



Martin's Meadows Solar Project

Stage 1 and 2 Archaeological Assessment Report

April 27, 2012

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**Stage 1 and 2 Archaeological Assessment
Martin's Meadows Solar Project
(FIT-FM5F42U)
Lot 16, Concession 8
Township of Glackmeyer
District of Cochrane, Ontario**

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Executive Summary:

This Stage 1 and 2 archaeological assessment was conducted on lands with the potential to be impacted by the proposed **Martin's Meadows Solar Project** on Lot 16, Concession 8, in the Township of Glackmeyer, District of Cochrane, Ontario. This work was completed under contract to **Hatch Ltd.** in advance of a **Renewable Energy Approval (REA)** application.

The Stage 1 and 2 assessment was carried out by **Archaeological Research Associates, Ltd. (ARA)** in November of 2010 under licence #P007, PIF #P007-281-2010. Stage 1 research indicated a high potential for the presence of both Pre-Contact and Euro-Canadian archaeological sites in the study area. The Stage 2 assessment, carried out under optimal conditions after legal *Permission to Enter* (PTE) had been granted by the property owner, did not identify any archaeological materials. Accordingly, **ARA** recommends that the project be allowed to proceed without further heritage concerns.

Personnel:

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Special thanks for his research assistance are extended to Mr. Robert Von Bitter, Archaeological Data Coordinator, Archaeology Unit, Heritage Branch, Ontario Ministry of Tourism and Culture, Toronto.

1.0 Introduction

Under a contract awarded in October of 2010, **Archaeological Research Associates Ltd. (ARA)** carried out a Stage 1 and 2 archaeological assessment of the proposed **Martin's Meadows Solar Project (FIT-FM5F42U)** in the Township of Glackmeyer, District of Cochrane, Ontario. This assessment was conducted in November of 2010 under licence #P-007, PIF #P007-281-2010. The work was completed under contract to **Hatch Ltd.** as a component of the screening process outlined in **Ontario Regulation 359/09**, which governs **Renewable Energy Approvals (REA)** under the provincial **Environmental Protection Act (EPA)**. The archaeological assessment was carried out in order to:

- Identify any known archaeological sites that might be found near or within the study area;
- Empirically determine the presence of any unknown archaeological resources which may be extant within the study area; and
- If identified, suggest appropriate strategies for the protection and management of these sites.

The assessment was managed with permission from the landowner to access the property and remove artifacts, and was conducted in accordance with the provisions of the *Ontario Heritage Act* (R.S.O. 1990), and *Draft Standards and Guidelines for Consultant Archaeologists* (Ontario Ministry of Culture 2009). All notes, photographs and records pertaining to this assessment are housed in Archaeological Research Associates Ltd.'s Head Office, 97 Gatewood Road, Kitchener, Ontario.

The Ministry of Tourism and Culture is asked to review the results and recommendations presented in this report.

2.0 Location

The study area is a 60 ha rectangular parcel of land located south of Glackmeyer Concession Road 8-9 in Glackmeyer Township, District of Cochrane, Ontario. It falls on Lot 16, Concession 8, roughly 1.0 km east of Genier Road (see Figures 1-3, Appendix).

The subject lands lie 800 m north of Lauzon Lake, 3.1 km southwest of the Abitibi River and 3.1 km east of Chartrand Lake. An unnamed creek passes 165 m east of the study area, running north-south to Lauzon Lake.

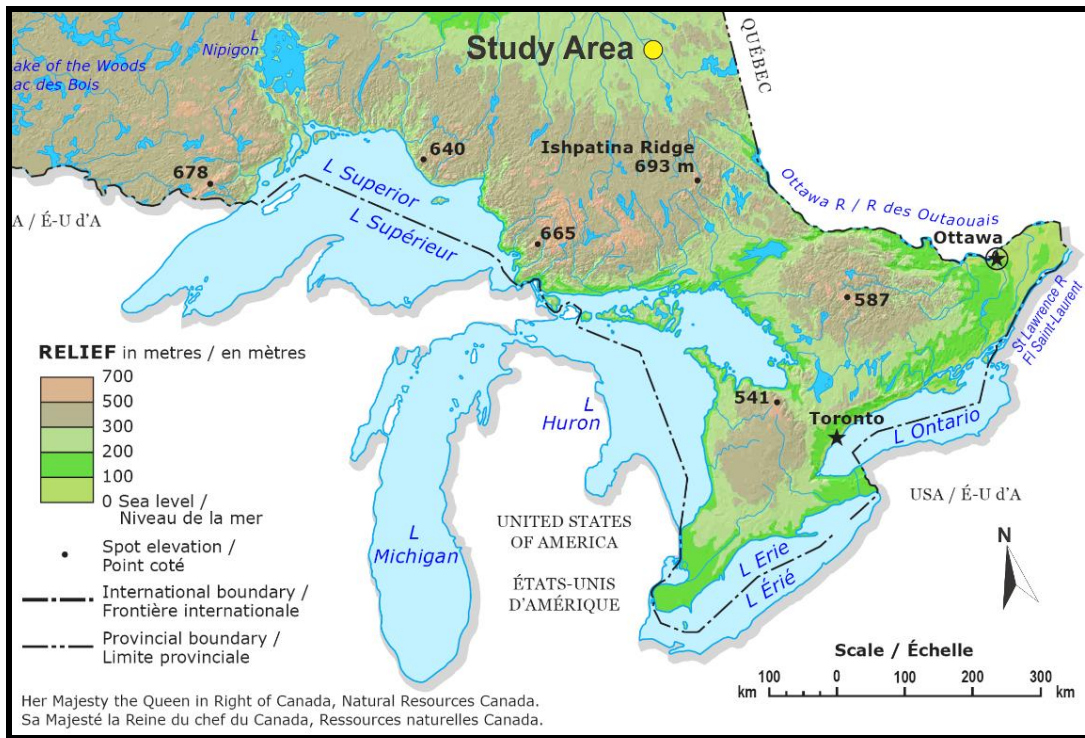


Figure 1: Location of Study Area in the Province of Ontario

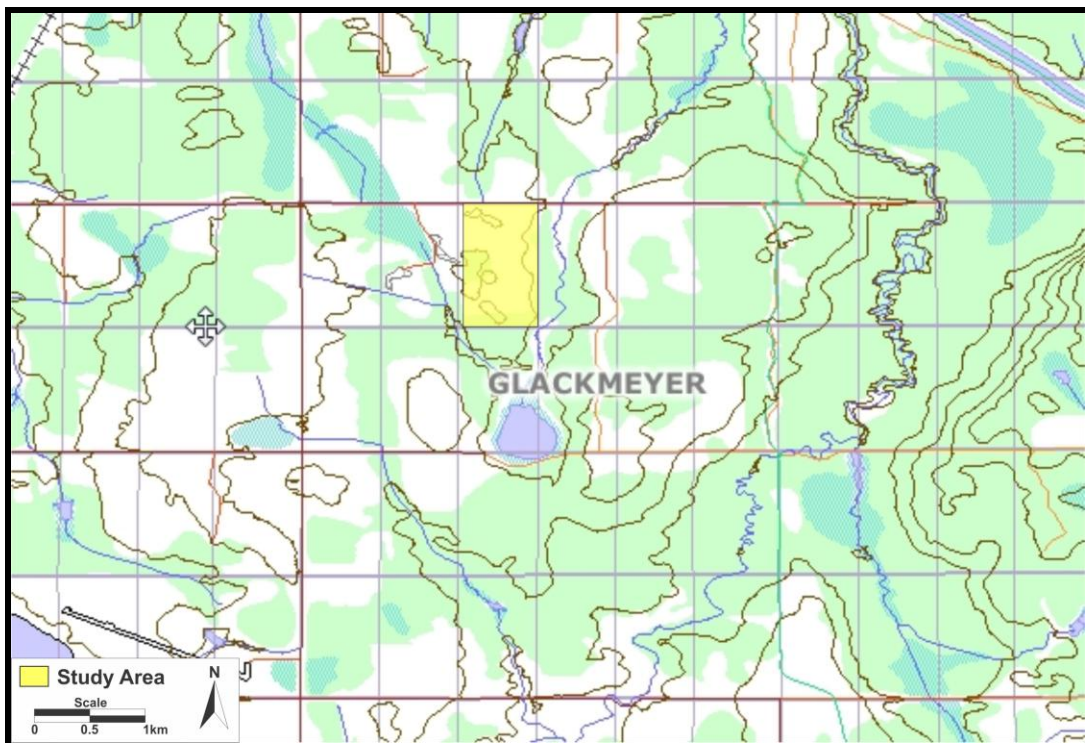


Figure 2: Study Area in Glackmeyer Township



Figure 3: Study Area in Detail

3.0 Geography

It has long been understood that environment plays a key role in determining site location, particularly in small societies with non-complex, subsistence-oriented economies. The local environment of the study area lies within the Boreal Forest, which lies south of the Hudson Bay Lowlands and north of the Great Lakes-St. Lawrence Forest. The Boreal Forest is the largest forest region in Ontario, with an area of roughly 50 million ha. Vegetation here consists of conifers such as black and white spruce, jack pine, balsam fir, tamarack and eastern white cedar, while deciduous species include poplars and white birch. This class of forest is home to very diverse wildlife as well, with numerous predators such as black bears, wolves and lynx, plus moose, caribou, great owls, wrens, hare, red fox and porcupine. Many species of ferns, mosses, fungi, shrubs and herbs are also attested in the Boreal Forest (Ontario Ministry of Natural Resources 2009).

In the upper Great Lakes region it is believed that the First Nations used some 500 plant species as food, food flavourings, drinks, medicines, building materials, fibres, dyes, and basketry (Mason 1981:59). As such, it is clear that vegetation played an important role in the site selection processes employed by Pre-Contact Aboriginal groups. Furthermore, this vegetation served as home and food for a wide range of game animals such as white tailed deer, turkey, passenger pigeon, cottontail rabbit, elk, muskrat, and beaver (Mason 1981:60).

The local climatic region is characterized by snowfalls totalling between 240 and 280 cm per year, with mean daily temperatures for the year rarely exceeding 0° C. Total annual precipitation levels for the vicinity of the study area fall within a range between 760 and 800 mm (Hare 1989:24-26).

Physiographically, the study area lies within the Superior Province of the Precambrian Canadian Shield (Davidson 1989a:37). The soils in the study area belong to the Gleysolic soil order, which are non-organic soils that remain saturated for most of the year and typically have dark surface horizons and gray subsoils (often spotted with red or yellow mottles). Specifically, Orthic Gleysols are dominant in the vicinity of the Town of Cochrane. These are characterized by dark-coloured A-horizons less than 10 cm thick (Hoffman 1989:69-73).

4.0 Previous Archaeological Research

An archival search was conducted using the Ontario Ministry of Tourism and Culture's Archaeological Sites Database in order to determine the presence of any registered heritage resources which might be located on or within a 2 km radius of the study area. No registered sites were found within these limits. This absence is likely related to the lack of archaeological exploration in the area rather than being representative of any meaningful settlement pattern.

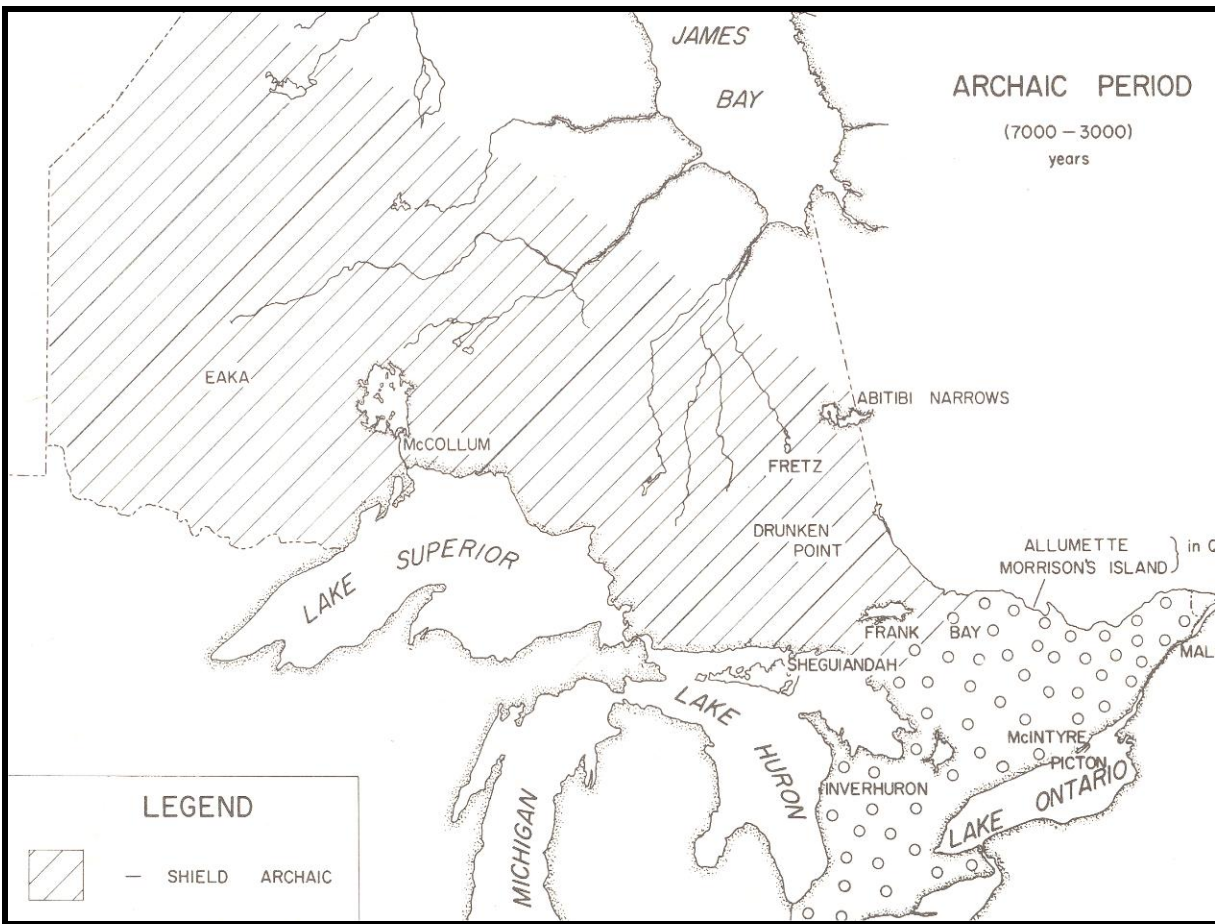
5.0 Historic Land Use Summary

5.1 Pre-Contact Era

The first settlers of Ontario were the Palaeo-Indian people, who arrived after the retreat of the Wisconsinian glaciers around 9000 B.C. Palaeo-Indians first lived as hunter-gatherers in the boreal-like landscapes of southern Ontario, archaeologically identified by Clovis lithic forms and related industries (Ellis and Deller 1990:39-43). Northern Ontario, on the other hand, was virtually unoccupied due to the presence of the retreating glaciers and associated glacial lakes. It is commonly accepted that much of northern Ontario was not inhabited until the arrival of the later Plano culture, and even this occupation was restricted to lands north and northwest of Lake Superior and on Manitoulin Island (Wright 1972a:10-18). Because of the low biotic productivity of the environment at this time, which would have resembled the modern sub-arctic, it is believed that human groups ranged over very wide territories in order to live sustainably (Wright 1972a:18; Ellis and Deller 1990:52). Although traditionally conceptualized as 'big game hunters' (living on caribou and other Pleistocene megafauna), Palaeo-Indian lifeways are poorly understood and their sites are often only attested by stone tools and manufacture debris.

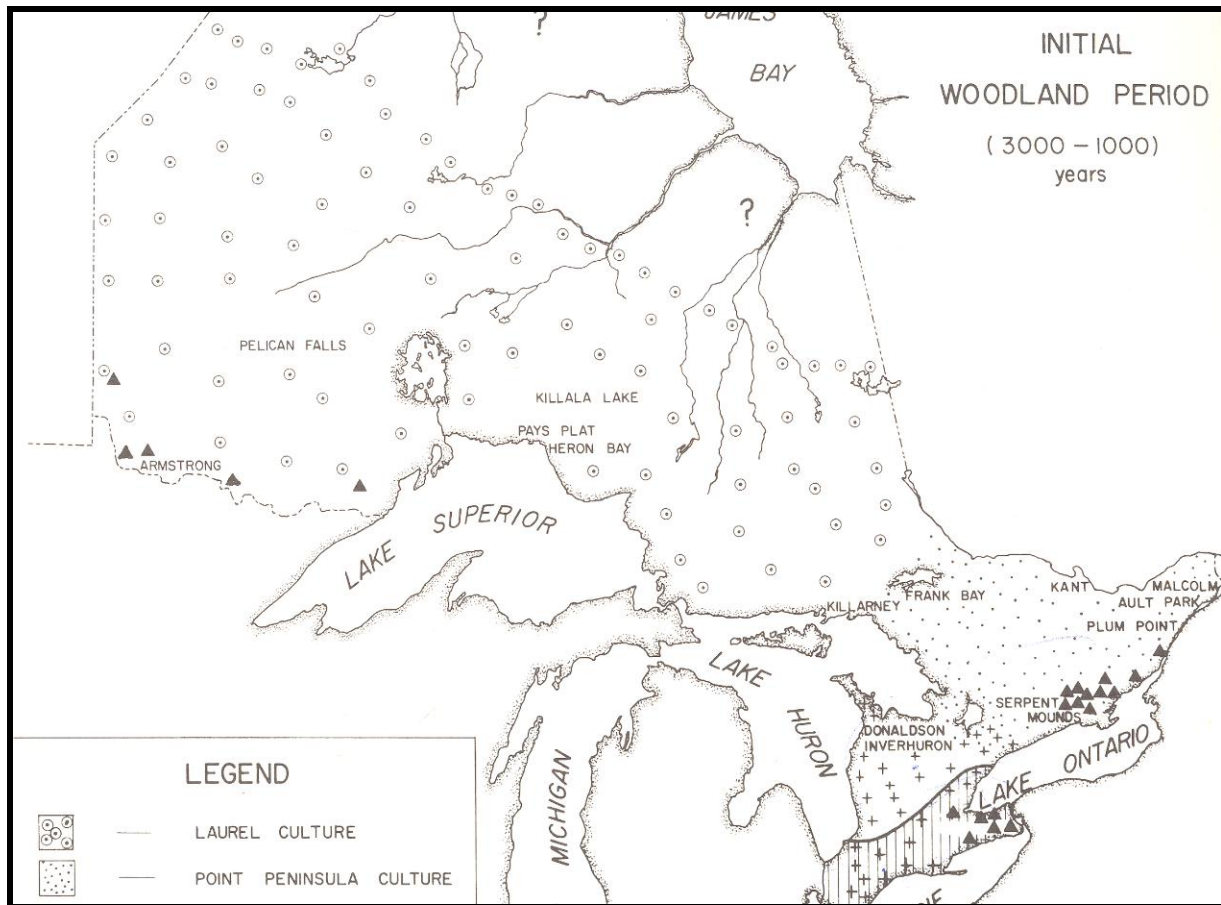
Beginning around 8000 B.C., the biotic productivity of the environment of southern Ontario began to increase as the climate warmed and the watershed was colonized by deciduous forest. In northern Ontario, this process was much slower, and during the Nakina Phase (ca. 7000 BC) and the Driftwood Stadial (ca. 6100 BC) glaciers, glacial lakes and post-glacial environmental factors would have provided an unattractive setting for early hunters and gatherers (Davidson 1989b:64). Eventually, as the land rebounded and became fertile once again, more opportunities arose for the exploitation of both animal and plant food sources. The resulting broad-based economy that emerged first in southern Ontario and later in northern Ontario was the basis for the cultural complexes referred to as 'Archaic' (Wright 1972a:23-36; Ellis et al. 1990).

During the Archaic period (roughly 8000 B.C. to 1000 B.C.) there was an explosion in the number and variety of raw materials, tool forms, site types, and the number of sites themselves. The northern Shield Archaic culture (5000 B.C. to 1000 B.C.) dominated the majority of northern Ontario, including the vicinity of the study area (see Figure 4). The Shield Archaic is believed to have developed out of the Plano culture to the west, and is thought to have spread eastwards as the continental glaciers gradually retreated. The Shield Archaic peoples are best known as caribou hunters and fisherman, and their material culture is marked by the appearance of copper tools and the likely manufacture of the birch bark canoe (Wright 1972a:33-36). These peoples arrived in what would become Cochrane District after the retreat of the ice sheets, and subsisted along the Abitibi River and Frederic House River ca. 3000 B.C. (Dodds 1978:2).



**Figure 4: Map of Archaic Period Cultures
(Wright 1972a:Map 3)**

The subsequent Woodland period began ca. 1000 B.C. in Ontario and is characterized by the first appearance of pottery and the development of multiple cultural complexes. Over the course of the Initial Woodland period (ca. 1000 B.C. to A.D. 1000), Ontario was home to the Meadowood, Laurel, Point Peninsula, Saugeen and Princess Point cultures (see Figure 5). The study area itself falls within the territory of the Laurel culture (ca. 700 B.C. to A.D. 1000), which is attested at numerous sites in east-central Saskatchewan, Manitoba, northern Ontario and northwestern Quebec. Laurel culture is virtually identical to that of the Shield Archaic, save for the adoption of pottery which was likely influenced by the Point Peninsula and Saugeen cultures of the south. Moose and beaver were important sources of food and secondary goods, and seasonal campsites were the norm. Their material culture included a variety of stone and bone tools, including scrapers, arrowheads, knives, net-sinkers, awls, harpoons and beaver incisor knives (Wright 1972a:59-63).

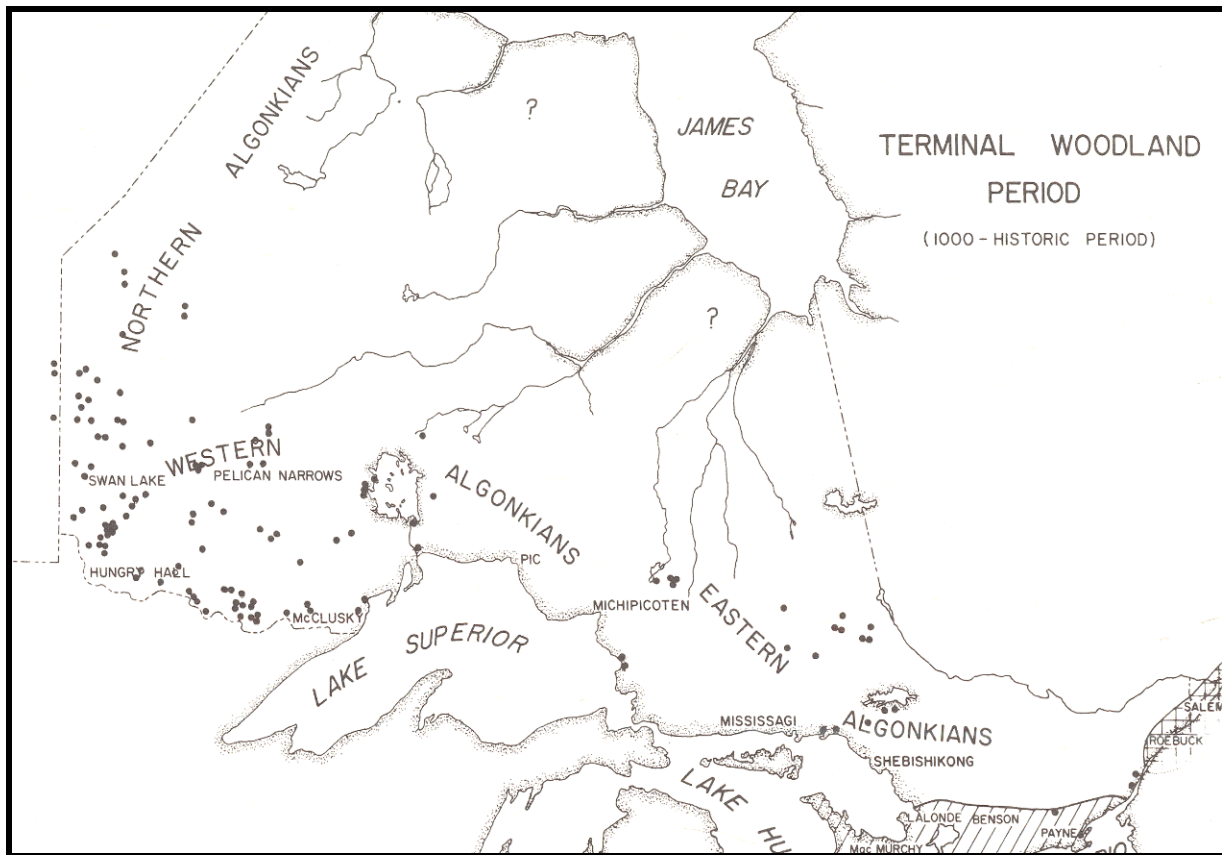


**Figure 5: Map of Initial Woodland Period Cultures
(Wright 1972a:Map 4)**

The first rudimentary evidence of maize (corn) horticulture appeared in southern Ontario during the transition to the Terminal Woodland (ca. A.D. 600 to 900) (Fox 1990:171). This allowed for population increases which in turn lead to larger settlement sizes, higher population density, and increased social complexity in the south, standing in marked contrast the more mobile hunter-gatherer groups in the north. The subsequent adoption of agriculture in northern Ontario would have been gradual, taking time to “transform a hunting people into a farming people” (Wright 1972a:51).

During the Terminal Woodland period (ca. A.D. 1000 to 1650), northern Ontario is commonly believed to have been occupied by the earliest manifestations of Algonkian-speaking peoples, organized in loosely affiliated bands identified in historic times under the broader groupings of the Ojibway, Cree and Algonquins (Wright 1972a:64,91). The study area falls outside of the assumed boundaries of the Northern Algonkians and Eastern Algonkians (see Figure 6), and was likely utilized by bands associated with both cultural complexes. The Northern Algonkians were centered in northern Manitoba and were characterized by the Selkirk pottery tradition, possibly

associated with the historic Cree. They shared common lithic and bone tool traditions with neighbouring Algonkian groups, especially the Western Algonkians. Their ceramics have been found as far east as the Ottawa Valley and along the north shore of Lake Superior (Wright 1972a:102). The Eastern Algonkians, on the other hand, developed alongside the Iroquoian-speaking Huron-Petun of southern Ontario and shared pottery traditions, pipe forms and possibly even ossuary burial practices. However, differences are clearly apparent amongst their lithic traditions, bone tools, houses and in the high frequency of dog burials. Eastern Algonkians appear to have adopted corn horticulture in a 'partial' way, planting in the spring and returning only in the fall to harvest the remnants left by animals and insects (Wright 1972a:94-95).



**Figure 6: Map of Terminal Woodland Period Cultures
(Wright 1972a:Map 6)**

Essentially, the lifeways of the First Nations that were observed by the first Europeans to arrive in the area were in place by the Terminal Woodland period.

5.2 The Early Contact Period

The first European to venture into what would become Ontario was Etienne Brulé, who was sent by Samuel de Champlain to visit the area and learn the language and customs of the First Nations there. Champlain himself made two trips to Ontario, first in 1613 and later from 1615 to 1616 (Gervais 2004:182). His journey of 1615 took him as far northwards as Lake Nipissing, after which he continued towards Lake Huron on the French River. The First Nations encountered by Champlain were many and varied, including both Iroquoian-speaking and Algonkian-speaking peoples (see Figure 7). Members of the former group include the Huron, Petun and Neutral Nations, concentrated north of Lake Ontario, south of Georgian Bay and north of Lake Erie, respectively (Lennox and Fitzgerald 1990; Ramsden 1990). People belonging to the second group, collectively known as the Anishinabeg, were much more widely dispersed. They included the “*Cheveux relevés*” (Odawa) along the southern Georgian Bay littoral and bands such as the Ouasouarini, Atchougue, Nipissiens, Sorciers and Missisaghe along the eastern littoral (Wright 1972a:91; Fox 1990:Figure 14.1). These latter bands are difficult to correlate into specific supra-tribal groups, and are often referred to as Ojibway (Chippewa), Cree or simply under the broad umbrella term “Algonkians”. It is unclear whether the Algonkian-speaking First Nations of Cochrane District ever came into contact with the earliest colonists (Dodds 1978:3).

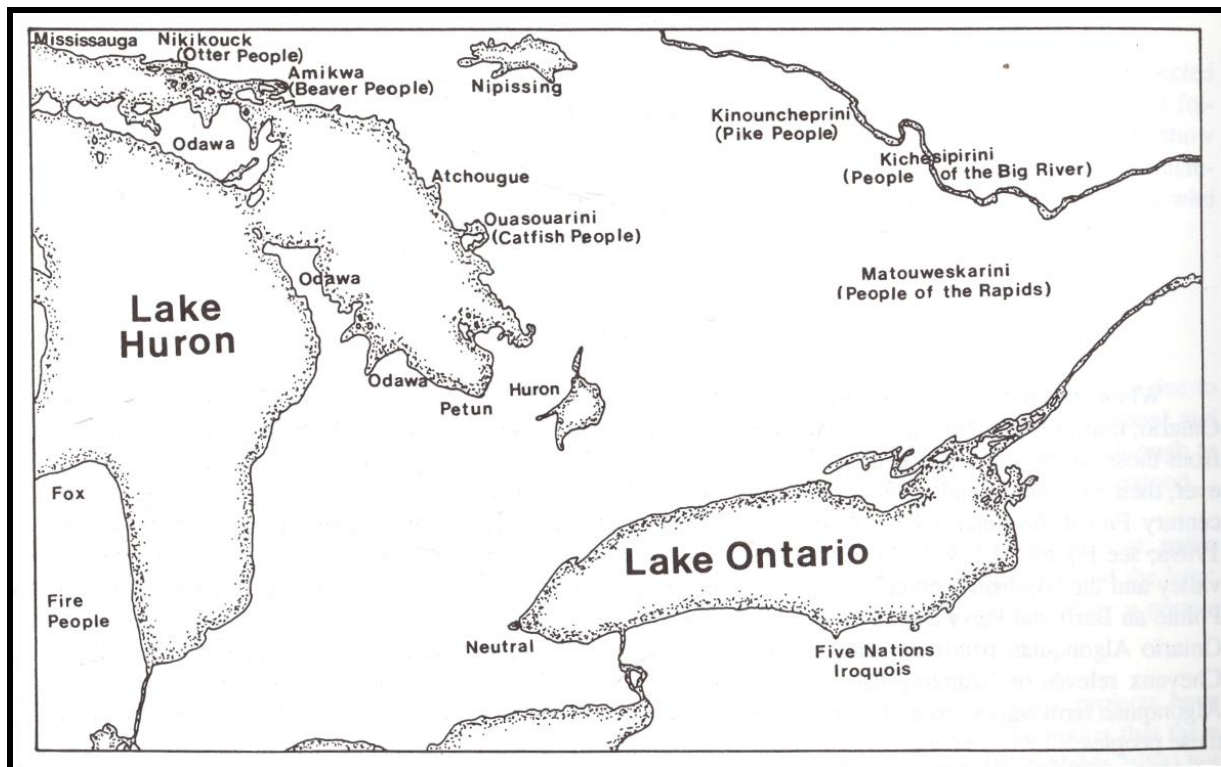


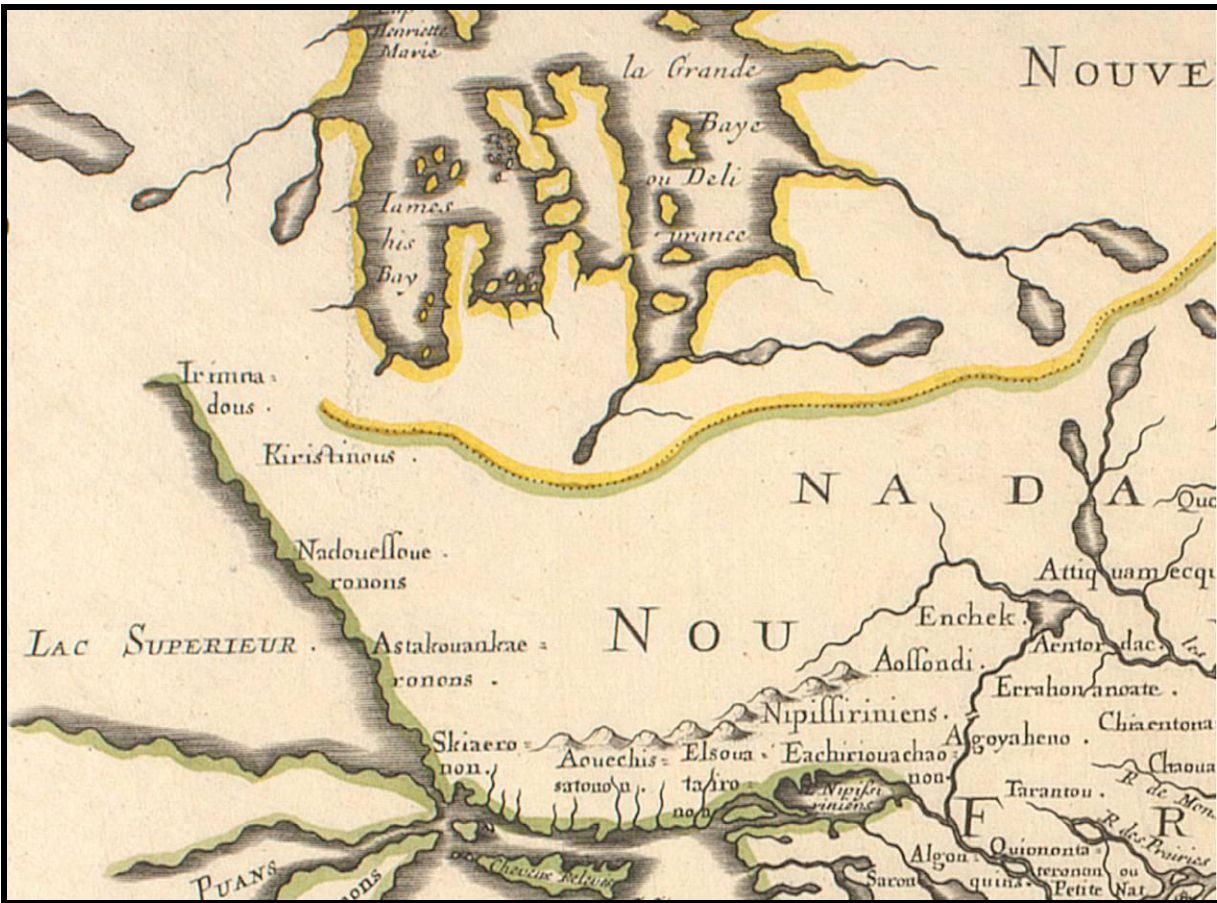
Figure 7: Northern Algonkian-Speaking Band Locations, Early 17th Century
(Fox 1990:Figure 14.1)

Anishinabeg peoples were primarily seasonal hunters and had few fixed settlements, unlike the more sedentary Iroquoian-speaking Huron and Neutral of southern Ontario. The Eastern Algonkians are known to have traded extensively with their Huron neighbours to the south, exchanging furs and meat for Huron corn and fish-nets (Wright 1972a:95).

Early European maps, including those by Jean Boisseau from 1643 (see Figure 8) and Nicholas Sanson from 1656 (see Figure 9), clearly depict several different Algonkian-speaking bands in northern Ontario, but provide limited specific information for the lands that would become Cochrane District.



**Figure 8: Detail of Jean Boisseau's *Description de la Nouvelle France* (1643)
(McGill University 2005:W. H. Pugsley Collection)**



**Figure 9: Detail of Nicholas Sanson's *Le Canada, ou Nouvelle France* (1656)
(McGill University 2005:W. H. Pugsley Collection)**

The first half of the 17th century saw a marked increase in trading contacts between the First Nations and European colonists, especially in southern Ontario. These trading contacts, however, eventually led to increasing factionalism and tension between the First Nations as different groups vied for control of the lucrative fur trade. In what would become Ontario, the Wendat, the Petun, and their Anishinabeg trading partners allied themselves with the French. In what would become New York State, the League of the Haudenosaunee (Iroquois), often referred to as the Five (later Six) Nations (which included the Mohawk, Cayuga, Onondaga, Oneida, Seneca, and later the Tuscarora Nations) allied themselves with the English. The advance of the Haudenosaunee ca. 1650 led to the demise of the Neutral as a distinct cultural entity (Lennox and Fitzgerald 1990:456) and to the dispersal of the Wendat and Petun nations to the east (Quebec) and west (near lake St. Claire) (Ramsden 1990:383-384). The northern Anishinabeg groups, begin quite distant from the conflict, were not so adversely affected and continued on with their nomadic and low-impact existence.

Early contact between the Europeans and the northern Anishinabeg can be more accurately traced to the activities of the Hudson Bay Company (HBC), which was “granted rights to all land containing rivers flowing into Hudson Bay” (Dodds 1978:3). This company, founded by the Frenchmen Des Groseilliers and Radisson with British support, dispatched its first ships on June 3, 1668 and was proclaimed by royal charter on May 2, 1670. The HBC was granted exclusive trading rights to the north (a region named Rupert’s Land), and it struggled militarily with the French for control of the fur trade around the Upper Great Lakes, where the French maintained many successful trading posts (Ray 2010) (see Figure 10). The first post in the Cochrane area was established by Chevalier de Troyes on Lake Abitibi, roughly 75 km southeast of the study area, on his way to attack the English in 1686 (Dodds 1978:3).



**Figure 10: Detail of Del’Isle’s *Carte du Canada ou de la Nouvelle France* (1708)
(Cartography Associates 2009:David Rumsey Collection)**

Peace was only reached in 1713 (with the Treaty of Utrecht), and for the next 60 years the HBC erected posts at the mouths of the major rivers flowing into the bay (see Figures 11-12). The defeat of the French in the *Seven Years War* (often called the *French and Indian War* in North America) and their resulting withdrawal from Canada created an even stronger opponent for the HBC, namely the Montreal-based overland trade network taken over by the British (Ray 2010).

Regardless, the HBC continued to experience success in the north, and northern Algonkians traded extensively with the company for much of the 19th century. The most significant post in the area, named New Post, was established north of Cochrane on the Abitibi River, and it dominated regional trade until it was closed early in the 20th century. The Anishinabeg who traded at this post were reputed to have had a large system of family hunting territories east of the Abitibi River at that time (Dodds 1978:4).



**Figure 11: Detail of Poppel's *A Map of the British Empire in America* (1733)
(Cartography Associates 2009:David Rumsey Collection)**

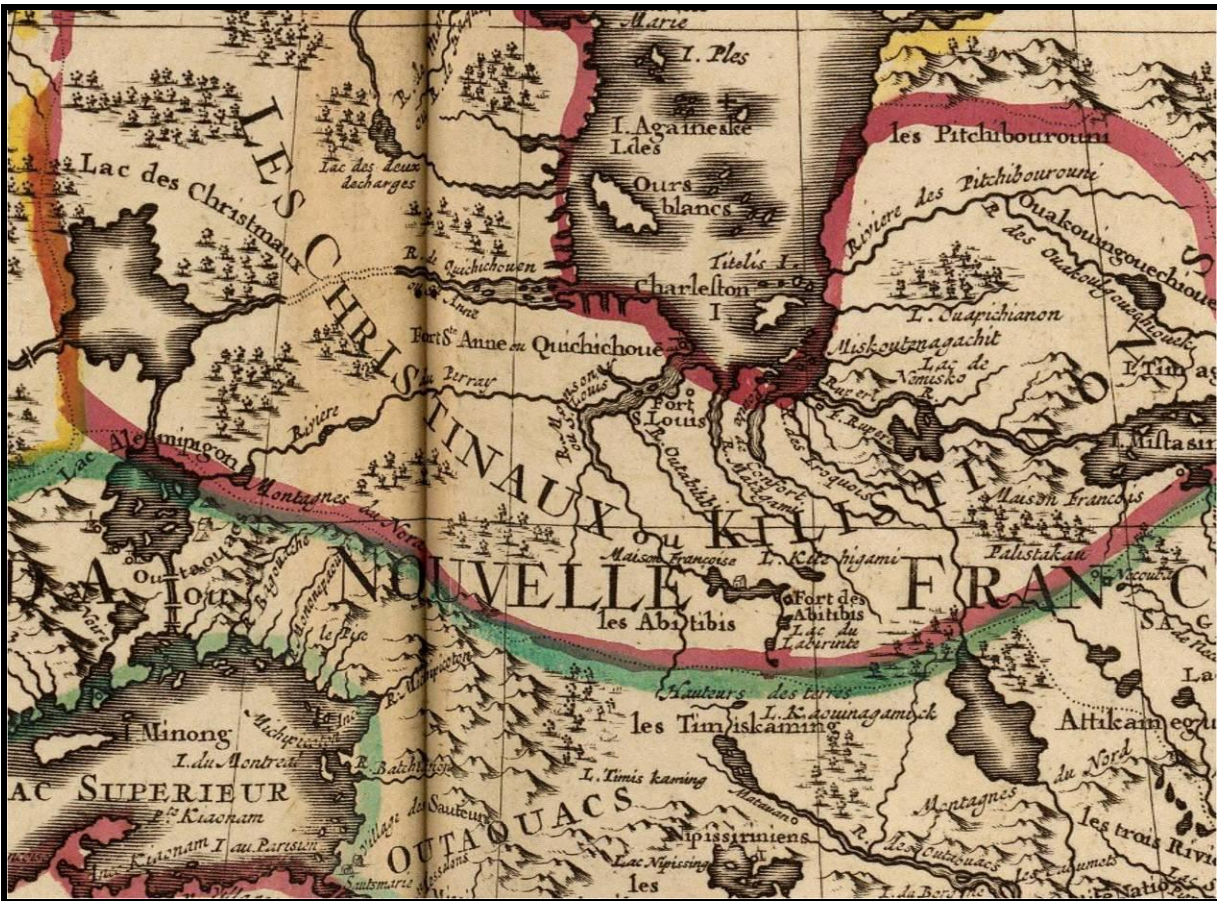


Figure 12: Detail of Covens and Mortier's *Carte du Canada ou de la Nouvelle France* (1742) (Cartography Associates 2009:David Rumsey Collection)

Archaeological evidence of Algonkian-speaking peoples continues to be elusive in northern Ontario, particularly when compared to sites associated with the southern groups such as the Haudenosaunee and Wendat. Aboriginal occupation of Greenwater Provincial Park was first noted in the late 1970's, for example, but on the whole relatively few archaeological sites are well documented (Dodds 1978:2).

5.3 The Euro-Canadian Era

Towards the end of the 18th century, the face of what would become Ontario changed considerably. The Constitutional Act of 1791 created the Provinces of Upper Canada and Lower Canada from the former Province of Quebec (Craig 1963:17). Colonel John Graves Simcoe was appointed the first Lieutenant Governor of Upper Canada, and he was responsible for governing the new province, directing its settlement and establishing a constitutional government modelled after that of Britain (Coynes 1895:33). In 1792, Upper Canadian legislature incorporated the Eastern, Midland, Home and Western Districts from the former Lunenburg, Mecklenburg,

Nassau and Hesse Districts of the Province of Quebec (previously established by Lord Dorchester in 1788). In 1796, an act of Parliament allowed Simcoe to divide Upper Canada into as many counties as he saw fit. The northern-most county established by Simcoe extended only as far as Lake Simcoe. The territory beyond, including what would become the District of Cochrane, was identified as “Chippewa Hunting Country” (see Figure 13).



**Figure 13: Detail of Kensett and Tardieu's Map of Upper and Lower (1812)
(Cartography Associates 2009:David Rumsey Collection)**

Simcoe initiated several schemes to populate and protect the newly-created province, and he employed a settlement strategy that relied on the creation of shoreline communities with effective transportation links. These communities, inevitably, would be comprised of lands obtained from the First Nations, and many surrenders and purchases were arranged in the closing years of the 18th century and in the early 19th century. These developments were limited largely to southern Ontario, however, as the area that would become the District of Cochrane largely remained in the possession of the northern Anishinabeg for the next 100 years. Historical maps from the 19th century indicate the territory exploited by the HBC (see Figure 14) as well as the fact that the study area was considered to lie beyond the borders of Canada (see Figure 15).

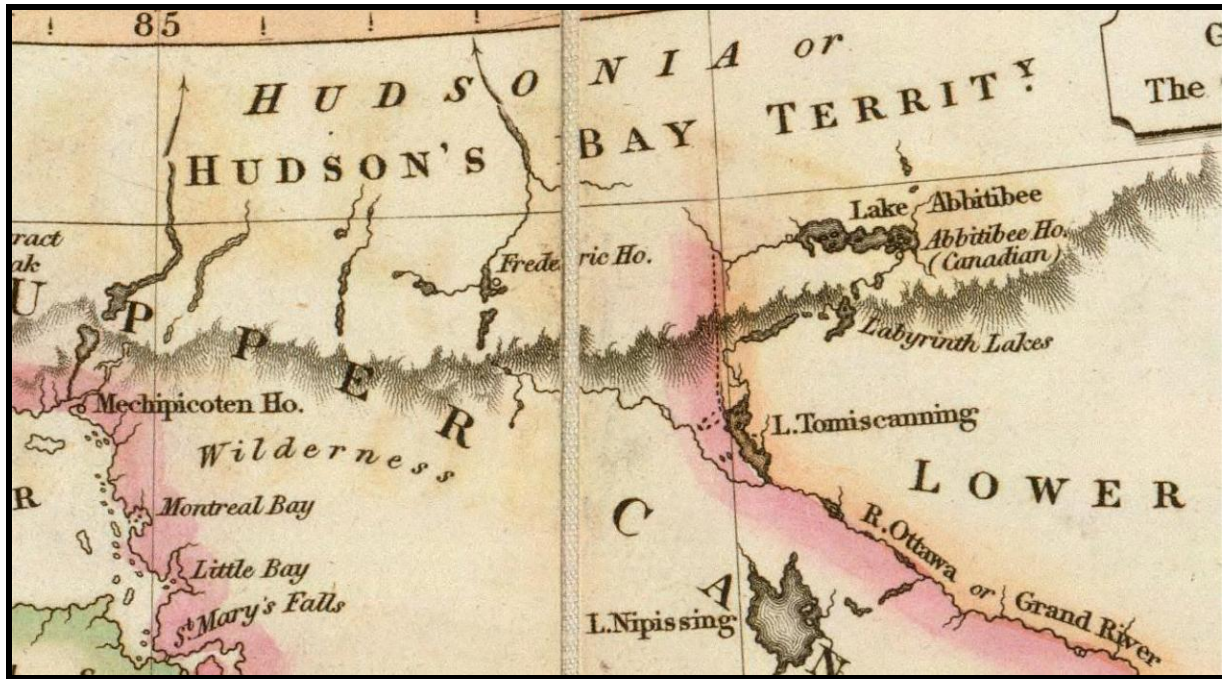


Figure 14: Detail of Purdy's *A Map of Cabotia* (1814)
(Cartography Associates 2009:David Rumsey Collection)

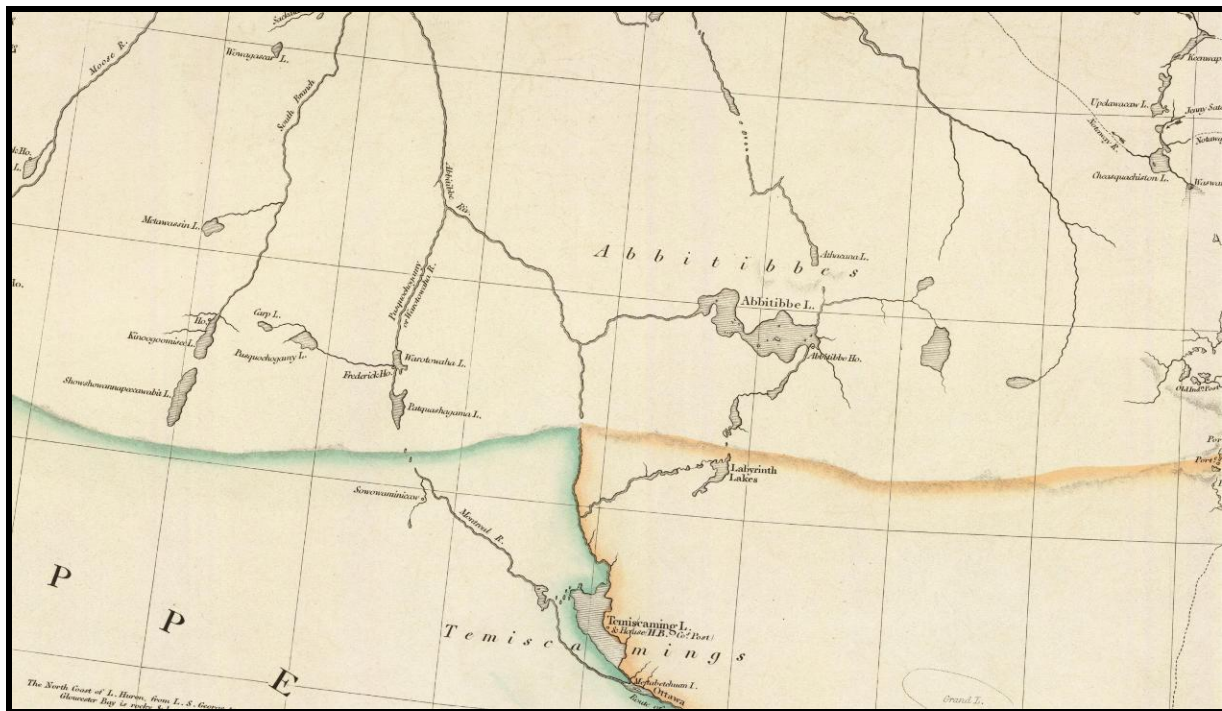


Figure 15: Detail of Arrowsmith's *Upper Canada* (1844)
(Cartography Associates 2009:David Rumsey Collection)

5.3.1 District of Cochrane

Cochrane District was largely unsettled early in the Euro-Canadian era, and most turn-of-the-20th-century folk knew little of the vast expanse of northern Ontario beyond the Canadian Pacific Railway (Marwick 1950:3). Here the Districts of Algoma and Nipissing extended across the great expanse of northern Ontario to the southern shores of James Bay, parts of which would later be rearranged into the Districts of Sudbury (1894), Timiskaming (1912), and finally, Cochrane (1921). The earliest pioneers began to arrive in this area in the 1880s, and the majority settled at the head of Lake Temiskaming (Marwick 1950:3; Dodds 1978:5). These early settlers cleared the land, built homes and planted crops, but they were largely isolated from the rest of Ontario and had few means in the way of communication. Their transportation routes were limited to the waterways, primarily Lake Temiskaming itself and the Ottawa River.

These early settlers pressured the government to establish a railway to service the north (Dodds 1978:5), but their requests fell upon deaf ears until Queen's Park decided to open up what was then called 'New Ontario'. Funds for a grand and ambitious railway project were set aside during the 1900 session of the Legislature, amounting to some \$40,000 (Gibson 1970). In 1900, ten teams of surveyors were sent to assess the agricultural, mineralogical, timber and water power potential of the north, basing their explorations from the Canadian Pacific Railway (Dodds 1978:5). The reports of the surveyors were presented in 1901, including Report No. 2 on the Cochrane area and the Great Clay Belt which stated:

The country along the whole length of the line is almost level. The soil is generally clay ... A large part of the country is covered with a heavy coating of moss which, in many places retains the winter's frost until late summer and retards the growth of timber ... summing up the whole line, it may be said that from start to finish it runs through as fine a tract of farming land as can be found in Ontario (Dodds 1978:6)

The surveyors also noted that the area was largely uninhabited, aside from several hundred Anishinabeg distributed over a large area. They noted that the First Nations typically concentrated their settlement along the Hudson Bay posts in the summer months, where fish were abundant, but otherwise returned to the wild in the winter months to hunt and trap. Already at that time they reported that Aboriginal peoples often had to deal with starvation due to the lack of game that was once so plentiful (Dodds 1978:11). The 1902 session of the Legislature authorized the provincial government to build the railway and open up 'New Ontario' (Marwick 1950:4-5).

The construction of the Temiskaming and Northern Ontario (T. & N. O.) railroad began in North Bay on May 12, 1902, and by 1905 the line reached New Liskeard, roughly 210 km southeast of the study area. At that time, it was announced that the Federal Government had plans to erect another railway running from Quebec to Winnipeg, so renewed interest emerged in expanding the Provincial line further to the north to meet with this 'Transcontinental Railway'. This second phase was planned and begun by the T. & N. O. Commission, and by the end of 1906 the railway

had reached McDougall's Chute, roughly 80 km southeast of the study area. Numerous towns were founded at that time, including Dane and Matheson (formerly McDougall's Chute). The final step towards meeting the Transcontinental at Cochrane was taken in January, 1907, but construction was severely hampered by extremely wet weather during the summer and fall (Marwick 1950:5-8).

During the survey work for the northerly expansion of the railway, a burial was found in the tangled forest. This burial was marked by a cross bearing a date of '1853', perhaps belonging to some unknown early traveller or settler (Marwick 1950:9-1). Initial survey and exploration between the Abitibi and Frederick House Rivers also resulted in the identification of an ideal town site, which was described by Joseph E. Bourke, an engineer of the T. & N. O. Commission, as follows:

The townsite is splendidly located on a rolling ridge covered with spruce, birch, poplar, etc., three deep lakes of clear water are situated within the town site. By a little care on the part of the townspeople an ample supply of pure water, for domestic purposes, is assured (Marwick 1950:11-12).

The name of the future town had already been chosen in 1907. It was to be called Cochrane in honour of the Minister of Lands, Forests, and Mines for Ontario, Frank Cochrane (appointed in 1905). Unfortunately, early in 1908 the project's finances were exhausted, and additional funding had to be obtained to complete the project. The line was completed in the summer of 1908, and the proposed junction with the Grand Trunk Pacific was reached (Marwick 1950:12-13; Dodds 1978:14).

Unlike much of southern Ontario, the lands that would make up the District of Cochrane had not yet been legally obtained from the First Nations by the time of the arrival of the first railways and the earliest communities. These lands were surrendered in 1905 and 1906 as part of Treaty No. 9, also known as the James Bay Treaty. The treaty was enacted in response to repeated petitions by the Cree and Ojibway First Nations, who were suffering great hardships due to the dramatic changes occurring in northern Ontario, particularly amongst populations living away from the railway line and its associated trade benefits. The First Nations were also concerned that mining and timber contracts were being granted by the government in un-surrendered lands (Morrison 1986; Indian and Northern Affairs Canada 2008; 2009). Chief Louis Espagnol's plea to James Phipps, Superintendent of Indian Affairs, summarizes the situation in 1884 quite succinctly:

All of my old people who used to hunt near here are in great need ... the trappers have stolen all our beaver, so there is nothing left for them to hunt and they are too old to go anywhere else ... there are also about twenty old sick women, invalids and orphans who are very badly off and they all join me in asking you to help us (Morrison 1986:2).

Treaty No. 9 was the only agreement known to have directly involved the Provincial Government in the negotiation process. These were typically arranged only by the Federal Government. Treaty No. 9 was also unusual in that the documentation was physically brought to the communities to secure signatures, rather than being signed in one communal location (Indian and Northern Affairs Canada 2008).

The treaty was first brought to Osnaburgh (Mishkeegogamang Ojibway Nation) on July 12, 1905, and upon its presentation, Chief, Missabay, expressed “the fear of the Indians that, if they signed the treaty, they would be compelled to reside upon the reserve to be set apart for them, and would be deprived of the fishing and hunting privileges which they now enjoy .. on being informed that their fears in regard to both these matters were groundless, as their present manner of making their livelihood would in no way be interfered with, the Indians talked the matter over among themselves” (Morrison 1986:33). The treaty was accepted, and a gratuity of \$8 was given to 350 people with annuity of \$4 thereafter in exchange for the surrender of local lands. At that time Chief Missabay was also presented with a 12 foot Union Jack (Indian and Northern Affairs 2008).

Treaty commissioners continued to secure signatures at Fort Hope, Marten Falls, English River, Fort Albany, Moose Factory, New Post and Abitibi in 1905 (Indian and Northern Affairs Canada 2008). James Wesley, a Cree historian of the Fort Albany reserve, states his perception of the treaty commissioner’s visit and words on August 3, 1905:

I am here under the British Government to tell you people if you are interested in a proposal from the British Government for you to give up your land for the government to look after. And if you are in favour of the idea give us your land. You will be given \$8.00 a year when you have given us your land. We will also give \$8.00 to all the people that are born from you. And also you will be visited by the doctor yearly and he will administer medicine and without charge to you people. Do not be afraid because there will not be any legislation governing trapping, hunting animals and hunting birds and fishing if you are in favour of the Treaty. If something happens to you as to sickness or need of help the Government will help you, all the people from Albany, Attawapiskat, Winisk, Fort Severn will have this help. This will be all for now; I will give you one hour to think it over. If you do not accept this treaty, the government will do whatever it wants with you. Where we have come from, all the Indians have agreed to sign treaty; if you don't you will find it hard for yourselves ... (Morrison 1986:2).

The commissioners eventually reached the First Nations at New Post on the Abitibi (Taykwa Tagamou Nation) on August 21, and again the local band expressed its concern about the effect the treaty might have on their hunting and fishing rights. After being assured that such rights would not be taken from them, they “expressed much pleasure and their willingness to sign treaty” (Morrison 1986:36).

The tour continued in 1906, and the commissioners obtained signatures at Matachewan, Mattagami, Flying Post, New Brunswick House, Chapleau and Long Lake. Unfortunately, the implications and impact of signing Treaty No. 9 were never clearly explained to the First Nations. According to the Treaty No. 9 commissioners' official report, promises of relief supplies and annual medical officer visits were never part of the written agreement. Discrepancies between the promises of the commissioners and the legal content of the treaty generated much despair on the part of the northern First Nations in the years following the signing of the treaty. As Morrison summarizes, "there is such a thing as non-verbal communication, and the way in which the government party presented itself to the Indian people created several unforeseen consequences ... for years afterwards, the government would hear complaints about unfulfilled provisions of the treaty" (1986:41).

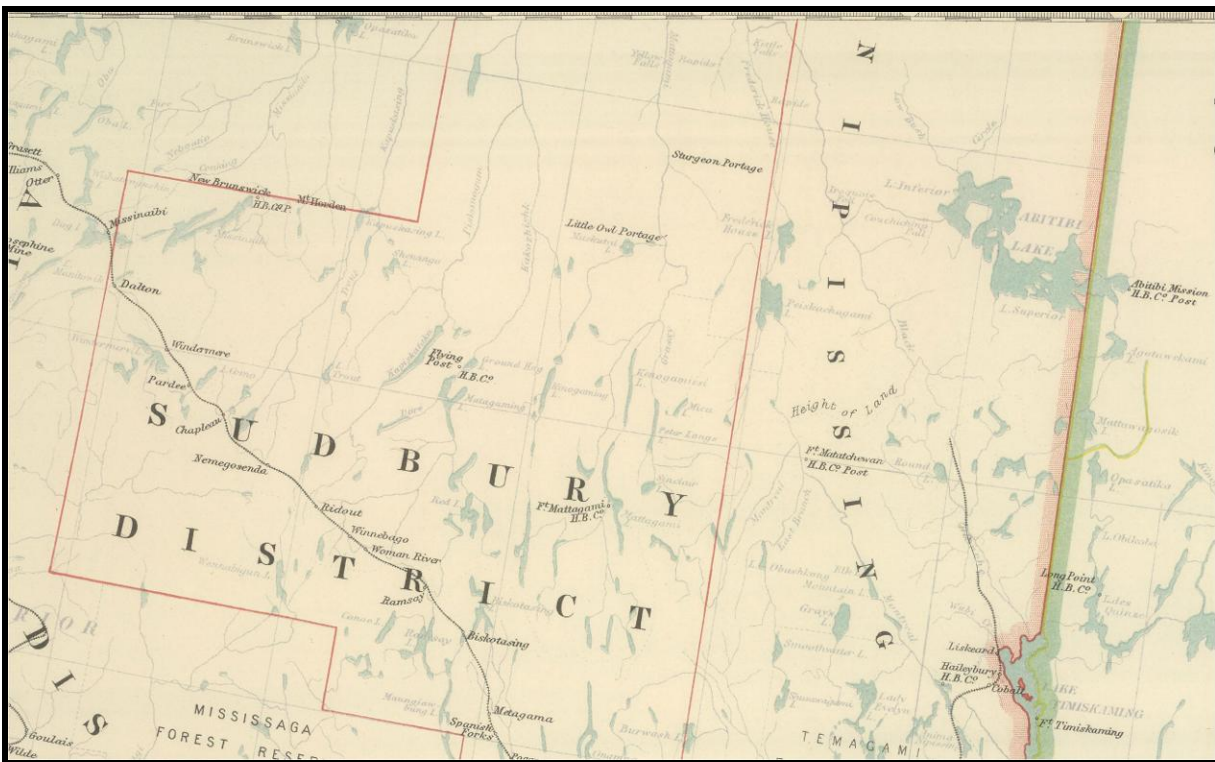
Additions were made to the treaty in 1929 and 1930, including lands at Big Trout Lake, Windigo Lake, Fort Severn and Winisk. (Indian and Northern Affairs Canada 2008). This enlarged area would cover nearly two-thirds of northern Ontario (see Figure 16).



**Figure 16: Historic Canadian Land Treaties
(Indian Affairs 2009)**

5.3.2 The Town of Cochrane

With the arrival of the railway in 1908 and the subsequent founding of Cochrane itself, Euro-Canadian settlement of the area began to increase exponentially (see Figure 17). The area was divided up into 160 acre farm lots which sold for \$80 each. Only a quarter of the full price was required initially, with the balance to be paid in three yearly payments plus 6% interest. After four years, the settler could then obtain the patent to the lot (Marwick 1950:129). The first settlers began to arrive in 1909, taking the 22 to 24 hour ride from Toronto that could amount to \$500 if livestock and furniture was also shipped (Dodds 1978:15). Upon arrival, each man obtained the number to his lot and was given directions to find the stakes. These settlers then set out, forcing their way through the bush with their provisions, axes and saws. Some went east towards the Abitibi River, following old tote roads, while others struck out into the unsettled north (Marwick 1950:129). Cochrane received its charter in January, 1910, and soon after it experienced its first disaster when its business sector burned to the ground in August of that same year (Gibson 1970).



**Figure 17: Detail of Johnston's Central Canada (1912)
(Cartography Associates 2009:David Rumsey Collection)**

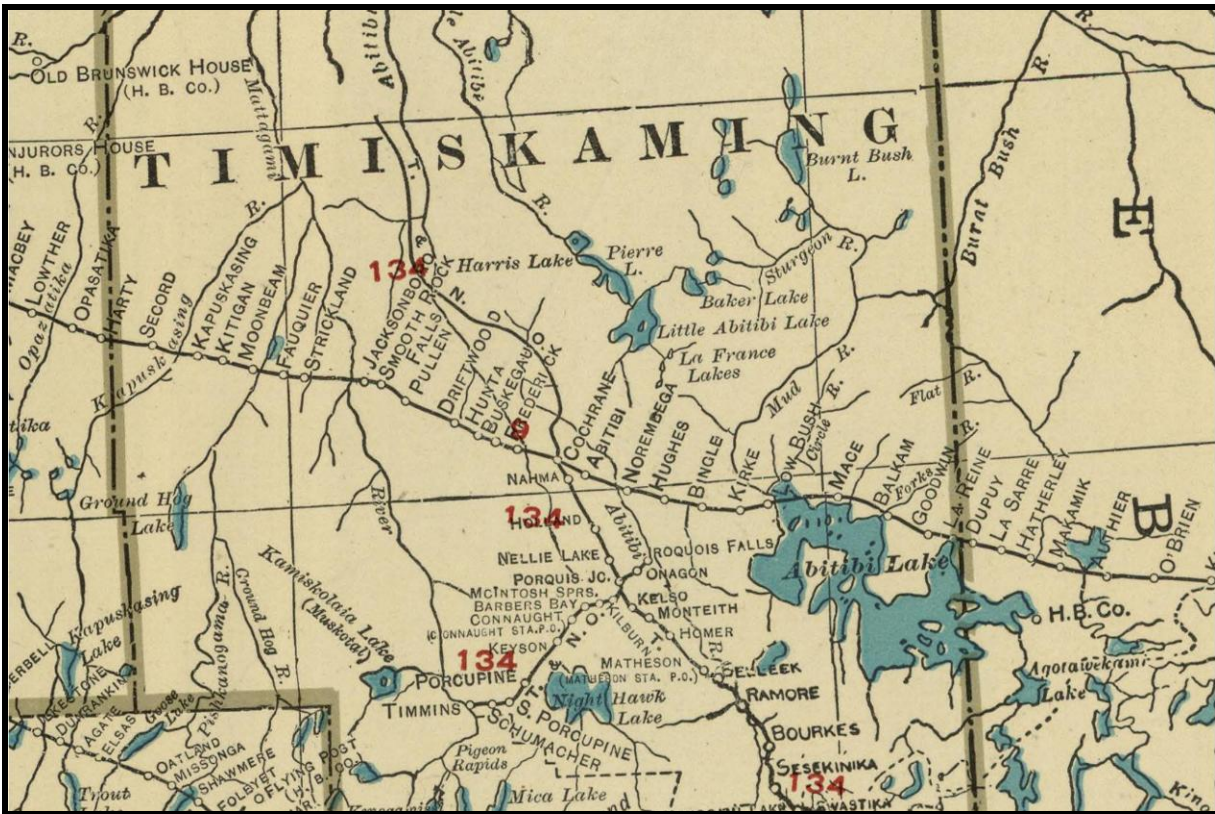
Employment for these early settlers, aside from selling timber and agricultural goods, was focused on the continued construction of the Grand Trunk Pacific railway and the Temiskaming

and Northern Ontario railway (Dodds 1978:14-15). Land needed to be cleared and steel needed to be laid, so many settlers would work on the railway in the winter and tend to their farms during the winter. On the settler's own lands, the majority of the early years were spent clearing the land in order to obtain their patent. They also sold firewood on the side of the road and pulpwood to the railroads. Early houses were generally tents or lean-tos, until the standard 16 x 20 foot shack could be built. The early years were the most difficult, as "everything had to start from scratch, and most of the settlers kept on scratching for years" (Marwick 1950:131).

Fire was always a danger, due largely to the common practice of burning brush and stumps. In 1911, some 864 square miles were devastated, with approximately \$3,000,000 in damages and 73 dead. This happened again in 1916, though the area of the fire was 1,000 square miles and 223 people died (Gibson 1970). Another challenge that faced the north were 'bogus settlers', lumberjacks sent by large lumber companies to strip the forest, leaving little for new settlers to sell and build with (Marwick 1950:132).

In anticipation of the great influx of settlers, the government began surveying the townships of the area in 1904. Typically, as fast as they were opened, the townships filled up (Dodds 1978:17). In the vicinity of what would become the Town of Cochrane, four townships were opened for settlement by 1910. To the north were Glackmeyer Township and Chute Township, while Lamarche Township and Fournier Township were situated to the south (Marwick 1950:141). Further to the west, Calder Township, Colquhoun Township and Leitch Township would later be opened for settlement. In less than 30 years, roughly 200 organized townships were created in northern Ontario (Dodds 1978:17). Aside from the community at Cochrane itself, the French Canadian settlement of Genier developed around Dora Lake to the north (Marwick 1950:141), while Hunta grew up in the vicinity of Hydro Lake to the west (See Figures 18-19). The very first settlers settled in Glackmeyer Township, with the other townships developing at a slower pace (Marwick 1950:141).

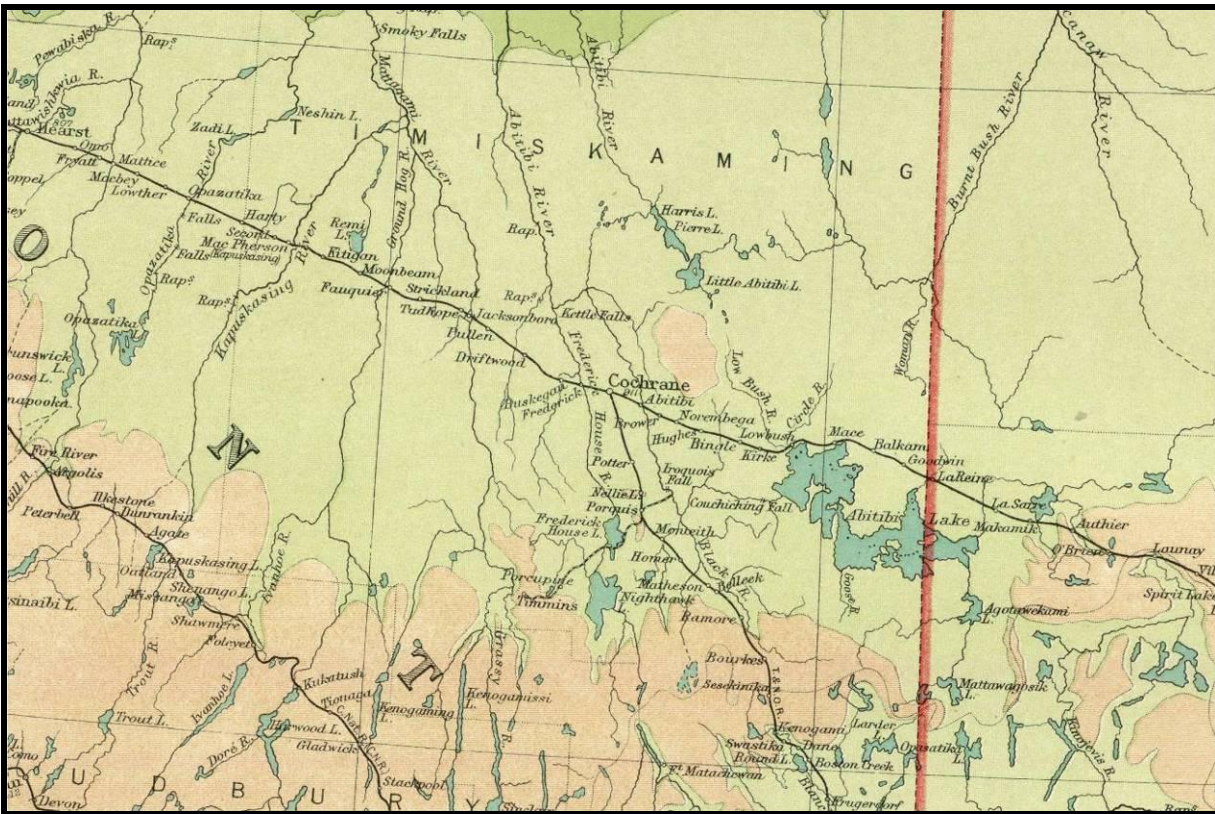
These settlers were unfortunately misled in many cases, as promotional 'settlement literature' was geared towards distorting the truth to encourage settlement. Winters were called 'mild and equable', 'healthful and dry', while the summers were 'warm with plenty of rain'. The winters were bitter, and the rains perhaps much too plentiful, especially around harvest time (rather than in the spring when it was needed). The absence of 'crop diseases' manifested itself in the form of frequent blights. The potatoes were sometimes "no bigger when they were harvested as when they were planted" (Dodds 1978:22). Still, settlement continued and the north developed. The town of Cochrane was made the seat of the Judicial District of Cochrane in 1922, and it came to house several headquarters of provincial government branches (Gibson 1970).



**Figure 18: Detail of Rand McNally's Map of Northern Ontario (1922)
(Cartography Associates 2009:David Rumsey Collection)**

In 1923 disaster struck once again. Typhoid fever broke out as the result of extensive pollution in the town's water supply; largely caused by the overflow of the aptly-named Sewer Lake into Spring Lake. The population was devastated, and with only two doctors and few nurses, many lives were lost. Seven doctors and seventy nurses arrived to help once word of the epidemic spread, and it took two months to bring the outbreak under control (Gibson 1970). Of the 3,500 people living in Cochrane, there were 1,072 cases and 100 deaths. Many of the dead could not be immediately buried in the frozen earth.

The population rebounded from the disaster, and continued to grow. In 1943, Highway 11 was completed between Hearst and Geraldton, and Cochrane was granted access to the west. By the end of the 1960s, Cochrane boasted a famous Snow Carnival (with its Polar Bear Dip), diverse shopping facilities, several golf and sport clubs, a public library, a hospital with roughly 100 beds, two public schools, a volunteer fire service, ample policing and eight churches (Gibson 1970). The community continues to thrive to this day. The Town of Cochrane, the seat of Cochrane District, was created in 2000 by the amalgamation of the Townships of Glackmeyer and Lamarche.



**Figure 19: Detail of Bartholomew's *Ontario & Quebec* (1922)
(Cartography Associates 2009:David Rumsey Collection)**

5.3.3 The Study Area – Lot 16, Concession 8

Lot 16, Concession 8 of Glackmeyer Township (Parcel 2051) was first patented to Emelda Buissiere, a widow, on November 5, 1947. On February 17, 1950, John Schenk claimed to be the purchaser of the lot by way of an agreement between himself and Emelda. On December 12, 1950, Emelda subsequently transferred the parcel to one Jan Schenk for a consideration of \$1. Jan and his wife Renske obtained a mortgage from the Canadian Farm Loan Board for \$2,000, with interest at 4% per annum. Unfortunately, due to tax arrears, the parcel was withdrawn by the Township of Glackmeyer on June 9, 1954, and ownership of Lot 16 passed to the Canadian Farm Loan Board on March 11, 1955 (for a consideration of \$1).

On March 20, 1964, the Farm Credit Corporation (formerly Canadian Farm Loan Board) transferred the lot to Albert Tousignant and Gerardine Tousignant for a consideration of \$3,000. Albert and Gerardine obtained a mortgage from the Farm Credit Corporation for \$8,500, with interest at 5% per annum. The parcel was later transferred to Tousignant Frères Limited on June 4, 1974, a company which obtained a mortgage of \$48,400 from the Farm Credit Corporation (with interest at 8% per annum). On the same day Albert and Gerardine became the lessees of the

new owners. The parcel was finally transferred to Rick Martin on March 7, 1998 for a consideration of \$15,500. The land transactions for Lot 16, Concession 8 are summarized in Table 1.

Table 1: Land Transaction Summary for Lot 16, Concession 8

Date	Transaction	Grantor	Grantee	Acreage
Nov 5, 1947	Patent	District of Cochrane	Emelda Buissiere	All
Dec 12, 1950	Transfer	Emelda Buissiere	Jan Schenk	All
June 9, 1954	Tax Arrears	Jan Schenk	Township of Glackmeyer	All
Mar 11, 1955	Transfer	Township of Glackmeyer	Canadian Farm Land Board	All
Mar 20, 1964	Transfer	Farm Credit Corporation	Albert and Gerardine Tousignant	All
June 4, 1974	Transfer	Albert and Gerardine Tousignant	Tousignant Frères Limited	All
Mar 7, 1998	Transfer	Tousignant Frères Limited	Rick Martin	All

Due to the recent date of settlement in the District of Cochrane and the location of the study area outside of major population centres, historical maps depicting the area of interest were not available.

6.0 Archaeological Potential

In addition to the relevant historical sources and the results of past excavations and surveys, the archaeological potential of a property can be assessed using its soils, hydrology and landforms as considerations. Throughout most of the Canadian Shield, there is considered to be a strong association between site locations and waterways. In particular, Pre-Contact Aboriginal sites are most commonly found along lakes where they are joined by navigable rivers and streams, and in those areas where the banks of creeks and rivers are sandy and well drained (Wright 1972b; Knight 1977). These areas are natural attractors for plant, game, and fish species, were valued for their proximity to transportation and communication routes, and had soils that were ideal for habitation and agricultural exploitation. The Ministry of Tourism and Culture (Ontario Ministry of Culture 2005:12-13) accordingly identifies properties with high potential for Aboriginal sites within 300 m of a primary water source (accessible lakes shores, rivers and large creeks) and 200 m of a secondary water source (smaller creeks, intermittent or seasonally wet streams, springs, marshes or swamps).

Other factors attracting prehistoric settlement include the presence of elevated knolls and ridges, unique landforms (waterfalls, rocky outcrops, caverns) and valued natural resources (raw

materials, concentrations of specific flora/fauna). Conversely, it must be understood that non-habitational sites (e.g. burials, lithic quarries, kill sites, etc.) may be located anywhere. Potential modeling appears to break down when it comes to these idiosyncratic sites, many of which have more significance than their habitational counterparts as a result of their relative rarity.

With the development of integrated 'complex' economies in the Historic (or Euro-Canadian) era, settlement tended to become less dependent upon local resource procurement/production and more tied to wider economic networks. As such, proximity to transportation routes (roads, canals, etc) became the most significant predictor of site location, especially for Euro-Canadian populations. In the early Historic era (pre-1850), when transport by water was the norm, sites tended to be situated along major rivers and creeks - the 'highways' of their day. With the opening of the interior of the Province to settlement after about 1850, sites tended to be more commonly located along historically-surveyed roads. Positive potential for Historic archaeological materials can also be inferred by proximity to documented historic structures (churches, cemeteries, houses) and locations associated with historic events.

Based on the location, drainage, topography and land-use modelling it seems clear that the study area would, in its pristine state, have a high potential for the presence of both Pre-Contact and Historic-era sites. The potential for Pre-Contact sites is high due to the presence of an unnamed creek to the east. The potential for historic Euro-Canadian sites is similarly high due to the study area's proximity to Glackmeyer Concession Road 8-9, a historically-surveyed thoroughfare. The lack of development in the study area for infrastructural, residential or commercial purposes has preserved its archaeological potential. In sum, the study area has the potential to yield sites which span Ontario's entire archaeological history.

7.0 Field Methods

Given that the study area was comprised of ploughed agricultural lands and areas not under cultivation, it was necessary to utilize both the pedestrian survey method and the test pitting method to complete the assessment.

In areas under cultivation that had been recently ploughed and contained well-weathered soils (see Plate 1-2), the archaeological assessment was carried out using the pedestrian survey method as set out by the Ministry of Tourism and Culture (Ontario Ministry of Culture 2009:12-13). In this strategy, crewmembers traversed the study area along parallel transects established at 5 m intervals, resulting in 20 survey transects per hectare (see Plate 3). If cultural materials were encountered in the course of the survey, the transect interval would be closed to 1 m and a close inspection of the ground would be conducted for 20 m in all directions. All diagnostic artifacts and a representative sample of non-diagnostic artifacts would then be collected for analysis. All remaining artifacts would be left *in situ* until a proper Stage 3 Controlled Surface Collection (CSC) could be carried out.

In areas not under cultivation, the assessment was conducted using the test pit survey method (sometimes referred to as shovel-testing). In this strategy, small regular 'test' pits, 30 cm in diameter, were hand-excavated down into the first 5 cm of subsoil at prescribed intervals across the study area (see Plates 4-5). The Ministry of Tourism and Culture's *Draft Standards and Guidelines for Consultant Archaeologists* (Ontario Ministry of Culture 2009:15) require that lands in northern Ontario or on Canadian Shield terrain be assessed according to the following standards:

- Test pitting is to be carried out at 5 m intervals for all lands within 50 m of any features with archaeological potential;
- Test pitting is to be carried out at 10 m intervals between 50 and 150 m of any features with archaeological potential.

The Ministry of Tourism and Culture (Ontario Ministry of Culture 2009:5-6) identifies features indicating archaeological potential as follows:

- Previously-identified archaeological sites;
- Natural water sources;
- Elevated topography (e.g. drumlins, eskers, moraines, etc.);
- Pockets of well-drained sandy soils;
- Distinctive landforms that may have been attractive as spiritual sites (e.g. waterfalls, rock outcrops, caverns, mounds, etc.);
- Resource collection areas (e.g. raw material sources, migratory routes, prairie lands);
- Historic transportation routes;
- Historic settlements;
- Properties designated under the *Ontario Heritage Act*;
- Locations identified as archaeological sites by the local knowledgebase, oral history, etc.

Survey is not required on lands with no or low archaeological potential (Ontario Ministry of Culture 2009:10), including lands that:

- Lay beyond 150 m of any features with archaeological potential;
- Are permanently wet;
- Are steeply sloped (greater than 20°);
- Consist of nothing but exposed bedrock.

All uncultivated lands exhibiting archaeological potential were assessed according to these standards (see Figure 3). Soil from each test pit was screened through 6 mm mesh and examined for archaeological remains (see Plate 6). If cultural materials were encountered in the course of the survey, each positive test would be documented. Clustered test pits at a transect interval of 1

m would be excavated in areas of high artifact concentrations to further delimit the site, and all artifacts would be collected for analysis. All test pits were backfilled upon completion.

Artifacts that may indicate the presence of significant cultural deposits include bone, charcoal, lithics (stone tools and refuse generated by their production and use), ceramics, glass, and metal. Archaeological features such as pits, foundations, and other non-portable remains may also be detected during a Stage 2 survey. Any archaeological materials encountered are flagged, mapped, photographed and collected for further analysis. Artifact locations are recorded on topographic maps, in field notes and at +/- 5 m accuracy on a Garmin eTrex Legend, WAAS-enabled, GPS (using the **WGS-84** coordinate system). As part of the Stage 2 assessment, all field data was removed, with permission from the land owner. Any artifacts recovered are sent to the ARA office at 97 Gatewood Road in Kitchener, Ontario for processing, cataloguing, analysis and curation. Project photographs, mapping materials, and field notes are stored at the same facility.



Plate 1: View of Ploughed Lands



Plate 2: View of Soil Conditions at Time of Survey



Plate 3: Crewmembers Conducting Pedestrian Survey at 5 m Intervals



Plate 4: View of Crewmembers Test Pitting at 10 m Intervals



Plate 5: Typical Test Pit, Excavated to Subsoil



Plate 6: Crewmember Screening Through 6 mm Mesh

8.0 Results

The Stage 2 archaeological assessment of the proposed Martin's Meadows Solar Project was conducted on November 3rd and 4th of 2010. Legal *Permission to Enter* (PTE) and recover artifacts on project lands was granted by the landowner. Key personnel involved during the assessment were P.J. Racher, Project Director; H.T. Brown and A.J. Wong, Field Directors; A. Ray, Assistant Field Director; and 9 additional crewmembers. Field conditions were excellent, with partly-sunny skies, well-weathered soils in the ploughed lands, and dry soil for screening.

The pedestrian survey of the ploughed lands (70% of the study area) and the test pit survey of the uncultivated areas (30% of the study area) did not result in the discovery of any finds exhibiting significant cultural heritage value or interest (see Figure 3). Approximately 20% of the study area was not surveyed due to the presence of lands with no archaeological potential, including those that were permanently wet and those sloped greater than 20°. Wet areas were primarily confined to the northwestern and western woodlots, but a thin east-west section of the southern woodlot was also wet (see Plates 7-11). Lands sloped greater than 20° were located in the northeastern part of the study area where land descends to the unnamed creek to the east (see Plate 12).



Plate 7: View of Wet Area



Plate 8: View of Wet Area



Plate 9: View of Wet Area



Plate 10: View of Wet Area



Plate 11: View of Wet Area



Plate 12: View of Lands Sloped > 20°

9.0 Recommendations and Advice on Legislative Compliance

Over the course of the Stage 2 archaeological assessment, no materials with significant cultural heritage value or interest were recovered. Accordingly, **Archaeological Research Associates Ltd.** feels that no further archaeological study of the area would be productive. It is recommended that the project be released from further heritage concerns. A **Letter of Concurrence** with these recommendations is requested.

This report is filed with the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report will be reviewed to ensure that the licenced consultant archaeologist has met the terms and conditions of their archaeological licence, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*. This condition provides for the potential for deeply buried or enigmatic local site areas not typically identified in evaluations of potential.

The Cemeteries Act requires that any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Small Business and Consumer Services. All work in the vicinity of the discovery will be suspended immediately. Other government staff may be contacted as appropriate; however, media contact should not be made in regard to the discovery.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act*, and may not be altered, or have artifacts removed, except by a person holding an archaeological licence.

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Appendix: Project Mapping Provided by Hatch Ltd.

