

# Northwestern Ontario Gold Mining, 1880-1902

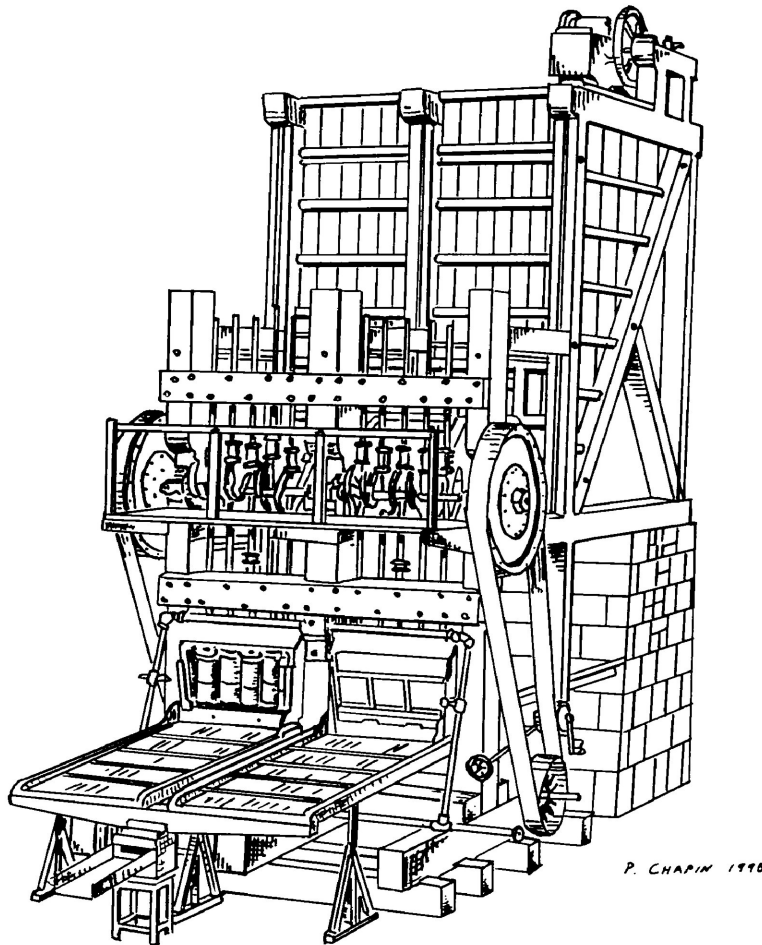
## The Gold Boom That Didn't Pan Out

by  
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Completed in Partial Fulfillment of Requirements  
for a Master of Arts Degree in History

1996

Lakehead University, Thunder Bay, Ontario



10-Stamp Battery  
Hornsby & Sons, Limited, Grantham, England  
circa 1894

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ISBN 0-612-09200-3

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## ERRATA

Page 50 in Chapter 4 states that there was no "federal strategy for mineral management until 1889." This is incorrect. By Order-in-Council dated 7 March 1884, a set of Dominion *Mining Regulations* became law "to govern the disposal of Mineral Lands other than Coal Lands."<sup>1</sup> Although the *Regulations* covered both "quartz" and placer mining, the latter clearly dominated the statute. Interesting features in the quartz mining section of the regulations included: locations could not exceed 40 acres; a quartz location could be "staked" and held free of charge for one year before it required surveying and a patent; locations had to be "proved up" to the tune of \$500 in improvements within the year's grace period; patents cost \$5/acre; and the patentee was denied "apex" privileges. General provisions of the *Regulations* included: a vague dispute resolution clause; Crown reservation of the minerals and royalties of 2½% "on the sales of the products;" mine operators were to make monthly returns to the Minister of the Interior; and local Agents could "summarily order" mine owners to make changes that would ensure their operations did "not interfere with or endanger" public safety, or other mining operations. If anything, the confusion caused by the coexistence of separate Dominion and Provincial mining regulations between 1884 and 1890 further contributed to the negative climate for capital investment during this period.

In reference to footnote 127 in Chapter 4, Barry Cottam, Ph.D., an independent researcher from Ottawa, has confirmed that "Oronhyatekha," one of the incorporators of the Gold Hills Exploration and Development Company (1897), was in fact a full-blooded Mohawk physician living in Toronto. Besides being a doctor, this individual was also a well known forester.

J.P. Williams should be added to the list of managerial personnel with previous experience outside the district (footnote 202, Chapter 5). Williams had been manager of the Ledyard gold mine near Peterborough, Ontario prior to managing the Sawbill mine in 1900.<sup>2</sup>

An incomplete citation appears in the bibliography at page 351 in the text. The *Colonist* newspaper was published in Winnipeg.

The reference on page 119, Chapter 5 (footnote 102) to the unlikely probability of the Regina mine doing a clean-up at its mill only once a month should be clarified. If the Regina's management elected to do a *total* clean-up once a month then this would have been in keeping with contemporary practice.<sup>3</sup> A total clean-up usually required five to seven hours and entailed removing the amalgam from the mortars, dies, aprons, screens, and inside battery plates. If the management was indicating that the daily apron and sluice plates cleaning would be delayed to

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<sup>1</sup>*Statutes of Canada, 1884*, Orders in Council, "Mining Regulations," pp. 71-92. This particular Order in Council was not indexed in the Statues and it was, therefore, initially overlooked by the author.

<sup>2</sup>Ontario Bureau of Mines, *Fourth Annual Report, 1894* (Toronto: Warwick & Sons, 1895), p. 234.

<sup>3</sup>Louis Janin, Jr., "The Amalgamation of Free-Milling Gold Ores," *The Mineral Industry, Its Statistics, Technology and Trade in the United States and Other Countries, 1894* (A Statistical Supplement of the "Engineering and Mining Journal"), Vol. III, (New York: Scientific Publishing Co., 1895), p. 340.

the end of the month, then such practice could be clearly seen as wasteful.<sup>4</sup>

The terms of the sale of the Sultana mine by J.F. Caldwell to the British company detailed on page 137 of Chapter 5 are incorrect. Caldwell received 225,000 vendor shares in the new company with no official cash down payment. However, it appears that the new company agreed to assume Caldwell's pre-existing mortgage on the mine for which Caldwell agreed to "deposit with the company as security" 50,000 of his shares. As the vendor, Caldwell was "paid on his account" £404 for expenses (approximately \$2,020). Another £1,307 (\$6,535) was paid out by the company for mysterious "preliminary expenses," and some of this expenditure undoubtedly also found its way into Caldwell's hands.<sup>5</sup>

Some attention should have been given in the text to the first gold discovery in Northwestern Ontario, the Huronian Mine (H1) southwest of Lake Shebandowan. This mine falls just within the "district" as defined by the accompanying map (it is located on the southwest end of Huronian Lake just south of the CN railway line near the right hand margin of the map). The discovery was made in 1871 by an Indian and the original "claim" for the property was staked by Peter McKellar of Fort William on behalf of himself and four others including the Indian. Late in 1883 a 10-stamp mill and chlorination plant was set up on the property. However, after treating only 820 tons, the operation was shut down due to lack of operating capital. The property and mill lay idle during the gold boom period.<sup>6</sup>

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<sup>4</sup>Ibid., p. 331.

<sup>5</sup>*The Canadian Mining Manual, 1901* (Ottawa: Canadian Mining Review, 1901), pp. 315-23.

<sup>6</sup>R.J. Watson, "Huronian Gold Mine, Moss Township, District of Thunder Bay," *Ontario Department of Mines Annual Report, 1928*, Vol. XXVII, Part 4, p. 120-121.

## ACKNOWLEDGEMENTS

Several individuals, organizations, and agencies have assisted in the completion of this thesis. My wife, Cathy, was responsible for much of the cartographic work involved in producing the map. Her support, both financial and moral, during this long endeavour has been invaluable and extraordinary, especially considering that our two children were born during the process. My wife's parents, Hugh and Shirley Skeldon of Bridgenorth, Ontario, have been extremely patient and they have provided considerable financial support. Their generosity and hospitality was especially helpful while I was doing research in Toronto. My parents, Jack and Dorothy Chapin of Columbia Falls, Montana, have also provided crucial funding and their encouragement has been invaluable, especially during the many personal crises we have endured along the way.

A special thanks is due to the agencies and individuals who assisted me during my research. These include the staff of the Ontario Provincial Archives in Toronto, especially Joseph Sullivan and the librarians; Ms. Roggers of York University Law Library; Reg Reeds and the staff of the Lake of the Woods Museum; Phil Eyler, an independent researcher living in Kenora; Ken Fenwick, formerly of the Thunder Bay District Geologist's Office; Charlie Blackburn and the staff of the Kenora District Geologist's Office; Peter Hall, the Kenora District Court Registrar; Ms. Heidi Bergman of the Lake of the Woods Historical Society; the staff of the Thunder Bay District Geologist's office; Luke Chabot of the National Library of Canada; and Ms. Vera Ward of the *Canadian Mining Institute*. Ginnie Taylor, Nancy Pazianos, and Lenora Randle, the inter-library loan staff of Lakehead University's Chancellor Paterson Library, have been especially helpful and *extremely* patient with my impatience in dealing with the communications problems that accompany doing research through the mail. Dr. S.A. Kissin of the Lakehead University Geology Department reviewed and corrected the geological portions of the thesis. His contributions were extremely helpful and greatly appreciated.

A very special thanks to the staff of the Lakehead Geography Department for their continued moral support and for the use of their facilities in completing the map that accompanies this thesis. The assistance of Ben Kaminski of the Lakehead University Graphics department was crucial especially during the compilation of the map insets. I am also especially grateful to my former employer, solicitor Gregg Cancade, for his patience, understanding, and flexibility during my years at graduate school.

Acknowledgment is also due to the staff of the Lakehead History Department, especially to Professor Victor Smith for his assistance in the initial research, and to my thesis advisor, Dr. Ernie Epp, whose assistance in improving the structure and organization of this thesis was invaluable. Dr. James Mochoruk of the University of North Dakota was kind enough to review my thesis and assist with the final fine tuning of the document.

**NORTHWESTERN ONTARIO GOLD MINING, 1880-1902**  
**THE GOLD BOOM THAT DIDN'T PAN OUT**

**ABSTRACT**

In 1878, gold was discovered south of Rat Portage on an island in the Lake of the Woods. After a brief flurry of development, excitement waned and Rainy River District mining progressed slowly and fitfully for more than a decade. Then, between 1896 and 1902, thousands of locations were leased or patented and hundreds of mining companies were formed. There is every indication that something really big was happening in Northwestern Ontario at the end of the last century. However, with total production amounting to less than \$1.5 million, there is also every indication that nothing big should have been happening.

This study investigates the factors that affected the development of this unusually "unproductive" gold boom. These include geography, geology, government policies, and "patterns of development." The research included with this thesis provides details for more than two hundred and thirty different "mines," two hundred companies, and more than a thousand incorporators and mine managers. Numerous photographs, tables, and graphs are also included.

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**Maps:**

**Northwestern Ontario Gold District, 1878-1902 . . . . . Back Jacket Pocket**

**Bedrock Geology of Northwestern Ontario Gold District . . . . . Back Jacket Pocket**

## INTRODUCTION: BOOM FACTORS

*For the year 1896 the total number of mining companies organized in the Province was 26, and the total amount of their authorized capital was \$15,600,000. In 1897 the number was ....a total of 140 companies, with an aggregate authorized capital of \$101,531,000, nearly all of which have been incorporated with the object of engaging in the mining business in Ontario. ...With the opportunities that are presented for mining enterprise in the northern and eastern districts of the Province, and with the spirit of venture that has seized hold of our people, the influence of so many new corporations must be noticeable in the progress of mining development during the present and succeeding years.<sup>1</sup>*

In 1878, Dr. Robert Bell, a physician and part-time geologist from Ottawa, was sent by the Canadian Geological Survey to do a preliminary geological assessment of the region around the Lake of the Woods which was involved in the jurisdictional dispute between the Province of Ontario and the Dominion. Imagine Dr. Bell's surprise when Rat Portage resident J. Dewe presented him with a quartz specimen from Hay Island containing visible traces of native gold. Assays later indicated the rock contained 37.318 oz. of gold, approximately \$653 per ton of ore (\$10 per ton was considered profitable).<sup>2</sup> After a brief gold rush and a flurry of misguided mining ventures in the early 1880's, gold mining in Northwestern Ontario fell dormant for nearly ten years. Then suddenly, beginning in 1895, thousands of mining locations were patented or leased, and more than 200 mining companies were formed to work them. Mines were opened up in every part of the district - Lake of the Woods, Lower and Upper Seine River, Manitou Lakes, Wabigoon, New Klondike (Taché), Minnitaki Lake, Eagle Lake, and Sturgeon Lake. However, the subsequent mining boom, which lasted until roughly 1902, produced significantly

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<sup>1</sup>Ontario Bureau of Mines, *Seventh Annual Report, 1897* (Toronto: Warwick & Sons, 1898), p. 14.

<sup>2</sup>Roy M. Longo, *Historical Highlights of Canadian Mining Including Canadian Personalities* (Toronto: Pitt Publishing, 1973), p. 89.

less than \$2,000,000 in gold. The obvious question is: why did this once-failed district produce a mining boom but no appreciable gold? Why did so many companies continue to purchase and develop so many apparently poor mining locations for such a lengthy period of time?

This study will endeavour to answer these questions by examining the factors responsible for producing the mining boom. These include geography, geology, public policy, and "patterns of development" or the ways promotion, market conditions, labour and technology were utilized. Fortunately, the Northwestern Ontario gold boom was large enough to produce sufficient data to make viable conclusions about these factors (as opposed to the Thunder Bay District mini-silver boom in the 1880's) but not so large as to be unwieldy (as would be the case in the Cobalt boom where more than five hundred companies were formed in one year).<sup>3</sup>

Obviously, one of the most important "boom factors" was the mineral itself. The nature of the ores and deposits determined the type of mining and the potential for successful extraction and refining of the product. Geography was also a major factor in mining booms. Proximity to supply and product consumption centres, transportation and communication facilities, and labour resources and production essentials such as water and fuel/power all affect the success of gold mining operations. Other geographical factors such as climate and even the flora and fauna can affect the success of a mining district. Patterns of development are shaped by promotion, market conditions, labour, and the application of available technology. Public policy issues affecting boom development include jurisdictional authority, law enforcement, subsidization, taxation, and even wars and foreign affairs.

The Northwestern Ontario gold boom of the 1890's broke the mould for almost every factor mentioned above. Many of the differences resulted from the fact that no placer gold to speak of was found in the district. Typically, placer discoveries led to development of lode deposits in the same vicinity, but in this case a hard rock boom was born on its own. As a

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<sup>3</sup> Harold Innis, *Settlement and the Mining Frontier*, Vol. 9 of *Canadian Frontiers of Settlement*, ed. by W.A. Mackintosh and W.L. G. Joerg (Toronto: Macmillan of Canada, 1936), p. 335.

consequence, prospecting was difficult and less local capital was available to finance exploration and development. Geographically, the district was also different from most Western mining regions. In the West the mineral was mined from mountains whereas in Northwestern Ontario the terrain was fairly flat. Although water and fuel supplies were often scarce in other mining boom districts, these essential mining elements were abundant in Northwestern Ontario. Development also did not take place in a typically remote, unpopulated region. Rat Portage and Fort Frances were strategically located fur trading posts that had become established communities and vital supply centres by the early 1880's.

The existence of two transportation systems, rail and steamboat, before the gold boom began was also unusual. Every previous precious metals rush in the United States and Canada had occurred in regions without pre-existing transportation systems.<sup>4</sup> Indeed, Kenneth Hammer's study of the Black Hills rush indicated that the rapid growth of supply and transportation systems precipitated a boom in capital and employment comparable to that of the gold mining sector.<sup>5</sup>

Northwestern Ontario's "pattern of development" factors also deviated significantly from those of most other mining booms. Typically, precious metal mining booms and rushes suffered, at least initially, from a shortage of available labour. However, the close proximity of the railway and major Indian reserves, Canada's liberal immigration policies, the collapse of the Thunder Bay district silver mines, and the economic depression of the late 1880's and early 1890's each had the potential to contribute a mass of prospective miners. Labour organization and unrest were never factors in Northwestern Ontario gold mines - a situation seldom heard of in other mining camps. The quantity and quality of Northwestern Ontario mine management personnel, however, appeared to be less than what could be expected in a typical mining boom situation. Certainly, development of the district's lode mines became an arduous task in the absence of the

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<sup>4</sup> The exception might be the Cripple Creek rush in Colorado which took place only eleven miles from an existing railway. However, development of its subsequent mining boom was contemporaneous with that of Northwestern Ontario.

<sup>5</sup> Kenneth Hammer, "Freighters and Railroads: The Growth of the Black Hills Freight and Stage Lines and Role of the Railroads," *Journal of the West* 20 (April 1981), 21-30.

fundamental placer gold capital usually available for promoting and developing hard rock mines. Without local placer capital to finance the window-dressing required to prompt investment, Ontario promoters were forced to be much more resourceful in obtaining outside funding.

Confusion in the region's administrative policies contrasted dramatically with the "wide open" locally administered American mining camps and the rapid-response, autocratic administration of early British Columbia mines.<sup>6</sup> In the American West, mining camps were allowed to administer themselves through local miners' meetings and, later, through turbulent territorial and state legislatures. Congress, at first preoccupied with trying to prevent the Civil War, then fighting it, and later reconstructing the country, could not be bothered with the expense and difficulties of administering remote mining districts. The American policy of allowing the local mining camps to manage (or mismanage) their own affairs set a precedent that Governor Douglas was eager to avoid when he sent Commissioners into the Fraser River valley in 1856 to administer Canadian justice and stave off Americanization of British Columbia. In Northwestern Ontario, however, the lack of a clearly defined western boundary with Manitoba produced a jurisdictional and political contest between Conservative Dominion and Liberal Provincial governments that was not resolved until 1889. However, contrary to American mining situations, development of the district *was* successfully delayed until after jurisdiction was settled and stable administration was in place.

Other district policy factors that were uncharacteristic of typical gold booms involved mining revenues, subsidized promotion, economic incentives and mining regulations. As a result of the declining Thunder Bay silver district, the indecision over the direction of Sudbury's development, and high aspirations for the Lake of the Woods gold mines, a Royal Commission was appointed in 1888 to study Ontario's mineral resources and mining policies. The

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<sup>6</sup>For a comparison of the different methods of administering British Columbia and American mining booms, see William J. Trimble's "The Mining Advance Into the Inland Empire: A Comparative Study of the Beginnings of the Mining Industry in Idaho and Montana, Eastern Washington and Oregon, and the Southern Interior of British Columbia: and of Institutions and Laws Based Upon That Industry." *Bulletin of the University of Wisconsin* #638, Vol. 3. (1914), 137-392.

Commission's 1890 report was directly responsible for the formation of the Ontario Bureau of Mines the following year to assist the Department of Lands in promoting the development of mining in Ontario.<sup>7</sup> The creation of a centralized mines bureaucracy at such an early stage was highly unusual, especially in comparison to the American West. However, little in the way of direct government assistance for mining development was forthcoming. In contrast to B.C. and later operations in Ontario, very few government economic incentives were provided for the development of Northwestern Ontario gold mines during the 1890's. Occasionally local subsidies were granted, but the Province and the Dominion both failed to provide any direct financial support for the expensive development of the area's mines and mills.<sup>8</sup>

Although Ontario's Liberal Government could not bring itself to become directly involved in financing district mines, it did go to extraordinary lengths to promote them indirectly. The government's unusual indirect mining incentives were intended to distract mining men from the fact that the region was never opened to claiming. Indeed, this appears to be the first case of a major mining region where prospectors *could not* secure mineral rights by simply staking and working a claim. Ontario political policies involved other irregularities. Inconsistent royalties and duties are a typical feature of Canadian mining but their application within the district during the 1890's was peculiarly vague and inconsistent. The profusion of Ontario mining laws passed during the decade was also unusual. In most cases of Western mining development, the mine owners entrenched themselves in the earliest state legislatures and severely limited changes in mining legislation for many years.<sup>9</sup>

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<sup>7</sup>H.V. Nelles, *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849-1941* (Toronto: Macmillan of Canada, 1974), p. 122.

<sup>8</sup>John Mather's Ottawa Gold Milling and Mining Company was promised a federal subsidy for the construction of a railway spur line to its Sakoose mine; however, the subsidy was never forthcoming. The Rat Portage Reduction Works was given \$10,000 by the Rat Portage town council in 1891 when the mill was supposedly completed. See chapters two and five herein.

<sup>9</sup>For an excellent description of the influence of mining companies in forming the policies of their infant State governments see Michael P. Malone's *The Battle for Butte: Mining and Politics on the Northern Frontier, 1864-1906* (Seattle: University of Washington Press, 1981) or Grant Smith's *History of the Comstock Lode, 1850-1920* (Reno: Nevada State Bureau of Mines and the Mackay School of Mines, 1943).

Several other miscellaneous factors also affected district mining development during this period. The serious depression of the 1880's and early 1890's may have contributed to a potential gold rush, but it almost certainly retarded the hard rock mining boom.<sup>10</sup> Gold mines in Cripple Creek, Colorado and Rossland B.C. as well as booming development in the Sudbury nickel district siphoned off scarce mining capital and expertise. Changes in British corporate law, the Boer and Spanish-American Wars, the Klondike Gold Rush, and the exposure of certain scandalous mining ventures also have been viewed as inhibiting mining progress in the district.

In examining what is generally viewed as the failure of the Northwestern Ontario gold mining district, the few historians who have approached the subject have laid the blame on such factors as lack of ore, lack of capital, or poor application of mining technology.<sup>11</sup> Few have recognized, however, that a significant event did occur before the district "failed." This study shows that a combination of complex factors was responsible for producing the "gold boom that didn't (and couldn't) pan out." An analysis of these factors may produce an understanding of the requirements necessary for a mining boom.

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<sup>10</sup> Watson Parker felt that times of national turbulence (such as a depression) were prerequisite for a successful gold rush (Watson Parker, "The Causes of American Gold Rushes," *North Dakota History*, 36 [Fall 1969], 336-345).

<sup>11</sup> Dianne Newell blamed the refractory nature of the ores and the lack of technology for the district's early failures (Dianne Newell, *Technology on the Frontier* [Vancouver: University of British Columbia Press, 1986], p. 87). H.V. Nelles reasoned that the reluctance of Canadian capitalists to invest crippled the district's mines (H.V. Nelles, *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849-1941* [Toronto: Macmillan, 1974], pp. 146-50).

## GEOLOGY: FINDING THE FAULTS

*On the whole, the conviction is being reached that in spite of a few fairly rich veins our gold ores are generally of low grade, though often present in amounts extensive enough to justify working on a very large scale. Fortunately all the properties developed ... prove to have essentially free milling ores, so that the cost of treatment is reduced to a minimum. ...Our energies should be directed largely to lowering the expense of mining and treating the ores, now averaging perhaps not much less than \$5 per ton; so that our large deposits of ore low in gold can be made to yield a profit.<sup>1</sup>*

Unquestionably the most significant factor determining the magnitude of a typical gold mining boom is the quality and quantity of its ores. The success of a mining district depends on enough gold ore of a sufficient quality (grade) being found in enough quantity in recoverable locations to make its removal profitable. Profitability, or the rate of recovery per ton less the cost of retrieving and refining the ore, is determined in large part by the geology of the ore deposit.

In the nineteenth century gold deposits were recognized to occur in three significant forms: placer, banket or "reefs," and hard rock.<sup>2</sup> Placer deposits were created when the processes of erosion literally extracted the gold from its original hardrock formations and deposited it in alluvial features. Placer mining involved gravitational sorting of the gold from its surrounding sedimentary materials (in a typical situation, raw gold is approximately twenty times heavier than its surrounding alluvial material). This gold was usually found in its "free" or native state and seldom required complicated milling or concentrating. Banket deposits were comprised of gold-

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<sup>1</sup> Dr. A.P. Coleman, in the Ontario Bureau of Mines (OBM), *Seventh Annual Report for the Year 1897* (Toronto: Warwick & Sons, 1898), p. 144.

<sup>2</sup>Banket deposits today are usually classified as "modified paleo-placers" although there is still some debate as to whether they are not more "akin to lode deposits" (R.W. Boyle, *GOLD: History and Genesis of Deposits* [New York: Van Nostrand Reinhold Company, 1987], p. 11).



bearing quartz pebble conglomerates, sedimentary rocks formed from deeply buried ancient river or lake beds.<sup>3</sup> Unlike placer deposits, "reef" deposits seldom contained gold in its native state and, therefore, extraction frequently involved underground mining, milling, concentration, and refining. Often low in quality, the profitability of banket deposits depended on their large dimensions. Today, most of the world's known gold reserves are held in very large banket "reefs".<sup>4</sup>

In Northwestern Ontario, gold typically occurred in "hard rock" deposits.<sup>5</sup> Most of these deposits were located near faults in the metavolcanic "greenstone" belts lying between the large formations of felsic igneous or metamorphic rocks (mostly granite).<sup>6</sup> The types of gold deposits, however, varied significantly within the district. The most common were the bedded and true fissure veins. Found in schistose or fractured rock, bedded veins usually occurred when "several layers of schist are more or less parted, [and] bands of quartz of varying thickness fill the spaces between [them]."<sup>7</sup> Bedded veins found in the district included the Little American, the Little Turtle, and the lucrative lenticular deposits at the Sultana mine.<sup>8</sup> True fissure veins, on the other hand, were found in large fractures occurring in the "massive rocks."<sup>9</sup> These veins exhibited more "continuity and uniformity" and were more clearly defined than bedded veins, and,

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<sup>3</sup>The term "banket" comes from a South African term for "almond cake." It alludes to the lumpy, nutty appearance of the ore.

<sup>4</sup>Boyle, *GOLD*, 19.

<sup>5</sup>There were, however, cases of *alleged* placer and banket deposits. The "Swede Boys" claim on the Lower Manitou was purported to be a placer claim, however, inspection revealed that the swamp mud the partners (who were actually Norwegian and not Swedes) were sluicing with their "primitive" operation was producing only the odd piece of broken schist. As a placer operation the claim never produced more than a few dollars (OBM, *6th Annual Report, 1896*, 83, 84, 119). The "Hammond Reef" of the Lower Seine, was incorrectly promoted as a banket deposit in the latter half of the 1890's. In fact, it was a scattered "stockwork" of smaller lode veins (OBM, *7th Annual Report, 1897*, 131). The press was especially inclined to misuse the term and liberally labelled every kind of deposit a "reef."

<sup>6</sup>See the "Bedrock Geology" map in the back binding cover pocket.

<sup>7</sup>OBM, *6th Annual Report, 1896*, 117.

<sup>8</sup>Ibid.

<sup>9</sup>Ibid., 115.

consequently, were easier to mine. Examples of true fissure veins were found at the Regina and Mikado mines and the Crown Reef vein of the Sultana mine.<sup>10</sup> Fahlband deposits, sulphide and pyrite-impregnated "bands of schists," occurred in the Rossland area mines east of Rat Portage and at a few other locations.<sup>11</sup> Though generally not rich, these deposits (which were, in fact, not veins) were occasionally found in large enough networks to support profitable extraction. Contact veins were fissure veins found along (and parallel to) the region of contact between the greenstones and the granites. Nearly all the veins in the district occurred in the vicinity of "contact zones" and some, such as the Mikado and Regina veins even crossed the zone, but very few occurred at the point of contact and followed the direction of the fault. The most notable example was found at the Elphinstone location (also known as 188P).<sup>12</sup> Frequently, the contact zones also held gold bearing veins that were found on the edges of dykes of a "finer grained, porphyritic kind, penetrating the schists and sometimes also the granitic rock itself."<sup>13</sup> Although several dyke associated veins were located near Rat Portage and on the Manitou, none were very productive.<sup>14</sup> Occasionally, "eruptive masses" (mafic and ultramafic igneous rocks) were alleged to contain gold (not in veins) but this situation was seldom profitable and occurred rarely in the district.<sup>15</sup>

One factor was common, however, to all district ores: they were found in hard rock and usually in conjunction with tough quartz veins. Gold extraction was consequently difficult and much more expensive than placer mining. The first of the difficulties was finding the gold-bearing or auriferous veins. In Ontario there were no alluvial deposits to point the way to the

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<sup>10</sup>OBM, *6th Annual Report, 1896*, 116.

<sup>11</sup>Ibid., 118.

<sup>12</sup>Ibid.

<sup>13</sup>Ibid.

<sup>14</sup>Ibid.

<sup>15</sup>OBM, *6th Annual Report, 1896*, 115-119.

hard rock deposits. Unable to hunt deposits down with a gold pan, prospectors were compelled to locate the veins visually: a very tedious and difficult task on the flat, tree and moss covered shield of Northwestern Ontario. Also, unlike placer gold hunters who discovered their claims simply by inspecting the sorted sands of prospective creeks, Ontario prospectors required at least a primitive understanding of geology to be successful. Prospecting involved travelling the bush or the waterways, finding promising rock formations, and then burning off the moss and trees to expose the rocks for further exploration. Once a favourable spot was found the prospector dug or blasted a test pit into the rock, ground selected ore samples with a pestle and mortar, and panned the particles for traces of gold. If "colours" showed, a larger sample of ore might be bagged and transported to an assayer for a more precise estimate of the prospects.<sup>16</sup> At some point, a decision would be made to "locate" (lease or patent) the claim or move on to other prospects.

Financing the prospective venture was also affected by geological conditions. In fact, Ontario prospectors should have found it much more difficult to obtain a grubstake than Western placer prospectors. For Western grubstakers there was a possibility that even a marginally successful prospector's pans and rockers would produce sufficient alluvial gold by the end of the season to pay off at least part of the grubstake. Ontario grubstakers could only look forward to a report on prospects (or lack thereof) as a return on their investments. Western "silent partners" were also less concerned with their prospective prospector's geological knowledge since searching for placer gold involved a minimum of technical expertise. In Ontario, however, a prospector's lack of geological knowledge increased the grubstake failure factor considerably.

Fortunately, other considerations helped offset the geological hurdles that inhibited prospecting in Ontario. Railway supply centres kept prices down and commodity volumes stable.

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<sup>16</sup>Even after finding colours, it was often difficult to assess the prospects accurately. The Bureau of Mines, reporting on discoveries in Jaffray Township, noted that assessing gold ore visually was tricky:

Pannings made by Mr. Ahn showed many colors of fine gold. However, it is never safe to count on the value of these ores by colors of gold, as owing to the fineness of the grains the actual yield may prove to be disappointing. A mill test is required to show their actual value." (OBM, *5th Annual Report*, 1895, 185.)

Grubstaking prospectors in Northwestern Ontario was, therefore, generally much cheaper than in other gold districts.<sup>17</sup> Canoes were also a much more economical mode of transportation for Ontario prospectors than the livestock used by their Western counterparts. Cheaper outfitting meant the costs of grubstaking were cut considerably and, therefore, the financier's risk of loss became significantly less than in the West. Geological knowledge also seems to have been less of a factor than it should have been. Grubstakers and mining investors often lacked sufficient geological knowledge to make a competent assessment of their prospectors' credibility. Also, the failure of qualified "educated men" to recognize the value of mineral deposits tended to denigrate the credibility of science. One famous example involved what was to become the district's most productive mine, the Sultana. As an undeveloped claim it was allegedly examined in 1890 by a "New York mining expert" who described it as worthless. Thoroughly discouraged, the owners sold out to J.F. Caldwell of Winnipeg, who went on to develop it into the district's richest mine.<sup>18</sup> In a few cases mystical methods competed with geological science. One Lake of the Woods prospector, Andrew Benson, reportedly found the Scramble mine and other deposits "by means of a divining rod brought from Sweden."<sup>19</sup> Eventually, the deficiency of geological knowledge may have been less of a factor in prospecting after the government established the Kingston

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<sup>17</sup>Compare, for example, the cost of supplies for the Lake of the Woods/Rainy River and Klondike districts. The price of bread rose scandalously from 18 to 14 loaves per dollar at Rat Portage (*Rat Portage News*, XIV, June 14, 1895). Enough flour to make 50 loaves of bread cost \$10 during the Klondike gold rush. (Innis, *Settlement and the Mining Frontier*, 194).

<sup>18</sup>OBM, *3rd Annual Report, 1893*, 19; The Sultana's ownership trail is quite tangled. A controversy has always centred on the legitimacy of the original claims. However, Caldwell's alleged *sole* ownership of the mine needs to be examined - in fact it may not have existed at all. In 1890 Caldwell purchased all but 1/16th interest in the claim. Jacob Henesy retained that fraction until 1892 when he reportedly sold out to Caldwell (*Ibid.*). It was generally believed that Caldwell personally owned and developed the mine until selling out to a British company in 1899. However, an entry in the daily journal of timber baron John Mather, who claimed control of the island as part of his Dominion timber lease, indicates he travelled to Winnipeg in 1892 to pick up 25 "shares" in the "Sultana" as part of the settlement of the timber berth dispute. The entry, however, gives no company name. (John Mather, *Journals*, September 20, 1891, Archives of Lake of the Woods Historical Society, Keewatin, Ontario). If the mine was a company-owned operation, it certainly was a well kept secret. Ontario Bureau of Mines *Reports* indicate the operation was owned by Caldwell until 1899. No record of any company incorporated in Ontario under the name of Sultana is reported in the *Ontario Gazette* until the end of the decade. Caldwell does not appear as a company director until October of 1899. During the decade only a few court cases involving the Sultana are mentioned in the District Court and High Court of Justice records and in each case the "style of cause" (document title) named John F. Caldwell as plaintiff or defendant. No mention was made of any company name.

<sup>19</sup>OBM, *6th Annual Report, 1896*, 108.

School of Mines in 1892 and later subsidized local extension course workshops in prospecting.<sup>20</sup>

Developing a gold mine, however, is like hunting a moose: finding and claiming one is the easy part - getting it out and processing it is when the work begins. Extracting gold from the deposits required hard work, considerable expertise, and substantial working capital. The process included mining, milling, concentrating, and refining. Mining typically involved sinking a shaft vertically into the ground through hard rock, blasting lateral drifts, removing ore from the vein or veins at various levels (stopping), and transporting the ore up to the surface and off to the mill for treatment.<sup>21</sup> Shaft sinking and mill construction required an immediate and substantial capital outlay. Subsequent expenditures for fuel, transportation, labour, and mining and milling equipment made opening a mine an expensive and risky venture. Joint stock companies were normally formed to finance mining operations and cut the risk of loss and liability by effectually spreading it out among shareholders. However, usually before a company could be formed, the prospects had to be proven worthy of major investment. This stage of initial development was typically the realm of mining promoters. Prospectors occasionally promoted their own mines, but they usually had insufficient capital to meet the costs of initial development. They were, therefore, forced to sell to or make arrangements with a promoter or company for further development. These arrangements could include partnerships, bonding or optioning the property, or exchanging mining rights for company shares. In any event, the prospector frequently stayed on as an employee and managed the project through initial development.<sup>22</sup> This could include shaft-sinking and drifting, construction of a shaft house and barracks/cook house, installation of

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<sup>20</sup>OBM, *5th Annual Report, 1895*, 216.

<sup>21</sup>Usually mining involved at least sinking a shaft. Several incidents of surface trench mining were noted in the OBM *Annual Reports* but these were not very extensive and usually occurred during the exploration stage of development.

<sup>22</sup>Samuel Whiting stayed on to manage the Gold Creek operation after leasing it to promoter G.F. Ernst in 1892 (J.S. Whiting, *Journals*, (Lake of the Woods Museum Archives, Kenora), various entries 1892-93). The Foley mine and Hammond Reef were two other examples of prospectors managing initial development. (James Hammond was not, however, the discoverer of the Hammond Reef. An Indian named Kabaskong first showed the location to Hammond and he subsequently claimed the property for himself [OBM, *7th Annual Report, 1897*, 75]). The *Mining Lands Register* shows that hundreds of patents and leases were taken out by individuals who later became mine managers (*Mining Lands Register, Rainy River District*, Ontario Public Archives, Toronto).

mining machinery (hoists, trams, skids, boilers, compressors, etc.), hiring and supervising miners, and arranging for shipment and testing of ore or construction and operation of a test mill.<sup>23</sup> If initial development was successful (or made to appear successful), the promoter could either sell at a profit or advance to the next step and organize a company to raise capital for large scale development.

Geological differences meant that promotion of hard rock gold mines would be much different than Western placer operations. Placer prospectors often obtained enough capital working their own claims to finance initial development. In the earlier stages their overhead costs were comparatively low, usually involving construction and operation of a sluice box and possibly the sinking of a few shallow test pits. Exploration was more cost effective since placer deposit assessment was easier, cheaper, and more accurate than it was for lode deposits. Panning various spots along a creek bed or digging test pits in river gravel was certainly a more efficient way of pinpointing a deposit than blasting drifts through solid rock in a quartz mine.<sup>24</sup> Diamond drills did little to narrow the gap between exploration costs of the two types of mining. If anything, the advent of this technology widened the gap since the drills operated much more efficiently in alluvial terrain than in solid rock.<sup>25</sup>

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<sup>23</sup>For a description of typical arrangements between mine promoters and prospector/managers see Samuel Whiting's *Journals*, 1891-1892.

<sup>24</sup>Innis cited Treadgold's liberal estimates of the costs of early development of Yukon placer mines. A two-man operation, including dam, flume, and sluice boxes, cost \$3,700. Sinking and drifting during the winter months was estimated at approximately \$5/foot (Innis, *Settlement and the Mining Frontier*, 206). These were cheap operating expenses when compared to Northwestern Ontario gold mining. Whiting contracted to start work on the Gold Creek mine for \$16.50/foot (this included three to four employees) (Whiting, *Journals*, August 31, 1891). Preliminary development hard rock mining equipment varied from mine to mine but was generally more expensive than placer mining outfits. A small steam mill (6 tons/day) and camp at the Haycock claim in the Upper Manitou cost only \$2,500 to set up (OBM, *6th Annual Report*, 1896, 84). A slightly larger 15 tons/day, five-stamp milling plant set up at the Little America mine cost \$11,000 in 1894 (OBM, *4th Annual Report*, 1894, 54).

<sup>25</sup>Clark Spence's study of the Conrey Mining Company in Montana showed that diamond drilling prior to development ensured the success of that placer operation. Before constructing its dredges, Conrey Mining used a diamond drill to explore the entire Grasshopper Creek drainage. A general assessment of the entire area was made before the decision was made to purchase property and finance dredge construction (Clark Spence, *The Conrey Placer Mining Company: A Pioneer Gold-Dredging Enterprise in Montana, 1897-1922*. [Helena: Montana Historical Society Press, 1989]). The costs of drilling in alluvial soils were usually much less than in hard rock. The Bureau's *Annual Report* for 1895 indicated that in sixty-nine days 296 feet had been drilled through granite at the Bonanza Nickel property near Lake Wahnapiatae at a

Successful preparatory development of Ontario gold mines involved the application of reasonable geological knowledge. Even if a developer was competent enough to recognize a deposit worth exploring, considerable expertise was required to pursue the prospects underground. "Reading the rocks" was an aptitude critical to the successful management of hard rock mining and exploration. Any error in geological judgment could seriously endanger a mine's ability to get off (or under) the ground. Even a simple mistake could send mining crews drifting aimlessly underground at a potentially ruinous expense.<sup>26</sup> Sinking a shaft on top of a vertically descending vein, for example, was a miscalculation to be avoided. It was much more efficient (and safer) to drift from the shaft to the deposits and refill the stopes with jettisoned debris as the ore was removed. Excavating the ore in the shaft meant working in the same area where the hoisting was going on. This could cause several difficulties including endangering the miners and exposing the shaft timbers, hoisting apparatus, ladders, and skip to damage during blasting.

Proceeding from the initial development to the production stage also involved geological considerations. Once sufficient capital had been raised, hard rock mines could expand mining and begin milling. However, at this stage, where exploration was replaced by larger scale exploitation, geology assumed a very important role. The purity and quantity of the ores and the technological adjustments to compensate for these factors were crucial to the survival of a producing hard rock mine. The quality of Northwestern Ontario ores varied considerably and, though most mines reported "free milling" ores whose gold was readily absorbed by mercury amalgamation after crushing, most producing mines in the district had problems of varying degrees with refractory contaminants, "float," and slimes.

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total cost of \$4.3224/foot. However, drilling through looser soils at the Glendower iron mine on a spur of the Kingston and Pembroke Railway only amounted to \$0.986/foot (part of this cost reduction was a result of cheaper transportation costs) (OBM, *5th Annual Report, 1895*, 231).

<sup>26</sup>The contract costs for drifting at the Olive mine illustrates the expense involved in erroneous drifting. The rate charged for shaft sinking (6'x10') was \$18/foot plus \$5/foot for laddering, blacksmith, and hoisting services. Drifting (4'x6') was let at \$12/foot plus \$3/foot for hoisting and blacksmithing services. (OBM, *7th Annual Report, 1897*, 72) In one instance, sinking a 4'x8' shaft progressed at 11 feet/week with three miners working in each of three shifts, 24 hours/day using hand drilling (OBM, *8th Annual Report, 1898*, 62).

"Float" refers to gold particles that are very fine (or ground too fine during milling) and therefore have insufficient specific weight per unit of surface area to overcome the surface tension of water. When this occurs the fine gold floats on the water above the amalgamation plates and, instead of being caught by the mercury, is carried off with the waste into the tailings. Fine float gold, "the bugbear of mill-men and metallurgists" was encountered as the consequence of a geological condition, one which deceived many of the district's mine developers.<sup>27</sup> Though ore samples crushed in a mortar and pestle sometimes yielded colours of free-milling gold on panning, the fineness of the particles often substantially reduced the quantity of gold per ton that could be recovered with stamp mill technology. The deposits east of Rat Portage and in the Lower Seine/Shoal Lake areas were particularly prone to float problems.<sup>28</sup>

Complications from slimes arose when finely crushed ores mixed with water created a clay-like muck which inhibited the attraction of gold onto the amalgamation plates during milling. The result was that, like float gold, the product was carried off with the waste. Some degree of sliming usually occurred in all milling but "talcose and aluminous" ores were particularly prone to crumbling into very fine particles and creating excessive sliming.<sup>29</sup> Sliming ores were frequently encountered in the district; however, excessive crushing during milling was also responsible for much of the problem.<sup>30</sup> This was in part due to the very fine nature of gold found in some ores - the finer the gold particles, the finer the ore had to be crushed to free it for

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<sup>27</sup>M. Eissler, *The Metallurgy of Gold* (London: Crosby Lockwood and Son, 1889), p. 96.

<sup>28</sup>One mining inspector observed in 1895 that the gold of the Lower Seine/Shoal Lake region was "rather pale in color and usually in very fine particles as compared with the coarse, yellow gold of the Lake of the Woods." (OBM, *5th Annual Report, 1895*, 67). By the middle of the decade the Bureau was cautioning prospectors to be conservative in their estimates of fine gold prospects since mill yields could be substantially less than assayed values. (Ibid., 185.)

<sup>29</sup>Eissler, *Metallurgy of Gold*, 91.

<sup>30</sup>Several individuals reported to the Royal Commission that early mining ventures encountered problems with sliming ores. George Mitchell claimed the Winnipeg Consolidated's failure was due in a large part to the "slaty matter in the gangue" (Ontario, *Report of the Royal Commission on the Mineral Resources of Ontario*, 1890, 117). John Wright described the Gold Hill veins as being found in conjunction with a "talcose slate" gangue (Ibid., 116). Later in the decade, Theodore Breidenbach, mining engineer and former manager of the Mikado mine, explained that the "slaty character of the [mine's] ore caused a sliming under the stamps up to 42 per cent. of the tailings" (*Canadian Mining Review*, XIX, [May 1900], 120).



amalgamation. Unfortunately, as will be shown in later chapters, sliming problems frequently also resulted from poor application of milling technology.

The refractory nature of the district's ores was probably the second most significant geological factor affecting development of its mines. Gold is often subtly contaminated when found in hard rock formations. One of the most common contaminants is silver, but this precious metal is usually left alloyed with gold during processing and removed during refinement at the mint. Other elements such as arsenic, antimony, tellurium and sulphur can seriously increase the amount of gold lost in the milling process.<sup>31</sup> The high incidence of sulphur, in particular, was an impediment to mining in the district.<sup>32</sup> Pyrites and other sulphides created serious difficulties during concentration, particularly, the "sickening" of the mercury used in amalgamation, which resulted in the loss of much of the fine gold.<sup>33</sup> It was often difficult to initially assess the severity of sulphur problems since, due to natural oxidization at or near the earth's surface, the proportion of sulphide minerals in a deposit often increased as mining became deeper.<sup>34</sup> Although the technology was available to overcome some of the problems caused by sulphur, success depended upon cost effectiveness and, of course, proper application. Both of these factors will be discussed in succeeding chapters.

The most important geological factor affecting the measurement of the district's success

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<sup>31</sup>Descriptions of arsenic and antimony impurities in the district's gold ores can be found in the reports of J.F. Latimer, George Mitchell, F. Miller, and Arthur Harvey in the *Royal Commission Report*, pages 116-119.

<sup>32</sup>Multiple examples of sulphur contamination were reported by various sources during the decade. In some cases it caused considerable losses. The Black Jack mine was alleged to have failed because the "gold in the sulphurets was not touched" by its Crawford mill (OBM, *3rd Annual Report, 1893*, 26). It was estimated that 75% of the Lucky Coon's \$28-\$30/ton gold was tied up in sulphurets and washed into the waste pit during milling (OBM, *7th Annual Report, 1897*, 84).

<sup>33</sup>Base metals in the ore that are not oxidized and desulphurized before concentration, will cause the mercury to "partly flower and float on top of the water, while the other globules of quicksilver, distributed through the pulp, will become coated with a black scum, thereby losing all its affinity for the precious metals" (Eissler, *Metallurgy of Gold*, 99).

<sup>34</sup>*Royal Commission Report, 1890*, 117; Hugh McKinstry, *Mining Geology* (Englewood Cliffs: Prentice-Hall, 1948), p. 245.

or failure was the quantity of the golden resource available. Production figures are typically the authority used for evaluating a district's mineral resources. However, it is impossible to determine precisely how much gold was taken from Northwestern Ontario since very few statistics have survived.<sup>35</sup> Mining companies were required by law to report annual production to the Bureau of Mines, but compliance and enforcement were both minimal.<sup>36</sup> Gold production reports that were received were not broken down by either mine or district in the Bureau's *Annual Reports*. In fact, without a breakdown of production by district, it is impossible to determine what portion of gold produced in the province actually came from Northwestern Ontario.<sup>37</sup> It has frequently been indicated that most of the annual Provincial yield cited in the *Reports* represented district production.<sup>38</sup> Based on statistics from the Annual Reports and other sources, the district's

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<sup>35</sup>In fact, a search of the Provincial Archives and the Department of Mines indicates *all* the files and records for the Bureau of Mines for this period have disappeared.

<sup>36</sup>Ontario, *Statutes of Ontario*, 1890, "An Act Respecting Mining Regulations," (53 Victoria, c.10, s.10). A document held at the Kenora District Geologist's Office titled "Annual Mineral Deposit Form" contains a breakdown of annual reporting figures for the Sultana Mine. It indicates that J.F. Caldwell reported 1894 production as being exactly \$20,000 from exactly 2,000 tons of ore. Apparently, he failed to report *any* production in 1893. These incorrect and incomplete figures would seem to indicate that the Bureau was unable or unwilling to enforce accurate reporting of annual statistics.

<sup>37</sup>The Bureau eventually came under fire for its ambiguous production statistics, however, it maintained this policy throughout the decade. Archibald Blue, the Bureau's Director, responded to critics in 1897 stating simply that "the time for [publication of individual mine production statistics] has not come yet." (OBM, *7th Annual Report, 1897*, 34). The Bureau was undoubtedly between a rock and a hard place. One of its founding directives was to gather and disseminate Ontario mining information, however, it also had to be wary of inadvertently becoming involved in scams promoted by operators who supplied false returns. The Bureau obviously also had to be concerned about maintaining the best possible reporting which meant maintaining the best possible rapport with the mines. Confidentiality undoubtedly ensured more participation and accuracy on the part of the mine operators. As well, it would be difficult to expect public disclosure of individual mine productivity when other industries were not required to do so. The logic for not breaking down the statistics by district seems less clear. Possibly, the Bureau wished to protect the failing mines in Eastern Ontario (Hastings, Marmora, etc.) whose complex ores and milling gadgetry were consuming more capital and producing less product than their promoters wished investors to know about.

<sup>38</sup>J. Ryan, among others, has contended that Provincial statistics represented Northwestern Ontario production (John Ryan, *The Kenora-Keewatin Urban Area: A Geographic Study*, M.A. Thesis, University of Manitoba, Winnipeg, 1964, 87). There is less validity to this assumption in the latter half of the decade when production in other districts began to pick up. The Eastern Ontario mines, for example, improved production considerably with the application of cyanide technology. In fact, in a rare instance of more specific vagary, the Bureau reported in 1899 that one mine, the Belmont, had produced more than \$20,000 in gold during the previous year (OBM *8th Annual Report, 1898*, 21). The Empress mine on Lake Superior in the Thunder Bay District also became a producing gold mining operation during this period and, though it was not one of the four mines reported to have exceeded \$20,000 in 1898, its output was substantial enough to establish a community worth a census tract in 1901.

ores produced *a maximum* of \$2 million in gold for the period 1880-1902.<sup>39</sup> However, even this liberal estimate of production never represented more than four percent of Canadian annual output for any single year during that period.<sup>40</sup>

Production statistics would seem to indicate a resource of little consequence. There were other factors, however, including geological considerations, which tended to compensate for the relatively meagre quantity of gold extracted. The shallow disposition of the ore bodies was certainly a point in the district's favour. Few mines worked ores deeper than five hundred feet.<sup>41</sup> The Sultana mine, allegedly the district's greatest producer, yielded up the largest of its deposits at less than 450 feet. The Mikado, which ranked second behind the Sultana, struck its major veins at only 74 feet. These were shallow depths indeed compared to Silver Islet's 1,200 feet and the "deep" mines on the South African Rand (more than 2,000 feet). The most prominent geological factor offsetting the poor quantity of the deposits was the widely scattered nature of the gold deposits. More than two hundred discoveries were scattered over a 14,000 square mile area ranging from English River to Shoal Lake and from Ft. Frances to Sturgeon Lake:

Grouping the Lake of the Woods region with that of Rainy lake and adjoining lakes and rivers to the north and east, we have a gold field 200 miles in length, from the Lake of the Woods to lake Shebandowan, and 70 miles in width, from

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<sup>39</sup>Davies and Smith have estimated gold production for the Lake of the Woods region up to 1904 at 120,740 ounces or \$2,056,461 (\$17.03/oz. contemporary value of gold is derived from statistics reported in the Bureau's *6th Annual Report, 1896*). It is not clear if this estimate includes the mines near Atikokan or those at Lake Minnetaki and Sturgeon Lake (J.C. Davies and P.M. Smith, "The Geological Setting of Gold Occurrences in the Lake of the Woods Area," Ontario Geological Survey Open File Report 5695 [Toronto: Ministry of Northern Development and Mines, Mines and Minerals Division, 1988], p. 1).

<sup>40</sup>Statistics for 1880 (152 oz.) and 1887 (450 oz.) were obtained from the *Report of the Royal Commission on the Mineral Resources of Ontario* (Toronto: Warwick & Sons, 1890), page 210. Statistics for 1890-1902 obtained from OBM *Annual Reports* and summarized in Figure 1, Appendix B.

<sup>41</sup>The *Mining Act* of 1890 required that mines report the extent of their workings each year (Ontario, *Statutes of Ontario, "An Act Respecting Mining"* [1890, 53 Victoria, c.10, s.12]). As in the case of production statistics, the accuracy of volunteer progress reports must be taken into consideration. Certainly, in 1899 the new owners of the Golden Star mine found the workings in a much different state than what they thought had been reported in the Bureau *Report* the year before (OBM, *9th Annual Report, 1899*, 66).

Rainy Lake City to Wabigoon or Ignace.<sup>42</sup>

The negative effects of continued mediocre production were offset by a sustained sense of optimism resulting from the dispersed disposition of the district's deposits. Even geologists felt that the widespread distribution of discoveries increased the likelihood of eventually finding bonanzas.<sup>43</sup>

One geological factor above all others proved to be the district's undoing. Though a few large deposits were found, generally speaking the veins proved to be small. The deposits on the Upper and Lower Manitou were described as "pockety" <sup>44</sup> and, as early as 1894, a Bureau geologist, Dr. A.P. Coleman, was worrying that the veins of the Lower Seine "while [possibly] carrying comparatively rich ore, will prove too small to pay for the erection of a stamp mill."<sup>45</sup> Coleman also estimated that the Hammond Reef, an "immense stockwork" of small veins, though receiving considerable publicity, would never be a producer unless its ores could sustain an average yield of just \$5 per ton.<sup>46</sup> It failed to meet even those minimal requirements. Ultimately, few of the district's scrawny veins proved rich enough to support the rising overhead costs associated with hard rock mining and milling. Indeed, as will be seen in a later chapter, premature overdevelopment of undersized deposits became the scourge of Northwestern Ontario gold mining.

To what degree did geological factors affect the development of the Northwestern Ontario gold boom? Certainly, the refractory nature of the ores could have been a significant deterrent to development. However, technology was becoming available which reduced this factor. The

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<sup>42</sup>Ontario Parliament, *Sessional Papers*, "Fourth Report of the Bureau of Mines," (1895, 58 Vict., No. 72) 71-72.

<sup>43</sup>Ibid.

<sup>44</sup>OBM, *7th Annual Report, 1897*, 123.

<sup>45</sup>OBM, *4th Annual Report, 1894*, 72-73.

<sup>46</sup>OBM, *7th Annual Report, 1897*, 131.

chlorination process had been around for years, having been perfected, it is said, in the 1860's at the Deloro mill in the old Eastern Ontario gold district.<sup>47</sup> More importantly, the cheaper and less dangerous cyanide precipitation process, invented by J.S. MacArthur and the De Forrest brothers in 1888, saw widespread application after 1890.<sup>48</sup> This process may have appeared in the district as early as 1893 and, although its technology was poorly understood and seldom properly applied, its potential for direct precipitation of bullion from ores typically requiring expensive smelting and refining certainly aroused considerable optimism.<sup>49</sup>

The small size of the deposits should have been more of a factor than it was. As mentioned above, the Bureau reluctantly expressed its concerns about the size of veins several times during the 1890's. Indeed, prospectors, investors, and developers all received ample early warning of this characteristic. In 1884, Eugene Costé, in one of the earliest scientific reports on the district's gold fields, tactlessly declared the dubious existence of large lodes and warned about the requirements necessary for profitably working the district's small veins:

Some of the 'prospectors' are strange men! While many of them complacently exhibit a lot of little quartz streaks and try to pass them off upon you for lodes of great richness, others pretend to know important deposits but they cannot be induced to show them to you. I hit upon one of the latter with reference to the veins known in the vicinity of Pine Portage Mine; perhaps, after all, he had really nothing to show me. ...several of [the Lake of the Woods veins] are without doubt capable of being profitably worked by companies, if their operations were properly

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<sup>47</sup>*Canadian Mining Manual, 1898* (Ottawa: Canadian Mining Review, 1898), 212.

<sup>48</sup>The mining industry was stunned that year by the spectacular results obtained using cyanide precipitation to recover large amounts of lost gold from the tailings of South African mines (Geoffrey Wheatcroft, *Randlords*, [New York: Atheneum, 1986], p. 120). One promotional publication alleged that the Robinson mine was extracting 91% of the assayed gold using the cyanide process as opposed to 64% obtained without concentration. (Fred H. Hatch and J.A. Chalmers, *The Gold Mines on the Rand*, [London: Macmillan and Co., 1895], p. 182.)

<sup>49</sup>Some confusion exists regarding exactly which of the district's mills first employed the cyanide process. The Bureau of Mines *Annual Report* for 1893 indicated that Caldwell was constructing a mill and cyanide plant at the Sultana (OBM, *3rd Annual Report, 1893*, 19). Subsequent *Reports* mentioned that the mill was completed and continued to operate "the same as at previous inspection [1893]." (OBM, *5th Annual Report, 1895*, 177). However, in 1896 it was reported that two years worth of concentrates were stock piled awaiting the completion of a chlorination plant (OBM, *6th Annual Report, 1896*, 95). This same report indicated that the district's first cyanide treatment plant was being built at the Regina mine (Ibid. 92). It is not clear if Caldwell changed his mind during construction or if he removed the cyanide plant later. As mentioned previously, operations at the Sultana were very secretive.

conducted, and especially if they were operating on a large scale.<sup>50</sup>

Mining men had also received ample early warning regarding the refractory characteristics of the ores. Almost every individual reporting on the district to the 1890 Royal Commission on the Mineral Resources of Ontario noted the sulphides complicating the Lake of the Woods gold ores.<sup>51</sup>

Prospectors, promoters, developers and investors were not to be discouraged, however. More than two hundred companies undertook mining operations during the period and these represented only a portion of the mining and prospecting activity in the area. Besides the widespread occurrence and the shallow depth of deposits mentioned earlier, various non-geological factors helped offset the district's shortage of high quantity deposits. It was anticipated that application of promising technological developments would improve the efficiency of mining small and lower quality veins sufficiently enough to make them profitable. Other factors including, geography, public policies, political stability, media exposure, and the availability of capital and labour also compensated for detrimental geological factors. Of these, the geographical factors, discussed in the next chapter, unquestionably had the most perceptible influence upon the growth of a mining boom in Northwestern Ontario.

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<sup>50</sup>Eugene Costé, *Summary Report of Operations of the Geological Survey Canada for the Year 1884* (Ottawa: Queens Printer, 1890), 15K, 20K.

<sup>51</sup>*Royal Commission Report*, 115-19.



## GEOGRAPHY: THE LAY OF THE LAND

*When it is remembered that this gold field is not in the heart of Africa, nor in an Australian desert, nor in remote valleys of the Rocky Mountains, where access is difficult, but in the most populous province of Canada, and touching at its southern edge the enterprising state of Minnesota, it seems as though its value should quickly be proved; and if it be really as productive as present appearances indicate, a year or two should see the development of a prosperous mining community. As to physical conditions, the region has everything in its favour, plenty of good water and several fine waterpowers, a wide area of the best unoccupied farming land in America close at hand to supply the necessary food products, and a climate which is admirable in summer, somewhat rigorous in winter, but always thoroughly healthy. No part of the region is more than 60 or 70 miles from a railway, and steamboat communication is available in many parts.<sup>1</sup>*

For the purposes of this study, the Northwestern Ontario gold mining "district" encompassed the area from the Manitoba border on the west, north to approximately 50°30' latitude (Sturgeon Lake), south to the American border and east to approximately 91°10' longitude (Atikokan). This 24,000 square mile area includes the Lake of the Woods, Shoal Lake/Clearwater Bay, Whitefish Bay, Rowan Lake, Eagle Lake, Manitou Lakes, Wabigoon/Dryden, New Klondike (Taché), Minnitaki, Sturgeon Lake, Bad Vermilion/Mine Centre, and Upper Seine (Atikokan) mining subdistricts. Several mines now within the Thunder Bay District (mostly in the Atikokan area) are also found in this study, since contemporary mining literature usually included them in discussions of the "Lake of the Woods" or "Rainy River District." Gold mining activity within the Lake Superior watershed generally has not been incorporated into this study, although operations were commenced during the 1890's at Black Bay, Jackfish Bay, Michipicoten, and Lake Nipigon.

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<sup>1</sup>OBM, 4th Annual Report, 1894, 71-72.



All mining in the district took place in relatively flat terrain at elevations of between one and two thousand feet. However, the flat terrain, a consequence of glaciation, was very rough and rocky with few major geological obstacles laying between the district and the Rocky Mountains or the Arctic Circle. The extended flat topography meant long cold winters and summer months marked by infrequent showers and hot, sunny days. Though at least one instance of a rain shadow was reported, usually enough precipitation fell during the summer months to alleviate the need for irrigation in the few areas with enough soil to sustain farming.<sup>2</sup> Although census records indicate farming was a vocation within the district, few areas had enough good soil to provide the basis for an industry.<sup>3</sup> Good soil was, however, never far away. The spectacular farming regions of Manitoba and the clay belt near Dryden provided abundant food stuffs at moderate prices.

The most striking geographical feature of the district was its system of waterways. In fact, in many areas the district's surface is covered with more water than land. The Lake of the Woods, for example, contains 14,000 islands and more than 100,000 kilometres of shore line.<sup>4</sup> During the 1890's these waterways provided an important means of access to a country where the terrain was often too rocky or swampy for travel by horseback. As a result, supplies and raw materials could be moved much more economically than in the mountainous mining districts of the West. In 1895, for example, provisions could be shipped more than 150 miles by commercial steamer from the rail head at Rat Portage to Fort Frances for a mere \$10 per ton.<sup>5</sup> Bulk

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<sup>2</sup>A Bureau of Mines inspector is alleged to have discovered a prickly pear cactus species in the rain shadow on a Rainy Lake island (Ontario Parliament, *Sessional Papers*, 58 Victoria, No. 72, p. 96).

<sup>3</sup>In 1901 Rat Portage contained 53 individuals [2.6% of the work force] who claimed to be involved in agriculture, including 31 farmers, 17 farm labourers, and 6 gardeners. This compares to 178 of the town's individuals reported as being involved in mining. The census reports for some of the subdistricts showed even less agricultural activity. For example, no persons involved in agriculture were reported in the Manitou Lakes district (*Census Reports*, Rat Portage and Manitou Lakes, 1891).

<sup>4</sup>Davies and Smith, "The Geological Setting of Gold Occurrences in the Lake of the Woods Area," p. 1.

<sup>5</sup>*Rat Portage News*, XV, December 11, 1895.

shipments of ore could be handled even more economically. John Mather, the Keewatin lumber baron who dabbled in mining, estimated that barging ores from the Yum Yum mine to the Keewatin Reduction Works, a distance of approximately 36 miles, cost \$0.58½ per ton freight, \$0.20 per ton unloading, and \$0.05 per ton depreciation on each \$400 barge [or approximately \$3.48 per ton per 150 miles].<sup>6</sup> Freight rates were considerably higher for Western Canadian mining districts. In 1898, for example, mine operators at Toad Mountain, British Columbia were freighting ore by pack train from the Hall Mine to a transfer point only seven miles away at the rate of \$10.00 per ton.<sup>7</sup>

By industry standards, the abundance of water was also an unusual boon. Water was essential to gold extraction for several reasons. First, large volumes were required for gravitational sorting of the ores during milling. The "wet battery" process of milling gold ores was estimated to consume: 7½ gallons per hour per boiler horse-power; 72 gallons per hour per stamp; 120 gallons per hour per "pan"; and 60 gallons per hour per "settler". A 30-stamp mill powered by a 60 horse-power boiler was estimated to consume 23,616 cubic feet of water per 24-hour day.<sup>8</sup> Steam driven underground mining equipment also consumed large volumes of water. Typically, one or more wood-fired steam boilers were required to power hoists, compressors, ventilators, and pumps. The Regina, for example, installed an 80 h.p. (14,400 gallons/day) steam boiler in 1886 to drive its new compressor and steam sinking pumps. Even small operations required immense quantities of water. The AD2 mine's 25 horse-power boiler could consume as much as 3,000 gallons in a sixteen hour day.<sup>9</sup>

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<sup>6</sup>Mather, *Journals*, July 10 and November 17, 1897.

<sup>7</sup>Innis, *Settlement and the Mining Frontier*, 274.

<sup>8</sup>Eissler, *Metallurgy of Gold*, 75. This estimate does not include boiler water required to power elevating equipment, crushers, feeders, or light plant dynamos.

<sup>9</sup>The mine used a hand operated windlass and bucket for hoisting and hand drilling which reduced the steam demand. However, steam power was required for its No. 5 Cameron drainage pump and its tiny 2-stamp mill. The number of miners (twelve) seems to indicate that a double shift of six each was probably employed. Without ventilation facilities, it is doubtful that mining could have been carried on more than 16 hours per day (OBM, *7th Annual Report, 1897*, 129).

In Western mining camps, water was often in such short supply that men and companies fought over it in the courts, camps, creeks, and even underground. One historian has maintained that "placer and lode mining for gold has resulted in water disputes in almost every mining district in America."<sup>10</sup> Those who controlled the water supply to a gold field often had more power than the mine owners. Keeping control of the water invariably meant controlling the authorities through bribery, collusion, or other similar methods. In the Black Hills, for example, the fight for water between Borland's De Smet mill and Hearst's Homestake mine culminated in a local referendum so "replete with fraud and violence that it could have been managed by Calamity Jane and Bill Hickock."<sup>11</sup> However, Northwestern Ontario mining promoters and investors were surrounded by water and consequently felt more secure developing mines in a district that was safe from the instability caused by water rights disputes. For mining engineers, the abundance of water meant that boilers would not have to be encumbered with expensive recirculators or condensers. The quality of the water was also beneficial to mining activity. The benign granite outcroppings that made up most of the landscape kept the water relatively free of the minerals which frequently fouled the boilers of Western mining companies.

However, the abundance of water had more potential for mining than just as a reliable source of steam power. By 1890 technology was available which could transfer Northwestern Ontario's many waterfalls and rapids into hydro-electric power. This water power potential combined with exciting new developments in electrical mining and milling technology to produce significant speculation regarding the district's capacity to produce gold, especially from marginal ores. At the close of the nineteenth century, gold mining investors/speculators, typically the most optimistic of capitalists, were attracted to an industry they thought was about to be revolutionized

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<sup>10</sup>Mel Gorman, "Financial and Technological Entrepreneurs in the Black Hills: The San Francisco-De Smet Connection," *Huntington Library Quarterly*, 45 (Spring 1982), 145.

<sup>11</sup>*Ibid.*

by such innovations as electric lights, engines and pumps.<sup>12</sup>

Complimenting the abundance of water and hydro-electric potential was a seemingly endless supply of fuel and building materials. The district's many lakes, islands and waterways were surrounded by vast forests of spruce, pine, balsam, and various hardwoods. This was an important asset since mining operations consumed large amounts of timber for fuel, building, timbering, and ore roasting. In fact, a district mine could consume up to eight cords of fuel per day,<sup>13</sup> and fuelling with local wood at \$1.25 per cord was far cheaper than burning coal at \$7.50/ton.<sup>14</sup> Such accessibility to unlimited fuel reserves was unusual for a mining district. In the West, timber or coal frequently had to be transported hundreds of miles over rough terrain at great expense. During the Klondike gold rush, fire wood brought \$15.00 per cord delivered "plus \$3 to \$5 for cutting."<sup>15</sup> In some cases, the fight for timber access became as heated as it was for water. In Montana the shortage of mining timbers became such a critical problem that eventually, to guarantee a source of lumber, the Anaconda copper mine was forced to purchase its own timber lots and lumber mills and construct its own railway.

The forests also provided the mining companies with seemingly endless building resources. With so much timber at hand, mining companies routinely set up their own sawmills during development. Mining Inspector J.A. Bow, reporting on the Boulder mine's ten thousand board feet per day mill, indicated that "the saw mill is an almost essential feature of any mine

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<sup>12</sup>Electric pumps were being used in English coal mines prior to 1888. Electric locomotives for moving ore underground first appeared in England in 1883 and in North America four years later (Lupton, *Mining*, 452, 355; Newell, *Technology on the Frontier*, 157n18). Hydro-electric power had even more potential in the mills since electrical motors were more receptive than steam or pneumatic engines to the fine tuning required to minimize production losses.

<sup>13</sup>The Golden Star consumed seven to eight cords per day and the Sultana used about eight cords (OBM, *8th Annual Report*, 1898, 267; *7th Annual Report*, 1897, 248).

<sup>14</sup>The *Toronto World* reported on July 23, 1899, that companies with their own timber rights could "lay down wood at their boilers at \$1.25 to \$1.50 per cord" and that coal ["black diamonds"] cost about \$7.50/ton delivered at "any Rainy River or Lake of the Woods mine." The Bureau inspectors reported fuel costs ranging from \$2.37½ to \$2.80/cord delivered (OBM, *8th Annual Report*, 1898, 267; *10th Annual Report*, 1900, 77).

<sup>15</sup>Innis, *Settlement and the Mining Frontier*, 194n39.

which is situated at a considerable distance from a railway, as usually a large quantity of lumber is needed, and the expense of transportation is considerable."<sup>16</sup> Other mines with sawmills included: the Alice A (10,000 bd ft/day), the Roy (12,000 bd ft/day), the Sawbill (5-6,000 bd ft/day), the Big Six (15,000 bd ft/day) and the Olive (1,000 bd ft/hour).<sup>17</sup> The Clearwater Gold Mining Company, owner of the Big Six mine, was probably involved in supplying more than just the needs of its mines. Not only did the company acquire its own "timber limit in connection with the [mining] property" but by 1899 it had also installed a planer in its large production mill.<sup>18</sup>

Besides abundant necessary natural resources the district was also blessed with favourable human resources. Two transportation networks, steamer and rail, were largely in place prior to major development of the district's gold mines and this asset made Northwestern Ontario particularly unique among the world's mining camps. The Canadian Pacific Railway was completed through Rat Portage in 1883 and a second railway, the Ontario and Rainy River (to become part of the Canadian National) was commenced in 1895 and completed in 1902 to service the southern reaches of the district. Additionally, American rail connections could be obtained through the "D & I" at Tower, Minnesota. During the 1890's, a few spur lines were also completed to join various mining camps directly to the major railways.<sup>19</sup> Existing alternative transportation facilities kept transportation rates to the district well below gold field averages. For example, in 1895 one C.P.R. all-rail first class fare from Toronto to Rat Portage (1,154 miles) cost \$34.60 ("colonist class," \$21.00). Various combinations of lower class fares and Great Lakes

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<sup>16</sup>OBM, *8th Annual Report, 1898*, 62.

<sup>17</sup>OBM, *9th Annual Report, 1899*, 72; *8th Annual Report, 1898*, 92; *7th Annual Report, 1897*, 64, 72.

<sup>18</sup>OBM, *9th Annual Report, 1899*, 81.

<sup>19</sup>In 1897, application was made to the Ontario Parliament for construction of the "Seine River, Foley and Fort Frances Railroad" (*Ontario Gazette*, XXX, No. 46, Nov. 13, 1897, p. 1966). In 1900, John Mather managed to finagle the construction of a spur line from the C.P.R. to the Ottawa Gold Mining and Milling Company's Sakoose (Golden Whale) mine. However, transportation of ore to the company's custom mill in Keewatin does not seem to have been the only objective for the line's construction. The Ottawa Gold Milling and Mining Company operated on borrowed capital using expected railroad subsidies for this spur line as collateral. See Mather *Journals*, various entries, December, 1901.

steamship/C.P.R. rail routes could reduce this amount to \$13.00.<sup>20</sup> This compared favourably to the \$26.25 charged by the Northern Pacific in 1877 for the trip from Chicago to Bismarck, North Dakota, the jumping off point for the Black Hills.<sup>21</sup>

Most important, however, the existence of an established railway meant reduced freight expenses for mining companies. Mining and milling equipment was extremely heavy and moving it to mine sites without railroads meant large amounts of capital could be consumed before the mine ever became operational. For example, a 5-stamp mill outfit for even a small operation could weigh 15,000 pounds.<sup>22</sup> Mining equipment, including boilers, drills, compressors, hoists, and ore cars, could be almost as bulky. Fortunately, railroad freight to Rat Portage was considerably cheaper than what mining promoters were accustomed to. In 1895, a mill weighing seven and a half tons could be transported to Rat Portage from Toronto for a mere \$30.00 and ore could be shipped by rail into Keewatin for as little as 8.75¢/ton/mile.<sup>23</sup> These were certainly bargain rates compared to other gold fields. In 1898 goods packed 45 miles over the White Pass in the Yukon cost as much as 65¢ per *pound*.<sup>24</sup> American "dry land" mining camps also suffered from high freight rates. In 1876, for example, freight rates from the railhead at Cheyenne, Wyoming to Deadwood in the Black Hills gold fields (more than two hundred fifty miles) ranged

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<sup>20</sup>*Rat Portage News*, XIV, March 1, 1895.

<sup>21</sup>Kenneth Hammer, "Freighters and Railroads: The Growth of the Black Hills Freight and Stage Lines and Role of the Railroads," *Journal of the West*, 20 (April 1981), 25. Hammer made no distinction as to the class of seat in the \$49.25 fare from Chicago to Deadwood [less the \$23 stage rate from Bismarck to Deadwood = \$26.25]. The assumption is that this was the lowest class fare.

<sup>22</sup>This includes one battery of five 850 lb. stamps including all ironwork, wooden pulleys, and hardwood guides for stamp stems; a No. 2 Blake Crusher and grizzly; two automatic ore feeders; water pipes for stamp battery; two copper table plates; four copper lining plates for mortars; an amalgam retort and condenser; one countershaft for stamps (with bearings and pulleys); "belting and lace leather"; engine, boiler, feed-pump and heater (Eissler, *Metallurgy of Gold*, 103).

<sup>23</sup>*Rat Portage News*, XIV, March 1, 1895. The "Winnor" mine was reported to be shipping ore to the Keewatin Reduction Works eight miles away for 70¢/ton. However, "For continuous shipments a lower rate would be granted." (*Canadian Mining Review*, XVII, October 1899, p.324). Earlier, Herbert Shear had reported to the Royal Commission on Mineral Resources that the Badger silver mine near Thunder Bay was shipping its concentrates and ores all the way to New Jersey by rail for only \$12.50/ton (*Royal Commission Report, 1890*, 200).

<sup>24</sup>Innis noted that rates over the White Pass trail rose "from 20 to 25 cents a lb. to 65 cents" in 1898 (Innis, *Settlement and the Mining Frontier*, 185n17).

from 3.5 to 7¢ per pound.<sup>25</sup> Thus, the same seven and a half ton mill delivered at Rat Portage from Toronto for \$30.00 could have cost \$9,750 to be moved over the White Pass or up to \$2,000 from Cheyenne to Deadwood. In reality, rates often exceeded even these outrageous figures. The mill for one Black Hills mine was "shipped via the Union Pacific to Sidney, Nebraska, and the Pratt & Ferris bull teams hauled the 400,000 pound mill to the mine at a cost of \$33,000 in transportation charges" or \$12.12 per pound.<sup>26</sup>

From the railheads, a variety of steamboats and an unknown number of barges, canoes and smaller craft supplied transportation to the Northwestern Ontario mining camps. As early as 1887 two steamers were making weekly trips between Rat Portage and Fort Frances and by 1895 at least three steamships were operating on Lake of the Woods.<sup>27</sup> In 1897 a second steamship line began operating out of Rat Portage utilizing a 127-foot steel-hulled ship which made three weekly runs to Fort Frances. By 1898, approximately sixty steamers were reportedly working the Lake of the Woods.<sup>28</sup> Several other steamers operated intermittently on Rainy Lake and the Lower Seine River while the gold fields in the Eagle Lake/Manitou regions were accessed by a steamship line based in Wabigoon.<sup>29</sup> Since a thriving shipbuilding business was already established at Rat Portage, many new mining companies elected to buy or build their own steamships.<sup>30</sup> The Sultana, Regina, Mikado, and Boulder mines each owned or leased launches,

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<sup>25</sup>Hammer, "Freighters and Railroads," 26.

<sup>26</sup>Ibid., 24. Unfortunately, Hammer's study does not include the mileage for any of the various service routes into the Black Hills, thus the very conservative estimate of the mileage between Sidney, Nebraska and Deadwood, South Dakota.

<sup>27</sup>Roland, *Algoma West*, 135; *Rat Portage News*, XV, July 12, 1895.

<sup>28</sup>*Souvenir Diamond Jubilee Guide, Rat Portage and Lake of the Woods* (Toronto?: Martell & Tilley, 1897), 8; OBM, *8th Annual Report, 1898*, 49.

<sup>29</sup>OBM, *7th Annual Report, 1897*, 121.

<sup>30</sup>Census statistics for 1891 show that at least six individuals were involved full time in shipbuilding (3 ship carpenters, 1 boat painter, 1 boat house operator, 1 boat builder). It is likely that several of the deckhands, seamen, etc. were also involved in shipbuilding during the off season. It is also probable that many of the sixty-three "carpenters" listed also were employed building steamers and other water craft (*Census Reports, 1891: Keewatin, Rat Portage, Norman*).

and the Ottawa Gold Milling and Mining Company opted to construct several barges to ship ores from Lake of the Woods mines to its Keewatin Reduction Works.<sup>31</sup> On Sturgeon Lake the Virginia mine "secured" its own forty foot steamer, the *Jenny Linn*, which completed connections to the Lake of the Woods through a small naphtha-powered launch already operating on Whitefish Lake.<sup>32</sup> This abundance of navigation facilities was crucial to keeping the district's transportation costs unusually low. In 1895, fare from Rat Portage to Fort Frances was \$4.00 per head (men, women, horses, and cattle; children travelled for \$2.50).<sup>33</sup> These rates were substantially cheaper than those charged in American mining districts. For example, fare for the two hundred ten mile stage trip from Bismark to Deadwood was \$23.00 in 1877.<sup>34</sup> Besides transportation, the district's waterways also supported mobile housing facilities for mining operations. At least one company, the Great Granite Gold Mining and Development Company of Ontario, actually lodged its employees on the water, constructing houseboats for its prospecting parties.<sup>35</sup>

The Canadian Pacific Railway, however, was more than just a cheap source of transportation. Railroad construction reportedly revealed the district's first specimens of gold-bearing ore (although this has never been substantiated).<sup>36</sup> More importantly, however, during construction and after completion, the railroad provided the foundation upon which the district's major centre (Rat Portage, Keewatin, and Norman) was established. Besides being the town's major employer - at least 160 railroad employees resided in Rat Portage and Keewatin in 1891 -

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<sup>31</sup>*The Rat Portage Miner* I, July 18, 1891; OBM, *6th Annual Report, 1896*, 52; OBM, *7th Annual Report, 1897*, 52; OBM, *8th Annual Report, 1898*, 62; Mather, *Journals*, Nov. 17, 1897.

<sup>32</sup>OBM, *9th Annual Report, 1899*, 47.

<sup>33</sup>*Rat Portage News*, XIV, March 1, 1895.

<sup>34</sup>Hammer, "Freighters and Railroads," 25.

<sup>35</sup>OBM, *9th Annual Report, 1899*, 60.

<sup>36</sup>In 1895 the *Rat Portage News* reported that a civil engineer involved in the construction of the C.P.R. alleged that one of his employees had discovered gold bearing ore while surveying the line in 1872 (*Rat Portage News*, XV, August 23, 1895).



the railroad was the basis for a large number of local industries. As early as 1887, six lumbering firms were reportedly in operation on the Lake of the Woods and vicinity, four using steam and two using water power.<sup>37</sup> By 1895 the railroad at Rat Portage/Keewatin was shipping tons of blueberries, kegs of caviar, nearly fifty carloads of lumber per day, and a carload or more of fish per day in season.<sup>38</sup> In 1891, a year before development began at the Sultana mine, the "tri-cities" contained 3,975 people. Rat Portage boasted two lumber companies, a semi-completed ore reduction works, two newspapers, a bank, several hotels (six boarding house keepers and nine hotel keepers), a brewery, and a multitude of mercantile businesses including a bakery, a livery, two photographers, five butchers, five shoemakers, at least one hardware store, six tailors and dressmakers, four watchmakers, and an undertaker. Businesses in Keewatin included two lumber companies, a major flour milling operation, a bank, two hotels, a drug store, a livery, a tailor, and a shoemaker, as well as bakeries, butcher shops, and various other "stores". Three other lumber companies were located in Norman as well as seven hotels and boarding houses. Among the merchants located in Norman were a baker, a barber, a shoemaker, a butcher, two dry-goods merchants, a jeweller, and three tailor(esses). Utilities in the tri-cities included at least two hydro companies, milk delivery in both Keewatin and Rat Portage, water works, and telephone service.<sup>39</sup> The pre-establishment of these railroad based local industries and utilities provided an important source of local capital that became crucial to building a mining boom.

Besides the tri-cities, the district was also near other sources of capital development. Winnipeg investors were some of the earliest to become involved in Lake of the Woods gold mining, while Fort William and Port Arthur provided much of the capital involved in the late 1890's boom period, especially in the Atikokan area. Duluth and Minneapolis capitalists contributed steadily throughout the decade.<sup>40</sup> The transportation and communication facilities also

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<sup>37</sup>Roland, *Algoma West*, 134.

<sup>38</sup>*Rat Portage News*, XV, August 9, 1895; *Rat Portage Semi-Weekly Record* V, 39 November 20, 1895.

<sup>39</sup>Canada, *Census Reports, Rat Portage, 1891*.

<sup>40</sup>For details of incorporators of district mines see Appendix B, Figure 6 and Appendix D, Table 1.

placed the district in an excellent position to draw upon Eastern Canadian and U.S. capital. These features were also largely responsible for Northwestern Ontario's success in competing with other mining districts for British financing, undoubtedly the most sought after source of North American precious metal mining investment dollars in the nineteenth century. Colonel Engledue, an early promoter of the Mikado mine, in his 1896 report to the South African General Development Syndicate in London indicated that the district possessed a unique advantage in that it was only "12 days easy journey" from London and mining operations could be "effectively supervised from England."<sup>41</sup> This was clearly an advantage that British investors were not accustomed to. Clark Spence, in his *British Investments and the American Mining Frontier*, surmised that the remoteness of American mining camps was a major factor contributing to the high rate of failure among British financed gold and silver mines in the American West.

But whether engineers, agents, or managers were British or American, experienced or inexperienced, efficient or inefficient, honest or dishonest, the fundamental problem of dealing with them was the same. How to bridge the distance gap was the major difficulty.<sup>42</sup>

Foodstuffs were as important as capital to early mining development and Northwestern Ontario was geographically in an excellent position to supply the needs of a gold boom. The railways and steamers brought vegetables, grain, and fodder from Manitoba, Minnesota, and the Dryden clay belt. Considerable produce was grown locally as well as in the neighbouring Thunder Bay district. The result was that few of even the most remote mines were ever threatened with scurvy or food shortages. Sufficient quantities and unusually low gold boom prices enhanced mining promotion in Northwestern Ontario. Cheap supplies meant promoters could retain more prospector/miners per dollar than could their Western counterparts. For example, in November of 1895, A. Gibson & Co. of Rat Portage advertised produce by the sixty-pound bushel at \$1.00 for onions, 35¢ for potatoes, 40¢ for turnips, and 75¢ for carrots. Cape Cod cranberries were available at 12½¢ per pound and, despite the lateness of the season, a "few

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<sup>41</sup>OBM, *6th Annual Report, 1896*, 258.

<sup>42</sup>Clark C. Spence, *British Investments and the American Mining Frontier 1860-1901* (Ithaca: Cornell University Press, 1958), p. 114.

bushels of nice green tomatoes" were still to be had.<sup>43</sup> The price of accommodations was also unusually low. Houses in Rat Portage rented for \$6 to \$10 per month, rooms in "the Cougher block" went for \$4 to \$6 per month, and asking prices for town lots were \$50, \$250, and \$1,500.<sup>44</sup> These prices were considerably cheaper than Dawson City real estate was in 1898 - one merchant paid \$120 per month for a space five feet square and the government rented water front lots at \$12 per frontage foot per month.<sup>45</sup>

By gold boom standards, Northwestern Ontario communities were also unusually civilized. Rat Portage's first provincial magistrate, W.D. Lyon, reported in 1881 that prostitution was widespread and that desperadoes roamed the streets with "knives and revolvers exposed in their belts."<sup>46</sup> However, the district seemed to settle down very rapidly once the Ontario-Manitoba border was decided in 1889. Although prostitution continued well past the turn of the century, relatively little violence was reported during the 1890's.<sup>47</sup> Even non-violent crime seems to have been unusually rare. In one instance, the *Rat Portage News* reported someone had stolen 60 sticks of dynamite from the editor of its competition, the *Journal*. Such an unusual incident provoked a particularly venomous response: "A person who would steal from a poor newspaper

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<sup>43</sup> *Rat Portage Semi-Weekly Record*, XV, November 20, 1895.

<sup>44</sup> *Ibid.*

<sup>45</sup> Pierre Berton, *Klondike: The Last Great Gold Rush, 1896-1899* (Toronto: McClelland and Stewart, 1986), p. 286.

<sup>46</sup> Morris Zaslow, "The Ontario Boundary Question," *Profiles of a Province* (Toronto: Ontario Historical Society, 1967), p. 112. The motive for Lyon's correspondence must be weighed. The district was still disputed between the Province and Dominion and, as a provincial officer, Lyon had reason to present the situation in a poor light and desperately in need of a change.

<sup>47</sup> The census returns for 1901 reveal that four "Social Evil Keepers" and eleven "Social Evil Inmates" resided in Rat Portage. Apparently, prostitution was tolerated as long as the "keepers" kept their houses in order. In 1895 two women were charged with keeping a "disorderly house" on "the east end of 3rd Street." They paid their fine and apparently went back to business as usual since they were still operating in 1901 (*Rat Portage News*, XV, July 28, 1895). In a boom town context, prostitution was viewed as more or less criminal behaviour - but more often "less". Even the Lion of the Klondike, Mountie Sam Steele, recognized that prostitution was a necessary evil in mining camps. He required that the "houses" be segregated from the rest of Dawson (Berton, *Klondike*, 369).

man would make his mother-in-law eat rotten eggs to save them."<sup>48</sup> Rat Portage (which, after 1892, included Norman) and Keewatin owed their stability to a well established municipal government and court system dating back to 1884.<sup>49</sup> Appointed circuit judges, magistrates, surveyors, provincial administrators, customs officers, and full time peace officers were already situated in the district and their presence reduced the risks of claim jumping, "miners meeting" justice, vigilantism, labour strife, and other violence usually associated with Western American mining booms. Certainly, life on the other side of the border during the Northwestern Ontario gold boom was comparatively more dangerous. For example, a near fatal shooting and a bank robbery occurred within a single two week period during the rush to Rainy Lake City in the summer of 1895.<sup>50</sup>

Two other features of the district's towns made them especially attractive to mining developers: they had a high proportion of foreign immigrant labourers and a very low proportion of Orientals.<sup>51</sup> The mines of Northwestern Ontario had a history of preferring a mixed bag of *white* immigrant mine labour while sharing a dislike for Orientals which was common in all mining camps.<sup>52</sup> The editor of the *Rat Portage News* could hardly conceal his relief when reporting that two C.P.R. "carloads of Japs and Chinamen" seen at the siding in town continued

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<sup>48</sup>*Rat Portage News*, XV, July 26, 1895.

<sup>49</sup>Ontario District Court first sat in Rat Portage in September 1884 and the first High Court of Justice sat in 1894.

<sup>50</sup>The shooting "on Rainy River" over a "claim jumping quarrel" was reported by the *Rat Portage News* on July 5, 1895 and the Rainy Lake City bank robbery, involving highly suspicious circumstances, took place on June 20, 1895 (*Rat Portage News* XV, June 28 & July 5, 1895).

<sup>51</sup>It is difficult to determine the exact number of immigrants available to work in the mines. However, the last names and birthplaces appearing in the *Census Reports* provide an indication that there were a significant number of mixed immigrants, from Icelandic to Irish, residing in Rat Portage. *Census Reports* also revealed that many mining camp employees were in fact immigrants. See, for example, the *Census Reports* for Sultana, 1901. Four Chinese residents (0.22% of the town's population) lived in Rat Portage in 1891. By 1901 this number had increased to 18 but it was still only 0.33% of the population (*Census Reports*, Rat Portage, 1891, 1901).

<sup>52</sup>Dianne Newell noted that the management of Silver Islet preferred a multinational crew to reduce the possibilities of the miners organizing (Newell, *Technology on the Frontier*, 78). Newspaper accounts of the 1895 Sultana fire indicated that nearly all the men on shift at the time of the accident were "Scandinavian miners" (*Rat Portage News*, XIV, March 15, 22, 1895). Several mining histories have cited problems with Oriental discrimination in other mining camps. Douglas Featherling's *Gold Crusades* provides details of many incidents from South Africa to California.

"on their way to the celestial countries."<sup>53</sup> Besides relatively few undesirable Orientals and a generous supply of immigrant labour, the district was also blessed by its convenient proximity to the declining Thunder Bay silver mines and their surplus of experienced mining labour and management resources.

On the face of it, the geography of Northwestern Ontario looked very attractive for mining men during the 1890's. However, there were several less publicized pitfalls to mining in the district. The Canadian Shield was responsible for many of these hidden hindrances. The flat topography and extreme latitude meant that winters were long, very cold, and unbroken. Shallow depth underground mining can be a cold operation in the best of situations but sub-zero temperatures for weeks on end meant that Northwestern Ontario mines would have to implement extreme measures to keep operations going in the winter months. Since fires would foul the underground air, miners had to be brought up periodically and warmed above ground. Additional problems included steam and pneumatic pipes which clogged with condensation, froze, and cracked. Pumps and rock drills seized up, walkways and ladders became covered with ice, and equipment became brittle and broke.<sup>54</sup> The extreme winter weather meant many mines could only be operated seasonally which usually led to more miner turnover and ultimately less productivity.

The glaciated flat terrain responsible for the long winters caused other problems during the non-winter months. The rocky, soggy landscape limited travel within most of the district to the waterways. Transportation to areas even a few miles inland was extremely difficult. The seven-mile road from Rat Portage to the Triumph mine was described as "bad, especially if the season is wet."<sup>55</sup> Road construction was almost impossible and mine managers who needed to

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<sup>53</sup>*Rat Portage News*, XV, September 13, 1895.

<sup>54</sup>In 1899, Inspector Bow reported that "owing to the severity of winters in this country it seems impossible to keep open two shafts which are connected underground, as cold underground air currents and the formation of ice in the ladder ways and drifts are difficulties that always result (OBM, *9th Annual Report, 1899*, 56).

<sup>55</sup>OBM, *8th Annual Report, 1898*, 56.

move ore or machinery even a few miles overland tried various weird contrivances to overcome the rocks and bottomless boreal muskeg. The Gold Hill mine's "pole road," spanning the half mile from its mine to the shore of the Lake of the Woods, was guaranteed to provide a bone-jarring ride in at least one direction: "Heavy poles have been used as rails, the large end of each being hollowed so that the small end of the next fits into it. ...The trucks have pulley shaped wheels, with hollow rims fitting the shape of the poles."<sup>56</sup> A similar "log railroad" moved ore from the Independence mine to its mill a mile away.<sup>57</sup> The Hammond mine attempted to electrify its operations but, in spite of constructing a special wagon with six-inch wheels, its large generator was delayed a year due to the "very bad conditions of the roads" from Bonheur Station to Sawbill Lake.<sup>58</sup> By far the most unusual transportation innovation occurred at the Combination mine on Camp Bay.

As the mine is about two miles back from the lake a railroad, called the "Camp Bay and Crow Lake Railroad" on account of its proximity to these two bodies of water at either end of this length, has been constructed to convey the ore to the mill. There is practically no up-grade in going towards the mill, and there are no steep grades in going the other direction until close to the mine, which is situated on top of a hill; two switch-backs with steep grading are necessitated. The track is 4 feet 7 inches gauge, the construction of which is interesting. ...Now the body of ore on this property would not warrant the construction of an expensive railroad for such a distance, so a cheap method of construction had to be employed. The road was made to follow the level ground, and hence the muskegs as far as possible, so as to avoid rock cutting. Trestle work and cribbing have taken the place of filling. ...The whole affair, where the track is elevated, is shaky and insecure. Where the road passes through the muskeg the timbers are laid on the bare ground. This...is a very soft and yielding foundation, and a continual sinking must always result.... The track yields under the train; the cribwork and the soft muskeg forming a springy combination. ....The rails are too light for the [seven ton] engine, and the spiking is not sufficiently strong, as spreading of the rails was observed in several places.<sup>59</sup>

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<sup>56</sup>OBM, *6th Annual Report, 1896*, 98.

<sup>57</sup>OBM, *8th Annual Report, 1898*, 46.

<sup>58</sup>OBM, *10th Annual Report, 1900*, 103.

<sup>59</sup>OBM, *9th Annual Report, 1899*, 50-51.

The swampy ground was also responsible for other hazards. During the summer months insects, particularly black flies and mosquitoes, could be so thick as to seriously impede exploration or production. The *Rat Portage News*, for example, speculated that prospecting in the "La Seine River District" had tapered off during August and September of 1895 "due in a just measure to the exceptionally hot weather as well as to the unusual aggressiveness of the ubiquitous mosquito and black fly."<sup>60</sup> For relief, mining operations and prospecting parties often resorted to burning smudges which, in turn, threatened the district with dangerous wild fires especially during the dry season.<sup>61</sup> The combination of bugs, rock, and swamp also made it difficult to maintain livestock at the mining camps. Indeed, cattle were so rare that one Bureau inspector felt obliged to comment on his surprise at finding a milk cow at the Ferguson mine in 1896.<sup>62</sup> At the Sultana, one of the few mining locations with soil suitable for cultivation, miners raised a wild moose rather than a beef cow for meat.<sup>63</sup>

Bugs, however, were the least of the problems the district's terrain presented its mining developers. The flat topography was particularly challenging for mining men trained in the West.<sup>64</sup> In mountainous regions gravity could be made to work in a mine's favour but in Northwestern Ontario this force was the miner's adversary. Ore almost always had to be elevated to the top of the shaft and then lifted to the top of the mill. Also, proper ventilation and water drainage usually required more than just driving adits and winzes as was often the case in the West. If Ontario mine operators could not obtain mechanical ventilators, they were forced to

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<sup>60</sup>*Rat Portage News*, XV, September 13, 1895.

<sup>61</sup>Report of S.J. Dawson to the *Royal Commission*, 1890, 311.

<sup>62</sup>OBM, *6th Annual Report*, 1896, 80.

<sup>63</sup>OBM, *6th Annual Report*, 1896, 96.

<sup>64</sup>Inspector, Courtnay De Kalb expressed his opinion that the credibility of mining men generally suffered from imported professionals: "It so happens that the value of such skill [mining] is rather discredited among many local mine owners from the circumstance that inefficient stragglers from the camps of the West and South have drifted into the Province from time to time, assuming undue importance, and giving altogether a false impression as to the service [they are] capable of rendering (OBM, *8th Annual Report*, 1898, 29).

stop mining for eight to twelve hours after each blast and wait for the air to clear. Drainage was a more serious problem. Virtually all district mines had problems with water in their shafts.<sup>65</sup> However, although massive flooding was uncommon, a few highly publicized incidents drew undesirable attention to several district mines during the late 1890's. The Burley mine, a shaft sunk through a cribwork into the bottom of the Lake of the Woods, eventually flooded despite all efforts to keep it pumped out. The massive flooding in the Sultana and the Sawbill mines, however, made more of an impression on potential developers. Inspector Bow reported on the Sawbill's dilemma in 1898:

While drilling at the bottom of the shaft on September 20, water under high pressure was struck, the force being such as to cause the entire suspension of sinking operations down to the time of my last visit, November 23. Two and three, and sometimes more, pumps had been worked to their full capacity all the time to keep the shaft from being flooded. It was found necessary to purchase larger pumps than those already in use, and a Northey sinking pump of 110 gallons per minute capacity was installed, but this was drowned entirely and remained so for some weeks until a second pump of the same make, but of 50 gallons capacity, was put in, and with the help of the other pumps already in use the water was got under control. It is estimated that at least 5,000,000 gallons had been pumped out of the shaft during the first two months after the water had been struck, and as far as could be calculated it was coming in with unabated force up to the time of my last visit.<sup>66</sup>

This incident forced the Bureau of Mines to grudgingly concede that the costs associated with raising large quantities of water even "comparatively short" distances "materially increases the cost of exploratory work" in the district.<sup>67</sup>

The district's wonderful water quality was also not all that it seemed to be. It is true that

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<sup>65</sup>Strangely enough, the only mine that *did not* have problems with flooding was one that was completely surrounded by water. In 1898, Inspector Bow reported that no provision for pumping was made at the Cameron Island mine "as the shaft is quite dry even at the bottom" (OBM, *8th Annual Report, 1898*, 69).

<sup>66</sup>OBM, *8th Annual Report, 1898*, 88.

<sup>67</sup>*Ibid.*, 39. This statement is substantiated by the mining equipment reported by the Inspectors for almost every operation, large and small, during the course of the decade. Invariably, each of the mines listed at least one pump as part of its outfit. The fact that water could be struck at shallow depths was borne out by various Bureau and newspaper reports. The *Rat Portage News* reported in 1895 that George McGee's "mine" was "troubled some with water in the shaft... [which was only] down seventeen feet" (*Rat Portage News*, XIV, February 8, 1895)].



the Lake of the Woods did have relatively clean, mineral-free water. However, although their mines were often surrounded by water, the developers of inland mines sometimes found it less useful than they had hoped. The abundance of water, flat terrain and shallow depths meant that even moving bodies of water often did not move very fast and were, therefore, frequently "turbid".<sup>68</sup> Once they started to warm up in the spring, many of the lakes, rivers and streams became choked with parasitic organisms, mosquito larvae, weeds, and moss. These biological blooms posed threats especially during the critical summer milling season. At great expense, the management of the Hammond Reef near Atikokan constructed a reservoir above the mine's mill only to discover by mid-summer that its water contained "too much vegetable grease for milling".<sup>69</sup> In another more bizarre case, the Olympia mine reported considerable problems due to fish. Minnows inadvertently pumped into the mill's cistern proliferated to the point that they eventually clogged boilers and gummed up the amalgamation plates. The gold subsequently lost in the tailings was alleged to have been worth thousands of dollars.<sup>70</sup>

The district's accessibility was not exactly what it seemed either. Indeed, its dry land terrain was so difficult that, prior to 1894, only one government road to a mine had been constructed and the *Rat Portage News* condemned it as being "hardly better than a snowshoer's trail."<sup>71</sup> In the latter half of the decade construction was undertaken on several other roads, most of which when completed were also barely passable. In 1898 the thirty-three-mile showpiece government road from Bonheur Station to Sawbill lake was described as "very rough, making the [stage] trip a hard day's work."<sup>72</sup> The network of lakes and streams was also not entirely what it appeared to be on the map. The Lake of the Woods could become rough and dangerous at a

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<sup>68</sup>The Seine River was especially brackish with many of the Bureau's inspectors complaining about the lack of good drinking water during their tours at that end of the district.

<sup>69</sup>OBM, *8th Annual Report, 1898*, 90.

<sup>70</sup>K. Nelson, P. Nelson and L. Vogrig, *Klondike at Home* (Kenora: Publisher unk., 1976), p. 151.

<sup>71</sup>This "winter road" was constructed from Rat Portage to Matheson's bay in 1889 (OBM, *6th Annual Report, 1896*, 9; *Rat Portage News*, XIV, February 22, 1895).

<sup>72</sup>OBM, *8th Annual Report 1898*, 87.

moment's notice:

Gusts of wind spring up often without warning on Lake of the Woods, and the canoe is then a frail craft in the lumpy waters. Tugboats are not too safe at such times, especially beyond Bare point, where the wind has a long sweep.<sup>73</sup>

Venturing out on the large lake in even a steamer often took courage (and a sense of humour), as Bureau Inspector Coleman demonstrated in 1895:

A smart wind was blowing, and a friend took me aside to whisper the counsel -"I wouldn't venture the trip in a little thing like that, loaded down to the rail. But can you swim?" It did look like a risk, and one is never sure of the wind on Lake of the Woods; but [as] an insurance agent was one of the party, I took the risk, and we set off.<sup>74</sup>

The thousands of islands, bays, estuaries, bogs, and swamps made navigation in the gold fields a tricky business. Consequently, pilots and guides were always in high demand and short supply. Procuring one was not always an easy enterprise as Dr. Coleman reported in 1896:

[The guide] whom I had engaged refused to go with us at the last moment unless we would make him a large advance of wages. Two lumbermen who had just come to town with a crowd of others to be paid off agreed to go in the morning, before their cheques were cashed, but were too drunk and happy to be of any service when we wanted to start an hour later. ... A good guide is very necessary in visiting mining locations, unless one is willing to lose a large amount of time searching.<sup>75</sup>

The network of lakes and rivers could confuse even the best of navigators including the pilot for the steamer *Wm. Whyte* who disembarked the Bureau's Inspector in 1897 at the wrong location on Wabigoon Lake.<sup>76</sup>

A shortage of maps further complicated navigation in the district. Although publication of maps was an objective of both the Ontario Bureau of Mines and the Geological Survey of

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<sup>73</sup>*Rat Portage News*, XIV, February 22, 1895.

<sup>74</sup>OBM, *5th Annual Report, 1895*, 180.

<sup>75</sup>OBM, *6th Annual Report, 1896*, 93.

<sup>76</sup>OBM, *7th Annual Report, 1897*, 126.

Canada, the supply never seemed to meet the demand in the district.<sup>77</sup> The maps that were available frequently did not provide a clear indication of the nautical obstacles to water transportation in Northwestern Ontario.<sup>78</sup> Shoals and submerged boulders were a constant hazard. Indeed, there rarely was a trip to Fort Frances in the summer that was not delayed by a steamer's grounding. The journey from Lake Wabigoon to the Manitou region was no less troublesome:

especially in Crooked river where at some of the bends the engine must be stopped and the boat pushed round with poles. Even in high water ... the propeller was frequently clogged with weeds and had to be reversed to disengage them. Many stones have been removed from the channel by the steamboat owners, but some very troublesome ones remained near the head of the creek before entering Minnehaha lake. Here we went aground but succeeded in getting off again.<sup>79</sup>

Besides shoals, the district's vast waterways network contained rapids and waterfalls which seriously complicated travel to and communications with the scattered mines. Significant hurdles included Ash Rapids on the Lake of the Woods, the falls at Fort Frances, Sturgeon Falls, Island Falls, and Lynxhead Falls on the Seine, and the Devil's Cascade on the Manitou. Getting goods past all the rough water obstacles and into the remote camps of the Upper Seine could be especially trying (and expensive).<sup>80</sup> In 1896 transportation to one fair-sized concern, the Sawbill mine near Atikokan, involved "a canoe journey of thirty three miles, including thirteen portages [one of which was]... a two mile portage at Bonheur."<sup>81</sup> Another route down the Little Wabigoon River to Turtle River and Shoal Lake was especially difficult "with its twenty-three or more portages, mostly short, but a few very bad, and its very winding stretches of river."<sup>82</sup>

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<sup>77</sup>The *Rat Portage Weekly Journal* complained in 1891 that "when a stranger comes to this district, he asks for maps ... and the answer is, 'there are none.'" (*Rat Portage Weekly Journal*, I, September 19, 1891).

<sup>78</sup>Inspector Coleman complained that his own maps of the Little Wabigoon to Turtle River route were "very imperfect for the first part of the journey" (OBM, *7th Annual Report, 1897*, 126).

<sup>79</sup>OBM, *7th Annual Report, 1897*, 121.

<sup>80</sup>Freight rates via canoe from Savanne to Reserve Island in the Upper Seine were quoted as \$60 per ton in 1896 (OBM, *6th Annual Report, 1896*, 75).

<sup>81</sup>OBM, *6th Annual Report, 1896*, 77.

<sup>82</sup>OBM, *7th Annual Report, 1897*, 128.

The waterway network was deceptive in another respect - it was only navigable for less than half the year. The system could start to freeze up as early as November, with navigation usually not resuming until the end of May. True, during the winter months stage lines furnished transportation over the ice and frozen "winter roads," however, there was a lengthy period, sometimes more than two months twice a year, in which both systems broke down entirely. During freeze-up and break-up, neither the steamers nor the steeds could tread on the district's water. Inexperienced mine managers, prospectors, and gold rushers were easily fooled by relatively easy access to supplies during the summer and they too often underestimated the periods of inevitable isolation. In the fall of 1895, residents of Rainy Lake City came perilously close to a long diet of "ka-go and wa-boose - jack-fish and jack-rabbits" when it appeared that supplies might not arrive in Fort Frances from Rat Portage before freeze up started.<sup>83</sup>

One more hidden obstacle to transportation awaited potential mine developers. Equipment failure plagued steamers and stages alike. Undertaking his risky Lake of the Woods voyage in the secure company of an insurance agent, Inspector Coleman found the rough water to be the least of his worries when "the packing in the cylinder of the engine became loose, and there were neither tools nor materials at hand to repair the damage, so that the rest of the voyage was slow and it was made disagreeable by the escaping steam."<sup>84</sup> The stage routes, whether over land, snow, or ice were quite an ordeal and often times risky. More than one team of horses was lost through the ice with a load of valuable freight.

The water power potential of the district may have been overestimated as well. For one thing, the application of electricity was not well understood by mining men - or the public in general for that matter. Take for example, the grizzly electrocution death of one of Rat Portage's better-known citizens in 1895. The power lead to J.F. Philbin's residence was carelessly run into his home over the top of the screen door. The insulation on the line was gradually worn away

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<sup>83</sup>*Rat Portage News*, XV, November 8, 1895.

<sup>84</sup>OBM, *5th Annual Report*, 1895, 180.

by the swinging of the door, causing Philbin to be struck dead while entering the house during a rainstorm.<sup>85</sup> Although many of the larger mining operations in the district installed electrical generating plants, most were steam powered and few of them were used for anything but lighting mills and buildings.<sup>86</sup> Unfortunately, harnessing the inland-water powers for mining use proved to be more difficult than the newspapers and mining prospectuses indicated. One spectacular hydro-electric project failure caught the reluctant eye of the Bureau inspectors. The Hammond Reef near Atikokan was the site of a large network of small, low-grade veins which, its managers decided, could be mined productively by using a large-scale mill powered by the electricity generated at a nearby waterfall. By the time the project finally succumbed in 1900 as a result of engineering and natural disasters, miles of transmission lines had been laid, dams built, a forty-stamp mill constructed, and generators, turbines and flumes installed.<sup>87</sup> This well publicized misadventure put a damper on the optimism many mining men had about harnessing Northwestern Ontario water-powers.

The supposed "unlimited" timber resources of the district proved to be a significant disappointment for mining promoters. Unfortunately, the right of mining men to exploit timber on their locations was never clearly defined. From the time gold was discovered in the district, mining and timber interests were at odds over the limits of their authority to use this resource. For example, Ontario mining law granted prospectors fairly liberal access to explore for minerals on government (and, at times, private) land.<sup>88</sup> However, for purposes of fire prevention, timber

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<sup>85</sup>*Rat Portage News*, XV, June 21, 1895.

<sup>86</sup>Among the mines installing dynamos were the Sultana, the Regina, the Mikado, the Gold Star, and Hammond Reef. Oddly enough, only the Black Jack was reported to be using its light plant for mine illumination (OBM, *5th Annual Report*, 1895, 174). The Ottawa Gold Milling and Mining Company's Keewatin Reduction Works was partially powered by Mather's hydro-electric plant. The Rat Portage Reduction Works was electrified when it was refitted in 1895.

<sup>87</sup>OBM, *10th Annual Report*, 1900, 103.

<sup>88</sup>*Statutes of Ontario, 1892*, "The Mines Act" (55 V., c.9, s.21). Prospectors were given a free hand to explore on any land except "that portion of any lot used as a garden, orchard, vineyard, nursery, plantation or pleasure ground, or upon which crops that may be damaged by such entry are growing, or on which is situated any spring, artificial reservoir, dam or waterworks, or any dwelling-house, out-house, manufactory, public building, church or cemetery, unless with the written consent of the owner, lessee or locatee, or of the person in whom the legal estate therein is vested."

lessees were also granted the right to keep all trespassers, including prospectors, off their timber berths. Timber lessees were accordingly granted the right to enter upon a mining patent at any time to remove timber and they could construct the necessary roads at their own discretion.<sup>89</sup> However, mining men had been previously granted permission to cut any timber they needed for purposes of mining and cultivation, regardless of any timber lease previously granted.<sup>90</sup> This right at first was exclusive of pine but later included pine under certain conditions. Both the timber companies and the mining operations abused the system during the 1890's and the conflicting legislation of the period and subsequent court battles surely gave many committed and potential mining investors second thoughts about operating in Northwestern Ontario.<sup>91</sup>

Just as district timber was often overrated as a source of lumber and fuel, its detrimental qualities were also usually under-rated. Wildfires were a very real threat to the mines of the district. Fortunately, though several mines suffered individual fire losses, there never was a general district-wide conflagration such as occurred in the Cobalt district in 1911. This was certainly fortunate considering the propensity of the district's mining men to use fire to eliminate the dense vegetation that hindered prospecting.

Where the land is heavily timbered and the soil covered with moss and decayed vegetation, as is the case in extensive regions throughout the northern part of the province, it is difficult to prospect for ore-bearing veins; and although it would be unjust to charge explorers with purposely setting out fires for the object of facilitating their own quest, it is an undoubted fact that a burnt district is more easily searched than one covered with primeval forest. The explorer's interest does not lead him to exercise great care in the prevention of fires, and he is more likely to view their outbreak as a good turn done to himself rather than an evil one

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<sup>89</sup>Ibid., "Mines Act" (55 Victoria, c.9, s.17[1]).

<sup>90</sup>Miners desiring to cut timber were only required to make their request in writing to the Commissioner of Crown Lands demonstrating their need for the timber. The Commissioner could then "grant authority to cut such timber, and fix the rate of dues to be paid thereon." (*Statutes of Ontario, 1891, "An Act Respecting Mining Regulations,"* [54 Vict., c.9, s.8]).

<sup>91</sup>The long fight between the Keewatin Lumber Company and the early owners of the Sultana mine is well known. It was only resolved when the remaining timber on Sultana Island mysteriously burned in 1891.

to the country.<sup>92</sup>

Northwestern Ontario prospectors and mine developers were, therefore, caught in a dilemma they could not have anticipated. How could they prospect for gold (with fire) and at the same time protect the timber resource which, though it inhibited prospecting, was necessary for mineral production?

The pre-existence of one railway and the construction of another during the mining boom was also not entirely the asset it appeared. Besides furnishing a large pool of experienced labour and management services, the C.P.R. also encouraged a plethora of loafers and fakes who found the district's transportation systems and proximity to the border convenient.<sup>93</sup> Construction of the Ontario and Rainy River Railroad, which commenced in 1895, undoubtedly depleted mining labour resources. As the railroad approached the Seine River subdistrict, mining operators noticed a change in attitude among their labourers. One official at the Foley mine reported in 1897 that the mill had closed down from lack of qualified labour, strikes, and high wage demands.<sup>94</sup>

The pre-existence of the district's towns also had drawbacks for gold field development. The businesses were not only a source of capital production, they could also be a source of labour depletion. Samuel Whiting's diaries indicate that he spent as much time in other jobs, such as piloting steamboats, carpentering and farming, as he did prospecting and mining. In fact, he rarely stayed with any one vocation for more than a few months and sometimes for only a few days. The local government bureaucracy could also be a nuisance to mine developers used to "mining at any cost." Promoters who "stiffed" their employees in Western mining camps as a

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<sup>92</sup>*Royal Commission on the Mineral Resources of Ontario, 1890, 307.*

<sup>93</sup>There was so much surplus labour available in 1895 that the editor of the *Rat Portage News* sarcastically suggested drastic measures: "If Constable Woods can keep the vermin away by simply shooting at them, he is doing a good act" (*Rat Portage News*, XIV, June 28, 1895). Railroad access was at least partly responsible for the flood of incompetent "mining men" for which the district became notorious.

<sup>94</sup>*The Canadian Mining Review*, XVI, April 1897, 221.

matter of practice soon learned that things were different in Northwestern Ontario. Court records contain a mass of multiple plaintiff actions against mining companies with the notation "Mechanics' Lien," which attest to the unusually high success rate of labour pursuing claims against deadbeat developers.

Geographically speaking, was there enough going for the district to make a difference in its gold boom development? Most of the advantages were widely publicized in the press and in government publications while most of the disadvantages remained obscure until the boom was well under way. Although adversity often times takes a back seat to promotion during mining development, the Northwestern Ontario gold district clearly had many geographic advantages which overshadowed its disadvantages and which were, without a doubt, essential to promoting a boom. Good transportation facilities, proximity to capital sources, available fuel and water, and convenient supply centres were incomparable assets available to none of the world's other new gold mining districts.





## PUBLIC POLICY: THE GOVERNMENT'S ROLE

*Unpredictability is a serious factor during the early stages of mining development and particularly in its psychological effects. No adequate analysis exists as to the causes of booms but the effects are obvious in the demands for the support of governments. Governmental intervention is a result of unpredictable resources and in itself becomes a disturbing factor. The enormous stakes have a dangerous influence on political life. ...Exploitation of virgin resources in mining, as in lumbering, tends to involve political manipulation. The contagious psychological effect of booms accentuates the danger.<sup>1</sup>*

Nineteenth century mineral extraction, especially precious metals extraction, invariably presented complicated problems for public administration. Land that held the potential for large fortunes per acre needed to be treated carefully to protect basic civil liberties and preserve order and harmony while at the same time promoting the most expedient extraction of the resources. The potential for quick profits encouraged rapid population growth and large capital development in areas that were typically remote and unsettled. In many cases, especially in the American West, infrastructure and policy developed in response to mining booms. The consequences were often harsh, to say the least and often included the breakdown of law and order, vigilantism, unsafe living and working conditions, labour strife, and wasteful production. Ontario, however, had several advantages over the American West. As a late-comer to mining booms, it had the luxury of picking and choosing its mining policies from the record of successes and failures in the other provinces and states. Ontario also had previous experience with mining booms. The first episode involved a brief gold rush near Peterborough. Though a rudimentary set of mining laws (the *Gold Mining Act* of 1864) predated this 1866 discovery by two years, the pandemonium of the Hastings/Madoc rush produced Ontario's first post-confederation mining

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<sup>1</sup>Innis, *Settlement and the Mining Frontier*, 404.

legislation, the *Gold and Silver Mining Act* of 1868.<sup>2</sup> Within a year, however, this first effort was replaced by a much more comprehensive *General Mining Act*.<sup>3</sup> By the time the gold fields of Northwestern Ontario were discovered in 1878, the Province had experienced yet another mining boom near Thunder Bay and mining legislation had been in place for nearly twenty years, giving it a distinct advantage over most other gold boom governments.

However, the potential advantage of pre-existing mining laws was negated by the fact that possession of Northwestern Ontario was disputed between the Province and the Dominion at the time of discovery. Although Ontario had a statute in place capable of regulating mining in the district, the lack of any similar federal strategy for mineral management until 1889 left the district's early mining developers in a state of anxiety.<sup>4</sup> The jurisdictional morass, however, helped to provide Ontario with yet another advantage in developing its mining policies. It served to delay development until a more thorough assessment (the Royal Commission of 1888-90) could be made of the problems facing Northwestern Ontario gold mining.

After 1890, provincial mining policies focused on three basic objectives: stimulating development, discouraging inefficiency, and maintaining productive social stability within the mining communities. Throughout the 1890's, however, these various goals were often at odds with each other. Mine safety regulations, for example, may have inhibited efficiency but, on the other hand, a mining district crippled by strikes or suffering from an accident-prone reputation

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<sup>2</sup>The Madoc situation became so unruly that the Government was obliged to dispatch 25 mounted policemen to the area to maintain law and order (T.W. Gibson, *The Mining Laws of Ontario and The Department of Mines*, Department of Mines, [Toronto: King's Printer, 1933], p. 6); *Statutes of Ontario*, 1868, "The Gold and Silver Mining Act," (31 V., c.10).

<sup>3</sup>S.O., 1869, "The General Mining Act," (32 V., c.34).

<sup>4</sup>Prior to settlement of the boundary the federal government literally had no legislation in place for the disposition of mining lands. In 1879 rudimentary provisions were made in the Dominion *Public Lands Act* for disposal of mining lands (43 V., c.31, s.37-42), however, the entire section was repealed the next year and replaced with a giant ambiguity. Lands containing minerals in either surveyed or unsurveyed lands "shall not be subject to the provisions of [the Dominion Lands] Act respecting sale or homestead, but shall be disposed of in such manner and on such terms and conditions as may, from time to time, be fixed by the Governor-in-Council, by regulations to be made in that behalf..." (*Statutes of Canada*, 1880, "An Act to Amend the Dominion Lands Act," [44 Vict., c.26, s.6]).

would have been difficult to stimulate with any amount of promotional effort. The improvement of roads and transportation facilities needed to encourage mining development required revenue-raising legislation in the form of royalties and duties which simultaneously discouraged investment. Balancing its three mining policy objectives became a perplexing process for the Province. The result was vacillating, and often times conflicting, legislation.

Ontario mining legislation during this period was primarily concerned with developing a productive land and resource management policy. Early mining lands administration was frustrated by three separate jurisdictional issues involving the boundary dispute, Indian reserves, and timber interests. The boundary dispute, which was not formally resolved until 1889, left Northwestern Ontario in a jurisdictional tug of war with the Dominion in which both parties claimed authority to administer the region's resources and lands. Even after the Privy Council rejected the Dominion boundary claims in 1884, the federal government still claimed it had the authority to administer resources in the region by right of the previously negotiated Indian Treaty No. 3. The issue was not laid to rest until 1888 when another Privy Council decision, the *St. Catharines Milling Company Case*, upheld Ontario's sole authority to control its mineral resources.<sup>5</sup>

The federal government next contested Ontario's jurisdiction over Indian reserve mineral resources. Provincial and Dominion policies towards resource development on Indian lands both had the same objective: to keep the Natives pacified, divided, and helpless while exploiting the minerals under their domain. However, after gold was discovered south of Rat Portage on Reserve No. 38 in the late 1880's, a dispute arose as to who would control administration of Indian lands *minerals*. The *British North America Act* made Indians wards of the Dominion government and, consequently, their lands and resources were to be administered on their behalf by federal Indian Agents. The discoveries on Reserve No. 38 prompted an 1889 Order-in-Council giving the Dominion Superintendent of Indian Affairs the authority to approve

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<sup>5</sup>For an excellent summary of the boundary issue see Morris Zaslow, "The Ontario Boundary Question," *Profiles of a Province*, (Toronto: Ontario Historical Society, 1967), pages 111-117.

prospecting on the reserves. It further stipulated that, if minerals were found and if the Indians surrendered their property rights, the local Indian agent could sell locations to mining claimants. However, if the Indian lands were not surrendered, the Superintendent, if he deemed it in a tribe's "best interest," could call the "chief and principal men" to meet in council for the purpose of persuading them to give up the lands in question. If successful, the attending agent was authorized to draw up a formal surrender and have it executed on the spot.<sup>6</sup> In fact, the Indians had little choice other than to be "induced".<sup>7</sup> In a strangely sympathetic commentary, Ontario Mining Inspector A.P. Coleman described their limited options:

Both halfbreeds and Indians are keen observers, and several gold locations have been taken up on information given by them. They are beginning now to know the value of gold and to join prospecting parties ... The chief of one of the reservations, having found what he believed to be a gold bearing vein on his land, enquired of the writer how he could dispose of it, since he and his tribe wanted the money it would bring. At present of course these wards of the Crown can transact no such business except through the somewhat slowly revolving machinery of the Indian Department; and he was informed that nothing could be done except through the agent in charge of the Rainy Lake reservations.<sup>8</sup>

The Province, however, also had a stake in the Indian lands action. In the 1888 *St. Catherines Milling Company Case*, Ontario successfully defended its claim over sole authority to control resources on former Indian lands surrendered by treaty.<sup>9</sup> The Province felt that this ruling also applied to Indian *reserve* lands surrendered later for mineral development. It claimed that its authority to administer Crown resources, as stated in the *British North America Act*, included *all* lands surrendered by the Indians including post-treaty reserve lands. This state of confusion continued throughout the decade and threatened promotion of Sultana Island, the richest

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<sup>6</sup>*Dominion Orders in Council, 1889, "Indian Lands Mining Regulations,"* (c.31, s.2-4).

<sup>7</sup>Walpole Roland, *Algoma West: Its Mines, Scenery and Industrial Resources*, (Toronto, Warwick & Sons, 1887), p. 148.

<sup>8</sup>OBM, *4th Annual Report, 1894*, 98.

<sup>9</sup>*Ontario Sessional Papers, 1904*, No. 93, "Return of Judgment of the Judicial Committee of the Ontario Mining Company, vs. Seybold," p. 3.

recognized as early as 1890, resolution was not obtained until the issue reached the Privy Council in 1902.<sup>10</sup>

The tenacious jurisdictional problems between the timber and mining interests proved to be more of a conflict of legislation than a fight between governments. Under the old *General Mining Act of 1869*, the Province retained all subsurface mineral rights to public lands not sold under mining patents, and licensed prospectors were entitled to search for minerals under any such lands.<sup>11</sup> However, Dominion law had previously guaranteed Northwestern Ontario timber lessees the right to limit public access to timber berths, ostensibly for the purpose of fire prevention.<sup>12</sup> The timber lessees felt that, under the *British North America Act*, their right to control access survived the district's 1889 transition from Dominion to Provincial administration. Subsequently, during the scramble to claim veins on the Lake of the Woods in the 1880's and early 1890's, several of the lumber barons used the fire suppression lever to pry prospectors and developers from their discoveries. In 1887, John Mather of the Keewatin Lumber and Manufacturing Company evicted the crew working the Ophir mine.<sup>13</sup> He also managed to hold

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<sup>10</sup>A call (not printed) for a "return" showing "whether or not ... Sultana Island, in the Lake of the Woods, has been sold, and if sold, showing by what right or title the Government of Canada claimed to have the power to sell the same" appears in the index to *Canada Sessional Papers, 1890* ("List of *Sessional Papers*," 53 Vict. p. 14). In the 1902 compromise reached before the Privy Council, Ontario agreed to recognize the Dominion's authority to regulate mining on surrendered Reserve locations (as per legislation passed by both parties in 1894). The Province also agreed that the Federal government had authority to regulate *precious metals* mining on Indian lands not surrendered (*Ontario Sessional Papers, 1904*, No. 93, "Return of Judgment of the Judicial Committee of the Ontario Mining Company, vs. Seybold"). This agreement, however, opened a whole new can of worms - who would administer locations of non-precious metals deposits on Indian lands? The agreement finally reached in 1924 involved a complicated structure of administrative sharing between the Province and the Dominion (*Statutes of Ontario*, "Indian Lands Act," [14 Geo. V, c.15]).

<sup>11</sup>*S.O., 1869*, "The Mining Act, 1892," (32 Vict., c.34, s.4).

<sup>12</sup>"The [timber] lease shall ... contain provisions binding the lessee to exercise strict and constant supervision to prevent the origin and spread of fire." (*Revised Statutes of Canada, 1886*, "Dominion Lands Act," [49 Vict., c.54, s.70f]).

<sup>13</sup>Roland, *Algoma West*, 146. Mather's timber berths included islands on the Lake of the Woods. It is interesting to note that the Dominion allowed Mather to include Sultana Island as an island under the conditions of his timber license while at the same time insisting that it was part of Reserve 38B for the purposes of mining. The island had originally been surveyed as a peninsula connected to the mainland Reserve but became separated after construction of Mather's dam on the Winnipeg River raised the lake level four feet (*OBM, 3rd Annual Report, 1893*, 14).

up development of the Sultana location until he received a "piece of the action" in 1891.<sup>14</sup> By 1890 the Boulder Island and Fish Island mines were also forced to cease operations due to "disputed titles" - undoubtedly the dispute was with Mather.<sup>15</sup>

Resolving the timber claims became a long and expensive process for the Province. Mather finally conceded the right of access to the islands of the Lake of the Woods in 1891 in exchange for total ownership of Tunnel Island (including its valuable waterpower rights) and one acre of land with each of the several cottages he had previously "squatted" on the islands and beaches near Rat Portage.<sup>16</sup> The right to explore individual timber berths was painstakingly (and reluctantly) negotiated by the Commissioner of Crown Lands on a case-by-case basis. As late as 1895 the Bureau noted that development of several locations in the Lower Seine subdistrict were still being held up by the timber lessee.<sup>17</sup> A year later the *Canadian Mining Journal* reported that claims "located upon Timber Berth No. 34 have at last been granted a clear title!"<sup>18</sup> In 1899, the promoter of the controversial Anglo-Canadian Gold Estates deal negotiated a release from the timber lessees *before* approaching the government with his proposal for exclusive exploration rights to large chunks of public domain.<sup>19</sup>

In 1888, when the most serious jurisdictional issue between the Province and Dominion was being settled by the Privy Council, Ontario recognized that development of the Lake of the Woods gold fields should proceed with all due haste. It appointed a Royal Commission to study

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<sup>14</sup>Mather received "25 shares" in the Sultana mine in exchange for a release to develop. (Mather, *Journals*, September 20, 1891).

<sup>15</sup>OBM, *2nd Annual Report, 1892*, 233.

<sup>16</sup>*Rat Portage Weekly Record*, 1, August 15, 1891.

<sup>17</sup>OBM, *5th Annual Report, 1895*, 67.

<sup>18</sup>*Canadian Mining Journal*, XV, Feb. 1896, 26.

<sup>19</sup>OBM, *9th Annual Report, 1899*, 48.

the various issues and obstacles facing mineral development in Ontario. The Commission's 1890 *Report* made numerous suggestions regarding every aspect of development from government incentives and taxation to mining safety and education. The Province responded immediately to the Commission's Report by passing mine safety legislation the same year.<sup>20</sup> The following year, the old 1869 *Mining Act* was temporarily modified to better meet the needs of hard rock mining and then, in 1892, it was replaced altogether with a more comprehensive *Mines Act*. Throughout the next ten years, the Province continued to upgrade "the Act" and other mining related laws through a series of amending acts and Orders-in-Council. Many of these alterations involved mining lands administration including regulations for dispute resolution, definition of non-mineral resource rights, and for exploration, transfer, and maintenance of mineral properties.

Several changes were made to exploration regulations during the 1890's, most of which were intended to provide incentives for prospectors. Besides the traditional American "double claim" discovery benefit included in the Act of 1869, Ontario mineral discoverers after 1892 were also entitled to immunity from taxation royalties for fifteen years.<sup>21</sup> In 1897, as a further incentive, any prospector who discovered "a vein, lode or other deposit not less than ten miles from the nearest known mine" was granted an additional free forty acres for his patent.<sup>22</sup> Another change involved mineral exploration on lands granted under the *Public Lands Act*. In 1891 the Province reasserted its authority over minerals on homesteaded agricultural properties and opened them to exploration by licensed prospectors.<sup>23</sup> This right of exploration on homesteaded lands did not extend to areas containing buildings, water supplies, or crops, and any adjudication of damages caused by prospecting or development was reserved to the Director of Mines rather than

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<sup>20</sup>*S.O.*, 1890, "An Act Respecting Mining Regulations" (53 Vict., c.10).

<sup>21</sup>*S.O.*, 1869, "The General Mining Act" (32 Vict., c.34, s.26); *Ibid.*, "The Mines Act" (55 Vict., c.9, s.4[1], s.4[3]). The "double claim" clause entitled discoverers of deposits in unexplored regions to an extra claim.

<sup>22</sup>*S.O.*, 1897, "An Act to Further Improve the Mining Laws" (60 Vict., c.8, s.3).

<sup>23</sup>*S.O.*, 1891, "An Act to Amend the Public Lands Act" (54 Vict., c.7, s.1).



a local court.<sup>24</sup> Opening homestead grants to exploration was meant to illustrate the government's devotion to encouraging mining development in Northwestern Ontario at any cost. However, the government undoubtedly knew these regulations would have little impact on a district where most of the prospecting was conducted in unsurveyed territory unsuitable for agricultural homesteading. It is likely that the opening of homesteaded public lands for prospecting was meant to distract attention from the very real problem of restricted access to timber leases.<sup>25</sup>

Changes in ownership and tenure regulations, or sometimes lack of changes, had the most far-reaching impact on development of Northwestern Ontario mining lands during the 1890's. Originally, under the old Act of 1869, prospectors could either stake a claim to any unclaimed one hundred by one hundred-foot parcel of a provincial mining division (or two claims if more than three miles from any other known claim) or they could purchase a "patent" (commonly referred to as a "location"). To obtain property rights, claimants had to "prove up" by performing a certain amount of work over a period of time, whereas patentees simply purchased their mineral property outright.<sup>26</sup> Although regulations regarding staking changed several times during the 1890's, these changes ultimately had little impact on Northwestern Ontario since the district was never opened as a mining division.<sup>27</sup>

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<sup>24</sup>S.O., 1892, "The Mines Act" (55 Vict., c.9, s.20-21).

<sup>25</sup>There are few clues as to what other motives might have been behind this clause. Neither T.W. Gibson nor H.V. Nelles commented on this aspect of the *Mining Act*.

<sup>26</sup>S.O., 1869, "General Mining Act" (32 Vict., c.34, s.22).

<sup>27</sup>Technically, however, the district was once briefly opened to claim staking. The *Ontario Gazette* reported that an Order-in-Council dated January 18, 1890 declared the Province as a whole opened as a mining division, however, it appears this action was never enforced and shortly thereafter invalidated by passage of the 1891 *Mining Act* (*Ontario Gazette*, XXIII, April 19, 1890, 402). A search of the Ontario Public Archives produced no records for anything but mining patents and leases within what was then known as the Rainy River District. In fact, the Bureau indicated in 1897 that the opening of the Michipicoten mining division occasioned the first appearance of mining claims anywhere in Ontario in more than 25 years (OBM, *7th Annual Report, 1897*, 101). Later, in 1899, a procedure became available for opening unsurveyed areas outside mining divisions to the staking of 40-acre claims. However, the strings attached virtually eliminated application of the statute in Northwestern Ontario. First, the Crown Lands Commissioner had to be convinced that no "valuable" pine timber existed in the region to be opened. His recommendation then required the typical capricious Order of the Lieutenant-Governor-in-Council before staking could commence (S.O., 1900, "Act to

Developers and prospectors wishing to secure district mining property were, therefore, limited to the two other types of tenure - patents and leases. The first option involved simply purchasing mining lands at a fixed price per acre plus the expense of obtaining surveys. Under the *Act* of 1869, purchasers or "patentees" retained all mineral and surface rights (with some restrictions on the timber).<sup>28</sup> However, the easy terms of the old system of patent locations (unlimited sites at \$1.00/acre) led to excessive land speculation, especially in the Sudbury basin. In 1891 the Province, faced with the dilemma of curtailing counter-productive land-grabbing while at the same time promoting exploration and investment, raised the price of patents. However, anxious that higher patent prices would further discourage already scarce capital, the Province simultaneously introduced mining leases which, as it turned out, became the most popular means of possessing mineral properties.<sup>29</sup> They were cheaper (\$1.00/acre for the first year and 25¢/acre/year for the remaining nine years as compared to increased rates of up to \$4.50/acre for patent locations) and they involved less risk than mining patents.<sup>30</sup> At any time before expiration, the lessee could buy the property and apply the first instalment towards the purchase price. If, however, a leased location failed to live up to expectations and if the developer was unable to transfer, bond, or option it, the property could simply revert to the Crown at a minimal loss. Forfeiture of a lease, especially in the first year or two, was obviously less expensive than absorbing the cost of a worthless patent. As a further safeguard against speculation, another provision in the 1891 Act directed that mining locations (both patents and leases) had to be worked. However, work on locations was defined much differently than it was for claims. Rather than measuring labour in days per year, lessees and patentees were required "to expend within ten years \$4.00 or \$5.00 per acre, according as the area granted was more or

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Amend the Mines Act" [62 Vict., c.10, s.3]). Needless to say, no one bothered trying to convince the Commissioner that the district was devoid of valuable pine timber.

<sup>28</sup>*S.O.*, 1869, "The General Mining Act" (32 Vict., c.34, s.7-12).

<sup>29</sup>Between 1891 and 1900, twice as many acres were leased as were sold by patent (292,836 acres leased, 143,124 sold) (Ontario, Department of Crown Lands, "Mining Lands Registries," 1891-1900, [Ontario Public Archives, Toronto]).

<sup>30</sup>*S.O.*, 1891, "The Mining Act" (54 Vict., c.8, s.5, s.1).

less than 160 acres" or the location would revert to the Crown.<sup>31</sup>

By 1894, provincial mining legislation appeared to have exceeded its objective of curtailing speculation. Mining land transfers in Northwestern Ontario had dropped off to nearly nothing - patents declined steadily from 1892 and leases fell off thirty percent between 1893-94.<sup>32</sup> The slump in development was actually due to a variety of reasons, many of which were beyond the Province's control.<sup>33</sup> However, in a desperate move to revitalize mining development, the government chopped mining lands prices drastically in 1894. Northwestern Ontario patents dropped to \$2.00-\$3.00 per acre (depending on proximity to railways).<sup>34</sup> By 1897, however, the situation reversed dramatically. Discoveries on Rainy Lake and in the Manitou and Bad Vermilion subdistricts combined with an improved economic picture to produce an alarming speculative rush on mining properties. Patents and leases in the district during 1897 increased five hundred percent and one thousand percent respectively over 1894 figures.<sup>35</sup> Clearly, the only objective of many of these "boomers" was "to locate themselves as near as possible to a known find in the hope that later they might sell out at a profit."<sup>36</sup> The *Canadian Mining Journal* complained caustically in 1896 that:

A good deal of trouble has developed lately from the actions of that species of individual operating in this district properly designated as the "mining lands hog". No sooner does a hard-working, patient prospector discover a good claim than this individual appears and upon some more or less flimsy pretext puts in a claim for the property, and though in most cases his claim is not such as can be substantiated at the Crown Lands office still he causes a good deal of needless worry and delay, and afterwards succeeds in his original object of being bought

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<sup>31</sup>Gibson, *Mining Laws of Ontario*, 13.

<sup>32</sup>See Figure 2, Appendix B.

<sup>33</sup>The fact that only one new mining company was incorporated in Ontario during 1893 reflects the general decline in the industry during the economic depression of the early 1890's (OBM, *7th Annual Report, 1897*, 7-13).

<sup>34</sup>*S.O., 1894*, "An Act Relating to Mines and Mineral Lands" (54 Vict., c.16, s.4).

<sup>35</sup>See Figure 2, Appendix B.

<sup>36</sup>Gibson, *Mining Laws of Ontario*, 16.

off.<sup>37</sup>

To bring the tide of speculation under control, the *Act to Further Improve the Mining Laws* passed in 1897, required that mining lands applicants substantiate by affidavit that minerals had actually been found on the property applied for.<sup>38</sup> The Act also put some teeth into the 1892 work requirement statutes, requiring that owners of patents and leases meet yearly quotas instead of delaying expenditures on work until the last year before forfeiting their properties.<sup>39</sup> As a final measure, the government at last placed some limitations on the number of locations an individual could hold since "it was considered better to have a large number of small or medium-sized properties at work than to permit a monopoly by a large organization or organizations."<sup>40</sup> Individuals and companies were limited to three hundred twenty and six hundred forty acres respectively, however, reflecting its cautious attitude toward drastic change, the Province still allowed single ownership of multiple locations as long as none were within the same fifteen-mile radius.<sup>41</sup>

As it turned out, however, the Province was willing to make exceptions to even this generous exception. In 1897, Colonel Engledue, who had successfully promoted the Mikado mine, received a major concession from the Ontario government. On behalf of a British corporation, he discretely negotiated an agreement giving the company exclusive exploration rights to two large "blocks" of Northwestern Ontario (approximately 46,000 acres). In exchange, the Ontario Gold Concessions paid a \$20,000 bond and agreed to thoroughly prospect and survey the blocks. Expenditures totalling \$120,000 were to be spent on prospecting and development during the three year term of the agreement.<sup>42</sup> In spite of the strings attached, the "Engledue

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<sup>37</sup>*Canadian Mining Review*, XV, Dec. 1896, 262.

<sup>38</sup>*S.O.*, 1897, "An Act to Further Improve the Mining Laws" (60 Vict., c.8, s.7).

<sup>39</sup>*Ibid.*, s.9.

<sup>40</sup>Gibson, *Mining Laws of Ontario*, 17.

<sup>41</sup>*S.O.*, 1897, "An Act to Further Improve the Mining Laws" (60 Vict., c.8, s.7[3]).

<sup>42</sup>*The Globe*, LII, March 10, 1897, 9.

Deal" was not without its opponents and, indeed, it caused considerable embarrassment to a government supposedly crusading against mining monopolies. Conservative spokesman J.P. Whitney argued that "locking up" large areas of land would cripple development and he pointed to Engledue's association with Mikado as proof of massive monopolization conspiracy. Liberals defended the agreement claiming it would provide the capital and geological knowledge necessary to get "something done" with the Northwestern Ontario gold fields.<sup>43</sup> The Premier, however, had considerable difficulty explaining why the Deal was acceptable in 1897 even though, as Commissioner of Crown Lands less than a year before, he had personally rejected Engledue's first offer for a much smaller concession as "not in the interest of the mining industry nor in the public interest."<sup>44</sup> The government survived the criticism and in 1900, in a repeat performance, made a similar prospecting agreement (less the \$20,000 bond) with the Anglo-Canadian Gold Estates.<sup>45</sup> Apparently, the short life of the Ontario Gold Concessions (it died in 1898) and the general decline in district mining lands transactions led even the Opposition to believe that there was nothing to lose in trying again.

Other land-related mining policies affecting Northwestern Ontario involved access to non-mineral resources within mining locations. Two non-mineral resources, timber and water, were particularly important to district mining productivity. Timber rights, first mentioned in the Act of 1869, varied slightly during the 1890's. Initially, patentees (no leases were offered until after 1891) could cut any trees on their locations, including pines, which obstructed cultivation or which the patentees required for building, fencing, or fuelling their mines. Pine timber cut on the locations and not required for mining or cultivation purposes was subject to ordinary Crown

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<sup>43</sup>*The Globe*, LII April 9, 1897, 12. Ironically, later as Premier, Whitney was responsible for reserving exploration rights on the large Gillies Timber Limit in the Cobalt district and then subsequently auctioning it off to the highest bidders. (Nelles, *Politics of Development*, 164).

<sup>44</sup>*Ibid.*

<sup>45</sup>*Ontario Gazette*, "The Anglo-Canadian Gold Estates License of Occupation #313, 17 October 1900," XXXII November 24, 1900, p. 1346-47. There was a connection between these two exploration monopolies - the promoter for the Gold Estates, mining engineer Allan Sullivan, had been in charge of prospecting the Gold Concession's "Block B."

dues. The patentee had free rein to do what he wished with other species of timber.<sup>46</sup> These terms were unusually generous, since (1) they superseded the timber lessee's rights and (2) it was almost impossible to determine how much timber the patentees actually were using for their mining operation and how much they were selling "out the back door" to settlers or other mines. With the adoption of leasing in 1891, the government felt compelled to enact special legislation to prevent individuals from obtaining mining leases for logging purposes. Lessees were thereafter allowed to use only "dry" pine trees for fuel but only after obtaining permission from either the timber licensee or the Commissioner of Crown Lands. They were also required to give the timber lessee the opportunity to remove pine timber in areas to be cleared for "cultivation." Mining lessees were, however, free to cut as much of any other species as they needed for mining operations during the first ten-year term of the lease.<sup>47</sup>

Although its abundance meant that water rights disputes were clearly never going to be a problem in Northwestern Ontario, several conflicting pieces of water-related legislation did muddy the district's mining development during the 1890's. For example, the *General Mining Act* of 1869 directed that where locations bordered on water, a one chain (60 feet) "road allowance" was reserved along the "margin of such lake or river."<sup>48</sup> This rule was bound to create problems especially in the Lake of the Woods and Manitou subdistricts where, in some cases, a chain's width margin might exclude mining from most of an entire island location.<sup>49</sup> After 1892 exceptions could be made for road allowances on islands of less than thirty acres but only after application to, and approval of, the Crown Lands Commissioner.<sup>50</sup>

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<sup>46</sup>S.O., 1869, "The General Mining Act," (32 Vict., c.34, s.12).

<sup>47</sup>S.O., 1891, "An Act to Amend the General Mining Act" (54 Vict., c.9, s.8).

<sup>48</sup>S.O., 1869, "The General Mining Act" (32 Vict., c.34, s.9[2]).

<sup>49</sup>Obviously the law was never strictly applied in the first place. The famous Silver Islet mine near Thunder Bay, the Province's richest nineteenth century producer, was on an island so small that a single chain reservation was unrealistic.

<sup>50</sup>S.O., 1892, "The Mines Act, 1892" (55 Vict., c.9, s.10).

A series of even more peculiar water rights contradictions emerged from the *Act Respecting the Construction of Roads by Mining Companies* and the *Ontario Mining Companies Incorporation Act*. The 1877 *Mining Roads Act* gave mining companies "having a frontage of one mile or upwards on any navigable lake, river or stream" liberty to construct "harbours, wharves, piers and other erections."<sup>51</sup> The 1897 *Mining Companies Incorporation Act* granted mining companies incorporated in Ontario the right to "construct, maintain, alter, make, work and operate *on the property of the company* [emphasis added]" any water-powers, piers, or wharves necessary for the purposes of mining.<sup>52</sup> However, as noted above, the *Mining Act* of 1869 and the *Mines Act* of 1892 both prohibited companies from owning waterfront properties on which piers, wharves or water-powers would have to be built. Then there was Section 14, Clause 4 of the *Act to Further Improve the Mining Laws*, also passed in 1897, which reserved to the Province the same water-powers promised that year to mining corporations in the *Mining Companies Act*.<sup>53</sup> Clause 4 may have had a limited impact on Northwestern Ontario gold fields promotion since it affected only mining claims and the district was never opened to claims staking. However, the *Act Respecting Water Powers* passed the following year which reserved for separate Provincial administration any undeveloped water-powers, undoubtedly affected mining promotion within the district since it affected the speculative value of power sources located on leases or future patents.<sup>54</sup>

An unprecedented water/land-related policy resulted from an unusual dispute in the Lake of the Woods subdistrict. In 1895 a syndicate of Ottawa and Toronto developers attempted to purchase underwater locations offshore from the lucrative Sultana mine. Although the *Mining Act* contained shoreline margin restrictions, there was nothing in the statutes that either prohibited or permitted locating mining properties underwater. The owner of the Sultana vigorously

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<sup>51</sup>R.S.O., 1877, "An Act Respecting the Construction of Roads by Mining Companies" (c.156, s.2).

<sup>52</sup>S.O., 1897 "The Ontario Mining Companies Incorporation Act" (60 Vict., c.29, s.3[c]).

<sup>53</sup>S.O. 1897, "An Act to Further Improve the Mining Laws" (60 Vict., c.8, s.14[4]).

<sup>54</sup>S.O., 1898, "An Act Respecting Water Powers" (61 Vict., c.8).

opposed this move and, consequently, the patent application was sent to the Crown Lands Commissioner, the sole arbitrator of mining patent disputes. In 1895 Commissioner Hardy approved most of the underwater claim but reserved judgement on three hundred feet extending out from the Sultana shore line. Another year and another Commissioner later, a supplementary decision extended the Sultana location into most of the reserved three hundred-foot parcel and awarded the remainder to the syndicate.<sup>55</sup> As a result of a very awkward situation caused by this reversed judgement, the Province was thrust into recognizing underwater mineral locations whether it liked it or not.<sup>56</sup> However, throughout the decade no statutory provision was ever made for or against underwater locations and, theoretically at least, it was possible for a developer to purchase or lease a block of underwater and adjacent dry land mining property while being excluded from the sixty-foot shore line margin between the two.<sup>57</sup>

Ontario government strategies to encourage mining development included several other incentives and programs besides generous land policies. The most publicized program involved providing prospectors with affordable access to diamond drills for mineral exploration. The Act of 1894 authorized the government to purchase two diamond drills which were to be rented to Ontario prospectors at reasonable rates.<sup>58</sup> In 1895, the Bureau purchased the first drill, an American-made Sullivan, Model C, capable of 1,000-foot depths. The easy rental terms included

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<sup>55</sup>*Canadian Mining Review*, XV, Sept. 1896, 217.

<sup>56</sup>The Sultana's patent was originally granted by the Indian Department in November of 1888 and *included* the shore line (OBM, *3rd Annual Report*, 1893, 19). However, as mentioned earlier, the Dominion's authority to issue Indian reserve patents was not resolved until 1902. Although there was no statute or evidence to support the Sultana mine's claim to the underwater section, special circumstances and politics undoubtedly influenced the Commissioner's decision. The old pre-dam shore line lying offshore and four feet below the post-dam water level was undoubtedly part of the Indian reserve surrendered for administration by the Dominion's Indian Affairs Department.

<sup>57</sup>Exceptions certainly existed. Developers could make application to the Commissioner of Crown Lands for the withheld chain allowance on their shorelines. The Ophir's owners were granted the shoreline to their location when the Commissioner discovered that J.F. Caldwell had built his mill within the allowance on his location without first obtaining the Commissioner's permission (Caldwell was objecting to the Ophir application for their shoreline allowance). Crown Lands, Survey Department files, Ontario Mining Company file, Ontario Public Archives, Toronto, various correspondence and rulings).

<sup>58</sup>*S.O., 1894*, "An Act Relating to Mines and Mineral Lands," (54 Vict. c.16, s.15).



posting a bond to cover transportation costs, wear and tear, service personnel wages, and other expenses. "To encourage exploration" the government would, however, subsidize a portion of these expenses ranging from forty percent in 1894 to twenty-five percent between 1897-1900.<sup>59</sup> In typical form, the government tied some less publicized strings to its diamond drill program. Bureau drill operators were obligated to report to the government the particulars of each "valuable mineral discovery" found with the drill. The first reason for this condition was economic. Upon verification of valuable minerals the government would cease subsidizing and start charging \$50.00 rent per month plus all costs.<sup>60</sup> The second reason was purely political. The Bureau, anxious to justify the program's expense, was desperate for drilling success stories to publish in its *Annual Reports*. However, publicized assessments of mining prospects could have done more harm than good to nineteenth century gold mining promotion, built on hype as much as it was on ore. The risks associated with public disclosure undoubtedly offset the discounted rates and discouraged participation in the program.<sup>61</sup>

The Bureau's rental terms, even with the government discounts, had disadvantages that made its diamond drills less competitive than those in the private sector. District prospectors wishing to engage a government drill had to consider the transportation costs for moving the drill and its crew from its last assignment to remote Northwestern Ontario locations. The Bureau's own administrator's were even concerned about the distance factor.

It frequently happens that operations are carried on in some remote spot where the roads are bad and where supplies of any kind are hard to get. Under such circumstances the cost is somewhat increased both on account of the difficulty in hauling in the plant, and the necessity for starting a camp for the accommodation of the men engaged on the drill.<sup>62</sup>

Besides freight costs, the prospectors were responsible for other incidental costs as they were

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<sup>59</sup>Ontario, *Sessional Papers, 1895*, (58 Vict., No. 72), 173.

<sup>60</sup>Ibid. The statute failed to define exactly what constituted a "valuable mineral discovery".

<sup>61</sup>Chapter 5, which deals with "patterns of development," details the importance of confidentiality in mining promotion.

<sup>62</sup>OBM, *5th Annual Report, 1895*, Thomas Gibson, "Work With the Diamond Drill," 225.

disbursed including the wages of the operator and fireman, replacement of bits and diamonds, and "other repairs of breakages and wear and tear of machinery."<sup>63</sup>

Furnishing diamond drills at "reduced" rates was about as far as the government wished to go with subsidizing Northwestern Ontario mining. Especially in the early part of the decade, mining promoters pressured the Province to provide direct financial support for gold mining development within the district. As early as 1891 there were calls for a provincially-funded local mining agency to sort out the mess of tangled titles around Rat Portage, where properties were "so mixed up that a would-be purchaser does not invest his money." Reflecting a local distrust of long-distance administration, the suggested remedy was a "mining bureau ... composed of the businessmen of Rat Portage."<sup>64</sup> A government Mining Lands Agency was finally established at Rat Portage in 1897, however, it was not composed of local potentates, and its very limited authority was undoubtedly a disappointment to local promoters crying for more efficiency.<sup>65</sup>

A government-funded custom stamp mill was also the object of fruitless district lobbying during the 1890's. Its advocates claimed that a government-run custom mill would "enable all who own a claim to thoroughly develop without being at the great cost of purchasing expensive machinery until they had discovered that the richness of the product would warrant the expenditure."<sup>66</sup> The Province, however, was justifiably cautious about spending money on another custom stamp mill when a previous project, funded in part by the municipality, lay idle

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<sup>63</sup>Ontario, *Sessional Papers, 1895*, (58 Vict., No. 72), 173.

<sup>64</sup>*Rat Portage Weekly Record*, 1, September 19, 1891.

<sup>65</sup>OBM Director Archibald Blue explained the purpose of the Mining Lands Agency in Rat Portage: "Maps upon which are laid down all locations applied for and locations for which patents or leases have been issued are kept for the purpose of reference, together with a register of every transaction, so that information may be promptly given to explorers and others regarding any property in the district." However, Blue admitted that "all official papers, affidavits, etc. relating to lands applied for, are forwarded to the head office for ruling by the Commissioner, who has sole authority to decide disputes and order titles to issue" (OBM, *7th Annual Report, 1897*, 3). Obviously, maps and registers at the office in Rat Portage could never be up to date since transactions were always completed by the Crown Lands Office in Toronto with notice subsequently being given to the Mining Lands Office in Rat Portage.

<sup>66</sup>*Rat Portage News*, XV March 15, 1895.

and collecting rust. The Rat Portage Reduction Works, allegedly completed in 1891, operated only fitfully (and, it seems, never properly) during the decade. In 1889 the town agreed to provide a subsidy of \$10,000 upon the mill's completion and two years later the company, running low on capital, hired a mining engineer from Port Arthur to certify the mill was operational. His report indicated that the mill was capable of processing 191½ tons per day but, in fact, it could never handle a fraction of that amount and wasted almost as much gold as it produced.<sup>67</sup> Periodically local promoters continued to propose various other schemes for direct provincial subsidization, however, as a result of the Reduction Works fiasco, the Ontario government would wait until well after the turn of the century before it involved itself directly in financing precious metal mining ventures.<sup>68</sup>

Created in 1891 as a division of the Crown Lands Department, the establishment of the Bureau of Mines marked a giant step forward in Ontario resource policy. The Bureau was supposed to provide the specialized expertise necessary for efficient administration of the Province's complicated mining industry. Its primary function was to promote mineral development through the gathering and publication of information.<sup>69</sup> Other roles included monitoring compliance with mining regulations and investigating accidents and fatalities. The Bureau Mining Inspectors were essential to each of these objectives. They toured the mining districts and gathered data on production, they inspected for violations of regulations, and they made observations on the geological, geographical, social, and even ecological conditions

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<sup>67</sup>OBM, *3rd Annual Report, 1893*, 33. Walpole Roland's report convinced the town to pay the subsidy, however, it is hard to imagine how any engineer could envision the Reduction Works' two small Standard pulverizers handling 191½ tons/day when contemporary engineering texts reckoned that a very large 20 stamp battery of 850 lb. stamps was only capable of crushing 40 tons/day "rock of average hardness" (Eissler, *Metallurgy of Gold*, 69).

<sup>68</sup>The *Rat Portage News* suggested, among other things, "a bonus on the sinking of shafts... increasing in amount according to depth." (*Rat Portage News*, XV March 15, 1895). In 1906, the Whitney administration retained the Gillies Timber Limit in the Cobalt district with the intention of developing a government run silver mine (Nelles, *Politics of Development*, 164). The failure of this adventure combined with the earlier Reduction Works fiasco to leave a lingering legacy that discouraged future subsidization of precious metals mining in Ontario.

<sup>69</sup> Nelles, *Politics of Development*, 122-23.

encountered.<sup>70</sup> Inspectors sometimes made several trips per year into Northwestern Ontario, travelling hundreds of back country miles on each trip.<sup>71</sup> Their observations were compiled into Reports and maps which were published annually and disseminated for public consumption.

The incorporation of the Kingston School of Mines in 1892 marked another progressive step towards efficient promotion of Ontario's mineral wealth. The School was created in response to early indications that a shortage of basic mining expertise was retarding Northwestern Ontario gold development.<sup>72</sup> Besides a Mining Engineer degree, the school also offered a flexible non-degree program to fit the needs of working mining men. Students could audit courses free of charge or enroll in a variety of evening classes. A special \$10, eight week accelerated course was offered during the winter for mine foremen, assayers, prospectors, and "mining men generally."<sup>73</sup> After 1894, important additions to the school's meagre curriculum included the extension course program. "Prospectors' classes ...accompanied with experiments, specimens, diagrams, etc." were given in the field during the summer months and were undoubtedly initiated to stimulate the district mining development. The government, anxious to augment Northwestern Ontario's shortage of expertise and improve its mining reputation, absorbed tuition costs for these summer courses.<sup>74</sup> Starting in 1894 and continuing to the end of the decade, classes were offered annually at Rat Portage and other locations within the district. Participation was high, in spite

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<sup>70</sup>One mining inspector reported the discovery of Ontario's only indigenous cactus species on an island in Rainy Lake (Ontario, *Sessional Papers, 1895*, 58 Vict. No. 72, 96).

<sup>71</sup>Dr. A.P. Coleman, acting as an Inspector, logged 670 canoe miles between July 4th and September 9th, 1896 (OBM, *6th Annual Report, 1896*, 71).

<sup>72</sup>Eugene Costé's 1884 *Geological Survey* report, vividly detailing the comic incompetence of the district's early developers, conferred a bad reputation upon Northwestern Ontario mining that took years to overcome (*Report of Progress, Geological Survey of Canada, 1884*, 5-22K).

<sup>73</sup>Ibid. 178; *Rat Portage News*, XV, June 14, 1895.

<sup>74</sup>OBM, *3rd Annual Report, 1893*, 179.

of the fact that classes were given during the prospecting season.<sup>75</sup> In fact, the summer extension classes presented the Bureau with a convenient opportunity to kill two birds with one stone. Kingston staff members occasionally doubled as mining inspectors, touring and reporting on mines and geology in the various districts between teaching engagements.

Unfortunately, Inspectors were frequently compelled to visit the district on a more irregular basis than just the summer inspection tours. One of their more sombre duties involved investigation of serious mining accidents or fatalities. As early as 1890, the government embarked on a policy of supervising mine safety by initiating a range of safety regulations ranging from banning paymasters from pubs to restricting women and children from working underground.<sup>76</sup> However, not unlike its softened "campaign" against land speculation, the Bureau's mine safety policies favoured gentle persuasion rather than rigorous enforcement. Accident reports were essential to the administration of these regulations and were to be included in the Annual Reports. Besides the obvious educational benefits, their publication was also intended to counterbalance sensational press coverage and minimize any impression potential investors might have that Northwestern Ontario's infant gold mines were shoddy accident traps.<sup>77</sup> Consequently, Inspectors seldom blamed anyone but the miners for the cause of their mishaps. Reporting on an 1897 accident in which a Swedish miner at the Foley mine sustained serious head injuries when he fell from a ladder in the shaft, the Inspector indicated the injured man "was subject to epileptic fits, and it is believed that he lost his hold of the ladder while in one of

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<sup>75</sup>W.H. Merritt reported attendance figures to the Bureau in 1895:

Mine Centre (July 15) . . . . .	44 attended
Rat Portage (August 12) . . . . .	24
Port Arthur (Sept 4) . . . . .	49
Sault Ste. Marie (Sept. 23) . . . . .	24

He noted however that "attendance as a rule was irregular, and the majority only attended a few lectures between business engagements." Classes were held at Sudbury during December and were, oddly enough, the poorest attended (only 13) (OBM, *5th Annual Report, 1895*, 216).

<sup>76</sup>*S.O., 1890*, (53 Vict., c.10); *S.O., 1892*, (55 Vict., c.9, s.53-59); *S.O., 1900*, (63 Vict., c.13, s.22).

<sup>77</sup>Actually, over the decade the average annual accident rate within the district (1.907% of the total employed) was only slightly higher than it was in the much more developed Sudbury nickel mining camp (1.026%). For a summary of annual accident rates see Figure 3, Appendix B.

these."<sup>78</sup> The miner's side of the story may have been more convincing - a High Court Judge granted him a \$350 judgment against the company the following year.<sup>79</sup> The Inspector reporting on one fatal accident grasped for almost any cause of death but the obvious. A miner who obviously died from asphyxia in an underground fire at the Sultana mine "had been suffering from heart trouble or spasmodic asthma, and ... the excitement induced by the situation in which he found himself might have caused his death, or it might have been due to fatty degeneration of the heart."<sup>80</sup> Unfortunately, although legislation barred women and boys under 15 years from working underground, there were no regulations against hiring men who lacked either the physical or mental capacity to work safely in mines.<sup>81</sup> Some accidents were brought on by the workers themselves, however, the *repeated* references to their own "carelessness" being the cause of accidents undoubtedly caused some resentment among the district's miners - but certainly not among its developers.<sup>82</sup>

Sometimes Bureau investigations were so blatantly whitewashed that their publication endangered the credibility of the district (and the Bureau) more than the truth. At the Olive mine

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<sup>78</sup>OBM, *7th Annual Report, 1897*, 31.

<sup>79</sup>Ontario, High Court of Justice, Rainy River Division, *Judgement Book, 1897*, Kenora District Court Records, p. 46. This award was about what was expected. The editor of the *Canadian Mining Review* noted that, in a similar accident at the Clara mine [Sudbury], a miner who broke three ribs and was out of work for six weeks settled out of court for \$315 "I believe, which sum would pay his lawyer's and his doctor's bills, his wages for the six weeks, and leave him something left over" (*Canada Mining Review*, XVII, July 1898, p. 197).

<sup>80</sup>The Inspector apparently failed to consider that each of the other nine immigrant miners, "mostly Swedes and Finns," trapped in the hell of smoke, burning timbers, and freezing fire hose water, collapsed and had to be resuscitated at the surface. The real cause of death, failure to institute a required emergency warning system, was minimized in the report. When the shaft house roof first caught fire, the shift foreman furiously rang the skip bell at the top of the shaft but the miners thought he was signalling them to clear the shaft so he could send the skip down for another load (OBM, *5th Annual Report, 1895*, 237-238).

<sup>81</sup>*S.O., 1890*, "An Act Respecting Mining Regulations" (53 Vict., c.10, s.4).

<sup>82</sup>On at least one occasion the Bureau Inspectors were implied to have been negligent in their duties to assist in enforcing mine safety regulations. Although the coroner's jury investigating the 1894 death of miner William Martin at the Copper Cliff mine near Sudbury found that "the deceased came to his death through injuries received through rock falling accidentally" it also condemned the Bureau Inspector for not making "proper inspection" of the mine (OBM, *4th Annual Report, 1894*, 213).

in 1897 one unfortunate miner died from either asphyxiation or injuries sustained from being dropped down the shaft several times by would-be rescuers. He and another miner were attempting to set a charge in a drift before the air was sufficiently cleared from the last blast. His partner barely made it up the shaft and several others nearly expired trying to retrieve the stricken miner. The manager claimed he had instructed the men to wait a whole day between setting blasts. Of course, Inspector Bow accepted the manager's version, expecting Bureau Report readers to believe that miners would descend into an unventilated shaft and set a blast purely on their own initiative.<sup>83</sup>

In fact, during the 1890's there was only one instance where a Bureau accident report actually pointed to mine management negligence. Three men were killed in 1899 at the Black Sturgeon mine when they were thrown out of the bucket that was illegally transporting them to the top of the shaft. Besides the fact that the mine was using a broken hoist with a jury-rigged brake, the "evidence in this case [indicated that] the lower ladders had not been replaced as they should have been, and it was necessary to use the bucket to reach the bottom of the shaft."<sup>84</sup> Though riding in ore-raising equipment accounted for several accidents during the decade, the managers were *always* exonerated while the miners were *always* blamed for ignoring the regulations against it.<sup>85</sup> The Black Sturgeon case, however, left the Inspector no option except to blame the company; the miners were obviously unable to use the ladders since none existed. It also may be no coincidence that this singular incident of finger pointing occurred late in the decade at the peak of the development boom. Obviously, there was by then less pressure to "soften" reports in the interest of mining promotion. However, over the decade Bureau accident reports generally reflected more concern for mining promotion than for mine safety, creating a situation that could have become volatile had the district ever evolved into a major mining centre.

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<sup>83</sup>OBM, *7th Annual Report, 1897*, 32-33.

<sup>84</sup>OBM, *9th Annual Report, 1899*, 29.

<sup>85</sup>For reports on other district incidents involving riding in ore raising equipment see the *Annual Reports* for 1899 [p.32] and 1898 [p.26]. This appears to have been a very common practice since several similar accidents were also reported in other provincial mining districts.

In defence of the Inspectors, it must be noted that they had no real authority to deal with safety hazards. They could only

Examine into and make enquiry respecting the state and condition of any mine ... and the ventilation of the mine, and all matters and things connected with or relating to the safety of persons employed in or about the mine,... and to give notice to the owner or agent in writing of any particulars in which he considers such mine or any portion thereof or any matter thing or practice to be dangerous or defective, and to require the same to be remedied within the period of time named in such notice.<sup>86</sup>

Inspectors had no legal authority to force mine managers to immediately cease practices or repair equipment hazardous to mine employees.<sup>87</sup> Inspectors were also unwilling or unable to act decisively against habitual offenders. Having found that the Dominion Gold Mining Company had not corrected dangerous deficiencies noted the year before, Inspector Slaughter "called the attention of the foreman at the locations and also of the general manager to this remissness" and only warned the company to correct the problem "forthwith."<sup>88</sup> An 1898 inspection of the Sultana mine, the district's richest operation, noted that the improper alarm system responsible for the fatality in its mine shaft fire still was not corrected *four years later*.<sup>89</sup> Notices for violations were, in fact, often so insubstantial that they invited management to ignore them. Noting a dangerous situation at the Sawbill mine shaft, Inspector Bow left instructions in 1898 "to increase the height of the present guard rail *if too much inconvenience* was not caused thereby [emphasis added]."<sup>90</sup>

Though they were forbidden by law from dabbling in mining enterprises, Bureau

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<sup>86</sup>S.O., 1890, "An Act Respecting Mining Regulations" (53 Vict., c.10, s.15).

<sup>87</sup>Only one inspector, Courtney De Kalb, appears to have had the audacity to exceed his legal authority. In 1898 he ordered managers at three of the district's larger mines (Regina, Sawbill, and Olive) to stop shaft-sinking until they either corrected hoisting and skipway deficiencies or obtained "special permission from the Bureau of Mines" (OBM, *8th Annual Report*, 1898, 44-46).

<sup>88</sup>OBM, *6th Annual Report*, 1896, 98.

<sup>89</sup>OBM, *8th Annual Report*, 1898, 43-45.

<sup>90</sup>Ibid., 88.



inspectors occasionally crept into the arena of economic forecasting.<sup>91</sup> In 1899 Inspector J.A. Bow's glowing report on the Golden Star mine was based largely on hearsay and selected \$10/ton assays. Bow concluded by making an unprecedented prediction that the mine was likely to yield "liberal dividend" payments.<sup>92</sup> Publication of the report provided the American owners with the advertising they needed to "boom" company shares with bogus dividends while gutting the mine of its best ores. As share prices were climbing the owners stripped the mine then discretely dumped their own stocks at a tidy profit. Within the year, Toronto investors had taken control of the mine which, to their dismay, they discovered to be nothing more than a dilapidated, empty hole in the ground.<sup>93</sup> The scandal ultimately produced several losers including Inspector Bow, who suddenly departed from the Bureau in 1900, and the Bureau of Mines itself, which was left with a bad case of egg on its face.

The government was well aware of the speculative nature of nineteenth century gold mining promotion. However, Ontario legislators were willing to accept the evils of mining speculation as the price of its potential benefits. Hard rock mining development was traditionally a process of guesswork usually involving many incidents of failure for every success. A certain amount of speculation was viewed as a necessary evil, essential to obtaining adequate investment capital in a high risk capital intensive industry. On the other hand, the bad reputation caused by a mining speculation bubble-burst would guarantee a capital drought that could last for years. The difficulty for Ontario policy makers lay in determining what to do when speculation had gone too far. A variety of different statutes attempted to encourage while simultaneously controlling speculation. When speculation appeared to be getting out of control, attempts were made to bring it back into line through adjustments to mining land prices and changes in tenure

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<sup>91</sup>*S.O., 1890, "The Mining Operations Act" (53 Vict., c.10, s.14).* This regulation forbade anyone who was involved in mining ventures from being "appointed or authorized to be qualified to act as an Inspector." However, it was a well known fact that W. H. Merritt, a Kingston School of Mines instructor who occasionally was authorized to make inspection tours for the Bureau, dabbled in mining lands on the Lower Seine (*Rat Portage News*, November 22, 1895).

<sup>92</sup>OBM, *8th Annual Report, 1898*, 271.

<sup>93</sup>OBM, *9th Annual Report, 1899*, 66.

regulations. At the same time, however, the Province's corporate mining legislation, oblivious to any restraint on speculation, was geared specifically towards encouraging mining investment at all costs.

Corporate mining legislation in the 1890's reflected the government's acceptance of the peculiar speculative requirements of mining promotion. In 1894, at the peak of a long mining slump, the Province included a special corporate section within its *Mines and Mining Lands Act* that granted mining companies extraordinary privileges. For example, while other companies could not sell stock "at any greater discount or at any premium less than what [was] previously authorized at a general meeting," mining companies could "dispose of shares and stock at such times to such persons and on such terms and conditions and at such premium or discount and in such manner as the directors think advantageous to the company."<sup>94</sup> This was a powerful option meant to enhance the ability of mining company directors to raise cash quickly in response to new developments, discoveries, or market trends.

The government also encouraged mining speculation by restricting another traditional avenue of raising mining capital - making calls on unpaid stock. Non-mining companies had the option of taking shareholders whose calls were unpaid to court and/or forcing them to forfeit their shares back into the treasury to "be disposed of as by by-law or otherwise the company may ordain".<sup>95</sup> Mining companies, however, could only reclaim (essentially cancel and reissue) the delinquent's shares and sell them at public auction.<sup>96</sup> Directors had to think long and hard about enforcing a call since they had no control over how much they were going to get for the shares or who was going to get them once they went on the block. Indeed, in the event that the shares

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<sup>94</sup>*Revised Statutes of Ontario, 1897*, "Ontario Joint Stock Companies Letters Patent Act" (c.157, s.43); *S.O., 1894*, "Act Relating to Mines and Mining Lands" (57 Vict. c.17, s.17).

<sup>95</sup>*R.S.O., 1887*, "Ontario Joint Stock Companies Letters Patent Act" (c.157, s.46-47).

<sup>96</sup>*S.O., 1894*, "Act Relating to Mines and Mining Lands" (57 Vict., c.16, s.21).

sold for more than what was owing, the excess had to be remitted to the original owner.<sup>97</sup> Prospective investors surely found Ontario mining stocks attractive knowing that payment of calls was an option rather than a contractual obligation. This clause also discouraged directors of suddenly promising mines from squeezing out their small shareholders by concealing developments while making calls (an old Comstock trick). Besides encouraging investment, this limitation was also intended to discourage mining companies from initially overstating their capitalization and/or selling too much stock too far below par value - two evils commonly blamed for the collapse of mining booms.

Further encouragement to corporate mining promotion dated back to the 1880 *Act Respecting Companies Incorporated Under Imperial Statutes*. Under this Act any company incorporated "under the laws of the Imperial Parliament of Great Britain and Ireland" could, upon application, receive *without condition* Letters Patent to carry on business in Ontario. Although not specifically limited to mining companies, this act was obviously intended to encourage investment in Canadian mines by British investors, historically the preferred target of mining promotion in North America during the latter half of the nineteenth century.<sup>98</sup> Automatically transferring Imperial Letters Patent to Ontario expedited the mining promotion game considerably. Because British investors were usually unwilling to sink their money into foreign mining companies, Ontario chose to allow British companies to participate directly and unconditionally in the province's mining industry.<sup>99</sup>

However, British capital investment did not live up to expectations. Instead, it was the Americans who became the surprise source of Ontario mining capital.<sup>100</sup> Faced with an American

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<sup>97</sup>Ibid.

<sup>98</sup>Spence, *British Investment and the American Mining Frontier, 1860-1901*, 233.

<sup>99</sup>Ibid. 37.

<sup>100</sup>After 1895 America began to compete with Great Britain as a source of Canadian capital imports. See Figure 4, Appendix B.

mining investment boom in Northwestern Ontario after 1895, the Province responded by legislating mechanisms to supervise the foreign flood of speculative mining companies. Section 9 of the 1897 *Mining Companies Act* established a licensing system for "extra-provincial" mining companies wishing to engage in the sale of mining securities within the Province of Ontario. A successful license applicant had to prove to the Director of the Bureau of Mines that "it has been duly incorporated [somewhere] and that it possesses the real estate property and assets, and that it is carrying on its operations on a scale and in a manner to command the confidence of the public..."<sup>101</sup> However, no criteria for paid up capital or real estate assets were defined, and it was not clear how the Bureau of Mines was to quantify exactly what kind of "scale" or "manners" would command public confidence. Also, the Bureau, composed largely of engineers and geologists, probably lacked the expertise to research the financial background of applicants. Although the Lieutenant-Governor retained the right to revoke any license at any time "for any cause that to him shall appear to be sufficient" there is no record of any company having its license revoked.<sup>102</sup>

The *Mining Companies Act* imposed several other regulations to encourage, yet control, speculation in Northwestern Ontario mining. Mining companies had to report annually the number of discounted shares sold and their rates of discount as well as "furnish such further and other information as shall at any time be required by the... Director of Mines."<sup>103</sup> Presumably, this last clause was intended to encourage better compliance with *Mines Act* requirements for annual production and progress reports.

Other clauses within the *Mine Companies Act* granted Ontario mining corporations extraordinary pyramiding powers. Although corporations were generally forbidden from purchasing shares in another company without shareholder consensus, mining companies were

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<sup>101</sup>*S.O., 1897, "Ontario Mining Companies Incorporation Act" (60 Vict., c.29, s.9).*

<sup>102</sup>*Ibid.*, s.10; A search of the *Ontario Gazette* for 1888-1902 failed to turn up a single license revocation.

<sup>103</sup>*Ibid.*, s.7.

authorized, in the course of everyday business, to "take, acquire and hold" shares or securities of other mining companies in "consideration for ores, metals or minerals sold or otherwise disposed of."<sup>104</sup> Mining company directors could also, on their own initiative, "acquire and undertake all or any part of the assets, business, property, privileges, contracts, rights, obligations and liabilities of any person or company" involved in mining.<sup>105</sup> Additional pyramiding powers reserved specifically to mining corporations included operating their own steamship lines without obtaining Parliamentary authorization and holding shares in subsidiary transportation improvement companies.<sup>106</sup>

One section of the 1897 *Mining Companies Act* pretended to profoundly affect the mining speculation game. Section 12 appeared to discourage the booming business of false advertising in the promotion of mining ventures. Promoters, directors, would-be directors, and even acquiescing would-be directors responsible for circulating prospectuses containing misleading information were liable to "pay to all persons so subscribing or applying on the faith of such prospectus or notice, compensation for the loss or damage they may have sustained by reason of any untrue statement..."<sup>107</sup> Promoters, however, had only to read the small print to discover that the attached conditions actually made successful litigation almost impossible. Conviction depended upon proving that the guilty parties made statements they *knew for certain* were untrue. Promoters could not be convicted for promoting false statements if they claimed they *believed* such statements were true when they made them.<sup>108</sup>

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<sup>104</sup>*R.S.O., 1887, "Ontario Joint Stock Companies Letters Patent Act" (c.157, s.60); S.O., 1897, "Ontario Mining Companies Incorporation Act" (60 Vict., c.29, s.3[e]).*

<sup>105</sup>*S.O., 1897, "Ontario Mining Companies Incorporation Act" (60 Vict., c.29, s.3[g]).* It is unclear whether "assets" included another company's securities.

<sup>106</sup>*Ibid., s.3(d), 3(h).* Both of these allowances were intended to encourage speculation specifically in Northwestern Ontario.

<sup>107</sup>*Ibid., s.12.*

<sup>108</sup>*Ibid., s.12(a-c).*

Certainly, the most controversial of Ontario's mining measures during the 1890's involved mining revenues. The Province's minerals, especially precious metals, were at various times viewed as Crown property and subject to a form of tribute called royalties. Royalties theoretically involved mining operations retaining a portion of the product as payment for its extraction with the remainder being returned to its rightful owner, the government. In reality the Crown took a percentage of the product and the company retained the rest. Royalties of from two to ten percent were first introduced in the 1868 *Gold and Silver Mining Act* but were promptly repealed the following year.<sup>109</sup> In 1891 the Province reinstated its ownership of minerals and reintroduced royalties but with several conditions attached. The old Hastings/Madoc gold mines and other locations south of Lake Nipissing were exempted. Royalties, to be calculated on the value of the ores at the "pit's mouth," applied only to silver, copper and nickel, but not gold (although the government reserved the right to impose royalties on gold at any time by Order-in-Council). New mines were granted a royalties holiday of seven years from date of patent or lease.<sup>110</sup>

Clearly, the Province was targeting the Sudbury district.<sup>111</sup> Reaction from this powerful mining camp was immediate and, within a year, the government backed down by once again repealing royalties and revoking its mineral rights - with conditions attached, however. Only the older patents issued before May 1891 (including, of course, most of the Sudbury locations) had their mineral rights restored and royalties rescinded.<sup>112</sup> The seven year collection exemption on new locations was reinstated but individuals making discoveries three or more miles from any other location were granted a fifteen year holiday.<sup>113</sup> Royalties were calculated on a net value

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<sup>109</sup>Gibson, *Mining Laws of Ontario*, 10.

<sup>110</sup>*S.O.*, 1891, "Act to Amend the General Mining Act" (54 Vict. c.8, s.3).

<sup>111</sup>In fact, "mines known to be rich in nickel" were only entitled to four post-discovery years of royalty-free production instead of the usual seven years (*Ibid.*).

<sup>112</sup>*S.O.*, 1892, "Mines Act" (55 Vict., c.9, s.3).

<sup>113</sup>*Ibid.* (s.4[3]).

basis rather than pit's mouth gross values.<sup>114</sup> In fact, the government's conditioned concessions on the royalties issue made little difference in the long run. Although the Province managed to keep a watered-down royalty system on the books, the issue remained so politically explosive the government never got up the courage to implement collection.<sup>115</sup> In 1900, it gave up altogether and provincial mineral rights and royalties were unconditionally repealed (except a threatened tax on Sudbury ores and mattes refined abroad).<sup>116</sup>

How profoundly did public policy during the 1890's influence the development of the Northwestern Ontario gold district? Certainly, the boundary issue delayed serious development for at least ten years, but this situation was more an unfortunate circumstance than a government policy. The confusion surrounding jurisdiction over minerals on Indian reserves involved a few, albeit lucrative, mines and was largely worked out between the Province and Dominion by 1894. With the exception of the Ophir mine, this dispute does not appear to have substantially affected mining development during the 1890's. In fact, at least one mining prospectus implied that the Provincial government was so confident of successfully resolving the Indian reserve jurisdiction dispute that it was guaranteeing mining investments in the area. The New Sabaskong Gold Mining Company's annual report/prospectus for 1899 indicated that the company "has no liabilities other than shown by the Secretary's report, except the possibility of some payment to the Federal Government in respect to Indian claims, against which the Company is protected, the title being assured under the *Land Titles Act* [of Ontario], and any sum the company might be called upon to pay would be collectable from the Provincial authorities."<sup>117</sup>

However, another jurisdictional issue, access to timber leases, undoubtedly had an

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<sup>114</sup>Ibid. (s.4[2]).

<sup>115</sup>Gibson, *Mining Laws of Ontario*, 14.

<sup>116</sup>S.O., 1900, "Act to Amend the Mines Act" (63 Vict., s.3, s.7, s.10).

<sup>117</sup>*Annual Report to the Shareholders of The New Sabaskong Gold Mining Company of Ontario, Limited* July 4, 1899 (Publisher unknown: Lake of the Woods Museum Archives, Kenora).

enduring impact on Northwestern Ontario mining development. Although the government did not hesitate to open other dispossessed public lands (homesteads) to prospecting, it lacked the courage to legislate against the timber lessees' limiting access to public forests lands. Until the end of the decade, district timber barons continued to be a formidable barrier to mineral exploration. Clearly, here was a situation that, unlike the boundary or Indian lands disputes, did not involve circumstances somewhat beyond the Province's control. Obviously, the Crown Lands Department was not willing to upset the district's forest products industry, its traditional bread and butter. There was also a political element to contend with. The lumbermen of Northwestern Ontario were well entrenched in provincial as well as national politics. John Mather of the Keewatin Lumber Co., for example, was well known in Ottawa political circles.<sup>118</sup> The mining men, on the other hand, had several disadvantages that handicapped their capacity to build a political front against the lumber barons. Composed mostly of absentee local investors with financial backgrounds as diverse as their residential locations, the district's mining men were simply *too* diverse to develop a strong lobby. Disunity was also encouraged by the scattered nature of the district's gold deposits. The political priorities of mines near Atikokan (improved transportation facilities), for example, were different than those near Rat Portage (industrial subsidization). The district's constant management shuffling further discouraged development of any consensus among the mining companies (and, obviously, within the mines as well).<sup>119</sup>

The Provincial government tried several approaches to encourage exploration during the 1890's - royalty holidays, bonus patents, relaxed access to former public lands, and low rent diamond drills. However, few of these incentives proved beneficial to prospectors in Northwestern Ontario. Royalty holidays were almost meaningless as an incentive since no

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<sup>118</sup>Mather had business connections with several prominent national politicians. He held controlling shares in the *Winnipeg Free Press* for Secretary of the Interior, Clifford Sifton. Business associates of his Lake of the Woods Milling Company included several C.P.R. magnates as well as future Prime Minister J.J.C. Abbott (*Dictionary of Canadian Biography*, Vol. XIII, ed. Ramsay Cook (Toronto: University of Toronto, 1994), pp. 692-93).

<sup>119</sup>The Table of Mining Companies (Table 1, Appendix C) provides some indications of the district's high rate of management turnover. In one extreme case, the Sawbill mine went through three mine superintendents in one year (OBM, *7th Annual Report, 1897*, 64).



royalties were ever imposed on gold anyway. Opening up other patented public lands for prospecting also provided little impetus since it belied the real obstacle to mining exploration in the district - the inability to access lands under the control of the timber men. The government's diamond drill program was never the smashing success the Bureau anticipated it would be. The ambiguities associated with paying disbursements and wages on a monthly as-completed basis (even with the government's discount) was less preferable than contracting with a local drilling company for a flat fee.<sup>120</sup> In fact, in 1900 the Bureau was finally forced to admit that, in spite of weekly advertisements in district newspapers, *not one* diamond drill application was received between October 1895 and February 1897.<sup>121</sup> During its brief fourteen year history, only rarely were government drills ever used at Northwestern Ontario gold mines. On one occasion, a drilling adventure on Long Lake proved to be such a costly affair that the Bureau deliberately eliminated its particulars from its annual report of the program's progress: "The cost of drilling on this property was much in excess of that on any other... The figures are omitted as they would be misleading for purposes of comparison."<sup>122</sup>

Mining land and tenure policies were intended to control speculation rather than encourage the district's development. It is true that the adoption of leasing in 1891 was an encouragement; however, if the Province had been serious about promoting expeditious development of Northwestern Ontario, the district would have been declared a mining division and opened to claims staking. Why this never happened remains a mystery. The general public, as well as the mining interests, pleaded for the creation of a mining division but the government stood steadfastly and silently (and sometimes cleverly) against it. One *Globe* correspondent, writing to a Rat Portage newspaper in 1891, predicted that "any poor man is a fool to waste his time and

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<sup>120</sup>The Gold Hill mine (Dominion Gold) purchased its own diamond drill in 1895, the same year the government instituted its program (OBM, *5th Annual Report, 1895*, 175). By 1898 at least five privately owned diamond drills were operating in the district (*Canadian Mining Review*, XVII [February 1898], 152).

<sup>121</sup>OBM, *10th Annual Report, 1900*, 51; In 1894 and 1895 the *Rat Portage News* weekly ran a rather large notice advertising the government's diamond drill program.

<sup>122</sup>OBM, *10th Annual Report, 1900*, 52.

energies prospecting for mining claims there... No one can get an 80 acre claim in Ontario now for less than \$750 in money and work."<sup>123</sup> Archibald Blue, the Bureau's first Director, responded vaguely declaring that no demand for claims existed and that the geography of the district discouraged creation of a mining division:

The reason no doubt is that circumstances have not arisen to call for utilizing the system for which it provides, either by reason of the distance of mining gold or other valuable ores where small areas would satisfy the desires of mining men. Mining locations are preferred, and there is not a demand for mining claims.<sup>124</sup>

There may have been a more sinister reason for not opening the district to claims-staking. The government had long recognized that the "Indians" of Northwestern Ontario were ambitious and effective prospectors.<sup>125</sup> It is not inconceivable that the government viewed the Natives, with their extensive oral history resources, as having an unfair advantage over white prospectors. Claims-staking would have provided "unfairly" advantaged Natives an opportunity to possess their mining discoveries at the cost of only a mining license and annual work requirements.<sup>126</sup> Limiting land tenure to patents and leases meant that the district's Indians, with their meagre

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<sup>123</sup>*Rat Portage Weekly Record*, 1 August 15, 1891.

<sup>124</sup>OBM, *2nd Annual Report, 1892*, 229.

<sup>125</sup>OBM, *4th Annual Report, 1894*, 98.

<sup>126</sup>The transcripts of the October 4, 1873 negotiations for Treaty 3 would seem to indicate that from the beginning there was a conscious effort to prevent Indians from holding mineral lands either on or off the reserves.

Chief- Should we discover any metal that was of use, could we have the privilege of putting our own price on it?

Governor [Morris]- If any important minerals are discovered on any of their reserves, the minerals will be sold for their benefit with their consent, but not on any other land that discoveries may take place upon; as regards other discoveries, of course, the Indian is like any other man. He can sell his *information* [emphasis added] (Alexander Morris, *The Treaties With the Indians of Manitoba, the North-West Territories, and Kee-Wa-Tin in the Dominion of Canada* (Publisher unknown, c.1880), p. 70).

Although the Indians may not have understood the link between the value of "metals" and title to the land on which they are found, Morris, as an educated white man, clearly did. Morris's answer set a precedent that would discourage Indian possession of mineral lands both on and off the reserves.

capital resources, were effectively eliminated from capitalizing on their prospecting expertise.<sup>127</sup>

Admittedly, there were conditions within the statutes themselves that may have discouraged opening the district to claims. Until 1897 the "apex law", which allowed miners to pursue veins extending laterally from claims (even under adjacent claims), was included in Ontario law to discourage land speculation in mining divisions.<sup>128</sup> However, as events in Butte, Montana revealed, the apex law provided more job security for litigation lawyers than it did for miners.<sup>129</sup> Ontario's patents and leases, on the other hand, did not include the potentially troublesome apex privileges and their underground mineral rights were limited to vertical extensions of surface boundaries.<sup>130</sup> The government was also undoubtedly aware that statutory provisions for resolution of claims disputes were impractical. Disputes over mineral claims could not be settled in local courts (as was the case in Montana) but had to be dealt with on a case-by-case basis by the local Mining Inspector. Any appeals would be sent to a Mining Board (providing one had been appointed by the Lieutenant-Governor in Council) or, after 1900, to the Crown Lands Commissioner.<sup>131</sup> The government's experiment with the Michipicoten Mining

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<sup>127</sup>Examination of the *Mining Lands Registry* revealed only four Indians among the thousands of district patentees and lessees. The famous Kabaskong, discoverer of the Hammond Reef, patented 315X and held an interest in HP535, both near Atikokan. Ogemahkezhequeb leased an interest in locations G275-77 in June of 1898. Payhombahsash held a joint interest in two "Upper Seine" leased locations in 1896 and 1897. In 1894, and 1895, Wapanaquaypniace held part interest in two separate leases (K191 & JO6) (*Mining Lands Register, Rainy River District*, Ontario Public Archives). Oliver Dunais, a "half-breed" from Fort William, was very active in finding and patenting locations in the district and near Thunder Bay (*Thunder Bay Sentinel*, III, May 24, 1884). Only one Indian was ever named as a director in any of the Northwestern Ontario gold mining companies. "Oronhyatekha" (his occupation and residence was unclear) was an incorporator of the Gold Hills Exploration and Development Company which patented two locations on Yellow Girl Bay and two others near Ptarmigan Bay, Lake of the Woods on January 22, 1898 (See Appendix C, Table 1).

<sup>128</sup>*S.O., 1869*, (32 Vict., c.34, s.20); *Ibid.*, (60 Vict., c.8, s.14).

<sup>129</sup>For a detailed description of the apex litigation battles of Butte's Copper Kings see Michael P. Malone's *Battle for Butte: Mining and Politics on the Northern Frontier* (Seattle: University of Washington Press, 1981).

<sup>130</sup>Though the Statutes never did clearly state the underground boundaries of locations, the implication was that they were vertical to the horizon. However, without anything being carved in stone, convenient exceptions could be made. James Caldwell, owner of the Sultana mine, managed to frighten the Crown Lands Commissioner into giving him an extra underwater extension of his mine's property as a result of his dispute with the Burley Shaft. See note no. 53.

<sup>131</sup>*S.O., 1869*, (32 Vict., c.34, s.14); *Ibid.*, 1892, (56 Vict., c.9, s.6); *Ibid.*, 1900, (63 Vict., c.13, s.13).

Division confirmed the dispute resolution deficiencies inherent in its claims regulations. Of the two hundred fifty-five claims staked after the Division was opened on September 22, 1897, fifty-six disputed claims were still unresolved and not filed when the Inspector left for the winter on November 1st.<sup>132</sup>

Political circumstances were also partly responsible for the Province's hesitation to open claims in the district. Certainly, before 1889 both the Province and the Dominion recognized the potential danger in opening the district to claims.<sup>133</sup> As it was, liquor licensing conflicts during the 1880's led to each government throwing the other's district officials in jail.<sup>134</sup> Both parties must have realized that a mad rush of rough-and-tumble, mostly American prospectors into a remote area subjected to duplicating authorities would have created a powder-keg situation benefiting no one.

The district's timber lobby presented another political obstacle to the mining division option. The timber barons certainly had reason to be concerned about the district being thrown open to a flood of prospectors. It was a well known fact that wildfire was the prospector's best friend and the timber lessee's worst enemy. The Province, unwilling to disturb the timber *status quo* and nervous about touching off a backwoods war between prospectors and lumberjacks (especially before the boundary issue was settled), chose a program of mining lands management that preserved the hegemony of the timer barons and excluded the "poor man" from the Northwestern Ontario gold mining game.

Although they may have preserved the peace, the Province's mining lands and tenure policies during the 1890's were marred by inconsistencies. Prices fluctuated and tenure

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<sup>132</sup>OBM, *7th Annual Report, 1897*, 101-106.

<sup>133</sup>Although the federal government did not have any mining legislation in place, an earlier model which included provisions for claims staking, could have been reinstated at any time by Order-in-Council.

<sup>134</sup>Zaslow, *Ontario Boundary Question*, 112.

requirements varied. Worst of all, however, was the government's willingness to make exceptions to its own rules. Granting the Sultana mine an underwater extension of its claim boundaries clearly illustrated how easily money could bend Ontario mining law. The Engledue deal and later the Anglo-Canadian Gold Estates agreement also revealed policies that lacked statutory integrity. Although these indiscretions were made on behalf of monied interests, potential investors had reason to be apprehensive about getting involved in a district where capricious policies could as easily be turned to their disadvantage as their advantage.

The creation of the Bureau of Mines provided a much-needed administrative apparatus for Ontario's mining industry. However, such a large Province required delegation of more authority to local officials. Mining Inspectors investigating accidents in the district usually came out from either Sudbury or Toronto. Throughout the period of this study, no *authoritative* representative of the Mining Bureau was resident in Northwestern Ontario. Although the Bureau did place a Mining Lands Agency in Rat Portage in 1897, the Agent had virtually no administrative powers. Clearly, there was justification for the Bureau to delegate its authority locally. Of the 113,124 acres of mining lands patented in Ontario between 1891 and 1900, 105,942 acres (or 93%) were within the "Rainy River District."<sup>135</sup> Given the number of mining land exchanges occurring during the period, it is difficult to understand why steps were not taken to improve efficiency and convenience by localizing the district's mining lands transfer system. Obviously, the timber-oriented Crown Lands Department wished to keep its Mining Bureau on a short leash for political reasons. The distance factor also undoubtedly accounted for several instances of lands policy violations slipping through the bureaucratic cracks. For example, although more than two thousand leases were issued between 1891 and 1902, scarcely a handful were forfeited to the Crown during this period.<sup>136</sup> Apparently, not even one of the thousands of acres patented during the decade ever reverted to the Crown for failure to meet work

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<sup>135</sup>Ontario, *Mining Lands Registries, 1891-1900*,; See Figure 2, Appendix B.

<sup>136</sup>Repossession of leases required publication in the *Ontario Gazette*. A review of the *Gazettes* revealed that some years showed no leases being revoked at all.

requirements. Such complete conformity is hard to imagine. It is more likely that the Bureau, detached as its staff was from the district, was incapable of monitoring compliance and only repossessed leases when pressed to do so by other interested parties.

Until 1900, the royalties issue, although it ultimately did not apply to gold production, remained a significant deterrent to mining development in Northwestern Ontario. The government's vacillation on the issue and the "loaded gun" in the Orders-in-Council clauses, destabilized the element most crucial to gold mine promotion - the fixed value of the product. Just as the unresolved Indian situation discouraged early mining promotion in the American West, the unresolved royalties issue discouraged investors from tying up their savings in Northwestern Ontario.

Provincial direct subsidization did not occur and the token indirect incentives were so poorly administered as to be rendered ineffectual. The diamond drill program failed largely as a result of the Bureau's inability to decentralize itself. The program's fee schedule was complicated since no local officials existed to provide the expertise required for efficient contracting. The prospector classes offered by the Kingston School of Mines may have had a marginal effect on development. However, extension courses in *mining* (rather than prospecting) undoubtedly would have had a more significant impact on district development. Inspector Courtney De Kalb, never one to mince words, complained openly of the lack of competent miners in the district:

The lack of such a body of well-trained miners is a serious drawback to the mining industry in Ontario, and it so happens that the value of such skill is rather discredited among many local mine owners from the circumstance that inefficient stragglers from the camps of the West and South have drifted into the Province from time to time, assuming undue importance, and giving altogether a false impression as to the service which a really skilled miner is capable of rendering.<sup>137</sup>

In 1900 the Bureau reported the fatal consequences of the district's lack of mining education. Two miners blown up at the John Sykes mine "knew but little about mining, and probably had

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<sup>137</sup>OBM, *8th Annual Report, 1898*, 29.

never been told how rigidly the temptation to use old holes as starters has to be avoided."<sup>138</sup> However, it is doubtful anyone in the government would have advocated its being associated with (let alone financing) meetings of miners for any purpose. Such activities, conducted outside the supervision of mine management, could easily have been interpreted as government encouragement of labour organization. It is true that the Kingston School did offer a curriculum for mining, however, the school's location limited its ability to improve the district's mining education and reputation. It is a mystery why, especially with the University of Toronto's programs being so close at hand, the Province decided to locate its School of Mines so far from its major mining districts.

The two greatest defects in Ontario's district mining policy lay in its inconsistency and its failure to deal with the timber lobby. During the decade, the Province could never make up its mind what it wanted to do about important issues such as land disposition and tenure, royalties, and the non-mineral resource rights (timber and water) of mining lands owners.<sup>139</sup> Restrictions meant to control speculation were subsequently undercut by "strings attached" or lack of enforcement. Occasional gigantic exceptions to the rules provided the most visible evidence of inconsistency in this decade of uncertain mining regulation.

The timber lease issue revealed the most important weakness in Ontario mining policy during the 1890's. The Crown Lands Department administered mineral as well as timber resources and its policies reflected the influence of the district's lumbermen over this department. However, a review of the list of Northwestern Ontario mining company directors during the 1890's reveals that several lumber barons were in fact deeply involved in many of the district's major mining ventures. John Mather, the lumberman who threw the miners off the Ophir location, built the Keewatin Reduction Works and was involved in several mining ventures

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<sup>138</sup>OBM, *10th Annual Report, 1900*, 43.

<sup>139</sup>For example, why did the Province choose to restrict a lessee's use of the pine timber but not a patentee's?

including the Scotty Island, the Yum Yum and the Sakoose.<sup>140</sup> D.C. Cameron of Cameron and Kennedy Lumber Company was listed as a director of five different mining companies including the one that reorganized the Sultana in 1903.<sup>141</sup> His partner, Hugh Kennedy was involved in the ill-fated Rat Portage Reduction Works early in the decade. John Dick of Winnipeg, one of the partners in Keewatin's Dick and Banning Lumber Company, was on the board of directors of the Nugget Gold Mining Company of Rat Portage, incorporated in 1897.<sup>142</sup> From 1895 to 1902, vocations listed for incorporating directors of new companies carrying on business in the district include one "lumber company manager," fourteen "lumber merchants," and nine "lumbermen".<sup>143</sup> The district's lumber men most certainly used their connections within the Crown Lands Department to promote legislation (or lack thereof) favourable to their own mining interests?<sup>144</sup> This was undoubtedly the opinion of one desperate Rat Portage mining promoter, William Bâby, who became so frustrated in 1899 that he formally challenged D.C. Cameron to a "meeting ... on the field of honour" to settle their differences in "honourable combat."<sup>145</sup>

In spite of the inconsistencies in its policies and its unwillingness to face up to the timber interests in Northwestern Ontario, in all likelihood, the Province encouraged more investors than it discouraged. Although the statutes appeared to be almost *too* comprehensive, the government's attitude remained relaxed and encouraging. Investors who were familiar with the wide-open,

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<sup>140</sup>His son, D.L., was associated with two other mines, the Homestake and the La Mascotte. His other son, R.A., was also listed as a director of the company owning the Homestake. See Table 1, Appendix D.

<sup>141</sup>Other mines he was involved in were the Master Jack, Bullion No. 2, and Champion.

<sup>142</sup>See Table 1, Appendix C or Table 1, Appendix D.

<sup>143</sup>In all probability, some of the directors who listed their vocations as "capitalists" (26) or "manufacturers" (58) were involved in the lumber business as well. See Table 3, Appendix D for a complete list of mining director vocations for the period.

<sup>144</sup>Edward Seybold, named as a party in the famous case that settled Indian reserve administration, was also listed as a director of Mather's Yum Yum mine and Ottawa Gold Milling and Mining Company. It is, of course, no coincidence that Mather was the one who originally evicted the Ontario Mining Company from the mine in question, the Ophir.

<sup>145</sup>William Bâby correspondence to D.C. Cameron, March 21, 1899 (Archives of the Lake of the Woods Museum, Kenora).



totally unpredictable administration of Western American mining districts surely found an element of sophistication and safety in Ontario mining policies that must have been at least a little more reassuring.

## PATTERNS OF DEVELOPMENT: BUILDING THE BOOM

*The investors who have found money for the enterprises undertaken have been most confiding and simple when they were satisfied to entrust the expenditure of their money to merchants, lawyers, grain dealers, speculators, British military gentlemen, or South African amateurs. In every case the efforts of these gentry have resulted in failures which have been only too fully advertised.<sup>1</sup>*

Not only has mismanagement of Northwestern Ontario gold mines during the 1890's been blamed for the district's failure to become a long term producer, but its poor management record has also been accused of retarding later mining booms in the Province.<sup>2</sup> Investigating the validity of these claims requires an analysis of several elements of the mine development process including financing, application of available technology, supervisory practices, corporate organization, and promotional tactics. Who were the people involved in building a boom in Northwestern Ontario? Where did the mining capital come from? What tactics were used to promote investment? What expertise, if any, did district managers have? What degree of expertise was required? What role did technology play? However, before exploring these issues, it is necessary to examine exactly what it took to get started in mining during the nineteenth century.

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<sup>1</sup>*Canadian Mining Review*, XX, January 1901, 2.

<sup>2</sup>"The most potent factor perhaps is one that is not recognized nor often mentioned in that section, and this factor is the complete lack of experienced or competent management of the properties that have been opened (*Canadian Mining Review*, XX, January, 1901, 1-2). "The disappointment in the investments [in the 'North-western Section'] gave a setback to mining from which Canadians did not recover until Porcupine demonstrated the possibilities of the province as a gold producer. The questionable character of the management of at least three companies in the Rainy Lake district did much to shake the confidence of investors" (E.S. Moore, *American Influence in Canadian Mining*, [London: Oxford University Press, 1941], p. 56).

**Getting Started**

As previously mentioned, the district's gold ores were all of the hard rock variety. Consequently, retrieving the gold required a secure natural resource base as well as considerable hard work and bulky, expensive, complicated machinery. Large quantities of capital were necessary to pay for the land, labour, equipment, transportation, fuel, and management required to make a mine out of a hole in the ground. Since there were no placer mines to speak of in the district, start-up capital typically had to be raised outside of the industry and, as was often the case, outside the district. Determining exactly how much capital, equipment, expertise, etc., was required is difficult since stages and magnitude of development varied from operation to operation. An examination of the evolution of a "typical" mining venture will provide instructive insight into the general expense and complexity of hard rock gold mining development.

The first step in development involved securing the resource. Prospectors typically took out a patent or lease on a discovery and then began hunting for financial backing. Sometimes they shared their find with a "grubstaker" who financed the prospecting, and, occasionally, grubstakers had the assets required to commence early development. However, in most cases, capital for preliminary testing and exploratory development came from other sources. At this point, a third party (or parties) was often taken on, creating a corporation or syndicate to come up with the cash to proceed. Corporations were composed of a number of owner/shareholders whereas syndicates involved only a partnership agreement between investors. Often the public was invited to participate in corporate investment, whereas syndicates were usually private operations. Several arrangements could be made to secure the property. The new company might take out a "working option," an agreement that provided the owners with a down payment and a promise to supply equipment and/or capital for a certain period of time with an option to buy the property at a fixed price at the end of the term. Several arrangements might be made for the sale. The owner might be offered partial payment in company stock (usually "paid up" shares) or the location might be purchased for "cash on the barrel." Another alternative available involved leasing the property from the owner. The initial owners often continued to participate

in mine management after the sale, often as a result of terms within the sale agreement or as a consequence of their shareholding capacity.

The next phase involved preliminary testing and exploration, the most poorly-defined stage of nineteenth century mining development. Today, testing and exploration would involve aerial surveys and diamond drill testing. However, although diamond drilling technology was available at the end of the century, its application was not widely understood. Early model drills also suffered from technical problems which were not yet resolved. For one thing, the uncertain diamond market in the years leading up to the Boer War impeded widespread adoption of the drill.<sup>3</sup> Early drills were also technologically flawed, many having a propensity to wander during boring, especially when used laterally. Rod breakage and retrieval was also a serious problem with the early machines.<sup>4</sup> During the time frame of this study, a slow transition towards more technological exploration was occurring but the old methods of "hit or miss" excavation (trenching, tunnelling, or shaft sinking) were only gradually being displaced by diamond drills. Even if excavation was selected (and in Northwestern Ontario it very often was), developers could apply a variety of techniques: for example, hand drilling vs. steam drills vs. pneumatic drills or horse powered hoisting vs. boiler powered hoisting.

Several options were also available for preliminary processing of the ores. Test lots could be sent to a custom mill or a small plant could be set up for on-site processing of the ores. There were, however, several disadvantages to off-site processing of ores mined during preliminary development. At this phase, the mine was most vulnerable to speculative volatility and a particular party's best interest could be endangered if the exact value of preliminary tests became known. Companies, owners, managers, and even workers might have been at risk for one reason or another should the truth come out at the wrong time. It is no surprise, therefore,

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<sup>3</sup>Diamond prices skyrocketed as DeBeers consolidated its hold on the industry (and anticipated the coming of war in South Africa). Between 1894 and 1895 the price per carat for industrial diamonds doubled from \$17 to \$36 (OBM, *5th Annual Report, 1895*, 233).

<sup>4</sup>*Ibid.*, 225.

that nineteenth century developers often constructed their own ore processing mills at very early stages of development.

It is difficult to define precisely what an exploratory operation was since the magnitude of development at this stage varied from mine to mine. Equipment, expertise, and manpower differed considerably from case to case. It is possible, however, to define what such an operation (say, a shaft sunk less than 100 feet with little or no drifting) probably *should have* looked like. About ten labourers would be working out of a tent camp or other temporary housing and, frequently, they were contracted. Hoisting was done by hand windlass, "horse and whim", or, possibly, by a small steam engine. Water was removed from the shaft by buckets or a small stationary pump. Milling, if any, was primitive and usually involved 5-stamps or less. Occasionally, steam stamps were used since their economy and portability offset their low processing rate (which should have been less of a factor at this stage). Such primitive mills usually did not include concentration equipment and the loss of refractory gold into the tailings was factored into the decision to develop the operation further.

Mining costs at this stage varied according to the situation. In 1891, J.S. Whiting contracted with G.F. Ernst to mine the Gold Creek property for \$16.50 per day. Whiting provided approximately five employees (and their room and board) as well as all building materials and transportation costs - "everything but ammunition [dynamite]".<sup>5</sup> Later in the decade, however, contractors typically worked on a by-the-foot basis. In 1897, the Preston Gold Mining Company (Olive mine) contracted shaft sinking (4' x 8') at \$18 per foot with drifting (4' x 8') at \$12 per foot. The contractor furnished blacksmithing, laddering, and hoisting at an additional \$5 per foot.<sup>6</sup> Contracting rates for other mines that year varied from \$16 to \$30 per foot, depending on the services to be supplied and the difficulty of the rock.<sup>7</sup>

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<sup>5</sup>Whiting, *Whiting Diaries*, August 31, 1891.

<sup>6</sup>OBM, *7th Annual Report, 1897*, 72.

<sup>7</sup>*Ibid.*, 39, 40, 59, 74, 77.

Installing a small mill required even more capital. A ten ton per day Gates Iron Works steam stamp, for example, complete with "automatic feeder, power and plates," sold for \$1,250 plus shipping and duties.<sup>8</sup> A six ton per day Tremaine steam 2-stamp mill could be set up for \$1,800 and a small 5-stamp mill was estimated to cost roughly \$5,000 (including engine and boiler).<sup>9</sup> Obviously, getting even this far into developing a mine was not cheap. Indeed, the costs associated with securing property and then exploring its contents has led one sage observer to conclude that, even in the early stages, "it costs a small fortune to find out that you have wasted one."<sup>10</sup>

Once preliminary results justified it, secondary development could get under way. This involved removing and processing ore on a larger scale. Heavier, more efficient equipment was installed in the mine, a mill was built or the old one expanded, permanent structures were constructed, new shifts were started, and more men were employed. If production or the stock market warranted it, the operation could be carried to a third level of large scale development which could include several stamp batteries and a concentrate treatment plant. Of course, attaining secondary or large-scale levels of development meant raising even more capital. Besides applying the methods employed in the preliminary stage, developers could also choose to re-organize the company and bring in more participants, or they could sell more treasury stock, or they could issue calls on any unpaid stock initially issued. Other methods of raising capital included increasing the capital of the company and selling more common shares, issuing bonds or debentures or baiting investors with new preferred stock. If these avenues failed, developers could consider letting another company take out a working option on the mine under a variety of terms. A last resort was raising capital through loans. Usually these were privately negotiated promissory notes and only rarely did banks become involved.

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<sup>8</sup>*Canadian Mining Review*, XVII, February, 1898, 59.

<sup>9</sup>O.B.M., *6th Annual Report, 1896*, 84; Eissler, *Metallurgy of Gold*, 89.

<sup>10</sup>T.H. Mitchell, *Canadian Mining Speculation* (Toronto: George J. McLeod Limited, 1965), p. 76.

Equipment varied but a typical operation at the "full-blown" stage (say, with a shaft to 100 feet and two levels or drifts) would require even more capital to purchase tons of new mining and milling equipment (for a list of the equipment involved in a typical operation see Appendix E). Two new and improved Frue vanners, for example, cost \$1,650 in 1894.<sup>11</sup> Ingersoll drills cost \$380 each while the compressor, receiver, and five hundred feet of pipe to run them sold for about \$1,750.<sup>12</sup> The mills for large-scale operations were especially expensive. The Mikado's 20-stamp operation, for example, cost \$15,000, about half the price of the Sultana's 10-stamp mill with concentrate treatment plant. The extravagant Rat Portage Reduction Works' mechanical menagerie, "completed" in 1891 at an alleged cost of \$75,000, was the district's most expensive mill-building project.<sup>13</sup>

Ultimately, the goal of nineteenth century mining developers was to put just enough money into their mines to make them either a paying concern or a selling concern. In Northwestern Ontario the latter option was frequently preferable. The buyers were traditionally English investors with their endemic surplus capital and propensity to be "suckered" into high-risk mining ventures.<sup>14</sup> However, there were plenty of other buyers, especially after 1895 when the United States provided the district's mining promoters with yet another net capital exporter to target.<sup>15</sup> Regardless of the target, turning mines into either paying or selling concerns was always a matter of much speculation *at all phases of development*.

Speculation was alternately, indeed sometimes simultaneously, seen as the bane and the boon of nineteenth century gold mining. Land speculation often drove up costs, tied up property,

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<sup>11</sup>Eissler, *Metallurgy of Gold*, 334.

<sup>12</sup>Ibid., 192, 175.

<sup>13</sup>OBM, *6th Annual Report, 1896*, 258; Ibid., *5th Annual Report, 1895*, 19, 187.

<sup>14</sup>"Why then ... if mining ventures are as a whole so eminently unprofitable, are they so constantly being brought out successfully, here [in England], as well as upon various provincial stock exchanges" (*The Economist*, 22 Feb. 1890, 236).

<sup>15</sup>See Figure 4, Appendix B

and generally delayed development of a gold district. Stock speculation, however, was viewed as a necessary evil. The stock speculator was often essential if a company was to raise capital through public sales of shares. For example, when companies were first organized, promoters were often given large blocks of shares at discounted prices with future options to buy further prearranged blocks at prearranged prices. With this incentive, the promoter would set about raising the value of the company's (and his) shares through various manipulations including advertising schemes, "mark ups," etc.<sup>16</sup> These schemes targeted the stock speculators, individuals who hoped to buy shares low and sell high. If the promoter was successful and managed to bring the price up, owners had the option of liquidating their shares at a profit if the mine's prospects declined or raising more capital for further development by releasing more shares to the promoter or the public. However, increasing capital or raising share prices solely on the backs of speculators was dangerous; too much speculation made the market too volatile. Therefore, the promoters and the companies both depended on taking a certain number of investors along for the ride. These individuals, whether petty or unaffiliated investors, company directors, or "vendors" (individuals who sold the mines to the companies), helped maintain some market stability with their reluctance or inability to act quickly (for example, vendor shares were frequently held in escrow for a considerable period after the sale). Companies that initially discounted their shares and who were serious about (or pretended to be serious about) continued development usually required speculative manipulation to raise the price of shares and attract investors with development capital.

Exploration companies utilized different speculative tactics than development companies. Exploration companies usually were only involved in purchasing properties and proving the minerals on them. The locations were then discarded, sold to a development company, or developed by the exploration company after a reorganization. Sometimes Letters Patent expressly limited companies to only exploration of certain properties (as in the case of the Golden Island

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<sup>16</sup>An excellent description of methods of mining stock manipulation can be found in T.H. Mitchell's, *Canadian Mining Speculation* (Toronto: George J. McLeod Limited, 1965). Grant Smith's recollections of nineteenth century stock promotional schemes on the Comstock Lode, though somewhat disorganized, is also very informative (Grant Smith, *History of the Comstock Lode 1850-1920* [Reno: Nevada State Bureau of Mines, 1945]).



Mining Company of Rainy River, Limited) but most new companies were not restricted to a specific piece of property or limited to a certain degree of development. The success of these operations depended less upon physical appearances and more upon their advertising and the production reports for mines in the vicinity of their properties.

The financing of one exploration venture, the New Sabaskong Gold Mining Company, provides some insight into promotional financing tactics common to both kinds of district mining companies. The corporation received its Letters Patent on November 11, 1898, and held its first annual shareholders meeting on July 4, 1899. The old Sabaskong Mining and Lumber Company's locations (2,409 acres) on Indian Reserve 38B, "a few hundred feet" from the Sultana property, had been secured at a cost of 100,000 paid up shares. The financial report indicated that 20,500 of the remaining 25,000 one dollar shares had been subscribed for and that a call of twenty-five percent was made on January 6, 1899, with roughly two thirds of the call being paid in by July. The call produced \$3,526.12 which was promptly gobbled up by various accumulated debts: "the expense of acquiring title owing to the contest before the Commissioner of Crown Lands" amounted to \$1,500; "cost of organization" was \$3,489.35; "disbursements" were \$2,642.17; and "about" \$225 still remained in "outstanding liabilities." The company, therefore, had the small sum of \$658.95 to conduct its explorations, although it wisely avoided pointing this out in its report. Instead it chose to minimize the property dispute<sup>17</sup> and focus on the proximity of the locations to the fabulous Sultana mine. Only four hundred feet of surface stripping had been done but the company was confident that the potential \$18,000 subscribed capital on call would be "sufficient to prove fairly well one or two of the properties," at which time a subsidiary company would be created to finance secondary development. The New Sabaskong subscribers could then exchange the property for paid up shares in the subsidiary.

But why would anyone invest in mining properties whose title might prove null and void?

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<sup>17</sup>The company went so far as to boast to its investors that the company would be reimbursed by the Province under the *Land Titles Act* in the event that "some payment to the Federal Government in respect to Indian claims" was necessary (*Report of the Annual Meeting of the New Sabaskong Gold Mining Company*).

Actually, for some of the incorporators, organizing a company was probably good business. H.H. Dewart, a Toronto Crown Attorney, undoubtedly paid himself for incorporating the company and defending the company's interest before the Crown Commissioner's hearing. M.P.P. James Conmee was a contractor from Port Arthur who almost certainly paid himself part of the disbursements for supplying labour and equipment. Miner, George Heenan of Rat Portage undoubtedly supervised exploration. It seems unlikely that anyone but local merchants George Drewery, Gustavus Kobold and Angus Carmichael would have furnished supplies (on their own terms). It is possible, therefore, that within a year each of these men had taken out at least as much as they had put into the company's shares. It is not known which shareholders received the 100,000 vendor shares for the property but trends found in the management of other district mines indicate that Heenan, Drewery, Kobold or Andrew Wiley (also from Port Arthur) could have been involved in the sale.<sup>18</sup> Termed "rake offs," this sort of self-serving spending by the directors at such an early stage was often indicative of a speculative exploration company that had met with disappointing results. Indeed, the New Sabaskong was very short-lived; it was never reported in any of the Bureau of Mines *Reports*.

Developing companies followed similar patterns for initial financing. In August of 1896, the Lake Harold Gold Mines Company floated 300,000 shares at 15¢ "or \$45,000 which amount is to be devoted to the future development and equipment of the mine and 'for other purposes.'" However, the "elaborately garnished" prospectus supporting subscription of the shares quoted a mining expert's report which indicated that the mining operation required "no further machinery but a large pump."<sup>19</sup> Furthermore, the prospectus did not explain how the company expended \$27,000 in share capital and \$7,000 in profits on a \$5,000 mill and underground work that could

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<sup>18</sup>None of the original incorporators of the Sabaskong Mining and Lumber Company appeared as shareholders in the New Sabaskong report of 1899. However, the fact that the incorporators in the old company were all local residents is a strong indication that the vendors to New Sabaskong were probably also locals. Further research into the *Mining Lands Registry* records at the Provincial Archives may shed some light on who the vendors were.

<sup>19</sup>*Canadian Mining Review*, XVII, 252.

not have cost more than \$10,000.<sup>20</sup> The *Canadian Mining Review* insinuated that some of the company's directors (the Wiley brothers of Port Arthur) were using share capital to pay themselves for operating the mine.<sup>21</sup>

Initial financing of development companies depended heavily upon successful advertisement schemes which in turn depended heavily on media exposure. Mining journals, local papers, national newspapers, government publications, and private publications were all used to get the right word at the right time to potential investor/speculators. To this end, appearances became the all important factor. For example, to raise capital and/or share prices quickly, a report indicating that extensive development was underway could be almost as valuable as a favourable production report. On the other hand, directors might need to suppress good news so they could drive down the price of shares and consolidate their holdings before releasing the information and allowing the price to rise. Successful mining promotion, therefore, was critically dependant upon mine management's maintaining a physical image commensurate with the promotional objectives.<sup>22</sup>

Keeping abreast of new technological developments was essential to a company's successful capital-raising strategy. Photography and the technology to cheaply reproduce photographs in publications led to escalating standards in the mining promotion game. Investors (especially public investors) responded much more enthusiastically to photographs of scenery, machinery, mining equipment, and gold ingots than they did to the lengthy descriptions and stylized pen and ink drawings found in old-fashioned prospectuses. There were, in fact, several other avenues for photographic promotion besides the prospectus. Photo supplements in the local,

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<sup>20</sup>Underground work, if contracted, should have cost an average of \$25 per foot (for a summary of several contracting arrangements see OBM, *7th Annual Report, 1897*, 39, 40, 59, 74, 77). Mills are estimated at \$1,000 per stamp.

<sup>21</sup>*Canadian Mining Review*, XVII, 252.

<sup>22</sup>Grant Smith detailed the essential role that managers played in promoting mines in Nevada's Comstock district. The Savage mine managers kept its miners locked up underground for weeks while stock market manipulators cultivated rumours of a new bonanza and boomed the company's shares from \$62 to \$725 (Smith, *History of the Comstock Lode*, 87-88).

regional and national newspapers, as well as in government publications such as the Bureau's *Annual Reports* (after 1894), and in trade publications such as the monthly *Canadian Mining Review* and its annual *Canadian Mining Manual* provided promoters with cheap, widespread exposure. However, successful photo promotion meant that physical appearances had to reflect at least the standards of the industry. Of course, applying new "cutting edge" mining technology increased a company's potential for profits from both production and speculation. The Regina, for example, created a sensation in the investment sector when its engineer installed *two* cyanide plants in 1897 which, he insisted, would provide the "solution to the problem of the profitable treatment of even the low grade ores of the Lake of the Woods."<sup>23</sup> However, as many of the earlier ventures discovered, the improper use or choice of technology for the sake of appearances could lead to a devastating waste of money, gold, and reputation.

Keeping up in the mining technology race required the proper expertise. To compete, developers/promoters required engineers and managers with education and experience as well as business sense. Unfortunately, in a new mining district (and especially in new and remote districts), this expertise frequently had to be imported or improvised. Selection of mining men of unknown competency from foreign stations was further complicated if the developers doing the hiring were themselves new to the mining game. In an ideal situation, the directors hired a manager to handle the business end of things, an engineer to plan and supervise development, and a mine captain to supervise employees. Frequently, however, many of these positions were combined (or omitted). With equally poor success, it seems, managers became engineers and engineers became managers and, in some instances, a "managing director" wore all four hats at once.

With the typical development process defined, it is possible to examine the histories of various Northwestern Ontario mines to see how they measured up against the "normal pattern of development:" mining exploration to initial development to large-scale production. An

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<sup>23</sup>OBM, *7th Annual Report, 1897*, 114; *8th Annual Report, 1898*, 66.

examination of the "pattern of development" of district mines requires that the district's subsequent "pattern of development" be broken down into its periods of surge and recession.

### **1880-90: Initial Failures**

Although several mining ventures were undertaken on the Lake of the Woods from 1880 to 1888, little is known about development practices during this earliest period of activity. Numerous factors, including a poor economic climate, political instability, and, most importantly, serious mismanagement, eliminated most of the operations by 1888. The few reports that are available paint a picture of epidemic incompetence. The monumental failures of three of the more prominent operations, the Pine Portage, Winnipeg Consolidated, and Argyle mines, proved a serious setback to sustained development in the district.

The "progress" of the Pine Portage provides a good example of mismanagement and premature development in the early period. In 1882 when its shaft was barely twenty feet deep, the mine's management decided to build a mill equipped with two Frue vanners and a little 750 lb/stamp, 5-stamp mill.<sup>24</sup> A year later, the shaft had progressed to only sixty feet with the contracted miners working "as they liked and blindly, not being controlled by any competent person."<sup>25</sup> Although it was claimed that Fraser & Chalmers of Chicago installed the \$750 vanners, it is unclear how or why they both were attached to such a small mill. Just one old-style Frue vanner was capable of handling up to six tons of stamped ore per day and, given the extreme hardness of the ore and the small amount of underground development, it is doubtful that the Pine Portage's small stamps could ever have seen more than five tons per day.<sup>26</sup> Another mystery involved the decision to locate the mill on "the side of a small creek, full of water in the

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<sup>24</sup>Costé, "Report on the Gold Mines of Lake of the Woods," GSC, *Reports of Progress*, 1884, 16K.

<sup>25</sup>Ibid., 14K.

<sup>26</sup>E. Henry Davies, *Machinery for Metalliferous Mines*, (London: Crosby Lockwood and Son, 1894), p. 332; Eissler indicated that a 700 lb/stamp 5-stamp mill was capable of crushing five to fifteen tons/day (Eissler, *Metallurgy of Gold*, 69).

spring, but absolutely dry in summer" when the Lake of the Woods lay downhill only three fourths of a mile away.<sup>27</sup> Eugene Costé, an engineer for the Geological Survey, could only guess that the "proprietors had been seized by a mania for spending money on seeing a little gold in the quartz."<sup>28</sup> Finally, in 1886, after letting the vanner concentrates pile up for more than two years, the managers, "a lumber merchant and a gentleman farmer," hired a Mr. Bourchire, "an English mining expert and practical mineralogist" to construct a furnace on the property for smelting the concentrates.<sup>29</sup> It never worked properly, possibly because the vanners had been run without sufficient water or because most of the concentrates sat around so long that they had re-crystallized. When the furnace failed the company finally lost hope and the whole operation closed within a few weeks.

The Winnipeg Consolidated, discovered in 1881 by George McVicar of Port Arthur, is probably the best known of the early operations.<sup>30</sup> Development commenced in 1882 and within a year a company was formed, 400 tons of ore were removed, and a mill was set up using the "antiquated" 5-stamp mill earlier evicted from the Boulder Island mine by Mather's lumber company.<sup>31</sup> However, even though the mine, with its "frightful" shaft and four drifts, was considered the most developed in the district, the Winnipeg Consolidated was obviously poorly managed from the start with operations being carried on "very irregularly, work being suspended sometimes for more than a week."<sup>32</sup> At the start of operations, the manager found that the refractory ores required concentrating and a "grinder" was added to the mill to prepare the ores

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<sup>27</sup>Costé, "Report on the Gold Mines of Lake of the Woods," GSC, *Reports of Progress*, 1884, 14K.

<sup>28</sup>Ibid.

<sup>29</sup>Ibid.; Roland, *Algoma West*, 146.

<sup>30</sup>B.F. Townsley, *The Mine Finders: The History and Romance of Canadian Mineral Discoveries* (Toronto: Saturday Night Press, 1935), p. 89.

<sup>31</sup>*The Commercial* (Minneapolis), I, Nov. 21, 1882, 146; Moore, *American Influence in Canadian Mining*, 56.

<sup>32</sup>The contorted shaft followed the dip of the vein's strike (approximately 100-110°), zig-zagging at "greatly varying" inclinations (65 degrees @ the surface, 57 degrees @ 40 feet, 45 degrees @ 80 feet, and 65 degrees @ 95 feet (Costé, "Report on the Gold Mines of Lake of the Woods", GSC, *Report of Progress*, 1884, 11K).

for the process.<sup>33</sup> However, for reasons unknown, concentration equipment was never installed and consequently "the [mill] refuse ran into the lake, carrying away all the non-free-milling gold."<sup>34</sup> By 1885, the company was having serious difficulties. The mill could not keep up with underground development work in the mine, so it was packed up once again and shipped off to the Argyle mine.<sup>35</sup> In 1886 the unpaid miners, having no legitimate court through which to seek relief, took the mine over and operated it themselves for about two weeks before internal dissention caused its closure.<sup>36</sup>

The Argyle mine was equally mismanaged. Unlike the Pine Portage, its crushing plant matched its concentrators, however, like the Winnipeg Consolidated, its mill in no way matched the mine. After inspecting the Argyle in 1884, Costé noted that:

The stamp mill is set up near the first little vein. It is furnished with ten stamps, one large copper amalgamating plate, and two "Frue ore-concentrators." The question is what are all these things for? For the mine to furnish the matter to be crushed at this crushing-house is impossible. The second vein, on which "the shaft" is situated is about half a mile from the crushing-house; there is no road through the wood over the hill, and the few tons of quartz taken from the two pits in this vein were brought to the crushing-house by way of the lake, in a scow in summer and on the ice in winter; and to cap the climax of blundering, the crushing-house itself is located some little way up on the hill, creating an additional difficulty in carrying the ore and the water up there. ...Thus ...at the Argyle Mine they have a vein, no shaft and a fine crushing-house half a mile away from the vein.<sup>37</sup>

Others undoubtedly agreed that the mill was too good for the mine. Eventually, unbeknownst

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<sup>33</sup>*Prospectus of the Winnipeg Consolidated Gold Mining Co., Limited* (Winnipeg: Boyce, circa 1883), p. 15; Costé, "Report on the Gold Mines of Lake of the Woods," GSC, *Report of Progress, 1884*, 12K.

<sup>34</sup>Costé, "Report on the Gold Mines of Lake of the Woods," GSC, *Report of Progress, 1884*, 12K.

<sup>35</sup>Roland, *Algoma West*, 136; Davies and Smith, "The Geological Setting of Gold Occurrences in the Lake of the Woods Area," 369.

<sup>36</sup>Townsley, *Mine Finders*, 89.

<sup>37</sup>Costé, "Report on the Gold Mines of Lake of the Woods," GSC, *Report of Progress, 1884*, 19K.

to its owners, it was "surreptitiously" relocated one winter to more fertile fields in British Columbia.<sup>38</sup>

The mines of this earliest phase of development hardly exceeded the preliminary development stage before their mismanagement caught up with them. Very little is known about the financial backing behind these operations. Apparently, none were incorporated in Ontario, which is not surprising considering that the territorial jurisdiction was not settled. Most of the scarce capital involved was either American or regional Canadian.<sup>39</sup> The managers were obviously "improvised". The Winnipeg Consolidated's John R. Brown, a "gentleman" with mining experience, was alleged to have superintended a Leadville, Colorado mine called the Miner Boy before taking up the reins at the Consolidated. However, what probably qualified him most was the fact that he was the son of one of the directors, P.J. Brown, the Winnipeg city clerk.<sup>40</sup> John T. Nagle, the manager of the Keewatin mine in 1882, also loosely defined his credentials as being a "gentleman" (not an engineer) with eleven years experience supervising mines in "California and Nevada" the names of which were conveniently absent from the company prospectus.<sup>41</sup>

During this phase, the boundary problem was undoubtedly the underlying cause for the

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<sup>38</sup>Townsley, *Mine Finders*, 91.

<sup>39</sup>The Lake of the Woods Mining Company was incorporated in New York in 1883 with a capital of \$2,000,000 (Moore, *American Influence in Canadian Mining*, 56). The Winnipeg Consolidated, incorporated with a capital of \$1,000,000 (@ \$50/share) consisted of five residents of Winnipeg (*Canada Gazette*, July 4, 1882). The Boulder Island mine was "owned by William Gibbons and others of Winnipeg" and the Fish Island mine, discovered in 1885, had a thirty foot shaft sunk by "a company of capitalists from California" (*Report of the Geological Survey of Canada*, 1892, "Mineral Statistics and Mining," 152S). An 1882 Dominion application for incorporation of the Keewatin Mining Company (Hay Island mine) listed four incorporators from Winnipeg, one each from Hamilton and Montreal, and four from New York. A year later four men from Winnipeg incorporated the Manitoba Consolidated Gold and Silver Mining Company two months after the Argyle Mining Company was formed by eleven Winnipeg residents and one individual from Rat Portage. Little information could be found regarding the owners of the Pine Portage mine, however, Costé's 1884 description of its owners' vocations suggests that they were either local or regional.

<sup>40</sup>*Prospectus of the Winnipeg Consolidated*, 7.

<sup>41</sup>*Ibid.*, 4.



mismanagement plaguing the earliest operations. Investors and speculators were reluctant to involve themselves in the contested district and, without sufficient capital, the few operations that did attempt to carry out secondary development were financially unable to attract any of the "extremely few practically trained mining men" available to set up and manage operations competently.<sup>42</sup> The fact that not one British company invested in Lake of the Woods mines was certainly seen as an indication of the district's riskiness. Indeed, by 1888, not one "mine" was left in Northwestern Ontario that could claim to be operating beyond the prospecting stage.

### **1890-94: The Post-Settlement Bubble**

The district's sour reputation was, however, quickly forgotten once the boundary was settled, and full-blown development of several other locations followed during the period from 1889 to 1893. A considerable impetus in this direction was provided by the town of Rat Portage when it agreed in 1889 to assist financially with the construction of a "custom mill."<sup>43</sup> The Reduction Works, as it came to be known, was intended to provide custom milling services to prospectors and district mines still in the preliminary stages of development. Its promoters anticipated that the Works would decrease the capital needed for initial development and thereby increase activity within the district. The mill was to be conveniently located on the shore of the Lake of the Woods and near the Canadian Pacific Railway. It was also decided, after considerable pressure from the town fathers, to locate the plant as near as possible to the city's municipally-owned, steam powered electrical plant in Norman.

The Reduction Works was first organized in 1889 under the "laws of the State of Illinois" as the Canadian Milling and Reduction Company, and construction began in January 1890.<sup>44</sup> However, within four months the company had run out of capital and it was then reorganized in

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<sup>42</sup>A.C. Lawson, "Report on the Geology of the Lake of the Woods Region," GSC, *Report of Progress, 1885*, 141CC.

<sup>43</sup>OBM, *3rd Annual Report, 1893*, 33. J.S. Whiting noted in his diary that the by-law promising the Reduction Works \$10,000 (upon completion) was passed on January 11, 1889 (Whiting *Journals*, January 12, 1889).

<sup>44</sup>OBM, *3rd Annual Report, 1893*, 31.

Ontario as the Lake of the Woods Gold and Silver Milling Reduction Company, Limited with its head office in Rat Portage.<sup>45</sup> The new directors were an interesting combination of local, regional, and foreign investors. Hugh Kennedy, a Rat Portage lumber baron, was listed as the first director, followed by Robert Linn of Cleveland (chairman of the board and, later, the second managing director), Edward Drewery (owner of the Redwood and Empire Breweries in Winnipeg and the brother of George Drewery, an influential Rat Portage merchant and liquor dealer), and Robert T. Riley, both from Winnipeg. Supposedly, "under the Linn and Powers organization shares had been sold to cover the cost of the works, the chief purchasers being residents of Winnipeg and Rat Portage."<sup>46</sup> In fact, local subscription was pursued feverishly - at one point shares were being openly pushed at town council meetings.<sup>47</sup>

A big drawing card for investment was the company's first managing director/engineer, Henry J. Powers, allegedly a renowned expert from Colorado with thirty years experience in mining and eighteen years experience "in the erection and management of reduction works."<sup>48</sup> It seems, however, that his endeavours were more of a literary than an applied mechanical nature. In exchange for a large percentage of the new company's shares, Powers agreed to coordinate the construction and then manage the operation of the Reduction Works. However, rather than building a tried-and-true stamp mill with Frue vanners and a chlorination plant to process free-milling ores and sulphide concentrates, Powers selected an assortment of "new-fangled" machinery.<sup>49</sup> The usual Blake or Gates crushers were foregone for an "American" and a "Blake & Dodge" make. Instead of crushing the ore with the usual stamps, Powers opted for two

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<sup>45</sup>*Ontario Gazette*, April 16, 1890.

<sup>46</sup>Report of Charles Brent, former Reduction Works manager to the Bureau of Mines. OBM, *3rd Annual Report*, 1893, 33.

<sup>47</sup>*Rat Portage Weekly Record*, I, September 19, 1891.

<sup>48</sup>OBM, *3rd Annual Report*, 1893, 33.

<sup>49</sup>OBM, *3rd Annual Report*, 1893, 34.

"Standard pulverizers" comprised of a strange system of rollers, rings and a "muller plate".<sup>50</sup> Amalgamation riffles and "concentrating tables" (presumably one for each pulverizer) were installed instead of Frue vanners. The mill's concentrate treatment plant was even more exotic than its crushers and concentrators, containing a multi-chambered furnace for three phase roasting of the concentrates which were then subjected to steamed amalgamation pans, salting, drowning, agitation, settling, skimming, and another trip over the concentrators.<sup>51</sup>

There were several considerations behind the decision to build such an unorthodox mill. Powers was clearly trying to save money with the sizing end of his plant. Large conventional stamp mills were expensive to buy and set up. To handle the constant vibration of falling stamps, a mill site required extensive preparatory construction, including sturdy foundations and bracing. Stamp mills were also extremely heavy and costly to transport - for example, a 10-stamp mill of 800 lbs/stamp weighed fourteen tons.<sup>52</sup> On the other hand, Huntington-style roller mills, operating on centrifugal force rather than gravitational pounding, required less reinforcement and were therefore easier to install. It was "claimed" that, compared to stamp mills, Huntington pulverizers involved one fourth the transportation costs, one tenth the construction costs, one third the power per ton, and no "mechanical skill" to operate.<sup>53</sup> Though this sounds enticing enough, Powers should have been sceptical since the manufacturer's claim that "fully nine-tenths" of the gold could be saved in the mill *before* going to the amalgamation plates was clearly unrealistic.<sup>54</sup> The same motivations for speed and economy of construction undoubtedly governed Powers's selection of concentrating equipment. In spite of their high cost, Frue vanners were still regarded as a savings over the labour and maintenance-intensive

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<sup>50</sup>The Standard pulverizer was undoubtedly a variation of the Huntington roller mill which had a capacity of 12 tons per 24 hours, weighed only about 7,000 pounds, and required 4 h.p. to operate (Davies, *Machinery for Mines*, 239).

<sup>51</sup>OBM, *3rd Annual Report, 1893*, 32-33.

<sup>52</sup>Davies, *Machinery for Mines*, 259.

<sup>53</sup>*Ibid.*, 237.

<sup>54</sup>*Ibid.*

antiquated technology of jiggers, pans, sizers, and percussion concentrators.<sup>55</sup> The failure to construct either a chlorine or cyanide plant for proper treatment of concentrates was obviously a matter of dubious economizing rather than good business sense. Certainly, the high sulphide content of the district's ores was already known and, if nothing else, the Reduction Works could have expected to make money processing large volumes of concentrates from the flood of prospecting mills that were already springing up in the district.

The Reduction Works was, therefore, doomed to fail before it ever opened its doors. Nevertheless, in September of 1891, the city paid over the \$10,000 bonus after receiving certification from Walpole Roland, a Port Arthur "mining engineer" with a drinking problem, that the mill's freak machinery could handle an incredible 191½ tons per day.<sup>56</sup> The company began operations immediately but prospective clients seemed hesitant - and for good reason.<sup>57</sup> Four months, two managers, and only a few jobs later, the mill was virtually washed up, having wasted about "half the gold" in two lots of Sultana ore as well as seventy-five percent of the gold in five tons of concentrates from the Pine Portage mine. The mill was then "remodelled" and a chlorination plant and landing docks added before reopening in June 1892. By August, however, the pulverizers, which had become a maintenance nightmare, finally "broke down entirely" and the company admitted defeat after having allegedly spent \$75,000 on its totally worthless facilities.<sup>58</sup>

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<sup>55</sup>The "concentrating tables" may have been either home-made contraptions or outmoded and inefficient "Gilt Edge, Gilpin County design" percussion tables which were very crude, required constant supervision, and generally were limited to exploratory stage operations (Davies, *Machinery for Mines*, 303-305).

<sup>56</sup>OBM, *3rd Annual Report, 1893*, 33; The *Rat Portage News* of July 24, 1894, noted that one Dan McGrevey was fined \$10.00 or fifteen days for supplying liquor to an individual placed under the *Interdict Act* (a designated alcoholic). The purchaser was none other than Walpole Roland.

<sup>57</sup>*Rat Portage Weekly Record*, I, September 26, 1891.

<sup>58</sup>OBM, *3rd Annual Report, 1893*, 33-34; It is unclear how much of the \$75,000 was spent on other mining properties. When the company's assets were sold out of court in 1895, several claims were listed including X90 (Blackjack), I11 (IXI), K100, and a one-third interest in 339P (*High Court of Justice Judgment Book*, Rainy River District, 1894-1946, p. 12-14).

The failure of the Reduction Works had a profound impact on the district's promotion during the 1890-94 period. It may be no coincidence that incorporations and land transactions both hit an all time low the year after the Works collapsed.<sup>59</sup> Forced to recognize the disaster and desperate to control the damage, Archibald Blue, Director of the Ontario Bureau of Mines, admitted that "the story of the Rat Portage reduction works is only one more instance of the folly of adopting new processes on a large scale before they have been tried and proven on a small one."<sup>60</sup> In fact, however, there were several other similar "instances of folly" in the district. At least three other mines, the El Diver, the Black Jack, and the Gold Hill, had undertaken full-blown development during this period and each was just as atrociously mismanaged.

Development work on the El Diver commenced in October of 1891. By June of 1892, having removed only two hundred tons from its sixty-foot shaft, manager E.W. Gaylord of Bristol, Connecticut, constructed all the facilities necessary for a proven proposition including a mill and the usual outbuildings, shaft house, blacksmith shop, and boarding houses. A dam was also built to supply water and power for the mill. Unfortunately, the owners, Gaylord and J.H. Webster, a lawyer from Cleveland, decided to follow the Henry Powers lead and installed "pulverizers" rather than stamps in the mill. The El Diver fared no better with its roller mill than did the Reduction Works, and within four months, it had to be replaced. The owners learned little from their initial error, however, and, instead of purchasing a typical stamp mill (not that *any* mill was in order at this stage of development), they chose to install a relatively unknown contraption called a Crawford mill.<sup>61</sup> Developed by Middleton Crawford, superintendent of the Belmont mine near Peterborough, the Crawford mill contained "nine balls of about 75 pounds each, which are constantly kept in rapid motion by a revolving disc which produces both a

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<sup>59</sup>In 1894 only four mines provided returns to the Bureau and there was "but one [the Sultana] that can rank as a mining enterprise" (OBM, *4th Annual Report, 1894*, 25).

<sup>60</sup>OBM, *3rd Annual Report, 1893*, 34.

<sup>61</sup>Ibid.

circular and lateral revolution."<sup>62</sup> They were relatively lightweight mills, easy to set up, and alleged to be extremely efficient. Regrettably, managers at the El Diver and several other mines were probably taken in by an 1892 Bureau of Mines report claiming that a test run of two hundred tons at the Belmont's Crawford-fitted mill produced an unbelievable ninety-two percent recovery rate.<sup>63</sup> In reality, the El Diver's mill proved incapable of handling even five tons per day. A mysterious fire on the night of May 31, 1893, put the milling experiment out of its misery and, since the hoisting engine was also damaged, mining ceased as well.<sup>64</sup>

The Black Jack mine was patented by its discoverer in 1889 and reportedly purchased by the "Black Jack Mining Company" in the fall of 1892.<sup>65</sup> By August 1893, manager Charles Brent, mining with "a small force," sank a shaft to sixty-three feet and opened an eighteen-foot drift. Sometime during the winter a mill was erected employing two Crawford mills, a Blake crusher, and a forty horse power boiler and engine. Only one of the Crawford mills ever worked, producing typically "unsatisfactory" results.<sup>66</sup> It is doubtful that the mill was carefully managed since Brent apparently had his hands full setting up the Sultana's mill and running the Black Jack mine and the Reduction Works, all at the same time. Operations were fortuitously forsaken after the first fifty-ton run, supposedly due to "the financial stringency in the States," and the mine was subsequently absorbed by the Lake of the Woods Gold and Silver Reduction Company shortly before it too became insolvent.<sup>67</sup>

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<sup>62</sup>OBM, *2nd Annual Report, 1892*, 238.

<sup>63</sup>Other mines taken in by the Crawford mill fad in 1892-93 included the Bulldog (Black Jack) mine near Rat Portage, the Ogema mine at Dorian, and four locations in the town of Marmora in eastern Ontario (Ibid.).

<sup>64</sup>The fire had "curious" consequences. A considerable amount of gold in the clean-up mercury was alleged to have evaporated, although the mercury (with its lower boiling point) did not (OBM, *3rd Annual Report, 1893*, 30).

<sup>65</sup>Ibid., 26.

<sup>66</sup>The failures of Crawford's mills were well known a year after their introduction. A report by Ricketts & Banks, a New York engineering firm, indicated that assays from mill runs at the Belmont showed a 23% loss into the tailings (OBM, *3rd Annual Report, 1893*, 50).

<sup>67</sup>Ibid, 26.

The early Gold Hill escapade proved to be a mismanagement extravaganza proportional to that of the Reduction Works. In 1885, inspired by rich specimens from the Winnipeg Consolidated, D.B. Burdette of Minneapolis personally financed a party of local prospectors who subsequently laid claim to eight locations including the Ada G (Gold Hill), Big Ellen, and Golden Gate. In 1891, having finally acquired patents to six of the locations, Burdette, "under the laws of the State of Michigan," organized the Northern Gold Company to finance development. Even though in, August 1892, "it could hardly [have been] said that real mining work had commenced on [the Ada G]," mill construction was underway less than two months later. When completed, the three story mill contained a 45 h.p. "Leonard & Son" boiler and engine, a "set of chrome steel rolls for crushing the ore," a Forster ore breaker, a Gates pulverizer (instead of stamps), a copper stirring tub, a pair of Cook amalgamators, a pair of Leede furnaces for roasting ore, a set of "steel finishing rolls", and two "sizers or sieves."<sup>68</sup> Other accoutrements included cisterns and pumps for supplying water from the adjacent lake and an "elevated tramway" for supplying ore from the shaft. The system for crushing and sizing involved juggling the ore through a maze of baffles, screens, sizers, elevators, and rollers:

The ore is delivered from the several shafts to the breaker on the second floor. This machine has a capacity of 65 tons per ten hours, reducing to the size of a four-mesh sieve. From the breaker the ore is lifted by elevators to be fed into sizer No. 1, and the portion of the charge passing through it goes by a spout to the rolls in the basement; the coarser lumps are returned to be fed again into the breaker. In the chrome steel rolls the ore is reduced to a twenty-mesh, and is conveyed thence to the finishing rolls on the third floor. Here it is ground to a fineness of fifty-mesh and passes through sizer No. 2, to be reground if necessary in the same rolls.<sup>69</sup>

The mill contained no concentrating equipment (Frue vanners). Instead, the owners, having "witnessed the performance of an experimental plant set up and tested under the eye of the inventor at Minneapolis," elected to install two oil-burning Leede furnaces. It was claimed that the process of oxidizing gold ore to a free-milling state, which in nature took years, could be

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<sup>68</sup>Ibid., 22.

<sup>69</sup>Ibid., 23.

expedited to thirty tons per day per furnace.<sup>70</sup> Both the mill and furnaces, however, proved an immediate failure after start-up in July of 1892, processing only three and a half tons per day. The pulverizers fell apart, as usual, and the furnace carburettors refused to work properly. "After a futile attempt to induce the inventor himself to visit the works and direct the operations," the frustrated owners removed the furnaces and replaced the pulverizers with a 5-stamp "Gilpin County" style mill.<sup>71</sup> However, it was too little, too late. The treasury was drained and the mine soon closed for lack of operating funds. By 1895, it was bankrupt and sold out of court.<sup>72</sup>

There were several similarities between these three operations. First, each of them elected to install mills when still in the earliest stages of mine development. At first glance, it seems the problems at the Reduction Works may have contributed to this decision. Since each of the mills was constructed in 1892, well after the failures of the Reduction Works became known, it would appear that the owners may have been compelled to build their own mills out of necessity. However, the milling equipment selected seems to indicate that management decisions were not affected by the Reduction Works fiasco. The El Diver, for example, was installing pulverizers at about the same time the Reduction Works had proven their worthlessness. None of the mills contained concentrating equipment, even though it was a well known fact that the ores of the district were refractory.<sup>73</sup> Had they been collected, concentrates could have been shipped to other facilities via the railway or treated at the remodelled Reduction Works chlorination plant.

Few similarities can be found in the type of ownership involved in these mines. One company, Northern Gold, was allegedly incorporated in the U.S., another, Rat Portage Mining Company (a.k.a. Black Jack Gold Mining), was nearly incorporated in Ontario, and the third

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<sup>70</sup>Ibid., 24.

<sup>71</sup>Ibid.

<sup>72</sup>*H.C.J. Judgment Book, 1894-1946*, "Phillip St. Lawrence and others vs. Northern Gold Co." August 13, 1895, pp. 15-16.

<sup>73</sup>*Ontario Mineral Commission Report*, 117.



mine, the El Diver, was owned and operated by an American partnership. The owners, however, were apparently mostly absentees. Little is known of the Northern Gold Mining's first directors except that its promoter, Daniel B. Burdette, formerly of Belleville, Ontario, was living in Minneapolis.<sup>74</sup> The other five directors were probably from Michigan where the company was incorporated. The El Diver was owned by a Cleveland lawyer, and one E.W. Gaylord from Bristol, Connecticut.<sup>75</sup> The Black Jack mine succumbed before its owners could complete Ontario incorporation, however, its proposed first directors included two "esquires" from Duluth and Wisconsin, as well as two "miners" and a lawyer from Rat Portage.<sup>76</sup>

The managers of the mines show more obvious similarities. George Dulmage of the Gold Hill and Charles Brent of the Black Jack were both locals as was E.B. Barnes, the director who finally took over for Brent in 1893. The El Diver was managed by its New England owner, Gaylord. The credibility of these men is doubtful. Though often described as a mining engineer, Brent's *curriculum vitae* was notably absent from his lengthy 1893 Bureau report about himself and the Reduction Works. George Dulmage was little more than a local prospector, one of the party grubstaked by Burdette in 1885.<sup>77</sup> Besides Brent, Powers was possibly the only qualified mining engineer working in the district during this period but his credibility turned out to be exaggerated.

Taken together, these observations show that development during the critical period immediately after the resolution of the boundary dispute was marred by hasty, half-baked schemes which were sometimes poorly financed and always poorly managed. Corporate decisions were made by persons with little knowledge of mining and the men charged with

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<sup>74</sup>OBM, *3rd Annual Report, 1893*, 20.

<sup>75</sup>Ibid., 29.

<sup>76</sup>See Table 1, Appendix C.

<sup>77</sup>Davies and Smith, *Gold Occurrences in the Lake of the Woods Area*, 140.

carrying them out had hardly any more expertise.<sup>78</sup> Consequently, the district's reputation nose-dived as one embarrassing blunder after another surfaced. Investor confidence was completely shattered and, by the end of 1894, the Bureau noted only four mines provided returns with "but one that can rank as a mining enterprise [the Sultana]."<sup>79</sup>

### **1894-95: The Recovery**

After 1894, the industry desperately needed a success story to restore confidence in Ontario gold mining. Fortunately, from 1894 to 1895 at least two were forthcoming. These two were, however, viewed as successes for different reasons. The Sultana mine was slowly nurtured into a regionally-owned and operated consistent gold producer. On the other hand, the Regina mine, although it did occasionally produce bullion, was more significant because of the source and scope of its capital investment - it was the district's first British owned large-scale operation.

The Sultana was discovered sometime around 1881, but early development was hampered by several disputes between governments, special interest groups, and claim jumpers. Finally, in April 1890, John F. Caldwell of Winnipeg purchased all but a sixteenth interest in the location. After coming to terms with Mather, "actual mining" began in March 1892 and two hundred tons were removed by a small work force and sent to the Reduction Works for processing. Although the Works wasted almost as much gold as it recovered, Caldwell at least learned the value of his deposits and quickly bought out his last remaining partner, Jacob Henesy. It is probable that this purchase was expedited by the wave of disappointment following the Reduction Works failures. In the last three months of 1892, Caldwell had Charles Brent install the operation's first mill

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<sup>78</sup>A few other companies were incorporated during this period but did not achieve "full-blown" development. Taché Gold Mining and the Homestake Mining Company of Algoma were both incorporated in Ontario. However, Taché Gold (a reorganization of the old Chatham based Maple Leaf Gold Mining) may have been a speculative company since no work report could be found on its location near the C.P.R.'s Taché Station. The Homestake Mining Company was incorporated entirely by locals with three of its first directors residing in Rat Portage and the other two (both sons of John Mather) in Keewatin. One of the directors briefly managed the mine but no mill was constructed (See Table 1, Appendix C). It is not clear if Gold Rock Mining actually operated the Gold Rock mine on Mantitou Lake. The Rajah was the only mine during this period that attracted a British company. However, upon the advice of an expert consultant, work stopped at a very early stage (OBM, *3rd Annual Report, 1893*, 28).

<sup>79</sup>OBM, *4th Annual Report, 1894*, 25.

which included a large 100 h.p. boiler and engine, an 8 h.p. boiler and light plant, a forty ton per day Blake crusher, and two Jenckes 850 lb/stamp, 5-stamp batteries, each with its own Tulloch ore feeder and improved Frue vanner. In outfitting his mill, Caldwell was intelligent enough to learn from the Reduction Works errors and selected stamps and vanners over untried, less expensive, gadgetry. The Reduction Works dismal twenty-five percent recovery rate when treating Pine Portage concentrates also convinced him that his vanners would be unprofitable unless he built his own facilities for concentrate treatment.<sup>80</sup> Consequently, in 1893, only three years after the process was introduced in South Africa, Caldwell made plans to build the district's first cyanide treatment plant. The mill was reportedly shut down for three months in 1893 during the plant's construction, however, three years later a chlorination treatment plant was constructed to handle two years worth of stockpiled concentrates.<sup>81</sup> It is unclear whether the cyanide plant was ever actually built or if it was discarded in 1894 (Caldwell may have run out of money before the plant was done - the mill was estimated to cost \$30,000).<sup>82</sup>

The key to Caldwell's success lay in his ability to consistently balance milling production to mining output even while the operation continued to grow. Beginning with a force of about thirty-two in 1892, Caldwell explored several veins on the property, sinking four shafts simultaneously during initial exploration. Having selected the site of his production shaft, he decreased his employees to twenty-one in 1893 and commenced sinking in earnest. As the mine began to prove itself, Caldwell slowly built his operation up to forty-one employees in early 1895.<sup>83</sup> By that time the main shaft was sunk to one hundred seventy-five feet with two levels of drifting totalling almost two hundred feet in length. Mine machinery was simple and efficient

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<sup>80</sup>OBM, *3rd Annual Report, 1893*, 33.

<sup>81</sup>OBM, *3rd Annual Report, 1893*, 16-19. This report indicated a cyanide plant was "added last summer" (being 1893 - the reports were always published the year after they were made). The *5th Report* stated that nothing had changed with the mill (p.177), however, the *1896 Report* stated that two years worth of concentrates had piled up and that a chlorination treatment plant was being built (*Ibid.*, 1896, 92).

<sup>82</sup>OBM, *3rd Annual Report, 1893*, 19.

<sup>83</sup>OBM, *2nd Annual Report, 1892*, 231; *3rd Annual Report, 1893*, 19; *4th Annual Report, 1894*, 226.

- a small 15 h.p. double cylinder hoist, a 40 h.p. boiler and compressor, and two Rand drills (with a third added in 1895).<sup>84</sup> Caldwell's strategy was sensible and effective. He was frequently on site, making management decisions from his own personal observations rather than via letters from mine captains and mill bosses. By involving himself personally he was able to keep management overhead to a minimum. Frequently, the same person supervised the running of both the mine and the mill. As a result of his personal appearances, he also quickly developed a legendary rapport with the community and his own men. A very low turnover indicated that Caldwell maintained good relations with his management.<sup>85</sup> Court records also show that his relationships with labour and the community were not marred by the usual bad debts and mechanics' liens which plagued many of the district's other operations.<sup>86</sup>

How productive was his Sultana mine? Unfortunately, we may never know for sure. Part of the key to Caldwell's success was the secrecy surrounding mine operations.<sup>87</sup> He only provided enough information to ensure that the public was aware that production was successful. As early as 1893, gold bricks were reportedly being shipped to the U.S. Assay Office in New York and by 1894 local papers reported weekly bullion shipments to Rat Portage's Imperial Bank.<sup>88</sup> However, the exact value of production was never disclosed and the extent of underground workings was only occasionally revealed. As full owner of the enterprise, Caldwell

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<sup>84</sup>OBM, *4th Annual Report, 1894*, 226.

<sup>85</sup>From 1892 until he sold the mine in 1899 only three others besides Caldwell ever supervised the mine's unbroken operation - W.M. Caldwell (1892), Z.J.S. Williams (1893-94) and M.T. Hunter (1896). See Table 1, Appendix C or OBM *Reports* for those years.

<sup>86</sup>Three cases were brought against Caldwell in District Court; Charles Brent and Henry Powers sued for what was probably a disagreement over the Reduction Works handling of the mine's ores. The third case involved a dispute among some of the original owners, Caldwell, Henesy, and John and Jeff Hildreth. All three actions were brought and disposed of in 1892. Caldwell never lost any of these cases. A fourth action was initiated in the 1895 High Court of Justice by one George McGee. This matter was apparently settled out of court in 1896 (*Rainy River HCJ and District Court Process Books*).

<sup>87</sup>"Under the private ownership the output of the mine was never published, and it was always more or less of a mystery to all but those who were in the inner circle, or whose business it was to know. Various rumours were in circulation, and various conjectures were made" (OBM, *9th Annual Report, 1899*, 38).

<sup>88</sup>OBM, *2nd Annual Report, 1892*, 231; *Rat Portage News*, XII, April 13, 1894.

did not have to report to shareholders, leaving the public (and potential buyers) to speculate on developments at the mine.

Probably the greatest curiosity of this unusual success story was its source of capital. Caldwell, a resident of Winnipeg, is alleged to have privately owned and financed the mine from 1892 until 1899. However, even if the operation eventually did become self-sufficient, it is difficult to imagine that, in the winter of 1892, at the very depth of a national depression, Caldwell could have (or, for that matter, would have) personally invested \$30,000 in one mine's milling equipment. Even if he had the money, did the indications from those initial Reduction Works runs prove *that* lucrative? Again, there is no way of telling since, even at this early stage, production was shrouded in secrecy.<sup>89</sup> There is some indication that Caldwell may have had a very wealthy and influential silent partner. John Mather noted in his 1891 diary that he had bargained for twenty-five shares in the Sultana mine, however, the lack of any reference in later years indicates that some other last minute arrangement may have been arrived at for settlement of the timber lease.<sup>90</sup>

The second "success story" of the 1893-95 period was the Regina mine. This location was first patented by three local mining prospector/speculators, Paul Proux, Jacob Henesy and John McLean. In 1893 these three managed to attract the attention of W.G. Motley, one of two experts sent by the Rajah Gold Company of London, England, to examine its mine northeast of Rat Portage. He reported unfavourably on the Rajah (which the company had previously acquired from, among others, Jacob Henesy), but while in the vicinity he took the time to investigate the Regina location. Although the shaft was only forty feet deep in mid-April 1894,

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<sup>89</sup>Even Charles Brent, the manager of the Reduction Works, did not know the details on the first runs of Sultana ore. Though he gave an exact figure for the gold contained in the Pine Portage concentrates, he could only say that "about half the gold" of the Sultana ore was wasted during treatment at the same time (OBM, *3rd Annual Report, 1893*, 33).

<sup>90</sup>Mather, *Journal*,s September 20, 1891. Possibly Mather was referring to the Sultana's neighbour, the Ophir mine, which was patented by a group of his Ottawa associates.

by November Motley had convinced the company to take out an option on the property.<sup>91</sup> Despite the lateness of the season, former Sultana manager W.M. Caldwell was immediately dispatched to the location with a gang of labourers and old equipment from the Reduction Works and the Black Jack mine.<sup>92</sup> In less than two and a half months, the company consummated its option, purchased the mine for \$30,000, and sent Motley to the States shopping for new equipment.<sup>93</sup> Although "actual mining was not under way until the spring [of 1895]," a mill had been purchased and its foundations laid before the ice was out in May!<sup>94</sup> There is no indication that even one sample lot of ore had been tested anywhere prior to making a decision to build the mill.

Even though the mine was not proven, the company chose to construct a first class gold mill anyway, and arranged for a representative of a well known equipment manufacturer, the Gates Iron Works of Chicago, to supervise construction in the spring of 1895. By the end of August, engineer Otto Purnell had installed a state-of-the-art, medium capacity conventional stamp mill consisting of a 40 h.p. boiler and engine, one grizzly, a Blake crusher, two 5-stamp Gates batteries (900 lb/stamp) with Tulloch feeders and amalgamation plates, two Perfection concentrators (possibly an improved version of the Frue vanner), four "slime cloths," and a "100 light" dynamo with 10 h.p. boiler. Purnell also supervised installation of new mining equipment including, the compressor and receiver for the Rand power drills and a tramway with turntable and automatic unloading cars to bring the ore from the mine to the mill.<sup>95</sup> No concentration treatment plant was installed at this point, although there appears to have been capital available for one. The enriched ores near the surface may have fooled Motley into believing the deposit was more free-milling than it was. The company was indeed very free with its money, a fact made clear by its personnel roster. The Bureau reported in 1895 that the Regina's thirty-five

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<sup>91</sup>*Rat Portage News*, XII, April 13, 1894.

<sup>92</sup>*Rat Portage News*, XIV, November 16, 1894.

<sup>93</sup>*Rat Portage News*, XIV, February 1, 1895.

<sup>94</sup>OBM, *5th Annual Report, 1895*, 182; *Rat Portage News*, May 3, 1895.

<sup>95</sup>OBM, *5th Annual Report, 1895*, 183.

employees included *four engineers*.<sup>96</sup> Many operations of similar age could not afford even one engineer but the Regina had two working each of the ten-hour underground shifts.

Just before the mill went on line in late September 1895, the London company sent out its managing director and Chairman of the Board, General Henry Wilkinson, a retired military man from India. Wilkinson was to become a fixture at the mine until the end of the decade, frequently even staying on through the winters. Though somewhat pompous and eccentric, he was good-natured and righteous (he personally supervised the mine's Sunday school). Unfortunately, he lacked both mining experience and business sense.<sup>97</sup> The one thing he was good at, however, was putting on a show, a trait he hoped would obscure his lack of mining or management expertise. A self-styled master of public relations, Wilkinson gave the mine's first gold brick to the Rat Portage hospital drive before it was ever produced.<sup>98</sup> His generous hospitality and the sumptuous trappings of his accommodations at the mine quickly became legendary.<sup>99</sup> Whenever the opportunity arose, he was ready to show off the underground work or demonstrate the mill. Indeed, there were few secrets at the Regina - except production statistics. In this respect, Wilkinson was as tight lipped as Caldwell. For example, he revealed that the brick from the first mill run given to the hospital fund was worth "about \$500," but only after he had whisked the run's other three bricks ("of unknown value") to England before anyone saw them.<sup>100</sup> However, occasionally Wilkinson's magniloquence overwhelmed his ability to

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<sup>96</sup>Ibid.

<sup>97</sup>Research failed to turn up any reference indicating Wilkinson was experienced in mining. His lack of business sense is exemplified by the company's many appearances in court over the decade answering to bad debts. Between 1895 and 1902 the General made at least four appearances in the High Court of Justice and was called before the District Court on at least ten occasions. The frequency was rather high considering that J.F. Caldwell of the Sultana only made four appearances in court over a much longer period of time (*Rainy River District HCJ and Dist. Court Process Books, 1894-1902*, see footnote 86 this chapter).

<sup>98</sup>*Rat Portage News*, September 13, 1895.

<sup>99</sup>Several of the Bureau Inspectors commented on Wilkinson's hospitality. Townsley states the General's "palatial bungalow" and boathouse were both outfitted with grand pianos and Persian rugs (Townsley, *Mine Finders*, 90).

<sup>100</sup>*Rat Portage News*, October 4, 1895.

conceal the mine's productivity. For example, though at least four bricks of vague dimensions were allegedly produced by the end of September 1895, it was reported that the mill was only cleaning up *once a month* to cut the costs of retorting and labour.<sup>101</sup> It is extremely difficult to believe that the mill's amalgamation plates had the capacity to hold the first four "bricks" worth of free-milling gold without a cleanup.<sup>102</sup>

A comparison between the Regina and the Sultana reveals some interesting similarities and contrasts. The calibre of managers varied almost inversely (except for W.M. Caldwell who set up the first equipment at both mines, probably working as no more than labour contractor for both). W.G. Motley and Otto Purnell of the Regina were both trained mining engineers whereas Matthew Hunter and Z.J.S. Williams were locals with unknown backgrounds. Both operations were run by owner/managers with doubtful backgrounds in mining. However, John F. Caldwell was a regionally based, inconspicuous, shrewd manager, whereas Wilkinson was a high profile Englishman with a lack of business sense characteristic of British directors managing North American mining ventures. Neither of these mines was incorporated in Ontario and neither of them, at this point, offered shares to the Ontario public.<sup>103</sup>

The source of the Sultana's capital was a well-kept secret. The Regina, however, was entirely a British concern from the beginning. First operated by Rajah Gold Mining, a company incorporated in England around 1893, the mine lived through several reorganizations during the decade. In 1895 the old company (capitalized at £170,000) was reorganized into the Regina (Canada) Gold Mining Company (£130,000). In February 1896 the Regina was again "reconstructed"

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<sup>101</sup>*Rat Portage News*, September 27, 1895.

<sup>102</sup>Leaving that much gold on the plates for an extended period involved at least two risks. First, the effectiveness of the amalgam would be reduced resulting in free-gold going into the concentrates and/or tailings. Also, leaving so much gold on the plates was a serious invitation to thievery. Obviously, the mill was not cleaning up as much as was reported, or the mine's spokesman was misleading the public.

<sup>103</sup>No shares in the Sultana were offered on the market until after Caldwell sold out in 1899. The Regina did not obtain a license to sell shares publicly in Ontario until 1898. See Table 1, Appendix C.



with an authorized capital of 150,000 shares of £1 each, of which 127,111 shares were issued credited with 17s. per share as paid. Calls amounting to 2s. per share have now been made on all of these shares. The holders of about 40,000 shares have voluntarily paid up in full, leaving as a reserve of capital 1s. per share on about 90,000 shares, and 22,882 shares still unissued.<sup>104</sup>

The 127,111 shares issued and credited with 17s. (85¢ on the dollar) were undoubtedly given up to the old Rajah shareholders during the reorganization. Clearly, by 1896 the company required further capital and the reorganization was undertaken to free up shares for another issue. However, the company never put shares on the market in Ontario during this period. The *Rat Portage News* reported that the management had indicated it was the company's intention to "wait until the value had been proven before issuing paper representing value produced by the results" of mining.<sup>105</sup> It is more likely, however, that the directors wished either to consolidate the dividends base or to keep the company exclusively English, a condition usually perceived by British investors as an indication of success.

By the end of 1895 both the Sultana and the Regina had become "successes" for different reasons. The Sultana, in spite of real difficulties, had developed into a producer in the careful hands of local ingenuity. The Regina had, in one year, gone from hardly a hole in the ground to a magnificent edifice, complete with all manner of equipment, wealthy noblemen owners, and a spend thrift resident aristocrat. In 1895 the story of these two mines inspired everyone interested in mining: the Sultana encouraged prospective investors and the Regina stimulated speculators.

### **1895-1900: The Boom Blooms**

The Sultana and Regina had primed the district for a boom and a seemingly insignificant discovery set off the charge in 1895. The Little America mine on an island on the U.S. side of Rainy Lake was discovered in 1894, a minor rush followed, and a boom town, Rainy Lake City,

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<sup>104</sup>OBM, *6th Annual Report, 1896*, 51.

<sup>105</sup>*Rat Portage News*, November 22, 1895.

sprang up almost overnight. Although mine development was a comedy of errors from the outset and the town all but disappeared within a year, the rush was on as hoards of prospectors and mining land speculators frothed the inland waterways and land registry inkwells with their pens and canoe paddles. Spirits were further buoyed by 1895 reports of gold bricks being produced at Harold Lake, one of the new discoveries on the Upper Seine.<sup>106</sup> An increase in American and, especially British, capital involvement produced a frantic race of land grabbing, shaft sinking, facilities construction, and mining company incorporation in Northwestern Ontario from 1895 to 1900. Especially encouraging was the sudden interest several British companies were taking in the district. The Ferguson mine and the Rat Portage Reduction Works were both bought by British investors in the summer of 1895 and, before the end of the year, another company had taken out a \$30,000 option on another Lower Seine property.<sup>107</sup> The successful development of the Mikado in 1896 further stimulated the tide of British investment, peaking with the Ontario Gold Concessions agreement in 1897 and the Sultana purchase in 1899.

By 1898 three district mines had shafts over four hundred feet deep, another was nearly four hundred feet, three others were down more than two hundred feet and several were between one hundred and two hundred feet deep. At least forty-one new stamps were constructed in the district that year.<sup>108</sup> A year later, more than a hundred mining ventures of various magnitudes were reported operating in the district.<sup>109</sup> Although a few operations, such as the Laurentian and the St. Anthony Reef, eventually became producers most of these "mines" were undoubtedly developed for purposes of speculation and quick sale rather than eventual gold production.

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<sup>106</sup>*Rat Portage News*, August 30, 1895.

<sup>107</sup>O.B.M., *6th Annual Report, 1896*, 259; *Rainy River H.C.J. Judgment Book, 1894-1946*, 12-14, (19 July 1895); *Rat Portage News*, XV, October 25, 1895.

<sup>108</sup>O.B.M., *8th Annual Report, 1898*, 50.

<sup>109</sup>Inspector Bow estimated in 1899 that "there are altogether about 120 locations or properties which have been worked during the year" but admitted that it was "very difficult to give accurate figures in these matters, since many properties are only worked intermittently, generally for a few months at a time" (O.B.M., *9th Annual Report, 1899*, 35).

There were several variations of "companies" involved in the district during the boom period. Some mineless corporations, such as Atlas Mining and Western Ontario Mining, apparently never got past the planning stage, while other mine owning outfits, such as Triumph Gold Mining and Gold Mountain Mining were only illusory uncertified companies.<sup>110</sup> Most of the incorporated mines developed during this period, such as the Lucky Coon, Lake Harold, and Gold Panner, only went through the motions of building a mining operation, with the intention of putting up enough of a facade to attract a British buyer or some unwary Toronto stock market investor. The various types of "companies" used different tactics to achieve their objectives. Several operations, including the Foley and Olive mines near Mine Centre, the Hammond Reef near what is now Atikokan, and the bizarre Burley Shaft *underneath* the Lake of the Woods, tried unsuccessfully to make a sale through facilities construction rather than mine production. Other companies, such as the notorious New Golden Twins and Lake Harold Gold Mining, used promotional scams to meet their ends. A few operations, most notably the Dominion Gold Mining and Milling and the Ottawa Gold Milling and Mining companies, attempted to consolidate an empire of mining properties within the district. At least one mine, the Golden Star, was so cleverly managed and promoted that it simultaneously made money from its production *and* its sale (thanks to a successful but scandalous stock manipulation).<sup>111</sup>

However, most of these companies failed to meet their objectives because of poor management decisions. Episodes of clumsy mismanagement of a number of high profile companies, including the revived Reduction Works and the Regina Limited, became embarrassingly obvious. Other companies, such as John Mather's Ottawa Gold Milling and Mining, became involved in so many different mining or mining-related ventures that their managements' inability to focus often left the companies overextended and their mines helplessly

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<sup>110</sup>Rupert Land Mining, incorporated in February 1897, put the cart before the horse and organized before it had finalized the deal on its mine. The *Day Book* of Allan McLennan, a Rat Portage lawyer, indicates he was retained in the fall of 1898 by several individuals (Geo. Foster, A.H. Mitchell, Jos. Flanagan, Wm. Tarrance and Fred Hudson) who, as the registered owners of claims WA1 and WA2, were being sued by Rupert Land Mining over the disputed sale of the property (Allan McLennan, *Day Books*, 1897-1900, Index Entry #253 [original held in Ontario Public Archives]).

<sup>111</sup>A description of the Golden Star affair follows on page 138.

short of capital and/or direction. Certainly the gravest management sin committed with the greatest frequency was over-development. A host of premeditated premature extravaganzas such as the Foley, Boulder, Glass Reef and Hammond fiascoes seriously threatened the district's credibility.

The history of the Regina's mismanagement almost defies logic. The company's early development was premature, albeit fortunate. Engineer Motley's decision to build a medium-sized mill was certainly not justified, however, the mine subsequently turned out some high quality ore and early mill clean-ups placed the operation in a position to make a profit. By 1896, however, development was moving at a breakneck, reckless rate. In little more than a year the shaft was sunk to two hundred thirty feet with more than five hundred feet of drifting. During the winter *two* cyanide plants were added to its mediocre 10-stamp mill, one to treat concentrates and one to treat tailings. Besides constructing a new shaft house and several outbuildings, the company also purchased a larger steam launch.<sup>112</sup> By 1898 the shaft was the deepest of any Ontario gold mine at four hundred fifty feet with four added levels of drifting (for a total of eight including one tunnel).<sup>113</sup> An oversized 10-drill compressor was added to the shaft house but the most disastrous changes were made in the mill. The gravity stamps were removed and replaced by seven (or eight) 2-stamp Tremaine steam stamp batteries and the Frue vanners were replaced with a pair of larger old fashioned jigs and Berdan pans.<sup>114</sup> The Tremaine stamps were at best only prospecting equipment and, although the board of directors reported them as "working most satisfactorily" in 1898, in fact, they broke down incessantly and their tonnage rate

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<sup>112</sup>OBM, *6th Annual Report, 1896*, 92.

<sup>113</sup>OBM, *8th Annual Report, 1898*, 57.

<sup>114</sup>"Report of the Shareholders Meeting of the Regina (Canada) Gold Mine, Limited, 1898," *Canadian Mining Review*, XVI, February 1897, 102-103; OBM, *8th Annual Report, 1892*, 58. Some confusion exists as to the exact number of steam stamps installed. The shareholders' report indicated eight 2-stamp batteries whereas both the 1898 and 1899 OBM *Reports* claim only seven batteries were installed. Admittedly, the shareholders' report seems to have been prone to exaggeration.

was less than a third of what was expected.<sup>115</sup> The jigs and pans were also a big disappointment, "being considered useless."<sup>116</sup> Unfortunately, the company could not fall back on the old mill since it had been sold to the Gold Panner mine.<sup>117</sup> Without sufficient mill support, the mine operated only "intermittently" until it finally closed in October 1899.<sup>118</sup>

The Bureau of Mines was inclined to blame one of the managers, Henry Pringle, for this setback.<sup>119</sup> In fact, the reasons were probably much more complicated. Even though the mine and mill were cranking out gold bricks regularly, production was apparently well below the costs of development. Requiring more operating capital, the company had conveniently taken a large loan (\$90,618.91) from General Wilkinson. The company, however, was never in a position to repay the note as long as Wilkinson remained on site orchestrating profitability. In July of 1897, the General foreclosed and the mine and all its properties were ordered surrendered to him "forthwith."<sup>120</sup> Wilkinson, therefore, personally controlled operations when the fateful mill decisions were made.<sup>121</sup> The Bureau also insinuated that the steam stamps were selected because

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<sup>115</sup>Ibid., *Regina Shareholders' Report, 1898*; OBM, *9th Annual Report, 44*. The entire mill was installed by the Gates Iron Works of Chicago and the mill's unsatisfactory performance was undoubtedly at the bottom of a law suit between the equipment company and the mine in 1899 (*District Court Process Books, "Gates Iron Works v. Regina Mine," 1899, entry #52, Judgment for plaintiff, \$1079.22* ).

<sup>116</sup>OBM, *9th Annual Report, 1899, 44*.

<sup>117</sup>OBM, *10th Annual Report, 1900, 75*.

<sup>118</sup>Ibid.

<sup>119</sup>Ibid. W.G. Motley and J. Leechman were also managing during this period.

<sup>120</sup>*H CJ Judgment Books, 1897, case #17, p. 27-28*. Without the court file, it is impossible to determine the exact particulars of the action. However, the large claim value and the nature of Wilkinson's position does not suggest a debt for services. The General was never mentioned as being an owner or vendor, making it unlikely that the action involved a property bond disagreement. The action could not have involved a securities default (bonds or debentures) since the company was not licensed to carry out share transactions in Ontario until 1898. The only reasonable cause for the action was that the company defaulted on a promissory note(s). Researching local newspaper records for this period may provide further information but, unfortunately, these are no longer available through inter-library loan.

<sup>121</sup>The *Shareholders' Report* for 1898 seems to indicate that stockholders were not aware that their company was at least temporarily without assets while priority shares were being issued and sold. Wilkinson most likely made some kind of arrangement to transfer his interest back to the corporation before the end of 1897. Before the company was licensed in Ontario on January 8, 1898 it had to prove to the Bureau's Director that it did have real assets. The arrangement was

the company had run low on funds.<sup>122</sup> This, however, does not explain the decision to buy a compressor probably twice as big (and expensive) as the mine needed.

The saga of the Rat Portage Reduction Works continued during this period along much the same road as the Regina. In fact, Motley had reportedly encouraged his English sponsors to pick up the Works in 1894 but they opted for the Regina instead.<sup>123</sup> In late 1893, a "syndicate of Americans," including Parlan Semple of Oshkosh, Wisconsin, and Alexander Hay of Duluth, paid \$15,000 for the plant. They attempted to organize the Rat Portage Land and Mining Company but gave up "owing to financial distress in the United States."<sup>124</sup> Purchased with the old Northern Gold properties out of court in 1895 by a representative of a British syndicate, the Works was quickly reorganized and refitted.<sup>125</sup> Otto Purnell, the same Fraser & Chalmers agent who installed the Regina's first mill, supervised the removal of the pulverizers and the installation of four 5-stamp batteries. The concentrate plant was renovated with grinders and amalgamators and a four-hearth reverberatory furnace. Purnell wisely perceived that the bloom of mills in the district meant more of a market for concentrate treatment than stamping ores. Consequently, the stamps installed were only capable of handling forty tons per day while the concentrate treatment plant was capable of handling ten tons per day.<sup>126</sup>

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short-lived as Wilkinson sued for the same amount and foreclosed again on June 21, 1899 (*H.C.J. Judgment Books*).

<sup>122</sup>OBM, *9th Annual Report, 1899*, 44.

<sup>123</sup>*Rat Portage News*, XIV, November 9, 1894.

<sup>124</sup>OBM, *3rd Annual Report, 1893*, 34; For information on the attempted organization see Table 1, Appendix C.

<sup>125</sup>The Reduction Works and Northern Gold properties, being "of a speculative value [which] cannot readily be sold by auction or by tender" were discretely sold on July 19, 1895 to the English promoter Edgar Bruswitz for a paltry \$6,000 and \$7,500 respectively (*H.C.J. Judgment Book, 1894-1946*, pp.12-14). The Rat Portage Mining and Reduction Company (apparently the American syndicate that had taken over for the Works in 1894) had amassed more than \$8,000 in bad debts in less than a year (*District Court Procedures Books*, Various cases, 1894). These may have been included in the 1895 \$6,500 H.C.J. judgment in favour of Joseph Sherman and others (*H.C.J. Judgment Books*, 1895).

<sup>126</sup>OBM, *5th Annual Report, 1895*, 188. Compare this to the Regina's 10 tons/month concentrate facilities (Nelson, *Klondike at Home*, 176).

At about the time reconstruction of the Works started, a curious character came on the scene. R.H. Ahn was a man of unknown, if not dubious, mining experience. By his own description he was "one of the most widely experienced men in the district," whose opinions were allegedly more valuable than the "conjectures of a hundred amateur prospectors." However, twenty-five years of experience as "a practical assayer" in Sudbury, California, Australia and New Zealand was cryptically quantified "for... though not entirely occupied in [mining], he has always given more or less attention to it."<sup>127</sup> He styled himself an "M.E.," but the *Canadian Mining Journal* was more familiar with his real credentials and indicated he had "an intimate acquaintance with jewellery and trinkets rather than with mines and metallurgy."<sup>128</sup> In 1894, while working an option on the Kobold property, Ahn gained the confidence of Edgar Brusewitz, the promoter arranging the revival of the Reduction Works. When an English syndicate organized the Dominion Gold Mining and Reduction Company in 1895, Ahn became co-manager with Alexander Hay. Within a year, however, he had outmanoeuvred Hay to become sole manager of the Dominion Gold empire. By 1899 he had attached himself to at least nine different mining operations, sometimes managing several at the same time.<sup>129</sup>

Although he may not have been a man of science, Ahn had the gift of gab and used his promotional skills to camouflage his mismanagement. For example, he claimed to have found enough gold-laden mercury on the site of the Reduction Works during renovations to keep the new plant "going for sometime without the necessity of going to expense in the purchase of new stock."<sup>130</sup> However, it is not clear how Ahn determined the mercury contained gold since, at the time of its discovery, he had already dismantled the old milling equipment and retort furnaces.

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<sup>127</sup>*The Colonist*, 10, May 1896.

<sup>128</sup>*Rat Portage Semi-Weekly Record*, V, December 11, 1895; *Canadian Mining Review*, XVI, January 1897, 6. Ahn was listed as a "mining engineer" in the incorporations of both the Crown Point and Gold Reefs companies (*Ontario Gazette*, XXXII, 7 October 1899, 1127; *Ibid.*, 5 August 1899, 729). He was more accurately described earlier in the Letters Patent application of the Golden Gate Mining Company as a "mining broker" (*Ibid.*, XXX, 20 March 1897, 658).

<sup>129</sup>See Table 1, Appendix D.

<sup>130</sup>*Rat Portage News*, XVI, August 16, 1895.

A master showman always, he advertised the opening of the plant in November of 1895 with guided tours (at a fee, of course) and grandiose public announcements.<sup>131</sup> Before the plant was up and running, Ahn was already cleverly concealing his own inabilities with yet another promotional angle. Realizing he was not capable of supervising the mill and unwilling to hire someone who could, Ahn opened the door for owners to personally treat their ores at the works.<sup>132</sup> He claimed this self-serve policy was intended to bolster confidence among a security-conscious clientele, however, it was unquestionably a dangerous business practice to let unfamiliar individuals loose in a facility filled with complex and expensive machinery.

Ahn's self-serve policy was also motivated by the fact that he had spread himself, and the company, too thin. Fifteen other well known properties, including the Gold Hill, Black Jack, Golden Gate, Big Ellen, Homestake, Yellow Girl, and Combination, were obtained by the company when the Reduction Works was purchased in 1895. Because Ahn assumed managerial responsibilities at most of these, he would have had little time to attend to business at Rat Portage. A look at the Dominion Gold Company's 1897 directors' report provides an indication of why the company was spread so thin:

Of a total capital of £200,000, the vendors received £150,000 as fully-paid in return for properties, and in addition received £11,576 in *cash*, which undoubtedly came out of the £18,707 of shares subscribed. This left the company with the large share capital of £200,000 only £7,131 in cash to work with. ...this sum was spent--as to £5,752 in machinery and plant, as to £1,853 in development, as to £1,064 in salaries, and as to £708 in preliminary expenses and furniture,--making a total of over £9,000, which necessitated *borrowing* £2,000.<sup>133</sup>

These statistics reveal that the "vendors," Brusewitz for sure and possibly Hay, made a killing during the organization of the company. The Reduction Works and Northern Gold properties together were bought from the court for only \$13,500, and subsequently sold to Dominion Gold

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<sup>131</sup>*Rat Portage News*, XVI, November 8, 1895.

<sup>132</sup>OBM, *5th Annual Report, 1895*, 259.

<sup>133</sup>*Canadian Mining Review*, XVI, January 1897, 6.



for \$57,880 cash plus \$750,000 paid-up shares of the company's \$1,000,000 capital.<sup>134</sup> This represented a tidy cash profit of over four hundred percent as well as absolute control over Dominion Gold's management. Obviously, buying properties in the name of the company was good business for the few individuals controlling the vendor shares since they paid themselves their own price. It is easy to understand why the company quickly became so overweight with real estate: purchasing mines was simply the most expedient and discreet way to "rake off" treasury funds.

The Dominion Gold empire, like its predecessor, Lake of the Woods Gold and Silver Reduction, was in trouble before one of its new Reduction Works stamps ever fell, and by 1896 work had ceased at all the company's properties for "lack of working capital."<sup>135</sup> Other management decisions besides excessive land ownership plagued the company. For some unfathomable reason, manager Ahn decided to simultaneously remodel the mills at the company's other properties rather than shipping their ores to the Reduction Works for treatment.<sup>136</sup> Ahn, who may have come along too late to get in on the purchase price rake-off, was getting his share by managing the financing of unnecessary construction and equipment purchases.

Two other mines, the Foley in the Bad Vermilion Lake area and the Hammond Reef near Atikokan, also reflected the same trends of premature development and mismanagement. The Foley mine, probably the most over-developed operation in the district, was owned or optioned by several companies in its short history but managed (in one capacity or another) throughout by its namesake, Joseph Foley of Duluth. Using a single Ingersoll rock drill and a small hoist, two tons were removed from various pits and shipped to New Jersey in 1895.<sup>137</sup> From this puny

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<sup>134</sup>*H.C.J. Judgment Book, 1894-1946*, pp.12-14. The 5:1 exchange rate was derived from 1899 Bureau statistics on the capitalization of the Anglo-Canadian Gold Estates (OBM, *9th Annual Report, 1899*, 48).

<sup>135</sup>*Canadian Mining Review*, XVI, January 1897, 6.

<sup>136</sup>Two Perfection concentration tables were added to the confused Gold Hill milling equipment and an electric light plant was installed at the Black Jack to light the shaft and the mill (OBM, *5th Annual Report, 1895*, 174).

<sup>137</sup>OBM, *5th Annual Report, 1895*, 158.

sampling, a decision was made to build an enormous operation. From March 1896 to February 1897, fifty to seventy-five men sank ten shafts to a total depth of four hundred sixty feet with seven hundred sixty feet of drifting and crosscutting. During the same period, the following mine and mill fixtures were also installed:

Shaft No. 1 engine house (36x40'), Shaft No. 11 engine house (26x36'), 40 h.p. boiler, 20 h.p. boiler, double drum hoist engine and three compressors, tram & trestle (4,400 feet), hoist engine (56" drum), skip road and shaft house, skip and six cars, 20-stamp Fraser & Chalmers mill with assay office, blacksmith shop (24x36'), barn (28x32'), boarding house, two storey office building, and six "dry houses and sleeping camps"<sup>138</sup>

The next year the operation continued to spend money building up the facilities. New buildings included "dwelling houses" for the manager and "inspector" Foley as well as two extravagant rarities - a dynamite-thawing house and "a hospital with a doctor and nurse in attendance." A seven horse-power steamer was also purchased for transportation on Shoal Lake.

The mine was, however, beginning to show signs of trouble. In August 1897, faced with a financial crisis, the company authorized 50,000 new shares at \$5 but only 36,000 were issued at a discount of sixty percent.<sup>139</sup> In a flimsy effort to promote the new shares, management grasped for excuses to explain the mine's poor performance. The failure to meet expected levels of production was blamed on the transiency of the miners, a problem which, the company maintained, would be mysteriously remedied by installing a new compressor and more drills.<sup>140</sup> In reality, the problem with the old compressor was not its size but its location. Because the mill had been built before any one of the eleven exploratory "shafts" was selected for extended development, Foley decided to place the compressor in the mill and pipe the air to the shaft(s). The resulting network of pipes, sometimes as long as a mile, cut the compressor's efficiency

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<sup>138</sup>*Canadian Mining Review*, XVI, February 1897, 42.

<sup>139</sup>*The Canadian Mining Review*, XVI, August 1897, 259.

<sup>140</sup>*Ibid.*, 221.

drastically.<sup>141</sup> The management, however, failed to grasp that even a larger compressor would not relieve problems with condensation and freezing that surely plagued the long feeder lines in the winter. The compressor continued to be a convenient if not transparent scapegoat, and when the mine closed in 1898 it was allegedly due to "various vexatious delays in getting in its air compressors."<sup>142</sup> Curiously enough, the owners eventually succeeded in unloading the company in 1899. The unlucky recipient, the Canadian Mines Development Company, was, of course, an English organization.

The Hammond Reef, like the Foley, went through several changes of ownership during its life, although its founder, James Hammond, always managed to stay on in some position or another. Like the Foley, the Hammond location was made up of several small veins. The Reef's first mill, constructed in 1897, was a standard preliminary development plant: a Blake crusher, two 850 lbs/stamp 5-stamp batteries with Challenge ore feeders, two mercury traps, and two Frue vanners (4 foot flat belts @ 300 r.p.m.). Although early mill results showed the Reef's stockwork of veins to be low in gold content, an investigating Bureau official indicated in 1897 that the mine might make a profit if milling was done on a large enough scale.<sup>143</sup> With this incentive, the squabbling owners put aside their differences and began raising the cash needed to build their own hydro-electric/mining mega-project.<sup>144</sup> At the end of 1898, on the basis of a meagre \$1.70 per ton net profit milling report, the company commenced enlarging the operation. Thirty more huge twelve hundred pound stamps and six more Frue vanners were added to the mill in 1899, an aerial tramway connected the main open pit "quarry" to the mill, and a one-hundred-fifty-foot-long, eighteen-foot-high hydro-electric dam was constructed two miles away. Eleven thousand feet of power lines were strung and two turbines were installed before the generator was ordered.

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<sup>141</sup>OBM, *7th Annual Report, 1897*, 69.

<sup>142</sup>OBM, *8th Annual Report, 1898*, 129.

<sup>143</sup>Inspector Coleman indicated in the *7th Annual Report* that harnessing the available water power would make a large mill profitable on even \$5 ores if they were found in large quantities (OBM, *7th Annual Report, 1897*, 131).

<sup>144</sup>At one point there were two different companies working side by side on the "reef." For an account of the entangled early ownership of the Hammond Reef, see OBM, *7th Annual Report, 1897*, 67.

When it finally arrived at Bonheur station, the base of the generator proved too large to transport overland to Sawbill Lake.<sup>145</sup> The dam was connected to the powerhouse seven hundred feet downstream by a five foot wooden flume containing one ninety degree bend and another "more obtuse" angle. The generator was finally installed in June of 1900 but the operation never really had a chance. Mining stopped when the mill's improperly grounded motors were burned out by a lightning strike in October and the lights finally went out on the Hammond Reef when the crooked flume blew itself to pieces in November.<sup>146</sup> Not surprisingly, the operation never reopened.

Equipment failure was, however, only a minor factor in the failure of the Hammond Reef. The mine was always a long shot at best, depending on high quantities of low quality ore to make its large-scale mill profitable. Unfortunately, although in 1897 Inspector Coleman was "convinced of the immensity" of the stockwork of veins, his early assessment did not stand up.<sup>147</sup> The inexcusably fatal mistake of the mine's management was accepting Coleman's report at face value and pursuing their grandiose plans without first accurately assessing the magnitude of the deposit. In fact, although hundreds of thousands of dollars were ultimately spent on mining and milling equipment, dams, generators, and power lines, there is no evidence to suggest that a single dollar's worth of diamond drilling was done prior to large-scale development.

The most significant similarity found in both the Foley and Hammond Reef enterprises was the fact that British capital played only a small part in their development. The Hammond Reef had a confused corporate beginning. The first attempt to organize a company, the Kabaskong Gold Mining Company, failed to get off the ground. Perhaps its promoters felt shares would sell better if the company had directors from more prestigious locations than Fort William and Port Arthur. On March 19, 1897, two months and another name change later, the first

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<sup>145</sup>OBM, *9th Annual Report, 1899*, 78.

<sup>146</sup>OBM, *10th Annual Report, 1900*, 103.

<sup>147</sup>OBM, *7th Annual Report, 1897*, 131.

company, the Hammond Gold Reef Mining Company, was incorporated. With the exception of vendor James Hammond of Fort William, all the local directors were replaced with Kingston and Toronto residents.<sup>148</sup> Only a half interest in two of the eight locations owned by the vendors was sold to the company. The company claimed a breach of contract, took the owners (Hammond and Henry Folger) to court, and won a two-thirds interest in the remaining six locations. Folger and Hammond then organized a second company, Folger-Hammond Gold Reef Mines and sold it a half interest in their third of those six locations. This company's board was made up of two of the three Toronto directors of Hammond Gold Reef, with Henry Folger representing the vendors. The most significant change, however, was the addition of two "decoys," Sir Richard Cartwright of Kingston and Lt. Col. George Sweny of Toronto.<sup>149</sup> Curiously, the mining operations of both companies were supervised concurrently by the same manager, James Hammond. The two companies finally pooled their resources in June of 1899, consolidating into a new company, Hammond Reef Consolidated Mining. Several new Toronto decoys were added to its board including the Hons. George Cox and Lyman Jones, and Queen's Counsel, George Watson, as well as a British connection, John Morty of London.<sup>150</sup> At this point Hammond was replaced as mine manager by his former "assistant," William Tedford although he continued to act as managing director.

The Foley mine was purchased by Joseph Foley (of Detroit) from its patentees in 1894 and in early 1895 he leased and optioned the three locations to Weigand Gold Mining, a

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<sup>148</sup>Benjamin Folger, the new director from Kingston, was undoubtedly related to Henry Folger, also of Kingston and one of the original patentees.

<sup>149</sup>OBM, *7th Annual Report, 1897*, 65. Well-known dignitaries, termed "decoys," were sometimes brought into a company's board of directors during incorporation. The thinking was that prospective shareholders had more confidence in companies allegedly run by men of influence or success. It is not clear whether Cartwright or Sweny contributed anything beyond their names, however, the fact that they stayed with the company through its consolidation suggests they may have had a financial stake in the Hammond Reef.

<sup>150</sup>Morty is unique in that he represents a rare instance where a British subject was successfully enticed into becoming involved in the management of a company incorporated in Ontario. (See Table 1, Appendix D).

Minnesota company.<sup>151</sup> In the fall of 1896 the mine was taken over by an Ontario corporation, the Ontario Mines Company, comprised of James Conmee, a Fort William politician, contractor, and promoter; Hume Proudfoot, an ubiquitous Ontario surveyor; and three others from Toronto. A month later, as the mine's first mill was being finished, a new company of American investors, the Foley Mines Company of Ontario, took the reins. However, by January 1897 this company had been reorganized into yet another company, the Foley Mines Exploration Company, whose Detroit directors completely replaced the former New York investors.<sup>152</sup> However, a review of the company's balance sheet later in the year revealed the reorganization's hollow foundation:

Local mismanagement has been accentuated by an exhibition of harlequinade finance, which has placed the company in what is euphemistically styled an "undoubtedly unhealthy condition." No one is likely to deny that a company that is not only reconstructed on a basis that gives "no provision for treasury stock to provide necessary working capital," and has to raise money "in the shape of loans" to continue work, but actually starts by assuming, "as it was difficult to present a full statement at the time," the responsibility of some \$16,000 odd plus further sums unknown, which subsequently turned out be some \$8,000 odd, is in an "undoubtedly unhealthy condition."<sup>153</sup>

Mining somehow continued at the Foley until operations ceased in May of 1898 with the No. 1 shaft down to four hundred twenty feet.<sup>154</sup> After negotiations that lasted more than a year, the mine was finally sold in late 1899 to British interests, the Canadian Mines Development Company.<sup>155</sup> Under manager O.B. Robinson, considerable cross-cutting, sinking, and drifting was done before that company ran out of money and closed the mine in December of 1900.<sup>156</sup> Having never run the mill (possibly for fear of results), and with more than six hundred tons on the ore

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<sup>151</sup>OBM, *5th Annual Report, 1895*, 158.

<sup>152</sup>Arthur Ellis of Windsor stayed on as the token Canadian director (See Table 1, Appendix C).

<sup>153</sup>*The Canadian Mining Review*, XVI, August 1897, 259.

<sup>154</sup>OBM, *8th Annual Report, 1898*, 84.

<sup>155</sup>OBM, *9th Annual Report, 1899*, 66.

<sup>156</sup>OBM, *10th Annual Report, 1900*, 94.

dump, and having laid out several "stopes"<sup>157</sup> on the several veins .... on the property,"<sup>158</sup> the British company was apparently more concerned with baiting a buyer than producing gold. They failed on both counts and the mine was eventually sold at a sheriff's sale in 1902<sup>159</sup>

Typical of the district's boom period operations, the Foley and Hammond Reef were both prematurely overdeveloped and managed by persons whose only credentials seems to have been that they were vendors. What made them unusual was the magnitude of their overdevelopment and the source of capital involved. The Hammond Reef contained far and away the largest and most expensive array of milling and hydro-electric machinery in the district. The Foley, besides its well equipped mill, contained some of the most extensive underground work in any Ontario gold mine. Remarkably, even though British capital was available, these large-scale developments were financed almost entirely by Ontario capitalists. A review of the development progress of other mining companies formed during this period indicates that the majority of the new operations were not financed by British capital.

If it can be assumed that most of these new companies were speculative operations, can it also be assumed that the deployment of significant domestic capital was a necessary prerequisite to making an operation sellable in England or America? Apparently, this was not the case. Indeed, by the end of the decade, British investors were so anxious to get involved in Canadian mining adventures that even the worst promoted schemes had no trouble raising capital in London, as the New Golden Twins scandal proved. The subject of the most embarrassing promotional swindles in Northwestern Ontario, the New Golden Twins "mine" was located in the Atikokan subdistrict near the Saw Bill and Hammond Reef mines. In 1897 a company, the New

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<sup>157</sup>Stopes are sections of underground ore either knocked loose and ready for removal or blocked out and ready to be knocked down.

<sup>158</sup>OBM, *11th Annual Report, 1901*, 243.

<sup>159</sup>Ibid.

Golden Twins (Ontario), was organized in England to raise capital for the purchase of the mining property (at a price of \$65,000 cash plus \$150,000 in fully paid shares). The company's prospectus cited details from two separate reports on the property, one by Port Arthur resident Frank Wiley and the other by a "Johnson Brown, M.E. of Wolf River, Ontario." The prospectus found its way into the hands of Alexander McComber, also of Port Arthur, who happened to have an axe to grind with Frank and his brother, Harold (a director of the New Golden Twins).<sup>160</sup> He also happened to have a relative who revealed to him that Johnson Brown was no mining engineer but rather a "half-breed Indian who can neither read nor write, and who makes his living by hunting and trapping."<sup>161</sup> With McComber's gleeful assistance the *Canadian Mining Review* unveiled the scam but, surprisingly enough, the revelation had little or no impact on the mine's successful promotion overseas.

Perhaps the most astounding thing of all in connection with this matter is that the flotation succeeded and the shares in January last [1898] were quoted at 1/8 premium, which is only additional evidence of the success which may attend deliberate and systematic efforts to foist unknown or worthless properties upon the English public, which, as this choicest fake of the year shows, is only too gullible. ... Such an endeavour to bolster up the purchase of two unknown and unimproved locations in the neighbourhood of two other speculative ventures [Big Six and Toronto & Western?], which so far have been most unsatisfactory to their owners can only be characterized as an offence which ought to be indictable and punishable with the penitentiary.<sup>162</sup>

A few management patterns, therefore, emerge during the district's "golden period" of boom development between 1895 and 1896. Most mines were developed by corporations and most new companies tended towards rapid, premature development. Operations continued to be

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<sup>160</sup>McComber was something of a trouble maker. During his stint as superintendent of the Rabbit silver mine near Thunder Bay, he was charged and convicted of two separate violent assaults (*Thunder Bay Sentinel*, August 28 and October 9, 1885).

<sup>161</sup>*The Canadian Mining Review*, XVII, February 1898, 123.

<sup>162</sup>Ibid. The scandal undoubtedly was the reason why the company was never licensed to sell shares in Ontario.



managed by inexperienced and unqualified vendors *cum* managing directors well into the large scale stage. The fact that the boom lasted for five years, in spite of its many scandals, schemes and failures, is a clear indication of the volume of surplus capital available locally, nationally, and internationally.

### **The Bubble Bursts: 1900-1902**

By the end of 1899, the fever for gold mining development in Northwestern Ontario had cooled considerably. There are several possible explanations for this. Davies and Smith theorized that the end of the war in South Africa meant that capital was diverted back to that area.<sup>163</sup> However, British investment in the district peaked before the war started in 1899. The shift in Canadian investment towards consumer goods manufacturing may also have been responsible for the declining popularity of gold issues.<sup>164</sup> It is more likely, however, that the bubble was burst by certain events within the district and outside Ontario as well as by a long overdue disappointment with the returns from the district's mines and mining stocks.

Several events outside Ontario had repercussions that could be felt within the district. Beginning in 1898 the Spanish-American War diverted the attention of U.S. investors just as the resolution of the Boer War in 1902 may have deflected British investment back to the gold fields of South Africa. The winding down of the Klondike gold rush in 1899 may also have been an indication that the excitement over gold issues had finally worn itself out. Also in 1899, the fantastic collapse of the War Eagle and several other very large foreign held British Columbia gold mining companies caused shockwaves throughout the industry and seriously discredited all Canadian gold mining ventures.

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<sup>163</sup>Davies & Smith, *Geological Setting of Gold in the Lake of the Woods*, 1.

<sup>164</sup>Michael Edelstein, *Overseas Investment in the Age of High Imperialism: The United Kingdom, 1850-1914*, (New York: Columbia University, 1982), pp. 277-278.

In Northwestern Ontario a *lack* of events probably had the most significant impact on the gold boom. With the exception of the brief rush to Sturgeon Lake in 1899, no new subdistricts were being discovered. The withdrawal of the Ontario Gold Concessions in 1898 further reinforced investor suspicions that the district was "drying up." The impact of the Gold Concessions failure had been somewhat softened in 1899 by the sale of the Sultana to a British corporation containing a number of impressive directors, including Cecil Rhodes's brother. However, this optimism was short-lived as it quickly became evident that something was wrong with the deal. The new company, the Sultana Mine of Canada Limited, was licensed in 1899 with an authorized capital of £275,000. The terms of the sale gave Caldwell fifty thousand paid up shares and an undisclosed cash payment. The other British decoys named to the board of directors undoubtedly also took large blocks of paid up shares with the result being that sufficient capital to keep the mine running could not be raised through sales of the remaining shares. As a consequence, the company's first order of business was to negotiate a £10,000 mortgage for operating capital.<sup>165</sup> The directors undoubtedly anticipated production would retire the mortgage in due course but they were to be disappointed. The only major discovery made by the new mine manager was water - and lots of it. By the spring of 1902 the district's most successful producer, the Sultana, had closed down due to disappointing results.<sup>166</sup> The short life of this, the district's leading mine, shook investor and speculator confidence in Northwestern Ontario's potential for long term production.

Confidence was further shaken by reports of the last and probably worst case of premature large scale development in the district. When it was scarcely a year old, the Glass Reef mine was outfitted in 1900 with its own "very fine complete hoisting machinery and treating plant." Mining equipment included a No. 5 Cameron sinking pump, a six hundred foot triple rail tramway over a one hundred fifty foot ravine, and a horizontal return tubular boiler, double

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<sup>165</sup>*The Canadian Mining Review*, XX, February 1901, 41.

<sup>166</sup>O.B.M., *13th Annual Report, 1903*, 59.

cylinder hoist, and 3-Rand drill compressor in the shaft house. The mill, set up by Fraser & Chalmers, contained ten 1,000 pound stamps with amalgamation plates, two Challenge ore feeders, a Brown's four-compartment hydrometric classifier, three Frue vanners (one being the improved model with corrugated belt), a crusher, and a light plant dynamo with all mill machinery powered by a single 85 h.p. "12 by 12 inch" steam engine (with another tubular return boiler and several pumps for backups). Besides manager/director George Glass, the operation employed eighty-four men including thirty-three miners. However, they were not employed long - the mine closed down on December 22, 1900 after *only two months* of "mill testing" the mine's ores.<sup>167</sup> A wiser move would have been to run the test lots through a custom mill before deciding to finance construction of such a large plant at the mine. The company's North Dakota investors may have been misinformed by Glass or they may have hoped to sell the mine based on its appearances. In any event, the venture was a failure since it neither produced nor sold. The result was disastrous, both for the owners and for the district's reputation.

About the same time that the Glass Reef embarrassment was being exposed, a more serious scandal erupted at the Golden Star mine in the Bad Vermilion subdistrict. The first company to develop this mine was organized in May of 1897 by three residents of Duluth, two others from Michigan, and a resident manager from Rat Portage. By midsummer the Golden Star Mining and Exploration Company of Ontario, Limited had sent out a small force of men to erect buildings and sink a shaft to fifty feet on a four foot vein.<sup>168</sup> Sometime late in the year, a \$30 per ton ore pocket was struck at the seventy-five foot level and, by January of 1898, plans were under way to build a mill. The company then incorporated a dummy subsidiary, the JO41 Gold Mining Company, from which it leased its mill site. This new company was merely a sham created for two purposes. First, it diverted treasury funds directly into the pockets of the owners of the Golden Star. Since the directors (and, no doubt, the major shareholders) of both

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<sup>167</sup>OBM, *10th Annual Report, 1900*, 99.

<sup>168</sup>OBM, *7th Annual Report, 1897*, 71.

companies were virtually the same, they could authorize funds derived from profits or the public sale of Golden Star shares to be paid to themselves as rental disbursements for the mill property. The mill owners could also charge the mine owners (themselves) exorbitant rates for milling the ores (an old trick commonly practiced during the Comstock boom). Secondly, by locating the mill on separate property held under another name, the directors left themselves in a position of considerable leverage should they sell the Golden Star mine.

A new face then entered the picture, one Lewis Hall of Duluth. Hall offered to finance the building of the mill if the company would agree to repay him from the first production profits.<sup>169</sup> By the end of summer, extensive mining was under way and a complete heavy duty 10-stamp mill (1020 lbs/stamp) was set up at the JO41 property on Bad Vermilion Lake. However, everywhere there were signs of sloppiness indicating development was proceeding with reckless abandon. Timbering was shoddy and the skips for hauling up the ore were so irregular that "great care" had to be exercised to keep them from jumping their tracks. An Otto Aerial Tramway twenty-seven thousand feet long linked the mine to the mill but it too was very irregular with "ups and downs in the cable way."<sup>170</sup> A series of serious accidents including two fatalities in 1898 and 1899 were further evidence of the mine's frantic development.<sup>171</sup> Towards the end of 1899 it became clear to the owners that the two rich lenses of quartz ore had been completely blocked out and that the surrounding felsite deposits were not as rich as had been anticipated.<sup>172</sup> At this point underground exploration ceased and the lens deposits were gutted and milled as quickly and discreetly as possible while the felsitic "ores" were left on the dump. Hall, realizing that the end was in sight, decided to gamble with his promised share of the profits. Late in 1898 he agreed to let these funds be used to pay dividends in exchange for 200,000

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<sup>169</sup>OBM, *9th Annual Report, 1899*, 66.

<sup>170</sup>OBM, *8th Annual Report, 1898*, 266.

<sup>171</sup>OBM, *8th Annual Report, 1898*, 26; *9th Annual Report, 1899*, 31; *10th Annual Report, 1900*, 43.

<sup>172</sup>For a description of the Golden Star's unique geology, see OBM, *8th Annual Report, 1898*, 77-78.

newly authorized shares in the new company.

Before the stock was increased, monthly dividends of 1 per cent were declared until the stock had risen to what was considered the maximum, which was a little over 80 cents, the par value being one dollar. The stock fluctuated between 70 and 80 cents for some time, and the largest shareholders [including Hall] were at this time unloading [their shares], as the mine had been gutted of its best ore.<sup>173</sup>

A group of Toronto capitalists (including the Hon. S.C. Wood) bought up the dumped shares, obtained a controlling interest, and moved the head office from Duluth to Toronto. The old manager, R.A. Kerr quietly disappeared and the new manager, engineer R.H. Flaherty, found the mine in a dangerous state of disrepair, the dump full of poor grade ore, and the mill located on someone else's property. The new owners' inability to continue paying dividends combined with revelations of the mine's depleted and dangerous condition sent shares plummeting to below 45¢ in July of 1899.<sup>174</sup> By September of 1900, the mine had closed due to poor production and lack of working capital.<sup>175</sup>

Curiously, during this "bust" period, the number of new incorporations did not decline drastically and new foreign licensed companies actually increased.<sup>176</sup> However, most of these new companies, such as the new Golden Star Mining Company and Black Eagle Gold, were speculative ventures or reorganizations of previously "developed" mines held in hopes that the speculative bubble could be re-inflated again. By 1903, although several operations including the Regina and Sultana had been resurrected, most of the district's mining activity was sporadic and purely cosmetic. In fact, after 1902 the Bureau hardly gave the district any notice at all.

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<sup>173</sup>OBM, *9th Annual Report, 1899*, 66.

<sup>174</sup>OBM, *9th Annual Report, 1899*, 67; *Toronto World*, July 23, 1899, 8.

<sup>175</sup>OBM, *10th Annual Report, 1900*, 93.

<sup>176</sup>See Figure 5, Appendix B.

**Conclusion: The Characters and Characteristics of a Gold Boom**

The pattern of development in Northwestern Ontario was unique for several reasons. The average life span of the companies involved was typically short with few lasting even three years. However, what was unusual was that the boom died without any one company or group of companies dominating the district, or for that matter, any subdistrict. Dominion Gold Mining, Ottawa Gold Milling and Mining, and Ontario Gold Concessions each tried but failed. Oddly enough, the district's best producers, the Sultana and Mikado, never attempted to expand beyond their own locations.<sup>177</sup> Another bewildering characteristic was the premature development that plagued most of the district's mining ventures. In spite of the fact that the Sultana provided an early example of the benefits of a cautious approach to development, few operations followed its pattern.

The mining companies exhibited several common traits that may account for their propensity for premature development. Nearly two hundred incorporated companies became involved in the district, most of whom at least owned a mine. Many of these mine-owning corporations carried on development to at least the mill-building stage and most sold shares on the market at one point in their life.<sup>178</sup> In fact, the district contained an unusual balance of mineless paper corporations (46 or 17%), corporations with development operations (123 or 45%), and corporations running exploratory operations (104 or 38%). Foreign-based companies (55 or 20%) were equally split between the Americans and British.<sup>179</sup> Curiously, after the settlement of the boundary dispute, *direct* involvement of companies incorporated in other

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<sup>177</sup>There were complaints that the Mikado's owners were behind the Ontario Gold Concessions deal which sewed up a large portion of mine's neighbouring Shoal Lake subdistrict. Colonel Engledue had negotiated the purchase of the Mikado on behalf of a South African syndicate but there is no indication that he continued his association after the sale was made. John F. Caldwell of the Sultana was said to have shared the ownership of the adjacent Ophir mine but he never appeared as a director in any of the companies incorporated to operate this mine.

<sup>178</sup>Records for the Rat Portage Mining Exchange have apparently been lost. Spotty information on the sale of shares can be found in the Bureau *Reports* and the *Globe*. The archives of the Toronto Exchange may provide a more precise estimate of the number of district mining companies trading shares.

<sup>179</sup>The breakdown of the companies and criteria for their categories can be found in Table 2, Appendix C.

provinces seems to have ceased.<sup>180</sup> There were innumerable privately-owned locations developed to varying degrees; from the blast in the ground that blew up the partner of Rat Portage mayor William McCarthy to J.F. Caldwell's 30-stamp mill and four hundred seventy foot shaft on Sultana Island.<sup>181</sup> However, few of these ever surpassed the shaft sinking stage. Table 1, Appendix C lists some of these privately operated mines (or incorporated mines in their earlier privately operated stage).

The statistics show that the most successful mines were supported by British capital at some stage of their development. The Mikado and Regina were developed by British companies from the beginning while the Sultana, after more than one effort, was finally purchased by a London company in 1899. British capital was, however, also involved in some of the district's worst fiascos including the New Golden Twins scandal and the revival of the Reduction Works under the Dominion Gold Mining and Milling Company. Although English capitalists appear to have had typically poor success as secondary developers of mines (the Dominion Gold, Foley, and Sultana episodes to name a few), they were involved in exploration to a surprising extent and as primary developers they were reasonably successful. The Regina and Mikado were both merely prospects when they were examined and purchased on behalf of British companies by Colonel Engledue. Although his ingenious deal for the Ontario Gold Concessions eventually fell flat on its face, Engledue had the good sense to guide his company out of the unpopular arrangement before losses were substantial. Clearly, Engledue was not the typical English mining promoter whose efforts to personally seek out prospects in North American gold fields have been likened to "hunting bumble bees with a brass band."<sup>182</sup>

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<sup>180</sup>This is based, of course, on the assumption that the Sultana was never incorporated in Manitoba. Any corporation carrying on business across provincial boundaries required Dominion Letters Patent and only three companies after 1890 were listed in the *Dominion Sessional Papers*. Another British based company, the New Golden Twins (Ontario), Limited was alleged to have been a subsidiary of a B.C. company heavily supported by English capitalists, the Klondike and Columbian Gold Fields, Limited, "the flotation of which provoked a storm of angry and plain-spoken attacks from both the English and the British Columbian press" (*Canadian Mining Review*, XVII, Feb 1898, 123).

<sup>181</sup>OBM, *5th Annual Report, 1895*, 240; *8th Annual Report, 1898*, 39.

<sup>182</sup>Spence, *British Investment and American Mines*, 87.

The residence of first directors shows a clearer trend in American *vs.* Canadian *vs.* local investor success ratios.<sup>183</sup> The unsuccessful "paper" companies incorporated between 1880 and 1903 were initiated by a nearly equal proportion of regional investors (49% [23% local, 16% regional Canadian, 10% regional American]) and non-regional investors (48% [10% non-regional American, 10% Eastern Canadian {Ottawa and Quebec}, and 28% Eastern Ontario]).<sup>184</sup> The opening of a Metals Exchange in Rat Portage in 1895 undoubtedly expedited regional trading in speculative shares and probably accounts for the large number of local and regional participants. The first directors of the Ontario *mine owning* companies, virtually all of whom were involved in mines in the secondary development stages, showed slightly different trends over the same period. Local and regional directors accounted for forty percent of these incorporators (19% local, 10% regional Canadian, 11% regional American) as compared to fifty-eight percent non-regional directors (28% Eastern Ontario, 11% Eastern Canadian, 19% non-regional American). However, an analysis of each of these categories during select periods reveals dramatic pattern shifts. During the overall period, the proportion of regional participants declined steadily. The non-local regional Canadians (mostly from Winnipeg) were inexplicably inconsistent, comprising almost half the incorporators in the 1880's, none between 1891-93, twenty percent during 1896-97, and then dropping out completely during the very active period of corporate development between 1898 and 1900. Non-regional Americans were very aggressive, especially at the end of the period, while Eastern Ontario and Eastern Canadian investors became steady participants after the boundary settlement in 1889.<sup>185</sup>

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<sup>183</sup>Since it is impossible to trace the actual share ownership of any corporation, first directors (or applicants) have been conveniently identified as the major shareholders. Although there is no way of determining exactly who all the shareholders were at any given time, it can generally be assumed that first directors retained a considerable stake in their new company, whether it be real capital investment or paid-up shares given to "decoys" for the use of their good name.

<sup>184</sup>"Paper" companies are corporations which, in their name or in their letters patent, indicated *involvement* in Northwestern Ontario gold mining but for whom no records of mine ownership appear in the sources studied. Closer scrutiny of the Crown Lands mining lands transactions registers may indicate these companies possessed locations, however, it is doubtful that any of these properties amounted to anything.

<sup>185</sup>See Figure 6, Appendix B; NOTE: Later research in February of 1996 turned up eight more mining companies that had participated in Northwestern Ontario gold mining. These directors appear in the tables but they have not been included in any of the above analysis of directors and managers.



From these statistics it is apparent that the Northwestern Ontario gold boom proceeded along much the same pattern as Western mining districts. Local and regional investors were responsible for most of the early enterprises, with both foreign companies and domestic corporations run by non-regional directors picking up the torch as time went on. An analysis of the residences of the non-regional directors provides some interesting insight into the district's mismanagement problems. There were no known companies and only one director based out of other mining districts.<sup>186</sup> Curiously, although Sudbury was close at hand and contained many qualified potential investors, *not a single participant* was a resident of this district. Not one of the multitude of Nova Scotia gold mining companies or investors participated in any of the Ontario corporations. Some of the American participants from Boston, Detroit, and other parts of Michigan may have had experience in the Lake Superior copper mining industry; however, their performance in Northwestern Ontario seems to indicate otherwise (see, for example, the Foley folly). Thunder Bay district supplied several developers who may have obtained some experience during the silver era but the fly-by-night track record of the Port Arthur/Fort William contingent was undoubtedly the worst in the district (the New Golden Twins, Sawbill, Hammond Reef, and Lake Harold mines, among others).

The general lack of corporate mining experience is further substantiated by examining the professions of the district's first directors. Merchants made up the largest identifiable category of investors (19%) followed by lawyers (15%), manufacturers (6%), "agents" and "brokers" (10%), accountants (5%), and medical practitioners [doctors, pharmacists, dentists] (4%).<sup>187</sup> Not surprisingly, "mining men" comprised nineteen percent of the incorporators, however, this category encompasses several vocations including miners, prospectors, assayers, mining brokers, mining engineers (a mere 2%), mine owners, managers and superintendents, and such ambiguous

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<sup>186</sup>A lawyer Joseph B. McArthur, Q.C. of Rossland, B.C. was listed as an incorporator of the Gold Hills Exploration and Development, Limited which patented two locations on Yellow Girl Bay and two more near Ptarmigan Bay, both on Lake of the Woods.

<sup>187</sup>First directors with unidentified vocations included "Gentlemen,"(41; 4.4 %) "Esquires,"(23; 2.5 %) and "Capitalists" (26; 2.8 %). See Table 3, Appendix D. Directors added after February 1996 are not included in these calculations.

professions as "explorers," "mineralogists" and "mining experts."<sup>188</sup> Lumbermen accounted for three percent of all new incorporators and eight percent of pre-1895 incorporators.

What is most significant is that no single vocational category came to dominate the field of investors. This would seem to indicate a lack of common business acumen between the managements of the different district mining companies. The directors of the Rainy River Gold Mining Company, which developed the Electro-Gold and Wimor locations, are a good case in point. A government surveyor (T.R. Deacon), a lawyer (Henry Langford), a hardware dealer (Charles Neads), a dentist (Nelson Schnarr), a miner (Thomas Walsh), and a photographer (Harry Wright) might all have had something to offer a budding mining company, however, the diversity of their vocations undoubtedly complicated the corporate decision making process.<sup>189</sup> The Grimsby Gold Mining Company, on the other hand, may have had slightly more cohesion among its directors (a broker, a druggist, two fruit growers, a nurseryman, and a publisher), however, none of these men had the background necessary to direct the development of their Lone Jack mine near Dryden.<sup>190</sup>

The investors with the most experience were undoubtedly the ones with the most money: the British capitalists.<sup>191</sup> The Sultana (between 1899 and 1903) the Mikado, and the Ontario Gold

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<sup>188</sup>The proximity of these two titles to the legitimate professions of geologist and mining engineer is no accident. Promoters like R.H. Ahn often dubbed themselves "mineralogist experts," "mining experts" or "consulting experts" and append the initials "M.E." or "C.E." to their names, thereby duping investors into thinking they had engineering backgrounds. In the Letters Patent for both the Gold Reefs and Crown Point mining companies, Ahn listed his profession as mining engineer but for the Golden Gate Mining company he listed himself as a mining broker. In his ad in the *Rat Portage News*, he claimed to be a mineralogist, mining broker, and assayer (*Rat Portage News*, XVI, June 21, 1895).

<sup>189</sup>*Ontario Gazette*, XXIX, November 4, 1896.

<sup>190</sup>*Ontario Gazette*, XXX, January 23, 1897. The publisher, J.A. Livingstone, was in fact the mine's manager. OBM, *7th Annual Report, 1897*, 125.

<sup>191</sup>It is difficult to make any residentially-based inferences regarding the management potential of foreign company directors since the *Ontario Gazette* did not publish names or residences of licensed directors. Information regarding their origins was obtained from Bureau Reports or newspaper accounts.

Concessions were all run by experienced directors with ties to the South African gold fields.<sup>192</sup> The Ontario Limited was a subsidiary of a West Australian mining company and the Anglo-Canadian Gold Estates was also managed by directors with historical ties to the industry. However, as we have seen, a British board of directors did not necessarily guarantee a mine's success. The English owned Reduction Works and Regina mine were hopelessly, if not deliberately, handicapped by poor management at the corporate level, and the Sultana's British owners were barely able to keep it open a year after its purchase in 1899. The district's English directors did, however, exhibit one very unusual characteristic - their willingness to involve themselves in mining ventures at the ground level. D.G. Paterson has indicated that, prior to 1914, British investors in Canadian mining stuck to "buying existing mineral claims and developed properties."<sup>193</sup> The Ontario Gold Concessions and the Anglo-Canadian Gold Estates were both British companies incorporated for the express purpose of large scale prospecting of huge land grants within the district. The Regina, the Mikado, and the New Golden Twins, among others, were largely undeveloped when they were purchased by English companies. One licensed company, Pipestone Gold Mining, existed without any reported mine activity which further demonstrates that British directors were willing to organize on the basis of undeveloped and unproven properties.<sup>194</sup>

Were the people in charge of the actual day-to-day supervision of the mines any better than their directors? In fact, managers were frequently also directors and it was not unusual for

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<sup>192</sup>A number of the directors of the Sultana Mine of Canada, including Cecil Rhodes's brother, were associated with South African gold mining. The Mikado was first developed in 1895 by the South African General Development Syndicate, Limited, of London (OBM, *6th Annual Report, 1896*, 256). The Ontario Gold Concessions was organized by Colonel Engledue, a promoter working for the same South African Development Syndicate (OBM, *6th Annual Report, 1896*, 258).

<sup>193</sup>D.G. Paterson, *British Direct Investment in Canada*, (Toronto: University of Toronto, 1976), p.96.

<sup>194</sup>See Table 2, Appendix C.

a manager's position to vary from mine to mine or even from time to time at the same mine.<sup>195</sup> Information on residential backgrounds could sometimes be gleaned from the *Gazettes* if a manager was also a director. If a director had a *bona fide* scientific background in mining or engineering, it was invariably publicized in the *Gazettes*. Unfortunately, little is known about the background of most of the non-directing mine managers. However, of the two hundred ten mine managers uncovered in this study, forty-three (20%) have been identified by reliable sources as having some formal training in mining or engineering.<sup>196</sup> Each of these "professionals" held an average of 1.9 positions (the demand potential was one professional position per 6.7 companies), a ratio very close to the "non-professional" average of 1.8 positions per person. Sixty-one percent of the managers (including 69% of the professionals) never held more than one position. Given the relatively short life span of the district's mines, this ratio seems to indicate more managerial transiency into and out of than within the district. Thus, with an average of only two positions per manager and less than forty percent within-district transiency, it would seem that the shortage of "mining men" was less acute than contemporary sources maintained.<sup>197</sup> One factor that may have magnified the illusion of a managerial shortage was the rapid rate of development of the companies themselves. Some companies were incorporating so fast and the demand for mining shares was so high that directors simply could not afford to take the time to find a qualified manager. When a new mining company was obliged to invent a manager and got caught, the embarrassment usually found its way into the press (as was the case when the New Golden Twins advertized its illiterate engineer and when the Ash Rapids Mining Company employed engineer Charles Brent without his knowledge).<sup>198</sup>

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<sup>195</sup>See the Grimsby Mining Company mentioned above. Forty-one managing director positions were found in this study. For the sake of clarification, "managers" refers to on-site supervisors, whereas "management personnel" refers to *all* management including managers, superintendents, directors, officers, owners, option holders, and partners.

<sup>196</sup>See Table 2, Appendix D.

<sup>197</sup>*Canadian Mining Review*, XX, January 1901, 1; OBM, *8th Annual Report, 1898*, 29, 39.

<sup>198</sup>*Canadian Mining Review*, XX, Feb. 1901, 50. The background of the Ash Rapids Company is not known. It appears several times in the court records but apparently was never incorporated or licensed in Ontario.

Several sources have indicated that the Klondike Rush and the Rossland, B.C. gold boom depleted the supply of mine managers available to the district.<sup>199</sup> The statistics do not seem to bear this out. Although the period from 1898 to 1900, the peak years of the Rossland boom and Klondike Rush, produced the highest rate of one-time managers during the 1890's (66%), this period also accounted for a thirty percent *increase* in the total number of new mine managers in spite of a twenty-eight percent *decrease* in new companies registered over the previous 1896-97 period.<sup>200</sup>

The above data would seem to indicate that the shortage of mine managers was probably not acute, but the question remains: was there a shortage of *qualified* managers? Of the one hundred five known former residences of managers,<sup>201</sup> fifty-seven percent were regional (43% local), sixteen percent were non-regional U.S., ten percent were Eastern Canadian, and ten percent came from Eastern Ontario, with the remaining seven percent being British Empire and German. Regionally produced mine managers therefore accounted for more than half the total. However, surprisingly few of these regional managers *appear* to have had any history linking them to either the Thunder Bay district silver mines or the Sudbury basin.<sup>202</sup> Unfortunately, the previous mining

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<sup>199</sup> John Ryan, *The Kenora-Keewatin Urban Area: A geographic Study*, (M.A. Thesis, University of Manitoba, 1964), 88; Greg Clark, *Handbook for Prospectors and Developers in the Kenora Area* (Kenora: Tri-Municipal Economic Development Commission, 1984), p. 21.

<sup>200</sup> "One-time managers" are defined as managers who were reported as only having been involved with one mine or mining company from 1880 to 1903. Given the relatively short average life span of the district's mines, it can be assumed that "one-timers" generally participated only briefly in district management. Each manager is categorized by the year in which he was *first* reported in a managerial position. See Table 1, Appendix D.

<sup>201</sup> Places of residence for ninety-four managers could not be determined. It is likely many of these were locals since non-residents were usually noted in the *Bureau Reports* or newspaper accounts. Advertising the use of imported mining expertise was thought to encourage promotion.

<sup>202</sup> The ubiquitous Mr. Ahn had been involved in mapping some of the underground development at Sudbury (*Rat Portage News*, XV, October 8, 1895). Frank Wiley, developer of several of the Atikokan area gold mines, had previously been an "agent" for the Silver Islet mine and later held an option on the Silver Mountain mine from 1898 to 1903 (*Fort William Daily Times-Journal*, June 17, 1929 [Wiley obituary]). Oliver Dunais, owner of the Three Ladies, Three Friends and other mines, had served as a director of the Rabbit Mountain silver mine (*Thunder Bay Daily Sentinel*, March 13, 1884). Walpole Roland, who had little success finding work in the district after his part in the first Rat Portage Reduction Works scandal, was alleged to have previously been "for some time the mining engineer in charge of the Victoria mine

experience (or lack thereof) of such individuals as James Hammond of Fort William, the Wileys of Port Arthur, and George Glass of Wabigoon was then and still remains almost a guarded secret.<sup>203</sup> Yet each held several important managerial positions in the district (sometimes concurrently!). The recurring absence of managerial credentials, combined with the fact that only a quarter of the "professional" mining men (who only comprised 22% of the total managers) were regionally based,<sup>204</sup> would seem to indicate that the non-professional, regionally-based managers who dominated the district were poorly qualified.

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(near Sault. Ste. Marie?)" (Ibid., June 12, 1884). Besides several other international escapades, he claimed to have been involved in some of the Thunder Bay silver mines during the 1880's (*Ontario Mineral Commission Report, 1890*, 62). Alexander McComber had been the belligerent superintendent of the Rabbit Mountain silver mine before becoming a director with the Ontario and Rainy River Contracting and Supply Company (which, although it was authorized, may never have been involved directly in Northwestern Ontario's gold mining) (*Thunder Bay Daily Sentinel*, May 15, 1895). McComber was better known for exposing the scandalous promotion of Wiley's New Golden Twins mine. General Alger of Detroit, one of the owners of the Pine Portage mine, previously held an interest in the Beaver silver mine near Port Arthur (*Ontario Mineral Commission Report, 1890*, 198). William Plummer, a director of Wiley's Lake Harold Gold had earlier worked underground in the Bruce Mines district (he did not indicate in what capacity) (Ibid., 100). Benjamin Folger, one of Hammond's partners, was a railway superintendent/mine promoter from Kingston involved in several early iron mining ventures in Eastern Ontario (Ibid., 135). Two other district gold mining participants, Port Arthur merchant Thomas Marks and Thomas Shortiss of Toronto, both reported to the 1890 Commission on Ontario's Mineral Development, however, their exact positions or mining experience were conveniently omitted (Ibid., 116, 394, 429). Thirteen years before Arthur Harvey became a director of the Sawbill, he had held an interest in the Mink mine west of Whitefish Lake near Thunder Bay (*Thunder Bay Daily Sentinel*, July 19, 1887). Before investing in the Stewart mine in 1890, "Professor" Eschweiler had previously owned a silver mine outside Port Arthur as well as managing the Huronian gold mine in Moss Township (*Thunder Bay Daily Sentinel*, May 10, 1887). Silas Griffis managed the Olympia mine in 1900, ten years after holding the reins at the Augusta mine, another Port Arthur operation (OBM, *2nd Annual Report, 1892*, 240). Joseph Brimson had owned the "RXX" silver mine west of Port Arthur in 1892, eight years before he became a director of the AL282 Gold Mining Company (Ibid.). William James, manager at the Gold Hill, Golden Gate and Cameron Island mines, managed the Guaranty, another Port Arthur silver mine, in 1892 (OBM, *2nd Annual Report, 1892*, 240). Surveyor John MacAree who was involved in several district gold mining ventures, had earlier managed the short-lived Nippissing mine on the south shore of Lake Nippissing (OBM, *2nd Annual Report, 1892*, 237). James Kerr, a major player in the Shoal Lake mines, came to the district with experience in oil drilling and refining at Petrolia (*Ontario Mineral Commission Report*, 162). W. Carpenter tried his hand at developing a mining property on Loch Lomand outside Fort William before becoming a director of Northern Gold in 1891 (*Thunder Bay Sentinel*, October 31, 1887). Charles Brent, who became a fixture on the Northwestern Ontario gold mining scene, had earlier been employed doing "chemical work" at the Beaver silver mine in 1887 (*Thunder Bay Sentinel*, November 2, 1887).

<sup>203</sup>Hammond was described as an "explorer" in the Letters Patent for the Hammond Reef Consolidated (*Ontario Gazette*, XXXII, 29 July 1899, 704) and Hunter fell under the favourite loop-hole vocation of "gentleman" in the incorporation of the Ontario Mining Company (*Sessional Papers*, 53 Vict., 1890, Vol. 7, "Report of the Secretary of State of Canada for the year ending 31st December, 1889," p.18). George Glass was at least credited with being a "miner" in the incorporation of the Glass Reef (*Ontario Gazette*, XXXII, 4 November 1899, 1258).

<sup>204</sup>The residences of eight (17.7%) of the professionals were not known. These men probably *were not* local residents.

The combination of inexperienced, unscrupulous, and discordant corporate directors and unskilled mine managers ultimately doomed the district's reputation as a gold field. Though a few of the large operations such as the Mikado and the Sultana and even one or two smaller ones such as the Alice A and Haycock's Gold Rock mine, followed the rules of preliminary-to-secondary-to-large-scale development, management decisions throughout the period predominantly favoured reckless premature development.<sup>205</sup> Indeed, the management was so frivolous, losses so extensive, and the scandals so repugnant that it is a wonder the district sustained any development at all, let alone a gold boom involving hundreds of companies.

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<sup>205</sup>For details of the Gold Rock and Alice A mines, see OBM, *7th Annual Report, 1897*, 84; *9th Annual Report, 1899*, 75. For a summary of the early history of the Mikado, see OBM, *6th Annual Report, 1896*, 105-107. The Mikado may have owed some its success (it was probably the second largest producer) to its uncharacteristic overload of qualified managers. In 1897 Theodore Breidenbach, an engineer educated at the Berlin School of Mines, was replaced by three individuals, N.C. McMillan (business manager), F.C. Pengilly (mine and mill manager), and T.R. Deacon ("Canadian director [with] general superintendence over the affairs of the mine"). Two mine captains (shift supervisors) and a mill manager/assayer were also on staff. "Although the management of the mine is thus distributed among different heads, with no one person in absolute authority, matters progress quite smoothly and satisfactorily" (OBM, *9th Annual Report, 1899*, 52).

## CONCLUSION: WHY A GOLD BOOM IN NORTHWESTERN ONTARIO?

*That little item in the [Rainy Lake] Journal which says that "Last Friday's clean up at the Little American 5 stamp mill, netted [only] \$160.00" is really of more value than all the balderdash that could be printed about prospective millions. It is that kind of thing that takes many poor men away from their homes, legitimate labors and the proper care of their families to hunt that will'o the wisp called an Eldorado. If the disease[sic] was only temporary or if there was a cure for it, the kind of writing mentioned would not have such evil effects. But once entered on the chase for a fortune in the shape of a gold mine, the unfortunate individual seldom or never recovers and only serves to prove the truth of the old adage or proverb which says that "Hope springs eternal in the human breast." Moreover this optimistic language does harm in other ways. It often involves business men in no end of expense and trouble, opening stores and embarking on enterprise the cost of which bears heavily upon them while they last and are kept up too long at a loss for the sake of the much vaunted prospect.<sup>1</sup>*

Considering all the factors, Northwestern Ontario seems to have been as unlikely as it was likely to produce a gold boom. For example, unlike many of its American counterparts, development of the district's gold fields was not delayed by Indian claims since these had been mostly settled before the discovery of gold. However, the dispute over Dominion-Provincial hegemony stalled serious development in most of the district for at least twelve years (and in a few isolated cases for more than twenty years).

Geographically speaking, the district was in a uniquely fortuitous position. Its extensive waterways provided a ready-made transportation network which was complemented by the completion of the C.P.R. railway through Rat Portage in 1883, five years after the discovery of gold on Hay Island. Major supply and capital centres were never more than a few days away

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<sup>1</sup>*Rat Portage News*, XV, August 2, 1895.



and significant labour resources were also accessible. Essential water and timber resources, in short supply in most other gold districts, were found in unlimited quantities in Northwestern Ontario. There were, however, several drawbacks to these unique geographical features. The water routes were not as advantageous as they appeared and the railway and the other established industries, most notably lumber, fishing, grain handling and flour milling, provided serious competition for both labour and capital. The Province's indecisive resource policies crippled the potential advantages of abundant hydro-electric power and timber while shaft flooding revealed the major drawback in Northwestern Ontario's plentiful water supplies.

The geology of the district also balanced pros with cons. Its several contact zones and faults produced a widespread network of deposits and gave investors the illusion that the district was "loded" with gold veins. Surface enrichment of sulphide deposits contributed to inflated assessments of long-term production, and the speculative potential of new technological advances, especially in the treatment of "refractory" ores, led to exaggerated optimism. However, there was never any denying the fact that district veins were typically small, inconsistent, and generally decreased in quality at greater depths.

Provincial mining policies were intended to provide incentives that would attract large-scale capital investment to the district. However, the government's cautious and inconsistent approach to critical aspects of these policies may have seriously dampened Northwestern Ontario's development. The imposition of one of North America's earliest mine safety codes in 1890, for example, was undoubtedly intended to head off the kind of labour strife that plagued Butte, Montana, Kellogg, Idaho and the copper district of Michigan. However, as long as there was no threat of organization in the district's mines, the Province was content to overlook safety enforcement for the sake of encouraging exploration and development. The question for mine promoters and investors was: how long could they count on the government looking the other way? Indeed, the different philosophies of different Bureau inspectors undoubtedly caused

considerable anxiety among developers.<sup>2</sup>

Two other policies in particular were a discouragement to investment: mineral royalties and mining lands disposition. Though never collected, the threat of mineral royalties hung like an axe over the head of potential investors throughout the period.<sup>3</sup> The Province's timid mining lands policies were frustrating and the clumsy and scandalous Engledeue Deal of 1897 could easily have destroyed investor confidence in the Province's administrative integrity. Rather than deal with the issues of land and taxes decisively, the government attempted to distract capitalists by offering them plums - the diamond drill program and the Mining Companies Acts. However, both of these efforts were discreetly but deliberately compromised by the several strings attached to them.

The district's pattern of development should have been its own worst enemy. Overzealous, premature development continued to dominate Northwestern Ontario gold mining management for the entire twenty-year period following the first discovery. Mismanagement fiascos continued one after the other from the Winnipeg Consolidated in 1884 to the massive Glass Reef boondoggle of 1901. However, in spite of it all, there never seemed to be any shortage of financial backers for the likes of the Wiley brothers, J.C. Foley, James Hammond, George Glass, or R.H. Ahn, no matter how badly they bungled their operations. There were a few success stories - the Sultana was owned and managed by Caldwell, "the local boy who made good," and the Regina and Mikado were both large operations based in England - but the

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<sup>2</sup>Inspector Courtney De Kalb, a mining engineer from New York, proved to be much stricter than either J.A. Bow or Dr. Coleman (De Kalb's background was detailed in the 1892 *Transactions of the American Institute of Mining Engineers*, page xxviii. ). In a few instances he even exceeded his authority and ordered operations to cease until the mine could meet the requirements of the *Regulations* (OBM, *8th Annual Report*, 1898, 44-46).

<sup>3</sup>Investors were particularly anxious during the early years. A very long letter from a *Globe* correspondent in Michigan printed in an 1891 edition of the *Rat Portage Weekly Record* complained that "capitalists will not readily invest their money in mining where any royalty is imposed on the products of the mines" (*Rat Portage Weekly Record*, I, August 15, 1891). As H.V. Nelles has pointed out, "twice the province imposed royalties when the outlook seemed promising and twice repealed them following disappointment" (Nelles, *Politics of Development*, 156). It was certainly clear to prospective investors that the government stood poised to claim an uncertain share if the bonanza should be found.

repeated failure of many other ventures was less of a deterrent than it probably should have been.

Why then did a mining boom occur if the district's liabilities and assets were so evenly matched? Three other crucial factors were responsible for the boom: timing, surplus capital, and promotion. The first of these elements, timing, is central to Professor Watson Parker's theory about the causes of gold rushes.<sup>4</sup> He proposed that significant gold rushes required an element of national unrest to get kick-started. The corresponding social restlessness, especially during periods of economic recession, produced an essential social condition necessary for the sudden migration of masses of gold seekers. Parker alleged that individuals with little to lose were most likely to wager everything on striking it rich. He also felt that times of recession or national unrest produced the large numbers of restless candidates necessary for a chain reaction stampede.

However, is Parker's thesis applicable to Northwestern Ontario's gold *boom*? In fact, it may be more applicable to gold mining company booms than rushes of gold prospectors. One characteristic of modern economic recovery has been the sudden rush of spending by consumers and investors who historically have been short on cash. The high capital demands of a gold boom are, therefore, more likely to be met during times immediately following economic recession. A comparison of national economic indicators and Northwestern Ontario's rate of mining company activity reveals that the mining boom "took off" about the same time Canada's economic situation turned around. Figure 7, Appendix B contains statistics for "Canadian Real Gross National Product per Capita," "Overdue Mortgages," "Overdue Loans," "Canadian Business Failures," and "District Mining Company Activity." Business failures and overdue mortgages climbed steadily throughout the early part of the decade and peaked in 1895-96. GNP per capita remained fairly steady throughout the first half of the decade (an average annual change of only -0.45% from 1890 to 1896) and then jumped more than ten and a half percent in 1897, the same year new mining company incorporations increased by two hundred forty percent.

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<sup>4</sup>Parker, "The Causes of American Gold Rushes," 337-45.

Besides sudden economic recovery, two other "timing" factors may have contributed to the gold boom. The Klondike Gold Rush of the late 1890's may have stimulated gold mining investors, however, this seems unlikely since a comparison of annual rates of activity indicates the Northwestern Ontario boom was well underway *before* anyone knew of the Klondike discovery.<sup>5</sup> In fact, it is difficult to determine what effect, if any, the Yukon rush had on the district's gold boom since the rate of mining development in Northwestern Ontario continued to grow sporadically during the last three years of the century.

Another "timing situation" that may have affected the growth of a gold boom in Ontario involved the late nineteenth century cultural trend in English Canada to identify strongly with the British Empire. Potential Canadian capitalists were undoubtedly familiar with the British tradition of investing heavily (some would say blindly) in North American precious metals mining ventures. Just as they felt compelled to imitate their British heritage in architecture, furniture and dress, Canadian capitalists may also have chosen to emulate their English cousins' investment habits, once they had the surplus resources to do so. This factor, is obviously difficult to substantiate since no evidence has yet been found indicating district investors were in the mining game specifically because it was the "British thing to do." However, the names they attached to many of the mines and companies certainly reveals their affinity to identify with Empire.<sup>6</sup>

The availability of surplus capital, especially domestic and American surplus capital, was

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<sup>5</sup>The *Excelsior* arrived in San Francisco with the first news of the Yukon discovery on July 15, 1897. The bulk of that year's district mining incorporations (63 out of 82) were already formed by that date and many companies incorporated later in the year were "in the works" when news of the Klondike broke (prospective companies were required to publish their applications in the *Ontario Gazette* three times before Letters Patent were granted).

<sup>6</sup>Examples of the Imperial connection in district mine names include the Jubilee, Baden-Powell, Emma Abbot (the Emma silver mine in Utah was a well known English operation), Northern Queen, Oxford, Monarch, Royal, Royal Sovereign, Victory, Empire, Crown Point, Elphinstone, Excelsior, Regina, Imperial, King Edward (1903), and Shakespeare (1903). Company names exhibiting Imperial connections include Stadacona Gold Mining, Anglo-Canadian Gold Estates, Britannia Consolidated Gold Mining, Anglian Mining and Finance, Rand Gold Mining Company of Wabigoon, Sovereign Mining, Queen of the Lakes Gold Mining, Anglo-Ontario Exploration, and Princess Gold Mining.

undoubtedly one of the most significant factors contributing to the gold boom in Northwestern Ontario. As indicated previously, after 1895 America became for the first time a net exporter rather than importer of capital.<sup>7</sup> In Canada, a sharp climb in Canadian productivity and a considerable increase in savings and loans reflected a substantial increase in available domestic capital after 1896.<sup>8</sup> Although H.V. Nelles has indicated otherwise, Canadians did not hesitate to invest their new-found surplus capital in Ontario mines.<sup>9</sup> Other studies have revealed that this sudden spurt of surplus capital was not strictly a North American phenomenon. British direct investment in Canadian mining ventures also increased considerably after 1895 until peaking at \$92,174,000 in 1900.<sup>10</sup> Michael Edlestein has even suggested that *too much* British investment in this sector may have caused the boom's demise:

In mining, a sharp rise in productivity occurred in the 1890's and then, rather strikingly, productivity growth was slightly negative across the years 1900-1910. It could be that augmented capital and labor inputs in this industry were so plentiful that the industry was driven to diminishing returns. If so, one might question whether here too financial resources might not have been somewhat overabundant.<sup>11</sup>

The people risking their money on these ventures were surprisingly cosmopolitan. The capitalists supporting the Northwestern Ontario mining boom were in fact not strictly the financial elite. The vocations of first directors listed in the *Gazettes* reveals a significant number of blue collar labourers, tradesmen, and merchants.<sup>12</sup> This would seem to indicate that surplus capital was available at all social-economic levels, from Toronto piano manufacturer George Hientzman

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<sup>7</sup>See Figure 4, Appendix B.

<sup>8</sup>See Figure 8, Appendix B.

<sup>9</sup>Nelles, *Politics of Development*, 146-50.

<sup>10</sup>"This figure represented approximately 77.5 per cent of the level of nominal capital." (Paterson, *British Direct Investment in Canada*, 58).

<sup>11</sup>Edlestein, *Overseas Investment in the Age of High Imperialism*, 278.

<sup>12</sup>See Table 3, Appendix D for a summary of directors' vocations.

to local Rat Portage butcher Gustavus Kobold.<sup>13</sup>

But what drove these men and women to invest their extra dollars in gold mines? There may have been more than just gold fever behind investor preference for mining companies. Canadian and regional Americans faced a shortage of domestic industrial outlets for capital investment and they were still wary of banks and transportation stocks after the collapse of North American banks and railway ventures in the 1870's and 1880's and the disastrous financial panic of 1893. With few other options, investors may have been pinched into placing their surplus capital on flashy mining ventures.<sup>14</sup> However, a more probable answer to the question of investor preference would be that surplus capital was attracted to mining through successful promotion.

Attracting large-scale investment involved large-scale promotion from all sectors: private, local, regional, provincial, national and international. Companies and promoters at the private level assailed the investing public with prospectuses, pamphlets and news releases. Prospectuses, historically the tool of choice for mining promotion, were nothing more than overblown fliers, typically embellished with florid illustrations, seductive prose, and fraudulent misrepresentations. Although there were undoubtedly hundreds of Northwestern Ontario mining prospectuses circulated during the last two decades of the nineteenth century, only a few examples have survived. These few, however, reveal the boundless (and unscrupulous) creativity of the district's promoters. The Winnipeg Consolidated Gold Mining Company's early *Prospectus* reported that the mine's "experienced" manager/geologist had uncovered unlimited ore supplies of fantastic

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<sup>13</sup>Heintzman and his partner/father, Theodore, were both directors of the Sentinel Consolidated Gold Mining Company. Gustavus Kobold was involved in several mining ventures including Western Ontario Mining, New Sabaskong Gold, Tycoon Mining & Development, Gold Panner Mining, Victor Gold Mining and his own Kobold Mine.

<sup>14</sup>The Bureau admitted that the collapse of the American iron industry in the 1880's caused many investors to reconsider Canadian mines. "So many mines were shut down in the United States, and so many furnaces blown out, that men with capital to spare were ready to take risks in any new venture which had in it the appearance of healthy speculation." (OBM, *Annual Report, 1893*, 13).

values.<sup>15</sup> However, the operation lasted scarcely a year before giving up. The Mines Contract and Investigation Company of Toronto first advertised under the name of the Canadian Mining Bureau in a devious attempt to borrow on the credibility of the Ontario government's Bureau of Mines.<sup>16</sup> The Province was sufficiently alarmed to legislate against the use of the word "bureau" in the name of any Ontario mining company.<sup>17</sup> The Ash Rapids Mining Company floated a prospectus indicating that a reputable Rat Portage mining engineer, Charles Brent, was managing the company's operations at the old barren Boulder location. Unfortunately, they had failed to advise Brent of that fact.<sup>18</sup> The Port Arthur-based New Sabaskong Mining Company circulated its 1899 prospectus under the unpretentious title "Shareholder's Report." The neatly printed pamphlet bravely attempted to paint a rosy picture of lucrative prospects and active exploration on mining locations whose titles, it subtly admitted, were not clear.<sup>19</sup> The episode of the New Golden Twins' illiterate Native "mining engineer" clearly revealed how successful even a blatantly fabricated prospectus could be.

Depending on the finances available, mining companies had other avenues for promotion at their disposal. The most dangerous of these involved stock manipulation. If management had the capital to risk, a company could create a false image of profitability by authorizing bogus dividends. Northwestern Ontario mine owners were seldom driven to such extremes since other more conventional and cheaper methods seemed to do the trick. There were, however, at least a few instances of phony dividends being issued during the 1890's. Besides the infamous Golden

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<sup>15</sup>*Prospectus of the Winnipeg Consolidated Gold Mining Company*, (Winnipeg: Boyce, circa 1883) [original held at the National Library of Canada].

<sup>16</sup>*Special Circular on the Gold Fields of Ontario and the Mining of the Province*, Pamphlet published by the Mines Contract and Investigation Company of Toronto, Limited, 1899, jacket-cover. From the original held by the Ontario Public Archives, Toronto.

<sup>17</sup>*Statutes of Ontario, 1900*, "An Act to Amend the Mines Act," 62 V., c.10, s.2.

<sup>18</sup>Charles Brent, "Letter to the Editor, March 21, 1901," *Canadian Mining Review*, XX, February 1901, 50.

<sup>19</sup>*Annual Report of the Shareholders of The New Sabaskong Gold Mining Company of Ontario, Limited*, dated July 4, 1899, Original pamphlet held in the archives of the Lake of the Woods Museum, Kenora, Ontario.

Star scandal of 1899, there was the case of the Twentieth Century Mining Company issuing a dividend "before a tap of work was done on any of its properties."<sup>20</sup> The Olive mine also paid a suspicious dividend shortly before it ceased operations for "rather complex" reasons in 1900.<sup>21</sup>

Companies without the ready cash to issue fake dividends sometimes tried to encourage investors by finding decoys to sit on their Board of Directors. However successful it may have been, this practice was not without its price as most decoys could not be induced to sign on without being given large blocks of paid up shares in advance. Although this was a common technique for promoting British companies, it does not seem to have been as widespread in companies organized in Ontario. Several parliamentarians and a few ministers such as Sir Richard Cartwright and Hugh MacDonald were named as directors, but their active roles in administering their companies suggests that their own finances were at stake.

The cheapest, and usually the safest, way for district mining companies to make their pitch to investors was through the press. The local press was, of course, the most accessible avenue for mining promotion. It is not surprising that a host of local papers sprang up in Northwestern Ontario to service the mining communities. A 1987 inventory turned up fifteen different newspapers published in the district between 1880 and 1902.<sup>22</sup> Fourteen additional newspaper operations existed in Thunder Bay (however, the early editors of that community continued to cling to the local dead and dying silver mines until 1892 when they gradually shifted their attention to the district's gold mines). In 1899, the peak year of the mining boom, eight different local papers were circulating in the district while five more were being published in Port Arthur and Fort William. Other regional newspapers also jumped on the mining boom

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<sup>20</sup> *Canadian Mining Review*, XX, April 1901, 134.

<sup>21</sup> *Canadian Mining Review*, XVIII, April 1899, 129; OBM, *10th Annual Report*, 1900, 80.

<sup>22</sup> J. Brian Gilchrest, *Inventory of Ontario Newspapers*, Toronto: Micromedia, 1987. See Appendix F for a complete list of publications. Several of these "different" publications were, in fact, continuations, amalgamations, or reorganizations of previous newspapers operating under a different name. It is possible that two additional newspapers existed in the district. Dates of publication for the *Rainy River Gazette* are unclear and an 1894 article refers to the office of the *Daily Dispatch* in Rat Portage doubling as an assay lab (*Rat Portage News*, XIV, December 14, 1894).



bandwagon. One of these, the *Winnipeg Free Press*, was in fact partly owned by John Mather, the Keewatin lumber baron and financier of several district mining ventures including the Ottawa Gold Milling and Mining Company (Keewatin Reduction Works), Yum Yum mine, and Sakoose mine. Most of the major Canadian newspapers, including Toronto's *Globe* and *Mail* kept a close eye on events in Northwest Ontario mining<sup>23</sup> and foreign newspapers were noted to have reported on district mining on numerous occasions.

Write-ups in professional publications also helped attract capital investors to district mining companies. After 1895 the *Canadian Mining Review*, first published in Ottawa in 1879, usually devoted a section each month to developments in the "Western Ontario Goldfields". The *Canadian Mining Manual*, published annually by the *Canadian Mining Review*, contained summaries of the activity at many district mines. Both of these publications were lavishly illustrated with several pages of photographs. The *Financial Times International Mining Yearbook* (1887-) annually provided its subscribers with details on several Northwestern Ontario mining ventures as did the *Engineering and Mining Journal* and the *British Columbia Review*, also published in England.<sup>24</sup>

Government publications also did their part to promote the district. The Ontario Bureau of Mines *Annual Report* undoubtedly had the most significant impact on the district's development. The Bureau Reports were created in response to the 1890 Royal Commission on the Mineral Resources of Ontario whose own *Report* complained that the federal government's *Geological Survey Progress Reports* were too technical and devoted too little attention to the investigation of economic mineralization in Western Ontario.<sup>25</sup> First published in 1891, the

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<sup>23</sup>The references to district mining found in either of these two newspapers in particular are too numerous to cite especially in the late 1890's. The financial sections kept an almost daily vigil of stock prices and mining developments in the district.

<sup>24</sup>For feature articles on district mining found in British periodicals see: *British Columbia Review*, VI, April 14, 1900, also VII, February 2, 1901, 54 and VIII, February 15, 1902, 222; J.D. Lowry, "The Gold Fields of Western Ontario," *Engineering and Mining Journal* (Sept. 1, 1900).

<sup>25</sup>*Report of the Royal Commission on the Mineral Resources of Ontario*, 408.

Bureau *Reports* provided the mining industry with readable "information on all points in relation to the mines and minerals, and indeed of all the material resources of Ontario."<sup>26</sup> In fact, a considerable portion of each of the first ten annual publications was devoted specifically to the gold mines of Northwestern Ontario.<sup>27</sup>

Several groups and organizations also promoted the gold fields. Civic organizations in Rat Portage were particularly active in assisting the mining boom. Following along the lines of old-time mining booms, a local Mining Exchange was formed in 1896, the same year the Standard Stock Exchange opened in Toronto.<sup>28</sup> On-site mining exchanges were a carry-over from the Comstock days in Nevada when poor communications dictated that mining shares be traded as quickly as possible and, therefore, as close as possible to underground developments. Local American exchanges were also used to involve the miners themselves in mining finance, thereby further binding them to the camps, cutting down on transiency, and providing management with more leverage against labour organization.<sup>29</sup> It is doubtful, however, that the short-lived Rat Portage Exchange served any of these purposes although its presence may have succeeded in imparting a degree of legitimacy to the mining capital of Northwestern Ontario during a peak year of the gold boom. The local Board of Trade, instrumental in organizing the Mining Exchange, had been active in promoting mining from the beginning of the decade and a look at its membership might give an indication why. Members for 1895 included: George Drewery, D.C. Cameron, J.M. Savage (each directors of four different mining companies), Frank Ap'john (Clerk of Court and director of Victor Gold Mining), Frank Gardner (developer of three mines in the district and another near Thunder Bay), R.A. Mather (director of the Homestake Mining

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<sup>26</sup>Ibid., 411.

<sup>27</sup>Percentages of the *Reports* contents that dealt specifically with Northwestern Ontario gold mines were: 2% in 1892, 12% in 1893, 25% in 1894, 23% in 1895, 26% in 1896, 24% in 1898, 20% in 1899, 16% in 1900, 6% in 1901, 3.2% in 1902, and 6% in 1903. The publications averaged 256 pages annually.

<sup>28</sup>Letters Patent were issued in Ontario to the "Rat Portage Mining Exchange (Limited) on 23 October 1896. However, a "movement was afoot" as early as 1894 to open a local stock exchange (*Rat Portage News*, XV, August 3, 1894). Standard Stock Exchange date is from Innis, *Mining Frontier*, 389.

<sup>29</sup>Grant Smith, *History of the Comstock Lode*, 111.

Co.), John Colcleugh (director of three mining companies), Angus Carmichael (director of two mining companies), and C.W. Chadwick (director of six mining companies).<sup>30</sup> Members who do not appear to have been associated directly with mining were J.T. McKay, A.H. Dickins of the Bank of Ottawa, and Crown Lands Agent, W. Margach.<sup>31</sup> Besides lobbying for direct government subsidization of the mines and local "prospector classes," the Board spearheaded the collection of local ore specimens for the Provincial collection.<sup>32</sup> Apparently the Board of Trade was responsible for producing and circulating a very elaborate and beautifully illustrated Diamond Jubilee coffee-table booklet containing photographs and descriptions of the Mining Exchange and several of the local mines.<sup>33</sup>

At least one other regional civic organization, the Central Canada Chamber of Mines, became quite notorious as a result of its efforts to publicize the gold fields. Based in Winnipeg and founded around 1901, the Chamber attempted to stimulate sagging mining development by circulating fancy brochures and issuing colourful press releases. "Patrons" of the Chamber allegedly included the Earl of Minto, Governor-General of Canada; Sir Wilfred Laurier; Lord Strathcona and Mount Royal, and Lt. Governor J.C. Patterson. "Honorary Presidents" included the Premier of Manitoba and H. Aylmer of Quebec. In addition to these obvious "decoys," the Chamber had numerous other officers including Rat Portage mining broker (and Board of Trade

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<sup>30</sup>*Rat Portage News*, XIV, April 12, 1895.

<sup>31</sup>Although Dickins may not have had a *direct* link to the mining boom, his bank certainly had a stake in it. Court records show that the Bank of Ottawa was involved in foreclosures of district mining companies during the late 1890's and early 1900's. Several High Court and District Court actions were initiated by the Bank against Black Eagle Mining (Regina mine) and one 1901 District Court suit was launched against the Anglo-American Consolidated Mines Company of Ontario (Rainy River District HCJ and DC *Process and Judgment Books*, 1884-1905, Kenora District Court archives, Kenora, Ontario). The Bank of Ottawa also had links to several district mining operations through its director, John Mather. Although discreet, Margach definitely had mining connections. In what appears to be the only piece of private correspondence in the his Timber Agent's Letter Books, Margach reported to W.C. Caldwell, M.P.P. on Dec. 31, 1890 regarding developments at an iron ore location he, his son, and Caldwell shared in the vicinity of Hunter's Island (*Crown Timber Agent's Letter Books, Rainy River District*, Vol. 1, Ontario Public Archives, pp.836-837).

<sup>32</sup>*Rat Portage News*, XIV, March 15, 1895.

<sup>33</sup>*Souvenir Diamond Jubilee Guide to Rat Portage and Lake of the Woods*, Toronto?: Martell & Tilley, 1897. An original of this booklet is held in the archives of the Lake of the Woods Museum, Kenora.

member), C.W. Chadwick, and General Wilkinson, the blustering manager/director of the struggling Regina mine. In 1901 the Chamber circulated an infamous brochure through the mails which claimed that the district's "reefs" were "true fissure veins" extending for "miles" and containing "\$10 ores."<sup>34</sup> British publications reacted furiously when they discovered their readers were the targets of ludicrous exaggerations "of the character that are generally heralding wildcat companies' promotion."<sup>35</sup> Apparently, the Chamber was financed by government grants which, one mining editor assumed, may have been responsible for the recklessness of the promotion.<sup>36</sup>

The mineral displays so ardently advocated by the Rat Portage Board of Trade became one of the cheapest and most efficient ways of promoting district mines. The *Rat Portage News* reminded local mine owners that "mineral specimens, especially those containing gold, have a certain fascination for many which might be the means of making known, not only the District but the giver of the specimen and name of mine from whence it was taken."<sup>37</sup> Suggestions for a Provincial rock collection first appeared in the *Ontario Mineral Commission Report* of 1890<sup>38</sup> and finally, in 1896, the Bureau took responsibility for establishing the "rules" for maintaining the collection.<sup>39</sup> District minerals and other mining related information were displayed locally and also shown nationally and internationally at the 1886 Colonial Exposition,<sup>40</sup> the 1887 Toronto

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<sup>34</sup>*Canadian Mining Review*, XX, January 1901, 6. The two terms "reef" and "fissure vein" were obviously misconstrued since the two types of deposits are not synonymous and typically do not coexist.

<sup>35</sup>Correspondence from Central Canada Chamber of Mines "to the editor" (*Canadian Mining Review*?) dated July 1, 1900. Original held in the archives of the Lake of the Woods Museum.

<sup>36</sup>"We are suspicious that the Central Canada Chamber of Mines has been asking money grants from the Ontario and Dominion Governments for the secret purpose of providing confined lodgings for its promoter and secretary" (*Canadian Mining Review*, XX, January 1901, 6).

<sup>37</sup>*Rat Portage News*, XIV, April 19, 1895.

<sup>38</sup>*Report of the Royal Commission on the Mineral Resources of Ontario*, 1890, 412, 522.

<sup>39</sup>OBM, *6th Annual Report*, 1896, 199.

<sup>40</sup>*Thunder Bay Daily Sentinel*, March 22, 1886.

Exhibition,<sup>41</sup> the 1893 Chicago Worlds Fair,<sup>42</sup> and the 1901 Pan-American Exposition.<sup>43</sup>

Several professional mining organizations were also involved in promoting the Northwestern Ontario gold fields. The prestigious American Institute of Mining Engineers (AIME) chose Montreal for the site of its February 1893 meeting and was attended by several active and future participants in the district's mining development.<sup>44</sup> At the February 1899 AIME meeting in New York, Peter McKellar of Fort William presented a paper on "The Gold Bearing Veins of Bag Bay, Near Lake of the Woods."<sup>45</sup> At that 1893 AIME meeting in Montreal, B.T.A. Bell, the editor of the *Canadian Mining Review*, assisted in organizing the first meeting of the Provincial Mining Association of Ontario.<sup>46</sup> In 1894 the Association was reorganized into the Ontario Mining Society. However, within a year the Society agreed to amalgamate with the General Mining Association of Quebec and the Mining Society of Nova Scotia. In 1896 the resultant Federated Canadian Mining Institute was officially born and commenced publishing its

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<sup>41</sup>Ibid., September 14, 1887.

<sup>42</sup>OBM, *2nd Annual Report, 1892*, 191.

<sup>43</sup>OBM, *11th Annual Report, 1901*, 85.

<sup>44</sup>District mining personnel in attendance included: Black Jack manager/director Edward Barnes; future director of the Master Jack, George Barnes; James Hammond manager and director of several Atikokan area ventures; E.B. Haycock, civil engineer and early operator of the Gold Rock mine; John Kennedy, the 1897 manager of the Gray Eagle mine; 1896 director of the Master Jack, Alexander Macdonald; W.H. Merritt, M.E., professor at the Kingston School of Mines and one time owner of "Thomas Weigand's interest in the Shoal Lake mineral leads" (Foley mine?) )*Rat Portage News*, XV, February 22, 1895), George Scott, director of Tache Gold and Maple Leaf Gold companies; engineer J. Burley Smith who later became involved in at least six different Lake of the Woods operations; and W.A. Wiley, the 1897 superintendent of the Hawk Bay mine. Robert H. Flaherty, future manager of the Golden Star, Burley Shaft, Foley, and Yum Yum mines, was elected a member of the Institute at the Montreal meeting. Other names appearing on the list of registered attendees that *may* have been district personnel include J.B. Miller (director John Miller of the Triggs Gold Mining Company?), and "Messrs McCormick" (William McCormick of the Gopher Mining Company?). *Transactions of the American Institute of Mining Engineers*, XXI, February 1892 to February 1893, lxi.

<sup>45</sup>*AIME Transactions*, XXVI, 1899, 104.

<sup>46</sup>Ibid., lli.

monthly *Bulletins*.<sup>47</sup> It was reorganized a final time in 1898 as the Canadian Mining Institute and continued to serve as a sounding board for district mining engineers and promoters, providing them with industry contacts and updated technical information.

The district was also the site of several mining industry conventions, conferences and excursions. The first annual meeting of the "Ontario Mining Institute" was held in Rat Portage on September 8, 1896.<sup>48</sup> A mining convention was also held there the next summer and was allegedly attended by mining men from "all over the globe." George Drewery, local merchant and multi-mine director, presided. Local Licensed Surveyor and "Mining Engineer" T.R. Deacon presented a paper to the several attending mining men and dignitaries, including the Director of the Ontario Bureau of Mines.<sup>49</sup> A Winnipeg paper even attempted to sensationalize the event by sending a *woman* to cover the story.<sup>50</sup> Also in 1897, a group of attendees at the Toronto meeting of the British Association for the Advancement of Science made an excursion to see some of the mines near Rat Portage. The group included two professors of the London School of Mines, professors from Oxford, Vienna, and Harvard, a former Director of the Indian Geological Survey, and a "Prince Krapotkin."<sup>51</sup> It seems even celebrities with no professional links to mining were excited about the district. "Celebrated entertainer" Christie Murray could not resist a tour of the Sultana mine during an 1895 stop-over in Rat Portage.<sup>52</sup>

Was promotion the key to successfully building the Northwest Ontario gold boom?

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<sup>47</sup>The *Federated Canadian Mining Society Bulletins* were actually a continuation of the *Journal of the Mining Society of Nova Scotia* which began publication in Halifax in 1892. (Telephone interview with Vera Ward of the Canadian Mining Institute, Montreal, September 11, 1995.)

<sup>48</sup>OBM, *6th Annual Report, 1896*, 71.

<sup>49</sup>OBM, *7th Annual Report, 1897*, 6.

<sup>50</sup>*Ibid.*

<sup>51</sup>*Ibid.*, 144-145.

<sup>52</sup>*Rat Portage News*, XIV, May 17, 1895.

Actually, the district's media exposure was not always glowing. The New Golden Twins and Golden Star scandals were widely publicized and the embarrassing Engledue Deal was a national headliner that created a storm of protest in the House of Commons.<sup>53</sup> Local, national, and international publications delighted in exposing the inept management and tricky business practices of the Rat Portage Reduction Works, the Regina mine, and the Ottawa Gold Milling and Mining Company, but the dollars kept rolling into new mining companies anyway. Obviously, it took more than glitter and hype to build a mining boom and it took more than a few scandals to burst the bubble.

Available capital was certainly a key element but the most crucial factor was the one that remains the hardest to assess - the public simply had to be in the right mood. However, it is difficult to determine what effects promotion and capital had upon the public mood or *vice versa*. Did successful promotion and surplus capital create the proper mood or did promotion succeed only when money was available and the right mood prevailed? Apparently, in the case of Northwestern Ontario, mining promotion succeeded in spite of itself. Companies and investors continued to throw their money into developments as scandals and disappointments emerged one after the other. This fact seems to indicate that the "mood" was independent of, and more significant than promotion in building this particular mining boom. More importantly, however, this study has shown that the gold itself was a relatively insignificant boom-building factor. In fact, the Northwestern Ontario experience of the 1890's has proven that even a "flash in the pan" is capable of producing a mining boom under the right circumstances.

The case of the Northwestern Ontario gold fields illustrates a trendy, technologically advancing industry that successfully attracted large volumes of capital immediately following a dramatic economic recovery. It appears this pattern has manifested itself in other industries as well. The Canadian piano business, for example, went through a boom period at roughly the

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<sup>53</sup>For particulars on the Commons debate on the Engledue deal see *Globe*, LII, April 9, 1897.

same time as the district's gold boom.<sup>54</sup> The growth experienced by the home appliance industry during the late 1940's and early 1950's and the computer business during the 1980's may be examples of post-recession trendy investment booms that are worthy of similar studies. Indeed, the rapid boom and bust of gold mining "penny stock" companies during the 1930's may be an illustration of an impoverished investing public speculating on an end to the Depression and anticipating that the pattern of the 1890's would be repeated.

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<sup>54</sup>Wayne Kelly's *Downright Upright* indicated that the Canadian piano industry went through a corresponding boom. Although he did not speculate on the causes of the boom he did give considerable attention to the reasons for its demise (Wayne Kelly, *Downright Upright*, [Toronto: Natural Heritage/Natural History, 1991]).





## APPENDIX "A"

### Photographs<sup>1</sup>

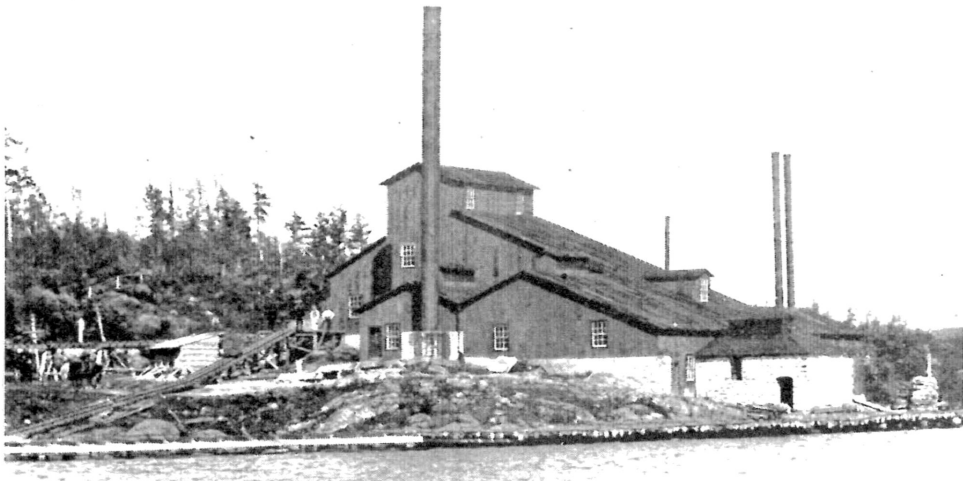
Gold Hill, 1895 .....	170
Rat Portage Reduction Works, 1895 .....	170
Imperial Mine, 1899 .....	170
Sultana Mine, 1899 .....	171
Vanners, Sultana Mill, 1897 .....	171
Regina Mine, 1899 .....	172
Regina Mine, 1895 .....	172
Mikado; Mill and Shaft, 1899 .....	173
Burley Shaft, 1899 .....	173
Crown Point Mine, 1899 .....	173
Gold Sun Mine, Tunnel, 1899 .....	174
Combined Gold Company Railroad, 1899 .....	174
Crown Point, early development, 1899 .....	175
Swede Boys Sluice, 1896 .....	175
Sawbill Mine, 1896 .....	176
Foley Mine, Stable and Camp, 1896 .....	176
Gem Vein, AD2 Mine, 1896 .....	177
Stella Mine, Tunnel and Shaft, 1899 .....	177
Hammond Reef, Stamp Mill, 1900 .....	178
Keewatin Reduction Works, 1899 .....	178

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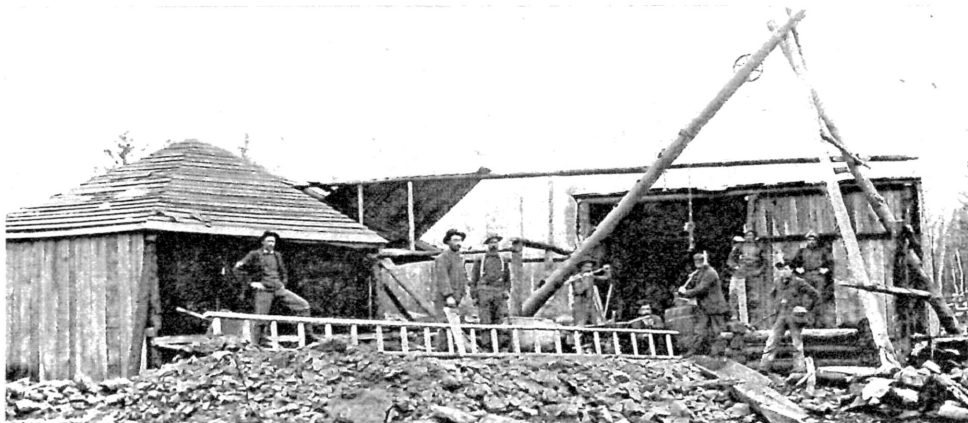
<sup>1</sup>All photos from Ontario Bureau of Mines *Annual Reports*.



Gold Hill - 1895



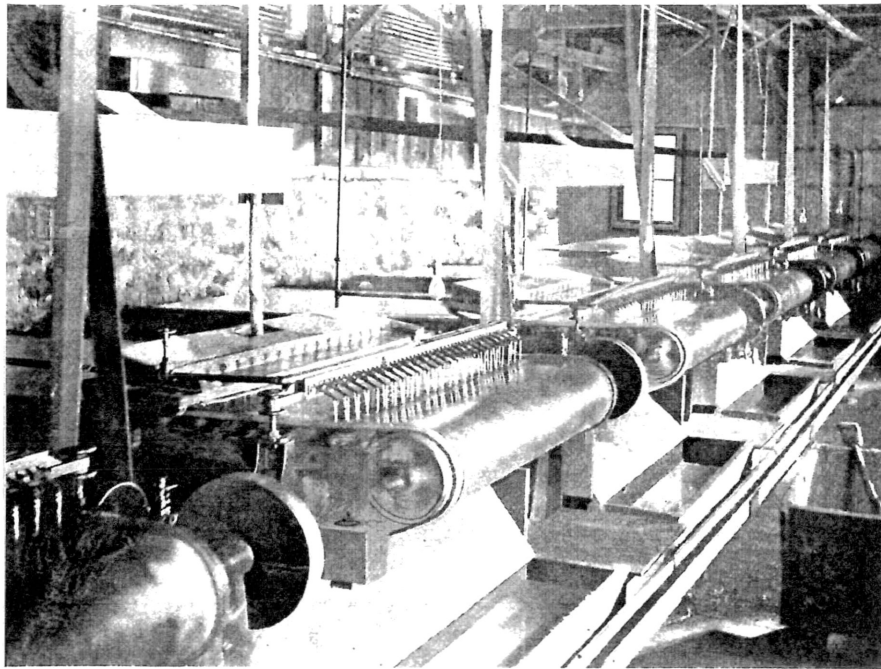
Rat Portage Reduction Works - 1895



Imperial Mine - 1899



Sultana - 1899



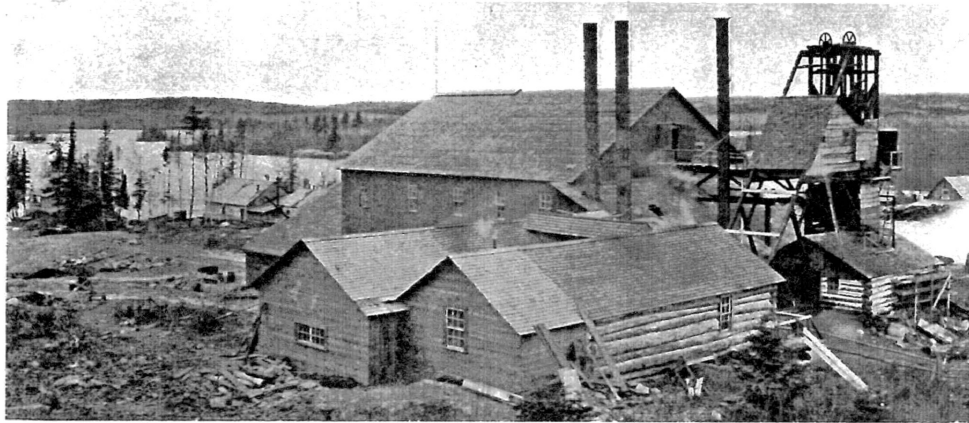
Vanners, Sultana Mill - 1897



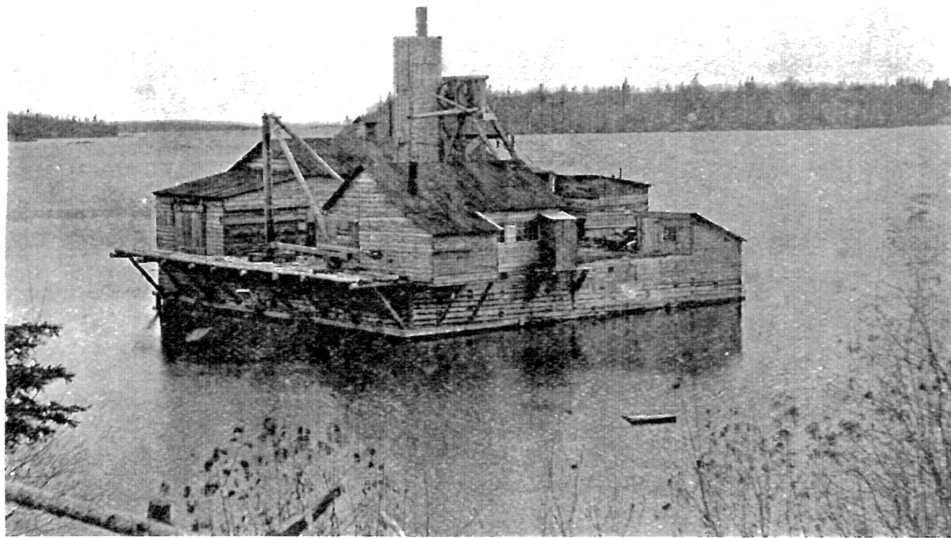
Regina Mine - 1895



Regina - 1899



Mikado; Mill and Shaft - 1899



Burley Shaft - 1899



Crown Point Mine - 1899



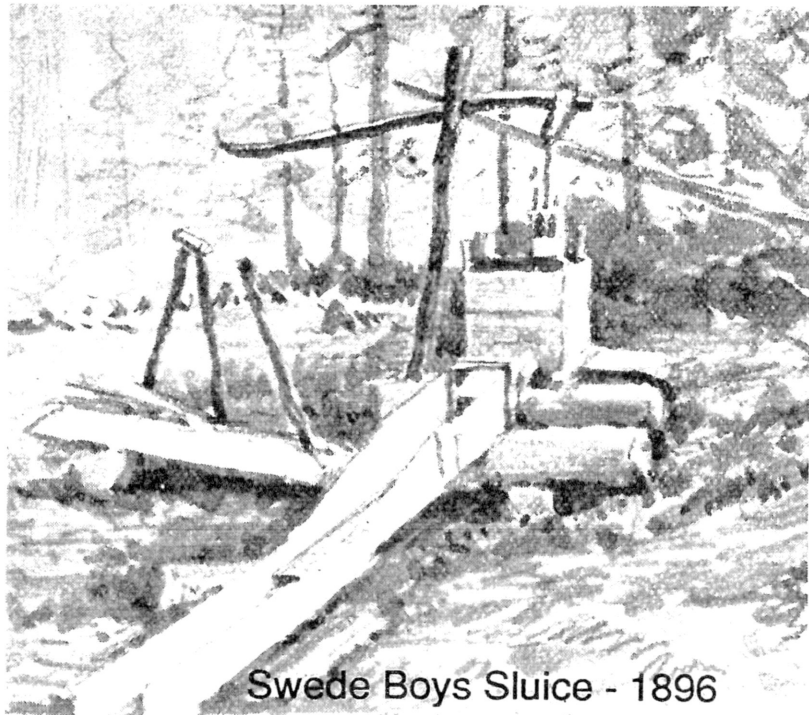
Gold Sun Mine, Tunnel - 1899



Combined Gold Company Railroad - 1899



Crown Point Mine, early development - 1899



Swede Boys Sluice - 1896

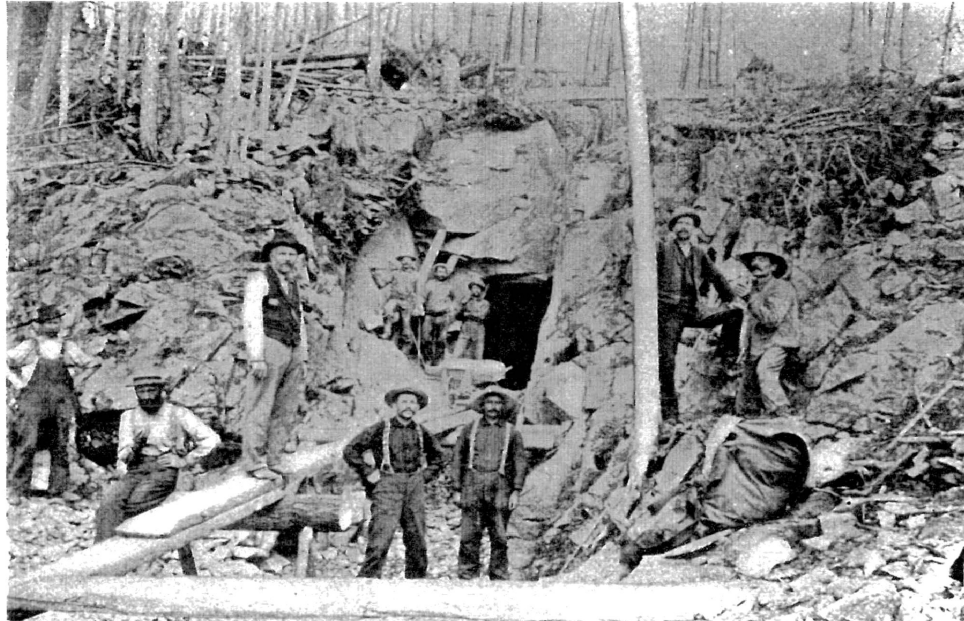




Sawbill Mine - 1896



Foley Mine, Stable and Camp - 1896



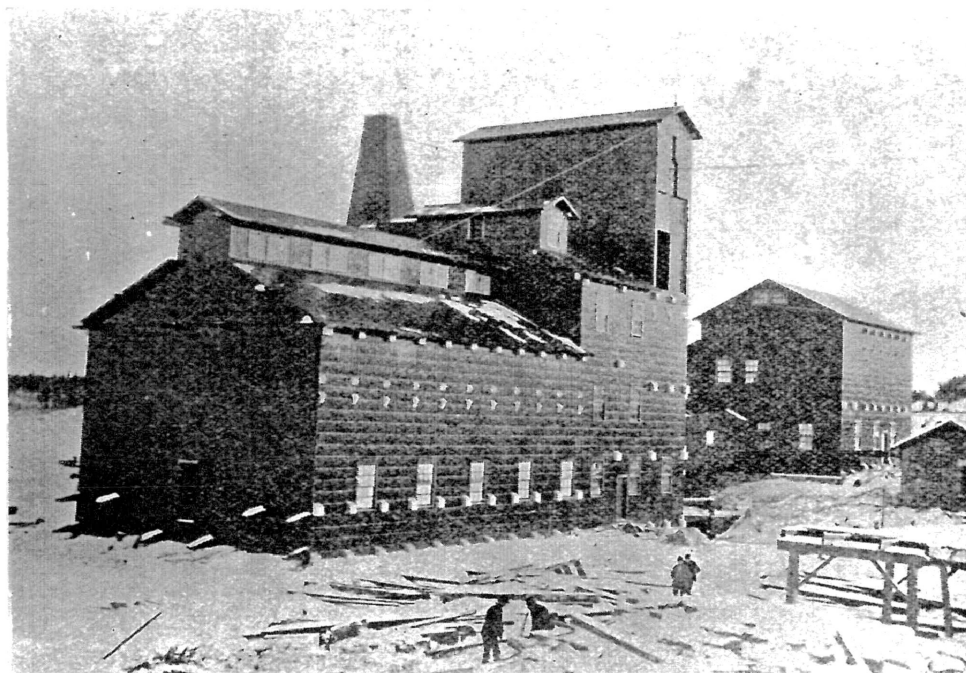
Gem Vein, AD2 Mine - 1896



Stella Mine, Tunnel and Shaft - 1899



Hammond Reef, Stamp Mill - 1900



Kewattin Reduction Works - 1899

## APPENDIX "B"

### Graphs and Charts

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# Provincial Gold Production 1890-1900

## Ontario, British Columbia, Nova Scotia

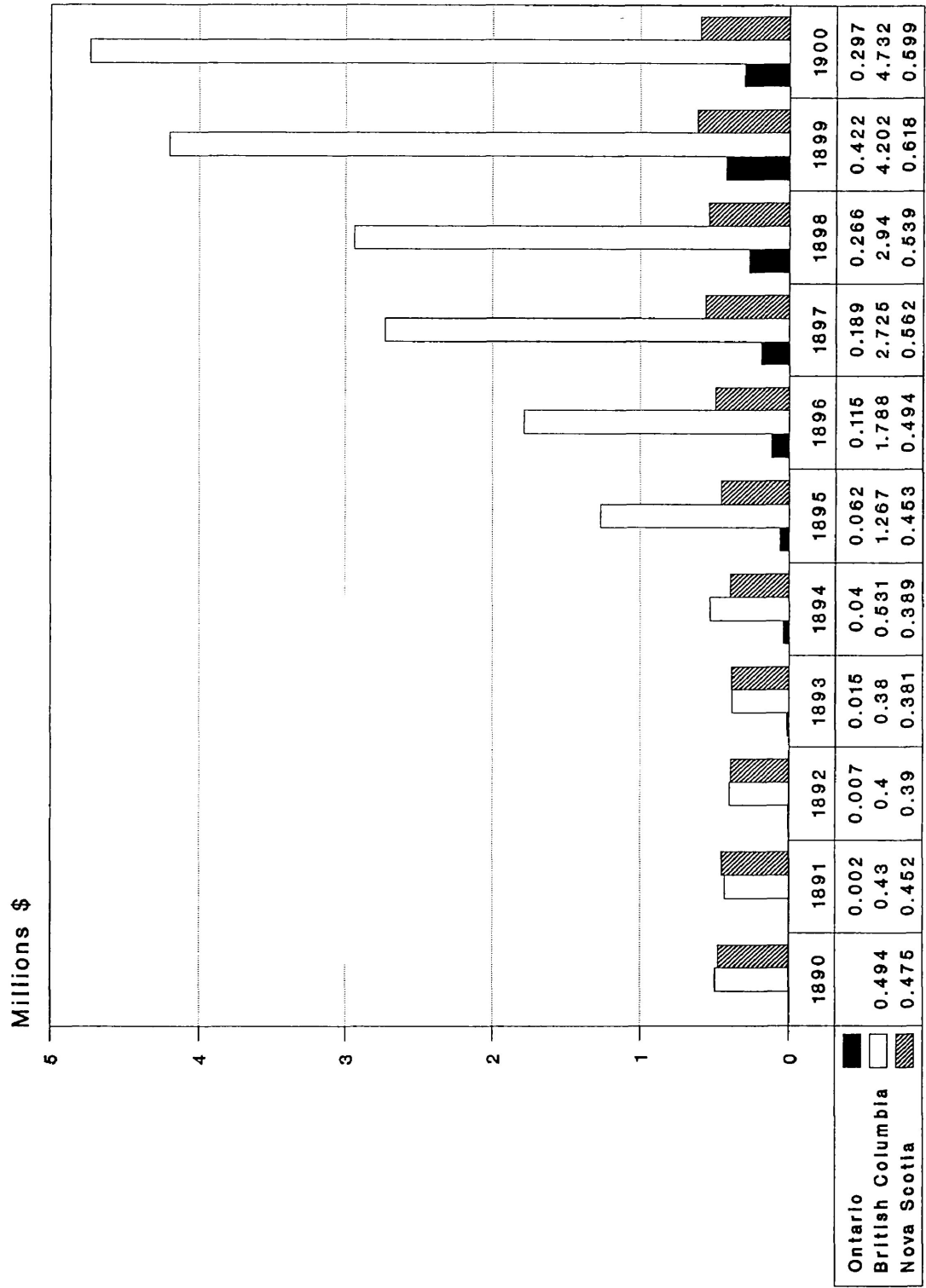
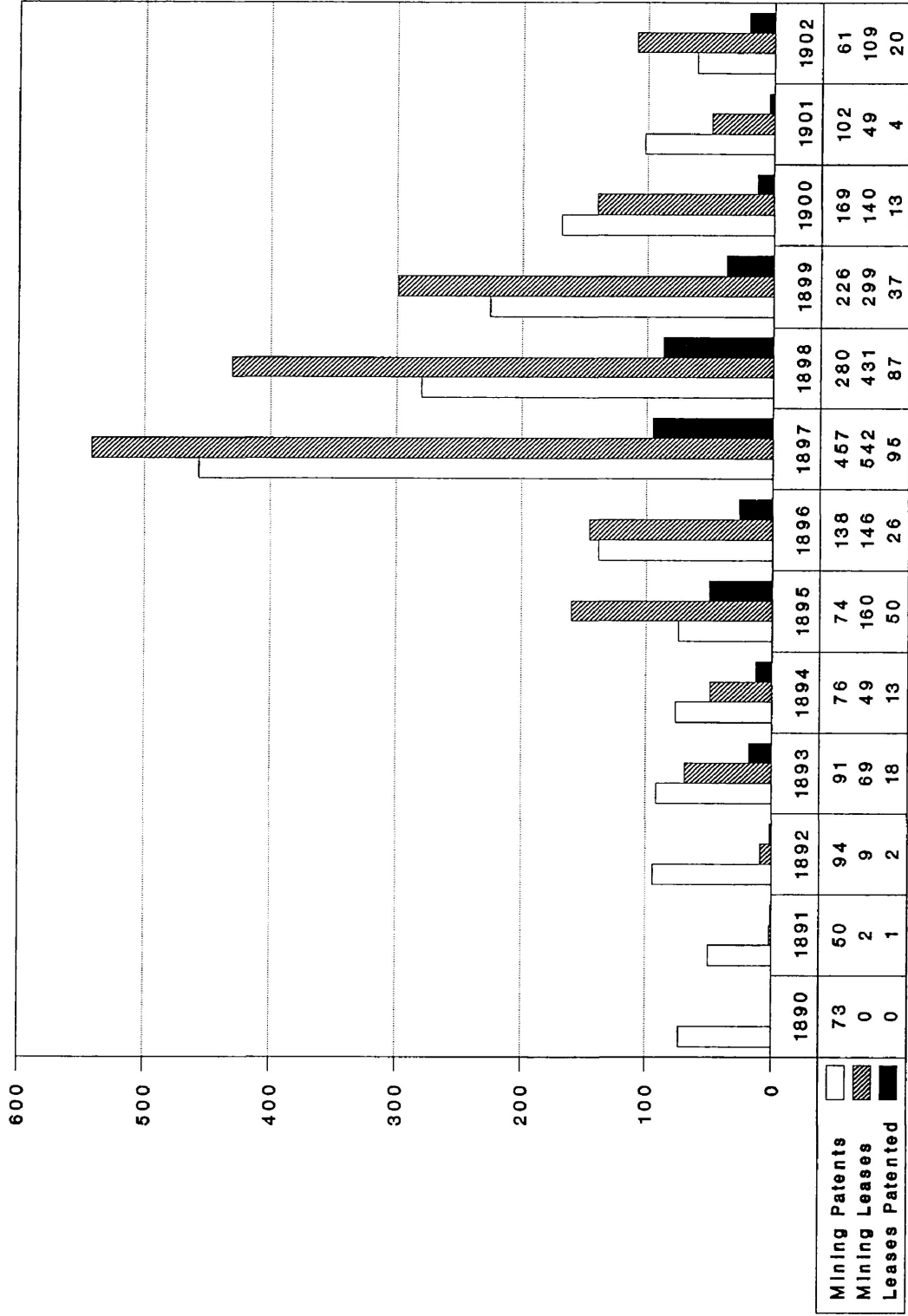


Figure 1

Source: Canada Dept. Mines Report 1909

# Mining Patents and Leases Rainy River District, Ontario 1890-1906



Sources: Mining Lands Registry and  
Bureau of Mines Annual Reports

Figure 2

Mining Accidents 1892-1902  
N.W. Ontario Gold v. Sudbury Nickel

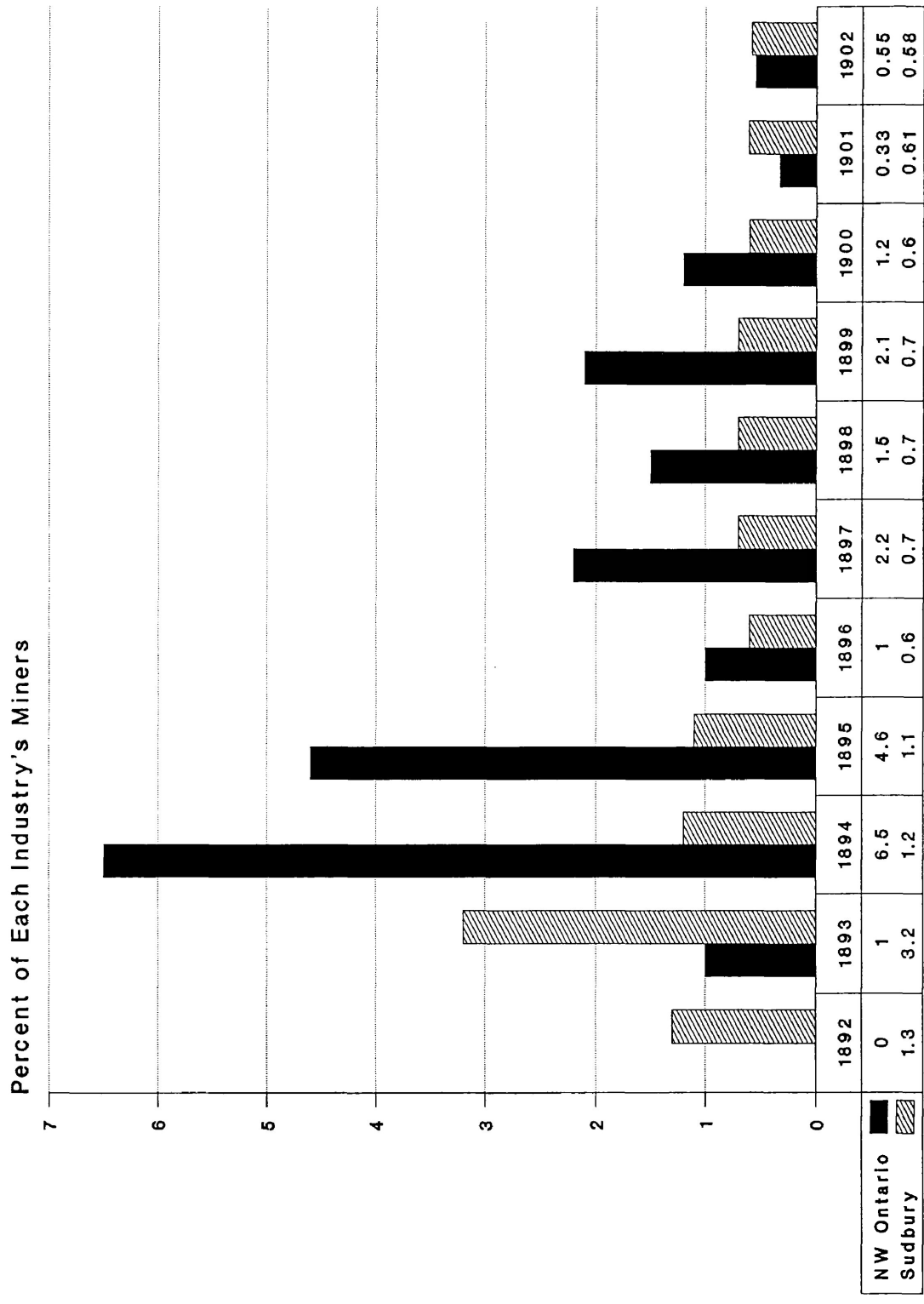
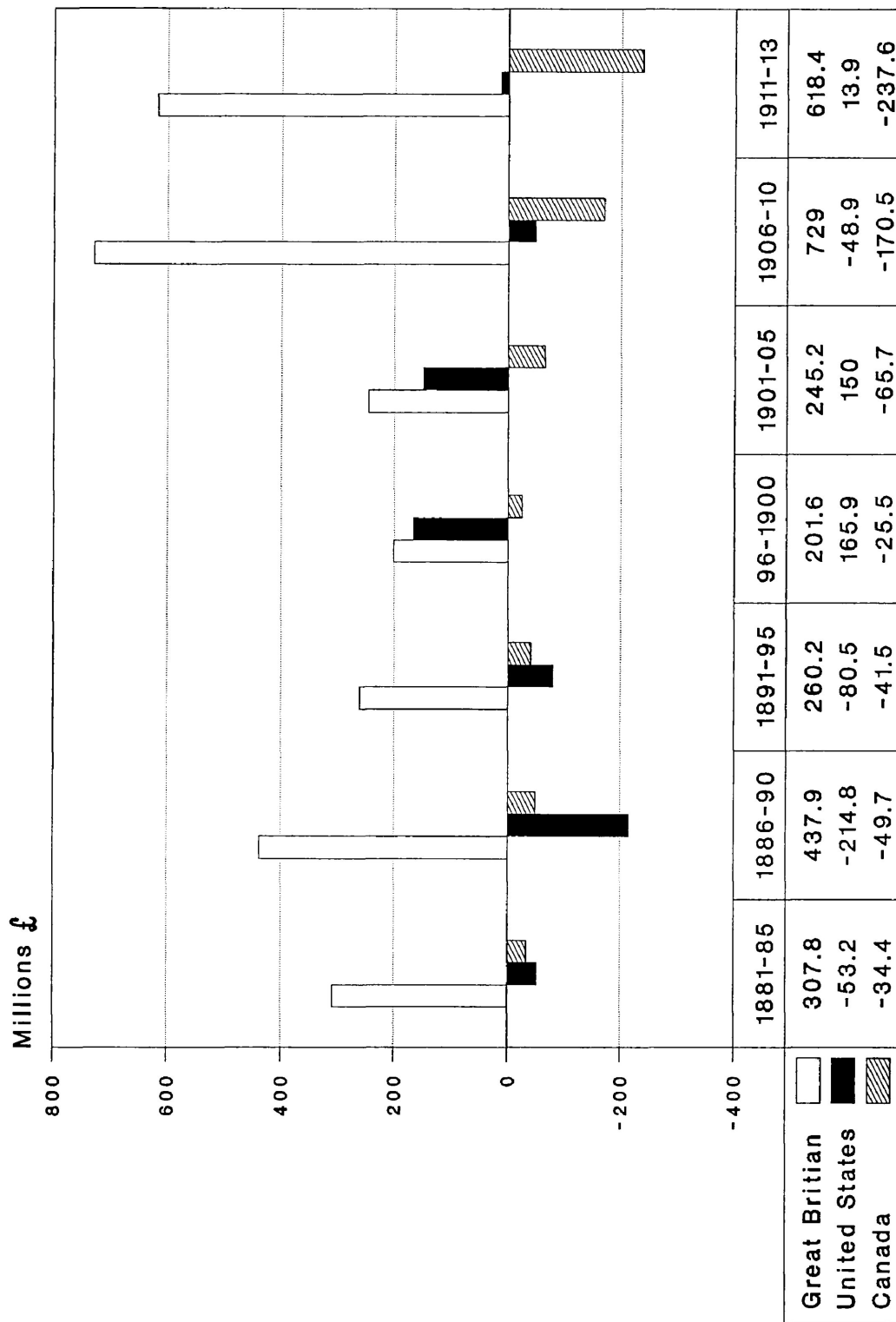


Figure 3

Source: OBM Annual Reports

# Net International Capital Movements

- = Capital Inflow + = Capital Outflow

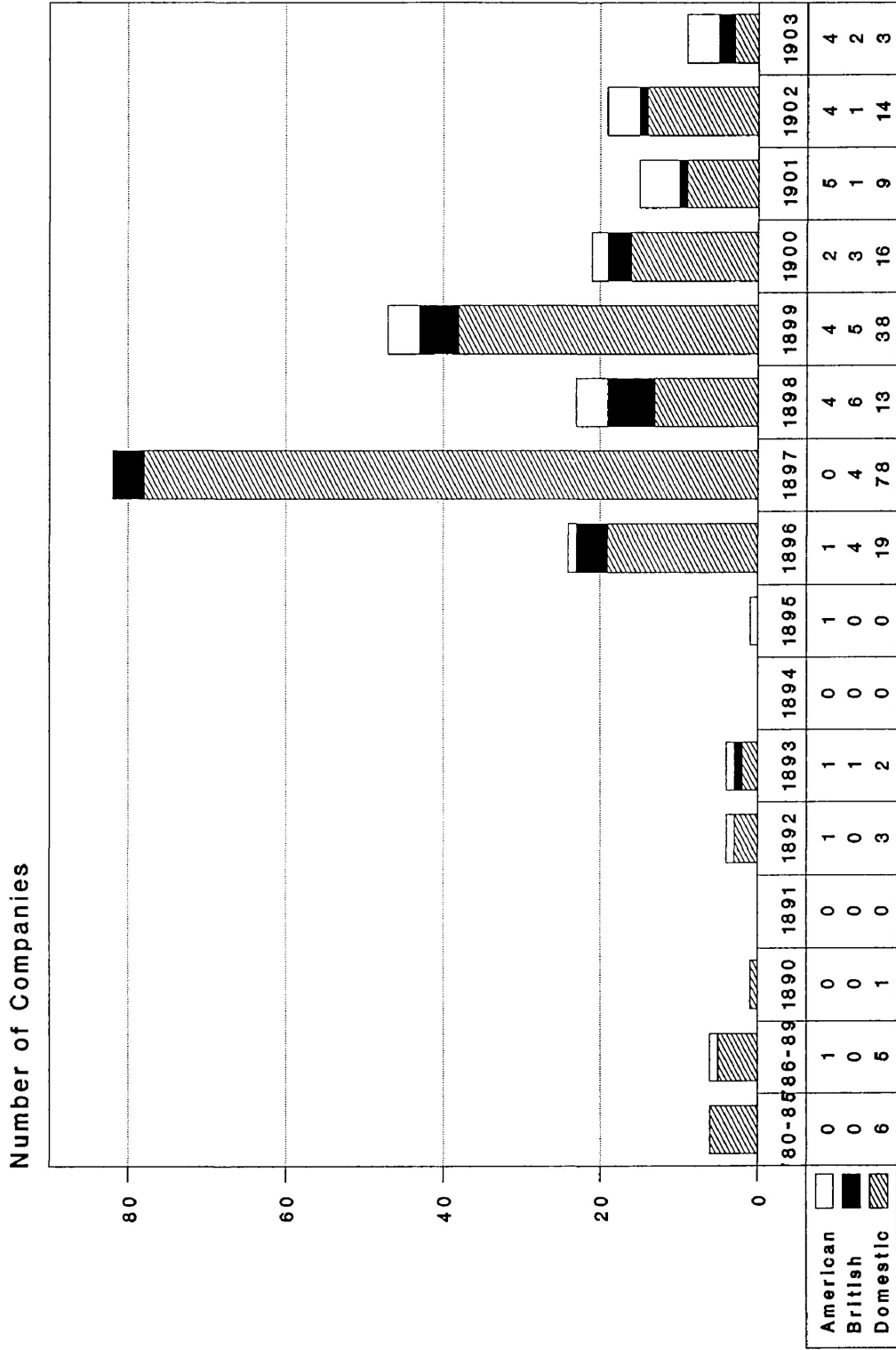


Source: Michael Edelstein, "Overseas Investment in The Age of High Imperialism" p.271



# N.W. Ontario Gold Mining Companies

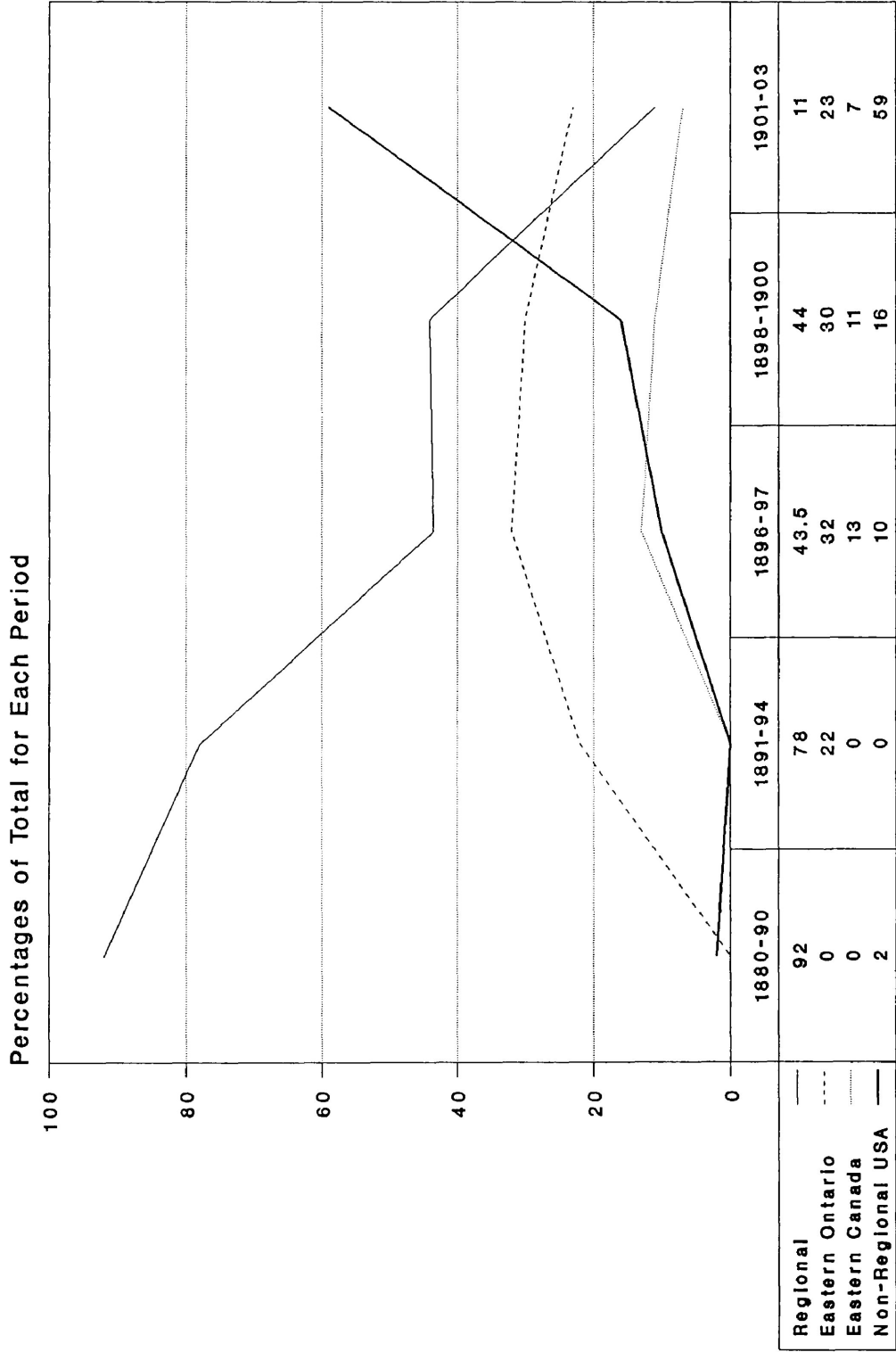
By Year of First Reported Activity or  
Date of Incorporation: 1880-1903



Source: OBM Reports, Ontario Gazettes, Dominion Gazettes, OGS Circulars

Figure 5

# Residences of First Directors Northwestern Ontario Gold Mining 1880-1903



Source: Ontario Gazettes, Dominion Gazettes, OBM Reports

# Canadian Banking Trends 1890-1900

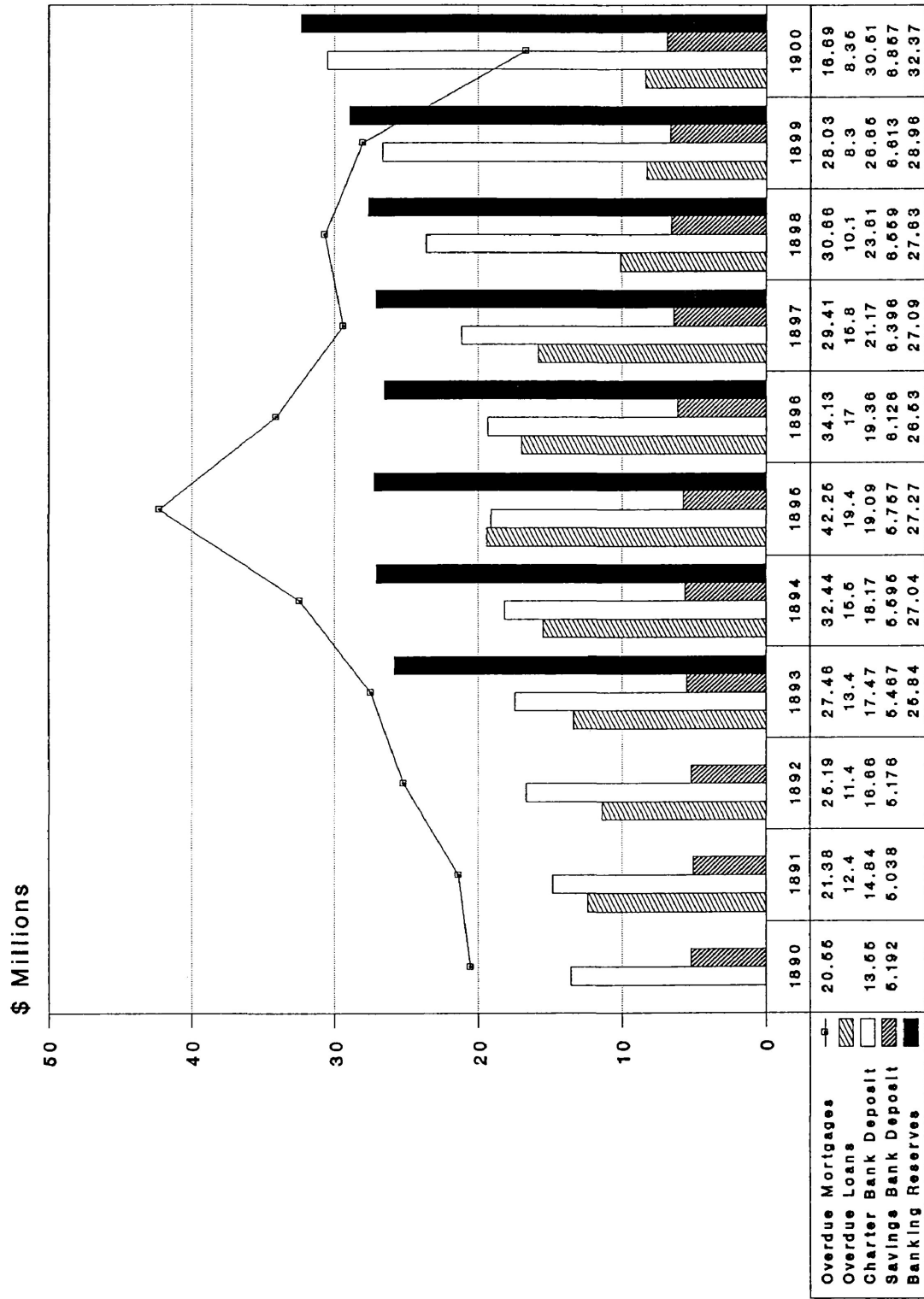


Figure 7

Source: Canada Statistical Yearbook 1904

# Economic Indicators and Northwestern Ontario Mining Activity 1890-1900

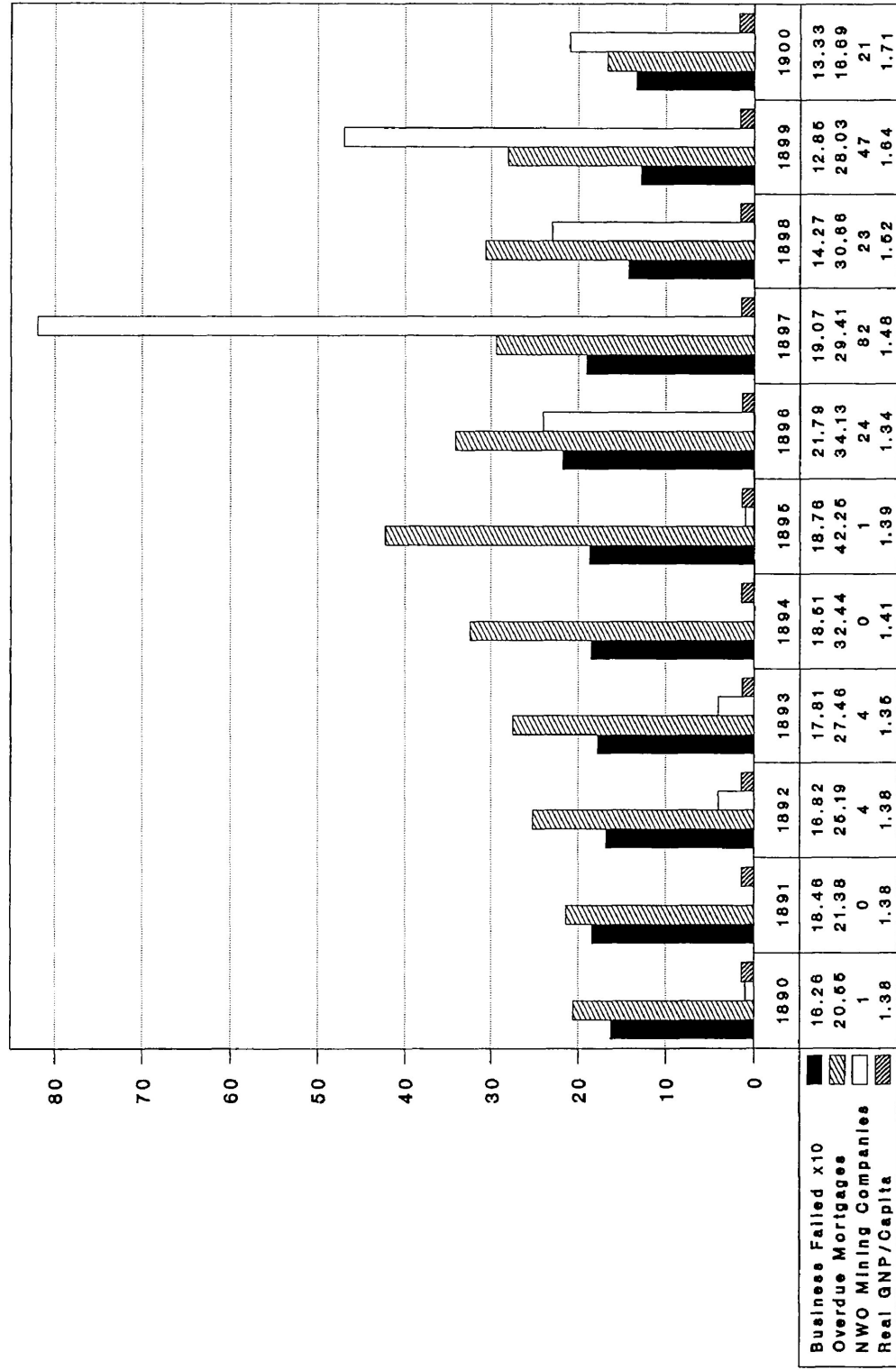


Figure 8 187



**APPENDIX "C"**

**Mining Companies**

**Table 1: Northwestern Ontario Gold Mining Companies Inventory . . . . . 190**

**Table 2: Levels of Activity Among Gold Mining Companies . . . . . 257**

Appendix "C" Table 1  
Mining Company Statistics

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Kewatin Mining Company	July 4, 1882 (Dominion Application only - Letters Patent never obtained)	\$1,000,000 @ \$10 ea		Hon. John Norquay, Esq. Hon. Corydon P. Brown, Esq. Alexander Logan, Esq. John Allan, Gent. (Winnipeg) W.E. Sanford, ? (Hamilton) George D. Taylor, Journalist (Montreal) Gen. Francis E. Smith, Esq. John E. Ingersole, Esq. Wm. T. McBride, Esq. Michel A.W. Meagher, Lawyer (New York)	Hay Island	Winnipeg
Argyle Mining Company	March 6, 1883 (Dominion)	\$1,000,000 @ \$100		Hon. W. Nelson Hood Arthur W. Ross, M.P. Albert C. Killam Peter J. Brown Henry N. Ruttan Alexander Haggart Malcom A. Maclean Peter McCarthy Joseph Wolf, Stephen Knight William L. Boyle (Winnipeg) Alexander McFadyen (Rat Portage)	Argyle [Three Nuns] (P552)	Winnipeg?
Winnipeg Consolidated Gold Mining Co., Limited	March 14, 1883 (Dominion)	\$1,000,000 @ \$50	John R. Brown (\$5)	Arthur W. Ross, MP Henry N. Ruttan, C.E. John B. Berryman Peter J. Brown John R. Brown (Winnipeg) [1 American, 6 Canadians - Moore]	Winnipeg Consolidated (F22, X82)	Winnipeg

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Manitoba Consolidated Gold and Silver Mining Company	May 10, 1883 (Dominion)	\$2,000,000 @ \$20	Hugh Sutherland (President)	Hugh Sutherland Andrew R.J. Bannatyne Charles T. Gregory Fesden C. Butterfield, M.E. Robert F.F. Timms (Winnipeg)	Manitoba Consolidated	Winnipeg?
The Mining Investment Company of Canada	May 14, 1883 (Dominion)	\$300,000 @ \$100		Thomas H. Carman Henry N. Ruttan, C.E. Alexander Logan John McDonald Sedley Blanchard Thomas Howard James Brady Arthur W. Ross, M.P. Andrew G. B. Bannatyne (Winnipeg) William B. Scarth (Toronto)	Pine Portage (?)	Winnipeg?
The Northern Gold Mining Company (Incorporated in Michigan?)	1888? (Davies & Smith) 1891 (OBM '93)	\$1,250,000 (OBM 1893)	George Dulmage (92) J. Sutherland (Gold Hill - 1896) Wm. James (Gold Hill - 1896)	Louis S. Coos Robert W. Bernett R.W. Bird W. Carpenter J.R. Wright? (?) Daniel B. Burdett (Minn)	Gold Hill (70K), Golden Slipper	Michigan
The Sabaskong Lumber and Mining Company, Limited	Nov. 12, 1888 (Dominion)	\$20,000 @ \$10		Alfred J. Parsons John H. Chaloner C.W. Chadwick Henry Bulmer (Rat Portage) John F. Mackie (?)	Sabaskong (Locations 1 to 18, Indian Reserve 38B)	Rat Portage
The Maple Leaf Gold Mining Company of Ontario, Limited	May 1, 1889	\$20,000 (@ \$10)		George Witherspoon James Verral David Eckert Joseph Butler George Cavil Scott (Chatham)	82V (S.E. of Taché Station, Patent Register ref. #20, 2 Apr. 1889)	Chatham



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Ontario Mining Company, Limited	Aug. 2, 1889 (Dominion)	\$20,000 @ \$10		Hon. Gilbert McMicken Hamilton McMicken A.C. McMicken H.G. McMicken Andrew Blackwood William Blackwood (Winnipeg) G. Heenan Alfred Parsons Matthew Hunter John Chaloner (Rat Portage) James G. Bennett (Duluth) Charles Hoare George Wainwright Herbert Belch Hon. Thomas Howard George Frisbee John A. Kirk Mortimer Wheeler (?)	Ophir (A20)	Winnipeg
Canadian Milling and Reduction Company	1889 (US, OBM, 1893)	\$200,000			Rat Portage Red. works	Illinois
Lake of the Woods Gold and Silver Reduction Company, Limited	April 16, 1890	\$500,000	Henry J. Powers (90- Nov.91) Robert Linn (Nov.91- Jan.92) Charles Brc (Jan.92- Aug.92)	Hugh Kennedy (Rat Portage) Henry Powers, M.E. (Colorado, Rat Portage, Helena, Montana) Robert Linn (Cleveland) Edward Drewery Robert T. Riley (Winnipeg)	Rat Portage Reduction works	Rat Portage
The Gold Rock Mining and Smelting Company of Algoma and Nipissing, Limited	Jan. 23, 1892	\$100,000		Joseph J. Davies William McCabe Elmer S. Townsend Walter T. Newman (Toronto)	Gold Rock? (HP405, HP407)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Homestake Mining Company of Algoma, Limited	Apr. 23, 1892	\$300,000	James Hildreth (92)	D.L. Mather R.A. Mather (Keewain) William Creighton J.M. Savage James Hildreth (Rat Portage)	Homestake (P386, P387)	Rat Port.
Taché Gold Mining Company of Ontario, Limited	Nov. 3, 1892	\$500,000		Saml. Barfoot Joseph Butler George Scott James Verral John Reeve (Chatham)	82V (per Patent Register)	Chatham
The Rat Portage Land and Mining Company, Limited (2nd application changed to Rat Portage Mining Company, Limited but never incorporated?)	Jan. 17, 1893 (Application)	\$1,250,000		Parlan Semple (Esq) (Oshkosh, Wis) Arthur Boyce (lawyer) Edward Barnes Albert Upton (miners) (Rat Portage) Alexander Hay (esq) (Duluth)	Black Jack [Bulldog] (X90)	Rat Portage
The Rat Portage Mining Company, Limited (a.k.a Black Jack Mining? Probably was Rat Portage Mining & Reduction Co. referred to in District & H.C.J. Court files and OBM Report)	March 7, 1893 (Application)	\$3,000,000 (@ \$5)		Parlan Semple (Esq) (Oshkosh, Wisc.) Arthur Boyce (lawyer) Edward Barnes Albert Upton (miners) (Rat Portage) Alexander Hay (esq) (Duluth)	Rat Portage Red. works Black Jack [Bulldog] (X90)	Rat Portage
The Bullion Gold Mining Company of Ontario, Limited	Feb. 18, 1893	\$300,000		C.W. Chadwick Jeff Hildreth Samuel Gillman Alexander Rose (R. Portage) [Edgar Brown of Duluth dropped out and Rose added after application]	Bad Mine (349P); Monarch; Mac 26 & 27; Bullion No. 1 (S106, S107) (Src: Davies & Smith)	Rat Port.

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Saw Bill Lake Gold Mining Company, Limited	May 26, 1896	\$100,000 (to \$125,000 on June 2, 1897)	F.S. Wiley (1897) G.H. Botherton, Supt (1897) J.B. Schroniz, Supt (1897) C.C. Schroniz, Supt (1897)	Harold Wiley George Marks Frank Wiley (Port Arthur) William Southam John H. Tilden John Hoodless Thomas W. Lester Henry Kitson Henry Beckett Francis Bruce (Hamilton)	Sawbill (313X)	Hamilton
Lake Harold Gold Mines Company, Limited	June 12, 1896	\$150,000		Harold Wiley Frank N. Gibbs Frank E. Gibbs George Marks Frank Wiley (Port Arthur)	Harold Lake (X219)	Port Arthur
The Pipestone Gold Mining Company, Limited	Aug. 6, 1896 (Licensed)	\$500,000				England
Seine Manitou Gold Mining Company, Limited	Sept. 9, 1896	\$100,000		Charles Hollands Walter Keating (Ft. Frances) William Cawthra Edmund Bristol (Toronto) Simeon Janes (Broker)	HW96 (Manitou Straits per Patent Register, ref. #764)	Toronto
Mackenzie Lake of the Woods Gold Mine, Limited (became Princess Gold Mining Company of Ontario, Limited?)	Sept. 18, 1896 (Application)	\$500,000	E. MacKenzie, agent	Ewin MacKenzie (supt) Thomas Shortiss (broker) John Flett Henry Lowndes (merchants) Henry O'Brien (lawyer) (Toronto)	Princess (D118)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Lake of the Woods Gold Mining Company, Limited (became Rat Portage Gold Mining Company, Limited?)	Sept. 22, 1896 (Application)	\$1,000,000		D.C. Cameron (lumber merchant) Angus Carmichael (merchant) Hugh Armstrong (fish dealer) C.W. Chadwick (real estate) Henry Langford (lawyer) George Barnes (Merch) (Rat Portage) Alex. MacDonald (merchant) (Winnipeg)	Master Jack (P203)	Rat Portage
Gold Explorers of Canada, Limited	Oct 26, 1896 (Licensed)	£100,000	A.H. Ahn (97) Frank Fuller (96)		Edna Mine [McA29](97) Standard [McA51] (96) Queen [McA46](?) (96) To purchase Mines Contract Company, Ltd. for £80,000	England
Imperial Mining and Development Company of Ontario (may have been a name conflict with Toronto company incorporating at same time)	Oct. 21, 1896 (Application)	\$500,000		Thos. W. Taylor (bookbinder) Duncan G. McBean (grain merchant) Henry Byrnes (merchant) Lendrum McMeans (lawyer) Geo. A. Glines (real estate) (Winnipeg)	Imperial (D397)?	Rat Portage
Princess Gold Mining Company of Ontario, Limited	Oct. 21, 1896	\$500,000	John Collins (97)	Thomas Shortiss Henry O'Brien John Flett Henry Lowndes (Toronto)	Princess (D118)	
The Rat Portage Gold Mining Company, Limited	Oct. 28, 1896	\$1,000,000	D.C. Cameron, President John Challoner, Secty (Rat Portage)	D.C. Cameron Angus Carmichael Hugh Armstrong C.W. Chadwick George Barnes (Rat Portage)	Master Jack [P203]	Rat Portage

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Ontario Mines Development Company, Limited	Oct. 30, 1896	\$50,000		James Conmee (Port Arthur) John Flett Hume Proudfoot Alfred Wilson James Van Sommer (Toronto)	Foley (AL74, AL75)	
The Ontario and Central Canadian Prospecting and Mining Company (became Atlas Gold Mining?)	Oct. 31, 1896 (Application)	\$90,000		Hon. H. Macdonald (lawyer) Jeremiah Robinson (merchant) Henry Drummond (banker) James Naismith (hotel-keeper) Albert McMicken (accountant) Alexander Haggart (lawyer) (Winnipeg)		Rat Portage
The Preston Gold Mining Company of Seine River, Limited	Nov. 4, 1896	\$50,000 (to \$500,000 28/12/98)	(See Olive Mine for management tree)	William Blackwood Andrew Blackwood Dr. Alfred Simpson Mary Nielson (Winnipeg) Wm. Preston (Mine Centre)	Olive (G60, G61)	Rat Portage
Mikado Gold Mining Company, Limited	Nov. 6, 1896 (License)	\$225,000	N. McMillan, Man (1900) T.R. Deacon, Supt (1900) N.C. McMillan & F.C. Pengilly, joint managers (1899) T. Breidenbach, ME and gen. man (1898) F.C. Pengilly, (Australia) Supt of mill (1898) C.W. Engledue (96) C. MacNichol (96)	Under Agreement with the South African General Development Syndicate, Ltd.	Mikado (D147, D148, D149)	England

Appendix "C" Table 1: Gold Mining Companies

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Rainy River Gold Mining Company, Limited	Nov. 4, 1896	\$1,000,000	James Weidman? (99)	Thomas Deacon Henry Langford Charles Neads Nelson Schnarr Thomas Wash Harry Wright (Rat Portage)	Electro-Gold (1/3 of lot 13, Jaffray Tnp), Wimor (289P)	Rat Portage
The Western Ontario Mining Company, Limited	Nov. 18, 1896	\$1,000,000		Morison Kyle Charles S. Morris Gustavus Kobold John Humble Henry Langford (Rat Portage)		Rat Portage
The Western Ontario and Manitoba Gold Mining and Development Company, Limited	Nov. 21, 1896 (Application)	\$750,000		John F. Howard John Dick Thomas H. Gilmour Andrew Kelly (Winnipeg) Edward Grain (Manitoba) Donald McDonald (Saskatch.)		Rat Portage
The Foley Mines Company of Ontario, Limited (originally applied for under the name of Ontario Gold Mines Company, Limited on 22/7/96)	Nov. 25, 1896	\$1,000,000	J.C. Foley (96)	Rudolph Demme (Detroit) Charles N. King (N. Jersey) Thomas Hurley Henry Weston Fred. Coming, M.E. Henry Berlin (NY, NY) Arthur Ellis (Windsor)	Foley (AL74, AL75)	Windsor

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Lake Harold Gold Mines Company, Limited	Dec. 9, 1896	\$1,000,000	F.N. Gibbs (1895-97) William Peters (mill manager 1895)	Frank E. Gibbs Joseph King Harold Wiley James O'Connor Thomas Marks George Marks Franklin Wiley (Port Arthur) William Plummer (S. St. Marie) Charles H. Ritchie Robert Davies (Toronto) Charles Spencer (Montreal) William Laird (NY NY)	Harold Lake (X219)	Port Arthur
Yum Yum Gold Mining Company of Ottawa, Limited	Dec. 24, 1896	\$1,000,000	H.A. Guess (99) J. Burley Smith (97) R.H. Flaherty (97)	John Mather John Coates, C.E. Charles Magee Denis Murphy John Burns Edward Seybold (Ottawa)	Yum Yum (S94)	Ottawa
The Standard Mining and Development Company of Ontario, Limited	Dec. 24, 1896	\$500,000 @ \$1	James C. Beebe (1898)	Thos. W. Taylor Duncan McBean Rodman Roblin Henry Byrnes Alfred Andrews John G. Morgan George Glines William Watson Fred. Hubbard (Winnipeg)	Emperor (656P)	
Golden Fissure Mining Company of Ontario, Limited	Dec. 24, 1896	\$1,000,000		William Burrett Donald McDonald William Kennedy Frank S. Wells (Toronto) John Sill (original owner '96?) (NY NY)	Golden Fissure (5RM)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Ontario Miners' Development Company, Limited (Dead-end?)	Ont Gazette 1st notice, 1896 p.430	\$150,000		James Conmee (Contractor) George Clavette (Merchant) (Port Arthur) John Flett (Merchant) Hume Proudfoot (Surveyor) Alfred Wilson (Gent) J. Van Sommer (broker) (Ottawa) H.N. Kitson (Merch) (Hamilton)		Toronto
The Colcleugh Gold Mining Company of Rat Portage, Ltd.	Dec. 2, 1896	\$475,000	C.P. Kelpin (Man)	John Colcleugh George Drewery J.M. Savage D.L. Mather (Rat Portage) John Arbutnot (Winnipeg)	La Mascotte (S79)	Rat Portage
Western Canada Gold Mines Company, Limited	Dec. 21, 1896	\$750,000		Edward Whitehead James Steen George Bryan Henry Crouy Richard Jameson John Plaxton Herbert Wilson (Winnipeg) David Wilson (Orange Ridge, Man) Robert Henry Agur Robert Beck (Winnipeg)		Rat Portage
The Sweden Gold Mining Company of Ontario, Limited	Jan 6, 1897	\$500,000	Charles E. Carbert? (1896)	Thomas H. Fahey Thomas Black Abraham Buehler Josiah Robarts (Winnipeg) Joseph Herman (Rat Portage)	Sweden (D58, 447P)	Rat Portage



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Grimsby Gold Mining Company, Limited	Jan. 8, 1897	\$200,000	J.A. Livingstone (97)	Francis Baker Murray Fitch John Kerman Herbert Kerman Charles Van Duzer James Livingstone (Grimsby)	Lone Jack (Lot 11, 1st Conc., Van Horne Twnshp)	Grimsby
Dominion Gold Mining and Reduction Company, Limited	Jan. 9, 1897 (Licensed)	£200,000	Alexander Hay (1900) Wm Peters (1898) Charles Smith (Gold Hill - 1897) A. Kingsmill (Gold Hill - 1897) J. Sutherland (Gold Hill - 1896)	Somerset F. Gough-Calthorpe E. Allen Robinson M.W. Elphinstone A.L. Foster Count Oscar Von Reichenbach David Ziman A. M. Hay	Rat Portage Reduction Works, Black Jack (X90), IXI, Excelsior, Jerusalem, Gold Hill (70K), Golden Slipper, 192P, Judge Mills, Combination, Golden Gate, Sultana Jr, K100, Elphinstone (P188), Yellow Girl (57V), Homestake, Queen of Sheba	England
The Toronto and Western Mines Development Company, Limited	Jan. 13, 1897	\$50,000 (to \$99,000 then to \$250,000 by 7 Jun 97)	Peter McKellar (1897) John T. Moore (1898) H.F. Downing, Foreman (1898)	Frederick Wyld John Flett Alexander Allan James Caruthers James K. Kerr (Toronto)	Toronto & Western (40IX Sawbill Bay); Sirdar (D410) and Sirdar Point (S182) [1897-98]	Toronto
The Gold Mountain Mining Company, Limited	Jan. 16, 1897 (Application)	\$2,500,000 @\$1		Albert E. Jones (London, Engl.) [Gentlman] Harry Jones (Niagara Falls, NY) [Manuf.] John S. Dignam [Manuf.] Francis Phillips [Contractor] Frederick Dela Vignie [Mining Expert] (Toronto)	Gold Mountain (48P)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Lakeside Gold Mining Company of Rat Portage, Limited	Jan. 16, 1897	\$750,000 @ \$1		Edward R. Whitehead James E. Steen George F. Bryan Henry S. Crotty Richard W. Jameson John Plaxton Herbert G. Wilson Robert H. Agur Herbert H. Beck (Winnipeg) David Wilson (Orange Ridge, Man.)	D463 (So. of War Eagle Lake); AD69 (No. of 4th Mer., Nivens Base Line), S113 (War Eagle Lake); G120 (Between Little Turtle L. & Bad Vermillion L.)	Rat Portage?
The Atlas Gold Mining and Development Company of Rat Portage, Limited (Originally applied for as Great Northern Gold Mining and Development Company of Rat Portage but name conflicted with another company being incorporated at S. St. Marie in Dec. 1896)	Jan. 20, 1897	\$90,000		Hon. Hugh J. Macdonald Henry Drummond Maj. F.J. Bowles Albert McMicken (Winnipeg) Maj. R. McLennan (Alexandria) Louis Hilliard (Rat Portage)		Rat Portage
The Crocus Gold Mining and Development Company of Rat Portage, Limited	Jan. 23, 1897 (Application)	\$195,000		Hugh J. Macdonald Jerry Robinson William Williams (Winnipeg) R. McLennan, MT (Alexandria) James Linton (Montreal) Thomas Kennedy (Rat Portage)		Rat Portage
Gold Hills Exploration & Dev. Co. (late addition added to data in February 1996)	27 Jan. 1897	\$2,000,000		James D. Edgar, Q.C. Oronhyatekha and Fredrick W. Strange, M.D. John Foy William James Douglas George McMurrich (Toronto) John George Bowes (Hamilton) Joseph B. McArthur, Q.C. (Rossland, B.C.)	D637 & D642 (Yellow Girl Bay); JO91 & JO92 (S. Shore of Piarmigan Bay); Patents Registered 22 Jan. 1898 (Ref. 1174 & 1407)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Hawk Bay Gold Mining Company, Limited	Jan. 29, 1897	\$150,000	H.A. Wiley (97) W.A. Harvey, Supt (1897)	John H. Tilden Henry Kintson Henry Beckett Francis Bruce Sidney Mewburn (Hamilton) Harold Wiley George Marks Franklin Wiley (Port Arthur) Hugh McLean (Publisher) (Toronto)	Hawk Bay (324X)	Hamilton
The Neepawa Gold Mining Company of Ontario, Limited	Feb. 3, 1897	\$1,000,000	F.W. Guernsey (97) (Gazette showed James Davidson as local manager) H.D. Alston (Royal Sovereign - 1901)	David Harrison John A. Davidson Bethuel Hamilton James H. Davidson (Neepawa, Man) Alexander Trotter (Brandon, Man)	Bee Hive, Neepawa Mines (PA11 & PA459), Victory (McA28), Royal Sovereign [HW54, 87, 253 & 253A]	Rat Portage
Rupert Land Mining Company of Ontario, Limited	Feb. 5, 1897	\$200,000		Robt. Campbell Henry Costigan Thos. Lock Robert Wilson Jas. Thompson Joseph Huxley (Winnipeg) John Brown (Russell, Man)	G59 (No. of Wild Potato L. per Patent Register, ref. #1080); HW221 (E. of Wabigoon Sta., ref. #1361)	Rat Portage
Imperial Gold Mining and Development Corporation of Ontario, Limited	Feb. 6, 1897 (Application)	\$2,500,000	A.A. (1900)	Robert S. King (Treasurer) Jos. Montgomery (Law Student) Wm. H. Jones (Manufacturer) Edward Trousedelle (Gent) Fred. D. Vigne (Mining Expert) John S. Dignam (Manufacturers (Toronto) Albert E. Jones (Gent) (London, Engl)	Imperial (D397)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Gagne Island Mining Company, Limited (First applied for as "Lady of the Lake Gold Mine Co. of Ottawa - Dec. 9, 1896. Arthur Seybold dropped out before Letters granted)	Feb. 12, 1897	\$500,000 @ \$1	F.W. Bindon (1897)	Albert Hudson Fred. W. Bindon Alex. Bannerman John W. Wurtel Taylor McVeity (Ottawa)	Gagne Island [a.k.a. Lady of the Lake](157K)	Ottawa
The Nugget Gold Mining Company of Rat Portage, Limited	Feb. 12, 1897	\$50,000		David Elair Adams Archbald Hartstone John Dick Herman Kobold James Simpson Robert Harvie (Winnipeg) Richard Hall (Rat Portage)		Rat Portage
Queen Bee Gold Mining Company of Ottawa, Limited	Feb. 15, 1897	\$1,000,000	J. Burley Smith (1895 CMI)	Levi Crannell Walter Bronson William A. Clark Agnes Fraser (Ottawa) J. Burley Smith, M.E. (Que)	Queen Bee (390P)	Ottawa
The Burley Gold Mining Company of Ottawa, Limited	Feb. 15, 1897	\$1,000,000	P.W. Webster (1899) R.H. Flaherty (1898) J. Burley Smith (97)	Levi Crannell William Clark Angus Fraser William Craig (Ottawa) J. Burley Smith, M.E. (Que)	Burley (D193A)	Ottawa
The Bald Indian Bay Mining and Investment Company, Limited	Feb. 15, 1897	\$6,000	A.W. Fraser, Agnt	Levi Crannell William Clark Angus Fraser William Craig (Ottawa) J. Burley Smith, M.E. (Que)	D154, D193B	Ottawa

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Wabigoon Free Milling Gold Mining Company, Limited (a.k.a. "Gold Quartz Free Milling, Mining and Development Co.")	Feb. 17, 1897	\$1,000,000		Robert T. Johnson, C.E., O.L.S. Dr. William Stuart Chris. C. Robinson William Wallbridge Archibald Mills Barnette Laurence Harriet M. Jewell (Toronto)	V33 [Hyndman Twp. Occurrence, Gold Quartz Mining Co. Occurrence]	Toronto
The Nan Ki Poo Gold Mining Company of Ottawa, Limited	Feb. 17, 1897	\$1,000,000	A.W. Fraser, Mngr	Dr. Albert Edmison (Rat Portage) John Murray Clark James Todhunter (Toronto) William Clark Angus Fraser (Ottawa) J. Burley Smith, M.E. (Que)	Nankipoo [S97]	Ottawa
The Free Gold Mining and Development Company of Toronto, Limited (Became John Sykes Mining in 1899?)	Feb 20, 1897 (Application)	\$2,000,000		John Sykes (Glen Williams) Sidney McKinnon Dr. William Stuart Dr. Norman Allen Robert Wood James Baird W.H. Wallbridge (Toronto)	John Sykes (SV105)	Toronto
The Jubilee Gold Mining and Development Company of Ontario, Limited	Feb. 27, 1897 (Application)	\$1,000,000	W.M. Caldwell (97)	John F. Howard (Merchant) Walter MacDougall (Accountant) Dr. Alfred Simpson (Winnipeg) Nathaniel Wheeler (Traveller) Anson McKim (Agent) (Montreal)	Jubilee [Elora] (HP301)	Rat Portage

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Black Sturgeon Mining Company of Ontario, Limited	March 1, 1897	\$1,000,000	Andrew Benson (97)	Hon. Hugh J. Macdonald Herbert Beck William Sweatman Robert Agur Dr. Robt Blanchard William Nichols (Winnipeg) William Edwards Newton Westerfield (St. Paul) George Hamilton (New York, NY)	Black Sturgeon (Haycock Tp. lot 11, con. VI); HW180 (Upper Manitou - per Lands Registry Ref. #900); South ½ Lot 16, Conc. Jaffray Twship	Rat Portage
Security Gold Mining & Dev. Co. of Ontario (late addition added to data in February 1996)	1 March 1897	\$1,500,000		Hon. Samuel C. Wood Hon. James C. Aikins George S. Ryerson, M.D. William H.B. Aikins, M.D. Thomas R. Clougher Mercer J. Adams Thomas Long (Toronto) William H. Boorne (Vancouver, B.C.) Joseph Hartich Walter J. Doughty (NY, NY) William G. Thurston (Toronto)	HW302 (NW arm of Minnieakie L.; patent registered 23 Sept. 1898 [Ref. #1385])	Toronto
The Coronado Gold Mining Company of Rat Portage, Limited	March 3, 1897 (option to Sentinel Consol. 1898)	\$40,000		Geo. Drewery Geo. Girard John Colcleugh J.M. Savage Arthur Boyce (Rat Portage)	Sentinel (WA7, WA8, WA9); also patented G25	Rat Portage
The Bath Island Mining Company, Limited	March 3, 1897	\$750,000	J.F. Mievile (1898) C.W. Fraser, contractor (1898)	John Galt, C.E. & M.E. John Gray Robt. M. Gray Ralph K. Burgess Wm. H. Collison Jno. Ferguson (Toronto)	Bath Island (504P, 589P)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Darlington Bay Gold Mining Company, Limited	March 6, 1897 (Application)	("\$ ____" on application)		Herbert Beck Newton Westerfield Robert Agur Hugh J. Macdonald (Winnipeg)		Rat Portage
The Seine River and Manitou Gold Mining and Development Company, Limited	March 6, 1897 (Application)	\$2,000,000		James A. Lowell (Gent) (Niagara) Edgar Jewett (Manufacturer) (Buffalo) Elton Ransom (Merchant) (NY) John Devereaux (Hotel) Frank LeBlond (Steamboat Man.) (Niagara, NY)		Niagara
The Original Swede Boys' Prospecting Company of Rainy River, Limited	March 10, 1897	\$90,000	John McLeod (1899)	John Berg George Asplund John Franson August Franson Erik Franson (Rainy Lake City)	Swede Boy [Headlight] (E237, E238)	Ft. Frances
The Golden Gate Mining and Development Company of Rainy River, Limited	March 10, 1897	\$300,000	R.H. Ahn (1896) Wm. James (1896) W.A. Laycock (1897)	Francis FitzGerald (Port Arthur) Arch. Macdonald (Guelph) James Warner (NY, NY) R.H. Ahn (Rat Portage) George Sackman Robert LeVesconte (Toronto)	Golden Gate? (208P)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Anglo-Ontario Exploration Company, Limited (first applied for as the Foley Mines Exploration Company of Ontario)	March 15, 1897	\$1,000,000 @ \$1	J. Foley (1897) R.H. Flaherty, M.E. (1897)	Rudolph Demme Edwin Husher (Hersher?) Samuel Babcock Hans Ruitshausen (Detroit) Arthur St. George Ellis (Windsor) Edmond Bristol William Cawthra (Toronto)	Foley (AL74, AL75)	Toronto
The Hammond Gold Reef Mining Company, Limited (First applied for as "West Sawbill Gold Mining company of Ontario")	March 17, 1897	\$1,000,000	J. Hammond (1898)	Benjamin Folger (Kingston) James Hammond (Ft. William) Walter Macdonald William Garvey (Toronto) Robert Sproule (Toronto)	Hammond Reef (337X, 338X)	Toronto
The Ambrose Mine and Development Company, Limited	March 19, 1897	\$1,000,000		S.C. Wood (Toronto) Peter Campbell Charles Cameron (Collingwood) Frank E.A. Cott (N.Y. N.Y.) Lewis Walsh (Port Arthur)	Ambrose [Gull Island] (K65), 470P (Lands Registry Book)	Toronto
The Webbwood General Mining and Development Company, Limited	23 March 1897	\$490,000		George Bayes (Farmer) Alexander Beck (Baker) George Beck (Lumberman) (Webbwood) John Robinson (Farmer) (May, Ont) Pete McCray (Shoe Merchant) (Gore Bay)		Webbwood



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Climax Gold Mine Company of Ontario, Limited	March 23, 1897	\$1,000,000	Fred Wagner (97)	Thomas Black Geo. Walker William Williams Benjamin Chaffey (Winnipeg) James Linton (Montreal)	Climax (P325), [Also contracted to do work on Dead Broke, (P64)]	Rat Portage
The Czar Gold Mining Company of Ontario, Limited	March 23, 1897	\$1,000,000		John Russell Josia Robarts Stephen Cummins William Mulock William Palk (Winnipeg)		Rat Portage
Queen of the Lakes Gold Mining and Development Company of Ontario, Limited	March 23, 1897	\$1,000,000 @ \$1		David Harrison John Davidson (Neebawa, Man.) John F. Howard George F. Bryan Abrm. Buehler Wm. R. Mulock (Winnipeg)	HW209 (Patent Register, ref. #1804, So. of Upper Manitou - Mosher Bay?)	Rat Portage
The Uphaz Gold Mining and Development Company of Ontario, Limited	March 27, 1897 (Application)	\$1,000,000		William McLeod (RR Ticket Agent) Thomas P. McIntyre (Traveller) Josia T. Robarts (Solicitor) James Cleghorn (Agent) (Winnipeg)	Probably was S36, leased by Cleghorn & Dick of Winnipeg in 1896, No. of Andrews Bay, Pipestone Point	Rat Portage
The Seine River Mining and Development Company, Limited	Apr. 3, 1897 (Application)	\$600,000 (@25¢)		John Leslie (Gent) Arthur S. King (Merch) Alfred Wislere (Gent) Sidney White (Gent) William Wallbridge (Lawyer) (Toronto)		Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Scramble Gold Mining Company of Ontario, Limited	April 7, 1897	\$1,000,000	William Strong (99) S.V. Halstead (optioned in '95)	Levi Partridge Edgar Williamson (Detroit) Herbert Beck Robert Agur (Winnipeg) Sargeson Halstead (Rat Portage)	Scramble (Jaffray Tp., Con. VI, Lots 13 & 14)	Rat Portage
Keewatin Gold Mining, Prospecting and Development Company, Limited	April 7, 1897	\$750,000		Samuel Hunter Thomas Shaw Nils Hanson Ronald Gilchrest Alpheus McFadden William McCraig Hamilton Echlin Cyrus McFadden (Keewatin)		Keewatin
The Shoal Lake and Seine River Mining Company, Limited	April 7, 1897	\$600,000		John C. Hunter Arthur Crassweller Ronald M. Hunter Angus Macfarlane James C. Hunter (Duluth)		Seine City
The Gold Brick Mining and Development Company of Saw Bill Lake, Limited (first applied for as Toronto Saw Bill Gold Mining Co.)	April 7, 1897	\$500,000		Joseph Mathe Mary Mathe Charles Martin Catherine Matheson (Ft. William) David McKay Joseph Naughton (W. Superior, Wis) George H. Watson (Toronto)	Sawbill?	
The Ottawa Gold Milling and Mining Company, Limited	April, 9, 1897	\$1,000,000	H.A. Guess (KRW & Scotty Island (JC100) 1899) N.B. Wilcox (1898) F.T. Snyder (1897)	John L. Mather (lumber baron) Edward Seybold James Gibson (Manufacturers) William A. Clark (Express Agent) Angus Fraser (Lawyer) (Ottawa)	Keewatin Reduction Works, Sakoose, Yum Yum; option on Scotty Island	Ottawa

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The La Reine Gold Mining Company of Ontario, Limited (First applied for as Northern Ontario Gold Mining. Later renamed "The Mutual Gold Development Company of Ontario, Limited" 26/4/99)	April 12, 1897	\$1,000,000	Charles Lewis, Pres Wm. Underhill, Scty	Arthur J. Jackson (Toronto) George Drewery J.M. Savage George Girard John Colcleugh (Rat Portage)	JL58, HP155, HP156, JO56, JO48, JO67, AL170, AL172, AL173, JO66 (Bad Vermillion area, patented to Mutual Gold in July 1899)	R. Portage (M.Centre 1899)
The Assaying and Smelting Company of Ontario, Limited	Apr. 14, 1897	\$75,000		William Henry Wm. Pettigrew Walter Jordan Hunter Cooper Geo. West (Winnipeg) Wm. S. Grout (Rat Portage)		Rat Portage
The Mandarin Gold Mining Company of Ontario, Limited	April 14, 1897	\$300,000		Fred Armstrong John M. Bowman Charles Boon Edward Hearm Edward Morgan Dr. Henry Matchell Samuel McKeown Dr. Chas. McKenna Alexander Purse Strachan Robinson Chris. Robinson William Sanderson William F. Tasker (Toronto) Edward Carpenter. MPP (Simcoe)	Mandarin (SW part of Lot 11, Conc. 8, Jaffray Twnshp)	Toronto
The Aurora Gold Mining and Development Company of Ontario, Limited	April 14, 1897	\$1,000,000		James Ashdown Robert J. Whilla Dawson Elliot James Thompson John Codville John W. Peck Alex. B. Bethune Wm. Georgeson (Winnipeg) Wm. Phair (Ft. Frances)		Wabigoon

Appendix "C" Table 1: Gold Mining Companies

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Ontario Reefs Mining and Development Company, Limited (First applied for as the Northern Ontario Development Company)	April, 17, 1897	\$5,000,000		Frank Morley John N. Lee Sydney Redway George Hamer Alfred Hunter (Toronto)	Golden Reef [Mikado Reef] (D484-489)	Toronto
The Ontario Prospectors' Mining and Development Company, Limited	April 21, 1897	\$1,000,000	Neil Campbell (1897-1900)	Thomas Ferguson Dr. James Chapman Neil Campbell (Rat Portage) James Wickham William Somerville Andrew Robertson (Keewatin) Estras Truby (Chicago)	Stella (S87, S86) [Contact]	Rat Portage
The Kabaskong Gold Mining Company of Ontario, Limited	April 21, 1897	\$500,000		James Hammond (Explorer) (Ft. William) William Dobie Daniel Burk (Gents) James Whalen (Contractor) Thos Gorham (Esq) (Port Arthur)	Kabaskong (361X, south ½)	Port Arthur
The Mohawk Mining Company of Rat Portage, Limited (Application first taken out as "Sovereign Mining Company, Limited" 26/12/96)	April 21, 1897	\$495,000 (to \$1,000,000 14/3/1900)		Dr. Charles Clark Henry Byrnes Albert McCutcheon Donald Dingwall William Pettigrew John Haney Robert Nunn (Winnipeg)	Sovereign?	Rat Portage

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Golden Island Mining Company of Rainy River, Limited [first applied for as "Rainy River Mining, Exploring and Dev. Co.]	April 30, 1897	\$750,000		William Colcleugh George Brebber James Morison William Conner John Corley Scott Pennock Dr. M. McPhaden Alexander Clarke Robert Brown John Noonan Allan Lamont William G. Scott Alexander Hackett William Roberts Thomas Collins James Corley Alexander Robertson Alexander Baker (Mount Forest) Charles Duncan Peter H. Black Milton Wilbee (Brantford) Archibald Ritchie, M.E. (Kewatin)	D605, D607 [From application for Letters Patent dated 6 Feb. 1897]	Mount Forest
The Rand Gold Mining Company of Wabigoon, Limited (First applied for as "Western Algoma Gold Mining Company of Wabigoon")	May 5, 1897	\$1,000,000		George Aske William Cowan (Brandon, Man) Thomas McNea James McDougall John S. McKellar (Wabigoon)	Northern Queen (HW130)	Wabigoon
The Golden Prince Mining and Development Company of Algoma, Limited (Applied for originally as Golden Queen)	May 5, 1897	\$750,000		John Barron (Lindsay) Thomas Clarke Henry Buckland Joseph Thompson (Toronto) Nelson Simpson (S.St. Marie) Henry Baumgarten (Ottawa)	JT10, JT11 (West of Moose Lake, SW of Sawbill Lake, lease registered 28 July 1898)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Consolidated Gold Fields Development Company of Ontario, Limited	May 5, 1897	\$2,000,000		Frank Morley Ernest Sawyer Donald McDonald Valentine Bedford Allan Macdonald (Toronto) Thomas Howarth (Oakville)		Toronto
Willow Creek Gold Mining & Development Co. of Brantford Ontario (late addition added to data in February 1996)	May 6, 1897	\$99,000		Eldoras Todd Finley McCallum Oliver Clark Fredrick C. Harp Duncan A. McCallum (Brantford, Ont.)	P767 (Shoal Lake - Seine River; Patent Registered 18 Jan. 1898 [Ref. #1168])	Brantford
The Manitou Gold Mining Company, Limited	May 12, 1897	\$1,000,000		Anthony Blum (Texas) Alex. Sutherland John Keddy William Wilson Andrew Rankin D. Anson Reesor Albert Philp (Brandon)		Rat Portage
Hay Island Gold Mining Company, Limited	May 21, 1897 (Dominion)	\$600,000 @ \$1	John Kenty (97)	James Cooper Edward Greenshields James R. Wilson John Macintosh (Montreal) Lendrum McMeans (Winnipeg)	Hay Island [Keewatin]	Montreal
The Golden Star Mining and Exploration Company of Ontario, Limited (Reorganized into the Golden Star Mining Company 21/1/1901)	May 26, 1897	\$1,000,000 @ \$1 (increased to \$1,200,000 on 17 May '99)	Edward Ward (1897) Thomas Merritt, Supt. (1898) R.A. Kerr (1899) R.H. Flaherty, M.E. (1900) Geo. Verry, Supt (1900) H.H. Wood, Man. (1900)	Thomas Merritt John Macdougall George Burgess James E. Smith Albert McManus (Duluth) A.G. Hubbell Vernon Chappel (Manistique, Mich) Edward Ward (Rat Portage)	Golden Star (A.L.114)	Port Arthur*

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Mineral King Mining and Development Company of Ontario, Limited	May 26, 1897	\$77,000		<p>William Strong Arthur H. Brown Edmund Meredith Charles B. Hunt Samuel Southcott George Kirk (London, Ont) George Maurer Alexander Dickson (Toronto)</p>		London, Ont
The Fort Frances Mining Company, Limited	May 26, 1897	\$40,000		<p>Albert Cline Henry Round Henry Clarke Walter Keating (Ft. Frances) Albert Keating, M.E. (Oregon) Albert Wilson (Orillia)</p>	G8 [Patented on 23 Oct 1897; small lake No. of Upper Manitou]	Ft. Frances
Winnipeg Mining and Development Company, Limited	June 9, 1897 (Dominion)	\$100,000 @ \$100		<p>James Aikins John S. Aikins James Ashdown Elisha Hutchings Jeffrey Brook Robert T. Riley Wm. Culver Wm. Whyte Edward Drewry Fred Drewry John Somers Jessie M. Wickson (fem) (Winnipeg) Thomas Irving (Toronto)</p>	Winnipeg Consolidated?	Winnipeg

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Combined Gold Mines Company of Ontario, Limited	June 21, 1897	\$1,000,000	J.F. Mieville (1900) A. Patterson (S79-1898)	Robert Humphreys (Penn) Edgar W. Smith (Grimbsby) Marion P. Hatch George Tait Frank Stanley Cobb Henry Breed Edmund Hardy (Buffalo)	Combined (S79 or McA 77)	Niagara Falls, Ont.
Eastern Townships Mining and Development Company of Ontario, Limited	June 23, 1897	\$500,000	H.B. Aylmer Francis Bennetts (Van Home prospect manager 1897)	Henry Alymer Edward Bernard Alfred Hudon (Richmond, Que) John McIntosh William Morris Frank Thomson (Sherbrooke, Que) Charles Church (Durham, Que)	Tabor (Option) (SV258, K912) Van Home; SV161; SV162	
Gold King Mining Co. of Toronto (late addition added to data in February 1996)	July 7, 1897	\$2,000,000		John Craig, M.D. Charles B. Seltzer Thomas S. Lawson Howard R. Buckley William Richardson (Baltimore, Md.)	D644 (So. of Little Chief's Lake, L. of Woods; Lease Registered 21 Sept. 1897 [Ref. #L1002])	Toronto?
The Oriole Gold Company of Wabigoon and Sawbill Lake, Limited	July 21, 1897	\$24,000		W.C. Phillips C.A. Dobson A.G. Carruthers (All Toronto) W.L. Walsh Dr. F.W. Lewis (Orangeville)	Sawbill?	Toronto
The Great Granite Gold Mining and Development Company of Ontario, Limited	Aug. 12, 1897	\$5,000,000	B. Leonard Thome (1898)	William Willard Thomas Gleason (Conn.) Benjamin Gallup (Rhode Island) Francis Putnam (Mass.) Charles Wortham (Buffalo, N.Y.)	Nina (1898) (JES93, JES110) Great Granite (248E, 272E)	



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Hiawatha Gold Mining and Milling Company of Ontario, Limited	Aug. 12, 1897	\$500,000		James Hammond (Ft. William) D.O. Cameron Henry Kyle (Oakville) William J. Douglas Frank McPhillips (Toronto)	Hiawatha (336X) [mine located by Mr. Ken Fenwick of Thunder Bay, an independant researcher]	Toronto
The Gold Creek Mines and Exploration Company of Ontario, Limited	Aug. 19, 1897	\$500,000		John Palmer Sydney Palmer Henry Baird Edmond Ryckman Arthur Kirkpatrick (Toronto)	Gold Creek (P237 or P347?)	?
The AD2 Gold Mining Company of Ontario, Limited	Aug. 19, 1897	\$500,000	E. Falconer (97)	William Fawcett Patrick Leavin William Butchart (Duluth) Joseph Handlan (W. Virginia) John Green (Rat Portage)	AD2	?
The Ontario Exploration and Development Company, Limited (Reorganized from Ontario Exploration Company, Limited, formerly Yellow Girl Gold Mines, Limited)	Aug. 19, 1897 (Licensed)	£150,000			Yellow Girl (P232, P384)	England
The Yellow Jacket Gold Mining Company of Seine River, Limited	Aug. 19, 1897	\$90,000 (Reported as \$300,000 in CGM '98)		William Croft James Goodall Albert J.H. Eckardt John W. Lester Samuel Clarke Sylvester Sharp William S. Milney John Housser Samuel McKeown (Toronto) Robert Palen (Buffalo)	Yellow Jacket	Toronto/ Seine River City

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Canadian Exploration, Limited	Aug. 19, 1897 (Licensed)	? (Not Published)				England
The Mine Centre Development Company, Limited	Aug. 27, 1897	\$50,000		George Campbell John Morton Edmund Johnstone Albert Campbell (Winnipeg) David Blair (Mine Centre)		?
The Railroaders' Gold Mining Company of Ontario, Limited	Sept. 2, 1897	\$500,000	C.C. Schrontz (98) James Hammond (99)	James Hammond L.L. Peltier S.C. Young G.W. Fleming W. Blannerhasset G. Snelgrove (All Ft. William)	AL283 AL282 [Sunbeam Mine]	?
The Chippewa Gold Mining Company of Ontario, Limited (Consolidated into Chippewa Consolidated Gold Mining and Milling Company, Limited 8 May 1902)	Sept. 25, 1897	\$1,000,000 @ \$1		Arthur C. Denniston (Philadelphia) Thomas W. Gleason (Hartford, Conn.) Reuben Paine (Niagara Falls, Ont.) Dexter D. Potter (St. Catharines) James B. O'Brian (Toronto)	Wendigo (MH208)	
The Folger-Hammond Mines Company, Limited	Oct. 7, 1897	\$1,000,000		Sir R. J. Cartwright Benjamin Folger Henry Folger (Kingston) L.C. George Sweny Walter MacDonald William Havelock Robert Sproule (Toronto)	Hammond (337X, 338X)	?

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Cameron Islands Mining and Development Company, Limited	Nov. 10, 1897	\$250,000	Geo. Thurber (1900) A.D. Lord (1899) H.B. Hunt (1898) Wm Caldwell (1897) Wm James, Foreman (1898)	Oren Foster (Buffalo) Jesse J. Foster John Allan Augustus Truss Sylvester Sharp (Toronto)	Cameron Island (S170)	Toronto
Kobold Gold Mining Company of Ottawa, Limited (merged with Gagne Island Mining to become "The Canada Consolidated Mineral Company, Limited" 24/4/1901)	Nov. 12, 1897	\$500,000		Dr. Robert Preston Dr. A. Shillington Moses Edey George H. Rogers James Davidson Taylor McVeity James Gilchrest Frederick Bindon George Blatch (Ottawa)	Kobold? (K3540)	?
The Ontario, Limited (formerly, Murchison Gold Fields, Ltd in Western Australia)	Nov. 27, 1897 (Licensed)	£100,000 (CMM '98)	Col. Engledue, Chairman C.W. Engledue (1897 manager)	Col. Engledue A.G. Shaw A.Q. Twiss	Ontario Limited (D203-204, S74)	England
The North-Western Ontario Exploration Company, Limited	Dec. 3, 1897 (Licensed)		J. Scott Smith, Manager/Director (1898) S.F. Franco, Supt. (1898) T. Hogan, Contract for HW419 (1898)		HW419 & 418	England
The Olive Gold Mining Company of Seine River, Limited	Dec. 13, 1897	\$1,000,000	Clifford B. Deacon, Scty (Winnipeg)	George E. Foster (MP Ottawa) Wm. Blackwood Dr. R.M. Simpson Dr. A.H. Simpson A.T.R. Blackwood (All Winnipeg)	Olive (G60, G61)	Winnipeg?

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Buffalo Mining and Development of Rat Portage, Limited	Dec. 23, 1897	\$1,500,000		Harvey J. Hopkins Solomon Rosenau Daniel Clark Henry C. Carter William Paul (Buffalo)	Buffalo?	?
The Olive Gold Company of Seine River, Limited	Dec. 30, 1897	\$1,000,000	W.A. Preston (1900) N.B. Hall (1898) A.E. Doidge, M.E. (1898)	George Foster William Blackwood Andrew Blackwood Dr. Alfred Simpson Mary Nielson (Winnipeg)	Olive (G60, G61)	?
International Gold Mining and Development	Jan. 7, 1898 (Dominion)	\$100,000 @ \$1	John Kennedy (Gray Eagle - 97) Alan Macdonald (contractor, 1897) J.G. Torrance, M.E. (247P - 95 [RP News])	Hon. Geo. A Cox Wm. Christie Alex. Manning Hugh Baird James Kennedy James Carruthers John L. Spink Hedley Shaw Charles Watts Benson Townsend Geo. Ritchie (Toronto) John B. Henderson (Paris, Ont.)	Grey Eagle (P217), Wild Rose (247P)	Toronto
The Regina (Canada) Gold Mines, Limited	Jan. 8, 1898 (Licensed)	\$750,000	Frank Peterson (01) J.F. Mieville (98) Henry Pringle, M.E. Attny & Man. (97) R. Huntley, M.E. (96) J. Leechman, M.E. & Supt (1896) J.M. Jones, Capt (1896) W.G. Motley, M.E. and Manager (95) W.M. Caldwell, Contractor (94)	Lt. Gen. Sir Henry Wilkinson H. Chester Master Col. Mallard W. Rivett-Carnac (All British)	Regina (P566)	England

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The JO41 Gold Mining Company of Rainy River, Limited	Jan. 8, 1898	\$500,000 (to \$1,000,000 1899)		Albert Hubbell James Bennett Vernon Chappel (Michigan) Thomas A. Merritt John Macdougall Albert McManus George Van Burgess (Duluth)	JO41 (Property leased for Golden Star mill)	Port Arthur (Toronto, 1899)
The Triggs Gold Mining Company of Ontario, Limited	Jan. 12, 1898	\$500,000	J.H. Triggs (1898-1900-)	Jeremiah Triggs John Miller (Rat Portage) Frederick Sargent (St. Paul) Frank Sargent (Milwaukee) Charles F. Miller (Minneapolis)	Triggs (McA56, McA129, McA148)	?
Mountain Mining Co. of Ontario (late addition added to data in February 1996)	12 Jan. 1898	\$499,000		David Allanson Jones William Allanson Sylvester Lyman M. Dougherty James Dougherty (Stouffville, Ont) George H. Sylvester (Ringwood, Ont) Harold Robinson (Toronto)	WD135 (Wolf Lake; Patent registered 21 April 1891 [Ref. 1245]; note indicates patent was cancelled)	Stouffville?
Ontario Gold Concessions, Limited	Feb. 14, 1898 (Licensed)	\$400,000	Knatchbull-Hugesson, Chairmn W.H. Weir, Attny (Rat Port. Imp. Bank) James Kerr, Solicitor Alan Sullivan, C.E. (Block A/1898) T.R. Deacon, O.L.S. (Block B/1898)	C.M. Knatchbull-Hugesson E. M. Bovill James Reid Mr. Peake-Mason Col. Englehue (England) James Kerr [vendor only] (Toronto)	Concessions, Block A and B	England

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Cedar Island Gold Mining Company, Limited	Feb. 14, 1898 (Licensed)	\$500,000	H.W. Kennedy (98) T.E. Smith, Supt. (1898) Alex M. Hay, Attny & manager (97)		Cedar Island [Comucopia] (D212)	England
The Clearwater Gold Mining Company, Limited	Feb. 25, 1898 (Licensed)	\$1,000,000	C.P. Anderson (Clear Lake Manager 1900) J.A. Steele (Clear Lake manager 1897, Big Six manager 98-99)	Charles P. Anderson W.F. Stevens	Big Six (WR56). Clearwater [Clear Lake] (785X)	West Virginia
The Bad Vermillion Gold Company of Ontario, Limited	March 23, 1898	\$1,225,000		Thomas A. Merritt Albert McManus Albert Hubbell George Burgess James H. Bennett (Duluth)		?
The Decca Mining Company of Ontario, Limited (Merged with Chemical Mining to become "Decca-Chemical Consolidated Mining Company of Ontario, Limited" July 27, 1900)	March 23, 1898	\$975,000		William Borland Bannell Sawyer Kenneth Campbell Dr. Geo. Fisk Charles Cornelle (Montreal)	Decca (K222)	Montreal?
The Buffalo Northwestern Gold Company of Ontario	Apr. 9, 1898	\$1,000,000		Frank Shaw Marion P. Hatch Harvey Hopkins Frank S. Cobb (Buffalo) Marvin W. Cobb (Fredonia, NY) Charles Robbins (Watertown, NY)	Buffalo (MH246)	?
The Duluth Mining Company of Ontario, Limited	Apr. 9, 1898	\$30,000 (to \$150,000 in 1899)	J. Howenstien (1900)	Nathl. Upham Thomas Upham John Howenstien William Woodbridge Charles Miller (Duluth) William McBrady (Port Arthur)	Gold Winner	?

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Bonheur Belle Gold Mining Company of Northwestern Ontario, Limited	Apr. 27, 1898	\$500,000		Robert Cartwright William Hurdman Reuben Leonard William Cotton (Ottawa) Archbl. Macdonald (Guelph)		?
The Sentinel Consolidated Gold Mining Company of Ontario, Limited	Apr. 29, 1898	\$250,000	N.B. Eagen (1898) John McAree, O.L.S. Eng (1898) Hamilton Proudlock foreman (1898)	Dr. Edmund King William Ray Alex. Barthelmes William Bohne Albert Coates David Best Thomas Eagen Nassau Eagen Theodore Heintzman George Heintzman (Toronto)	Sentinel (WA7,8,&9) [optioned from Coronado Gold, 1898]	Toronto
The Chemical Gold Mining Company of Ontario, Limited (Merged with Decca Mining to become "Decca-Chemical Consolidated Mining Company of Ontario, Limited" July 27, 1900)	August 26, 1898 (Mine info from Davies & Smith)	\$1,500,000	J.F. Mievieille (1900) Frank Peterson (Supt. 1900) Daniel Morrison (1899) F.C. Fisk (1898)	Louis Baridon Lucien Bernard Seraphim Lachance Joseph Laviolette Charles Humphrey John Morris (Montreal)	Witch Bay (K4544) [Gordon James Mine]	Rat Portage (changed to Ottawa 1899)
The Virginia Mining Company of Ontario, Limited	Aug. 30, 1898	\$100,000 @ \$1	Thomas Paris, Supt. (1898) S.H. Brockunier, Manager (1899) James Rayburn, Agent (1899)	Saml. Brockunier Charles Dalby (Rat Portage) Edward Stifel Laura Stifel Mary Brockunier (W. Virginia)	Lizzie [Virginia] (FM73A)	Toronto (Rat Portage, 1899)
Canadian Minerals Company, Limited (Licensed)	Sept. 8, 1898 (Licensed)	\$500,000	Henry Langford, Rat Port., Attny			England

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Tycoon Mining and Development Company of Ontario, Limited	Sept. 13, 1898	\$150,000	P.S. Griffith (99) [Silas Griffiths?]	John Emmons Gustavus Kobold Morison Kyle Henry Langford (Rat Portage) James Conmee (Port Arthur) {Emmons, Kyle & Langford original owners }	Tycoon (D219, D220, D221)	Rat Portage?
The New Sabaskong Gold Mining Company of Ontario, Limited	Nov. 11, 1898	\$125,000		James Whalen James Conmee Andrew Wiley (Port Arthur) Gustavus Kobold George Drewry Louis Hilliard Henry Langford (Rat Portage) Directors 1899 Conmee, Drewry, G.A. Kobold Angus Carmichael (R. Portage) Dr. John Gilmour Herbert Dewart (Toronto) H.M. Boud (Montreal)	Sabaskong (Locations 1 to 18, Indian Reserve 38B)	Rat Portage?
The Stanton Gold Mining and Development Company of Eagle River, Ontario, Limited (Name changed to "The Eagle Lake Gold Mining Company of Ontario, Limited" 28 March 1899)	Dec. 28, 1898	\$475,000		Olin H. Clark (Conn.) James Curran Charles Corser (Mass.) Dr. Osman Roberts (Mass.) George Lane Olin H. Smith Louis J. Rigali (Mass.) James E. Stanton (Eagle River)	Eagle Lake	



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The John Sykes Mining and Milling Company, Limited	Jan. 6, 1899	\$499,999	G.H. Fanning (1899)	John Sykes Alfred Sykes Harry Holdroyd Martha Sykes (Glen Williams) William Wallbridge John Shilton (Toronto)	John Sykes [Minnitaki] (SV105), Ruby Island (SV103), Nepawa Island (SV106, SV107), SV104, SV109, SV109, SV110	Glen Williams (OBM 98)
The Golden Crescent Mining and Exploration Company of Ontario, Limited	March 16, 1899	\$1,000,000	W.G. LaRue (1899-1900)	Albert Hubbell Thomas Merritt Ida Searle Albert McManus John Rossman Charles Leland (Duluth)	AD2 Mine [Golden Crescent]	Duluth? (OBM 1900)
The Gold Bug Mining Company, Limited	March 16, 1899	\$1,200,000		Hugh Steele (Duluth) Walter Keating (Et. Frances) James Hillyer Dr. Carrol Corson John H. Hill (W. Superior)	Gold Bug [P660]	Mine Centre
Allan Gold Reefs Company of Ontario (late addition added to data in February 1996)	March 16, 1899	\$40,000		William A. Allan Sanford Flemming Henry K. Egan Edson J. Chamberlin Charles Jerome Jones (Ottawa?) [Provisional Directors Allan, Egan, Flemming]	SV124 (SW of Lower Manitou Lake; patent registered 15 Nov. 1899 [Ref. #1669])	Ottawa
The Randolph Gold Mining Company, Limited	March 28, 1899	\$1,000,000	Neil Berger (Randolph & Isabella 1899)	William Fanning Charles Sunderland Merritt French (Superior, Wis) Neil Berger (Mine Centre) Joseph Sellwood (Duluth)	Randolph (AL115), Isabella? [Randolph Farm] (AL113)	Rat Portage

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Lucky Coon Gold Mining Company, Limited	April 13, 1899	\$1,000,000	A.W. Robertson (1898)	George Hillyer Dr. Carroll Corson (West Superior) Hugh Steele James H. Bennett (Duluth) Walter Keating (Ft. Frances)	Lucky Coon [Hillyer] (P655)	Mine Centre
The Boulder Mining Company of Ontario, Limited	April 13, 1899	\$2,000,000	J.R. Gifford	E.T. Le Clair William D. Graham (Minneapolis) Allan McLennan John Gifford, M.E. John Short (Rat Portage)	Boulder (S141, E281)	Rat Portage
The Gold Sun Mining Company, Limited	April 13, 1899	\$1,000,000	A.A. Atwater (99)	John Becker John Gale Bernd. Schatzinger Louis Poplowsky Gustave Kaercher Herb. Palmer, M.E. (Cleveland) Albert Atwater, M.E. (Rat Portage)	Gold Sun (JC81, JC97, FM145)	Windsor
The Golden Eagle Mining and Exploration Company of Ontario, Limited	April 13, 1899	\$1,000,000		John Rossman Charles L. Lewis Harvey Phelps Albert McManus John P. Johnson (Duluth)	Golden Eagle (MCA282)	Mine Centre
The Headlight Gold Mining and Exploration Company of Ontario, Limited	April 13, 1899	\$1,000,000	John McLeod (1900)	John Rossman George Van Burgess George Claypool Franklin Scarle Harvey Phelps (Duluth)	Swede Boy (E238, E237)	Mine Centre

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Mikado Peninsula Gold Mining and Development Company of Ontario, Canada, Limited	April 13, 1899	\$100,000		James H. Ross (Regina, Sask) Walter Ross Thomas Birbeck Frederick Bowman David Ferguson (Rat Portage)		Rat Portage
The Ontario and Rainy River Contracting and Supply Company, Limited	April 13, 1899	\$80,000		James Connee Alexander Thompson Alex. McComber Emily Connee Laura Whalen (Port Arthur)	Contracting to Sink Shafts, build Railroads, etc.	Port Arthur
The Fighting Chance Gold Mining Company, Limited	April 19, 1899	\$999,000		Otto Taubert Henry Person Fred. Kuechler (St. Paul) Andrew Wright Henry Dietrich (Mine Centre)	Fighting Chance (G274?)	Mine Centre
The Gold Leaf Mining Company of Ontario, Limited	April 19, 1899	\$900,000	Robert Laird, M.E.	Alexander Simpson Harry W. Brown (Ottawa) Michael O'Brien (Renfrew) James O'Brian (Toronto) Taylor Mohr (Buffalo)	Norah (JES38)	Ottawa
The Mines Contract and Investigation Company, Limited	May 12, 1899	\$100,000		Wm. Cheeseworth Fred. Schmieendorf John Rowell Fred. Cheeseworth Strachan Robinson George Sackman Henry Sewell, M.E. Henry Read (Toronto)	[Explored various numbered locations]	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Orion Gold Mining Company, Limited	May 17, 1899	\$999,999	Newton Higbee (99)	Otto Taubert Henry C. Peterson (St. Paul) Newton Higbee (Koochiching, Min) George Fullerton Frederick Bowman (Rat Portage)	Orion (HP357, HW88, HW49, HW50, HW51, G151, G460)	Rat Portage
Atlin Mining Co. (late addition added to data in February 1996)	May 19, 1899	\$400,000		John Torrance, the younger John B. Clarkson Fredrick C. Hirsch Bannell Sawyer (Montreal) William Moore (Exeter, England)	CR70 and CR68 (E. Carl Bay, Shoal L., L. of Woods (Patents Registered 21 Aug. 1899)	Ottawa
The Crackerjack Gold Mining Company, Limited	May 31, 1899	\$1,000,000	Walter Keating (99)	Henry Clay Clark (Chicago) George Hillyer Joseph Kidd (Duluth) Henry Round Walter Keating Albert Cline Alice Keating (Ft. Frances)	Crackerjack	Ft. Frances
The Sirdar Gold Mining Company, Limited	June 3, 1899	\$1,000,000	Oscar Smith (1900) G. Warren (Bus. Manager 1900)	William Cowan (Oshawa) John Flett Frederick Wylid Alexander Allan James Kerr James Carnuthers Thomas Walmsley John Moore (Toronto) Elias Snider (Waterloo) John Moore (Galt)	Sirdar (D410, etc); Sirdar Point (S182)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Atikokan Gold Development Company, Limited	June 15, 1899	\$1,000,000		John G. Howard John P. Johnson Byron G. Segog Michael Kalmbach Charles L. Lewis (Duluth)		Port Arthur
The Gold Bullion Mining Company of Ontario, Limited	June 28, 1899	\$750,000	James Gordon (1899) A.E. Higgins (Supt 1899)	James Curtis Emile Esperandieu Edward Higgins Charles Rupp James Taggart William Bull (Buffalo)	Bullion (263P) Bad [Champion?] (P349)	Ft. Erie
The Hammond Reef Consolidated Mining Company, Limited (Amalgamation of Folger Hammond Mines and Hammond Gold Reef Mining Company)	June 23, 1899	\$5,000,000	Wm. Tedford (99)	Hon. R.J. Cartwright Benjamin Folger (Kingston) Hon. Geo. Cox William Mackenzie Clarkson Jones Walter Macdonald Col. Geo. Sweny Hon. Lyman Jones Geo. Watson, Q.C. Henry Pellatt Robert Sproule (Toronto) John Morry (London, Engl) James Hammond (Ft. William)	Hammond Reef (337X, 338X)	Toronto
The Black Hawk Gold Mining Company, Limited	July 3, 1899	\$498,000		Joseph Morgan Charles Evans Elizabeth Morgan Josephine Morgan (Cleveland) William Watson (Toronto)	Black Hawk (P218)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Island Falls Mines Company, Limited	July 12, 1899	\$1,500,000		John H. Hill George Hillyer (Supertor, Wis.) Louis Armstrong (Chicago) George McLaughlin (Mich.) Alphonse Guerard (P. Arthur)		Port Arthur
The Empire Mining Company of Manitou, Limited	July 10, 1899	\$850,000		Thomas McLaughlin James Hallett James Curry William J. Clark (Toronto) John Sutherland (Ottawa)	Empire [Violet] (JES106)	Toronto
The Gold Panner Mining Company of Ontario, Limited	July 19, 1899	\$999,999	Wm. Small (1900) Richard Hall (1899)	Richard Hall Morison Kyle C.W. Chadwick John Dean Gustavus Kobold William McLeod John Partington (Rat Portage)	Gold Panner (MH230)	Rat Portage
The Manitou Lake Gold Mining Company, Limited	July 26, 1899 (Licensed)	\$1,000,000	N.C. Westerfield (1898) Geor. Kilmer (Toronto), Atny	F.M. Joslin Cyrus Wellington F.E. Draper (All St. Paul?)	Westerfield (HP355, HP386; bonded HP387 & G31)	St. Paul
The Gold Reefs Company, Limited	July 28, 1899	\$1,000,000	R.H. Ahn 1899	Francis Foster William Boyd Robert Campbell (Montreal) Edward Barton (Quebec) R.H. Ahn, (M.E.?) Robert Le Vesconte (Toronto)	Victory [McA28], Gold Reef #2 (D404, D489)	Ottawa
The Upper Seine Pioneers, Limited	Aug. 12, 1899 (Licensed)		Samuel Wright-Wilkinson (Doctor of Philosophy) (Ft. William), Atny			England

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Gold Coin Mining Company, Limited	Aug. 31, 1899	\$500,000	C. W. Engleclue (98)	Lorenzo Cleaves William Preston Edward Hall, M.E. Asa Camp (Mine Centre) William J. Elliott (Toronto)	Gold Coin (D218)	Mine Centre
The Pritchard's Harbour Copper Mining and Development Company, Limited	Sept. 13, 1899	\$500,000		William MacLeod John Humble Frank Gardner Dr. Wm. Chapman Dr. Robt Aylesworth John McAree Frank Hockley Charles Varran Warrington Pritchard John MacGillivray (Rat Portage) Peter Trombley (Port Arthur)	(Known to have worked a mine near Black Bay on Lake Superior but Letters Patent authorized company to develop mines within the district)	Rat Portage
The Northwest Ontario Mining and Development Company, Limited	Sept. 16, 1899 (Licensed)	\$243,000	Harold Hill (Rat Portage), Attny & Mine Manager		Location 419HW	England
The Bullion Number Two Mining Company, Limited	Sept. 22, 1899	\$999,999	Wm Smail (1899) Charles Brent (1899)	D.C. Cameron C.W. Chadwick Robert Rogers (Rat Portage) Walter Macdonald Robert Sproule (Toronto)	Bullion No. 2 (D233, D389)	Rat Portage
The Northland Gold Company of Ontario, Limited	Sept. 27, 1899	\$1,000,000		Daniel Waite Charles L. Lewis George W. Buck William Underhill Sheldon Frazer (Duluth)		Mine Centre

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Crown Point Mining Company, Limited	Oct. 4, 1899	\$1,000,000	(Sylvester?) Sharp (1900)	R.H. Ahn (M.E.?) Frederick Buller Joseph Collison Robert LeVesconte (Toronto) Edward Barton (Montreal)	Crown Point [Black Cat] (D258)	Ottawa
The Montreal-Manitou Mines Company, Limited	Oct. 6, 1899	\$750,000		Louis Grothe Alexander Robertson Frank Matthews Daniel Hoctor Herman Sheyer William Robertson (Montreal) Allan Davis, M.E. (Napanee, Ont.)		Ottawa
The Britannia Consolidated Gold Mining Company of Ontario, Limited	Oct. 18, 1899	\$300,000		Dr. George Lovejoy Bannell Sawyer William Masterman Frederick Hirsch John Carson (Montreal)	Black Jack (X90), Gold Hill (70K)	Ottawa
The Glass Reef Gold Mining Company of Lake Manitou, Limited	Oct. 21, 1899	\$750,000	Geo. W. Glass (1900)	George Glass (Wabigoon) Alexander Bucanan Edwin H. James Andrew Miller Benjamin James (North Dakota)	Glass Reef (11W 391, HW594)	Wabigoon
Sultana Mine of Canada	Oct. 27, 1899 (Licensed)	£275,000	J.F. Caldwell (Rat Portage), Attny Alex Cotter (Supt. 99)	Leonard Fawell Sir Gerald Fitz Gerald W. Rhodes Wilberforce Bryant Hugh C. Brabridge (All London) John F. Caldwell (Winnipeg)	Sultana (42X, 43X)	England



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Minnesota Ontario Gold Mines Company, Limited	Nov. 1, 1899	\$2,000,000		Albert Clausen Alonson Woodruff (St. Paul) Franklin Paine Melvin Forbes George Spencer Wardwell Ames (Duluth) Lester Brooks (Minneapolis)		Mine Centre
The Golden Rod Mining Company, Limited	Nov. 3, 1899 (Licensed)	\$100,000	Wm. H. Garvey (Toronto), Attny	"New York interests" (Hurst, 1932, p.28)	Golden Rod (HW652, HW654) [Minnitaki] [Teresa Lake]	West Virginia
The Victor Gold Mining and Development Company of Rat Portage, Limited	Nov. 8, 1899	\$999,999		John McCrossman William Båby Frank Ap'John Joseph Bird Dr. Wm. Chapman Jacob Hose Ashton Fife Joseph Fife Gustavus Kobold George Riech John Wesley Humble Frank Gardner Joseph Derry James Mackenzie Harding Rideout Frederick Godwin Marshall Hopkins, O.L.S. Norman Fricker (Rat Portage) Daniel Hyland (Rainy River) John H. Casler (Buffalo) Alecia Reinhardt (Wife of Henry Reinhardt) (Montreal)		Rat Portage

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Mount Royal-Manitou Gold Mining Company, Limited	Nov. 24, 1899	\$995,000		Alfred Brice William McNally Benjamin Tooke (Montreal) George Stott (Quebec) James Curry (Toronto)		Toronto
The Hartford Gold Mining and Development Company, Limited	Dec. 13, 1899	\$300,000		Edward Main Charles Huntting Francis Warren Burton Hills William Pomeroy William Morse Theodore Goodrich Elwin Austin Curtis Gladding (Conn.) Benjamin Thorne (Rat Portage)		Toronto
The Gold Winner Mining Company of Ontario, Limited	Dec. 13, 1899	\$1,000,000		Nathaniel Upham John Stryker William Prindle William Edson Benjamin Wells Henry Bradley Erastus Upham (Duluth) William McBrady (Port Arthur)	Gold Winner (K14517 & K14520)	Port Arthur
The Kalevala Gold Mining Company, Limited	Dec. 27, 1899	\$1,000,000		John Keyes Adolph Eckstein James H. Bennett Angus Gibson William Hutchinson (Duluth) Ray. Weelye, M.E. (Mine Centre)		Mine Centre

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Canadian Mines Development Company, Limited	Dec. 20, 1899 (Licensed)	£300,000	Edmund Briston (Toronto), Attny O.B. Robinson (1900) Wm. Strong, M.E. (1898)	C.E.R. Betterley Wm. Strong, M.E.	Foley (AL74, AL75); (G7); (SV133); (G109 & G110)	England
The Monarch Mining Company, Limited	Jan. 17, 1900	\$990,000		Thomas McLaughlin James Duke Michael Mallaney William J. Clark James Hallett (Toronto)	Monarch (S106)	Toronto
The Sulliana-Ophir Mining Company, Limited	Jan. 24, 1900	\$10,000 (raised to \$150,000 17/12/02)		Edward Seybold Erskine Bronson Angus W. Fraser William A. Clark (Ottawa) Samuel Armstrong (Toronto)	Ophir (A20)	Toronto
The Moose Lake Mining and Milling Company, Limited	Jan. 31, 1900	\$1,000,000	Dryden Smith, Man (1900) John Harland, M.E. (1900)	David Robinson Louis N. Dupuis William A. McKay Alexander Ross Charles Blakely John N. Chabot Louis Delorme (Montreal)	Moose Lake [HW6, HW38]	Comwall
The Bag Bay Gold Mines Company of Ontario, Limited	Jan. 31, 1900	\$999,999		James Irwin Thomas Gilmour James Buxton Sargesson Halstead Joseph Bird (Rat Portage)	Bag Bay?	Rat Portage
The Jack Lake Gold Mining Company, Limited	Feb. 7, 1900	\$100,000	J.S. Steele (1900-02) R. Andrew (1902 Captain) K.T. Barnard (1902 Assayer)	Ezra Rust (NY, NY) Charles E. Wheeler (Chicago) George Weadock Miles Purcell Joseph Steele (Michigan)	Jack Lake (AL325), St. Anthony Reef (BG152)	Toronto

Appendix "C" Table 1: Gold Mining Companies

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The A.L.282 Gold Mining Company of Ontario, Limited	Feb. 23, 1900	\$1,000,000		Alfred Merritt James Hale Culyer Adams Henry Ely William C. White (Duluth) James Hammond (Fr. William) Joseph Brimson (Port Arthur)	AL282 (Island Falls Area, Attkokan)	Port Arthur
The Manhattan Gold Mining Company of Ontario, Limited	Feb. 24, 1900	\$40,000	Frank Peterson (NY) Manager (1900)	Edmund Horton Andrew Berry James Shanks (New Jersey) Franc Jewett William J. Sinclair Frank Finch Edgeworth Ussher Frederick Shephard Frank Malond James Stanton Julius Windecker Frank L. Evans Frederick G. Brown (NY, NY) Francis Case (Buffalo)	Manhattan [on Eagle Lake] (DJ2, DJ3)	Brockville
Anglo-Canadian Gold Estates, Limited	Mar. 14, 1900 (Licensed)	\$305,000 (£61,000)	Allan Sullivan (Rat Portage), Atmy and Manager (1899) W.H. Jones (of Deloro) (1902)		Sturgeon Lake (TB6980), Reliance (FM171, FM172), Elizabeth (FM171, FM172?), opiton on Sullivan (near Cameron Lake)	England

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Stadacona Gold Mining Company, Limited	April 7, 1900	\$1,000,000		Rufus Pope William Bailey (Cookshire, Que) Frederick Bindon Taylor McVeity (Ottawa) Donald Loynachan (Montreal) Robert Rogers (Rat Portage)		Ottawa
The Page Gold Mining Company of Ontario, Limited	April 13, 1900	\$1,000,000		George Burgess William Burgess Clarence R. Smith William Sargent Joseph Mishler (Duluth)	Page (Forge Tp.)	Mine Centre
The Reliance Gold Mining Company, Limited	April 25, 1900	\$1,250,000		Levi Partridge Flavius Brooke Dr. Rollin Olin Stephen Gutches Burton Yates (Detroit)	Independance (So. half lot 11, 3rd Conc., Bennett Twnshp)	Windsor
Inter-state Consolidated Mineral Company, Limited	May 5, 1900 (Licensed)	\$700,000	J.A. Langford (Rat Portage), Atmy Daniel Simpson (1900) W.H. Pickering (1901)	C.W. Stone Wm. Schaler M. Nellany M.A. Myers (1900 OBM reported them as residing in Buffalo)	Big Master [HP366, HP368]	West Virginia
Saw Bill Reef Syndicate, Limited	May 9, 1900 (Operated mine from 1898 - option?)	\$1,000,000	J.P. Williams (98)	Joseph Kilgour Archibald Hutchison Thomas Walmsley Arthur Harvey (Toronto) Franklin Wiley (Port Arthur) John Tilden Henry Kitson (Hamilton)	Sawbill (313X)	Toronto

Appendix "C" Table 1: Gold Mining Companies

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The "Little Bobs" Mining Company of Ontario, Limited	June 23, 1900	\$1,000,000		Frank Gardner Stephen Cummins Matthew Hunter Thomas Wash Robert Rogers (Rat Portage)	Little Bobs (S420)	Rat Portage
The Wendigo Mines of Ontario, Limited	June 27, 1900	\$1,000,000		Charles Gooderham William Garvey Clarkson Jones Alex. Cartwright Robert Sproule (Toronto) Matthew Hunter (Rat Portage) Frank P. Jones (Montreal)	Wendigo [Gooderham Syndicate] (MH208)	Toronto
The Nino Mining Company, Limited	July 6, 1900	\$1,000,000	Charles Brent (1902 - Consulting Engineer)	Frank W. Moore Warrington Pritchard (Rat Portage) William Chaplin James Chaplin Frederick W. Wilson Francis Bullivant Dexter Potter (St. Catharines) Charles Wortham Thomas Gleason (Buffalo) Arthur Schoellkopf (Niagara Falls) James O'Brian (Toronto)	Nina (JES93, JES110)	Toronto
The Rainy River Development Company, Limited	Oct. 24, 1900 (Licensed)	\$300,000	William Weir (Rat Portage, Banker). Attny A.W.B. Whitely (1900)		Hidden Treasure (HP278). Mayflower (K390, K391)	England

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Pine Portage Mining Company, Limited	July 11, 1900	\$80,000		Duncan Lavrock Walter P. Thomson Thomas B. Martin Llewellyn Stephens (Hamilton) Thomas Dobbie (Tilsonburg)	Pine Portage (P219)	Hamilton
The Ontario Mining Company, Limited	Nov. 30, 1900 (Licensed)	\$20,000	Stephen Cummins (Rat Portage Mining Broker), Attny		Ophir?	Rat Portage (England)
The Golden Star Mining Company, Limited (Reorganization of Golden Star Mining and Exploration Company of Ontario, Ltd)	Jan. 16, 1901	\$1,500,000		James Steller Lovell William Baine Ernest McNeill Robert Gowans Augustin Scheurer Richard Richards on Stanely Wilkie Robert Cassels (Toronto)	Golden Star (AL114)	Toronto
The Champion Gold Mining Company of Ontario, Limited	Feb. 28, 1901	\$1,000,000		D.C. Cameron Robert Roberts C.W. Chadwick Alfred J. Parsons Angus Carmichael (Rat Portage) Hugh Armstrong (Portage la Prairie)	Champion (P349)	Rat Portage
The Canada Consolidated Mineral Company, Limited (Merger product of Kobold Mining and Gagne Island Mining 24/4/1901)	April 24, 1901	\$500,000		W.B. McAllister C.A. Butterworth A.T. Shillington W.C. McCarthy E. LaBere (All Ottawa)	Lot 15, 5th Conc. Jaffray Twnshp [Royal?]. 157K [Lady of the Lake, Gagne Island]. 12SC, 13SC, 14SC	Ottawa

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Sakoose Gold Mining Company, Limited	March 9, 1901	\$300,000	W.J. Craig (1901) H.A. Guess, M.E. (1900)	Hon. Robert Watson (Port. la Prairie) Flora Munroe (Dymont) John M. Munroe Thomas Metcalfe (Winnipeg) George E. Foster John Mather Angus Fraser (Ottawa)	Sakoose [Golden Whale] (HW416, HW475)	Ottawa
The Rush Bay Golden Horn Mining Company, Limited	March 18, 1901	\$250,000 (to \$400,000 in Sep 1903)	H. Rideout (1902)	Harding Rideout (Rat Portage) Frederick Hemmings Dr. Charles Clark (Winnipeg) Charles Hutchings William Robertson (St. John, NB)	Golden Horn (D267)	Rat Portage
The Ontario Mining Company	May 22, 1901 (Licensed)	\$500,000	Walter Gow (Toronto, Lawyer), Attny		Ontario Mine?	Cleveland
The Homestake Gold Mining Company of Ontario, Limited	June 13, 1901 (Licensed)	\$1,250,000	G.H. Draper (Rat Portage, Lawyer), Attny		Homestake (P386, P387)	St. Paul
Gold Mountain Mining Company	June 13, 1901 (Licensed)	\$500,000			Gold Mountain (48P)	West Virginia
The Michigan-Ohio Gold Mining Company of Ontario, Limited	Aug. 22, 1901	\$1,000,000		Corydon Randall Frank Walters Chandler Randall Ferris Randall (Detroit) Carl Brand Fred Felt William McCuaig Charles Clapp Alvin Tillinghast Clarence Leeper (Toledo) George Draper Martin Florida (Rat Portage)		Windsor



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Twentieth Century Mining Company, Limited	Aug. 23, 1901 [authorized to hold meetings outside Ontario, 1903]	\$2,000,000	A. Trudo (Eng '98) Dryden Smith (1901)	A. Blum W.K. Smalley (Boston) Dr. John Molath (Conn) W.R. Stokes (Pittsburgh) D.S. Stanley (Wash. D.C.)	Twentieth Century [HP398], {also did development work on Volcanic Reef (S40)}	Toronto
The Gopher Mining Company, Limited	Aug. 23, 1901	\$1,000,000		William Sargent William McCormick Edward Alexander Charles Schiller George Munsey William Himebach Fred Voss (Duluth)		Ft. Frances
The Grace Mining Company, Limited	Sept. 4, 1901	\$1,000,000 @ \$1	J.H. Casler	John H. Casler Sam. C. Rogers Frank L. Dayton William H. Warhus Edmund F. Zimmerman (Buffalo)	Grace (MH251)	Ridgeway
Black Eagle Gold Mining Company, Limited (Licensed)	Sept 6, 1901 (Licensed)	\$500,000 (£100,000)	Frank Peterson (Rat Portage, Mine Manager), Attny	S.R. Bastard H.C. Wilkinson (England) Frank Peterson (New York) N.S.(N.C?) McMillan	Regina (P566)	England
?The Standard Mining Company of Algoma, Limited	Oct. 2, 1901	\$40,000		Henry Hamilton Andrew Elliot John E. Irving Georgina Hamilton William Brown (S. St. Marie)	Leona	S.St. Marie
Westerfield Mining Investment Company, Limited	Oct. 23, 1901 (Licensed)	\$200,000	Herbert Draper (Rat Portage, Lawyer), Attny		Westerfield	Phoenix

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Log Cabin Gold and Copper Company, Limited	Oct. 23, 1901	\$3,000,000	F.C. Fisk (1901)	George Sanborn Marcus Fuller Charles Minot Jerome Stanton (NY) Charles Minor William Nicholson (Buffalo)	Log Cabin [G532 & 533]	Toronto
Redeemer Mining and Milling Company, Limited	Nov. 29, 1901	\$500,000	Gus Larson (Dryden) 1901	Paul Rainer Harry Bernstein Albert Herrmann (Chicago) Benjamin Kaup George Corthell (Ohio)	Redeemer [Hermann-Larson] (Van Home Tp., SW¼, S½ lot 6, con. 1)	Windsor
United States Gold Mining Company	Dec. 20, 1901 (Licensed)	\$1,000,000	William McBrady (Port Arthur, Lawyer), Atny	E.G. Filer (Michigan) A.V. McAlvray (Michigan)	United States (AL367, AL368, BG136)	Augusta, Maine
President Gold Mining Co. (late addition added to data in February 1996)	Feb. 12, 1902	\$1,000,000		Thomas McLaughlin Kerr Somerville William Degeer Johnston Clifford Johnston William C. MacKay (Toronto)	SV348 & SV349 (North of Long Lake; Patents Registered 7 April 1902 [Ref. #1943])	Toronto
The New York and Ontario Gold Mining Company, Limited	Feb. 26, 1902	\$1,000,000	H.S. Emlaw (1901) Geo. Copeland (1902, Eng & Foreman) C.J. McLean (1902, Captain) T.R. Jones (1902, Supt)	Benjamin Folger Matthew Folger (Kingston) Matthew Folger, Jr. Nathan Flower Henry Seibert (NY, NY)	optioned AL282 [Sunbeam Mine]	Kingston
The English River Gold Mining Company, Limited	Feb. 28, 1902	\$1,000,000	H.D. Symes (1899) C.E. Eve (1902)	George Dawson Mr. Varley (St. Catharines) Donald W. Ross (Parry Sound) [Some names appear to have been omitted going from one page to next]	Dawson (BG155, BG156, BG157, BG158, BG159 {TB6980}) [Dawson-White] [Sturgeon Lake]	St. Catharines

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Chippewa Consolidated Gold Mining and Milling Company, Limited (Consolidation of Buffalo Northwestern Gold and Chippewa Gold Mining Company)	May 8, 1902	\$2,000,000	Fred Pfau, M.E. (1902)	James Harrington Alexander Mohr Fred Pfau, M.E. Frank S. Cobb William Robinson Francis Potter Josiah Scovell Herbert B. Lee Charles Wortham Thomas Gleason Edward Oates (Buffalo) Edward N. Potter Dexter D. Potter (St. Catharines) Herbert Secord James O'Brian (Toronto)	Wendigo [Gooderham Syndicate] (MH208)	Toronto
Giant Gold Company, Limited	May 31, 1902	\$700,000	Daniel Simpson, M.E. (1902) Paul Paulson (1902 Captain)	Michael Nellany Dan. Simpson, M.E. Cornelia Simpson (Buffalo) William C. Patterson Edward Appleyard (NY)	Giant (HW74, HW75, HW185)	Gold Rock

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Protegene Gold Mines Company, Limited	May 31, 1902	\$1,500,000	J.C. Foley (1901)	Joseph Foley Charles Brucker Isaac Worden Mary Foley (Detroit) Martin Goldsworthy Thomas Coughlin Frederick Bawden James Close, Jr. Frank Mayworm Dr. William Dodge David Kendall John Ryan Martin Conway Charles Hanchette (Hancock, Mich) John Daniell, C.E. (Laurium, Mich) Joseph Hodgson Charles Moss Horace Stevens (Houghton, Mich) Arthur Ellis (Windsor)	Foley (AL74, AL75)	Windsor
The Flint Lake Gold Company, Limited	June 25, 1902 (Licensed)	\$2,000,000	George Draper (Rat Portage, Lawyer), Atny T. Breidenbach, M.E. (1902)	N.C. Westerfield (Winnipeg) C.L. Barker (Philadelphia)	Flint Lake (McA285)	Phoenix
The Northern Light Mines Company	Aug. 14, 1902 (Licensed)	\$2,000,000 (\$50,000 authorized)	George Draper (Rat Portage, Lawyer), Atny Newton Higbee (1902)	Joseph Gavin W.H. Barnhart (Buffalo)	Baden Powell (FM168), Buffalo (MH246), Eldorado (MH257), S464	Phoenix
Volcanic Reef Company, Limited	Aug. 27, 1902	\$1,000,000 @ \$10		Anthony Blum Lantie V. Blum (Boston) James G. Strong William R. Williams James G. Shaw (Toronto)	Volcanic Reef (S40)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Laurentian Mining Company, Limited	Aug. 27, 1902	\$1,000,000 (to \$2,000,000 later in the year)		Anthony Blum Lantie Vincent Blum (Boston) William R. Williams James G. Strong James G. Shaw (Toronto)	Laurentian (HP371)	Toronto
Gold Reef Mining Company, Limited	Sept. 17, 1902 (Licensed)	\$700,000 (\$700,000 authorized)	Allan McLennan (Rat Portage, Lawyer), Atny H.J. Shields (1902)		Mikado Reef [Golden Reef] (D484, D489)	Traverse City, Mich
Indian Joe Gold Mining Company, Limited	Sept. 24, 1902	\$500,000	J. Williams	Wm. Cheeseworth Asher Painter George Garwood Henry Fryling Charles Woodruff (New Jersey)	Great Northwest, Indian Joe (352EA)	Toronto
Little Rock Consolidated Mining and Development Company, Limited	Sept. 30, 1902 (Gazette) [OGS Circular #24; Wilkinson, 1982, p.21]	\$1,000,000 @ \$1		Earl W. Bailey James C. Cutter Benjamin J. Morningstar Henry J. Tharle (Buffalo) Earl B. Baily (E. Aurora, NY)	Minto (AL 278, AL200)	Toronto
The Jubilee Mining Company, Limited	Oct. 15, 1902	\$500,000	W.M. Caldwell (1897)	Merlin Myers Wiley Hammond Margaret Gross Michael Silk (Penn) Wm. Wadsworth (Toronto)	Jubilee [Elora] (HP301)	Toronto
The Keenora Mining Company, Limited	Oct. 15, 1902	\$1,000,000		Merlin Myers Charles Warren Stone Michael Silk Wiley Hammond (Penn) Charles Russell (Cincinnati)	Rat Portage Reduction Works, Scramble, D217	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Great North-West Mining Company, Limited	Oct. 29, 1902	\$3,000,000	J.P. Williams (1902)	Wm. Cheseworth Henry Beecher Henry Fryling Adolph Eisele Albert Babcock (New Jersey)	Great Northwest [Indian Joe] (352EA, 352E)	Toronto
Rat Portage Mining and Development Company of Arizona	Dec. 17, 1902 (Licensed)	\$2,000,000 (\$100,000 authorized)	Charles Pennock (Rat Portage, Bank Manager), Attny			Phoenix
The Summit Lake Gold Mining Company of Ontario, Limited [Amalgamation of Rainy River Development, Imperial Gold Mining, and Little Master Co.]	Dec. 19, 1902 (Licensed)	\$1,000,000 (\$100,000 authorized)	Alexander MacLaren (Stratford, Esq), Attny		Summit Lake? Little Master (AL206 or HP375?), Imperial (G19), Peninsular (HW31)	Phoenix
The Gold Standard Mining Company [listed in Bureau Report 1898]	Dec. 26, 1902 (Licensed)	E.E. Hall (1903)	Geo. Draper, Attny Anton Watzke (1900)	C.L. Brown H.L. Smith R.J. Hall W.F. Cooley (All S. Dakota)	Gold Standard (G340 & then to HW271)	South Dakota (Morris, Minn?)
The Coronation Gold Mining Company, Limited	March 9, 1903	\$1,000,000		J. Burley Smith (Montreal) Angus Fraser (lawyer) Henry Burbidge (lawyer) John Fraser (law student) John McBain (contractor) Arthur Fraser (law student) (Ottawa)		Ottawa
The Camp Bay Mining Company, Limited	May 20, 1903	\$90,000	Sidney Pinchin	George Tait Marion Hatch Robert Moderwell (Buffalo) Charles Goodwin (Penn) Edgar Warren Smith (Grimsby)	Combined (McA77)	Niagara Falls

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Sultana Gold Mine, Limited	May 27, 1903	\$1,000,000		John F. Caldwell (Winnipeg) D.C. Cameron (Rat Portage) William Wallbridge John Shilton Hubert Wetherald (Toronto)	Sultana (42X, 43X)	Rat Portage
Vermillion Bay Mines Company	June 10, 1903 (Licensed)	(\$50,000 authorized)	Newton Higbee (Rat Portage, Mine Manager), Attny			Delaware
Northern Development Company	July 30, 1903 (Licensed)	(\$40,000 authorized)	John Joy (Gold Rock, Mine Supr), Attny		Paymaster (HW20)	Arizona
Long Lake Gold Mining Company, Limited [Reported in 1901 OBM]	Jul. 31, 1903 (Licensed)	(\$25,000 authorized)	Philip MacKenzie (Rat Portage, Esq.) Attny John D. Aaron (1901)		Long Lake (SV353, SV354, SV355, HW575)	England
?Provident Mining Company	Aug. 31, 1903 (Licensed)	(\$1,000,000 authorized)	James O'Brian (Toronto, Lawyer) Attny			Arizona
The Eagle Lake Gold Mining Company	Sept. 23, 1903 (Licensed)	(\$50,000 authorized)	James O'Brian (Toronto, Lawyer) Attny Newton Higbee, Manager (1900)		Eagle Lake (island 2 mi. SW of South Twin Island)	Arizona
The Mikado Gold Mining Company (1903) Limited	Nov. 6, 1903 (Licensed)	(\$175,000)	William Davidson (Toronto, Lawyer), Attny		Mikado (D147, D148, D149)	England
The Gold Mountain Mining Company	?OBM, 1895			E.V. Wright (Ottawa) James Foley (Montreal)	Gold Mountain (K4386 (48P))	?
The Nina Gold Mining Company of Ontario (Property bonded to Great Granite in 1898)	? (OBM 1900)		S.H. Reynolds (1898-1900)		Nina (JES93, JES110)	

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
American and Canadian Gold Mining Company (US Company?)	(OBM 1898)		T.D. Prideaux (2nd Manager 1898) Geo. Robbins (1st Manager 1898) G. Hillyer (1897) W. Peters, Mill Manager (1895)	A. Hillyer (W. Superior) George Hillyer (Duluth)	Alice A (K191)	West Superior
Bad Mine Syndicate	(OBM 1898)	[bonded Bad Mine @ 10% down]	James Hildreth, foreman (1898) Wm Peters (1898)	James Hildreth Hugh Armstrong William Peters [Partners]	Bad Mine (349P) [option]	Rat Portage
Manhattan Gold Mines of Canada	(OBM, 1898)				Manhattan (adjacent to Decca) [K231]	Montreal?
Seine River and Rainy Lake Exploration Company [Minnesota Company]	(OBM 1896, 1897)	[Minnesota Company]	Edward Ward (1897)	Thomas Merritt (Supt/President)	Ferguson [AL110, AL111, K223] Golden Star [AL114] Randolph [AL115]	Duluth
Henry-Tilden Syndicate	(OBM, 1897)		E. Giessen		325X	
Anglian Mining and Finance (Licensed? Bogus?)	? OBM 1896		R.H. Ahn (1896)		Cornucopia [Cedar Island] (D212)	England
The Independence Mining and Development Company, Limited (Sparta, Wisc.) [two small buttons were shipped by this mine to the Philadelphia Mint through the Sparta, Wisc. Bank per Mint Weigher's Books]	? (OBM '1898)		A.N. Rice (1898) Mr. (James?) Gordon (1899) A.E. Botterell (1901)	T.O. Thorbus H.M. Newton (Wisconsin)	Independence (Bennett Tnp. lot 11, con. 3)	Sparta, Wisconsin
Seine River Gold Mines, Limited (London)	? (OBM '98)	£100,000	T. Nenty Varty (Gen. Manager '96) Arthur Whiteley (Manager '96)		Ferguson (AL110, AL111, AL112, K223)	England
Roy Mining and Development Company	? (OBM '98)		C.C. Schronitz (1898) Roy Sweeney (98)		Roy (McA274? or AL298, AL299)	
Golden Twins Mining Company (London)	? (OBM '98)		E. Giessen (98)	Frank Wiley Harold Wiley (Port Arthur)	New Golden Twins (BC18, 327X, 328X)	England



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Triumph Gold Mining Company	? (OBM '98)		J.G. Torrance, M.E. (95) J.S. Rayburn (97) Charles Brent, M.E. (1897) Joseph Hicks (98)		Triumph (C12) (I1, I2, P2, P7, X33 - Ayer & Davies)	Michigan
Bertram Engine Works Company, Limited (Patents in the name of George H. Bertram, manufacturer, ref. #776 & 777)	? (OBM '97)		W.F. Carlson (97)		Sioux Narrows Mine (D624)	Toronto
Wampum Gold Mining Company	? (OBM '97)				Wampum (316X north ½ - shared with Kabaskong)	
Weigand Gold Mining Company (Minnesota?)	? (OBM '95)		Thomas Weigand		Foley (Purchased AL74, AL76; leased AL75 from Foley)	Minnesota
Weigand Syndicate	(OBM'95)		Thomas Weigand	Col. W.S. Ray (Toronto) John Green (Ft. William) Thomas Weigand (Minn?)	Foley [Weigand] (AL74, AL75, AL76)	
The Rainy Lake Mining and Power Company, Limited	1900? (OBM 1900; also appears in Dist. Court records)		Anton Watzke (1900)	O.A. Watzke I.N. Snider C.N. O'Hare	Saury Camp (G149)	Superior, Wisc.
The Gold Hill Co. [Northern Gold?]	1885-91 (Gold Deposits of Ontario, p.152)		George DuImage (Supt. 92)	D.B. Burdette J.D. Wright	Gold Hill (70K)	Michigan?
The Black Jack Mining Company [probably Rat Portage Land & Mining or Lake of the Woods Gold and Silver Reduction]	1892 (OBM '93)		E.B. Barnes (93) Charles Brent (Supt. and Assayer - 92)	Patian Semple (Oshkosh) E. Brown (Duluth)	Black Jack (X90) [Bulldog]	Duluth (OBM 92)
Rajah Gold Company (Imperial?)	1892 (OBM '93)	£170,000	M.T. Hunter (93)		Rajah (317P)	England
The Oxford Mining Company	? (OBM '99)		Thomas Armstrong (99)	Wm. Pinkerton (?) John F. Gray (Toronto?)	Oxford (SV129)	Toronto

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
The Emma Abbott Gold Mining Company	? (OBM '99)	\$1,000,000	Lee J. Moss (Supt)	Henry Clay Clark (Chicago) Hugh Steele (Duluth) John S. Dodge (Minn) Lee J. Moss	Emma Abbott (K215)	West Superior
The Seine River Syndicate Mining Company (Option)	? (OBM '99)	(Option)	James Huston (Supt 99)	W.D. Pettigrew (Winnipeg)	Pettigrew (BG24, BG25, BG36, BG37)	Scotland
Olympia Gold Mining Company, Limited	? (OBM '1902)		J.S. [Silas] Griffiths (1902)		Olympia (M11)	
Quarry Island Mine	? (OBM 1899 - photo p.96)				Quarry Island	
Upton-Wright (Option)	OBM (1900)	(Option)	J.M. Jones (Manager)	A.B. Upton (Duluth) Geo. Ross (Rat Portage)	Bully Boy (S56)	
Gooderham Syndicate	OBM (1900)	(Syndicate)	M.T. Hunter (Manager)	Charles Gooderham Wm. McKenzie Sir R. Cartwright Clarkson Jones (Toronto)	Wendigo (MH208)	Toronto
Stirling Syndicate	OBM (1900)	(Syndicate of Owners)	Geo. Ross (1900) A.B. Whitehead and Allan Sullivan (Optioned to 1897)	C. Stirling T. Walsh M.P. Wright (Rat Portage) (Owners)	Trojan (S77, WA4) Bully Boy [Sullivan's Mine] (S56)	Rat Portage
Swanson Syndicate	OBM (1900)	(Syndicate)	Geo. Swanson	Geo. Swanson L. Lawson J. McAree (Rat Portage)	Swanson (MCA230)	Rat Portage
Gatensbury Prospect	OBM (1900)	(Owner Operated)	E. Gatensbury	E. Gatensbury	Eldorado (MH257)	Rat Portage
Partington Syndicate	OBM (1900)	(Syndicate)	R.H. Ahn (1902)	J.A. Partington E. Appleton S. Pinchon S.S. Fornieri (Rat Portage)	Baden Powell (FM168)	Rat Portage

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Stevenson Syndicate	OBM (1900)	(Syndicate)		E. Stevenson L. Stevenson F. Blackie J.D. Curran (Rat Portage)	Viking (S446)	Rat Portage
J.F. Caldwell	1892-1899	Private Ownership	Albert Johnson, Capt (1900) James Gale, Mill Boss (1896) Albert Johnson, Mine Foreman (1896) M.T. Hunter, Supt/Man (1896) Z.J.S. Williams, Capt (1894) W.M. Caldwell (1892)	J.F. Caldwell (after 1892) J. Hensy (1/16 before 1892) J. Mather?	Sulana (42X, 43X)	Winnipeg
Maw & Greening Syndicate	1898-1900 (OBM 1900)	Syndicate	A.F. Botsford (1900)	S.O. Greening (of B. Greening Wire Co., Hamilton) John Maw	Maw (HW479, HW477)	Hamilton?
Quackenbush Locations	(OBM 1898)	Private Ownership	Geo. W. Glass (1898)	V. Quackenbush (owner)	Quackenbush (HP375 and HP267 [next to Glass Reef])	
Barker Brothers Partnership	(OBM 1898)	Private Ownership	Mr. Forbes (Melvin Forbes of Duluth?) (1898)	Barker Brothers (owners)	Barker (HW339)	
Tabor-Stephanson Partnership	(OBM 1898)	Private Ownership (Optioned to Eastern Twnshp)		James Tabor James Stephanson (Wabigoon) (owners)	Tabor (SV258)	Wabigoon
Munroe-Watson Partnership	(OBM 1898)	Private Ownership	Tom Hogan, Contractor (98)	Robert Watson (Minister of Public Works for Man.) John M. Munroe (Dinorwic)	Watson-Munroe Mine [Golden Whale, Sakoose] (HW416)	
Harvey Syndicate	(OBM 1898)	Syndicate	A. Johnson (98)	E.E. Harvey (Winnipeg) and others	Burnt Island (HW446). BJ12, BJ17, BJ20	Winnipeg

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Good & Jones Partnership	(OBM 1892 & 96)	Syndicate?	John T. Nagle (85?)	Good & Jones (1892) (Winnipeg) G. Heenan (1883-84) (Rat Portage)	Hay Island (K511) [Keewatin], Heenan	Winnipeg
MH190 Syndicate	(OBM 1897)	Syndicate	George Bates (97)	Morris H. Kennedy Gaudaur George Bates (Rat Portage)	MH 190 (Whitefish Bay)	Rat Portage
Gilchrest-Culligan	(OBM 1899)	Private Ownership	P. Culligan (99)	F.W. Gilchrest P. Culligan (Michigan)	Black Sturgeon (See above description) {from B.S.M. Co.}	
Webster	(OBM 97)	Private Ownership?		J.W. Webster (Cleveland, lawyer)	Carbou (P288)	
Beck, Sutherland, Mrs. Moore	(OBM 97) Mining Lease Register, # 668	Lessees	William Kirkley (contractor - 97)	H.H. Beck R.R. Sutherland Sarah A. Moore	Medicine Ledge (S88)	
Chisholm	(OBM 97)			Chisholm	Jenny Leigh (S140)	
Carroll & Paul	(OBM 97)	Partnership?		Carroll Paul (?)	Big Dick (HW66)	
Partington Syndicate No. 2	(OBM 97)	Syndicate	C.T. Brown (97)	Thomas Partington C.T. Brown L. Vaughn A. McLaren T.H. Schofield (?)		
Unknown	(OBM 97)				Little Jumbo (Lot 10, 1st Concession, Van Horne Twtnshp)	
Unknown	(OBM 97)		R.H. Ahn		Elsie	
Oliver Dunais	(OBM 96)	Private Ownership		Oliver Dunais (owner - 1896) (Norman, Ont)	Nonesuch (M12); Three Ladies [Kenricia] (P211); Three Friends [Clearwater Bay] (AL36, AL37, AL38)	

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Ross-McKellar-Horne	(OBM 96)	Partnership?		Walter Ross (Rat Portage) P. McKellar — Home (Ft. William)	Norway (395P) [Breakneck?]	
Hume Proudfoot	(OBM 96)	Ownership	R. Swanson (96)	Hume Proudfoot (owner) (Toronto?)	Reserve Island [AL199]	
Haycock-Brady-Mitchell	(OBM 96)	Partnership		H.F. Brady E.B. Haycock, C.E. C.W. Mitchell (Ottawa)	Gold Rock (138D, 139D, 140D, 141D)	
Pine Portage	(OBM 96) (P-Arthur Herald, 29 Nov. 1884)	?		General Alger Mr. Farewell (Detroit-1896) Mr. Chaffey (1884) Mr. Gordon (1884) Thomas Dobie (Tilsonburg-1884, 1893)	Pine Portage (P219)	
Kennedy	(OBM 96)	Ownership		Kennedy (Rat Portage)	King (P221)	
Lillin & Rochon	(OBM 94)	Partnership?	Rochon (1894)	Lillin & Rochon (Keewatin)	133P & 155P	
Webster & Angell	to 1893 (Gold Deposits of Ontario p.151)	Partnership?	Geo. Tennant	J.W. Webster Mr. Angell (Cleveland)	Treasure (400P, 409P)	
A.B. Upton	1900 (OBM 93)	Ownership?	Geo. Tennant (Contractor 99)	A.B. Upton (Duluth)	Treasure (400P, 409P)	
D.B. Burdette Co.	1893 (OBM 93)	Syndicate?		D.B. Burdette (Minnesota)	Big Ellen, Ada G. Combination, Gold Hill, Golden Slipper, Golden Gate, Judge Mills, Live Post	

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
G.F. Ernst	(OBM 92 & Whiting diaries)	Lease?	J.S. Whiting	J.S. Whiting E.H. Kendall Joseph Thompson (Rat Portage) (owners?)	Gold Creek (P237 or P347?)	
William Gibbons & Dr. Henson	1890 (OBM 92, Commission 90)	Syndicate?		William Gibbons (Winnipeg) Dr. Henson (Rat Portage) (owners) Alexander Manning (Toronto) (option)	Boulder Island (E148) {discovery 1879}	
Bunting-Little-Thompson	(P.Arthur Herald, 29 Nov. 1884) (Commission 90)	Partnership		Robert Bunting (Rat Portage) John Little (Selkirk) Mr. Thompson (Joe?) (owners)	Woodchuck (71P)	
J.B. Campbell (Montreal)	(OBM 99)	Bonded from Griffiths	T.R. Deacon (Contractor 99)	Silas Griffiths (Rat Portage) (owner)	M11 [Olympia]	
Gardiner-Derry	1899 (OBM 99)	Optioned by Ottawa Gold Milling from owners	H.A. Guess (99)	Frank Gardiner George Derry (Rat Portage) (owners)	Scotty Island (JC100)	
Hutchison Syndicate	(OBM 1901)	Syndicate?		R.D. Hutchison H.G. Hutchison J.G. Hammond (Dryden) C.J. Seith (Iowa) (owners)	Gold Moose (Van Home Twp. con 1, lot 8)	
Herman-Larson	(OBM 1901)	Optioned by Redeemer Gold Mining	G. Larson (1901)	G. Larson (Dryden) A.B. Herman (Chicago) (Leasees)	Herman-Larson (SW 40 acres of Lot 6, 1st Con., Van Home Twnshp)	
National Gold Mining Co. (Detroit, Michigan)	(OBM 1903)		S.V. Halstead		National (HW78)	Michigan?

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
John Sutherland, amalgamator living at mine (per Mining Lands Registry ref #1736)	(CMJ 1896, p.164)			W.E. Stone (C.W. Stone?)	Australian (HP140, HP141, HP142, HP143, HP144, K402)	
F.N. Gibbs, M.E. (P. Arthur), Harvey Long & Thomas Paradise (Explorers, Mine Centre)	(Gold Deposits of Ontario) Mining Lands Register, ref. #754, Patent 3 Apr, 1897	Discovery 1897			Black Fly (K413)	
J.J. Walsh	(Gold Deposits of Ontario, p.250)	Private ownership?	J.J. Walsh (1900-1903)	J.J. Walsh (?)	J.J. Walsh (BJ115)	
James R. Gilbert (Seine River)	(CMJ 1896 p.221) (Mining Patents & Lease Register - Leased 6 Oct 1896, #594)	Owner			Nova (K383) [No. of Bad Vermillion Lake]	
Charles Brent	(OBM 1896; Gold Deposits of Ontario, p.170)	Ownership?	Charles Brent (1900)	Charles Brent	Monte Cristo (D158)	
Unknown	(OBM 1897)				Royal (Jaffray Tnp. lot 15, con. 6)	
Unknown	(OBM 1899, p.10)				League (Van Home tnp. Con. 1, Lot 6, N½ - adjacent to Redeemer)	
Woolverton	(S.J. Wilkinson - Gold Deposits of Atikokan, OGS #24)			Woolverton (Owner?)	Woolverton [Sawdo]	
Kendell & Whiting	1895? (Ayer, "Clearwater, etc.)	Partnership?		S. Whiting E.H. Kendell (Rat Portage) (owners?)	Echo Bay (P324)	
A. Geroux	1895? (Ayer, "Clearwater, etc.)	Ownership?		A. Geroux	Geroux (FM174)	

Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Gauthier-Eamgey-Birbeck	1900? (Ayer, "Clearwater, etc.")	Partnership?		J. Gauthier J. Eamgey Mr. Birbeck (?)	Homestead (JC103)	
H. Foster	1900? (Ayer)	Ownership?		H. Foster (?)	Victoria Island (WA2)	
J.S. Whiting	1900? (Ayer)(Davies & Smith)	Ownership?	(N.C.?) McMillan (1900?)	S. Whiting (Rat Portage)	Unicom (D184)	
Webster & Gaylord	(OBM 93)	Partnership?	E.W. Gaylord (92)	J.H. Webster (Cleveland) E.W. Gaylord (Conn.)	El Diver (351P)	
R.H. Evans	(RP News 95)	Ownership?	R.H. Evans (95)	R.H. Evans (St. Paul)	Scott Island	
J. Haldreth (Jeff or James Hildreth?) [Mining Lease Register shows that Lease #136 issued to E.P. McDonnell on 14 Dec. 1892]	1892 (Davies & Smith)	Ownership		J. Haldreth (Jeff Hildreth?)	Dead Broke (P64)	
Electro-Gold Mining and Milling Co., Ltd.	1896 (Davies & Smith)				Electro-Gold (1/3 Lot 13, Jaffray Twnshp)	
Eschweiler and Sanderson	1890 (Davies & Smith)	Ownership	Mr. Hunter (Milwaukee 1901)	Prof. Eschweiler Mr. Sanderson (Milwaukee)	Stewart [Eschweiler] (283P)	
Symmes	1902, OBM 1899 (Davies & Smith)	Ownership		H.C. Symmes (Niagara Falls, Ont)	Imperial (BG138)	
Kobold Syndicate	OBM 1895	Partnership?	Optioned to A. Hay and R. Ahn (1894)	A. Goulet G.A. Kobold	Kobold (K3540)	
Israel Gagne	1896 (Davies & Smith)	Ownership		Israel Gagne (c. 1896) Markell (1897) Ontario Limited (1897)	Machin Zone (S130); Wendigo (MH208)	
George Heenan	1893 (Davies & Smith)	Ownership?	G. Heenan (93)	George Heenan (Rat Portage)	Thunder (328P)	



Mining Company	Year	Capitalization	Officers/Managers	Directors	Mine (& Claim No.)	Head Office
Minnesabic Island	1882-83 (Davies - "Geol. Setting")				Minnesabic Island	
Messrs. Myers, Wood & Moore	P. Arthur Herald, 29 Nov. 1884	Partnership?		Mr. Myers Mr. Wood (H.H.?) Frank Moore	Yellow Girl (57V)	
Hamilton Powder Co. (late addition added to data in February 1996)	Patents Register, 13 July 1894 (Ref. #360)	Owners			So. part lot 6, Conc. 6, Jaffray Twnshp	
Keewatin Power Co. (late addition added to data in February 1996)	Patents Register, 13 April 1894 (Ref. #348)	Owners			Land & land covered by water in the Municipality of Rat P.	Keewatin
Trust Corporation of Ontario (late addition added to data in February 1996)	Patents Register, 3 July 1899	Owners			Lucky Coon (655P)	
Trust Corporation of Ontario (late addition added to data in February 1996)	Patents Register, 8 June 1899	Owners			Gold Bug (660P)	

## Appendix "C" Table 2

### Reported Levels of Activity Among Northwestern Ontario Gold Mining Companies 1880-1903

#### MINELESS COMPANIES

(no known mine found or reported)

Assaying and Smelting Co. [1897]  
 Atikokan Gold Mining [1899]  
 Atlas Gold Mining and Dev. [1897]  
 Aurora Gold Mining Company of Ontario [1897]  
 Bag Bay Gold Mines Co. [1900]  
 Bad Vermillion Gold Co. [1898]  
 Bonheur Belle Gold Mining Co. of Northwestern Ontario [1898]  
 Canadian Minerals Company¶ [1898]  
 Consolidated Gold Fields Dev. [1897]  
 Coronation Gold Mining Co. [1903]  
 Crocus Gold Mining and Dev.\* [1897]  
 Czar Gold Mining Co. [1897]  
 Darlington Bay Gold Mining \*[1896]  
 Gopher Mining Co. [1901]  
 Island Falls Mines Co. [1899]  
 Kalevala Gold Mining Co. [1899]  
 Keewatin Gold Mining, Prospecting & Dev. [1897]  
 La Reine Gold Mining Co. of Ontario [1897]  
 Manitou Gold Mining Co. [1897]  
 Michigan-Ohio Gold Mining Co. [1901]  
 Mikado Peninsula Gold Mining and Dev. Co. of Ontario [1899]  
 Mine Centre Dev. [1897]  
 Mineral King Mining and Dev. [1897]  
 Mining Investment Co. of Canada‡ [1883]  
 Minnesota Ontario Gold Mines Co. [1899]  
 Montreal-Manitou Mines Co. [1899]  
 Mount Royal-Manitou Gold Mining Co. [1899]  
 Northland Gold Co. of Ontario [[1899]  
 Nugget Gold Mining [1897]  
 Ontario and Rainy River Contracting and Supply Co. [1899]  
 Oriole Gold Co. of Wabigoon and Sawbill Lake [1897]  
 Page Gold Mining Co. of Ontario [1900]  
 Pipestone Gold Mining¶ [1896]  
 Rat Portage Mining and Dev. Co. of Arizona‡[1902]  
 Seine River Mining and Dev.\* [1897]  
 Seine River and Manitou Gold [1897]  
 Shoal Lake and Seine River Mining [1897]  
 Stadacona Gold Mining Co. [1900]  
 Uphaz Gold Mining and Dev. [1897]  
 Upper Seine Pioneers¶ [1899]

Vermillion Bay Mines Co.‡[1903]  
 Victor Gold Mining and Dev. Co. of Rat Portage [1899]  
 Webbwood General Mining and Dev. Co. [1897]  
 Western Canada Gold Mines Co. [1896]  
 Western Ontario Mining [1896]  
 Western Ontario and Manitoba Gold \* [1896]

TOTAL MINELESS COMPANIES . . . . . 46  
 Dominion Companies [Federal Letters Patent] (‡) 1  
 US Companies (†) . . . . . 2  
 British Companies (¶) . . . . . 3  
 Dead-End Applications (\*) . . . . . 4

**DEVELOPING AND/OR PRODUCING COMPANIES**

(shaft to at least 75 feet with drifting and/or mill)

Mine names not reflected in the company's title are indicated in parentheses.

- A.L.282 Gold Mining Co. of Ontario [1900]  
 Anglo-Canadian Gold Estates¶ (Elizabeth, etc.) [1900]  
 Anglo-Ontario Expl. and Gold Mining (Foley) [1897]  
 Argyle Mining Co.‡ [1883]  
 Bath Island Mining Co. [1897]  
 Black Eagle Gold Mining Co.¶ (Regina) [1901]  
 Black Sturgeon Mining [1897]  
 Boulder Mining Co. of Ontario [1899]  
 Britannia Cons. Gold Mining Co. of Ontario (Black Jack, Gold Hill) [1899]  
 Bullion Gold Mining [1893]  
 Bullion Number Two Mining Co. [1899]  
 Burley Gold Mining [1897]  
 Canadian Milling and Red. Co.‡(RPRW) [1889, OBM {1893}]  
 Canadian Mines Dev. Co.¶ (Foley) [1899]  
 Cameron Islands Mining and Dev. [1897]  
 Camp Bay Mining Co. (Combined) [1903]  
 Cedar Island Gold Mining Co.¶ [1898]  
 Champion Gold Mining Co. [1902]  
 Chemical Gold Mining Co. of Ontario (Witch Bay) [1898]  
 Chippewa Cons. Gold Mining and Milling Co. (Wendigo) [1902]  
 Chippewa Gold Mining Co. (Wendigo) [1897]  
 Clearwater Gold Mining Co.‡ [1898]  
 Combined Gold Mines Co. [1897]  
 Coronado Gold Mining (Sentinel) [1897]  
 Crown Point Mining Co. (Black Cat) [1899]  
 Decca Mining Co. [1898]  
 Dominion Gold Min. & Red. (RPRW, etc.)¶ [1897]  
 Duluth Mining Co. of Ontario (Gold Winner) [1898]  
 English River Gold Mining Co. (Dawson) [1902]  
 Flint Lake Gold Co. [1902]  
 Foley Mines Co. of Ontario [1896]  
 Anglo-Ontario Exploration [1897]  
 Folger-Hammond Mines Co. [1897]  
 Giant Gold Co. [1902]  
 Glass Reef Gold Mining Co. of Lake Manitou [1899]  
 Gold Brick Mining and Dev. Co. of Saw Bill Lake (Sawbill) [1897]  
 Gold Bullion Mining Co. of Ontario (Bad) [1899]  
 Gold Hill Mining‡ [1892, OBM]  
 Gold Leaf Mining Co. of Ontario (Norah) [1899]  
 Gold Panner Mining Co. of Ontario [1899]  
 Gold Reef Mining Co.¶ (Mikado Reef) [1902]  
 Gold Reefs Co.‡(Victory, Gold Reef #2) [1899]  
 Gold Standard Mining Co.‡ [1902]  
 Gold Winner Mining Co. [1899]  
 Golden Crescent Mining and Expl. Co. of Ontario (AD2) [1899]  
 Golden Star Mining and Expl. [1897]  
 Golden Star Mining Co. [1900]  
 Grace Mining Co. [1901]  
 Great North-West Mining Co. (Indian Joe) [1902]  
 Hammond Gold Reef Mining [1897]  
 Hammond Reef Consolidated Mining Co. [1899]  
 Hawk Bay Gold Mining [1897]  
 Headlight Gold Mining and Expl. Co. of Ontario (Swede Boy - Mine Centre) [1899]  
 Hiawatha Gold Mining and Milling [1897]  
 Imperial Gold Mining and Dev. [1897]  
 Independence Mng and Dev. Co.‡(Independence) [1898, OBM]  
 Inter-state Consol. Mineral Co.‡(Big Master) [1900]  
 Jack Lake Gold Mining Co. [1900]  
 John Sykes Mining and Milling Co. [1899]  
 Jubilee Gold Mining and Dev. [1897]  
 Jubilee Mining Co. [1902]  
 Keenora Mining Co. (RPRW, Scramble) [1902]  
 Lake of the Woods Gold & Silver (RPRW) [1890]  
 Lake Harold Gold [1896]  
 Lake Harold Gold Mines (2nd Incomp.) [1896]  
 Lucky Coon Gold Mining Co. [1899]  
 Manhattan Gold Mining Co. of Ontario [1900]  
 Mikado Gold Mining Company (1903) Limited¶ [1903]  
 Mikado Gold Mining¶ [1896]  
 Moose Lake Mining and Milling Co. [1900]  
 National Gold Mining Co.‡ [1903, OBM]  
 Neepawa Gold Mining Co. (Bee Hive, etc.) [1897]  
 New York and Ontario Gold Mining Co. (Sunbeam - AL282) [1902]

Nino Mining Co. (Nina) [1900]	Sweden Gold Mining [1897]
Northern Gold Co.†(Gold Hill) [1893, OBM]	Toronto and Western (Sirdar, etc.) [1897]
Northwest Ontario Mining and Dev. Co. (419HW)¶ [1899]	Triggs Gold Mining Co. [1898]
North-Western Ontario Expl. Co.¶ (HW419) [1897]	Triumph Gold Mining Co.†[1898, OBM]
Olive Gold Company of Seine River [1897]	Twentieth Century Mining Co. [1901]
Olive Gold Mining Co. [1897]	Tycoon Mining and Dev. Co. of Ontario [1898]
Ontario Gold Concessions¶ [1898]	United States Gold Mining Co.†[1901]
Ontario, Limited¶ [1897]	Weigand Gold Mining Co.†[1895, OBM]
Ontario Mines Development Co. (Foley) [1896]	Wendigo Mines of Ontario [1900]
Ontario Prospectors' Mining and Dev. (Stella) [1897]	Winnipeg Consolidated Gold Mining‡ [1883]
Original Swede Boys' Prospecting Co. (Headlight) [1897]	Yum Yum Gold Mining of Ottawa [1896]
Ottawa Gold Milling and Mining (Keewatin Red. Works, etc.) [1897]	TOTAL DEVELOPING COMPANIES . . . . . 123
Oxford Mining Co.? [1899, OBM]	Dominion Companies (‡) . . . . . 2
Pine Portage Mining Co. [1900]	USCompanies (†) . . . . . 14
Preston Gold Mining Co. (Olive) [1896]	British Companies (¶) . . . . . 17
Protogene Gold Mines Co. (Foley) [1902]	Dead-End Applications (*) . . . . . 1
Rainy Lake Mining and Power Co.†(Sairy Gamp) [1900, OBM & Dist. Court]	
Rainy River Dev. Co.¶ (Mayflower, Hidden Treasure) [1900]	
Rat Portage Gold Mining (Masterjack) [1896]	
Rat Portage Land & Mining Co.* (RPRW, Blackjack) [1893]	
Railroaders' Gold Mining Co. (Sunbeam) [1897]	
Randolph Gold Mining Co. [1899]	
Redeemer Mining and Milling Co. [1901]	
Regina (Canada) Gold Mines¶ [1898]	
Reliance Gold Mining Co. (Independance) [1900]	
Roy Mining and Dev. Co.? [1898, OBM]	
Rush Bay Golden Horn Mining Co. [1901]	
Sakoose Gold Mining Co. [1901]	
Saw Bill Lake Gold [1896]	
Saw Bill Reef Syndicate, Limited [1900]	
Scramble Gold Mining Co. [1897]	
Seine River Syndicate Mining Co.¶ (Pettigrew) [1899, OBM]	
Seine River (Ont.)Gold Mines¶(Ferguson) [1898, OBM]	
Sentinel Consolidated Gold Mining [1898]	
Sirdar Gold Mining Co. [1899]	
Standard Mining and Dev. Co. of Ontario (Emporer) [1896]	
Sultana Gold Mine, Limited (1903)	
Sultana Mine of Canada ¶ [1899]	
Summit Lake Gold Min'g Co. of Ont.†(Little Master, Imperial, Penninsular) [1902]	

**EXPLORATION COMPANIES** (held a known property, shaft less than 75 feet, no mill)

Mine names not reflected in the company's title are indicated in parentheses.

- AD2 Gold Mining Co. [1897]  
 Allan Gold Reef Co. of Ont. (SV124) [1899]  
 Ambrose Mine and Dev. [1897]  
 American and Canadian Gold Mining Co.†(Alice A) [1898, OBM]  
 Anglian Mining and Finance¶? (Cornucopia) [1896, OBM]  
 Atlin Mining Co. (CR68, CR70) [1899]  
 Aurora Gold Mining and Dev. {aka Big Manitou Mining} (HP222) [1897]  
 Bald Indian Bay Mining & Inv. (D154) [1897]  
 Bertram Engine Works, Co. (Sioux Narrows) [1897]  
 Black Hawk Gold Mining Co. [1899]  
 Buffalo Mining and Development of Rat Portage [1897]  
 Buffalo Northwestern Gold (Buffalo?) [1897]  
 Canada Consolidated Mineral Co. (Kobold, Gagne Island) [1901]  
 Climax Gold Mine Co. [1897]  
 Colcleugh Gold Mining (La Mascotte) [1896]  
 Crackerjack Gold Mining Co. [1899]  
 Eagle Lake Gold Mining Co.†[1903]  
 Eastern Townships Mining and Dev. (Tabor) [1897]  
 Electro-Gold Mining and Milling Co.? [1896, Davies]  
 Emma Abbott Gold Mining Co.†[1899, OBM]  
 Empire Mining Co. of Manitou [1899]  
 Fighting Chance Gold Mining Co. (Fighting Chance?) [1899]  
 Fort Frances Mining Co. (G8) [1897]  
 Gagne Island Mining [1897]  
 Gold Bug Mining Co. [1899]  
 Gold Coin Mining Co. [1899]  
 Gold Creek Mines and Expl. [1897]  
 Gold Explorers of Canada¶ (Edna, Queen, Standard) [1896]  
 Gold Hills Exploration & Dev. Co. (D637, etc.) [1898]  
 Gold King Mining Co. of Toronto (D644) [1897]  
 Gold Mountain Mining \* [1897]  
 Gold Mountain Mining Co.†[1901]  
 Gold Quartz Free Milling, Mining and Development Co. of Ontario [1897]  
 Gold Rock Mining [1892]  
 Gold Sun Mining Co. [1899]  
 Golden Eagle Mining and Expl. Co. of Ontario [1899]  
 Golden Fissure Mining [1896]  
 Golden Gate Mining and Dev. [1897]  
 Golden Island Mining Co. (D605, D607) [1897]  
 Golden Prince Mining and Dev. (JT10-11) [1897]  
 Golden Rod Mining Co.†[1899]  
 Golden Twins Mining Co.¶ [1898, OBM]  
 Great Granite Gold Mining and Dev. [1897]  
 Grimsby Gold Mining [1897]  
 Hamilton Powder Co. [1897]  
 Hartford Gold Mining and Dev. (D307) [1899]  
 Hay Island Gold Mining Co.‡ [1897]  
 Homestake Mining [1892]  
 Homestake Gold Mining Co. of Ont.†[1901]  
 Indian Joe Gold Mining Co. [1902]  
 International Gold Mining & Dev.‡ [1898]  
 J041 Gold Mining Co. [1898]  
 Kabaskong Gold Mining [1897]  
 Kobold Gold Mining Company of Ottawa [1897]  
 Lakeside Gold Mining Co. (D463, D69, G120, S113) [1897]  
 Laurentian Mining Co. (Later sustained major dev.) [1902]  
 "Little Bobs" Mining Co. of Ontario [1900]  
 Little Rock Cons. Mining and Dev. Co. (Minto) [1902]  
 Log Cabin Gold and Copper Co. [1901]  
 Long Lake Gold Mining Co.¶ [1903]  
 Mandarin Gold Mining Co. [1897]  
 Manitoba Consolidated [1883]  
 Manitou Lake Gold Mining Co.†(Westerfield) [1899]  
 Maple Leaf Gold (82V) [1889]  
 Mines Contract and Investigation Co. (various numbered locations) [1899]  
 Mohawk Mining Co. (Sovereign?) [1897]  
 Monarch Mining Co. [1900]  
 Mountain Mining Co. of Ontario (WD135) [1897]  
 Nan Ki Poo Gold Mining Co. of Ottawa [1897]  
 New Sabaskong Gold Mining Co. of Ontario [1898]  
 Northern Development Co.†(Paymaster) [1903]  
 Northern Light Mines Co.†(Baden Powell, Buffalo, Eldorado) [1902]

Olympia Gold Mining Co.? [1899, OBM]	TOTAL EXPLORATION COMPANIES . . . . .	104
Ontario Exploration and Dev.¶ (Yellow Girl) [1897]	Dominion Companies (‡) . . . . .	5
Ontario Mining Co.‡ (Ophir) [1889]	U.S. Companies (†) . . . . .	12
Ontario Mining Co.¶ (Ophir?) [1900]	British Companies (¶) . . . . .	7
Ontario Mining Co.†(Ophir?) [1901]	Dead-End Applications (*) . . . . .	1
Ontario Reefs Mining and Dev. (Golden Reef) [1897]	<b>Total US Companies . . . . .</b>	<b>28</b>
Orion Gold Mining Co. [1899]	<b>Total British Companies . . . . .</b>	<b>27</b>
President Gold Mining Co. (SV348 & 349) [1902]	<b>Total Dead-End Applications . . . . .</b>	<b>6</b>
Princess Gold Mining [1896]	<b>TOTAL ALL COMPANIES . . . . .</b>	<b>273</b>
Pritchard's Harbour Copper Mining and Dev. (Black Bay, Thunder Bay, Dist.) [1899]		
Queen Bee Gold Mining [1897]		
Queen of the Lakes Gold Mining and Dev. Co. of Ontario (HW209) [1897]		
Rainy River Gold (Wimor, Electro-Gold) [1896]		
Rajah Gold Co.¶ [1893,OBM]		
Rand Gold Mining Co. of Wabigoon (Northern Queen) [1897]		
Randolph, Golden Star) [1886, OBM]		
Rupert Land Mining (G59, HW221) [1897]		
Sabaskong Mining & Lumber‡ [1888]		
Seine River and Rainy Lake Expl. Co.†(Ferguson, Randolph, Golden Star) [1896, OBM]		
Security Gold Mining & Dev. Co. of Ontario (HW302) [1898]		
Seine Manitou Gold Mining (HW96) [1896]		
Stanton Gold Mining and Dev. Co. of Eagle River [aka Eagle Lake Gold Mining] (Eagle Lake) [1898]		
Sultana-Ophir Mining Co. (Ophir) [1900]		
Taché Gold Mining (82V) [1892]		
Virginia Mining Co. of Ontario (Lizzie) [1898]		
Volcanic Reef Co. (Later sustained major development) [1902]		
Wabigoon Free Milling Gold Mining (Gold Quartz) [1897]		
Wampum Gold Mining Co. [1897, OBM]		
Westerfield Mining Investment Co.‡[1901]		
Willow Creek Gold Mining and Dev. Co. of Brantford, Ont. (P767) [1897]		
Winnipeg Mining and Dev.‡ (Winn. Cons.) [1897]		
Yellow Jacket Gold Mining Co. of Seine River [1897]		



**APPENDIX "D"**

**Mine Management**

**Table 1: Northwestern Ontario Mine Management Personnel . . . . . 265**

**Table 2: Mine Managers . . . . . 319**

**Table 3: Vocations of First Directors and Incorporators . . . . . 323**





**Appendix 'D' Table 1**  
**NORTHWEST ONTARIO MINE MANAGEMENT PERSONNEL 1880-1903**

\*NOTE: Individuals identified as "Patentees" and "Lessees" of locations with recorded development were added after computations were made for statistical analysis in text. The directors for the following recently uncovered district gold mining companies were also added after computations: Allan Gold Reefs Co. of Ontario; Atlin Mining Co.; Gold Hills Expl. & Dev.; Gold King Mining Co. of Toronto; Mountain Mining Co. of Ontario; President Gold Mining Co.; Security Gold Mining & Dev.; and Willow Creek Gold Mining & Dev. Co. of Brantford, Ont.

Name	Mine/Year	Position	Residence	Company
John D. Aaron	Long Lake/1901 ¶	Manager		Long Lake Gold Mining Co. ¶
Culyer Adams	AL282/1900	Director	Duluth, Minn.	A.L.282 Gold Mining Co.
David Elair Adams	1897	Director	Winnipeg	Nugget Gold Mining
Mercer J. Adams	HW302/1897	Director	Toronto	Security Gold Mining & Dev. Co. of Ontario
Robert Henry Agur	1896 Black Sturgeon/1897 1897 1897 * Scramble/1897	Director Director Director Director Director	Winnipeg	Western Canada Gold Black Sturgeon Mining Lakeside Gold Mining Darlington Bay Gold * Scramble Gold Mining
R.H. Ahn	Kobold/1894 § Comucopia/1896 § Edna, Standard, Queen/1896 ¶  Golden Gate/1896 § RP Reduction Works/1895 ¶ Golden Gate/1897 Elsie/1897 § Victory, Gold Reef #2/1899 Crown Point/1899 Baden Powell/1902 §	Option Director Manager  Manager Manager Dir/Manager Director Dir/Manager Director Manager	R. Portage Toronto	Kobold Mine § Anglian Mining §? Gold Explorers of Canada ¶ and Dominion Gold ¶ Golden Gate Mine § Dominion Gold ¶ Golden Gate Mining & Dev. Elsie Mine § Gold Reefs Company Crown Point Mining Partington Syndicate §
Hon. James C. Aikens	HW302/1897	Director	Toronto	Security Gold Mining & Dev. Co. of Ontario
James A.M. Aikins (Lt. Gov.)	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
John S. Aikens	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
William H.B. Aikens, M.D.	HW302/1897	Director	Toronto	Security Gold Mining & Dev. Co. of Ontario
Edward Alexander	1901	Director	Duluth, Minn.	Gopher Mining Co.
General Alger	Pine Portage/1896 §	Owner/ Operator?	Detroit, Mich.	Pine Portage Mine §
Alexander Allan	Toronto & Western/1897; Sirdar Point/1899	Director Director	Toronto	Toronto & Western Mines Dev. Sirdar Gold Mining
John Allan	Hay Island/1882* Cameron Island/1897	Director Director	Winnipeg Toronto	Keewatin Mining Co. Cameron Islands Mining
William A. Allan	SV124/1899	Director	Ottawa	Allan Gold Reefs Co. of Ontario
Dr. Norman Allen	1897 *	Director	Toronto	Free Gold Mining & Dev. *

\* Application made for incorporation but Letters Patent never obtained ("Dead-End Application")

¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain

Name	Mine/Year	Position	Residence	Company
H.D. Alston	Royal Sovereign/1902 §	Manager		St. Paul, Minn. Syndicate §
Wardwell Ames	1899	Director	Duluth, Minn.	Minnesota Ontario Gold Mines
Charles P. Anderson	Clear Lake/1900 ¶ Big Six/1898 ¶	Manager Director		Clearwater Gold Mining ¶ Clearwater Gold Mining ¶
R. Andrew	Jack Lake, St. Anthony Reef/1902	Captain		Jack Lake Gold Mining Co.
Alfred Andrews	Emporer/1896	Director	Winnipeg	Standard Mining & Dev.
Mr. Angell	Treasure/1893 §	Partner	Cleveland, Oh.	Treasure Mine §
Frank Ap'John	1899	Director	Rat Portage	Victor Gold Mining and Dev.
E. Appleton	Baden Powell/1900 §	Partner, Synd.	Rat Portage	Partington Syndicate §
Edward Appleyard	Giant/1902	Director	NY	Giant Gold Company
John Arbuthnot	La Mascotte/1896	Director	Winnipeg	Colcleaugh Gold Mining
Fred. Armstrong	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
Hugh Armstrong	Master Jack/1896 Champion/1901	Director Director	R. Portage Portage La Prairie	Rat Portage Gold Champion Gold
Louis Armstrong	1899	Director	Chicago	Island Falls Mines Co.
Thomas Armstrong	Tabor/1898 Oxford/1899 §?	Foreman Manager		Eastern Townships Min'g & Dev. Oxford Mining Co. §?
Samuel Armstrong	Ophir/1900	Director	Toronto	Sultana-Ophir Mining Co.
George Aske	Northern Queen/1897	Director	Brandon, Man.	Rand Gold Mining of Wabigoon
James Ashdown	HP222/1897 Winnipeg Con/1897	Director Director	Winnipeg	Aurora Gold Mining & Dev. Winnipeg Mining and Dev.
George Asplund	Swede Boy/1897	Director	Rainy Lake City	Original Swede Boys's Prospecting
Albert Atwater, M.E.	Gold Sun/1899	Manager/Dir.	Rat Portage	Gold Sun Mining Co.
Elwin Austin	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
Henry B. Aylmer	Tabor, Van Home/1897	Dir./Manager	Richmond, Que.	Eastern Townships Min'g & Dev.
Dr. Robt Aylesworth	1899	Director	Rat Portage	Pritchard's Harbour Mining
Albert Babcock	Great Northwest/1902	Director	New Jersey	Great North-West Mining Co.
Samuel Babcock	Foley/1897	Director	Detroit	Anglo-Ontario Exploration
William Baby	75P/1897 § 1899	Partner Director	Rat Portage	Location 75P § Victor Gold Mining and Dev.
Earl B. Bailey	1897	Director	Buffalo, NY	Little Rock Consolidated Gold

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Name	Mine/Year	Position	Residence	Company
Earl W. Bailey	1897	Director	E. Aurora, NY	Little Rock Consolidated Gold
William Bailey	1900	Director	Cookshire, Que	Stadacona Gold Mining
Henry Baird	Gold Creek/1897	Director	Toronto	Gold Creek Mines & Expl.
Hugh N. Baird	Gray Eagle/1898	Director	Toronto	International Gold Mining Dev.
James Baird	1897 *	Director	Toronto	Free Gold Mining & Dev. *
William Baine	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
Alexander Baker	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Francis Baker	Lone Jack/1897	Director	Grimsby	Grimsby Gold Mining
Andrew G.B. Bannatyne Andrew R.J. Bannatyne	1883 Manitoba Consolidated/1883	Director Director	Winnipeg	Mining Investment Co. of Canada Manitoba Consol. Gold & Silver
Alexander Bannerman	Lady of the Lake/1897	Director	Ottawa	Gagne Island Mining Co.
Samuel Barfoot	82V/1892	Director	Chatham	Taché Gold Mining
K.T. Barnard	Jack Lake, St. Anthony Reef/1902	Assayer		Jack Lake Gold Mining Co.
Edward Barnes	Black Jack/1893	Dir./Manager	Rat Port.	Rat Portage Land & mining (aka Rat Portage Mining Co.)
George Barnes	Master Jack/1896	Director	Rat Port.	Rat Portage Gold Mining
Charles Barnette	Ambrose/1897	Director	Collingwood	Ambrose Mine & Dev.
Robert W. Barnett	Gold Hill/1891 §	Director		Northern Gold §
W.H. Barnhart	Baden Powell, Buffalo, Eldorado/1902 ¶	Director	Buffalo, NY	Northern Light Mines Co. ¶
Louis Baridon	Witch Bay/1898	Director	Montreal	Chemical Gold Mining
C.L. Barker	Flint Lake/1902 ¶	Secty/Dir.	Philidephia, Pa.	The Flint Lake Gold Co. ¶
John Barron	1897	Director	Lindsay	Golden Prince Mining & Dev.
Alexander Barthelmes	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold
Edward Barton	Victory, Gold Reef #2/1899 Crown Point/1899	Director Director	Quebec	Gold Reefs Co. Crown Point Mining Co.
S.R. Bastard	Black Eagle [Regina]/1901 ¶	Director	England	Black Eagle Gold Mining ¶
T.B. Bate	Dawson, White/1901	V.Pres		English River Gold Mining
George Bates	MH190/1897 §	Partner/Man.		MH190 Mine §
Henry Baumgarten	1897	Director	Ottawa	Golden Prince Mining & Dev.
Frederick Bawden	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
George Bayes	1897	Director	Webbwood, Ont.	Webbwood General Mining

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Name	Mine/Year	Position	Residence	Company
Alexander Beck	1897	Director	Webbwood, Ont.	Webbwood General Mining
Herbert Beck	Black Sturgeon/1897 1897 1897 * Scramble/1897 Medicine Ledge/1897 §	Director Director Director Director Lessee	Winnipeg	Black Sturgeon Mining Lakeside Gold Mining Darlington Bay Gold * Scramble Gold Mining Medicine Ledge Mine §
George Beck	1897	Director	Webbwood, Ont.	Webbwood General Mining
Robert Beck	1896	Director	Winnipeg	Western Canada Gold
John Becker	Gold Sun/1899	Director	Cleveland, Oh.	Gold Sun Mining Co.
Henry Beckett	Sawbill/1896 Hawk Bay/1897	Director Director	Hamilton	Saw Bill Lake Gold Hawk Bay Gold
Valentine Bedford	1897	Director	Toronto	Consolidated Gold Fields Dev.
James C. Beebe	Emperor/1896	Manager		Standard Mining & Dev.
Henry Beecher	Great Northwest/1902	Director	New Jersey	Great North-West Mining Co.
Herbert J. Belch	Ophir/1889	Director	?	Ontario Mining Co.
James Bennett	Ophir/1889 JO41/1898 1898 Lucky Coon/1899 1899	Director Director Director Director Director	Duluth Michigan Duluth Duluth Duluth	Ontario Mining Co. JO41 Gold Mining Bad Vermillion Gold Co. Lucky Coon Gold Mining Kalavela Gold Mining
Francis Bennetts	Van Home/1897	Manager		Eastern Townships Min'g & Dev.
Andrew Benson	Black Sturgeon/1897	Manager		Black Sturgeon Mining
John Berg	Swede Boy/1897	Director	Rainy Lake City	Original Swede Boys's Prospecting
Neil Berger	Randolph, Isabella/1899	Dir./Man. (1900)	Mine Centre	Randolph Gold Mining
Henry Berlin	Foley/1896	Director	NY, New York	Foley Mines Co.
Edward Bernard	Tabor, Van Home/1897	Director	Richmond, Que.	Eastern Townships Min'g & Dev.
Lucien Bernard	Witch Bay/1898	Director	Montreal	Chemical Gold Mining
Harry Bernstein	Redemer/1901	Director	Chicago	Redemer Mining and Milling
Andrew Berry	Manhattan/1900	Director	New Jersey	Manhattan Gold Mining Co.
John Berryman	Winnipeg Consolidated/1883	Director	Winnipeg	Winnipeg Consol. Gold M. Co.
David Best	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold
Alex. Bethune	HP222/1897	Director	Winnipeg	Aurora Gold Mining & Dev.
C.E.R. Betterley	Foley/1899 ¶	Director	London, Engl?	Canadian Mines Dev. Co. ¶

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Name	Mine/Year	Position	Residence	Company
Frederick W. Bindon	Kobold/1897 1900 Lady of the Lake/1897	Director Director Dir./Manager	Ottawa	Kobold Gold Mining of Ottawa Stadacona Gold Mining Co. Gagne Island Mining
Thomas Birbeck	1899 Homestead/1900 §	Director Partner	Rat Portage	Mikado Peninsula Gold Mining Homestead Mine §
Joseph Bird	1899 Bag Bay/1900	Director Director	Rat Portage	Victor Gold Mining and Dev. Bag Bay Gold Mines
W. Bird	Gold Hill/1891 §	Director		Northern Gold §
Peter H. Black	D605, D607/1897	Director	Brantford	Golden Island Mining
Thomas Black	Sweden/1897 Climax/1897	Director Director	Winnipeg	Sweden Gold Mining Climax Gold Mine Co.
F. Blackie	Viking/1900 §	Partner/Synd.	Rat Portage	Stevenson Syndicate §
W.A. Blackstone	Big Master/1902	President	Jamestown, NY	Inter-state Consol. Mineral Co. ¶
Andrew Blackwood	Ophir/1889 Preston/1896 Olive/1897 Olive Gold/1897	Director Director Director Director	Winnipeg	Ontario Mining Co. Preston Gold Mining Olive Gold Mining Olive Gold Co.
William Blackwood	Ophir/1889 Preston/1896 Olive/1897 Olive Gold/1897	Director Director Director Director	Winnipeg	Ontario Mining Co. Preston Gold Mining Olive Gold Mining Olive Gold Co.
David Blair	1897	Director	Mine Centre	Mine Centre Development
Charles Blakely	Moose Lake/1900	Director	Montreal	Moose Lake Mining and Milling
Dr. Robert Blanchard	Black Sturgeon/1897	Director	Winnipeg	Black Sturgeon Mining
Sedley Blanchard	1883	Director	Winnipeg	Mining Investment Co. of Canada
W. Blannerhasset	Sunbeam/1897	Director	Fort William	Railroaders' Gold Mining
George Blatch	Kobold/1897	Director	Ottawa	Kobold Gold Mining of Ottawa
Anthony Blum	1897 20th Century/1901 Laurentian/1902 Volcanic Reef/1902	Director Director Director Director	Texas Boston Boston Boston	Manitou Gold Mining Twentieth Century Mining Laurentian Mining Co. Volcanic Reef Gold Mining
Lantie Vincent Blum	Laurentian/1902 Volcanic Reef/1902	Director Director	Boston	Laurentian Mining Co. Volcanic Reef Gold Mining
Henry Blumer, Jr.	1888	Director	Rat Portage	Sabaskong Lumber & mining
William Bohne	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold
Charles Boon	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
William H. Boorne	HW302/1897	Director	Vancouver, B.C.	Security Gold Mining & Dev.. Co. of Ontario
William Borland	Decca/1898	Director	Montreal	Decca Mining Co.

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Name	Mine/Year	Position	Residence	Company
G.H. Botherton	Sawbill/1897	Supt.		Saw Bill Lake Gold
A.F. Botsford	Maw/1900 §	Manager		Maw & Greening Syndicate §
Mr. Botterell	Independence/1901 §	Manager		Independence Min. and Dev. Co. (US Corp?)§
E. M. Bovill	Ontario Gold Conc./1898 ¶	Director	London, Engl.	Ontario Gold Concessions ¶
John G. Bowes	D637, etc./1897	Director	Hamilton	Gold Hills Expl. and Dev. Co.
Maj. F.J. Bowles	1897	Director	Winnipeg	Atlas Gold Mining
Frederick Bowman	1899 Orion/1899	Director Director	Rat Portage	Mikado Peninsula Gold Mining Orion Gold Mining
John M. Bowman	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
Arthur Boyce	Black Jack/1893 Sentinel/1897	Director Director	Rat Port.	Rat Portage Land & mining (aka Rat Portage Mining Co.), Coronado Gold Mng
William Boyd	Victory, Gold Reef #2/1899	Director	Montreal	Gold Reefs Co.
William L. Boyle	Argyle/1883	Director	Winnipeg	Argyle Mining Co.
Hugh C. Brabridge	Sultana/1899 ¶	Director	London, Engl.	Sultana Mine of Canada ¶
Henry Bradley	Gold Winner/1899	Director	Duluth, Minn.	Gold Winner Mining Co.
H.F. Brady	Gold Rock/1896 §	Partner	Ottawa	Gold Rock Mine §
James Brady	1883	Director		
Carl Brand	1901	Director	Toledo, Ohio	Michigan-Ohio Gold Mining
George Brebber	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Henry Breed	Combined/1897	Director	Buffalo	Combined Gold Mines
T. Breidenbach, M.E.	Mikado/1898 ¶ Sirdar/1899 Flint Lake/1902	Mine Man. Manager Manager	Germany	Mikado Gold Mining ¶ Sirdar Gold Mining Flint Lake Gold
Charles Brent, M.E.	Black Jack/1892 Monte Cristo/1896§ Triumph/1897§ Bullion No. 2/1899 Nina/1902	Manager Owner/Oper. Mine Engineer Manager Consult. Eng.	Rat Portage	Lake of Woods Gold & Silv. Red., Monte Cristo Mine§ Triumph Gold Mining§ Bullion Number Two Mining Co. Nino Mining Co.
Alfred Brice	1899	Director	Montreal	Mount Royal-Manitou Gold
Joseph Brimson	AL282/1900	Director	Port Arthur	A.L.282 Gold Mining Co.
Edmond Bristol	HW96/1896 Foley/1897	Director Director	Toronto	Seine Manitou Gold Anglo-Ontario Exploration
Edmund Briston	Foley/1899 ¶	Attorney	Toronto	Canadian Mines Dev. Co. ¶
Jeffrey H. Brock	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.

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Name	Mine/Year	Position	Residence	Company
Mary Brockunier	Lizzie [Virginia]/1898	Director	West Virginia	Virginia Mining Co.
S.H. Brockunier	Lizzie [Virginia]/1898	Dir/Man. (1899)	Rat Portage	Virginia Mining Co.
Walter Bronsen	Queen Bee/1897	Director	Ottawa	Queen Bee Gold Mining
Erskine Bronson	Ophir/1900	Director	Ottawa	Sultana-Ophir Mining Co.
Flavius Brooke	Reliance/1900	Director	Detroit, Mich.	Reliance Gold Mining Co.
Lester Brooks	1899	Director	Duluth, Minn.	Minnesota Ontario Gold Mines
Arthur H. Brown	1897	Director	London, Ont.	Mineral King Mining & Dev.
C.L. Brown	Gold Standard/1902 ¶	Director	S. Dakota	Gold Standard Mining Co. ¶
C.T. Brown	Big Ruby/1897 §	Man./Partner	Taché, Ont.	Big Ruby Mine §
Hon. Corydon P. Brown	Hay Island/1882*	Director	Winnipeg	Keewatin Mining Co.*
Frederick G. Brown	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
Harry W. Brown	Norah/1899	Director	Ottawa	Gold Leaf Mining Co.
John Brown John R. Brown	G59, HW221/1897 Winnipeg Cons./1883	Director Supt/Director	Russell, Man. Winnipeg/ Colorado	Rupert Land Mining Winnipeg Consol. Gold M. Co.
Peter J. Brown	Winnipeg Consolidated/1883 Argyle/1883	Director Director	Winnipeg	Winnipeg Consol. Gold M. Co. Argyle Mining Co.
Robert Brown	D605, D607/1897	Director	Mount Forest	Golden Island Mining
William Brown	Leona/1901	Director	S. St. Marie	Standard Mining Co.
Francis Bruce	Sawbill/1896 Hawk Bay/1897	Director Director	Hamilton	Saw Bill Lake Gold Hawk Bay Gold
Charles Brucker	Foley/1902	Director	Detroit, Mich.	Protogene Gold Mines
George F. Bryan	1896 HW209/1897 1897	Director Director Director	Winnipeg	Western Canada Gold Queen of the Lakes G. M. & Dev. Lakeside Gold Mining
Wilberforce Bryant	Sultana/1899 ¶	Director	London, Engl.	Sultana Mine of Canada ¶
Alexander Buchanan	Glass Reef/1899	Director	North Dakota	Glass Reef Gold Mining
George W. Buck	1899	Director	Duluth	Northland Gold Co. of Ontario
Henry Buckland	1897	Director	Toronto	Golden Prince Mining & Dev.
Abraham Buehler	Sweden/1897 HW209/1897	Director Director	Winnipeg	Sweden Gold Mining Queen of the Lakes G. M. & Dev.
William Bull	Mack 26 & 27, Bullion, Bad/1899	Director	Buffalo	Gold Bullion Mining
Frederick Buller	Crown Point/1899	Director	Toronto	Crown Point Mining Co.
Francis Bullivant	Nina/1900	Director	St. Catherines	Nino Mining Co.

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Name	Mine/Year	Position	Residence	Company
Robert Bunting	Woodchuck/1890 §	Partner	Rat Portage	Woodchuck Mine §
D.B. Burdett	Big Ellen, Ada G, Combination, Gold Hill, Golden Slipper, Golden Gate, Judge Mills, Live Post/1893 §	Dir./Partner	Minnesota	Northern Gold § [Gold Hill Co.?)
Henry Burbidge	1903	Director	Ottawa	Coronation Gold Mining Co.
A.C. Burgess	Bath Island/1897	Assayer		Bath Island Mining
George Burgess	Golden Star/1897 JO41/1898 1898 Swede Boy/1899 Page/1900	Director Director Director Director Director	Duluth, Minn.	Golden Star Mining & Expl. JO41 Gold Mining Co. Bad Vermillion Gold Headlight Gold Mining Page Gold Mining Co.
Ralph K. Burgess	Bath Island/1897	Director	Toronto	Bath Island Mining
William Burgess	Page/1900	Director	Duluth, Min.	Page Gold Mining Co.
Daniel Burk	Kabaskong?/1897	Director	Port Arthur	Kabaskong Gold Mining
William Burritt	Golden Fissure/1896	Director	Toronto	Golden Fissure Mining
John Burns	Yum Yum/1896	Director	Ottawa	Yum Yum Gold Mining
William Butchart	AD2/1897	Director	Duluth	AD2 Gold Mining Co.
Joseph Butler	82V/1889 82V/1892	Director Director	Chatham	Maple Leaf Gold Taché Gold
Fessenden Butterfield, M.E.	1883	Director	Winnipeg	Manitoba Consol. Gold & Silver
C.A. Butterworth	Royal, Lady of Lake/1901	Director	Ottawa	Canada Consolidated Mineral Co.
James Buxton	Bag Bay/1900	Director	Rat Portage	Bag Bay Gold Mines Co.
Henry Byrnes	Imperial/1896 * Empoer/1896 Sovereign/1897	Director Director Director	Winnipeg	Imperial Min. & Dev. * Standard Mining & Dev. Mohawk Mining
John F. Caldwell	Sultana/1892- § Sultana/1899 ¶ Sultana/1903	Owner/Man. Attorney/Dir. Director	Winnipeg	Sultana Mine § Sultana Mine of Canada ¶ Sultana Gold Mine, Limited
W.M. Caldwell	Fish Island/1884 Sultana/1892 § Jubilee/1897 * Cameron Island/1897 Jubilee/1902	Manager Supt. Manager Manager Manager	Rat Portage	Fish Island Mine § Sultana Mine § Jubilee Gold Mining * Cameron Islands Mining & Dev. Jubilee Mining Co.
D.C. Cameron	Master Jack/1896 Bullion No.2/1899 Champion/1901 Sultana/1903	Director Direcor Director Director	R. Portage	Rat Portage Gold Bullion No. 2 Gold Champion Gold Mining Sultana Gold

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Name	Mine/Year	Position	Residence	Company
D.O. Cameron	1897	Director	Oakville, Ont.	Hiawatha Gold Mining
Asa Camp	Gold Coin/1899	Director	Mine Centre	Gold Coin Mining Co.
Albert Campbell	1897	Director	Winnipeg	Mine Centre Development
George Campbell	1897	Director	Winnipeg	Mine Centre Development
J.B. Campbell	Olympia/1899 §	Bond Holder	Montreal	Olympia Mine §
Kenneth Campbell	Decca/1898	Director	Montreal	Decca Mining Co.
Neil Campbell	Stella, Contact/1897-1900	Manager/Dir.	Rat Portage	Ontario Prospectors' Mining
Peter Campbell	Ambrose/1897	Director	Collingwood	Ambrose Mining & Dev.
Robert Campbell	Victory, Gold Reef No. 2/1899	Director	Montreal	Gold Reefs Co.
Robert Campbell	G59, HW221/1897	Director	Winnipeg	Rupert Land Mining
Charles E. Carbert	Sweden/1896	Manager		Sweden Gold Mining
W.F. Carlson	Sioux Narrows/1897	Manager		Bertram Engine Works
Thomas H. Carman	1883	Director	Winnipeg	Mining Investment Co.
Angus Carmichael	Master Jack/1896 Champion/1901	Director Director	R. Portage	Rat Portage Gold Champion Gold Mining Co.
Edward Carpenter, MPP	Mandarin/1897	Director	Simcoe	Mandarin Gold Mining
W. Carpenter	Gold Hill/1891 §	Director		Northern Gold §
A.B. Carruthers	1897	Director	Toronto	Oriole Gold Co. of Wabigoon
James Carruthers	Grey Eagle/1897 Toronto & Western/1897; Sirdar Point/1899	Director Director Director	Toronto	International Gold Mining & Dev. Toronto & Western Mines Dev. Sirdar Gold Mining
John Carson	Black Jack, Gold Hill/1899	Director	Montreal	Britannia Consol. Gold Min'g Co.
Henry C. Carter	Buffalo/1897	Director	Buffalo	Buffalo Mining and Dev.
Alex. Cartwright	Wendigo/1900	Director	Toronto	Wendigo Mines of Ontario
Sir Richard J. Cartwright	Folger-Hammond/1897 Hammond Reef/1899 Wendigo/1900 §	Director Director Syndicate	Kingston	Folger-Hammond Mines Co. Hammond Reef Consolidated Gooderham Syndicate §
Robert Cartwright	1898	Director	Ottawa	Bonheur Belle Gold Mining
Francis Case	Manhattan/1900	Director	Buffalo, NY	Manhattan Gold Mining Co.
John Henry Casler	Grace/1897 1899	Manager/Dir. Director	Buffalo, NY	Grace Mining Co. Victor Gold Mining and Dev.
Robert Cassels	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
J.H. Cassidy	Golden Horn/1901	Secty/Treas	St. John, NB	Rush Bay Golden Horn Mining
William Cawthra	HW96/1896 Foley/1897	Director Director	Toronto	Seine Manitou Gold Anglo-Ontario Exploration

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Name	Mine/Year	Position	Residence	Company
John N. Chabot	Moose Lake/1900	Director	Montreal	Moose Lake mining and Milling
C.W. Chadwick	1888 Bad; Bullion No. 1; Monarch/1893 Master Jack/1896 Gold Panner/1899 Bullion No. 2/1899 Champion/1901	Director Director Director Director Director	Rat Port.	Sabaskong Lumber& mining Bullion Gold Mining Rat Portage Gold Gold Panner Mining Bullion Number Two Mining Champion Gold Mining
Benjamin Chaffey	Climax/1897	Director	Winnipeg	Climax Gold Mine Co.
John Chaloner	1888 Ophir/1889 Master Jack/1897	Director Director Secty	R. Portage	Ontario Mining Co. Sabaskong Lumber& mining Rat Portage Gold Mining
Edson J. Chamberlin	SV124/1899	Director	Ottawa	Allan Gold Reefs Co. of Ontario
James Chaplin	Nina/1900	Director	St. Catherines	Nino Mining Co.
William Chaplin	Nina/1900	Pres/Director	St. Catherines	Nino Mining Co.
Dr. James (William?) Chapman	Stella, Contact/1897 1899 1899	Director Director Director	Rat Portage	Ontario Prospectors' Mining Pritchard's Harbour Mining Victor Gold Mining & Dev.
Vernon Chappel	Golden Star/1897 JO41/1898	Director Director	Manistique, Mich.	Golden Star Mining & Expl. JO41 Gold Mining Co.
Fredrick Cheeseworth	1899	Director	Toronto	Mines Contract & Investigation
William Cheeseworth	1899 Great NW, Indian Joe/1902 Great NW, Indian Joe/1902	Director Director Director	Toronto	Mines Contract & Investigation Indian Joe Gold Mining Great North-West Mining
William Christie	Gray Eagle/1898	Director	Toronto	International Gold Mining & Dev.
Charles Church	Tabor, Van Home/1897	Director	Durham, Que.	Eastern Townships Min'g & Dev.
Charles Clapp	1901	Director	Toledo, Ohio	Michigan-Ohio Gold Mining
Dr. Charles Clark	Sovereign?/1897 Golden Horn/1901	Director Director	Winnipeg	Mohawk Mining Co. Rush Bay Golden Horn Mining
Daniel Clark	Buffalo/1897	Director	Buffalo	Buffalo Mining and Dev.
Henry Clay Clark	Crackerjack/1899 Emma Abbott/1899 §	Director Director	Chicago	Crackerjack Gold Mining Emma Abbott Gold Mining §
John Murray Clark	Nankipoo/1897	Director	Toronto	Nan Ki Poo Gold Mining
Olin H. Clark	Eagle Lake/1898	Director	Conn.	Stanton Gold Mining & Dev.
Oliver Clark	P767/1897	Director	Brantford, Ont.	Willow Creek Gold Mining & Dev. Co. of Brantford Ontario

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§ Unincorporated mining operation or origin of incorporation uncertain

Name	Mine/Year	Position	Residence	Company
William A. Clark	Keewatin RW, etc./1897 Nankipoo/1897 1897 Burley/1897 Queen Bee/1897 Ophir/1900	Director Director Director Director Director Director	Ottawa	Ottawa Gold Milling & Mining Nan Ki Poo Gold Mining Bald Indian Bay Mining & Invest. Burley Gold Mining Queen Bee Gold Mining Sultana-Ophir Mining
William J. Clark	Empire/1899 Monarch/1900	Director Director	Toronto	Empire Mining Co. Monarch Mining Co.,
Alexander Clarke	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Henry Clarke	G8/1897	Director	Ft. Frances	Fort Frances Mining
Samuel Clarke	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
Thomas Clarke	1897	Director	Toronto	Golden Prince Mining & Dev.
John B. Clarkson	CR68 & 70/1899	Director	Montreal	Atlin Mining Co.
Albert Clausen	1899	Director	St. Paul, Minn.	Minnesota Ontario Gold Mines
George Clavette	1896 *	Director	P. Arthur	Ontario Miners' Dev. *
George Claypool	Swede Boy/1899	Director	Duluth, Minn.	Headlight Gold Mining & Expl.
James Cleghorn	1897 *	Director	Winnipeg	Uphaz Gold Mining & Dev. *
Lorenzo Cleaves	Gold Coin/1899	Director	Mine Centre	Gold Coin Mining Co.
Albert Cline	G8/1897 Crackerjack/1899	Director Director	Ft. Frances	Fort Frances Mining Crackerjack Gold Mining
James Close, Jr.	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
Thomas R. Clougher	HW302/1897	Director	Toronto	Security Gold Mining & Dev., Co. of Ontario
Albert Coates	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold
John Coates, C.E.	Yum Yum/1896	Director	Ottawa	Yum Yum Gold Mining
Frank Stanley Cobb	Combined/1897 Buffalo/1898 Wendigo/1902	Director Director Director	Buffalo	Combined Gold Mines Buffalo Northwestern Gold Chippewa Consolidated Gold
Marvin W. Cobb	Buffalo/1898	Director	Fredonia, NY	Buffalo Northwestern Gold
John Codville	HP222/1897	Director	Winnipeg	Aurora Gold Mining & Dev.
John Colcleugh	La Mascotte/1896 Sentinel/1897 1897	Director Director Director	R. Portage	Colcleugh Gold Mining Coronado Gold Mining La Reine [Mutual] Gold
William Colcleugh	D605, D607/1897	Director	Mount Forest	Golden Island Mining
John Collins	Princess/1897	Manager		Princess Gold Mining
Thomas Collins	D605, D607/1897	Director	Mount Forest	Golden Island Mining
William H. Collinson	Bath Island/1897	Director	Toronto	Bath Island Mining

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¶ Licenced extra-provincial or Imperial incorporation

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Name	Mine/Year	Position	Residence	Company
Joseph Colton	Crown Point/1899	Director	Toronto	Crown Point Mining Co.
Emily Conmee	1899	Director	P. Arthur	Ont. & R.R. Contract
James Conmee	Foley/1896 Tycoon/1898 New Sabaskong/1898 1899	Director Director Director Director	P. Arthur	Ontario Mines Dev. Tycoon Mining & Dev. New Sabaskong Gold Ont. & R.R. Contract
William Conner	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Martin Conway	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
W.F. Cooley	Gold Standard/1902 ¶	Director	S. Dakota	Gold Standard Mining Co. ¶
Hunter Cooper	1897	Director	Winnipeg	Assaying & Smelting Co. of Ont.
James Cooper	Hay Island/1897	Director	Montreal	Hay Island Gold Mining
Louis S. Coos	Gold Hill/1891 §	Director		Northern Gold §
George Copeland	AL282/1902	Eng/Foreman	Butte, Montana	New York and Ontario Gold Mining
James Corley	D605, D607/1897	Director	Mount Forest	Golden Island Mining
John Corley	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Charles Corneille	Decca/1898	Director	Montreal	Decca Mining Co.
Fred. Coming, M.E.	Foley/1896	Director	NY, New York	Foley Mines Co.
Charles Corser	Eagle Lake/1898	Director	Massachusetts	Stanton Gold Mining & Dev.
Dr. Carol Corson	Gold Bug/1899 Lucky Coon/1899	Director Director	W. Superior, Wisc.	Gold Bug Mining Lucky Coon Gold Mining
George Corthell	Redemer/1901	Director	Ohio	Redemer Mining and Milling
Henry Costigan	G59, HW221/1897	Director	Winnipeg	Rupert Land Mining
Frank E.A. Cott	Ambrose/1897	Director	New York, NY	Ambrose Mine & Development
Alex Cotter	Sultana/1899 ¶	Supt.		Sultana Mine of Canada ¶
William Cotton	1898	Director	Ottawa	Bonheur Belle Gold Mining
Thomas Coughlin	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
William Cowan	Northern Queen/1897 Sirdar/1899	Director Director	Brandon, Man. Oshawa	Rand Gold Mining of Wabigoon Sirdar Gold Mining Co.
Hon. Geo. Cox	Gray Eagle/1898 Hammond Reef/1899	Director Director	Toronto	International Gold Mining & Dev. Hammond Reef Consol. Mining
John Craig	D644/1897	Director	Baltimore, Md.	Gold Mining Co. of Toronto

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Name	Mine/Year	Position	Residence	Company
William Craig	Burley/1897 1897 Sakoose/1901 Keewatin RW/1901	Director Director Manager Manager	Ottawa	Burley Gold Mining Bald Indian Bay Mining & Invest. Sakoose Gold Mining Ottawa Gold Milling & Mining
Levi Crannell	Queen Bee/1897 Burley/1897 1897	Director Director Director	Ottawa	Queen Bee Gold Mining Burley Gold Mining Bald Indian Bay Mining & Invest.
Arthur Crassweller	1897	Director	Duluth	Shoal Lake & Seine River Mining
Horace Crawford	Northern Queen/1897	President	Winnipeg	Rand Gold Mining of Wabigoon
William Creighton	Homestake/1892	Director	Rat Port.	Homestake Mining
William Croft	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
Henry Crotty	1896 1897	Director Director	Winnipeg	Western Canada Gold Lakeside Gold Mining
P. Culligan	Black Sturgeon/1899 §	Man/Partner?		Black Sturgeon Mine §?
William H. Culver	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
Stephen Cummins	1897 Little Bobs/1900 Ontario Ltd/1900 ¶	Director Director Attorney	Winnipeg Rat Portage	Czar Gold Mining Co. "Little Bobs" Mining Co. Ontario Mining Co. Ltd. ¶
James Curran J.D. Curran?	Eagle Lake/1898 Viking/1900 §	Director Syndicate	Massachusetts Rat Portage	Stanton Gold Mining & Dev. Stevenson Syndicate §
James Curry	Empire/1899 1899	Director Director	Toronto	Empire Mining Co. Mount Royal-Manitou Gold Mining
James Curtis	Mack 26 & 27, Bullion, Bad/1899	Director	Buffalo	Gold Bullion Mining
James C. Cutter	1897	Director	Buffalo, NY	Little Rock Consolidated Gold
Charles Dalby	Lizzie [Virginia]/1898	Director	Rat Portage	Virginia Mining Co.
John Daniell, C.E.	Foley/1902	Director	Laurium, Mich.	Protogene Gold Mines
James Davidson	Neepawa, Beehive, Victory, Royal Sovereign/1897 Kobold/1897	Man/Director Director	Neepawa, Man. Ottawa	Neepawa Gold Mining Kobold Gold Mining
John A. Davidson	Neepawa, Beehive, Victory, Royal Sovereign/1897 HW209/1897	Director Director	Neepawa, Man.	Neepawa Gold Mining Queen of the Lakes G. M. & Dev.
William Davidson	Mikado/1903 ¶	Attorney	Toronto	Mikado Gold Mining Co.¶
Joseph J. Davies	1892	Director	Toronto	Gold Rock Mining
Robert Davies	Harold Lake/1896	Director	Toronto	Lake Harold Gold Mines
Allan Davis, M.E.	1899	Director	Napanee, Ont.	Montreal-Manitou Mines Co.
George Dawson	Dawson, White/1902	Pres/Director	St. Catherines	English River Gold Mining

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Name	Mine/Year	Position	Residence	Company
Frank L. Dayton	Grace/1897	Director	Buffalo, NY	Grace Mining Co.
Clifford B. Deacon	Olive/1897	Secty	Winnipeg	The Olive Gold Mining
Thomas R. Deacon, O.L.S. (Ont. Lic. Surveyor)	Electro-Gold, Wimor/1896 Ontario Gold Concess/1898 ¶ Olympia/1899 Mikado/1900 ¶	Director Supt. Contractor Supt.	R. Portage	Rainy River Gold Ontario Gold Concess. Olympia Mine Mikado Gold Mining ¶
John Dean	Gold Panner/1899	Director	Rat Portage	Gold Panner Mining Co.
Fred. Dela Vigne	Imperial/1897 * Gold Mountain/1897 *	Director Director	Toronto	Imperial Gold Mining and Dev. * Gold Mountain Mining Co. *
Louis Delorme	Moose Lake/1900	Director	Montreal	Moose Lake Mining and Milling
Rudolph Demme	Foley/1896 Foley/1897	Director Director	Detroit	Foley Mines Co. Anglo-Ontario Exploration
Arthur C. Denniston	1897/Wendigo	Director	Philadelphia, Pa.	Chippewa Gold Mining
George Derry	1899 Scotty Island/1899 §	Director Partner	Rat Portage	Victor Gold Mining and Dev. Scotty Island Mine §
John Devereaux	1897 *	Director	Niagara, N.Y.	Seine River & Manitou Gold Mining *
John Dick	1896 * 1897	Director Director	Winnipeg	Western Ont. & Manitoba * Nugget Gold Mining
Alexander Dickson	1897	Director	Toronto	Mineral King Mining & Dev.
Henry Dietrich	Fighting Chance/1899	Director	Mine Centre	Fighting Chance Gold Mining
John S. Dignam	Imperial/1897 * Gold Mountain/1897 *	Director Director	Toronto	Imperial Gold Mining and Dev. * Gold Mountain Mining Co. *
Donald Dingwall	Sovereign?/1897	Director	Winnipeg	Mohawk Mining Co.
Thomas Dobbie	Pine Portage/1893 § Pine Portage/1900	Partner/Synd. Director	Tilsonburg	Pine Portage Mine § Pine Portage Mining Co.
William Dobie	Kabaskong?/1897	Director	Port Arthur	Kabaskong Gold Mining
C.A. Dobson	1897	Director	Toronto	Oriole Gold Co. of Wabigoon
John S. Dodge	Emma Abbott/1899 §	Director	Minnesota	Emma Abbott Gold Mining §
Dr. William Dodge	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
A.E. Doidge, M.E.	Olive/1898	Manager	Winnipeg	The Olive Gold Co.
James Dougherty	WD135/1898	Director	Stouffville, Ont.	Mountain Mining Co. of Ontario
Lyman M. Dougherty	WE135/1898	Director	Stouffville, Ont.	Mountain Mining Co. of Ontario

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Name	Mine/Year	Position	Residence	Company
Walter J. Doughty	HW302/1897	Director	New York, NY	Security Gold Mining & Dev. Co. of Ontario
William J. Douglas	1897 D637, etc./1897	Director Director	Toronto	Hiawatha Gold Mining Gold Hills Expl. and Dev. Co.
H.F. Downing	Toronto & Western /1898	Foreman		Toronto & Western Mines Dev.
F.E. Draper	Westerfield [Reliance]/1898 ¶	Director	St. Paul ?	Manitou Lake Gold Mining ¶
G.H. Draper	Homestake/1901 ¶ 1901 Flint Lake/1902 ¶ Baden Powell/1902 ¶ Gold Standard/1902 ¶	Attorney Director Attorney Attorney Attorney	Rat Portage	Homestake Gold Mining Co. ¶ Michigan-Ohio Gold Mining Co. Flint Lake Gold Co. ¶ Northern Light Mines Co. ¶ Gold Standard Mining ¶
Herbert Draper	Westerfield/1901 ¶	Attorney	Rat Portage	Westerfield Mining Invest. Co. ¶
Edward Drewry	RP Reduction Works/1890 Winnipeg Cons/1897	Director Director	Winnipeg	Lake of Woods G. & Silver Red. Winnipeg Mining and Dev.
Fred Drewry	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
George Drewry	La Mascotte/1896 Sentinel/1897 1897 New Sabaskong/1898	Director Director Director Director	R. Portage	Colcleugh Gold Mining Coronado Gold Mining La Reine [Mutual] Gold New Sabaskong Gold
Henry Drummond	1896 * 1897	Director Director	Winnipeg	Ontario & Cen. Can. Prosp. * Atlas Gold Mining
James Duke	Monarch/1899 ¶	Director	Toronto	Monarch Mining Co. ¶
George Dulmage	Gold Hill, Golden Slipper/92 §	Manager	Rat Portage	Northern Gold § [Gold Hill Co. ?]
Oliver Dunais	Nonesuch, Three Friends, Three Ladies/1896 §	Owner	Norman	Oliver Dunais §
Charles Duncan	D605, D607/1897	Director	Brantford	Golden Island Mining
Louis N. Dupuis	Moose Lake/1900	Director	Montreal	Moose Lake Mining and Milling
Nassau B. Eagen	Sentinel/1898	Manager/Dir.	Toronto	Sentinel Consolidated Gold
Thomas Eagen	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold
J. Earngey	Homestead/1900 §	Partner		Homestead Mine §
Hamilton Echlin	1897	Director	Keewatin	Keewatin Gold Mining
Albert J.H. Eckardt	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
Adolph Eckstein	1899	Director	Duluth, Minn.	Kalevala Gold Mining Co.
D. Eckert	82V/1889	Director	Chatham	Maple Leaf Gold
Moses Edey	Kobold/1897	Director	Ottawa	Kobold Gold Mining of Ottawa
James D. Edgar, Q.C.	D637 etc./1897	Director	Toronto	Gold Hills Expl. and Dev. Co.
Dr. Albert Edmison	Nankipoo/1897	Director	Rat Portage	Nan Ki Poo Gold Mining

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Name	Mine/Year	Position	Residence	Company
William Edson	Gold Winner/1899	Director	Duluth, Minn.	Gold Winner Mining Co.
William Edwards	Black Sturgeon/1897	Director	St. Paul, Minn.	Black Sturgeon Mining
Henry K. Egan	SV124/1899	Director	Ottawa	Allan Gold Reefs Co. of Ontario
Adolph Eisele	Great Northwest/1902	Director	New Jersey	Great North-West Mining Co.
Andrew Elliot	Leona/1901	Director	S. St. Marie	Standard Mining Co.
Dawson Elliot	HP222/1897	Director	Winnipeg	Aurora Gold Mining & Dev.
William J. Elliott	Gold Coin/1899	Director	Toronto	Gold Coin Mining Co.
Arthur Ellis	Foley/1896 Foley/1897 Foley/1902	Director Director Director	Windsor	Foley Mines Co. Anglo-Ontario Exploration Protogene Gold Mines
M.W. Elphinstone	Rat Portage RW, etc./1897 ¶	Director	London, Engl.	Dominion Gold Mining ¶
Henry Ely	AL282/1900	Director	Duluth, Minn.	A.L.282 Gold Mining Co.
H.S. Emlaw	AL282/1901	Manager		New York and Ontario Gold Mining
John Emmons	Tycoon/1898 Ontario Limited/1898 ¶	Director Foreman	Rat Portage	Tycoon Mining & Development Ontario Limited ¶
C.W. Engledue	Mikado/1896 ¶	Manager	England	Mikado Gold Mining ¶
Col. W.T. Engledue	Ont. Limited/1897 Ontario Gold Conc./1898 ¶ Gold Coin/1898	Man/Dir Vendor/Dir? Manager	England	Ontario Limited Ontario Gold Concessions, Ltd ¶ Gold Coin Mining
G.F. Ernst	Gold Creek/1892 §	Lease or Option		Gold Creek Mine §
Professor Charles F. Eschweiler, M.E.	Stewart/1890 §	Partner	Milwaukee, Wis.	Stewart Mine §
Emile Esperandieu	Mack 26 & 27, Bullion, Bad/1899	Director	Buffalo	Gold Bullion Mining
Charles Evans	Black Hawk/1899	Director	Cleveland	Black Hawk Gold Mining
Frank L. Evans	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
R.H. Evans	Scott Island/1895 §	Owner/Oper.	St. Paul, Minn.	Scott Island Mine §
C.V. Eve	Dawson, White/1902	Manager		English River Gold Mining
E. Falconer	AD2/1897	Manager		AD2 Gold Mining Co.
G.H. Fanning	John Sykes/1899	Manager		John Sykes Mining & Milling
William Fanning	Randolph, Isabella/1899	Director	Superior, Wisc.	Randolph Gold Mining
Mr. Farewell	Pine Portage/1896 §	Owner/Oper?	Detroit, Mich.	Pine Portage Mine §
William Fawcett	AD2/1897	Director	Duluth	AD2 Gold Mining Co.
Leonard Fawell	Sultana/1899 ¶	Director	London, Engl.	Sultana Mine of Canada ¶

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Name	Mine/Year	Position	Residence	Company
Fred Felt	1901	Director	Toledo, Ohio	Michigan-Ohio Gold Mining
David Ferguson	1899	Director	Rat Portage	Mikado Peninsula Gold Mining
Jno. Ferguson	Bath Island/1897	Director	Toronto	Bath Island Mining
Thomas Ferguson	Stella, Contact/1897	Director	Rat Portage	Ontario Prospectors' Mining
Ashton Fife	1899	Director	Rat Portage	Victor Gold Mining and Dev.
Joseph Fife	1899	Director	Rat Portage	Victor Gold Mining and Dev.
E.G. Filer	United States/1901 ¶	President	Filer, Mich.	United States Gold Mining ¶
Frank Finch	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
Francis FitzGerald	Golden Gate/1897	Director	Port Arthur	Golden Gate Mining and Dev.
Sir Gerald Fitz Gerald	Sultana/1899 ¶	Director	London, Engl.	Sultana Mine of Canada ¶
F.C. Fisk	Witch Bay/1898 Log Cabin/1901	Manager Manager		Chemical Gold Mining Log Cabin Gold & Copper
Dr. George Fisk	Decca/1898	Director	Montreal	Decca Mining Co.
Murray Fitch	Lone Jack/1897	Director	Grimsby	Grimsby Gold Mining
R.H. Flaherty, M.E. (AIME Member 1893)	Foley/1897 Yum Yum/1897 Burley/1898 Golden Star/1900	Manager Manager Manager Manager	Iron Mountain, Michigan	Foley Mines Explor. Yum Yum Gold Mining Burley Gold Mining Golden Star Mining
Thomas H. Flahey	Sweden/1897	Director	Winnipeg	Sweden Gold Mining
G.W. Fleming	Sunbeam/1897	Director	Fort William	Railroaders' Gold Mining
Sanford Flemming	SV124/1899	Director	Ottawa	Allan Gold Reefs Co. of Ontario
John Flett	1896 * Princess/1896 Foley/1896 Toronto Western, Sirdar, Sirdar Point/1897	Director Director Director Director Director	Toronto	MacKenzie Gold * Princess Gold Ontario Mines Dev. Toronto & Western Sirdar Gold Mining
Martin Florida	1901	Director	Rat Portage	Michigan-Ohio Gold Mining
Nathan Flower	AL282/1902	Director	New York, NY	New York and Ontario Gold Mining
J.C. (Joseph) Foley	Foley/1896 Foley/1897 Gold Mountain/1901 ¶ Foley/1902	Manager Manager Director? Manager/Dir.	Montreal  Detroit	Foley Mines Co. Foley Mines Expl. Gold Mountain Mining Co. ¶ Protogene Gold Mines Co.
Mary Foley	Foley/1902	Director	Detroit	Protogene Gold Mines Co.
Benjamin Folger	Hammond Reef/1897 Folger-Hammond/1897 Hammond Reef/1899 Sunbeam/1902	Director Director Director Director	Kingston	Hammond Gold Reef Mining Folger-Hammond Mines Co. Hammond Reef Consolidated New York & Ontario Gold

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Name	Mine/Year	Position	Residence	Company
Henry Folger	Folger-Hammond/1897	Director	Kingston	Folger-Hammond Mines Co.
Matthew Folger	Sunbeam/1902	Director	Kingston	New York & Ontario Gold
Matthew Folger, Jr.	Sunbeam/1902	Director	New York, NY	New York & Ontario Gold
Melvin Forbes Mr. (Melvin?) Forbes	1899 Barker/1898 §	Director Manager	Duluth, Minn.	Minnesota Ontario Gold Mines Barker Mine §
S.S. Fornieri	Baden Powell/1900 §	Partner/Synd.	Rat Portage	Partington Syndicate §
A.L. Foster	Rat Portage RW, etc./1897 ¶	Director	London, Engl.	Dominion Gold Mining ¶
Francis Foster	Victory, Gold Reef #2/1899	Director	Montreal	Gold Reefs Co.
George E. Foster, MP	Olive/1897 Olive/1897 Sakoose/1901	Director Director Director	Ottawa	The Olive Gold Mining Olive Gold Co. Sakoose Gold Mining
H. Foster	Victoria Island/1900 §	Owner/Oper.		Victoria Island Mine §
Oren Foster	Cameron Island/1897	Director	Buffalo, NY	Cameron Islands Mining
Jessie J. Foster	Cameron Island/1897	Director	Toronto	Cameron Islands Mining
John Foy	D637, etc./1897	Director	Toronto	Gold Hills Expl. & Dev. Co.
S.F. Franco	HW418,419/1898 ¶	Supt.		North-Western Ont. Exploration ¶
August Franson	Swede Boy/1897	Director	Rainy Lake City	Original Swede Boys's Prospecting
John Franson	Swede Boy/1897	Director	Rainy Lake City	Original Swede Boys's Prospecting
Erik Franson	Swede Boy/1897	Director	Rainy Lake City	Original Swede Boys's Prospecting
Angus Fraser	Keewatin RW, etc./1897 Nankipoo/1897 1897 Burley/1897 Queen Bee/1897 Ophir/1900 Sakoose/1901 1903	Director Manager/Dir. Agent Director Director Director Director Director	Ottawa	Ottawa Gold Milling & Mining Nan Ki Poo Gold Mining Bald Indian Bay Mining & Invest. Burley Gold Mining Queen Bee Gold Mining Sultana-Ophir Mining Sakoose Gold Mining Coronation Gold Mining
Arthur Fraser	1903	Director	Ottawa	Coronation Gold Mining Co.
C.W. Fraser	Bath Island/1898	Contractor		Bath Island Mining
John Fraser	1903	Director	Ottawa	Coronation Gold Mining Co.
Sheldon L. Frazer	1899	Director	Duluth	Northland Gold Co. of Ontario
Merritt French	Randolph, Isabella/1899	Director	Superior, Wisc.	Randolph Gold Mining
Norman Fricker	1899	Director	Rat Portage	Victor Gold Mining and Dev.
George Frisbee	1889/Ophir	Director	?	Ontario Mining Co.

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Name	Mine/Year	Position	Residence	Company
Henry Fryling	Indian Joe/1902 Great Northwest/1902	Director Director	New Jersey	Indian Joe Gold Mining Great North-West Mining Co.
Frank Fuller	Edna, Standard, Queen/1896 ¶	Agent		Gold Explorers of Canada ¶
George Frisbie	Ophir/1889	Director	?	Ontario Mining Co.
Marcus Fuller	Log Cabin/1901	Director	New York	Log Cabin Gold & Copper Co.
George Fullerton	Orion/1899	Director	Rat Portage	Orion Gold Mining Co.
Israel Gagne	Machin Zone/1896 § Wendigo/1900	Owner/Oper. Mine Captain	Rat Portage	Machin Zone § Gooderham Syndicate
James Gale	Sultana/1896	Mill Manager		Sultana Mine
John Gale	Gold Sun/1899	Director	Cleveland, Oh.	Gold Sun Mining Co.
Benjamin Gallup	Nina/1897	Director	Rhode Island	Great Granite Gold Mining
John Galt, M.E.	Bath Island/1897	Director	Toronto	Bath Island Mining
Frank Gardner	1899 § 1899 1899 Little Bobs/1900	Partner Director Director Director	Rat Portage	Scotty Island Mine § Pritchard's Harbour Mining Victor Gold Mining "Little Bobs" Mining
William Garvey	Hammond Reef/1897 Golden Rod/1899 ¶ Wendigo/1900	Director Attorney Director	Toronto	Hammond Gold Reef Mining Golden Rod Mining Co. ¶ Wendigo Mines of Ontario
George Garwood	Indian Joe/1902	Director	New Jersey	Indian Joe Gold Mining
E. Gatensbury	Eldorado/1900 §	Owner, Operator	Rat Portage	Eldorado Mine §
J. Gauthier	Homestead/1900 §	Partner		Homestead Mine §
Joseph Gavin	Baden Powell, Buffalo, Eldorado/1902 ¶	Director	Buffalo, NY	Northern Light Mines Co. ¶
E.W. Gaylord	El Diver/1892 §	Partner	Connecticut	El Diver Mine §
William Georgeson	HP222/1897	Director	Winnipeg	Aurora Gold Mining & Dev.
William Gibbons	Boulder Island/1890 §	Partner	Winnipeg	Boulder Island Mine §
Frank E. Gibbs	Lake Harold/1896	Director	P. Arthur	Lake Harold Gold
Frank N. Gibbs	Lake Harold/1896 Black Fly/1897 §	Dir./Man. Patentee	P. Arthur	Lake Harold Gold Black Fly Mine §
Angus Gibson	1899	Director	Duluth, Minn.	Kalevala Gold Mining Co.
James Gibson	Keewatin RW, etc./1897	Director	Ottawa	Ottawa Gold Milling & Mining
E. Giessen	New Golden Twins/1898 ¶?	Manager		Golden Twins Mining Co. ¶?
John R. Gifford, M.E.	Boulder/1899	Manager/Dir.	Rat Portage	Boulder Mining Co.
F.W. Gilcrest	Black Sturgeon/1899 §	Partner		Black Sturgeon Mine §?

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Name	Mine/Year	Position	Residence	Company
James Gilchrest	Kobold/1897	Director	Ottawa	Kobold Gold Mining of Ottawa
Ronald Gilchrest	1897	Director	Keewatin	Keewatin Gold Mining
Samuel Gillman	Bad, Bullion No. 1, Monarch/1893	Director	Rat Port.	Bullion Gold Mining
Thomas Gilmour	1896 * 1900	Director Director	Winnipeg	Western Ont. & Manitoba * Bag Bay Gold Mines
George Girard	Sentinel/1897 1897	Director Director	Rat Portage	Coronado Gold Mining La Reine Gold Mining
Curtis Gladding	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
George Glass	Quackenbush/1898 § Glass Reef/1899	Manager Manager/Dir. ector	Wabigoon	Quackenbush Mine § Glass Reef Gold Mining
Thomas Gleason	Wendigo/1897 Nina/1897 Nina/1900 Wendigo/1902	Director Director Director Director	Hartford, Conn. Connecticut Buffalo, NY Buffalo, NY	Chippewa Gold Mining Great Granite Gold Mining Nino Mining Co. Ltd Chippewa Consolidated Gold
Geo. A. Glines	Imperial/1896 * Emporer/1896	Director Director	Winnipeg	Imperial Min. & Dev. * Standard Mining & Dev.
Frederick Godwin	1899	Director	Rat Portage	Victor Gold Mining and Dev.
Martin Goldsworthy	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
Mr. Good	Hay Island/1892 §	Partner	Winnipeg	Hay Island Mine §
James Goodall	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
Charles Gooderham	Wendigo/1900 Wendigo/1900 §	Director Partner/Synd.	Toronto	Wendigo Mines of Ontario Gooderham Syndicate §
Theodore Goodrich	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
Charles Goodwin	1903	Director	Pennsylvania	Camp Bay Mining Co
James Gordon, C.E.	Mack 26 & 27, Bullion, Bad/1899 Independence/1899 §	Manager Manager		Gold Bullion Mining Independance Min. & Dev. (US Corp?)§
Thomas Gorham	Kabaskong?/1897	Director	Port Arthur	Kabaskong Gold Mining
Somerset F. Gough- Calthorpe	Rat Portage RW, Black Jack, IXI, Excelsior, Jerusalem, Gold Hill, Golden Slipper, 192P, Judge Mills, Combination, Golden Gate, Sultana Jr, K100, Elphinstone, Yellow Girl, Homestake, Queen of Sheba/1897 ¶	Director	London, Engl.	Dominion Gold Mining ¶
A. Goulet	Kobold/1895 §	Partner		Kobold Mine §

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Name	Mine/Year	Position	Residence	Company
Walter Gow	Ontario Mine?/1901 ¶	Attorney	Toronto	Ontario Mining Co. ¶
Robert Gowans	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
William D. Graham	Boulder/1899	Director	Minneapolis, Minn.	Boulder Mining Co.
Edward Grain	1896 *	Director	Manitoba	Western Ont. & Manitoba *
John Gray	Bath Island/1897 Oxford/1899 §?	Director Director?	Toronto	Bath Island Mining Oxford Mining Co. §?
Robert Gray	Bath Island/1897	Director	Toronto	Bath Island Mining
John Green	AD2/1897 Foley/1895 §?	Director Director	Rat Portage Fort William	AD2 Gold Mining Co. Weigand Gold Mining §?
S.O. Greening	Maw/1898-1900 §	Partner/Synd.	Hamilton	Maw & Greening Syndicate §
Edward Greenshields	Hay Island/1897	Director	Montreal	Hay Island Gold Mining
Charles T. Gegory	1883	Director	Winnipeg	Manitoba Consol. Gold & Silver
J.S. [Silas] Griffis	Olympia/1902 §?	Manager	Port Arthur	Olympia Gold Mining Co. §?
P.S. Griffith	Tycoon/1899	Manager		Tycoon Mining & Development
Margaret Gross	Jubilee/1902	Director	Pennsylvania	Jubilee Mining Co.
Louis Grothe	1899	Director	Montreal	Montreal-Manitou Mines Co.
Wm. S. Grout	1897	Director	Rat Portage	Assaying & Smelting Co. of Ont.
H.A. Guess, M.E.	Yum Yum/1899 Keewatin RW/1899 Scotty Isl./1899 § Sakoose/1900	Manager Manager Manager Manager		Yum Yum Gold Mining Ottawa Gold Milling Scotty Island Mine § Sakoose Gold Mining
Alphonse Guerard	1899	Director	Port Arthur	Island Falls Mines Co.
F.W. Guernsey	Neepawa, Beehive, Victory, Royal Sovereign/1897	Manager		Neepawa Gold Mining
Stephen Gutchess	Reliance/1900	Director	Detroit, Mich.	Reliance Gold Mining Co.
Alexander Hackett	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Alexander Haggart	Argyle/1883 1896 *	Director Director	Winnipeg	Argyle Mining Co. Ontario & Cen. Can. Prosp. *
James Hale	AL282/1900	Director	Duluth, Minn.	A.L.282 Gold Mining Co.
Edward Hall, M.E.	Gold Coin/1899	Director	Mine Centre	Gold Coin Mining Co.
N.B. Hall	Olive/1898	Manager	Winnipeg	The Olive Gold Co.
R.J. Hall	Gold Standard/1902 ¶	Director	S. Dakota	Gold Standard Mining Co. ¶
Richard Hall	1897 Gold Panner/1899	Director Man/Director	R. Portage	Nugget Gold Mining Gold Panner Mining

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¶ Licenced extra-provincial or Imperial incorporation

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Name	Mine/Year	Position	Residence	Company
James Hallett	Empire/1899 Monarch/1900	Director Director	Toronto	Empire Mining Co. Monarch Mining Co.
Sargeson V. Halstead	Scramble/1895 Scramble/1897 Bag Bay/1900 Summit Lake/1902	Option Director Director Manager	Rat Portage	Scramble Mine Scramble Gold Mining Bag Bay Gold Mines Summit Lake Gold Mining ¶
Bethuel Hamilton	Neepawa, Beehive, Victory, Royal Sovereign/1897	Director	Neepawa, Man.	Neepawa Gold Mining
George Hamilton	Black Sturgeon/1897	Director	N.Y., New York	Black Sturgeon Mining
Georgina Hamilton	Leona/1901	Director	S. St. Marie	Standard Mining Co.
Henry Hamilton	Leona/1901	Director	S. St. Marie	Standard Mining Co.
James Hammond	Kabaskong?/1897 Hammond Reef/1897 1897 AL282, Sunbeam/1897 Hammond Consol./1897 AL282/1900 Gold Moose/1901	Director Dir./Manager Director Dir./Man(99) Director Director Owner	Fort William	Kabaskong Gold Mining Hammond Gold Reef Mining Hiawatha Gold Mining & Milling Railroaders' Gold Mining Hammond Reef Consolidated A.L.282 Gold Mining Gold Moose Mine
Wiley Hammond	Jubilee/1902 RPRWorks, Scramble, etc./1902	Director Director	Pennsylvania	Jubilee Mining Co. Keenora Mining Co.
Charles Hanchette	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
Joseph Handlan	AD2/1897	Director	W. Virginia	AD2 Gold Mining Co.
John Haney	Sovereign?/1897	Director	Winnipeg	Mohawk Mining Co.
Nils Hanson	1897	Director	Keewatin	Keewatin Gold Mining
Edmund Hardy	Combined/1897	Director	Buffalo	Combined Gold Mines
A.A. Hare	Imperial/1900 *	Manager		Imperial Gold Mining & Dev. *
John Harland, M.E.	Moose Lake/1900	Mine Eng.		Moose Lake Mining and Milling
Frederick C. Harp	P767/1897	Director	Brantford, Ont.	Willow Creek Gold Mining & Dev. Co. of Brantford Ontario
George Harper	Mikado Reef/1897	Director	Toronto	Ontario Reefs Mining
David Harrison	Neepawa, Beehive, Victory, Royal Sovereign/1897 HW209/1897	Director Director	Neepawa, Man.	Neepawa Gold Mining Queen of the Lakes G. M. & Dev.
James Harrington	Wendigo/1902	Director	Buffalo, NY	Chippewa Consolidated Gold
Joseph Hartich	HW302/1897	Director	New York, NY	Security Gold Mining & Dev.. Co. of Ontario
Archibald Hartstone	1897	Director	Winnipeg	Nugget Gold Mining
Arthur Harvey	Sawbill/1900	Director	Toronto	Saw Bill Reef Syndicate, Limited

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Name	Mine/Year	Position	Residence	Company
E.E. Harvey	Burnthut Isl./1898 §	Partner		Harvey Syndicate §
W.A. Harvey	Hawk Bay/1897	Supt.		Hawk Bay Gold Mining
Robert Harvie	1897	Director	Winnipeg	Nugget Gold Mining
Marion P. Hatch	Combined/1897 Buffalo/1898 1903	Director Director Director	Buffalo	Combined Gold Mines Buffalo Northwestern Gold Camp Bay Mining
William Havelock	Folger-Hammond/1897	Director	Kingston	Folger-Hammond Mines Co.
Alexander Hay	Black Jack/1893  Rat Portage RW/1894 § Dominion Gold/1897 ¶ Rat Portage RW/1897 ¶ Cedar Island/1898 Kobold/1895 §	Director  Partner? Dir/Man Manager Manager Option	Duluth, Minn.	Rat Portage Land & Mining (aka Rat Portage Mining Co.) Rat Portage Mining & Red. Co. § Dominion Gold Mining ¶ Dominion Gold Mining ¶ Cedar Island Gold Mining Kobold Mine §
E. Benton Haycock, C.E.	Gold Rock/1896 §	Partner	Ottawa	Gold Rock Mine §
Edward Hearn	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
George Heenan	Hay Island/1883-84 § Ophir/1889 Thunder/1893	Owner/Oper. Director Owner/Oper.	Rat Portage	Hay Island Mine § Ontario Mining Co. Thunder Mine §
George Heintzman	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold
Theodore Heintzman	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold
Frederick Hemmings	Golden Horn/1901	Director	Rat Portage	Rush Bay Golden Horn Mining
John B. Henderson	Gray Eagle/1898	Director	Paris, Ontario	International Gold Mining & Dev.
William Henry	1897	Director	Winnipeg	Assaying & Smelting Co. of Ont.
Dr. Henson	Boulder Island/1890 §	Partner	Rat Portage	Boulder Island Mine §
Joseph Herman	Sweden/1897	Director	R. Portage	Sweden Gold Mining
Albert Hermann	Redemer/1901 Hermann-Larson/1901 §	Director Lesee	Chicago	Redemer Mining and Milling Hermann-Larson Mine §
Edwin Hersher	Foley/1897	Director	Detroit	Anglo-Ontario Exploration
Joseph Hicks	Triumph/1898 §	Manager	Rat Portage	Triumph Gold Mining Co. §
Newton Higbee	Orion/1899 Eagle Lake/1900 ¶ Baden-Powell, Buffalo, Eldorado/1902 ¶ Golden Eagle/1902 § 1903 ¶	Manager/Dir. Manager Manager  Owner Attny/Man.	Koochiching, Minn. Rat Portage	Orion Gold Mining Co. Golden Eagle Mine § Northern Light Mines ¶  Vermillion Bay Mines Co. ¶ Eagle Lake Gold Mining ¶
A.E. Higgins	Mack 26 & 27, Bullion, Bad/1899	Supt		Gold Bullion Mining
Edward Higgins	Mack 26 & 27, Bullion, Bad/1899	Director	Buffalo	Gold Bullion Mining

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Name	Mine/Year	Position	Residence	Company
James Hildreth	Homestake/1892 Bad Mine/1898 §	Manager/Dir. Foreman	Rat Port.	Homestake Mining Bad Mine Syndicate §
Jeff Hildreth	Bad, Bullion No. 1, Monarch/1893	Director	Rat Port.	Bullion Gold Mining
Harold Hill	Location 419HW/1899 ¶	Attorney	Rat Portage	Northwest Ont. Mining & Dev. ¶
John H. Hill	Gold Bug/1899 1899	Director Director	W. Superior, Wisc.	Gold Bug Mining Island Falls Mines
Louis Hilliard	1897 New Sabaskong/1897	Director Director	R. Portage	Atlas Gold Mining New Sabaskong Gold
Burton Hills	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
A. S. Hillyer	Alice A/1897 §	Director/Pres.	W. Superior, Wisc.	Am. & Can. Gold Mining (US Corp?) §
George Hillyer	Lucky Coon/1899 Crackerjack/1899 1899 Alice A/1897 §	Director Director Director Dir./Manager	W. Superior, Wisc.	Lucky Coon Gold Mining Crackerjack Gold Mining Island Falls Mines Am. & Can. Gold Mining (US Corp?)§
James Hillyer	Gold Bug/1899	Director	W. Superior, Wisc.	Gold Bug Mining
William Himebach	1901	Director	Duluth, Minn.	Gopher Mining Co.
Frederick Hirsch	Black Jack , Gold Hill/1899 CR68 &70/1897	Director Director	Montreal	Britannia Consol. Gold Min'g Co. Atlin Mining Co.
Charles S. Hoare	Ophir/1889	Director	?	Ontario Mining Co.
Joseph Hodgson	Foley/1902	Director	Houghton, Mich.	Protogene Gold Mines
Frank Hockley	1899	Director	Rat Portage	Pritchard's Harbour Mining
Daniel Hoctor	1899	Director	Montreal	Montreal-Manitou Mines Co.
T. Hogan	HW418,419/1898 ¶ Watson Mine/1898 §	Contractor Contractor		North-Western Ont. Exploration ¶ Watson Mine §
Harry Holdroyd	John Sykes/1899	Director	Glen Williams	John Sykes Mining & Milling
Charles Hollands	HW96/1896	Director	Ft. Frances	Seine Manitou Gold
Hon. W. Nelson Hood	1883	Director	Winnipeg	Argyle Mining Co.
John Hoodless	Sawbill/1896	Director	Hamilton	Saw Bill Lake Gold
Harry Hook	Big Master/1902	Assayer		Inter-state Consol. Mineral Co. ¶
Harvey J. Hopkins	Buffalo/1897 Buffalo/1898	Director Director	Buffalo	Buffalo Mining and Dev. Buffalo Northwestern Gold
Marshall Hopkins, O.L.S.	1899	Director	Rat Portage	Victor Gold Mining and Dev.
Mr. Horne	Norway/1896 §	Partner	Fort William	Norway Mine §

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Name	Mine/Year	Position	Residence	Company
Edmund Horton	Manhattan/1900	Director	New Jersey	Manhattan Gold Mining Co.
John Housser	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
John F. Howard	1896 * Jubilee/1897 * HW209/1897	Director Director Director	Winnipeg	Western Ont. & Manitoba Gold * Jubilee Gold Mining * Queen of the Lakes G. M. & Dev.
John G. Howard	1899	Director	Duluth	Atikokan Gold Dev. Co. of Ont.
Hon. Thomas Howard	1883 Ophir/1889	Director Director	Winnipeg	Mining Investment Co. of Canada Ontario Mining Co.
Thomas Howarth	1897	Director	Oakville	Consolidated Gold Fields Dev.
John Howenstein	Gold Winner/1898	Dir/Man. (1900)	Duluth	Duluth Mining Co.
Fred. Hubbard	Empoer/1896	Director	Winnipeg	Standard Mining & Dev.
A.G. Hubbell	Golden Star/1897 JO41/1898 1898 AD2/1899	Director Director Director Director	Manistique, Mich.	Golden Star Mining & Expl. JO41 Gold Mining Co. Bad Vermillion Gold Golden Crescent Mining & Expl.
Alfred Hudon	Tabor, Van Horne/1897	Director	Richmond, Que.	Eastern Townships Min'g & Dev.
Albert Hudson	Lady of the Lake/1897	Director	Ottawa	Gagne Island Mining Co.
John Humble	1896 1899 1899	Director Director Director	R. Portage	Western Ontario Mining Pritchard's Harbour Victor Gold Mining
Charles Humphrey	Witch Bay/1898	Director	Montreal	Chemical Gold Mining
Robert Humphreys	Combined/1897	Director	Pennsylvania	Combined Gold Mines
Charles B. Hunt	1897	Director	London, Ont.	Mineral King Mining & Dev.
H.B. Hunt	Cameron Island/1898	Manager		Cameron Islands Mining
Alfred Hunter	Mikado Reef/1897	Director	Toronto	Ontario Reefs Mining
James C. Hunter	1897	Director	Duluth	Shoal Lake & Seine River Mining
John C. Hunter	1897	Director	Duluth	Shoal Lake & Seine River Mining
Matthew Hunter	Ophir/1889 Rajah/1893 ¶? Sultana/1896 § Little Bobs/1900 Wendigo/1900 Wendigo/1900 § Stewart/1901? §	Director Manager Supt./Man. Director Director Manager Manager	Rat Portage	Ontario Mining Co. Rajah Gold Co. ¶? Sultana Mine § "Little Bobs" Mining Co. Wendigo Mines of Ontario Gooderham Syndicate § Stewart Mine §
Ronald M. Hunter	1897	Director	Duluth	Shoal Lake & Seine River Mining
Samuel Hunter	1897	Director	Keewatin	Keewatin Gold Mining
R. Huntley, M.E.	Regina/1896	Mine Eng.		Regina (Canada) Gold Mines

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Name	Mine/Year	Position	Residence	Company
Charles Huntting	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
William Hurdman	1898	Director	Ottawa	Bonheur Belle Gold Mining
Thomas Hurley	Foley/1896	Director	NY, New York	Foley Mines Co.
James Huston	Pettigrew/1899 §	Manager		Seine River Syndicate (Unincorporated Scotch Syndicate) §
Elisha F. Hutchings	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
Charles Hutchings	Golden Horn/1901	Director	St. John, NB	Rush Bay Golden Horn Mining
Elisha F. Hutchings	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
William Hutchinson	1899	Director	Duluth, Minn.	Kalevala Gold Mining Co.
Archibald Hutchison	Sawbill/1900	Director	Toronto	Saw Bill Reef Syndicate, Ltd
H.G. Hutchison	Gold Moose/1901 §	Partner	Dryden, Ont.	Gold Moose Mine §
R.D. Hutchison	Gold Moose/1901 §	Partner	Dryden, Ont.	Gold Moose Mine §
Joseph Huxley	G59, HW221/1897	Director	Winnipeg	Rupert Land Mining
Daniel Hyland	1899	Director	Rainy River	Victor Gold Mining and Dev.
John E. Ingersole	Hay Island/1882*	Director	New York	Keewatin Mining Co.*
John E. Irving	Leona/1901	Director	S. St. Marie	Standard Mining Co.
Thomas C. Irving	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
James Irwin	Bag Bay/1900	Director	Rat Portage	Bag Bay Gold Mines Co.
Arthur J. Jackson	1897	Director	Toronto	La Reine Gold Mining (aka Mutual Gold Dev.)
Benjamin James	Glass Reef/1899	Director	North Dakota	Glass Reef Gold Mining
Edwin H. James	Glass Reef/1899	Director	North Dakota	Glass Reef Gold Mining
William James	Golden Gate/1896 ¶ Gold Hill/1896 § Cameron Island/1898	Manager Manager Foreman	Port Arthur	Dominion Gold Mining ¶ Northern Gold § Cameron Island Mining & Dev.
Richard Jameson	1896 1897 75P/1897 §	Director Director Partner	Winnipeg	Western Canada Gold Lakeside Gold Mining Location 75P §
Simeon Janes	HW96/1896	Director	Toronto?	Seine Manitou Gold
Harriet M. Jewell	1897	Director	Toronto	Wabigoon Free Milling Gold
Edgar Jewett	1897 *	Director	Buffalo, N.Y	Seine River & Manitou Gold Mining *
Franc Jewett	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
Albert Johnson	Burnthut Isl./1898 § Sultana/1896-1900 ¶	Manager Mine Captain		Harvey Syndicate § Sultana Mine of Canada ¶

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Name	Mine/Year	Position	Residence	Company
John P. Johnson	Golden Eagle/1899 1899	Director Director	Duluth, Minn.	Golden Eagle Mining & Expl. Atikokan Gold Dev. Co. of Ont.
Robert T. Johnson, C.E., O.L.S.	1897	Director	Toronto	Wabigoon Free Milling Gold
Clifford Johnston	SV348 &349/1902	Director	Toronto	President Gold Mining Co.
William Degeer Johnston	SV348 &349/1902	Director	Toronto	President Gold Mining Co.
Edmund Johnstone	1897	Director	Winnipeg	Mine Centre Development
Mr. Jones	Hay Island/1892 §	Partner	Winnipeg	Hay Island Mine §
Albert E. Jones	Imperial/1897 * Gold Mountain/1897 *	Director Director	London, England	Imperial Gold Mining and Dev. * Gold Mountain Mining Co. *
Charles Jerome Jones	SV124/1899	Director	Ottawa	Allan Gold Reefs Co. of Ontario
Clarkson Jones	Hammond Reef/1899 Wendigo/1900 Wendigo/1900 §	Director Director Partner/Synd.	Toronto	Hammond Reef Consol. Mining Wendigo Mines of Ontario Gooderham Syndicate §
David Allanson Jones	WD135/1898	Director	Stouffville, Ont.	Mountain Mining Co. of Ont.
Frank P. Jones	Wendigo/1900	Director	Montreal	Wendigo Mines of Ontario
J.M. Jones	Regina/1896 Bully Boy/1900 §?	Captain Manager		Regina (Canada) Gold Mines Bully Boy Mine §?
Hon. Lyman Jones	Hammond Reef/1899	Director	Toronto	Hammond Reef Consolidated Mining
T.R. Jones	AL282/1902	Supt.		New York & Ontario Gold Min'g
W.H. Jones	1897 * Anglo-Canadian Gold Estates (Elizabeth, etc.)/1902 ¶	Director Manager	Toronto Deloro, Ont.	Imperial Gold Mining & Dev. * Anglo-Canadian Gold Estates ¶
Walter Jordan	1897	Director	Winnipeg	Assaying & Smelting Co. of Ont.
F.M. Joslin	Westerfield [Reliance]/1898 ¶	Director	St. Paul, Minn.?	Manitou Lake Gold Mining ¶
John Joy	Paymaster/1903 ¶	Mine Supt./ Attny	Gold Rock	Northern Development Co. ¶
Gustave Kaercher	Gold Sun/1899	Director	Cleveland, Oh.	Gold Sun Mining Co.
Michael F. Kalmbach	1899	Director	Duluth	Atikokan Gold Dev. Co. of Ont.
B.Z. Kasson	Jack Lake/1901	Assayer		Jack Lake Gold Mining Co.
Benjamin Kaup	Redeemer/1901	Director	Ohio	Redeemer Mining and Milling
Albert Keating, U.S. M.E.	G8/1897	Director	Oregon	Ft. Frances Mining
Alice Keating	Crackerjack/1899	Director	Ft. Frances	Crackerjack Gold

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Name	Mine/Year	Position	Residence	Company
Walter Keating	HW96/1896 G8/1897 Gold Bug/1899 Lucky Coon/1899 Cracker Jack/1899	Director Director Director Director Manager	Ft. Frances	Seine Manitou Gold Ft. Frances Mining Gold Bug Mining Lucky Coon Gold Crackerjack Gold
John Keddy	1897	Director	Brantford	Manitou Gold Mining
Andrew Kelly	1896 *	Director	Winnipeg	Western Ont. & Manitoba *
C.P. Kelpin	La Mascotte/1896	Manager		Colcleaugh Gold Mining
David Kendall	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
E.H. Kendell	Gold Creek/1892 § Echo Bay/1895 §	Partner Partner	Rat Portage	Gold Creek Mine § Echo Bay Mine §
H.W. Kennedy	King/1896 MH190/1897 Cedar Island/1898 ¶	Owner Synd./Partner Manager	Rat Portage	King Mine MH190 Mine Cedar Island Gold Mining ¶
Hugh Kennedy	RP Reduction Works/1890	Director	Rat Portage	Lake of Woods G. & Silver Red.
John Kennedy	Gray Eagle/1897§	Manager		Internat'l Gold Min & Dev (US Corp?)§
Morris H. Kennedy	MH190/1897 §	Partner		MH190 Mine §
Thomas Kennedy	1897*	Director	R. Portage	Crocus Gold*
William Kennedy	Golden Fissure/1896	Director	Toronto	Golden Fissure Mining
James J. Kenny	Gray Eagle/1898	Director	Toronto	International Gold Mining & Dev.
John Kenty	Keewatin/1897 §	Manager		Hay Island Gold Mining Co. §
James K. Kerr	Toronto & Western/1897 Ontario Gold Conc./1898 ¶ Sirdar Point/1899	Director Solic./Vendor Director	Toronto	Toronto & Western Mines Dev. Ontario Gold Concessions ¶ Sirdar Gold Mining
R.A. Kerr	Golden Star/1899	Supt.		Golden Star Mining & Dev.
John Kerman	Lone Jack/1897	Director	Grimsby	Grimsby Gold Mining
Herbert Kerman	Lone Jack/1897	Director	Grimsby	Grimsby Gold Mining
John Keyes	1899	Director	Duluth, Minn.	Kalevala Gold Mining Co.
Joseph Kidd	Crackerjack/1899	Director	Duluth	Crackerjack Gold Mining
Joseph Kilgour	Sawbill/1900	Director	Toronto	Saw Bill Reef Syndicate, Limited
Albert C. Killam	Argyle/1883	Director	Winnipeg	Argyle Mining Co.
George Kilmer	Westerfield [Reliance]/1898 ¶	Attorney	Toronto	Manitou Lake Gold Mining ¶
Arthur S. King	1897 *	Director	Toronto	Seine River Mining & Dev. *
Charles N. King	Foley/1896	Director	New Jersey	Foley Mines Co.
Dr. Edmund King	Sentinel/1898	Director	Toronto	Sentinel Consolidated Gold

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Name	Mine/Year	Position	Residence	Company
Joseph King	Harold Lake/1896	Director	P. Arthur	Lake Harold Gold Mines
Robert S. King	Imperial/1897 *	Director	Toronto	Imperial Gold Mining and Dev. *
A. Kingsmill	Gold Hill/1897 ¶	Manager		Dominion Gold Mining ¶
George Kirk	1897	Director	London, Ont.	Mineral King Mining & Dev.
John A. Kirk	1889	Director	?	Ontario Mining Co.
William Kirkley	Medicine Lodge/1897 §	Contractor		Medicine Lodge Mine §
Arthur Kirkpatrick	Gold Creek/1897	Director	Toronto	Gold Creek Mines & Expl.
Henry Kittson	1896* Sawbill/1897 Hawk Bay/1897 Sawbill Reef/1897	Applicant Director Director Director	Hamilton	Ontario Miners' Dev.* Saw Bill Lake Gold Hawk Bay Gold Saw Bill Reef Synd.
C.M. Knatchbull-Hugesson	Ontario Gold Conc./1898 ¶	Chairman/Dir	London, Engl.	Ontario Gold Concessions ¶
Stephen Knight	Argyle/1883	Director	Winnipeg	Argyle Mining Co.
Gustavus Kobold	1896 New Sabaskong/1898 Tycoon/1898 Gold Panner/1899 1899 1895 §	Director Director Director Director Director Owner	R. Portage	Western Ontario Mining New Sabaskong Gold Tycoon Mining & Dev. Gold Panner Mining Victor Gold Mining Kobold Mine §
Herman Kobold	1897	Director	Winnipeg	Nugget Gold Mining
Frederick Kuechler	Fighting Chance/1899	Director	St. Paul, Minn.	Fighting Chance Gold Mining
Henry Kyle	1897	Director	Oakville	Hiawatha Gold Mining
Morrison Kyle	1896 Tycoon/1898 Gold Panner/1899	Director Director Director	R. Portage	Western Ontario Mining Tycoon Mining & Dev. Gold Panner Mining
E. LaBeree	Royal, Lady of Lake/1901	Director	Ottawa	Canada Consol. Mineral Co.
Seraphim Lachance	Witch Bay/1898	Director	Montreal	Chemical Gold Mining
Robert Laird, M.E.	Norah/1899	Manager		Gold Leaf Mining Co.
William Laird	Harold Lake/1896	Director	NY, New York	Lake Harold Gold Mines
Allan Lamont	D605, D607/1897	Director	Mount Forest	Golden Island Mining
George Lane	Eagle Lake/1898	Director	Massachusetts	Stanton Gold Mining & Dev.
Henry Langford	Electro-Gold, Wimor/1896 Master Jack/1896 * 1896 1898 Tycoon/1898 New Sabaskong/1898	Director Director Director Attorney Director Director	R. Portage	Rainy River Gold Lake of the Woods Gold * Western Ontario Mining Canadian Minerals Co. Tycoon Mining & Dev. New Sabaskong Gold
J.A. Langford	1900	Attorney	R. Portage	Inter-State Consolid.

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Name	Mine/Year	Position	Residence	Company
G. Larson	Hermann-Larson/1901 §	Man./Lesee	Dryden, Ont.	Hermann-Larson Mine §
W.G. LaRue	AD2/1899-1900	Manager		Golden Crescent Mining & Expl.
Barnette Laurence	1897	Director	Toronto	Wabigoon Free Milling Gold
Joseph Laviolette	Witch Bay/1898	Director	Montreal	Chemical Gold Mining
Duncan Lavrock	Pine Portage/1900	Director	Hamilton	Pine Portage Mining Co.
L. Lawson	Swanson/1900 §	Partner/Synd.	Rat Portage	Swanson Mine §
Thomas L. Lawson	D644/1897	Director	Baltimore, Md.	Gold King Mining Co. of Toronto
W.A. Laycock	Golden Gate/1897 ¶	Manager		Dominion Gold Mining ¶
Patrick Leavin	AD2/1897	Director	Duluth	AD2 Gold Mining Co.
Frank LeBlond	1897 *	Director	Niagara, N.Y.	Seine River & Manitou Gold Mining *
E.T. Le Clair	Boulder/1899	Director	Minneapolis, Minn.	Boulder Mining Co.
Herbert B. Lee	Wendigo/1902	Director	Buffalo, NY	Chippewa Consolidated Gold
John N. Lee	Mikado Reef/1897	Director	Toronto	Ontario Reefs Mining
J. Leechman	Regina/1896	Eng./Supt.		Regina (Canada) Gold Mines
Clarence Leeper	1901	Director	Toledo, Ohio	Michigan-Ohio Gold Mining
Charles Leland	AD2/1899	Director	Duluth	Golden Crescent Mining and Expl.
Reuben Leonard	1898	Director	Ottawa	Bonheur Belle Gold Mining
John Leslie	1897 *	Director	Toronto	Seine River Mining & Dev. *
John W. Lester	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
Thomas W. Lester	Sawbill/1896	Director	Hamilton	Saw Bill Lake Gold
Robert Le Vesconte	Golden Gate/1897 Victory, Gold Reef #2/1899 Crown Point/1899	Director Director Director	Toronto	Golden Gate Mining and Dev. Gold Reefs Co. Crown Point Mining Co.
Charles Lewis	1897  Golden Eagle/1899 1899 1899	President  Director Director Director	Duluth	La Reine Gold Mining (aka Mutual Gold Dev.) Golden Eagle Mining & Explor. Atikokan Gold Dev. Co. of Ont. Northland Gold Co. of Ontario
Dr. F.W. Lewis	1897	Director	Orangeville, Ont.	Oriole Gold Co. of Wabigoon
Robert Linn	RP Reduction Works/1890	Dir/Man. (1893)	Cleveland, Oh.	Lake of Woods G. & Silver Red.
James Linton	1897 * Climax/1897	Director Director	Montreal	Crocus Gold * Climax Gold Mine Co.

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Name	Mine/Year	Position	Residence	Company
John Little	Woodchuck/1890 §	Partner	Selkirk, Man.	Woodchuck Mine §
J.A. Livingston	Lone Jack/1897	Man/Director	Grimsby	Grimsby Gold Mining
Thomas Lock	G59, HW221/1897	Director	Winnipeg	Rupert Land Mining
Alexander Logan	Hay Island/1882* 1883	Director Director	Winnipeg	Keewatin Mining Co.* Mining Investment Co.
Harvey Long	Black Fly/1897 §	Patentee	Mine Centre	Black Fly Mine §
Thomas Long	HW302/1897	Director	Toronto	Security Gold Mining & Dev. Co. of Ontario
A.D. Lord	Cameron Island/1899	Manager		Cameron Islands Mining
Dr. George Lovejoy	Black Jack , Gold Hill/1899	Director	Montreal	Britannia Consol. Gold Min'g Co.
James Steller Lovell	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
James A. Lowell	1897 *	Director	Niagara	Seine River & Manitou Gold Mining *
Henry Lowndes	1896 * Princess/1896	Director Director	Toronto	MacKenzie Gold * Princess Gold
Donald Loynachan	1900	Director	Montreal	Stadacona Gold Mining
Alan MacDonald	Gray Eagle/1897	Contractor	Rat Portage	Internat'l Gold Min & Dev (Dominion)
Allan Macdonald	1897	Director	Toronto	Consolidated Gold Fields Dev.
Alexander Macdonald	Master Jack/1896 *	Director	Winnipeg	Lake of the Woods Gold *
Archibald Macdonald	Golden Gate/1897 1898	Director Director	Guelph	Golden Gate Mining and Dev. Bonheur Belle Gold Mining
Hugh Macdonald	1896 * 1897 1897 * 1897 Black Sturgeon/1897	Director Director Director Director Director	Winnipeg	Ontario & Cen. Can. Prosp. * Atlas Gold Mining Crocus Gold Mining * Black Sturgeon Mining Darlington Bay Gold *
Walter Macdonald	Hammond Reef/1897 Folger-Hammond/1897 Hammond Reef/1899 Bullion No. 2/1899	Director Director Director Director	Toronto	Hammond Gold Reef Mining Folger-Hammond Mines Co. Hammond Reef Consolidated Bullion Number Two Mining
John Macdougall	Golden Star/1897 JO41/1898	Director Director	Duluth, Minn.	Golden Star Mining & Expl. JO41 Gold Mining Co.
Walter MacDougall	Jubilee/1897 *	Director	Winnipeg	Jubilee Gold Mining *
Angus Macfarlane	1897	Director	Duluth	Shoal Lake & Seine River Mining
John MacGillivray	1899	Director	Rat Portage	Pritchard's Harbour Mining
John Macintosh	Hay Island/1897	Director	Montreal	Hay Island Gold Mining
William C. MacKay	SV348 & 349/1902	Director	Toronto	President Gold Mining Co.

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¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain



Name	Mine/Year	Position	Residence	Company
Ewin MacKenzie	1896 *	Director	Toronto	MacKenzie Gold *
James Mackenzie	1899	Director	Rat Portage	Victor Gold Mining and Dev.
Philip MacKenzie	Long Lake/1903 ¶	Attorney	Rat Portage	Long Lake Gold Mining Co. ¶
William Mackenzie	Hammond Reef/1899 Wendigo/1900 §	Director Partner/Synd.	Toronto	Hammond Reef Consol. Mining Gooderham Syndicate §
John F. Mackie	1888	Director	?	Sabaskong Lumber & mining
Alexander MacLaren, M.P.	Big Ruby/1897 § Summit Lake, Imperial, etc. /1902 ¶	Partner Attny/Pres	Stratford, Ont.	Big Ruby Mine § Summit Lake Gold Mining Co. ¶
Malcom A. Maclean	Argyle/1883	Director	Winnipeg	Argyle Mining Co.
William MacLeod, (AIME Member 1899)	1899	Director	Rat Portage	Pritchard's Harbour Mining
C. MacNichol	Mikado/1896 ¶	Manager		Mikado Gold Mining ¶
Charles Magee	Yum Yum/1896	Director	Ottawa	Yum Yum Gold Mining
Edward Main	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
Frank Malond	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
Michael Mallaney	Monarch/1899 ¶	Director	Toronto	Monarch Mining Co. ¶
Colonel Mallard	Regina/1898 ¶	Director	London, Engl.	Regina (Canada) Gold Mines ¶
Alexander Manning	Boulder Island/1890 § Gray Eagle/1898	Held Option Director	Toronto	Boulder Island Mine § International Gold Mining & Dev.
Mr. Markell	Machin Zone/1897 §	Owner/Oper.		Machin Zone ¶*
George Marks	Sawbill/1896 Lake Harold/1896 Hawk Bay/1897	Director Director Director	P. Arthur	Saw Bill Lake Gold Lake Harold Gold Hawk Bay Gold
Thomas Marks	Lake Harold/1896	Director	P. Arthur	Lake Harold Gold
J. Marshall	Gold Winner/1899	Foreman		Gold Winner Mining
Charles Martin	Sawbill?/1897	Director	Fort William	Gold Brick Mining
Thomas B. Martin	Pine Portage/1900	Director	Hamilton	Pine Portage Mining Co.
H. Chester Master	Regina/1898 ¶	Director	London, Engl.	Regina (Canada) Gold Mines ¶
William Masterman	Black Jack , Gold Hill/1899	Director	Montreal	Britannia Consol. Gold Min'g Co.
Dr. Henry Matchell	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
Joseph Mathe	Sawbill?/1897	Director	Fort William	Gold Brick Mining
Mary Jane Mathe	Sawbill?/1897	Director	Fort William	Gold Brick Mining
D.L. Mather	Homestake/1892 La Mascotte/1896	Director Director	Keewatin	Homestake Mining, Colcleaugh Gold Mng

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Name	Mine/Year	Position	Residence	Company
John Mather	Yum Yum/1896 Keewatin RW/1897 Sakoose/1901	Director Director Director	Ottawa Keewatin	Yum Yum Gold Mining Ottawa Gold Milling Sakoose Gold Mining
R.O. Mather	Homestake/1892	Director	Keewatin	Homestake Mining
Catherine Matheson	Sawbill/1897	Director	Fort William	Gold Brick Mining
Frank Matthews	1899	Director	Montreal	Montreal-Manitou Mines Co.
George Maurer	1897	Director	Toronto	Mineral King Mining & Dev.
J. Maw	Maw/1898-1900 §	Partner/Synd.		Maw & Greening Syndicate §
Frank Mayworm	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
W.B. McAllister	Royal, Lady of Lake/1901	Director	Ottawa	Canada Consolidated Mineral Co.
A.V. McAlvay	United States/1901 ¶	Secty/Treas.	Manistee, Mich.	United States Gold Mining ¶
John McAree, O.L.S.	Sentinel/1898 1899 Swanson/1900	Engineer Director Partner/Synd.	Rat Portage	Sentinel Consolidated Gold Pritchard's Harbour Mining Swanson Mine
Joseph B. McArthur	D673, etc./1897	Director	Rossland, B.C.	Gold Hills Expl. & Dev. Co.
John McBain	1903	Director	Ottawa	Coronation Gold Mining Co.
Duncan McBean	Imperial/1896 * Emporer/1896	Director Director	Winnipeg	Imperial Min. & Dev. * Standard Mining & Dev.
William McBrady	Gold Winner/1898 Gold Winner/1899 United States/1901 ¶	Director Director Attny	Port Arthur	Duluth Mining Co. Gold Winner Mining United States Gold Mining ¶
William T. McBride	Hay Island/1882*	Director	New York	Keewatin Mining Co.*
William McCabe	1892	Director	Toronto	Gold Rock Mining
Duncan A. McCallum	P767/1897	Director	Brantford, Ont.	Willow Creek Gold Mining Co. of Brantford, Ontario
Finely McCallum	P767/1897	Director	Brantford, Ont.	Willow Creek Gold Mining Co. of Brantford, Ontario
Peter McCarthy	Argyle/1883	Director	Winnipeg	Argyle Mining Co.
W.C. McCarthy	Royal, Lady of Lake/1901	Director	Ottawa	Canada Consol. Mineral Co.
Alexander McComber	1899	Director	Port Arthur	Ontario and Rainy River Contracting & Supply
William McCormick	1901	Director	Duluth, Minn.	Gopher Mining Co.
William McCraig	1897	Director	Keewatin	Keewatin Gold Mining
Pete McCray	1897	Director	Gore Bay, Ont.	Webbwood General Mining
William McCuaig	1901	Director	Toledo, Ohio	Michigan-Ohio Gold Mining

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Name	Mine/Year	Position	Residence	Company
Albert McCutcheon	Sovereign?/1897	Director	Winnipeg	Mohawk Mining Co.
John McDonald	1883	Director	Winnipeg	Mining Investment Co.
Donald McDonald	1896 * Golden Fissure/1896 1897	Director Director Director	Sask. Toronto Toronto	Western Ont. & Manitoba * Golden Fissure Mining Consol. Gold Fields
James McDougall	Northern Queen/1897	Director	Wabigoon	Rand Gold Mining of Wabigoon
Alpheus McFadden	1897	Director	Keewatin	Keewatin Gold Mining
Cyrus McFadden	1897	Director	Keewatin	Keewatin Gold Mining
Moses McFadden	Echo Lake/1901 ¶	Attorney	S. Ste. Marie	Echo Lake Mining Co. ¶
Alexander McFadyen	Argyle/1883	Director	R. Portage	Argyle Mining Co.
John McIntosh	Tabor, Van Horne/1897	Director	Sherbrooke, Que.	Eastern Townships Min'g & Dev.
Thomas P. McIntyre	1897 *	Director	Winnipeg	Uphaz Gold Mining & Dev. *
David McKay	Sawbill?/1897	Director	W. Superior, Wisc.	Gold Brick Mining
William A. McKay	Moose Lake/1900	Director	Montreal	Moose Lake mining and Milling
John S. McKellar	Northern Queen/1897	Director	Wabigoon	Rand Gold Mining of Wabigoon
Peter McKellar	Toronto & Western /1897 Norway/1896 §	Manager Owner	Fort William	Toronto & Western Mines Dev. Norway Mine §
Dr. Charles McKenna	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
Samuel McKeown	Mandarin/1897 Yellow Jacket/1897	Director Director	Toronto	Mandarin Gold Mining Yellow Jacket Gold Mining
Anson McKim	Jubilee/1897 *	Director	Montreal	Jubilee Gold Mining *
Sidney McKinnon	1897 *	Director	Toronto	Free Gold Mining & Dev. *
Thomas McLaughlin	Empire/1899 Monarch/1900 SV348/1902	Director Director Director	Toronto	Empire Mining Co. Monarch Mining Co. President Gold Mining Co.
George McLaurin	1899	Director	Michigan	Island Falls Mines Co.
C.J. McLean	AL282/1902	Mine Captain		New York & Ontario Gold Min'g
Hugh McLean	Hawk Bay/1897	Director	Toronto	Hawk Bay Gold Mining
Allan McLennan	Boulder/1899 Mikado Reef/1902 ¶	Director Attorney	Rat Portage	Boulder Mining Co. Gold Reef Mining Co. ¶
Maj. R. McLennan, MP	1897 1897 *	Director Director	Alexandria	Atlas Gold Mining Crocus Gold *
William McLeod	1897 * Gold Panner/1899 1899	Director Director Director	Winnipeg Rat Portage	Uphaz Gold Mining & Dev. * Gold Panner Mining Pritchard's Harbour Mining

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Name	Mine/Year	Position	Residence	Company
John McLeod	Swede Boy/1899	Manager		Headlight Gold Mining
William McLeod	1897 * Gold Panner/1899 1899	Director Director Director	Winnipeg Rat Portage	Uphaz Gold Mining & Dev. * Gold Panner Mining Pritchard's Harbour Mining
Albert McManus	Golden Star/1897 JO41/1898 1898 AD2/1899 Golden Eagle/1899	Director Director Director Director Director	Duluth, Minn.	Golden Star Mining & Expl. JO41 Gold Mining Co. Bad Vermillion Gold Golden Crescent Mining & Expl. Golden Eagle Mining & Expl.
Lendrum McMeans	Hay Island/1897 Imperial/1896 *	Director Director	Winnipeg	Hay Island Gold Mining Imperial Min. & Dev. *
Albert (A.C.) McMicken	Ophir/1889 1896 * 1897	Director Director Director	Winnipeg	Ontario Mining Co. Ontario & Cen. Can. Prosp. * Atlas Gold Mining
Hon. Gilbert McMicken	Ophir/1889	Director	Winnipeg	Ontario Mining Co.
Hamilton McMicken	Ophir/1889	Director	Winnipeg	Ontario Mining Co.
H.G. McMicken	Ophir/1889	Director	Winnipeg	Ontario Mining Co.
N.C. McMillan	Mikado/1899-1900 ¶ Unicorn/1900 Black Eagle [Regina]/1901 ¶	Mine Man. Manager Director		Mikado Gold Mining ¶ Unicorn Mine Black Eagle Gold Mining ¶
George McMurrich	D637, etc./1897	Director	Toronto	Gold Hills Expl. & Dev. Co.
William McNally	1899	Director	Montreal	Mount Royal-Manitou Gold
Thomas McNea	Northern Queen/1897	Director	Wabigoon	Rand Gold Mining of Wabigoon
Ernest McNeill	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
Dr. M. McPhaden	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Frank McPhillips	1897	Director	Toronto	Hiawatha Gold Mining
Taylor McVeity	Kobold/1897 Lady of the Lake/1897 1900	Director Director Director	Ottawa	Kobold Gold Mining of Ottawa Gagne Island Mining Stadacona Gold Mining Co.
Michel A. W. Meagher	Hay Island/1882*	Director	New York	Keewatin Mining Co.*
Edmund Meredith	1897	Director	London, Ont.	Mineral King Mining & Dev.
Alfred Merritt	AL282/1900	Director	Duluth, Minn.	A.L.282 Gold Mining Co.
Thomas Merritt	Golden Star/1897 § Golden Star/1897 JO41/1898 1898 AD2/1899	Pres/Supt. Dir/Supt (98) Director Director Director	Duluth, Minn.	Seine River & Rainy Lake Expl.§ Golden Star Mining & Expl. JO41 Gold Mining Co. Bad Vermillion Gold Golden Crescent Mining
W.J. Merritt	Golden Star/1897	Supt.		Golden Star Mining & Expl.
Thomas Metcalfe	Sakoose/1901	Director	Winnipeg	Sakoose Gold Mining Co.

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Name	Mine/Year	Position	Residence	Company
Sidney Mewburn	Hawk Bay/1897	Director	Hamilton	Hawk Bay Gold Mining
J.F. Mieville	Bath Island/1898 Regina/1898 ¶ Combined/1900 Witch Bay/1900	Manager Manager Manager Manager		Bath Island Mining Regina (Canada) Gold ¶ Combined Gold Co. Chemical Gold Mining
Andrew Miller	Glass Reef/1899	Director	North Dakota	Glass Reef Gold Mining
Charles F. Miller	Triggs/1898 Gold Winner/1898	Director Director	Minneapolis Duluth, Minn.	Triggs Gold Mining Duluth Mining Co.
John Miller	Triggs/1898	Director	Rat Portage	Triggs Gold Mining
William S. Milney	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
Archibald Mills	1897	Director	Toronto	Wabigoon Free Milling Gold
Charles Minor	Log Cabin/1901	Director	Buffalo	Log Cabin Gold & Copper Co.
Charles Minot	Log Cabin/1901	Director	New York	Log Cabin Gold & Copper Co.
Joseph Mishler	Page/1900	Director	Duluth, Minn.	Page Gold Mining Co.
C.W. Mitchell	Gold Rock/1896 §	Partner	Ottawa	Gold Rock Mine §
Robert Moderwell	1903	Director	Buffalo, NY	Camp Bay Mining Co
Alexander Mohr	Wendigo/1902	Director	Buffalo, NY	Chippewa Consolidated Gold
Taylor Mohr	Norah/1899	Director	Buffalo, NY	Gold Leaf Mining Co.
Dr. John Molath	20th Century/1901	Director	Conn., USA	Twentieth Century Mining
Jos. Montgomery	Imperial/1897 *	Director	Toronto	Imperial Gold Mining and Dev. *
Frank W. Moore	Yellow Girl/1885 Nina/1900	Owner Director	Rat Portage	Myers-Wood-Moore Syndicate § Nino Mining Co.
John Moore	Sirdar, Sirdar Point/1899	Director	Toronto	Sirdar Gold Mining
John T. Moore	Sirdar, Sirdar Point/1898 Sirdar, Sirdar Point/1899	Manager Director	Galt	Toronto & Western Mines Dev. Sirdar Gold Mining
Mrs. Sarah H. Moore	Medicine Ledge/1897 §	Lessee	Rat Portage?	Medicine Ledge Mine §
William Moore	CR68 & 70/1899	Director	Exeter, Engl.	Atlin Mining Co.
Edward Morgan	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
Elizabeth Morgan	Black Hawk/1899	Director	Cleveland	Black Hawk Gold Mining
John G. Morgan	Empoer/1896	Director	Winnipeg	Standard Mining & Dev.
Joseph Morgan	Black Hawk/1899	Director	Cleveland	Black Hawk Gold Mining
Josephine Morgan	Black Hawk/1899	Director	Cleveland	Black Hawk Gold Mining
James Morison	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Frank Morley	Mikado Reef/1897 1897	Director Director	Toronto	Ontario Reefs Mining Consolidated Gold Fields Dev.

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Name	Mine/Year	Position	Residence	Company
Ben. J. Morningstar	1897	Director	Buffalo, NY	Little Rock Consolidated Gold
Charles S. Morris	1896	Director	R. Portage	Western Ontario Mining
John Morris	Witch Bay/1898	Director	Montreal	Chemical Gold Mining
William Morris	Tabor, Van Horne/1897	Director	Sherbrooke, Que.	Eastern Townships Min'g & Dev.
Daniel Morrison	Witch Bay/1899	Manager		Chemical Gold Mining
William Morse	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
John Morton	1897	Director	Winnipeg	Mine Centre Development
John Morty	Hammond Reef/1899	Director	London, Eng.	Hammond Reef Consolidated
Charles Moss	Foley/1902	Director	Houghton, Mich.	Protogene Gold Mines
Lee J. Moss	Emma Abbott/1899 §	Supt./Dir.		Emma Abbott Gold Mining §
W.G. Motley, M.E.	Regina/1895	Eng./Man.		Regina (Canada) Gold Mines
William Mulock	HW209/1897 1897	Director Director	Winnipeg	Queen of the Lakes G. M. & Dev. Czar Gold Mining Co.
Flora Munroe	Sakoose/1901	Director	Dyment	Sakoose Gold Mining Co.
John M. Munroe	Watson/1898 § Sakoose/1901	Partner Director	Winnipeg	Watson Mine § Sakoose Gold Mining Co.
George Munsey	1901	Director	Duluth, Minn.	Gopher Mining Co.
Denis Murphy	Yum Yum/1896	Director	Ottawa	Yum Yum Gold Mining
M. (Merlin?) A. Myers	Big Master/1900 ¶ Jubilee/1902 RPRWorks, Scramble, etc./1902	Director Director Director	Buffalo? Warren, Penn.	Inter-state Consol. Mineral Co. ¶ Jubilee Mining Co. Keenora Mining Co.
John T. Nagle	Keewatin/1885	Manager	California?	Keewatin Mining Co. (extra-provincial?)§
James Naismith	1896 *	Director	Winnipeg	Ontario & Cen. Can. Prosp. *
Joseph Naughton	Sawbill?/1897	Director	W. Superior, Wisc.	Gold Brick Mining
Charles Neads	Electro-Gold, Wimor/1896	Director	R. Portage	Rainy River Gold
N.C. Neff	Golden Star/1899	Secty	Toronto	Golden Star Mining & Expl.
Michael Nellany	Big Master/1901 ¶ Giant/1902	Director Director	Buffalo, NY	Inter-state Consol. Mineral Co. ¶ Giant Gold Co.
Walter T. Newman	1892	Director	Toronto	Gold Rock Mining
H.M. Newton	Independence/1898 §	Director	Wisconsin	Independence Min. and Dev. Co. (US Corp?)§
William Nichols	Black Sturgeon/1897	Director	Winnipeg	Black Sturgeon Mining

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Name	Mine/Year	Position	Residence	Company
William Nicholson	Log Cabin/1901	Director	Buffalo	Log Cabin Gold & Copper Co.
Mary Nielson	Preston/1896 Olive Gold/1897	Director Director	Winnipeg	Preston Gold Mining Olive Gold Co.
John Noonan	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Hon. John Norquay	Hay Island/1882*	Director	Winnipeg	Keewatin Mining Co.*
Robert Nunn	Sovereign?/1897	Director	Winnipeg	Mohawk Mining Co.
James O'Brien	1897/Wendigo Norah/1899 Nina/1900 Wendigo/1902 1903 ¶? Eagle Lake/1903 ¶	Director Director Director Director Attny Attny	Toronto, Ont.	Chippewa Gold Mining Gold Leaf Mining Co. Nino Mining Co. Chippewa Consolidated Gold Provident Mining Co. ¶? Eagle Lake Gold Mining ¶
Michael O'Brien	Nora/1899	Director	Renfrew, Ont.	Gold Leaf Mining Co.
Henry O'Brien	1896 * Princess/1896	Director	Toronto	MacKenzie Gold * Princess Gold
James O'Connor	Harold Lake/1896	Director	P. Arthur	Lake Harold Gold Mines
C.N. O'Hare	Sairy Gamp §	Director		Rainy Lake Min'g & Power Co. §
Edward Oates	Wendigo/1902	Director	St. Catherines	Chippewa Consolidated Gold
Dr. Rollin Olin	Reliance/1900	Director	Detroit, Mich.	Reliance Gold Mining Co.
Oronhyatekha (Indian?)	D637, etc./1897	Director	Toronto?	Gold Hills Expl. & Dev. Co.
Franklin Paine	1899	Director	Duluth, Minn.	Minnesota Ontario Gold Mines
Reuben Paine	1897/Wendigo	Director	Niagara Falls, Ont.	Chippewa Gold Mining
Asher Painter	Indian Joe/1902	Director	New Jersey	Indian Joe Gold Mining
Robert Palen	Yellowjacket/1897	Director	Buffalo, NY	Yellow Jacket Gold Mining
William Palk	1897	Director	Winnipeg	Czar Gold Mining Co.
John Palmer	Gold Creek/1897	Director	Toronto	Gold Creek Mines & Expl.
Herbert Palmer, M.E.	Gold Sun/1899	Director	Cleveland, Oh.	Gold Sun Mining Co.
Sydney Palmer	Gold Creek/1897	Director	Toronto	Gold Creek Mines & Expl.
Thomas Paradise	Black Fly/1897 §	Patentee	Mine Centre	Black Fly Mine §
Thomas Paris	Lizzie [Virgina]/1898	Supt.		Virginia Mining Co.
Alfred J. Parsons	Ophir/1889 1888 Champion/1901	Director Director Director	Rat Portage	Ontario Mining Co. Sabaskong Lumber & Mining Co. Champion Gold Mining Co.
John Partington	Gold Panner/1899 Baden Powell/1900 Partington Syndicate No.2/1897	Director Partner/Synd. Partner/Synd.	Rat Portage	Gold Panner Mining Co. Partington Syndicate No. 1 § Partington Syndicate No. 2 §

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Name	Mine/Year	Position	Residence	Company
Thomas Partington	Big Ruby/1897 §	Partner		Big Ruby Mine §
Levi Partridge	Scramble/1897 Reliance/1900	Director Director	Detroit, Mich.	Scramble Gold Mining Reliance Gold Mining
A. Patterson	Combined/1898	Manager		Combined Gold Mines
William C. Patterson	Giant/1902	Director	Buffalo, NY	Giant Gold Co.
William Paul	Buffalo/1897 Big Dick/1897 §	Director Partner	Buffalo	Buffalo Mining and Dev. Big Dick Mine §
Paul Paulson	Giant/1902	Mine Captain		Giant Gold Co.
John W. Peck	HP222/1897	Director	Winnipeg	Aurora Gold Mining & Dev.
Henry Pellatt	Hammond Reef/1899	Director	Toronto	Hammond Reef Consolidated
L.L. Peltier	Sunbeam/1897	Director	Fort William	Railroaders' Gold Mining
F.C. Pengilly	Mikado/1898-99 ¶	Mill Man.	Australia	Mikado Gold Mining ¶
Charles Pennock	1902 ¶	Attorney	Rat Portage	Rat Portage Mining and Dev. Co. of Arizona
Scott Pennock	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Henry Person	Fighting Chance/1899	Director	St. Paul, Minn.	Fighting Chance Gold Mining
William Peters	Harold Lake/1895 RP Reduction Works/1898 ¶ Mack 26 & 27, Bullion, 1898 Bad/1898 § Alice A/1895 §	Mill Man. Mill Man. Manager Manager Mill Man.		Lake Harold Gold Mines Dominion Gold Mining ¶ Gold Bullion Mining Bad Mine Syndicate § American & Can. Gold (US Corp?) §
Frank Peterson	Witch Bay/1900 Manhattan/1900 Black Eagle [Reginald]/1901	Manager Manager Man./Attny/ Dir.	Rat Portage & New York	Chemical Gold Mining Manhattan Gold Mining Black Eagle Gold Mining
Henry C. Peterson	Orion/1899	Director	St. Paul, Minn.	Orion Gold Mining Co.
William Pettigrew	1897 Soveriegn?/1897 Pettigrew/1899	Director Director Director?	Winnipeg	Assaying & Smelting Co. of Ont. Mohawk Mining Co. Seine River Syndicate Mining (un-incorporated?)
Fred Pfau, M.E.	Wendigo/1902	Manager/Dir.	Buffalo, NY	Chippewa Consol. Gold Mng. and Milling Co.
William Phair	HP222/1897	Director	Ft. Frances	Aurora Gold Mining & Dev.
Harvey Phelps	Golden Eagle/1899 Swede Boy/1899	Director Director	Duluth, Minn.	Golden Eagle Mining & Expl. Headlight Gold Mining & Expl.
W.C. Phillips	1897	Director	Toronto	Oriole Gold Co. of Wabigoon
Albert Philp	1897	Director	Brantford	Manitou Gold Mining
W.H. Pickering	Big Master/1901 ¶	Manager		Inter-state Consol. Mineral Co. ¶

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Name	Mine/Year	Position	Residence	Company
S. Pinchon	Baden Powell/1900 §	Partner/Synd.	Rat Portage	Partington Syndicate §
William Pinkerton	Oxford/1899 §?	Director		Oxford Mining Co. §?
John Plaxton	1896 1897	Director Director	Winnipeg	Western Canada Gold Lakeside Gold Mining
William Plummer	Harold Lake/1896	Director	S.S. Marie	Lake Harold Gold Mines
William Pomeroy	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
Rufus Pope	1900	Director	Cookshire, Que	Stadacona Gold Mining
Louis Poplowsky	Gold Sun/1899	Director	Cleveland, Oh.	Gold Sun Mining Co.
Dexter Potter	Wendigo/1897 Nina/1900 Wendigo/1902	Director Director Director	St. Catherines	Chippewa Gold Mining Nino Mining Co. Chippewa Consolidated Gold
Edward N. Potter	Wendigo/1902	Director	St. Catherines	Chippewa Consolidated Gold
Francis Potter	Wendigo/1902	Director	Buffalo, NY	Chippewa Consolidated Gold
Henry J. Powers	RP Reduction Works/1890	Dir./Manager	Colorado	Lake of Woods G. & Silver Red.
Dr. Robert Preston	Kobold/1897	Director	Ottawa	Kobold Gold Mining
William Preston	Preston/1896 Olive/1900 Gold Coin/1899	Director Manager Director	Mine Centre	Preston Gold Mining Olive Gold Co. Gold Coin Mining
T.D. Prideaux	Alice A/1898	Manager		Am. & Can. Gold Mining (US Corp?)§
William Prindle	Gold Winner/1899	Director	Duluth, Minn.	Gold Winner Mining Co.
Henry Pringle	Regina/1897	Eng./Attny/ Manager		Regina (Canada) Gold Mines
Warrington Pritchard	1899 Nina/1900	Director Director	Rat Portage	Pritchard's Harbour Mining Nino Mining Co.
Hume Proudfoot, O.L.S	Foley/1896 Reserve Island/1896 §	Director Owner	Toronto	Ontario Mines Dev. Reserve Island Mine §
Hamilton Proudlock	Sentinel/1898	Foreman		Sentinel Consolidated Gold
Miles Purcell	Jack Lake, St. Anthony Reef/1900	Director	Michigan	Jack Lake Gold Mining Co.
Alexander Purse	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
Francis Putnam	Nina/1897	Director	Massachusetts	Great Granite Gold Mining
V. Quackenbush	Quackenbush/1898 §	Owner/Oper.		Quackenbush Location §
Paul Rainer	Redemer/1901	Director	Chicago	Redeemer Mining and Milling
Elton Ramson	1897 *	Director	NY, N.Y.	Seine River & Manitou Gold *
Chandler Randall	1901	Director	Detroit	Michigan-Ohio Gold Mining

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¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain

Name	Mine/Year	Position	Residence	Company
Corydon Randall	1901	Director	Detroit	Michigan-Ohio Gold Mining
Ferris Randall	1901	Director	Detroit	Michigan-Ohio Gold Mining
Andrew Rankin	1897	Director	Brantford	Manitou Gold Mining
William Ray	Sentinel/1898 Foley/1895 §	Director Director	Toronto	Sentinel Consolidated Gold Weigand Gold Mining §
James Rayburn	Triumph/1897 §? Lizzie [Virginia]/1899	Agent Manager		Triumph Gold Mining §? Virginia Mining Co.
Henry Read	1899	Director	Toronto	Mines Contract & Investigation
Sydney Redway	Mikado Reef/1897	Director	Toronto	Ontario Reefs Mining
D. Anson Reesor	1897	Director	Brantford	Manitou Gold Mining
John Reeve	82V/1892	Director	Chatham	Taché Gold Mining
Count Oscar Von Reichenbach	Rat Portage RW, etc./1897 ¶	Director	London, Engl.	Dominion Gold Mining ¶
James Reid	Ontario Gold Conc./1898 ¶	Director	Ontario/Eng.	Ontario Gold Concessions ¶
Alecia Reinhardt	1899	Director	?	Victor Gold Mining and Dev.
S.H. Reynolds	Nina/1898-1900 §	Manager		Nina Gold Mining Co. §
W. Rhodes	Sultana/1899 ¶	Director	London, Engl.	Sultana Mine of Canada ¶
A.N. Rice	Independence/1898 §	Manager		Independence Min. and Dev. Co. (US Corp?)§
Richard Richardson	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
Harding Rideout	1899 Golden Horn/1902	Director Manager/Dir.	Rat Portage	Victor Gold Mining and Dev. Rush Bay Golden Horn Mining
Louis J. Rigali	Eagle Lake/1898	Director	Massachusetts	Stanton Gold Mining & Dev.
Robert T. Riley	RP Reduction Works/1890 Winnipeg Cons/1897	Director Director	Winnipeg	Lake of Woods G. & Silver Red. Winnipeg Mining and Dev.
George Rioch	1899	Director	Rat Portage	Victor Gold Mining and Dev.
Archibald Ritchie, M.E.	D605, D607/1897	Director	Keewatin	Golden Island Mining
Charles H. Ritchie	Harold Lake/1896	Director	Toronto	Lake Harold Gold Mines
George Ritchie	Gray Eagle/1898	Director	Toronto	International Gold Mining & Dev.
W. Rivett-Carnac	Regina/1898 ¶	Director	London, Engl.	Regina (Canada) Gold Mines ¶
Josiah Robarts	Sweden/1897 1897 * 1897	Director Director Director	Winnipeg	Sweden Gold Mining Uphaz Gold Mining * Czar Gold Mining
Charles D. Robbins	Buffalo/1898	Director	Watertown, NY	Buffalo Northwestern Gold
George Robbins	Alice A/1898	Manager		Am. & Can. Gold Mining (US Corp?)§

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Name	Mine/Year	Position	Residence	Company
Dr. Osman Roberts	Eagle Lake/1898	Director	Massachusetts	Stanton Gold Mining & Dev.
Robert Roberts	Champion/1901	Director	Rat Portage	Champion Gold Mining Co.
William Roberts	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Andrew (A.W.?) Robertson	Stella, Contact/1897	Director/Pres.	Keewatin	Ontario Prospectors' Mining
Alexander Robertson	D605, D607/1897	Director	Mount Forest	Golden Island Mining
A.W. Robertson	1899 Lucky Coon/1898	Director Director Manager	Montreal	Montreal-Manitou Mines Lucky Coon Gold Mining
William Robertson	1899 Golden Horn/1901	Director Director	Montreal St. John, N.B.	Montreal-Manitou Mines Co.
Christopher Robinson	1897 Mandarin/1897	Director Director	Toronto	Wabigoon Free Milling Gold Mandarin Gold Mining
David Robinson	Moose Lake/1900	Director	Montreal	Moose Lake Mining and Milling
E. Allen Robinson	Rat Portage RW, etc./1897 ¶	Director	London, Engl.	Dominion Gold Mining ¶
Harold Robinson	WD135/1898	Director	Toronto	Mountain Mining Co. of Ont.
Jerimiah Robinson	1896 * 1897 *	Director Director	Winnipeg	Ontario & Cen. Can. Prosp. * Crocus Gold Mining *
John Robinson	1897	Director	May, Ont.	Webbwood General Mining
O.B. Robinson	Foley/1899 ¶	Manager		Canadian Mines Dev. Co. ¶
Strachan Robinson	Mandarin/1897 1899	Director Director	Toronto	Mandarin Gold Mining Mines Contract & Investigation
William Robinson	Wendigo/1902	Director	Buffalo, NY	Chippewa Consolidated Gold
Rodman Roblin	Emporer/1896	Director	Winnipeg	Standard Mining & Dev.
George H. Rogers	Kobold/1897	Director	Ottawa	Kobold Gold Mining of Ottawa
Robert Rogers	Bullion No. 2/1899 1900 Little Bobs/1900	Director Director Director	Rat Portage	Bullion Number Two Mining Co. Stadacona Gold Mining "Little Bobs" Mining Co.
Samuel C. Rogers	Grace/1897	Director	Buffalo, NY	Grace Mining Co.
Alexander Rose	Bad, Bullion No. 1, Monarch/1893	Director	Rat Port.	Bullion Gold Mining
Solomon Rosenau	Buffalo/1897	Director	Buffalo	Buffalo Mining and Dev.
Alexander Ross	Moose Lake/1900	Director	Montreal	Moose Lake Mining and Milling
Arthur Wellington Ross, MP	Winnipeg Consolidated/1883 1883 Argyle/1883	Director Director Director	Winnipeg	Winnipeg Consol. Gold Min'g Co. Mining Investment Co. of Canada Argyle Mining Co.
Donald W. Ross	Dawson, White/1902	Director	Parry Sound	English River Gold Mining
George Ross	Bully Boy/1900 § Trojan/1900 §	Partner/Synd. Partner/Optn.	Rat Portage	Bully Boy Mine § Trojan Mine §

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Name	Mine/Year	Position	Residence	Company
James H. Ross	1899	Director	Regina, Sask.	Mikado Peninsula Gold Mining
Walter Ross	1899 Norway/1896 §	Director Partner	Rat Portage	Mikado Peninsula Gold Mining Norway Mine §
John Rossman	AD2/1899 Golden Eagle/1899 Swede Boy/1899	Director Director Director	Duluth	Golden Crescent Mining and Expl. Golden Eagle Mining & Expl. Headlight Gold Mining
Henry Round	G8/1897 Crackerjack/1899	Director Director	Ft. Frances	Fort Frances Mining Crackerjack Gold Mining
John Rowell	1899	Director	Toronto	Mines Contract & Investigation
Charles Rupp	Mack 26 & 27, Bullion, Bad/1899	Director	Buffalo	Gold Bullion Mining
Charles Russell	RPRWorks, Scramble, etc./1902	Director	Cincinnati, Oh.	Keenora Mining Co.
John Russell	1897	Director	Winnipeg	Czar Gold Mining Co.
Ezra Rust	Jack Lake, St. Anthony Reef/1900	Director	New York, NY	Jack Lake Gold Mining Co.
Hans Rutishauser	Foley/1897	Director	Detroit	Anglo-Ontario Exploration
Henry N. Ruttan, C.E.	Winnipeg Consolidated/1883 1883 Argyle/1883	Director Director Contractor	Winnipeg	Winnipeg Consol. Gold Min'g Mining Investment Co. of Canada Argyle Mining Co.
John Ryan	Foley/1902	Director	Hancock, Mich.	Protogene Gold Mines
Edmond Ryckman	Gold Creek/1897	Director	Toronto	Gold Creek Mines & Expl.
George S. Ryerson, M.D.	HW302/1897	Director	Toronto	Security Gold Mining & Dev. Co. of Ontario
George Sackman	Golden Gate/1897 1899	Director Director	Toronto	Golden Gate Mining and Dev. Mines Contract & Investigation
George Sanborn	Log Cabin/1901	Director	New York	Log Cabin Gold & Copper Co.
Mr. Sanderson	Stewart/1890 §	Partner	Milwaukee	Stewart Mine §
William Sanderson	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
W.E. Sandford	Hay Island/1882*	Director	Hamilton	Keewatin Mining Co.*
Frederick Sargent	Triggs/1898	Director	St. Paul, Minn.	Triggs Gold Mining
Frank Sargent	Triggs/1898	Director	Milwaukee	Triggs Gold Mining
William Sargent	Page/1900 1901	Director Director	Duluth, Minn.	Page Gold Mining Co. Gopher Mining Co.

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Name	Mine/Year	Position	Residence	Company
J.M. Savage	Homestake/1892 La Mascotte/1896 Sentinel/1897 * 1897	Director Director Director Director	Rat Port.	Homestake Mining Colcleaugh Gold Mng Coronado Gold of RP * La Reine Gold (a.k.a. Mutual Gold)
Bannell Sawyer	Decca/1898 Black Jack, Gold Hill/1899 CR68 &70/1899	Director Director Director	Montreal	Decca Mining Co. Britannia Consolidated Gold Atlin Mining Co.
Ernest Sawyer	1897	Director	Toronto	Consolidated Gold Fields Dev.
Franklin Scarle	Swede Boy/1899	Director	Duluth, Minn.	Headlight Gold Mining & Expl.
William B. Scarth	1883	Director	Toronto	Mining Investment Co. of Canada
George Cavit Scott	82V/1889 82V/1892	Director Director	Chatham	Maple Leaf Gold Taché Gold
William G. Scott	D605, D607/1897	Director	Mount Forest	Golden Island Mining
Josiah Scovell	Wendigo/1902	Director	Buffalo, NY	Chippewa Consolidated Gold
Wm. Schaler	Big Master/1901 ¶	Director	Buffalo?	Inter-state Consol. Mineral Co. ¶
Bernard Schatzinger	Gold Sun/1899	Director	Cleveland, Oh.	Gold Sun Mining Co.
Augustin Scheurer	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
Charles Schiller	1901	Director	Duluth, Minn.	Gopher Mining Co.
Fredrick Schmietendorf	1899	Director	Toronto	Mines Contract & Investigation
Nelson Schnarr	Electro-Gold, Wimor/1896	Director	R. Portage	Rainy River Gold
Arthur Schoellkopf	Nina/1900	Director	Niagara Falls	Nino Mining Co.
T.H. Schofield	Big Ruby/1897 §	Partner		Big Ruby Mine §
C.C. Schrontz	Sawbill/1897 AL282, Sunbeam/1898 Roy/1898	Supt. Manager Manager		Saw Bill Lake Gold Railroaders' Gold Roy Mining and Dev.?
J.B. Schrontz	Sawbill/1897	Supt.		Saw Bill Lake Gold
Ida Searle	AD2/1899	Director	Duluth	Golden Crescent Mining & Expl.
Herbert Secord	Wendigo/1902	Director	Toronto, Ont.	Chippewa Consolidated Gold
Byron G. Segog	1899	Director	Duluth	Atikokan Gold Dev. Co. of Ont.
Henry Seibert	AL282/1902	Director	New York, NY	New York & Ontario Gold Min'g
C.J. Seih	Gold Moose/1901 §	Partner	New Sharon, Iowa	Gold Moose Mine §
Joseph Sellwood	Randolph, Isabella/1899	Director	Duluth	Randolph Gold Mining
Charles B. Seltzer	D644/1897	Director	Baltimore, Md.	Gold King Mining Co. of Toronto

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Name	Mine/Year	Position	Residence	Company
Parlan Semple	Black Jack/1893	Director	Oshkosh, Wis.	Rat Portage Land& mining (aka Rat Portage Mining Co.)
	RP Reduction Works/1894 §	Partner?		Rat Portage Mining & Red. Co. §
Henry Sewell, M.E.	1899	Director	Toronto	Mines Contract & Investigation
Edward Seybold	Ophir/1890 §	Owner	Ottawa	Ontario Mining §
	Yum Yum/1896	Director		Yum Yum Gold Mining
	Keewatin RW/1897	Director		Ottawa Gold Milling
	Ophir/1900	Director		Sultana-Ophir Mining
James Shanks	Manhattan/1900	Director	New Jersey	Manhattan Gold Mining Co.
Sylvester Sharp	Yellowjacket/1897	Director	Toronto	Yellow Jacket Gold Mining
	Cameron Island/1897	Director		Cameron Islands Mining & Dev.
	Edna/1897 ¶	Manager		Gold Explorers of Canada ¶
	Crown Point/1900	Manager		Crown Point Mining
A.G. Shaw	Ontario Limited/1897 ¶	Director	London, Engl?	Ontario, Limited ¶
Frank J. Shaw	Buffalo/1898	Director	Buffalo	Buffalo Northwestern Gold
Hedley Shaw	Gray Eagle/1898	Director	Toronto	International Gold Mining & Dev.
James G. Shaw	Laurentian/1902	Director	Toronto	Laurentian Mining Co.
	Volcanic Reef/1902	Director		Volcanic Reef Gold Mining
Thomas Shaw	1897	Director	Keewatin	Keewatin Gold Mining
Frederick Shephard	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
Herman Sheyer	1899	Director	Montreal	Montreal-Manitou Mines Co.
H.J. Shields	Mikado Reef/1902 ¶	Manager		Gold Reef Mining Co. ¶
Dr. A. Shillington	Kobold/1897	Director	Ottawa	Kobold Gold Mining of Ottawa
	Lady of Lake, etc./1901	Director		Canada Consolidated Mineral Co.
John Shilton	John Sykes/1899	Director	Toronto	John Sykes Mining & Milling
	Sultana/1903	Director		Sultana Gold Mine Ltd
E. Arthur Shores	United States/1901 ¶	Secty/Treas.	Ignace, Ont.	United States Gold Mining ¶
John Short	Boulder/1899	Director	Rat Portage	Boulder Mining Co.
Thomas Shortiss	1896 *	Director	Toronto	MacKenzie Gold *
	Princess/1896	Director		Princess Gold
Michael Silk	Jubilee/1902	Director	Pennsylvania	Jubilee Mining Co.
	RPRWorks, Scramble, etc./1902	Director		Keenora Mining Co.
John Sill	Golden Fissure/1896	Director	NY, New York	Golden Fissure Mining
Alexander Simpson	Norah/1899	Director	Ottawa	Gold Leaf Mining Co.
Dr. Alfred Simpson	Preston/1896	Director	Winnipeg	Preston Gold Mining
	Olive/1897	Director		Olive Gold Mining
	Olive Gold/1897	Director		Olive Gold Co.
	1897	Director		Nugget Gold Mining
	Jubilee/1897 *	Director		Jubilee Gold Mining *

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Name	Mine/Year	Position	Residence	Company
Cornelia Simpson	Giant/1902	Director	Buffalo, NY	Giant Gold Co.
Daniel Simpson, M.E.	Big Master/1900 ¶ Giant/1902	Manager Manager/Dir.	Buffalo, NY	Inter-state Consol. Mineral Co. ¶ Giant Gold Co.
James Simpson	1897	Director	Winnipeg	Nugget Gold Mining
Nelson Simpson	1897	Director	S. St. Marie	Golden Prince Mining & Dev.
Dr. R.M. Simpson	Olive/1897	Director	Winnipeg	The Olive Gold Mining
William J. Sinclair	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
Wm. Smail	Bullion No. 2/1899 Gold Panner/1900 Dawson/1901	Manager Manager Manager		Bullion Number Two Mining Gold Panner Mining Co. English River Gold Mining
W.K. Smalley	20th Century/1901	Director	Boston	Twentieth Century Mining
Clarence R. Smith	Page 1900	Director	Duluth, Minn.	Page Gold Mining Co.
Dryden Smith	Moose Lake/1900 20th Century/1901	Manager Manager		Moose Lake Mining and Milling Twentieth Century Mining
Edgar W. Smith	Combined/1897 1903	Director Director	Grimsby, Ont.	Combined Gold Mines Camp Bay Mining Co.
Gen. Francis E. Smith	Hay Island/1882*	Director	New York	Keewatin Mining Co.*
H.L. Smith	Gold Standard/1902 ¶	Director	S. Dakota	Gold Standard Mining Co. ¶
J. Burley Smith, M.E.	Queen Bee/1895 Yum Yum/1897 Burley/1897 1897 Nankipoo/1897 1903	Man/Director Manager Man/Director Director Director Director	Quebec	Queen Bee Gold Mining Yum Yum Gold Mining Burley Gold Mining Bald Indian Bay Mining Nan Ki Poo Gold Mining Coronation Gold Mining
J. Scott Smith	HW418,419/1897 ¶	Dir./Manager	London, Engl	North-Western Ont. Exploration ¶
James E. Smith	Golden Star/1897	Director	Duluth, Minn.	Golden Star Mining & Expl.
Olin H. Smith	Eagle Lake/1898	Director	Massachusetts	Stanton Gold Mining & Dev.
Oscar Smith	Sirdar/1900	Mine Man.		Sirdar Gold Mining
T.E. Smith	Cedar Island/1898 ¶	Supt.		Cedar Island Gold Mining ¶
G. Snelgrove	Sunbeam/1897	Director	Fort William	Railroaders' Gold Mining
Elias Snider	Sirdar/1899	Director	Waterloo	Sirdar Gold Mining
I.N. Snider	Sairy Gamp §	Director		Rainy Lake Min'g & Power Co. §
Frederick T. Snyder	Keewatin RW/1897	Manager		Ottawa Gold Milling & Mining
John B. Somerset	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
Kerr Somerville	SV348 & 349/1902	Director	Toronto	President Gold Mining Co.
William Somerville	Stella, Contact/1897	Director	Keewatin	Ontario Prospectors' Mining

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Name	Mine/Year	Position	Residence	Company
James Van Sommer	Foley/1896	Director	Toronto	Ontario Mines Dev.
Samuel Southcott	1897	Director	London, Ont.	Mineral King Mining & Dev.
William Southam	Sawbill/1896	Director	Hamilton	Saw Bill Lake Gold
Charles Spencer	Harold Lake/1896	Director	Montreal	Lake Harold Gold Mines
George Spencer	1899	Director	Duluth, Minn.	Minnesota Ontario Gold Mines
John L. Spink	Gray Eagle/1898	Director	Toronto	International Gold Mining & Dev.
Robert Sproule	Hammond Reef/1897 Folger-Hammond/1897 Hammond Reef/1899 Bullion No. 2/1899 Wendigo/1900	Director Director Director Director Director	Toronto	Hammond Gold Reef Mining Folger-Hammond Mines Co. Hammond Reef Consolidated Bullion Number Two Mining Wendigo Mines of Ontario
D.S. Stanley	20th Century/1901	Director	Wash. D.C.	Twentieth Century Mining
Jerome Stanton	Log Cabin/1901	Director	New York, NY	Log Cabin Gold & Copper
James E. Stanton	Eagle Lake/1898 Manhattan/1900	Director Director	Eagle River New York, NY	Stanton Gold Mining & Dev. Manhattan Gold Mining
J. Steele	Clear Lake/1897¶ Big Six/1898-99¶ Jack Lake/1900-02	Manager Manager Manager/Dir.	Michigan	Clearwater Gold Mining ¶ Clearwater Gold Mining ¶ Jack Lake Gold Mining
Hugh Steele	Gold Bug/1899 Emma Abbott/1899 § Lucky Coon/1899	Director Director Director	Duluth	Gold Bug Mining Emma Abbott Gold Mining § Lucky Coon Gold Mining
James Steen	1896 1897	Director Director	Winnipeg	Western Canada Gold Lakeside Gold Mining
James Stephanson	Tabor/1898 §	Partner	Wabigoon	Tabor-Stephanson Partnership §
Llewellyn Stephens	Pine Portage/1900	Director	Hamilton	Pine Portage Mining Co.
Horace Stevens	Foley/1902	Director	Houghton, Mich.	Protogene Gold Mines
W.F. Stevens	Big Six/1898 ¶	Director	USA?	Clearwater Gold Mining ¶
E. Stevenson	Viking/1900 §	Partner/Synd.	Rat Portage	Stevenson Syndicate §
L. Stevenson	Viking/1900 §	Partner/Synd.	Rat Portage	Stevenson Syndicate §
Edward Stifel	Lizzie [Virginia]/1898	Director	West Virginia	Virginia Mining Co.
Laura Stifel	Lizzie [Virginia]/1898	Director	West Virginia	Virginia Mining Co.
C. Stirling	Trojan/1900 §	Partner/Synd.	Rat Portage	Trojan Mine §
W.R. Stokes	20th Century/1901	Director	Pittsburgh, Pa.	Twentieth Century Mining
C.W. Stone	Big Master/1901 ¶ RPRWorks, Scramble/1902	Director Director	Pennsylvania	Inter-state Consol. Mineral Co. ¶ Keenora Mining Co.
George Stott	1899	Director	Quebec	Mount Royal-Manitou Gold

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Name	Mine/Year	Position	Residence	Company
Frederick W. Strange, M.D.	D637, etc./1897	Director	Toronto	Gold Hills Expl. & Dev. Co.
James G. Strong	Laurentian/1902 Volcanic Reef/1902	Director Director	Toronto	Laurentian Mining Co. Volcanic Reef Gold Mining
William Strong, M.E.	Scramble/1899 1897 Foley/1899 ¶	Manager Director Manager/Dir.	London, Ont.	Scramble Gold Mining Mineral King Mining & Dev. Canadian Mines Development ¶
John Stryker	Gold Winner/1899	Director	Duluth, Minn.	Gold Winner Mining Co.
Dr. William Stuart	1897 * 1897	Director Director	Toronto	Free Gold Mining & Dev. * Wabigoon Free Milling Gold
Allan Sullivan, C.E.	Trojan/1897 Ontario Gold Conc./1898 ¶ Anglo Can. G. Est./1900¶ Elizabeth/1901	Partner/Optn. Joint Man. Man./Attny Manager	Rat Portage	Trojan Mine Ontario Gold Concessions ¶ Anglo Canadian Gold Estates ¶ Anglo Canadian Gold Estates ¶
Charles Sunderland	Randolph, Isabella/1899	Director	Superior, Wisc.	Randolph Gold Mining
Alex Sutherland	1897	Director	Brandon, Man.	Manitou Gold Mining
Hugh Sutherland	1883	Director	Winnipeg	Manitoba Consol. Gold & Silver
J. (John?) Sutherland John (J.?) Sutherland	Gold Hill/1896 § Australian/1896 § Empire [Violet]/1899	Manager Patentee Director	"At the mine" Ottawa	Northern Gold § Australian Mine § Empire Mining Co.
George Swanson	Swanson/1900 §	Man./Partner	Rat Portage	Swanson Mine §
R. Swanson	Reserve Island/1896 §	Manager		Reserve Island Mine §
William Sweatman	Black Sturgeon/1897	Director	Winnipeg	Black Sturgeon Mining
Roy Sweeney	Roy/1898 §?	Manager		Roy Mining and Development §?
Lt. Col. George Sweny	Folger-Hammond/1897 Hammond Reef/1899	Director Director	Toronto	Folger-Hammond Mines Co. Hammond Reef Consolidated
Alfred Sykes	John Sykes/1899	Director	Glen Williams, Ont.	John Sykes Mining & Milling
John Sykes	1897 * John Sykes/1899	Director Director	Glen Williams, Ont.	Free Gold Mining & Dev. * John Sykes Mining & Milling
Martha Sykes	John Sykes/1899	Director	Glen Williams, Ont.	John Sykes Mining & Milling
George H. Sylvester	WD135/1898	Director	Ringwood, Ont.	Mountain Mining Co. of Ontario
William Allanson Sylvester	WD135/1898	Director	Stouffville, Ont.	Mountain Mining Co. of Ontario
H.C. Symmes H.V. Symes	Imperial/1899 § Sturgeon Lake/1899	Owner/Oper. Manager	Niagara Falls	Imperial Mine § English River Gold Mining
James Tabor	Tabor/1898 §	Partner	Wabigoon	Tabor-Stephanson Partnership §

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Name	Mine/Year	Position	Residence	Company
George Tait	Combined/1897 1903	Director Director	Buffalo	Combined Gold Mines Camp Bay Mining
William F. Tasker	Mandarin/1897	Director	Toronto	Mandarin Gold Mining
Otto Taubert	Fighting Chance/1899 Orion/1899	Director Director	St. Paul, Minn.	Fighting Chance Gold Mining Orion Gold Mining
George Denison Taylor	Hay Island/1882*	Incorporator	Montreal	Keewatin Mining Co.*
H.J. Taylor	Dawson, White/1901	Treasurer		English River Gold Mining
Thomas Taylor	Imperial/1896 * Emporer/1896	Director Director	Winnipeg	Imperial Min. & Dev. * Standard Mining & Dev.
William Tedford	Hammond Reef/1899	Manager		Hammond Reef Consolidated
George Tennant	Treasure/1893 §	Manager		Treasure Mine §
Henry J. Tharle	1897	Director	Buffalo, NY	Little Rock Consolidated Gold
Alexander Thompson	1899	Director	Port Arthur	Ontario and Rainy River Contracting & Supply
Frank Thompson	Tabor, Van Home/1897	Director	Sherbrooke, Que.	Eastern Townships Min'g & Dev.
James Thompson	HP222/1897 G59, HW221/1897	Director Director	Winnipeg	Aurora Gold Mining & Dev. Rupert Land Mining
Joseph Thompson	1897 Gold Creek/1892	Director Owner	Toronto Rat Portage	Golden Prince Mining & Dev. Gold Creek Mine
Walter P. Thomson	Pine Portage/1900	Director	Hamilton	Pine Portage Mining Co.
T.O. Thorbus	Independence/1898 §	Director	Wisconsin	Independence Min. and Dev. Co. (US Corp?)§
B. Leonard Thorne	Nina/1898 1899	Manager Director	Rat Portage	Great Granite Gold Mining Hartford Gold Mining & Dev.
George Thurber	Cameron Island/1900	Manager		Cameron Islands Mining
William G. Thurston	HW302/1897	Director	Toronto	Security Gold Mining & Dev. Co. of Ontario
John H. Tilden	Sawbill/1896 Hawk Bay/1897 Sawbill Reef/1900	Director Director Director	Hamilton	Saw Bill Lake Gold Hawk Bay Gold Saw Bill Reef Synd.
Alvin Tillinghast	1901	Director	Toledo, Ohio	Michigan-Ohio Gold Mining
Robert F.F. Timms	1883	Director	Winnipeg	Manitoba Consol. Gold & Silver
Eldoras Todd	P767/1897	Director	Brantford, Ont.	Willow Creek Gold Mining Co. of Brantford, Ontario
James Todhunter	Nankipoo/1897	Director	Toronto	Nan Ki Poo Gold Mining
Benjamin Tooke	1899	Director	Montreal	Mount Royal-Manitou Gold

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Name	Mine/Year	Position	Residence	Company
J.G. Torrance, M.E. (AIME Member 1876)	Triumph/1895 § Gray Eagle, Wild Rose/1895 §	Manager Manager	Montreal	Triumph Gold Mining Co. § International Gold Mining & Dev.
John Torrance, the younger	CR68 & 70/1899	Director	Montreal	Atlin Mining Co.
Benson J. Townsend	Gray Eagle/1898	Director	Toronto	International Gold Mining & Dev.
Elmer S. Townsend	1892	Director	Toronto	Gold Rock Mining
Jeremiah Triggs	Triggs/1898	Manager/Dir.	Rat Portage	Triggs Gold Mining
Peter Trombley	1899	Director	Port Arthur	Pritchard's Harbour Mining
Alexander Trotter	Neepawa, Beehive, Victory, Royal Sovereign/1897	Director	Brandon, Man.	Neepawa Gold Mining
Edward Trousdale	Imperial/1897 *	Director	Toronto	Imperial Gold Mining and Dev. *
Estras Truby	Stella, Contact/1897	Director	Chicago	Ontario Prospectors' Mining
A. Trudo	20th Century/1898	Engineer		Twentieth Century Mining
Augustus Truss	Cameron Island/1897	Director	Toronto	Cameron Islands Mining
A.Q. Twiss	Ontario Limited/1897 ¶	Director	London, Engl?	Ontario, Limited ¶
William Underhill	1897 1899	Secretary Director	Duluth	La Reine Gold Mining (aka Mutual Gold Dev.) Northland Gold Co. of Ontario
Erastus Upham	Gold Winner/1899	Director	Duluth	Gold Winner Mining
Nathaniel Upham	Gold Winner/1898 Gold Winner/1899	Director Director	Duluth	Duluth Mining Co. Gold Winner Mining
Thomas Upham	Gold Winner/1898	Director	Duluth	Duluth Mining Co.
Albert Upton	Black Jack/1893 Reduction Works/1898 Bully Boy/1900 Treasure/1900 §	Director Option Option Owner	Rat Port. /Duluth	Rat Portage Land & mining (aka Rat Portage Mining Co.) Rat Portage Reduction Works Bully Boy Mine §
Edgeworth Ussher	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
Charles Varran	1899	Director	Rat Portage	Pritchard's Harbour Mining
D.E. Varley	Dawson, White/1902	Secty/Dir.	St. Catherines	English River Gold Mining
T. Newley Varty	Ferguson/1896 ¶?	Manager	India	Seine River Gold Mines ¶?
Charles Van Duzer	Lone Jack/1897	Director	Grimsby	Grimsby Gold Mining
L.S. Vaughan	Big Ruby/1897 §	Partner	Dinorwic, Ont.	Big Ruby Mine §
James Verral	82V/1889 82V/1892	Director Director	Chatham	Maple Leaf Gold Taché Gold Mining
George Verry	Golden Star/1900	Supt.		Golden Star Mining & Expl.
Fred Voss	1901	Director	Duluth, Minn.	Gopher Mining Co.
William Wadsworth	Jubilee/1902	Director	Toronto	Jubilee Mining Co.

\* Application made for incorporation but Letters Patent never obtained ("Dead-End Application")

¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain

Name	Mine/Year	Position	Residence	Company
Fred Wagner	Climax/1897	Manager		Climax Gold Mine Co.
George H.W. Wainwright	Ophir/1889	Director	?	Ontario Mining Co.
Daniel Waite	1899	Director	Duluth	Northland Gold Co. of Ontario
W.H. Wallbridge	1897 * 1897 1897 * John Sykes/1899 Sultana/1903	Director Director Director Director Director	Toronto	Free Gold Mining & Dev. * Wabigoon Free Milling Gold Seine River Mining & Dev. * John Sykes Mining and Expl. Sultana Gold Mine, Limited
George Walker	Climax/1897	Director	Winnipeg	Climax Gold Mine Co.
Thomas Walmsley	Sirdar/1899 Sawbill/1900	Director Director	Toronto	Sirdar Gold Mining Sawbill Reef Syndicate
J.J. Walsh	J.J. Walsh/1901-1903 §	Owner/Oper.		J.J. Walsh Mine §
Lewis Walsh	Ambrose/1897	Director	Port Arthur	Ambrose Mine & Dev.
T. [Thomas]Walsh	Electro-Gold, Wimor/1896 Little Bob/1900 Trojan/1900 §	Director Director Partner/Synd.	Rat Portage	Rainy River Gold Little Bob's Mining Trojan Mine §
W.L. Walsh	1897	Director	Orangeville, Ont.	Oriole Gold Co. of Wabigoon
Frank Walters	1901	Director	Detroit	Michigan-Ohio Gold Mining
Edward Ward	Golden Star/1897 § Golden Star/1897	Manager Manager/Dir.	Rat Portage	Seine River & Rainy Lake Expl. § Golden Star Mining & Expl.
William H. Warhus	Grace/1897	Director	Buffalo, NY	Grace Mining Co.
James Warner	Golden Gate/1897	Director	New York, NY	Golden Gate Mining and Dev.
Francis Warren	1899	Director	Conn., USA	Hartford Gold Mining and Dev.
G. Warren	Sirdar/1900	Bus. Man.		Sirdar Gold Mining
George H. Watson	Sawbill?/1897 Hammond Reef/1899	Director Director	Toronto	Gold Brick Mining Hammond Reef Consolidated
Hon. Robert Watson	Watson/1898 § Sakoose/1901	Partner Director	Port. la Prairie	Watson Mine § Sakoose Gold Mining Co.
William Watson	Emporer/1896 Black Hawk/1899	Director Director	Winnipeg Toronto	Standard Mining & Dev. Black Hawk Gold Mining
Charles Watts	Gray Eagle/1898	Director	Toronto	International Gold Mining & Dev.
Anton Watzke	Gold Standard/1900 ¶ Sairy Gamp/1900 §	Manager Manager/Dir.		Gold Standard Mining Co. ¶ Rainy Lake Min'g & Power Co. §?
George Weadock	Jack Lake, St. Anthony Reef/1900	Director	Michigan	Jack Lake Gold Mining Co.
J.W. Webster	El Diver/1892 § Treasure/1893 § Caribou/1897 §	Partner/Man. Partner Owner	Cleveland, Ohio	El Diver Mine § Treasure Mine § Caribou Mine §

\* Application made for incorporation but Letters Patent never obtained ("Dead-End Application")

¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain

Name	Mine/Year	Position	Residence	Company
Ray. Weelye, M.E.	1899	Director	Mine Centre	Kalevala Gold Mining Co.
James Weidman	Electro-Gold, Wimor/1899	Manager		Rainy River Gold
Thomas Weigand	Foley/1895 §?	Manager/Dir.	Minnesota?	Weigand Gold Mining §?
W.H. Weir	Ontario Gold Conc./1898 ¶ Hidden Treasure, Mayflower/1900 ¶	Attorney Attorney	Rat Portage	Ontario Gold Concessions ¶ Rainy River Development ¶
Cyrus Wellington	Westerfield [Reliance]/1898 ¶	Director	St. Paul?	Manitou Lake Gold Mining ¶
Benjamin Wells	Gold Winner/1899	Director	Duluth, Minn.	Gold Winner Mining Co.
Frank S. Wells	Golden Fissure/1896	Director	Toronto	Golden Fissure Mining
George West	1897	Director	Winnipeg	Assaying & Smelting Co. of Ont.
Newton C. Westerfield	Black Sturgeon/1897 1897 * Westerfield/1898 Flint Lake/1902 ¶	Director Director Manager Pres/Director	St. Paul, Minn.	Black Sturgeon Mining Darlington Bay Gold * Manitou Lake Gold Mining Flint Lake Gold Co. ¶
Henry Weston	Foley/1896	Director	NY, New York	Foley Mines Co.
Hubert Wetherald	Sultana/1903	Director	Toronto	Sultana Gold Mine, Limited
James Whalen	Kabaskong?/1897 New Sabaskong/1898	Director Director	Port Arthur	Kabaskong Gold Mining New Sabaskong Gold Mining
Laura Whalen	1899	Director	Port Arthur	Ont. & Rainy R. Contracting & Supply
Charles E. Wheeler	Jack Lake, St. Anthony Reef/1900	Director	Chicago	Jack Lake Gold Mining Co.
Mortimer M. Wheeler	Ophir/1889	Director	?	Ontario Mining Co.
Nathaniel Wheeler	Jubilee/1897 *	Director	Montreal	Jubilee Gold Mining *
Sidney White	1897 *	Director	Toronto	Seine River Mining & Dev. *
William C. White	AL282/1900	Director	Duluth, Minn.	A.L.282 Gold Mining Co.
A.B. Whitehead	Trojan/1897 §	Partner/Optn	Rat Portage	Trojan Mine §
Edward Whitehead	1896 1897	Director Director	Winnipeg	Western Canada Gold Lakeside Gold Mining
Arthur W.B. Whitely	Hidden Treasure, Mayflower/1900 ¶ Ferguson/1896 ¶?	Manager Manager		Rainy River Development Co. ¶ Seine River Gold Mines ¶?
J.S. Whiting	Gold Creek/1892 § Echo Bay/1895 § Unicom/1900 §	Man./Partner Partner Owner/Oper.	Rat Portage	Gold Creek Mine § Echo Bay Mine § Unicom Mine §
Robert Whitla	HP222/1897	Director	Winnipeg	Aurora Gold Mining & Dev.
Wm. Whyte	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
James Wickham	Stella, Contact/1897	Director	Keewatin	Ontario Prospectors' Mining

\* Application made for incorporation but Letters Patent never obtained ("Dead-End Application")

¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain

Name	Mine/Year	Position	Residence	Company
Jessie M. Wickson	Winnipeg Cons/1897	Director	Winnipeg	Winnipeg Mining and Dev.
Milton Wilbee	D605, D607/1897	Director	Brantford	Golden Island Mining
N.B. Wilcox	Keewatin RW/1898	Manager		Ottawa Gold Milling & mining
Andrew Wiley	New Sabaskong/1898	Director	Port Arthur	New Sabaskong Gold Mining
Frank S. Wiley	Sawbill/1897 Lake Harold/1896 Hawk Bay/1897 Golden Twins/1898 ¶ Sawbill Reef/1900	Dir./Manager Director Director Director Director	P. Arthur	Saw Bill Lake Gold Lake Harold Gold Hawk Bay Gold New Golden Twins ¶ Sawbill Reef Gold
Harold Wiley	Sawbill/1896 Lake Harold/1896 Hawk Bay/1897 Golden Twins/1898 ¶	Director Director Dir./Manager Director	P. Arthur	Saw Bill Lake Gold Lake Harold Gold Hawk Bay Gold New Golden Twins ¶
W.A. Wiley	Hawk Bay/1897	Supt.	P. Arthur	Hawk Bay Gold
Stanely Wilkie	Golden Star/1901	Director	Toronto	Golden Star Mining Co.
Lt. Gen. Sir Henry Wilkinson	Regina/1898 ¶ Black Eagle [Regina]/1901 ¶	Manager/Dir. Manager/Dir.	London, Engl.	Regina (Canada) Gold Mines ¶ Black Eagle Gold Mining ¶
William Willard	Nina/1897	Director	Connecticut	Great Granite Gold Mining
J.P. Williams	Sawbill/1900 Indian Joe/1902	Manager Manager		Saw Bill Reef Syndicate, Ltd Great North-West Mining Co.
William Williams	1897 * Climax/1897	Director Director	Winnipeg	Crocus Gold * Climax Gold Mine Co.
William R. Williams	Laurentian/1902 Volcanic Reef/1902	Director Director	Toronto	Laurentian Gold Volcanic Reef Gold Mining
Z.J.S. Williams	Sultana/1894 §	Mine Captain	Rat Portage	Sultana Mine §
Edgar Williamson	Scramble/1897	Director	Detroit, Mich.	Scramble Gold Mining
Albert Wilson	G8/1897	Director	Orilla, Ont.	Fort Frances Mining
Alfred Wilson	Foley/1896	Director	Ottawa	Ontario Mines Dev.
David Wilson	1896 1897	Director Director	Orange Ridge, Manitoba	Western Canada Gold Lakeside Gold Mining
Frederick W. Wilson	Nina/1900	Director	St. Catherines	Nino Mining Co.
Herbert Wilson	1896 1897	Director Director	Winnipeg	Western Canada Gold Lakeside Gold Mining
James R. Wilson	Hay Island/1897	Director	Montreal	Hay Island Gold Mining
William Wilson	1897	Director	Brantford	Manitou Gold Mining
Robert Wilson	G59, HW221/1897	Director	Winnipeg	Rupert Land Mining
Julius Windecker	Manhattan/1900	Director	New York, NY	Manhattan Gold Mining Co.
George Witherspoon	82V/1889	Director	Chatham	Maple Leaf Gold

\* Application made for incorporation but Letters Patent never obtained ("Dead-End Application")

¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain

Name	Mine/Year	Position	Residence	Company
Alfred Wislere	1897 *	Director	Toronto	Seine River Mining & Dev. *
Joseph Wolf	Argyle/1883	Director	Winnipeg	Argyle Mining Co.
H.H. Wood	Golden Star/1900	Man./Treas.	Toronto	Golden Star Mining & Expl.
Hon. S.C. Wood	HW302/1897 Ambrose/1897 Golden Star/1899	Director Director Director	Toronto	Security Gold Mining & Dev. Co. Ambrose Mine & Dev. Golden Star Mining & Expl.
Robert Wood	1897 *	Director	Toronto	Free Gold Mining & Dev. *
William Woodbridge	Gold Winner/1898	Director	Duluth	Dluth Mining Co.
Alonson Woodruff	1899	Director	St. Paul, Minn.	Minnesota Ontario Gold Mines
Charles Woodruff	Indian Joe/1902	Director	New Jersey	Indian Joe Gold Mining
Isaac Worden	Foley/1902	Director	Detroit, Mich.	Protogene Gold Mines
Charles Worthman	Nina/1897 Nina/1900 Wendigo/1902	Director Director Director	Buffalo, NY	Great Granite Gold Mining Nino Mining Co. Ltd. Chippewa Consolidated Gold
Andrew Wright	Fighting Chance/1899	Director	Mine Centre	Fighting Chance Gold Mining
E.V. Wright	Gold Mountain/1901 ¶	Director?	Ottawa	Gold Mountain Mining Co. ¶
Harry Wright	Electro-Gold, Wimor/1896	Director	R. Portage	Rainy River Gold
M.P. Wright	Trojan/1900 §	Partner/Synd.	Rat Portage	Trojan Mine §
J.R. Wrightwood	Gold Hill/1891 §	Director		Northern Gold § [Gold Hill Co.?]
Samuael Wright-Wilkinson	1899 ¶	Attorney	Fort William	Upper Seine Pioneers ¶
John W. Wurtel	Lady of the Lake/1897	Director	Ottawa	Gagne Island Mining Co.
Frederick Wyld	Toronto & Western/1897 Sirdar Point/1899	Director Director	Toronto	Toronto & Western Mines Dev. Sirdar Gold Mining
Burton Yates	Reliance/1900	Director	Detroit, Mich.	Reliance Gold Mining Co.
S.C. Young	Sunbeam/1897	Director	Ft. William	Railroaders' Gold Mining
David Ziman	Rat Portage RW, etc./1897 ¶	Director	London, Engl.	Dominion Gold Mining ¶
Edmund F. Zimmerman	Grace/1897	Director	Buffalo, NY	Grace Mining Co.

**Total of 1262 participants held 1769 positions for an average of 1.4 positions per participant.**

\* Application made for incorporation but Letters Patent never obtained ("Dead-End Application")

¶ Licenced extra-provincial or Imperial incorporation

§ Unincorporated mining operation or origin of incorporation uncertain

## Appendix "D" Table 2

### Mine Managers (Engineers, Superintendents, etc.)

**Known Engineers, etc. (\* = place of residence not known)**

Albert Atwater, M.E. - managing director (1)  
 T. Breidenbach, M.E. - manager (3)  
 Charles Brent, M.E. - Man. (2), Owner/Operator (1), Mine Eng. (1), Consulting Eng. (1)  
 Fessenden Claremont Butterfield, M.E. - director (1)  
 John Coates, C.E. - director (1)  
 George Copeland - engineer/foreman (1)  
 Fred. Corning, M.E. - director (1)  
 John Daniell, C.E. - director (1)  
 Allan Davis, M.E. - director (1)  
 Thomas R. Deacon, O.L.S - supt (2), director (1), contractor (1)  
 A.E. Doidge, M.E. - manager (1)  
 Charles F. Eschweiler, M.E., Professor - owner (1)  
 R.H. Flaherty, M.E. (AIME Member 1893) - manager (4)  
 John Galt, M.E. - director (1)  
 John R. Gifford, M.E. - managing director (1)  
 \*James Gordon, C.E. - manager (2)  
 \*H.A. Guess, M.E. - manager (4)  
 Edward Hall, M.E. - director (1)  
 \*John Harland, M.E. - mine engineer (1)  
 E.B. Haycock, C.E. - partner (1)  
 Marshall W. Hopkins, O.L.S. - director (1)  
 \*R. Huntley - mine engineer (1)  
 Robert T. Johnson, C.E., O.L.S. - director (1)  
 Albert M. Keating, U.S. M.E. - director (1)  
 \*Robert Laird, M.E. - manager (1)  
 \*J. Leechman - engineer/supt. (1)  
 William MacLeod, (AIME Member 1899) - director (1)  
 John McAree, O.L.S - Engineer (1), Director (1), Partner, Syndicate (1)  
 \*W.G. Motley, M.E. - engineer/manager (1)  
 Herbert Palmer, M.E. - director (1)  
 Fred Pfau, M.E. - managing director (1)  
 Henry J. Powers, M.E. - managing director (1)  
 Henry Pringle - engineer/manager/attorney (1)  
 Hume Proudfoot, O.L.S - owner(1), director (1)  
 Archibald Ritchie, M.E. - director (1)  
 Henry N. Ruttan, C.E. - director (2)  
 Henry Sewell, M.E. - director (1)  
 Daniel Simpson, M.E. - manager (1), managing director (1)  
 J. Burley Smith, M.E - manager (1), managing director (2), director (3)  
 William Strong, M.E. - manager (1), managing director (1), director (1)  
 Allan Sullivan, C.E. - partner, option (1), joint manager (1), mangr/attny (1), manager (1)  
 J.G. Torrance, M.E. (AIME Member 1876) - manager (2)  
 \*A. Trudo - engineer (1)  
 Ray. Weelye, M.E. - director (1)

M.E. = mining engineer; C.E. = civil engineer; O.L.S. = Ontario Land Surveyor; AIME = American Institute of Mining Engineers



**Other Managers** (\* = place of residence not known)

*John D. Aaron	*G.H. Fanning	*John Kennedy
R.H. Ahn	*F.C. Fisk	*John Kenty
*H.D. Alston	J.C. Foley (Joseph Foley)	*R.A. Kerr
*Charles P. Anderson	Mr. (Melvin?) Forbes	*A. Kingsmill
*Thomas Armstrong	*S.F. Franco	
Henry B. Aylmer	Angus Fraser	G. Larson
		*W.G. LaRue
*K.T. Barnard	Israel Gagne	*W.A. Laycock
Edward Barnes	Frank N. Gibbs	Robert Linn
*George Bates	*E. Giessen	J.A. Livingston
*James C. Beebe	George Glass	*A.D. Lord
*Francis Bennetts	J.S. [Silas] Griffith	
*Andrew Benson	*P.S. Griffith	*C. MacNichol
Neil Berger	*F.W. Guernsey	Peter McKellar
Frederick W. Bindon		*C.J. McLean
*G.H. Botherton	N.B. Hall	*John McLeod
*A.F. Botsford	Richard Hall	*N.C. McMillan
*Botterell	Sargeson V. Halstead	Thomas Merritt
S.H. Brockunier	James Hammond	*W.J. Merritt
C.T. Brown	*A.A. Hare	*J.F. Mieville
John R. Brown	*W.A. Harvey	John T. Moore
*A.C. Burgess	Alexander Hay	*Daniel Morrison
	Joseph Hicks	*Lee J. Moss
John F. Caldwell	Newton Higbee	
W.M. Caldwell	*A.E. Higgins	*John T. Nagle
Neil Campbell	James Hildreth	
*Charles E. Carbert	George Hillyer	*Thomas Paris
*W.F. Carlson	*Harry Hook	*A. Patterson
John H. Casler	John Howenstein	*Paul Paulson
*John Collins	*H.B. Hunt	F.C. Pengilly
*Alex Cotter	Matthew Hunter	*William Peters
William Craig	*James Huston	Frank Peterson
*P. Culligan		*W.H. Pickering
	William James	William Preston
James Davidson	*Albert Johnson	*T.D. Prideaux
George Dulmage	*J.M. Jones	
	*T.R. Jones	*James Rayburn
Nassau B. Eagen	W.H. Jones	*S.H. Reynolds
*H.S. Emlaw	John Joy	*A.N. Rice
C.W. Engledue		Harding Rideout
Col. W.T. Engledue	*B.Z. Kasson	*George Robbins
*C.V. Eve	Walter Keating	*A.W. Robertson
	*C.P. Kelpin	*O.B. Robinson
*E. Falconer	H.W. Kennedy	

M.E. = mining engineer; C.E. = civil engineer; O.L.S. = Ontario Land Surveyor; AIME = American Institute of Mining Engineers

\*C.C. Schrontz  
 \*J.B. Schrontz  
 Sylvester Sharp  
 \*H.J. Shields  
 \*Wm. Smail  
 \*Dryden Smith  
 J. Scott Smith  
 \*Oscar Smith  
 \*T.E. Smith  
 \*Fred. T. Snyder  
 J. Steele  
 J. (John?) Sutherland  
 George Swanson  
 \*R. Swanson  
 \*Roy Sweeney  
 \*H.V. Symes

\*William Tedford  
 \*George Tennant  
 B. Leonard Thorne  
 \*George Thurber  
 Jeramiah Triggs

T. Newley Varty  
 \*George Verry

\*Fred Wagner  
 Edward Ward  
 \*Anton Watzke  
 J.W. Webster  
 \*James Weidman  
 Thomas Weigand  
 Newton C. Westerfield  
 \*Arthur W.B. Whitely  
 J.S. Whiting  
 Frank S. Wiley  
 Harold Wiley  
 W.A. Wiley  
 \*N.B. Wilcox  
 Lt. Gen. Sir Henry Wilkinson  
 \*J.P. Williams  
 Z.J.S. Williams  
 H.H. Wood

Average of one (1.03) manager for every company (Dominion, Ontario, & Licensed)

One *experienced* mining or engineering person for each 5.5 companies incorporated provincially or federally - one per 6.7 if licensed companies are included; The "professional" held an average of 1.9 different positions.

M.E. = mining engineer; C.E. = civil engineer; O.L.S. = Ontario Land Surveyor; AIME = American Institute of Mining Engineers



**Appendix 'D' Table 3**  
**Vocations of First Directors and Incorporators**

**Dominion Company Incorporators 1880-1890**

Accountant...1	Merchant...1
Agent...4	Machinist...1
Agent, Financial...1	Miner...4
Assayer...1	Mining Expert...2
Auctioneer...1	Photographer...2
Banker...1	
Broker...2	
Capitalist...1	
Clerk...2	
Conductor...1	
Contractor...3	
Engineer...1	
Engineer, Civil...2	
Engineer, Mining...1	
Esquire...1	
Gentleman...4	
Insurance Agent...1	
Lawyer...8	
Lumber Merchant...1	
Lumber Dealer...1	
Manufacturer...2	
Merchant...4	
Merchant, Commission...1	
Miner...2	
Postmaster...1	
Real Estate Agent...1	
Surveyor...1	
Ticket Agent...2	
Travelling Passenger Agent...1	
?...1	

**Ontario Mining Company Incorporators up to Dec 31, 1894**

Accountant...1  
 Agent...2  
 Actuary...1  
 Brewer...2  
 Engineer, Mining...1  
 Govt., Postmaster...1  
 Grocer...1  
 Lawyer...2  
 Lumberman...4  
 Lumber Merchant...1  
 Machinist...1  
 Manager...1  
 Manufacturer...1

## Ontario Mining Company Incorporators 1895-1902

Accountant . . . . .	44	Grocer . . . . .	4
Agent . . . . .	28	Govt., Asst. Receiver General . . . . .	1
Agent, Advertising . . . . .	2	Govt., County Treasurer . . . . .	1
Agent, Express . . . . .	3	Govt., Inland Revenues Collector (Man.) . . . . .	1
Agent, Freight . . . . .	1	Govt., Judge . . . . .	3
Agent, Loans . . . . .	1	Govt., Minister . . . . .	2
Agent, Shipping . . . . .	1	Govt., Postmaster . . . . .	1
Architect . . . . .	1	Govt., Sheriff . . . . .	2
Assayer . . . . .	2	Govt., Surveyor . . . . .	3
Baker . . . . .	1	Govt., Territorial Commissioner (James Ross) . . . . .	1
Banker . . . . .	14	Govt., Town Treasurer . . . . .	1
Bank Manager . . . . .	1	Govt., Supt. of Police, Buffalo, NY . . . . .	1
Bank Teller/Clerk . . . . .	2	Govt., Senator . . . . .	2
Bookkeeper . . . . .	12	Grain Elevator President . . . . .	3
Brewer . . . . .	2	Harnessmaker . . . . .	1
Broker . . . . .	49	Hotel Keeper . . . . .	3
Broker, Mining . . . . .	11	Housewife . . . . .	1
Broker, Grain . . . . .	4	Indian(?) . . . . .	1
Broker, Stock . . . . .	3	Inspector, Grain . . . . .	1
Butcher . . . . .	4	Inspector, Post Office . . . . .	1
Business College Instructor . . . . .	1	Inspector . . . . .	1
Caterer . . . . .	3	Insurance Agent . . . . .	12
Cattle Dealer . . . . .	1	Insurance Adjuster . . . . .	1
Capitalist . . . . .	25	Insurance Manager . . . . .	8
Cashier . . . . .	1	Insurance Underwriter . . . . .	2
Chemist . . . . .	1	Iron Founder . . . . .	1
Clergyman . . . . .	2	Jeweller . . . . .	3
Clerk . . . . .	2	Journalist . . . . .	1
Clerk, Law . . . . .	5	Land Owner . . . . .	1
Clerk, Mercantile . . . . .	2	Lawyer/Advocate/Barrister/Solicitor . . . . .	133
Clerk, Office . . . . .	1	Lumber Company Manager . . . . .	1
Commission Agent . . . . .	1	Lumber Merchant . . . . .	16
Commission Merchant . . . . .	1	Lumberman . . . . .	10
Contractor . . . . .	21	Machinist . . . . .	1
Dentist . . . . .	3	Manager. . . . .	6
Doctor . . . . .	25	Manager, Brewery . . . . .	1
Druggist . . . . .	11	Manager, Business . . . . .	10
Electrician . . . . .	4	Manager, Board of Trade (Duluth) . . . . .	1
Engineer . . . . .	1	Manager, Loan Co . . . . .	3
Engineer, Civil . . . . .	4	Manager, Steamboat . . . . .	1
Engineer, Mining . . . . .	17	Manufacturer . . . . .	57
"Esquire" . . . . .	24	Married Woman . . . . .	8
Explorer . . . . .	5	Mariner . . . . .	3
Farmer . . . . .	3	Mason . . . . .	1
Fish Dealer . . . . .	1	Merchant . . . . .	145
Forwarder . . . . .	5	Merchant's Broker . . . . .	1
Gentleman . . . . .	43	Merchant, Coal . . . . .	3
		Merchant, Grain . . . . .	6

Merchant, Liquor . . . . .	1	Undertaker . . . . .	1
Merchant, Shoe . . . . .	1	Widow . . . . .	2
Military . . . . .	2		
Military, Retired General . . . . .	1	<b>TOTAL . . . . .</b>	<b>924</b>
Miller . . . . .	8		
Millwright . . . . .	1		
Miner . . . . .	26	<b>1903-04</b>	
Mine Operator . . . . .	9	Accountant...1	
Mine Owner . . . . .	2	Capitalist...1	
Mineralogist . . . . .	2	Oil Producer...1	
Mine Manager . . . . .	1	Lumber Merchant...1	
Mining Expert . . . . .	1	Manufacturer...1	
Mining Supt . . . . .	1	Miner...1	
Newspaper Owner . . . . .	1	Gentleman...1	
Newspaper Journalist . . . . .	2	Broker...1	
Newspaper Editor . . . . .	2	Lawyer...2	
Newspaper Manager . . . . .	1		
Oil Producer . . . . .	2		
Plumber . . . . .	4		
Plumbing Supplies Dealer . . . . .	1		
Postmaster . . . . .	1		
Principal . . . . .	1		
Promoter . . . . .	4		
Prospector . . . . .	9		
Publisher . . . . .	6		
Railroad Employees . . . . .	4		
Railroad Passenger Conductor . . . . .	1		
Railroad Contractor . . . . .	1		
Railroad General Manager . . . . .	1		
Railroad Station Agent . . . . .	1		
Railroad Supt . . . . .	2		
Railroad Vice President . . . . .	1		
Railway Clearing House Manager . . . . .	1		
Railway Association Secty . . . . .	1		
Real Estate . . . . .	19		
Salesman . . . . .	1		
Secretary, Private . . . . .	1		
Senator . . . . .	2		
Steam Fitter . . . . .	1		
Stone Dealer . . . . .	1		
Spinster . . . . .	3		
Superintendent . . . . .	1		
Surveyor . . . . .	2		
Tanner . . . . .	2		
Teacher . . . . .	1		
Telegrapher . . . . .	1		
Ticket Agent . . . . .	1		
Trader . . . . .	2		
Traveler, Commercial . . . . .	4		
Travelling Inspector . . . . .	1		



## APPENDIX 'E'

### Mining and Milling Equipment for a Typical Mine in Secondary Development Stage

#### Mining Machinery:

- Enclosed headframe
- 15 h.p. hoist engine
- Buckets and ore cars
- Tramway to the mill
- Three 3" Ingersoll pneumatic drills complete [drills, columns, drill steels, air hose]
- One 12¼" diameter bore compressor
- 45 h.p. boiler for compressor and hoist
- Receiver & fittings for compressor
- 500' 4" pipe and fittings, etc. for compressor & drills
- Change room and showers
- Powder magazine
- Blasting equipment
- Powder
- Timbering, laddering, etc.
- Misc. hand tools
- Two dewatering pumps, one sinking and one stationary
- Bunkhouses, cook shack, office/assay building, stables & livestock and/or docks & boat

#### Milling Machinery:

##### Breaker, Grizzly, and Feeders:

- 1 No. 2 Blake Crusher, complete
- 1 Grizzly (or screen), 4x10
- 2 Tulloch automatic ore feeders
- All necessary track iron and wood screws for track for feeders to run upon.

##### Stamps:

- 1 10-stamp battery of 850 lb/stamp [or two 5-stamp batteries]
- 2 high mortars or batteries, each about 5,000 lbs.
- 2 hardwood screen frames, fitted to mortars
- 4 wrought-iron keys, for holding screen frames in place
- 2 iron slot punched screens of required size
- 10 patent stamp shoes
- 10 each dies, heads, stems, tappets, cams
- 1 heavy hammered iron cam shaft
- 2 wrought collars and steel set screws, fitted to cam shaft
- 3 heavy corner cam shaft boxes
- 2 jack shafts
- 4 jack shaft boxes
- 10 iron sockets for wood levers, lined with leather
- 10 wood levers for holding up stamps fitted to sockets
- 1 pair of double sleeve flanges for wood pulleys
- All bolts, rods, nuts, and washers, for 10-stamp framework
- 1 complete set of hardwood guide boxes
- 2 pieces of rubber packing for top of mortar blocks



**Milling Machinery cont'd:**

## Concentrators:

2 Frue vanners complete

## Water Pipes:

1 complete set of water pipes for 10 stamps proper, with valve and fittings ready for connection with main supply; also hose for washing copper plates in front of mill.

## Copper [for stamps &amp; amalgamation plates]:

2 sheets of L.S. copper, 96"x width of mortar x 1/8" for tables in front of mill

2 sheets of pure L.S. Copper, 3/16" for mortars inside

## Building Bolts:

1 complete set of building bolts, rods, nuts, and washers, for frame of building, and also for ore bins

## Tighteners:

1 stamp tightener for stamp belt, complete with wood frame, rack, pinion, hand wheels, dogs, etc.

1 breaker tightener for breaker belts, complete with swinging frame, chain, shaft and hand wheel

1 main tightener for engine belt, complete with wood frame, rack, pinion, hand wheel, dogs, etc.

## Shafting, Pulleys, and Belting:

1 main line turned shaft

3 pillow blocks for main line shaft

1 pulley, 32"x 15" to drive stamps

1 pulley, 42"x 14" to drive main shaft

All necessary bolts for above pillow blocks

All necessary collars and set screws

1 turned shaft, for driving crusher

2 pillow blocks for crusher shaft

1 pulley, 60"x 14" to receive power from engine

1 pulley, 36"x 10" to drive crusher countershaft

1 pulley, 24"x 10" on crusher countershaft

1 pulley, 40"x 8" to drive crusher

All necessary bolts for crusher pillow blocks

All necessary collars and set screws for crusher

1 rubber belt, 45'x 14", 4 ply, for stamp battery

1 belt 49'x 14" for engine

1 belt 70'x 10" for crusher countershaft

1 belt 47'x 7" for crusher

1 belt 27'x 5" for engine belt feed pump

1 hide of lace leather

## Amalgam Safe:

1 amalgam safe and strainer, with padlock

**Milling Machinery cont'd:**

Retort and Bullion Furnace:

- 1 retort, complete with cover, wedge, and condenser
- 1 bullion furnace (16"), with all ironwork, crucible tongs, 2 moulds, and set of steel letters for stamping

Overhead Crawl and Block:

- 1 overhead carriage crawl and track iron
- 1 1-ton differential pulley block

Engine:

- 1 stationary slide valve steam engine, 9" cylinder bore with 14" stroke, complete (Capable of driving stamp, crusher and 2 or 4 Frue vanners if necessary)

Boiler:

- 1 tubular steam boiler, 40" bore x 10' stroke, complete with fixtures, fittings, and smoke stack

Light Plant:

- 8 h.p. boiler and dynamo

Feed Pump, Heater, and Pipes:

- 1 belt feed pump, 2x3 (to carry water to top of mill)
- 1 heater, with pipe coil
- All pipes, valves, fittings, etc.

\$270 worth of materials was also required for a month's mill run including 70 gallons of various lubricants, 25 pounds tallow, 6 boxes of axel grease, 10 pounds packing, 1 pint of acid, 4 ounces amalgam, and 3 flasks (230 pounds) mercury.<sup>1</sup>

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<sup>1</sup>Mill specifications from E.H. Davies, *Machinery for Metalliferous Mines* (London: Crosby Lockwood & Son, 1894), p.359-362. Light plant specifications from OBM, *3rd Annual Report, 1893*, p.19. Hoist specifications from OBM, *5th Annual Report, 1895*, 178.



## APPENDIX 'F'

### Local Newspapers Operating in Northwest Ontario, 1880-1902

Source: J. Brian Gilchrest, *Inventory of Ontario Newspapers*, Toronto: Michromedia, 1987  
and Thunder Bay Regional Geologists Newspaper Clippings Files

#### Rat Portage

*Argus* - 1883

*Rat Portage Progress* - 1881-85 [became *R.P. News*]

*Rat Portage News* - 1885-1904 [became *Daily Miner and News*]

*Rat Portage Record* - 1891-97 [became *R.P. Miner and Rainy Lake Journal*]

*R.P. Miner and Rainy Lake Journal* - 1897-1902

*Rat Portage Miner* - 1902-04 [merged with *R.P. News*]

*Daily Miner and News* - 1904-today

#### Keewatin

*Hustler* - 1888-90

*Minstrel* - 1899-1900

*Enterprise* - 1899-?

#### Rainy River

*Gazette* - ?

#### Ft. Frances

*News* - 1895-96

*Times and Rainy Lake Herald* - 1894-today [published in Int'l Falls, Minn.]

#### Dryden

*Observer* - 1897-today

#### Wabigoon

*Miner* - 1897-?

*Star* - 1897-1907

#### Thunder Bay

*Weekly Sentinel* - 1875-95 [became *Weekly Sentinel & North Shore Miner*]

*Ft. William Echo* - 1880-93 [became *Ft. William Journal & Thunder Bay News*]

*Herald* - 1880-86

*North Shore Miner* - 1880-82 [became *Weekly Sentinel & North Shore Miner*]

*Daily Sentinel* - 1882-93

*Weekly Herald and Algoma Miner* - 1882-1902

*Ft. William Sun* - 1884

*Weekly Times* - 1887-1907

*Daily Journal* - 1893-99 [became *Daily Times-Journal*]

*Daily Times-Journal* - 1899-1972

*Evening Chronicle* - 1899-1916 [became *Daily News Chronicle*]

*Ft. William Times* - 1899



## Bibliographic Essay

Primary source material is the foundation of this thesis and for good reason - Canadian mining history is generally "slim pickings." Original sources used in this study include: Ontario Bureau of Mines *Annual Reports*; Dominion and Provincial *Statutes, Sessional Papers, and Gazettes*; the *Report* of the 1890 Royal Commission on the Mineral Resources of Ontario; Provincial court records for the Rainy River District; federal census statistics and records, Geological Survey *Reports*; several local, regional and provincial newspapers; articles and reports found in contemporary mining journals; the personal papers and journals of four Rat Portage mining personalities; and several well known contemporary texts on mining and milling. These sources were, generally speaking, all quite reliable. I did, however, encounter some problems worth mentioning. The local Rat Portage newspaper accounts were very valuable; however, I only obtained two years worth (1894-95) before the Kenora Library ceased loaning their microfilm. I did manage to quickly peruse some earlier editions at the library during a later trip to Kenora to examine court records. Ken Fenwick, a retired geologist in Thunder Bay, spent fifteen years amassing an extraordinary and voluminous newspaper clipping collection from local, regional, national, and international sources. Unfortunately, I did not discover this valuable resource until my research was nearly completed. Recently, due to space restrictions, the Thunder Bay District Geologists Office boxed up the entire collection and moved it to an unheated warehouse. I have suggested and it is hoped that the files will be transferred to the Thunder Bay Historical Museum where they can be reorganized and made accessible to the public. The *Canadian Mining Manual* was an invaluable source of information. Editor B.T.A. Bell was a classic muckraker with a flashy tabloid journalistic style. Unfortunately, I was only able to study the post-1894 originals of this frail but quite beautifully produced journal during a very rushed research session at the University of Toronto Science Library.

The Ontario Bureau of Mines *Annual Reports* were probably the most significant source material for this study. They contain a wealth of "fairly" reliable information and from them I was able to consolidate individual histories of each of the mines indicated on the map

accompanying this study (my rough notes are available upon request). Obtaining the *Reports* was not a problem; however, finding the maps that accompanied them was more difficult (they were printed on self-destructing newsprint).

Information from the *Gazettes* was obtained at the Provincial Archives and through inter-library loan. Unfortunately, the *Ontario Gazette* was a very poor quality publication. The indexes sometimes listed company incorporations that did not show up in the volume and, in several instances, companies were found in the text that were not listed in the index. Incorrect page numbers in the index also occurred frequently. By going through the volumes page by page I was in fact able to find companies the Bureau failed to locate for its own statistics. However, trying to locate these companies in the *Gazettes* from the information I have provided will, unfortunately, not be easy. I have recorded the date each company received its Letters Patent (which appears in the first line or two of each notice) but *this date does not coincide with the date the notice was published*. If the company does not show up in the index of the volume or in the issue corresponding to the date of incorporation, I suggest looking through the issues published a month or two after the incorporation date. The table of mining companies derived from the *Gazettes* (Appendix C, Table 1) appears to be inconsistent because it contains the occupations for a few incorporators but no information on the rest. In that table, I recorded only the vocations of incorporators who applied for *but did not receive* Letters Patent. These individuals were not included in my analysis of occupations of first directors of incorporated companies which appears in another table. At the time I was not sure if I would merge this data with the occupations of incorporated directors. Unfortunately, it was necessary to transfer the other director occupations to another file because the data base became larger than my computer could handle.

The court records found in Kenora were tantalizing but, unfortunately, by themselves they provide an incomplete picture. The *Process* and *Judgment* books contain little beyond the names of the parties, the actions taken, the judgments rendered, and the dates they occurred. In some instances deductions can be made about the proceedings (for example, the Foley mine accident

litigation and the sale of the Reduction Works) but usually only a few facts can be gleaned. Unfortunately, nearly all the court files have been lost. The Ontario Public Archives, however, has records of the judges' notes for some cases and putting these pieces together with the Kenora record books may provide an interesting resource for another study.

The contemporary mining texts were invaluable especially for assessing milling techniques and overhead costs. Oddly enough, two of these texts turned up in my wife's grandfather's homestead in Saskatchewan, while the third (a library copy) was actually the personal property of Henry Pringle, the engineer who single-handedly ruined the Regina.

The daily journals of John Mather and Samuel Whiting were invaluable. Mather provided meticulous notes on the costs (and intrigue) associated with running a local mining "empire." Whiting's journal, on the other hand, provides insight into the unsteady and gruelling day to day life of a local prospector/mine contractor/jack-of-all-trades. There is another source at the archives of the Lake of the Woods Museum, the diaries of the Mikado mine manager's wife, which may provide interesting material for a local social history.

A few advertising publications surfaced (prospectuses and pamphlets) which added a colourful perspective to the study. However, it is surprising that more of this type of evidence has not turned up.

Most of the available secondary source material in Canadian mining is either social/biographical history such as Pierre Berton's classic *Klondike* or corporate biographies such as Lewis Green's description of A.N.C. Treadgold's efforts to monopolize Yukon placer mining in *The Gold Hustlers*.<sup>1</sup> However, a few exceptions do exist. In his *Settlement and the Mining Frontier*, Harold Innis described the role of labour, technology and capital in overcoming geographical and foreign economic influences during the evolution of Canadian frontier

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<sup>1</sup>Pierre Berton, *Klondike: The Last Great Gold Rush, 1896-1899* (Toronto: McClelland and Stewart, 1986); Lewis Green, *The Gold Hustlers* (Anchorage: Alaska Northwest Publishing, 1977).



settlements.<sup>2</sup> His analysis of most of the major mining developments on the Canadian frontier (except Northwestern Ontario gold mines) was organized chronologically by district or event. Methodically written and carefully documented, Innis's work is a standard for studying any Canadian resource extraction industry.

The structure of another Canadian mining classic, D.M. LeBourdais's *Metals and Men*, bore a striking resemblance to Innis's *Mining Frontier*.<sup>3</sup> However, these two works share nothing except their similar format of moving from one mining boom/rush to the next (and the fact that neither gave any attention to the Northwestern Ontario gold boom). *Metals and Men* was poorly documented and, although it contained interesting chronologies of the men and events involved in Canadian mining, there was little or no analysis. The author frankly admitted he only intended to show "that mines were not made in a day, and... how far the skill and experience of Canadian mining men and geologists has... gone to eliminate the uncertainty of mining."<sup>4</sup>

Other "less classic" studies of Canadian mining include Arnold Hoffman's *Free Gold: The Story of Canadian Mining* and B.F. Townsley's *Mine-Finders*.<sup>5</sup> Both of these books are clearly constructed for high volume consumption (i.e., "coffee-table" varieties). *Free Gold* is filled with romantic stories of various mining personalities (prospectors, developers, prostitutes, etc.) who seemed to be (and some probably were) larger than life. Two chapters, "Styles in Financing" and "Come On Suckers," provide excellent insight into the mechanisms and manoeuvring behind Canadian mining promotion. Although Townsley's book was organized differently (from East to West chapter by chapter), it also dealt primarily with the individuals involved in Canadian mining. Townsley is one of the few Canadian "mining historians" who has not overlooked the

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<sup>2</sup>Harold Innis, "Settlement and the Mining Frontier," Volume 9 of *Canadian Frontiers of Settlement*, edited by W.A. Mackintosh and W.L.G. Joerg (Toronto: Macmillan of Canada, 1936).

<sup>3</sup>D.M. LeBourdais, *Metals and Men: The Story of Canadian Mining* (Toronto: McClelland & Stewart, 1957).

<sup>4</sup>Ibid., 6.

<sup>5</sup>Arnold Hoffman, *Free Gold: The Story of Canadian Mining* (Toronto: Rinehart & Co., 1947); B.F. Townsley, *Mine Finders: The History and Romance of Canadian Mineral Discoveries* (Toronto: Saturday Night Press, 1935).

Northwest Ontario gold boom. However, his sloppy research created a credibility problem in more than one instance. For example, he indicated that General Wilkinson's "untimely death" prematurely "sealed the fate" of the Regina mine.<sup>6</sup> Records show, however, that Wilkinson continued to participate in court actions long after the mine ceased to be "profitable" (if indeed it ever was). Townsley also claimed that the management of the Golden Star augmented their phony dividend scam by "salting" the mine.<sup>7</sup> Although it was "gutted" before the sale, there is no indication that any gold was planted in the mine. It is anyone's guess where Townsley or Hoffman obtained their information since neither cited their sources.

Dianne Newell's study of Canadian technology employed in early Ontario mining, examined the impacts of local innovations upon the Province's development of its resources and subsequently also its social and economic institutions.<sup>8</sup> Her investigation detailed the "sequence of developments in the process of technological change" within the industry from 1840 to 1890. Unfortunately, the time frame of her study did not include the boom phase of Northwestern Ontario gold mine development. Certainly, the rampant misuse, abuse, and misapplication of existing technology during this period does not fit well with her thesis of generally progressive and innovative developments in Ontario mining technology.

Greg Clark of Winnipeg, formerly Kenora, has written and published several pieces on gold mining in the Lake of the Woods area. However, a serious historian has problems with almost everything he has done. In one of his earliest contributions, *Handbook for Prospectors*, Clark maintained that "in many instances English companies sent out managers who knew little about their business, and the resulting incompetent management resulted in discrediting Canadian

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<sup>6</sup>Townsley, *Mine Finders*, 90.

<sup>7</sup>*Ibid.*, 91.

<sup>8</sup>Dianne Newell, *Technology on the Frontier: Mining in Old Ontario* (Vancouver: University of British Columbia Press, 1986).

mining investments in the eyes of English capitalists."<sup>9</sup> Of course, he does not cite any "instances" but an examination of the track records of known British managers in the district indicates this statement is incorrect. The Mikado was managed well enough and Colonel Engledue (mastermind of the infamous "Engledue Deal") proved to be a very shrewd promoter and developer. The Regina evolved into a monument of incompetence but, as the New Golden Twins case illustrated, exposés of bungling and misrepresentation did little to deter British investment in the district. Clark also states that:

during the last years of the 19th century the gold industry began to lose its importance. After 1896/97 the industrial economy of North America began to revive, in part due to the Spanish-American war and the technological and market changes in the industrial sector.<sup>10</sup>

Most historians agree, however, that economic recovery began in 1895-96 not in 1898. Also, the facts indicate that economic recovery did not kill the gold boom in Northwestern Ontario, rather it got the boom going. The number of new mining companies and locations *increased* in the latter half of the decade. Clark also blamed the demise of the boom on the 1897-99 Yukon gold rush which "caused an exodus from the area."<sup>11</sup> Again, the facts indicate exactly the opposite. Transiency was high but only *within the district* as most mine managers chose to stay in Northwestern Ontario during the Klondike rush. There was only one case of a reported labour shortage but even this instance was blamed on miners leaving to prospect *within the district* not in the Yukon. More blatant errors were found in the time line accompanying the text. Clark indicated that Rat Portage became part of Ontario in 1892 and that the Ontario-Manitoba boundary dispute was settled in 1898. It is not clear how Rat Portage could have become part of Ontario *before* the boundary dispute was settled, but this dilemma is immaterial since both dates are wrong anyway. The boundary was settled in September of 1889 at which time Rat Portage, and the rest of the district, officially became part of the Province. Although he

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<sup>9</sup>G. Clark, *Handbook for Prospectors and Developers in the Kenora Area* (Kenora: Tri-Municipal Economic Development Commission, 1984), p. 21.

<sup>10</sup>*Ibid.*

<sup>11</sup>*Ibid.*

researched contemporary newspaper clippings extensively, Clark apparently gave little attention to the Bureau *Reports* for the period. Mr. Clark lately has taken a keen interest in the Sultana, having recently written a small book on the subject as well as contributing a chapter on the mine in a locally published book, *Time for the Telling*.

Material regarding nineteenth century Canadian mining finance was gathered from several useful and credible sources. Clark Spence's *British Investments and the American Mining Frontier, 1860-1901* and Lewis Atherton's "Structure and Balance in Western Mining History" both provide interesting insight into the managerial techniques involved in developing and promoting nineteenth century mines.<sup>12</sup> Spence focused on how and why British capitalists became the preferred customers for Western American mining investment and their role in financing the opening of the West. Atherton's cryptically titled article describing the marketing methods employed by one California mining promoter, helps explain the unusual behaviour of many Northwestern Ontario mining promoters. Michael Edlestein's *Overseas Investment in the Age of High Imperialism* furnished excellent statistics to show the volume of international capital movement into Canada during the period.<sup>13</sup> His theory that "overabundant financial resources" may have driven the Canadian mining industry "to diminishing returns" shortly after the turn of the century seems to have been borne out by this study.<sup>14</sup> D.G. Paterson's *British Direct Investment in Canada* also provides excellent statistical information and more detailed (and theoretical) analysis of the reasons for British failure to capitalize on Canadian mines.<sup>15</sup> He felt that British investors generally avoided undeveloped mines or prospecting ventures because of a higher risk factor and the inability to reliably assess unproven mining properties. However, as

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<sup>12</sup>Clark Spence, *British Investment and the American Mining Frontier, 1860-1901* (Ithaca: Cornell University Press, 1958); Lewis Atherton, "Structure and Balance in Western Mining History," *Huntington Library Quarterly* 30 (November 1966): 55-84.

<sup>13</sup>Michael Edlestein, *Overseas Investment in the Age of High Imperialism: The United Kingdom, 1850-1914* (New York: Columbia University Press).

<sup>14</sup>*Ibid.*, 278.

<sup>15</sup>D.G. Paterson, *British Direct Investment in Canada* (Toronto: University of Toronto Press, 1976).

the Engledeue Deal, the Anglo-Canadian Gold Estates, Rajah, Anglian Mining and Finance, New Golden Twins, and other ventures proved, British investors *did not* hesitate to get involved at the ground level in Northwestern Ontario during the 1890's.

As mentioned earlier, Arnold Hoffman's two chapters on Canadian mining promotion techniques provides excellent insight as does T.H. Mitchell's thorough (and humorous) description of stock manoeuvring in *The Story Behind Canadian Mining Speculation*.<sup>16</sup> Melvin Watkins's theories on Canadian staple economics helps explain the unusually high rate of domestic investment in Northwest Ontario gold mines. With "abundant opportunities waiting to be developed" (i.e., the widespread nature of the deposits), Canadian domestic savings did in fact become a "significant" factor in determining the rate of investment in this industry even though it is doubtful that the gold itself, despite the fact that it was "land based," was ever found in quantities sufficient to deserve classification as a staple commodity.<sup>17</sup> E.S. Moore's *American Influence in Canadian Mining* suggests that the capital supporting Northwest Ontario gold mines during the 1890's was "chiefly Canadian and English, although much American capital was involved."<sup>18</sup> However, it appears that "chiefly Canadian with some English and American capital" might have been a better assessment. His research into the financial backing of district mining was limited and his analysis was doubtful. For example, he stated that the Winnipeg Consolidated Company "consisted of one American and six Canadians."<sup>19</sup> However, the 1883 *Canada Gazette* listed all five founders as being residents of Winnipeg.<sup>20</sup> His study generally lacked statistical data to support contentions regarding the role of American dollars in developing Canadian mines.

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<sup>16</sup>T.H. Mitchell, *Canadian Mining Speculation* (Toronto?: George J. McLeod Limited, 1967).

<sup>17</sup>Melvin Watkins, "A Staple Theory of Economic Growth," *Perspectives on Canadian Economic Development*, Gordon Laxer, editor, (Toronto: Oxford, 1991), p. 81.

<sup>18</sup>E.S. Moore, *American Influence in Canadian Mining* (London: Oxford University Press, 1941), p.56.

<sup>19</sup>Ibid.

<sup>20</sup>See Appendix C, Table 1, page 1.

Secondary sources useful for analyzing the evolution and effects of government policies on district mining include Peter George's chapter on Ontario mining in *Progress Without Planning*, T.W. Gibson's *Mining Laws of Ontario*, David Yudelman's *Canadian Mineral Policy Past and Present*, H.V. Nelles's *Politics of Development*, and S.J.R. Noel's *Ontario Society and Politics*. Noel helped explain the reluctance of Ontario's Liberal government to formulate an objective mining policy during the 1890's.<sup>21</sup> With its overwhelmingly agrarian philosophy, the government simply could not fathom releasing its hold on land or minerals for the sake of development. Yudelman dealt more with Ontario's "present" and less with its "past" and his policy topics were brief and limited to taxation and ownership issues.<sup>22</sup> T.W. Gibson, a career administrator in the Ontario Bureau of Mines, attempted to construct a comprehensive chronology of early mining legislation and an authorized biography of the Bureau.<sup>23</sup> Although he provided "insider" information on the reasoning behind some legislation which was helpful, he was also occasionally confused about certain pieces of legislation and the chronology was frequently jumbled. Controversial policies such as the Engledue affair and the failure to open a mining division in the district were either glossed over or avoided. Peter George's chapter in *Progress Without Planning* was brief, clear, concise, and documented.<sup>24</sup> However, he seemed to accept H.V. Nelles's general theories about the wonderful effectiveness of the hamstrung "carrot-and-stick" policies used to divert the attention of mining men from the more volatile issues of royalties and land tenure regulations.<sup>25</sup> Like Nelles, he also failed to recognize (although Gibson was careful to point it out to both of them) that, in spite of existing legislation, *not one dollar*

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<sup>21</sup>S.J.R. Noel, *Patrons, Clients, Brokers: Ontario Society and Politics, 1791-1896* (Toronto: University of Toronto Press, 1990).

<sup>22</sup>David Yudelman, *Canadian Mineral Policy, Past and Present: The Ambiguous Legacy* (Kingston: Centre for Resource Studies, Queen's University, 1985).

<sup>23</sup>T.W. Gibson, *The Mining Laws of Ontario and The Department of Mines* (Toronto: Department of Mines, 1933).

<sup>24</sup>Peter George, "Ontario's Mining Industry, 1870-1940," In *Progress Without Planning: The Economic History of Ontario From Confederation to the Second World War*, edited by Ian Drummond (Toronto: University of Toronto, 1987) 52-76.

<sup>25</sup>H.V. Nelles, *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario* (Toronto: Macmillan, 1974).

of royalties was ever collected by the Province during this period. Nelles seemed to be more preoccupied with the causes rather than the effects of early mining legislation and he omitted two areas of policy - mine safety and mining company incorporation - that had considerable impacts upon Northwestern Ontario gold mining.

Most credible *general* mining historians are found south of the border. Rodman Paul, Ronald Genini, T.A. Rickard, Watson Parker and William Trimble produced important contributions to the study of mining booms and rushes and their impacts upon the development of North American frontiers. Rodman Paul is best known for his histories of the California gold rush and his *Mining Frontiers of the Far West* which successfully challenged Frederick Jackson Turner's "frontier thesis."<sup>26</sup> Paul pointed out that, although the fur traders were the initial explorers of the American West, it was the mining men, not the farmers, who became the first significant settlers of the Trans-Mississippi region. The railways and farmers arrived later to supply the needs of the mining communities. Trimble's comparison of the development of the mining frontiers of the Inland Empire (Montana, Idaho, Washington and Oregon) and of Southern British Columbia led him to conclude that present day political systems in the two areas emanated from the diverse governmental responses to their separate mineral rushes.<sup>27</sup> The Canadian government made sure that its political institutions (courts, police, taxation, etc.) were always in place as soon as each rush started; whereas the various mining localities of the Inland Northwest had to fend for themselves and developed their own institutions as conditions (or corruption) dictated. Clearly, a similar comparison could be made of the lawlessness and violence in Rainy Lake City during 1895 as compared to the relative security enjoyed by residents of Ontario's "Lower Seine" during the same period. Ronald Genini attacked Trimble's thesis, but he failed to prove that Fraser-Cariboo social institutions were moulded by the influx

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<sup>26</sup>Rodman Paul, *Mining Frontiers of the Far West, 1848-1880* (New York: Holt Rinehart and Winston, 1963); See also his *California Gold: The Beginning of Mining in the Far West* (Cambridge: Harvard University Press, 1947).

<sup>27</sup>William J. Trimble, "The Mining Advance Into the Inland Empire: A Comparative Study of the Beginnings of the Mining Industry in Idaho and Montana, Eastern Washington and Oregon, and the Southern Interior of British Columbia: and of Institutions and Laws Based Upon That Industry," *Bulletin of the University of Wisconsin* #683, Vol. 3 (1914), 137-392.

of California gold rushers.<sup>28</sup> In fact, Genini's study seemed to indicate the exact opposite. T.A. Rickard, an esteemed mining engineer and prolific turn of the century technical writer, is best known for his *History of American Mining* in which he attempted to describe every U.S. mining development from the conquistadors to the perfection of the floatation milling process in the 1920's.<sup>29</sup> Although Rickard's work is a good chronology of events it provides little analysis and few citations. Watson Parker attempted the ambitious enterprise of defining "The Causes of American Gold Rushes."<sup>30</sup> His theory that American gold rushes were caused by periods of national unrest (typically, economic recession) is interesting but underestimates the important role of promotion in precipitating gold rushes.

Mel Gorman, Kenneth Hammer, Charles Hyde, Larry Lankton, Michael Malone, and Grant Smith have all made contributions to special aspects of mining booms/rushes. Gorman and Hammer each studied different aspects of the Black Hills gold rush. Gorman's article, "Financial and Technological Entrepreneurs in the Black Hills," investigated the corporate entanglements and behind-the-scenes manoeuvring that enabled George Hearst and his California cronies to consolidate their hold on Black Hills gold production.<sup>31</sup> His descriptions of the fantastic overdevelopment of the De Smet mine and mill provides an excellent background for studying similar examples in Northwestern Ontario. Hammer studied the role of "Freighters and Railroads" in supplying the needs of the remote Black Hills gold rush.<sup>32</sup> The absence of these significant large-scale auxiliary transportation industries (especially the overland freight networks) may have been one factor accounting for the roller coaster pattern of development of the

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<sup>28</sup>Ronald Genini, "The Fraser-Cariboo Gold Rushes: Comparison and Contrasts with the California Gold Rush," *Journal of the West* 11 (July 1972): 470-487.

<sup>29</sup>T.A. Rickard, *A History of American Mining* (New York: McGraw-Hill, 1932).

<sup>30</sup>Watson Parker, "The Causes of American Gold Rushes," *North Dakota History* 36 (Fall 1969), 336-345.

<sup>31</sup>Mel Gorman, "Financial and Technological Entrepreneurs in the Black Hills: The San Francisco-De Smet Connection," *Huntington Library Quarterly* 45 (Spring 1982), 137-154.

<sup>32</sup>Kenneth Hammer, "Freighters and Railroads: The Growth of the Black Hills Freight and Stage Lines and Role of the Railroads," *Journal of the West* 20 (April 1981), 21-30.



Northwestern Ontario mining district during the 1890's. Lankton, Hyde, and Malone have each studied different aspects of copper mining booms. Larry Lankton's *Cradle to Grave: Life, Work and Death at the Lake Superior Copper Mines* is a unique and well documented consolidated history of labour, social, and business conditions in Michigan's nineteenth century company mining towns.<sup>33</sup> Comparisons to conditions in Northwestern Ontario mining camps were interesting. For example, lawsuits for injury disability compensation produced awards that were comparable (about \$600). Management for both mining districts preferred immigrant labour (although both appear to have become wary of "socialist" Finns) and both encouraged families to settle in the camps. There is little evidence, however, that Northwest Ontario gold miners experienced even the limited social safety net enjoyed by Michigan copper miners. Charles K. Hyde's "From 'Subterranean Lotteries' to Orderly Investment: Michigan Copper and Eastern Dollars" examined the patterns of capital investment during the early development of Michigan copper mines between 1841 and 1865.<sup>34</sup> As was the case in Northwestern Ontario, he found that regional investors played a larger role than previously recognized, especially during the earliest years. Michael Malone's *The Battle for Butte* describes the development of the Butte, Montana copper mines.<sup>35</sup> His colourful chronicle focused on the competition between the larger companies and how their conflicts produced the political instability and corruption that plagued Montana during its early years as a territory and state. Besides the "war of the copper kings" he also described the working conditions in the mines, the social environment of the community, and the technological developments required to overcome Butte's peculiar geology. Grant Smith, a mining litigation lawyer raised in Virginia City, Nevada during the heyday of the Comstock Lode, wrote his history of this great silver mining district during the 1930's.<sup>36</sup> Though obviously

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<sup>33</sup>Larry Lankton, *Cradle to Grave: Life, Work and Death at the Lake Superior Copper Mines* (Oxford: Oxford University Press, 1991).

<sup>34</sup>Charles K. Hyde, "From 'Subterranean Lotteries' to Orderly Investment: Michigan Copper and Eastern Dollars, 1841-1865," *Mid-America* 66 (January 1984), 3-20.

<sup>35</sup>Michael Malone, *The Battle for Butte: Mining and Politics on the Northern Frontier, 1864-1906* (Seattle: University of Washington Press, 1981).

<sup>36</sup>Grant H. Smith, *History of the Comstock Lode, 1850-1920* (Reno: Nevada State Bureau of Mines and the Mackay School of Mines, 1943).

hastily written and fraught with disorganization, lack of citations, repetition, and blatant bias, Smith's history nonetheless provides excellent descriptions of the ruthless business practices of the district's "rags-to-riches" silver barons. His detailed descriptions of the financial, geographical, geological, and technological hardships involved in processing the district's silver deposits provided an interesting contrast to developments in Northwestern Ontario.



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## Cartographic Essay

The map accompanying this thesis was completed by the author and Cathy A. Chapin, cartographer for the Department of Geography, Lakehead University. The 1:500,000 hydrological base map was obtained from Energy Mines and Resources Canada and derived from three quadrants (Pickle Crow, Thunder Bay-Ignace, and Kenora-Fort Frances). Several secondary sources were consulted during research and these are credited at the conclusion of this essay.

Numerous problems were encountered when compiling the information for this map. Occasionally the same mining locations were inconsistent on different source maps. For example, the Climax mine on the Davies et al. map was several kilometres distant from where it was located on the Beard et al. map. The Davies study, done several years after Beard's work, neglected many of the mines located in the previous investigation. A few of the sources were unusually thorough. Wilkinson's study of the Atikokan area gold mines provided excellent information on locations that had previously received little attention. However, even Wilkinson missed a few important locations, most notably the Big Six, Clearwater, 325X and Golden Fissure mines. Ken Fenwick's work on the same area was more complete but even he failed to locate the Golden Fissure mine. I am indebted to Mr. Fenwick for his assistance in locating the Hiawatha mine and other locations.

Several locations showed up in my primary source research that I was unable to locate in any mapped reference. Some of these mine names may have been alternate titles for other locations. The Regional Geologists files at Kenora may contain answers for a number of these mysteries, however, time constraints prevented me from giving this resource the proper attention it deserves. Any information on the missing locations will be greatly appreciated. A recent check of the *Rainy River District Mining Lands Register* at the Ontario Public Archives turned up a few new companies who held patents or leases for locations. My research did not turn up any record of development work on any of these locations. Nonetheless, because they were the property of corporations I assume some work must have been done, and I have, therefore, included them in the list of unknown locations that need to be mapped.

These mining locations were determined entirely from research into other sources. I did not locate any of the mines personally, and therefore I will not assume any responsibility for the map's accuracy. Indeed, the purpose of the map is only to provide general information about the locations of various mining operations. Individuals looking for more precise information should consult the sources listed below. In many cases these sources contain written descriptions and instructions useful for visiting the locations. However, *extreme caution* is advised when hunting for "abandoned" mines. Many of the mine openings are no longer fenced or sealed and are dangerously disguised by overgrowth. Searchers might not find a shaft until they literally fall to the bottom of it. The explorer should also remember that many (indeed, most) of these old locations are now private property and legally cannot be accessed without the permission of the owners.

The format for the map index is a considerable advancement over usual techniques. While mining sites on other maps are usually numbered according to an alphabetical list, we have produced a dual index system for easier location. All sites are numbered sequentially on the map starting from the western part of the district and proceeding generally towards the east. Locations are indexed alphabetically by name and also by number in the left hand margin. The user, therefore, is not compelled to find and plot the latitude and longitude of a mining location or search through a map of randomly numbered sites.

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**KNOWN MINES THAT NEED TO BE LOCATED**

\* = claim number needed † = corporate mining company location found after Feb. 1996

**Lake of Woods**

192P (L of W)

† CR70 and CR68 [Atlin Mining Co.]

† D644 [Gold King Mining Co.]

\*Golden Slipper (L of W - adjoins Black Jack and Gold Hill [OBM 1897])

IXI [I11](L of W)

\*Jerusalem (L of W)

\*Queen of Sheba (Ptarmigan Bay -OBM 95)

Reliance (FM171, FM172) SW extension of Denmark Lake (near Rowan Lake)

Sabaskong (Locations 1 to 18, Indian Reserve 38B)

\*Sultana Jr. (L of W)

Wild Rose [247P] (L of W?)

Woodchuck [71P] (Clearwater Bay)

† D637, D642, JO91 & JO92 [Gold Hills Mining Co.]

**Manitou**

Lillin & Rochon [133P & 155P] (Upper Manitou)

Penninsular [HW31] (Manitou)

Imperial [G19]

† SV124 [Allan Gold Reefs Co.]

**Rainy Lake**

\*Fighting Chance

K383 [Nova] (Seine River)

Manhattan [Bush Winning; K231] ("Adjoined" the Decca mine; loc. #FF5183?)

† P767 [Willow Creek Mining Co.]

**Dryden**

Quackenbush [HP267]

\*Van Horne

**Minnitakie Lake**

† HW302 [Security Gold Mining Co.]

**Misc.**

D605 & D607 (Golden Island?) † SV348 & SV349 [President Mining Co.]

D217 † WD135 [Mountain Mining Co.]

HP222 \*Yellow Jacket

K100

## **NOTE**

The maps accompanying this thesis would not microfilm properly (the bedrock geology map was in colour and the mining locations map was too large ). Copies of the map may be obtained from the author or from Lakehead University.

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## ERRATA

Page 50 in Chapter 4 states that there was no "federal strategy for mineral management until 1889." This is incorrect. By Order-in-Council dated 7 March 1884, a set of Dominion *Mining Regulations* became law "to govern the disposal of Mineral Lands other than Coal Lands."<sup>1</sup> Although the *Regulations* covered both "quartz" and placer mining, the latter clearly dominated the statute. Interesting features in the quartz mining section of the regulations included: locations could not exceed 40 acres; a quartz location could be "staked" and held free of charge for one year before it required surveying and a patent; locations had to be "proved up" to the tune of \$500 in improvements within the year's grace period; patents cost \$5/acre; and the patentee was denied "apex" privileges. General provisions of the *Regulations* included: a vague dispute resolution clause; Crown reservation of the minerals and royalties of 2½% "on the sales of the products;" mine operators were to make monthly returns to the Minister of the Interior; and local Agents could "summarily order" mine owners to make changes that would ensure their operations did "not interfere with or endanger" public safety, or other mining operations. If anything, the confusion caused by the coexistence of separate Dominion and Provincial mining regulations between 1884 and 1890 further contributed to the negative climate for capital investment during this period.

In reference to footnote 127 in Chapter 4, Barry Cottam, Ph.D., an independent researcher from Ottawa, has confirmed that "Oronhyatekha," one of the incorporators of the Gold Hills Exploration and Development Company (1897), was in fact a full-blooded Mohawk physician living in Toronto. Besides being a doctor, this individual was also a well known forester.

J.P. Williams should be added to the list of managerial personnel with previous experience outside the district (footnote 202, Chapter 5). Williams had been manager of the Ledyard gold mine near Peterborough, Ontario prior to managing the Sawbill mine in 1900.<sup>2</sup>

An incomplete citation appears in the bibliography at page 351 in the text. The *Colonist* newspaper was published in Winnipeg.

The reference on page 119, Chapter 5 (footnote 102) to the unlikely probability of the Regina mine doing a clean-up at its mill only once a month should be clarified. If the Regina's management elected to do a *total* clean-up once a month then this would have been in keeping with contemporary practice.<sup>3</sup> A total clean-up usually required five to seven hours and entailed removing the amalgam from the mortars, dies, aprons, screens, and inside battery plates. If the management was indicating that the daily apron and sluice plates cleaning would be delayed to

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<sup>1</sup>*Statutes of Canada, 1884*, Orders in Council, "Mining Regulations," pp. 71-92. This particular Order in Council was not indexed in the Statues and it was, therefore, initially overlooked by the author.

<sup>2</sup>Ontario Bureau of Mines, *Fourth Annual Report, 1894* (Toronto: Warwick & Sons, 1895), p. 234.

<sup>3</sup>Louis Janin, Jr., "The Amalgamation of Free-Milling Gold Ores," *The Mineral Industry, Its Statistics, Technology and Trade in the United States and Other Countries, 1894* (A Statistical Supplement of the "Engineering and Mining Journal"), Vol. III, (New York: Scientific Publishing Co., 1895), p. 340.

the end of the month, then such practice could be clearly seen as wasteful.<sup>4</sup>

The terms of the sale of the Sultana mine by J.F. Caldwell to the British company detailed on page 137 of Chapter 5 are incorrect. Caldwell received 225,000 vendor shares in the new company with no official cash down payment. However, it appears that the new company agreed to assume Caldwell's pre-existing mortgage on the mine for which Caldwell agreed to "deposit with the company as security" 50,000 of his shares. As the vendor, Caldwell was "paid on his account" £404 for expenses (approximately \$2,020). Another £1,307 (\$6,535) was paid out by the company for mysterious "preliminary expenses," and some of this expenditure undoubtedly also found its way into Caldwell's hands.<sup>5</sup>

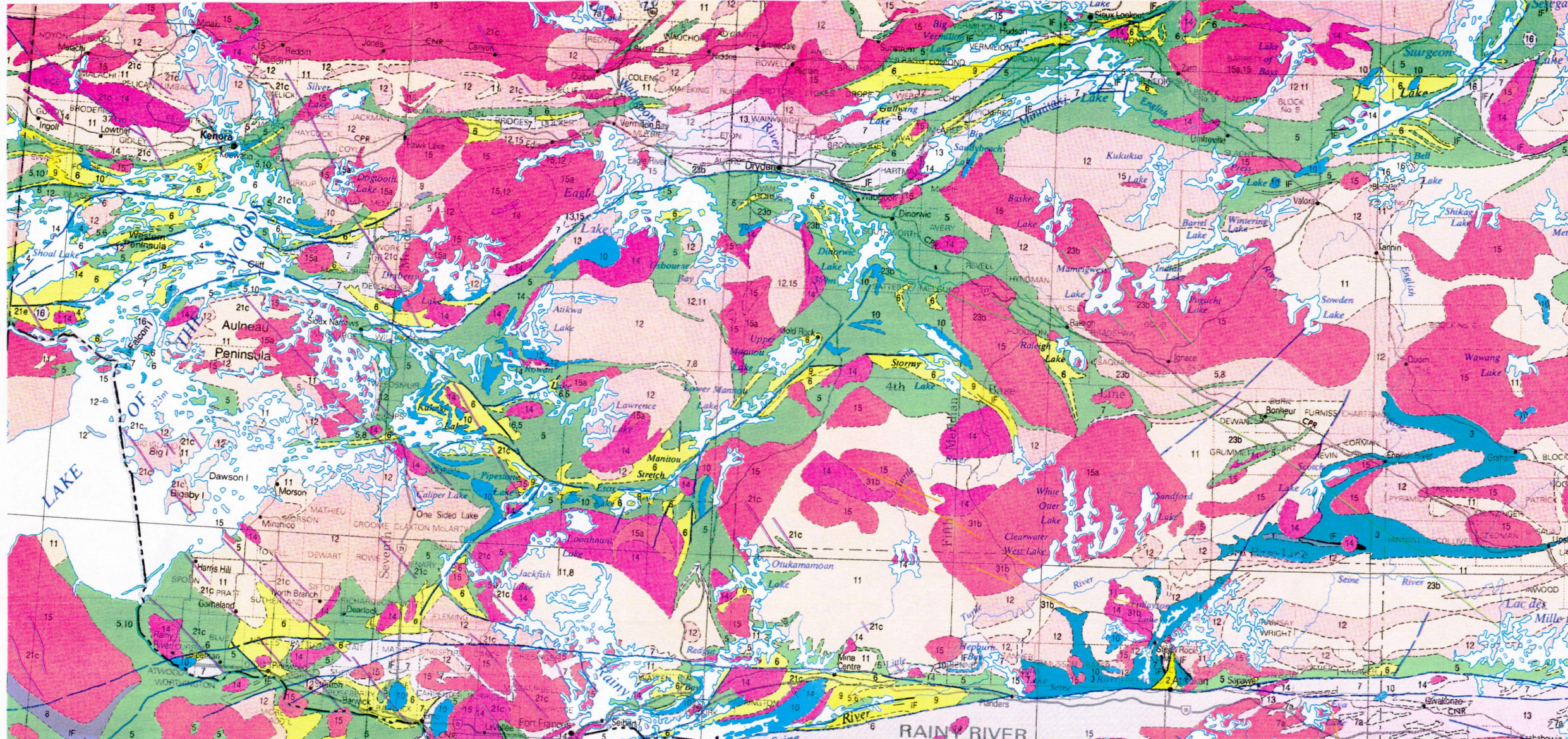
Some attention should have been given in the text to the first gold discovery in Northwestern Ontario, the Huronian Mine (H1) southwest of Lake Shebandowan. This mine falls just within the "district" as defined by the accompanying map (it is located on the southwest end of Huronian Lake just south of the CN railway line near the right hand margin of the map). The discovery was made in 1871 by an Indian and the original "claim" for the property was staked by Peter McKellar of Fort William on behalf of himself and four others including the Indian. Late in 1883 a 10-stamp mill and chlorination plant was set up on the property. However, after treating only 820 tons, the operation was shut down due to lack of operating capital. The property and mill lay idle during the gold boom period.<sup>6</sup>

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<sup>4</sup>Ibid., p. 331.

<sup>5</sup>*The Canadian Mining Manual, 1901* (Ottawa: Canadian Mining Review, 1901), pp. 315-23.

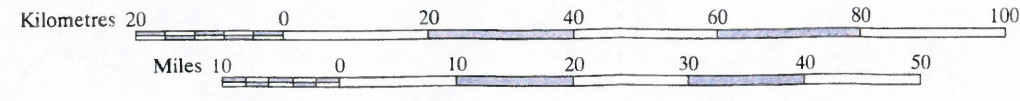
<sup>6</sup>R.J. Watson, "Huronian Gold Mine, Moss Township, District of Thunder Bay," *Ontario Department of Mines Annual Report, 1928*, Vol. XXVII, Part 4, p. 120-121.



# BEDROCK GEOLOGY OF THE NORTHWESTERN ONTARIO GOLD FIELDS

Edited From Ontario Ministry of  
Northern Development and Mines  
Map #2542, 1991

Scale 1:1 000 000



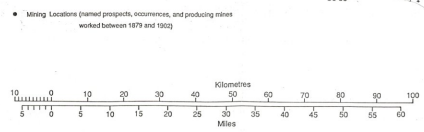
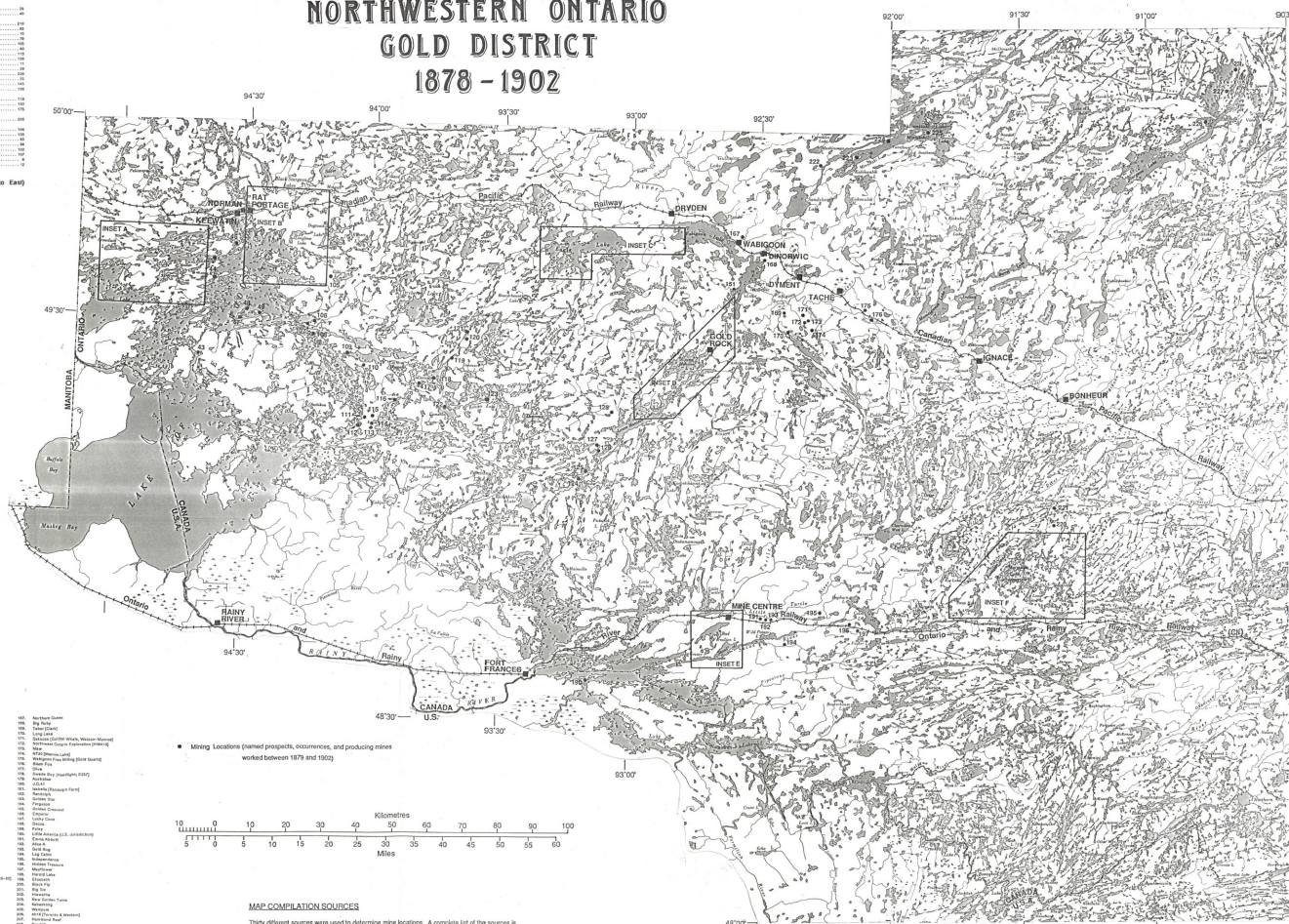
<b>ARCHEAN</b>		<b>NEO-ARCHEAN (2.5 to 2.9 Ga)</b>		<b>MESOARCHEAN (2.9 to 3.4 Ga)</b>	
<b>NEOARCHEAN (2.5 to 2.9 Ga)</b>		<b>SUPRACRUSTAL ROCKS</b>		<b>SUPRACRUSTAL ROCKS</b>	
<b>INTRUSIVE ROCKS</b>		<b>9 Coarse clastic metasedimentary rocks<sup>g</sup>: mainly coarse clastic metasedimentary rocks, with minor, mainly alkalic, mafic to felsic metavolcanic flows, tuffs and breccias</b>		<b>3 Mafic metavolcanic and metasedimentary rocks<sup>f</sup>: mafic metavolcanic rocks, minor iron formation</b>	
16	<b>Diorite-nepheline syenite suite<sup>g</sup>: pyroxenite, diorite, monzonite, syenite, nepheline syenite (saturated to undersaturated suite)</b>	<b>NEO- TO MESOARCHEAN (2.5 to 3.4 Ga)</b>		<b>2 Felsic to intermediate metavolcanic rocks<sup>f</sup>: rhyolitic, rhyodacitic, dacitic and andesitic flows, tuffs and breccias</b>	
<b>NEO- TO MESOARCHEAN (2.5 to 3.4 Ga)<sup>egop</sup></b>		<b>SUPRACRUSTAL ROCKS</b>		<b>1 Metasedimentary rocks and mafic to ultramafic metavolcanic rocks<sup>fw</sup>: coarse clastic metasedimentary rocks, marble, quartz arenite, iron formation, komatiite, mafic metavolcanic rocks, a minor felsic metavolcanic rocks</b>	
<b>INTRUSIVE ROCKS</b>		<b>8 Migmatized supracrustal rocks<sup>eg</sup>: metavolcanic rocks, minor metasedimentary rocks, mafic gneisses of uncertain protolith, granitic gneisses</b>		<b>Geological boundary</b> .....	
15	<b>Massive granodiorite to granite: massive to foliated granodiorite to granite 15a Potassium feldspar megacrystic units</b>	<b>7 Metasedimentary rocks<sup>eg</sup>: wacke, arkose, argillite, slate, marble, chert, iron formation, minor metavolcanic rocks 7a Paragneisses and migmatites<sup>g</sup> 7b Conglomerate and arenite</b>		<b>Fault (traceable on surface, traceable in subsurface)</b> .....	
14	<b>Diorite-monzonite-granodiorite suite: diorite, tonalite, monzonite, granodiorite, syenite and hypabyssal equivalents (saturated to oversaturated suite)</b>	<b>6 Felsic to intermediate metavolcanic rocks<sup>gf</sup>: rhyolitic, rhyodacitic, dacitic and andesitic flows, tuffs and breccias, chert, iron formation, minor metasedimentary and intrusive rocks; related migmatites</b>		<b>Iron formation</b> .....	
13	<b>Muscovite-bearing granitic rocks: muscovite-biotite and cordierite-biotite granite, granodiorite-tonalite</b>	<b>5 Mafic to intermediate metavolcanic rocks<sup>gf</sup>: basaltic and andesitic flows, tuffs and breccias, chert, iron formation, minor metasedimentary and intrusive rocks, related migmatites</b>		<b>Granulite facies</b> .....	
12	<b>Foliated tonalite suite: tonalite to granodiorite—foliated to massive</b>	<b>4 Mafic to ultramafic metavolcanic rocks<sup>gf</sup>: mafic metavolcanic rocks with minor komatiite, minor metasedimentary and pyroclastic rocks</b>		<b>International boundary</b> .....	
11	<b>Gneissic tonalite suite: tonalite to granodiorite—foliated to gneissic—with minor supracrustal inclusions</b>	<b>Geological boundary</b> .....		<b>Interprovincial boundary</b> .....	
10	<b>Mafic and ultramafic rocks<sup>g</sup>: gabbro, anorthosite, ultramafic rocks</b>	<b>Geological boundary</b> .....		<b>District, County boundary</b> .....	
		<b>Geological boundary</b> .....		<b>Geographic township boundary (surveyed, unsurveyed)</b> .....	
		<b>Geological boundary</b> .....		<b>Railway</b> .....	
		<b>Geological boundary</b> .....		<b>Multilane highway</b> .....	
		<b>Geological boundary</b> .....		<b>King's highway</b> .....	
		<b>Geological boundary</b> .....		<b>Secondary highway</b> .....	

# Map of the NORTHWESTERN ONTARIO GOLD DISTRICT 1878 - 1902

Mines by Name	
Abbot	124
Abraham	125
Abraham	126
Abraham	127
Abraham	128
Abraham	129
Abraham	130
Abraham	131
Abraham	132
Abraham	133
Abraham	134
Abraham	135
Abraham	136
Abraham	137
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Abraham	139
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Abraham	142
Abraham	143
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Abraham	191
Abraham	192
Abraham	193
Abraham	194
Abraham	195
Abraham	196
Abraham	197
Abraham	198
Abraham	199
Abraham	200

Mines by Number (West to East)	
1	Abraham
2	Abraham
3	Abraham
4	Abraham
5	Abraham
6	Abraham
7	Abraham
8	Abraham
9	Abraham
10	Abraham
11	Abraham
12	Abraham
13	Abraham
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97	Abraham
98	Abraham
99	Abraham
100	Abraham



● Mining Locations (named prospects, occurrences, and producing mines worked between 1879 and 1902)

**MAP COMPILED SOURCES**  
 Thirty different sources were used to determine mine locations. A complete list of the sources is contained in the "Cartographic Essay" of Patrick R. Chapin's Northwest Ontario Gold Mining, 1878-1902, Masters Thesis, Lakehead University, 1976.  
 Hydrography composites printed by Energy, Mines and Resources - Ottawa  
 Cartography by Cathy A. Chapin, Lakehead University Geography Department and by Patrick R. Chapin, 1985

