; Henry Radecki, "Polish Immigrants in Sudbury," ibid., 49; Mary Stefura, "Ukrainians in the Sudbury Region," ibid., 72. In 1912 Ukrainians in Sudbury tried unsuccessfully to open their own church. Sudbury Journal, 15 August 1912.

⁸⁷ Canadian Baptist, 11 June 1908, 29 April 1909; Baptist Year Book, 1907, 59; 1913, 85; 1914, 69; Gertrude J. Lewis, "The German Presence in the Ontario Northland," German Canadian Yearbook 8 (1984): 41-42; Harry Young with Sheila Prusila, "Chinese in Sudbury," Polyphony 5 (1, 1983): 108; Sudbury Journal, 30-April 1914. Heinonen's arrival is noted in Sudbury Star, 18 June 1913; for more on his work see Chapter Six.

⁸⁸ Lauri T. Pikkusaari, Copper Cliffin Suomalaiset ja Copper Cliffin Suomalainen Evankelis-Luterilainen Wuoristo-Seurakunta (Hancock: Suomalais-Luterilainen Kustannusliike, 1947), 116-17, 146-49, 153-63. On the Jewish effort: Sudbury Star, 15 October 1913; Peake and Horne, 66; Dorothy Moses with Dina Abramson, "Jews in Sudbury," Polyphony 5 (Spring-Summer 1983): 113.

⁸⁹ Canadian Baptist, 5 December 1907. The limited affiliation is evident in comparing memberships with census figures. Frank A. Peake concluded that the slow acceptance of the Churches was characteristic of a frontier setting. F.A. Peake, "Religion and Society in Sudbury: 1883-1914 A Preliminary Study," Presidential Address to the Sudbury & District Historical Society, 1970, SPL, pp 5, 12-13.

⁹⁰ Leslie H. Saunders, "Directory of all Lodges," The Story of Orangeism (Toronto: The Grand Orange Lodge of Ontario West, 1960), 2, 23-24; Proceedings of the Grand Lodge of Ancient Free and Accepted Masons of Canada, in the Province of Ontario (1903): 334, (1913): 283; Independent Order of Odd Fellows, Proceedings of the Grand Lodge of Ontario (1911): 338; National Council of Women, Year Book (1912): app, p. xxv, 11.

⁹¹ Toronto Telegram, 21 March 1911; Toronto Star, 29 November 1911; F.W. Merchant, Report on the Condition of English-French Schools in the Province of Ontario (Toronto: King's Printer, 1912). Among the newer francophone groups were Le Club Canadien and the Union St. Joseph du Canada. As early as 1908 francophones in Sudbury, Balfour, Rayside, Blezard and Hanmer organized a deputation which met with Sir Wilfred Laurier seeking a French-speaking judge for the local court. Sudbury Mining News, 28 February 1908; Sault Star, 3 March 1908. Details on francophone institutions and the school question are available in: Gail Cuthbert-Brandt, "The

Development of French-Canadian Social Institutions in Sudbury, Ontario 1883-1920," LUR 11 (February 1979): 13-19; J.B. Waddell, "Histoire de la paroisse St. Anne," unpublished manuscript, 1933 (?), ASJCF, file B-3-8, pp 132, 145-46; Gaetan Gervais, "Les franco-Sudburois, 1883-1983," Polyphony 5 (1, 1983): 21-23. The quote is from Brandt, 14. There is a wealth of additional information.

⁹² André Lalonde, "Le règlement XVII et ses repercussions sur le Nouvel Ontario," (B.A. diss., Laurentian University, 1964); Victor Simon, "Le règlement XVII: sa mise en vigueur à travers l'Ontario 1912-1927," Documents historique 78 (1983); Choquette, 110-20. Bishop Scollard felt Regulation 17 was "in whole and in part, pre-eminently fair, just and equitable." Bishop D.J. Scollard, letter to Premier J.P. Whitney, 21 October 1912, quoted in Michael J. Fitzpatrick, "The Role of Bishop Michael Francis Fallon, and the Conflict Between the French Catholics and Irish Catholics in the Ontario Bilingual Schools Question 1910-1920," (M.A. diss., University of Western Ontario, 1969), 132.

⁹³ Le Droit (Ottawa), 21 July 1913. Ricard won much acclaim among area francophones: Sudbury Star, 24 June 1933; "Felix Ricard," in Marguerite W. Tregonning, Regard sur le passé (Sudbury: Le Voyageur Inc, 1983), 299-303. On the College: Albert Plante, Vingt-cinq ans de vie française: le College de Sudbury (Montréal: Imprimerie du messenger, 1938); 32-47. On the 1913 meetings: Choquette, 117-18; CAR (1913): 427.

⁹⁴ Sudbury Journal, 3 October 1907; 6 February 1908, 4 January 1912; Sudbury Star, 27 August 1910; Visentin, 32; Sudbury Star, 13 December 1911. One study of local Finnish institutions is Peter Krats, "'Sudburyn Suomalaiset': Finnish Immigrant Activities in the Sudbury Area, 1883-1939," (M.A. diss., University of Western Ontario, 1980).

⁹⁵ Sudbury Journal, 20, 27 February 1908, 4 January 1912.

⁹⁶ Brandt, 19; Sudbury Star, 1 November 1913 provide details on the businessmen's groups. On Mr. Zepieri: Sudbury Journal, 18 July 1907. Quite likely he was part of the migrant Italian "padrone" network. See: Robert Harney, "The Padrone System and Sojourners in the Canadian North, 1885-1920," Pane E Lavoro: The Italian American Working Class, ed. George Pozzetti (Toronto: Multicultural History Society of Ontario, 1980), 119-37. On the Caisse populaires: Le Droit (Ottawa), 14, 25, 28, 31 October 1913; Vaillancourt, 146; Seguin, 68. The Co-operative's founding and subsequent store opening are reported in Ontario Gazette 45 (29 June 1912): 905; *ibid.*, 46 (7 June 1913): 781.

⁹⁷ Stokes, Mines and Minerals, 10; Ontario, "Directory of Labour Organizations in Ontario," Bureau of Labour, 1900-1913; Canada, Labour Organization in Canada, 1911-14; Gregory S. Kealey and Bryan Palmer, Dreaming of What Might Be: The Knights of Labor in Ontario, 1880-1920 (Cambridge: Cambridge University Press, 1982), 59; John B. Lang, "'A Lion in a Den of Daniels': A History of the International Union of Mine, Mill and Smelter Workers in

sales would revive the prosperity of wartime.

THE RISE AND FALL OF THE MINERAL INDUSTRY: 1914-22

The "War to end all wars" provided a tremendous boost to INCO and Mond Nickel because nickel was a key reinforcing agent in war materials ranging from bullet casings to battleships. The consequent demand for nickel soon gave these firms world dominance in the nickel industry, especially since New Caledonian production was hurt by shipping difficulties. But INCO and Mond chose radically different strategies. While INCO simply strove to maximize its production and its profit, Mond, aware of the implications of peace, maintained a steadier course. The postwar decline, exacerbated by calls for disarmament, brought similarly divergent responses: Mond maintained partial production while INCO shut its local operations. INCO's tactics brought despair to its mine and smelter towns, earning the firm considerable criticism. The American firm, having weathered the far more serious threat of a reinvigorated wartime "Nickel question", paid little heed to local complaints and concentrated instead on obtaining new markets for nickel. Mond, too, sought out commercial markets; by 1922 these efforts were producing new sales for both firms. But BANCO, which had been revitalized by British wartime nickel purchases, found commercial sales and efficient production insufficient to ward off its long-established rivals. BANCO's collapse in 1924, along with the unsuccessful efforts of gold and iron mining concerns, left control of the Nickel Region mineral industry firmly in the hands of INCO and Mond Nickel.

Nickel and the War

Ironically, the expectation of war gave a temporary setback to the industry, because INCO, nervous about the possible loss of markets due

103 Information on these rail-based centres is scattered through the various directories and gazetteers. For example: Ontario Publishing and Advertising Co., Ontario Gazetteer and Directory (1903-4): 43, 606, 642; Union Publishing Co., Province of Ontario Gazetteer and Directory (1907-8): 42, 636, 672; R.G. Dun, The Mercantile Agency Reference Book...Canada (January 1911): 350, 488, 674. Canada, Canada Official Postal Guide, indicates which stations featured mail service. Local histories include Cheryl Young, "Larchwood: A Local History," unpublished (?) manuscript, 197-(2), SPL; Robert P. Trott, The Story of Onaping Falls (Sudbury: Acme Printers, 1982).

104 Ontario Publishing and Advertising Co., Ontario Gazetteer and Director (1903-4): 163, 601, 1126, 1161,; Union publishing Co., Province of Ontario Gazetteer and Directory (1907-08): 168, 627, 1192, 1225,; R.G. Dun, The Mercantile Agency Reference Book ... Canada (January 1911): 385, 522, 679, 691.

105 Based on the directories cited above (n. 103-104) and others like John Lovell, Lovell's Gazetteer of the Dominion of Canada (1908): 387. Annual population figures and other details are available in Ontario, "Statistics of Ontario Municipalities," Bureau of Industries, 1910-13; idem, "Municipal Statistics," Bureau of Labour, 1910-13. The best local histories are the previously cited works by Vaillancourt and by Seguin.

106 See the various directories. Also: Toronto Star, 29 November 1911; Le Droit (Ottawa), 10 February 1914; Solski, 45-46; Coniston Historical Group, The Coniston Story (Sudbury: Journal Printing, 1983), 1-5; Nissila, 10; Leo Legault, "Blezard Valley," Documents historique 24 (1952): 29-35; N. Mallette, "History of McFarlane Lake," McFarlane Lake Bystander, 1 (September 1961): 7, 17; *ibid.*, 1 (October 1961): 5, 11.

107 Pine or Bahnsen, or both, were listed in the directories from about 1905: Union Publishing Co., Province of Ontario Gazetteer and Directory (1905-6): 730; John Lovell, Lovell's Gazetteer of the Dominion of Canada (1908): 285, 742. On the mine camps see the OBM. On Quartzite also see Baker, *passim*; Stovel, 11-12. Whistle was sometimes referred to as Nickleton; it should not be confused with Nickelton, the site of BANGO's works.

108 Besides the directories see: OBM, 1903-13. Especially pertinent references include: OBM (1902): 58; (1905): 41; (1907): 67; (1908): 77. Also: Saturday Night, 16, 23 May 1908, 4 October 1930; Sudbury Journal, 26 October 1911; Sault Star, 6 June, 6 September 1913; Sudbury Star, 18 June, 8 October 1913; Northern Miner, 6 March 1930; Stewart, 584; Taylor, *passim*; Gray, 19; Makine, 26, 32-35. The OBM and various reports by A.P. Coleman contain maps of these mine centres as well as photographs.

¹⁰⁹ The quotes: Sault Star, 6 June 1913; Sudbury Star, 30 August 1913. In addition to the directories and the annual OBM, see: Canadian Baptist, 21 February 1907; Globe, 2 August 1907; Saturday Night, 23 May 1908; Toronto Star, 6 July 1908; Northern Miner, 6 March 1930; Sudbury Star, 23 March 1932; Lindeman, 3-4; Clay, 44-46; Makinen, 30-32; Brown, 78-80.

¹¹⁰ The best sources on Copper Cliff are: Eileen Goltz, "Genesis and Growth of the Company Town: Copper Cliff, 1886-1920," (M.A. diss., Laurentian University, 1983); Daminato et al., passim. Numerous directories were consulted; the most reliable is Vernon's Directories Ltd., Vernon's Sudbury and Copper Cliff Directory, which began appearing in 1911. See also the numerous references in the OBM, RONC, and the works of A.P. Coleman. Ontario, "Statistics of Ontario Municipalities," Bureau of Industries, and other provincial sources add yet more detail. Other useful references include: Sault Star, 4 May 1905; Canadian Baptist, 21 February 1907; Saturday Night, 16 May 1908; Stelter 9-14, 36, 41-44. The quote is from the Toronto Star, 2 October 1902.

¹¹¹ Calculated from occupations cited in Sudbury, "Minutes," 1903-13. For a similar conclusion see: Gail Cuthbert-Brandt, "'J'y suis, j'y reste': the French Canadians of Sudbury, 1883-1913," (Ph.D. diss., York University, 1976), 259.

¹¹² The growth is evident in the directories, Vernon's Directories Ltd., Vernon's Sudbury and Copper Cliff Directory. One summary of the progress is Noel Beach, "Nickel Capital: Sudbury and the Nickel Industry, 1905-1925," LUR 6 (June 1974): 66-69. On the newspapers: A. McKim Ltd., The Canadian Newspaper Directory (1909): 20, 46, 74, 269; The Desbarat Advertising Agency, The Desbarat Newspaper Directory (1909-10): 152, 184; Sault Star, 2 September 1908; Sudbury Journal, 14 January 1909.

¹¹³ Canadian Baptist, 5 December 1907, 29 July 1909. Other positive assessments include: Toronto Star, 2 October 1902; Church of England Report of the Missionary Society, 1912, p. 28.

¹¹⁴ The quotes are from: Sudbury Journal, 1 January 1903; Toronto Telegram, 21 March 1911. On the boom: Sault Star, 23 May 1907; Financial Post, 12 October 1912; Canadian Baptist, 5 December 1912; Edwin Higgins and Frank Peake, Sudbury Then and Now: A Pictorial History of Sudbury and Area 1883-1973 (Sudbury: Sudbury & District Chamber of Commerce, 1977), 64. The high real estate values -- or housing "famine" -- noted in Toronto Star, 2 October 1902; Sudbury Star, 10 September 1910, 1 November 1911; Financial Post, 12 October 1912, 12 May, 12 July 1913. The housing shortage persisted despite the opening of new subdivisions: Sudbury Journal, 26 March, 2 April 1908; 6 January 1910, 4 July 1912; Antonio Presenza, "Sudbury: Pattern of Urban Growth 1883-1941," unpublished paper, Laurentian University, 1971, p. 20. See above for municipal services.

¹¹⁵Beach, 61-62, 68-69; Brandt, "Social Institutions," 8-0; idem., "J'y suis, j'y reste," 28-31, 49-52; Canada, Census of Canada, 1911, vol. 2, Table VII, pp 232-33; Sudbury Star, 1 March 1910, 2 April 1913.

¹¹⁶Sudbury Journal, 16 January, 1 May 1913; Sudbury Star, 1 February 1913; Ontario, "Report of the District Officer of Health", District No. 6, Report of the Provincial Board of Health of Ontario, 1914, 42; Beach, 64; E.P. Weaver, The Story of the Counties of Ontario (Toronto: Bell & Cockburn, 1913), 268. On the "Flour Mill": Claire Pilon, Le moulin à fleur, (Ottawa, n.p., 1983). The fashionable suburb is reported in Toronto Star, 2 October 1902; Sudbury Journal, 16 October 1902.

CHAPTER SIX

NICKEL HEEDS THE CALL:

THE SUDBURY REGION IN WARTIME AND ITS AFTERMATH

Introduction

The headlong plunge into worldwide conflict wrought great change on every aspect of life in the Sudbury Region. The normal course of social progress was altered by wartime passions: Conscription, Regulation 17, the "threat" posed by the "enemy alien", the "Bolshevik" and the "radical" worker all influenced local lives. The hostilities also touched the positive side of the human spirit, sparking new enthusiasm for religion, social reform and various patriotic societies, all of which enriched the human landscape. These developments, like the more commonplace extension of administration, transportation and communications media, were most strongly felt in Sudbury, further demonstrating the town's regional primacy.

But even an increasingly sophisticated Sudbury could not escape the economic consequences of war and its aftermath. Wartime needs quickened resource exploitation, in turn providing strong markets for business, labour and farm products; the last hastened the commercialization of agriculture. Still, nickel production -- crucial to the war effort -- was of first rank, as evidenced by the senior governments' protection of the nickel firms from wartime nationalism, BANCO and even farmers weary of sulphur-damaged crops. Unfortunately all this aid went for naught; once postwar disarmament crushed the nickel markets; the Anglo-American nickel duopoly cut operations severely and the ensuing depression underscored the extent to which the wartime boom had increased local reliance on nickel production. Even Sudburians, though somewhat better off because of their town's varied functions, could only hope that new commercial

sales would revive the prosperity of wartime.

THE RISE AND FALL OF THE MINERAL INDUSTRY: 1914-22

The "War to end all wars" provided a tremendous boost to INCO and Mond Nickel because nickel was a key reinforcing agent in war materials ranging from bullet casings to battleships. The consequent demand for nickel soon gave these firms world dominance in the nickel industry, especially since New Caledonian production was hurt by shipping difficulties. But INCO and Mond chose radically different strategies. While INCO simply strove to maximize its production and its profit, Mond, aware of the implications of peace, maintained a steadier course. The postwar decline, exacerbated by calls for disarmament, brought similarly divergent responses: Mond maintained partial production while INCO shut its local operations. INCO's tactics brought despair to its mine and smelter towns, earning the firm considerable criticism. The American firm, having weathered the far more serious threat of a reinvigorated wartime "Nickel question", paid little heed to local complaints and concentrated instead on obtaining new markets for nickel. Mond, too, sought out commercial markets; by 1922 these efforts were producing new sales for both firms. But BANCO, which had been revitalized by British wartime nickel purchases, found commercial sales and efficient production insufficient to ward off its long-established rivals. BANCO's collapse in 1924, along with the unsuccessful efforts of gold and iron mining concerns, left control of the Nickel Region mineral industry firmly in the hands of INCO and Mond Nickel.

Nickel and the War

Ironically, the expectation of war gave a temporary setback to the industry, because INCO, nervous about the possible loss of markets due

to hostilities, laid off men and cut production as early as June 1914, then curtailed work severely on August 8. All of its mines except the Creighton were closed, as were all but two furnaces; 75 percent of the workforce lost their jobs. But early in October two furnaces were refired and employment levels rose to 60 percent of the pre-war total. Then the growing demand for nickel led to the reopening of the Crean Hill mine; soon 500 men were employed there, raising some 175,000 tons of ore annually. Limited operations at the No. 2, Vermillion, and Frood mines provided yet more ore. The Creighton nevertheless remained crucial: more than 1,000,000 tons of ore were raised there in 1916, and the mine became even more efficient in 1917 when the No. 3 shaft was finished. Creighton mine produced about 80 percent of an ore output that doubled between 1914 and 1916 and then held steady at the 1.2 million tons per year level through 1918.¹

Record production required improvements to INCO's processing plant. Its Huronian Power subsidiary installed a second plant at High Falls that tripled INCO's power capacity when it came on stream in 1917.² More power was needed because of a \$500,000 expansion of the Copper Cliff works. Construction began in April 1915 and in August a larger reverberatory furnace was blown in (fired) to supplement the six furnaces already running full time. By 1917 an unprecedented total of eight furnaces were reducing ore; to quiet complaints against the sulphur fumes the No. 3 roast yard was replaced in 1916 by the huge, highly mechanized O'Donnell yards located several miles west of Creighton mine.³

Vast amounts of sulphur also emanated from the Mond Nickel works at Coniston, that firm having overcome early hesitancy to reap substantial wartime income. Mond, worried that its just-expanded operations would

be disrupted by wartime shipping problems, discharged most of its men in mid-August 1914. "Erratic and irregular" shipments did prove troublesome early in the war, but a combination of economic need and British patriotism soon led to the resumption of full scale operations.⁴ The Garson, Worthington, Victoria and Levack mines operated throughout the war, and several smaller mines produced some ore before being phased out because of low productivity or failing deposits. Mond even purchased a little ore from independent operations at the Mount Nickel and Howland mines. Both efforts failed in 1916 when Mond refused to buy any more ore. Instead, the firm 7. relied on its own ore production, while keeping costs down by limiting developmental mining and by introducing more careful ore sorting prior to shipment. Any unnecessary expansion or cost was avoided in anticipation of much smaller postwar markets. Ore production therefore showed little of INCO's wartime surge; instead, it was kept steady at about 350,000 tons per annum.⁵

Plant improvements were equally conservative, highlighted by the firing of a third Coniston furnace in 1915 and expansion of the Clydach refinery. A fourth furnace, ready in 1918, was kept in reserve. Rather than expand its plant, Mond improved its reduction process, hoping to cut costs and alleviate the waste and pollution of heap roasting. Tests were begun in 1915 on a Fink smelting furnace designed to reduce "green" ore to 80 percent matte; many problems were encountered but Mond began winters-only roasting in 1916 and phased out its roastyard by 1918.⁶ But even conservative expansion strained Mond's power reserves, so its Lorne Power subsidiary installed a new twin-turbine plant at Nairn Falls on the Spanish River. By 1917 the Nairn Falls and Wabageshik plants, supplemented by purchases from Wahnapiatae Power, proved adequate.⁷

Mond's cautious wartime strategy brought it profits of at least £ 1.5 million, and dividends were equally substantial. INCO's more aggressive approach earned far more -- \$45.8 million in profits, with dividend payments totalling about \$38 million. In contrast with other wartime industries, these profits reflected real gains, not price increases: the established purchasers of nickel paid little more for the metal in 1918 than they had in 1913. The steady price created unrest among INCO's American stockholders; their concerns were assuaged by the good profits earned through the five-fold increase in nickel-copper production.⁸

These gains -- Sudbury produced 90 percent of the world's nickel output for 1918 -- attracted new investors, who found the Nickel Basin a very challenging field. The backers of Sudbury Nickel, Algoma Nickel and similar firms merely obtained speculative properties; others had greater aspirations. One interesting attempt involved a new nickel-steel process developed by Linus P. Burrows, a metallurgical chemist. The "Burrows process" first attracted some Ottawa parties -- also linked to the Sudbury Power Company -- who organized the Sudbury Nickel Refineries, Limited. It accomplished little except to attract the attention of a group reportedly including "big automobile manufacturers", which acquired the process and organized Fecunis Limited. But its plans for a Levačk Township mine and a twenty-mile railway went for naught because of the postwar depression.⁹

British America Nickel represented a more significant threat to the nickel duopoly, for BANCO's executive seized on the war to solicit government aid in establishing an "Empire" supply of refined nickel. Early in 1915 E.R. Wood initiated a campaign for a \$3 million bond guarantee from the Federal Government, but a hasty counter attack by INCO (compounded by

the loss of F.S. Pearson on the Lusitania) prevented any progress there. Next, BANCO found an ally in the Munitions Resources Commission, the British agency that developed Canadian production of war materials. In April 1916 the Commission urged Canadian aid for BANCO so long as the firm was willing to establish its refinery in Canada. Prime Minister Robert Borden had his doubts about BANCO, however, and his hesitancy was reinforced by Federal Finance Minister Thomas White's continuing opposition to federal aid. No assistance was forthcoming from Ottawa.¹⁰

Then the more receptive British wartime government acquired a controlling interest in BANCO and provided it with a \$6 million securities guarantee plus a ten year contract for 6,000 tons of nickel a year. So armed, the reorganized BANCO resumed operations. Murray mine was reopened in August 1916; soon afterwards plans for a smelter and refinery at the nearby Nickelton site were announced. By September 1917 the fast-rising construction site was serviced by some eight miles of track, including a spur to the AER, but BANCO then discovered that Wahnapiatae Power was unable or unwilling to supply the 5,000 horsepower needed for its electrolytic refinery. After considering power sites on local rivers, BANCO opted to install the refinery at Lac Deschenes, Quebec, where power supplies were plentiful. The remaining works, meanwhile, relied on costly steam-generated power. Shortages of power and labour notwithstanding, 21,000 tons of ore were stockpiled and the smelter at Nickelton was nearing completion of war's end.¹¹

Some analysts looked askance at Ottawa's refusal to aid so determined a firm as BANCO, for the emotions of war had renewed and greatly strengthened the cries for domestic control of nickel.¹² Despite assurances in 1914 from Ottawa and INCO that Germany would receive no more Canadian nickel,

an outraged public remained unconvinced. To quiet the outcry, on 19 December 1915 Robert Borden urged INCO to establish a refinery in Canada. Ambrose Monell, in reply, complained that it would "cost more to refine nickel in Canada than at the present point of operation", but promised to act on the request. The promise, made public in January 1916, did not placate INCO's critics; the Munitions Resources Commission waited only one month before urging "instant establishment" of a Canadian nickel refinery.¹³

INCO also faced verbal barbs from Provincial Liberals, sitting in Opposition in Toronto, whose politically inspired attacks linked Frank Cochrane -- former Minister of Lands, Forests and Mines, now federal Cabinet member and a key Conservative organizer -- with the industry. They also intimated that Krupp interests controlled INCO, and advocated tax increases or even public ownership of nickel production. The Ontario Government responded by creating a Royal Commission that began its study of the nickel industry on 10 September 1915. The Government, like the Borden administration, argued it was effectively policing INCO, but these claims received a telling blow in 1916. News that nickel was being shipped by submarine from the still-neutral United States to Germany became public knowledge. The "Deutschland" incidents inspired heated calls for public action against INCO: The Financial Post sought "drastic" corrective action and W.L.M. King argued that the nickel industry "should be made a state monopoly." Even long-time INCO allies spoke out: the Sudbury Star called for the establishment of a Canadian refinery, preferably near Sudbury. To placate these nationalist sentiments, INCO formed a Canadian subsidiary -- The International Nickel Company of Canada -- on 25 July 1916. Fourteen days later it announced plans for a nickel refinery; Port Colborne, not Sudbury, was the proposed site.¹⁴

That announcement satisfied many critics. The Royal Ontario Nickel Commission, pleased by a booming industry and promised refinery, ignored its own voluminous evidence in determining that the nickel industry showed no sign of monopoly. The Commissioners did recommend more adequate taxation -- new measures were introduced in the Mining Tax Act of 1917. INCO officials, already facing much increased wartime taxes in the United States, argued that the act was ultra vires of provincial jurisdiction, and an "indirect and unfair means" to penalize the firm. But Ottawa refused to consider an appeal for disallowance and the act, which O.W. Main described as "undoubtedly discriminatory against the nickel industry, and especially against International", remained in place. INCO's inability to thwart the tax, Main notes, caused it to move from "reliance on a legal position to an active development of a public relations policy." Good public relations stood the firm in good stead in the postwar years, for Hartley Dewart and other Liberals remained persistent foes of INCO.¹⁵

Postwar Mining Woes

The war's end brought new challenges, for the victorious Allies tried to eliminate the traditional armament markets for nickel through the peace treaties and efforts like the Washington Naval Disarmament Conference. The general postwar recession and the reuse of scrap nickel further weakened the market. Though industry sources like the Engineering and Mining Journal argued that the best mining policy was to turn out the smallest possible tonnage and yet keep organizations intact, INCO opted for drastic cutbacks. In 1919 it closed the Crean Hill mine, cut mining at Creighton by two-thirds, and slowed reduction work by half. More cuts followed in November 1920 and July 1921; then, on 24 August 1921, INCO closed all of its Sudbury area works. A skeleton crew of 200 men was pared further on November 26

as INCO strove to commit all funds possible to developing peacetime nickel markets.¹⁶ The new approach directed from the New York head office was spearheaded by Americans Paul Merica, head of the Development and Research Department, and Robert Stanley, a longtime proponent of commercial sales who assumed the company presidency in 1922. A major expansion of research and development, more frequent product advertising and the construction of a rolling mill at Huntington, West Virginia all displayed their determination to widen the market for Monel metal, structural nickel steels, along with various other nickel-copper and ferro-nickel alloys useful in products ranging from skillets to automobiles.¹⁷

Early sales resulting from these initiatives led to the refiring of one furnace at Copper Cliff on 1 May 1922 and, in August, the first shipment of matte in at least a year. Local optimism grew as 165 men were rehired at the Creighton on August 26; the mine was re-opened on September 1, as were two more furnaces at Copper Cliff. A fourth furnace was fired in November. The Creighton workforce grew to 380 men early in 1923; during the year this crew raised ten times as much ore as in 1922. The increased ore production necessitated refiring yet another blast furnace, four wedge furnaces and a reverberatory furnace. The recovery was welcomed not only by employees but by INCO shareholders: meagre sales and increased spending on market development has resulted in a first-ever loss in 1922.¹⁸

That loss surely convinced Mond Nickel executives of the rightness of their more-sophisticated managerial approach. The British firm had avoided over-expansion during the war while simultaneously launching a search for new nickel markets. Aided by a relatively stable postwar British market and income from precious metals, Mond acquired a controlling interest in the Birmingham based Henry Wiggins & Son refinery and rolling

April (1920). Meanwhile, the fledgling American Mond Nickel Company sought to gain what Alfred Mond termed "a fair share of the United States market." Commercial nickel sales helped keep Mond's plant open despite postwar disarmament, although production was greatly reduced. Crews averaging 80 to 90 men worked the mines; these small crews outnumbered the entire local INCO payroll by 1921 and they raised 150 percent more ore than did INCO's miners during 1921-22. Continuing ore production kept a single furnace and convertor in service at Coniston even though markets were so weak that no matte was shipped between September 1921 and mid-June 1922. Improved sales then saw Mond resume matte shipments; it even started enlarging the Coniston smelter late in 1922. The mines, too, were put on a more active basis, although work at the Victoria ceased on 23 September 1923 because the deposit was worked out. The revitalized operations were welcomed locally, and even Mond shareholders -- pleased that careful planning had kept annual profits above £200,000 during the worst of the postwar slump -- saw a bright future in the new commercial nickel market.¹⁹

Recovering nickel sales were not enough for BANCO, which had made steady if at times slow progress thanks to the financial backing of the British Government. Three shifts of men worked the Murray mine, producing over 70,000 tons of ore by the end of 1919. The smelter at Nickelton was blown in on 17 January 1920; it reduced the stockpiled ore directly into high grade matte. The first matte was shipped to the Lac Deschenes refinery on June 30, but then the British Government cancelled its nickel contract to relieve domestic political pressures. BANCO's rigidly mortgaged finances could not stand the blow, for there were few alternative markets and nickel prices remained low. Operations were "seriously curtailed"

by year's end, and 800 men lost their jobs when the smelter closed on 26 February 1921. A small crew continued underground development work at the Murray, but that also was halted in October.²⁰

Some investors remained optimistic; they found fresh capital (backed by Norway's State Bank) and secured a new contract with Wahnapiatae Power that provided more and cheaper electrical supplies. The rejuvenated firm resumed operations in April 1923. Two furnaces treated about 1,000 tons of ore daily, by late summer, as 800 employees toiled to supply American buyers which nickel at three cents per pound below the going rate. BANCO's aggressive price policy resulted in a "bitter" price war with INCO that drove nickel prices down by 75 percent. BANCO remained solvent because of its efficient works. Ore production reached a record 200,000 tons in 1923 and still greater production was achieved early in 1924. The smelter and Hybinette process refinery, meanwhile, was cost-effective and provided extra income from precious metals sales.²¹

Progress, however, was undermined by a lawsuit, first filed in 1921, alleging that BANCO's reorganization had reduced the value of first-mortgage bonds held by M.J. O'Brien, Limited. The suit remained unsettled until June 1924, when the court declared the reorganization invalid. The still-tightly capitalized firm, facing large repayments, was forced to declare bankruptcy and cease operations on 21 July 1925. Yet the Financial Post downplayed the impact of "a great deal of litigation", instead blaming the failure on poor ores, a lack of working capital, the low price of nickel, and the firm's "extravagant construction" practices. The Post might also have included the enmity and even market collusion of INCO and Mond. The disposal of BANCO's assets in 1925 seemingly confirmed such collusion. Financial sources, citing interest by Henry Ford and

Bethlehem Steel, anticipated a "keen contest" for the assets, but only one "dirt cheap" bid was received. The "lucky" winner, Anglo-Canadian Mining, was a Toronto-based dummy corporation financed largely by INCO and to a lesser degree by Mond. The assumption of BANCO's assets by the nickel duopoly confirmed their control of nickel production, but did little to help a local industry beset by postwar slowdowns.²²

Nor could unemployed miners look to the once-promising gold and iron mining concerns. Gold, as ever, created occasional excitement but the only real mine was Canadian Exploration's Long Lake operation. There, as many as 110 men worked an open pit or in the nearby cyanide mill, aided by electricity purchased from Wahnapiatae Power. Production at the mine -- unique in that it lacked rail service -- doubled in 1914, making it the highest-yielding gold mine in Ontario that year. But the small deposit was decimated by the pace of operations: 90 men were let go when the mine was closed in July 1916.²³ Iron mining, in contrast, was troubled not by the extent but the poor grade of the Moose Mountain deposit. Moose Mountain's non-Bessemer magnetite was poorly received because of variable iron content, while its Bessemer hematite was too costly to produce given the low price of iron. When poor sales forced the closure of the mine in 1914 the firm's still-hopeful backers ordered various plant improvements intended to increase sales. Their faith seemed justified: regular operations were resumed in May 1916 and the pace of mining quickened through 1918. But trouble was looming for Moose Mountain's backers and its 140 employees because weak postwar iron markets killed sales. The plant was closed on 29 November 1920; following the sale of stockpiled iron, the site was abandoned in 1923.²⁴

The investors' losses could not compare with the trials of the mineral labour force, which reaped limited gains from the wartime boom but paid a heavy price for postwar slowdowns. Early in the war, 5,000 or more men were employed in the industry, but improved plant efficiency, increased use of stockpiled ores and the closing of minor nickel and other mines soon saw employment dip to below pre-war levels. Those still employed were better off: INCO introduced wage increases and reduced working hours on 1 November 1915, Mond quickly followed suit, and smaller firms soon mimicked these actions. Miners were best off under the new schedules, working eight-hour days, six days a week, with the standard daily pay often supplemented by bonuses for speedy work. Unskilled hands also worked shorter hours, but this was a mixed blessing because the twenty-percent wage gains registered between 1915 and 1918 did not always compensate for the hours lost. Industry observers nevertheless commended the "sky high" wages (25 to 60 cents an hour in 1918), plus a heightened company paternalism intended to squelch unrest. Better health care and living conditions complemented by new features like worker-management committees, a pension plan and a stock purchase plan, meant that local conditions had "taken precedence over any mining camp on the continent", or so argued the Sudbury Star.²⁵ But the Armistice brought a new reality: as many as 4,000 men had lost their jobs by May 1919, and employment opportunities continued to decline until 1922. Miners were first to go, then reduction personnel as ore stockpiles were replaced by matte reserves. Wages, meanwhile, reached their nadir in 1921, though the cuts were fairly small because the massive layoffs reduced labour costs.²⁶

The workers who suffered this succession of gains and losses remained

an ethnically heterogeneous group:

The labour in the district is principally foreign, probably not more than 25 per cent being Canadian or American. The more skilled workmen, such as foremen, mechanics and carpenters, are Canadian or American. Underground the drill runners and helpers are principally Finns and Austrians; the trammers are generally Poles, Italians, Austrians and Russians.²⁷

The smelters, meanwhile, featured mainly Italian, French Canadian and East European labour; these men toiled in ever-more sophisticated plants that nonetheless remained hot, gaseous and dangerous places to work.

The mines, too, posed a wide variety of dangers, although crude open mining techniques were being superseded by underhand stoping and still newer shrinkage stoping. These more efficient, if not always safer techniques, combined with the introduction of more and better machinery and explosives, permitted fewer men to raise more ore. Higher individual wages, then, did not always mean higher overall labour costs.²⁸

More modern mining and reduction techniques were symptomatic of the changes transpiring in the mineral industry between 1914 and 1922. The strong wartime demand for nickel had reinforced the supremacy of the Sudbury ore deposits, but the failure of wartime nationalism and BANCO's subsequent collapse both served notice that INCO and Mond would brook no opposition. With other minerals proving unreliable, the nickel duopoly's growing strength loomed ever larger over the region's fortunes. The power of the two firms was manifested during the postwar slump: INCO's abrupt cuts crippled various centres, while Mond's controlled slowdown permitted some degree of economic stability in its company towns. Both scenarios, however, provided clear evidence of the risks inherent in a single-resource, limited-market economy, so industry analysts and area residents alike applauded the expansion of commercial nickel sales. The new markets, it was hoped,

would permit a return to the prosperity evident in wartime and further confirm the reputation of the Sudbury Basin as the major world source of nickel.

II

FARMING AND FORESTRY

Local farmers stood apart from those persons praising the nickel industry, for agriculture in Northern Ontario was difficult enough without the added burden of sulphur pollution. Ontario's response to "smoke" damaged crops -- the protection of INCO and Mond -- was in sharp contrast to the well-established Provincial policy of aiding both new and established farmers. But neither these mixed signals, nor the wartime fascination with the Clay Belt, could blunt agricultural progress in the Nickel Range. New locations were opened on free and sales lands, making subsistence-oriented, pioneer farms a continuing element in the agricultural landscape. Longer settled farmers, meanwhile, took advantage of improved access to the strong urban markets and introduced superior methods. The upshot was increased commercial farming, though even the best-off farmers continued to derive additional sustenance from the forests. These stands, scarred from three decades of cutting, nevertheless remained an important economic force. Thus a large pulpwood industry, smaller cuts of other woodstuffs, and even the ever-more-distant pine operations helped to finance the more substantive gains sponsored by farm settlement.

Agricultural Progress

Wartime, however, placed the long-standing Provincial support for northern colonization in conflict with the need to maximize nickel production. The contradictory policies soon clashed: INCO and Mond, weary of the "excessive" compensation handed out since 1909 for sulphur damaged crops

and aware of the unprecedented damage that wartime production would bring, sought better terms. Ontario was quick to act; new adjudicators set lower damage awards and in 1915 the remaining Crown holdings in twenty townships were withdrawn from settlement. Still more corporate protection followed: the Industrial and Mining Lands Compensation Act of 1918 ensured that "smoke easements" -- one time payments that negated corporate liability for sulphur damage -- were binding on future land owners. The Province even attached such clauses to the withdrawn lands upon their being returned to the market in the 1920s. The damage by Fumes Arbitration Act of 1921 (with later amendments) further aided the nickel firms by providing minimal damage compensation. Area farmers grudgingly accepted these token amounts because the courts, too, favoured the industry over the agriculturalist.

Provincial Judge J. Middleton's 1917 decision on smoke damage claims, for instance, bluntly argued that "the Court ought not to destroy the mining industry even if a few farms are damaged or destroyed."²⁹

Ontario's unwavering support of the nickel firms surely confounded area farmers who received equally spirited aid from the Provincial and Federal governments. Ontario's Northern Development Branch -- established by 2 Geo. V (1912) c. 2 -- was especially active. The Branch committed most of its funds to road improvement, a natural choice in that many settlers had to cope with narrow, winding, dirt-surfaced roads. When the financial constraints of wartime slowed progress, the population grew restive: J.F. Whitson, Commissioner of the Branch, yearly noted a growing demand by the settlers and businessmen in Northern Ontario for more roads and better roads. In response, the Branch increased its spending, with a fourfold local increase bringing Sudbury area expenditures (1914-22) to \$177,927. The increases saw new roads pushed out to the fringes of settlement; busier

routes like the Burwash Road were upgraded to Trunk Road status.³⁰ The Branch also provided direct agricultural aid to farmers, including low interest loans, quality seed, pesticide and emergency supplies in years of crop failure. These sorts of aids were complemented by the Department of Agriculture's continuing promotion of better livestock, seed and farm techniques. And the federal Agricultural Aid Act and later legislation helped fund Ontario's "Ag Reps" who brought further word of modern agriculture.³¹

The increased assistance was appropriate, for local agriculture was making great strides. New settlers continued to penetrate the alluvial valleys scattered east, west and south of Sudbury. Sales lands in Lorne and Louise Townships attracted many Finns, and more varied populations settled in other townships west of Sudbury. Settlement to the south was concentrated in Broder and Dill Townships though some pioneers pushed on into Cleland and Burwash Townships. Settlers also continued to open up the Shield east of Sudbury. All told, then, farming on Shield lands showed much wartime expansion, but the scattered availability of land dictated very uneven settlement densities. Some townships supported from ten to thirty farms and a few -- Broder, Garson, Lorne, Louise and Waters -- sixty or more. Other townships, meanwhile, had few if any farms because of pollution damage, mineral company landholding, government withdrawals, or simply lack of arable land.³²

Even the most successful Shield farming areas, moreover, featured fields separated by rocky hills and empty lots separating farms. Farm buildings were erected where it best suited; hence, many rather isolated valleys featured one or two farmyards, linked to other farms by winding,

often primitive roads. The "patchy" settlement, physically distinctive in its own right, was accompanied by culturally inspired differences between locations. Finnish farms -- with dove tailed construction techniques, saunas, numerous outbuildings and mixed farming methods that included the use of rye as a food grain -- differed sharply from the often-rude "hay and oats" farms of their francophone neighbours.³³

Ethnic enclaves and patchy settlement on the rough Shield terrain were in marked contrast to the longer-settled, comparatively level and rich Valley farms that were fast assuming the character of an agrarian community. Most of the usefully arable lands in the Valley were filled: the Provincial land office in Blezard Valley was closed in 1916 "by reason of practically all the land being granted."³⁴ The Province, however, under-estimated the continuing attraction of the more northerly, formerly isolated townships -- Hanmer, Lumsden, Capreol and Morgan -- all of which continued to attract settlers. Their farms added to an agricultural setting quite unlike that of the Shield, featuring large, contiguous fields -- sometimes encompassing half the farm -- and buildings erected alongside straight, regularly intersecting roads." Small clusters of these buildings often coalesced into "crossroads" villages, again inviting comparison with Old Ontario. But outside observers were taken aback by the "antiquated" farming techniques -- poor livestock, inadequate winter forage, and an unwillingness to rotate crops -- prevalent in the mainly francophone, Catholic population. Their condemnation overlooked local market and income realities, not to mention new efforts like the Chelmsford Agricultural Society (c. 1918), a United Farmers' of Ontario store (1921) and the Balfour and Rayside Farm Credit Association (1922) that brought better methods while reinforcing the sense of community.³⁵

The gains in the Valley were just part of the continuing progress that gave agriculture a more prominent role. Rapid settlement continued between 1914 and 1922: 365 persons obtained over 41,000 acres of land through grant or purchase. And many settlers were successful despite the Crown Land withdrawals that limited the supply of suitable land. Patents were issued on 331 locations, and 140 lots were resumed, 61 of these on the marginal lands at the northern extreme of the Valley. By 1922 those who were successful boosted total farm numbers to about 1,200 including over 200,000 acres of land.³⁶

These farms had a major impact on the Nickel Range. The francophone and especially the ethnic enclaves gave these rural populations a stronger sense of community and a higher profile than their numbers might otherwise have warranted. And the farms were a real factor in the economy. Pioneer farms naturally continued to rely on subsistence techniques, concentrating on economic survival during the period of clearing, drainage and other basic settlement work. But more and more farms achieved commercial status as their owners sold their produce to nearby resource camps or communities. Commercial farming reached new heights in the Valley and near Sudbury, not the least because of the opening of a farmers' market in that town in 1914. High wartime prices -- eggs sometimes sold for \$1.00 a dozen -- encouraged increasingly sophisticated operations. Dairies became especially common: Joseph Boudreau supplied milk products to much of Coniston, the Andersons supplied Creighton mine, and the Sudbury Co-operative Cream Company was most prominent of a dozen dairymen supplying Sudbury. Valley farmers also mounted large concerns. The Chelmsford Cream Company, for instance, produced 44,914 pounds of cheese in 1918; it faced competition from several private and co-operative creameries and cheese factories.

Other Valley farmers began to specialize in cash cropping the potato because the slightly sandy red loam east of Chelmsford produced tremendous, damage-resistant yields.³⁷

New crops and commercial endeavours won the support and praise of the Sudbury Board of Trade; even so, Board members fearful of retaliatory action by the nickel firms, refused to provide area farmers with any meaningful aid in their battles over sulphur pollution.³⁸ A general public more concerned with mining and the war paid farming even less heed. The Shield farms, producing 40 percent of local crop income in 1920, were ignored, and even the Valley received scant attention. Yet signs of progress were everywhere. District crop values (local figures are unavailable) increased by 67 percent between 1913 and 1922; fodder -- necessary for all livestock -- accounted for 75 percent of the crop, roots for 20 percent. New implements like mowers and rakes eased fodder production, in turn supporting larger numbers of milk cattle, poultry and sheep, all of which more than doubled in value. More livestock also implied more barns: farm building values doubled. All these gains -- farm values increased by over 50 percent -- demonstrated the greater permanence of the District agricultural sector, worth well over \$7 million by 1922.³⁹ The majority of these farms were in the Sudbury region proper, so a multi-million dollar farm economy was in place by 1922, with all signs pointing to further commercialization and even higher values in the future.

A Failing Timber Economy

Contemporary observers and policy makers welcomed the success of farming, which they viewed as a natural successor to the once-only timber "harvest." Though the decline of timber operations was evident in the denuded, rocky hills about Sudbury, more-distant pine and considerable

stands of boreal and second growth timber remained important assets. Increasingly, however, the forests became a means to an end, providing economic sustenance when and where the mine or the farm fell short. Farmers, for instance, earned well over \$100,000 in 1920 through sales of pulpwood, lumber, fuelwood and other woodstuffs.⁴⁰

Farmers also found seasonal work at pulpwood operations which expanded rapidly thanks to an increasing American demand for newsprint. The Spanish River Pulp and Paper Mills was the highly profitable beneficiary; in 1919 it was the largest producer of newsprint paper in Canada. Even so, company president G.H. Mead sought further expansion, obtaining a promise of a \$3.5 million loan from Chicago backers provided Spanish River obtained additional timber limits. Accordingly and thanks to Premier G. Howard Ferguson's personal unparliamentary, and probably illegal initiative, Mead obtained an untendered 4,900 square mile berth from the Province. The Ontario Timber Commission would issue harsh criticism of the deal; the unfavourable publicity, weakened postwar markets and a strike by mill workers at Espanola in 1920-21 blunted Spanish River's progress. This was a serious blow to the Sudbury area economy, for pulpwood cutting was fast supplanting lumber operations in local importance.⁴¹

The scattered remaining stands of superior timber did provide some economic sustenance. Several medium sized mills, like that of James McCreary in Larchwood, had capacities in excess of one million feet per annum; many more mills cut smaller mounts of lumber. Specialized wood products had their own niches: tie cutters prospered with the opening in 1921 of a creosoting plant just west of Sudbury, and the roast yards consumed huge quantities of fuelwood before being closed in favour of more sophisticated smelters or by the postwar mining slowdown. These and other operations,

like the pulp cutters, ignored the decline of local forests. The Royal Ontario Nickel Commission, in fact, conceded that local forestry was "a disappearing business, for lumbering methods... [have] concerned themselves with only one crop of trees, namely the first."⁴²

The authors of this approach were its first victims: only a handful of the 400 or more pine cutting firms which had been active locally prior to 1913 maintained operations by the 1920s. Little wonder by 1916 nearly all the "real" timber within 35 miles of Sudbury had been cleared. Large-scale pine operations were restricted to remote areas well to the north, or around the Lake Penage and Wanapitei watersheds. The postwar recession slowed these operations severely, some closing and others being reduced to a small fraction of their previous output. Nor was the sparse, mediocre pine still standing bountiful enough to merit a resumption of cutting when the markets improved, especially in an era of ever more costly, mechanized operations.⁴³ With the local pine cut "a thing of the past", Sudbury's businessmen turned to railway-based provision of more distant operations. Thus Sudbury remained a seasonal home and distribution point for the lumber crews; in 1921 the Ontario Department of Labour reported that "no other city[sic] of its size in Ontario... sees so many 'strangers within its gates' ... as Sudbury"; most of these men found employment with the lumber firms.⁴⁴

The forest, then, continued to provide income even after the virgin stands were but a dim memory. The forests were replaced by an agrarian landscape as pioneer settlers took up new lands and longer-settled farmers introduced superior farming techniques, buildings and equipment. The upshot was increasingly commercial agriculture, though success varied from farm to farm according to its newness, the limitations of the immediate

physiography, the distance from markets, individual preferences and other factors. Contemporary observers, pointing to the recovery of the nickel industry, anticipated strong farm produce markets and in turn a stronger farm economy. Yet a booming nickel industry also implied more sulphur pollution. Area farmers, now resigned to minimal, provincially mandated compensation for smoke damaged crops, had little choice but to take the bad with the good in trying to create a fully functioning agricultural sector in a region closely aligned to the nickel industry.

III

WAR STRIKES HOME: SUDBURY AREA SOCIAL ACTIVITY

Church and secular organization felt the impact of war as surely as the resource industries, for the brutality of the European conflict created unavoidable social tensions. Area churches welcomed new members seeking solace from the horrors of war, but both the clerics and the lay members had to deal with issues ranging from social reform to conscription. The Roman Catholic Church, with a large francophone majority, was especially troubled by conscription and divisions over language. Both issues were also affecting the secular arena, where a united francophone community espoused the nationaliste cause. Wartime stresses also focused attention on the immigrant population, whose members were blamed for the region's continuing "wickedness" and condemned as enemy aliens or, alternatively, as Bolsheviks. "Mainstream" Canadian churches and secular organizations, enlivened by wartime enthusiasm, launched further attempts to "save" the new arrivals, but many immigrants opted for their own institutions. Among these societies were the most "radical" of a host of labour unions which found the Nickel Belt a difficult field despite the wartime labour shortages and the general social ferment associated with the conflict. The failure

of the workingmen's movement -- equated locally with the "Red" element -- was applauded by the host of patriotic organizations and established voluntary associations that made Sudbury the heart of the fast-maturing regional social infrastructure.

The Churches

War posed vexatious questions for Roman Catholic clergy already confronting severe linguistic divisions within their church. Both the "Imperial" nature of the conflict and conscription were controversial, so local priests were understandably reticent about the conflict. Language tensions, however, could not be avoided: at St. Anne's parish in Sudbury the always cool relationship between the francophone majority and a fast growing anglophone component became an open rift that culminated in the 1915 formation of a new English language St. Joseph's parish. Strained relations persisted because St. Joseph's, unhappy with its proposed location and short of funds, requested part of St. Anne's property. Members of the older parish were horrified when Bishop Scollard broke his 1915 commitment against just such a grant: St. Joseph's was awarded Jubilee Hall (renovated for church use in 1917) and sufficient lands for a rectory (1920) and other facilities. Despite appeals to higher Church authorities, the decision stood, but the fast-growing, side-by-side congregations long harboured the anger evident in Fr. F.X. Descoteaux's condemnation of Sudbury's anglophone Catholics as the "bitter enemies" of his St. Anne's parish. Bishop Scollard, too, faced the wrath of St. Anne's, and his wartime appointment of Irish priests to the churches at Capreol, Coniston and Copper Cliff won him more opponents.⁴⁵

The Bishop, for his part, argued that claims of bias were "entirely false"; he pointed out that the Diocese had 43 francophone, nine anglophone

and five "foreign" language priests. The Sudbury based Jesuits certainly were well-supported in their work, with French services the rule in Valley and frequent elsewhere. Work at established parishes and missions continued apace, and new missions were established at Capreol, Burwash, Levack and elsewhere. Progress could be remarkably rapid: the Capreol mission, established on 20 July 1919, opened its newly built church on December 8. This was but one of a dozen or more local Catholic edifices, large and small; each in turn supported work at more remote locations. These wide-ranging efforts left no doubt that Roman Catholicism was maintaining its regional dominance.⁴⁶

The Protestant cause also prospered as the populace sought solace from the horrors of war. But the conflict generated heated discussion of potentially divisive issues. War-generated idealism took the social gospel movement to new heights: by war's end the Rev. J.C. Cochrane of the Sudbury Methodist Church called for "new emphasis on the socialistic principles of Jesus Christ." More often, though, Protestants responded to the war by praising the Allied effort, or, as they put it, "the cause of justice, truth, and righteousness." All the Protestant clergy used their pulpits to provide war news and promote conscription of men and wealth. The war-inspired unity even extended to inter-church co-operation, especially among local Methodists and Presbyterians, who in 1915 voted overwhelmingly for the latest, unsuccessful church union effort and by 1917 had eliminated all overlapping in "aid receiving charges."⁴⁹

Practical co-operation -- "Union" Churches and the like -- helped all the Protestant churches. Capreol's first call to a minister, for instance, though directed to the Presbyterian authorities, was made by a divergent

group representing six Protestant denominations. The gains made through co-operation were cemented by the work of dedicated and versatile men. The Presbyterian missionary at Sellwood, for example, spent the summer of 1915 teaching first aid, gardening and English, refereeing sports, providing "slide shows" for entertainment and, of course, ministering to the mine and mill workers.⁵⁰ Such all-encompassing activity -- the degree of education naturally varied -- brought considerable Protestant gains. The Presbyterians, who in 1914 celebrated the formation of the Presbytery of Sudbury, stood in the first rank, followed by the Methodists; the Anglicans made some gains in Coniston and Capreol, but the Baptists could point only to the Capreol mission, organized in 1920. The Baptists, in fact, probably had a lower regional profile than did the Salvation Army, whose War Work Campaign won public sympathy all around the Nickel Range.⁵¹

The Salvation Army's success permitted the opening of a new citadel in Sudbury; well wishers from other Protestant churches attended its opening in 1922. The new citadel enhanced the already high profile of the Protestant cause at the region's core. The Presbyterian congregations -- St. Andrews in Sudbury and Knox in Copper Cliff -- claimed to have 1,250 persons "under pastoral care" by 1922, up 40 percent from 1914. The Sudbury and Copper Cliff Methodist congregations boasted over 400 members, and nearly that many belonged to the Anglican Church of the Epiphany and St. John's in Copper Cliff. Only the Baptists faltered: no gains were made in Copper Cliff and the Sudbury Baptist congregation declined because of its inadequate facility which was without a settled minister from 1916 until the Rev. James Proudfoot arrived in January 1918. Proudfoot managed to stabilize church membership and, with the aid of Toronto Baptists, arranged the

construction of a new church. To save money the congregation decided to build only a basement until a larger facility was needed; there the revitalized congregation of 64 persons looked forward to a brighter future.⁵²

The struggles of the Baptists prevented their working with the "foreign" population, and the better-off Anglicans showed little interest in winning over the immigrant. Area Methodists, in contrast, mounted a spirited Italian mission in Copper Cliff (1916); annual donations from INCO and the Women's Missionary Society enabled it to persist despite the "active opposition" of the Roman Catholic clergy. That opposition was led by the various priests who were in charge of St. Elizabeth's church in Copper Cliff, established in 1914 "to look after Italians of that place, of Creighton, Sudbury, Coniston, and of all other places in the vicinity."⁵³

The Roman Catholic clergy -- despite various attempts -- was less successful with area Ukrainians, who instead celebrated the occasional wartime visits of Fr. Nikitas Budka, Uniate Bishop of Winnipeg, and supported St. Nicholas Greek Catholic Church in Copper Cliff. But only a minority of the 2,000 or so "Ruthenian" Catholics lived there; when the postwar slowdown forced numbers of them out of Copper Cliff, the church fell into disuse. Many "Ruthenians" moved to Sudbury, where they re-awakened decade-old efforts to establish a Greek Catholic church; some years would pass before success was at hand.⁵⁴

Other immigrants, doubtful of Catholic rites, turned to the practical aid -- English classes, for example -- that the Presbyterian church provided. By 1921 its Chinese mission boasted 61 members, well over half the local Chinese population.⁵⁵ Practical training also drew Finns to the Finnish Presbyterian churches in Copper Cliff (established in 1914) and in Louise

Township (1916) or to 30 additional mission stations in the mine camps and rural settlements. The Rev. Arvi Heinonen also used less Christian tactics, branding those Finns unwilling to convert to Presbyterianism as "reds"; INCO supported this effort with pressure on its employees and monetary aid. Heinonen's work, and INCO's attempt "to force the Finnish immigrants into membership in a 'company' church", lost momentum because of the postwar employee layoffs. Aware that many unemployed Finns were leaving Copper Cliff, Heinonen moved to Louise Township, where he continued his much-praised work against the "Bolsheviks": his former charge failed in September 1921.⁵⁶

Finnish Lutherans found little solace in these events because INCO's firings halved the Wuoristo congregation's membership. Though hard hit, the congregation continued its region-wide work, competing not only with Heinonen but with the Finnish language proselytizing of the Pentacostals, Jehovah's Witnesses and Missouri Synod Lutherans. The last also funded German-language services and a small Polish Lutheran congregation in Copper Cliff.⁵⁷ Local Jews, in contrast, met their own needs: the small Orthodox congregation embarked on new efforts like a Hebrew school and the Sisterhood of Shaar Hashomayim when finances and numbers permitted.⁵⁸

Secular Activities

Dedicated clerics and followers worked long and hard to bring a new level of religious sophistication to the Nickel Belt, but with limited effect. The war certainly inspired more churchgoing, but even the most optimistic analyst could not help but remark upon the continuing indifference of many persons toward religion. Apart from the small Jewish and Chinese efforts, no denomination could boast membership even approaching the potential suggested by census figures. Nor had the wartime "moral crusade"

won many advocates; moralists bemoaned the liquor and "vice" related arrests that between 1914 and 1922 resulted in 9,255 convictions, second in Ontario only to Toronto. Even so, enforcement was hampered because prohibition enjoyed so little local support: two-thirds of voters called in 1919 for the introduction of Government sponsored liquor sales, and 71 percent chose the "wet" option in 1921. With illegal activities bringing much money into circulation, accusations emerged that the undermanned police forces were "letting up" on those transgressing the Ontario Temperance Act.⁵⁹

Social activity was not always "wicked", of course, for it included impromptu festivities like the gathering of some 7,000 persons to see the Duke of Connaught, Governor General of Canada, on his passage through Sudbury in 1914, or the celebration that erupted after news of the Armistice.⁶⁰ But spontaneous activities became less frequent because established voluntary associations ranging from the Orange Lodge to the Knights of Columbus continued to flourish and new groups like the Elks (1914) were organized. Recreation, too, became more organized: the sporting clubs common to nearly every community drew wide participation, while groups like the Nickel Belt Motor Club, the Idlewyld Golf Club and the Women's Art Association, drew more select memberships. Wartime concerns, meanwhile, resulted in a wide range of new organizations including the Sudbury Patriotic Society, the Great War Veterans Association plus several War Relief Clubs and chapters of the Red Cross. War-inspired moralists also addressed social issues through institutions like the W.C.T.U. and the large Y.M.C.A. in Capreol; the Boy Scout and Girl Guide movements were aimed at the local youth.⁶¹

But the conflict also created social tension because avowedly nationaliste francophones reacted strongly against Regulation 17 and conscription.

Discontent over the latter policy won the anti-conscriptionist E.A. Lapierre a large majority in the rural portions of Nipissing riding in 1917 and only the military polls prevented his election.⁶² Anger at Regulation 17, which virtually eliminated French language education, was of longer standing. In 1915 the Sudbury Separate School Board was divided de facto into French and English sections; the francophone component soon hired teachers highly competent in French, regardless of their certifications, and increased classroom use of French. School inspectors who questioned this direct confrontation with Provincial guidelines gained little support from English Board members satisfied with their "half" of the system, and faced the unbending will of the French-speaking members. "Whenever the inspector objected", Dr. J.R. Hurtubise rather smugly recalled, "we simply said we knew the proper way of teaching French children better than the department did and would not stand for any interference." There was no mistaking the strength of the francophone convictions. "The cause is sacred", Zotique Mageau, M.P.P., told an approving St. Jean Baptiste Day (1916) audience in Sudbury. "There is neither rouge nor bleu. It is French-Canadian and Catholic before all. It shall ever be so till they give us our language." These strong views made Regulation 17 something of a dead letter locally, for outlying school boards, intent upon maintaining good, "cheap" education, consciously mimicked the Sudbury Board's example.⁶³ Francophone students gained a post secondary option when the Collège du Sacre Coeur gained a French only configuration in 1917. Its expansion in 1920 was cheered by new groups like the Institute Canadien français de District du Sudbury (1920) and the Fédération des femmes Canadiennes-français (1921) that displayed the gathering unity of local French Canadians.⁶⁴

Immigrants, too, sought the benefits accruing from joint effort, though many still relied on the interpersonal support available in a "little Italy" or "Polack Town." The small Chinese population in Sudbury, influenced by both Chinese Freemasonry and the Chinese Nationalist Movement (KMT), organized a local of the KMT by 1918. It encouraged "positive" social behaviour and sponsored a library, but a racist local press paid it no heed and subjected the Chinese to repeated slurs. Immigrants from the Central Powers -- "enemy aliens" -- were hardly better off, their actions and motivations receiving constant negative scrutiny in the press. Only the Italians, suddenly transformed into Allies and organizers of a chapter of the Italian Red Cross, fared better. Then the "Red Scare" late in the war saw Eastern Europeans and Finns -- already wrongly lumped among the "enemy aliens" -- accused of "Bolsheviki" inspired sedition. A Sudbury Star editorial of 2 March 1918 illustrated that fear:

If anyone imagines that the doctrine of Bolsheviki is something mere akin to the present European political and military situation, present activities in Canadian labor circles, and more especially in the Canadian mining camps would open their eyes to the length and breadth of this movement and also the danger of its character. The average Austrian, Russian, Bulgarian, Roumanian, Finlander are discussing the doctrine of the Bolsheviki at their work, in their boarding houses and there is no question of a doubt that with a majority of them their mind is obsessed with the subject at the present time.⁶⁵

More often than not, these fears caused local observers to decry immigrant institutions as "hotbeds" of revolution. The Ukrainian Social Democratic local in Sudbury and the sixteen or so Finnish Organization of Canada locals were most affected because "Red Scare" pressures cut their memberships. More members departed in the early 1920s, disenchanted with these groups' new links to the fledgling Communist Party. But many persons remained, a few drawn by ideological commitment and many more by the pragmatic services and entertainments provided by these institutions.

Those who left looked to competing societies, ranging from ethno-cultural groups like the Ukrainian Narodni Dim (Peoples' Home) to the syndicalist Industrial Workers of the World, which featured a small, mainly Finnish local at Copper Cliff. These new efforts added to the high local profile and social infrastructure of the immigrant population.⁶⁶

The IWW was perhaps the most radical element in the local workingman's movement and one of the oldest: itinerant "Wobblies" had long been attracted to the area by its large, unorganized labour force. But the defection of the Western Federation of Miners (WFM) and the postwar emergence of the One Big Union (OBU) robbed the IWW of whatever momentum it had generated.⁶⁷ The IWW's weakness was not surprising, for even the conservative unions quickly succumbed to employer pressure. Skilled workers -- carpenters, machinists, iron workers, typographers and others -- formed twelve crafts locals between 1914 and 1922; only the miniscule Moving Picture Operation No. 634, organized in 1920, displayed any persistence. The railway brotherhoods were more successful: most of the fourteen area locals organized during wartime survived well into the 1920s or longer. More easily replaced personnel -- be they retail clerks or lumbermen -- were not so fortunate: their mainstream unions accomplished little.⁶⁸

The clerks soon gave up, but the lumbermen found a new option in the radical doctrines of the Lumber Workers' Industrial Union. The LWIU, with the aid of the OBU, supplanted both the Trades and Labour Congress and the IWW as the voice of North Shore lumbermen: its Sudbury office claimed 1,782 members by 1920. But the success was shortlived for the LWIU was beset by ideological and ethnic dissension, which caused it to break with the OBU in January 1921. The LWIU continued to seek adherents, even establishing a second Sudbury area local at Beaver Lake in 1921,

but in vain: crucial Finnish supporters were drawn to the new, Communist backed LWIU organized in January 1922. For the present, the new turn reduced the lumber unions' impact.⁶⁹

Area Finns also dominated the Garson local of the WFM, which launched a strike soon after its inception. The work stoppage quickly spread to Mond Nickel's other works, and won the workers some gains. The success prompted an increase in WFM membership to perhaps 700, but it also angered the firm's executive. Mond hired four Pinkerton agents who infiltrated the union and stole its books. Thus informed, Mond dismissed the unionists and, with the co-operation of INCO and Moose Mountain Mining, instigated a region-wide blacklist against WFM members. The Garson local was dissolved before 1914 was out, and the Sudbury WFM local became inactive.⁷⁰ It disappeared in 1916, much to the relief of W.E. Mason, editor of the Sudbury Star, who expressed revulsion of the "lawlessness" of the WFM. Outside observers voiced more sympathy for local miners, in part because of the sentiments provoked by the wartime "nickel question." Even the pro-business Northern Miner claimed the nickel miners "must move circumspectly, if they would hold their jobs" with the "fortress of alien industrialism." Hand in hand with corporate control came corporate paternalism -- improved living and working conditions -- that together stifled unrest: the Industrial Banner's 1917 survey of mine unions made no mention of the Nickel Range.⁷¹

Interest in organizing the nickel industry workers did not cease, however, for the International Union of Mine, Mill and Smelter Workers (Mine Mill) persisted. In 1918 Mine Mill, the successor to the WFM, pleaded in vain for Trades and Labour Congress aid in organizing Northern Ontario mine workers. It adopted a much more aggressive strategy in 1919, launching the Cobalt and Kirkland Lake strikes and affiliating with the OBU. But

the massive layoffs at Sudbury blunted talk of unionization at Sudbury. Labour spokesmen appearing before the federal Royal Commission on Industrial Relations (1919) alleged that unionists were among the first to be discharged, and roundly condemned the anti-union stance of the nickel firms. Company spokesmen, however, asserted that their firms were not against workers' organization per se, but rather the "outside interference of certain socialist miners' organizations." Mine Mill, unabashed by the corporate warnings, launched Local 146 at Coniston in 1919 and held meetings elsewhere around Sudbury. But the OBU was fast losing momentum, and the Mine Mill effort collapsed in 1920. Even so, a small band of Mine Mill and IWW sympathizers continued to solicit support, suggesting that unionization of the nickel workers might yet again become a contentious issue.⁷²

For the time being, though, the labour movement was at a low ebb, a victim of corporate intolerance, the deepening slump in the local economy and internal division. The last was very important: the various unions battled each other as often as they confronted their employers, arguing the merits of organizing "unskilled" workers or the proper limits of labour activity. Though the crafts unions paid little heed to organizing the great mass of the labour force, the new Sudbury (District) Trades and Labor Council, formed in 1918, did look to broaden labour's influence. Practical aid to the workingman drew the Council's attention: it helped to organize the Sudbury Industrial Co-operative Society in 1918. Branch stores soon opened in Coniston, Worthington, Nickelton and Capreol, the last was destroyed by fire in 1922 and the other operations soon succumbed to the postwar slump and poor management.⁷³ The Labor Council was no more successful in its support of the "labor" candidates for Sudbury Town Council. The Council put forward two candidates in 1918 and a five man

"ticket" in 1919, prompting the pro-business Sudbury Star to claim that:

Labor, as dictated from the Trades and Labor Council, has made a specific and definite bid for control of Sudbury's municipal affairs. The chief objection to this is the obvious dictatorship which so-called Labor leaders have attempted at different times throughout the past year. The Sudbury Trades and Labor Council may be said to be in control of the radical or "red" element of Labor which has become altogether too numerous and too assertive with the "red" doctrine said to be flourishing like the green bay tree. Appeals to class prejudice and many assertions subversive of good government have issued too often to be held as idle talk and the movement to gain control of the council may properly be interpreted as an attempt to set up an aristocracy of "red" labor in Sudbury.

These allegations surely hurt the candidates, the most successful of whom fell just short of obtaining a seat on Town Council. William Mason, editor of the Star, applauded this "decided rebuke" and was even happier to report that the election of new officers in 1920 has "ousted" the "red" element from the Labor Council. But with the return "to the well-beaten paths of trade-unionism", the Council quickly lost its vigour and disbanded in 1922.⁷⁴

The demise of the Labor Council provided yet more evidence that war-inspired social ferment was in steep decline. Area churches returned to the day-to-day business of preaching, taking less note of social reform and leaving inter-denominational unity to the Methodists and Presbyterians. Language tensions persisted in the Catholic church, but for the most part local Roman Catholics looked beyond that difficulty and worked for the betterment of their Church. The secular arena, too, lost some of its vigour because the Armistice quieted the fervent patriotism of various societies and the pressures from the state, business and mainstream Canadian institutions took their toll on various ethnic societies. That these sweeping declines left a wealth of new organizations intact suggests something of the expansion of sacred and secular organizations between 1914 and 1922.

By 1922, in short, Sudbury-area society showed few signs of its recent frontier heritage, and Sudbury -- the heart of institutional activity -- compared quite favourably with like-sized centres in older portions of Ontario.

IV

THE COMMUNITY SETTING

The resolutely urban character of the Nickel Range was further confirmed by wartime events. Sudbury, located at the hub of the regional transport and communications network, was the major beneficiary of war-inspired expansion in social, commercial and administrative activities. New businesses plus a greatly enlarged population and the requisite housing construction were the most obvious indications of Sudbury's prosperity. These gains left most smaller centres even more subservient to Sudbury, although the major mining communities and Capreol, a CNR town, enjoyed many corporate-sponsored gains. So long as corporate funding continued, these centres enjoyed superior social and physical services. However, dependence on a single firm carried massive risks -- many centres failed after being abandoned by INCO or other firms. Most Sudburians, determined to keep Sudbury at the regional forefront, nevertheless viewed closer ties to mining as the only means of continuing the massive expansion of public and private services that by 1922 gave Sudbury a modern urban setting. These optimists paid little heed to the fast-emerging dependence on mining foreshadowed by an influx of immigrant mineral workers, instead revelling in Sudbury's wartime prosperity and its unchallenged regional dominance.

Administration and Services

Sudbury's progress, naturally enough, did not occur in a jurisdictional vacuum, though the pace of jurisdictional and administrative change was

INCO's control of real estate. Society was no more open: the Northern Miner, citing pressure against its local correspondent, complained in 1916 that Copper Cliff was "a walled city, secret and secretive." Little wonder, then, that there were so few complaints about the choking sulphur fumes and naked ground that made O'Donnell and Copper Cliff such dreary places.⁹³

Besides, clean air was associated with economic slowdown, like the postwar closures that revealed INCO's indifference towards its employees during times of economic stress. O'Donnell was hardest hit: all of its 300 or so residents had to leave in 1919, driven out by INCO's decision to cancel roast yard operations until the nickel markets recovered. INCO's smelter town fared little better, because the firm soon decided to "shut Copper Cliff up tight." This was a telling blow, for INCO evicted the tenants of company-owned housing. The firm owned more than half of the 730 or so dwellings in Copper Cliff, so the population plunged from nearly 5,000 in 1916 to a low of 2,314 in 1922. The departures reduced the town's "foreign" population by over 600 persons, or from 53 to 39 percent. Retailers hit hard by the population losses found themselves increasingly hard-pressed to make ends meet, especially with growing competition from their now easily accessible rivals in Sudbury. The concurrent decline in business and population, exacerbated by the demoralizing influence of closed nickel plants, forever ended Copper Cliff's chances of being more than an INCO dormitory town.⁹⁴

Sudbury

Sudburians, the beneficiaries of Copper Cliff's decline, sought even greater progress. The town's leading citizens were confident that Sudbury's excellent rail connections, plus a central place on the Trunk Road and

had settled there by 1916, attracting various commercial and social facilities which in turn drew more people. Capreol achieved Town status in 1918, making available further tax monies, debenture loans and Provincial aid. The Ontario Housing Act of 1919, for instance, provided monies for new dwellings. Municipal taxes, meanwhile, funded the purchase of a fire engine and the hiring of a general civic employee -- teamster, garbage collector, meter reader, electrician, fire chief and constable. The new Chief of Police, in contrast, faced a less onerous task because the CNR police maintained order. The railway also established a townsite plan, built 60 or so houses, provided electric lighting and supplemented local wells with a gravity fed waterworks, all before 1920. The CNOR's largesse gave it a strong voice in municipal affairs, but most residents accepted the corporate control as the price of rapid progress. Capreol's population tripled to about 1,500 persons between 1918 and 1921, with persons of British background (60 percent) and francophone (25 percent) most numerous. These persons and the many CNR workers passing through Capreol were served by a wide range of commercial establishments, several chapels, a new school and various social and recreational facilities highlighted by a large Y.M.C.A.; all enhanced the quality of life. Nevertheless, some individuals were not enamoured by the CNR's overbearing influence, so they settled just north of Capreol's boundaries, where an unorganized village known as Norman grew up. ⁸²

Even these people enjoyed the benefits of a relatively steady railway economy that put Capreol well ahead of most mixed-economy communities. These villages retained the remnants of early prosperity, featuring a railway station, post office and school, a few commercial establishments

were organized and only three townships opted for statutory board status.⁷⁸ The last named continued to limit their efforts to roads and schools, while the slightly richer township municipalities -- annual tax revenues varied from \$2,000 in Nairn to \$22,500 in Neelon-Garson -- fared only relatively better. Many services remained inadequate or non-existent: in 1916 J.D. Gemmell, Reeve of the Union Municipality of Drury, Denison and Graham, informed the newly appointed District Fire Marshall that municipal fire protection "had never even been discussed."⁷⁹ Among area municipalities only the incorporated towns offered wide-ranging, effective services, as befitted their more solid financing:

TABLE 6.1

MUNICIPAL FINANCES: 1914, 1918, 1922

<u>Total Assessment (\$1,000's)</u>	<u>1914</u>	<u>1918</u>	<u>1922</u>
Township municipalities (average)	150.5	232.3	232.9
Capreol	--	523.1 (1919)	667.8
Chelmsford	112.5	116.4	124.8
Copper Cliff	3692.6	4846.7	4626.8
Frood Mine	680.8	353.0	306.5
Sudbury	4211.5	4894.2	5517.4
<u>Taxes Imposed (\$)</u>			
Township municipalities (average)	4,964	7,639	10,195
Capreol	--	14,145 (1919)	30,449
Chelmsford	2,799	3,630	4,457
Copper Cliff	37,071	63,158	78,611
Frood Mine	4,798	2,118	1,379
Sudbury	84,694	179,360	284,242
<u>Debenture Debt (\$)</u>			
Township municipalities (average)	1,983	1,736	1,160
Capreol	--	32,821 (1919)	96,426
Chelmsford	nil	nil	nil
Copper Cliff	49,400	46,031	55,329
Frood Mine	nil	nil	nil
Sudbury	493,635	946,844	1,428,521

(Source: Ontario, Bureau of Industries, Municipal Bulletin)

These towns also ~~enjoyed~~ the benefits of privately funded services dependent upon highly concentrated populations. Telephone service, for example, was effectively limited to a large, modern Bell network in Sudbury and Copper Cliff and smaller private systems in Coniston and Chelmsford.⁸⁰ Transit service, meanwhile, was practical only between Sudbury and Copper Cliff, where jitney and bus service were supplemented by the Sudbury-Copper Cliff Suburban Electric Railway. Plans for an electric street railway linking the two towns dated from about 1899, but four or more schemes succumbed to INCO's opposition -- the firm evidently feared a loss of corporate control in Copper Cliff.

The inter-urban railway scheme gained new credibility in 1910 because the CNOR pledged its support, hoping to gain a lucrative freight connection to Copper Cliff. INCO, meanwhile, had dropped its opposition because the new Trunk Road from Sudbury had broken Copper Cliff's isolation. The line won Parliamentary approval in 1912 and a civic franchise in 1913; on 8 November 1915 the costly, "substantial" line opened for business. It was well received, with at least 200 persons using the line to commute from Sudbury to Copper Cliff; the positive reception saw service doubled to 30 runs daily and the system being expanded to the "Flour Mill" and Lake Ramsay, thus providing most Sudburians with convenient street railway service.⁸¹ The street railway and telephone, important additions to Sudbury's service base, gave the town a sophistication well beyond the reach of neighbouring centres.

Communities Not Dependent Upon Mining

The combination of private and public funds nevertheless brought progress elsewhere in the Nickel Range. Capreol, a divisional and junction point on the CNR system, was a case in point. Thirty or more families

and one or more chapels. But they suffered steep declines because of improved access to Sudbury: their populations often declined to 50 or fewer persons and the local township municipalities or statutory boards lacked the fiscal resources to stem the downward slide.⁸³ Only the town of Chelmsford, with 1,045 mainly francophone residents (1921) plus a commercial and social base dependent upon Valley agriculture, managed to hold its own. Even there, the town fathers could supply few services because Chelmsford's tax levy averaged less than \$3,500.⁸⁴

Mining Communities

Mineral industry communities were less afflicted by tax shortfalls or Sudbury's increasing might because the mining firms generated most local income and sponsored improvements to the physical setting. By war's end the mining villages featured improved sidewalks, streets and drainage, new waterworks and electrical utilities, good schools, churches and halls, plus company-paid civic employees. Numerous company-built houses added further permanence and the wartime production boom resulted in much-enlarged populations and, in turn, more retail, service and social facilities.⁸⁵ INCO, not surprisingly, led the way, committing over \$500,000 for new construction at Creighton. New well-serviced housing -- 162 houses were erected in wartime -- was in sharp contrast to the "rickety" community built prior to 1914, whose "tumbling terraces" remained home to the "wandering miners of many nations." Together, the old and new components housed about 2,350 persons by 1918, but the "ethnic colonies" shrank in the early 1920s as operations ground to a halt.⁸⁶

The rise and fall of other INCO centres was even more dramatic. INCO's "second" mining village prospered during wartime, the population of about 600 resembling in all aspects a small town, with all the requisite

services. But all activity ceased soon after the mine was closed in 1919, leaving Crean Hill a ghost town of some 137 buildings. Frood Mine suffered a similar fate. Built in anticipation of major operations at the Frood mine, that town featured numerous, fully serviced houses plus police, garbage and other services. But INCO concentrated operations at the Creighton, and by 1915 Frood Mine was little more than a curiosity, maintaining town status despite a population sometimes numbering less than ten persons.⁸⁷

Mond Nickel's mining communities met a variety of fates. Its smallest camps -- North Star, Kirkwood and the like -- disappeared after the associated mines were closed for reasons of efficiency; and Mond, a crude camp of 90 or so unserviced buildings on haphazardly intersecting dirt streets, was largely ignored because the nearby Victoria deposit was failing. That failure spelled Mond's end: the large Finnish component was first to leave, followed by the Poles, the French Canadians and, on the mine's closing in 1923, the remnant anglophone population.⁸⁸ Garson and Worthington, in contrast, grew substantially during the war and maintained a degree of postwar prosperity because of Mond Nickel's determination to continue a minimum level of production. Both featured a blend of new, comparatively well serviced housing and older, often "hopeless, shackly, unpainted" quarters. Levack, in contrast, was a new village with 95 company-built homes aligned on a gridiron street plan. But it, too, featured rougher private dwellings erected by immigrant workers -- Poles, Ukrainians and Finns -- on a separate site known as "Warsaw." These employees, like their compatriots in the other Mond villages, suffered grievous blows because of postwar production cuts. But some married men retained their positions,

◦ permitting the populace and commercial and social facilities to eke out a survival until the nickel markets recovered.⁸⁹

"Smelter Towns"

Mineral industrial centres had a slightly better time of it because the smelters operated long after the mines had closed and because their plants generally serviced more than one deposit. The exceptions were Nickelton and Sellwood. The latter, Moose Mountain's sole mining and concentrating site, ebbed and prospered with the highly variable price of iron. As many as 1,500 persons lived in Sellwood when sales volumes dictated full-scale operations, but the well-serviced, company-built village, featuring neat rows of houses, stores, halls and churches, dwindled as iron prices fell after 1918; it was deserted by 1923. BANCO, looking to avoid such waste, abandoned earlier (1916) plans for a company town at Nickelton and announced in 1918 that its workers would have to live in Sudbury. But some employees could not afford housing there, and others disliked the bother of commuting four or more miles from Sudbury on BANCO funded trains and, later, a "fleet of motor buses." So the firm erected about 40 dwellings and a boarding house at its smelter site, and Nickelton, home to 300 persons and a few commercial and social endeavours by 1920, became the region's newest industrial community. The prosperous beginning proved illusory: BANCO's ensuing troubles saw the population fall to 100 by 1923, and the village was deserted soon after the firm's bankruptcy in 1924.⁹⁰

Coniston, on the other hand, displayed considerable permanence after the war because Mond Nickel maintained some minimal smelter operations. This latest commitment to Coniston's prosperity followed major wartime

spending on housing, schools, churches and full blown civic services at the village core, known as "English town." Unfortunately, the great bulk of the population called the adjoining "Polack", "Italian" or "French" towns home. They made do with few services and small, insubstantial housing; conditions worsened as wartime prosperity saw Coniston's population, only 100 in 1914, soar to 1,000 by 1918. Mond's decision to continue production prevented a major exodus -- the population bottomed out in 1920 at about 850 persons -- and by 1923 Coniston boasted 1,265 residents. The quick recovery -- a great relief to Coniston's extensive business and social sectors -- seemingly confirmed the wisdom of Mond Nickel's tactics.⁹¹

INCO's wartime policies also won considerable praise in the communities associated with its reduction plant. At O'Donnell -- a new village in Graham Township housing those persons dependent upon the roast yards which INCO built there in 1916 -- the residents fared well. By 1918 O'Donnell featured good, well-serviced housing, various commercial and social facilities, the mails, and AER service, all because of INCO's direct or indirect aid.⁹² Copper Cliff, meanwhile, was a major beneficiary of the giant nickel firm's wartime largesse. Every aspect of community life prospered because of INCO funding, giving Copper Cliff physical and social services second to none in the Nickel Range. The corporate aid also kept municipal costs and taxes quite low: in 1921, for example, Copper Cliff's per capita tax was \$7.29, compared with \$31.60 in Sudbury. Long term debt, meanwhile, was one-tenth of Sudbury's burden. Businessmen in Copper Cliff reaped further gains because wartime expansion provided steady work and improved wages for INCO employees, who formed 67 percent of the town workforce. But the business sectors of both O'Donnell and Copper Cliff also faced INCO's overbearing influence; private growth was strictly limited through

INCO's control of real estate. Society was no more open: the Northern Miner, citing pressure against its local correspondent, complained in 1916 that Copper Cliff was "a walled city, secret and secretive." Little wonder, then, that there were so few complaints about the choking sulphur fumes and naked ground that made O'Donnell and Copper Cliff such dreary places.⁹³

Besides, clean air was associated with economic slowdown, like the postwar closures that revealed INCO's indifference towards its employees during times of economic stress. O'Donnell was hardest hit: all of its 300 or so residents had to leave in 1919, driven out by INCO's decision to cancel roast yard operations until the nickel markets recovered. INCO's smelter town fared little better, because the firm soon decided to "shut Copper Cliff up tight." This was a telling blow, for INCO evicted the tenants of company-owned housing. The firm owned more than half of the 730 or so dwellings in Copper Cliff, so the population plunged from nearly 5,000 in 1916 to a low of 2,314 in 1922. The departures reduced the town's "foreign" population by over 600 persons, or from 53 to 39 percent. Retailers hit hard by the population losses found themselves increasingly hard-pressed to make ends meet, especially with growing competition from their now easily accessible rivals in Sudbury. The concurrent decline in business and population, exacerbated by the demoralizing influence of closed nickel plants, forever ended Copper Cliff's chances of being more than an INCO dormitory town.⁹⁴

Sudbury

Sudburians, the beneficiaries of Copper Cliff's decline, sought even greater progress. The town's leading citizens were confident that Sudbury's excellent rail connections, plus a central place on the Trunk Road and

communications networks, assured further expansion of the administrative, social and commercial functions that had given rise to their town's regional primacy. One need only peruse the town's four newspapers -- with combined circulations of 6,500 in 1918 -- to sense the optimism.⁹⁵ The civic leadership pointed especially to the fast-expanding business sector, which displayed a diversity perhaps unmatched in Northern Ontario:

TABLE 6.2

SUDBURY BUSINESSES BY TYPE: 1914 and 1922

<u>Type</u>	<u>1914</u>	<u>1922</u>
Construction	15	16
Finance	12	28
Manufacturing	23	19
Mining	3	-
Service	122	158
Trade	98	170
Transportation	13	15
Other	5	5
Total	292	401

(Source: Noel Beach, "Nickel Capital," p. 67)

The success of the mixed economy assured an aggressive and confident Sudbury Town Council, members routinely ignored promises "to practice economy in every department" and authorized more and more civic spending. By 1922 Sudburians faced taxes one-third higher than the combined levy of all other area municipalities, and the town's debt load (\$1,428,521) was nine times the combined debt of its neighbours. But the town fathers were unrepentant, pointing to the spread of civic services. Steady expansion of paved streets, cement sidewalks, water and sewer services, garbage collection, police and fire protection, planning, plus the establishment of a Parks Commission (1917) and a Housing Commission (1919), added new sophistication to the Town.⁹⁶ The search for more and cheaper electricity

provided further evidence of the civic commitment to progress. Sudburians, weary of the small amount of hydro-electricity made available by Wahnapiatae Power, sought power elsewhere. But Sudbury Power's output barely sufficed for its Sudbury Flour Mills, and repeated calls for Hydro-Electric Power Commission service were in vain.⁹⁷

The failure to win HEPCO service did not shake the confidence of Sudbury Town Council, which maintained liberal incentives for new businesses and continued to improve civic services despite the postwar recession. To justify their actions the Councillors pointed to a substantial, brick urban core, featuring large stores, offices, churches and other social edifices. They also cited a rapidly expanding population, up from 4,150 in 1911 to 8,621 in 1921, while arguing that the new subdivisions just beyond the town limits, especially the fast-rising Gatchell subdivision built alongside the westerly Suburban Electric line, added substantially to the number of persons who called Sudbury home. Last, but certainly not least, they continually praised their town's varied economic base.⁹⁸

But the mixed economy was somewhat misleading. The social and administrative infrastructure was nearing maturity, leaving little room for expansion. More important, the apparently varied business sector relied mainly on a relatively narrow natural-resource base for its prosperity; with forestry in decline, the mineral economy assumed new importance. Improved travel options and corporate policy -- INCO restricted the housing supply in Copper Cliff and BANCOR chose not to provide a company town -- saw miners and smeltermen opt for the greater services and freedoms available in or just outside Sudbury. The influx of mineral workers quadrupled the town's "foreign" population to 1,174 persons, most of whom settled in fast-emerging ethnic quarters on the northeastern and western fringes

of Sudbury. These highly visible immigrants frightened nativist elements among the 4,331 Sudburians of British background, although Sudbury's francophones, numbering 3,091 in 1921, seemed less concerned, perhaps because they were clustered in their own "Flour Mill" sector. Less racist critics, meanwhile, recognized the risks inherent in trusting Sudbury's future progress to an industry so frequently beset by market-or-corporate-induced slowdowns. They urged further diversification of Sudbury's traditional commercial, social and administrative functions, fearful that closer ties to mining would reduce the town to a dependent, company-town status.⁹⁹

Their pleas fell on deaf ears even in the depths of the postwar depression, because few Sudburians harboured dark forebodings about the future. After all, their town faced no threat from the failing mixed-function villages, and progress in Capreol and Chelmsford was dependent upon relatively limited railway and farming bases. The major mineral centres -- Copper Cliff, Coniston and Creighton -- managed very quick wartime gains, but suffered serious declines after the Armistice. The war also brought a major expansion in Sudbury's wide-ranging functions and the postwar slowdowns were partially offset by that diversity and the arrival of workers from nearby mineral centres. Though these new arrivals foreshadowed greater dependence on the nickel industry, most Sudburians remained confident of an even brighter future.

CONCLUSION.

World War I, for all its horrors, marked a generally prosperous time for the Sudbury area, with resource exploitation funding considerable commercial expansion. The good economic times also quickened improvements to the daily necessities of life, from roads to services, while the tensions

of war produced a more diverse social landscape. This "routine" progress, enhancing the quality of life, was possible because wartime needs propelled the nickel industry to record production. With the timber-based industries in decline the regional economy became increasingly dependent on INCO and Mond; unfortunately these firms found postwar disarmament a far greater threat than the wartime nationalism that had questioned their worldwide control of nickel production. The Armistice left both firms facing severe declines in sales, which in turn necessitated massive production cuts. A new emphasis on commercial sales eventually led to renewed activity and promised future prosperity, but the postwar events provided ample evidence of the risks inherent in relying on a single resource. Most Sudburians, aware of the economic benefits associated with a fast recovering nickel industry, decided that renewed civic prosperity and enhanced regional primacy outweighed the danger of dependency. The ensuing decade would determine the soundness of their judgement.

NOTES

¹ Ontario, Report of the Bureau of Mines (later, Department of Mines) (hereafter OBM) (1915): 24, 96-98; (1916): 15, 70-73; (1917): 23, 77-83; (1918): 25, 89-91; (1919): 22, 108-09. More details on this and other mining-related topics are available in Canada, Department of Mines, Mines Branch, Annual Report of Mineral Production (hereafter, Canada, Mines Branch, Report); for reasons of space and repetition it will not be cited extensively. The local, financial and mining press also contain numerous references. For instance, on the 1914 slowdown: Financial Post, 27 June, 22 August, 5, 19 September, 17 October 1914, 20 February 1915; Sudbury Star, 8 August, 7 October 1914, 6 February 1915; Sudbury Journal, 13 August 1914.

² OBM (1915): 97; Sudbury Star, 21 March 1914; INCO Staff, "The Mining and Smelting Operations of The International Nickel Company of Canada, Limited," Transactions of the Canadian Mining Institute (TCMI) 23 (1920): 103.

³ OBM (1916): 69-70; (1917): 76-77; (1918): 89; (1919): 109; Financial Post, 17 October 1914, 17 April 1915; INCO Staff, 64, 66; Canadian Mining Journal (CMJ) 37 (15 August 1916): 391; Sudbury Star, 6, 8 January, 5 February, 12 April 1916; INCO Triangle 2 (November 1938): 13.

⁴ In 1913-14 Mond acquired several properties and undertook a corporate re-structuring which doubled its share capital. Financial Post, 27 June 1914. On its early wartime problems: *ibid.*, 5 September, 17 October 1914.

⁵ OBM (1915): 24, 99-102; (1916): 15, 73-76; (1917): 23, 83-87; (1918): 25, 95-97; (1919): 22, 109-11; Mond Nickel Co., The Mond Nickel Company Limited (n.p.: n.p., 1918), *passim*, esp. pp. 5, 11, 13, 15 and a fold-out map. On the Mount Nickel and Howland mines: OBM (1916): 77; (1917): 87, 89; Ontario, Report of the Royal Ontario Nickel Commission (Toronto: King's Printer, 1917) (hereafter RONC), 487; Sudbury Star, 17 February, 13 May 1915.

⁶ OBM (1916): 73; (1918): 96; (1919): 110; Eugene Haanel, "The Utilization of Some of Our Non-Metallic Mineral Resources, Suggested by Present Conditions," Canada, Commission of Conservation, Annual Report, 1915, 46; Financial Post, 27 June 1914, 18 August 1917.

⁷ OBM (1915): 99; Mond Nickel Co., 29; Financial Post, 18 August 1917.

⁸ Oscar W. Main, The Canadian Nickel Industry: A Study of Market Control and Public Policy (Toronto: University of Toronto Press, 1955), 87; RONC, 7, 72, 83-84; Financial Post, 2 June 1917, 17 June 1927, 8 January 1931. While nickel prices were steady, copper prices rose: *ibid.*, 15 May, 1915, 10 March 1917, 30 April 1926; Alfred Stansfield, "Some Effects

of the War on the Metallurgical Industries of Canada," TCMI 19 (1916): 132.

⁹ See the lists in the OBM and Canada, "Synopsis of Letters Patent Issued to Companies Incorporated under 'The Companies Act'," Report of the Secretary of State of Canada 1914-18, (hereafter Canada, "Synopsis of Letters Patent,"). On the Sudbury Nickel Refineries: Canada Gazette 49 (20 May 1916): 3882-83; Ontario Gazette 49 (9 September 1916): 1291. For details on Fecunis: Ontario, Statutes, 1921, 11 Geo. V, c. 137; Financial Post, 28 January 1921; Sudbury Star, 23 April 1921.

¹⁰ Alex Skelton, "Nickel," International Control in the Non-Ferrous Metals, eds. W.Y. Elliot et al. (New York: Macmillan, 1937), 143; H.V. Nelles, "The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1890-1939," (Ph.D. diss., University of Toronto, 1969), 550-54; Financial Post, 17 April 1915; Canadian Annual Review (CAR) (1916): 534; Munition Resources Commission Canada, Final Report of The Work of The Commission (Toronto: The Industrial and Technical Press, 1920), 11. The Commission's resolution was dated 17 April 1916.

¹¹ OBM (1917): 87; (1918): 91-92; (1919): 22, 106-08; RONC, 69; CMJ 37 (1 October 1916): 462-63; 38 (1 May 1917): 196-97; 38 (1 September 1917): 337; Saturday Night, 2 September 1916; Financial Post, 5 August 1916, 6 January, 17 February, 18 August, 1 September 1917, 2 March 1918; Sudbury Star 29 July, 20 December 1916, 3 February, 22 September 1917, 26 June 1918.

¹² The "Nickel Question" of World War I is much studied. For contemporary views from very differing perspectives: George Wilkie, "Canada and Its Nickel", The Canadian Magazine 47 (August 1916): 259-65 and Henry Borden, ed., Robert Laird Borden: His Memoirs (Toronto: Macmillan, 1938), 628-42. Modern overviews include: Jean-Claude St. Amant, "La question du nickel pendant la première grande guerre," Documents historique de la Société historique du Nouvel-Ontario (hereafter Documents historique) 68 (1978): 5-32; Nelles, "Politics," 546-61; Peter Oliver, "The Making of a Provincial Premier, Howard Ferguson and Ontario Politics: 1870-1923," (Ph.D. diss., University of Toronto, 1969), 210-220; Christopher Armstrong, "The Politics of Federalism: Ontario's Relations with the Federal Government, 1896-1941," (Ph.D. diss., University of Toronto, 1972), 137-42; Main, 82-89.

¹³ CAR (1914): 319-21; Financial Post, 21 November 1914; Canada, "Correspondence between the International Nickel Company and the Prime Minister," unpublished Sessional Paper, 1916, no. 78; see esp. letters of 29 December 1915 and 7 January 1916; Munition Resources Commission Canada, Final Report, 10.

¹⁴ The quotes are from: Financial Post, 22 July 1916; Sudbury Star, 29 July 1916. Also: Main, 87; Toronto Star, 5 October 1914; CAR (1914): 319-21; (1915): 545-48; (1916): 532-40; Financial Post, 15 July 1916;

Sudbury Journal, 14 January 1915. On INCO's response: John Thompson and Norman Beasley, For the Years to Come; A Story of International Nickel of Canada (New York: G.P. Putnam's 1960), 167-69, 190; Canada, "Synopsis of Letters Patent," 1917, 54.

¹⁵ RONC, passim. For critiques of the Commission: Sudbury Mining News, n.d., quoted in Sudbury Star, 30 March 1921; CAR (1917): 657-60. On the tax: Main, 89, 130; Ontario, Statutes, 1917; 7 Geo. V, c. 7; Francis H. Gisborne and Arthur A. Fraser, comp., Correspondence, Reports of the Minister of Justice and Orders-in-Council upon the Subject of Provincial Legislation 1896-1920 (Ottawa: King's Printer, 1922), 2: 184-200. INCO's American tax burden rose eighteen-fold between 1916 and 1918: Financial Post, 3 May 1919. Dewart remained a foe of INCO until well after the war. Ontario, Department of Public Records and Archives, "Newspaper Hansard, Legislature of Ontario," (hereafter Ontario, "Newspaper Hansard"), 7 May 1920, 15 February 1921.

¹⁶ On the "Expert" opinion: Engineering and Mining Journal (EMJ), 109 (17 January 1920): 124. For details: OBM (1919): 109; (1920): 16, 18, 73; (1921): 16, 67-69; (1922): Part I, 15, 34-35, Part X, 25-26; Sudbury Star, 15 January, 6, 27 November 1920, 16 March, 20 July, 24, 27 August 1921; Financial Post, 12 November 1920, 14 January, 4, 25 March, 22 April, 2, 9 September 1921; Main, 92-93; Skelton, 121; Thompson and Beasley, 178-79; Northern Miner, 5 March 1921, 14 January 1922.

¹⁷ Thompson and Beasley, 174-80; Frank B. Howard-White, Nickel: An Historical Review (Princeton: D. Van Nostrand, 1963), 177. Some minor advertising for Monel metal began even earlier: CAR (1915): 851.

¹⁸ Profitability returned about November 1922. See: OBM (1923): Part I, 15, Part VI, 34-35, (1924): Part I, 15, Part VII, 23-24; Financial Post, 13 January, 5 May, 2 June, 15 December 1922; Northern Miner, 29 April, 17 June, 12 August, 9 December 1922; Sudbury Star, 5 August, 2 September 1922.

¹⁹ OBM (1920): 18, 74-75; (1921): 16, 77-78; (1922): Part I, 15, Part X, 27-28; (1923): Part I, 15, Part VI, 35-37; (1924): Part I, 15, Part VI, 25-26; Mining Magazine 20 (May 1919): 291; Sudbury Star, 2 April 1919, 14 September 1921, 14 June 1922; Financial Post, 27 August 1920, 14 January, 4 March, 9 September 1921, 4 November 1922. Alfred Mond on the American market is from Main, 100.

²⁰ OBM (1920): 17-18, 70-71; (1921): 16, 66-67; (1922): Part I, 15, Part X, 24; Sudbury Star, 11 June 1919, 28 January 1920; Financial Post, 14 January, 18, 25 March, 8 April, 9 September 1921.

²¹ OBM (1924): Part I, 15, Part VI, 23; (1925): 20-21; Financial Post, 8 April 1921, 29 June 1923, 29 February 1924; Northern Miner, 10 February, 21 April 1923; Sudbury Star, 18 April 1923, 23 July 1924; EMJ 115 (3 February 1923): 214; 118 (2 August 1924): 163; Skelton, 143-44; Main, 96-97;

Saturday Night, 1 September, 13 October 1923.

²² On the lawsuit: Main, 97; Financial Post, 8 February, 2 June, 25 July 1924; Sudbury Star, 26 September 1925; Scott Young and Astrid Young, O'Brien, (Toronto: The Ryerson Press, 1967), 176-79. For more on BANCO's end: Financial Post, 25 July, 1, 8 August, 12 September, 1924, 30 January, 27 March, 3 April, 5 June, 21 July, 28 August, 6 November 1925; Northern Miner, 2, 9 August 1924, 7 February, 28 March, 16 May, 13 June, 7 November 1925; Sudbury Star, 23 July 1924, 6, 9, 13, 23 May, 3, 24 June, 25, 29 July, 26 September, 7 November 1925; Saturday Night, 26 July 1924, 18 July 1925. On INCO and Mond acquiring the assets: Globe, 4 November 1925, Main, 156 n. 42.

²³ OBM (1915): 103; (1916): 78; (1917): 10, 89; M.B. Baker, "Long Lake Gold Mine, Sudbury District," OBM (1917): 157-62; E.L. Bruce, "Precious Metal Mining in Northern Ontario," Journal of the Canadian Bankers' Association 33 (April 1925): 354; Financial Post, 24 October 1914.

²⁴ OBM (1915): 103; (1916): 79; (1917): 89; (1918): 98; (1919): 114; (1920): 70; (1921): 66; (1922): Part I, 17; (1923): Part I, 18, Part VI, 33; (1924): Part I, 33; E.L. Bruce, "Future of The Ontario Iron Deposits," Queen's Quarterly 32 (2, 1924): 177; Crowell & Murray Co., The Iron Ores of Lake Superior (Cleveland: Penton Publishing, 1914), 257.

²⁵ Employment and wages based on the annual OBM, Canada, Mines Branch, Report. Specific, detailed figures for 1 November 1915 are available in the Labour Gazette 16 (February 1916): 924-25. The local and mining press provide additional information. See especially: Sudbury Star, 23, 27 October 1915, 20 April 1918; Northern Miner, 30 October, 6 November 1915, 23 June 1917. On workplace improvements see the OBM and the laudatory articles -- perhaps the result of wartime nationalism -- in The Labor News (Hamilton), 25 December 1914, 11 June, 24 December 1915, 30 June 1916, 1 June, 22 December 1917, 20 December 1918, 25 December 1919. Also: INCO Staff, 105-07; Financial Post, 4 June 1926.

²⁵ OBM (1922): Part X, 23; Sudbury Star, 2 April 1919, 6 November 1920, 16 March, 20 July 1921; Financial Post, 4, 25 March, 9 September 1921; Main, 92-93.

²⁷ RONC, 225.

²⁸ Joseph R. Boldt, The Winning of Nickel: Its Geology, Mining and Extractive Metallurgy (Toronto: Longmans Canada, 1967), 96-106; INCO Staff, 73-102; RONC, 212-37; C.V. Corless, "The Metallurgy of Nickel-Copper Ores of Sudbury," Financial Post, 27 October 1922; Oliver Hall, "Mining Methods at the Mond Nickel company's Mines," TCMI 22 (1919): 180-86; R.N. Palmer, "Mining Methods at the Worthington Mine," ibid., 21 (1918): 127-44.

²⁹ Sudbury Star, 23 June 1917. The summer of 1915 featured unprecedented crop damage: ibid., 11 September 1915. See also: Ontario, "Return... dated 11th April 1916 ... [re] damage to property by the International Nickel Company...", Sessional Papers (SP), 1917, no. 65. For an excellent survey see: Mathew Bray, "The Province of Ontario and the Problem of Sulphur Fumes in the Sudbury District: An Historical Perspective," Laurentian University Review (LUR) 16 (February 1984): 82-87.

³⁰ Whitson remarked upon the growing demand for more and better roads in his annual reports, which prefaced Ontario, Report of the Northern Development Branch (title varies). 1912-1922. These reports, plus Ontario, Public Accounts of the Province of Ontario, 1914-22, provide details on local road construction and improvement.

³¹ Details on "Settlers Loans" and other provincial aid is available in Ontario, "The Assistance of Settlers," Report of Northern Development Branch, 1916-22. One case of emergency aid was the fodder and seed supplied following the "indifferent growing season of 1921." ibid., 1922, app. 48, p 202. Also see Ontario, Annual Report of the Department of Agriculture and Canada, Report of the Minister of Agriculture for the Dominion of Canada. Separate reports by these agriculture ministries also add information. See, for instance, Canada, Report on the Agricultural Instruction Act, 1915-23.

³² Canada, Census of Canada, 1921, vol. 5, Tables 80-82, 86, pp 157, 242-43, 346-47, 610-11. Local histories add detail and colour. See, for instance, Eino Nissila, Pioneers of Long Lake (Sudbury: n.p., 1987), on the area south of Sudbury.

³³ Martha I.G. Allen, "A Survey of Finnish Cultural, Economic and Political Development in the Sudbury District of Ontario," (M.A. diss., University of Western Ontario, 1954), 61-63; Peter Krats, "Finnish Rural Life in the Sudbury Basin," paper presented at the Agricultural History of Ontario Seminar, Guelph, 1983; Thomas F. Barton, "Agricultural Landscapes of the Sudbury Area, Ontario," Illinois State Academy of Science Transactions (1941), 130-37.

³⁴ Ontario, Report of the Minister of Lands, Forests and Mines (hereafter Lands, Forests and Mines), 1916, vii. •

³⁵ Barton, 130-37; W.J.B. Kay, "Field Supervision of Settlers under the Soldier Settlement Act in the Sudbury District," (B.A. diss., Ontario Agricultural College, 1921), 14-16; Gaston Belanger, "L'agriculture dans Rayside et Balfour 1900-1950," (B.A. diss., Laurentian University; 1980); Ontario, Annual Report of the Agricultural Societies, 1918, 88; Sudbury Star, 26 November 1921, 30 June 1922.

³⁶ Canada, Census of Canada, 1921, vol. 5, Tables 80-82, 86, pp 157, 242-43, 346-47, 610-11; Ontario, "Statement showing the number of Locatees and of acres located; of purchasers and of acres sold; of lots resumed for non-performance of the settlement duties and of patents issued in Free Grant Townships during the year," Lands, Forests and Mines, 1914-22; idem, "Statement showing the number of purchasers and of acres sold; of lots resumed for non-performance of the settlement duties; and of patents issued in the Townships other than Free Grant during the year," ibid., 1917-22. My calculations.

³⁷ Sudbury Star, 5 August 1914, 7 September 1918, 23 August 1919; Ontario Gazette 49 (23 September 1916): 1382; Canada, "Synopsis of Letters Patent," 1915, 123; Jeanne Vaillancourt, Chelmsford, 1833-1983 (Ottawa: Le Club 50 de Chelmsford, 1983), 262; Belanger, 43-44. For District-wide details see the recurring Canada, Dominion Bureau of Statistics, Census of Industries. For example: idem, Census of Industries, 1917 Part II Dairy Factories 1917, SP, 1919, no. 17a, pp 4, 10, 14, 20-21.

³⁸ Sudbury Star, 29 July 1922.

³⁹ Calculated from Ontario, Department of Agriculture, "Agricultural Statistics", Annual Report of the Bureau of Industries, 1913, and idem, Annual Report of the Statistics Branch, 1922.

⁴⁰ Canada, Census of Canada, 1921, vol. 5, Table 38, p. 687.

⁴¹ Montreal Gazette Publishing, Commercial and Financial Review (1919):47; Houston's Publications, The Annual Financial Review (1915): 291; (1916): 309; (1917): 317; (1919): 360; (1920): 376-77; (1921): 394; (1922): 414-15; Eileen Goltz, "Espanola: The History of a Pulp and Paper Town," LUR 6 (June 1974): 76-77; Ontario, "Special Report on The Spanish River Pulp and Paper Mills, Limited," Report of the Timber Commission ... 1920 Province of Ontario (Toronto: King's Printer, 1922), 56-65, see esp. 63-65. H.V. Nelles, The Politics of Development: Forests, Mines & Hydro-Electric Power in Ontario, 1849-1941 (Toronto: Macmillan, 1974), 387-89; CAR (1920): 584-85.

⁴² RONC, 1; Canada, Dominion Bureau of Statistics, Census of Industries, 1917 Part IV Lumber, Lath, Shingles Etc. Section 1, SP 1919, no. 17c, 40-42; ibid., 1919, SP 1921, no. 17a, 33-35. Sudbury Star, 7 July 1915, 16 April, 27 July 1921; Financial Post, 12 August 1921. The demand for roast yard fuelwood was so great that in just three years Mond Nickel had removed even the tree stumps from the property around its Coniston works. Keith Winterhalder, "Environmental Degradation and Rehabilitation in the Sudbury Area," LUR 16 (February 1984): 18.

⁴³ J.P.G. de Lestard, "A History of Sudbury Forest District," Ontario Department of Lands and Forests, District History Series, no. 21, 1967; Thomas Thorpe, "A Review of Logging and Pulp Operations in Sudbury District

During the Years 1901-1950," unpublished manuscript, Department of Lands and Forests, n.d.; F.J. Kelly, "Spanish River Lumber Company, Limited," Sylva 5 (July-August 1949): 25-27; Sudbury Star, 28 July 1915, 25 March 1916, 17 May 1919, 23 October 1920.

⁴⁴ Sudbury Star, 6 August 1921; Ontario, Annual Report of the Department of Labour, 1920, 34.

⁴⁵ Robert Choquette, La foi: gardienne de la langue en Ontario, 1900-1950 (Montreal: Les éditions Bellarmin, 1987), 56-61; Alphonse Raymond, "Paroisse Sainte-Anne de Sudbury -- 1883-1953," Documents historique 26 (1953): 19-20; J.B. Waddell, "Histoire de la paroisse St. Anne," unpublished manuscript, 1933, Jesuit Archives, Université de Sudbury, (hereafter ASJCF), file B-3-8, p. 161; Gail Cuthbert-Brandt, "The Development of French-Canadian Social Institutions in Sudbury, 1833-1920," LUR 11 (February 1979): 12-13; Lorenzo Deschamps, "Le développement de l'Eglise Catholique a Sudbury," Rapport La Société Canadienne d'histoire de l'Eglise Catholique (1960): 29; Frank Peake and Robert Horne, The Religious Tradition in Sudbury 1883-1983 (Sudbury: Journal Printing, 1983), 16, 86; Sudbury Star, 26 September 1917. Fr. Descôteaux's anger surprised Charles McCrea; the phrase is McCrea's. Charles McCrea, Sudbury, to Fr. F.-X. Descôteaux, 25 April 1917, in "Les lettres des/aux curés de Ste.-Anne," ASJCF, file C-5-3.

⁴⁶ Robert Choquette, Language and Religion: A History of English-French Conflict in Ontario (Ottawa: University of Ottawa Press, 1975), 223. The discussion of Roman Catholicism's progress is based on local and parish histories, newspaper reports, and the more general studies like Deschamps, 23-34 and Lorenzo Cadieux, "Les fondations du diocèse du Sault-Ste.-Marie," Documents historique 6 (1944): passim. On Capreol: Sudbury Star, 21 May 1921.

⁴⁷ Sudbury Star, 3 September 1919. Cochrane's views were similar to those expressed at the Methodist General Conference of 1918: CAR (1918): 603.

⁴⁸ Peake and Horne, 86-87; CAR (1917): 46; Sudbury Star, 12 September 1914, 11 April, 19 September 1917.

⁴⁹ Presbyterian Church in Canada, "Report on Home Missions," Acts and Proceedings of the General Assembly of the Presbyterian Church in Canada (hereafter General Assembly), 1914, 17; 1915, 20; 1918, 6; 1923, 25; idem, "Sudbury Presbytery Records," ("Minutes") 3 March 1915. On the vote: Sudbury Star, 8 January 1916.

⁵⁰ Presbyterian Church in Canada, General Assembly, 1916, 34-35; 1919, 22-23. Sellwood and O'Donnell, and perhaps other centres, had non-denominational Union churches: Sudbury Star, 23 March 1932; INCO Triangle 34 (October 1974): n.p..

⁵¹ This general assessment is based upon local sources and especially the reports and statistics published by the various denominations. See: Presbyterian Church in Canada, General Assembly, 1914-23; Methodist Church of Canada, Proceedings of the Toronto Annual Conference of the Methodist Church, 1914-23; Church of England, Journal of Proceedings of the Synod of the Diocese of Algoma, 1914-23; Baptist Convention of Ontario and Quebec, The Baptist Year Book, 1914-22. Church minutes and histories add more detail, as do Church-sponsored and local newspapers. On Capreol's Baptist, for example, see: Canadian Baptist, 17 June 1920, 7 July 1921, 31 August 1922; Sudbury Star, 21 May, 30 November 1921. On the Salvation Army: ibid., 11 January 1919.

⁵² Statistics compiled from Church reports cited in note 51. The Baptist's history based on the Canadian Baptist, 11 June 1914, 27 May 1915, 14 June 1917, 16 March 1918, 12 June 1919, 7 July 1921, 2 November 1922, 4, 25 January, 22 February 1923. On the Salvation Army: Sudbury Star, 10 December 1921, 28 June 1922. Peake and Horne, 21-22, 29-30, 33, 37-38, is the best general survey. There are several histories of the individual churches.

⁵³ Methodist Church of Canada, Proceedings, 1915-25 provide an annual statistical report. Also: idem, Annual Report Women's Missionary Society, 1916-17, cxlvi; 1917-18, clii; 1920-21, clxiii; 1923-24 cliv; Missionary Outlook, September 1916, 193; January 1917, 7; July 1917, 151; February 1918, 32; October 1918, 239; September 1919, 215, November 1920, 263; November 1922, 519; February 1923, 47; December 1924, 281. On the Catholic effort: Maurizio A. Visentin, "The Italians of Sudbury," Polyphony 5 (1, 1983): 32; Sudbury Star, 20 September 1916, 8 September 1920, 21 January 1922, 10 October 1923.

⁵⁴ Waddell, 169-70, 216; Michael H. Marunchak, The Ukrainian Canadians: A History (Winnipeg: Ukrainian Free Academy of Sciences, 1970), 215-16; Mary Stefura, "The Process of Identity: A Historical Look at Ukrainians in the Sudbury Area Community," LUR, 15 (November 1982): 59; Sudbury Star, 1 November 1924.

⁵⁵ Harry Young with Sheila Prusila, "Chinese in Sudbury," Polyphony 5 (1, 1983): 108.

⁵⁶ Arvi Heinonen, "The Finns in Europe and Canada," Presbyterian Record 40 (September 1906): 407; Presbyterian Church in Canada, "Sudbury Presbytery Records," ("Minutes"), 27 August 1913, 10 July 1914, 7-September 1921, 4 June 1923. Annual statistics available in idem, General Assembly, 1914-23. For critiques of Heinonen see: Lauri T. Pikkusaari, Copper Cliff, to M.I.G. Allen, London (?), 22 September 1954; Pikkusaari condemns Heinonen as "an adventurer and impostor... and a totally unprincipled fellow." Finnish Canadian Historical Society Collection, Public Archives of Ontario, Drawer 60, Box 17, item 14. A contemporary critique of Heinonen is in the leftist Vapaus, 14 October 1924. For more details see Peter Krats,

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⁵⁷ For a brief discussion of the Finnish-Lutheran effort and an indication of the numerous Finnish-language sources: Krats, "'Sudburyn Suomalaiset'," 127-29, 239. On the Missouri Synod: Frank Malinsky, Grace and Blessing: A History of the Ontario District of the Lutheran Church -- Missouri Synod (Elmira: The Church, 1954), 89. Little is known of the Polish congregation listed in Vernon's Directories Ltd., Vernon's Sudbury and Copper Cliff Directory from 1914 through 1926. Presumably it was one of the hard-pressed Polish congregations that opted for Missouri Synod aid out of need: Julius Bodensieck, The Encyclopedia of the Lutheran Church (Minneapolis: Augsburg Publishing House, 1965), 3: 1919.

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⁵⁹ On OTA fines and general conviction rates: Ontario, Report of the Board of License Commissioners for Ontario on the Operation of the Ontario Temperance Act 1915-23; idem, Annual Report of the Inspector of Prisons and Public Charities upon the Prisons and Reformatories of the Province, 1914-23. On the temperance votes: Horne and Peake, 84; Sudbury Star, 22, 25 October, 15 November 1919, 13, 16, 20 April, 23, 30 March, 7 May 1921. For local attitudes toward prohibition: Horne and Peake, 81-82; Elaine J. Cataford, "Prohibition and Canadian Cities," unpublished paper, Laurentian University, 1974. On the lax policing: Edwin Higgins, Twelve O'Clock and All's Well: A Pictorial History of Law Enforcement in the Sudbury Area (Sudbury: Sudbury Regional Police, 1978), 21-27; Sudbury Star, 8 March 1922.

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⁶³ Brandt, 16; Choquette, La Foi, 118; J.-Raoul Hurtubise, "Les écoles bilingues de Sudbury," Documents historique 28 (1954): 41; Guy Courteau, "Le docteur J.-Raoul Hurtubise M.D.-M.D.: 40 ans de vie française à Sudbury," ibid., 58-60 (1971): 65-79; Lionel Seguin, Historique de la paroisse de Chelmsford Ontario (Sault Ste. Marie (?): The Diocese, 1948), 110; Sudbury Mining News, 31 December 1915, clipping in ASJCF file D-6-8; Sudbury Star, 31 March 1917. The quotes: Toronto Star, 28 September 1927 and on Mageau, CAR (1916): 530.

⁶⁴ Brandt, 17; Gerald Blais, "Le Collège du Sacre-Coeur, Sudbury, Ontario," (M.A. diss., University of Ottawa, 1968); Peake and Horne, 105; Sudbury Star, 10 September 1919; Louise Chenier, "La Fédération des Femmes Canadiennes-françaises de Sudbury," Documents historique 9 (1945): 18-19.

⁶⁵ For a survey of the anti-Chinese sentiment, focusing on the 1920's, Graeme Mount, The Sudbury Region: An Illustrated History (Burlington: Windsor Publications, 1986), 25-27; complaints about Chinese restaurants had begun by 1912. Sudbury Journal, 7 November 1912. On the Chinese National League: Sudbury Star, 27 July 1918, 16 June 1920. References to "Enemy Aliens" include: ibid., 8 January, 1 April, 2 August 1916; CMJ 36 (1 July 1915):391. The Italian Red Cross was active by early 1916: Sudbury Star, 19 January 1916. The quote on Bolshevism is from the Sudbury Star, 2 March 1918. For an overview of reaction to the Russian Revolution: Elliot Samuels, "The Red Scare in Ontario: The Reaction of the Ontario Press to the Internal and External Threat of Bolshevism 1917-1919," (M.A. diss., Queen's University, 1971).

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⁶⁹ Canada, Labour Organization in Canada (1919): 31, 38, 277; (1920): 32-33; (1923): 22; Sudbury Star, 29 March 1922; William Rodney, Soldiers of the International: A History of the Communist Party of Canada 1919-1929 (Toronto: University of Toronto Press, 1968), 50-51; Bercuson, 166, 169.

⁷⁰ Canada, Labour Organization in Canada (1914): 226; (1916): 73, 138, 221; John Penttinen, "Muistelmia Garsonista," Suomalaiset Nikkeliäluella: C.S.J.:n Sudburyn osaston 25 -- vuotisjuhlan johdosta, ed: H. Sula (Sudbury: Vapaa Publishing, 1937), 60; Toronto Star, 18 August 1916; Sudbury Star, 19 August 1916. On the blacklist see the letter of John Latvala, Sellwood, to the FOC National Office, 22 January 1914 in "Correspondence, National Office File FOC," FOC Collection, Public Archives of Canada MG 28 V 46 vol. 2, no. 2

⁷¹ Quotes: Sudbury Star, 19 August 1916; Northern Miner, 22 January 1916. For strong criticisms of INCO's labour policy: Industrial Banner, 8 June, 31 August, 28 September 1917.

⁷² Solski and Smaller, 10, 66-69; Canada, Labour Organization in Canada (1916): 73; (1919): 186, 208; (1920): 16-17, 23-24; Trades and Labour Congress of Canada, Report (1918): 161; Sudbury Star, 2 April, 17, 21 May; 17 September 1919; Sault Star, 19 May 1919; Northern Miner, 7 June 1919.

⁷³ Canada, Labour Organization in Canada (1919): 154; G.R. MacPherson, "The Search for the Commonwealth: The Co-operative Union of Canada, 1909-1939," (Ph.D. diss., University of Western Ontario, 1970), 329-30; Sudbury Star, 21 September, 9, 12 October 1918, 1 November 1919, 10 April 1920, 27 April, 10 December 1921, 25 February, 17 May, 15 November 1922.

⁷⁴ Quotes: Sudbury Star, 31 December 1919, 7 January 1920, 28 February 1920. See also: ibid. 31 December 1918, 27 December 1919. The Independent Labour Party fared no better locally: Industrial Banner, 16, 30 November 1917, 22, 29 October 1919.

⁷⁵ Ontario, Statutes, 1914, 4 Geo. V, c. 31 Provincial electoral representation was unaffected and federal representation was only slightly changed: Canada, Statutes, 1914, 4-5 Geo V, c. 51, s. 26.

⁷⁶ Waters Township, "Minute Book", 13 December 1918, 13 January 1919; Canada, Canada Official Postal Guide, 1916, 1920, 1927..

⁷⁷ On Burwash: Ont, Inspector of Prisons; the first report on the farm was published in 1917. Also: Sudbury Star, 25 January 1913, 12 September 1914, 26 September 1914; Sudbury Public Library, "Burwash: A History 1911-1981," unpublished manuscript, SPL, 1982, not paginated. On schools: Sheila Frusila et al., "Vintage Schools; A Preliminary Survey"

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⁷⁸ Ontario, "Procedure File no. 4628," Annual Report of the Ontario Railway and Municipal Board, 1918, 81-82. The new statutory townships, as determined by inclusion on provincial spending lists in the Public Accounts, were Cleland, Levack and Norman Townships.

⁷⁹ Figures from Ontario, Bureau of Industries, Municipal Bulletin. Quote: Union Municipality of Drury, Denison & Graham, "Council Minutes," letter, n.d., 1916.

⁸⁰ Ontario, Telephone Systems, 1915-23.

⁸¹ John Knowles et al., "The Sudbury Streetcars: The Sudbury-Copper Cliff Suburban Electric Railway Company," Nickel Belt Rails 3 (1983): 7-8, 10; Ontario, Statutes, 1903, 3 Edw. VII, c. 117; ibid., 1912, 2 Geo. V, c. 149; ibid., 1914, 4 Geo. V, c. 125; Town of Sudbury, "Minutes of the Council," (hereafter Sudbury, "Minutes,"), 11 May 1903, 25 August 1913; Town of Copper Cliff, "Town Council Minutes," 12 May 1903, 10 February 1906, 21 February 1907; Sudbury Journal, 5, 19 January 1899, 22, 29 November 1900, 21 May, 18 June 1903, 7, 15 December 1905, 15 February 1906, 29 September 1910, 21 March 1912, 7 August 1913, 9 April 1914, 11 November, 23 December 1915; Sudbury Star, 28 September 1910, 11 October 1911; Financial Post, 27 June 1914; Canadian Railway and Marine World, September 1915, 355; September 1916, 482; Ontario, Report of the Minister of Public Works for the Province of Ontario, 1917, 56; H.W. Middlemist, "Engineer's Report," Ontario, Railway and Municipal Board, 1917, 218-19. For operating statistics see: "Annual Report of Railway Companies," in ibid. and Canada, "Electric Railways," in "Railway Statistics," Annual Report of the Department of Railways and Canals.

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⁸³ For villages like Azilda, Blezard Valley, Hanmer, Larchwood and Whitefish scattered newspaper references and local histories can be supplemented with the Dun, Reference Book. See, for example, *ibid.*, January 1921, pp 481, 492, 595, 623, 871.

⁸⁴ Canada, Census of Canada, 1921, vol. 1, Tables 16, 27, 38, pp 307, 482-83, 700-01; Ontario, Municipal Bulletin, yearly; Dun, Reference Book, January 1921, 519; Vaillancourt, *passim*; Seguin, *passim*; Tina Koivu, "A History of Chelmsford, Ontario," unpublished paper, Laurentian University, 1974; Tina Castonguay, "Chelmsford," Documents historique 4 (1944): 12-29.

⁸⁵ There are numerous details in the OBM. Also: RONC, 75, 81; Mond Nickel Co., *passim*; Leo G. Denis, Electric Generation and Distribution in Canada (Ottawa: Commission of Conservation, 1918), 109, 159. One general coverage is Gilbert Stelter, "Community Development in Toronto's Commercial Empire: The Industrial Towns of the Nickel Belt, 1833-1931," LUR 6 (June 1974): 10-11, 14, 41-42. Newspaper references include: Sudbury Star, 21 January 1914, 15 January 1916, 2 September 1922.

⁸⁶ Mining developments are discussed above. Creighton, as befitted a "great" mine, drew considerable notice: Sudbury Journal, 18 March 1915, 26 April 1917; Sudbury Star, 7 July, 4 December 1915, 26 May 1917, 12 June, 10 July, 18 September, 20 November 1918, 2 September 1922; Financial Post, 4 September 1915; Northern Miner, 12 August 1916; CMJ 36 (1 December 1915): 736; 37 (15 August 1916): 391; Vapaus, 5 May 1921; Dun, Reference Book, January 1921, 534; Presbyterian Church, General Assembly, (1914): 20; (1916): 36. The quote is from a reminiscence in Northern Miner, 6 March 1930.

⁸⁷ See Ontario, Municipal Bulletin, for Frood Mine statistics. After establishing various civic services in 1914, Frood Town Council became virtually dormant; the continued town status was something of a curiosity. See: Town of Frood Mine, "Town Council Minutes," 1914-23. There are only a handful of entries after 1914. Also on Frood see Sudbury Star, 21 January 1914; Saturday Night, 4 October 1930; RONC, 217; Noel Beach, "Nickel Capital: Sudbury and the Nickel Industry 1905-1925," LUR 6 (July 1974), 62. On Crean Hill: RONC, 75; INCO Triangle 10 (October 1950): 9; Bradstreet Company, Bradstreet's Commercial Ratings in Dominion of Canada, July 1918, 87; Sudbury Star, 26 May 1917, 20 November 1918; Northern Miner, 6 March 1930.

⁸⁸ William Makinen, "The Mond Nickel Company and the Communities of Victoria Mines and Mond," Industrial Communities of the Sudbury Basin (Sudbury: Sudbury & District Historical Society, 1986): 32-41; Sudbury Star, 22 September 1920; Vapaus, 23 April, 5 May 1921.

⁸⁹ Mond Nickel Co., 81; Dun, Reference Book, January 1917, 859; *ibid.*, January 1921, 565, 625, 882; OBM (1917): 85; Vapaus, 28 May 1921; Northern

Miner, 6 March 1930; RONC, 81; Stelter, 11, 40; Robert Trott, The Story of Onaping Falls (Sudbury: Acme Printers, 1982), 30-42.

⁹⁰ Clay, 44-46; Beach, 62; Dun, Reference Book, January 1921, 744; RONC, 89; Financial Post, 2 March 1918; Sudbury Star, 20 December 1916, 23 January 1918, 18 April, 11 August, 7 November 1923, 19 March 1924, 16 February 1927, 23 March 1932.

⁹¹ Coniston Historical Group, The Coniston Story (Sudbury: Journal Printing, 1983), 3-5, 9-10, 26, 38, 82; Michael Solski, "Coniston," Industrial Communities of the Sudbury Basin (Sudbury: Sudbury & District Historical Society, 1986), 46-48; Mond Nickel Co., 24; RONC, 81; Dun, Reference Book, January 1921, 529; Sudbury Star, 28 March 1914, 9 August 1916, 3 July 1920.

⁹² INCO Staff, 64; INCO Triangle 34 (October 1974): n.p.; Sudbury Star, 6; 8 January, 5 February, 12 April 1916, 20 November 1918.

⁹³ Eileen Goltz, "Genesis and Growth of the Company Town: Copper Cliff, 1886-1920," (M.A. Diss., Laurentian University, 1983) provides much detail. See also Cheryl Dominato et al., A Bit of the Cliff: A Bit of History of the Town of Copper Cliff Ontario 1901-1972 (Sudbury (?): Copper Cliff Museum, 1982), passim; Ontario, Municipal Bulletin, 1914-22; RONC, 7, 75; Stelter, 14, 41-44; Dun, Reference Book, January 1921, 530; Sudbury Journal, 22 January 1914, 25 February 1915; Sudbury Star, 18 February, 22 April 1914, 26 May 1917, 12 June, 10 July, 20 November 1918; The Labor News, 22 December 1917, Vernon's Directories Ltd., Vernon's Sudbury and Copper Cliff Directory, 1914-18. The quote on secrecy is from the Northern Miner, 22 January 1916. On the physical setting see Pamela A. Follett's vivid descriptions in: Methodist Church of Canada, Annual Report of the Women's Missionary Society (1917-18): clii; (1919-20): cxliv; (1922-23): cxlix.

⁹⁴ The aforementioned works by Goltz and Dominato et al. (n. 93) provide much detail. Also: Ontario, Municipal Bulletin, 1919-22; Financial Post, 9 September 1921. For demographics, compare Canada, Census of Canada, 1911, vol. 2, Tables II, VII, pp 66-67, 232-33, with ibid., 1921, vol. 1, Tables 16, 27, 38, pp 307, 482-83, 700-01.

⁹⁵ The fourth newspaper was the Finnish language Tapaus, which began publishing on 6 November 1917; it assumed a national perspective but nevertheless provided considerable local news. A. McKim & Co., The Canadian Newspaper Directory (1918): 79, 319; Sudbury Star, 10 November 1917.

⁹⁶ Quote from: Financial Post, 10 August 1918. For an overview of civic progress: Sudbury Star, 17 December 1921; Canadian Baptist, 15 February 1923. Expenditures calculated from Ontario, Municipal Bulletin. For details on civic improvements: Sudbury, "Minutes," 1914-22; see especially 13 November 1916, 22 January 1917, 27 January, 7 May 1919. Also: Town

of Sudbury, "Parks Committee Minutes," 13 February 1917; Ontario, Bureau of Municipal Affairs, Report re Housing, 1919, 6, 9, 32, 84; 1920, 9, 24; 1921, 23. J. Grove Smith, Fire Waste in Canada (Ottawa: Commission of Conservation, 1918), 73, 77, 226, 230, 237; Leo G. Denis, Waterworks and Sewage Systems (Ottawa: Commission of Conservation, 1916), 96, 186; Higgins, Twelve O'Clock, 21-28; Sudbury Journal, 29 April 1915, 26 July 1917; Sudbury Star, 21 October 1916, 5 May 1917, 22 May, 15 September 1920, 2 March, 28 May 1921, 25 March 1922; Financial Post, 31 December 1920.

⁹⁷ Canada, Reports, Returns and Statistics of the Weights and Measures, Electricity and Gas Branch of the Department of Trade and Commerce 1919-1922 (From 1914-1918 under Inland Revenue) provides statistics both on Sudbury's use of power and the output of the Sudbury Power Company. For more on that firm: Sudbury Star, 13 August 1910, 9 April 1913, 31 January, 16 December 1914, 20 March 1915, 12 January 1916, 24, 26 April 1917; Saturday Night, 17 September 1910. Another private firm -- the "Sudbury Hydro-Electric Development Company" -- was stillborn: *ibid.*, 3 April 1920. Hartley Dewart claimed that INCO and Frank Cochrane -- co-owners of Wahnapiatae Power -- conspired to prevent the installation of HEPCO service at Sudbury. Toronto World, 19 August 1916. On local efforts to win HEPCO service: Sudbury Journal, 15 January 1914, Sudbury Star, 2 August, 27 December 1916, 31 March, 3 April 1920.

⁹⁸ Quote from Heaton's Annual: The Commercial Handbook of Canada (1922): 480. On the economy: Beach, 66-69, is a good survey. On the population: Canada, Census of Canada, 1911, vol. 1, Table I p 84 and *ibid.*, 1921, vol. 1, Table 16, p 307. See also: Judith Topham, "Sudbury: Growth and Development, 1920-1940," (B.A. diss., Laurentian University, 1981), 15-16. The continuing urban spread is outlined in Antonio Presenza, "Sudbury: Pattern of Urban Growth 1883-1941," unpublished paper, Laurentian University, 1971, see esp. p. 20. For details on Gatchell: Sudbury Star, 31 January, 14 February 1914, 20 August 1921; Financial Post, 11 July 1914.

⁹⁹ Canada, Census of Canada, 1921, vol 1, Table 27, 482-83, vol. 2, Table 54, 363; Beach, 61-63, 71; Claire Pilon, Le moulin a-fleur (Ottawa: n.p., 1983), 7; Gilbert Stelter, "Use of Quantifiable Sources in Canadian Urban History," Urban History Review 1 (February 1972): 16-17; Sudbury Journal, 5 February 1914; Canadian Baptist, 28 May 1914; Sudbury Star, 17 January 1914, 20 December 1916, 23 January 1918, 6 December 1919, 18 April 1923.

CHAPTER SEVEN

A MORE MODERN PHYSICAL SETTING:

THE SUDBURY REGION, 1923-1933

Introduction

The Nickel Belt attracted considerable attention in the Twenties as a resurgent mineral industry propelled a new flurry of development. Sudbury, which grew to include some 20,000 residents, was a major beneficiary, but changes occurred throughout the Nickel Belt. New or enlarged mines and smelters, a fast improving farming sector, and a much expanded transport and communications network were obvious physical changes. The expansion of social, administrative and commercial services, plus the marked improvement to both the urban and rural quality of life, were no less important. The following two chapters consider this decade of change, first with regard to the physical setting and then in Chapter Eight to the human landscape. Together, these chapters indicate how far the Nickel Range had progressed beyond the frontier era.

* * *

Resource exploitation reached new heights in the Twenties as commercial markets for nickel and newly valuable lead-zinc deposits inspired consecutive mineral "rushes." While Falconbridge Nickel was the only survivor of these booms, the short-lived excitement added to the prosperity associated with INCO and Mond Nickel. The quick recovery of these older firms, which culminated in their merger, also helped to assure the success of other local endeavours. Farming, for example, continued to increase, both in volume and sophistication, soon displacing forestry in regional importance. The success of the resource industries, and the demands of the population attracted to the Nickel Belt, speeded the expansion of the transport and

communications media. New and better facilities, in turn, prompted an even quicker expansion of resource exploitation.

I

THE MINERAL INDUSTRY: 1923-33

As the recovery of the middle Twenties gained momentum, so did the fortunes of INCO and Mond Nickel. Nevertheless, these firms continued to emphasize market development and improved production economies; parallel strategies and long standing co-operation over the marketing of nickel led in 1928 to their merger. Even before that union, speculators were wary of INCO's might; they had turned their attention to the Sudbury area's other mineral deposits. Their attentions fired a wildly optimistic lead-zinc boom, which brought the region some of the notoriety long reserved to the precious metal camps of Northern Ontario. The publicity generated -- and the results of extensive drilling campaigns -- prompted new speculation in nickel. This second "rush" led to the formation of Falconbridge Nickel, which achieved a fully productive status thanks to careful spending control, new reduction plant efficiencies and INCO's calculated tolerance. While Falconbridge brought new income opportunities to the Nickel Belt, it posed no threat to INCO, which held undisputed control of the worldwide nickel industry. Even INCO, however, could not avoid the crushing economic declines of the Great Depression; Falconbridge was more sorely tested. The Depression-inspired slowdowns were severe blows to the once-flourishing local economy, so the quick recovery of both firms was a great relief to the residents of the Nickel Range.

Monopoly Control of Nickel Production

INCO and Mond Nickel found new prosperity in the mid-1920s thanks to improving copper prices, strong precious metals sales and especially

a fast expanding commercial market for nickel. The nickel firms won much praise for their efforts in that direction:

Possibly nothing illustrates so graphically the spirit of Canadian metallurgists as the re-establishment of the nickel market. Following the war and the Washington Disarmament Conference the demand for nickel was almost completely disrupted. As a remedy the nickel men began an extensive and costly program of research work. Industry after industry was examined, and the new uses of nickel discovered and advertised. To-day most of the pre-war market has been recovered in other directions -- in motors, in alloy steels, in great bridges, and the humble cooking and laundering utensils.¹

But the evolution of INCO and Mond into industrial rather than war-dependent mining concerns was closely controlled. Neither firm wished to confront another interloper like the just-vanquished BANCO, so they maintained a base price of 35 cents per pound for nickel -- low enough to discourage competition while profitable enough to foster investor confidence. Strong ore reserves further complemented these advantages, giving the Anglo-American tandem a "well nigh unassailable" position.²

INCO in particular continued to make excellent progress. Production at the Creighton mine averaged 600,000 tons annually through 1925, then increasing rapidly; wartime records were surpassed by 1928. Magnetic ore sorting and other improvements resulted in better grades of ore while limiting work force expansion -- the mining crew numbered 600 men in 1928, up from 400 in 1924. Though the Creighton was a remarkable deposit, INCO's executive recognized that relying on a single ore source was dangerous and launched investigations at the Frood mine in 1924. Satisfied, they authorized its redevelopment; when the \$8 million project was completed in 1928, the Frood featured a completely modern mining plant, ready for mining to depths of 3,000 feet. The emphasis on development kept ore production at a trickle; in any event, INCO's smelters were kept running

at capacity handling ore from the Creighton.³ Clearly, these works required expansion to meet the anticipated Frood output. Several first steps were taken: the Copper Cliff-to-Frood rail line was improved and electrified in 1925-26, and INCO moved to enlarge its hydro-electric power supplies. Construction of the "Big Eddy" (High Falls No. 3) plant was begun in 1927, when it came on stream two years later the plant doubled INCO's "hydro" capacity to some 49,500 horsepower. These changes, part of a \$52 million modernization scheme, complemented INCO's continuing search for new nickel markets. The new course was very rewarding: between 1923 and 1928 INCO earned \$32 million in profits and paid \$16 million in dividends.⁴

Mond Nickel also profited from new markets and cartel-determined pricing; but to match INCO's accomplishments it relied on three widely separated mines. The Levack was the most productive, closely followed by the Garson; the Worthington, a smaller but higher-grade mine, produced a fifth of Mond's ore until the inadequate mining techniques of the day caused it to cave in on 4 October 1927. Until the cave-in, these mines produced an average of about 750,000 tons annually (1923-27); nevertheless, the forwarding-looking Mond executive authorized development of the larger, more central Frood Extension deposit.⁵ It came on stream in 1928, part of a \$12 million modernization program that included the installation of a third turbine at the Nairn Falls hydro-electric plant in 1924. The new turbine raised Mond's power capacity to 12,400 h.p., permitting various improvements to the mining and reduction works. Construction of a plant to recover sulphuric acid was one example -- the plant, finished in 1925, lessened the waste and pollution associated with the Coniston smelter, now operating at near capacity. The various changes cut production costs

by 25 percent while improving the grade of Mond's matte. After refining in Wales, the product found a steady market in Europe, also growing acceptance in the United States through the efforts of the American Nickel Corporation, a Mond subsidiary. The sales, plus the improved efficiencies, earned Mond Nickel profits of £ 2.4 million for the 1923-28 period; dividend payments totalled £ 2.1 million.⁶

The good fortunes of Mond and INCO, and their virtually symbiotic relationship led inevitably to thoughts of even greater gains through unified effort. Rumours of merger had been circulating since 1923 and they gained credibility after 1925 because of the side-by-side development of the ~~Frood~~ deposit. Merger would greatly streamline mining at the Frood, preventing the wasteful duplication of financing and effort. Besides, Alfred Mond, head of the British firm, believed that industrial co-operation was far superior to competition. Principle, profit and pragmatism soon won out: merger talks were started about May 1928 and more detailed discussions began late in September when Alfred Mond visited North America. All major issues were settled by October 20; to facilitate merger (and prevent American anti-trust action?) INCO was reorganized, the International Nickel Company of Canada becoming the parent firm while the International Nickel Company, Incorporated, became its American subsidiary. On December 18 Alfred Mond recommended an exchange of stock with INCO; some shareholders sought even better terms, causing a month's delay before the requisite 75 percent approval was in hand. In reality, the backers of Mond and INCO fared very well. The holders of Mond preferred shares received both shares and a premium of two shillings six pence per share exchanged, and all parties involved profited from the skyrocketing share values. Indeed, rumours of the merger talks, though steadfastly denied, pushed INCO share

prices to ~~seven~~ times their 1927 value, drawing much talk even in the frenetic markets of the day.⁷

The merger, taking effect on 1 January 1929, not only earned shareholders a "handsome profit" but also created a firm that controlled well over 90 percent of worldwide nickel production. The new INCO had proven reserves in excess of 200,000,000 tons and owned or controlled three refining processes, various smelters, refineries, rolling mills, power plants, transportation and utility systems, over 100,000 acres of land and many other assets.⁸ The firm was a world leader in the production of the precious metals, especially platinum; by 1931 INCO and its predecessors had recovered well over five million ounces of these metals, worth upwards of \$40 million. Copper production, meanwhile, had added millions of dollars more to the firm's coffers.⁹

But nickel remained the key and booming sales of the metal in 1928 and 1929 encouraged further enlargements of the Sudbury area works. Plans to enlarge the Levack mine were stymied by a fire that halted operations there, but the pace of mining quickened at Creighton, Garson and especially Frood, setting new production records. Meanwhile, a giant smelter, new concentrators, a sulphur recovery plant and the Orford separating plant, transferred from Port Colborne, enhanced the Copper Cliff plant. Less dramatic improvements at Coniston were highlighted by the addition of a new sintering plant.¹⁰ INCO also had a controlling interest in the Ontario Refining Company which in 1929-30 erected a \$4 million electrolytic copper refinery just south of Copper Cliff. Waste heat transformed into steam drove a 2,500 k.w. turbine at the new refinery, but INCO looked for even more power. It expanded the Wabageshik hydro-electric plant

attracted new Canadian investment, which in turn won the pre-amalgamation firms yet more praise. But careful observers noted that even more shares were sold abroad, giving Canadians a diminishing voice in the industry notwithstanding their enlarged share holdings. The merger of INCO and Mond quickened the trend: in 1931 Canadians held only 21 percent of INCO shares, down from 35 percent in 1928. The majority of shares were held by American (46 percent) or British (32 percent) shareholders. These figures reawakened anti-INCO sentiments among Canadian nationalists who worried that the nickel industry was slipping not only out of Canadian, but even out of "Empire" control, and into American hands.²⁵ Falconbridge's success did little to quiet these concerns, for it relied on American financing. Besides, Falconbridge's survival

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Into the Great Depression

INCO's tactics proved invaluable to Falconbridge, whose initial production reached the point of sale just as nickel markets shrank dramatically. Falconbridge sold just 53 percent of its refined nickel in 1931 before starting an "aggressive" sales campaign in Europe and Asia and, more daringly, deciding to "dump" its unsold nickel on the American market at a reduced price. The gamble paid off: INCO took no hostile action and the American sales enabled Falconbridge to increase the pace of mining and smelting. The income earned, moreover, permitted smelter improvements and the purchase

in 1930 and purchased in advance much of the power from the Abitibi Canyon project, 246 miles to the north. Though the project -- initially a mix of private and public sectors, then completely public -- progressed more slowly than expected, the Island Falls substation, 57 miles south of the Abitibi Canyon, began providing 25,000 h.p. to INCO on 1 October 1931.¹¹

Seeking an Alternative to INCO

INCO's might surely frustrated speculators with interests in the Nickel Belt, especially as the region's other minerals once again had proven inadequate to sustain operations. Though gold's promise remained elusive, less glamorous minerals provided some local benefits.¹² Feldspar deposits south of Sudbury attracted attention because of increased demand by American pottery, glass and porcelain manufacturers. Most work occurred in the mid-1920s, and was concentrated in Dryden, Cleland and Dill Townships; the low price for feldspar limited operations to relatively simple, summers-only quarrying. Still, in 1926 alone, over 100 men removed 4,500 tons of feldspar from six pits. But the local industry became dormant in 1928 because American buyers consolidated themselves into two large consortiums, thus ending the competition which had prompted the expansion of the industry.¹³ Meanwhile, an even more unlikely mineral -- anthraxolite -- inspired renewed excitement despite the refutations of its coal-like material in 1896 and 1911. Interest was revived in 1921 when 52 tons of anthraxolite were shipped to Toronto and sold as fuel by the "Balfour Development" syndicate which sponsored the shipment probably reaped good rewards because at least four firms were organized to acquire and examine the "coal" seam. The British Colonial Coal Mining Company, the most persistent firm, worked its Balfour Township mine until its funds finally ran out in 1927.¹⁴

.Ironically, diamond drill cores taken during the latest "coal" craze precipitated a larger boom, for they reawakened interest in the low-grade lead-zinc deposits located in the heart of the Sudbury Basin. Though known since the 1880s these deposits were now more attractive since the booming manufacturing industries needed huge quantities of base metals. Prices naturally improved, with lead reaching a new peak in December 1924. These price gains, combined with improved reduction techniques that increased the worth of low-grade deposits, led The Treadwell-Yukon Company, controlled by the Bunker Hill & Sullivan syndicate, to option 4,000 acres and commence tests in July 1925.¹⁵

Rumours of a "Billion Dollar Zinc Zone" soon inspired a frenzy of staking and company incorporation -- more than 40 new firms, worth over \$100 million on paper, were organized. Many existing firms also launched exploratory operations; Dome Mines, for instance, optioned seven Hanmer Township properties. In all, more than 75 firms took some part in "the greatest concentrated diamond drilling campaign any district in Canada has ever seen." But the furor cooled by mid-1928 because most of the lead-zinc firms were "overnight promotions, inadequately financed, whose sole chance lay in immediately picking up a commercial ore body." This proved impossible, for the ores proved very complex metallurgically and, far worse, were of a lower-than-anticipated grade. The heavy overburden in the Valley and boom-inflated land costs were additional difficulties; still, industry observers placed most of the blame on the investors themselves, who put forward money in response to wildly optimistic promotions and "abstract" geological theories about the lead-zinc zone. This ill-conceived speculation, the Northern Miner concluded, left "many of the hopeful Argonauts stranded. There are no doubt some fish on the beach as well."¹⁶

By early September 1928 the boom was over, with only Treadwell-Yukon, Sudbury Basin Mines and Towagmac Exploration's Lake Geneva Mining Company still actively seeking mineralized deposits. Sudbury Basin, however, soon turned its attention to local nickel deposits, and Lake Geneva's considerable development in Hess Township --, including a mine and a 100 ton concentrating mill -- went for naught because in 1931 production was "deferred, pending improved metal prices."¹⁷

Treadwell-Yukon committed far greater funds and energy to its Errington mine; two shafts, a 250 ton pilot concentrating mill, a private utility line to carry electricity purchased from Wahnapitae Power, and other necessary mining facilities were in place by 1927. The once-sceptical Sudbury Star anticipated a "huge industry", especially after Treadwell Yukon's capitalization was increased from \$1.5 to \$11.5 million in May 1927. The extra funds permitted the acquisition of an additional 2,000 acres of property, the bringing on stream of the concentrating mill on 21 April 1928 and beginning in June the sinking of a third mine shaft; the expanded operations boosted the workforce to about 400 men. Trouble at the mill slowed progress, but by year's end Treadwell-Yukon had announced major expansion plans, highlighted by a proposed base-metal refinery. A new CPR spur to the Errington works, which in 1929 won out over a rival Sudbury Basin branch offered by the CNR, was one indication of the prevailing optimism.¹⁸

Fast-falling base-metal prices brought a changed attitude: in August 1929 Treadwell-Yukon announced a two year delay in full-scale operations pending an assessment of the deposit's worth. Experimental mining and milling continued: through 1930 some 186,170 tons of ore had produced about 12,770 tons of zinc concentrate, 7,840 tons of copper concentrate

and 1,940⁸ tons of lead concentrate. Eight thousand or so tons of low-value iron pyrites concentrate, plus trace amounts of silver and gold, added to the total. Unfortunately for the firm, zinc prices were very low because of African and Latin American competition, while copper and lead prices were falling. When exploration work at the newest levels of the mine produced "disappointing" ore values, Treadwell-Yukon determined that profitable operation of the Errington mine was unlikely and began curtailing operations in December 1930. Its last local employees were released when the mine was abandoned on 15 December 1931 and allowed to flood. Treadwell-Yukon's failure dashed the last remaining hope for a significant mineral alternative to the nickel industry.¹⁹

New Competition in Nickel

Yet so pervasive was the optimism surrounding the local mineral zone that some of the lead-zinc speculators switched their attentions to possible nickel-copper properties. Their action, in turn, created a new "nickel rush" involving some 30 firms, both large and small. Though giants like the Mining Corporation of Canada and Consolidated Smelters launched diamond drilling campaigns, only three firms moved to mining operations.²⁰ Sudbury Offsets, Limited, explored the old Ross mine in Foy Township from 1928 to 1930 before further plans were undermined by the onset of the Great Depression. Considerably more work was undertaken by McVittie-Graham Limited, incorporated in 1928 to develop properties acquired during several years of "quiet absorption." The firm tested the old Howland and Totten mines, but focused its efforts at Moose Lake, near Lake Wanapitei, where a 40 man crew opened up a small mine. The mine attracted the attention of Noah Timmins and Fred McConnell of the Hollinger group, who in February 1929 obtained a two-thirds interest in McVittie-Graham for \$250,000.

The considerable optimism created by entry of this "powerful new group" ebbed as poor results at Moose Lake and the failure of a region-wide drilling campaign saw McVittie-Graham cease active operations in 1930.²¹

Only one group of investors managed to locate sufficient ore, mount a full fledged mining plant and gain access to reduction and refining expertise while still retaining enough capital to withstand "start up" difficulties plus the market declines afflicting the nickel industry. Their efforts resulted in The Falconbridge Nickel Company of today. Thayer Lindsley organized Sudbury Basin Mines in 1927 to take advantage of the lead-zinc boom. When that boom faltered, Lindsley looked to acquire nickel-copper properties, offering their holders shares in Sudbury Basin or, later, its Sudbury Nickel-Copper subsidiary in lieu of cash. Then in July 1928 Lindsley obtained the Falconbridge property from the Bennett group for \$2.5 million, with only a \$500,000 downpayment.²² The low initial cost of the long-dormant property permitted an immediate start to mining. Lindsley, backed by Sudbury Basin and Ventures, Limited, organized Falconbridge Nickel Mines, Limited, on 28 August 1928. Work on the property began less than ten days later; a 50 man crew had extended Thomas Edison's old shaft some 350 feet by year's end, by which time the public sale of shares brought more capital to Falconbridge. The new funds helped in the acquisition and enlargement of the Hybinette process nickel refinery at Kristiansands, Norway -- the only such nickel works not controlled by INCO. Under the charge of experienced personnel formerly associated with BANCO, the efficient, electrolytic plant permitted the inexpensive refining of Falconbridge's matte near the intended point of sale. Work at the mine, meantime, advanced rapidly, with the shaft beyond 625 feet in depth and smelter construction underway by May 1929. Railway service became available

in December, the CNR having outmanoeuvred the CPR in negotiations for a new Falconbridge spur; the mining firm built a new utility line to deliver electricity from Wahnapiatae Power. This determined pace saw the mine ready for operation by the end of the year, with the 250-ton smelter, designed to facilitate low-cost expansion, fired in February 1930.²³

As with most mining operations, there were various initial difficulties. Power shortages plagued the works since Falconbridge could not secure an optimum 3,000 h.p. from Wahnapiatae Power, but was forced to cope with 1,800 h.p. Refinery troubles in Norway were more serious, forcing a halt to production at the Sudbury area works on 1 November 1930. But the two-month hiatus was put to good use: extensive underground development work was undertaken and the smelter was enlarged to a 450-ton capacity. When production resumed on 2 January 1931, the future looked bright, for Falconbridge's finances were in good order -- "start-up" costs totalled only \$5 million -- and its works were efficient, borrowing technology from the copper industry to produce a low-cost, high-grade matte from a low-grade deposit. Nor were ore reserves a problem, for the Lindsley-controlled firms held many properties around the Nickel Range. Most importantly, Falconbridge followed a careful marketing policy that focused upon the European market and thus avoided challenging INCO's might.²⁴

Falconbridge Nickel's success did not quiet a lingering resentment among Canadian nationalists against INCO. The giant firm, for its part, continued the public relations campaigns first embarked upon by its predecessors, hoping to stifle criticism and attract investment. The new, more open policy had won quick rewards: in 1924 Charles McCrea, Ontario's Minister of Mines and member for Sudbury, spearheaded a successful drive to lower taxation for the nickel industry. The favourable publicity also

attracted new Canadian investment, which in turn won the pre-amalgamation firms yet more praise. But careful observers noted that even more shares were sold abroad, giving Canadians a diminishing voice in the industry notwithstanding their enlarged share holdings. The merger of INCO and Mond quickened the trend: in 1931 Canadians held only 21 percent of INCO shares, down from 35 percent in 1928. The majority of shares were held by American (46 percent) or British (32 percent) shareholders. These figures reawakened anti-INCO sentiments among Canadian nationalists who worried that the nickel industry was slipping not only out of Canadian, but even out of "Empire" control, and into American hands.²⁵ Falconbridge's success did little to quiet these concerns, for it relied on American financing. Besides, Falconbridge's survival

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of plentiful hydro-electric power from the Abitibi Canyon; both actions enhanced production efficiency. Thus Falconbridge's determination to achieve fully productive status, and INCO's calculated indifference to the invasion of the American market, took the new firm through the worst of the Great Depression. Falconbridge earned net profits of \$10,531 in 1931 and \$762,420 in 1932, which allowed it to eliminate existing deficits.²⁷

INCO, in contrast, suffered a rare corporate loss in 1932, the result of the severe decline in sales that began in 1930. First, copper sales were much reduced under an international agreement to which INCO was a party; the firm, mining nickel-copper ore, had no choice but to produce and stockpile the unwanted copper. When nickel sales also declined, INCO curtailed mining: on 1 July 1930 work at Creighton was halved and Garson's output was cut by a third. Further cuts at these mines were made in September 1931. Work at the Frood, meanwhile, had slowed by a third on 1 November 1930, and then held steady at that pace. Mining costs were lowered further by limiting development work to the minimum. These adjustments, and the Frood's greater efficiency, enabled INCO to post a "decided improvement" in its per capita output, but ore production slipped from 2 million tons in 1930 to 1.5 million in 1931. The reduced ore output, naturally enough, led to reduced smelter operations. One reverberatory furnace was closed on 1 November 1930, and the pace of smelting was down one fifth by 1931. Then, as of September 1931, the Coniston works were run at one-quarter capacity while operations at the Copper Cliff concentrators and copper refinery slowed by more than half. But even as it halved overall spending, INCO's executive increased research and sales spending by a quarter in an effort to reacquire old markets and win new ones.

That approach was no surprise: commercial sales had earned INCO profits of \$43.6 million between 1928 and 1931, permitting retention of a \$16.8 million surplus at the end of fiscal 1931. That surplus easily covered the loss in 1932, and the return of profitability in 1933 boded well for the future.²⁸

The recovery could not come too soon for residents of the Nickel Range, and especially for the miners and smeltermen, because the slowdowns had a devastating impact on a population by now accustomed to relative prosperity. True, the lead-zinc and other mines had caused some disappointment, but the nickel firms made up much of the slack -- despite increased efficiencies they employed at least 5,000 men in 1930, two-thirds more than in 1923. The still-cosmopolitan workforce experienced relatively little turnover, for employment was secure so long as the nickel firms were expanding and few other mineral zones offered equivalent wages or benefits. Wages had risen sharply by 1930, running from \$3.75 to \$5 or more for an eight hour day; both INCO and Mond had also offered medical and social services, not to mention insurance, pension, and house-financing plans. These benefits assured smooth labour relations so long as times were good: J.L. Agnew, President of INCO, boasted in 1926 that "the men and Company... understand each other thoroughly." But that "understanding" -- a carefully veiled reference to INCO's determined "open shop" policy -- grew more strained as the firm's workforce and gross wages plunged by two-thirds or more in 1931-32. While Falconbridge released few of its 300 or so employees, the new firm remained too small to lessen the staggering impact of INCO's cuts on the regional economy.²⁹

Company shareholders fared rather better than the miners or smeltermen. Despite all its troubles, Falconbridge paid a first-ever dividend of ten

ten cents per share on 20 January 1933. INCO shareholders, of course, earned far more: they received \$46.0 million in dividend payments between 1928 and 1931, and preferred shareholders even received their dividend payments in 1932, despite the small corporate loss.³⁰ The dividend payments reflected INCO's might: the firm retained a multimillion dollar surplus notwithstanding the costly improvements and market-development strategies implemented at the onset of the worldwide economic crisis. Even better days were to come, for renewed nickel sales saw production increases instituted by May 1932. Before long, both INCO and Falconbridge were achieving new sales records with rearmament again creating vast markets to complement their regular commercial nickel sales.³¹

The strength of the nickel industry in the face of the Great Depression reflected the determined commercial marketing approach that financed improvements to the local works and, in turn, helped propel INCO and Mond Nickel toward merger. The new INCO had undisputed control of the industry; only Falconbridge -- the beneficiary of Thayer Lindsley's entrepreneurial skills -- stood ready to provide INCO any competition. Though the income supplied by Falconbridge was of some help during the dark days of the early Thirties, INCO's slowdown was a severe blow even to workers grown accustomed to the "boom and bust" cycles of the nickel industry. Still, a population that had grown dependent upon INCO had little choice but to hope that the quick recovery would prove more durable than the booms of the past.

II

FARMING AND FORESTRY

Agriculture attracted continuing local attention as the postwar recession and the Great Depression prompted "back to the land" movements among

unemployed miners and woodsmen whose job opportunities narrowed as forestry fell into permanent decline. Longer-settled farmers, meanwhile, brought Sudbury-area agriculture to a solidly commercial footing by the 1920s, with continuing Provincial efforts aimed at further progress in that direction. Thus agriculture reached new heights, both in terms of sophistication and volume, even as local forestry fell on hard times.

Forestry's Land Stand

The forest-based industries nevertheless remained important in the Twenties, especially in Sudbury, where 25 firms had offices as late as 1928. The Provincial Employment Agency there annually placed several thousand men at distant bush camps despite the "keen competition" offered by these private employment agencies.³² But the number of men employed was in decline, by 1926, fell sharply in 1928, and reached its nadir in the early Thirties. The decline reflected the general economic crisis and the demise of local lumbering: Victoria Harbour Lumber sold its Lake Penage holdings to the much smaller Brunne Lumber Company in 1926, leaving Spanish River Lumber and Marshay Lumber as the only "big" firms still in the field. Medium sized firms did continue to cut a few million feet of lumber, and most settlements boasted a small sawmill or two, but there was no mistaking that lumbering was "making its last stand." The onset of the Depression, then, merely sped the passing of an already failing industry.³³

Alternative forest-based industries suffered much the same fate. The Acme Timber Company, which supplied INCO's roastyard needs in the 1920s, suffered a serious blow when the O'Donnell yard was phased out beginning in 1929. Other woodstuffs markets -- the Canada Creosoting plant in Sudbury and even domestic fuelwood sales -- became less lucrative as the economy

went into decline.³⁴ Lost pulp cutting opportunities were more serious, because the Spanish River Pulp and Paper Mills had assumed first rank among local forest-based industries. Spanish River enjoyed some prosperity in the mid-Twenties: 4,000 or more men cut pulpwood in the Sudbury District in 1925, producing well over 100,000 cords of the various boreal tree species. But falling newsprint prices, chronic power shortages and the antiquated state of the paper mill soon brought intermittent shutdowns. Early in 1928 the Abitibi Power and Paper Company absorbed Spanish River, raising the hope of steadier production; instead, Abitibi closed the money-losing operation on 31 December 1929.³⁵ Many local residents were harmed: while the wages were low -- cutters earned less than \$3 for a cord of four-foot pulpwood while other bushmen earned from \$1 to \$2 per day -- the money earned was the lifeblood of many francophone and immigrant pulpmen, and an important source of income to seasonally employed farmers. Thus the Spanish River layoffs were a devastating blow to this sector of the regional workforce, one from which the once-important forest industries would never fully recover.³⁶

Agriculture

Farmers, while hurt by the decline of pulp cutting, could find some solace in the growing sophistication of the Nickel Belt's agricultural sector. Those gains surely pleased Provincial officials to whom agricultural settlement in the North remained an article of faith despite a half-century of mixed results. Sudbury area farmers were beneficiaries of this policy: the Northern Development Branch had provided \$150,245 in settlers' loans by 1931, and Ontario's Department of Agriculture had made about 50 loans totalling \$25,000, to the Balfour-Rayside Farm Credit Association.³⁷ The Department also promoted sound farming practices. Travelling displays,

visiting speakers, and especially the District "Ag Rep" pointed out the merits of better livestock breeds (emphasizing horses, cattle and poultry), better seed varieties (potatoes and clover) and new forage (sunflower) and commercial (sugar beet) crops. These notions received practical application at the "Bleazard Valley Demonstration Farm", established in 1923, which displayed the advantages of crop rotation, regular fertilizing, proper tillage, improved drainage, better quality livestock and crops, and use of a silo to provide "green" winter feed. Though "field days" drew much attention to the farm, the cost of applying the suggested techniques or of securing the needed implements and facilities limited their diffusion; the farm was discontinued in 1931.³⁸

Still, the Demonstration farm and other government-sponsored efforts, plus increasingly strict produce regulation, helped push area farmers toward a commercial style of agriculture. Necessity also played a part, for District "Ag Rep" P.A. Dorion reported in 1931 that:

Continual hay and grain farming and the removal of these from the farm as cash crops have considerably reduced the fertility of the soil so that now and for a number of years past the farmer is and has been faced not only with a failing market for hay and grain but with a considerably reduced yield per acre of those crops.

These two factors are literally forcing the Sudbury district farmer to enter into the raising of more live stock and the growing of hoed crops, vegetables and potatoes as cash crops.³⁹

Some farmers, of course, had long since moved to commercial operations, especially the dairymen, who by 1931 sold three million pounds of milk per annum and produced 400,000 pounds of butter and cheese at a dozen or so factories. Potato growers, too, grew more prosperous, aided by a Sudbury Board of Trade campaign to make the Valley famous for its tubers. The degree of commercialization, naturally enough, varied from farm to farm according to immediate field and soil conditions, transportation

and market conditions, and especially economics. Thus ploughs, harrows, mowers and rakes were common, but threshers, tractors and vehicles were beyond the means of most farmers and geographically isolated farmers had little hope of success in milk production which relied on quick access to markets. Agricultural practices also reflected individual preferences and skills: francophone farmers earned notoriety for following antiquated techniques, while Polish and especially Finnish farmers won praise for succeeding on farm properties previously abandoned as unproductive. Of course there were good and poor farmers in every group.⁴⁰

Many farms were too new to have advanced beyond the subsistence stage, for pioneering settlement continued all around the Nickel Range. The Valley continued to draw settlers even though little good land remained available: 131 persons took up almost 17,000 acres of land between 1923 and 1931, mainly in Dowling, Lumsden, Morgan and Hanmer Townships. But settlement in the Valley neared its limit and the marginal quality of the new locations took a heavy toll. Patents were issued on 146 locations between 1923 and 1931, but 100 lots were resumed. Little wonder, then, that the still-lightly settled Shield townships proved attractive, with 160 locations taken up, comprising over 19,000 acres of land. The arable portion of Lorne, Louise, Drury, Dryden and especially Dill Townships proved most attractive, and reasonably productive; patents were issued on 164 Shield-based properties, while 68 locations were resumed. As the Depression took hold a more informal farming community took shape south of Sudbury, with 50 or more families squatting in those portions of Dryden and Cleland Townships still closed to settlement under long-standing "sulphur" bans.⁴¹

These squatters, whose lands were eventually recognized by the Crown, were the first wave of the "back-to-the-land" settlement of the Thirties. The Depression-caused pioneering was very active-- 508 locations were taken up by 1941, mainly south of Sudbury -- but farm abandonments and failures were very common. Indeed, only 123 patents were issued, as opposed to 115 resumptons. While the province would grant patents and resume properties well into the 1960s, the acquisitions of the 1930s ended the settlement phase of local farming.⁴² Six decades of settlement had produced a considerable agricultural hinterland around Sudbury, comprising two fairly distinct sectors. The Valley remained almost uniformly franco-phone and it displayed a marked similarity to rural Southern Ontario, with tight settlement, crossroads villages and regularly spaced roads arrayed on its flat lands. Shield-based farms, in contrast, remained "pockets" of agricultural land scattered about a rough terrain, with immigrant enclaves adding their own special flavour. These immigrants helped give the Shield farms a greater importance, equalling the Valley operations in total value by 1941.⁴³

For all their differences, the two farm sectors displayed many similarities. All Sudbury-area farmers strove to wrest their living from a region blessed with good markets but plagued by indifferent climate, various physical limitations and much sulphur pollution. There were many other problems, not least of which was the continuing inadequacy of settlers' roads, castigated by Ontario's Agricultural Enquiry Committee of 1924 as the "main obstacle" to farming progress.⁴⁴ Local farmers also bemoaned the decline of timber-based operations, which lessened the opportunity to earn extra income. The cash-poor settlers looked to another forest crop -- blueberries -- as an alternative: 2,500 or more tons of the berries

(3.3 million quarts) were shipped from the district between 1923 and 1931. The low prices paid -- from 2 to 10 cents per quart -- hardly replaced the lost timber-based income, but blueberry earnings would be invaluable during the Depression years. ⁴⁵

Many farmers remained short of funds, but agriculture in the Twenties was far advanced from the pioneer settlement of an earlier day. Census statistics, though incomplete, suggest something of this progress. The Sudbury area featured over 25,000 acres in crops in 1931, eighty percent of them in forage -- hay, clover and root crops -- that helped maintain about 1,400 horses, 6,200 cattle, 48,000 fowl, plus several thousand swine and sheep. The other major crop was potatoes, the yield and quality being comparable with anywhere in Ontario. The considerable acreages devoted to crops and the large livestock holdings were evidence that area farming had achieved a new degree of sophistication and importance. District farm values had advanced to \$9.9 million, nearly double that of just two decades earlier; half or more of these farms were situated within the Sudbury area proper. Income generated by employment in creameries, at markets and at other farm-dependent facilities further enhanced the economic importance of local agriculture. ⁴⁶

The prosperous farming base was the culmination of long-held Provincial policy on the development of Northern Ontario, which saw agriculture as the natural successor to the forest-based industries. By the Thirties this succession was completed locally; the forest industries were in permanent decline while agriculture was reaching a new maturity. Though both industries clearly benefitted from mineral-based markets, they nevertheless continued to provide the region some economic independence. The "back-to-the-land" settlement of the Thirties not only enlarged local agriculture,

but confirmed the advantages of a renewable natural bounty as opposed to the whims of mineral markets and giant farms. Despite its inevitable hardships and failures, this last burst of settlement provided yet more evidence that the region was much more than a barren land of mines and smelters. Indeed, the quickening commercialization of farming, the improved fields, pastures and facilities, and even the expansion of the rural social setting all spoke volumes about the vibrant agricultural economy of the Nickel Belt.

III

TRANSPORTATION AND COMMUNICATIONS

Farmers, no less than INCO or area businessmen, relied on the efficient movement of goods and information, though the mode and volume of that movement varied according to need. Fortunately, the continuing expansion of roads, railways and communications services culminated in a new, modern setting by the Twenties. Yet change beget more change; the now-massive mineral firms needed ever better freight services while the local populace demanded even more improvements to the transport and communications media. Not all needs were met: telecommunications and hydro-electric power were limited to urban settings, their expansion into the countryside limited by physical constraints and costs. Not all services suffered such hindrances: radio communication and airplane travel, though both in their infancy, presaged modern information flow and the provision of quick and easy transport regardless of terrain. Sudburians were especially active in promoting these forerunners of the future; they recognized that a central role in transport and communications was crucial in assuring Sudbury's continuing regional dominance.

The Roadways

For the time being, however, Sudburians and their regional compatriots found far greater utility in road-based travel. Thus they welcomed the efforts of the Northern Development Branch, which through increased funding built new roads and improved existing routes. Crushed rock surfacing became common on busier routes and in 1924 C.H. Fullerton of the Branch announced that:

commencement of a more permanent type of road construction for heavily travelled roads in Northern Ontario was made by the completion of a cement-concrete road between Sudbury and Coniston, and the letting of contracts for a bituminous-penetrate road between Creighton and Copper Cliff.⁴⁷

Hard surfacing, plus the maintenance of consistent road widths, gradients and curvatures, resulted in a high-quality Trunk Road network which by 1930 penetrated in all directions from Sudbury. Less-travelled routes, meanwhile, were "grubbed", "dragged" and gravelled; thousands of steel culverts, 70 bridges and a handful of scows were added improvements. The progress did not come cheap: Ontario provided \$1.5 million for area roads between 1923 and 1931, with local funds and statute labour adding substantially to that total. The result, by 1931, was trunk routes running roughly parallel to the railways, plus a wide-ranging series of lesser routes whose quality was generally coincident with their distance from the main road. Apart from the straight, regularly intersecting roads of the Valley, the geometric grids and survey lines adopted for roads in Southern Ontario or the Prairies were nowhere to be seen. Instead, the location of roads through the Shield was determined by the terrain and the position of settlement or industry.⁴⁸

Despite the major improvements, contemporary observers remained dissatisfied at the state of local roads. Col. W.R. Smythe, Supervisor of Settlement and Inspector of Crown Land Agencies, argued strongly for more

side roads. "Forget about the trunk highways for a while", he advised. "Motorists can drive around the bends for another two or three years, and spend the money on settlers' roads. ... you will be doing a lot more good than by building roads for tourists." Local politicians and the Sudbury Board of Trade also grumbled that area routes were the worst in Northern Ontario, yet they saved their loudest pleas for more long-distance roads, especially south to Parry Sound and north to Timmins.⁴⁹

The reaction to pleas for more long-distance roads revealed an ambiguous attitude on the part of southern authorities; they supported building and improving local routes and even Trunk Roads, but ignored the North when committing their funds to highway construction. This indifference would persist for quite some time, despite the conclusion reached by the Ontario Royal Commission on Transportation (1938):

The Commission is of the unanimous opinion that the roads of Northern Ontario should be considered as an integral part of the highway system of the Province. Motor traffic now moves over every passable road wherever it may be and it is no longer practicable to delineate arbitrarily any region within which the highway system may properly be considered as contained.⁵⁰

"Motor traffic" long since had become a major factor on Sudbury area roads. The first self-propelled vehicles were buses, but these soon were outnumbered by automobiles and trucks. Technological improvements and better roads transformed the motor vehicle from an impractical curiosity to the wave of the future. The number of motor vehicles in the District soared from 524 in 1919 to 4,557 in 1931, with most intended for personal use, -- by 1931 one person in ten owned a motor vehicle. But cash-poor farmers and residents of villages were slow to abandon their horses for travel: automobile sales were concentrated in Sudbury, home to 30 automobile dealers by 1931.⁵¹

Sudburians also owned many of the 500 or so commercial vehicles registered in the District by the early 1930s. Jitney and cartage services prospered, and bus service continued to expand. The Delongchamp and Sudbury Transit firms pioneered bus service between Sudbury and communities all about the Nickel Range, while the older Sudbury-Copper Cliff routes received more frequent service. Sudbury Transit even provided long-distance service to Huntsville (via North Bay), where passengers connected with Gray Coach service to Toronto.⁵²

The Railways

Buses, for all their versatility, provided too slow, infrequent and costly service to be practical for longer routes, so the train remained the essential long-distance mode for goods or people. The various CPR and CNR lines won considerable patronage and provided work for several thousand residents of Sudbury, Capreol and Cartier.⁵³ But the Algoma Eastern (AER) was the railway most intimately linked to local development. The war had brought the AER burgeoning freight and passenger business; but then freight traffic plunged from 2.6 million tons in 1918 to only 462,912 tons in 1923 and passenger service fell by two-thirds to 28,140 riders. These declines were a serious blow, for even at its wartime peak the AER made little or no profit. Still, the revival of operations at the Creighton mine, the O'Donnell roastery and the Espanola paper mill augered well for the future, so the AER board authorized construction of a new station in Sudbury. The decision seemed sound, for freight and passenger traffic increases helped produce modest profits despite payments that reduced the AER's long-term debts seven fold. Unfortunately for the AER, two major freight contracts were lost in 1929 when the Espanola mill and the O'Donnell yards were closed. The parent Lake Superior Corporation,

foreseeing future losses and seeking to ease its own debts, sold its AER shares to the CPR in 1929; the following year the entire line was leased to the CPR at a cost of \$3 million for 999 years. The AER was consolidated into the CPR system on 1 July 1931 as the Nickel and Little Current subdivisions; within a few years most of the Nickel subdivision was dismantled, leaving the Creighton mine as its westerly terminus.⁵⁴

The Sudbury-Copper Cliff Suburban Electric Railway had an equally troubled existence. While quite popular, the inter-urban service proved unprofitable because of high operating and debt costs. Discouraged by miniscule and declining surpluses, the Railway's backers in 1920 authorized a sales offer to the Town of Sudbury at the asking price of \$222,921. A special committee of Town Council, citing the railway's inadequate income, recommended against purchase; an even lower price (\$190,000) was rejected in January 1921.⁵⁵ The owners of the line therefore chose to raise ticket prices and cut operating costs by offering less frequent service in the hope of achieving profits. Instead, the service fell prey to competition from cheaper, more convenient bus lines -- by 1926 ridership had fallen below 500,000 for the first time in a decade. The service cuts and tight spending controls also led to the deterioration of equipment, which made the unprofitable line the brunt of public criticism. The beleaguered ownership had only one cause for optimism: INCO's expansion of the Copper Cliff works seemingly heralded an increase of ridership. In anticipation of improved business the line was extended to the new copper refinery and worn out equipment was replaced. Ridership did indeed double between 1927 and 1929, but even with a two-cent fare increase the line made little money, leaving it ill-prepared for the Depression. The line carried 800,000

fewer passengers in 1932 than in 1930, leading to the first of five successive deficits and, in 1938, bankruptcy. The City of Sudbury then assumed the system; ironically, the line would serve record numbers of riders during World War II and until bus service permanently displaced it in 1950.⁵⁶

The Movement of Power and Information

One of the street railway's many burdens was the comparatively high cost of electricity, a symptom of the commercial monopoly held by the Wahnapiatae Power Company. The firm's steady urban and mining markets had produced sizeable profits -- averaging \$75,000 at the height of the postwar depression -- and Wahnapiatae's business increased in the Twenties. A third power station -- the Stinson, built in 1925 -- enabled new sales to Treadwell-Yukon, Falconbridge and the Burwash prison, and increased sales to the Town of Sudbury. Annual sales soon topped \$300,000 and costs were low since the mining firms and the prison built and maintained their own power transmission lines. Wahnapiatae's success and its high charges led to renewed grumbling over its power monopoly, but Ontario was slow to act. As late as 1927 Premier G. Howard Ferguson questioned the wisdom of extending HEPCO service to Northern Ontario, fearful that towns there would have to carry prohibitive costs only to have the mining firms be the real beneficiaries of public power. HEPCO Chairman Charles McGrath countered that Ontario, not private enterprise, should direct hydro-electric development in the north. Besides, he noted, the introduction of public power service in Northern Ontario would prove politically advantageous.⁵⁸

Pragmatism and politics won the day: HEPCO acquired the Cochrane estate's controlling interest in Wahnapiatae Power in 1929, signed new contracts with its customers soon afterward, and delivered the first power

under these terms in February 1930. A reluctant but aging William McVittie sold his minority interest in March. The purchase, authorized by The Power Commission and Companies' Act, 1930, led to the dissolution of Wahnapiatae Power on 30 April 1930, but it produced few local changes. Sudbury and Capreol -- the latter town having established municipal electric lighting in about 1924 -- continued to rely on the Wahnapiatae system for electricity until 1940.⁵⁹ INCO and Falconbridge and their dependent communities alone benefitted from the much greater power supplies made available after the Abitibi Canyon project came on stream in the early 1930s.⁶⁰ Rural settlers would not enjoy "hydro" service for at least two more decades.

These settlers fared no better when it came to communications, for the establishment of a long-sought rural mail service in Waters Township (1924) was the sole attempt to accommodate their needs. The railway-based telegraph systems, too, were little changed.⁶¹ Local telephone systems, in contrast, grew rapidly; service, however, remained dependent on a network of wires, poles and the like, plus high population densities. Thus rural settlers went without, while most communities enjoyed some level of telephone service by 1931. The Capreol Telephone Company, for instance, joined the regional network in 1927 and boasted 219 subscribers in 1931. But the residents of Sudbury and Copper Cliff were best off, with Bell Telephone constantly improving the level of service. Little wonder the firm had 3,500 customers in 1930.⁶²

Looking to the Future

Not all communication modes were hamstrung by demographic or physical constraints. Radio communications had long attracted local attention, and interest increased after the "wireless" station in Sault Ste. Marie went into service in 1912.⁶³ Radio receivers, greatly improved during

the war, offered news and other programmes and were of more general utility. By 1920 the first local "radio buffs" were listening to distant stations, and by 1922 these enthusiasts had organized the Sudbury Radio Club. The medium's potential impressed William Mason, owner of the Sudbury Star, who printed a regular radio column -- "On The Air" -- and published editorials promoting radio as "a permanent part of our daily life." Though there were only about 100 bulky, awkward-to-use receivers in the region, Mason's views won new credibility in 1923 because radio station "9CE" went on the air. This 50-watt station, owned by the Laurentide Air Service, soon secured federal permission to operate on the 400-metre frequency as station CFCR. The promising beginnings ground to a halt in the fall of 1924 because CFCR was sold to the Provincial Forestry Service, which abandoned the station's entertainment functions and moved it to a new aerodrome in Sault Ste. Marie. Local radio service did not resume until 1935, when CKSO went on the air, but the brief interlude with CFCR pointed to the "shrinking" of distances through the force of modern technology.⁶⁴

Air travel offered even greater promise. Though air shows were held in Northern Ontario by 1915, the first airplane to reach Sudbury arrived in July 1919. Its appearance helped prompt several commercial air service schemes, but none reached fruition. Aircraft proved more practical for timber surveys and in fire prevention: Spanish River Pulp and Paper obtained an "aeromarine flying boat" in 1920, and in 1922 the Quebec-based Laurentide Air Service pioneered flights out of Lake Ramsey in Sudbury. That lake soon became an important terminal for both private and public air service; in 1931 Northern Aviation (later Austin Airways) became the first passenger carrier to call Sudbury home. Many Sudburians recognized that air travel

made distance and difficult terrain -- major hindrances to development on the Shield -- almost irrelevant; they busily campaigned for an airport in or near Sudbury, hoping to further the gains already made thanks to land based transportation modes.⁶⁵

This interest in air travel was a natural progression from the long-standing local efforts at improving older transport and communications media. These efforts had met with considerable success: improved roads permitted motorized travel through much of the region, while trains offered long-distance options or, in the case of the Sudbury-Copper Cliff line, a transit option. Telegraph, telephone and mail service, though under outside control, nevertheless provided much-improved communications and further emphasized Sudbury's central position on the regional network. Little wonder, then, that Sudburians saw radio or airplane service as enhancing their City's central-place function. Besides, these services would enhance a transport and communications network which already compared well with the much older setting in Southern Ontario. Only the minority of local residents who lived in the countryside had reason to complain -- they still lacked telecommunications and "hydro" service, and sometimes suffered the frustration of inadequate roads. Still, there was no mistaking that the transport and communications infrastructure of the Nickel Range was of a modern order, with all signs pointing toward even more future progress.

CONCLUSION

By the Thirties the Sudbury area boasted a physical sophistication beyond the most optimistic dreams of its pioneer residents. Good quality roads penetrated to all corners of the region, with the railways providing

excellent service to points beyond. Local travellers, meanwhile, could marvel at the size and sophistication of the nickel industry's works and, not far away, the growing sophistication of area farms. Only the logger might complain about the local setting: the few stands of second-rate timber remaining were a far cry from the massive forests of the 19th century. But even the logger would, given the conventional wisdom of the day, concede that the demise of the forests was a "natural" precondition to further progress. That progress, only too evident in the mines, fields, roads, railways and the like, also featured a human component. It is to the expansion of social services and the overall human landscape that we shall now turn.

NOTES

¹ Globe, 28 April 1924

² Oscar W. Main, The Canadian Nickel Industry: A Study in Market Control and Public Policy (Toronto: University of Toronto Press, 1955): 90-91, 95, 102-03; John Thompson and Norman Beasley, For the Years to Come; A Story of International Nickel of Canada (New York: G.P. Putnam's, 1960), 184, 189-90, 221-22; John Deverell, Falconbridge: Portrait of a Canadian Mining Multinational (Toronto: James Lorimer, 1975), 34; Ontario, Annual Report of the Ontario Department of Mines (hereafter ODM) (1925): Part L, 20. All future citations of the ODM will refer to Part I unless otherwise noted. Saturday Night, 1 September, 13 October 1923; Financial Post, 23 November 1923, 29 February 1924, 2 October 1925; Canadian Annual Review (CAR) (1923): 546; Montreal Gazette Publishing, Commercial and Financial Review (hereafter without publisher) 1923: 26; Northern Miner, 31 January 1925; Sudbury Star, 14, 28 March 1925. The Quote: A.H.A. Robinson, "Canada is Largest Producer of Nickel," Natural Resources Canada 4 (December 1925): 4.

³ ODM (1925): 21, 80-81; (1926): 24, 137-38; (1927): 23, 149; (1928): 161, 164; (1929): 22-23. Canada, Department of Mines, Annual Report of the Mineral Production of Canada; idem, Economic Minerals and Mineral Industries of Canada; idem, Investigation of Mineral Resources and the Mining Industries provide additional details on local mining activities. For reasons of space and to prevent duplication, these and other federal Mines materials are not cited here. Also: Saturday Night, 13 October 1923; Financial Post, 6 June 1924, 5 March 1926, 22 April 1927; Sudbury Star, 21 March 1925.

⁴ ODM (1925): 80; (1926): 138; (1927): 146, 149-50; (1928): 161; (1929): 163; Commercial and Financial Review (1923): 44; Thompson and Beasley, 226; Financial Post Survey of Mines (hereafter F.P. Mines) (1929): 145; Natural Resources Canada 7 (August 1928): 3; 8 (August 1929): 3; Financial Post, 23 May, 4 July 1924, 27 July 1928, 8 January 1931; Sudbury Star, 11 April 1925, 4 August 1928; Northern Miner, 28 November 1928.

⁵ ODM (1925): 21, 81-83; (1926): 24, 139-40; (1927): 23, 151; (1928): 165-66; (1929): 165-66; Thompson and Beasley, 198; Sudbury Star, 12 September, 3 October, 10 November 1923, 12 July 1924, 28 March, 13 June 1925, 5 October 1927; Saturday Night, 13 October 1923; Financial Post, 24 April, 24 July 1925, 17 June, 21 October 1927; Northern Miner, 6, 13 October 1927.

⁶ Main, 100-02; Thompson and Beasley, 195-97; F.P. Mines (1929): 149; ODM (1926): 26; Sudbury Star, 5 March 1924, 31 January 1925; Financial Post, 4 July 1924, 6 February 1925, 17 June 1927, 8 January 1931; Northern Miner, 1 August, 5 December 1925, 31 July, 11 December 1926, 16 November 1928.

⁷ Canada Gazette, 62 (12 January 1929): 2173; Main, 104-06; Thompson and Beasley, 190, 198-205; F.P. Mines (1929): 144; Financial Post, 20 July 1923, 16 December 1927, 28 September, 19, 26 October, 2 November, 21 December 1928; Sudbury Star, 23 June; 11 July, 20 October 1928; Northern Miner, 5 July, 26 October, 1 November, 13 December 1928, 10 January 1929; Toronto Telegram, 18, 20, 22 October 1928; Saturday Night, 3 November 1928; Alex Skelton, "Nickel," International Control in the Non-Ferrous Metals, eds. W.Y. Elliot et al., (New York: MacMillan, 1937), 116, 149.

⁸ Skelton, 149. Industry critic John Deverell claims the shareholders made "a killing" on the deal. Deverell, 35. On the assets of the post-merger INCO: Thompson and Beasley, 210; Financial Post, 2 November 1928; CAR (1928-29): 763-790; Engineering and Mining World (EMW) 1 (November 1930): 573-647.

⁹ Canadian Copper had recovered gold, platinum and palladium in the 1890s; Mond's carbonyl refining process left even more by-products. A correspondent to Saturday Night, 16 May 1908, claimed that the new Crean Hill mine returned its operating costs on by-products alone. See: Ontario, Report of the Bureau of Mines (OBM) (1905): 4-7; ODM, 1920-32; Ontario, Report of the Royal Ontario Nickel Commission (Toronto: King's Printer, 1917), 483-85; Main, 95-100; Thompson and Beasley, 229-30; Financial Post, 13 February, 6 March 1930, 29 January 1931.

¹⁰ ODM (1930): 21, 25; (1931): 20, 108; (1932): 21, 101-02; Sudbury Star, 6 April 1929; Financial Post, 26 April, 8 August, 19 December 1929, 9 January, 6 February 1930; Saturday Night, 31 August 1929.

¹¹ INCO would acquire outright control of the copper refinery in 1935. ODM (1931): 20, 108; (1932): 102; Thompson and Beasley, 226-27; Canada, "Synopsis of Letters Patent to Companies Incorporated under 'The Companies Act'," Report of the Secretary of State of Canada (hereafter "Synopsis of Letters Patent,"), 1930, 11, 1931, 187; Arthur Buisson, "The Copper Mining Industry in Canada," Natural Resources Canada 8 (December 1929): 12; T.C. James, "Northern Systems, Sudbury District," The Bulletin 17 (October 1930): 386; Anonymous, "Abitibi-Sudbury 132 kv Line in Service," ibid., 18 (November 1931): 385-90; D.P. Douglas, "Hydro Electric Development for the Mining Industry of Northern Ontario," ODM Bulletin, 1944, No. 46, pp. 28-30; Financial Post, 29 March, 4 July, 1 August, 19 December 1929, 3 April, 25 December 1930, 26 December 1931; Northern Miner, 17 April 1930, 8 October 1931; Saturday Night, 14 June 1930. The improvements were financed through new sales of shares: Canada Gazette 62 (3 February 1929): 2591; 63 (4 January 1930): 291-92; 64 (2 August 1930): 350.

¹² Gold seekers concentrated on the Geneva Lake region of Hess Township, near Lake Wanapitei and, in 1928, on the placer beds on the upper Vermilion and Onaping Rivers. ODM (1928): Part 7, pp 61-62; Northern Miner, 4 August 1923, 10 December 1931; Financial Post, 25 September 1925, 3, 17 June 1927, 10 February, 8 June, 16 November 1928; Sudbury Star, 25 January 1928; Saturday Night, 25 January 1928.

¹³ OBM (1919): 49; ODM (1920): 38; (1923): Part VI, 27; (1924): Part VII, 21; (1925): 78-79; (1926): 82-83; (1928): 73; Hugh S. Spence, "Feldspar," Canada, Department of Mines, Mines Branch, Report, 1932, no. 731, 57, 59-60, 92-93; D.F. Hewitt, "Feldspar in Ontario," Ontario Department of Mines, Industrial Minerals Circular, 1952, no. 3, p 13; Sudbury Star, 15 November 1922, 2 May, 17, 28 November 1923, 22 November 1924, 4 March 1925, 31 December 1926; Northern Miner, 11 April 1925, 17 June 1927.

¹⁴ The latest "coal" craze was the brainchild of "Prof." A.F.A. Coyne, who previously had promoted oil fields near Winnipeg and who would go on to promote an unsuccessful Montreal oil firm, Saturday Night, 16 July 1927. On the search for "coal": ODM (1921): 107; (1923): Part VII, 25-26; (1926): 82; (1927): 87; (1928): 83; Sudbury Star, 2 April 1921, 27 September 1924, 4 March 1925, 19 May 1926; Financial Post, 11 June 1921, 22 September 1922, 2 April 1926; Saturday Night, 22 April, 1, 22 July, 5, 19 August, 23, 30 September, 13 October 1923, 9 February 1924, 11 July 1925; Northern Miner, 5 May, 4 August 1923, 20 February, 31 July 1926; Ernest Hemingway, "Search for Sudbury Coal A Gamble," Toronto Star, 25 September 1923.

¹⁵ For details on the lead-zinc zone: A.G. Burrows and H.C. Rickaby "Sudbury Nickel Field Restudied," ODM (1934): Part II. On earlier interest: W.L. Uglow, "Lead and Zinc Deposits in Ontario and in Eastern Canada," OBM (1916): Part II, 17; Financial Post, 18 February 1927, 20 January 1918. Work through 1925 is detailed in: ODM (1923): 27; (1926): 30; (1927): 59; Alex Skelton, "Lead," International Control of Non-Ferrous Metals, eds W.Y. Elliot et al. (New York: Macmillan, 1937), 624; Financial Post, 31 July, 14 August 1925; Northern Miner, 15 August 1925; Saturday Night, 11 June 1927.

¹⁶ Nearly every issue of the Financial Post, Northern Miner, and Sudbury Star circa 1927-28 carried news or advertisements concerning the lead-zinc zone. Information on the firms is available in the annual list of incorporations published in the ODM, as well as Canada, "Synopsis of Letters Patent," the F.P. Mines, the federal and provincial Gazettes and the numerous advertisements. For overviews of the excitement: Commercial and Financial Review (1926): 16; CAR (1926-27): 328; Northern Miner, 6 September 1928; Financial Post, 15 June 1928, 19 April 1929. The quotes, in order, are from: Toronto Telegram, 25 December 1926; F.P. Mines (1929): 143; Financial Post, 7 December 1928; Northern Miner, 6 December 1928.

¹⁷ Sudbury Basin is discussed below with respect to Falconbridge Nickel On Towagmac: ODM (1929): 57, 158-59; (1930): 136-37; (1931): 104; P.P. Mines (1929): 233, (1930): 111, 187; (1931): 91, 151; Financial Post, 21 October 1927.

¹⁸ ODM (1927): 30, 144; (1928): 28, 159; (1929): 27, 83-84, Part III, 42; (1930): 26, 79-80; Sudbury Star, 3 March 1926, 23 February, 4 June, 24 August 1927, 16, 20 June, 8 September, 1928; 31 August 1929; Northern Miner, 24 March, 21, 28 April, 13, 20 October, 17 November 1927, 12 January 1928;

Saturday Night, 28 May 1927, 23 June 1928, 12 January 1929; Financial Post, 28 May 1926, 29 April, 6, 27 May, 17 June, 1, 29 July, 18 November 1927, 6, 20 January, 17 February, 16 March, 27 April, 22 June, 9, 16 November 1928; 11 January, 22 August, 12 September, 19 December 1929. On the rail spur: ODM (1930): 80; Canada, Statutes, 1929, 19-20 Geo. V, c. 33; Canadian Pacific Railway Company (CPR), Annual Report, 1930, p. 29; Canadian National Railways, Annual Report, 1928-30, map, n.p.; Canada, Report of the Department of Railways and Canals (hereafter Railways), 1929-30, xv; Sudbury Star, 20 June 1928, 31 August 1929; Northern Miner, 4 April, 19 September, 7 November 1929.

¹⁹ ODM (1931): 64-65; (1932): 64; Financial Post, 22 August, 10 October, 19 December 1929, 20 March, 24 April, 20 November, 25 December 1930, 26 March, 19 November, 26 December 1931; Northern Miner, 13 March, 6 November, 25 December 1930; Saturday Night, 16 January. Ore and metal production calculated from figures in ODM 1929-32; Financial Post, 1 July 1927, Saturday Night, 12 January 1929.

²⁰ For more on the companies involved in this latest nickel "rush" see: F.P. Mines, the ODM lists of incorporations, news and advertising in the mining press and Canada, "Synopsis of Letters Patent." For overviews see: Financial Post, 17 June 1927, 17 February, 1 June 1928, 19 April, 18 July 1929; Northern Miner, 13 December 1928, 30 May 1929; Saturday Night, 2 March 1929. On Consolidated Smelters: Northern Miner, 20 June 1929; Financial Post, 18 July 1929. The Mining Corporation of Canada was represented by its Mincor subsidiary. Financial Post, 19 April, 18 July, 24 October 1929; Northern Miner, 30 May 1929.

²¹ ODM (1929): 53, 164, 166; (1930): 147; Financial Post, 17 February, 28 March, 6 April, 8 June, 16 November 1928, 5 April, 11, 18 July, 26 September, 12, 19 December 1929, 27 February, 13 March 1930, 22 January, 26 February, 26 March, 17 October 1931; Northern Miner, 15 March, 12, 26 April, 17 May, 21 June, 27 September, 18 October, 8 November, 6, 20 December 1928, 10 January, 14 February, 11 April, 20 June, 20 August 1929, 23 January, 20, 27 February, 13 March, 19 June 1930, 1 January 1931; Sudbury Star, 12 September, 14 November 1928; Saturday Night, 8 February, 28 June 1930.

²² On the history of the deposit: George Lonn, The Mine Finders (Toronto: Pitt Publishing, 1966), 56; Philip Smith, Harvest from the Rock: A History of Mining in Ontario (Toronto: Macmillan, 1986), 217-20; F.P. Mines (1929): 143, 149, 153; Ontario Gazette 49 (19 February 1916): 211-12; 51 (12 October 1918): 2151; Sudbury Journal, 24 February 1916. On Sudbury Nickel-Copper: Financial Post, 15 June, 3 August, 16 November 1928, 5 April 1929, 2 January, 6 November 1930, 5 December 1931; Northern Miner, 8 November 1928, 20 June 1929. For Sudbury Basin: Financial Post, 19 August, 28 October, 16 December 1927, 20 January, 23 March, 18 May 1928, 31 October 1929, 26 March 1931; Northern Miner, 20 October 1927; ODM (1929): 82. Concerning Lindsley and the beginnings of Falconbridge: Deverell, 37, 41; Smith, 217-20; Donat LeBourdais, Sudbury Basin: The Story of Nickel (Toronto: Ryerson, 1953), 136-38; Northern Miner, 30 August 1928.

²³ ODM (1929): 53, 159; (1930): 137-41; (1931): 20, 105; LeBourdais, 162-64; CPR, Annual Report, 1928: 9; Canada, Railways, 1928-29, xxvi, 1929-30, xv-xvi; Engineering and Mining Journal 127 (1929): 31, 173, 212, 616, 653, 773; 128 (1929): 68, 223, 489, 673; Sudbury Star, 10 March, 25 August, 8, 26 September, 7 November 1928, 12 January, 24 April, 8 June, 7 August, 16 October, 23 November 1929; Northern Miner, 6 September, 1, 29 November, 13 December 1928, 17 January, 7 March, 2 May 1929; Financial Post, 14 September, 5 October, 9 November 1928, 8 February, 29 March, 4 July, 8 August, 7 November, 5, 19 December 1929, 20 February 1930; Saturday Night, 31 August 1929.

²⁴ ODM (1931): 20, 105-C7; (1932): 98-99; Main, 103, 155 n. 22; Le Bourdais, 165; Northern Miner, 27 February, 3 April, 23 October, 18 December 1930; Saturday Night, 6 September, 13 December 1930; Financial Post, 23 October, 25 December 1930, 8 January 1931.

²⁵ Sudbury Star, 25 March, 12 April 1922; Financial Post, 28 March 1924, 3 June, 14 October 1927, 23 March, 16 November 1928, 19 June 1930, 2 April 1931.

²⁶ Main, 114. See also Financial Post, 14 September, 5 October 1928, 11 January, 18 July 1929, 12 June 1930; Northern Miner, 29 November, 13 December 1928.

²⁷ ODM (1932): 21, 98-99; (1933): 22, 47, 101; Main, 133; Skelton, "Nickel," 195; Saturday Night, 16 January, 7 May 1932; F.P. Mines (1932): 108.

²⁸ ODM (1931): 20, 109; (1932): 21, 100-03; (1933): 103-04; Robert C. Stanley, "Address to INCO Shareholders 1930," 31 March 1931, Gardner Collection, Laurentian University Library, p.1; ibid., 1931, 29 March 1932, p.5; Northern Miner, 6 November 1930, 29 January, 6 August 1931; Sudbury Star, 21 January 1931; F.P. Mines (1931): 94; (1932): 98.

²⁹ Quote: J.L. Agnew, "Why International Nickel Has Never Faced a Strike," Financial Post, 4 June 1926, p. 10. For more on miners' unions see Chapter Eight. On wages see: Northern Miner, 15 September 1923, 9 January 1926; Financial Post, 15 January 1926 and the ODM. For technical details and company paternalism: E.A. Collins and G.S. Jarrett, "Safety Work and Industrial Relations," EMW 1 (November 1930): 581-82; and the whole of that special edition on INCO, pp 572-647. Also: Labour Gazette 25 (June 1925): 551; Northern Miner, 6 March 1930. The mixed origins of Ontario's mine workforce is outlined in: ibid., 5 May 1923, 30 January 1930; Balmer Neilly, "The Influence of Mining on Canadian Development," Annual Report of Ontario Land Surveyors (1928): 166. Precise local statistics are not available.

³⁰ See the annual ODM and F.P. Mines for corporate profit and dividend figures. For example: F.P. Mines (1933-34): 110-11,

³¹ ODM (1933): 22, 104; Robert C. Stanley, "Address to INCO Shareholders 1932," 30 March 1933, Gardner Collection, Laurentian University Library; Main, 108, 117; Katherine McClelland, "The Great Depression in Northern Ontario, 1929-1934," (B.A. diss., Laurentian University, 1975), 51.

³² Sudbury Star, 21 March 1928. Ontario, Annual Report of the Department of Labour (hereafter Department of Labour), 1923-31. The quote is from ibid., 1926, p 29.

³³ Sudbury Star, 10 October 1927. See: Thomas Thorpe, "A Review of the Logging and Pulp Operations in Sudbury District During the Years 1901-1950," unpublished manuscript, Department of Lands and Forests, n.d.; J.P.G de Lestard, "A History of Sudbury Forest District," Ontario, Department of Lands and Forests, District History Series, 1967, no. 21; F.J. Kelly, "Spanish River Lumber Company, Limited," Sylva, 5 (July-August 1949): 28-29; Ontario, Ontario Ready Reference Part I: Northern Ontario 1931 (Toronto: Heaton Publishing, 1931): 35; Sudbury Star, 17, 21 November 1923, 12, 15 March, 15 November 1924, 21 January, 8 April, 2 May, 20 June 1925, 16 January, 22 May 1926, 1 October 1927, 25 January, 21 March, 19 September 1928, 6 April 1929, 18 February 1931.

³⁴ Ibid., 17 November, 1923, 18 February 1931, William McIlveen et al., "Early Roasting and Smelting Operations in the Sudbury Area -- An Historical Outline," unpublished manuscript, Ontario Ministry of the Environment, Sudbury Office, 198-(?), n.p.; Ontario, "Timber Areas Disposed of....," Report of the Minister of Lands and Forests of the Province of Ontario (hereafter Lands and Forests), 1922, app. 51; 1923, app. 41; 1924, app. 29.

³⁵ Eileen Goltz, "Espanola: The History of a Pulp and Paper Town," Laurentian University Review (LUR) 6 (June 1974): 77-78; Houston's Publishing, The Annual Financial Review (1924): 401-02; (1925): 428; (1926): 733; (1927): 806; (1929): 116; Financial Post Survey of Corporate Securities (hereafter F.P. Corporate Securities) (1927): 97; (1928): 96; Ontario, Department of Labour, 1925, 27; C.P. Fell, "The Newsprint Industry," The Canadian Economy and Its Problems, eds. Harold Innis and A.F.W. Plumptre (Toronto: Canadian Institute of International Affairs, 1934), 47; Sudbury Star, 21 March 1928, Financial Post, 11 May 1928. On the general problem of the industry: L. Ethan Ellis, Print Paper Pendulum: Group Pressure and the Price of Newsprint (New Brunswick, N.J.: Rutgers University Press, 1948), 51-62; John A. Guthrie, The Newsprint Industry: An Economic Analysis (Cambridge: Harvard University Press, 1941), see esp. 145, 149, 241; Canada, Report of the Royal Commission on Pulpwood (Ottawa: King's Printer, 1924), 51-62.

³⁶ Ontario, Department of Labour, 1926, p 21; Vapaus, 6 November 1924; Sudbury Star, 19 November 1927; A.R.M. Lower and Harold Innis, Settlement and the Forest and Mining Frontiers (Toronto: Macmillan, 1936), 151-52.

³⁷ Ontario, Report of the Northern Development Branch (title varies), 1916-31; idem, Department of Agriculture, Report of the Minister of Agriculture, 1923, 103; 1924, 109. Later, see: idem, Annual Report of the Agricultural Development Board.

³⁸ The annual reports and other publications of the Northern Development Branch as well as the federal and provincial Departments of Agriculture provide a wealth of detail concerning the promotion of improved farm techniques. Private efforts like the "Northern Ideal Seed Farms," not to mention the exhortations and aid supplied by the Sudbury Board of Trade, had the same goals in mind. Sudbury Star, 20 May 1925, 3 March 1926; Henri Moncion's farm, "adjoining" the Blezard Valley Roman Catholic Church, was the site of the Experimental farm. For details: Ontario, Report of the Minister of Agriculture, 1924, 90-93; idem, Public Accounts of the Province of Ontario, 1923-31; Gaston Bélanger, "L'agriculture dans Rayside et Balfour 1900-1950," (B.A. diss., Laurentian University, 1980), 30-31; Sudbury Star, 7 November 1923, 25 June, 30 August 1924.

³⁹ Sudbury Star, 28 January 1931.

⁴⁰ ibid, 3 March 1926, 28 January 1931, 2 July 1932; Romeo Leroux, "Le sol et l'agriculture du comté de Sudbury," Documents historique de la Société historique du Nouvel-Ontario (hereafter Documents historique) 1 (1942): 31. The best assessment of the diffusion of mechanization on Northern Ontario farms, albeit based on the Clay Belt, is A. Gosselin and G.P. Boucher, Settlement Problems in Northwestern Quebec and Northeastern Ontario (Ottawa: King's Printer, 1944), 48.

⁴¹ Figures compiled from: Ontario, "Statement showing the number of Locatees and of acres located; of purchasers and of acres sold; of lots resumed for non-performance of settlement duties; and of patents issued under The Free Grant and Homestead Act," and idem, "Statement showing the number of purchasers and of areas sold; of lots resumed for non-performance of the settlement duties; and of patents issued in Townships other than Free Grant," Department of Lands and Forests, 1924-32. On the squatters: Sudbury Star, 8 June, 20 August 1932. For succinct comments on the state of agriculture in many of the arable Shield townships see: Elihu Stewart, "Report and Field Notes of the survey of the Roads through Townships Lorne, Fairbank, Louise, Lumsden, Shakespeare, Creighton, McKinnon, Snider, Trill Broder - District of Sudbury, 1930" Ontario, Department of Lands and Forests, "Field Notes and Reports of Surveys," microfilm copies, D.B. Weldon Library University of Western Ontario, Book 2248, Reel 81.

⁴² See the two statements on land allocations (note 41), 1933-42. On back-to-the-land settlement: Sudbury Star, 20 August 1932; Ontario, Lands and Forests, 1932, p 8. On 25 June 1941 sales and free grants were discontinued; The Public Lands Act, 1942, re-established them under tighter conditions. Free grants were abolished in 1953. Ontario, Lands and Forests, 1942, 39; 1943, 41; 1953-54, 1.

⁴³ Thomas F. Barton, "Agricultural Landscapes of the Sudbury Area, Ontario," Illinois State Academy of Science Transactions, (1941): 130-37 Stewart, 1-2, 4-5, 7, 9-10; Sudbury Star, 8 June, 20 August 1932; Canadian Uutiset, 27 December 1923; Leroux, 29-30; Canada, Census of Canada, 1941, "Ontario Census of Agriculture," Tables 51-54, pp 166-69, 194-95, 220-23, 248-51.

⁴⁴ Ontario, "Report of the Agricultural Enquiry Committee, 1924," Journals of the Legislative Assembly of the Province of Ontario, 1925, 15 Geo. V, 2nd Session, vol, 59, app. 1, 56-58. However, by 1930, Elihu Stewart claimed that the Northern Development Roads "reach into many sections where settlers are located." Stewart, 4. See also p.6.

⁴⁵ ARDA, The Blueberry Industry: The Role of ARDA (Canada: Department of Forestry and Rural Development, 1966), 1, provides an overview. For local circumstances see Sudbury Star, 19 September 1923, 10 September 1924, 24 March 1926, 1 October 1927, 10 October 1928, 20 August, 4 October 1930, 19 September, 8 August 1931.

⁴⁶ Canada, Census of Canada, 1931, vol, 8, Tables 37-38, pp 504-07, 528-29; Ontario, Department of Agriculture, Annual Report of the Statistics Branch, 1931, Part I.

⁴⁷ Ontario, Northern Development Branch, 1924, 74.

⁴⁸ Ibid., 1923-32; Ontario, Public Accounts, 1923-31; idem, Report of the Minister of Public Works, 1923-31; idem, Report of the Royal Commission on Transportation, Province of Ontario, (Toronto: King's Printer, 1938), 44-47. For descriptions of the local routes circa 1930 see: Stewart, passim; and E.L. Cavana, "Report & Field Notes: Survey of Improved Roads, District of Sudbury 1929," Ontario, Department of Lands and Forests, "Field Notes and Reports of Surveys," Book 2245, Reel 81.

⁴⁹ The quote: Sudbury Star, 8 June 1932. In 1927, region-wide meetings were held to seek means of improving local roads. McKim Township, "Township Council Minutes," 12 November 1927. For complaints: Sudbury Star, 30 April 1924, 28 January 1925, 14 April 1928, 11 July 1930. On better north-south roads: ibid., 22 September 1928, 17 June 1931; Financial Post, 16 November 1928, 19 December 1929.

⁵⁰ Ontario, Report of the Royal Commission on Transportation, Province of Ontario, 179. A perusal of the respective annual reports suggests that both the provincial and federal authorities -- the latter empowered to improve highways through the Canada Highways Act, 1919 -- remained indifferent about Northern Ontario routes. See: Ontario, Annual Report of the Department of Public Highways; Canada, Department of Railways and Canals, Annual Report of the Commissioner of Highways (title varies.)

⁵¹ Ontario, Annual Report of the Motor Vehicles Branch, 1919-31; Canadian Gazette Publishing Co., Dominion of Canada and Newfoundland Gazetteer and Classified Business Directory (1926): 735-46; (1933): 719-37. There had been only twelve cars in Sudbury in 1910: Sudbury Star, 11 June 1910.

⁵² Stage service dated from the 1890s; Alex Brunet introduced a steam-powered bus about 1905. Formal jitney service dated from 1916; by 1923 Sudbury had 40 licensed jitney operators. LeBourdais, 116; Anonymous, Ontario -- Connecting Motor Coach Carriers, n.p., 19 August 1931, Scale 1 inch = 20 miles. University of Western Ontario Map Library, Cabinet 28, "Ontario Historical Maps"; Sudbury Star, 5 May, 11 July 1923, 11 April 1925, 27 April, 22 October 1927, 22 February 1928, 10 April, 15 June, 13 July 1929, 21 May 1930; Financial Post, 17 June 1927, Northern Miner, 25 July 1929.

⁵³ There also were rail-based "transit" services connecting Sudbury and Nickelton, Coniston and the adjacent smelter and, from 1914 through 1927, Levack and the main CPR line. Edwin Higgins and Frank Peake, Sudbury Then and Now: A Pictorial History of Sudbury and Area 1883-1973 (Sudbury Sudbury & District Chamber of Commerce, 1977), 46; Robert Trott, The Story of Onaping Falls (Sudbury: Acme Printing, 1982), 33-34; Sudbury Star, 11 June 1919. And dreams remained of a direct rail line to the more northerly gold and silver fields: Financial Post, 17 July 1925, 16 November 1928; Canadian Mining Journal 46 (10 July 1925): 673-74; 46 (31 July 1925): 740-41.

⁵⁴ Dafe Wilson, "Algoma Eastern Railway," Nickel Belt Rails 1 (1979): 33, 36, 39; CPR, Annual Report, 1930, 11; 1931, 7; Duncan McDowall, Steel at the Sault: Francis H. Clergue, Sir James Dunn and the Algoma Steel Corporation 1901-1956 (Toronto: University of Toronto Press, 1984), 131. For operating and income statistics see: Poor's Publishing Co., Poor's Manual of Railroads; Canadian Railway and Marine World; Canada, Department of Railways and Canals, Railway Statistics of the Dominion of Canada; Ontario, Annual Report of the Railway and Municipal Board.

⁵⁵ John Knowles et al. "The Sudbury Streetcars: The Sudbury-Copper Cliff Suburban Electric Railway Company," Nickel Belt Rails 3 (1983): 78, 10, 12; Canadian Railway and Marine World, August 1920, 450; January 1921, 34; Sudbury, "Minutes," 20 July 1920; Sudbury Star, 21 April, 20 November 1920. For income and operating details: Ontario, Railway and Municipal Board, 1916-21; Canada, Railway Statistics, 1916-21.

⁵⁶ Knowles, et al., passim. For a few of the many criticisms see: Sudbury Star, 22 October 1927, 22 February, 8 December 1928, 20, 27 April, 4 May 1929; Northern Miner, 25 July 1929. For operating statistics: Canada, Railway Statistics, 1922-31 and other sources listed in note 54.

⁵⁷ Poor's Publishing Co., Poor's Public Utilities Section, 1925, p. 1328; F.P. Corporate Securities (1927): 84; Canada, Annual Report of the Weights and Measures, Electricity and Gas Investigation Service of the Department of Trade and Commerce, (title varies), 1915, 30; Neville Barnett,

"History of Hydro in Sudbury 1895-1966," unpublished manuscript, 1967, Regional Room, Sudbury Public Library, pp 13-14; Ontario, Annual Report of the Hydro-Electric Power Commission of Ontario, 1929, 51; Financial Post, 23 May, 4 July 1924, 16 January, 5 June 1925.

⁵⁸ H.V. Nelles, "The Politics of Development: Forest, Mines and Hydro-Electric Power in Ontario, 1890-1939," (Ph.D. diss., University of Toronto, 1969), 702-703.

⁵⁹ James, 381, 386; Barnett, 16; Scott Young and Astrid Young, Silent Frank Cochrane: The North's First Great Politician (Toronto: Macmillan, 1973), 36; F.P. Corporate Securities (1929): 97; (1930): 51; (1931): 58; Ontario Statutes, 1930, 20 Goe. V. c.16, ss. 4-6, idem, Annual Report of the Hydro-Electric Power Commission of Ontario, 1929, vi xv, 51; 1930, 52, 245; 1932, 47, 60, 100; idem, Public Accounts, 1930, p B019; 1931, p. B-9; Sudbury Star, 23 March 1929; Financial Post, 20 March 1930; Saturday Night, 13 December 1930.

⁶⁰ James, 386; Anonymous, "Abitibi-Sudbury 132 kv Line in Service," 385-90; Northern Miner, 2 January, 17 April 1930, 8 October 1931; Financial Post, 18 September, 25 December 1930, 26 December 1931.

⁶¹ Sudbury did gain a large new telegraph office in 1930: Charles Dorion, The First 75 Years: A Headline History of Sudbury, Canada, (Ilfracombe, Devon: Arthur H. Stockwell, 1959), 263. On Waters, Canada, Report of the Postmaster General, 1923; 114.

⁶² Ontario, Telephone Systems, 1924-32; Thomas Grindlay, The Independent Telephone Industry in Ontario: A History (Toronto: Ontario Telephone Service Commission, 1975), app I, Sudbury Star, 30 July 1930.

⁶³ Canada, Department of the Interior, Atlas of Canada 1915, 43; Sault Star, 13 July 1905, 24 May 1906, 10 August 1912.

⁶⁴ Dorion, 204; Sudbury Star, 6, 20, 24 January, 10 February, 29 March, 18 25 April, 29 August, 15 September, 27 October, 10, 17 November 1923, 6, 13, 20 February, 15 March, 1 October, 22 November 1924. For details on the growing federal bureaucracy -- switched in 1922 from the Naval Service to the Department of Marine and Fisheries -- see Canada, "Report of the Director, Radiotelegraph Services" (Title varies), Annual Report of the Department of Marine and Fisheries, 1922-23, 139-40, and later Reports. The quote is from the Sudbury Star, 20 January 1923.

⁶⁵ Dorion, 262; D.W. Thomson, Skyview Canada: A Story of Aerial Photography in Canada (Ottawa: Information Canada, 1975), 89-93; J.C. Dillon, Early Days: A Record of the Early Days of the Provincial Air Service of Ontario (Toronto: Department of Lands and Forests, 1961), 4, 14; Hugh Halliday, "Laurentide Air Service Limited -- Commercial Pioneer," Canadian

Geographical Journal 80 (April 1970):110-17; Frank Ellis, Canada's Flying Heritage (Toronto: University of Toronto Press, 1954), 132; G.A. Fuller et al., 125 Years of Canadian Aeronautics (Willowdale: Canadian Aviation History society, 1983), 39, 107; Canada, Department of National Defense, Report on Civil Aviation, 1923, 14; 1927, 34-35, 89; Sudbury Star, 8 September 1915, 28 February 1920, 6 November 1929; Financial Post, 8 May 1920, 19 August 1927.

CHAPTER EIGHT

SOCIAL PROGRESS IN THE SUDBURY REGION, 1923-1933

Introduction

Mineral and agricultural success prompted growth all around the Nickel Belt, but most changes were concentrated in urban settings. New social organizations served the fast-increasing population, prompting a revitalized effort by the existing institutions and bringing the area a social sophistication more common in much larger centres. Prosperous times also resulted in new or improved commercial and administrative services, which brought renewed vigour to various communities. The company towns, for instance, recovered from the slump of the early Twenties and posted some good gains. But Sudbury was the most altered: home to some 20,000 persons by 1930, it featured a multi-function base befitting its new status as a City. Though Sudbury's mineral-inspired boom further confirmed its metropolitan dominance over the Nickel Belt, the progress could not hide the city's dependence on the nickel industry. The Great Depression would give Sudburians a hard lesson in the cost inherent in having become the "Nickel Capital of the World."

I

A MATURE SOCIAL ORDER

By the Twenties, the social makeup of the Nickel Belt bore little resemblance to the frontier society of an earlier day. Long-established churches and secular groups competed with "radical" ethnic and workingmen's societies for the attentions of a fast-rising population. Though the competition produced much of practical and spiritual worth, it also fostered divisive forces like racism, nationalism and class conflict. Sudbury's central place in this social milieu earned it a new reputation

as a centre of "Red" activity, which -- or so the moralists argued -- was just another facet of Sudburians' "wicked" ways. Even so, the multitude of institutions that graced the Sudbury area by 1931, and the results of their sometimes bitterly conflicting efforts, brought new diversity and sophistication to the Nickel Belt community.

The Churches

No institutions were of longer local standing than the Churches, which continued to promote their particular ethos and to provide aid to various social and charitable causes. Their practical efforts won many plaudits, but an increasingly secular population took a dimmer view of the Churches' efforts to define the bounds of "proper" behaviour. Maintaining the relevance of their beliefs, in fact, was perhaps the leading challenge facing local clerics, because the physical expansion of the mainstream denominations was nearing completion. No longer gripped by a wartime sense of purpose, and with the social gospel in decline, the Churches sought new roles that justified their overwhelming social presence.

The Roman Catholic cause was best off because it played a prominent role in local education, health care and in various social organizations; the new Catholic-supported d'Youville Orphanage served to re-emphasize the Church's commitment to all aspects of life. That many of these efforts were centred in Sudbury was no surprise, because the vigorous parishes there were the heart of local Catholicism. Progress continued in Sudbury thanks to an influx of francophones into the town; St. Anne's grew so overcrowded that in 1930 a new St. Jean de Brébeuf parish was organized in the heart of the "Flour Mill." Anglophone and immigrant Catholics, meanwhile, replaced their inadequate St. Joseph's Church; a large new basement sufficed until continued progress permitted construction of a

new edifice in 1928. Sudbury's Roman Catholic parishes anchored a regional Catholic effort that saw new facilities erected as needed -- St. Bartholemew's in Levack, opened in 1925, was an example. By the Thirties at least twenty churches and chapels, their associate missions, and the work of roving, Sudbury-based Jesuits, left few Roman Catholics far from regular services.¹

No Protestant denomination approached this degree of regional coverage, and the more evangelically minded were in no position even to try. The Salvation Army won much praise for its practical relief work, but few adherents.² Area Baptists also struggled: Sudbury's Baptist Church was but a badly leaking basement until outside donations permitted its completion in 1924. The 115 member congregation faced disaster when fire gutted the church in 1930; fortunately, outside funds once again proved forthcoming. Elsewhere, Baptists made progress only in Capreol, where a small church attracted perhaps 50 members. Further gains were hindered by theological controversy which forced area Baptists to choose between the older Baptist Convention of Ontario and Quebec or the more fundamentalist Union of Regular Baptists. The latter won quick support when it established a Sudbury mission in the mid-1930s, but the older faction also retained adherents.³

Local Anglicanism, in contrast, fared reasonably well, especially outside Sudbury. New churches were opened in Capreol (1923) and Garson (1932) while regular ministerial visits to six smaller centres were inaugurated. All told, 1,500 to 2,000 area residents took some part in Anglican services by 1931. But there were areas of weakness: in Copper Cliff and Coniston once prosperous congregations fell into decline. Though Church authorities blamed the weakness on the concentration of population in Sudbury, Anglicanism there also seemed stagnant, with the Church of

the Epiphany struggling to pay its debts. Surveys were undertaken to determine why nominally Anglican newcomers showed no interest in the Church, and on how the Sudbury congregation might best serve the town, but all to no avail. The congregation -- numbering 900 in 1923 -- stood only at 918 in 1928, and the population boom of 1928 to 1930 brought few gains. Little wonder that the Diocese expressed disappointment at the state of Anglicanism in Sudbury.⁴

That disappointment was all the more acute because the United Church made rapid progress, notwithstanding the unrest aroused by church members who were loath to alter their circumstances when in 1925 the long-impending union was at last imminent. Some Methodists in Sudbury, troubled by the loss of their congregational identity, balked at immediate amalgamation. Their ranks gradually thinned and the union was finalized on 10 June 1927.⁵

Dissident Presbyterians in Sudbury and Copper Cliff posed a greater challenge: about 94 families opted for membership in the Continuing Presbyterian Church. They began regular services on 22 March 1925, and began collecting funds for church construction. The opening of the Knox Presbyterian Church in 1927 helped boost church membership to 359 communicants by 1931, a 125 percent increase from 1925. Church union, then, had not lessened the number of congregations in Sudbury, though the Continuing Presbyterians drew little support elsewhere in the Nickel Belt.⁶

The majority of Presbyterians and Methodists who opted for union found considerable prosperity under a United Church which took good advantage of earlier work by both denominations. The Presbyterians had featured nine wide ranging circuits that served perhaps 300 families and 100 single persons; the much smaller Methodist effort had only a few scattered congregations.

Both denominations had large memberships at Sudbury and Copper Cliff, where just prior to union the Presbyterians claimed 240 families and 40 single members; Methodist membership was said to be 370 persons.⁷ On being organized, St. Andrew's United Church in Sudbury assumed first rank, with 1,850 persons under pastoral care by 1930. Strength in Sudbury helped advance the United Church throughout the region, six major fields having 1,900 persons under pastoral care by 1930.⁸

The United Church also continued the work that its constituent churches had conducted among the immigrant population, although the Italian, Finnish and a new Ukrainian mission soon were united as the All Peoples' Mission. Based in Sudbury, the All Peoples' Mission initially fared well, permitting the opening of the Sudbury All Peoples' Church in 1930.⁹ But the effort faltered because its new-found members soon turned to the more familiar languages and cultures offered by a growing number of "ethnic" churches. Some of these institutions, like the Jewish synagogue in Sudbury or the Finnish Lutheran church in Copper Cliff, were long-standing ones. But there was a flurry of new activity: new Ukrainian Catholic congregations were formed in Sudbury (1923), Coniston (1926) and Creighton (c. 1930), and even smaller Greek Orthodox and German Lutheran congregations were established in 1932. Other immigrants could celebrate within the mainstream denominations' purview; Italian, "Syrian", and Polish Roman Catholic services were examples. The immigrants' continuing interest in their long-established traditions would bring yet more "ethnic" services and see new congregations established, further strengthening that aspect of the Nickel Belt's social structure.¹⁰

Secular Institutions

Immigrants of every stripe also valued organized secular activity because past experience in their homelands suggested that joint effort could ease the trials of resettlement. The number and diversity of these institutions increased after 1923 as an influx of new arrivals seeking work in the nickel industry, combined with the growing economic and social stability of earlier arrivals, prompted an increasing national-cultural-consciousness. By the nearly Thirties, the Nickel Belt was home to Chinese, Croatian, Italian, Jewish, Polish, Serbian, Slovak and Yugoslav organizations.¹¹ Local Ukrainians and Finns displayed even greater organizational tendencies: their numerous societies ran the gamut from Finnish IWW locals to the Ukrainian Hetman Organization, a para-military group which sought to restore Ukrainian independence under the traditional monarch or hetman. In all cases, however, institutional success was contingent on the continued provision of practical and social services in the language and style familiar from the homeland. In short, hall, dances and sporting events drew the most support, with politically motivated activity drawing far fewer participants.¹²

The local establishment sometimes recognized that ethnic institutions relied on their social and cultural utility rather than on the appeal of political doctrine. Editorials in the Sudbury Star and the Northern Miner, for instance, downplayed the "radicalism" of the Ukrainians and Finns while applauding their worth as miners. Such positive comments became more frequent because of immigrants' evident unhappiness over the bolshevization campaign of the Communist Party of Canada. By 1930 the Sudbury Star was convinced of the loyalty of most immigrants. "The vast majority of local Finns and Ukrainians," the Star concluded, "are Socialists,

not Communists, grading from almost scarlet to a pink as pale or paler than Ramsay Macdonald, Socialist Premier of Great Britain."¹³ This moderating attitude both encouraged and was fostered by an increase in inter-ethnic linkages. Canadians regularly took advantage of the social events arranged by immigrant groups, and several mainstream organizations -- the Elks and the new, American-based Rotary and Lion's Clubs -- permitted European immigrants to join.¹⁴

Notwithstanding some signs of acceptance, many barriers remained intact. Groups like the Sons of England and the Sudbury Caledonian Society focused on their own culture, and immigrants sometimes shunned membership in general organizations. Ontario's Women's Institutes, for instance, made very slow progress locally because ethnic women opted to form their own groups.¹⁵ Francophones, too, steered clear of the English-language societies that seemingly threatened their heritage. Both nationaliste and French-language Catholic groups -- the two streams sometimes overlapped -- prospered. Area francophones also maintained a steady fight against Regulation 17, and in the wake of its 1927 cancellation celebrated their real social, economic and political gains.¹⁶ For all its positive aspects, cultural nationalism also exacerbated the largely unbridled nativism of the 1920s, which was highlighted by the formation of a chapter of the Ku Klux Klan in 1925; its cross burnings and other rituals reportedly attracted about 200 members. The Klan's racism, of course, was but an extreme expression of a then popular attitude: in 1925 J.L. Agnew, President of INCO, told an approving Sudbury Women's Canadian Club audience that immigration was best restricted to the "Nordic" and British peoples.¹⁷

Nativism also helped fuel fears among an establishment badly shaken by the Winnipeg General Strike and other signs of "Red" activity in Canada.

The success of the "leftist" Finnish Organization of Canada (FOC) and the Ukrainian Labour Farmer Temple Association (ULFTA) led the Sudbury Star, the Sudbury Board of Trade and other groups to condemn these "wavers of the Red Flag." No institution aroused more unfavourable attention than the FOC-owned Liberty Hall, home to various leftist and workingmen's organizations. A florid report in the Star, noting repairs to the much-used structure, well reflected the attitude of the establishment:

Liberty Hall is being repaired. The floor, worn thin by the stampings of thousands of proletarian hobnails expressing emphatic approval of the belligerent epithets hurled from the rostrum at the nefarious bourgeoisie, has been torn up and a parquet of hard wood, guaranteed to sustain the most violent punishment an excited disciple of Comrade Marx can give it is being laid. The old walls, discoloured... from a thousand pipe bowls before the altar of the great god of Bolshevism, are now being thoroughly washed... and the rostrum, the pulpit of the Temple of Communism, ... now rings only to the blow of hammers.¹⁸

Sometimes the establishment took action. Impolitic remarks of indifference to the well-being of King George V, published in the FOC-sponsored Vapaus (Liberty) in 1928, caused widespread public outrage. Vapaus' editor, Arvo Vaara, was convicted on sedition charges, and Sudbury's Roman Catholic, United, and Baptist Churches, along with the Canadian Legion, the Sons of England and the Orange Lodge, petitioned jointly to have the newspaper suppressed for "good and sufficient grounds." Although Vapaus, survived these efforts, its editors and the various "leftist" organizations felt the establishment's wrath throughout the 1930s. Significant police attention, corporate harassment -- Communist organizers were quickly "escorted" from INCO towns -- and unsympathetic municipal officials all were burdens to the Finnish and Ukrainian organizations to the "left."¹⁹

Nevertheless, the FOC and the ULFTA continued their long-standing support for "working class" activity. Both groups tried to counter the

fast-growing chain stores and banks through the promotion of consumers' and producers' co-operatives. Earlier apolitical co-operatives sponsored by francophones and Italians had failed, and the decade-old caisse populaires in the Valley were struggling to survive. Political motivation, of course, was no guarantee of success; Sudbury's Ukrainian Community Co-operative, organized in 1931, was defunct within a year. Area Finns, in contrast, opened a long-sought co-operative venture in 1926; by 1929 the Co-operative Trading Association of Sudbury (Co-optas) boasted a large Sudbury Consumers Co-operative store, six branch stores, a restaurant, a boarding house and the co-op's main money-maker, a dairy. But the rapid expansion left the co-op dangerously over-extended and therefore vulnerable to internal divisions over the co-op's political stance. Though a moderate group - neither apolitical nor towing the "red" line -- gradually gained control, the factionalism so weakened the 600 member co-op that in 1931 it collapsed despite \$445,000 in sales. Even then local Finns looked to new co-operative ventures: both apolitical and class oriented co-ops would re-emerge in the 1930s.²⁰

Such determined commitment also ensured a continuing workingmen's movement in the Sudbury area despite a feeble Trades and Labour Congress presence. The TLC's influence was limited to a few trades; six more railway brotherhoods and eight other crafts unions were organized after 1922, mainly in the boom years of 1928 to 1930. Most were crushed by the Depression and anti-union sentiment: even the Sudbury Trades and Labor Council, reorganized in 1930, collapsed in 1936.²¹ The struggling trade and craft unions left the "unskilled" majority of workers to the IWW and Communist-backed unions, which focused their attentions on area lumbermen and miners. But francophone loggers paid the organizers little heed,

so the syndicalist and the Communist Lumber Workers' Industrial Unions made few gains. Instead, the area's single local of the IWW's LWIU and the eight Communist-backed LWIU locals were reduced to being extensions of the Finnish societal infra-structure, with their literature printed in Finnish and meetings held in that language. This ethnic exclusivity, and the decline in local timber operations, saw both Sudbury-area LWIU efforts fail in the early 1930s, just as bush workers elsewhere in Northern Ontario asserted a greater militancy.²²

Circumstances were much the same in the mine union movement, although strong corporate control was an added barrier to success. Here, too, the IWW and even the OBU continued to win some recruits; for the most part, however, the mid-Twenties witnessed unrelenting corporate efforts to maintain the "open shop" through a combination of corporate paternalism and pressure -- unionists were summarily fired and blacklisted. While industry observers lauded the "ideal labor situation", a few Ukrainians and Finns embarked upon a campaign to bring the Communist-backed Mine Workers' Union of Canada (MWU) to the Nickel Range.²³ A local of the MWU, formally organized in September 1928, assumed an aggressive stance, calling in August 1929 for a seven hour day, a minimum wage of almost \$1.00 per hour, the abolition of bonusing, and the appointment of union safety inspectors. These demands, not surprisingly, were ignored. Then the union called for a strike at the Froot mine to protest wage cuts instituted in 1930. The strike, planned for 22 October 1930, failed utterly; the result was inevitable, because the MWU had very few members and potential supporters quite rightly rejected the work action as premature. The Froot strike fiasco left the MWU in shambles, and it was defunct by 1934.²⁴ The few beleaguered organizers who pushed on would have to wait until a reinvigorated Mill Mine managed,

under federal auspices, to mount an effective wartime unionization effort.²⁵

The establishment, of course, looked askance at these attempts to organize the forest and mineral workers; the Women's Labour League and the National Unemployed Workers' Association earned equally severe rebukes. These criticisms reflected the growing visibility of the Communist Party: disdainful dismissal was replaced by fear as May Day festivities -- inaugurated about 1924 -- grew in size, culminating in an illegal 1930 march on Sudbury Town Hall that was turned back with the help of fire hoses. Violence again erupted in November of that year as local "Reds" marched in support of the unemployed. Civic authorities had no sympathy for such efforts: Sudbury Town Council appointed 50 war veterans as a special force to deal with "radicals", and most councillors were overtly hostile towards a Workers' Unity League delegation that appeared before Town Council in 1931 to plead for more relief.²⁶

Labour, in fact, rarely had a voice in local affairs. In Sudbury, for instance, no labour or leftist representative ran for public office between 1921 and 1929, and the two Communist candidates who did run in 1930 received few votes. The "left" fared no better in provincial or federal elections, rarely even managing to field a candidate. Other fringe candidates -- Independents, Progressives, United Farmers and the like -- suffered equally moribund campaigns. Local voters instead chose quite evenly between Liberal and Conservative candidates, opting more often for the former in federal elections and for the latter provincially. Nor was there much variation according to locale: urban, mining camp and rural voting patterns differed by only a few percentage points. But a few trends were evident. Area francophones tended to vote Liberal, and local company towns, especially

Copper Cliff, repeatedly favoured Conservative candidates, especially Frank Cochrane and Charles McCrea. Both men, probably not coincidentally, served as Minister of Mines. Issues, naturally enough, sometimes came to the fore: francophone and rural voters favoured Liberal candidates during the conscription and language crises of World War I. But insofar as election results indicated popular opinions -- in the case of immigrants ineligible to vote they provided few clues -- the Nickel Belt generally displayed a political conservatism that belied its reputation as a "hotbed" of labour and "Red" activity. In the voting booth and at the workplace, then, individualism remained preponderant, with most persons still content to go about their daily search for personal gains.²⁷

The search for individual gratification ensured the continuing success of the "baser" elements of society. Prohibition proved especially unpopular: over 80 percent of the local electorate voted "wet" in the 1924 plebiscite held under the Ontario Temperance Act. Most area residents, it seems, welcomed the shift to government run liquor and beer outlets. These outlets, and at least six hotels opened shortly after the regulations were changed, augmented the 874 homes "brewing their own" under O.T.A. sanction and numerous illicit stills.²⁸ Notwithstanding a "dry" decade, excessive liquor consumption remained a serious problem: the over 6,200 liquor convictions (1923-1932) and many other illicit activities were blamed on "Booze". But the high crime rate -- almost 12,000 persons were convicted just between 1926 and 1929 -- also reflected the unsteady nature of resource-based employment.²⁹ Saddest of all were those men without savings and too old to participate in the search for work. Such men, arrested as vagrants, were sent to the Burwash Prison. Bad economic times saw the

rate of vagrancy convictions swell despite the shelter and relief offered by the municipalities and the Salvation Army. Men sought refuge at the Sudbury Police Station about 5,400 times in 1929; that number quadrupled in 1930 and then held steady in 1931. By September 1931 Sudbury was home to perhaps 3,500 unemployed men, whose restiveness resulted in a reputation for criminal behaviour, further blackening Sudbury's image. These unemployed men, huddled in miserable shanty towns on the fringes of the city, were as characteristic of resource-based development as were the social "evils" that resulted from the money the mines and forests generated during prosperous times.³⁰

Vagrancy and vice were as much a part of Sudbury area society as were its thriving churches, lodges, ethnic institutions and myriad other organizations. Though the recreational interaction between various elements of the society helped to blur divisions, ethnic and ideological barriers remained very real. Sudbury, as host to most of the organizations, featured a human landscape not unlike that of much larger and older centres to the south. The complex social setting with its practical and spiritual impact over all of the Nickel Range, further cemented Sudbury's metropolitan status. Greater social diversity naturally included some inter-group hostilities, but on the whole the more complex social order made the Nickel Belt a better place to live. Local society, in short, had come of age.

II

THE COMMUNITIES OF THE NICKEL BELT

The heavy manpower requirements of the mining industry left the Nickel Belt with a largely urban setting dominated by the Town of Sudbury. Meanwhile, four decades of administrative improvements had brought the area to the

threshold of a modern service infrastructure; further improvements during the Twenties helped complete this developmental sequence, with Sudbury achieving a clear advantage over its neighbours. But superior service did not come cheap: Sudbury's politicians struggled to provide services for a fast-rising population while other local municipalities concentrated their meagre finances on necessities like roads and schools. Corporate funds permitted greater progress at area mineral and railway centres, though the gains there slowed once the sponsoring firms determined that "their" town was large and sophisticated enough to meet company needs. Chelmsford and Capreol, in contrast, failed in their attempts to win new mineral-based industry; Capreol therefore remained dependent on the CNR, while Chelmsford managed to stave off disaster because of its agricultural hinterland. Smaller communities were less fortunate, their mixed-function economies ruined by the failure of the timber-based economy, the concentration of mineral activity and especially the advance of Sudbury. Several waves of mining excitement brought an unprecedented building boom and population increase to Sudbury; both helped propel the mixed economy to new heights. But the gains were misleading; the growth strained municipal resources and, far worse, greatly increased the likelihood of economic disaster should the mineral boom fail. Thus, Sudbury, long a beneficiary of a rich hinterland but not a slave to these resources, now joined its neighbours as a dependent client of the mineral industry, and most especially of INCO.

The Administrative Setting

Even as the mineral industry achieved new importance, Sudbury retained its role as the local headquarters for senior levels of government. This was no small factor in its stability, because the Provincial and Federal

governments helped fund and administer governmental infrastructure so modern that it required few changes in the Twenties. Federally, the northern tier of the region was transferred to the new Temiskaming South electoral riding in 1924, but as this proved an awkward arrangement these townships were re-assigned to Nipissing riding in 1933.³¹ The Federal government otherwise continued to provide both funds and services: four new post offices, for instance, enhanced a very useful mail service featuring about 35 offices. Sudbury, however, was the major beneficiary of Federal aid; the introduction of door-to-door mail delivery and the installation of the Sudbury R.C.M.P. detachment, both in 1931, were just two examples.³²

Ontario, meanwhile, made only very minor jurisdictional changes while maintaining a very high profile in Sudbury, thanks to its various inspectors, officials and offices. Sudbury also benefitted from Provincial grants directed toward the new District jail, St. Joseph's Hospital, the d'Youville Orphanage, the Children's Aid Society, and other social-welfare facilities, all of which were located there. Some Provincial funds, naturally enough, went elsewhere -- the Burwash Prison farm was enlarged, while outlying municipalities received grants in support of physical improvements or social and protective services.³³ As in earlier decades, the most ubiquitous sign of provincial spending was the still-expanding school system: sixteen new schools were opened between 1923 and 1931, bringing the regional total to 75 or so schools. Large or small, modern edifices or simple log cabins, these schools were invaluable providers of educational opportunity and focal points for nearby residents.³⁴

Local administrators recognized the importance of the schools, and committed anywhere from one to three-quarters of their overall budgets to education. Only local roads drew a comparable attention; social and

protective services still remained largely ineffectual because of tight municipal finances. Spending ranged from the almost-microscopic outlays of the statutory townships -- two more townships opted for that status in the 1920s -- to the less penurious expenditures of the Township municipalities, which in 1923 welcomed Dowling Township to their number. These Townships had widely varying budgets, ranging from \$2,000 per annum in Waters to some \$60,000 annually in Neelon-Garson; on average, however, they were on an equal footing with the still small Town of Chelmsford.³⁵ Larger towns were able to spend far higher sums thanks to higher assessments, tax rates or accumulated debts (see Table 8.1).

Outlying Service Communities

The tightly financed townships were helpless to prevent the decline of communities within their boundaries, be they long-established villages like Whitefish or Wahnapiatae, agricultural villages like Blezard Valley or Rheault, or the remains of defunct mineral centres like Mond or Stobie Mine. Local services -- a school, post office, or perhaps a store or hotel -- sometimes kept these once vibrant centres from disappearing but only Cartier, a railway divisional point, and Hanmer, a service centre at the northeast end of the Valley, featured anything approaching prosperity. Even these villages faced continuing erosion of importance by Sudbury, which through ever improving transport and communications media made more and more inroads into their functions and markets.³⁶

The Town of Chelmsford faced the same pressures; worse, its residents found the agricultural and forest industries insufficient for continued growth. Then the lead-zinc boom, and the consequent transfer of 25 houses from Nickelton to Chelmsford, produced a 30 percent increase in the town's

TABLE 8.1

SUDBURY AREA MUNICIPAL STATISTICS, SELECTED YEARS

<u>ITEM</u>	<u>1924</u>	<u>1928</u>	<u>1932</u>
<u>Total Assessment (000's \$)</u>			
Township municipalities (av.)	215.9	238.2	227.0
Capreol	863.4	881.6	891.7
Chelmsford	121.0	165.8	163.3
Copper Cliff	3,366.8	3,431.8	4,174.2
Frood Mine	303.5	302.1	655.6
Sudbury	6,252.4	8,114.6	12,944.8
<u>Mill Rate</u>			
	<u>(1925)</u>		
Township municipalities (av.)	14.61	23.65	21.17
Capreol	37.00	39.00	56.00
Chelmsford	10.00	48.80	46.60
Copper Cliff	17.00	17.00	17.00
Frood Mine	--	--	--
Sudbury	25.00	58.00	54.55
<u>Receipts (000's \$)</u>			
Township municipalities (av.)	13.7	15.8	14.6
Capreol	37.8	40.4	69.9
Chelmsford	3.8	10.2	16.3
Copper Cliff	133.3	122.5	155.4
Frood Mine	1.0	0.8	2.7
Sudbury	378.6	383.2	726.4
<u>Debenture Debts (000's \$)</u>			
Township municipalities (av.)	9.2	12.9	6.6
Capreol	97.0	122.6	321.3
Chelmsford	--	9.0	21.4
Copper Cliff	50.7	39.8	26.0
Frood Mine	--	--	--
Sudbury	1,259.2	1,251.7	3,288.8
<u>Total Outlays (000's \$)</u>			
Township municipalities (av.)	12.5	12.6	11.8
Capreol	40.3	45.5	59.7
Chelmsford	3.9	10.2	13.8
Copper Cliff	71.2	76.1	129.1
Frood Mine	0.0	0.0	2.0
Sudbury	407.2	461.6	938.5

(Source: Ontario, Municipal Statistics, 1924, 1928, 1932)

assessment and a sharp population increase. The gains prompted much optimism: Chelmsford Town Council mounted a bold advertising campaign which acclaimed their town's bright future; more substantive progress was financed through an unprecedented debentured loan. Though the mineral boom soon faltered, forcing Chelmsford to fall back on its farming base, the brief economic surge resulted in municipal improvements and increased numbers and variety of businesses. With more than 25 businesses, plus St. Joseph's church, various other institutions and an almost exclusively French speaking population of 800, Chelmsford had confirmed its position as the central place of the Valley. Nevertheless, it remained very vulnerable to encroachment by Sudbury-based commercial and social services and would become even more threatened as the automobile gained wider popularity.³⁷

Capreol, farther from Sudbury and dependent on the CNR rather than on natural resources, seemed far more secure. Indeed, an optimistic Town Council provided improved electric, water and sewerage facilities, a new school, and other highly visible improvements. The less noticeable protective services were given short shrift. Capreol's per capita fire losses were the highest in the region, and in 1931 the Chief of Police still doubled as town assessor, building and weed inspector, truant officer, meter reader, not to mention poll and dog tax collector. Even this minimal service, when combined with the physical improvements, burdened Capreol's 1,400 residents with the highest mill rates in the area and a debenture debt of over \$320,000, easily the highest per capita debt in the Nickel Belt. To make matters worse, the CNR seemed content to let Capreol stagnate since the town had reached sufficient size to serve the railway's needs. Town Council, hoping to rekindle growth, looked to other options. During the mineral booms of 1927 and 1929, Capreol pressed its advantages in

advertisements promoting the town as a "New and Promising Prospect in Great Mining Section." The claims that Capreol was "entirely surrounded by the nickel-copper formation" brought some gains -- the population neared 2,000 by 1930 -- but the boom quickly subsided. The census of 1931 reported a town of 1,684 persons and two dozen businesses. These stores and services employed 30 or so persons; most other Capreolers relied on the CNR. Thus the population was quite unlike that of a mining town, with a strong British presence -- 60 percent of the population -- helping to account for a relatively strong Anglican church.³⁸

Mineral Centres

Nor did mining communities enjoy the economic stability of a railway-based economy; instead their sponsoring mining firms continued to subject mining centres to booms followed by economic chaos. The good times, plus INCO's largesse, brought modern urban living -- good streets, utilities, waterworks, first-rate schools and housing, social and protective services -- to Creighton, where three decades of near-continuous mining operations had attracted an ethnically diverse population and, in turn, a commercial and social base rivalling that of Copper Cliff in size.³⁹ Other mining centres were worse off. Bradley, the camp associated with Treadwell-Yukon's Errington mine, disappeared soon after that mine's closure in 1931.⁴⁰ The residents of Worthington, on the other hand, were shocked by the massive 1927 cave-in that ended mining there; the busy village of 1,000 or more persons, boasting many stores and services, declined seven fold by 1931. Only the school, post office and a small sawmill prevented Worthington's disappearance. Levack, meanwhile, suffered grievously when fire destroyed the mining plant in 1929; at least hope remained that the mine might some day be reopened. The village of Garson faced no disasters, but its 300

or so residents enjoyed few commercial or social services because of the competition in Sudbury just a few miles to the southwest and easily accessible by regular bus service.⁴¹ The same factors limited commercial and social progress in Falconbridge, a well-serviced, modern village on a "nicely laid out site" that housed Falconbridge Nickel's employees. Full-scale community development there was also hindered by the almost immediate emergence of "Happy Valley", an unserved "fringetown" village which attracted those persons unwilling to live under the constant scrutiny of their employer.⁴²

Circumstances were quite different at the reopened Frood works. Both INCO and Mond Nickel, weary of the "vexing ramifications" and costs associated with company towns, had determined by 1925 that employees at their respective Frood operations would have to live in Sudbury. Merger did not bring a change in policy; in fact, the new enlarged INCO introduced a \$500,000 loan package to help its workers acquire housing in Sudbury. The Town of Frood Mine, therefore, was home to only 173 persons in 1931, mainly company staff. This tiny, mainly Anglo-Saxon population paid no taxes and enjoyed good physical services, but they looked to Sudbury, two miles to the south, for their other needs.⁴³

Though the fate of Frood Mine suggested that corporate policy was shifting against company towns, the much-enlarged reduction facilities required ever-larger on-site workforces. Thus the same modernization campaign that doomed O'Donnell -- site of INCO's roastyards -- also caused the construction of 25 "good, clean, modern" houses just west of the new copper refinery. Though the Suburban Electric Railway put both Copper Cliff and Sudbury within easy reach, the "Ontario Refinery Village" enjoyed considerable community life and permanence, perhaps because of its greater

distance from the authorities in Copper Cliff. The village, in short, evolved into a "fringetown" sometimes known as Cinotterville.⁴⁴

INCO's older industrial centres, however, housed the vast majority of its reduction plant employees. Both Coniston and Copper Cliff featured a full-fledged network of urban services thanks to the funds provided by the newly merged firm or, earlier, by its constituent elements. Coniston fared especially well because Mond's expansion plans led to higher employment and a consequent population and business boom. The village, home to 1,265 persons in 1923, trebled in population before the end of the decade. Population and business growth in Copper Cliff, in contrast, slowed markedly because INCO considered the town to have reached optimum size. Though the population increased by 28 percent, reaching 3,200 in 1931, that figure paled before the peak of 4,000 achieved in 1916. Still, the new arrivals added even more diversity to already heterogeneous populations. Italians, for instance, made up 21 percent of Copper Cliff's population in 1931; Finns formed another fifteen percent. French Canadians and Eastern Europeans were also numerous, especially in Coniston, while significant British components dominated the better-off parts of both towns, and especially their civic and company administrations.⁴⁵

These two administrations, in fact, were indistinguishable. INCO officials continued to dominate Copper Cliff politics and when Coniston achieved Town status on 31 December 1933, they took up a similar role there. But most decisions were made at Copper Cliff because post-merger administration was consolidated there: the Copper Cliff police force, for example, grew to twenty men in 1929 because it also served as the security force at INCO's other works. INCO covered any costs incurred

and, indeed, most costs in Copper Cliff and Coniston, so individual tax burdens were very low. INCO's largesse, and the overwhelming reliance of the populace on its good will -- fully 75 percent of Copper Cliff's labour force worked for the firm and INCO owned much of the housing in both centres -- gave it unassailable municipal control. Even in Copper Cliff's Little Italy, described in 1927 as "nothing but sand, slag, sulphur and gas fumes," the residents kept quiet, preferring low-cost housing and continued employment to the dismal atmosphere of shutdown or, worse, being fired. But INCO's reluctance to spend even more money forced some families to move to Sudbury while others moved of their own free will, being all too eager to escape the firm's influence. This population exodus left Copper Cliff a shadow of its former self; though Coniston fared relatively better because of its greater isolation, the dark economic days to come would leave both INCO-dependent towns far in Sudbury's wake.⁴⁶

Sudbury

Sudburians, naturally enough, rejoiced at their town's progress. But the new emphasis on Sudbury as a home for miners placed tremendous burdens on town coffers that were in a shambles. Sudbury Town Council, it turned out, had followed "absurd" accounting practices during the war-time boom; a provincially-sponsored audit led to better management, but a \$1.4 million debt remained.⁴⁷ Yet a still-optimistic Town Council approved even more spending for paved streets, concrete sidewalks and much-expanded electric and water services. By 1931 Sudbury featured some 35 miles of watermains, 25 miles of concrete sidewalks and 13 miles of paved streets. Sometimes the Council had no option but to launch improvements: a reinvigorated Board of Health demanded that sanitary bylaws be enforced rather than be "relegated to the dusty interior of the municipal vault."

The Board imposed milk pasteurization regulations in 1925, had a new waste dump opened in 1927 and in 1929 successfully called for enlarging the sewerage system and constructing a sewage treatment plant. Occasional typhoid cases among the burgeoning population lent urgency to the Board's requests, and convinced the town fathers to extend funding to St. Joseph's hospital and the Victorian Order of Nurses.⁴⁸

The 150 percent population increase registered between 1923 and 1931 also strained municipal social services. Education remained very costly: Sudbury committed nearly \$2 million to its seventeen schools (1923 to 1931), notwithstanding aid from the Province and the Roman Catholic Church. Although the Children's Aid Society and social aids like mothers' pensions won some grants, Town Council was slower to extend social welfare monies. Pleas for a House of Refuge went unheeded, the town fathers explaining that all available funds were committed for the ongoing provision of relief. Aid for the unfortunate became a greater burden in 1930: Sudbury opened a bureau for the unemployed on October 29, and as the number of registered unemployed rose to 3,500 in 1931, relief costs escalated to \$1,700 per day.⁴⁹

Worries about roaming unemployed men, and fears that the enlarged population would bring more crime, were factors behind the expansion of the Sudbury police force from eight men in 1923 to eighteen men in 1931. Fire, also seen as a major threat, led to stricter enforcement of the building code, increases in fire department personnel and equipment, and improved water service. Here, at least, the results were gratifying: per capita fire losses fell sharply to below the national average and only half of those in Capreol or Copper Cliff.⁵⁰

Sudburians, not surprisingly, expressed much pride in the general improvement to the community. Unfortunately, the expansion of civic services often was unsystematic, ignoring the unity of the whole community; town zoning and building codes, and the improvement of the Memorial and Bell Parks (1926) stood out as rare examples of planned progress. Civic growth in general remained ad hoc, controlled by private developers whose grid-iron surveys ignored the local topography and the cumulative effect of their developments on Sudbury as a whole. This was not new: five decades of unregulated growth had left a jumble of wildly varying development densities, and structures ranging from the brick "blocks" of Sudbury's core to the scattered dwellings of the newly annexed Donovan subdivision (1931) that was home to many Froot mine workers. Thoughtful, community-oriented "urban renewal" would have been both unlikely and very expensive.⁵¹

Town Council would have rejected such outlays because these men were already struggling to control fast-rising civic spending. New physical and social services increased total expenditures from \$400,000 in 1923 to \$950,000 in 1931. The latter sum was almost three times the spending of all other Nickel Range municipalities combined; Sudbury, by 1931, spent more on its library than the individual budgets of six area municipalities. The library, moreover, was one of the smallest items in Sudbury's budget (see Table 8.2).

Spending on this scale forced the administration to double the mill rates despite a 100 percent increase in assessments between 1923 and 1928. These manoeuvres proved insufficient by 1929 so Sudbury's debenture debt, which had held fairly stable since 1923, began once again to increase. By 1932 these debts passed \$3.3 million, up 164 percent in four years. Though the borrowing provided Sudbury with physical and social facilities

TABLE 8.2

CIVIC DISBURSEMENTS, SUDBURY, 1931
(Less Debt Charges)

<u>ITEM</u>	<u>Disbursement (\$)</u>
Education	\$ 329,241
Streets	\$ 109,682
Protection of Persons and Property	\$ 78,522
Administration	\$ 52,751
Charities and Hospitals	\$ 50,292
Health and Sanitation	\$ 36,743
Libraries	\$ 5,600
Recreation	\$ 420
TOTAL	\$ 764,983

(Source: Ontario, Municipal Statistics, 1931)

and services unmatched in the region, the debt proved an impossible burden as the Depression deepened -- Sudbury defaulted on its loans in 1934.⁵²

The fiscal burdens facing Sudbury were the inevitable consequence of civic politicians who emphasized progress and considered costs only fleetingly. Such an attitude reflected the good times of the Twenties, as Sudbury benefitted from the resurgent nickel industry, continuing forest-based income, and smaller industries like a creosoting plant, a soda works and a foundry. Steady gain, marked by the expansion of housing and the transformation of the downtown into "solid brick area", was succeeded by "boom" mentality when news of the lead-zinc finds and especially the Frood reopening became known; the latter promised a much increased mining population in Sudbury.⁵³ The excitement stimulated a surge in house building, with over 1,300 new homes being built between 1928 and 1931, many of them on the 400 lots the CPR sold at the boom's peak. New subdivisions -- Kingmount, Nickel Park, Frood Park and many others -- were opened. Yet the near frenzied construction could not keep pace with a population influx: in 1928 Sudbury was "teeming with strangers", and by 1930 the

population density was triple that of 1918. Overcrowding was common, forcing up real-estate values and cutting off many wage earners from home ownership. Eight out of ten Sudburians owned their own homes in 1927, but the situation quickly deteriorated. By August 1929 "hundreds of families" were "carrying on housekeeping as best they can, in business office blocks, in tents and so forth" because the overcrowding was "as severe as in the congested quarters of a great city." The building boom brought relief, but in 1931 just less than half of Sudburians were home owners. Rental accommodation, not surprisingly, grew much more expensive.⁵⁴

The rush of construction was by no means limited to housing, for many larger projects were undertaken -- a \$600,000 CPR roundhouse, the \$150,000 Silverman's department store, the new District jail. These new projects and housing boom taxed Sudbury's resources: 500 men were employed by the town in 1929 as it hurriedly installed new services. The atmosphere of unfettered progress was caught in a Financial Post headline that reported "Growth in Sudbury is Without Parallel Throughout Canada."⁵⁵ Outside businessmen quickly took note: Sudbury welcomed various new "chain" stores including Eaton's, Loblaw's and Dominion; two more banks brought the number represented in the town to nine. The new arrivals were remarkably successful: the new Eaton's store, for example, ranked first nationally in per capita sales in 1929, 1930 and 1931. The brisk sales helped enhance the already wide variety of retail stores and services in Sudbury: in 1931 the town featured well over 300 such enterprises. This commercial sector employed upwards of 700 persons and in 1930 recorded net sales of \$11 million. That no other area community could boast one tenth of those figures demonstrated Sudbury's central role in the regional economy.

Adding to the town's role were other businesses such as light manufacturing, diamond-drill contracting and construction, their less-heralded gains providing more new job opportunities.⁵⁶

The flourishing business sector served the region and beyond, but its attentions were most closely focussed upon Sudbury's newly enlarged and diversified population. Nearly 20,000 souls called Sudbury home at the peak of the boom; the census of 1931 reported 18,518 persons living in Sudbury. Though persons of British (36.6 percent) and French (35.9) origins still predominated, there was a new "European" flavour (24.9) to the community. Finns, Ukrainians, Utalians, Poles and Germans were most numerous, and their presence was made more apparent by each group's tendency to live in close proximity with their fellows. These "foreign colonies" achieved considerable cohesiveness by 1931, but still paled before the large, almost exclusively francophone character of the Flour Mill sector. Areas of superior housing, espeically near Lake Ramsay, were home to mainly anglophones. Income levels also played a role: immigrants or francophone labourers already burdened by the high cost of living could not afford some residential areas.⁵⁷

Sudbury's increasingly cosmopolitan character reflected the growing numbers of mine and smelter workers living there. Indeed the mineral industry had become the largest single employer of Sudburians by 1931, though even then it claimed only fourteen percent of the working population (see Table 8.3). In the broadest terms, then, about twenty percent of Sudburians earned their keep in the primary industries, and twice that number were employed in both the secondary and tertiary occupations. Males far outnumbered females -- 5,664 to 847 -- with only \$470,880 of the total earnings going to female employees. Women were scarcer still

TABLE 8.3

SUDBURY WORKFORCE STATISTICS, 1931

<u>Occupation</u>	<u>Number</u>	<u>Weeks Employed</u>	<u>Earnings (\$)</u>
Mining	951	39,266	\$ 950,000
Service	865	39,909	884,800
Building / Construction	792	28,168	793,600
Transport / Communications	559	24,298	644,100
Trade	442	19,499	497,800
Clerical	419	20,076	414,500
Metal Products Manufacturing	384	16,138	455,100
Lumber	100	2,665	30,200
Electric Light and Power	79	3,549	101,700
Warehousing	62	3,000	78,200
Wood Products Manufacturing	29	1,238	38,900
Farm Labour	29	881	13,400
Vegetable Products Manufacturing	21	990	21,700
Finance / Insurance	17	828	32,500
Small Firms	413	18,734	680,300
Other	1,331	40,214	731,200
TOTALS	6,511	261,166	\$ 6,412,100

(Source: Canada, Census of Canada, vol, 5, Table 37)

among a civic elite that had few links with the mining industry: only four of 218 nominees for public office (1923-31) reported mining as their economic means of survival.⁵⁸

Contemporary observers pointed to these employment statistics and the mixed economy to argue that Sudbury was not a mining town. While giving due credit to the Froid expansion and mining in general, they were quick to point out that Sudbury was the headquarters for many lumber and pulp firms, a major market and supply centre for a large agricultural population, an important warehousing and distribution point, a financial centre, a "jumping off" point for an "ideal" vacation land, an administrative and social centre, and a regional information base that was home to three widely read newspapers.⁵⁹ All of these functions, reflecting

the town's position at the hub of an extensive transport and communications network, contributed to what the Financial Post termed Sudbury's "dominating position" over the region. Sudbury, the newspaper reported, was

particularly situated in that about it are a number of smaller places, company towns, grouped about one of the great mines, that are not and do not wish to be entirely self sustaining. These places look to Sudbury as their natural centre. Because of that, Sudbury has more places of business, and more business is done than in any other place in Ontario of, say, 75,000 inhabitants.⁶⁰

Commentaries became ever more positive as new stores, business blocks, subdivisions and other construction, along with the doubling of Sudbury's population gave the town a permanent air. The local populace certainly harboured no doubts: a citizen's petition and the exhortations of the Sudbury Board of Trade saw Sudbury achieve incorporation as a City on 28 July 1930.⁶¹

But city status, positive reports and quick growth could not long hide an ever-greater reliance on the nickel industry. The postwar slump already had hinted that Sudbury looked to the mines and smelters for its prosperity, and the influx of workers from Froid mine and Copper Cliff increased that dependence. So when INCO slowed operations in the fall of 1930, Sudbury experienced an unprecedented business decline: a surge in local unemployment was exacerbated by the continuing arrival of job seekers drawn by the Nickel Belt's reputation. By now, it was all too apparent that Sudbury's recovery awaited a return of good nickel sales. "Sudbury's prosperity", the Sudbury Star editorialized on 6 December 1930, "is naturally wrapped around that of International Nickel."⁶²

Recovery was much slower than William Mason, the paper's editor and owner, had anticipated, but even in the economic depths of 1931 he was convinced that Sudbury remained "in a position to absorb a great many

benefits from association with mining." The revival of nickel sales in 1932 did, indeed, begin a slow march to civic prosperity; the recovery, however, reinforced the realization that Sudbury had shifted from a beneficiary of local mineral operations to a position of outright dependence. Leslie Roberts, in fact, had pointed this out in a 1931 Maclean's article. He argued that:

Sudbury is not a one-mine town, ... nor is it a group of independent enterprises such as one finds in the gold camps: ... Sudbury is the child of the Froid, the Creighton, the Garson and other treasure troves; ... Sudbury's prosperity is written on the ... physical assets of INCO. Sudbury, at first glance, is Sherbrooke or Moose Jaw or Moncton. But first and last Sudbury is International Nickel.⁶³

Sudbury nevertheless boasted long-standing social, administrative and commercial functions of a diversity and sophistication unmatched in the Nickel Range. Copper Cliff and Coniston might offer facilities and services on a par with Sudbury, but their municipal administrations, economies and social settings were utterly dependent on INCO. Capreol, while free of INCO's influence, remained a client of the CNR. Even so, its residents were better off than those in Chelmsford, which was losing importance in the face of competition from Sudbury. The same pressures had all but destroyed smaller local communities. By the Thirties, then, the Nickel Range featured fewer significant centres than in an earlier day, and Sudbury had far surpassed its largest rivals, being ten times larger than Capreol, twenty times greater than Chelmsford. While Copper Cliff and Coniston boasted considerable populations, these smelter towns had few prospects for future gain. Meanwhile, the mining villages -- Creighton, Garson and Levack -- were the last vestiges of the past, for by 1930 Sudbury was attracting more and more miners, especially those working at the Froid. Improved transportation options and changing corporate policy resulted

in an even greater concentration of miners in Sudbury and a seemingly limitless prosperity. All too soon, however, the drastic downturn brought on by the Depression made a mockery of Sudburians' boasts about living in the "Nickel Capital of the World."

CONCLUSION

Sudbury's claim of "Nickel Capital" status demonstrated both pride of place and confidence in the future. Little wonder: the Nickel Range had made tremendous strides in less than a lifetime. Automobiles travelled on paved roads where an "endless" forest had stood fifty years earlier; the railways provided both long distance and transit needs and maintained widespread telegraph services. Telephones and hydro-electricity, radios and airplanes foreshadowed an even more modern era. Other physical improvements -- new buildings, effective services, modern goods -- all won accolades. Urban centres, especially Sudbury, were best off, but rural residents could point to good roads, reasonably convenient mail service and a farm sector that had "conquered" the wilderness. Social gains were no less impressive: by 1931 the Nickel Range boasted the practical and spiritual aid of the churches and many secular organizations. Social services, notably education, were equally widespread, thanks in no small part to funding from the Province. "Progress" also brought with it burdens like higher taxes, social unrest and the demise of communities unable to cope with the failure of the forest industry, mine plant closure, or competition from Sudbury. Still, most residents of the Nickel Belt and especially Sudburians, were quick to discount these burdens as the inevitable cost of progress.

But Sudbury's prosperity and the resulting pride of place could not hide one unassailable fact: the rapid expansion of the nickel industry

and the concurrent decline in forestry had propelled the Nickel Range into an almost complete dependency on INCO. That firm operated various mines and reduction plants, controlled a half dozen company towns, owned over 100,000 acres of land and employed thousands of local residents. Those persons not employed by INCO were nearly as dependent on the firm. Businessmen prospered when the industry boomed; similarly, INCO's wood-stuff requirements helped a residual forest-based economy survive. Area farmers, meanwhile, looked to mining towns for sales while trying to cope with INCO's pollution. The sheer physical impact of the sulphur smoke along with INCO's mines, pits, smelters and hydro-electric plants emphasized the firm's regional dominance.

By 1930 Sudbury lay well within INCO's sphere of influence because Sudburians ignored the "boom and bust" histories of nearby company towns, choosing instead to emphasize the gains possible through closer ties to mining. But as this new dependency included little of the corporate largesse that had wrought such major changes in Copper Cliff or Coniston, Sudbury's steadfastly optimistic administrators were forced to spend freely in order to provide services for those persons and businesses attracted by the mineral-inspired boom. Though the general expansion of Sudbury's social, economic and administrative functions further consolidated the City's regional primacy, the Great Depression provided hard lessons about a dependency from which it was far too late to escape. Sudburians and their neighbours had no choice but to await a brighter day. Fortunately for the Nickel Belt, nickel sales began to revive in 1932; new purchases made in anticipation of the great world conflict to come would dramatically confirm Sudbury's status as the "Nickel Capital of the World."

NOTES

¹ St. Joseph's in Sudbury was renamed Christ the King (1935) to avoid confusion with St. Joseph's in Chelmsford. Alphonse Raymond, "Paroisse Sainte-Anne de Sudbury 1883-1953," Documents historique de la Société historique du Nouvel-Ontario (hereafter Documents historique) 26 (1953): 24-27; Lorenzo Gadioux, "Fondateurs du diocèse du Sault-Ste.-Marie," ibid., 6 (1944): 34-35; M.-Emma Bergeron, "L'orphelinat d'Youville de Sudbury," ibid. 9 (1945): 33-39; Laurent Martin, "La paroisse Notre-Dame-du-Rosaire," ibid. 24 (1952): 38; Lionel Seguin, Historique de la paroisse de Chelmsford Ontario (Sault Ste. Marie, ?): The Diocese, 1948, 79-80; Franke Peake and Robert Horne, The Religious Tradition in Sudbury 1883-1983 (Sudbury: Journal Printing, 1983), 18-19; Ontario Catholic Year Book and Directory: (1937): 139.

² Peake and Horne, 35. The Army won special praise for its work at the Burwash Prison Farm: Ontario, Annual Report of the Inspector of Prisons and Public Charities upon the Prisons and Reformations of the Province of Ontario (hereafter Inspector of Prisons), 1915, 57. Also see later reports..

³ Baptist Convention of Ontario and Quebec, The Baptist Year Book, 1922, 1926, 1929, 1932; Canadian Baptist, 13 December 1923, 17 January 1924; Peake and Horne, 38, 53-58; Sudbury Star, 16 July 1930.

⁴ Church of England, Journal of Proceedings of the Diocese of Algoma, 1923, 1926, 1929, 1932; idem, Year Book, 1925-31, see esp. 1931, p.151; Frank Peake, The Church of the Epiphany: A Century of Anglican Witness (Sudbury: Journal Printing, 1982); Sudbury Star, 2 February 1927, 19 March 1930. On the disappointment see the Journal of Proceedings, 1932, p.31.

⁵ Peake and Horne, 30, 43-45. For a fuller discussion of the Methodist and Presbyterian experience in Sudbury see Graeme Mount and Michael Mulloy, A History of St. Andrew's United Church, Sudbury (Sudbury: Journal Printing, 1982).

⁶ Presbyterian Church in Canada, Acts and Proceedings of the General Assembly of the Presbyterian Church in Canada, (hereafter Presbyterian Church, General Assembly), 1926-32; Peake and Horne, 43-47, 52; Sudbury Star, 25 March, 16 September 1925, 9 November 1927.

⁷ Methodist Church of Canada, Proceedings of the Toronto Annual Conference of the Methodist Church, 1923-25; Presbyterian Church, General Assembly, 1923-25; Peake and Horne, 30, 33.

⁸ United Church of Canada, Year Book and Record of Proceedings (hereafter United Church, Year Book), 1926-32; Peake and Horne, 51-52. For a fuller

sketch on Sudbury see Mount and Mulloy (see note 5). The most prominent Anglican centres outside Sudbury were Copper Cliff, Creighton, Capreol, Garson, Coniston and Levack.

⁹ Statistics available in United Church, Year Book, 1926-32. See esp. 1926, 335-36. See also idem, "Community Missions East," Annual Report of the Women's Missionary Society of the United Church of Canada, 1926-32; Peake and Horne, 69-70.

¹⁰ Peake and Horne, 66-77; Peter Krats, "Sudburyn Suomalaiset": Finnish Immigrant Activities in the Sudbury Area 1833-1939, (M.A. diss., University of Western Ontario, 1980), 127-30; 239-40; Mary Stefura, "The Process of Identity: A Historical Look at Ukrainians in the Sudbury Area Community," Laurentian University Review (LUR) 15 (November 1982): 59; Raymond, 27-28; Gertrud Lewis, "The German Presence in the Ontario Northland," German Canadian Yearbook 8 (1984): 43-44; Charles Booth with Steve Moutsatsos, "Greeks in Sudbury," Polyphony 5 (1, 1983): 110-11; J.B. Waddell, "Histoire de la paroisse St. Anne," unpublished manuscript, 1933, Jesuit Archives, Universite de Sudbury, file B-3-8, p. 216; Sudbury Star, 1 November 1924, 12 September 1928, 23 August 1930, 20 May 1931. Studies of the ethnic groups provide additional detail; even more information is available in national studies and works in each group's vernacular.

¹¹ From a vast array of material available on these groups the most accessible coverages are Mary Stefura, ed., "Sudbury's People," Polyphony 5 (1, 1983), passim, and Donald Dennie, ed., "Aspects of Ethnicity in Northeastern Ontario," LUR 15 (November 1982), passim.

¹² Krats, 107-44, 159-89; Oiva Saarinen, "Finns in Northeastern Ontario with Special Reference to the Sudbury Area," LUR 15 (November 1982): 48-51; Stefura, 58-59; idem, "Ukrainians in the Sudbury Region," Polyphony 5 (1, 1983): 74-76; Vapaus, 7 March 1922, 8 December 1925; Sudbury Star; 18 February 1925, 5 February 1927, 23 June 1928, 22 April, 2 December 1931.

¹³ The quote: Sudbury Star, 28 May 1930. See also *ibid.*, 22 April 1931; Northern Miner, 16 May 1929.

¹⁴ Charles Dorion, The First 75 Years: A Headline History of Sudbury, Canada (Ilfracombe, Devon: Arthur H. Stockwell, 1959), 102; John H. Macdonald, 50 Years of Rotary Service to Sudbury and District, 1924-1974 (Sudbury: Rotary Club, 1974). The local newspaper regularly carried reports of "Canadians" enjoying sporting or entertainment events put on by immigrants. For example: *ibid.*, 8 September 1923, 20 June 1928.

¹⁵ Donald Dennie, "The British in Northeastern Ontario: The Ubiquitous Minority," LUR 15 (November 1982): 72-74, 77-78; Sudbury Star, 15 March 1924; Ontario, Report of the Women's Institutes of the Province of Ontario, 1918, 17; 1924, 15.

¹⁶ Robert Choquette, La foi: gardienne de la langue en Ontario, 1900-1950 (Montreal, Les éditions Bellarmin, 1987), 121, 146; Seguin, 110-11; Raymond, 24; J.-Raoul Hurtubise, "Les écoles bilingues de Sudbury," Documents historique 28 (1954): 32-33; 37, 41; Guy Courteau, "Le docteur J.-Raoul Hurtubise, m.d., M.P., (1882-1955): 40 ans de vie française à Sudbury," ibid., 58-60 (1971): 73-79; Gaëtan Gervais, "Les franco-Sudburois, 1883-1983," Polyphony 5 (1, 1983): 23-24; Sudbury Star, 25 March 1925; Toronto Star, 27 September 1927.

¹⁷ Sudbury Star, 28 March 1925. On the KKK: ibid., 25 October 1925, 28 April 1926.

¹⁶ Ibid., 1 December 1929. See also ibid., 30 August 1922, 2 May 1925.

¹⁹ Canada, Official Report of Debates, House of Commons, 1929, 19-20 Geo V., Third Session - Sixteen Parliament, vol. 2, 25 April, 8 May 1929, pp. 1919, 1967, 2354; Sudbury Star, 5 January 1929, 2 August, 25 October, 1, 5 November, 17 December 1930, 25 February 1931.

²⁰ Canada, Annual Report on Co-operative Associations in Canada, 1929, 33; 1930, 43; 66; 1931, 45, 78; Canadian Co-operator (Brantford), August 1931, 10; September 1933, 31; January 1934, 13; July 1935, 10-11; G.R. McPherson, "The Search for the Commonwealth: The Co-operative Union of Canada, 1909-1939," (Ph.D., diss., University of Western Ontario, 1970), 498 n.3, 501; Krats, 73-76; Anna Celli, "Italian Time Line," Polyphony 9 (1, 1987): 44; Mary Stefura, "The Ukrainian Co-operative Movement in Sudbury," ibid., 2 (1, 1979): 45-46; Vapaus, 17 February 1923, 4 August 1925, 6 April, 21 July 1926, 13 April, 6 May 1927, 23 December 1929; Sudbury Star, 24 March 1923, 12 September 1931, 30 March 1932; Vapaa Sana, 28 April 1934.

²¹ Totals compiled from Canada, Labour Organization in Canada, 1923-32. On the local Labor Council: ibid., 1930, 79; 1936, 66, 219; Sudbury Star, 1 June 1932.

²² Canada, Labour Organization in Canada, 1924, 112; 1925, 114; 1926, 123; 1927, 130; 1928, 121; 1929, 121; 1930, 103, 116, 118, 120, 125-26, 207, 219, 229; 1931, 106, 130, 229; 1932, 39, 87, 98, 111, 120; "Report of the Fifth Convention of the Lumber Workers Industrial Union of Canada... 1929," Canadian Communist Party Records, Ontario Attorney General Files, Public Archives of Ontario (hereafter CPC Records), RG 4 D-H-1 LAOII0; "Lumber Workers Industrial Union of Canadian Vuosikertomus... 1929-30," (LWIU Annual Report), ibid., RG4.D-1-1 22 IO541; Labour Gazette, 27 (October 1927): 1046; 27 (December 1927): 1296; Livo Ducin, "Unrest in the Algoma Lumbercamps; The Bushworkers' Strikes of 1933-34," 50 Years of Labour in Algoma: Essays on Aspects of Algoma's Working Class History (Sault Ste. Marie: Algoma University College, 1978), 79-99; Sudbury Star, 29 March, 6 September 1922, 14 June 1924, 23 June, 20 October 1928; Vapaus,

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²⁴ Canada, Labour Organization in Canada, 1930, 163; 1932, 87; 1933, 91; 1934, 196; Labour Gazette, 29 (September 1929): 1021; Ian Angus, Canadian Bolsheviks: The Early Years of the Communist Party of Canada (Montreal: Vanguard Books, 1981), 310-11; Vapaus, 17 April 1928, 23 October 1930; Sudbury Star, 22, 25 October 1930. The CPC Records and the files of the FOC contain much additional information.

²⁵ Mike Solski and John Smaller, Mine Mill: The History of the International Union of Mine, Mill and Smelter Workers of Canada Since 1945 (Ottawa: Steel Rail Press, 1984), 102-09; John B. Lang, "'A Lion in a Den of Daniels': A History of the International Union of Mine Mill and Smelter Workers in Sudbury, Ontario 1942-1962," (M.A. diss., University of Guelph, 1970); Robert P. Horne, "Disappointment to Euphoria: A History of the International Union of Mine Mill and Smelter Workers in Sudbury 1936-1944," (B.A. diss., Laurentian University, 1981); TLC, Report (1936): 74, 182; (1937): 89, J.T. O'Connor, "Nickel Magnates Fight Union Effort in North," Social Forum (February 1937), 1.

²⁶ Canada, Labour Organization in Canada, 1926, 208, 214; 1928, 248; 1930, 183; 1931, 198; Krats, 140; Workers' Unity, June 1932, 15; Sudbury Star, 29 March, 1 April 1922, 1 April 1925, 22 February, 1, 5 November 1930, 25 February, 23 September 1931.

²⁷ This brief analysis based on election results reported in Canada, Return on the General Election... for the House of Commons of Canada (title varies) 1887-1935, and Ontario, Return From the Record of the General Election to the Legislative Assembly 1885-1934. Voting results drawn from the federal ridings of Nipissing, Algoma and Timiskaming South and provincially, from Algoma, Algoma East, Algoma-Manitoulin, Manitoulin, Nipissing, Nipissing West, Sturgeon Falls and Sudbury ridings. Unfortunately the imprecise and constantly changing polling divisions hinder detailed analysis of voting patterns. Two studies of local election results are: Jean-Claude St.-Amant, Robert Dupuis and Yves Tassé, "Les élections fédérales dans la ville de Sudbury (1887-1974)," Documents historique 67 (1977), 4-24; and Lennard Sillanpää, "The Political Behaviour of Canadians of Finnish Descent in the District of Sudbury," (Licentiate diss., University of Helsinki, 1976).

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³¹ Canada, Statutes, 1924, 14-15 Geo. V, c. 63; *ibid.*, 1933, 23-24 Geo. V, c. 54.

³² Canada, Canada Official Postal Guide, 1927, 1928, 1934; *idem*, Report of the Royal Canadian Mounted Police, 1931-32, 141; Higgins, 37; Sudbury Star, 12 February 1930.

³³ Ontario, Statutes, 1925, 15 Geo. V, c. 7, sch. A; *ibid.*, 1933, 23 Geo. V, c. 56, sch. A; *idem*, Annual Report of the Commissioner of the Ontario Provincial Police, 1922, 8, 10; 1923, 9; 1930, 10; *idem*, Report of the Minister of Public Works for the Province of Ontario, 1931, 60; *idem*, Annual Report of the Inspector of Prisons and Public Charities upon the Hospitals and Charitable Institutions of the Province of Ontario, 1923-31; *idem*, Inspector of Prisons, 1923-31. The Public Accounts provide detailed lists of provincial expenditures.

³⁴ Ontario, Schools and Teachers in the Province of Ontario, 1923-31; Sheila Prusila et al., "Vintage Schools: A Preliminary Survey of Schools Operating in the Sudbury Basin 1880-1930," unpublished manuscript, 1981, Regional Room, Sudbury Public Library (hereafter SPL).

³⁵ Ontario, Bureau of Municipal Affairs, Municipal Statistics, 1923-32. On Dowling see *ibid.*, 1923, p. 33.

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³⁷ Ontario, Municipal Statistics, 1923-32; Canada, Census of Canada 1931, vol. 2, Tables 21, 33, 42, pp 217, 426-27, 632-33; Bradstreet, Commercial Ratings, January 1932, 71; Seguin, 62; Sudbury Star, 16 February 1927; Financial Post, 17 June 1927.

³⁸ Canada, Census of Canada, 1931, vol. 2, Tables 21, 33, 42, pp 217, 426-27, 632-33; vol. 10, Table 12, p 544; vol. 11, Table 9, 272; Bradstreet, Commercial Ratings, January 1932, 62; Underwriters' Survey Bureau, Capreol, Ont. District of Sudbury (Toronto: The Bureau, 1924), Scale 1 inch = 50 feet; Colin Clay, "Capreol and Surrounding Area," Historic Sudbury 1 (1970): 42-61; Sudbury Star, 18 November 1925, 11 September 1926, 20 November 1929; Financial Post, 2 October 1925, 17 June 1927, 5 October 1928, 10 October 1931. The quote is from *ibid.*, 17 June 1927.

³⁹ Bradstreet, Commercial Ratings, January 1932, 88; Sudbury Star, 19 March, 19 May 1924, 10 February, 3 March, 19 May 1926; Saturday Night, 13 December 1930. For year-to-year coverage see especially: Ontario, Annual Report of the Ontario Department of Mines (hereafter ODM).

⁴⁰ Even if the Errington had been a success, Bradley was unlikely to prosper: officials at Treadwell-Yukon had decided against the installation of a company town. ODM (1928): Part I, p. 159; (1929): Part III, p. 42; Sudbury Star, 4 June 1927; Financial Post, 17 June 1927; Canadian Mining Journal 49 (22 June 1928): 512.

⁴¹ The ODM provides the most information. See also: Bradstreet, Commercial Ratings, January 1932, 127, 205, 548; INCO Triangle 1 (December 1936): 3; Gilbert Stelter, "Community Development in Toronto's Commercial Empire: The Industrial Towns of the Nickel Belt," LUR 6 (June 1974): 11, 14, 40-41; Sudbury Star, 11 December 1926, 5, 8 October 1927; Financial Post, 17 June 1927; Northern Miner, 6 March 1930.

⁴² ODM (1930): part I, 138; (1931): Part I, 106; Engineering and Mining Journal 127 (20 April 1929): 16; 128 (10 August 1929): 223; 128 (21 September 1929): 489; 128 (26 October 1929): 673; Sudbury Star, 7 November 1928, 24 April, 7 August, 16 October, 23 November 1929, 1 February, 19 April 1930; Northern Miner, 1, 15 August, 26 December 1929, 6 March 1930; Financial Post 8 August, 19 December 1929. On Happy Valley: Oiva Saarinen, "Single-Sector Communities in Northern Ontario: The Creation and Planning of Dependent Towns," Power and Place: Canadian Urban Development in the

North American Context eds., Gilbert Stelter and A.F.J. Artibise (Vancouver: University of British Columbia Press, 1986), 245.

⁴³ Canada, Census of Canada, 1931, vol. 2, Tables 21, 33, 42, pp. 217, 426-27, 632-33; Ontario, Municipal Statistics, 1923-32; Canadian Annual Review (1929-30): 768-69; Labour Gazette 25 (June 1925): 551; 29 (August 1929): 849; Sudbury Star, 12 September, 3 October, 10 November 1923, 12 July 1924, 28 March, 13 June 1925; Northern Miner, 6 March 1930; Saturday Night 13 December 1930.

⁴⁴ INCO Triangle 34 (October 1974): n.p.; Higgins, 104; Photograph Archives, SPL, Accession no. 607; Sudbury Star, 25 January, 26 March 1930.

⁴⁵ Coniston Historical Group, The Coniston Story (Sudbury: Journal Printing, 1983), 3-40, 82; Cheryl Damiano et al., A Bit of the Cliff: A Brief History of the Town of Copper Cliff Ontario 1901-1972 (Sudbury (?): Copper Cliff Museum, 1982); Canada, Census of Canada, 1931, vol. 2, Tables 33, 42, pp 426-27, 632-33; Bradstreet, Commercial Ratings, January 1932, 82-83; Vernon's Directories Ltd., Vernon's Sudbury and Copper Cliff Directory 1931.

⁴⁶ Michael Solski, "Coniston," Industrial Communities of the Sudbury Basin (Sudbury: Sudbury & District Historical Society, 1986), 50-52; Stelter, "Community Development," 14, 41-44; Ontario, Annual Report of the Railway and Municipal Board, 1933, 98-99; idem, Municipal Statistics 1923-31; Sudbury Star, 30 May 1925, 19 November 1930; Northern Miner, 6 March 1930. The quote on Little Italy is from United Church, Annual Report of the Women's Missionary Society, 1926-27, 254.

⁴⁷ Robertson, Robinson, Armstrong & Co., "Report re Books, Accounts and Vouchers of the Municipal Corporation of Sudbury," Ontario, Report of the Provincial Municipal Auditor, 1923, 248-372. The quote is from the Financial Post, 7 December 1923.

⁴⁸ The quote: Town of Sudbury, "Report to the Provincial Board of Health," 1922, City of Sudbury Archives, p.2. See also: idem, "Board of Health Minutes," 4 September 1925, 16 December 1929; idem, "Minutes of Town Council," 7 April 1924; Ontario, Annual Report of the Department of Health, 1929, 97-98; 1930, 100; 1931, 113-15; idem, Municipal Statistics 1923-32; Canadian Baptist, 15 February 1923; Sudbury Star, 13 December 1924, 10 June 1925, 19 January, 28 May 1927, 19 May 1928, 12 February, 2 August 1930; Financial Post, 17 January 1927, 16 November 1928, 19 December 1929, 25 December 1930, 26 December 1931.

⁴⁹ Town of Sudbury, "Minutes of Town Council," 7 April 1924; Ontario Municipal Statistics, 1923-32; Sudbury Star, 20 October 1926, 29 October, 19 November, 29 December 1930, 22 August, 2 September 1931; Financial Post, 19 December 1929.

⁵⁰ Edwin Higgins, The Sudbury Fire Department 1883-1976 (Sudbury: n.p., 1976(?)), n.p.; idem, Twelve O'Clock, 41-48; Financial Post, 2 October 1925, 17 June 1927, 5 October 1928, 25 December 1930, 10 October 1931; Sudbury Star, 21 April 1923, 25 July 1928; Northern Miner, 25 July 1929.

⁵¹ Town of Sudbury, "Parks Committee Minutes," 23 January 1916; Ontario, Annual Report of the Railway and Municipal Board, 1931, 41; Saarinen, "Single-Sector Communities," 234; Sudbury Star, 17 May 1923, 20, 27 February 1926, 27 April 1929; Northern Miner, 25 July 1929. For a contemporary description see: A. Graham, "The City that Nickel Built," Maclean's Magazine 1 (1 January 1936): 19.

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⁵³ For an excellent aerial photograph of Sudbury (1928) see: Kim Carbonetto, "The National Air Photo Library," Urban History Review 12 (June 1983): 71. Written descriptions include the Canadian Baptist, 15 February 1923; Sudbury Star, 28 May 1927, Financial Post, 17 June 1927. On the new excitement: ibid., 6 May, 3 June 1927; Sudbury Star, 1 June 1927, 24 March 1928.

⁵⁴ Ontario, Annual Report of the Department of Labour, 1928, 29; 35; 1930, 33-34; Antonio Presenza, "Sudbury: Pattern of Urban Growth 1883-1941," unpublished paper, Laurentian University, 1971, p. 20; Sudbury Star, 28 May, 4 June 1927, 9 May, 15 June, 11 August, 26, 29 September 1928, 20 March, 25 July 1929, 15 February, 2, 9, 23 April, 24 September, 6 December 1930, 26 August, 19 December 1931; Financial Post, 16 November 1928; Northern Miner, 27 June, 19 September 1929, 27 March 1930. The quotes are from: Sudbury Star, 24 March 1928; Saturday Night, 31 August 1929.

⁵⁵ Financial Post, 19 December 1929. Also: ibid., 16 November 1928; Northern Miner, 27 June, 25 July, 19 September 1929, 27 March, 7 August 1930; Saturday Night, 31 August 1929; United Church, Year Book, 1930, 181.

⁵⁶ Canada, Census of Canada, 1931, vol. 10, Table 12, p. 544; Bradstreet, Commercial Ratings, January 1932, 374-77; Judith Topham, "Sudbury: Growth and Development, 1920-1940," (B.A. diss., Laurentian University, 1981), 28, 36, 47, 54, 78-80; Leslie Roberts, "Sudbury Looks to the Future," Maclean's Magazine 44 (15 March 1931): 50; Financial Post, 27 May 1927, 16 May 1928; Northern Miner, 20, 27 June, 25 July 1929, 27 March, 11 September 1930; Sudbury Star, 29 April, 13 December 1931.

⁵⁷ Canada, Census of Canada, 1931, vol. 2, Table 33, pp 426-27. For an introduction to Sudbury's ethnic communities see: Dennie, ed., passim, and Stefura, ed., passim. On the Flour Mill: Claire Pilon, Le moulin

à fleur (Ottawa: n.p., 1983); Gilbert Stelter, "Use of Quantifiable Sources in Canadian Urban History," Urban History Review 1 (February 1972): 16-18. The high cost of living -- behind only Cobalt and Timmins in Northern Ontario -- is noted in: Sudbury Star, 20 August 1930.

⁵⁸ Canada, Census of Canada, 1931, vol. 5, Table 37, pp. 677, 679, 681, 683; Denis Charette, Donald Dennie and Lucie Lapalme, "L'évolution de la structure d'occupation de Sudbury (1931-1981)," Revue du Nouvel-Ontario 5 (1983): 33-34.

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⁶⁰ Financial Post, 17 June 1927.

⁶¹ Ontario, Statutes, 1930, 20 Geo. V, c. 102; Sudbury Star, 29 January, 26 February, 1 March 1930.

⁶² The quote: Sudbury Star, 6 December 1930. Also: Peake and Horne, 93, 97; Ontario, Annual Report of the Department of Labour, 1930, 33; Northern Miner, 22 May 1930; Sudbury Star, 4 June, 26 July 1930, 4 March 1931.

⁶³ Roberts, 13. On Mason's view: Sudbury Star, 12 December 1931. For a summary of the bad times: Ontario, Annual Report of the Department of Labour, 1931, 35.

SUMMARY AND CONCLUSIONS

A history of Sudbury and its hinterland, while informative in its own right, also provides insights into Northern development, metropolitanism and the rise of dependent, resource-based frontiers. What follows is a brief summary of the thesis and a glimpse at some of the theoretical issues raised by this study.

A. "LIMITLESS" NATURAL BOUNTY

Local progress was a reflection of the successful exploitation of its rich, natural bounty. First to feel the impact of this effort were the fur bearing fauna, hunted to near extinction by a hard-pressed Amerindian population. These "original peoples" retreated to Reservations after the CPR provided easy passage into the "wilderness." Lumbermen, farmers and miners were quick to arrive; their successes led to the expansion of the whole physical, administrative and socio-economic infrastructure of a fast-rising population. In just 50 years the wilderness was transformed into a modern setting, with Sudbury at the centre of a world-renowned Nickel Belt.

Mining

Fast-paced progress seemed a most unlikely prospect after the discovery that local "copper" ores were "tainted" by nickel. But Canadian Copper already had made large investments in its work; faced with financial disaster, Sam Ritchie sought out both processes and markets for the nickeliferous ores. With nickel-steel offering new hope, Ritchie found an ally in Robert Thompson of Orford, who used U.S. Navy monies to develop a new nickel-refining process. Skillful management of Canadian Copper's superior resources and Orford's technological advantages soon brought

success. The amalgamation of INCO introduced the financial and marketing might of J.P. Morgan and U.S. Steel, thereby ensuring even greater things to come.

INCO made short work of potential rivals. Closed markets and restricted finances made the establishment of large-scale operations almost impossible, and small operations were uncompetitive in an increasingly sophisticated industry. Mond Nickel was the lone exception, using independent financing, European markets and a policy of serving as INCO's useful ally to survive. With the rush to Armageddon bringing record sales, the much-strengthened nickel duopoly had little difficulty fending off both wartime nationalism and BANCO. The postwar recession, a more difficult challenge, was overcome thanks to aggressive marketing of new, commercial nickel products.

Soon both INCO and Mond achieved record sales, which financed the further expansion and modernization of their operations. Both firms, however, doubted the wisdom of side-by-side development of the Frood deposit; merger offered a more logical course. The result was a new, giant INCO, capable of total control of nickel production had it so chosen. Both Falconbridge, tiny and troubled, and the New Caledonian firms, burdened by poorer, distant ores, survived only because of INCO's calculated tolerance.

INCO's might won its shareholders great wealth -- over \$160 million -- in dividends were distributed between 1892 and 1931 -- but the Nickel Belt also received some benefits. Large mines and plants required large workforces, notwithstanding innovative technologies that increased per capita output. While local wages did not keep pace with the growing value of the nickel-copper production, INCO's might had residual economic impacts. Diamond drilling and mine supply firms brought additional local income,

while monopoly control in the nickel industry diverted speculative investment to other minerals. Firms seeking gold, iron, lead-zinc, feldspar and elusive "coal" deposits built roads, railways and sometimes communities all around the region. These mine development activities, along with the wages earned and supplies bought, were especially valuable during the periodic slumps in the nickel industry.

Slowdowns in the nickel industry, however, were comparatively infrequent, especially when compared with the volatile economies of the gold and silver camps of New Ontario. Monopoly control of the high capital nickel industry also brought order and superior living conditions to INCO's company towns, but their residents were at the mercy of fiscal or production "adjustments" introduced by that firm. Nor was there any room for anti-corporate views. As Sudbury welcomed miners and smeltermen in the Twenties, it also fell under INCO's sway.

Forestry and Farming

Even at the height of nickel-borne prosperity, however, Sudbury and its hinterland continued to look beyond the mineral industry for economic sustenance. As in much of Canada's mid-North, forestry played "midwife" to agricultural settlement, while providing a large market for goods and labour. Once improved, the lumberman's "tote" road, "headquarters", or mill site became part of the transportation and community infrastructure. But the industry was self destructive: as the pine and boreal species were cut, forestry suffered a rapid local decline. But Sudbury, thanks to its central position on the transportation lines, managed to maintain a service and supply role for more-distant forest operations.

Agriculture, meanwhile, offered some measure of economic security to many of the smaller centres rocked by the departure of the lumbermen.

Farmers first ventured into the Valley: home to half of the region's farms by 1931, it was reminiscent of Old Ontario, with a rectangular road network, crossroads agricultural villages and commercial, if technically unsound agriculture. An alternative, Shield-based agrarian sector, with farms disseminated about the rocky landscape, also proved quite productive. Success varied, of course, but the combination of subsistence and commercial farming had a very real economic and demographic impact on the Nickel Belt. Forage crops -- oats and hay -- dominated the 50 or so acres cleared on the average farm, helping to sustain a rising production of dairy and poultry products. Potatoes, too, won considerable favour among farmers because of their resistance to the omnipresent sulphur "smoke" and the strong urban markets for the tuber. Whatever the crop, agricultural settlement helped to open the region: Colonization Branch and settlers' roads were especially important. Agrarian progress also increased the local francophone and "foreign" presence; French Canadians dominated the Valley and shared the Shield areas with Finns, Poles and lesser numbers of other immigrants. Anglo-Saxon Canadians generally shunned the land despite a farm success rate nearly double the New Ontario average; instead, they sought their fortunes in urban settings..

II

COMMUNITY PROGRESS

The villages and towns scattered about the Nickel Belt were home to most local residents, who both demanded and necessitated improved transport and communications, administration, and social and commercial services. The gains made in these fields, and Sudbury's central role in those accomplishments, helped to determine the pattern and rapidity of progress in the Nickel Belt.

Transport and Communications

Improved means of moving people, goods and information were crucial to regional advance. Construction of the CPR and its telegraph line suddenly created a considerable pocket of civilization within a wilderness. The decision to establish a railway junction at Sudbury -- the first of many outside decisions of critical importance to the locality -- defined area transport axes. Rail service also facilitated the exploitation of local resources; shorter lines -- notably the Sudbury-Copper Cliff Suburban -- provided local travel options. Beyond moving goods and people, the railways determined local settlement patterns. Stations became nodes of settlement, their roles reinforced by telegraph and mail services. Ever so slowly, the CPR's tote roads were transformed into Trunk Roads; telephone and hydro-electric lines later retraced these paths. The transit services, too, ignored the countryside and focussed their attentions on Sudbury and Copper Cliff. Of course, comparable improvements on a larger scale placed the Nickel Belt in the hinterland of Montreal, Toronto and international centres.

Administration and Services

The effort to provide order, though benefitting from improvements to the transport and communications media, nonetheless imposed varying burdens and achieved mixed results across the Nickel Belt. Unorganized townships could do little; meanwhile, municipal improvement became the central topic at township and town councils' meetings. But fiscal and administrative shortfalls rarely left enough funds to enable significant gains. Even Sudbury's town fathers struggled to find an effective balance between superior services and civic insolvency. "Company towns", in contrast, introduced services comparable with those in Sudbury; infusions

of planning and cash from the sponsoring firms left company town residents with tax rates that were the envy of their regional neighbours.

Still, everywhere there was progress, for local monies and effort were supplemented by and from the senior levels of government. By 1931, education, the mails, and improved roads, along with some level of judicial and public health administration were available to nearly everyone; substantial numbers also enjoyed the benefits of utilities, sanitation and sundry social services. For those without, there was some consolation in recognizing that the level of outside-imposed "control" and taxes was inversely proportional to the level of services.

Society

Notwithstanding the extraordinary gains, many aspects of everyday life remained beyond the ken of the public sector. Fortunately, local society made forward strides of its own. First came the diligent pioneers. Though clerics won the loudest acclaim, the organizers of the early lodges and the first tavern owners played no small parts in transferring Southern society to the Nickel Belt. Not surprisingly, work was directed at the largest centres; the Churches worked most widely but even they focused the bulk of their attentions on Sudbury.

Continuing prosperity and population accession prompted the emergence of more numerous and diverse social activities. While the various denominations fared reasonably well, more and more secular institutions arose. Taverns and "houses of ill-repute", lodges of every sort, "ethnic", "national" and "class" oriented societies all sought their respective clientele. Diversity, naturally enough, brought tensions and clashes between groups; still, various recreational, sporting and political associations sought

general support. Much was accomplished: by 1931 the Nickel Range and especially Sudbury, featured a social base comparable to many far older and more heavily populated regions.

The Communities

Plainly, there was a profound dichotomy between urban and rural life in the Nickel Belt, with the urban dweller much the better off. That better standard of living, in conjunction with the heavy manpower requirements of the resource industries and the railways, gave the Nickel Range the predominantly urban character so characteristic of the North.

During the frontier era, the communities of the Sudbury area reflected the dual influences of the CPR and resource exploitation. Arbitrarily located CPR stations formed the foci for villages, their railway functions being supplemented by commercial and service roles. Those stations with relatively bountiful hinterlands fared best; a half-dozen communities emerged. Thanks to its initial and locational advantages, Sudbury took the lead. That advantage became self-perpetuating: clerics, administrators, merchants and others used the centrally placed village as a regional base. Their attentions often focused on the numerous resource camps scattered about the area. These camps usually disappeared as quickly as they emerged, the victims of resource or corporate failure.

Gradually this urban frontier was replaced by a more stable urban setting. The lumber villages declined after the lumbermen moved on; the ramshackle mineral camps were replaced by "company towns." Copper Cliff prospered as INCO sponsored major improvements; Mond Nickel replaced an aging and poorly situated Victoria Mines site with the modern, planned village of Coniston. Similarly, by the First World War, various mining centres -- Creighton, Crean Hill, Sellwood and Levack -- were a far cry

from the rough -and-tumble circumstances still prevalent at Cobalt or other New Ontario mining camps. Capreol, yet another company town, made great strides under the watchful eye of CNR officials.

The consolidation of mining and railway activities in a few, superior locations had dire consequences for the mixed-function communities spread along the CPR line. All but Chelmsford suffered steep declines, falling prey to the company town or, more often, the fast-extending reach of Sudbury. That town made rapid gains thanks to the prosperous regional economy, improved transport and communication media that extended the reach of its businesses and services, and, not least, its designation in 1907 as the District seat. A four-fold population increase (1901-21) propelled a major building boom that lifted Sudbury well beyond all other local centres both in size and sophistication.

That trend, once established, continued in the Twenties. The once-flourishing railway villages dwindled to insignificance, while the company towns stagnated at a size deemed suitable by company administrators. On the other hand, the ongoing improvements in transportation, communications administration and social services wrought great changes in Sudbury. By 1930 the newly incorporated city, home to over 20,000 persons, was the bustling, well-serviced metropolis of the Nickel Belt. Pride of place led Sudburians to ignore the increasing vulnerability of the civic economy: by 1931 Sudbury was virtually dependent upon INCO. The Great Depression would sorely test the pride associated with having become the Nickel Capital of the World.

III

THEMES AND THEORETICAL ISSUES

Study of the Nickel Belt's advance -- in the mines, forests and fields -- and the concurrent failures raises important questions concerning "progress."¹ The Sudbury area was a difficult frontier: the "boom and bust" cycles of the resource economy made outside aid, both public and private, a requisite part of local progress. Yet individual enterprise and even fortuitous circumstance also came into play: the near-simultaneous conjunction of ore discoveries, metallurgical advances and Sam Ritchie's enthusiasm is but one example. Moreover, the very notion of "progress" must be viewed skeptically: the "sacrifice" of the Amerindians, resource workers and the environment on the "altar" of progress raises serious doubts as to the rightness of development.

The Nickel Belt shared the "costs" of progress with all of Northern Canada. Little wonder: it lay well within the North in 1880. By 1930 the region was part of the provincial ecumene, but its outer flanks remained undeveloped. Continuing attempts to exploit this fringe provided an example of the "perpetual frontier" -- development spreading in a pattern resembling a series of concentric circles -- so characteristic of the North.² Similarly, there was no mistaking the Northern quality of local dissatisfaction with Southern administration.

That unhappiness reflected the overwhelming control exercised over the Sudbury area by Southern governments and corporations. Local communities, especially Sudbury, served as conduits for these outside forces, which more often than not ignored local wishes. Even the so-called "positive state" -- the attempts to impose domestic nickel refining, for example --

drew harsh local criticism, for such actions seemingly threatened the very lifeblood of the Nickel Belt. Similarly, outside critiques of the nickel cartel drew little local support. Instead, Sudburians usually applauded INCO's successes, much preferring the local income generated by a successful foreign firm to the uncertainties of nationalist schemes.

Little wonder: Sudbury made great strides thanks to the exploitation of its hinterland. Sudbury's rise, in fact, is an excellent example of the evolution of a regional metropolis. Yet N.S.B. Gras' model falls short of explaining local circumstances.³ Sudbury did parlay its initial and locational advantages into a regionally dominant marketing, financing and manufacturing role; however, the town failed to achieve full metropolitan status. Instead, the influx of miners and smelters in the Twenties caused a rapid reversal in the urban process. Even as growth and commercial diversification reached new heights, Sudbury degenerated to "colonial" dependency on INCO.

That dependency gave Sudbury new common ground with the communities that lay scattered about the Nickel Range. Numerous communities, ranging from hamlets to towns, looked to the resource industries or the railways for economic sustenance; Sudbury or the senior governments provided social and civic services. How is one to categorize these centres? The villages and camps fell short of the statistical measures "defining" urban centres; surely, however, Whitefish, Murray, Creighton, Levack, Coniston or Capreol were not rural. These and other local communities displayed urban (if unpolished) streetscapes, a level of services far surpassing that of the countryside, and a blend of commercial and social institutions that attracted nearby farmers and lumbermen. Many residents, meanwhile, displayed a pride of place reminiscent of the boosterism of Western Canadian towns.

In short, study of the smaller local settlements shows the need for a better understanding of the small, yet distinctly urban places so common on the Canadian landscape.

Unfortunately, most observers have ignored these centres or simply emphasized their dependency. That dependent status, and the devastated local ecology, have made the Nickel Belt a favourite target for latter-day Canadian nationalists. For the most part, however, their complaints about weak regulatory responses or the nickel monopoly miss the point. So, too, do Marxist critiques of the stifling of the workers by the forces of full-capitalist industrial mining. The suppression of workers' "rights", so evident among the nickel firms merely reflected the attitudes of the day. Besides, the litanies of failed unions hints that most local workers concentrated on improving their own lot. Ontario's "benign neglect", meanwhile, was a natural consequence of earlier North Shore failures and an unyielding belief in "limitless" resources. Lax regulations did permit the rapid acquisition of mineral properties, but several failed firms held more than enough deposits to sustain full-scale operations. Unlike INCO or Mond, however, no Canadian firm displayed the finances, strong management, efficient processing and market development capacity necessary to become an effective nickel-producing firm.

INCO's success, in fact, is an interesting variant to staples-led development. Briefly put, INCO created a staples industry rather than exploiting an existing market. In any event, the staples thesis alone does not adequately explain local events: the notion of provincial "empire building" adds to an understanding of the Nickel Belt's rise. Ontario's "positive state", an early exercise in province building, provided much aid for local services, transportation and agriculture; nickel production

was left, perhaps rightly, in private hands. Impositions by an outside government also bring to mind dependency theory, which proposes that the Nickel Belt was dependent on far-distant governments and corporations for aid and direction. While there is merit in this view, the unfailingly critical outlook of the dependency theorists downplays the positive side of the relationship. Dependent, metropolitan-directed development, while an anathema to many modern observers, had by 1931 produced a prosperous region of over 30,000 souls boasting a commercial agricultural base, a complex series of urban centres, roads and railways and, of course, a world class mineral industry. Notwithstanding the very real shortcomings described by dependency and "politics of development" theorists, could much more have been accomplished in just 50 years?

That dependency, staples and province-building themes all help to explain local development is no accident. All are variations of the metropolitan-hinterland approach that provides the clearest perspective on local growth.⁴ One of the strengths of that approach is its capacity to explain both positive and negative development. The latter are all too evident; southern administrators and corporate heads paid little heed to the human or ecological costs of resource production. The largely unfettered progress was in sharp contract with the social order; outside imposed society and administration blunted most signs of the "liberal" frontier that Turner described.

Yet the same metropolitan forces also brought much that was good. Easily obtained lands and later aids sped the development of farming, while the urban population benefitted from services, socio-cultural opportunities and especially the employment provided by corporations, governments or Southern social institutions. These opportunities also attracted an

immigrant population whose "cultural baggage" and hard work resulted in many local gains and much cultural pluralism. Put briefly, local progress may have been directed from afar; but in 1931 there was no mistaking that a full-fledged, modern region was in place where 50 years before wilderness had prevailed.

Local history, then, is best understood as the interaction of metropolitan and local forces, with the former firmly in control. This approach is especially useful because its flexibility permits analysis of Sudbury both as a metropolitan centre and a "colonial entrepot." Though some scholars have taken umbrage at the very utility of the metropolitan approach, I would argue that its explanatory powers far outweigh concerns over its exact definition.⁵ Indeed, adaptability can be a virtue. "Historians", Bernard Bailyn has argued, "must be, not analysts of isolated technical problems from the past, but narrators of worlds in motion -- worlds as complex, unpredictable, and transient as our own."⁶ Certainly, the construction of a paradigm explaining urban-regional development on the resource frontier has not been the goal here. I have highlighted the persons and the events, the good and the bad, the commonplace and the unique, that collectively resulted in the rise of the Nickel Belt.

NOTES

¹For a further discussion of theoretical issues, with references, see the Introduction.

²A.R.M. Lower was among the first to propose a notion of "expanding circles" of development. See: A.R.M. Lower and Harold Innis, Settlement and the Forest and Mining Frontiers (Toronto: Macmillan, 1936), 58.

³N.S.B. Gras, An Introduction to Economic History (New York: Harper & Brothers, 1922).

⁴Derek Hum and Paul Phillips, "Growth, Trade, and Urban Development of Staple Regions," Urban History Review (UHR) 10 (October 1981): 13.

⁵Donald Davis, "The 'Metropolitan Thesis' and the Writing of Canadian Urban History," UHR 14 (October 1985): 95-113.

⁶Bernard Bailyn, "The Challenge of Modern Historiography," American Historical Review 87 (February 1982): 24.

MAP I

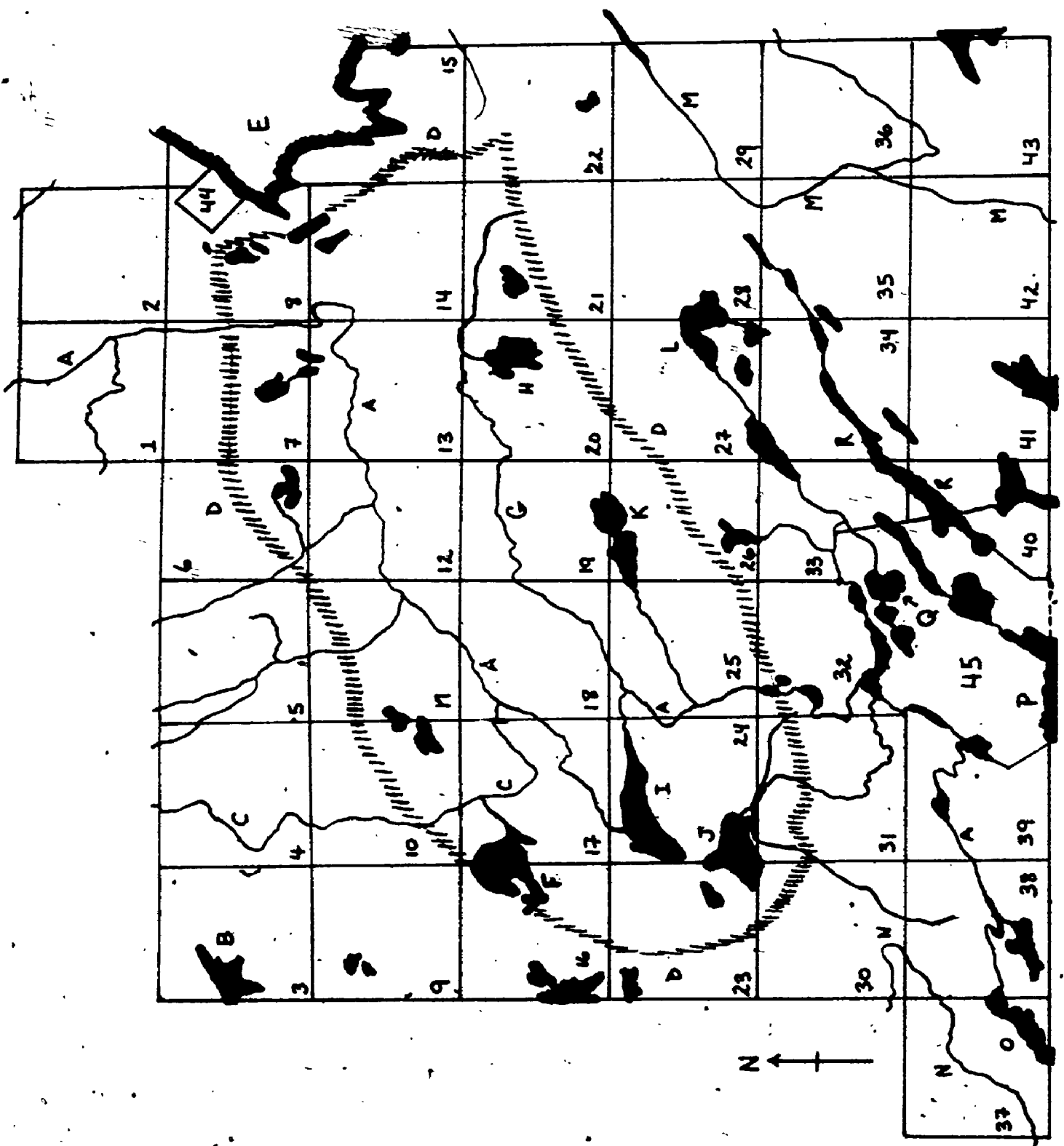
TOWNSHIPS AND PHYSICAL FEATURES

Townships

- | | | |
|--------------|------------------|--|
| 1. Hutton | 17. Dowling | 33. Waters |
| 2. Parkin | 18. Balfour | 34. Broder |
| 3. Hess | 19. Rayside | 35. Dill |
| 4. Harty | 20. Blezard | 36. Cleland |
| 5. Foy | 21. Garson | 37. Nairn |
| 6. Bowell | 22. Falconbridge | 38. Lorne |
| 7. Wisner | 23. Trill | 39. Louise |
| 8. Norman | 24. Fairbank | 40. Eden |
| 9. Cartier | 25. Creighton | 41. Tilton |
| 10. Levack | 26. Snider | 42. Secord |
| 11. Morgan | 27. McKim | 43. Burwash |
| 12. Lumsden | 28. Neelon | 44. Wanapitei Lake Indian Reserve (No. 11) |
| 13. Hanmer | 29. Dryden | 45. Whitefish Lake Indian Reserve (No. 6) |
| 14. Capreol | 30. Drury | |
| 15. McLennan | 31. Denison | |
| 16. Cascadan | 32. Graham | |

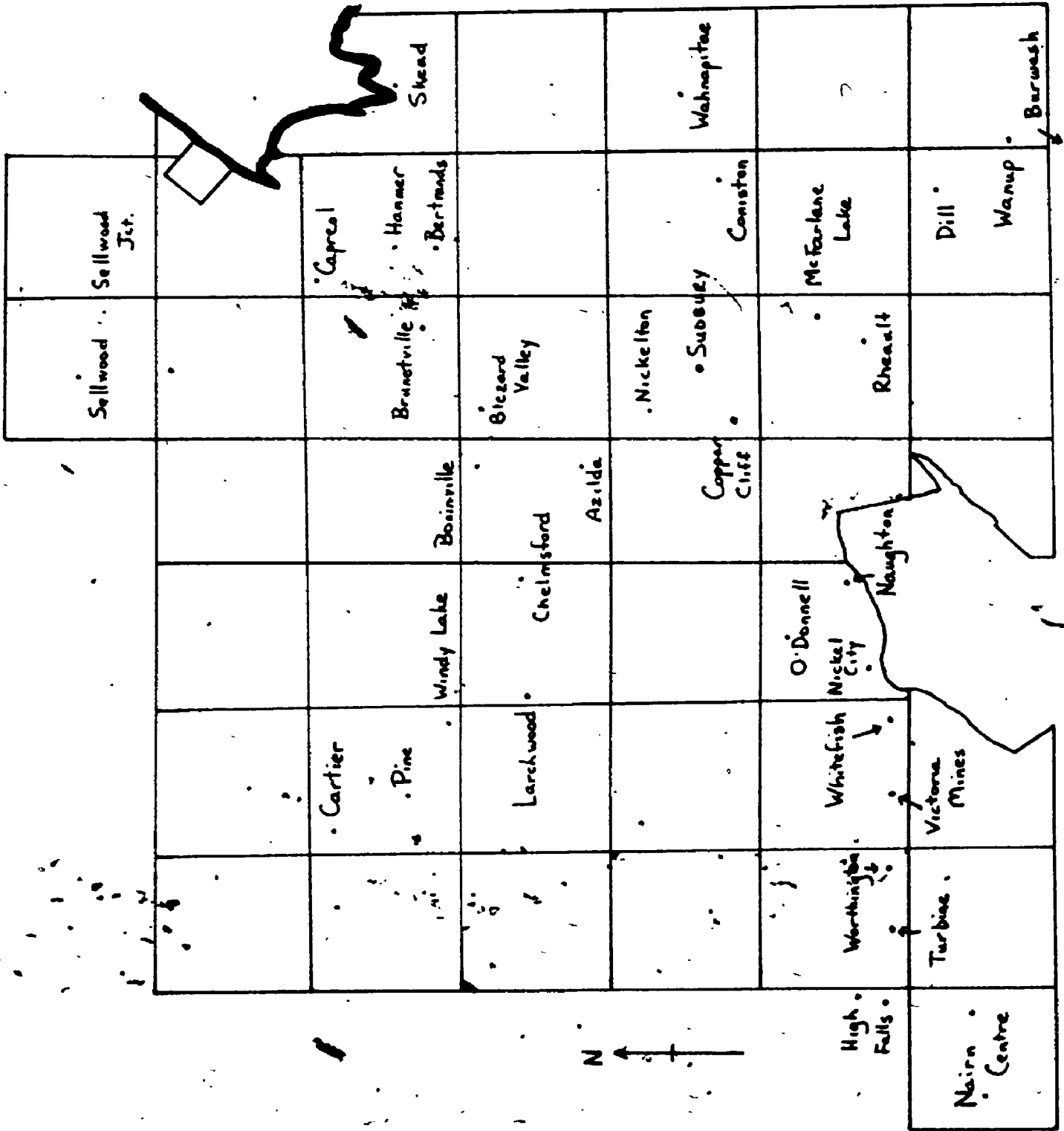
Physical Features

- | | | |
|----------------------|--------------------|--------------------|
| A. Vermilion River | G. Whitson River | M. Wanapitei River |
| B. Geneva Lake | H. Whitson Lake | N. Spanish River |
| C. Onaping River | I. Vermilion Lake | O. Wabageshik Lake |
| D. Sudbury Basin Rim | J. Fairbank Lake | P. Penage Lake |
| E. Wanapitei Lake | K. Whitewater Lake | Q. Whitefish Lake |
| F. Windy Lake | L. Ramsey Lake | R. Long Lake |



MAP I: Townships and Selected Physical Features of the Sudbury Area

Scale: 1 inch = 6 miles



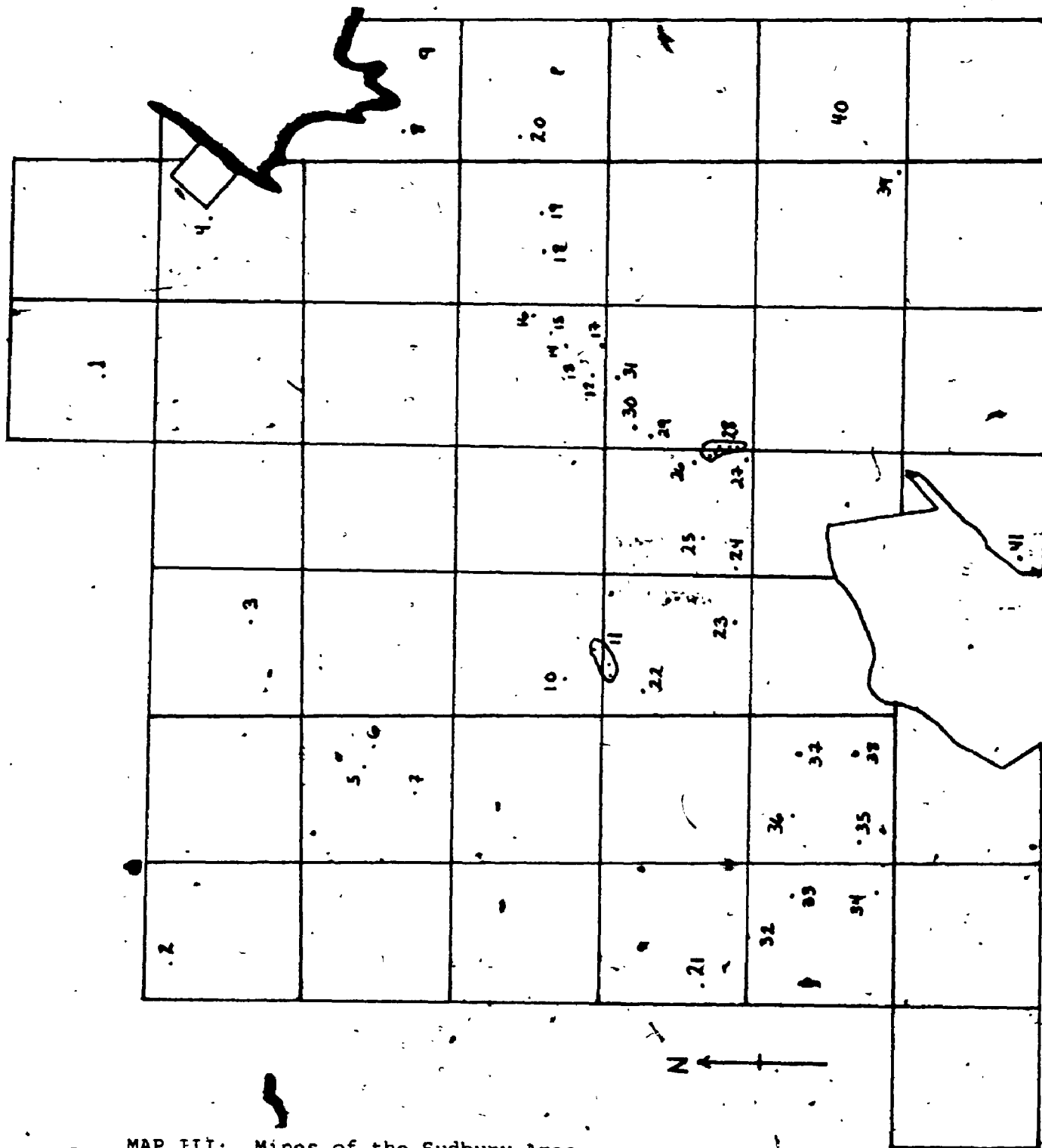
MAP II: Sudbury Area Communities

Scale: 1 inch = 6 miles

MAP III

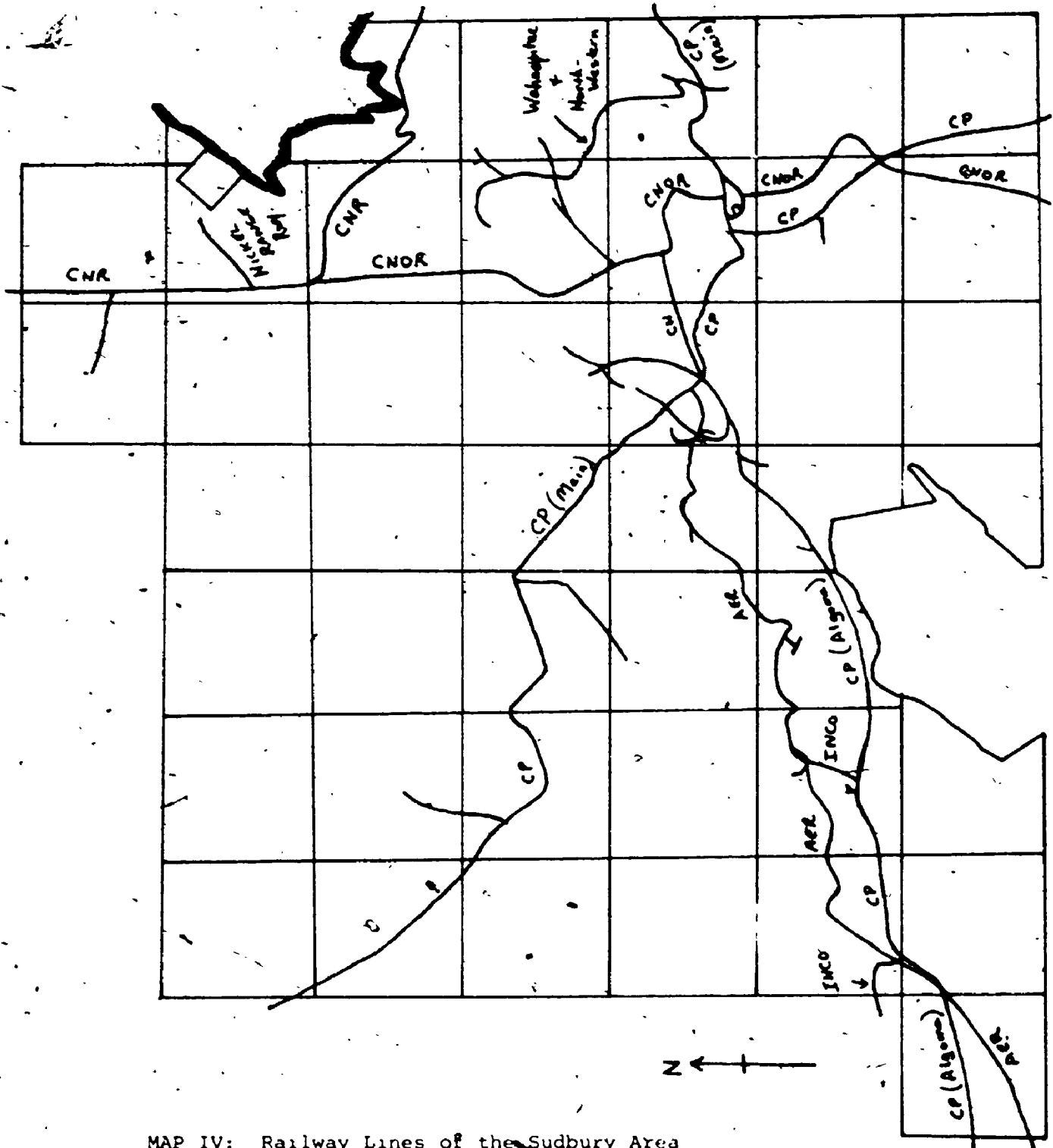
MAJOR MINES OF THE SUDBURY AREA

- | | |
|------------------------------|--|
| 1. Moose Mountain (Sellwood) | 23. Gertrude |
| 2. Geneva Lake mineral area | 24. Creighton |
| 3. Ross (Sudbury Offsets) | 25. North Star |
| 4. Whistle | 26. Lady Violet |
| 5. Strathcona | 27. Evans |
| 6. Big Levack | 28. Copper Cliff no. 1,2,4,5,6
and other pits |
| 7. Levack | 29. Elsie |
| 8. McVittie-Graham | 30. Murray |
| 9. Wanapitei Lake gold area | 31. Frood, Frood Extension |
| 10. "Coal" area | 32. Sultana |
| 11. Errington | 33. Chicago |
| 12. Cameron | 34. Worthington, Mitchener, Totten |
| 13. Little Stobie | 35. O'Connor, Robinson, Howland,
Gersdorffite, McIntyre |
| 14. Mount Nickel | 36. Victoria (Mond) |
| 15. Bizard | 37. Crean Hill |
| 16. Sheppard | 38. Vermillion |
| 17. Stobie | 39. Quartz |
| 18. Kirkwood | 40. Feldspar zone |
| 19. Garson | 41. Long Lake |
| 20. Falconbridge | |
| 21. Trillabelle | |
| 22. Creighton Gold | |



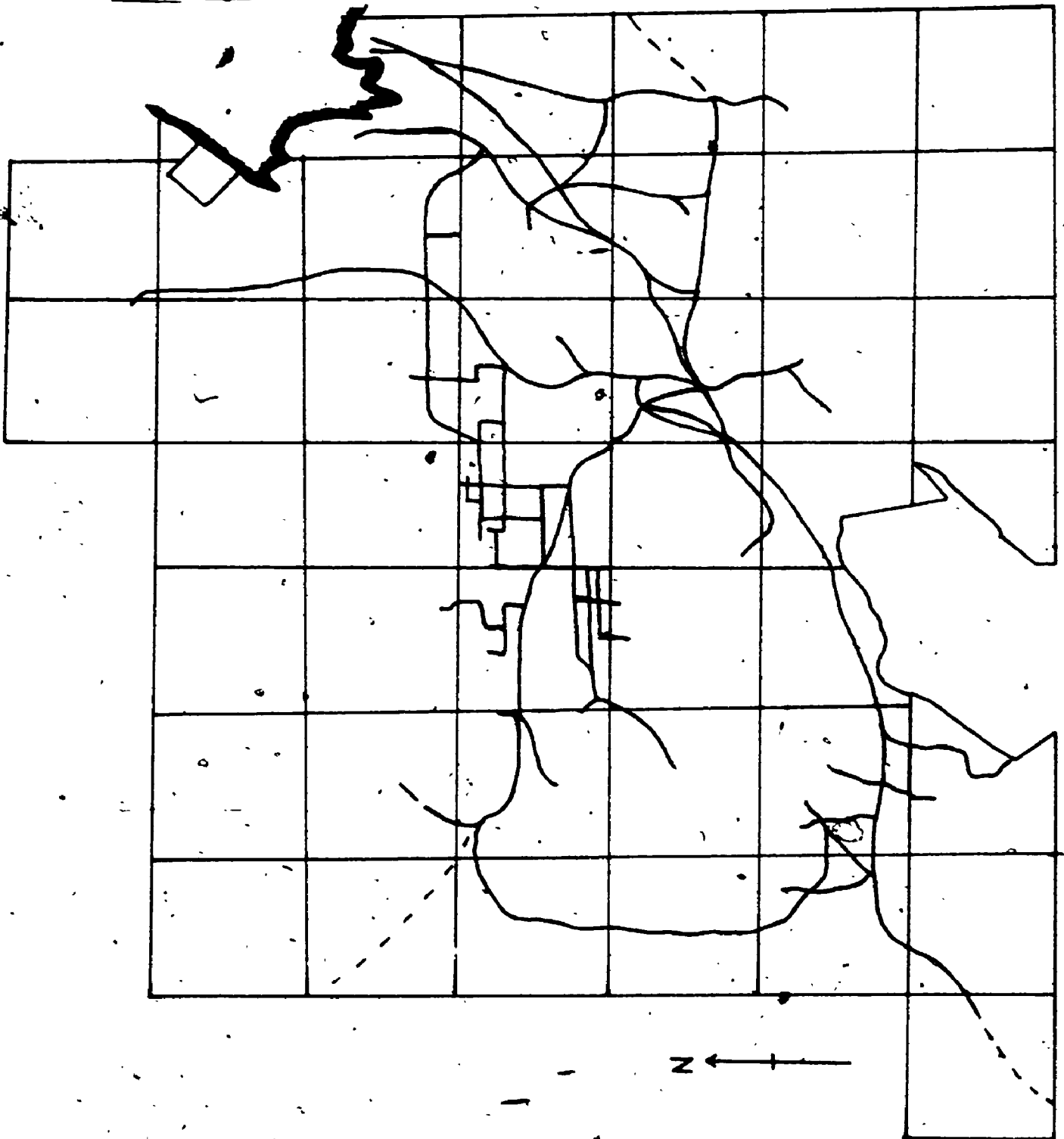
MAP III: Mines of the Sudbury Area

Scale: 1 inch = 6 miles



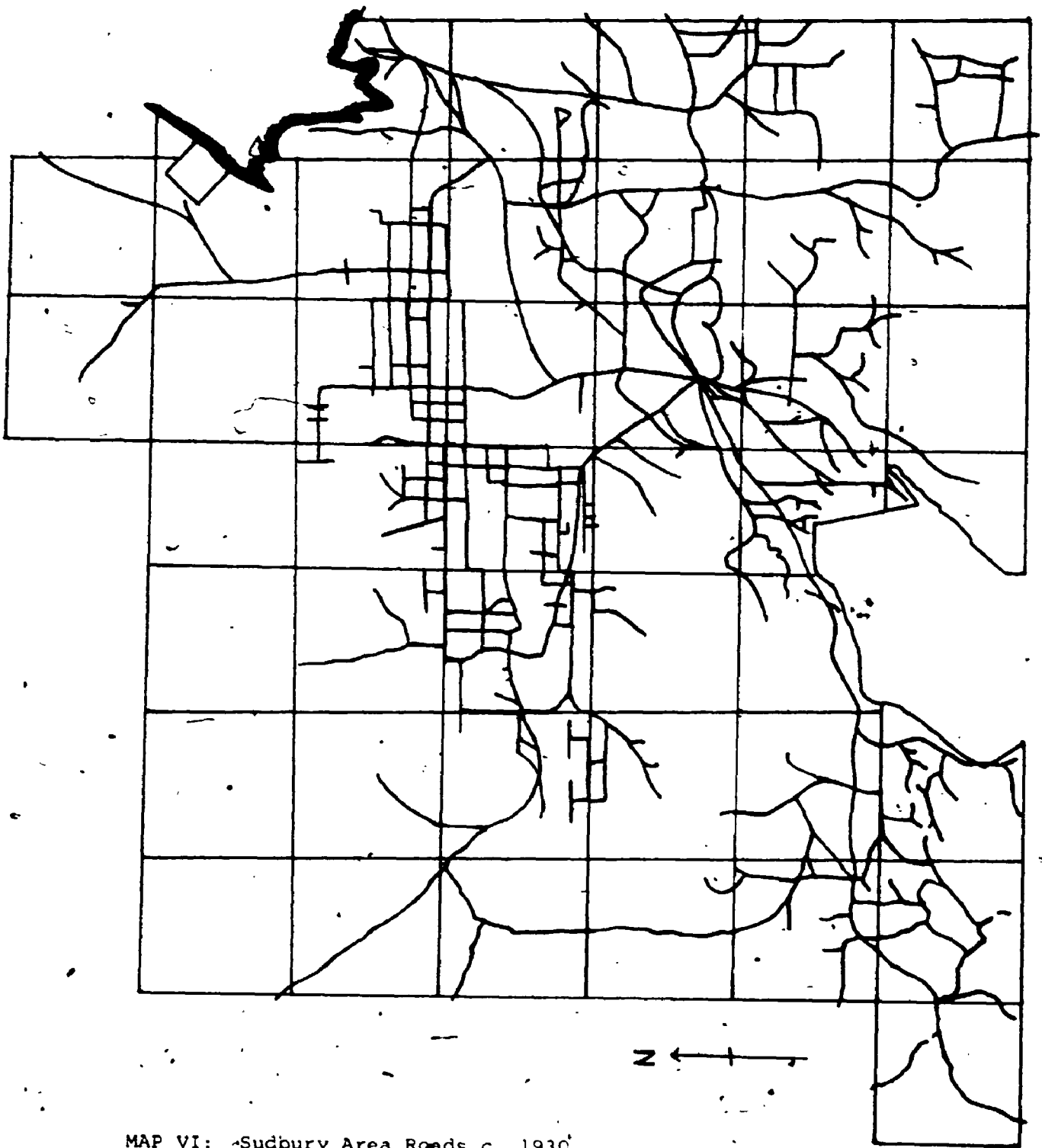
MAP IV: Railway Lines of the Sudbury Area

Scale: 1 inch = 6 miles



MAP V: Sudbury Area Roads c. 1905

Scale: 1 inch = 6 miles



MAP VI: Sudbury Area Roads c. 1930

Scale: 1 inch = 6 miles

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