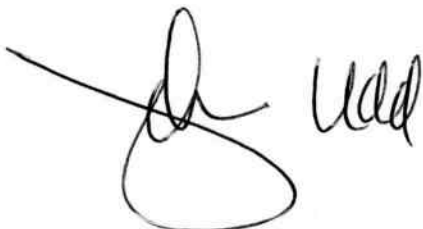


The Mines of Ottawa

A guide to the mineral deposits of
Southeastern Ontario and Southwestern
Québec

by

John E. Udd

To Colin
With best wishes


“The Mines of Ottawa”
**A Guide to the Mineral Deposits of Southeastern Ontario and
Southwestern Québec**

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Important Notes to the Reader

The information in this book has been compiled from sources considered to be very reliable. Nonetheless, the absence of errors can not be guaranteed. Very often, the details about locations differed in the various reports. Such differences are mentioned in the descriptions in this book.

Additionally, no attempt has been made to find and list the current owners of the properties. This would have been a monumental task resulting in many errors. Against the background that several hundred properties are included, it is likely there will be many changes in ownership in any given year.

Thus, readers wishing to visit any of the properties are advised that some personal research is necessary. First, the majority, if not all, of the mineral deposits are probably located on privately-owned land. Thus, some effort may be required to establish the identities of the owners. Preliminary travel in the area, including visits to Registry Offices and/or neighbours, may be needed.

Second, the rights of owners to unimpeded enjoyment of their property must be respected. Always request permission to visit and leave the property as you found it. "No trace" visiting should be the norm. You should also assure the owner(s) that you will assume any liability in respect of your visit.

Finally, abandoned mines present many possible hazards. Always be properly equipped with personal protection, including appropriate clothing, a hard hat, safety boots, and safety glasses. Be aware of potential hazards both beneath and above you. Open trenches, pits, and holes can be very dangerous. Proceed with caution and pay careful attention to where you are walking. Never enter tunnels or caves or climb on waste embankments without being mindful that rocks and other objects may fall from above. Never visit a property alone.

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Introduction

Minerals have been mined in Canada for thousands of years. Long before the first contact with Europeans, about 4000 B.C., the first nations peoples were trading in native silver and copper from the country around Lake Superior. About 2000 B.C., it is thought that the Maritime Archaic Indians mined chert at Ramah Bay, Labrador, for trading as far south as New England. For a period from about 200 BC to 200 AD there was trade in native silver from the area that is today called Cobalt, Ontario. Later, in 998, the Vikings are known to have mined bog iron ore at L'Anse aux Meadows, Newfoundland. There must be many, many, more examples.

The arrival of the explorers in the late sixteenth century, however, added a new dimension. The Europeans viewed the Americas as a storehouse of vast mineral wealth that could be used to support their coffers. With a keen eye to the potential of the new lands, the explorers reported anything of potential economic significance they came upon. A mountain with a "greenish hue" was reported in the Gaspé peninsula of Québec. Master Simon, a mining engineer accompanying Samuel de Champlain, reported silver and iron at St. Mary's Bay, Nova Scotia. Canada's first coal mine was opened at Grand Lake, New Brunswick, in 1639. This was followed, in 1672, by the mining of coal seam at Sydney Mines, Cape Breton Island, Nova Scotia.

As exploration spread west from the Maritimes into the heart of the continent, via the great waterways, discoveries were reported farther and farther inland. Bog iron ore was mined at Les Forges du St. Maurice, Québec, in 1729. Canada's first blast furnace, and the second in North America, was blown in at that location in 1736.

In 1740, as the result of exploration to the farthest reaches of the Ottawa Valley, argentiferous galena was discovered at Anse à la Mine, on Lake Temiskaming. Bellin's map of 1744 shows this deposit.

During the 18th Century, the mining of coal by regular methods began in Cape Breton and New Brunswick. Three additional blast furnaces, the Batiscan, L'Islet, and Shawenegan, were constructed in Québec. In 1800, the first blast furnace in Ontario was constructed at Furnace Falls (Lyndhurst), at the falls of the Gananoque River.

In the early 19th Century other blast furnaces were erected in eastern Ontario, and the province's first iron mine, the Blairton, or Big Ore Bed, was opened near Marmora, in Hastings County. Placer gold was discovered in the Chaudière Valley, of Québec. The mining and processing of gypsum began near Paris, Ontario. In 1846, silver was discovered near Thunder Bay, Ontario, and the famous copper mines at Bruce Mines were opened. Until their closing in 1875, this was the most famous mining centre in Canada.

In 1829, apatite was discovered in the Lièvre River area, north of Buckingham, Québec. By the end of the century the scores of mines in the Gatineau and Lièvre districts, many of them small

operations, made these the principal areas of phosphate mining in Canada. Mining began in 1871, and the famous Emerald Mine was opened by the Buckingham Mining Company in 1875. Phosphate mining in the area continued until the discovery of large deposits of guano, or animal phosphates, in the southern United States, made it uneconomical to continue mining hard rock phosphate for fertilizer in Canada.

These deposits, however, were located in pyroxene pegmatite dykes. A number of other minerals of economic importance were found in association with the apatite, namely: mica, feldspar, and quartz. The end of the nineteenth century was the beginning of the electrification of North America. Thus, as the market for phosphate declined the market for mica was on the ascendency. Many deposits originally mined for one mineral, were re-mined for another.

In 1830, iron was reported in Hull, Québec. The famous Forsyth mine, which operated for more than 100 years, opened in 1848. Located on the north side of the city its headframe was a landmark. I saw it many times as a child - never imagining that my career would be in mining engineering or that one day I would compile a history of the mines in the area. There were several iron mines in the area from Hull to Shawville on the Québec side of the Ottawa River.

In 1845, Canada's first graphite mine, the Miller, or Keystone, opened at Grenville, Québec. Attempts to mine the disseminated graphite of the Buckingham region, followed in 1847. The Black Donald Mine, on Whitefish Lake, in Renfrew County, Ontario, opened in 1896 and became the source of most of the graphite mined in Canada. Its principal shareholder was the McRae family, of Ottawa, and I am able to add a personal note which highlights the fascinating discoveries that can be made in doing historical research. John William McRae, the Secretary of the company that operated the Black Donald, was the original owner of a camp that I own, called *Landikagama*, on Petit Lac Cayamant, north of the Picanoc River. John William, an entrepreneur was the President of Ottawa Electric and the Ottawa Electric Street Railway Company at the end of the 19th Century. He was instrumental in the electrification of Ottawa. His son, John Bell McRae, a graduate of McGill University in mining engineering, as am I, was responsible for the Black Donald. John Bell probably built the building I now occupy after the tragic accidental death of his father in 1901.

Also around Ottawa and Hull were a large number of limestone and sandstone quarries. The materials were used in the construction of our nation's capital, and the Rideau Canal. The Higginson sandstone quarry, at Hawkesbury, is probably the oldest mining operation in the area. It is thought to have been started in the 1820s since blocks with the date "1825" carved into them may be found in the first lock of the Grenville canal, and in the keystone above the door to the lockmaster's house. Limestone was also used for the production of lime, and the first hydraulic cement produced in Canada was made at Hull, in 1840. There were many quarries in the region and mining continues at several deposits today.

The middle of the 19th Century was the age of industrialization in North America. The steel industry was born, and the ribbons of rail that it produced resulted in the great age of railroad

building. Many of these lines were built to provide rail service to the mineral deposits that had been discovered. The circle was completed by many deposits being discovered, in turn, through the opening up of the country by the construction of the railroads. Their names must not be lost to history for they played a pivotal role in the development of Canada. In the area of a circle of about 180 kilometers (100 miles) radius around Ottawa, these were the:

Barry's Bay and Bessemer
 Bay of Quinte (into Canadian Northern)
 Belleville and Madoc (into Grand Trunk)
 Belleville and North Hastings (into Midland Railway)
 Bessemer Mine Railway (gone)
 Bessemer and Barry's Bay (into Canadian Northern)
 Brockville and Ottawa
 Brockville, Sault Ste. Marie and North Western
 Brockville, Westport and Northwestern
 Brockville, Westport and Sault Ste. Marie
 Brockville and Westport
 Canada Atlantic (into Grand Trunk)
 Canada Central (became Canadian Pacific)
 Canadian National
 Canadian Northern (with Canadian Government Railways
 became Canadian National)
 Canadian Pacific
 Central Ontario (into Canadian Northern)
 Cobourg, Peterborough and Marmora
 Dominion Timber and Minerals (circa 1916)
 Fassett Lumber
 Gatineau Valley (into Ottawa, Northern and Western)
 Grand Junction (into Midland, then Grand Trunk)
 Grand Trunk (into Canadian National)
 Grasselli Chemical Company Pyrite Mine (narrow gauge)
 Haycock Mine (narrow gauge)
 Irondale (into Irondale and Bancroft)
 Irondale and Bancroft (into Irondale, Bancroft and Ottawa)
 Irondale, Bancroft and Ottawa (into Canadian Northern)
 Kingston and Pembroke (into Canadian Pacific)
 Marmora Railway and Mining (into Canadian Northern)
 Midland Railway of Canada (into Grand Trunk)
 Montréal and Ottawa (into Canadian Pacific)
 Napanee, Tamworth and Québec (into Bay of Quinte)
 New York and Ottawa
 Ontario and Québec (into Canadian Pacific)
 Ontario, Belmont and Northern (subsidiary of Central Ontario,

became Marmora Railway and Mining)
 Ottawa and Cornwall (circa 1904)
 Ottawa and Gatineau (circa 1898) (into Gatineau Valley)
 Ottawa and Prescott (into Canadian Pacific)
 Ottawa, Arnprior and Parry Sound (into Canada Atlantic)
 Ottawa, Northern and Western (into Canadian Pacific)
 Pontiac and Pacific Junction (into Canadian Pacific)
 Prince Edward County (became Central Ontario)
 Québec and Ontario
 Toronto and Nipissing Extension (into Irondale, Bancroft and
 Ottawa)

In doing the literature search for this book, I found there were many references in the various reports of the importance of rail access to the southern markets. The dates that rail service to mineral deposits were established were usually noted, as were the distances to the nearest Stations. Wherever I have come across these I have placed the details in my listings of properties. I believe that this serves a twofold purpose: it adds further precision to obtaining the exact location; and, it adds historical flavour to the writeups.

In the mid-19th Century, the gold rush was common in Canada. In British Columbia, hordes rushed to the bars of the Fraser River, to the Cariboo, and to the Kootenays. In Nova Scotia, the same took place to the Tangier, Oldham, Lawrencetown, Isaacs Harbour, Renfrew, Goldenville, and other districts. Shortly after the beginning of the century there were nearly one hundred gold mines in operation in Nova Scotia. In Ontario, the important discoveries of gold of the day were made in the Madoc-Marmora area. The discovery of the Richardson mine orebody, at Madoc, in 1866, was the first time that gold had been discovered in the Canadian Shield. Several mines were subsequently opened up in the vicinity. The coming of the railroads made it possible to develop the important iron ore deposits of the Marmora area to be developed. Subsequently, both fluorite and talc became important commodities mined in the Madoc area. The Henderson talc deposit was discovered in 1880 and mining began in 1896. It was one of those rare Canadian operations that lasted for several generations.

Also in the area, the Ramsey lead mine was opened at Carleton Place in 1858. This was followed by the Frontenac lead mine, in Loughborough Township, Frontenac County in 1866. Canada's first lead smelter was constructed for its ores in 1880. Closer to Ottawa, the Galetta, or Kingdon, mine, on Chat Island in the Ottawa River, in Carleton County, opened in 1884. It too, lasted for many years. In 1925, it was reported to be one of only two lead-zinc mines then operating in eastern Canada. Finally, the famous lead-zinc mines of Calumet Island opened in 1893 and were mined until 1915.

From all of this, then, it is certain that one hundred years ago, at the beginning of the 20th Century, the area around Ottawa was one of the most important mining regions in Canada. Ottawa was truly a "mining town". Based on the number of operations, it could possibly have

been the mining capital of Canada as well as our nation's capital!

But, how many mines were there in the region?

I started the research with Ann Sabina's well-known books "*Rocks and Minerals for the Collector: Buckingham - Mont Laurier - Grenville, Québec; Hawkesbury - Ottawa, Ontario*" (Geological Survey of Canada, 1986) and a companion volume for "*Rocks and Minerals for the Collector: Hull - Maniwaki, Québec; Ottawa - Peterborough, Ontario*" (Geological Survey of Canada, 1987). Both, and the others in the series, were written for the rock-hound, and probably assumed access to the sites would be by automobile. Thus, the directions are given for highway access and some information is given concerning the history and the details of property ownership at the time of writing. Unfortunately, though, the exact cadastral descriptions, lot numbers, and concessions (Ontario) or ranges (Québec) are not. One can understand why these were not since these may well have been considered to be unnecessary detail.

Nonetheless, the approach that I followed was to use Sabina's descriptions as a basic list and to add the details that I wanted to include from my readings of other sources. I wished to provide the most complete description possible, in terms of the name(s) of the deposit, its location, history, and mineralization, while, at the same time, not being too wordy. For the additional details, I consulted the annual reports of the Departments of Mines (or equivalents) of the Federal, and Ontario and Québec governments.

Immediately, there were clearly a great many more deposits that Sabina (and perhaps anyone else!) had described. Often, the reports would list only the occurrences or operations at the various locations, at which mining had taken place that year, without either the names of the mines or the owners. Further, successive reports were often in conflict with the preceding ones, through giving different cadastral descriptions, or names, or variations on names, or all of these.

Knowing that people may be looking for particular mines according to their names, I have chosen to include all of the details I think are relevant. The different names by which an operation was called, and the successive owners and or operators are important parts of the histories. For example, under "Lead", is the mine that came to be known as the Galetta Lead Mine. It is also shown in the same entry as the Kingdon mine, its original name, and as the Kingdom mine, a variation on this which was found in the literature. There were many examples of misspellings in the references. Where I have been unable to make obvious connections and resolve them I have left them in the list in exactly the form that I read them. Where variations in spelling and names have been given in the references I have included these exactly as written, in the full knowledge that some must be in error. Nonetheless, the discrepancies exist and must be acknowledged.

Quite often, those deposits mined for many years were known by several names. These may have included the names of the owners or operators, the companies, the locations, geographical names, or others. In the lists I have included all the names that I found were associated with the particular property. The convention I adopted was to use the most recent name as the one by

which the deposit can be found in the alphabetical listings. All others are given in parentheses, starting with the original name as the first. In the case of well-known major deposits known by several names, I have usually entered all of these in the lists, with a cross-reference to the name under which the description is given. My intent was to make it as easy as possible to find the description of a deposit, regardless of which name it is known by to a reader.

Many of the deposits were mined over very long periods - particularly pegmatite dikes which may have been successively mined for mica, feldspar, quartz, and radioactive minerals. Thus, the ownership of the property often passed through several hands. Sometimes the names of the mines were those of the individual that owned them. Oftentimes, the names used were those of the companies that mined the deposits. In listing the names I have been careful to provide the references in the literature to these. For the very old deposits the ownership of the property has probably changed several times since the original descriptions were written - thus, a person wishing to arrange to visit a particular location, and to obtain permission to go onto the land, will need to do some research on the present ownership. This may involve visits to those living on the property, neighbours, or local Registry Offices.

Also, regarding names, the full proper names of companies include either "Incorporated" or "Limited". I have chosen not to include these to improve the readability of the lists and to save a bit of space. One can assume, however, that all of the companies named were incorporated and limited as to liability.

The deposits that were not mined, or occurrences, presented a different problem. Because the concentrations of minerals were too low to justify mining, these locations were seldom given names. Often, the description would simply be accompanied by only the cadastral reference (ie., lot, concession (or range), township, and county). In compiling my lists, then, I have tried to make it easier to locate these occurrences by **attaching a name, if this might simplify the search**. Thus, as a bare minimum, and if there was no alternative, I have used the name of the township (i.e., Carlow Occurrence). If, on the other hand, a prominent geographical feature was close, or if the name of the owner of the lot was given, I have used these. In all instances, I consider the name of the owner, if available, to be more definitive and, therefore, gave it preference.

It must be emphasized, however, that many of the names of the occurrences **are my invention and will not be found as such in the literature references**. As an example, the occurrence that I have called the "O'Grady Lake Occurrence", under Corundum, appears in the reference (Hewitt, 1955) simply as "Carlow Township, Concession XVI, Lot 15". Because it is close to O'Grady Lake and no name of an owner, either of the land or the or the mineral rights is attached to it, I have added the name of the lake.

One difficulty faced was deciding how I could provide the most accurate label and description for each property. There were many variations in the literature and, often, there were conflicting labels and descriptions for what I believe was often the same property. I have tried to resolve this

as follows:

A Mine: When a property was listed as a mine anywhere in the references, I have given it this title. I have also used it: when it was apparent that the property was actually mined for a mineral and the product shipped; and also when the development was very extensive even though there was no production reported. A good example of the latter, is the Robinson (lead) Mine, with its two shafts and underground development.

A Prospect or a Property: The use of this description normally implies that some work, short of actual commercial mining, was done on the mineral deposit. This may have been exploration, or the excavation of test pits or trenches or sampling.

An Occurrence: This is simply the report of mineralization of interest on a property. Often, there is no record of any work having been done.

The structure of the book is such that the commodities are listed in alphabetical order, and, within each, the deposits are also listed in alphabetical order. I have tried to eliminate overlap and duplication but, unquestionably, there is some - especially in cases where the same deposit was mined at different times for different minerals.

A further complication is that it was not unusual for a mine owner or operator to have had several deposits available for mining. In these cases, while the names may be repeated, it is through the cadastral descriptions that the differences can be established. For example, look for O'Brien and Fowler, a large operator of the day, under Feldspar.

Quite often, I encountered difficulties in trying to establish the exact location of a deposit. In many of the reports I examined, either the cadastral descriptions were not included or, if they were, they were at variance with what had been reported elsewhere. It was not unusual to find changes either in the lot or concession (or range) numbers in different reports.

The first step in trying to sort this out was to make a judgement as to whether or not different properties might be involved. As the sizes of the deposits and the scale of the old operations were usually very small it would not have been unusual for a landowner or an mine operator to exploit several small deposits on the same lot, or on adjacent lots. Secondly, it would also not be unusual for a deposit to have been located on a line between lots, concessions, ranges, townships, or even counties.

One clue to resolving conflicting information lay in the descriptions of the workings. If these were almost identical, with only the cadastral descriptions varying slightly, it was assumed that the properties were the same. Under these circumstances, in writing the entry, I included **all of the information, with that which I believed to be incorrect in parentheses**, i.e.: Lot 20 (21).

If the information was **very** different, I concluded that separate properties were involved.

Next, a problem arose after the introduction of the system of mineral claims. In the more recent reports it was not unusual to find that a property had been described as a number of claims in a certain township, without any reference at all to either lots or concessions (or ranges). Where I have had no alternative but to use this information (not having seen anything else) I have done so. Sometimes, however, reference was made to a cadastral description concerning the location of a shaft, or a pit, or some other feature of the property. When this was done I have described the property as a whole as being "in the vicinity of...". This is by no means perfect, but, it is better than nothing at all!

In compiling the entries I have provided references to the sources so that a reader may return to these for additional details or clarifications. In doing this, I realized that I ran the risk of including endless footnotes because of the mountain of references that had been consulted. I chose to simplify this as follows:

First, deposits in Ontario are usually described in the annual reports of the Ontario Department of Mines or its successor organizations. The same applies to deposits in Québec. However, there are many situations in which a deposit in the sister province is described for purposes of comparison. Equally, an owner/operator may be located in one province but mine deposits in the other.

Thus, if a deposit is in Ontario and is described in a report published in 1926, for example, only (1926) shows as the reference. It is implied that the reference is to an Ontario Department of Mines report published in 1926. The same applies to Québec deposits and reports. A complete list of references is given at the end of the book.

Second, the year of publication of the report is given as the essential information since it was normal that annual reports were published in the following year. Thus, the (1926) report referred to was probably the annual report for the year 1925, published in 1926. But this was not always the case, since sometimes reports were delayed for up to two years or more. In other instances, the reporting periods were not calendar years. The actual publication date is used as the definitive date through which the reference can be found.

Third, the reports of the Federal Mines Branch contained descriptions of properties across the entire country. To distinguish between these sources of information and the provincial sources, I have used *Canada, 1917*, or variations such as *Canadian Mines Branch, 1917* as examples. Once again, the year of the actual publication of the report is given.

Another factor that entered into the search for data was that there were wide variations in the degree to which detail was provided. In Québec, for example, complete lists of the owners and operators of all mineral properties, for all of the commodities, were published up until 1946. After that the lists vanished from the annual reports. This sudden disappearance of detail may be reflected in my lists as a discontinuity. If other information was available in later reports I have included it. If not, the record stops at 1947. This should not be taken to imply that there are no further records, but rather, that I have not seen these.

Next, one of the key decisions was to decide how far from Ottawa the "circle of inclusion" would extend. My initial concept that the radius would be a distance of about 200 km (or 125 miles), which would represent a trip - albeit a long one- that could be accomplished in a day. There have been exceptions, however, since I wanted to include Grand Remous, at the headwaters of the Gatineau River, and the mines of the Marmora - Peterborough area (also covered by Sabina). Thus, if following the 200 km rule-of-thumb, the western limit to this list, in Ontario, would have been those properties in Lennox and Addington County. I have, however, extended this to include all of Hastings County - which includes both Bancroft and Madoc. A few exceptionally important deposits in Peterborough, Haliburton, and Victoria Counties are also listed - but these are very much the exceptions.

To the east, I have included the mines to the south of the Ottawa River as far as Rigaud, and in the Laurentians to the northwest of Montréal. The many quarries on Montréal Island are not included.

How many mines are within the "circle of inclusion" around Ottawa? The answer is that there are hundreds upon hundreds of deposits of all sizes and descriptions. These vary from the small occurrence on the back of a farm from which only a few tons were mined in one year to major operations at which scores of people were employed for several years. If the property was listed as a mining operation at any time in any of the references that I have seen, it is included. I have tried to leave nothing out and to make this book as complete as possible. Nonetheless, after all of my research, I can state that there were probably many more mines and mineral occurrences than the several hundreds that are included in my lists.

Additionally, there are many instances when the descriptions that I give are incomplete. The reason for this is straightforward - in these cases it was not possible for me to find any description other than a fleeting reference to a name or a hint at a location. All too often properties were mentioned as "old mines", etcetera. The early records were often very poor and in conflict with each other. Frequently, different cadastral locations would be given in successive reports. Quite regularly, the names of the properties would be changed - often with variations in spelling.

In spite of these difficulties, however, I have included references to all of the records which I found. My intent was to make this index as complete and as accurate as I could possibly make it. If my judgement told me that a fragment of a record should be included, I did so.

Going back to the period, one must remember that a great many of these mining operations were done by farmers and others who worked small-scale mineral deposits on their properties during the off-seasons. Some of the pits I have seen are no larger than the excavation for a foundation for a small house or garage. Thus, it is likely that there were many such operations that were unknown to the authorities and never documented.

Simultaneously, the period was also when the keeping of systematic records by the federal and provincial governments began. My search started with the very first of these reports - and even

then references were made to "old mines".

Additionally, during the period, much of the territory in the region had not been surveyed. It is hardly surprising, therefore, that there should be so much contradictory evidence in the many reports concerning locations. This is further compounded by the changing geopolitical map in which the names of counties, and boundaries, were changed. In all instances in my index I have used the descriptions as given originally - in the full knowledge that some of the names changed subsequently. I have revised these to modern descriptions only when I have been completely confident that no error would result.

Wherever possible, I have listed:

(1) the name, or names, by which the property was known. The name used most recently is given first, with the others in parentheses. Errors and variations in spelling are included if these were found in the literature.

(2) the exact cadastral location, as given by: the number of the Lot, and Concession (Ontario) or Range (Québec); the Township; and County. If the names changed I have tried to include both.

(3) the distances from key locations, such as railway stations, towns, and key landmarks, such as lakes. All distances have been converted from miles to kilometres.

(4) the details on ownership, as given in the references (indicated in parentheses).

(5) the history of development. Where dimensions are given, I usually quote these as these were given in the references - even though Canadians have converted from English measure (feet, etc.) to the Systeme International (metres, etc.) . This choice is deliberate and was made to avoid the odd-looking values that would result from conversions. Wherever possible I have abbreviated the dimensions (without periods, as is the present style).

(6) the geological details, with only the principal reference indicated. Most often, these were reports of the various Geological Surveys and contained, in turn, further references to earlier publications. As an example, Harding's report on the *Geology of the Olden-Bedford Area* of Ontario (1951) contains numerous references. Not having seen these personally, I do include them.

Many times the locations are given not only with reference to communities but also to railroad stations and sidings, the majority of which no longer exist. The old roadbeds often can still be found, however, and these might provide some important clues. For that reason, and two others, I have left the references to old railroad intact. The first is that this gives an important historical flavour to the list. The second is that we must never forget that the railroads were the most important form of transportation at the time that many of these deposits were mined. Communities lived or died depending on whether or not the railroad came and a station established. It is a fact that entire communities in Canada relocated when the railroad passed them by.

An essential ingredient in the story of mining in the area around Ottawa is that many of the

railroads were built in the expectations that substantial traffic would result from the mines and mining towns being developed. There was a synergy in that the lives of the communities depended on the railroads and the lives of the railroads depended on the communities. The lives of both depended on the mines. As the mines were exhausted, many lines were abandoned and many communities became literally "ghost towns".

However, the construction of the railroads to provide service to existing deposits resulted in the discoveries of still others and made yet other deposits economic to mine simply because these were close enough to the railroad.

Another essential ingredient in the history of mining in the Ottawa area is the importance it played in the local economy. With production coming from hundreds of mineral properties, there were many hundreds, if not thousands, of people employed - in mining, in transportation of the minerals to the markets or the treatment facilities, and at the treatment plants - such as the mica splitting works in Ottawa, and elsewhere. Whenever I found references to the numbers employed in the several operations I added these to the descriptions. These figures, viewed individually, provide some valuable insights into the relative importance of the many operations. Viewed collectively they support my contention that Ottawa was once one of Canada's important mining capitals and that it had its roots in minerals as well as in lumber.

Finally, the preparation of this manuscript involved the scanning or reading of thousands of pages of the reports written over a hundred-year period. Considering that references to properties of only a few words, or a phrase, could be missed easily in scanning the reports, it is probable that several were. In any such instances, I would be grateful for any contributions of missing data that would make the work more complete.

Mines in the area of Ottawa, Ontario
(Within a radius of about 200 km, to Grand Remous (North),
Marmora (West), Hawkesbury (East), U.S. border (South))

Actinolite

Actinolite, along with coal tar, was used in the manufacture of a roofing material. Production in the area, around the turn of the century, was in Hastings and Addington Counties, Ontario.

Actinolite Mine, Lots 4, 5, and 6, 7th Concession, Elzevir Township, Hastings County, Ontario.

About 5 km east of Actinolite and 7 km north of Tweed. The mine, on Lot 6 (1924), was mined from 1883 to 1908 by Joseph James, of Actinolite (previously known as Bridgewater), and the International Asbestos Company. In 1904, operations came to a standstill when their mill dam was blown out by a lumber company. A suit for the use of the water followed. The Actinolite Mining Company then acquired it and mined it on a small scale (a few hundred tons a year) until 1929. A new mill was constructed in 1910 (1913). Shipments from the stockpile were reported in 1917 to 1919 (1918-1920). No ore was reported to have been raised from 1925 to 1931 (1928-1932) but small shipments continued. Sabina (1987) reported that the pits were then on the farm of Mr. Wm. J. Erwin.

Helena Mining Company. Production was reported to have begun in 1902 (1903).

Smith Property (several pits), Lot 8, 1st Concession, Kaladar Township, Addington County, Ontario. The pits were reported to have been on the farm of Mr. D. H. Smith (1893).

Aquamarine

Aquamarine, a member of the beryl family, is a major gemstone. The cut stones are a sparkling pale blue.

Lyndoch Occurrence, Lot 23, 15th Concession, Lyndoch Township, Renfrew County, Ontario, near Quadville. Aquamarine occurred as large shattered crystals in a pegmatite dike.

Sinkankis (1959) reported that the crystals were up to about 12 cm in diameter and that the colour matched the best from Brazil.

Arsenic

Arsenic was used in the manufacture of insecticides, weed killers, and cattle dips for the agricultural industry. Canada's output was recovered as a by-product from the smelting of metallic ores. "Mispickel" (arsenopyrite) ores were mined at Deloro, Ontario, and treated for the production of white arsenic, As₂O₃.

- Atlas Arsenic Mine, part of Lot 10, 9th Concession, Marmora Township, Hastings County, Ontario. Adjacent to the Deloro Mine, it was reportedly developed in 1901 (1901).
- Dungannon Occurrence, Lot 26, 3rd Concession, Dungannon Township, Hastings County, Ontario. Arsenopyrite was reported to have occurred with pyrite and chalcopyrite in three old pits on this property (Thomson, 1943).
- Jeffrey Mispickel Prospect, Lot 12, 9th Concession, Faraday Township, Hastings County, Ontario. Hewitt (1959) reported that a small shaft (35 ft deep [Thomson, 1943]) had been sunk on this property, about 40 m to the southwest of Carfrae Lake, and about 1200 m north of the road. There were also two small pits. On the property, quartz veins containing arsenopyrite and pyrite were reported to have cut the local marble.
- Stewart Prospect, Lot 16, 14th Concession, Wollaston Township, Hastings County, Ontario. About the mid-1920s, D. E. K. Stewart, of Madoc was reported to have mined two carloads from a quartz-carbonate-arsenopyrite vein (Thomson, 1943).

Asbestos

Asbestos has a fibrous structure and is heat resistant. The long fibres can be spun into thread or yarn which can be woven into cloth or made into hard sheets. The advantage is that these are fireproof, weatherproof, and resistant to chemicals. The common uses include brake-linings. In the mid-20th Century, Canada was the most important producer in the world, with most production coming from the mines of the Eastern Townships of Québec.

- Allan Mine, Lots 15 and 16, 5th Range of West Portland Township, Papineau County, Québec. Mr. Allan, of Ottawa, was reported to have mined some asbestos in 1891.
- Blithfield Occurrence, see the listing for the Carswell Mine, below.
- Boyne Mine, Lot 13, 9th Concession, Marmora Township, Hastings County, Ontario. Owned by Mr. J. C. Boyne of Marmora, in 1891, it was reported to have been sold to the North American Stone and Asbestos Company, of New York (?) (1893).
- Calabogie Asbestos (Carswell, Blithfield Property) Mine, Lot 22, 4th Concession, Blithfield Township, Renfrew County, Ontario. About 200 m northwest of the Black Donald-Calabogie Road, the pit was on the west side of a north-south striking ridge of white crystalline limestone. The minerals reported were serpentine, talc, calcite, tremolite, and chlorite. The asbestos and calcite were in slips (Satterly, 1945). A cut, 30 ft long and eight ft wide (1948) was made in the side of a limestone ridge, by L. M. Carswell, of Renfrew, in 1944 (1947). Test shipments were reported to have been made in 1943 and 1944 (1948). Sales of 7124 pounds of fibre were reported to have been made to the Johns-Manville Company, at Asbestos, Québec. In 1945, a tunnel, seven ft by seven ft, was driven 20 ft into the ridge (1948). Lenses of asbestos occurred in crystalline limestone (1947). A small shipment was made in 1946, when the property was identified as *Calabogie Asbestos* (1948).
- Canadian Refractories Limited, Grenville Township, Argenteuil County, Québec. The company was listed as an owner/operator from about 1941 to 1946 (1942-1947). See also the listing under Magnesite.

- Denholm (Denholme) Mine, Lot 42, 1st Range, Denholm Township, Gatineau County, Québec. About 4 km east of Low, and once served by the Gatineau Valley Railway, it was worked by the International Mining and Manufacturing Company, of Newark, New Jersey, in 1894, and by the Asbestos Mining and Manufacturing Company in 1895. There were reported to have been 18 men employed in four large excavations (1895). It was next worked for two or three years, beginning in 1898, by Mr. J. W. Wurtelle, of Ottawa. Sabina reported (1987) that the deposit was then on the farm of Mr. N. Fitzpatrick.
- Duffy Occurrence, Lot 11, 5th Concession, Oso Township, Frontenac County, Ontario. On the farm of Mrs. Tom Duffy, and on the side of a cliff about 80 m south of Duffy Lake. Small, thin, lenses of greenish serpentine were reported to have occurred in Grenville crystalline limestone. These contained thin veins of light-grey asbestos (Harding, 1951).
- McConnell Mine, Lots 4 and 5, 1st Range, Portland West Township, Papineau County, Québec. The mine was reportedly under development in 1892.
- Poltimore Asbestos Property, about 5 km west south west of Notre-Dame-de-la-Salette, Québec.
- Ross Occurrence, Lot 8, 9th Concessions, Ross Township, Renfrew County, Ontario. Fibrous chrysotile in a serpentine limestone was noted by Satterly (1945).
- Smith Mine, Lot 42, 1st Range, Denholm Township, Gatineau (previously Ottawa) County, Québec. The mine was reported, in 1892, to be under development by J. Smith.
- Templeton Asbestos Mining Company (two mines), Lot 11, and the east half of Lot 15, 8th Range, Templeton Township, Papineau (formerly Ottawa) County, Québec. The company was reported to have hired 50 men and to have started the two mines in 1891.

Note: small production from a tremolite deposit, near Calabogie, Ontario, was reported in 1946 (Canada, Mines Branch, 1947). No further details were given.

Barite

Barium compounds are used for the manufacture of white paint and as a filler in rubber, paper, and linoleum. Other uses are in the ceramic, optical, and medical industries. In the area around the National Capital a considerable quantity was shipped from the Ironsides area, in Hull County, around the turn of the century.

- Bellew Property, Lot 20, 10th Concession, North Burgess Township, Lanark County, Ontario. In 1920 it was reported that 7000 tons had been mined by H. C. Bellew, of Montréal (1921). A small tonnage was reported the following year, 1921 (1927). In the 1923 report, however, it was mentioned that none had been produced in Ontario since 1918 (1924). It was reported idle in 1934-1937 (1936-1938).
- Brennan Occurrence, Lot 16, 6th Concession, Bedford Township, Frontenac County, Ontario. On the farm of John Brennan, there were two small pits about 300 m north of Long Pond Lake, and about the same distance from the house. The pits, originally sunk in the 19th Century in a search for lead, were in a breccia of crystalline limestone and barite. Calcite, mica, serpentine, galena, and sphalerite were mentioned (Harding, 1951).
- CPR Occurrence, Lot 16, 6th Concession, Oso Township, Frontenac County, Ontario. The

occurrence was reported to have been on the railroad right-of-way, about 5 km east of Sharbot Lake Station. Vertical small veins of pink barite were exposed in a narrow zone to the north of the track (Harding, 1951).

Caldwell Property, Lavant Township, Lanark County, Ontario. Some development work on this property was reported in 1918 (1919).

Canada Paint Company Mine, east half of Lot 7, 10th Range, Hull Township, Gatineau (formerly Ottawa) County, Québec. Six men and a horse-powered derrick were used to mine this pit in 1899 (1900). The deposit was depleted and the pit abandoned in 1903 (1917).

Crawford (Rogers) Mine, Lot 25, 1st Concession, Oso Township, Frontenac County, Ontario. The mine was on the farm of John Crawford (Harding, 1951), about 8 km west of Sharbot Lake Station on the Canadian Pacific Railway, and about 38 km southwest of Perth. A road was reported to have been within 30 m of the workings. A pit, on the west side of a hill, and about 100 m west of the road along the boundary between the 1st and 2nd Concessions, was reported to have been dug in 1908 by a Mr. Rogers. It was 100 ft long, six ft wide, and up to 20 ft deep. The barite occurred in vertical veins cutting dolomitic limestone. Well-defined scalenohedral crystals of calcite, massive cream to light pink barite - with some crested barite, and well-formed crystals of green fluorite, were noted (Harding, 1951).

Foley Mine, about 2 km south of Cantley, Quebec. The mine was worked from 1900 to 1903 by the Canada Paint Company. The property was later owned by Mr. G. Clermont (Sabina, 1987).

Howes Mine, Lot 1, 1st Concession, Hinchinbrooke Township, Frontenac County, Ontario. The mine was reported to have been on the farm of T. R. Howes (Harding, 1951). In 1907, a pit, about 25 ft deep, was dug on land then owned by Francis Howes. The vein of barite and calcite was parallel to the bedding of the white, coarse, crystalline limestone. Pyrite was noted (Harding, 1951).

Mica Products Quarry, Lots 5, 8th and 9th Concessions, Portland Township, Frontenac County, Ontario. It was noted that 200 tons of inferior barite were mined in 1918 at this feldspar operation (see the listing under Feldspar).

Quyon Deposit, Lot 14, 3rd Range, Onslow Township, Pontiac County, Québec. About 1.5 km east of Quyon, the deposit was discovered in 1915. A four-foot-wide vein of barite and fluorite was traced through the width of four lots. An outcrop is found on Lot 12 (1917).

Basalt

Armstrong Brothers (Marmora) Quarry, about 5 km south of Marmora, Ontario, on Highway 14 (Sabina, 1987).

Beryl

Beryl, a silicate of aluminum and beryllium, is the principal source of beryllium - a rare metal - used in alloys with copper and nickel. These are used for the manufacture of parts which are to be subjected to wear or vibration. Other uses include fluorescent lamps, X-ray and television tubes.

The mineral usually occurs as crystals in pegmatite dykes.

Caldwell Property (Lyndoch Occurrence), Lot 23, 15th Concession, Lyndoch Township, Renfrew County, Ontario. Known since 1897, the deposit was worked originally in 1926 by its owner, T. B. Caldwell, of Perth, and later by: Madawaska Minerals, which was formed in 1932 (1932); Renfrew Minerals (Canada, Mines Branch, 1937); and Canadian Beryllium Mines and Alloys. It was worked on a small scale, beginning in 1926. The deposit was also mined for feldspar. In 1929, it was reported that 4456 pounds of beryl had been produced in 1927 and shipped to Hamburg, Germany (1932), while, in 1937, production was 40 tons of cobbled beryl crystals (Canada, Mines Branch, 1938). The beryl occurred as fine green scattered crystals, some of which were large, in a pegmatite dike. The dike consisted of quartz, microcline (with some amazonite), albite, tourmaline, and mica. Rare minerals, columbite (thin, flat disk-shaped masses with concentric markings), lyndochite (resinous irregular masses and rarely as yellow to amber crystals), cyrtolite (greyish or yellowish masses), monazite (dull-brown and wedge-shaped), and euxenite. Zircon was also reported. In 1944, Satterly (1945) reported that one open pit was 225 ft long, 30 ft wide, and up to 26 ft deep. Another, close by, was reportedly filled with water.

Canadian Beryllium Mines and Alloys Mine, Lot 23, 15th Concession, Lyndoch (and Brudenell) Townships, Renfrew County, Ontario. On the south side of Casey Hill, about 2.5 km from Quadeville (Hewitt, 1954), the deposit was discovered in 1897 and opened by T. B. Caldwell, of Perth, in 1926. During this period, an estimated two to four tons of beryl crystals were mined. In 1939, Canadian Beryllium Mines and Alloys (formed in 1937) began to open the property. Beryl was hand-picked from broken rock. Twelve men were employed (1941). In 1950, it was reported that a shipment was made from the stockpile (1952). The beryl, and other minerals, were in a pegmatite dike which cut hornblende granite gneiss. The pit was about 210 ft long and up to 30 ft wide. It was narrower in the central part. The beryl occurred as well-formed euhedral six-sided blue-green crystals, up to 10 cm in diameter and 20 cm long. These occurred with lyndochite (a variety of euxenite), columbite, monazite, columbian anatase, euxenite, cyrtolite (zircon), allanite (black, platy crystals), microcline, microcline-perthite, albite (pink), quartz (smoky and clear), tourmaline (in crystals up to 2.5 cm in diameter and 15 cm long), cleavelandite, biotite and muscovite mica (in books up to 5 cm across), magnetite, garnets (reddish-brown crystal up to about 1 cm), fluorite, and apatite (Hewitt, 1954).

Canadian Beryllium Mines and Alloys Mine (Lyndoch Occurrence), Lots 30 and 31, 15th Concession, Lyndoch Township, Renfrew County, Ontario. About 2 km north of the Quadeville-Palmer Rapids Road. The deposit was opened by Renfrew Minerals during 1935-1936, when feldspar was mined (Hewitt, 1954). It was then mined by Canadian Beryllium Mines and Alloys during the period 1948-1950, when feldspar was mined and beryl concentrates sold. The beryl occurred in a pegmatite dike along with several other minerals: microcline, albite, rose quartz, biotite, magnetite, beryl (in crystals up to 20 cm in diameter), columbite (flat, bladed, black crystals, in plates up to 7.5 cm in diameter), and euxenite (brown to black resinous masses) (Satterly, 1945), biotite, muscovite, hornblende, and fluorite. Hewitt (1954) mentioned having seen a single crystal of pink

microcline-perthite, which was roughly 20 by eight by six ft, and which contained an estimated 80 tons of feldspar. Columbite-tantalite (thin, platy crystals, up to 5 cm long) were also mentioned by Hewitt (1954)

Casey Hill Prospect, Lots 19, 20, and 21, 5th Concession, Lyndoch Township, Renfrew County, Ontario. Hewitt (1954) mentioned six pits that had been dug in a pegmatite. No beryl was reported.

Universal Light Metals Prospect, Lot 24, 15th Concession, Lyndoch Township, Renfrew County, Ontario. This was noted as being a granite-pegmatite containing hornblende and scattered crystals of beryl. Columbite and euxenite were mentioned (Satterly, 1945).

Brucite (see also Magnesite)

Brucite, a hydrated magnesium hydroxide, is processed for the recovery of magnesia for use in refractories and fertilizers. The first discovery in Canada was made at Rutherglen, Ontario, in 1937 (Harding, 1951). The brucitic limestone deposits at Wakefield, Québec, were mined by the Aluminum Company of Canada for the manufacture of linings for furnaces used in aluminum smelting. These deposits are a magnesian limestone of Precambrian age. Others are at Bryson, Québec, and in Hinchinbrooke Township of Frontenac County, Ontario - both within the area of these lists. The Hinchinbrooke deposits were considered to be too low in grade to be economically viable (Harding, 1951). In 1940, it was reported that Canadian Refractories, Limited, of Kilmar, carried out some development work on a deposit near Farm Point and shipped 1100 tons to their plant for experimental purposes (1941). The exact location was not specified.

Aluminum Company of Canada Claims, Concession A, Orlig Township, and Calvin Township, District of Nipissing, Ontario. In 1944, the company held five groups of claims. Four of these, known as the *McDonough*, *James Lake*, *Green Lake*, and *Boivin East*, were in Orlig Township. The last was at the southeast end of Pimisi Lake, in Calvin Township. Substantial diamond drilling was performed in 1941-1943. The *McDonough Group*, S. 33, 918 to 33,924, 34,312 and 34,360, were staked in 1939 for the McDonough Mining Syndicate. Two other claims, S. 36,998 and 36,990, were added by Alcan to the group. All were in Lots 8 and 9, Concession A, Orlig Township. The southwestern boundary was the shore of Talon Lake. The *James Lake Group*, claims S. 33,464 to 36,466 and 37,048, some of which were staked by J. A. Boivin, were on Lots 6 and 7, Concession A, Orlig Township, near James and Brucite Lakes. The *Green Lake Group*, S. 32,214, 37,049, 37,093, and 37,096 were in Lots 7 and 8, Orlig Township, southeast of Green Lake. The *Boivin East Claim*, S. 35,355, was in the western part of Lot 5, Concession A, Orlig Township, between James Lake and the Mattawa River. The *Pimisi Lake Group*, E.O. 2,835 and 3,114, were in the northern parts of Lots 27 and 28, 9th Concession, Calvin Township, at the southeast end of Pimisi Lake. It was noted that crystalline limestone carrying abundant, coarse, granules of brucite, were exposed in a cut of Highway 17, a short distance east of Pimisi Lake (Harding, 1946).

Boivin Claims, Lots 8 and 5, Concession A, Orlig Township, District of Nipissing, Ontario. Two

of these, S. 35,894 and 36,113, in Lot 8, were south of Green Lake. Two others, S. 35,247 and 35,248, were in Lot 5, west of the Mattawa River. These were reported to have been held by J. A. Boivin (Harding, 1946).

Cross Mine, Lot 4F, 1st Range, Wakefield Township, Gatineau County, Québec, about 4 km north of Farm Point, on Highway 105. Operated by the Aluminum Company of Canada, the brucite concentrator on the property was constructed in 1941(1942). The mine, at the top of a hill on the west bank of the Gatineau River, was operated from 1959 (1961) to 1968. Work was suspended late in 1962 (1964). Many interesting minerals, including serpentine may be found in this quarry. The writer has collected good specimens on the property. Sabina (1987) reported that the property was later owned by the Municipality.

Davis Property, Wakefield Township, Gatineau County, Québec. Listed as an owner/operator from 1946 (1947).

Dillon Occurrence, Lot 5, 10th Concession, Hinchinbrooke Township, Frontenac County, Ontario. About 400 m southeast of Wilkinson Station on the Canadian Pacific Railway and on the farm of Eugene Dillon. Disseminated brucite in white crystalline limestone was reported to have been exposed by a creek (Harding, 1951).

Dillon Property, Lots 4 and 5, 12th Concession, Hinchinbrooke Township, Frontenac County, Ontario. A small amount of stripping, trenching, and blasting, was reported to have been done on bush lots then owned by Eugene Dillon (Harding, 1951).

Dwyer Property, Lot 6, 12th Concession, Hinchinbrooke Township, Frontenac County, Ontario. Discovered in 1940 by the Consolidated Mining and Smelting Company, this was the first discovery in this part of Ontario. The company acquired an option that year and conducted surface exploration through stripping, trenching, and blasting. The brucite occurred as disseminated granules in weathered white crystalline limestone (Harding, 1951).

Hinchinbrooke Pits, Lot 3, 12th Concession, Hinchinbrooke Township, Frontenac County, Ontario. Two small pits in brucite-bearing limestone were reported (Harding, 1951).

Martin Claims, Lots 5,6,7, and 8, Concession A, Orlig Township, District of Nipissing, Ontario. This group of 16 claims, held by the Martin family, included: S 33,771 to 33,773, 33,782, 33,802 to 33,806, 33,818, 33,820 33,825, 33,845, 35,619, 35,620, and 36,170 (Harding, 1946).

Morrison (Maxwell) Mine, Lot 26A, 16th Range, Hull Township, Gatineau County, Québec. About 6 km north of Farm Point, and 35 km north of Ottawa. The Wakefield brucite deposits were discovered in 1938 by Mr. M.F. Goudge of the Canadian Mines Branch, who, Sabina reported (1987), identified a sample from the property of Mr. S.L. Cross. The mine was developed in 1941 by the Aluminum Company of Canada, which operated it as an open pit from 1942 to 1968. The pit was idle in 1962 (1964). A concentration plant, the Wakefield concentrator, on the property was opened in 1942 (1943), and the magnesite sold to Canadian Refractories, at Kilmar, for the manufacture of refractory brick. Lime was also produced (see the listing under Limestone, below). The property was owned later by Mervin Morrison, of Wakefield (?). The brucite, a magnesium hydroxide, occurred as colourless to dark grey granules in white fine-grained calcite (1955).

Wakefield Syndicate (Registered) Property, Wakefield, Québec. The company, from Calumet,

was listed as an operator in 1942-1945 (1943-1946).

Calcite

Caldwell Deposit, west half of Lot 4, 7th Concession, Palmerston Township, Frontenac County, Ontario. The deposit was on the farm of James Crain, about 3 km from Robertsville on the Kingston and Pembroke line of the Canadian Pacific Railway. Thomas B. Caldwell, of Perth, who had purchased the mineral rights, quarried about 200 tons in 1921 (1922).

Marhill Mine, near Clarendon Station, Ontario, about 35 km west of Perth. Sabina reported (1987) that crystals as large as 20 cm across have been found at this site. It was mined from 1920 to 1946 by Marhill Mines Limited.

Marhill Mine, Lots 32 to 35, 1st and 3rd Concessions, Hungerford Township, Hastings County, and Lots 3 and 4, 6th and 7th Concessions, Palmerston Township, Frontenac County, Ontario (1952). The mine address was given as Deseronto. Marhill Mines (incorporated in 1942) was reported to have opened a new vein of calcite on this property in 1950 and to have mined 18 000 tons (1952).

Celestite (see Strontium)

CLAY (see also Kaolinite)

Clay is a firm, plastic, fine-grained earth resulting from the deposition of fine particles of rock in water. It is used in the manufacture of bricks, ceramics, and pottery.

R Dochart Brick and Tile (Dochart Brick, Tile and Terra-Cotta Works), Lot 8, Concession B, McNab Township, Renfrew County, Ontario. Just north of Arnprior, and adjacent to the Canadian Pacific Railway, the property was crossed by Dochart Creek. It was established in 1867 by William Baker and was subsequently operated by his son, G. E. Baker, until 1942 (Satterly, 1945). Both sand and clay were mined. It was listed until at least 1974 (1978).

Domtar Construction (Materials), Gloucester Township, Carleton County, Ontario. The company was listed as a producer from 1968 to at least 1974 (1970-1978).

Elsterman Québec Art Pottery, Terrebonne County, Québec. At Sainte-Agathe, it was reported to have produced from about 1949 to 1952 (1950-1953).

Jamieson Lime Company, Lot 10, 2nd Concession, Horton Township, Renfrew County, Ontario. The pit was on the eastern outskirts of Renfrew, and adjacent to the Canadian Pacific Railway. Satterly (1945) noted that the plant was mentioned in 1906 and was still in production in 1943. The Jamieson Company purchased the plants of Thomas Henderson and F. Hilliard in 1911. A new plant was constructed in 1915. There were two adjacent areas from which clay was removed.

Estate of Jas. Johnson, Lot 2, 1st Concession, Stafford Township, Renfrew County, Ontario. Near Pembroke. Satterly (1945) noted that this property had also been mentioned in 1906 and

that it had been operated intermittently up to 1938.

La Faïencerie de Blainville, Terrebonne County, Québec. At Sainte-Thérèse-de-Blainville, it was reported to have produced from 1951 to 1952 (1952-1953).

Napanee Brick and Tile (Napanee Brick and Tile Works), Lot 13, 6th Concession, (North) Fredericksburgh Township, Lennox and Addington County, Ontario. The company was listed from 1945 to 1973 (1948, 1970-1977).

R. Ottawa Brick and Terra Cotta Company, Billings Bridge, Ottawa, Ontario. The company was listed from 1945 to 1946 (1948).

Pembroke Brick Company, Lot 27, 1st Range, Stafford Township, Renfrew County, Ontario. The operation was reported to have been immediately south of Pembroke. Satterly (1945) noted: existence in 1906; operation in 1928; and termination of operations in 1931.

John E. Waite Operation, Lot 8, 8th Concession, Ross Township, Renfrew County, Ontario. Near Forester Falls, the plant was reported to have been built by James Johnson in 1895 and purchased by a Mr. Waite in 1898 (Satterly, 1945). Both brick and tile were manufactured until the plant closed in 1922.

RUSSELL?

Columbium (Niobium) and Tantalum

Columbium, formerly known as niobium, and tantalum are rare corrosion-resistant metals used for making the filaments in electric lights and surgical instruments. Some years ago, these were also used for the manufacture of the grids and plates used in radio vacuum tubes. In 1955, substantial quantities of the ores of these rare metals were discovered in the Deux-Montagnes electoral district of Québec. The mineralization was found at the contact of the Oka Monteregean alkaline intrusion with the Grenville limestone, and especially near dykes and sills of the intrusives. The minerals identified were (alphabetically): betafite, britolite, ilmenite, magnetite, perovskite, and pyrochlore.

Bouscadillac Gold Mines Property, L'Annonciation and St. Joseph parishes, Deux-Montagnes County, Québec. In Saint-Benoît. Drilling in 1955 had indicated about 3 million tons of higher-grade ores (1957).

Columbium Mining Products (Coulee Lead and Zinc Mines/Headway Red Lake Gold Mines) Property, L'Annonciation Parish, Deux-Montagnes County, Québec. The property was south of Molybdenum Corporation's *Bond* zone. Drilling by Coulee/Headway in 1955 outlined an estimated 30 million tons of lower-grade ore (1957). Columbium Mining Products, formed in 1956 took over the property (1958). Drilling and bulk sampling was undertaken in 1960 (1962).

Oka Rare Metals Mining Company Property, Lots 390 to 393, Saint-Joseph Parish, Deux-Montagnes County, Québec. The property was east and north of the Molybdenum Corporation property (above). It was estimated that 200 000 tons had been outlined. By the end of 1955, the company had started to sink a shaft (1957). This was continued in 1956 (1958).

Québec Columbium (Molybdenum Corporation of America/Kennecott Copper Corporation) Property, Saint-Joseph and L'Annonciation Parishes, Deux-Montagnes County, Québec.

Two zones of lower-grade ores were outlined: the *Bond*, or southwest, and the *Manny*, or northeast. In 1955, the company was performing beneficiation tests and studying the market possibilities (1957). It was estimated that 30 million tons had been outlined. The property was taken over in 1956 by Québec Columbian (1958). An airborne magnetometer survey and some drilling was done in 1959 (1961). Further drilling and studies were done in 1960-1964 (1962-1967).

Saint Lawrence Columbian and Metals Corporation (Saint Lawrence River Mines) Property, L'Annonciation parish, Deux-Montagnes County, Québec. The mine was about 3 km from Oka and east of the Coulee/Headway property. In 1955, Saint Lawrence River Mines estimated that 30 million tons of possible ore grade had been outlined by drilling (1957). Several holes were drilled and trenches cut for sampling in 1959 (1961). It was planned to install a small pilot plant at École Polytechnique, in Montréal (1961). In 1960, the name of the company was changed to Saint Lawrence Columbian. Further drilling took place, stripping over the *A* block began, and the construction of a 500 tons per day concentrator was begun (1962). Mining of the *A-1* deposit began in 1961 and was followed by production from the *A-3* in 1962 (1964). In 1964, 321 586 tons of ore were mined (1967). In addition to columbian pentoxide concentrates, the company also sold calcite as a by-product.

Copper

Copper is an excellent conductor of electricity and is used for wires and cables and electrical apparatus. It is also used in: making brass and bronze, alloys of copper with zinc and tin, respectively; coinage; and a variety of uses in art and the building trades. In Ottawa, the roofs of the Parliament Buildings are clad with copper. Canada is an important supplier of copper to the world with much of its production coming from the nickel-copper ores of the Sudbury basin, northern Manitoba, Québec, and British Columbia.

In 1963, there was a staking rush in the Lake Landron area of northern Pontiac County, Québec. Several major companies were involved but encountered only low values (1967).

Bonter Prospect, "on or near" Lot 27, 5th Concession, Marmora Township, Hastings County, Ontario. On the property, pyroxenite was reported to have intruded greywacke. Pyrrhotite and chalcopryrite was reported in the pyroxenite. Several pits and trenches had been cut into the deposits by 1925 (Thomson, 1943).

Cashel Copper Mines, east half of Lot 31, the south 20 acres of half of Lot 31, 1st Concession Cashel Township, Hastings County, Ontario, near Gilmour. The company was incorporated in 1916 and began sinking a vertical shaft on a vein containing chalcopryrite. This was reported to have been 80 ft deep (1918).

Crain Prospect, Lot 31, 4th Concession, Oso Township, Frontenac County, Ontario. The prospect was on the farm of J. Crain, about 150 m south of the boundary between Oso and Palmerston Townships. A shallow pit was dug in the side of a hill on the east half of the lot. The vein was reported to have been in highly altered basic lavas of Precambrian age.

The minerals included feldspar, and small amounts of chalcopyrite, pyrite and malachite (Harding, 1951).

Dungannon Prospect, south half of Lot 23, 3rd Concession, Dungannon Township, Hastings County, Ontario. The property was reported to have been staked in 1903, and a shaft, about eight m deep, sunk. Calcite, pyrite and small amounts of chalcopyrite were noted on the dump (Thomson, 1943). The local rock was reported to be marble and feather amphibolite (Hewitt & James, 1956).

Eldorado (Medina, Coe) Mine, about 2 km west of Eldorado, Ontario and 1 km north northwest of Madoc. Originally known as the Coe iron Mine, which operated as such from 1901 to 1903, it became a copper mine on the discovery of a lower orebody in 1903. It was then leased to the Medina Gold Mining Company (1905). A smelter was built in 1906, the first copper smelter in eastern Ontario, and it was operated until 1907 (Sabina, 1987).

Fassett Occurrence, about 6.5 km from the North Shore line of the Canadian Pacific Railway, and about 3.5 km from the Fassett Lumber Company's branch line along the Kinonge River, in Québec. About 6.5 km north of Fassett, a tributary valley trends northwest-southeast. At the west end it is occupied by Sweezy Creek, which flows into the Kinonge River. At the east end it is occupied by Favre, or Clear, Creek, which flows into the Little Salmon River, and thence into the Ottawa. The deposit was reported to have been situated on the south side of this valley about 3.5 km east of the Kinonge River. Discovered in 1923, by Messrs. Arthur Lannigan, S. Faloon, A. R. Robinson, and R. H. Lannigan, of Calumet, it consisted of chalcocite and bornite in a banded pyroxene pegmatitic gneiss. The copper content was estimated at less than one percent (1925).

Grimsthorpe Occurrences, north halves of Lots 14 and 21, 1st Concession, Grimsthorpe Township, Hastings County, Ontario. It was reported to have been staked for copper in 1910, with no report of findings (Thomson, 1943).

Lake Occurrence, south half of east half of Lot 30, 7th Concession, Lake Township, Hastings County, Ontario. It was reported to have been staked in 1915, with no report of findings (Thomson, 1943).

Monteagle Occurrence, Lot 9, 8th Concession, Monteagle Township, Hastings County, Ontario. Hewitt reported that there were two small pits in an open field, about 400 m south of the Concession road. Veinlets of pyrite, pyrrhotite, and rare chalcopyrite were found in rusty paragneiss, pyroxenite, and hornblendite (Hewitt, 1955).

Picamine Copper Gold Mines Property, Lots 1 and 2, 8th and 9th Concessions, Palmerston Township, Frontenac County, Ontario. The company explored this property in 1946-1948 through trenching in two veins about 30 m apart and diamond drilling. Smith (1958) reported that the openings were then filled with debris. The veins were about one foot wide, and contained chalcopyrite, pyrite, pyrrhotite and carbonate. Locally, the rocks were diorite and schist that had been cut by aplitic dikes.

Renzy Mine, 390 acres, Hainault Township, Québec. The mine, approximately 175 km north of Ottawa, was a copper-nickel producer during the period 1969-1972. Dormant thereafter, it was estimated that about 1 350 000 tons of reserves, grading 0.70% copper and 0.70% nickel, remained (Canadian Mines Handbook, 1972-1973).

Riddell Mine, Palmerston Township, Frontenac County, Ontario. In the southern part of the

township, this was mentioned as having been the most interesting discovery that was made in the latter part of the 19th Century (Harding, 1951).

Tangamong Lake Occurrence, Lot 26, 4th Concession, Methuen Township, Peterborough County, Ontario. Hewitt (1961) noted small amounts of chalcopyrite and pyrite in rusty gneiss in pits on this Lot.

Taylor Property, Lot 13, 8th Concession, Monteagle Township, Hastings County, Ontario. On the farm of D. E. Taylor and about 100 m south of the farmhouse (Hewitt, 1955), a small pit had been dug in rusty paragneiss with metapyroxenite. Pyrite, pyrrhotite, chalcopyrite, and molybdenite were mentioned.

Washinta Occurrence, Lot 30, 4th Concession, Lyndoch Township, Renfrew County, Ontario, on the farm of E. Washinta. Hewitt (1954) mentioned a small shallow pit which had been dug in narrow stringers of chalcopyrite in a quartz-mica paragneiss.

Corundum

Corundum is an oxide of aluminum and is second only to diamond in hardness. It is principally used as an abrasive, while the rare clear gemstone varieties are cut into jewels. The coarser grains were used in the manufacture of grinding wheels, while the finer grains found application in the production of corundum flour used for the grinding of optical lenses. The first production in Ontario was recorded, in 1900, from the Craig Mine, in Renfrew County (Hewitt, 1954). At the time, 1898-1901, a "corundum rush" was taking place in Ontario (Hewitt, 1961). By 1906, Canada was the world's leading producer of the abrasive form of the mineral. The country's record production of 2914 tons of grain corundum was attained that year, the period of peak production having been from about 1900 to 1920. Mining was centered mostly in the nepheline syenite belt which crosses Renfrew, Hastings, and Haliburton Counties of Ontario. Afterwards, however, the introduction of artificial abrasives caused demand to fall off. In 1946, production ended on the completion of the re-treatment of the tailings at the dump of the Craigmont property, near Renfrew.

Clear gemstone varieties of corundum are very rare, and are known as sapphire and ruby. The custom is that all intense red stones are known as ruby, and all other colours, including pink, are known as sapphire. Canada has produced very small gems from Eastern Ontario. Typically, the corundum mined in Ontario occurred as six-sided barrel-shaped crystals.

Armstrong Property. It was mentioned in 1910, but no further details were provided (1911).

Ashland Emery and Corundum Company Mine, Lots 15 and 16, 13th Concession, Carlow Township, Hastings County, Ontario. The mine was reported to have been about halfway up the south face of Burgess Mountain and 400 m north of Burgess Mines Road. Open pit work began in 1906 and mining continued until 1915 (1916), when it was operated under lease by the Manufacturers Corundum Company (1913). Hewitt (1955) reported that there were three shallow pits: (1) *Northwestern*, 60 x 20 x 5 to 10 ft. deep; (2) *Southern*, 25 x 20 x 18 ft. deep; (3) *Northeastern*, 20 x 3 to 5 ft. wide, with depth not specified. The corundum occurred in syenites.

- Bentley Creek Prospect, Lot 15, 16th Concession, Dungannon Township, Hastings County, Ontario. Hewitt & James (1956) reported that a small pit had been dug in a nepheline-corundum pegmatite, just east of the creek. There were also several other showings on other lots in the area.
- Blue Corundum Occurrence, Lot 12, 12th Concession, Dungannon Township, Hastings County, Ontario. The occurrence was at Egan Chute on the west side of the York River, and about 400 m north of East Road. Hewitt (1961) noted that it was accessible by a path. While most of the corundum crystals at the site are grey, it is well-known to collectors for the blue crystals which can be found (Hewitt, 1961). The corundum crystals are mantled by muscovite.
- Boehme Occurrence, Lot 13, 17th Concession, Raglan Township, Renfrew County, Ontario. The occurrence was reported to have been on a low ridge northwest of the farmhouse of Charles Boehme (Hewitt, 1954). Corundum crystals, up to 7.5 cm long, occurred in two outcrops of syenite gneisses.
- Brougham Occurrence, Lot 8, 15th Concession, Brougham Township, Renfrew County, Ontario (Satterly, 1945).
- Brudenell Occurrence, Lot 24, 5th Concession, Brudenell Township, Renfrew County, Ontario, at the northwest corner of the lot (Satterly, 1945).
- Brudenell Occurrence, Lot 24, 6th Concession, Brudenell Township, Renfrew County, Ontario. This may be the same as the above (Satterly, 1945).
- Brudenell Occurrence, Lot 20, 7th Concession, Brudenell Township, Renfrew County, Ontario. This occurrence was reported to have been southeast of the east end of Charlotte Lake (Satterly, 1945).
- Brudenell Occurrence, Lot 34, 7th (or 8th?) Concession, Brudenell Township, Renfrew County, Ontario. Bands of nepheline and corundum-bearing rocks were reported to cross the Rosenthal-Rockingham road southeast of Rockingham (Mink) Lake (Satterly, 1945).
- Brudenell Occurrence, see the listing for the Rosenthal Mine, below.
- Brudenell Occurrence, Lot 279, Range B North, Brudenell Township, Renfrew County, Ontario. This was reported to be a small outcrop, about 0.5 km north of the Brudenell Church. Small corundum crystals occurred in a rusty corundum-syenite pegmatite (Hewitt, 1954).
- Buck Lake Cuts (Mines), Lot 11, 16th Concession, Carlow Township, Hastings County, Ontario. There were two groups of cuts, the *South Cuts*, and the *North Cuts*, south of Buck Lake. The principal *South Cut* was reported to be 100 ft. long, 20 ft. wide, and averaging four ft deep. The rocks were an interbanded series of syenite gneisses. It was noted (Hewitt, 1955) that the corundum crystals were large and euhedral, up to 5 cm long, and surrounded by haloes of muscovite. There were also vugs, which contained crystals of calcite, feldspar, and muscovite. The *North Cuts* were about 125 m to the north, on the top of a hill near the Township boundary. The principal cut was 45 ft in diameter and from two to eight ft deep. Elsewhere on the property, there were other occurrences: (1) about 225 m south of the Buck Lake Cuts, and ; (2) about 125 m south of the Township boundary and 80 m west of the cut (Hewitt, 1955).
- Buderick Occurrence, Lots 14 and 15, 14th Concession, Raglan Township, Renfrew County, Ontario. The occurrence was reported to have been about 1000 ft east of the Palmer

- Rapids-Boulter Road on a hillside on the John Buderick Farm. Yellowish corundum crystals, up to several in in diameter were intergrown with black tourmaline. The corundum was in a lenticular albite dike surrounded by highly silicated and contorted limestone (Satterly, 1945). A small outcrop of corundum-syenite pegmatite containing albite feldspar, corundum, and tourmaline, was reported on Lot 15 by Hewitt (1954).
- Burgess Mine**, south halves of Lots 14 and 15, 14th Concession, Carlow Township, Hastings County, Ontario. The mine was about seven km west of the Craig Mine, 50 km south of Barry's Bay, and at the base of Burgess Mountain and about 800 m north of the New Carlow Road. Corundum was discovered on this property in 1896 by W. F. Ferrier (Hewitt, 1955). It was reported to have been owned by: Nesbitt Thomas Armstrong, until 1902; the Ontario Corundum Company from 1902 to 1905; and, the Ashland Emery and Corundum Company from 1905. Mining began in mid-1902 by the Ontario Corundum Company (1904) (Thomson, 1943). Several nearby deposits were mined including those on: Lots 15 and 16, 16th Concession, north of Grady Lake (*O'Grady Lake Strippings and South Workings*); Lot 10, 12th Concession; Lot 10, 15th Concession, on John Armstrong's Hill. In 1910, the Armstrong Corundum Company took over the property immediately before it, in turn, was taken over by Manufacturers Corundum (Thomson, 1943) It was reported to have been re-opened for a short period in 1916 by the Manufacturer's Corundum Company (1917). There were two workings: (1) a cut into the side of a hill, 100 ft long, 60 ft high, and 40 ft into the hill; (2) 75 ft long, and extended from the above. The corundum was reported to have occurred as pockets of large brown or bronze crystals in red micaceous pegmatite. Hewitt (1955) noted that the workings followed the ore zone into the hill until the overhanging cap made further work too dangerous.
- Burleigh Occurrence**, Lot 7, 7th Concession. Burleigh Township, Peterborough County, Ontario. The occurrence was near the boundary between Methuen and Burleigh Townships. Sinkankis (1959) reported that the corundum approached gem quality but had not been found suitable for cutting. Adamantine spar was also found.
- Cardiff Occurrence**, Lot 1, 18th Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) reported a narrow band of nepheline gneiss containing small grey corundum crystals.
- Cardiff Occurrence**, Lot 26, 23rd Concession, Cardiff Township, Haliburton County, Ontario. It was reportedly about 120 m north of a road. Hewitt (1959) reported an occurrence of a corundum syenite gneiss containing blue-grey corundum crystals up to about 7.5 cm in diameter.
- Carlow Occurrence**, Lots 18 and 19, 14th and 15th Concessions, Carlow Township, Hastings County, Ontario, about 400 m northwest of the Logan cuts (see the listing below). The occurrence was on the boundary between the lots and the concessions. Corundum crystals, up to 2.5 cm in diameter, occurred in a syenite gneiss (Hewitt, 1955).
- Carlow Occurrence**, Lot 21, 14th Concession, Carlow Township, Hastings County, Ontario. The occurrence was on the west side of a low hill. Lenses of coarse-grained corundum syenite occurred in syenite gneisses and amphibolite (Hewitt, 1955).
- Carlow Occurrence**, Lot 12, 16th Concession, Carlow Township, Hastings County, Ontario About 600 m north of the Concession boundary corundum was reported to have occurred in a buff and grey syenite gneiss (Hewitt, 1955).

- Carlow Occurrence, Lots 12 and 13, 16th Concession, Carlow Township, Hastings County, Ontario, on the boundary between the lots, on the southeast face of a hill. Corundum grains occurred in pink and buff syenite (Hewitt, 1955).
- Carlow Occurrence, Lot 29, 16th Concession, Carlow Township, Hastings County, Ontario. Corundum syenite was exposed on the side of a 20-ft cliff (Hewitt, 1955).
- Carlow Occurrence, Lot 30, 16th Concession, Carlow Township, Hastings County, Ontario, near the top of a hill, about 250 m west of the Craigmont Road. At the outcrop, a band of corundum syenite was reported to have been exposed for 100 ft. Crystals, up to 5 cm in size, were reported (Hewitt, 1955).
- Corundum Refiners Inc. Mine, Jewellville, Ontario (1905). See the listing for Jewellville Mines, below.
- Craigmont Corundum (Craig) Mines, Lots 3, 4, and 5, 18th Concession (*Craigmont Workings*), and Lots 2, 3, and 4, 19th Concession (*Klondike Workings*), Raglan Township, Renfrew County, Ontario. In the northwest corner of Raglan Township, near Craigmont, and on the farm of Henry Robillard on the south side of Mount Robillard (which rises about 150 m above the York River). Also about 10 km south of the village of Combermere and 16 km south of Barry's Bay. The properties were acquired in 1899 by J. H. Shenstone and B. A. C. Craig, for the Canada Corundum Company (Hewitt, 1954). Development began in 1900 and a workforce of 60, of whom 14 were miners, were reported to have been on the property in 1902 (1902). During the period, the village of Craigmont, named after Mr. Craig, was constructed at the foot of Robillard Mountain. The deposits were worked by the company until 1908, when its closure, due to overproduction (Hewitt, 1954), caused a severe set-back to the industry in the province (1908). Work was resumed in 1909 by the Manufacturers' Corundum Company, which operated it under lease until 1918 (1919). The large mill, at Craigmont, was destroyed by fire early in 1913 and mining ended at Craigmont (Hewitt, 1954). In another report, however, it was said to have been the only corundum mine operating in 1915 (1916). Nonetheless, in 1919, the property was leased by Corundum Limited, which constructed a small mill (Hewitt, 1954), and operated it intermittently in 1920-1921, treating tailings (1921-1922). Thomson (1943) reported that there were 20 large cuts on the property, and that it was probably the largest corundum mine in the world. In 1944, the Wartime Metals Corporation established the Craigmont Corundum Project (Hewitt, 1954), erected a mill and began to treat the old tailings (1947). It was the only producer in Ontario in 1945, when 64 482 tons of tailings was reported to have been treated (1948). Wartime Metals was disbanded in late 1945 and the work taken over by the federal Department of Reconstruction (1948). Treatment of tailings continued in 1946 (1948). Hewitt (1954) noted that 84% of all of the total Canadian production of corundum came from these mines. He also noted that there were 20 open-cuts on the south side of the hill and 11 on the west side. The *Craigmont Upper Pond* cut, one of the largest, was reported to have been 500 ft long, 100 ft wide, and up to 50 ft deep. Another large cut, the *Klondike East*, was 320 ft long, 100 ft wide, and 60 ft deep. There were also adits and drifts driven into the hillside. The corundum occurred in nepheline syenites, anorthosites, or pegmatites, with the richest ore being found in the red corundum pegmatites. Sinkankis (1959) reported that some of the corundum had been occasionally cut into cabochons. Other minerals noted (Satterly, 1945) were magnetite,

pyrite, garnet, molybdenite, muscovite, biotite, quartz, hornblende, and microcline.

Allanite, uraninite, and euxenite were also mentioned. Hewitt (1954) noted that some of the nepheline-corundum rocks contained as much as 80% nepheline.

Croft (Property) Mine, Lots 14 and 15, 8th Concession, Methuen Township, Peterborough County, Ontario. The property, close to the northwest end of Kasshabog Lake, was reported to have been worked in 1901 by the Imperial Corundum Company. There were several small pits up to about 20 ft deep. On the property, pegmatite dikes occurred close to the contact of gneiss and nepheline syenite. The corundum occurred with muscovite. While 10 tons of hand-picked ore had been set aside, there appear to have been no shipments (Hewitt, 1961).

Crown Corundum and Mica Company Property, see the listing under Mica.

Dungannon Occurrences, Lots 17 to 20, 11th Concession, Dungannon Township, Hastings County, Ontario (Thomson, 1943). Occurrences were mentioned on each of the lots. One, a nepheline-corundum gneiss was reported on Lot 17, about 120 m south of East Road. Stripping and trenching had been done on Lot 19, with grey and blue corundum crystals, up to about 2 cm in diameter, being reported (Hewitt & James, 1956).

Dungannon Occurrence, Lot 12, 14th Concession, Dungannon Township, Hastings County, Ontario. The occurrence was reported to have been east of the York River. Deep blue crystals found in syenite could be cut into minute faceted gems (Sinkankas, 1959). This was reported to be as close to gem sapphire as had ever been found in Canada and an excellent specimen was exhibited as sapphire at the Pan-American Exhibition, in Buffalo, New York, in 1901 (Thomson, 1943).

Dungannonite Property, Lots 11 and 12, 14th and 15th Concessions, Dungannon Township, Hastings County, Ontario. Several pits and trenches were mentioned as being on the top of Dungannonite Ridge, south of the York River. The largest, about 40 ft long, six ft wide, and from four to five ft deep, was about 400 m south of the river. Corundum, garnet, zircon, hornblende, biotite, apatite, muscovite, tourmaline, and scapolite were all noted in a nepheline-andesine gneiss (Hewitt & James, 1956). The location is well-known for its blue corundum crystals. Up to about 5 cm in size, these occur in gneiss (Hewitt, 1961).

Egan Chute Occurrence, Lot 12, 12th Concession, Dungannon Township, Hastings County, Ontario. Occurrences were reported near Egan Chute on both sides of the York River. Blue corundum was reported in a nepheline syenite (Thomson, 1943). At one of these, on the west side of the York River, and about 400 m north of East Road, blue corundum crystals, up to 5 cm in diameter, were mentioned as occurring in a nepheline-albite-muscovite gneiss. Galena was noted as an accessory mineral (Hewitt & James, 1956).

Gorman Lake Occurrence, Lot 20, 10th Concession, Brudenell Township, Renfrew County, Ontario. On a small island in Gorman Lake, small corundum crystals were observed in a muscovite-biotite syenite gneiss (Hewitt, 1954).

Gutz Mine, Lot 34, 5th Concession, Brudenell Township, Renfrew County, Ontario. On a hillside on the farm of Richard Gutz, the pit was 200 ft east of the Rosenthal-Rockingham Road, and 800 ft north of the south boundary of the lot. The pit was reported to be 40 by 40 ft in plan, and 10 ft deep. No history of mining was given (Hewitt, 1954), but shipments were reported to have been once made to Palmer Rapids (Satterly, 1945). The corundum,

as grey-brown crystals from about 1 cm to 12.5 cm in diameter, occurred in a coarse white biotite pegmatite. Sodalite, cancrinite, and muscovite were also mentioned (Hewitt, 1954).

Herb's Cuts (Mine), East Workings, Lots 11 and 12, 15th Concession, Carlow Township, Hastings County, Ontario, near the boundary between the lots on the west face of a steep ridge. The cut was 50 ft long, 10 to 12 ft wide, and with a 12 ft face into the hillside. There were other occurrences on the property, along the ridge. Hewitt (1955) reported that the bronze corundum crystals, found in corundum syenites, were stubby, and up to about 2 cm in diameter. Granite pegmatites cut the corundum-bearing rocks. These latter contained titanite (sphene), allanite, magnetite, hornblende. Biotite, muscovite, and garnet, were also mentioned.

Herb's Cuts (Mine), West Workings, Lot 11, 15th Concession, Carlow Township, Hastings County, Ontario. On a low rise west of the stream on Lot 11. The pits were probably worked about 1910, but no history was given. One was reportedly 15 ft square and eight ft deep, while the second was 20 ft square and three ft deep. Corundum, as scattered crystals up to about 2 cm in diameter, occurred in grey and buff syenite (Hewitt, 1955).

Hoover Lake Cut (Mine), Lot 7, 16th Concession, Carlow Township, Hastings County, Ontario. On the north side of a hill, about 300 m northeast of the northwest end of Hoover Lake (Hewitt, 1955), the mine was probably operated about 1910, but no history has been found. The pit was 45 ft long, 20 ft wide, and from 10 to 15 ft deep. The rocks were a variety of syenites and pegmatite. The corundum occurred as bronze-coloured crystals, up to 5 cm in diameter (Hewitt, 1955).

Hoover Lake Occurrence, Lots 7 and 8, 16th Concession, Carlow Township, Hastings County, Ontario. About 400 m north of Hoover Lake corundum-bearing bands were reported to have occurred in syenites (Hewitt, 1955).

Hoover Lake Occurrence, Lot 9, 16th Concession, Carlow Township, Hastings County, Ontario. About 400 m north of the east end of Hoover Lake, corundum-bearing syenite was reported in a small outcrop (Hewitt, 1955).

Indian Hill Occurrence, Lot 18, 18th Concession, Raglan Township, Renfrew County, Ontario, on the crest of Indian Hill. Hewitt (1954) stated that this is probably the same property that was mentioned by Satterly (1945) as being on Lot 19. Small crystals of corundum occurred in gneiss.

Jack's Cuts, Lot 10, 14th Concession, Carlow Township, Hastings County, Ontario. These were mined about 1910, and consisted of four open pits on the south side of a hill. These were: (1) *Western Cut*, 150 x 50 x six to seven ft deep; (2) 50 ft east of *Number 1*, 120 x 100 x two to five ft deep; (3) 30 ft east of *Number 2*, 80 x 30 x eight ft deep; (4) 100 ft east of *Number 3*, 60 x 25 x three to four ft deep. All were in corundum syenites and corundum syenite pegmatites (Hewitt, 1955). The corundum occurred as bronze crystals up to about 5 cm in diameter. Other minerals were: biotite, muscovite, magnetite, scapolite, and, possibly, giesseckite (dull greenish).

Jewel Mine, Raglan Township, Renfrew County, Ontario (Canada, Mines Branch, 1926).

Jewellville Corundum Mines, Lots 24 and 25, 18th Concession, and Lots 24, 26, and 27, 19th Concession, Raglan Township, Renfrew County, Ontario. Between the Palmer Rapids Bridge across the Madawaska River and Rosenthal, the deposits extended for about 1.5

km These were on the west side of the lot at the head of the Horserace Rapids on the Madawaska River (Satterly, 1945). Hewitt (1954) reported that the deposits were discovered between 1901 and 1906 by Corundum Refiners Limited. In 1915, the Manufacturers Corundum Company moved its mill from their Burgess Mine (see the listing above) to Lot 24 on the 18th Concession. There were small three pits at the north end of the lot. All were on the west side of a hill, and about 120 to 140 m northeast of the bridge at Palmer Rapids. These were mined in 1917 - 1918. The rocks were reported to have been pink corundum-magnetite leuco (white)-syenite and syenite gneiss. The corundum crystals were small, and rimmed with muscovite mica. Several other occurrences were reported on the lot; just east of the road; beside the road, about 80 m south of the bridge, and in various outcrops. Elsewhere in the immediate area: four small pits were reported on the southwest corner of Lot 25, 19th Concession; two were noted on the south half of Lot 26; numerous pits and trenches were mentioned at the lower end of Lot 27 near the boundary with Lot 26; while other workings were noted in the east-central part of the south half of Lot 27. A narrow band of nepheline-corundum-plagioclase gneiss was reported by Hewitt (1954).

Kargus Occurrence, Lots 13 and 14, 15th Concession, Lyndoch Township, Renfrew County, Ontario. On the farm of Wesley Kargus, north of a small lake, small corundum crystals were noted in a pink syenite-pegmatite (Hewitt, 1954).

Lentz Occurrences (two), Lot 9 and 10, 17th Concession, Raglan Township, Renfrew County, Ontario. The first, on Lot 9, was about 100 m west of the barn on the abandoned farm that had belonged to Gottlieb Lentz (Hewitt, 1954). At it, elongated crystals of grey corundum occurred in a grey syenite gneiss. The second, on Lot 10, was reported to have been described by Satterly (1945) 1944. It occurred in a low ridge, about 60 m from the old farmhouse. Small brown crystals of corundum were observed in bands of biotite syenite gneiss.

Leslie Prospect, Lot 13, 5th Concession, Hinchinbrooke Township, Frontenac County, Ontario. The prospect was reported to be on the north boundary of the east half of the lot, on a farm then owned by N. J. Leslie (Harding, 1951). The corundum at this location was said to have been identified at the beginning of the 20th Century. Two small pits had been dug, The green and grey corundum was disseminated in a small mass of syenite.

Leslie Prospect, Lot 11, 7th Concession, Hinchinbrooke Township, Frontenac County, Ontario. Also on a farm belonging to N. J. Leslie, corundum was discovered at the end of the 19th century. Two small pits had been dug in syenite, in which green and grey corundum was disseminated (Harding, 1951).

Logan Corundum Cuts, Lot 18, Carlow Township, Hastings County, Ontario. The cuts were reported to have been on the west side of a hill. While no history was given, these pits were probably mined about 1910. There were three cuts: (1) *Eastern*, 200 x 25 x 12 to 15 ft deep; (2) *Central*, 75 x 30 to 40 wide x 10 to 25 ft deep; (3) *Southwestern*, on the west side of the hill, 70 x 30 x 25 ft deep. All of the cuts were in syenites, and large bronze and green corundum crystals up to 15 cm were reported (Hewitt, 1955). In the cuts, nepheline had been altered to pink hydronephelite and then into buff gieseckite.

Lyndoch Occurrence, Lot 13, 14th Concession, Lyndoch Township, Renfrew County, Ontario. The occurrence was reported to have been at the north end of the lot at the east end of a

- small lake (Satterly, 1945).
- Lyndoch Occurrence, Lot 13, 15th Concession, Lyndoch Township, Renfrew County, Ontario.
The occurrence was reported to have been near the house (Satterly, 1945).
- Mackie Cuts (Mines), Lot 15, 14th Concession, Carlow Township, Hastings County, Ontario. The mines were mentioned as being on the west side of the top of Burgess Mountain, and about 150 m above a road (Hewitt, 1955). The history was not given, but it is likely that these were mined in the 1910 period. The workings had been cut into the side of the mountain. The first was 150 ft long and 66 ft wide at the widest point. At either end, the faces were up to 50 ft high. There were other, smaller, cuts to the northwest. The corundum was bronze, yellow-brown, and green, and occurred in syenites. On top of the mountain, about 200 m from these workings, Hewitt (1955) reported that there were other exposures. These, however, were small.
- Madill Prospect, Lot 15, 9th Concession, Methuen Township, Peterborough County, Ontario.
Some work had been done on an occurrence of corundum in white feldspar and black mica (in Hewitt, 1961).
- Mantifel Occurrence, Lot 20, 15th Concession, Raglan Township, Renfrew County, Ontario. The occurrence was reported to have been about 30 m north of the road on the farm of Harvey Mantifel. Hewitt (1954) reported that bronze-coloured crystals, up to 7.5 cm in diameter, occurred in a very small outcrop.
- Manufacturer's Corundum Company Properties: (1) Lot 32, 1st Concession, Radcliffe Township, Renfrew County; (2) Lots 25 to 28, 19th Concession, Raglan Township; (3) Lot 24, 18th Concession, Raglan Township (1917). The mill was situated on this latter property. In 1917 the company mined various small deposits in Raglan, Radcliffe, and Brudenell Townships. The ore was stockpiled at the concentrating plant at Palmer Rapids, on Lot 24, 18th Concession, Raglan Township (1918). Operated in 1918 (1919), the properties were leased in 1919 to Corundum, Limited (1920).
- Michaelis Mine, Lot 31, 1st Concession, Radcliffe Township, Renfrew County, Ontario. On the farm of August Michaelis, the pit was 50 ft east of the boundary with Lot 30 and about 300 m north of the Concession Road (Hewitt, 1954). It was 60 ft long, 15 ft wide, and from six to 10 ft deep. No history of the mining was given. Small crystals of corundum occurred in syenite gneisses.
- Monteagle Occurrence, Lots 2 and 3, 1st and 2nd Concessions, Monteagle Township, Hastings County, Ontario. On the east side of the York River, it was reported to have been prospected, with some stripping done, by the Canada Corundum Company in 1906 (Thomson, 1943).
- Monteagle Occurrence, Lot 4, 1st Concession to Lot 2, 2nd Concession, Monteagle Township, Hastings County, Ontario. Corundum was reported to have been found in a belt of gneissic nepheline anorthosite Thomson, 1943).
- Monteagle Occurrence, Lot 20, 3rd Concession, Monteagle Township, Hastings County, Ontario. This was reported to have been a small occurrence of corundum in a pink biotite syenite. The crystals were very small, and occurred with muscovite and magnetite (Hewitt, 1955).
- Monteagle Occurrence, Lot 21 or 22, 4th Concession, Monteagle Township, Hastings County, Ontario, and near the boundary between the lots. Magnetite and corundum were reported to have occurred in pink syenite (Hewitt, 1955).

- Monteagle Occurrence, Lot 14, 5th Concession, Monteagle Township, Hastings County, Ontario. Near the west boundary of the lot and about 600 m south of the Concession Road, patches of corundum were reported in a pink biotite syenite. Crystals, up to 5 cm in diameter, were reported (Hewitt, 1955).
- Monteagle Occurrence, Lot 16, 6th Concession, Monteagle Township, Hastings County, Ontario. About 150 m south of a road, and in a field, small blue to grey corundum grains were found in a grey biotite syenite gneiss (Hewitt, 1955).
- Monteagle Occurrence, Lot 17, 6th Concession, Monteagle Township, Hastings County, Ontario. The occurrence was small. Crystals, up to about 1 cm, were found in a leuco (white)-syenite (Hewitt, 1955).
- Monteagle Occurrence, Lot 11, 10th Concession, Monteagle Township, Hastings County, Ontario. The occurrence, in pink syenite, was about 30 m west of the Monteagle Valley Road and 400 m south of the Monteagle Valley Post Office. Hewitt (1955), reported bronze-coloured crystals up to about 2.5 cm in diameter.
- Monteagle Minerals Property, Lots 2 and 2, 2nd Concession, Monteagle Township, Hastings County, Ontario. On the east bank of the York River, about 15 km northeast of Bancroft, the property was first developed in 1906 by the Canada Corundum Company, which conducted stripping, trenching, and bulk-sampling. It was drilled in 1915, and subsequently sampled in 1947-1948 by Louis Moyd (Hewitt, 1955). It was then optioned, in 1950 by Ortona Gold Mines, of Toronto, which formed a subsidiary, Monteagle Minerals (Canada, 1955). The deposit of nepheline-feldspar was reported to contain fine-grained corundum and muscovite mica. Beneficiation tests were performed in the laboratories of the Canadian Mines Branch in 1951, 1952, 1953 (Canada Mines Branch, 1953)(Hewitt, 1955). No work was reported in 1954. The corundum, occurring as aggregates with magnetite and muscovite, was found in a grey nepheline-biotite-scapolite-plagioclase gneiss.
- National Corundum Wheel Company Mine, Lot 13, 1st Concession, Monteagle Township, Hastings County, Ontario. Ore was reportedly being hand-picked on the property in 1906 (1906). The corundum was mined from a syenite pegmatite dyke (Thomson, 1943).
- North Burgess Occurrence, Lot 2, 9th Concession, North Burgess Township, Hastings County, Ontario. About 5 km from Perth, Sinkankis (1959) reported that minute gems had been cut from the rose and blue corundum which occurs in metamorphic limestone on this property.
- O'Grady Lake Occurrence, Lot 15, 16th Concession, Carlow Township, Hastings County, Ontario. The occurrence was at the east end of a low ridge about 800 m north of O'Grady Lake. Hewitt (1955) reported well-formed, barrel-shaped, bronze crystals of corundum, in syenite. Magnetite and muscovite were mentioned.
- O'Grady Lake Strippings (Mines), Lot 15, 16th Concession, Carlow Township, Hastings County, Ontario. About 2.5 km north of the Burgess Mine and 400 m north of O'Grady Lake, the workings, on the crest of a ridge, were 170 ft long and 40 ft wide, and exposed corundum syenites and pegmatites. Hewitt (1955) reported that the crystals were up to 10 cm in diameter, but that the corundum occurred as a thin veneer and that the deposit, therefore, was not as rich as it appeared to be.
- O'Grady Lake North Workings (Mines), Lot 17, 16th Concession, Carlow Township, Hastings

- County, Ontario. These were located about 3.2 km north of the Burgess Mine and on the west side of O'Grady Lake. Hewitt (1955) reported that the shallow cut was 70 ft long and exposed pink and buff-coloured corundum-syenite gneiss.
- O'Grady Lake South Workings (Mines), Lot 16, 16th Concession, Carlow Township, Hastings County, Ontario. The cuts were about 2.75 km north of the Burgess Mine and on the west side of O'Grady Lake (Hewitt, 1955). There were two parallel cuts at the southeast side of a hill, each about 80 ft long, and from 25 to 50 ft wide. The faces exposed in the hillside were from five to 25 ft high. Locally, the rocks were a variety of syenites and pegmatites. Hewitt noted that "the geological relations are complex".
- Oso Occurrence, Lot 8, 7th Concession, Oso Township, Frontenac County, Ontario. On the northwest shore of Attewell Lake. Well-formed green to yellowish-green hexagonal crystals, less than 3 cm long, were noted (Harding, 1951).
- Palmer Prospect, Lot 7, 7th Concession, Oso Township, Frontenac County, Ontario. The prospect was reported to have been on a bare hill about 70 m from the southwest shore of Mud Lake and close to a small pond near the northwestern arm of Attewell Lake. The land was then owned by Thomas Palmer, of Maberly (Harding, 1951). Harding (1951) noted that several tons of gabbro had been blasted from a cliff on the north side of a hill and that the work was reported to have been done in the early part of the century. Isolated small crystals of whitish and yellowish weathered corundum were exposed in the gabbro.
- Phanenhour Occurrence, Lot 31, 1st Concession, Radcliffe Township, Renfrew County, Ontario. A pit, 15 m east of the boundary between Lots 30 and 31, and about 550 m north of the south boundary of the lot, had been dug on the farm of John Phanenhour. Satterly (1945) reported that it was nearly mined-out.
- Radcliffe Occurrence, Lot 21, 1st Concession, Radcliffe Township, Renfrew County, Ontario. An occurrence was noted in a band of syenite between granite gneisses (Hewitt, 1954).
- Radcliffe Occurrence, Lot 29, 1st Concession, Radcliffe Township, Renfrew County, Ontario. Three pits were located about 30 m east of the boundary between Lots 28 and 29 and 0.8 km north of the south boundary of the lot (Satterly, 1945). The total length of the workings was reported to be 400 ft (Hewitt, 1954). The pits were: 120 by 15 by 15 ft deep; 100 by 15 by four to 12 ft deep; 80 by 15 by 15 ft deep. The rocks were banded hybrid syenitic gneisses cut by hornblende-syenite pegmatite dikes. The minerals mentioned were: biotite, calcite, corundum (yellowish-brown crystals), hornblende, and scapolite.
- Raglan Occurrence, Lot 11, 17th Concession, Raglan Township, Renfrew County, Ontario (Satterly, 1945).
- Raglan Occurrence, Lot 17, 17th Concession, Raglan Township, Renfrew County, Ontario (Satterly, 1945).
- Raglan Occurrence, Lot 35, 18th Concession, Raglan Township, Renfrew County, Ontario (Satterly, 1945).
- Raglan Occurrences (three), Lots 20, 21, and 22, 14th and 15th Concessions, Raglan Township, Renfrew County, Ontario. On the south slope of a ridge. Small corundum crystals occurred in local concentrations in syenite gneisses (Hewitt, 1954).
- Raglan Occurrences (two), Lot 25, 19th Concession, Raglan Township, Renfrew County, Ontario. On the southern part of the lot and from 365 to 600 m north of the road running southeast

- from a bridge across the Madawaska River. The two occurrences, in hybrid syenite gneiss, had been opened up by pits. A calcite-filled pocket lined with crystals of feldspar, apatite, pyroxene, and drusy quartz was noted (Satterly, 1945).
- Raglan Occurrences (two groups), Lot 26, 19th Concession, Raglan Township, Renfrew County, Ontario. From 600 m to 1.4 km north from the road running southeast from the above-mentioned bridge. The first group, 600 m from the bridge, was on top of a ridge. Tapered brown prismatic corundum crystals were noted. At the second group, beside the wagon road, large red garnet crystals, as much as 2.5 cm across, were noted (Satterly, 1945).
- Raglan Occurrences, Lot 27, 19th Concession, Raglan Township, Renfrew County, Ontario. Further minor showings, in which pits and shallow workings had been dug, were noted (Satterly, 1945).
- Raglan Occurrences, Lot 28, 19th Concession, Raglan Township, Renfrew County, Ontario. There were reported to be several old workings on this lot (Satterly, 1945).
- Raglan Occurrence, Lot 29, 19th Concession, Raglan Township, Renfrew County, Ontario. It was noted that Countum Refiners had prospected this lot (Satterly, 1945). This could be the same property listed under the company's name, above.
- Reid Lake Occurrence, Lot 34, 7th Concession, Brudenell Township, Renfrew County, Ontario. At the south end of Reid Lake. Corundum, intergrown with magnetite, occurred in a nepheline-albite gneiss (Hewitt, 1954).
- Lily Robertson (Property) Mine, Lot 26, 13th Concession, Dungannon Township, Hastings County, Ontario. Hewitt & James (1956) reported that this small, but rich, deposit had been opened by Louis Moyd, of Bancroft (about 1947 or 1948). It was on the northwest side of Robertson Hill. There were two pits. In the *North Pit*, bronze-black corundum crystals, up to 5 cm in diameter, occurred in a nepheline-albite pegmatite. Purplish-blue scapolite was also noted. In the *South Pit*, about 15 m away, tapered bronze corundum crystals, up to about 7.5 cm across, were mentioned (Hewitt, 1961).
- Rosenthal Mine (Brudenell Occurrence), Lot 34, 4th Concession, Brudenell Township, Renfrew County, Ontario. At the northeast corner of the lot, about 300 m from the Township boundary and 12 m south of the road between the 4th and 5th Concessions (Hewitt, 1954). The pit was about 50 ft long and 25 ft wide. It was dug in a granite pegmatite which cut syenite gneisses. No history of mining was given but Satterly (1945) reported this as being a pit from which corundum had been mined. Lenses of corundum-bearing syenitic gneiss were in pink and white syenitic gneisses. Some very rich patches of corundum pegmatite, with up to 75% corundum, were mentioned. Other minerals included albite, allanite, biotite, hornblende, titanite (sphene). Hewitt (1954) reported that patches of massive black allanite, up to 15 cm² occurred in the red granites and syenite pegmatites.
- Schroeder Occurrence, Lot 31, 2nd Concession, Radcliffe Township, Renfrew County, Ontario. On the farm of Julius F. Schroeder, about 365 m southeast of the farm buildings. Satterly (1945) noted that it was of no economic interest. Bronze corundum crystals occurred in a pink syenite gneiss (Hewitt, 1954).
- Sebastopol Occurrence, Lot 6, 4th Concession, Sebastopol Township, Renfrew County, Ontario (Satterly, 1945).
- Sebastopol Occurrence, Lot 24, 5th Concession, Sebastopol Township, Renfrew County, Ontario (Satterly, 1945).

- Sebastopol Occurrence, Lot 25, 5th Concession, Sebastopol Township, Renfrew County, Ontario (Satterly, 1945).
- Unnamed Mine, Lot 5, 15th Concession, Carlow Township, Hastings County, Ontario. The mine was reportedly on the side of a hill, about 250 m north of the New Carlow Road. An old cut, probably worked about 1910, it was 120 ft long, 40 ft wide, and from three to four ft deep. Bronze corundum crystals, up to 2.5 cm in diameter, occurred with muscovite, biotite, and magnetite, in a syenite (Hewitt, 1955).
- Unnamed Occurrence, Lot 7, 6th Concession, Brudenell Township, Renfrew County, Ontario. At the west end of a small lake, bluish corundum crystals were reported in a band of biotite-corundum syenite gneiss and crystalline limestone (Hewitt, 1954).
- Unnamed Occurrence, Lot 24, 6th Concession, Brudenell Township, Renfrew County, Ontario. This was a small occurrence of small corundum crystals in a syenite gneiss (Hewitt, 1954).
- Unnamed Occurrence, Lot 20, 7th Concession, Brudenell Township, Renfrew County, Ontario. Southeast of the east end of Charlotte Lake (Hewitt, 1954), corundum was reported to occur as weathered knobs in outcrops of syenite and altered limestones.
- Welsh Corundum Mine, Lot 13, 1st Concession, Monteagle Township, Hastings County, Ontario. The deposit, a small one, was worked by the National Corundum Wheel Company, of Buffalo, New York, in 1906. The pit, about 400 m north of the township boundary, was reported to be 25 ft long, 18 ft wide, and with a 10-foot face on one side (north). The corundum, occurring as small crystals (up to about 6 mm.), was in a grey biotite-corundum syenite gneiss.
- Wishman Occurrences (two), Lot 10, 18th Concession, Raglan Township, Renfrew County, Ontario. On the east side of the Conroy Marsh on the farm of George Wishman (Hewitt, 1954). Numerous outcrops on a hill above the York and Madawaska Rivers were reported by Satterly (1945). Hewitt (1954) reported small brown corundum crystals in a pink leuco-syenite at the west occurrence.

Diabase(Trap)

Diabase, also known as trap rock, was quarried for use as road ballast.

Ontario Rock Company Quarry, Lots 6 and 7, 4th and 6th Concessions, Belmont Township, and Methuen Township, Peterborough County, Ontario. At Preveneau, 8 km east of Havelock, it was operated intermittently from 1912 to 1946 (1913-1948). The product was shipped to Toronto, for use in road construction. Forty were reported to have been employed.

Diopside

Diopside is a gem mineral which is a member of the pyroxene group. These are usually found in metamorphic limestones of which there are many occurrences in the areas covered by these lists.

Bird's Creek Occurrence, Lot 3, 4th Concession, Herschel Township, Hastings County, Ontario.

- Sinkankis reported that light green gems had been cut from crystals from this location (1959).
- Cardiff Occurrence, Lot 1, 21st Concession, Cardiff Township, Haliburton County, Ontario.
Sinkankis (1959) noted that much-shattered transparent green crystals were obtained at this site.
- Charbonneau Property, Lot 24, 7th Range, Wentworth Township, Argenteuil County, Québec.
Near Laurel. Osborne (1938) reported that J.-J. Charbonneau had mined in a small body of metamorphic pyroxenite. There were reportedly: large pale lilac diopside crystals; phlogopite mica; sphene; apatite; scapolite; calcite; and honey-yellow vesuvianite. All the minerals were reported to be very shattered. Osborne noted that diamonds had also been reported, but that all that he had seen that had resembled diamonds had been colourless quartz anhedral within coarsely crystalline calcite (1938).
- Laurel Diopside Occurrence, Argenteuil County, Québec. About 7 km from Lost River, Québec, and on the road to Morin Heights. Sabina reported that the pit, opened about the mid 1950s, was then on the property of Albert Morrow (Sabina, 1986).
- Laurel Occurrence, near Laurel, south of Sixteen Island Lake, Argenteuil County, Québec.
Sinkankis (1959) reported large reddish-brown crystals in metamorphosed limestone next to a pegmatite dike.

Dolomite (see also Magnesium)

Magnesium, a metal lighter than aluminum, was (and is) used in the manufacture of airplanes, airplane engines, and incendiary bombs. Because it burns easily, with a hot, white light, it is also used in flash bulbs, flares, incendiary bullets, and fireworks.

- Airmat Corporation Quarry, Bouchette Township, Gatineau County, Québec. It was reported to have produced dolomite and crystalline limestone in 1964 (1967).
- Baptiste Lake Deposit, Lots 23 to 25, 4th and 5th Concessions, Herschel Township, Hastings County, Ontario. On the southwest shore of Baptiste Lake, about 0.6 km from Baptiste Station on the Irondale, Bancroft and Ottawa line of Canadian National Railways. Beside the Railway and outcropping on a hill. Purchased in 1916 by Alex Watson, of Toronto, who transferred it, in 1921, to the Ontario Dolomite Manufacturing Company, it was then absorbed, in rapid succession, by the Crystalline Mining Company and by Burnip Brothers and Company. It seems to have been mined in 1922 (1923). The dolomite was underlain by gneiss (1922).
- Canada Marble and Lime Quarry, about 3 km southwest of L'Annonciation, Québec. The quarry was reportedly operated in the 1930s (Sabina, 1986).
- Canadian Dolomite Company Quarries, Portage du Fort, Pontiac County, Québec. The White Grit Company was reported as an owner/operator from 1921 to 1923 (1922-1924), while the Canadian Dolomite Company was listed from 1949 (1950) to 1954 (Canada, Mines Branch 1952-1955). The white crystalline dolomite was crushed and used for terrazzo, stucco, and stone aggregates.
- Crystalline (Crystallite) Stone Products (Carfrae) Mine, Lots 3 and 4, 12th Concession, Faraday

(Herschell) Township, Hastings County, Ontario. West of Bancroft, it was opened by Alfred. J. J. Carfrae on his farm, in 1923. The product was shipped to the Crystalline Stone Company, of Hamilton. It was mined in 1924 and 1925 (1926) and listed as a producer in 1926, when 1 467 tons were shipped (1927). Six men were employed, while the quarry was about 150 ft long with a 30-foot face (Thomson, 1943). The dolomite was used in the manufacture of stucco dash.

Dominion Magnesium Mine, see the listing under Magnesium.

Faraday Mine, Lot 2, 12th Concession, Faraday Township, Hastings County, Ontario. Hewitt (1959) reported that a small quarry had been opened in a dolomite deposit at this location, on the south side of a hill, during the period 1953-1954. The dolomite was white and medium to coarse-grained. No name was given to the operation and this writer has assigned the name according to its location.

Gould Quarry, Lot 20, 5th Concession, Ross Township, Renfrew County, Ontario. To the west of the Dominion Magnesium mine, it was reported as an old quarry by Satterly (1945).

Horne Property, west half Lot 22 and Lot 23, 3rd Concession, Herschel Township, Hastings County, Ontario. The property was reported to have been explored by the Horne Prospecting Company in 1942 (Thomson, 1943).

Jamieson Lime Company Quarry, Lot 21, 1st Concession, Horton Township, Renfrew County, Ontario. The quarry was about 6.5 km northwest of Renfrew and beside Highway 17. It was about 275 ft long, and with a 20 to 30-ft face, and was in a white crystalline dolomite. It was reported as being mined in the summer to supply paper sulphite mills (Satterly, 1945).

Laurentian Dolomite Mining Quarry, Campbell Township, Labelle County, Québec. The quarry, in dolomitic limestone, began, in mid-1964 (1967).

Ross Quarries (four), Lot 25, 3rd Concession, Ross Township, Renfrew County, Ontario. The pits were about 2 km from Haley Station on the Canadian Pacific Railway. Satterly (1945) noted that the stone was shipped to Toronto for terrazzo, and that the property had been idle for a number of years. The siliceous crystalline dolomite contained radiating masses of white tremolite.

Ross Quarry, east half of Lot 19, 6th Concession, Ross Township, Renfrew County, Ontario. Satterly (1945) noted that a marble mill was operated on the site from 1901 to 1907, and that the property had been connected via a spur line to the Canadian Pacific Railway at Haley Station. The stone was used in several buildings. The property was then owned (1944) by Dominion Magnesium.

Unnamed Property, Lots 23 to 25, 4th and 5th Concessions, Herschel Township, Hastings County, Ontario. To the south of Baptiste Lake and close to Baptiste Station on the Canadian National Railway. Production in 1921 was mentioned, as were shipments in 1935 by Ontario Chemical Minerals, of Toronto (Thomson, 1943).

Val-Barrette area Quarries (three), about 14 km south east of Mont-Laurier, Québec. Sabina reported (1986) that these were worked "a few years ago" (prior to 1986).

Feldspar

Feldspar is used in the ceramic industry to manufacture pottery, porcelain, wall tiles, enamelware, and glass. It is also used for abrasive soaps and washing compounds. Very pure feldspar can also be used for dental purposes. There are many deposits in Ontario and Québec, with the area around Ottawa being particularly noteworthy. Feldspar was mined in the area as early as the 1890s - especially around: Buckingham, in Hill County, Québec; Perth, in Lanark County, Ontario; and Verona, in Frontenac County, Ontario. The Buckingham area continued to be the main producing area in Québec until the late 1950s (1959). Many of the deposits are in pegmatite dikes cutting the other rocks of the locality. In the area covered by these lists there are probably thousands of pegmatite dikes which contain feldspar and other minerals. Many of these are too small to be mined, while in many others the feldspar is not of sufficient purity to be economically viable. There are a great many properties at which pits were dug and shafts sunk and which never developed into commercial operations. In the area the peak of the activity in feldspar was about the first quarter of the 20th Century.

Some of the deposits were in pegmatite dikes that were later discovered to be radioactive. These became of interest in a boom in uranium which began in the mid-1950s. Two such deposits which are particularly well-known for a large variety of interesting minerals were the MacDonald Mine and the Woodcox Mine. Both are listed not only in this section, but also under Uranium.

Some of the feldspars are also known as gemstones. Perthite, named for Perth, Ontario, is a flesh-red feldspar with braided-looking intergrowths of microcline and albite. Amazonite is a bright green variety of microcline. Peristerite is an iridescent albite (plagioclase group). Bytownite, a member of the oligoclase group of plagioclase, was named after Bytown, but, ironically, the feldspar found there proved not to be this mineral. Moonstone, is a plagioclase which displays bluish or silvery light.

Aleck Mine, south half of Lot 17, 6th Concession, Murchison Township, Renfrew County (formerly District of Nipissing), Ontario. Wallace Cameron and three men were reported to have produced 215 tons in 1951 (1953). Leonard Aleck, of Madawaska, was reported to have produced 80 tons in 1953 (1955).

Allan Mine, Lot 12, 10th Concession, North Burgess Township, Lanark County, Ontario. On the farm of J. K. Allan, at Allan Mill, and about 10 km southwest of Perth the property was reported to have been first mined in 1920 by the Silica Milling Company of Chicago, Illinois. It was a small operation, with five men a horse and a whim (1920). Work stopped in February 1920 (1921).

Aylen Mine, north half of Lot 28, 6th Concession, Clara Township, Ontario. About 8 km east of Deux Rivières, the mine was opened in 1924 by Duncan Dewar and W. H. Gibson, of Pembroke. Ten men were reported to have shipped one carload (1926).

Babcock Mine, Lot 1, west half of Lot 2, the northeast quarter of Lot 2, 11th Concession, and the east half of Lot 3, 12th Concession, Loughborough Township, Frontenac County, Ontario, near Holleford and Verona, on the farm of W. J. Babcock. The mine was opened in 1920

- by the Gardner Feldspar Company. Eighteen were employed (1921). It was worked by them until 1921 (1922), and then by W. G. Treadwell, of Ottawa, in 1922 (1923).
- Back** (Wallingford Mine, Wallingford and Moreau Property), Mine, Lots 14 and 15, 2nd Range, Derry Township, Papineau County, Québec. The mine was about 6 km northeast of Glen Almond, and 27 km from Buckingham. The orebody occurred in a pegmatite which cut across the spur of a ridge immediately north of Mud Lake. Arthur Wallingford and Rodolphe Moreau, the latter of Pointe Gatineau, were listed as owners/operators in 1935 (1936), while Arthur Wallingford was listed in 1936 (1937) and George E. Wallingford from 1938 to 1939 (1939-1940). The *Wallingford Mine* was mentioned by name for the first time in 1937, when it was noted that both feldspar and quartz were being obtained by underground methods from a pegmatite dyke of considerable size (1938). The underground stope was reported, in 1944, to have been 275 ft long, 100 ft wide, and 85 ft high. Access was via two short adits driven into the south slope of the ridge, five and 35 ft above the level of the lake, respectively (1945). During 1937-1938, it and the Derry mine (see the listing below) were operated by the Canadian Flint and Spar Company (1939). It was the main producer in 1939-1941 (1940-1942), and one of the main producers from 1942 to 1953 (1943-1955), when it was called the *Back Mine*. In 1947, it was reported to have been the largest feldspar producer in Canada. It was worked underground by underhand stoping methods (1950). Sabina (1986) reported that it was opened by Messrs. O'Brien and Fowler, of Ottawa, and later operated by the Canadian Flint and Spar Company, and its successor, the International Minerals and Chemical Corporation, and that it was in continuous production from 1924 to 1972. The orebody, occurred in a pegmatite dyke, and was more than 500 ft long and 100 ft wide. It was one of the largest of its type in Québec, and was massive white feldspar more than 30 m wide. Quartz, feldspar, and biotite were reported as the principal minerals (1945). It was reported to have contributed 70% of the output in 1954 (1956). In the same year, the company purchased 10 other quartz and feldspar operations in Buckingham, Derry, and Hull Townships (1956). In 1959-1964, it was mined by International Minerals and Chemicals Corporation (Canada), the successor company, at the rate of about 30 tons per day, or 600 tons per month (1961-1967).
- Bambrick Mine**, Lot 14, 3rd Concession, Dickens Township, District of Nipissing (later Renfrew County), Ontario. Beside the Canadian National Railway line, about 2.5 km west of the Aylen Lake siding, the mine was opened in 1921 by a Mr. Bambrick, of Ottawa. It was then worked in 1922-1923 by Canadian Non-Metallic Minerals, of Montréal. The ore was reported to have been a reddish spar with quartz and mica (Satterly, 1945).
- Bancroft Feldspar Mines (Reeves) Mine**, Lot 6, 12th Concession, Monteagle Township, Hastings County, Ontario. Near Maynooth. Operations were reported to have begun in 1945 (Canada, 1947). It was operated by Arthur Shore and Ray Munnings. After small trial shipments, mining began in 1946, when 1190 tons was shipped (1948).
- Bark Lake Occurrences**, Lachute area, Québec. The occurrences were to the west of Duncan's Road. Osborne mentioned these pits in his 1936 report (1938). The feldspar occurred with quartz and mica.
- Barr Property**, Aberford Township, Québec. W. J. Barr, of Westmeath and then Beachburg, Ontario, was listed as an owner/operator from 1937 to 1946 (1938-1947). Work was

reported in 1940-1941.

- Barr (Property) Mine, north half of Lot 24, 16th Concession, Fraser Township, Renfrew County, Ontario. Near Renfrew, and about 3 km north of Indian Station on the Canadian National Railway, it was reported to have been the property of W. J. Barr, of Westmeath, in 1935-1938 (1936-1939). A production of 1107 tons was mentioned for the three years 1934-1936 (Satterly, 1945). The pit had been dug in a pegmatite dike which consisted of glassy white quartz and large crystals of pink microcline (up to three by four by five ft).
- Barrett Mine, Lot 25, 6th Range and Lot 27, 8th Range, Templeton Township, Ottawa (now Papineau) County, Québec (1899).
- Bartlett (Hybla, Vardy) Mine, west half of Lot 13 and Lot 14, 8th Concession, Monteagle Township, Hastings County, Ontario. Previous mining on this property was reported to have been the opening of a stope in a hillside in feldspar. The old stope was 100 ft long, 35 ft wide, and 25 ft high. The Hybla Feldspar Corporation was incorporated in mid-1948, and continued mining the old stope. A report indicates that 312 tons were shipped (1950). Later that year, D. C. Vardy, of Bancroft, took over the lease and mined a further 480 tons (1950). In 1950, W. Jessop became the owner and mined about 500 tons of feldspar. The opening, in a hillside, was then about 125 ft long, from 20 to 40 ft wide, and 25 ft high (1952).
- Bartlett Mine, Lot 15, 8th Concession, Monteagle Township, Hastings County, Ontario. There were two showings on the property. The *Number 1 Showing* about 40 ft from the west shore of Salmon Trout Lake, near the south end of the lake, and about 250 m north of a road (Hewitt, 1955). It was reported to have been prospected by P. J. Dwyer, in 1926. A pit, 40 ft long, 20 ft wide, and six ft deep, was dug at that time. The *Number 2 Showing* was on the crest of a hill, south of the road, and about 300 m east of the J. Bartlett farmhouse (Hewitt). At this second location, a small pit, 15 ft long, 10 ft wide, and three ft deep, had been excavated by K. Bowser, in 1951. Both pits had been dug in graphic granite pegmatites. Microcline perthite crystals, up to 120 cm in diameter, were mentioned, as were hornblende and allanite.
- Bathurst Mine, south half of Lot 16 and the north half of Lot 15, 8th Concession, Bathurst Township, Lanark County, Ontario. About 15 km west of Perth, it was mined by Bathurst Feldspar Mines Limited (incorporated 1927), and others, during the period from 1926 to 1953. It was the largest producer in the area and the second in the province (Sabina, 1987). It was the principal producer in Ontario in 1938 and 1945 (Canada, Mines Branch, 1939, 1946), and still a principal producer in 1950 (Canada, 1951). It was mentioned in 1953 (Canada Mines Branch, 1954). T. H. Craig was listed as the operator from 1938 to 1942 (1940, 1946). When the lease terminated in 1942 and Bathurst Feldspar resumed operations, the pit was 240 ft long, 70 ft wide, and 120 ft deep (1946). It was reported that 18 were employed in 1943 (1944). Production between 1947 and 1951 varied from about 2 000 tons to 12 000 tons in 1948 (1949-1953). It was operated on a contract basis by W. M. Wallingford, of Buckingham, in 1951 (1953). L. R. Bigelow, of Perth, was reported to have mined it, with 12 men, in late 1953. Nine hundred and fifty-five tons of feldspar were mined that year (1955).
- Battle Lake Mine, Québec. The mine was reported to have been worked by Edward Wallingford Limited in 1951 (1952).

- Bertrand Property, Derry Township, Papineau County, Québec. Wilfrid Bertrand, of Buckingham, was reported as the owner/operator of a property from 1934 to 1938 (1935-1939). It was not mentioned as having produced.
- Betty Mine, Lot 25 (20), 12th Range, Buckingham Township, Papineau County, Québec. Intermittent work at this mine was reported in 1942-1943 (1943-1944).
- Bigelow Mine, Lot 16, 9th Range, Buckingham Township, Papineau County, Québec. It was operated by United Mining Industries in 1942-1944 (1943-1945). Much of the output was reported to have been of the quality required for dental purposes. The feldspar was white. V. Bigelow reportedly mined 54 tons in 1964 (1967).
- Bigelow Mine, Lot 1, 3rd (1st) Range East, Portland Township, Papineau County, Québec. The property was reported to have been mined intermittently by Robert Bigelow and Sons from 1946 to 1949 (1947-1950).
- Gordon Bigelow Property, Lot 13, 1st Range, Portland East Township, Papineau County, Québec. This property was reported to have been in development in 1928 (1929). Gordon Bigelow was listed as an owner/operator from 1929 to 1932 (1930-1933).
- Bigelow Property, Derry Township, Papineau County, Québec, also owned/operated by Gordon Bigelow, of Glen Almond. Work was reported in 1938 (1939). Gordon Bigelow was listed as owner/operator of this property from 1943 to 1946 (1944-1947) and was mentioned again in 1952 (Canada Mines Branch, 1953). See the listing for the Derry Mine, below.
- Bigelow and Parcher Property, Derry Township, Papineau County, Québec. Gordon Bigelow and Alton Parcher, of Glen Almond, were reported as owners/operators in 1939 and 1940 (1940-1941). Work was reported in both years.
- Napoleon Blais and Phrase Arbic Property, Campbell Township, Québec. The owners were listed as being from Mont-Laurier (1933-1937). It was not reported as producing.
- Blue Sea Lake Quarry, about 1 km west of Blue Sea Lake, Québec. It was reported to have been worked in the early 1910s (Sabina, 1987).
- Bon Ami Mines, Lot 22, 6th Range, Lot 22, 7th Range, Lot 27, 8th Range, Buckingham Township, Papineau County, Québec. Bon Ami, of Montréal, was reported to have done a lot of development work on these properties in 1940 (1941) and to have marketed a few hundred tons of feldspar. During 1925-1932, it also operated the McArthur (Masson) Mine. In the 1946 (1947) Canadian Mines Branch report, it was noted that the company operated two mines in the Lièvre River area and one in Aylwin Township, Gatineau County. It operated a few properties each year, but these were not necessarily the same from year to year. See also the listings for the Cameron, Gratton, Green Lake, McArthur, McDonnell, and Smith Mines, below. It was mentioned as a producer in 1954 (Canada Mines Branch, 1955).
- Border Mine, west half of Lot 5, 12th Concession, Portland Township, Frontenac County, Ontario, and about 3 km northeast of Verona. Leased by the Pennsylvania Feldspar Company, of Toughkenamon, Pennsylvania, in 1902, it was mined from 1902 to 1904 and from 1906 to 1907 (1906)(1908). Mining was from one pit (1903).
- Bowes Mine, Ontario. It was reported as being one of the mines of Feldspar Quarries in 1929 (1930). The location was not specified.
- Bowser Brothers (Canspar) Mine, see the listing for the Cameron (Ox Lake) Mine, below.

- Brassard Mine, Lot 25, 6th Range west, Portland Township, Papineau County, Québec.
Intermittent operations were mentioned in 1944 (1945).
- Brazeau Mine, Lot 3, 1st Range, Portland West Township, Papineau County, Québec. Maurice A. Brazeau was reported as a new producer who shipped a few tons in 1929 (1930).
Intermittent production was then reported until 1937 (1930-1938).
- Brebner (Bauder, Gamey) Mine, Lot 4, 12th Concession, Portland Township, Frontenac County, Ontario. Near Verona. Reported to have been idle for a long time, the property was re-opened in 1919. The pit was 300 ft long and 65 ft deep (1920). It was worked until September 1920 by Feldspar Quarries, Limited (1921). It was closed in the spring of 1921 (1922).
- British American Feldspar (Property) Mine, Lot 28, 5th Concession, Bedford Township, Frontenac County, Ontario. On the west shore of Bob's Lake. Shipments were made from Drafton siding on the Kingston and Pembroke Railway. About 15 were employed (1920).
- Buckingham Feldspar Company (Property) Mine, Lot 9, 2nd Range, Derry Township, Papineau County, Québec. About 6.5 km from the Lièvre River. Opened by Messrs. Parker and Higginson, of Buckingham, in 1922, it was sold later that year to Messrs. Mahoney and Rich, of Ottawa. Production began that year, and it was then second in importance to the Derry mine (1923) (see listing below). In 1923, however, it was abandoned and the work shifted to the McGivern Mine (see listing below) (1924). The property was mentioned in the lists of owners/operators intermittently from 1932 to 1936 (1933-1937).
- Buckingham Feldspar Incorporated Properties, Buckingham and Derry Townships, Papineau County, Québec. Reported as an intermittent producer in 1946 (1947).
- Buckingham Feldspar Limited Property, Buckingham Township, Papineau County, Québec. Reported as an owner/operator in 1925 (1926), it produced a small amount in 1945-1946 (1946) (Canada, 1947).
- Buckingham Mining Company Mine, Lot 14, 12th Range, Buckingham Township, Papineau County, Québec. On the same lot as the Pedneaud Mine (see the listing below), this was worked in 1926 (1927). The company was listed intermittently as an owner/operator from 1929 to 1934 (1930-1935), but production was not reported. A small amount was produced in 1946 (Canada, 1947).
- Buckingham Mining Corporation Property, Québec. See the listing for the McClements Mine, below.
- Burger (Property) Mine, Renfrew County, Ontario. Near Eganville, on the Albert Burger property, it was mined in 1947 by the Canadian Flint and Spar Company (Canada, 1948).
- Burnham Mine, Lot 3, 10th Concession, Portland Township, Frontenac County, Ontario.
Sinkankis noted that peristerite was present (1959).
- Burns (John Burns) Mine, east half of Lot 2, 3rd Concession, Bathurst Township, Ontario. Beside the Canadian Pacific Railway tracks about 2.5 km west of Christie Lake siding. Previously mined by Austin and Hawley, it was re-opened in 1920 by Orser-Kraft Feldspar (1921). It was mined in 1921-1922 (1922-1923).
- Burnt Lake Mine, about 6 km northeast of Glen Almond, Québec. Sabina reported (1986) that it was worked, but not when.
- Cairns Mine, Lot 21, 7th Concession, Monteagle Township, Hastings County, Ontario. At the south end of the lot, about 200 m west of the boundary with Lot 20 and 125 m north of

the Concession Road. The property was opened by Messrs. Dillon and Mills, in 1920, and later worked by the Feldspar Mines Corporation and P. J. Dwyer. Hewitt (1955) reported that it had been inactive since 1924 and that the total production had been estimated at two carloads. The main pit was 50 ft long, 30 ft wide, with a 12-ft face at the west end. Then reportedly filled with water, it was estimated to be 25 ft deep. There were two other small cuts close to the main cut. The pits were in a dike. Perthite crystals, up to 45 cm, were mentioned. The other minerals were soda feldspar; smoky quartz, titanite (sphene), hornblende, pyrite, magnetite, and occasional crystals of a black vitreous mineral that was thought to be ellsworthite (Hewitt).

J. H. Cameron, Buckingham, Québec. Reported as an owner/operator from 1922 to 1923 (1923-1924).

Wm. and J. J. Cameron (Property) Mines, Lots 5, 10 and 11, 2nd Range, Derry Township, Papineau County, Québec. The Camerons, of Buckingham, were reported intermittently as owners/operators from 1923 to 1935 (1924-1936), and were mentioned as mining these properties from 1925 to 1929 (1930). The feldspar was used in making ceramics.

Cameron Mine, Lots 23 and 24, 7th Range, Buckingham Township, Papineau County, Québec. The deposit was reported to have been mined by Bon Ami in 1948 (1949).

Cameron Mine, Lots 27 and 28, 9th Range, Buckingham Township, Papineau County, Québec. The Camerons were reported to have developed this property in 1926 and mined some feldspar which was stockpiled (1927). It was mined intermittently until 1935. In 1935 and 1936, however, it was mentioned as being one of the principal operating mines in the province (1936-1937). Reportedly abandoned by W. E. Evans in 1936 (1938), work was again reported in 1937 (1938). Reginald Cameron was reported as owner/operator of a property in Buckingham Township in 1939-1940 (1940-1941), but the location of his property was not specified. William Cameron was also listed in 1940-1945 (1941-1946).

Cameron Mine, Portland West Township, Papineau County, Québec. Near the High Rock apatite mine and close to Notre-Dame-de-la-Salette. Reportedly opened by W. A. and A. D. Cameron in 1936, when 1000 tons of white high-potash feldspar was mined (1937).

Cameron (Gole, Ross) Mine, Lots 14 and 15, 4th Concession, District of Nipissing (Renfrew County), Ontario. The mine was about 4 km from Madawaska Station on the Canadian National Railway. Staked by W. B. Cameron, of Madawaska, in 1938, it was taken over by J. G. Gole in 1940, and acquired by D. L. Ross and Company, of Montréal, in 1941. The workings were on the southeast side of a hill in a pegmatite dikes cutting hornblende and biotite gneiss. A large mass of white to grey glassy quartz was reported to have contained huge pink to grey pure crystals of microcline. One of these was reported to have supplied 300 tons of feldspar (Satterly, 1945). Production in 1943 was reported as 700 tons of feldspar and 3550 tons of quartz.

Cameron (Canspar, Bowser Brothers, Ox Lake) Mine, north half of Lot 22, 7th Concession, Murchison Township, (District of Nipissing) Renfrew County, Ontario, near Madawaska. In 1950-1951, the pit was worked by Bowser Brothers, who mined about 300 tons annually (1952-1953, and, Canada, 1951). In late 1951, W. Cameron started to operate the property (1953). Production in 1952 and 1953 was 1314 tons (1954) and 1500 tons (1955), respectively. Five men were reported to have been employed (1955). In 1954, Russell Van Meter, of Whitney, was reported to have purchased the property and mined

187 tons of feldspar (1956)

Cameron Mine, Lot 22, 8th Concession, Murchison Township, District of Nipissing, Ontario. The property was reported to have been mined over a number of years, with an old open cut in a hillside having been 250 ft long, 13 ft wide, and 25 ft deep. It was operated under lease by the Opeongo Mining Company (Gary Colautti) in 1948, when 405 tons were shipped (1950).

Cameron and Aleck Property, south half of Lot 17, 6th Concession, Murchison Township, District of Nipissing (later Renfrew County), Ontario, and near Madawaska. W. B. Cameron and Leonard Aleck, both of Madawaska, opened this deposit in 1949. By the end of the year the pit was 60 ft long, 30 ft wide, and from ground-level to a 20-foot face (1951). Some 1015 tons was reported as production for 1949. In 1950, 789 tons was mined. The pit was then 80 ft long, up to 50 ft wide, and with a 25-ft face (1952, and Canada, 1951). Wallace Cameron was mentioned in 1952-1953 (Canada Mines Branch, 1953-1954)

Cameron and Donald Property, Portland West Township, Papineau County, Québec. Wm. A. Cameron and A. Donald, of Buckingham, were listed as owners/operators in 1937 (1938). Canada Feldspar Corporation, near Verona, Ontario (1918-1919).

Canada Radium Mines Property, Cardiff Township, Haliburton County, Ontario. The company also produced feldspar and quartz. See also the listing under radium.

Canadian Amber Mica Company Property, Portland West Township, Papineau County, Québec. The company was reported intermittently as an owner/operator from 1924 to 1939 (1925-1940).

Canadian Beryllium Mines and Alloys (Renfrew Minerals) Mine, Lot 23, 15th Concession, Lyndoch Township, Renfrew County, Ontario. Ontario. On the south side of Casey Hill, about 2.5 km from Quadeville (Hewitt, 1954), the deposit was discovered in 1897 and opened by T. B. Caldwell, of Perth, in 1926. It was operated by C. Lentz, of Rockingham in 1936-1938 (1937-1939). During this period, it was estimated that from two to four tons of beryl crystals were mined. In 1939, Canadian Beryllium Mines and Alloys (formed in 1937) began to open the property, and beryl was hand-picked from broken rock. Twelve men were employed (1941). Inactive since 1945, it was acquired by Canadian Beryllium Mines and Alloys in 1949. About 500 tons was mined that year (1951). In 1950, it was reported that a shipment was made from the stockpile (1952). The beryl, and other minerals, were in a pegmatite dike which cut hornblende granite gneiss. A deep green amazonite was found in a pegmatite outcrop (Sinkankis, 1959). The pit was about 210 ft long and up to 30 ft wide. It was narrower in the central part. The beryl occurred as well-formed euhedral six-sided blue-green crystals, up to 10 cm in diameter and 20 cm long. These occurred with lyndochite (a variety of euxenite), columbite, monazite, cyrtolite (zircon), allanite (black, platy crystals), microcline, microcline-perthite, albite (pink), quartz (smoky and clear), tourmaline (in crystals up to 2.5 cm in diameter and 15 cm long), cleavelandite, biotite and muscovite mica (in books up to 5 cm across), magnetite, garnets (reddish-brown crystal up to about 1 cm), fluorite, and apatite (Hewitt, 1954). A small quantity of pink microcline pertite and light green amazonstone were also mined (Hewitt, 1954).

Canadian Flint and Spar Company Properties, Ontario and Québec. The company, from Buckingham, was listed as an owner/operator from 1930 to 1952 (1931-1953). It

produced in from 1935 to 1956, when it became the International Minerals and Chemical Corporation (1958). In the Canadian Mines Branch Reports for 1946 to 1953 (1947-1954), it was noted that it then operated four mines: in Derry, Buckingham, West Portland, and Templeton Townships, Papineau County, and that it accounted for much of the output in the province. It operated several properties every year, but these were not necessarily the same each year. The reader is referred to the individual listings for the Back, Cole Lake, Evans-Lou, Hart, New York, Matthewman, Parker-Higginson, Templeton, and Wakefield Mines. The company also operated the old Richardson Mine, in Bedford Township, Frontenac County, Ontario (see this listing also). In 1946-1947, it was noted that it was developing new properties on Lots 19 and 20, 5th Range and Lots 11 and 12, 7th Range, of Derry Township (1947-1948). It was reported to have operated six mines in Québec in 1952 (1953), and also other properties in the Verona and Perth areas of Ontario (1951). In 1949, it was reported to be operating the Mink Lake Mine, in Loughborough Township, Ontario (1951). In 1950, the MacDonald Mine was added to the list (1952). In 1953, it was reported to have opened up a new deposit near Plevna, in Miller Township, Frontenac County. This was mined in 1954. In 1955, it was reported to have processed the output from 11 other (unnamed) mines (1957).

Canspar Mine (Keystone Contractors Property, Cameron Property), south half of Lot 22, 8th Concession, Murchison Township, District of Nipissing (now Renfrew County), Ontario. The property, 12 km northwest of Madawaska Station on the Canadian National Railway, was first operated by W. B. Cameron, of Madawaska, and four men in 1942 (1946). It was mined by Garry Colautti, of Barry's Bay, acting for Keystone, until mid-1944 (1947). The cut was then 100 ft long, 12 ft wide, and 25 ft deep. Sixteen hundred and sixty-eight tons were reported to have been mined in 1943 (1944). Five were employed. In 1944, Canspar Mines was formed and enlarged the cut made by Keystone. By the end of 1944, it was 200 ft long, 12 ft wide, and from 10 to 25 ft deep (1947). The pegmatite dike contained soda and potash feldspars and quartz. Large pyroxene crystals, from 7.5 cm to 37.5 cm in length, were reported (Satterly, 1945). Production in 1943 was reported as 1530 tons. In 1944, it was 1263 tons, with eight employed (1947).

Canspar (Five-Mile) Mine, see the listing for the Five-Mile Mine, below.

Card Mine, Lot 16, 11th Concession, Portland Township, Frontenac County, Ontario, about 3 km west of Verona Station on the Kingston and Pembroke Railway. It was worked in 1905 and 1906 by the Kingston Mining and Development Company. In 1909 it was purchased by the Kingston Feldspar and Mining Company, which mined it until it closed in 1911. In 1912, however, it was reported that 1000 tons of quartz were shipped from the stockpile. It was thought that it would be re-opened as a source of silica (1917). Later owned by Senator Richardson of Kingston, it was re-opened in October, 1917. After the shipment of 20 carloads, it was closed in May, 1918 (1918).

Carfare Property, Lot 5, 12th Concession, Faraday Township, Hastings County, Ontario. The deposit was about 5 km southwest of Bancroft, on the Carfare Farm. The firm Dillon and Mills employed 10 men to prospect on this property in early 1921 (1921).

Casey and Burke Property, Lots 8 and 9, 11th Range, Buckingham Township, Papineau County, Québec, on the east shore of a lake, and on the north halves of the lots. The deposit, in a pegmatite, was developed by Henry Casey and Anthony Burke in 1949 (1950).

- Cecebe Lake Deposit, Lot 26, 2nd Concession, Chapman Township, Ontario. On the east side of Cecebe Lake, near Harlem's Wharf, the deposit was reached by steamboat from Burk's Falls on the Maganatawan (Magnetawan) River. It was reported as being developed in 1919 (1920). In 1920 it was reported that 722 tons were shipped and that the Wheeling Feldspar Company had been incorporated to exploit the property (1921).
- Chamberlain Quarry, about 1 km north of Old Chelsea, Québec. It was reported to have been worked briefly in 1898 (Sabina, 1987).
- Charles (Card) Mine, Lot 9, 8th Concession, Bathurst Township, Lanark County, Ontario. Worked intermittently in 1942-1947 by T. H. Craig under lease (1944, 1946, 1949). In 1943, it was reported that the "L-shaped" pit was 60 ft long, 30 ft wide, and 20 ft deep, on each branch. Five persons were then employed (1944). One carload from this old property was mined in 1947 (Canada, 1948). At that time the pit, in the south side of a low ridge, was 40 ft long, 30 ft wide, and up to seven ft deep (1949).
- Charette Property, Derry or Buckingham Township, Papineau Counties, Québec. Frank Charette was reported to have mined 1 623 tons for a property in 1964 (1967).
- Alcidas Charron Mine, Templeton Township, Papineau County, Québec. Near Saint-Pierre-de-Wakefield, it was operated by Charron Frères, of Hull. Intermittent production was reported in 1942 (1943).
- Chisholm Mine, see the listing for the Wilson Mine, below.
- Colautti Mines, see the listings for Keystone Contractors and Opeongo Mining Company, below.
- Cole Lake Mine, Lot 7, 4th Range, Derry Township, Papineau County, Québec. About 7 km north of Glen Almond, it was reported to have been worked in 1948 and 1949 by Canadian Flint and Spar Company Limited (1949-1950). Sabina (1986) noted that the property was then owned by Francois Charette, of Glen-Almond.
- Collins Occurrence, south half of Lot 24, 16th Concession, Fraser Township, Renfrew County, Ontario. The property was owned by J. Collins, of Beachburg (Satterly, 1945). Two pits had been dug in biotite granite pegmatite dikes. It was doubted if any feldspar had been shipped.
- Cooligan Property, Buckingham Township, Papineau County, Québec. Joe Cooligan, of Buckingham, was listed as an owner/operator from 1930 to 1932 (1931-1933).
- Constantineau and McGill (Constantineau) Property, Augmentation of Grenville Township, Québec. Léon Constantineau, of Pointe-au-Chêne, Argenteuil County, was listed as an owner/operator in 1939 (1940). He and Lawrence McGill, were listed in 1940-1942 (1941-1943).
- Corcoran (Pearson) Mine, Lot 12, 12th Range, Buckingham Township, Papineau County, Québec. Originally mined by Charles Pearson, it was acquired by G. J. Corcoran, of Pittsburgh, Pennsylvania. He was reported to have operated it in 1894 with 15 men (1895).
- Coté (Wallingford) Mine, 14th Range, Hull Township, Gatineau (formerly Ottawa) County, Québec. Near Cantley, it was reported that this old mine had been reopened in 1948 (Canada, 1949)(1949). On the summit of a hill, the deposit was worked in 1949 by Arthur and Waldrick Wallingford. The pink feldspar was shipped to Rochester, New York (1949). The deposit was microcline feldspar in a pegmatite which outcropped for a length of almost 300 m. The width was about 45 m. The minerals reported were quartz, feldspar,

tourmaline, biotite, and pyrite. Frequent occurrences of tourmaline crystals were reported (1950). The deposit was worked from an open pit.

Coté Property, Templeton Township, Papineau County, Québec. The Hon. Louis Coté, of Ottawa, was listed as an owner/operator in 1935 (1936).

Estate of P. M. Coté Properties, Hull and Templeton Townships, Gatineau and Papineau Counties (both formerly Ottawa), Québec. From Buckingham, and the Ottawa, it was listed as an owner/operator in 1931 (1933) and 1934 (1935).

Cotnam Mine, Ontario. On Moffat Island in the Ottawa River, about 5 km below Pembroke, the mine was reported to have been opened by G. C. L. Cotnam, of Pembroke, in 1924 (1926).

Couture Mine, Lot 9, 11th Range, Buckingham Township, Papineau County, Québec. Louis Couture, of Buckingham, was listed as the owner/operator in 1924 (1925). He was succeeded by Edmond Couture, of Glen Almond, who was listed from 1927 to 1928 (1928-1929). Louis Couture was listed again in 1932 (1933).

Craig Mine, west half of Lot 12, 9th Concession, Bathurst Township, Lanark County, Ontario. It was reportedly operated by T. H. Craig, of Perth, from 1933 to 1939 (1933-1941).

Craig Mine, Lots 1 and 2, 10th Concession, Loughborough Township, Frontenac County, Ontario. It was listed in 1926 (1927), when nine were employed.

Craig Mine, Lot 1, 12th Concession, Loughborough Township, Frontenac County, Ontario. It was recorded as a producer in 1925 (1926).

Craig Mine, Lot 5, 14th Concession, Loughborough Township, Frontenac County, Ontario. Near Desert Lake, it was also mined by Thomas H. Craig, of Verona. Production of 85 tons was reported in 1924 (1926).

Craig Mine, Lot 15, 6th Concession, Portland Township, Frontenac County, Ontario. Mined by T. H. Craig, production of 100 tons was reported in 1924 (1926).

Craig Mine, Lot 11, 7th Concession, Portland Township, Frontenac County, Ontario. Mined by T. H. Craig, it was reported to have produced 80 tons in 1924 (1926).

Craig Mine, Lot 5, 8th Concession, Portland Township, Frontenac County, Ontario. Another of T. H. Craig's mines, it produced 65 tons in 1924 (1926).

Craig Mine, west half of Lot 2 and the east half of Lot 3, 10th Concession, Portland Township, Frontenac County, Ontario. Mined by T. H. Craig, of Verona, it was his largest mine in 1924, producing 750 tons. It produced from 1923-1929 (1924-1930). Seven men were employed.

Craig Mine, Lots 22 and 23, 2nd Concession, Brudenell Township, Renfrew County, Ontario. Development work was reported to have been conducted by T. H. Craig, in 1942, with 30 tons of feldspar being shipped. There were several small pits in the pegmatite dike that formed a low ridge. The pink granite pegmatite dike contained intimately mixed quartz and pink microcline (Satterly, 1945). Hewitt (1954) reported that much of the pink microcline was in 15 to 20 cm crystals with close intergrowths of quartz and feldspar. Some very large crystals were mentioned, while the other minerals were reported to be: albite (pink), biotite, and hornblende.

Crang Corporation Property, Derry Township, Papineau County, Québec. The J. K. Crang Corporation, of Toronto, was listed as an operator from 1941 to 1942 (1942-1943). Work on this property was reported. See also the listing for the Squaw Hill Mine, which it

operated (below).

- Cronk Prospect, Lot 19, 7th Concession, Hinchinbrooke Township, Frontenac County, Ontario. Owned by Mereneas Cronk, of Parham, about 1920, and by George Cronk, in 1946 (Harding, 1951). The pegmatite was on the northeastern part of the Lot. Between 1918 and 1922, it was reported that a shaft, 15 ft by 15 ft, was sunk to a depth greater than 50 ft, at a location about 150 m from the northeastern corner of the lot. The minerals were noted as being: pink potash feldspar; white soda feldspar; quartz; mica; tourmaline; magnetite; and epidote.
- Cronk and Van Luven Mine, east half of Lot 3, 12 Concession, Loughborough Township, Frontenac County, Ontario. Owned by A. J. Van Luven, of Hartington, it was reportedly mined in 1925. Fourteen cars of feldspar were shipped and six men were employed (1926).
- Derry Mine, south half of Lot 7 and Lot 8, 1st Range, Derry Township, Papineau County, Québec. About 5 km northeast of Glen Almond and 14.5 km from Buckingham. First reported as a new deposit of great promise, and being developed by Messrs. O'Brien and Fowler, a small quantity was shipped in 1920 (1921). From 1921 to 1926 it was the principal producer in the province (1923, 1927). In 1922, the steam-powered drills that were previously used were replaced by Waugh compressed-air drills (1923). The deposit was then mined from a pit, 50 ft wide and 300 ft long, in a pegmatite dyke of almost pure orthoclase feldspar (1922). One of the most important mines and the first in the district, it was mined intermittently from 1919 to 1938, 1942 to 1949, and 1969 to 1970 (Sabina, 1986). It was worked from an open pit until 1924, and then by underground methods from an 85-ft shaft at an inclination of 70 degrees. The face of the large stope at the bottom of the shaft was 35 ft wide and 25 ft high (1926). In 1930, it was reported that it had been leased by Feldspar Quarries, Limited, a subsidiary of the Consolidated Feldspar Corporation, of Trenton, New Jersey (1931). It was also noted that the depth was then 190 ft, and that mining was from "a vast underground chamber". It was the only underground feldspar mine at that time - with all others in Québec being mined from open pits. By 1931 the large stope had been abandoned and mining was to the north and south of it from surface pits (1932). B. A. McDonnell operated it in 1935 (1936). It was then mined for silica (see listing under Silica). In 1937-1942, it was operated by the Canadian Flint and Spar Company. For 1937-1938, it was the largest feldspar mine in Québec, and had produced more than 100 000 tons since 1921 (1938). In 1945-1949, Gordon Bigelow was named as an intermittent operator (1946-1950) who was recovering high-grade feldspar from the old workings (1950). The feldspar from the Lièvre River deposits ranged in colour from white to cream to buff, while that from the Templeton District, a few miles to the west Ranged from pink to red (Canada, Mines Branch, 1924). The Derry deposit also contained a translucent, brittle, glassy spar suitable for use in dentistry. The writer visited the site in mid-September, 1998, and found the pit to be surrounded by a recently-installed, high, chain-link fence. It is inaccessible.
- Derry Mining Company Property, Derry Township, Papineau County, Québec. The company, of Buckingham, and later Ottawa, was listed as an owner/operator in 1934-1946 (1935-1947).
- Desert Lake (Desert) Mine, Frontenac County, Ontario. Near Verona, it was operated by the

Kingston Feldspar and Mining Company (1915-1916). The ore from this mine was shipped in scows across Thirteen Island and Thirty Island Lakes to Glendower Siding on the Canadian Pacific Railway (1915). In 1916, when it was purchased by Feldspars Limited, it and the Reynolds Mine were then producing most of the feldspar mined in Ontario (1917). The pit was then 350 ft long, 100 ft wide, and up to 100 ft deep. There were 75 workers in 1917 (1918). It produced in 1918 (1919). It was also listed as a producer of quartz (see the listing under Quartz). Production was reported in 1924 (1926).

Dominion Feldspar(s) Mine, Lot 28, 5th Concession, Bedford Township, Frontenac County, Ontario, at Parham (1915)(?). The pit was in a pegmatite dike on the northwest shore of Bob's Lake and in the northeastern part of the lot (Harding, 1951). It was within a few m of the shore. Harding mentioned that it was mined early in the 20th Century by the Suroff Mining and Milling Company, and then by Dominion Feldspars. The ore was transported by boat to Fish Creek at the south end of the lake then by wagon to a grinding mill, about 3 km away, at Duncan Lake near the Fish Creek crossing on the Kingston and Pembroke Railway. The feldspar was the pink potash variety.

Dominion Improvement and Development Company Limited, North Burgess Township, Lanark County, Ontario (1915).

Donaldson Mine, Lot 21, 12th Range, Buckingham Township, Papineau County, Québec. Robert J. Donaldson, of Glen Almond, Québec was listed intermittently as the owner/operator from 1927 to 1940 (1928-1941). It was mined in 1929. Work was reported intermittently from 1937 to 1940. W. Donaldson was reported to have mined 262 tons in 1964 (1967).

Dungannon Mine, Lot 20, 10th Concession, Dungannon Township, Hastings County, Ontario. Hewitt & James (1956) reported a pit 50 ft long, 15 ft wide, and six ft deep, that had been dug for feldspar in a granite pegmatite dike which cut a garnet-sillimanite paragneiss. Pink potash feldspar, quartz, and biotite were mentioned.

Dwyer Mine, Lot 6, 8th Concession, Hinchinbrooke Township, Frontenac County, Ontario. A pit was sunk in the first decade of the 20th Century by Patrick Dwyer, and a small quantity shipped. The pit was 40 ft long, eight ft wide, and up to 10 ft deep. The minerals identified were potash feldspar; quartz; muscovite; epidote; and hornblende. In 1946, the property was owned by Joe Dwyer (Harding, 1951).

Dwyer Mine, north half of Lot 24, 6th Concession, Monteagle Township, Hastings County, Ontario, near Hybla. It was worked in 1926 by P. J. Dwyer, who excavated a small pit into the east side of a ridge close to the railroad (Thomson, 1943). It is possibly the property listed as one of the mines of Genesee Feldspar in 1930-1933 (1931-1933). The minerals included allanite, pale green amazonite, euxenite, hornblende, dark mica, peristerite feldspar with fine iridescence, and quartz (Thomson, 1943).

Dwyer (Dillon and Mills) Mine, south half of Lot 24, 6th Concession, Monteagle Township, Hastings County, Ontario. A few hundred m south of the above-mentioned property, it was worked by Dillon and Mills, in 1920, and P. J. Dwyer, in 1926 (Thomson, 1943).

Dwyer (Dillon and Mills) Mine, Lot 20, 7th Concession, Monteagle Township, Hastings County, Ontario. About 1.5 km from Dwyer's Siding on the Canadian National Railway, it was opened by Dillon and Mills in 1920, and worked afterwards by Feldspar Mines Corporation and P. J. Dwyer. The small pit was not worked after 1924 (Thomson, 1943).

- Dwyer Mine, Lot 15, 8th Concession, Monteagle Township, Hastings County, Ontario. At the south shore of Bartlet Lake, about 3 km from Hybla Station, it was reported to have been opened in 1926 by P. J. Dwyer in a dyke containing quartz, large crystals of feldspar, hornblende, and allanite (Thomson, 1943).
- Dwyer Mine, Lot 25, 8th Concession, Monteagle Township, Hastings County, Ontario. Hewitt (1955), reported that a small pit, 20 ft long, 10 ft wide, and six ft deep, was excavated by P. J. Dwyer, at this location. In a granite pegmatite dike, it exposed poorly segregated pink potash feldspar and quartz.
- Dwyer Mine, Lot 30, 9th Concession, Monteagle Township, Hastings County, Ontario. Operated by P. J. Dwyer in 1943, with 50 tons reportedly being shipped (1944).
- Emery Mine, west half of Lot 16, 10th Concession, Portland Township, Frontenac County, Ontario. On the Emery Farm, near Verona, operations were begun in late 1917 by the Eureka Flint and Spar Company, of Trenton, New Jersey. By mid-1918, the pit was 125 ft long, 35 ft wide, and 30 ft deep. It was adjacent to the Hurlbut Property (see the listing below) (1918). It operated in 1919 (1920) and was one of the largest shipper in Ontario in 1920, with 15 people employed (1921). It closed in mid-1921 (1922).
- Ennis Quarry, about 14 km west of Perth, Ontario. On the Charles Ennis Farm, it was opened as a prospect in 1922 (Sabina, 1987).
- Eureka Flint and Spar Company Mine, Lot 3, 10th Concession, Hinchinbrooke Township, Frontenac County, Ontario. Near Verona (1919), and a few hundred ft east of the Wilkinson Road on the lot (Harding, 1951). The feldspar in the pegmatite dike was reported to have been so intimately mixed with the other minerals that its recovery was impossible. Some shipments had been made in 1920.
- Evans Mine, Portland West Township, Papineau County, Québec, near Poltimore. It was reported to have been mined by W. E. Evans and abandoned in 1936 (1938). See also the listing for the Cameron Mine, above.
- Evans Property, Buckingham Township, Papineau County, Québec. Ted Evans was listed as an owner/operator in 1939 (1940).
- Evans Property, Buckingham Township, Papineau County, Québec. Owned and operated by W. H. Evans, of Buckingham, from 1938 to 1939 (1939-1940), work was reported in both years.
- Evans-Lou Mine, Lots 29 and 30, 6th (4th) Range West, Portland Township, Papineau County, Québec. About 9 km west of Notre-Dame-de-la-Salette, and 7 km north of Saint-Pierre-de-Wakefield. The deposit was worked: in 1932, by B. Winning of Notre-Dame-de-la-Salette; from 1934 to 1936 by William B. Evans, of Perth, Ontario; and from 1938 to 1956 by Canada Flint and Spar. Production was mentioned in 1949 (1950). It is known both for the amazing variety of minerals and for the very large sizes of crystals that can be found. Sabina listed (1986) no fewer than 54 minerals, of which two were originally discovered at this deposit. In mid-September, 1998, the writer was allowed to visit the property by a neighbour of the owner (who does not permit collecting). The large cut was found to be filled with water and the dumps very overgrown. Collecting, even if it could be arranged, would be very difficult.
- Father Guay Mine, about 1 km northeast of Pointe-Comfort, Québec. Originally opened by Father Guay, of Gracefield, Québec, in 1896, it was operated intermittently until 1908. Sabina

reported (1987) that it was then on the farm belonging to Rosaire Gauthier.

Federal Feldspar Mine, Lot 25, 3rd Concession, Bedford Township, Frontenac County, Ontario. It was mined between 1920 and 1921 by the Federal Feldspar Company of Ottawa. There were three large pits, which were reported to be presently filled with water (Harding, 1951). The largest was estimated to be 140 ft long, 25 ft wide, and up to 25 ft deep. During the period in which it was mined, the ore was drawn by horses and shipped from near Tichborne, on the Kingston and Renfrew branch of the Canadian Pacific Railway. See also the listing for the Richardson Mine, below.

Feldspar Corporation of North America Property, Portland West Township, Papineau County, Québec. The corporation was reported as an owner/operator from 1925 to 1926 (1926-1927).

Feldspar Glass Mine, Bathurst Township, Ontario. Listed as an operator in 1930-1931 (1931).

Feldspar Mines Corporation Property, Lot 11, 7th Concession, Monteagle Township, Hastings County, Ontario. It was listed as a shipper from 1925 to 1927 (1926-1929).

Feldspar Products Property, Lot 25A, 11th Range, Buckingham Township, Papineau County, Québec. The company was listed as a working owner/operator in 1946 (1947), and production was reported in 1947-1948 (1948-1949).

Feldspar Quarries (Canadian Feldspar Corporation) Mine, Lot 4, 10th Concession, Portland Township, Frontenac County, Ontario. About 4 km west of Verona, on the Reynolds Farm. By 1915 an open pit was developed to a length of 40 ft, a width of 35 ft, and a depth of 40 ft. The ore was a high-grade spar mixed with quartz (1916). In 1916 the property was purchased by Feldspar Quarries, a company organized by Frank and George Hurlbut (1917). It operated in 1919 (1920).

Feldspar Quarries, west half of Lot 16, 10th Concession, Portland Township, Frontenac County, Ontario. Six thousand tons were reported to have been shipped in 1917 (1918). In mid-1918, the pit was reported to have been 150 ft long and 80 ft deep. The quarry operated in 1919 (1920).

Feldspar Quarry, about 15 km north of Buckingham, Québec. It was reportedly worked in the 1920s (Sabina, 1986).

Feldspars Limited Quarries (four?), Lots 1 and 2, 13th Concession, and Lot 1, 12th Concession, Loughborough Township; Lots 1 and 2, 13th Concession, and Lots 1 and 2, 12th Concession, Portland Township; Lot 1, 1st Concession and Lot 2, 2nd Concession, Bedford Township, Frontenac County, Ontario (1918-1919). The company was listed as a shipper from 1925 to 1926 (1926-1927).

Feldspar Quarries Limited, Buckingham Township, Papineau County, Québec. The company was reported as an owner/operator from 1929 to 1932 (1930-1933).

Ferril Mine, Lot 27, 3rd Concession, Monteagle Township, Hastings County, Ontario. Owned by J. T. Ferril, it reportedly produced for a short period in 1926 (1927).

Finn Property, Lot 3, 10th Concession, Hinchinbrook Township, Frontenac County, Ontario. On the farm of Edward Finn, about 1 km southeast of Wilkinson Station on the Canadian Pacific Railway, the deposit was reported to have been opened in 1920 by the Eureka Flint and Spar Company (1921).

Five-Mile (Canspar) Mine, north half of Lot 17, 8th Concession, Dickens Township, District of Nipissing (later Renfrew County), Ontario. Near Madawaska, it was first mined in 1945,

when 1047 tons of feldspar were shipped (1948). By 1948, it was operated under option by the Opeongo Mining Company (Gary Colautti) and 1842 tons was produced (1950). Subsequently, in 1951, it was operated by Wallace Cameron, of Madawaska, and A. G. McKenzie, of Wilberforce (1953).

Foster Mine, see the listing for Laurentian Feldspar Mines, below.

Fowlie Property, Ontario. J. A. Fowlie, of Verona, was mentioned as a shipper in 1924 (1926).

Freeman Mine, Lots 1 and 2, 12th Concession, Loughborough Township, and Lot 1, 13th Concession, Portland Township, Frontenac County, Ontario. On Fourteen Island Lake, about 8 km east of Verona, it was leased by the Pennsylvania Feldspar Company, Toughkenamon, Pennsylvania, which worked it in 1902 and 1903 (1903, 1921). There was one pit. The dumps were re-sorted in 1920 by W. A. Mills, of Hartington (1921). In February 1922, Feldspar Quarries began to re-mine the deposit with a workforce of 27 (1923).

Furlong Mine, Ontario. It was reported as one of the mines of Feldspar Quarries in 1929-1931 (1930-1931), and was then operated by W. H. Evans, of Buckingham, Québec.

Gardner Mine, Lots 1 and 2, 11th Concession, and east half of Lot 3, 12th Concession, Loughborough Township, Frontenac County, Ontario. On the west side of Mud Lake, the deposit was reported to have been opened up during World War I. It was re-opened in 1922 by the Gardner Feldspar Company and shipped from 1923 (1923, 1926). See also the listing for the Steele Mine, below.

Gatineau Mine, Saint-Pierre-de-Wakefield, Québec. It was reported that this mine was worked intermittently in 1943 (1944).

Gatineau Mining and Contracting Company Property, Wakefield Township, Gatineau County, Québec. The company, of Montréal, was listed as an owner/operator in 1942 (1943).

Gatineau Spar Milling Company Property, Hull Township, Gatineau County, Québec. The company, of Ottawa, was listed as an owner/operator from 1932 to 1934 (1933, 1935).

Gauthier Brothers, Buckingham Township, Papineau County, Québec. Reported as an owner/operator in 1925 (1926). J. B. Gauthier was listed from 1930 to 1934 (1931-1935).

Geddes Mine, near Verona, Ontario. Operated by W. J. Geddes, of Verona, it was reported to have produced in 1923 (1924).

Genesee Mine, 7th Concession, Monteagle Township, Hastings County, Ontario. Near Hybla. Opened in 1923 by the Genesee Feldspar Company, from Rochester, New York, the vein was up to 30 ft wide (1924). It was mined from 1924 to 1929, with 15 employed (1927-1930). Feldspar Quarries was mentioned as the operator in 1929.

Genesee Feldspar Mine, Lot 13, 9th Concession, Monteagle Township, Hastings County, Ontario. It was reported to have been mined in 1924 and two carloads shipped (Thomson, 1943).

Genesee Feldspar Number 2 Mine, south half of Lot 14, 8th Concession, Monteagle Township, Hastings County, Ontario. On the west face of a ridge that forms the eastern shore of Salmon Trout Lake, and about 60 m south of the road "at the foot" of the lake (Hewitt, 1955). This was the second mine of the Genesee Feldspar Company, and was opened in 1926, when two cars were reported to have been shipped. The orebody was mined from a large drift, about six m by six m, driven into the hillside. Up to 1931, it was estimated that 2000 tons of feldspar had been mined (Thomson, 1943). During the period from 1948 to 1950, it was again operated by D. Vardy and W. Jessup. At the end of this period, the

total production from the property was estimated at 2846 tons (Hewitt, 1955). Hewitt reported that a large cavern, up to 60 ft wide and 25 ft high, had been driven 110 ft into the hillside. There was also a small pit near the top of the ridge, about 80 m northwest of the cavern, and a third excavation about 120 m to the southeast. The dykes of pink feldspar contained masses of quartz and large vugs, often filled with quartz crystals (Thomson, 1943). Hewitt mentioned these, and also small amounts of soda feldspar, sericite, ellsworthite, and pyrite.

Gleeson-Campbell Mine, west half of Lot 20, 9th Concession, Bathurst Township, Lanark County, Ontario. On the farm of Harry Keays (see also the listing for the Keays Mine), the deposit was being stripped in 1922. It was noted that the feldspar was discoloured with iron stain (1923).

Gowan Property, Lot 15, 4th Range, Portland West Township, Papineau County, Québec. It was reported to have been owned and operated by Wm. Gowan, of Holland Mills, from 1925 to 1926 (1926-1927) and from 1929 to 1930 (1930-1931).

Gratton Mine, Lot 1 (7), 5th Range East, Portland (East) Township, Papineau County, Québec. In 1946, it was noted that Bon Ami was developing this new deposit (1947). It was worked in 1947 (1948).

Gratton Mine, Lot 7, 5th Range East, Portland Township, Papineau County, Québec. A. M. Gratton, of Buckingham, was listed as having worked the deposit from 1944 to 1946 (1945-1947). In 1948, Bon Ami mined it (1949).

Gratton Property, Derry Township, Papineau County, Québec. A second property of A. M. Gratton during the period 1944-1946.

Gray Prospect, see the listing for Mills and Cunningham, below.

Green Lake Mine, Lot 27b, 10th Range, Buckingham Township, Papineau County, Québec. It was first reported as a Bon Ami operation in 1946 (1947). The feldspar was shipped to the Orford Soap Company, Manchester, Connecticut.

Gunter Occurrence, Lot 14, 12th Concession, McClure Township, Hastings County, Ontario. On the farm of Judson Gunter, some stripping in 1930 was mentioned (Thomson, 1943).

Harris Mine, see the listing for the Jenkins Mine, below.

Hart Mine, Lots 6 and 7, 8th (5th) Range West, Portland Township, Papineau County, Québec. About 3 km west of Notre-Dame-de-la-Salette. In 1943, Rodrigue Hart, of Notre-Dame-de-la-Salette, reportedly discovered the two important deposits of pink feldspar on the property (1944). The deposits were then acquired and worked by the Canadian Flint and Spar Company Limited from 1944 to 1951. The property belonged, in 1998, to Gerard Lapointe, of Val-des-Monts. A large cavern, about 15 m across and 15 m high, has been cut about 20 m into the hillside. Further, an unprotected shaft was excavated from above into the top of the cavern (to facilitate exhausting of blasting fumes). Good crystals of sphene can be obtained. Other minerals include biotite, feldspar, hornblende, and quartz. Persons visiting should exercise caution because of the potential hazards from an open hole above. The writer visited the site in September, 1998.

Hart Property, Lot 4, 2nd Range East, Portland Township, Papineau County, Québec. It was reported to have been mined intermittently by Rodrigue Hart in 1949 (1950).

Hébert Property, Derry or Buckingham Townships, Papineau County, Québec. Fernand Hébert was reported to have mined 281 tons in 1964 (1967).

- Hickey (Jessop, Jessup) Mine, south half of Lot 30, 9th Concession, Monteagle Township, Hastings County (also once reported as Renfrew County, in error), Ontario. On the northwest side of a small hill, about 600 m east of Highway 62 (Hewitt, 1955). Hewitt remarked that it is reached easily by following a Concession road east from the highway. The deposit was worked by Wesley Jessup, of Bird's Creek (and also Bancroft), in late 1949. Some mining had taken place previously and the deposit was then known as the Hickey Mine (1951). One hundred and sixty-six tons was mined in 1949 (1951), and 100 tons in 1950 (1952). Wesley Jessop was reported to have been the producer in 1950 (1951). The pit, cut into a hillside, was reported to have been 80 ft long, from 20 to 30 ft wide, and with a 40-ft face at the east end. An area had been stripped above the cut and there was also a second, smaller, pit about 40 ft from the main pit. All of the workings were in granite pegmatite. Pink microcline micropertite, quartz, and graphic granite were mentioned as the principal constituents.
- Higginson Mine, Lots 9 to 11, 2nd Range, Derry Township, Papineau County, Québec. On the same lots as the Parcher Mine (see the listing), it was reported to have been operated by W. E. Evans, of Buckingham, in 1939 (1940).
- Hill Property, Lot 11, 2nd Range, Derry Township, Papineau County, Québec. It was reported to have produced intermittently, by Wm. and Teasdale Hill, in 1949 (1950).
- Hoppins Mine, Lot 2, 3rd Concession, Bedford Township, Frontenac County, Ontario. On the farm of Aaron D. Hoppins, and east of the Desert Lake Road, the deposit was opened in 1919 by the International Feldspar Company, of Detroit, Michigan. Twelve were employed in 1919 and 15 in 1920 (1920-1921). It was closed in March, 1921 (1922). There were three pits, close together, and close to the northeast shore of a small lake about 100 m from the north boundary of the Lot. Pink and white feldspar, quartz, pyroxene, and some pyrite, were mentioned as the minerals (Harding, 1951).
- Huffman Properties (two), south half of Lot 3, 12th Concession, Portland Township, Frontenac County, Ontario. About 5 km northeast of Verona, on the Huffman Farm north of Fourteen Island Lake, it was opened in late 1919 (1920).
- Hurlbut (Austin) Property, Lot 1, 11th Concession, Loughborough Township, Frontenac County, Ontario. Originally owned by L. E. Austin, the property was being developed in 1915-1916 by George Hurlbut, of Toronto. Several test pits had been dug. Six persons were employed (1916). Feldspar Quarries, Limited, was organized in 1916 by Frank and George Hurlbut to work this property but the prospect was then abandoned (1917). Adjacent to the Emery Property (see the listing above). See also the listing for the Noonan Mine, below.
- Hurlbut Mine, Lot 12, 6th Concession, Loughrin Township, Ontario. It was listed as a producer in 1924 (1926).
- Hybla Mine, see the listing for the Bartlett Mine, above.
- Industrial Minerals Corporation of Canada Mine, Lots 29 and 30, 15th Concession, Monmouth Township, Ontario. Near Wilberforce and Eau Claire, it was reported to have been the source of shipments in 1923 and from 1925 to 1926 (1924, 1926-1927).
- International Minerals and Chemical Corporation Properties, Québec. The company succeeded Canadian Flint and Spar in 1956 (1958), and mined until 1962 (1964). See the listings for the Back and Smith Lake Mines.

Jack (Jake) Lake Mine, about 5 km northeast of Glen Almond, Québec. This mine was reported to have been worked in the 1920s (Sabina, 1986).

Jenkins (Harris) Mine, south half of Lot 3, 3rd Concession, Bedford Township, Frontenac County, Ontario. Owned by Charles Jenkins, of Petrolia, it was first worked between 1902 and 1905 (1905)(1906)(Harding, 1951). During this time, it was reported that about 1500 tons had been mined. It was reported again in 1914 (1915). There were two pits, in pegmatite, the largest being about 100 ft long, 30 ft wide, and up to 27 ft deep. Another pit was farther north on the lot. Both were close to the Desert Lake Road. The minerals noted were reddish feldspar, quartz, biotite, hornblende, pyroxene, and magnetite (Harding, 1951).

Jessop Property, see the listing for the Hickey Mine, above.

Jodouin Mine, see the listing for O'Brien and Fowler, below.

Keays Mine, Lot 20 and east half of Lot 21, 9th Concession, Bathurst Township, Lanark County, Ontario. The mine was reported to have been about 11 km from Glen Tay, and on the property of William J. Keays. Orser-Kraft Feldspar began to open this property in 1921. Rinaldo McConnell was also reported to have worked it, with six men, in the same year. The deposit was a white to greenish-white feldspar (1921), and also pink (1922). The vein, up to 28 ft wide, was in syenite. Apatite was reported to have been mined on an adjacent property "many years ago" (1921). Rock Products (see the next listing) mined it in 1922-1923 (1923-1924).

Keays Mine, west half of Lot 21, 9th Concession, Bathurst Township, Lanark County, Ontario. The Rock Products Company, of Silica, Ohio, was reported to have opened up a new pit in 1921 (1922). The feldspar, pale pink in colour, occurred in syenite. There were two pits. It was mined until February 1922, at which time the equipment was moved to the property listed above (1923).

Keays Quarry, about 12 km west of Perth, Ontario. The mine was reported to have been the principal feldspar producer in the Perth area in the 1920s. It was operated by Rock Products Limited, of Ohio, from 1921 to 1927. It was reported to be on the farm of Lloyd Foster.

Kenehan Mine, Lot 4, 3rd Concession, Hinchinbrooke Township, Frontenac County, Ontario. On the farm of Art Kenehan in the northeastern part of the lot, the pit was reported to have been dug about 1925 and a small amount shipped. The local rocks consisted of altered sediments which had been cut by lenses and veins of pegmatites. The pit was on the brow of a hill, about 100 m east of Highway 38. Pink feldspar, quartz, pyroxene, and hornblende were noted (Harding, 1951).

Kennedy Mine, Lot 28, 4th Concession, Bedford Township, Frontenac County, Ontario. On the farm of William Kennedy. During the first quarter of the 20th Century, the owner was reported to have dug a prospect pit, six ft square and 12 ft deep, in a pegmatite dike a few hundred ft west of the house on the western part of the lot. The pit was filled with water when Harding visited it in 1942 (Harding, 1951). Red potash feldspar, quartz, biotite, and tourmaline were reported, but, it was stated that the association between the minerals was so intimate that the deposit was of no value.

Keystone Contractors (Deady) Mine, Lot 117, Range B North, Opeongo Road, Jones Township, Renfrew County, Ontario. Mined from a showing beside the main highway in 1942 by G.

Colautti and/or H. M. Deady, of Maynooth (Satterly, 1945)(1946). Both have been reported as mining the property in the same year! The pit was 260 ft northeast of Highway 60 at the northwest end of a small lake. It was reported that mining had probably been completed.

- Keystone Contractors Mine (Garry Colautti Operation), Lot 22, 8th Concession, Grattan Township, Renfrew County, Ontario. About 13.5 km from Eganville Station on the Canadian Pacific Railway, the property was reportedly then owned by L. St. Louis, and was by Garry Colautti, of Barry's Bay (1946). It was reported that there were three workings, about 60 m from the northeast corner of the lot. These exposed a pink graphic granite pegmatite in contact with hornblende gneiss. Intergrowths of quartz and tourmaline, with large crystals of the latter were noted. The production in 1943 was reported as 1174 tons (Satterly, 1945). The workforce was reported to have been five persons (1944).
- Kingston Feldspar Mining Company, Lot 3, 3rd Concession, Bedford Township, Frontenac County, Ontario. (1905, 1918).
- Kingston Feldspar and Mining Company, Lot 1, 2nd Concession Bedford Township and southeast quarter of Lot 16, 11th Concession, Portland Township, Frontenac County, Ontario. The property was reported to have been near the Kingston and Pembroke Railway (1911). The headquarters of the company were in Kingston.
- Kingston Mining and Development Company, Lot 16, 11th Concession, Portland Township, Frontenac County, Ontario. Mining, from an open pit, began in 1905 (1906).
- Kirkham Mine, Lot 3, 7th Concession, Bathurst Township, Lanark County, Ontario. Near Brooke, and about 17 km southwest of Perth. On the farm of Thomas H. Kirkham, the mine was begun in 1917 by George Gray, of Tichborne. In 1918, Joseph H. Mendels, of Perth, shipped two car loads. In 1919, Rinaldo McConnell and Son worked it. It produced in 1919 - 1921, with up to ten men employed (1922). In 1922, Orser-Kraft mined it for a brief period (1923). The pit was reported to have then been 90 ft long, 20 ft wide and up to 22 ft deep (1921). The feldspar was reported to be a good grade of red. Sabina (1987) reported that it was then on land owned by F. Kirkham.
- Kirkham Mine, Lot 14, 7th Concession, Bathurst Township, Lanark County, Ontario. S. H. Orser, of Perth, was reported to have shipped 20 cars of spar and five of quartz from this property during 1923 (1924).
- Kirkham Mine, South Sherbrooke Township, Haldimand County, Ontario. The mine was on land belonging to D. Kirkham. It was reported that 10 carloads were shipped in 1923 (1924).
- Kish Prospect, Lot 17, 8th Concession, Bedford Township, Frontenac County, Ontario. On the land of L. Kish, of Fermoy. The prospect pit was dug by A. Botting. There was no production. (Harding, 1951).
- Klassen Property, Buckingham Township, Papineau County, Québec. J. I. Klassen, of Ottawa, was listed as an owner in 1944 (1945).
- Lachaine (Lachaine) Mine, Lot 30, 3rd Range West, and Lot 29, 4th Range West, Portland Township, Papineau County, Québec. About 6 km northwest of Saint-Pierre-de-Wakefield, the property was mined by Regis Lachaine in 1948 (1949). Sabina reported (1987) that the mine was being operated at that time by Mr. R. Lachaine, of Saint-Pierre-de-Wakefield. He was reported to have mined 350 tons in 1964 (1967).

- Lake Mine, Lot 9, 12th Concession, Faraday Township, Hastings County, Ontario. About 6 km southwest of Bancroft, on the farm of Charles Lake, it was reportedly mined in early 1920 by a syndicate from Hamilton. Two carloads were shipped (1921). Hewitt (1959) mentioned this deposit in one of his reports, as well as the one on Lot 6. It was noted that the property was then owned by Greyhawk Uranium Mines. The feldspar occurred in a granite pegmatite.
- Lake Mine, Lot 19, 1st Concession, Dickens Township, District of Nipissing, Ontario. The deposit was opened in 1948 by the Opeongo Mining Company (Gary Colautti), which operated it under lease. The pit, in a dike, was then 12 ft wide and cut 40 ft into a hillside. Four hundred and eighteen tons were reported to have been shipped in 1948 (1950).
- Lamarche and Arbic Property, Campbell Township, Labelle County, Québec. J. Hermas Lamarche and Phrase Arbic, of Mont-Laurier, were listed as owners/operators from 1937 to 1938 (1938-1939). Work was reported in 1938.
- John Laneville, Buckingham, Québec. He was listed from time-to-time as an owner/operator from 1927 to 1934 (1928-1935).
- Langill Mine, Lot 26, 8th Range, Templeton Township, Papineau (formerly Ottawa) County, Québec. The mine was reportedly operated for J. H. Taylor, of Ottawa, in 1898 (1899).
- Lanigan Property, Lot 27, 2nd Range, Grenville Township, Argenteuil County, Québec. It was reported to have been mined by A. R. Lanigan in a small dyke, in 1917 (Osborne, 1938).
- Lapointe Mine, Lots 2 and 3, 5th Range, Portland West Township, Papineau County, Québec. About 3 km west of Notre-Dame-de-la-Salette, Québec. The deposit was worked intermittently from about 1923 to 1932 by Emmanuel Lapointe, of Notre-Dame-de-la-Salette (1924-1933). Idle for many years, it became the property of United Mining Industries in 1943. The company discovered a large deposit of massive pink feldspar in 1943, and mined it until 1944 (1944-1945). Sinkankis (1959) reported that very fine peristerite is found in the quarry, which is in a pegmatite dike. The colours range from gray to pink. An excavation, about 10 m wide, and six m high, had been cut about six m into the side of a hill. Minerals include biotite, felspar, mica, quartz, tourmaline, and specularite. Good samples can be obtained from the old dumps. The writer visited the property in mid-September 1998.
- Lapointe Mine, Lot 1, 5th Range, Derry Township, Papineau County, Québec. Mining, by Emmanuel Lapointe, seems to have begun in 1926 (1927) and continued until 1930 (1931).
- Lapointe Mine, Buckingham Township, Papineau County, Québec. It was reported to have been owned and operated by Emmanuel Lapointe from 1931 (1932).
- Larocque and Hebert Property, Buckingham Township, Papineau County, Québec. See the listing for the Pedneaud Mine, below.
- Larose Property, Lot 25, 4th Range, Arundel Township, Les Laurentides County, Québec. Reportedly near a mica deposit north of Huberdeau, it was operated intermittently and on a small scale by Antoine Larose, of Weir, from 1926 to 1936 (1927, 1931-1938). The feldspar was deep red and associated with iron-bearing minerals (magnetite) in a pegmatite dyke. Osborne (1938) reported that one carload was shipped in 1926-1927.
- Laurentian Feldspar Company Mine, Lot 4, 1st Range, Portland West and East Townships, Papineau County, Québec. The company was reported as the owner/operator from 1925

- to 1929 (1926-1930). It was also reported to have drilled two properties, mostly on the Foster Farm, in Bathurst Township, Lanark County, Ontario in 1947 (Canada, 1948).
- Laurentian Feldspar (Foster) Mine, Lot 13, 8th Concession, Bathurst Township, Lanark County, Ontario. About 13 km west of Perth, Ontario. The mine, then known as the Foster Mine, was operated in 1929 by Feldspar Quarries Limited (1930)(Sabina, 1987). In 1947, Laurentian Feldspar Mines (incorporated 1945) diamond-drilled the property and, with a crew of four men, re-opened the old pit. One hundred tons were reported to have been shipped in 1947 and 150 tons in 1948 (1949-1950).
- Lauzon Occurrence, Lot 19, 10th Concession, South Algona Township, Renfrew County, Ontario. About 6.5 km from Golden Lake Station on the Canadian National Railway on the property of A. Lauzon (Satterly, 1945). Several small pits were reported to have been dug in pegmatite in 1922.
- Laviolette Property, Portland East Township, Papineau County, Québec. Aldeas Laviolette, of Buckingham, was listed as an owner/operator in 1936-1938 (1937-1939). Work was reported in 1937.
- S. H. Law Mine, Lot 13, 1st Range, Derry Township, Papineau County, Québec. Operated by S. H. Law, of Toronto, intermittent production was reported in 1944-1947 (1945-1948).
- Libby Property, Lot 29, 1st Range, Waltham Township, Pontiac County, Québec. About 1 km northwest of the Hull-Chapeau highway and 4.5 km west of Waltham. The deposit is on the side of a hill and a small creek flows southeast of it. The feldspar, pink perthite with albite and orthoclase, occurs in a pegmatite dike which cuts granite gneiss. Green amphibole, pyrite, and molybdenite were also reported (Retty, 1933). Originally owned by Demmon Libby, of Waltham, it was developed in 1932 by the Rock Products Company, of Trenton, New Jersey. The vein was reported to have varied in width from five to 50 ft.
- Little Union Mine, Portland West Township, Papineau County, Québec. It was reported to have been mined for a high-quality dental spar by Bush Winning in 1935 (1936).
- Long Lake Mines (two), Lot 11, 9th Concession, Loughborough Township, Frontenac County, Ontario. The mines were reported to have been near the Perth Road and on the shore of Long Lake. O'Brien and Fowler worked these until 1920, and were then succeeded by Sherman Orser and Dr. S. C. Wilson, of Perth (1921). Mining continued until February 1921 (1922).
- MacDonald Property, Lot 14, 2nd Range, Derry Township, Papineau County, Québec. It was reported that this mine, owned by Bert MacDonald, produced for the first time in 1930 (1931).
- MacDonald (McDonald) Mine, Lots 18 and 19, 7th Concession, Monteagle Township, Hastings County, Ontario. The mine was about 3 km east of Hybla Station on the Canadian National (Central Ontario) Railway, 16 km north of Bancroft, and on the farm of Peter M(a)cDonald. The main workings were on Lot 18, while there were three smaller pits on Lot 19, to the west (Hewitt, 1955). The vein was opened up starting in late 1919 by the Pennsylvania Feldspar Company, of Philadelphia (1920), which leased the rights from Peter MacDonald. The company was then taken over by the Verona Mining Company (1921-1922), a subsidiary, which operated it in 1920-1921, with about 20 persons. This company was taken over by the Genesee Feldspar Company, of Rochester, New York, in 1922. The mine was operated until 1928. From 1929 to 1935, Peter MacDonald was

reported to have produced from the dumps and the pits on Lot 19 (Hewitt, 1955). During this period it was the largest operation in the Hybla area and the Bancroft district. The total production reported during this period was 35048 tons of feldspar (Satterly, 1957). In 1956, the Phillips-Doubt Grubstake Syndicate held an option on the mining rights for Lots 16 to 20, and the north half of Lot 21, in the 7th Concession of Monteagle Township (Satterly, 1957). The property was acquired by Cloudmont Mines in 1956. During the first period, as a feldspar mine: The *Main Pit* was 550 ft long, 70 ft wide, and 120 ft deep. To the west, on Lot 19, were the *Southwest* (110 ft long, 25 ft wide, and 20 ft deep), *Northeast* (50 ft long, 20 ft wide, and eight ft deep), and *Northwest* (250 ft long, 40 ft wide, and from 25 to 30 ft deep) *Cuts*. Additionally, a second operation of the company was located nearby on Lot 14, of the 8th Concession. Later, when it was explored for radioactive minerals, the Phillips-Doubt Syndicate worked the dumps and bagged 40 tons of dike rock containing ellsworthite. Additionally, there was development underground from the MacDonald workings in Lot 18, and under the Sutherland open pit, in Lot 19 of the 8th Concession (Satterly, 1957). The deposits, in granite pegmatites, were famous as sources of rare and unusual minerals. It was said to have yielded the largest quantity of radioactive minerals from a pegmatite dyke in the County (Thomson, 1943). The principal minerals of the dikes were quartz, microcline perthite, and plagioclase. Some of the feldspar crystals were reported to be as much as 15 ft across. The other minerals included hornblende, pyroxene, biotite, calcite, chlorite, fluorite (purple), galena, scapolite, abundant dark red-brown garnet, magnetite, ilmenite, pyrite, pyrrhotite, chalcopryite, galena, molybdenite, titanite (sphene), and zircon. The rare minerals included allanite (in masses up to 25 cm in diameter), antozonite (fetid fluorite), ellsworthite (a waxy, yellow-brown to shiny black radioactive mineral), euxenite, feldspar, radioactive garnet, smoky quartz, titanite, uraninite, uranothorite, and zircon or cyrtolite (arranged alphabetically). Sinkankis (1959) reported that both amazonite and peristrite were found on this property. It was especially famous for its crystals of cyrtolite, a radioactive zircon. These occurred as single crystals, either elongated double prisms or with pyramidal faces, up to 2.5 cm long, and covered with hematite (Hewitt). These occurred often in feldspar or in pink calcite pods in quartz (Satterly, 1957). Hewitt also mentioned the allanite crystals which were found along the hanging-wall side of the dike in the *Northwest Cut*. These were up to 60 cm in length.

MacDonald (McDonald Mine), east half (reported as west half, 1952) of Lot 12, 9th Concession, Bathurst Township, Lanark County, Ontario. The mine was reported to have been operated by T. H. Craig, of Perth, in 1930-1932 (1931-1932). (See also the many listings for Craig, above), and W. H. Evans, also of Perth, in 1941 (1946). Some production was reported in 1938 from the MacDonald Mine, in Bathurst Township, Lanark County (Canada, Mines Branch, 1939). In 1950, the Canadian Flint and Spar Company was reported to have pumped out the old workings and to have produced 578 tons of feldspar. The pit was then 275 ft long, from 40 to 75 ft wide, and with faces of 40 and 70 ft at the ends (1952). Production in 1951 was about 3000 tons, with 15 employed (1953, Canada, Mines Branch, 1953). By 1952, this had fallen to about 300 tons (1954).

A. J. MacMillan, Buckingham, Québec. Reported as an owner/operator in 1922 (1923), 1931 (1932), and 1936 (1937).

- MacPherson Prospect, Lot 17, 11th Concession, Olden Township, Frontenac County, Ontario. Harding (1951) reported that the lot was owned, in 1945, by Colin S. MacPherson. In 1920, a small pit was dug in a pegmatite dike by William T. MacPherson and John Bragg. The minerals were pink potash feldspar and grey soda feldspar.
- McArthur (Masson) Mine, Lots 47 and 48, 8th (9th) Range, Aylwin Township, Gatineau County, Québec. Near Marks Station, southwest of Gracefield. A "very appreciable quantity" was reported to have been shipped in 1921 by W. G. Masson, of Ottawa, the original owner of the property. The feldspar was albite (1922). Bon Ami Limited, of Montréal, mined it from 1925 to 1932 (1926-1933) and from 1946-1947 (1947-1948). Shipments were made from the stockpiles in 1948 (1949). The pure white feldspar was shipped to the Orford Soap Company of Manchester, Connecticut, for use in making soaps and cleaning powders (1927).
- McClement Property, east of Buckingham, Québec. Mentioned as a new property, it was reported to have been operated by United Mining Industries, in 1945 (Canada, Mines Branch, 1946).
- McClements Mine, Lot 8, 7th Range, Buckingham Township, Papineau County, Québec. This property of the Buckingham Mining Corporation was reported to have produced intermittently in 1946 (1947).
- McCloskey Field Feldspar Occurrence, about 20 km northwest of Hull, Québec, beyond the Champlain Lookout in Gatineau Park. Sabina reported (1987) that two small pits were operated about the 1930s.
- McConnell Properties (2), Bathurst Township, Lanark County, Ontario. Rinaldo McConnell, of Perth, was reported to have worked on two feldspar veins in Bathurst Township in 1921 (1922).
- McCormack Mine North Showing, north half of Lot 24, 6th Concession, Monteagle Township, Hastings County, Ontario. On the farm of R. McCormack, the workings were reported to have been about 125 m west of the railway and in the side of a hill. A cut, 60 ft long, from 15 to 20 ft wide, and with a 50-ft face at the southwest end, had been opened up. It was reported to have been worked by P. J. Dwyer in 1926, with no production reported (Hewitt, 1955). The cut was in a granite pegmatite dike which was well defined. Graphic granite occurred at the contact, with large crystals (up to 30 and 60 cm) of potash feldspar and quartz in the centre. Amazonstone, biotite, hornblende, magnetite, titanite (sphene), allanite, and ellsworthite, were also mentioned.
- McCormack Mine South Showing, south half of Lot 24, 6th Concession, Monteagle Township, Hastings County, Ontario. The mine was reported to be on the side of a hill, about 125 m south of the North Showing and 60 m west of the Railway. According to Hewitt (1955), the cut rose in a series of benches up the hillside. It was opened in 1920 by Messrs. Dillon and Mills, and again, in 1926, by P. J. Dwyer. The total production was about 150 tons. The minerals in the pegmatite were: microcline perthite; graphic granite; quartz; soda feldspar; hornblende; and minor pyrite.
- McCormack Properties (two), part of Lot 22, 6th Concession, Monteagle Township, Hastings County, Ontario, near Hybla and west of the Central Ontario Railway. It was reported that the property, on the W. H. McCormack Farm, was being exploited by W. A. Dillon and W. A. Mills in 1920. Sixteen cars had been shipped (1921). A second property on the

- west half of Lot 24 was also noted.
- McCumber Property, Frontenac County, Ontario. Thomas H. McCumber, of Verona, was listed as a shipper in 1927 (1929).
- McDonald Feldspar Mining Company, Lots 4 and 5, 10th Concession, Portland Township, Frontenac County, Ontario. Near Verona. Operations were first reported in 1910 and continued to at least 1914 (1915). There was a pit on each lot, the largest being on Lot 4. This pit was 350 ft long and 50 ft deep (1911). Both feldspar and quartz were produced. It was reported to have been operated by the McDonald Feldspar Company, of Toronto.
- McDonnell Property, Lot 9, 1st Range, Derry Township, Papineau County, Québec. B. A. McDonnell, of Buckingham, was listed as the original owner/operator from 1934 to 1939 (1935-1940). Production was reported intermittently during the 1935-1939 period. In 1948, it was reported that Bon Ami was mining the deposit (1949).
- McGill Property, Lot 3, 3rd Range, Augmentation of Grenville Township, Argenteuil County, Québec. Lawrence McGill, of Pointe-au-Chêne, was listed as an owner in 1943-1946 (1944-1947). Work was reported in 1944, 1946 (1945, 1947). See also the listing under Scapolite.
- McGivern Mine, Lot 5, 10th Range, Buckingham Township, Papineau County, Québec. Production from this property was reported for the first time in 1923 (1924), when Messrs. Mahoney and Rich closed the Buckingham Feldspar Company's mine and opened this one.
- McGregor Property, northeast corner of Lot 25, 3rd Concession, Bedford Township, Frontenac County, Ontario. On the farm of Archie McGregor, about 5 km east of Tichborne. The mining rights were acquired by Alfred Richardson, who began stripping at the end of 1919 (1920). It was bought by Federal Feldspar, of Ottawa, in 1920 and worked until late that year. The pit was 100 ft long, 25 ft wide, and up to 25 ft deep (1921).
- McLemments (Poulin) Mine, Lot 8, 7th Range, Buckingham Township, Papineau County, Québec. The mine was originally developed by Joseph Poulin, of Saint-Lambert, who was listed as an owner/operator in 1939-1940 (1940-1941). Idle from 1940, it was mined in 1945 by United Mining Industries (1946).
- McMillan Property, Buckingham Township, Papineau County, Québec. A. J. McMillan, of Buckingham, was reported as an owner/operator from 1929 to 1940 (1930-1941).
- McQuire Property, Ontario. No details on its location were found in the literature. Operated by H. F. McQuire, shipments were reported in 1923 (1924). It was next operated in 1947 by E. Shaw, under contract to the Canadian Flint and Spar Company (Canada, 1948).
- Mackey Mine, Head Township, Renfrew County, Ontario. About 1 km from Mackey Station on the Canadian Pacific Railway, on the farm of James Carey, it was reported to have been opened by Joseph Laberge, of Eganville, in late 1924. The feldspar was shipped to the New York Feldspar Company, of Rochester. It was mined from 1924 to 1925 (1926).
- Maine Feldspar Company (Gilpin) Mine, Lot 3, 3rd Concession, Bedford Township, Frontenac County, Ontario. The Gilpin Corporation mined it from 1925 to 1926 (1926-1927), at which time it was taken over by the Maine Feldspar Company, of Brunswick, Maine.
- Marcellis and Freeman Mine, Lot 3, 13th Concession, Loughborough Township, Frontenac County, Ontario. Production of 48 tons was reported in 1950 (1952).
- Markham Feldspar Company Mine, Lanark County, Ontario. The company was listed as a shipper

- in 1927 (1929).
- Martin Property, Lot 3, 2nd Concession, Bedford Township, Ontario. E. L. Martin, of Kingston, was listed as a shipper in 1924 (1926).
- Matthewman Mine, Lot 27, 8th Range, Buckingham Township, Papineau County, Québec. The mine was reported as having been operated by the Canadian Flint and Spar Company in 1950 (1951).
- Mercier & Lauzon Mine, Lot 3, 2nd Range, Portland East Township, Papineau County, Québec. Operated by Henri Mercier and John Lauzon, of Shapely Creek. First reported as an owner/operator in 1929, the mine produced in 1930 (1931). There were reports of no production in 1931 or 1932 (1932-1933).
- Mica Products Mine, Lots 5, 8th and 9th Concessions, Portland Township, Frontenac County, Ontario. The first reference to this property was in the 1918 report (1919), when it was noted that 200 tons of inferior barite had been mined but not shipped.
- Micaspar Industries Property, Portland West Township, Papineau County, Québec. The company, of Hamilton, Ontario, was listed as a working owner from 1943 to 1944 (1944-1945). No work was reported in 1945-1946 (1946-1947).
- Mills and Cunningham Mine, Lot 10, 5th Concession, Oso Township, Frontenac County, Ontario. Near Sharbot Lake, the property was under development by Messrs. Mills and Cunningham, of Kingston, in 1904 (1905). In 1944, the property was owned by Elwood Gray (Harding, 1951). Quartz and pink feldspar were exposed.
- Minerals Development Property, Lot 21, 6th Concession, Monteagle Township, Hastings County, Ontario. Near Hybla, it was listed in 1933 (1933).
- Mink Lake (Verona, Verona Quarries, Canadian Flint and Spar) Mine, Lots 1 and 2, 13th Concession, Loughborough Township, Frontenac County, Ontario. The mine was listed as a shipper from 1926 to 1927 (1927-1929). During 1949-1951 it was reported to have been operated by the Canadian Flint and Spar Company. The pit was then 250 ft long, up to 35 ft wide, and from 60 to 100 ft deep. Production in 1949-1951 was from about 1500 to 2000 tons per annum, with 12 employed (1951-1953).
- Morin Property, Buckingham Township, Papineau County, Québec. A. Henri Morin, of Glen Almond, was listed as a working owner/operator from 1941 to 1945 (1942-1946). No work was reported in 1946 (1947). See the listing for the Pedneault Mine, below.
- Morrison (Dillon and Mills) Mine, Lot 6, 12th Concession, Faraday Township, Hastings County, Ontario. It was reported to have been mined by W. Morrison, in 1920, and by Dillon and Mills until 1922. There were two small pits in a granite pegmatite dyke. Biotite, hornblende and pyrite were mentioned (Thomson, 1943). Hewitt (1959) mentioned this property in one of his reports, noting that it then belonged to Greyhawk Uranium Mines.
- Morrison Property, Ontario. Wm. Morrison, of Bancroft, was listed as a shipper in 1925 (1926).
- Morrow (Orser, Orser and Kraft), Lot 13, 5th Concession, South Sherbrooke Township, Lanark County, Ontario. The mine was reported to have been about 5 km from the village of Maberley, on the Canadian Pacific Railway, and 24 km southwest of Perth. It was also beside Little Silver Lake and about 2.5 km from Mud Lake Station on the Canadian Pacific Railway. Originally owned by Rinaldo McConnell, who worked it some years previously, the quarry in a pegmatite dike was opened in 1915 by James A. Morrow, the owner of the land. After about 2000 tons of feldspar had been exported to the United

- States, a brownish-black mineral with a brilliant lustre was noticed. This was identified as euxenite, a radioactive mineral. It occurred in a granite pegmatite dike about 75 ft wide. In 1916, it was acquired by S. H. Orser, of Perth. Mining began with a force of 10 men, and 2000 tons was produced (1917). The quarry was leased to H. N. Kraft at the end of 1916. It was mined from 1916 to 1921 by Orser and Kraft Company and then acquired by Ontario Feldspars. In 1918, production was 100 tons per week (1918). By 1919, the excavation was 115 ft long, 40 ft wide (at the top), and 24 ft deep (1920). It was mined until October 1921, when it was closed because of market conditions. Up to 12 men were employed (1922). Euxenite was reported as a mineral.
- Morrow Mine, Lot 10, 4th Concession, South Sherbrooke Township, Lanark County, Ontario. The mine was reported to have been on the farm of James Morrow, near Maberley and Feldspar. Work began in 1919, with the product being shipped to Feldspar Station. Rinaldo McConnell and Son were working the deposit (1920). It was mined in 1920 (1921).
- Morrow Mine, Lot 13, 5th Concession, South Sherbrooke Township, Lanark County, Ontario. It was worked in 1920 by Ontario Feldspar and then Orser-Kraft Feldspar Limited, with thirteen employed (1921).
- Mount Eagle Feldspar Mine, Lot 22, 6th Concession, Monteagle Township, Hastings County, Ontario. It was worked for a few months in 1922, by the Mount Eagle Feldspar Company, until the company was liquidated (1923).
- Munroe Property, Lot 11, 8th Concession, South Sherbrooke Township, Lanark County, Ontario. The deposit was reported to have been on the farm of William Munroe, about 3 km west of Maberley Station. In 1920, Joseph H. Mendels, of Perth, began stripping it (1920).
- National Mine, Ontario. The National Feldspar Company was listed as an operator, near Perth, from 1928 to 1929 (1930).
- National Potash Corporation Quarry. The location was not specified, but it was probably in either Frontenac or Lanark Counties, Ontario. It was reported to have been operated in 1917, with the face being 60 ft high (1918).
- New York Mine, Lots 27 and 28, 8th (9th) Range, Buckingham Township, Papineau County, Québec. The property was first mined between 1926 and 1929 when 17 000 tons were shipped. It was then abandoned for lack of haulage facilities. In 1937, it was reported that W. E. Evans had reopened the property (1938). He worked it intermittently in 1938-1939 (1939-1940). By 1942, the property had been taken over by the Canadian Flint and Spar Company, and it was one of their four producers - - the others being the *Back (Wallingford)*, *Derry*, and *Wakefield* mines (1943). It was worked until 1946 (1947). The feldspar was white and was associated with large bodies of quartz. In 1944, it was mentioned that the open pit was 300 ft long, 85 ft wide, and 88 ft deep (1945).
- New York Feldspar Corporation Property, Lots 15 and 16, 8th Range Buckingham Township, Papineau County, Québec. This company, of Lewiston, Pennsylvania, was listed as an owner/operator from 1928 to 1932 (1929-1933).
- Noonan (Austin, Hurlbut) Mine, Lot 11, 7th Concession, Bedford Township, Frontenac County, Ontario. This mine was near the east shore of Canoe Lake, on the farm of Miss Nellie Noonan. Harding (1951) reported that the property was mined by L. E. Austin between 1915 and 1918 and then by George Hurlbut (both of Toronto). There were two pits about

- 150 ft apart. Both were in a hill forming the shore; one within 50 ft of the lake, with the second higher. Locally, pegmatite dikes had intruded gneiss. White feldspar and altered pyroxene were noted. See also the listing for the Hurlbut (Austin) Property, above.
- Noonan Property, Lot 18, 9th Concession, Bathurst Township, Lanark County, Ontario. It was reported to have been tested in early 1921 by the Rock Products Company, of Silica, Ohio (1921). After several cars had been shipped the work was discontinued (1922).
- O'Brien and Fowler Mine, Lots 7 and 8, 1st Range, Derry Township, Papineau County, Québec. The company was reported as the operator of this property from 1928 to 1929 (1929-1930) (see Derry mine listing, above).
- O'Brien and Fowler Mine, Lot 15, 2nd Range, Derry Township, Papineau County, Québec. Acquired by the company about 1923, the intention was to develop this deposit of almost pure white feldspar in 1924 (Canada, Mines Branch, 1924). The company was reported as being an owner/operator from 1925 to 1937 (1926-1938). Production was not reported.
- O'Brien and Fowler Mine, Lot 22, 5th Range, West Portland Township, Papineau (formerly Ottawa) County, Québec. It was reported, by the Canadian Mines Branch, to have been opened up in 1911 (1912). The company was reported as an owner/operator until 1926 (1927).
- O'Brien and Fowler Mine, parts of Lots 6, 2nd and 3rd Concessions, March Township, Carleton County, Ontario, about 19 km southwest of Ottawa. First reported in 1897, the deposit was developed, through two pits, in late 1919. Shipments were made from South March on the Grand Trunk Railway. There were several veins on the property (1920).
- O'Brien and Fowler Mine, northern part of Lot 11, 9th Concession, Loughborough Township, Frontenac County, Ontario. There were two veins of light pink to cream coloured feldspar mixed with quartz. Euxenite was also reported. Development began in early 1920 (1920).
- O'Brien and Fowler (Jodouin) Mine, Lot 29, 3rd Concession, Mattawan Township, District of Nipissing (later Renfrew County) Ontario. On the south of a hill overlooking the north shore of Plain Chant Lake, and about 5.5 km west of Mattawa, the deposit was discovered by A. Jodouin and his sons in 1924, and was acquired by O'Brien and Fowler. It produced in 1925 and 1926 (1927), and operations ceased the following year (Harding, 1946). The rocks were a dark grey biotite-hornblende gneiss cut by pegmatite. The minerals included pink microcline, quartz, biotite, muscovite, and hornblende.
- O'Holloran (O'Halloran, Holloran) Mine, Lot 1, 2nd Concession, Bathurst Township, Lanark County, Ontario. On the farm of Michael O'Holloran, near Perth, and a short distance south of Christie Lake, it was also about 4 km from Elliott siding and 13 km from Glen Tay. In 1919, J. H. Mendels, of Perth, was reported to have shipped three carloads (1920). It was acquired by Feldspar Quarries Limited in 1920, which then mined it (1921). It was closed in the spring of 1921 (1922).
- Opeongo Mining Company, see the listings for the Five-Mile, Lake, and Cameron Mines, above.
- Orser Property, Lot 17, 6th Concession, South Sherbrooke Township, Lanark County, Ontario. On the Patterson Farm, the deposit was optioned by S. H. Orser, in 1916. A small amount of feldspar was mined (1917). S. H. Orser, of Verona, was listed as a shipper in 1926 (1927).
- Ottawa Valley Mines Property, Lot 3, 6th Range, Buckingham Township, Papineau County, Québec. The company, from Montréal, first produced from this property in 1930 (1931).

- It was reported as an owner/operator from 1931 to 1932 (1932-1933).
- Palmer (Alex. Palmer) Mine, Lot 10, 4th Concession, South Sherbrooke Township, Lanark County, Ontario. On a farm worked by James Morrow, it was mined by Rinaldo McConnell, of Perth, in 1920. It was noted that hand drilling was used (1921).
- Palmer Mine, Lot 5, 3rd Concession, Bathurst Township, Lanark County, Ontario. The property was also owned by Alex Palmer and was mined by Orser-Kraft in 1921-1922 (1922-1923).
- Parcher Mine, Lots 9 to 11, 2nd Range, Derry Township, Papineau County, Québec. On the same lots as the Higginson Mine (see the listing above), and reportedly operated by W. E. Evans, of Buckingham, in 1939 (1940).
- Parcher Mine, Lot 2, 1st Range, Derry Township, Papineau County, Québec. Worked intermittently by Alfred Parcher, of Glen Almond, from 1926 to 1939 (1927-1940). It appears that he was succeeded by Maggie Parcher, who was listed from 1939 to 1940 (1940-1941).
- Parcher Mine, Lot 11, 1st Range, Derry Township, Papineau County, Québec. It was probably first worked intermittently by Alfred Parcher, of Glen Almond, during the 1926-1940 period. By 1943, however, it was the property of United Mining Industries (1944).
- Parker-Higginson Mine, Lot 10, 3rd Range, Derry Township, Papineau County, Québec. The mine was reported to have been mined intermittently by H. Clement in 1949 (1950).
- Parker-Higginson Mine, Lot 2, 10th Range, Derry Township, Papineau County, Québec. Othis mine was reported to have been operated by the Canadian Flint and Spar Company from 1945 (1946).
- Patterson Mine, see the listing for Stoness and Kent, below.
- Patterson Property, Lot 15, 6th Concession, South Sherbrooke Township, Lanark County, Ontario. On the farm of Robert J. Patterson, about 3 km from Maberley Station, mining reportedly began in early 1920 by Universal Silicates (1920). Later in the year L. E. Austin shipped several carloads (1921).
- Pedneaud (Gonzague Pedneaud) Mine, Lot 14A, 11th and 12th (13th) Range, Buckingham Township, Papineau County, Québec. Situated near the Derry Mine (see the listing above), Messrs. O'Brien and Fowler were have reported to have contracted for the output. The property, at Glen Almond, was owned by Gonzague Pedneaud. It was reported as a deposit in 1912 (1922), and later stated that feldspar and quartz had been mined in 1922 (1923). The quartz was used by the Electric Reduction Company, of Buckingham. Gonzague Pedneaud, of Glen Almond, was reported as owner/operator until 1937 (1938), while Louis and Aline Pedneaud were listed from 1938 to 1940 (1939-1941). On the same lot as the Buckingham Mining Company Mine (see the listing above). It was one of the principal producers in 1935 and was mined for both quartz and feldspar (1936). It produced intermittently between 1939 and 1944 (1943-1945). It was reported to have been mined intermittently by René Larocque and Fernand Hebert in 1948-1949 (1949-1950). They were also mentioned as producers of silica.
- Pedneault Mine, Buckingham Township, Papineau County, Québec. A. H. Morin was named as the operator in 1945 (1946), and had probably operated it during the period 1941-1944.
- Perkins Feldspar Mine, Lot 1, 3rd Range, Derry Township, Papineau County, Québec. About 4 km north northwest of Glen Almond, Québec, it was operated in the 1930s by the

Perkins Mining Company (Sabina, 1986). The company was reported as an owner/operator until 1945 (1946). It was reported as being one of the principal producers in 1936 (1937) and work was reported until 1941 (1942). It was an open pit in pink feldspar.

Perkins Mine, Lot 27, 12th Range, Buckingham Township, Papineau County, Québec.

Intermittent work was reported on this property in 1943 (1944).

Perth Mine, Ontario. The location was not found in the literature but the property was reported as having been one of the mines of Feldspar Quarries in 1930 (1931).

Perth Quarry, about 10 km west of Perth, Ontario. Operated between 1922 and 1926, the property was reported to have belonged to Carl Duncan (Sabina, 1987).

Perth Feldspar Company Mine, Lots 19 and 20, 9th Concession, Bathurst Township, Lanark County, Ontario. The company was listed as a shipper in 1926 (1927).

Perth Feldspar Mining Company Property, south half of Lot 20, 9th and 10th Concessions, Bathurst Township, Lanark County, Ontario. About 8 km north of Glen Tay Station, it was reported as having been operated in 1923-1925 (1924-1926). The lots were also listed as Lots 19 and 20, in 1925 (1926).

Pike Lake Mine, Derry Township, Papineau County, Québec. The mine was reported to have been operated by Wallingford and Cornu in 1935 (1936).

Plunkett (Plunket) Mine, Lot 20, 6th Concession, Monteaule Township, Hastings County, Ontario. About 2 km from Hybla, the mine was on the farm of Harry Plunket(t), and about 800 m from the farmhouse. The deposit was stripped in 1920 with one carload was shipped (1921). It was worked in 1921 by the American Molybdenite Company with a few pits having been dug in a dyke of pink feldspar. S. Orser next worked it in 1927 (Thomson, 1943). In all, two carloads of feldspar were produced (Hewitt, 1955). The workings, on the south side of a field, were in a granite pegmatite. These were 175 ft long and from 20 to 25 ft wide. The minerals and rocks in the pegmatite were abundant graphic granite, pink microcline perthite crystals up to 60 cm in diameter; smoky and milky quartz; pink and white albite, hornblende, in crystals up to 10 cm, titanite (sphene), molybdenite, pyrite, biotite, magnetite, and, allanite. The first-mentioned were abundant. The latter were scarce to rare. In a second occurrence, about 225 m south of the Concession Road, a small pit had been excavated in another pegmatite. At this location, Hewitt (1955) reported that the minerals were plagioclase, smoky quartz, pink microcline perthite, amazonite, ellsworthite, euxenite, titanite, garnet, purple fluorite, and hornblende.

Poltimore Mine, Portland West Township, Papineau County, Québec. W. E. Evans, of Buckingham, was first listed as an owner/operator in 1934 (1935). In the following report, 1935, he was identified as operating this mine (1936). It was mentioned as being one of the principal producers in 1936 (1937).

Price Property, Lot 22, 7th Concession, Township not given, Ontario. On the John G. Price Farm, it was reported to have been prospected by Spencer and Rose, of Napanee, in 1920 (1921).

Québec Feldspar Quarries Property, Derry Township, Papineau County, Québec. The company was listed as an owner/operator from 1938 to 1942 (1939-1943).

Radcliffe Prospect, Lot 240, Range B, North, Radcliffe Township, Renfrew County, Ontario. The

prospect was reported to have been close to the north side of the Hopefield Road. A small trench, then overgrown, was reported by Hewitt (1954). Pink perthitic microcline and grey albite, as crystals up to 30 cm in diameter were reported, as were biotite, quartz, and, possibly, allanite.

Range Prospecting Syndicate Property, Templeton Township, Papineau County, Québec. The company, from Toronto, was listed as a working owner in 1943 (1944). No work was noted in 1944 (1945).

Raymond and Sawyer Property, Lot 10, 11th Concession, Jones Township, Renfrew County, Ontario, near Bark Lake. A production of 121 tons of potash feldspar was mentioned for 1937 (Satterly, 1945).

Reeves Mine, see the listing for Bancroft Feldspar Mines listing, above.

Renfrew Minerals Mine, Lot 30, 15th Concession, Lyndoch Township, Renfrew County, Ontario. The property was reported to have been worked by Renfrew Minerals in 1935 and 1936, during which time 675 tons of feldspar was shipped (Hewitt, 1954). At the west end of the dike and excavation was reported to have uncovered a "giant pegmatite", with a core of rose quartz and huge crystals of pink perthite. Hewitt mentioned that he had seen one that measured 20 x 8 x 6 ft! In 1949, Canadian Beryllium Mines and Alloys operated it as a feldspar operation. 300 tons of pink perthite was mined. See also the listing under Beryl.

Revill Property, Frontenac County, Ontario. S. W. Revill, of Verona, was listed as a shipper in 1927 (1929).

Reynolds Mine, east half of Lot 16, 10th Concession, Portland Township, Frontenac County, Ontario. The mine was reported to have been worked until September 1919, at which time fourteen men were engaged in sorting the dump (1920).

Reynolds Mine, Lot 1, 13th Concession, Portland Township, Frontenac County, Ontario. Work, by the Kingston Feldspar and Mining Company, which owned the property, began in 1911 (1912). It was reported that several thousand tons of high-grade feldspar were produced in 1912 and 1913 (1914). It also produced in 1914 to 1918 (1915-1919). Because of the lack of a summer road to the pit, it was worked only during the winter. The ore was transported to Verona by sleigh. In 1916 it was purchased by Feldspars Limited. At the time, it, and the Desert Lake Mine were producing most of the feldspar mined in Ontario (1917). It was also listed as a producer of quartz (see also the listing under Quartz). Production was reported in 1924 (1926).

Richardson Mine, east part of Lot 1, 1st Concession, and Lot 1, 2nd Concession, Bedford Township, Frontenac County, Ontario. At Thirteen Island Lake and near the southwest end of the western arm of Desert Lake. In 1947, it was reported to have been on the farm of Ross Morey (Harding, 1951). It was originally owned by: H. Richardson, of Kingston, from 1900 to 1901; the Kingston Feldspar Company, from 1901 to 1908; the Kingston Feldspar and Mining Company, from 1909 to 1916. In 1916, it was acquired by Feldspar Limited, of Toronto (Harding, 1951), which operated it until late 1918. It was then idle for a decade, until the Genesee Feldspar Company, of Rochester, New York, acquired it in 1928. It produced until 1930, and again became dormant for a decade. In 1941, it was leased to the Federal Feldspar Company, of Toronto. Operations were suspended during the war, and, by 1944, the pit was filled with water. Once again, however, operations were resumed in 1946, after the mine was purchased by the Canadian Flint and Spar

Company from Federal Feldspar, in 1945. Up to that time, it was estimated that 250 000 tons had been mined from the deposits (Harding, 1951). New buildings were erected and new machinery installed (1946). In 1946, the Canadian Mines Branch reported that the long-idle pit had been de-watered and prepared for production by the Canadian Flint and Spar Company (Canada, 1947). In 1946, a production of 438 tons was reported (1948). This had increased to 1832 tons in 1947 (1949), and 2878 tons in 1948 (1950). The deposit was mined from two pits, was the chief producer of feldspar in Ontario for several years (from about 1905 to 1914), and was said to be the largest shipper of feldspar in either Canada or the United States (1911). It was close to the *Jenkins Mine*, on the south half of Lot 3, 3rd Concession, Bedford Township. The largest pit was 500 ft long, 200 ft wide, and 130 ft deep (1911). From 40 to 50 men were employed on the property. The ore was hand-sorted in the pit. During the winter months it was "teamed" to Godfrey and shipped by rail. During the summer it was loaded at Glendower (1913). Fifty men were employed in 1913 (1914). About 18 000 tons was reported to be mined annually (1915). Reported as a producer until December, 1918 (1922). It was inactive until August, 1921, when men were employed to sort the dump (1922). This continued until 1923 (1924). Production in 1952 was 513 tons (1954, and Canada Mines Branch, 1953). Sinkankis (1959) reported that brown tremolite with brilliantly reflective partings was suitable for the production of catseyes (gems). The deposit was in a large pegmatite dike which cut Grenville sediments. The minerals were pink microcline, white quartz, greyish-green, white and pink oligoclase; crystals of black hornblende, light-green pyroxene, biotite, muscovite, titanite (sphene), magnetite, pyrite, calcite, apatite, and tourmaline (Harding, 1951).

Richardson Mine, Lots 4 to 7, 21st Concessions, Cardiff Township, Haliburton County, Ontario. The workings were reported to be about 6 km east of Wilberforce. Pink peristerite was reported by Sinkankis (1959).

Robinson Property, south half of Lot 5, Lots 6 and 7, Concession A, Faraday Township, Hastings County, Ontario. Test pits were reportedly sunk on this property in 1920 (1921).

Robinson Mine, Lot 30, 2nd Concession, Bedford Township, Frontenac County, Ontario. The mine was close to the Kingston and Renfrew Branch of the Canadian Pacific Railway, about 30 m north of the barn on the farm of Durwood Robinson and in the northeast part of the lot. The pit, about 14 ft deep, was reported to have been dug by Tom Craig, of Verona, between 1927 and 1930. The deposit was in a pegmatite dike, the minerals consisting of pink potash feldspar, quartz, and hornblende (Harding, 1951).

Robinson Mine, Lot 30, 11th Concession, Bedford Township, Frontenac County, Ontario. On the farm of John Robinson, it was reported as being stripped by the Pennsylvania Pulverizing Company in 1921 (1922).

Rock Products Company (Property) Mine, Lot 20, 9th Concession, Bathurst Township, Lanark County, Ontario. It produced from 1925 to 1927 (1926-1929), with 1966 tons being shipped in 1925. Fifteen were employed, and the pit was from 75 to 120 ft deep.

Ross (Gole, Madawaska Feldspar) Mine, Lots 14 and 15, 4th Concession, Murchison Township, District of Nipissing (later Renfrew County), Ontario. Formerly worked by John G. Gole, it was mined in 1942 by D. L. Ross and Company, of Montréal. The pit was reported to have then been 700 ft long, 20 to 40 ft wide, and 20 ft deep (1946). In 1943, it was

- reported that 3550 tons of quartz and 700 tons of feldspar had been mined. Ten were employed (1944). By 1944, the cut was reported to have been 700 ft long, from 20 to 40 ft wide, and up to 25 ft deep (1947). Production that year was 825 tons of feldspar and 5089 tons of silica.
- Saint-Amour Property, Villeneuve Township, Papineau County, Québec. Orphila Saint Amour, of Notre-Dame-de-la-Salette, was reported as an owner/operator from 1934 to 1942 (1935-1943). Work was reported in 1939.
- Saint-Pierre-de-Wakefield Quarry, about 3 km south of Saint-Pierre-de-Wakefield, Québec. No details were found on either the date it was operated or its ownership (Sabina, 1987).
- Sellers and Parcher Property, Derry Township, Papineau County, Québec. Walter Sellers and Alton Parcher, of Glen Almond, were listed as owners/operators from 1935 to 1938 (1936-1939). Work was reported in 1938.
- Silver Lake Mine, south of Silver Lake, about 30 km southwest of Perth, Ontario. It was reported to have been worked for a few months in 1891 (Sabina, 1987).
- Skead Mine, Lot 24, 5th Range, West Portland Township, Papineau (formerly Ottawa) County, Québec. This property, an old producer of muscovite mica, was operated in 1923 by Bush Winning. The feldspar was pink (Canada, Mines Branch, 1924).
- Smith Mine, Lot 13, 5th Concession, North Burgess Township, Lanark County, Ontario. The deposit, of bluish-white feldspar, was reported to have been opened up in 1911 by E. Smith (Canada, Mines Branch 1912). A small amount, about 800 tons, was mined by Edward Smith in 1914 (1915) and was shipped via the Rideau Canal to Ottawa.
- Smith Mine, Lots 17 and 18, 5th Range, Buckingham Township, Papineau County, Québec. The deposit was reported to have been mined by Bon Ami in 197 (1948).
- Smith Lake Mine, about 6 km northeast of Glen Almond, Québec. On the opposite side of the hill from the Back Mine (see the listing above), the mine was in the same dyke. Sabina reported (1986) that it was mined about 1950. In 1959-1960, it was reported to have been mined by International Minerals and Chemicals Corporation (Canada), at the rate of 12-13 tons per day (1961-1962).
- South March Quarry, Lots 6, 2nd and 3rd Concession, South March Township, Carleton County, Ontario. At Young Road, Kanata, and near South March Station, it was reported to have been operated from 1919 to 1921 by O'Brien and Fowler, of Ottawa. The largest excavation was 125 ft long, 25 ft wide, and 20 ft deep (1921).
- Steele Property, east (also reported as west) half of Lot 27, 3rd Concession, Bedford Township, Frontenac County, Ontario. On the farm of William Steele, about 3 km northeast of Tichborne, and about 70 m west of the Crow Lake Road, it was exploited briefly by the Gardner Feldspar Company in 1920, which abandoned it the same year (1921). The pit was reported to be 50 ft long, 30 ft wide, and between 15 and 20 ft deep (Harding, 1951). It was filled with water by 1942. The minerals in the pegmatite were intimately mixed and, thus, the operation was not viable. The minerals were pinkish feldspar, quartz, biotite, and hornblende (Harding, 1951). See also the listing for the Garner Mine, above.
- Stoness Mine, Lot 32, 3rd Concession, Bedford Township, Frontenac County, Ontario. The mine was beside and to the east of the Canadian Pacific Railway on land then belonging to G. S. Anderson (Harding, 1951). Harding reported that J. M. Stoness had produced feldspar from two pits at this location early in the 20th Century (about the 1920s). The larger pit,

about 30 m ft from the railway, was reported to be 20 ft long and 10 ft wide and filled with water. The second, about 75 m from the railway, had a diameter of 25 ft and was 12 ft deep. Both were in a large pegmatite dike. Pink potash feldspar, quartz, and biotite were mentioned.

- Stoness and Kent (Patterson) Mine, Lot 34, 5th Concession, Bedford Township, Frontenac County, Ontario. On the farm of Hilliard Patterson (Harding, 1951), and close to the north shore of the northeast bay of Crow Lake, there were three small prospect pits that were reported to have been dug by Stoness and Kent during the first quarter of the 20th Century. Locally, pegmatites cut Precambrian sediments. The minerals noted were pink potash feldspar, quartz, biotite, hornblende, tourmaline, actinolite, and minor pyrite and magnetite.
- Stoney Lake Occurrence, Burleigh Township Peterborough County, Ontario. The occurrence was reported to have been on the north shore of the lake near the mouth of Eel Creek. Periserite albite was noted by Sinkankis (1959).
- Supple Property, Lot 15, 4th Concession, Murchison Township, Renfrew County, Ontario. The property was reportedly owned by J. A. Supple and operated by W. B. Cameron of Pembroke from 1938 (1940).
- Sutherland Mine, Lot 19, 7th Concession, Monteagle Township, Hastings County, Ontario. On the farm of Alex Sutherland, it was worked in 1920. The vein, 30 ft wide, had been opened up over a length of 50 ft and a depth of 12 ft (1921).
- Tait Occurrence, Lot 24 (23), 9th Concession, Dungannon Township, Hastings County, Ontario. On the farm of J. F. Tait, of L'Amable, and about 300 m south of the road, a dike of white feldspar was reported to cut limestone and marble (Thomson, 1943). Hewitt & James (1956) reported that the dike was graphic granite with hornblende and biotite.
- Taylor Mine, Lot 13, 8th Concession, Monteagle Township, Hastings County, Ontario. About 5 km from Hybla Station on the Canadian National Railway and on the farm of David Taylor, the mine was located on the north face of a hill, and about 250 m northwest of the farm gate on the Hybla-Monteagle Valley Road (Hewitt, 1955). It was reported to have been worked in 1925-1926 by P. J. Dwyer and Consolidated Feldspars, of Toronto. It was estimated that a total production of one carload was shipped (Hewitt). On the property, a short adit (a horizontal entrance) had been driven 15 ft into the cliff, and then further to follow the granite pegmatite dike (Thomson, 1943) (Hewitt, 1955). In the dike, the pink potash feldspar and quartz were intergrown (as graphic intergrowth), with microperthite crystals, up to 60 cm in size, being noted. Red garnets, up to about 1.5 cm, were also mentioned.
- Teeples Property, Lot 8, 13th Concession, Storrington Township, Ontario. The deposit was on the east side of Upper Rock Lake and the Alexander Teeples property, about 111 km west of Ottawa. The vein of white feldspar was reported to be in crystalline limestone. A trial shipment was made in 1920 (1921). The Storrington Feldspar Company was incorporated in 1921 to work this property. Because of a lack of a road it was decided to transport the feldspar across a chain of lakes. This involved a trestle and a tramway, a dam and a canal (1922).
- Templeton Mine, Lot 20, 12th Range, Templeton Township, Papineau County, Québec. About 10 km northeast of Wilson's Corners, Québec, at the west end of Lac McGregor (Sabina,

- 1987), the mine was reported to have been operated by the Canadian Flint and Spar Company from 1950 to 1951 (1951-1952).
- Thompson Mine, Lot 11, 7th Concession, Monteagle Township, Hastings County, Ontario. The mine was about 6.5 km from Hybla Station on the Central Ontario Railway and on the farm of James Thompson on the Lot-line Road. It was opened by Feldspar Mines Corporation, a subsidiary of the Pennsylvania Pulverizing Company, in 1922. The company worked it until 1924, when the name of the parent company had been changed to the Pennsylvania Glass Company (1926). It was mined from 1923 to 1924, with from 12 (1924) to 18 employed (1926). In his report, Hewitt (1955) stated that it was worked from 1923 to 1925 and again in 1927 by Feldspar Mines Corporation. The total production was given as 2715 tons, most of which was of lower quality. Operations were shifted here when the *Woodcock Mine* was closed in late 1923 (see the listing below). There were three pits: (1) *Eastern*, 180 ft long, from 20 to 25 ft wide, and with a 30-ft face at the west end; (2) *Number 2*, about 20 ft west of the barn, and 30 ft long, 20 ft wide, and 12 ft deep; (3) *Number 3*, about 50 ft west of *Number 2*, 80 ft long, 20 ft wide, and from 10 to 12 ft deep (Hewitt). The dike was reported to be 30 ft wide and exposed over a length of 500 ft (1926). It consisted of pink perthite, milky quartz, white soda feldspar, with epidote, allanite, pyroxene, hornblende, sericite, chlorite, titanite (sphene), and hematite, as accessory minerals.
- Timmins Mine, part of Lots 17 and 18, 11th Concession, Portland Township, Frontenac County, Ontario. On the farm of John Timmins, it was reported that Feldspar Quarries Limited was preparing to develop the mine in 1920 (1920). It operated in 1920 (1921). A high content of quartz was noted in the vein, with conspicuous molybdenite. Twelve men were employee (1921). It was closed in the spring of 1921 (1922).
- Toutloff Property, Portland East Township, Papineau County, Québec. Frank Toutloff, of Pointe Gatineau, was listed as an owner/operator from 1934 to 1936 (1935-1937).
- Toutloff Property, Québec. W. Toutloff, of Buckingham, was listed as an owner/operator in 1934 (1935).
- Toutloff and Wallingford Property, Portland East Township, Papineau County, Québec. Frank Toutloff and Arthur Wallingford, of Pointe Gatineau, were also listed as owner/operators in 1934 (1935).
- Truelove Mine, Lot 10, 6th Concession, Bathurst Township, Lanark County, Ontario. On the farm of James Truelove, it was mined in 1920 by the Rock Products Company of Silica, Ohio. Fourteen carloads were shipped (1921).
- United Mining Industries Properties. See the listings for the Bigelow, Lapointe, McLemments, and Parcher Mines, above. The company was listed as a working owner/operator from 1941 to 1945 (1942-1946).
- Unnamed Mine, Lot 9, 9th Concession, Bathurst Township, Lanark County, Ontario. Sinkankis (1959) reported that beautiful peristerite had been obtained on this property since 1850. The pit was in a pegmatite dike.
- Unnamed Mine, Lot 25, 6th Concession, Monteagle Township, Hastings County, Ontario. Hewitt (1955) reported that a small cut, 25 ft long and eight ft high, had been opened in the side of an outcrop of coarse-grained granite pegmatite. The pegmatite was composed of microcline perthite (pink) and quartz, with minor biotite, magnetite, hornblende, titanite

- (sphene), and allanite.
- Unnamed Mine, Lot 25, 7th Concession, Monteagle Township, Hastings County, Ontario. Hewitt (1955) reported that this was a small pit, 20 ft long, 10 ft wide, and six ft deep. No history was given. In a granite pegmatite, the pit exposed poorly segregated quartz and feldspar.
- Unnamed Mine, north half Lot 14, 8th Concession, Monteagle Township, Hastings County, Ontario. Hewitt (1955) reported a small cut at the north end of the lot, in the north face of a hill above Salmon Trout Lake. The pit, in a granite pegmatite cutting amphibolite, was 30 x 40 ft, and in two six-ft benches into the hillside. Potash and soda feldspar, quartz, and rare allanite, were noted.
- Unnamed Mine, Lot 3, 6th Concession, North Burgess Township, Lanark County, Ontario. Sinkankis (1959) reported flesh-red perthite with small golden spangles. This was the mine at which perthite was identified and given its name.
- Unnamed Occurrence, Lot 23, 15th Concession, Lyndoch Township, Renfrew County, Ontario. An occurrence of amazonite and cleavelandite (albite) (Satterly, 1945).
- Unnamed Occurrence, Lot 30, 15th Concession, Lyndoch Township, Renfrew County, Ontario (Satterly, 1945).
- Valley Property, Buckingham Township, Papineau County, Québec. Mrs. Ella Valley, of Buckingham, was reported as an owner in 1945-1946 (1946-1947).
- Vanluven Property, west half of Lot 3, 12th Concession, Loughborough Township, Frontenac County, Ontario. On the property of Albert Vanluven, the vein outcropped on the shore at the east end of Fourteen Island Lake. It was prospected in 1921 (1922).
- VanMeter Property, Murchison Township, District of Nipissing, Ontario. R. VanMeter, of Whitney, was mentioned as a producer in 1954 (Canada Mines Branch, 1955).
- Vardy (Hybla) Mine, see the listing for the Bartlett Mine, above.
- Verona Mine, Lot 1, 13th Concession, Portland Township, Frontenac County, Ontario. Operated by Verona Quarries, either it or the mine above produced from 1926 to 1933 (the records are not clear). In 1926, 2000 tons were mined from a pit about 60 ft deep. Fourteen were employed (1927-1933).
- Verona Quarries Mine, see the listings for the Mink Lake Mine and the Canadian Flint and Spar Company, above.
- Victoria Mine, north half of Lot 32, Lot 33, 3rd Concession, Bedford Township, Frontenac County, Ontario. About 5 km west of Crow Lake Station on the Lake Shore Line of the Canadian Pacific Railway. It was reported to have been opened by J. M. Stoness and Sons in 1915. The feldspar was used in the manufacture of pottery, with one car load being shipped in 1915 and others in 1916 (1916). Some mining took place in 1916, but plans to develop the property changed on the death of the principal owner, J. M. Stoness (1917).
- Villeneuve Mine, Lot 31, 1st Range, Villeneuve Township, Papineau (formerly Ottawa) County, Québec. The mine was about 9 km north of Notre-Dame-de-la-Salette, and 40 km north of Ottawa. The deposit, of high-grade white spar (microcline), suitable for use in dentistry, was worked between 1884 and 1911, and was known for its fine specimens of mica (Sabina, 1986). The Canadian Mines Branch reported that it was closed in 1911 (1912). (See also the listing under mica). Sinkankis (1959) stated that some of the finest albite peristrite found in Canada is found on this property. The colour is white to pink with pink, green, and gold flashes in polished gems. Other minerals were reported to

include apatite, beryl, cerite, feldspar, fluorite, garnet, mica, monazite, quartz, thorite, tourmaline, uraninite, and zircon (Sabina, 1986). The writer visited the site in mid-September 1998, and obtained fine samples of several of the minerals. It is to be noted, however, that the dumps are steep and both the open cut and an adit (a horizontal entrance) pose potential hazards. Those visiting the site should be careful.

Wakefield Mine, Lot 26 (28), 13th Range, Templeton Township, Papineau County, Québec.

About 6 km northeast of Wilson's Corners, Québec, it was opened by the Canadian Flint and Spar Company Limited in 1942-1949 (1943-1950) and operated until 1950 (1951). The orebody, of red feldspar, was mined in an open pit.

Walker Mine, Lot 2, 10th Concession, Portland Township, Frontenac County, Ontario. About 8 km northeast of Hartington and 8 km east of Verona, it was reported to have been leased by the Pennsylvania Feldspar, Company, Toughkenamon, Pennsylvania in 1902 (1903).

Wallingford Mine, Lot 1, 3rd Range, Buckingham Township, Papineau County, Québec. Jos.

Wallingford, of Perkins, was listed as the owner/operator from 1938 to 1940 (1939-1941). Work was reported in 1938, and intermittent work was reported in 1943 (1944).

Wallingford (Coté) Mine, Lot 13, 14th Range, Hull Township, Gatineau County, Québec. See the listing for the Coté Mine, above.

Wallingford Properties, Hull and Templeton Townships, Gatineau and Papineau Counties, Québec. William and O. A. Wallingford were mentioned as important producers in 1949 (1950).

Wallingford Property, Templeton Township, Papineau County, Québec. Waldick Wallingford, of Gatineau Point, was listed as an owner/operator in 1940 (1941).

Wallingford Mine, Lot 6, 13th Range, Templeton Township, Papineau County, Québec. The deposit, reported as a new one, was a few hundred ft west of Battle Lake (1950). It was worked by E. Wallingford was mentioned as an important producer in 1949 (Canada, 1950).

Wallingford & Tardif Property, Lot 1A, 3rd Range, Portland East Township, Papineau County, Québec. This property was mentioned as a new producer in 1930 (1931).

Wanup Mine, Ontario. Wanup Feldspar Mines, of Perth, was mentioned as an operator in 1929 (1930).

Watson Mines (three), Lots 21 and 22, 6th Concession, Montegale Township, Hastings County, Ontario. The land on which the mine was located was first reported as having been owned by George Watson. His farm was about 3 km from Hybla, on the Central Ontario Railway and north of Bancroft. In 1953, Hewitt (1955) reported that the three showings were all on land then owned by John Twa. The *Number 1* showing was in a pegmatite dike about 400 m south of the Concession Road, on the east edge of a cleared field next to a hill. It was reported to be 90 ft long, and from 10 to 15 ft wide. The *Number 2* showing was also south of the Concession road, about 800 m east of a railway crossing on the concession road, and 125 m south. At this location a 60-foot long cut led to an adit which had been driven 100 ft into the hillside (1922). The *Number 3* showing was on the south half of Lot 22, near the boundary with Lot 23, about 700 m south of the Concession road, and 425 m west of a road from Price's Corner to the north. The pit was in the west side of a hill. In earlier reports it was mentioned that Universal Silicates began to develop this property in

early 1920 (1920) and that it was worked only that year. There was a second pit on the same Lot (1921). In 1921, it was acquired by the Mount Eagle Feldspar Company, which worked it until July. Subsequently, it was mined until 1926 by the Consolidated Feldspar Company, of Toronto. James Campbell, of Hybla, then worked the third pit in 1930 (Thomson, 1943). In Hewitt's report (1955), however, it was mentioned that it was operated between 1919 and 1926 by P. J. Dwyer, the Mount Eagle Feldspar Company, and the Consolidated Feldspar Company, of Toronto. The total production from the cuts was estimated to have been 500 tons. The *Number 1* deposit was an irregular pegmatite containing feldspar, quartz and graphic granite. Small pieces of euxenite were also reported (1922). Additionally, smoky and milky quartz, pink potash spar, soda spar, allanite crystals (on the south wall of the dike), titanite (sphene), hornblende, and pyrite, were all mentioned (Hewitt).

- Watson Property, south half of Lot 21, 7th Concession, Monteagle Township, Hastings County, Ontario. Also on property belonging to George Watson, this was reportedly exploited in 1920 by W. A. Dillon and W. A. Mills, who shipped six carloads of feldspar (1921).
- Watts and Noble Mine, Lot 14c, 2nd Range, Templeton Township, Papineau County, Québec. Messrs. Watts and Noble (Nobble), of Kirk's Ferry, were reported as owners/operators from 1920 to 1923 (1921-1924).
- T. Whitfield Property, Lot 9, 8th Range, Buckingham Township, Papineau County, Québec. This property was reported to have been developed in 1928 (1929). A report of production was filed in 1929 (1930). Reported as an owner/operator from 1930 to 1937 (1931-1938).
- Whittemore Property, Lot 13, 1st Range, Derry Township, Papineau County, Québec. Mrs. A. R. Whittemore, of Ottawa, Ontario, was reported as the owner/operator of this property from 1923 to 1935 (1924-1936). A report of production was filed in 1929 (1930).
- Wilson Mine, Lot 4, 4th Concession, Bedford Township, Frontenac County, Ontario. The mine was reported to have been about 100 m south of Sand Lake and on land then owned by Mrs. E. Babcock (Harding, 1951). A few tons were reported to have been mined by Dick Wilson in the first quarter of the 20th Century. The pit was in a pegmatite dike comprised of pink potash feldspar, white soda feldspar, quartz, and biotite.
- Wilson (Chisholm) Mine, Lot 5, 4th Concession, Bedford Township, Frontenac County, Ontario. This mine was also close to the northeast shore of Sand Lake (within 30 m), and on the farm of Dick Wilson. A. M. Chisholm was reported to have mined about 300 tons in 1904 (1905), when the property was reported as the *Chisholm Mine*. Harding (1951) noted that E. M. Chisholm had begun mining at this date but that none had been shipped. About a decade later, Dick Wilson shipped one carload. In 1945, the pit was 25 ft long, 15 ft wide, and 10 ft deep (Harding). There were also two other pits on the property: (1) one situated on the side of a hill close to the northwest shore of Sand Lake (from which one carload had been shipped); (2) one on a hill near the south end of Canoe Lake, and about 150 ft east of the Desert Lake road. It was noted that five carloads were shipped from this latter pit in 1918. Red potash feldspar and quartz were mentioned.
- Bush Winning Mine, west halves of Lots 2 and 3, 9th Range, Portland East Township, Papineau County, Québec, about 40 km from Buckingham. Bush Winning was reported as an owner/operator from 1920 to 1926 (1921-1927). The product from this mine was

reported to have been used for dental purposes. Winning and Elliot, of Poupore, were listed as the owners/operators in 1927 (1928).

Bush Winning Mine, Lot 24, 12th Range, Buckingham Township, Papineau County, Québec. This mine was reported to have been operated in 1925 (1926) and 1928 (1929). Winning and Elliott were listed from 1929 to 1930 (1930-1931), while Winning and Downing were also listed in 1930 (1931).

Bush Winning Mine, Lot 7, 3rd Range, Portland West Township, Papineau County, Québec. The mine was reported as having been mined by Bush Winning in 1925 (1926). One of his properties in Portland West was also noted as being mined in 1935 and 1936, but the location was not given (1936-1937). Bush Winning was reported as an owner/operator who had worked on his property in this township until 1942 (1943). It could have been either this property or the two listed below.

Bush Winning Mine, Lot 17, 6th Range, Portland West Township, Papineau County, Québec. Developed by Mr. Winning in 1926, the feldspar was used for dental purposes and pottery (1927).

Bush Winning Mine, Lot 23, 7th Range, Portland West Township, Papineau County, Québec. This mine was also developed by Mr. Winning in 1926, with the feldspar being used for dentistry and pottery (1927).

Bush Winning Mine, Lot 27, 7th Range west, Portland Township, Papineau County, Québec. Intermittent production was reported in 1942 (1943).

Winning and Downing Property, Buckingham Township, Papineau County, Québec. The firm, of Notre-Dame-de-la-Salette, was reported as owner/operator from 1932 to 1934 (1933-1935).

Winning and Elliott Property, Buckingham Township, Papineau County, Québec. The firm, also of Notre-Dame-de-la-Salette, was reported as owner/operator in 1932 (1933).

Wood Land Mineral Company Property, Lots 8, 9, and 10, 12th Concession, Faraday Township, Hastings County, Ontario. Mining was reported in 1942 (1946).

Woodcox (Woodcock, Metro Minerals and Uranium Mines) Mine, Lots 16 and 17, 8th Concession, Montegale Township, Hastings County, Ontario, on the farm of Harvey Woodcock, near Hybla. The mine was about 150 m south of the road, and in an open field (Hewitt, 1955). It was reported as being stripped by the Feldspar Mines Corporation, a subsidiary of the Pennsylvania Pulverizing Company in 1921 (1922). It was mined in 1922-1923, with 10 to 20 employed (1923-1924). It was abandoned in late 1923, however, because the ore had been stained by hematite and because the thickness of the overburden was then 20 ft (1924). The total production during this period was reported as having been 4087 tons (Hewitt, 1955). In 1955, the old property was held by Metro Minerals and Uranium Mines (Satterly, 1957). The open pit was reported to have been 325 ft long, 40 ft wide, and 25 ft deep (Thomson, 1943). The pit was in a granite pegmatite dike. Beautiful green feldspar (microcline) as well as white (plagioclase) and also red orthoclase were reported. Sinkankis (1959) reported amazonite on this property. Some of the quartz was reported to have been exceptionally clear and flawless (Thomson, 1943). The minerals reported both by Hewitt (1955), and in the references cited were: pink and white potash feldspar, amazonstone, peresterite, hornblende, magnetite, biotite, titanite (sphene), pyrite, columbite, ellsworthite, allanite, muscovite, calcite, hematite,

epidote, cyrtolite, hatchettolite, and calciosamaraskite. In Ellsworth's report (see references) it was stated "the Woodcox dyke is unique, for nowhere in Canada have such large individual masses of radioactive minerals been found in quartz and feldspar", (quoted from Hewitt's report, Ellsworth, p. 209). Masses of brown to black radioactive minerals, with crystals of greyish cyrtolite and columbite, and weighing up to 100 pounds (about 45 kilograms) were reported as "not unusual".

York Prospect, Lot 20, 4th Concession, Hinchinbrooke Township, Frontenac County, Ontario. Harding (1951) reported that the land was owned, in 1946, by S. York. On the side of a hill about 60 m east of a road on the west half of the lot. A prospect pit was reported to have been sunk, to 10 ft, in a pegmatite dike about 1920. Considerable quantities of biotite and tourmaline were reported in addition to feldspar and quartz.

Fluorite

Fluorspar is used as a flux in the making of steel. It has the property of making the melt much more fluid. It is also used in the refining of other metals and in the making of hydrofluoric acid. In the area, it occurs in narrow veins cutting limestone near Madoc, in Hastings County. There is also a narrow band of occurrences that extends between Ottawa and Montréal, north of the Ottawa River.

Fluorspar mining in Ontario was at its peak from about the end of the 19th Century to the early 1920s. The limited market in Canada, together with alternate sources of supply in the United States, resulted in the collapse of the local mines. Production in the Madoc area virtually ceased in 1925, but some mining continued at the Detomac (or Kilpatrick) Mine of Huntingdon Fluorspar until 1959 (1961). In 1960, there was some production at Huntingdon's Perry Lake Mine. The following year, 1961, the company began to prepare its South Coe Lake Property for production. Mining ceased, however, and, in 1962, the company constructed a processing plant to treat ores from Mexico. The plant was north of Northbrook (North Brook), on Highway 41 (1964). No production was reported in Ontario from 1962 to 1970 (1964-1972).

Allevato Property, Huddersfield Township, Pontiac County, Québec. Tony Allevato, of Rouyn, was reported as an owner in 1944 (1945).

Bailey Mine, Lot 1, 4th Concession, Madoc Township, Hastings County, Ontario. About 3 km from Madoc, it was discovered in 1890 and mining commenced in 1905. It was reported to have been the first fluorite mine in the area. It was worked: in 1907; from 1916 to 1917 by the Hungerford Syndicate (Harry Hungerford and Robert Gilchrist); and from 1944 to 1951 by Millwood Fluorspar Mines Limited. In 1917 there was a 40-ft shaft on the property (1918). In 1944, Millwood's development exposed a fluorspar vein about 15 ft wide. It was opened for a length of 80 ft, and to a depth of 44 ft that year (1947). A three-compartment vertical shaft was sunk to 100 ft the following year and a level established at the bottom. In 1945, production of 4800 tons was reported. The workforce numbered 36 (1948). In late 1946, the workings were allowed to flood and the remainder of the surface crown pillar mined. Production was reported as 5500 tons (1948). In 1947, however, the

property was reopened and the shaft deepened to 179 ft and a second level established. Twenty-five hundred tons of sorted ore was produced from the 3500 tons hoisted (1949). In 1948, 5300 tons was handled by the sorting plant (1950). Production in 1949 was 3340 tons (1951). In 1950, Millwood Fluorspar Mines reopened the mine and produced 1100 tons (1952). In 1951, the shipments were from stockpiles (Canada Mines Branch, 1952). The property was reported, by Sabina, in 1987, to have then been owned by a Mr. Lebeau.

Bassett Fluorspar (George Lee) Mine, Lot 2, 3rd Concession, Madoc Township, Hastings County, Ontario. The mine was reported to have been operated by George Lee "some years ago" and reopened by the Bassett Fluorspar Mining Syndicate in 1943 (1944). Two veins were excavated and a headframe erected. About 200 tons were produced with six men employed. In 1944, the *Number 1* shaft, in the *Number 1* vein, near Bancor Lake, was deepened to 50 ft and lateral development done. Another shaft, the *Number 3*, on the east side of the lot was deepened to 47 ft and a drift driven. A third shaft near the centre of the lot, 40 ft deep, was retimbered. Production was reported to have been 315 tons of fluorspar (1947). The work continued in 1945, when 153 tons was mined (1948).

Blakely (Blakeley) Mine, east half of Lot 10, 12th Concession, Huntingdon Township, Hastings County, Ontario, about 5 km south southeast of Madoc. Discovered in 1916, it was mined by: Stephen Wellington, from 1918 to 1920; Canada Fluorspar Company, 1928; Charles A. Stoklosar, from 1941 to 1947. The mine, an open pit in 1941 (1946), was reported to be on the farm of Leslie Blakely (Sabina, 1987). In 1942-1943, an old shaft 95 ft deep was partially de-watered, a new level established at 45 ft, a new hoist installed, and underground drilling conducted (1944, 1946). The pit, at the south end of the property, was reported to have been 50 ft long, five ft wide, and 35 ft deep (1944). After further de-watering in 1945, a new level was cut at 75 ft (1948). Production in 1946 was reported as 1900 tons (1948), and 582 tons in 1947 (1949).

Cardiff Fluorite Mines Property, Lot A, 17th Concession, and the south half of Lot 1, 19th Concession, Cardiff Township, Haliburton County, Ontario. In the Wilberforce-Harcourt district, about 80 km north of Madoc, it was first mentioned in 1943 (1944) when 300 tons of disseminated fluorspar was reported to have been stockpiled. In 1948, it was reported that the exploratory work of the past few years was being continued and that a mill was being considered (Canada, 1949). In 1947, short adits were driven into hillsides on Lot A, 17th Concession, and the *E* adit (1951) on the south half of Lot 1, 19th Concession (1949). Further development continued in 1948 (1950). In 1949, it was planned to sink a shaft, in the *C* zone, on Lot A, 17th Concession (1951). In 1950, a two-compartment inclined (49 degrees) (1952) was sunk to 315 ft and 800 ft of drifting and crosscutting were cut. The development continued in 1951 (1953) but operations ceased on the completion of the exploration program that same year (Canada Mines Branch, 1952). Apatite in calcite veins was also mentioned by Hewitt (1959).

Clark Property, Lot 13, 22nd Concession, Cardiff Township, Haliburton County, Ontario. It was reported to have been mined by William E. Clark, of Harcourt in 1942, when a shipment was made to Arvida, Québec (1946).

Coe Mine, about 2 km south of Madoc, Ontario, on Moira Lake. First worked in 1941 and 1942, it was again mined by Huntingdon Fluorspar Mines Limited in 1960 and 1961 (Sabina,

1987).

Cole Mine, Lot 14, 5th Concession, Ross Township, Renfrew County, Ontario, on the northeast corner of the lot. A small, shallow, pit had been dug in an outcrop of pink hybrid gneiss. A vein of purple fluorspar, salmon-pink calcite, dark-green pyroxene, scapolite, and other accessory minerals was reported (Satterly, 1945).

Cross and Wellington Property, Lot 2, 13th Concession, Huntingdon Township, Hastings County, Ontario. Shipments were reported from this property in 1924 (1926).

Detomac (Huntingdon, Kilpatrick) Mine, east half of Lot 9, 14th Concession, Huntingdon Township, Hastings County, Ontario. The mine was about 2 km south of Madoc, and accessible from Highway 62. Discovered in 1943, it was opened in 1944 by Detomac Mines Limited, which was incorporated in 1943 (1947). A two-compartment shaft was sunk to 27 ft, but operations were suspended when the water encountered could not be handled (1947). It was next operated by Huntingdon Fluorspar Mines Limited between the incorporation of the company, in 1953, and 1959 (Sabina, 1987). In 1953, a vertical, two-compartment shaft, Known as the *Number 1*, was sunk to 63 ft, and 1600 tons mined (1955). In 1954, the shaft was deepened to 84 ft and a second level established at 80 ft. Production was 1907 tons (1956). It was the only Ontario producer in 1953-1954 (Canada Mines Branch, 1954-1955). In 1955, no fluorspar was mined in Ontario but the company was reported to have sold 730 tons from its stockpiles (1956). Further small sales from the stockpile were made in 1956 (1958). It was the only operation in the province in 1958-1959, with about 2400 to 2700 tons being produced. By 1959, even though some underground development was taking place and annual production remained at about 2700 tons, the number employed had fallen to 13 (1961). The mine seems to have closed in 1959, with the company shifting production to the Perry Lake Mine, in 1960 (1962), and to the South Coe Lake Property in 1961 (1963). See also the listing for the McIlroy mine, below.

Dominion Fluorspar (Wallbridge) Mine, west halves of Lots 1 and 2, 1st Concession, Madoc Township, Hastings County, Ontario. The Wallbridge brothers were reported to have dug three prospect pits during 1921, and to have started a two-compartment shaft in 1922 (1922). The Dominion Fluorspar Company was incorporated in 1940 and took over the old Wallbridge property and also that on Lot 2. In 1943, the shaft was pumped to 50 ft and a headframe raised (1944). The *Number 1* shaft was subsequently deepened from 95 to 125 ft, and new levels established at 85 and 100 ft (1946).

Dominion Magnesium Properties, Ross Township, Renfrew County, Ontario, near Cobden. The property was being evaluated, as a possible source of supply for their magnesium plant at Haley, in 1945 (Canada Mines Branch, 1946).

Dwyer (Prospect) Mine, Lot 8, 22nd Concession, Cardiff Township, Haliburton County, Ontario. The pit, about 30 m in diameter was on the north side of a hill and about 30 m south of a road. It was also at a point about 330 m west of the turn-off to the Nu-Age Mine (Hewitt, 1959). There was also an adit at the bottom of the hill. In the winter of 1919-1920, P. J. Dwyer, of Toronto, was driving an adit to reach a vein of fluorite (1920). Locally, a calcite vein contained hornblende, red apatite crystals, and abundant purple fluorspar. P. J. Dwyer was reported to have mined 180 tons in 1918, of which 37 tons were shipped.

Fission Mines Property, Ross Township, Renfrew County, Ontario. The property was east of

Wilberforce and near Cobden. These former holdings of the Ontario Radium Corporation and Richardson were taken over in 1946 (Canada, 1948). After drilling, in 1948, the property was inactive (Canada, 1949).

Fluoroc Mines Properties. See the listings for the Hill and Johnson mines, below.

Gillespie and Wellington (Gillies and Wellington)(Property) Mine, Huntingdon Township, Hastings County, Ontario. On the shore of Moira Lake, about 3 km southwest of Madoc, it was reported to have been opened in 1910, by Messrs. Gillies and Wellington. The pit was 30 ft long and 25 ft deep (1911). In 1913, it was reported that the deposit formerly worked by Messrs. Gillespie and Wellington was then being worked by C. Bowman. A camp had been built and the workings de-watered (1913). A shaft was sunk to 50 ft in 1913 (1914). In 1914, the Canadian Mines Branch reported that this was one of two Wellington-controlled properties which had produced a few hundred tons during the previous ten years (1915) (see also the listing for Wellington, below).

Herrington (Herington) Fluorite Mine, Lots 1 and 2, 12th Concession, Huntingdon Township, Hastings County, Ontario. The mine was about 6 km west southwest of Madoc, and immediately to the north of the Wallbridge Mine (Sabina, 1987). In 1917, it was leased to Charles Henrotin, who shipped 13 tons from an 18 inch vein which was stripped for a length of 250 ft (1918).

Hill (Howard)(Property) Mine, east half of Lot 14, 11th Concession, Huntingdon Township, Hastings County, Ontario. About 6 km southwest of Madoc, it was discovered in 1917, and mined by Wellington and Munro from 1918 to 1920. The Reliance Fluorspar Mining Syndicate, incorporated in late 1940, operated it in 1941. An inclined shaft, at 60 degrees, was 45 ft deep. The fluorspar was hand-sorted (1946). In 1942, Arthur I. Land, of Hamilton, and W. A. Wood, of Madoc, operated it through the Wood Land Mineral Company (1946). In 1944, Fluoroc Mines was incorporated and deepened the two-compartment shaft to 60 ft. The mine was reported by Sabina (1987) to have been then on the Howard Farm. See also the listing for the Johnson mine, below.

Huddersfield Deposits, Huddersfield Township, Pontiac County, Québec (Canada, 1948, 1949). It was reported that 18 tons of clean-picked fluorspar were shipped in 1944 from a deposit in Pontiac County - presumably one of these (Bartley, 1961).

Hungerford Syndicate Mine, Lot 1, 4th Concession, Madoc Township, Hastings County, Ontario. Work began on this deposit in 1916 through the sinking of a shaft on the outcrop near the farm owner's house. The shaft was then 25 ft deep. The syndicate owners were Harry Hungerford and Robert Gilchrist (1917).

Huntingdon Fluorspar Mines, see the listings for the Detomac (Huntingdon, Kilpatrick), Perry Lake, McIlroy mines, and the South Coe Lake Property.

Johnson Mine, Lot 13, 11th Concession, Huntingdon Township, Hastings County, Ontario. This was evidently an old property, but, surprisingly, the first reference to it was in 1949, when it was mentioned that the Reliance Fluorspar Mining Syndicate was performing reconditioning and development work (1951). Former structures were demolished, a new headframe constructed, and the shaft deepened from 55 to 78 ft.

Johnston Mine (Property), west half of Lot 14, 11th Concession, Huntingdon Township, Hastings County, Ontario. It was reported to be adjacent to the Noyes property. A shaft was sunk to 55 ft in 1943. It was operated by R. T. Gilman, of Madoc (1944). Fluoroc Mines,

incorporated in 1944, took over the property that year and continued the development. The shaft was sunk to 62 ft deep, with a level at 55 ft (1947). The development continued in 1945 and 1946 with new surface installations being built (1948). Shipments were made in 1947 (Canada, 1948). See also the listing for the Hill Mine, above. 500 tons was hoisted in 1947 (1949), from which 187 tons was recovered after sorting.

Keen (Kane, Keene) Mine, west half of Lot 9, 14th Concession, Huntingdon Township, Hastings County, Ontario. About 2 km southwest of Madoc, on the northern shore of the west arm of Moira Lake, the deposit was reported to be on the Keen Farm (Sabina, 1987). Discovered in 1917, it was opened the following year and mined by Canadian Fluorite until 1919. In 1917, the shaft was 25 ft deep in a vein about nine ft wide (1918). In 1937, it was reported that Canadian Fluorspar planned to reopen the old mine (Canada, Mines Branch, 1938). It was worked again in 1943 by H. C. (G.) Miller, of Ottawa, and again, from 1944 to 1950 by Millwood Fluorspar Mines Limited. In 1943, it was noted that the workings were de-watered, the 65-ft-deep shaft deepened to 91 ft, a new hoist-room erected, and underground drilling performed. Twenty were employed and 1943 production was 2376 tons of crude fluorspar (1944). Sinkankis (1959) reported it as a source of exceptionally fine crystals.

Kilpatrick Mine, see the listing for the Huntingdon Mine, above.

Lee Junior (Lee Senior Fluorite) Mine, west half of Lot 1, 1st Concession, Madoc Township, Hastings County, Ontario. The mine was about 6 km west southwest of Madoc and immediately south of the Wallbridge Mine (Sabina, 1987). In 1917, it was under lease to Charles Henrotin, who shipped five carloads. The open cut was then 500 ft long, and eight ft deep, in a vein three ft wide (1918). It was reported, in 1945, to have been operated by Bassett Fluorspar Mines (Canada, Mines Branch, 1946).

Ben Lee Mine, east half of Lot 1, 1st Concession, Madoc Township, Hastings County, Ontario. It was reported to have been mined and closed, in 1943, by the Trent Mining Syndicate, of Trenton (1944). At that time a new headframe was erected over an old shaft, the shaft deepened to 50 ft, and 203 tons of crude fluorspar shipped.

Lee Property, see the listing for Bassett Fluorspar, above.

McIlroy Mine, south half of Lot 2, 4th Concession, Madoc Township, Hastings County, Ontario. This mine was about 3 km west southwest of Madoc and on the McIlroy farm. Mining began in 1916, by Mineral Products, with open cut mining of a vein of almost pure fluorite almost a meter wide. Four carloads were reported to have been shipped in 1923 (1924). The cut was 200 ft long and a shaft was being sunk. It was mined from 1916 to 1924 (1926) by Charles Campbell, of Toronto, and then again briefly in 1944, by Detomac Mines Limited (Sabina, 1987). In 1944, the old two-compartment shaft was deepened from 80 to 112 ft and some development done on the 110-foot level (1947). See also the listing for the Kilpatrick Mine, above.

Millwood Fluorspar Properties, see the listings for the Bailey and Keen Mines, above.

Moira Fluorspar Mining Syndicate Property, Ontario. At Madoc. C. L. Emery, was listed in 1939 (1941).

Montgomery Property, Lot 9, 21st Concession, Cardiff Township, Haliburton County, Ontario. A small pit was reported to have been opened by F. K. Montgomery, of Havelock, in 1942 (1946). Hewitt (1959) reported that apatite also occurred in calcite veins.

- Montgomery, MacFarlane and Clarke Property, Lot 8, 22nd Concession, Cardiff Township, Haliburton Township, Ontario. Beside the Wilberforce Road, this old property was reported to have been mined, under lease, by F. K. Montgomery, J. K. MacFarlane, and R. M. Clarke, in 1943 (1944). Previously, a tunnel, 35 ft long, had been driven. Three men were mentioned as having mined 40 tons in 1943 (1944).
- Noyes Mine, east half of Lot 12 and Lot 13, 12th Concession, Lot 14, 11th Concession, Lot 15, 10th Concession, Lot 16, 9th Concession, and the north half of the west half of Lot 12, 11th Concession, Huntingdon Township, Hastings County, Ontario. The mine was about 5 km southeast of Madoc and adjacent to the Johnston Property. Discovered in 1916, it was worked by: Messrs. Wellington and Munro, from 1917 to 1918; Canadian Industrial Minerals Limited, from 1918 to 1920; the Noyes Mining Company, from 1924 (1926); Mr. R. T. Gilman, from 1941 to 1943 (1946). In 1917, an inclined shaft had been sunk 100 ft in a vein which averaged from eight to 12 ft wide, on Lot 13 of the 12th Concession. *Number 2* shaft was sunk to 230 ft and a winze (an internal inclined shaft) put down 103 ft from the first level. Twelve hundred and forty ft of drifting was reported to have been done on the 100-foot level in 1919, and other development done in the mine (1920). Up to 40 men were employed. In October, 1920, the mine was closed and all of the machinery removed (1921). When R. T. Gilman operated it in 1941, the *Number 2*, or *Noyes Shaft*, was de-watered and mining resumed (1946). A *Number 3 Winze* was begun in 1943 and 6800 tons of ore mined (1944). Sabina reported (1987) that good samples of barite could be found.
- Perry Lake (Perry) Mine, Lot 11, 13th Concession, Huntingdon Township, Hastings County, Ontario. About 3 km south of Madoc, Ontario, and close to the junction of the east and west arms of Moira Lake, the deposit was exposed by the construction of the Belleville-Madoc Branch of the Grand Trunk Railway. Messrs. Cross and Wellington mined it from 1915 to 1920. In 1915, a shaft being sunk had reached 35 ft, and about 100 tons of spar had been stockpiled (1916). In 1917, it was reported that there were three shafts: *Number 1*, on the shore of Hog Lake, west of the old railway line, and 70 ft deep; *Number 2*, on the north shore of Moira Lake, east of the Belleville-Madoc Road, and about 300 m from *Number 1* shaft, and 80 ft deep; *Number 3*, 148 ft deep, in 1919. The property was shut down in December, 1917, pending the installation of an adequate pumping plant (1918). Cross and Wellington were reported to have worked it in 1920, with 16 men (1921). There was a small production, of 64 tons, in 1923 (1924). The Reliance Fluorspar Mining Syndicate Limited mined it in late 1941, after bringing the plant from the Hill Mine (refer to the listing)(1946). It mined it until late 1943 (Sabina, 1987) and again in 1952, when it was reported to have been the only producer (Canada Mines Branch, 1953). During 1943, the *Perry Number 1* shaft was sunk to 195 ft (1944). In 1952, the *Perry* shaft (also referred to as *Number 1*), a two-compartment vertical shaft, was sunk to 170 ft and levels established at 75, 120, and 170 ft. There was also a two-stage vertical escapeway, known as the *Number 2* shaft (1962). In 1960, Huntingdon Fluorspar Mines, then identified as the owner, seems to have shifted its operations from the Detomac Mine (see above) to this operation. Production was reported as having been about 2000 tons (1962). By the following year, however, production had been shifted to the South Coe Lake Property (1963). Sinkankis (1959) reported it as a source of exceptionally fine crystals.

- Ponton (Property) Mine, west half of Lot 3, 1st Concession, Madoc Township, Hastings County, Ontario, adjacent to the Wallbridge Mine. A three-ft wide vein on the property was stripped for 300 ft in 1917 (1918). A small quantity was picked from the old dumps or mined in 1928-1938 (1930-1940). Charles A. Stoklosar, of Madoc, was reported as the operator in 1930-1939 (1931-1941). A small quantity was mined in 1942 (1946).
- Reliance Fluorspar Property, see the listings for the Rogers Mine, below, and the Johnson Mine, above.
- Rogers Mine, Lot 10, 14th Concession, Huntington Township, Hastings County, Ontario. The mine was on Bailey Lake, about 3 km south of Madoc, via Highway 62. Discovered in 1909, it was mined from 1910 to 1914. In 1915, Messrs. Cross and Wellington pumped out the old workings and were preparing the resume sinking of the shaft which C. M. Bowman and a syndicate sunk to 65 ft in 1914 (1916). The Reliance Fluorspar Mining Syndicate Limited (incorporated in 1940) was reported to have mined it from 1943 to 1951 (1944, 1952). In 1944, the *Number 1* shaft was deepened from 56 to 123 ft, and a level cut at 120 ft. There was also a *Number 2* shaft, 87 ft deep, which followed an underhand stope in the upper section of the vein (1947). It was, during this period, one of the leading producers of the area. Annual production varied between about 2000 to 9000 tons during the period 1945 -1951 (1948-1953). In 1947, a new three-compartment shaft, the *Number 4*, was sunk to 240 ft. Twenty-four were then employed. The mill was on the Perry property (refer to the listing for it). In 1951, it was reported to be the only producer (Canada Mines Branch, 1952). Shipments from stockpiles were made in 1952 (Canada Mines Branch, 1953). The property was reported to belong to Mrs. Symon, of Madoc (Sabina, 1987).
- Sand Creek Deposits, Pontiac County, Québec, near Sand Creek. In 1944, a bulk sample was shipped to Dominion Magnesium at Haley, for evaluation in connection with supplying their magnesium plant. No work was done in 1945 (Canada, Mines Branch, 1946).
- Schickler Prospect, Lot 9 (Hewitt, 1959), (also reported as Lot 8, in the 1918 report), 22nd Concession, Cardiff Township, Haliburton County, Ontario. The prospect was near the village of Harcourt on the Canadian Northern Railway, and about 180 m north of a road in a field (Hewitt, 1959). It was reportedly discovered in 1918 on the Schickler Farm and optioned to P. J. Dwyer, of Wilberforce. The vein was of violet-blue fluorspar, calcite and apatite (1918). Hewitt also reported that the trench was 100 ft long, six ft wide, and from six to 10 ft deep. Notwithstanding this, no production was recorded.
- South Coe Lake Property, south half of Lot 10, 13th Concession, Huntingdon Township, Hastings County, Ontario. This property was developed by Huntingdon Fluorspar Mines during the first two months of 1961. A vertical two-compartment shaft was sunk to 42 ft and a level begun at 32 ft. There was no report of production.
- South Reynolds (Reynolds) Mine, Lot 7, 13th Concession, Huntingdon Township, Hastings County, Ontario. In 1917, it was operated under option by Charles Henrotin, who produced two carloads from an open cut in a vein 18 in wide. About 150 ft had been exposed (1918). It was next reported to have been mined and closed (both in 1943) by the Wood Land Mineral Company, of Hamilton (1944). In 1943 a portable mining plant was installed and a shaft sunk to 30 ft.
- Stoklosar Property, see the listing for the Blakely Mine, above.

- Topspar Fluorite (Clark Property, Tops) Mine**, north part of Lot 13, 22nd Concession, Cardiff Township, Haliburton County, Ontario. About 80 km north of Madoc, in the Wilberforce-Harcourt area, the mine was opened in 1940 by W. E. Clark, who was reported to have shipped 30 tons of acid-grade fluorspar between then and 1942 (Satterly, 1957). It was then acquired by the Tops Mining Syndicate, in 1943, the year that it was incorporated (1947), and work on surface and diamond drilling on several properties was reported. An 8-ft by 8-ft adit was driven 126 ft into a hill to intersect a vein which had been discovered on the surface above. A shaft was then raised 30 ft to the surface (1947). This syndicate was the only operator in 1945 (Canada, Mines Branch, 1946). The adit was driven a further 30 ft in 1945, and 31 ft in 1946, to a total of 170 ft from the portal. No production had yet been reported (1948). It was then acquired by Topspar Fluorite Mines, in 1950. Locally, syenite pegmatites cut hornblende gneisses. The minerals reported were pink to buff feldspar, in crystals up to 60 cm across, pyroxene, in euhedral crystals up to 90 cm in diameter, salmon-pink calcite, purple fluorite, and uranothorite (Satterly, 1957). Hewitt (1959) reported apatite in calcite veins.
- Trapp Property**, Cardiff Township, Ontario. Shipments were reported from this property in 1924 (1926).
- Trent (Ben Lee) Mine**, east half of Lot 1, 1st Concession, Madoc Township, Hastings County, Ontario. An old open cut, reportedly 200 ft long and 400 ft deep, it was reopened by the Trent Mining Syndicate in 1942 (1946). See also the listing under Talc, and the other listings for Lee, above.
- Twin-Valley Prospecting Syndicate Property**, Lot 22, 4th Range, Huddersfield Township, Pontiac County, Québec. In 1944, it was reported that 18 tons had been marketed in 1943-1944 (1945). Massive pale green and purple fluorite occurred in pockets in pyroxenite. There were also large crystals of apatite, scapolite, and phlogopite mica, and pink calcite.
- Wallbridge Mine**, west half of Lot 4, 1st Concession, Madoc Township, Hastings County, Ontario. About 6 km west northwest of Madoc, it was first mined in 1917 when 380 tons were produced from a three-ft wide vein which had been stripped for 500 ft. There was also a second vein 700 ft west of the first. It was worked from 1920 to 1922 and by Dominion Fluorspar Company Limited from 1941 to 1943 (Sabina, 1987). C. M. Wallbridge, representing the Wallbridge Estate, was listed in 1934-1935 (1935-1936). It was reported to be adjacent to the Ponton Property (1918).
- Wallbridge Mine**, see the listing for the Dominion Fluorspar Company listing, above.
- Wellington Mine**, Lot 1, 4th Concession, Madoc Township, Ontario. The mine was reported to have been opened by S. Wellington, of Madoc, in 1905 (1906). In 1914, the Canadian Mines Branch reported that a few hundred tons had been taken out over the previous ten years from this and another property, also owned by S. Wellington, on Lot 10, 14th Concession, Huntingdon Township (1915) (see also the listing for Gillespie and Wellington, above).
- Wellington and Munro Mine**, Lot 13, 12th Concession, Huntingdon Township, Hastings County, Ontario, across Hog Lake from the Perry Mine. There was reported to have been considerable work in 1916, with ore being removed from two open pits (1917).
- Wellington and Munro Property**, east half of Lot 1, 1st Concession, Madoc Township, Hastings County, Ontario. Mining began in 1916 with the preparation of two car loads of high

grade spar for shipment (1917).

Gallium

Gallium is a soft bluish-white metal with an unusually low melting point of 29.75 degrees Celsius. It is used in dental amalgams and as a substitute for mercury in thermometers.

Gallium Corporation Mine, Monmouth Township, Haliburton County, Ontario, near Tory Hill.

The Company was incorporated in 1950 and began to mine the property in 1953, at the rate of 25 tons per day, and using a workforce of six. The ore was mined from a pegmatite (1955).

Garnet

Garnet, sufficiently hard to be an abrasive, is used in the manufacture of coated papers (sandpaper) and cloths. While occurring widely in Canada, chiefly as an accessory mineral to others, there are very few commercially-viable deposits. While occurring in both igneous and metamorphic rocks, in the latter it can be formed as well-defined crystals. Transparent garnet can be faceted into beautiful and valuable gemstones.

Canada Garnet Company (Labelle) Mine, Lot 16, 1st Range, Joly Township, Labelle County, Québec. The mine was about 3 km southwest of Labelle on the Mont-Laurier Branch of the Canadian Pacific Railway, 160 km north of Montréal, and on the east side of a small lake. Some development work was done from 1927 to 1932 by the Labelle Nickel and Garnet Company, of Montréal (1928-1933). The company also sent a trial shipment to the United States. There was no mining in 1931 (1932), but a trial shipment of one hundred tons of crude rock was made in 1932 (1933). The company failed in 1932 and was taken over by custodians that year (1933, 1934). It was next operated by La Belle Mining Incorporated in 1934 (1935), but not mined in 1935 (1936). Work was reported in 1936 (1937). Subsequently, it was taken over and worked by the Canada Garnet Company in 1937 (Canada, Mines Branch, 1938). The company was reported as Canada Garnet Limited during the 1941-1946 period of production (1942-1947). A concentrator constructed in 1937-1938 (1939) was destroyed by a storm in 1939 (1940) and rebuilt in 1940 (1941). The underground workings consisted of an adit (a tunnel), about 40 meters long, driven into the foot of a hill (1942). The deposit, on a hillside above a small lake, was a garnetiferous biotite-quartz-gneiss interbanded with veins of pyrrhotite and massive crystalline garnet. The garnets were deep wine-coloured. There were four parallel veins (1928). The better grade was reported to occur in pegmatite dykes, with the garnets being about 1 cm across. The minerals reported were quartz, feldspar, hornblende, pyrrhotite, magnetite, deep-green amphibole, sphene, and garnet (Osborne, 1935).

Garnet Products Limited (Property) Mine, Lot 10, Range A, Joly Township, Labelle County, Québec. This mine was in the Sainte-Agathe - Saint-Jovite area, on the east side of the Rouge River and close to the railway. The company, from Montréal, was incorporated in

1934 and began mining in 1935 (1936). The quarry was opened in a ridge of garnetiferous limestone and pegmatite dykes.

McLean-McNicoll Mine, Lot 25, Range B, Joly Township, Labelle County, Québec, on the southern side of Labelle. The company, from Montréal, was reported to have started mining in 1934 (1935). Work was not reported from 1935 to 1938 (1936-1939). The orebody was on a high bluff on the east side of the Rouge River. The garnetiferous gneiss was rich in biotite. It was cut by quartz and garnetiferous pegmatite dykes. A mill, with a capacity of 40 tons per day, was constructed on the property (Osborne, 1935).

Mayo Occurrence, Lot 14, 12th Concession, Mayo Township, Hastings County, Ontario. This was reported to be an occurrence of garnet schist (Hewitt & James, 1956).

Montréal Garnet Products Property, Joly Township, Labelle County, Québec. The company was listed as an owner/operator in 1935 (1936).

Quirk Deposit, Lots 3 and 4, 5th Concession, Monteagle Township, Hastings County, Ontario. About 15 km north of Bancroft, the property was reported to have been staked by J. E. Quirk, of Hybla (Thomson, 1943). Broken-up andradite garnets, with quartz, feldspar, and hornblende, occurred in a granite gneiss. The deposit occurred in a diopside-garnet-scapolite skarn that had been formed by an intrusion of nepheline syenite. About 12 m wide, it was reported to have the appearance of solid garnet, but, after examination it was found to be composed of masses of clear red garnet crystals with quartz, hornblende, and feldspar scattered throughout it. The garnets were of the andradite variety (Hewitt, 1955).

Ruby (Jewell Ruby) Mine, Lot 3, 15th Concession, Ashby Township, Lennox and Addington County, Ontario. The mine was reported to be about 32 km east of Bancroft, with the pit being about 1.5 km south of the Hardwood Lake-Denbigh Road. The garnet occurred as well-formed red crystals, up to 2.5 cm in diameter, in a hornblende-mica schist (Canada Mines Branch, 1926). It was originally staked by James Coyne and Thomas Ryan, in 1910, and transferred to J. H. Jewell and Company the same year (Satterly, 1945). A shaft was sunk in the valley several hundred ft from the quarry which was later developed. It was known as the *Jewell Ruby* mine. The camp was built by the Bancroft Mines Syndicate in 1921 (1923), and was mined in 1922 and 1924, when 1610 tons was produced (Canada, Mines Branch, 1934). This was the only commercial shipment of the mineral, to that date, in Canada. The company's mill burned in late 1923 and operations ceased in early 1924. In 1937, the Damigo Mining Syndicate, of Toronto, was reported to have mined 400 tons of rock (Canada, Mines Branch, 1938). It was re-staked, in 1943, by L. Garbutt (Satterly, 1945). At the time, the pit was about 40 by 50 ft, and 15 ft deep. The deep-red garnets were up to about 1 cm in diameter, and were reported to form about 30% of the rock. Hornblende and quartz were also reported.

Wakefield Occurrence, Lot 7, 1st Range, Wakefield Township, Gatineau County, Québec. The occurrence was reported to be on the right (east) bank of the Gatineau River, about 34 km north of Hull. Sinkankis (1959) reported perfectly colourless to yellow transparent crystals which could be cut into gems. The garnets are found lining vugs (cavities, often lined with crystals) in metamorphic limestone.

Gold

Gold, one of the great metals of antiquity, is known for its malleability and exceptional resistance to oxidization. It has long been used throughout the world for coinage and ornamental purposes - chiefly jewellery and gilding. Because of its exceptional resistance to corrosion it is now used in electronics and space-age technologies. Gold occurs in every province and territory except Prince Edward Island. Ontario and Québec have large, well-established gold mining industries and account for much of Canadian production. The Richardson Mine, at Eldorado, near Madoc, was historic because it was the first deposit of gold discovered within the Canadian Shield. Its discovery, in 1866, triggered a gold rush into the Madoc-Marmora area. Many mines were developed. Most of these were small, however, and short-lived.

Ackerman Mine, about 3 km southeast of Deloro and 12 km west of Madoc, Ontario, from Highway 7. Sabina (1987) reported that this was one of several arsenopyrite gold deposits that was opened in the Madoc - Deloro area between 1870 and 1900, but did not report on ownership.

Adamston Township Occurrences, Renfrew County, Ontario. Three small occurrences, one on Lot 3, 12th Concession, and two on Lot 5, 12th Concession, were noted by Satterly (1945). The first was a calcite stringer in a magnetic gabbro. The second was a quartz-chalcopyrite vein in limestone and grey biotite gneiss.

Addington (Rich Rock, Golden Fleece, Cobalt Frontenac) Mine, Lots 24 and 25, 6th Concession, Kaladar Township, Lennox and Addington County, Ontario. This famous mine was about 10 km north northwest of Kaladar, and near Flinton. Discovered in 1881, the deposit was mined from time-to-time between 1887 to 1939. A 10-stamp mill was erected in 1907 (1908). In 1912 it was owned by the Adelaide Mining Company, of Baltimore, Maryland, and was operated under lease, with an option to purchase, by the A. B. P. Mining Company (1913). At the time, there was a shaft 75 ft deep, which had been abandoned and an open cut, which was being mined. It was worked until mid-1913 (1915). In 1915 it was acquired by the Cobalt Frontenac Mining Company, which de-watered the old workings. There were then two shafts: *Number 1*, 85 ft deep; and *Number 2*, 40 ft deep (1916). In 1916, *Number 2* shaft was re-timbered and deepened to 60 ft and a little mining took place (1917). In 1918-1919 another shaft, at 65 to 70 degrees, was sunk to 100 ft (1919-1920), and a level opened at 90 ft. The mine was developed from 1917 to 1920 (1918-1921). In 1922, the company's money was exhausted and all work was stopped on July 1 (1923). In more recent years, it was owned by Addington Mines and optioned by the Consolidated Mining and Smelting Company of Canada in 1935. Between 1935 and 1937 an inclined shaft was sunk 535 ft and five levels established. Almost 14 000 ft of underground development was reported. About 50 people were employed (1937-1939). In 1938, a winze (an inclined shaft) was sunk from the fifth level about 600 ft north of the shaft. From this, two additional levels were cut at 625 and 750 ft. About 15 200 tons of ore and waste were hoisted (1940). It operated until the end of March, 1939 (1941).

Atlas Arsenic Mine, along the Central Ontario Railway. It was first mentioned in 1903 (1904). It produced in 1900, 1902, and 1903 (1941).

- Bannockburn Gold Mine, Lot 28, 5th Concession, Madoc Township, Hastings County, Ontario.
At Bannockburn, about 18 km north northwest of Madoc, it was mined between 1894 and 1898. In 1902, it was reported that some very rich gold-bearing specimens had been obtained at this property (1902). In 1939, it was listed as having produced only in 1895 (1941). There were four shafts on the property, 26, 30, 30, and 45 ft deep, respectively, and a 10-stamp mill. The gold occurred in discontinuous quartz stringers in altered limestone close to the contact with a mica syenite. Some rich specimens were found (Thomson, 1943).
- Barker (MacDonald) Prospect, Lot 14, 4th Concession, Olden Township, Frontenac County, Ontario. The prospect was on the farm of Bruce and Reginald Barker. Harding (1951) reported that a prospect pit, 12 ft deep, was dug in a band of rusty-weathering Grenville quartzite prior to 1925 by Alex. MacDonald, the former owner of the lot. Traces of gold were indicated through assays.
- Big Dipper Mine, Lot 4, 10th Concession, Barrie Township, Frontenac County, Ontario. About 5 km west of the Star of the East Mine and 0.8 km west of Massassaga (Mississagagon?) Lake. Owned by the Big Dipper Mining and Milling Company, of Peterborough, the mine was developed in 1905. Two shafts were sunk (1906). Operations began again in 1907 (1908) and continued until 1909 (1941).
- Boerth Mine, Lot 28 or 29, 7th Concession, Clarendon Township, Frontenac County, Ardoch, about 19 km west of Clarendon Station on the Kingston and Pembroke Railway, Ontario. Smith (1958) reported that the working were about 4 km northeast of Fernleigh and about 800 m east of Swagger Lake. A power line was within 100 m and remnants of the old mill about 400 m to the northeast. It was worked for gold, commencing about 1900, by the Boerth Mining Company of Ontario, Limited. A 10-stamp mill was erected on the property. It was then taken over by the Clarendon Mining Company of Ontario, Limited, in 1902, and operated in 1903. There was an open pit and two shafts, one 120 ft deep (1904). In 1908 it was reported that the property had been closed for some years but that work had begun again (1908). Sabina (1987) reported that the property was then owned by Mr. Wilf Hermer. Smith (1958) noted that, on the property, beds of sedimentary schist and gneiss were interbanded with limestone. The mining had been in quartz veins which cut these obliquely. Arsenopyrite and tourmaline were noted.
- Bourk Prospect, Lot 23, 1st Concession, Oso Township, Frontenac County, Ontario. The prospect was on the farm of W. T. Bourk (Harding, 1951). Harding reported that, early in the 20th Century, William Duffy had excavated a prospect pit in beds of crystalline limestone which had been intruded by granite. The minerals noted were quartz, calcite, pyrite, chalcopyrite, and malachite. Low values of gold had been obtained from assays.
- Brougham Township Occurrence, Lot 11, 1st Concession, Brougham Township, Renfrew County, Ontario. Locally, granite and pegmatite dikes were reported to cut hornblende schist (Satterly, 1945).
- Brudenell Township Occurrences (three), Lot 30, 9th Concession, and Lots 31 and 32, 10th Concession, Renfrew County, Ontario. Near Rockingham, these were mentioned by Satterly (1945). At one, on a hill behind the Post Office, the grey igneous rock was noted to contain quartz, feldspar, pyroxene and titanite (sphene). The latter, in red-brown flattish, wedge-shaped crystals, was noted to constitute up to 1 percent of the rock

(Satterly, 1945).

Brudenell Prospect, Lot 32, 10th Concession, Brudenell Township, Renfrew County, Ontario.

This prospect was reported to be about 300 m north of the Post Office at Rockingham and 200 m west of the road. Satterly (1945) reported that a shaft, six by 10 ft, had been sunk to 13 ft. Material on the dump was reported to be a limestone. The minerals noted were pyrrhotite, titanite (sphene) and graphite.

Campbell-Blomfield Mine, east half of Lot 6, 8th Concession, Marmora Township, Hastings County, Ontario. The mine was reported to have been owned, in 1902, by Messrs. A. H. Campbell, of Toronto, and C. J. Blomfield, of Lakefield, Ontario. Two shafts, one to 60 ft, had been sunk (1902).

Cleveland Mine, Ontario. This was reported to have been a small mine which produced in 1908 (1941).

Clow Prospect, Lot 22, 3rd Concession, Hinchinbrooke Township, Frontenac County, Ontario. A band of mineralized rock, consisting of quartz and pegmatites, was reported to cross Highway 38 about 1.5 km south of Parham (Harding, 1951). It was noted that this could be followed eastward on the farm of O. R. Clow. Harding noted that two pits had been dug in this about 1934. One was to the east of Highway 38 while the second was a short distance directly south of Clow Lake. Large quantities of pyrite were found in the first, the westernmost pit. Pyrite, pyrrhotite and molybdenite were observed in the second.

Cobalt-Frontenac Mining Company Properties: (1) North half of Lot 26, and, southwest quarter of Lot 27, 7th Concession, Kaladar Township, Lennox and Addington County; (2) Lot 33, 1st Concession, Barrie Township, Frontenac County (1917); (3) Lots 24 and 25, 6th Concession, Kaladar Township, Lennox and Addington County, Ontario (see also the listing for the Golden Fleece Mine below); (1918). It was reported as having produced in 1919 and 1922 (1941).

Cook (Cook Land) Mine, Lots 7, 8, and 9, 9th Concession and Lots 10, 11, and 12, 10th Concession, Marmora Township, Hastings County, Ontario. The mine was 8 km southeast of Plevna Village, 3.2 km south of the Boerth Mine, and about 400 m east of the Deloro Mine, in Clarendon Township, Frontenac County. It was owned by J. W. Cook, of Marmora, and then the Cook Land Company, of Toronto, in 1902. It was reported that 1000 tons, from which 500 ounces was extracted, was mined prior to 1871 (1937). There were two shafts, on Lot 9, 9th Concession: *Number 1* and *Number 4*, about 450 m northeast of the former (1903). Production was reported in 1901, 1902, and 1904 (1941).

Cook Property (?), Lot 23, 9th Concession, Clarendon Township, Frontenac County, Ontario. The old pit was about 3 km southeast of Fernleigh. It was about 500 m from a road running south from the Fernleigh-Ardoch Road and also from the Mississippi River. A pit, about 25 ft deep had been dug on a contact between limestone and diorite. Quartz stringers with arsenopyrite were noted by Smith (1958).

Cordova (Belmont, Cardona) Mine, east half of Lot 20, 1st Concession of Belmont Township, Peterborough County, Ontario. This mine was about 13 km north of Marmora, and 19 km northeast of Havelock. Access was from the Cordova Mine Road. Gold was discovered in 1890 and operations began in 1891. A branch line of the Ontario, Belmont and Northern Railway (a subsidiary of the Central Ontario), was completed from Belmar Junction to the property in 1896 (Hansen, 1997). The Cordova Exploration Company Limited, of

Newcastle-upon-Tyne, England, acquired it in 1897. The name "Cardona" was also used in reports. There were 10 shafts (1900). The property was owned by Mr. A. W. Carscallen, of Madoc, and optioned to the company (1901). In 1902, there were 225 employees, of whom 102 were miners. Production ended in late 1902, but the mine was de-watered and prepared for resumption of production in 1911. Three shafts, *Numbers 1, 3, and 7*, were pumped out and considerable stoping was done above the third level. *Number 1* shaft was the 400 ft deep and *Number 3*, 485 ft deep. At that time the name was changed from the Belmont Mine to Cordova. There was a 30-stamp mill on the property. It was worked until 1913 (1914), and then taken over by P. Kirkegaard and associates in 1914 (1915). Many improvements were made to the mine during 1915 and 1916 and some mining took place on the 400-ft level of *Number 1* shaft, by Cordova Mines Limited, with Peter Kirkegaard as Managing Director. A disastrous fire in March 1917 destroyed the shaft house and all surface facilities and equipment except for the compressor plant, office, and laboratory (1917). The operation then closed because of difficulties in obtaining labour and supplies. In 1918 the company constructed an electric smelting plant, at Cordova, for the production of ferro-chromium (1919). It was worked intermittently until the Consolidated Mining and Smelting Company of Canada took it over in 1935 (1937). In 1936, a shaft was sunk 396 ft, about 1900 ft of underground development completed, and 30 000 tons hoisted (1938). The development continued in 1937, with 65 employed (1939). By 1938, the *Number 3* shaft was 1000 ft in inclined depth. A winze (an inclined shaft within the mine) was sunk that year from the ninth level to the tenth, at a vertical depth of 1120 ft (1940). All three shafts and the winze were sunk at 67 degrees (1942). Cominco operated it from 1936 to 1940, when all operations ceased at the end of July. It was reported to have produced in: 1892, 1893, 1898 to 1903, 1912 to 1917, and 1939 (1941).

Craig Mine, south halves of Lots 4 and 5, 3rd Concession, Tudor Township, Hastings County, Ontario. About 13 km north of Bannockburn Station, this was a small property which was reported to have been idle in 1898. Two small pits and trenching had been done and the ore treated at the Bannockburn Mill. Originally owned by residents of Belleville, Ontario, it was reopened in 1904 by the Craig Gold Mining and Reduction Company, of Newark, New Jersey (1905) (Phelps, New York (1906)). Two shafts were sunk to depths of 210 ft and 165 ft during the early years. One of these had been sunk to 103 ft by 1896 (1902). About 550 m of lateral development was also done and 1850 tons of ore milled (Thomson, 1943). Craig Gold Mines, formed in 1934, sunk two shafts, *Number 1*, to 245 ft, and *Number 2*, to 200 ft, in 1935 (1937). Some development was also done. It was developed further in 1936 (1938). In early 1938, however, the company failed and the property was sold to W. Blamire and associates. A new company, Kudore Gold Mines was planned and the mine was placed on a care-and-maintenance basis (1940). In the early days, it was reported as having produced in 1905 and 1906 (1941).

Crain Prospect, Lot 31, 5th Concession, Oso Township, Frontenac County, Ontario. The prospect was on the farm of Andrew Crain and about 100 m south of the boundary between Oso and Palmerston Townships. Harding (1951) reported that a shallow prospect pit had been dug in a quartz vein late in the 19th Century. Disseminated pyrite was noted.

Crescent Mine, Lots 16 and 17, 11th Concession, Marmora Township, near the Hamlet of

- Malone. Acquired by the Crescent Gold Mining Company in 1890, it was reported to have been worked about a quarter of a century previously (1893). In 1939, it was reported that it had produced in 1891 and 1892 (1941).
- Dean and Williams Mine, Lot 8 (7), 9th Concession, Marmora Township, Hastings County, Ontario. In 1901, reported to have been worked many years ago for gold (1901). Thought to be on a continuation of the vein on the property of Canadian Goldfield Limited (1902), it was about 2.5 km south of Canada Consolidated's Gatling Mine (1937).
- Deloro Gold (Canadian Goldfields) Mine, Lot 9, 8th Concession, Lot 10, 6th Concession, west half of Lot 10 and the northeast quarter of Lot 8, 9th Concession, Marmora Township, Hastings County, Ontario. At Deloro, it was worked between 1870 and 1903 by operators including Canadian Goldfields Limited (the latter from 1897 to 1903). There were several shafts, the *Timber*, the *Tuttle*, the *Gatling*, and the *Red* (1902). In 1939, it was reported that it produced between 1897 and 1902 (1941). Sabina reports (1987) that, after the mine closed in 1903, the Deloro Mining and Reduction Company converted the mill to treat ores from Cobalt. The latter company was formed in 1907 (Hansen, 1997). During both the Second World War and the Korean War, cobalt ore was shipped for treatment to Deloro - since this was the only plant in North America that could treat such ores. The plant closed about 1960 (Hansen, 1997).
- Deroche and Burrows Mine, Lot 25, 6th Concession, Kaladar Township, Lennox and Addington County, Ontario. It was reported to have been mined in 1887, when three tons of ore yielded gold worth \$65 (1937).
- Dodds Prospect, east half of Lot 20, 4th Concession, Oso Township, Frontenac County, Ontario. Harding (1951) reported that a prospect pit, southwest of the farmhouse, had been dug by R. Harris late in the 19th Century. A vein of white quartz, containing pyrite, had been exposed. A second pit, southeast of the house, and dug prior to 1912, was also mentioned.
- Emily Mine, Rawdon Township, Hastings County, Ontario. It was reported, in 1902, to have been worked many years ago (1902).
- Feigle Mine, Lot 8, 8th Concession, Marmora Township, Hastings County, Ontario. It was reported that this mine had produced gold worth \$4,000 before 1870 (1937). It was reported to have been situated on a continuation of the veins on which the Gatling and Gladstone mines were also located.
- Ferguson Prospect, Lot 29, 6th Concession, Oso Township, Frontenac County, Ontario, on the farm of Donald Ferguson. A small pit had been dug in a quartz vein on the contact between granite gneiss and highly altered basic rock. Pyrite was observed in quartz stringers (Harding, 1951).
- Fulton Prospect, Lot 1, 10th Concession, Dungannon Township, Hastings County, Ontario. Two old test pits were reported on the farm of Thomas Fulton, of Detlor. The vein, containing disseminated sulphides, was in bedded limestone cut by diorite dikes (Hewitt & James, 1956).
- Gatling Pearce (Gatling, Canada Consolidated) Mine, Lot 10, 8th Concession, Marmora Township, Hastings County, Ontario. This well-known mine was about 1.5 km from Marmora Station on the Central Ontario Railway and near Deloro. It was active as early as 1871, and it was stated that gold worth \$10,000 had been mined up until 1884 (1937).

- In 1892, the property, then known as *The Gatling Five Acres* appears to have been taken over by the Atlas Arsenic Company, in 1900. There were two shafts (1900). This property was completely surrounded by the property of Canadian Goldfields Limited (1902). In 1939, it was reported that it had produced only in 1893 (1941).
- Gawley Mine, east part of Lot 18, 9th Concession, Marmora Township, Hastings County, Ontario. The mine was owned by the Atlas Arsenic Company. A shaft had been sunk to 100 ft by 1902 (1902).
- Gilmour Gold Mine, Lot 30, 19th Concession, Grimsthorpe Township, Hastings County, Ontario. Near Gilmour Station, about 42 km north of Madoc, it was operated by the Gilmour Mining Company, of Syracuse, New York. The property was developed in 1908 and operated from 1909 to 1914. There were three levels, at 63, 86, and 126, from which about 1000 ounces was mined in the early years. There was a five-stamp mill on the property. Gilmour Gold Mines was formed in 1935 (1937), and continued the development done by the former owners. There were two shafts: a vertical two-compartment shaft 85 ft deep, and an inclined two-compartment shaft 210 ft deep. Levels were cut at 85, 135, and 185 ft. In 1936, Cataraqui Gold Mines was formed and succeeded the former company. It de-watered the mine and obtained samples (1940). No ore was found, however, and the project was abandoned. Thomson (1943) noted that the buildings had been removed from the property.
- Gladstone Mine, Lot 17, 6th Concession, Marmora Township, Hastings County, Ontario. Adjacent to the Sovereign Mine, it was first mentioned in 1903 (1904) as "near the boundary of the old Gladstone property" (Sovereign Mine workings). From this, I have assumed its location. It was reportedly on the same veins as the Feigle and Gatling mines (1937).
- Golden Fleece (Cobalt Frontenac, Addington) Mine, west half of Lot 24 and Lot 25, 6th Concession, Kaladar Township, Ontario. See the listing for the Addington Mine, above.
- Gould Prospect, see the listing for Larmon (Gould), below.
- Guinard Mine, Kaladar, Ontario. This property was reported to have been mentioned in the 1890 Report of the Royal Commission of the Mineral Resources of Ontario (1937). The ore was reportedly worth \$8 to \$9 per ton.
- Helena Mines, Lots 19 and 20, 6th Concession and Lot 20, 7th Concession, Barrie Township, Frontenac County, Ontario. About 29 km northeast of Kaladar, it was reportedly owned in 1901 by Michael Seitz, Brooklyn, New York, and A. M. Chisholm, Cloyne, Ontario. Three shafts, the *Hill*, *Valley*, and *Bill*, were being developed in 1900 (1901). The ore contained both copper and gold.
- International Mine, Lots 6, 7, 8, and 9, 9th Concession, Barrie Township, Frontenac County, Ontario, about 35 km northeast of Kaladar Station. Mining by the International Gold and Copper Company Limited was reported to have begun in 1902 (1903).
- James Mine, Clarendon Township, Frontenac County, Ontario. Smith (1958) mentioned that this property was beside the main power line in the area and about 800 m east of the Plevna Fault. It was noted that the excavations were very old and had been dug in quartz veins in limestone. One, sloping at 45 degrees, was about 20 ft deep.
- James Mine, Lots 2 and 3, 4th Concession, Elzevir Township, Hastings County, Ontario, at the village of Actinolite. Then reported to have been owned by Joseph James, of Actinolite, it

- was mentioned that five shafts had been sunk for exploration by 1902 (1902).
- Jeffrey Prospect, 9th Concession, Faraday Township, Hastings County, Ontario, about 11 km west of L'Amable Station on the Central Ontario Railway. It was owned by James Best, of Bancroft, in 1902. Reportedly, a shaft had been sunk to 10 ft (1902).
- Keller Occurrence, Lot 39, 6th Concession, Clarendon Township, Frontenac County, Ontario. On the farm of Manson Keller, of Plevna, the occurrence was about 300 m north of the Ompah-Plevna Road. Arsenopyrite and pyrite were observed in a rusty shear (Smith, 1958).
- Larmon (Gould) Prospect, Lot 25, 5th Concession, Oso Township, Frontenac County, Ontario. The prospect was on the farm then belonging to Henry Larmon (Harding, 1951). About 1904, it was mentioned that John Gould, the previous owner, had dug a shallow pit in a quartz vein which cut altered Precambrian basic intrusives and sediments. The minerals were reported to be pyrite, quartz, rusty-quartz with pyrite, and quartz with fine needles of tourmaline.
- Ledyard Mine, east half of Lot 19, 1st Concession of Belmont Township, Peterborough County, Ontario (1893). In 1939, it was reported that it had produced in 1893 and 1894 (1941).
- Little Doris Mine, Ontario. An eastern Ontario mine, reported, in 1939, to have produced in 1898 (1941).
- MacDonald Prospect, Lot 14, 2nd Concession, Olden Township, Frontenac County, Ontario. The prospect was reported to have been about one kilometre west of Mountain Grove, 200 m south of the Canadian Pacific Railway, and on land belonging to Eldon MacDonald. Harding (1951) reported that Alex MacDonald explored by stripping and blasting during the early part of the 20th Century. Quartz veins, with pyrite, intruded Grenville sediments.
- MacDonald Prospect, see the listing for the Barker (MacDonald) Prospect, above.
- MacDonnell Prospect, Lot 26, 5th Concession, Oso Township, Frontenac County, Ontario. Harding (1951) reported that a vein of quartz (or lens) was located about 400 m northwest of the farmhouse. The vein cut gabbro and diorite, and contained some pyrite.
- MacPherson Prospect, Lot 23, 5th Concession, Oso Township, Frontenac County, Ontario. On the farm of George MacPherson, a pit had been dug in altered Precambrian sediments. At this location, pyrite was disseminated in quartzite, in altered sediments (Harding, 1951).
- McKnight Prospect, west half of Lot 10, 4th Concession, Olden Township, Frontenac County, Ontario. The prospect was on the farm of William McKnight (Harding, 1951). The pit, in a rusty gossan (a very weathered outcrop of sulphide minerals, such as pyrite), was close to the east side of Long Lake Road, near the middle of the west half of the lot. The gossan was close to the contact between gabbro-diorite and Grenville sediments. Abundant pyrite and pyrrhotite were noted. Assays of grab samples indicated the presence of gold and nickel.
- McVeigh Prospect, west half of Lot 18, 4th Concession, Oso Township, Frontenac County, Ontario. In 1937, R. McVeigh, the owner of the lot, was reported to have dug a pit, 13 ft deep, in a narrow granite dike in crystalline limestone. The pit was about 150 m southwest of the farmhouse and about 200 m from the Zealand Road. Disseminated pyrite and low gold values were mentioned (Harding, 1951).
- Malone Mine, southeast half of Lot 6, 8th Concession of Marmora Township, Hastings County, Ontario (1895).

Mayboro Milling Company (Old Diamond) Mine, west half of east half of Lot 14, 10th

Concession, Madoc Township, Hastings County, Ontario. An old mine, to which the first reference was made in 1940 (1942). The previous operators had sunk three 100-ft shafts in veins and done some underground development. The workings had then flooded. The Mayboro Milling Company was incorporated in 1939. It then de-watered the mine, erected a small mill, and did some mining. *Number 1* shaft was deepened to 156 ft and a new level established at 135 ft (1942). Three hundred tons of ore and 1375 tons of waste were hoisted in 1941, but operations were suspended early in 1942 (1946).

Morrow Prospect, Lot 15, 2nd Concession, Oso Township, Frontenac County, Ontario. The prospect was between Highway 38 and the Canadian Pacific Railway, and about 1 km northeast of a bay on Sharbot Lake on the east half of the lot. Harding (1951) reported that Andrew Morrow, of Shabot Lake, had worked on this prospect between 1941 and 1944. Locally, a quartz vein cut quartzite. There were two pits. In one, low gold values were reported to have been obtained. In the other, pyrite, actinolite, and graphite were identified.

Munro Prospect, Lots 16 and 17, 2nd Concession, Dungannon Township, Hastings County, Ontario. On the farm of A. W. Munro, near its southeast corner, two zones of weathered pyrite were reported in crystalline limestone, slate, and amphibolite. Traces of gold were mentioned (Hewitt & James, 1956).

Old Diamond (Mayboro) Mine, Ontario. This was a small operation, which was reportedly mined only in 1941 (1953).

Ore Chimney Mine, Lots 34 to 36, 1st Concession, Barrie Township, Frontenac County, Ontario. This well-known old mine was near Bishop Corners and Northbrook, and about 17 km northwest of Kaladar. It was owned by the Ore Chimney Mining Company, of Northbrook, Ontario. In 1913, it was reported that there were then three abandoned test pits on the property and a 150-ft deep shaft, known as *Number 4*, from which development was being done on the 125-ft level (1913). There were 12 men on the property at the time. Development continued from 1913 to 1916 (1917), with the shaft being deepened to 405 ft, and levels cut at 108, 150, 250, 300, 332, and 400 ft. Drifting and crosscutting were done on all levels. A 20-stamp mill was installed. Some 30 to 40 persons were employed throughout 1915 (1916). By the end of 1917, 2000 ft of drifting and cross-cutting had been done on the six levels (1918). There was no mining from 1917 to 1921, but the company completed six dams on the Skootamatta River. Four more dams and a hydro-electric plant were being completed in 1920-1921 (1920-1922). It was mined for the first half of 1924 (1926). It was also reported to having been de-watered and developed further in 1925 (1926), with 20 persons on the property. In 1926, a winze (an inclined internal shaft) was completed below the 400-ft level, and a new level opened at 500 ft. 30 men were then employed (1927). Sabina (1987) reported that it was mined from 1909 to 1932.

Ore Extension Mine, northwest quarter of Lot 27, 7th Concession, Kaladar Township, Lennox and Addington County, Ontario. Work began in 1914 by the Ore Extension Mining Company. A two-compartment shaft, slightly inclined from the vertical was sunk to 43 ft (1915). It was closed throughout 1915 (1916).

Ore Mountain Mine, Lot 32, 1st Concession, Barrie Township, Ontario. Development began by

- the Ore Mountain Mining Company in 1914. A shaft had been sunk to ten ft (1915). In 1915 this shaft was abandoned and work done at other places on the property (1916).
- Pay Ore Mine, Lots 35 and 36, 1st Concession, Barrie Township, Ontario. Development began, by Pay Ore Mines Limited, in 1914. A shaft had been sunk to 66 ft (1915). It was closed throughout 1915 (1916).
- Pearce Mine, Lot 8, 9th Concession, Marmora Township, Hastings County, Ontario. The mine was on property adjoining the Deloro Mining and Reduction Company's works. Owned by the Cleveland Gold Mining Company, its development began in 1904. A shaft, inclined at 26 degrees, was sunk to 173 ft and two levels, at 60 and 140 ft, were established. Drilling was by steam in 1907, at which time it was reported that it had been closed down for some time and was re-opened in 1907 (1908).
- Rankin Mine, Lot 6, 8th Concession, Marmora Township, Hastings County, Ontario. Owned by Canadian Goldfields, a shaft had been sunk on the property (1902).
- Raymond Occurrence, Lot 10, 6th Concession, Olden Township, Frontenac County, Ontario. The occurrence was on land reportedly owned by Ira Raymond, about 60 m north of the Sharbot Lake Road, and about 1 km southwest of Olden Siding on the Canadian Pacific Railway. On it, Grenville sediments had been intruded by granites, with rusty-weathering pyrite zones occurring in greywackes and quartzites. Abundant pyrite was reported. Analyses did not indicate gold but did indicate low values of nickel.
- Rebstock Mine, Lots 2 and 3, 5th Concession, Kaladar Township, Lennox and Addington County, Ontario, about 2 km east of Flinton Village. Owned by J. H. Stone, of Flinton, and others, in 1902, two shafts (one to 80 ft) had been sunk (1902).
- Richardson Mine, east half of Lot 18, 5th Concession of Madoc Township, Hastings County, Ontario. At Eldorado, about 11 km north northwest of Madoc. The discovery of this gold deposit in 1866, on the property of Mr. J. Richardson, was the first discovery of gold in the Canadian Shield. It triggered a gold rush to the Madoc-Marmora area and changed prospecting in Canada since, previously, gold had been found in placer deposits. The mine was known for its leaves, sheets, and nuggets. Mined until 1868, it is now inaccessible and is an Historic Site (Sabina, 1987).
- Robertson Property, Lavant Township, Lanark County, Ontario. The occurrence was on the farm of H. S. Robertson, and southeast of Robertson Lake, at Lavant. During the period 1938-1944 the occurrence, in a shear zone parallel to Lavant Creek, was drilled by the Consolidated Mining and Smelting Company. Low values of gold were obtained (Smith, 1958).
- Rollins Property, Lot 16, 14th Concession, Wollaston Township, Hastings County, Ontario, 8 km northeast of Coe Hill. A shaft had been sunk to 30 ft and stripping begun by 1902. It was then being worked by D. E. K. Stewart, of Madoc, who sold the ore to Canadian Goldfield's works, at Deloro (1902).
- Schlievert Prospect, east half of Lot 9, 11th Concession, Renfrew County, Ontario. Satterly (1945) reported that four pits had been dug in a line about 125 m west of the farm house. These were to expose stringers of rusty quartz in greywacke interbedded with grey crystalline limestone.
- Severn (Pearce) Mine, Lot 8, 9th Concession, Marmora Township, Hastings County, Ontario. First reported as the Pearce Mine, in 1893, the property is about 300 m east of the Deloro

- Mine. Owned by the Altas Gold and Arsenic Mining Company Limited, a shaft had been sunk to 110 ft on it by 1902 (1902).
- Sophia (Diamond) Mines, west halves of east halves of Lots 14 and 15, 10th Concession of Madoc Township, Hastings County, Ontario. The mine was about 2 km west of Queensboro and 12 km north northeast of Madoc. Gold was discovered in 1896 and the property was being developed in 1898. It was worked by new owners, The Hon. Peter McLaren, of Perth, Leopold Meyer, and Charles Meyer, in 1901. It was taken over by the Madoc Mines Company in 1908 (1908). There were three shafts (1901). It was reported as having produced only in 1900 (1941).
- Sovereign (Feigle) Mine, Lot 17, 11th Concession, Marmora Township, Hastings County, Ontario. This mine was reported (1902) to have been worked for several years. It was first known as the Feigle Mine, and was known for very rich ore in irregular deposits. In 1903 it was being reopened by the Sovereign Gold Mining and Development Corporation of Ontario, Limited, of Buffalo, New York. Old pits and workings were being extended to the boundary of the Gladstone property (1904). In 1939, it was reported as having produced only in 1900 (1941).
- Star Gold Mine (also known as the Star of the East Mine), Lot 24, 10th Concession, Barrie Township, Frontenac County, Ontario. The mine was beside Mississagagon Lake, near Perry's Rapids, and Myer's Cave, on the Mississippi River (1904). It was also about 25 km north of Kaladar. Mined from 1903 to 1907 by the Star of the East Gold Mining and Milling Company, it was mentioned as having produced in 1905 and 1907 (1941).
- Thomas and Derry Mine, Marmora Township, Hastings County, Ontario. Along with the Gatling Mine, it was also a property of the Canada Consolidated Gold Mining Company, at Deloro. It was reported to have been active in 1879 (1937).
- Turriff Road Prospect, Lot 26, 3rd Concession, Dungannon Township, Hastings County, Ontario. Three test pits were reported to have been a short distance north of the Turriff Road. The easternmost was mentioned as being 25 ft deep and timbered. Locally, crystalline limestone cut by gabbro dikes. The sulphides consisted of pyrite with arsenopyrite and chalcopyrite. Traces of gold were mentioned (Hewitt & James, 1956).
- Tysick Prospect, Lot 27, 6th Concession, Oso Township, Frontenac County, Ontario. The prospect was reported to have been about 12 m east of the road and 100 m south of the house of Peter Tysick (Harding, 1951). The land was then owned by Duncan Tysick. Harding noted that Peter Tysick had dug the prospect pit in 1938 in gabbro-diorite which enclosed small lenses of crystalline limestone. Disseminated pyrite and low values of gold were mentioned.
- Webber (Property) Mine, Clarendon Township, Frontenac County, Ontario. This mine was about 400 m northeast of Swagger Lake and 3.2 km northeast of Frenleigh. Smith (1958) noted that a shaft and about 50 m of trenches had been used to open a quartz vein in gneiss. No history was given. Arsenopyrite was observed.
- Weiss Property, Clarendon Township, Frontenac County, Ontario. On the farm of George Weiss, about 6.5 km west of Ardoch and south of the Mississippi River, a shallow pit had been dug in a quartz vein in limestone. Gold was said to have been obtained but no data were available (Smith, 1958).
- Wilberforce Township Occurrence, Lots 2 and 3, 2nd Concession, Wilberforce Township,

Renfrew County, Ontario. Two narrow quartz veins were reported in a granite gneiss. These contained pyroxene and pyrite (Satterly, 1945).

Yeoman(s) (Bertrim) Prospect, Lot 15, 6th Concession, Olden Township, Frontenac County, Ontario. The prospect was reported to have been on a hill about 250 m south of Highway 7 and about 125 m northwest of the Robert Bertrim farmhouse (Harding, 1951). Harding reported that the mineral rights were then held by Earl Yeomans, of Harrowsmith. In 1936, stripping, trenching, blasting, and sampling had been performed. The mineralized zone was in quartzite with pyrite. It was reported that assays had indicated the presence of gold.

Young Prospect, Lot 24, 5th Concession, Oso Township, Frontenac County, Ontario, on the farm of John Young. Harding (1951) reported that an 18-ft deep prospect pit had been sunk late in the 19th Century. Locally, the rocks are lavas and crystalline limestones. Pyrite was seen in the pit.

Granite (and Syenite)

Granite, an igneous rock, is used for architectural and building purposes, for monuments, and, in crushed form, for road building and railway ballast. Composed of feldspar, quartz, and mica, its colours usually range from pink to red and light to dark grey.

Abrams Quarry, Lot 6, 1st Concession, Leeds Township, Leeds County, Ontario. Operated by Joshua M. Abrams, of Gananoque, it produced syenite paving blocks and stones for monuments (1922-1926).

Ambro Materials and Construction Quarry, Marmora Township, Hastings County, Ontario. First reported in 1974 (1978), this operation may have succeeded the Armstrong Quarry (see the listing below).

Appleby Quarry, Lots 5 and 6, 2nd Concession, Leeds Township, Leeds County, Ontario. Operated by Mark Appleby, it was reported that granite paving blocks were produced (1922). Thomas A. Appleby was listed in 1932 and 1935-1936 (1932, 1936-1937). It was reported to have been idle in 1935.

Appleby and Hutcheon Quarry, Lot 31, 4th Concession, Pittsburgh Township, Ontario, on the farm of John Carey, close to Findley Station. In 1920, Mark Appleby and Andrew Hutcheon, of Gananoque, quarried paving blocks. The granite was red (1921).

Argenteuil and Two-Mountains Quarry, Saint-André East Township, Argenteuil County, Québec. Operated by Carrières d'Argenteuil et Deux-Montages, it produced from 1964 (1967).

Argenteuil Granite Company Quarries (two), part of Lots 13, 14 and 15, 7th Range, Chatham Township, Argenteuil County, Québec. In the Brownsburg granite area, the quarries were owned by James Brodie, the Argenteuil Granite Company, and Jos. Ward, of Montréal. The stone was used for the first storey of the Post Office building at Sainte-Catherine and Bishop streets, in Montréal (1933).

Armstrong Brothers Quarry, Marmora Township, Hastings County, Ontario. Listed as a producer from 1968 to 1971 (1970, 1977), it was reported as not producing in 1972-1973. It may have been succeeded by the Ambro operation (see the listing above), which began in the

- area the following year (1978).
- Bachelor Granite Quarries, about 65 km north northwest of Madoc, Ontario, and accessible from Highways 62 and 620 (Sabina, 1987).
- Bancroft Mica and Stone Products Mining Syndicate Property, Hastings County, Ontario. At Selby, this property was first listed in 1946 (1948).
- Benoit, Ledoux and Péloquin Quarry, Lot 6, Range B, Campbell Township, Labelle County, Québec. This quarry was in the Guenette granite area. In 1932 (1933), it was reported that it had been opened 20 years previously by Messrs. J. O. Benoit, Jos. Ledoux, and J. B. Péloquin. It was operated by the B. and L. Company in 1913 and 1914. The pink granite, coarse-grained, was cut by pegmatite dikes.
- Beresford Quarry, Gananoque, Ontario. John Beresford was reported as a producer from 1929 to 1933 (1930-1933).
- Bérubé Quarry, Lot 18, 9th Range, Chatham Township, Argenteuil County, Québec. Near Brownsburg, it was operated by Lucien Bérubé et Fils, of Rousillon, from about 1929 to 1946 (1930-1947). The granite was reported to be greenish-grey (1933).
- Bigras Quarry, Grenville Township, Québec. Edouard Bigras, of Montréal, was listed as an owner/operator in 1937 (1938).
- Billie Quarries, Bathurst Township, Lanark County, Ontario. At Maberley and Sharbot Lake, it was operated by T. R. Billie, of Smiths Falls in 1933 (1933). Charles V. Billie was listed in 1935-1936 (1936-1937).
- Black and Burgess Quarry, Willetsholm, about 10 km east of Gananoque, Ontario. Owned, in 1901, by Messrs. Black and Burgess, of Gananoque (1902).
- Bolenders Quarry, Dysart Township, Haliburton County, Ontario. The quarry was listed as a producer in 1972-1973 (1977).
- Bourbonnais Quarries, Dorion-Vaudreuil, Québec, at Rigaud. J. A. Bourbonnais was reported as an owner/operator from 1941 to 1946 (1942-1947). (See also the listing under Rigaud quarries, below).
- Bradley Quarry, Leeds County, Ontario. The quarry was reportedly operated by W. Bradley, of Gananoque, from 1933 to 1934 (1933-1935).
- Brissette Quarry, Sainte-Agathe-des-Monts, Terrebonne County, Québec. J. A. Brissette, was listed as an owner/operator from 1941 to 1943 (1942-1944).
- Brodie's Limited Quarry, Lots 4 and 5, Range A, Campbell Township, Labelle County, Québec. The quarry was near Guenette, on the Montréal-Mont Laurier Branch of the Canadian Pacific Railway. The railway spur from this property to Guénette, about 5 km long, provided an alternate access to the Canadian Graphite Corporation Mine (see the listing under Graphite). The quarry on Lot 4 was first mined in 1910 by Jos. Ledoux. James Brodie acquired it in 1911 and quarried dimension stone and paving blocks. It was leased by L. Lafond in 1915 and the railway spur was completed that year (1933). The granite was also used for press rolls. It is fine-grained and pink and of exceptionally high quality. Thus, it was reported, as having been the only granite in Canada that met the exacting standards for use as press rolls in paper mills. It was also used in the Saint Rémi Street Tunnel, in Montréal in 1950 (1951). Operated by Brodie's Limited, of Montréal, it was mined from about 1925 to 1964 (1926-1967). Its output in 1958 was reported at 2000 tons, while in 1960 it was 150 tons.

- Brodie's Limited Property, Lot 37, 5th Range, Boyer Township, Labelle County, Québec. This deposit, close to the aforementioned, had not yet been exploited in 1932 (1933). The granite was greyish-pink and suitable for use as paving blocks, curbstones, and building stone. It was listed in 1935 (1936).
- Brown's Quarry, Lot 10, 9th Concession, Leeds Township, Ontario. The quarry was 12 km from Lyndhurst and on the farm of Alex Bruce. In it, red granite for monuments was quarried by Alex C. Brown, of Lyndhurst. The quarry was opened in 1918 and produced until 1925 (1926).
- Brown's Quarry, Lots 9 and 10, 9th Concession, Leeds Township, Ontario. West of the above quarry, and on the farm of Clifford Earle, it was worked by Robert Brown, and later Robert Brown and Son, of Ottawa. The red granite was also used for monuments. It produced from 1917 to 1928 (1918-1930). Jos Brown, of Gananoque, was reported as a producer in 1929 (1930).
- Brownsburg Quarries (four?), Chatham Township, Argenteuil County, Québec. The quarries were about 3 km to 7 km from Brownsburg. Sabina (1986) reported that quarrying in the area began about 1890 and declined after World War I. These were reported as having been worked as late as 1921 (1922). The granite was coarse-grained, and from pink to chocolate in colour. It was used for monuments, columns, and building material. An example is the Hochelaga Bank Building at Trois-Rivières (1922). See the individual listings for: Argenteuil Granite, Berteau, Bérubé, Brunet, Clausen, Jackson, Kennedy, Lacasse, Lemieux and Berteau. There were reported to have been many small quarries in the area (1933).
- Brunet Quarries (two), northern parts of Lots 14 and 15, 7th Range, part of Lot 15, 8th Range (that part south of the road), and west part of Lot 13, 8th Range, Chatham Township, Argenteuil County, Québec. First operated by Augustus Trudeau about 1890, the properties were acquired by a syndicate of Messrs. Laframboise, Gagnon, Carrière, and Joseph and Placide Brunet. By 1900 Joseph Brunet was the sole owner. He organized the Laurentian Granite Company in 1907, which operated the quarries with a force of about 250 men until it was liquidated in 1917. Mr. Brunet then re-acquired the properties. The larger, the western quarry was known as the *Klondyke*. The stone was a hornblende granite which varied greatly in colour from blue to pink to brown (1933). It was used in the construction of the Bordeaux Jail, the Bank of Hochelaga, at Trois-Rivières, and the columns of the Courthouse at Sherbrooke (1933).
- Building Products Quarry, Lot 11, 3rd Concession, Olden Township, Frontenac County, Ontario. This quarry was about 1.5 km south of Mountain Grove and 200 m west of the Long Lake Road, on the farm of John Drew (Harding, 1951). Mining of a coarse-textured gabbro-diorite began in 1936 and continued until 1942. The product was shipped by truck to Verona and used in the manufacture of stucco and roofing. When mining ended in 1942, the pit was reported to be 125 ft in diameter and 25 ft deep (Harding, 1951). Other quarries in Ontario were listed in Portland Township of Frontenac County, Ontario from 1933 to 1942 (1935-1946) and at Havelock and Madoc, from 1943 to 1946 (1944-1948). A crushing plant was at Havelock (1947).
- Cameron Quarry, Lot 4, 11th Concession, Drummond Township, Lanark County, Ontario. The quarry was reported to have been operated by James Cameron, of Fallbrook. The crushed

- pegmatite was used for road metal (1923-1924).
- Campbell and Lattimore Quarry, west half of Lot 32, 4th Concession, Pittsburgh Township, Leeds County, Ontario. Near Findlay, it was mined for granite paving blocks, building stone, and monument stone (1922-1926).
- Campbell Construction Company Quarry, Escott Township, Leeds County, Ontario. It was reportedly operated by N. S. Campbell, of Toronto, in 1938-1941 (1940-1946).
- Canadian Pink Granite Quarry, Labelle County, Québec. At Guenette, it was reported to have produced 1000 tons in 1958 (1959), and at a rate of from 75 to 150 tons per week in 1959-1964 (1961-1967).
- Canadian Red Granite Quarry, Grenville Township, Argenteuil County, Québec. The company was listed as an operator from 1946 (1947).
- Central Ontario Granite and Marble Quarries, Bancroft, Ontario. The quarries were reported as being idle in 1915 (1916).
- Chisholm Wellage Quarries (two), 1st Concession, Elizabethtown Township, Leeds County, Ontario. These produced crushed and screened granite and quartzite for roads (1922).
- City of Brockville Quarry, Leeds County, Ontario. Granite and quartzite were produced for roads (1922).
- Clausen Quarry, Lot 15, 8th Range, Chatham Township, Argenteuil County, Québec. On a farm which belonged to the Cuning Family, it was operated by Julius Clausen, of Brownsburg, and associates (1933-1936). It was used for curbstones and paving blocks.
- Code Quarry, Leeds Township, Leeds County, Ontario. This quarry was reportedly operated by W. Harry Code, of Smith's Falls, from 1930-1931 (1931).
- Cook Quarry, Gananoque, Ontario. It was mentioned in 1929 (1930), but no further details were given..
- County of Lanark Quarry, Lot 24, 9th Concession, Beckwith Township, Ontario. It was reported to have produced granite for roads (1922).
- County of Lanark Quarry, Lot 26, 1st Concession, Bathurst Township, Lanark County, Ontario (1923-1924).
- Curran and Briggs Quarries, Bancroft and Hearst, Ontario. This quarry was listed in 1943 (1944).
- Department of Public Highways of Ontario Quarry, Henderson Quarry, 1st Concession, Leeds Township, Leeds County, Ontario. It was reported to have produced granite for roads (1922).
- Department of Highways Quarry, Frontenac County, Ontario. This quarry was listed as a producer in 1969-1970 (1971-1972).
- Dolley's Quarries, Portage-du-Fort, Québec. In 1912 the Canadian Mines Branch reported that quarrying was carried out many years previously in the coarse-grained white and grey banded marbles of the area. It was also reported that William Dolley, of Portage-du-Fort, had recently opened new quarries (1913).
- Ebonridge Quarries, Lots 23 and 24, 5th Concession, Wollaston Township, Hastings County, Ontario. The medium-grained pink to grey granite mined at this quarry was called *Heather* by the operators. The property was opened in 1929 and operated into the 1930s (Thomson, 1943).
- Farmer Quarry, Meath Township, Renfrew County, Ontario. George Farmer and Sons, of Ottawa, were listed as producers in 1927 (1929).

- Forsythe's Quarries (four), on Forsythe, Jumper, Leek, and Grindstone Islands, St. Lawrence River, about 3 km from Gananoque, Ontario. These were reported to have been the oldest quarries in the area in 1902 (1902).
- Gaboriault & Nevers Reg'd Quarry, Grenville Township, Argenteuil County, Québec, about 6 km northeast of Grenville. Victor Gaboriault and G. Nevers, of Montréal were first listed as owners/operators in 1937 (1938). The quarry was reported, by Sabina, to still be in operation in 1986. The *Rawcliffe* quarry was operated only in the summer (1959).
- Gordon Quarry, Leeds County, Ontario. The quarry was about 19 km east of Gananoque and near the village of Escott. It was reported that it, then considered to be old, had closed in 1914 (1915). In 1915, however, it was reported that David Gordon and Sons, with 15 men, were working it. Grey granite was produced (1916). It produced intermittently in 1917-1919 (1918-1920) and in 1927-1929 (1929-1930). During the latter period it was operated by the D. J. Gordon Granite Company, of Toronto.
- Gordon Quarry, Lot 3, 5th Concession, Leeds Township, Ontario. About 8 km from Cheeseboro, on the Grand Trunk Railway and on the farm of Joseph Marshall, it was quarried by David J. Gordon, of Gananoque. The rock was a greenish grey syenite (1921). It was reported as being mined until 1925 (1926).
- Gordon Quarry, Lot 11, 2nd Concession, Leeds Township, Leeds County, Ontario. Operated by David J. Gordon, it produced red granite (1923-1924).
- Gordon Quarry, Lot 11, 11th Concession, Leeds Township, Leeds County, Ontario. It was reported to have produced in 1924 (1926).
- Gordon Granite Company, 1st Concession, Escott Township, Leeds County, Ontario. Mined by R. Gordon, of Gananoque, granite paving stones were produced (1917-1922). It was listed as a shipper in 1926 (1927).
- Gordon Granite Company Quarry, Ontario, 8 km north of Gananoque. It was operated by A. E. Gordon, of Gananoque, from 1930-1932 (1931-1932).
- Gordon and Bruce Quarry, Lyndhurst, Ontario (1915-1917). While listed, no details were given.
- Granite Saint-Jérôme Quarry, Saint-Jérôme, Québec. The company, from Montréal, was listed as an operator from 1946 (1947).
- Grant and Son Quarry, Actinolite, Ontario (1917).
- Grenville Crushed Rock Quarry, Ontario. At Hawk Lake, it was reportedly operated by W. H. Roberts, of Montréal in 1936-1939 (1938-1941).
- Guénette Area Granite Quarries (six?), Campbell Township, about 18 to 25 km southeast of Mont-Laurier, Québec. Quarrying in the area is reported to have commenced about 1910. Production was reported in 1921 (1922). The Guénette Granite Company was listed as an owner/operator from 1930 to 1931 (1931-1932). Only one of these, Brodie's, the farthest from Mont-Laurier, was active in 1967 (Sabina, 1986). It is a fine-grained granite, light red in colour (1922). The reader is referred to the individual listings.
- Guénette Granite Company Quarry, Lots 1a and 1b, Range A, Campbell Township, Labelle County, Québec. Quarrying at this location began in 1930. The granite is medium-grained and varies in colour from rose to grey (1933). It was listed from 1935 to 1937 (1936-1938).
- Hastings Quarry, Lot 11, 14th Concession, Hungerford Township, Hastings County, Ontario. Owned by the Hastings Quarry Company, it reportedly produced in late 1916 (1917). The

- crushed red granite was used for the Bloor Street Viaduct, in Toronto.
- Henniger Quarry, Escott Township, Ontario. M. G. Henniger, of Smiths Falls, was listed as a producer in 1927 (1929).
- Hoffman Concrete Products Quarry, Pembroke Township, Renfrew County, Ontario. It was listed as a producer in 1968 (1970).
- Hokanson Quarry, Lot 7, 2nd Concession, Leeds Township, Leeds County, Ontario. This quarry was reported to have been operated by Swan Hokanson from 1929 to 1932 (1930-1932).
- Hutcheon Quarry, Gananoque, Ontario. It was mentioned in 1929 (1930), but no details were given.
- Inter-Provincial Construction Limited Quarry (Bourbonnais Quarry), Rigaud, Québec. J. A. Bourbonnais, of Vaudreuil, was listed intermittently as the owner/operator from 1927 to 1935 (1928-1936). The Inter-Provincial Company was listed from 1936 to 1940 (1937-1941).
- Irvine Quarry, Gananoque, Ontario. The Edgar Irvine Company, of Alexandria, was listed as a shipper in 1926 (1927).
- Jackson Quarry, Lot 17, 8th Range, Chatham Township, Argenteuil County, Québec. It was one of the quarries in the Brownsburg area. The stone was grey and fine-grained (1933).
- Keniston and Lowans Quarry, Gananoque, Ontario. It was mentioned in 1929 (1930). No further details were given.
- Kennedy Quarry, Lot 16, 8th Range, Chatham Township, Argenteuil County, Québec. One of the Brownsburg area quarries, it was reportedly acquired by Wm. Kennedy, of Brownsburg, from the Westmount Construction Company in 1930 (1933). The Westmount Construction Company was reported as owner/operator from 1924 to 1926 (1925-1927). The stone, which varies in colour from grey to deep chocolate, was used in the construction of the Presbyterian Church at Lachute.
- King Quarry, Lot 1, 10th Concession, Drummond Township, Lanark County, Ontario. This quarry was reported to have been operated by James King, of Balderson (1923-1924).
- Lacasse Quarry, Lot 18, 8th Range, Chatham Township, Argenteuil County, Québec. In the Brownsburg granite area, it was reported to have been operated by Jos. Lacasse on a small scale in 1932 (1933).
- Lamothe Quarry, Argenteuil Seignior, Argenteuil County, Québec. Operated by D. Lamothe Limited, it produced crushed granite, in 1960, for the Carillon Dam across the Ottawa River (1962).
- Laurentian Granite Company Quarry, at Staynerville, Argenteuil County, Québec. It was reported to be operating in 1913 (1914).
- Laurentain Granite Company Quarry, Campbell Township, Labelle County, Québec. At Guénette. In 1958, it was reported that the output was 120 tons per month (1959). Operations were suspended in 1959 (1961) but it operated for a few months in 1960 (1962).
- Lemieux and Berteau Quarry, Lots 13 and 14, 8th Range, Chatham Township, Argenteuil County, Québec. One of the Brownsburg area quarries, it was reported to have been on a ridge north of the Hamlet of Rousillon. It was operated by Antoine Lemieux and A. Berteau, with the product being used for curbstone (1933).
- Low Quarry, Chatham Township, Argenteuil County, Québec. James Low, of Brownsburg, was reported as an owner/operator from 1934 to 1935 (1935-1936).

- McDougall and Wellington Quarry, Lot 3, 10th Concession, Drummond Township, Lanark County, Ontario (1923-1924).
- McGinnis and O'Connor Quarry, Lot 3, 6th Concession, Pittsburgh Township, Frontenac County, Ontario. Granite for roads was produced (1922, 1924).
- McKee Quarry, Lot 2, 8th Concession, Escott Township, Leeds County, Ontario. James McKee, of Lansdowne, was listed as an operator from 1928 to 1929 (1930). William McKee was listed in 1934 (1935).
- McKee Quarry, Lot 8, 2nd Concession, Leeds Township, Leeds County, Ontario. This quarry was also reported to have been operated by James McKee, from 1930 to 1931 (1931). William McKee, of Lansdowne, was listed intermittently from 1932 to 1937 (1932-1938).
- McNamara Quarry, Lot 8, 4th Concession, Drummond Township, Lanark County, Ontario. Operated by H. McNamara, of Perth, it was mined to produce crushed stone (1924).
- Matte Quarry, Lot 24, Range I, Campbell Township, Labelle County, Québec. It was reported to have been owned by J. A. Matte, of Mont-Laurier, and operated from about 1929 (1930). The stone was an *Augen* gneiss, in which large crystals of feldspar were surrounded by mica and quartz. Coarse-grained and rose-coloured, it was used in the construction of the Mont-Laurier Cathedral (1933).
- Melrose Granite Quarry, Campbell Township, Labelle County, Québec, at Guénette. In 1958 it was reported that the production had been 2000 tons of monumental stone and 500 tons of building stone (1959). It produced in 1959-1964 (1961-1967).
- Mills Quarry, Leeds Township, Leeds County, Ontario. Near Gananoque, it was operated by George Mills. It was mentioned in 1929-1931 (1930-1931).
- Minnesota Minerals Quarry, Belmont Township, Peterborough County, Ontario. It was listed as a producer from 1968 to at least 1974 (1970-1978).
- Morrison Quarry, Lots 24, 5th and 6th Concessions, Wollaston Township, Hastings County, Ontario. At Coehill, it was reported to have been operated, from about 1921 to 1926 by Thomas and William Morrison, of Bancroft, for stone for monuments (1922-1927).
- Morrison and Henderson Quarry, Ontario. About 3 km north of Gananoque, it was operated in 1933 (1933).
- Muffit Quarry, Lots 15 to 17, Wollaston Township, Hastings County, Ontario. The quarry was operated by C. E. Muffit, of Bancroft, in a band of gneissic granite of a deep pink colour. The granite was not suitable for dimension stone because of closely-spaced joints (Thomson, 1943).
- Newell Quarry, Leeds County, Ontario. Near Ascot, it was operated by T. Newell, of Gananoque, in 1933 (1933).
- Noack Quarry, Lot 25, 3rd Concession, Stafford Township, Renfrew County, Ontario. On the land of William Noack, the quarry was operated about 1918 or 1919 to provide road metal for the Eganville-Pembroke Highway. The rock was a banded grey to pink hybrid gneiss with pegmatite (Satterly, 1945).
- Orser (Smith) Quarry, Lot 8, 5th Concession, Olden Township, Frontenac County, Ontario. On the west half of the lot, on the farm of Melville Smith, open-pit operations were begun by S. Orser, of Verona, in 1938. The gabbro was used for roofing and stucco. Harding (1951) reported that no work had been performed "in recent years".
- Paré Quarry, Guénette, Québec. Elzéar Paré, of Montréal, was listed as an operator from 1946

- (1947).
- Parker Property, Lot 19, 2nd Concession, Lansdowne Township, Leeds County, Ontario. A. H. Parker, of Cornwall, was listed as a shipper in 1926 (1927).
- Plouffe Quarry, Campbell Township, Labelle County, Québec. The quarry was reportedly operated by Eugène Plouffe in 1964 (1967).
- Provencher Quarry, Lot 16, Range C, Campbell Township, Labelle County, Québec. In the Guénette granite area this small quarry, in grey paragneisses, was opened in 1913 by Henri Provencher, of Guenette (1933).
- Red Granite Quarry, Grenville Township, Argenteuil County, Québec. At Rawcliffe, the quarry was reported to have been operated during the summer months of 1959-1962 (1961-1964).
- Rigaud Granite Quarries, on the north slope of Rigaud Mountain facing the Village of Rigaud, Québec. The company was incorporated in 1924 (1925), and began mining from the *Devil's Garden*, a field of boulders of granite, granite gneiss, syenites, syenite porphyries, and quartzitic sandstones, on top of the mountain (1926). It is near the Lourdes Shrine. The company was reorganized in 1926 into the Rigaud Granite Corporation (1927). Rigaud Granite Products was listed as the owner/operator in 1928 (1929), Rigaud Quarries in 1930 (1931), and Granite Quarries from 1931 to 1932 (1932-1933).
- Robertson and Muchmore Quarry, Leeds Township, Ontario. The company, of Gananoque, was reported as an operator in 1929 (1930).
- Saint-Jérôme Quarry, Terrebonne County, Québec. The City of Saint-Jérôme was listed as the owner/operator of the quarry from 1937 to 1944 (1938-1945).
- Scotstown Granite Company Quarry, Grenville Township, Argenteuil County, Québec, at Rawcliffe. It was reported to have produced about 600 tons in 1958 (1959). Production was reported in 1959 and 1960 (1961-1962).
- Street(s) and O'Brien Quarry, Lot 6, 2nd Concession, Leeds Township, Leeds County, Ontario. Located near Gananoque Station on the Grand Trunk Railway (1915) and on the farm of John Bell, it was reported that the quarry was opened in 1908 (1920). The grey granite was reported to have been of the highest grade. There was also red granite. Paving blocks were produced. It was reportedly mined from 1908 to 1926 (1927).
- Tillson Quarries, Nepean Township, Carleton County, Ontario (1919).
- Town of Pembroke Quarry, Lot 25, Range A, Alice Township, Ontario. The Town was listed as an operator from 1926 to 1927 (1927-1929).
- Tweed Quarries, part of Lots 15 and 16, 11th Concession, Hungerford Township, Ontario. This quarry was opened by Tweed Quarries Limited in 1913. Close to the Toronto-Ottawa line of the Canadian Pacific Railway. Forty were employed, mostly in construction (1914).
- Upper Canada Granite Quarries, Lots 26 and 27, 3rd Concessions, Wollaston Township, Hastings County, Ontario. Listed from 1941 (1946), the coarse-grained red to rose-coloured granite was used for monumental and building stone (Thomson, 1943).
- Verona Rock Products Quarry, at Verona. The property was first listed in 1946 (1948).
- Ward(s') Quarry, Chatham Township, Argenteuil County, Québec, near Brownsburg. Joseph Ward(s), of Montréal, was reported to be an owner/operator from 1934 to 1935 (1935-1936).
- Westmeath Quarry, Lot 21, 2nd Concession, Westmeath Township, Renfrew County, Ontario.

Adjacent to Highway 17, the quarry was mined for road metal. The rock was well-banded grey and pink hybrid gneiss. It was abandoned by 1944 (Satterly, 1945).

Westmount Construction Company Quarry, Lot 16, 8th Range, Chatham Township, Argenteuil County, Québec. The company was reported as owner/operator from 1924 to 1926 (1925-1927). In 1930 the quarry was reported as having been sold to William Kennedy (see the listing above).

Young Quarry, 2nd Concession, Elizabethtown Township, Leeds County, Ontario. It was reported to have been operated by W. Young. Granite for roads was produced (1922).

Graphite

Graphite is used for foundry facings, crucibles for the melting of metals, pencils and crayons, lubricants, paints, stove polishes, and a variety of other uses. It is a very soft mineral. Graphite mining started in Canada, in Argenteuil County, Québec, in 1846. In 1866, disseminated graphite was mined in Labelle County, Québec, while, in Ontario, mining began in 1870, at Port Elmsley, near Perth. In 1896, the Black Donald mine, near Calbogie, came into production. This was thought to be the largest graphite deposit and mine in North America, and for years, was the only producing graphite mine in Canada.

Allanhurst Property, Denbigh Township, Lennox and Addington County, Ontario. It was reported to have been opened up in 1902 by J. G. Allan, of Hamilton (1903).

Argall Mine, Lot 23, 8th Range, Wentworth Township, Argenteuil County, Québec. The graphite was exposed by three small pits excavated by William and Thomas Argall (Osborne, 1938). Much of it was disseminated and associated with rusted sulphides.

Bawden Mine, Lot 2, 6th Concession, Bedford Township, Frontenac County, Ontario. Close to the northwest shore of Birch Lake. It was worked late in the 19th Century by Joseph Bawden, of Kingston, who was reported to have shipped 100 barrels of graphite ore to the United States. A shaft had been sunk about 30 ft in Grenville crystalline limestone containing disseminated graphite (Harding, 1951).

Beidelman and Lyall (Moriarty)(Prospect) Mine, Lots 1 and 2, 2nd Concession, Lyndoch Township, Renfrew County, Ontario. The mine was reported to have been about 200 m northwest of the Madawaska River, and just east of Mount Jamieson. The property was discovered by Dan Moriarty, of Eganville, in 1880, and developed by Messrs. Beidelman and Lyall, in 1917 (Satterly, 1945). The graphite was in narrow bands in white crystalline limestone. There were six workings over a length of about on the property: *Pit A* (15 by 20 by six ft deep), *Trench B* (caved in), *Shaft C* (10 by 10 by 35 ft deep), *Trench D* (irregular shape), *Shaft E* (six by seven by 12 ft deep), and *Pit F* (eight by 10 by three to six ft deep)(Hewitt, 1954).

Bell Graphite Company Mines, Lots 1, 2, and 3, 5th Range and Lot 4, 10th Range, Buckingham Township, Papineau County, Québec. The property was about 4 km east of Buckingham, on the north slope of a ridge south of McNaughton Creek (1953). The mine, on Lots 2 and 3, 5th Range, was worked by the Bell Graphite Company of London from 1906 to 1912. In 1910 the workings were confined to the south half of Lot 2, at which a tunnel

had been driven and a shaft sunk to intersect it (1911). The mine operated during all of 1912 (1913), but closed in 1913 (1914). The company was reported as the owner/operator for several years (1917-1922). In 1925, it was reported that a Montréal group had optioned this property and the Québec Graphite Company property (see the listing below), with a view towards combining the two (1926). Frobisher re-examined the property in 1951-1952 (1952-1953). Sabina reported (1986) that it was then on the MacNamara Farm.

E. Bertrand, Northfield Township, La-Vallée-de-la-Gatineau County, Québec. The owner, of Gracefield, was listed as an owner/operator from 1932 to 1935 (1933-1936).

Birch Lake Prospect, Lot 1, 5th Concession, Bedford Township, Frontenac County, Ontario. On the side of a hill facing the lake a test pit was reported to have been dug in Grenville crystalline limestone containing disseminated graphite (Harding, 1951).

Black Donald Mine, Lots 16, 17, 18, and 19, 1st, 2nd and 3rd Concessions (reported in 1949 as Lots 17, 18, and 19, in the 3rd and 4th Concessions (1951, 1956)), Brougham Township, Renfrew County, Ontario. The mine was about 19 km west of Calabogie Station on the Kingston and Pembroke Railway and 23 km from Calabogie, at Whitefish Lake. The Ontario Graphite Company, of Ottawa, organized in 1896, was the original owner and was managed by J. McRae (1902). In 1902 steam power was to be replaced by electricity from a plant at Mountain Chute on the Madawaska River, about 3 km southeast of the mine. In 1901, because of an insufficiently thick crown pillar, the mine was flooded when the lake above poured in (1919). It was then closed for a few years (1919). In 1904, after this cave-in, it was leased by Rinaldo McConnell, of Ottawa, who renovated it (1905) and operated it in 1905 and 1906 (1906). The lease was transferred to the Black Donald Graphite Company (incorporated in 1906) in 1908, and production resumed (1909). The mine produced, mainly during the summer months, from 1909 to 1915 (1916). It was a large operation, with a pit 85 ft deep by 1912 (1913). The ore was then stoped from the east end of the pit. By 1916 the underground workings had reached a depth of 145 ft. It was one of only two Ontario producers in 1915 (1916). Sufficient ore was mined during three months to keep the mill operating for the full year (1913). In 1916 a new shaft was being sunk and 75 were employed at the mine (1917). (The *Number 1* shaft was known as the *F* shaft, while *Number 2* was known as the *Patno* (1944). Its production in 1917 was reported to have been the greatest in the history of the company (1918). It produced on a double shift during the war years 1915-1918 (1919) and reverted to a single shift at war's end. In 1926, it was reported that it had produced the larger part of the graphite mined in Canada over its 30-year period of operation (Canada Mines Branch, 1928). This was reported as 96.41 percent of the total in 1924 (1926). During the next few years, when others operations in the Perth, Bancroft, Buckingham, Guénette, and St. Rémi districts closed, it became the only operator in Canada (Canada, Mines Branch, 1935). By 1938 all readily extractable ore had been mined and the underground workings abandoned and allowed to flood. The treatment of old tailings was begun in 1939. In 1941, the Frobisher Exploration Company explored the property (Satterly, 1945). After disclosing about 32 000 tons of ore, it leased it and operated it under the name of Black Donald Graphite (incorporated 1942). At this time old tailings were re-treated and the underground pillars robbed in the *Number 2* shaft area. It was the sole Canadian producer, mainly from re-

treatment of old mill tailings and surface dumps (Canada, Mines Branch, 1947-1951). In 1944, production was reported to have been from the *Number 1*, or *F*, shaft and then from the *Number 2*, or *Patno*, shaft, which had been rehabilitated to a depth of 75 ft. Meanwhile, a third shaft, the *McConnell*, 125 ft deep, had been rehabilitated to 65 ft (1947). Underground production in 1943 was reported to have been 345 tons (1944). In 1944, it was reported that one-third of production was from the mine and two-thirds from old tailings pumped from Whitefish Lake (1947). In 1945, a new headframe and hoist were installed above the *Number 3* shaft, which had been de-watered and reconditioned to a depth of 320 ft (1948). Levels were then established at 180 and 290 ft. The *McConnell* shaft was also reconditioned to 110 ft. The reconditioning continued in 1946, with 2816 tons being mined underground. Seventy persons were then employed (1948). Unfortunately, a fire on December 26, 1946, destroyed the hoist room and power house. In 1947, mining was from above the 290-foot level, in the *Number 3* shaft area. A reported 13 952 tons were milled, of which 7701 had come from underground operations (1949). In 1948, 15 268 tons were hoisted (1950). 1949 production was 13 724 tons hoisted (1951). In mid-1950, a series of serious ground falls began in an old open stope beneath Whitefish Lake. The back collapsed on November 19, and it was reported that the workings were flooded within a few minutes (1952). In a different report, it was mentioned that the completion of power developments on the Madawaska River flooded the area and the mine was unexpectedly flooded in November, 1950 (Canada, 1951). Underground operations then ceased. In 1951 production continued on a reduced scale, from surface excavations on continuations of the Black Donald orebody, from tailings from the lake bottom, and from properties under development near Perth and Buckingham (Canada Mines Branch, 1952). By 1952, a dam to permit the mining of the western part of the orebody had been completed. At the same time, the ore on the surface was mined (1954, 1955) and exploration was taking place elsewhere (see listing for Frobisher). During 1953 it was reported that 30 538 tons were mined on surface (1955). In 1954, 4780 tons of ore were milled - from both the open pit and clean-up around the property. Operations ceased, the plant was dismantled, and the mine allowed to fill with water (1956). The graphite occurred as disseminated flakes in either gneiss or crystalline limestone. The orebody was massive and was up to 70 ft wide. There were two parallel veins, which had been traced for a length of 800 ft (1919). There were three shafts: *Number 1*, 80 ft deep and vertical; *Number 2*, 34 ft and vertical; *Number 3 (Ross Shaft)*, at 50 degrees, and 290 ft deep. It was planned to mine a new orebody that had been indicated by diamond drilling at this level (Canada, Mines Branch, 1946).

Blithfield Occurrence, Lots 13 and 14, 4th Concession, Blithfield Township, Renfrew County, Ontario. The occurrence was reported to be near the bank of the Madawaska River. The graphite was reported to occur in a rusty garnetiferous gneiss associated with granite and pyroxenite. It was developed prior to 1896 (Satterly, 1945).

Blithfield Occurrence, Lot 25, 5th Concession, Blithfield Township, Renfrew County, Ontario. This occurrence was on the top of a ridge, in the southwestern part of the lot, and about 0.8 km southwest of the farm of J. B. Scully. This was reported to be a small old pit that had been dug to expose graphitic gneiss overlain by crystalline limestone (Satterly, 1945).

Boylen 1942 Syndicate Property, Hincks Township, Gatineau County, Québec. The company, of

- Toronto, was reported as a working owner/operator in 1942 (1943).
- Brougham Occurrences, Lot 1, 6th Concession, Brougham Township, Renfrew County, Ontario, about 1.6 km southwest of the J. B. Scully Farm (Satterly, 1945). Five old pits were reported to have been dug about 1920.
- Brougham Occurrence, Lot 17, 6th Concession, Brougham Township, Renfrew County, Ontario. On the top of a knoll, about 150 m south of the west end of Green Lake, a shaft was reported to have been sunk 15 ft and an adit driven 100 ft (Satterly, 1945). Narrow quartz-tremolite veins, with flakes of graphite, were mentioned.
- Buckingham Company Mines, Lot 26, 4th Range, Buckingham Township, Papineau (formerly Ottawa) County, Québec. A new company, in 1897, it also controlled several other lots in the area, namely: the north halves of Lots 25 and 26, 5th Range; Lots 25, 26, and 27, 6th Range; the south half of Lot 25, and Lots 26, and 27, 7th Range, Buckingham Township, Papineau County, Québec (1897).
- Buckingham Graphite Company Mine, Lot 28, 6th Range, Buckingham Township, Papineau County, Québec. The mine was reportedly about 13 km from Buckingham. In 1910 (1911), it was reported that this company had succeeded the Anglo Canadian Graphite Company in mining at this location. There were several workings including a tunnel which had been driven 300 ft into the side of a hill. Two shafts had also been sunk to intersect the tunnel. The pits were up to 50 ft deep. It did not produce in 1913 (1914).
- Butterill Prospect, Lot 18, 8th Concession, Bedford Township, Frontenac County, Ontario. The prospect was reported to have been between the Burr ridge-Fermoy road and Fermoy Lake. Harding (1951) reported that the property was then owned by George Butterill, of Fermoy. Shallow prospect pits had been dug in crystalline limestone containing disseminated graphite.
- Cameron Property, Buckingham Township, Papineau County, Québec. R. J. Cameron, of Buckingham, was reported as an owner/operator from 1929 to 1934 (1930-1935).
- Canadian Graphite Company Mine, Lot 1, 4th Range, Wentworth Township, Argenteuil County, Québec. This mine was developed in 1911 and produced until 1912 (1913). In 1915, it was reported that it was again being developed (1916).
- Canadian Graphite Corporation Mine, Lots 27 to 31, 6th and 7th Ranges, Boyer Township, Labelle County, Québec. About 4 km east of Guénette Station on the Montréal-Mont Laurier Branch of the Canadian Pacific Railway, it was developed in 1921 and 1922 (1922-1923) by the Standard Graphite Company. The mill was near Guénette, on the Canadian Pacific line to Mont-Laurier. In 1924, the property was taken over by the Canadian Graphite Corporation, of Montréal (Canada, Mines Branch, 1928). It did not operate that year, however, supplying demand from stockpiles (1925). Substantial quantities were shipped in 1925 and 1926 (1926-1927). It produced 50 tons in 1928 (1929) and in 1929 (1930). The mine was closed in 1930 because of competition from less expensive foreign graphite (1932). The company was listed as owner/operator until 1935 (1936), and small shipments from the stockpiles were reported to have been made in 1934 and 1935 (1935, 1936). The ore was disseminated, and occurred as irregular bands or lenses in gneiss. There were a number of pits on the property, the deepest being 60 ft.
- Canastota Mine, about 8 km northeast of Notre-Dame-du-Laus, Québec. The deposit was stripped, in 1952, by the Steel and Graphite Company, and later explored by Canastota

- Copper Mines Incorporated. Sabina (1986) did not report on ownership of the property.
- Cardiff Prospect, Lot A, 19th Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) reported that the pit, about 12 ft long, 10 ft wide, and eight ft deep, was near the west boundary of the south half of the lot. The graphite occurred in coarsely crystalline white marble.
- Cardiff Mine, and other Prospects (three), Lot A, 20th Concession, Cardiff Township, Haliburton County, Ontario. All were in occurrences of flake graphite in white crystalline limestone. Two of the pits were near the west boundary, about 1.2 km south of the railway. A third was immediately west of a small lake, while the fourth, the most significant, was near the top of a hill about 300 m northwest of the lake. Hewitt (1959) reported a shaft 20 ft wide, 10 ft high, and at least 80 ft deep on a 25 degrees incline. This latter qualifies as a mine and, lacking any other information, has been named by this writer after its location.
- Carlow Prospect (Occurrence), Lots 9 and 10, 8th Concession, Carlow Township, Hastings County, Ontario. Hewitt (1955) reported that there was a prospect pit, 15 ft long, 10 ft wide, and six ft deep, on Lot 10, about 400 m north of a cabin on the southwest shore of McWhirter (Stoney) Lake. The property was reported to have been staked in 1909 and again in 1942. The graphite was fine-grained (Thomson, 1943). Locally, a granite pegmatite cut crystalline limestone and interbanded amphibolite. The graphite occurred as flakes (Hewitt, 1955).
- Castor Lake (Clot) Mine, Lot 20, Range N, Joly Township, Québec. About 5 km southeast of Labelle (10 km by road), on the west shore of Castor Lake, the property was opened by J. A. Bigonnesse, of Labelle, about 1905 (Sabina, 1986), and was kept by him until 1919 (1952). During this period a shallow shaft was sunk and the overburden stripped. The property was described in the 1934 report (1935), when it was reported that the old trenches were filled with debris and that the shaft had caved around the collar. It was staked several times between 1935-1948 (1952). O.Clot Graphite Mines Limited worked the deposit in 1951-1952 (1952-1953) and stockpiled hand-cobbed lumps. A small shipment was made by Québec Graphite Corporation in 1954 (1956). Sabina reported (1986) that good specimens could be obtained but did not report on ownership. The deposit was in steeply-dipping bands of altered dolomite, cut by permatite dikes. The graphite was in large cleavable masses, and occurred in veins cutting diopside rock and pegmatites. Pyrrhotite was also reported (Osborne, 1935).
- Chatelain Property, Lochaber Township, Papineau County, Québec. It was reported to have been owned by the Rev. J. Chatelain, of Buckingham (1927).
- Crucible Graphite Company Property (North American Mine), Lot 28, 6th Range, Buckingham Township, Papineau (formerly Ottawa) County, Québec. Production was reported to have begun in 1896 (1897). It seems to have been out of production for several years, until this old mine was taken over by the North American Graphite Company, of Buckingham, in 1922 (1923). It was redeveloped and operated from 1924 to 1925 (1925-1926). It was acquired in 1926 by the Crucible Graphite Company, but the mine remained closed (1927). The company was reported as an owner/operator from 1927 to 1935 (1928-1936), but there were no reports of production. The deposit is a graphitic crystalline limestone, near an intrusion of coarse-grained basic rock (gabbro)(1925).
- Cup Lake Occurrence, Lot 18, 15th Concession, Cardiff Township, Haliburton County, Ontario.

- The occurrence was reported to have been on the north side of a creek joining the two parts of Cup Lake. The graphite occurred as small flakes in a paragneiss (Hewitt, 1959).
- Darling Occurrence**, Lot 9, 8th Concession, Darling Township, Lanark County, Ontario. The graphite was in a pegmatite dike that cut crystalline limestone. A small test pit had been dug (Peach, 1958).
- Desert Lake Prospect**, Lots 4, 4th and 5th Concessions, Bedford Township, Frontenac County, Ontario. The prospect was reported to have been at the northwest end of Desert Lake, "a few hundred ft" east of the entrance of the creek from Canoe Lake, and 13 km east of Godfrey Station on the Kingston and Pembroke Railway. It was being diamond-drilled in 1918 (1919). At the time, it was controlled by the Mining Corporation of Canada (Harding, 1951). Harding reported that there were pits and trenches on the lots and that flake graphite was disseminated in crystalline limestone.
- Dickson and Riddell Prospect**, Lot 18, 14th Concession, Cardiff Township, Haliburton County, Ontario. A pit was reported to be on the top of a hill, about 100 m southeast of Cup Lake. Hewitt (1959) reported that it was 15 ft by 15 ft by 10 ft deep and had been excavated in 1909 by R. Dickson and A. Riddell. In addition to graphite, pyrrhotite and molybdenite occurred close to the graphitic zone in a weathered amphibolite.
- Dixon Mines**, Lot 23, 5th Range, Lot 28, 6th Range, and Lot 28 i, 5th Range, Buckingham Township, Papineau County, Québec. These were reported to be old mines which had been operated by the North American Graphite and Mining Company in 1894 (1895).
- Dominion Mine**, Lots 20 and 21, 5th Range, Buckingham Township, Papineau County, Québec. About 6 km west of Buckingham, it was worked from 1910 to 1916 by the Dominion Graphite Company. A mill was installed in 1912 but ran for only a few months before closing during a reorganization of the company (1913). In 1914, it was taken over by the Plumbago Syndicate (1919). It did not operate in 1918. The property was reported by Sabina (1986) to have been then owned by Mr. Smith.
- Donaldson Mine**, Lot 28, 6th Range, Buckingham Township, Papineau County, Québec. Established by the Graphite Lubricating Company, Jersey City, operations started in 1892 with a workforce of 20 to 30.
- Faraday Occurrence**, Lot 12, 1st Concession, Faraday Township, Hastings County, Ontario. There was a small test pit in a body of fine-grained graphite veinlets (Thomson, 1943).
- Faraday Prospect**, Lot 12, 1st Concession, Faraday Township, Hastings County, Ontario. Hewitt (1959) mentioned this pit, which was reported earlier by Thomson (1943).
- Frobisher Property**, Lot 4, 4th Concession, Bedford Township, Frontenac County, Ontario. This property was reportedly explored by Frobisher Limited in 1952, as part of the effort to search for new orebodies to replace the Black Donald Mine (1954)(see the listing above).
- Globe (Pyne) Mine**, Lots 21 to 23, 6th Concession North Elmsley Township, Lanark County, Ontario. The mine was about 10 km from Perth, 1.5 km from Oliver's Ferry (1893 and 1905), and about 5 km south of Port Elmsley on the Tay River. In the early days of mining in Ontario it was known as the Pyne Mine. In 1900, it was acquired by Rinaldo McConnell, who formed the Globe Refining Company. It was closed about 1912. In 1915, the Globe Graphite Mining and Refining Company reopened it. First worked as an open pit, it was later an underground mine with workings to 125 ft (1916). This could be the same mine as the McConnell (see the listing below). In 1916, the assets of the company

were sold to a group from Syracuse, New York, who continued to operate it under the Globe name. The mill was enlarged and two shafts were started - one an incline and the other vertical. Thirty-five men were employed in the mine (1917). It produced throughout 1917, with the *Number 3* shaft being sunk to 100 ft (1918). Operations ceased in February, 1919 (1919). The company name appears to have changed to the Graphite Refining Company, as shipments under that name were reportedly made from stocks in 1926 (1927).

Graphite Limited Mine, Lots 15 and 16, 7th Range (1936) and Lots 17 to 21, and parts of Lots 13 and 14, 8th Range, Amherst Township, Amherst County, Les Laurentides, Québec. At Saint-Rémi-d'Amherst, the property was first mined in 1909. A shaft was ultimately sunk to 125 ft, with levels cut at 40, 80, and 125 ft. The extent of the levels was said to be considerable (1936). Surface stripping and open-cutting had taken place by 1910 (1911). It produced from 1911 until the company went into liquidation in 1913 (1914). The property was optioned to the Multispar Syndicate in 1916 (1917). It was acquired Graphite Products Limited after the liquidation of Graphite Limited in 1918 (1920). Graphite Products was also liquidated, in 1919. In this latter report, reference is made to another mine on Lot 16, 6th Range, Amherst Township. It was noted that a 100-ft shaft had been sunk, and well as a tunnel into the side of a hill which intersected it. The tunnel had cut through lenses of graphite ore in which the graphite was in a gangue (a mixture of worthless minerals) of calcite, wollastonite, and pyroxene (1920). The graphite was in a contact between crystalline limestone and a gabbro (1936). There was reported to be an abundance of contact metamorphic minerals - wollastonite, diopside, titanite, hornblende, vesuvianite, scapolite - and others. These minerals, and the graphite, occurred as an aggregate of coarsely-crystallized individuals in a silicated zone in the limestone at the contact with the pegmatite (Osborne, 1936). The zone was reported to be 60 meters wide and about 3 km long.

Grenville Occurrence, Québec (1905).

Griffith Occurrence, Lot 26, 14th Concession, Griffith Township, Renfrew County, Ontario. On a hill on the north side of Cox Lake, a small occurrence was reported in a lens of graphite-rich material in a hornblende-calcite gneiss in crystalline limestone (Satterly, 1945).

Hunt Property, Lot 13, 10th Concession, Brougham Township, Renfrew County, Ontario. On the west shore of Black Lake, the deposit was reported to have been opened up about 1911 by a Mr. Hunt (Satterly, 1945). Pits and caved-in trenches were noted. The graphite was in a band of coarsely crystalline white limestone.

Kennelly Property, Lot 6, 8th Concession, Brougham Township, Renfrew County, Ontario. On the farm of Patrick L. Kennelly (Satterly, 1945), and about 150 m southwest of the farmhouse, two small pits had been dug, exposing white granite pegmatite containing graphite and scapolite. Some of the scapolite prisms were reported to be as large as 2.5 cm by 20 cm.

Kirkham Property, see the listing for the Stewart Lake Resources Property, below.

Lac-des-Îles Mine, Bouthillier Township, Labelle County, Québec. On a property of about 2175 acres, about 22 km south of Mont-Laurier. Discovered in 1987, the deposit was developed by Stratmin Graphite, a subsidiary of Stratmin Incorporated, and was first mined in 1989. Canada's only producer of flake graphite at the time, it was reported to

account for 10% of world production. The company erected a mill on the property and also made use of a custom mill at Notre-Dame-du-Laus. In 1990, production was reported at 14 000 tons of concentrates, while, in 1991, it was 10 600 tons (Canadian Mines Handbook, 1992-1993).

Laurentian Graphite Company, Lots 15 and 16, 6th Range, Amherst Township, Les Laurentides, Québec. This company took over the property, previously owned by Graphite Limited in 1920 (1921). It was reported as an owner/operator from 1921 to 1922 (1922-1923).

Letterkenny Prospect, Lot 24, 15th Concession, Lyndoch Township, Renfrew County, Ontario. About 400 m south of the Letterkenny Road, a small prospect pit had been dug into the north side of a small knoll (Hewitt, 1954). Flakes of graphite occurred in silicated limestone interbedded with paragneiss.

Lewis Brothers and Company, Lot 11, 3rd Range, Portland West Township, Papineau County, Québec. The property was reported as being developed in 1892.

Libby Property, south half of Lot 36, 3rd Range, Waltham Township, Pontiac County, Québec. About 3 km northeast of the Hull-Chapeau Highway, it was reported to have been discovered by Demmon Libby several years before it was described in 1932 (Retty, 1933). The local rock is granite gneiss which encloses bands of crystalline limestone and quartz-rich paragneiss. The property was developed by the Libby Graphite Mining Company but proved to be not worth mining.

Lower Cardiff Lake Prospect, Lot 4, 22nd Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) reported a small, old, pit about 100 m south of Lower Cardiff Lake and between the railroad and the road. It was in white crystalline limestone.

MacDougall Prospect, Lot 24, 22nd Concession, Cardiff Township, Haliburton County, Ontario. The two small pits, about 600 m north of a road, were reported to have been opened by B. E. MacDougall, in 1942 (Hewitt, 1959). The graphite occurred in a syenite pegmatite.

McAllister Prospect, south half of Lot 16, 8th Concession, Herschel Township, Hastings County, Ontario. It was reported to have been staked by John McAllister in 1911. A few shallow pits were dug in bands of graphitic gneiss (Thomson, 1943).

McCallum Prospect, Lot 16, 9th Range, Buckingham Township, Papineau County, Québec. It was explored by Frobisher Limited in 1951, and abandoned when no deposit of commercial importance was discovered (1952).

McConnell (M'Connell) Mine, Lot 21, 6th Concession, North Elmsley Township, Lanark County, Ontario. The mine was on the Rideau Canal, at Oliver's Ferry, about 11 km from Perth. In 1872, a mill was erected to treat the graphite. This was short-lived. J. F. Torrance, of Montréal, made a further short attempt in 1893. Dr. R. A. Pyne, of Toronto, using the government diamond drill, proved further reserves in 1901. Owned by Rinaldo McConnell, of Ottawa, the mine began production again in 1902. It was closed in 1903, re-opened in 1904 (1903) (1905), and closed again in 1905 (1906). In 1908, however, active development began once again by the Globe Graphite Company and the mine was brought back into production, with a shaft being sunk to a depth of 90 ft on the inclination of the vein, about 50 degrees. Drifts had been cut 125 east and 100 ft west of the shaft. It operated until 1911 (1912), when operations were again suspended. This could be the same mine as the Globe (see the listing above).

McThierney Mine, Lot 8, 4th Range, Grenville Township, Argenteuil County, Québec. The mine

- was reportedly about 6.5 km from Grenville Station on the Canadian Pacific Railway. It was mentioned that large sheets of graphite were found (1897).
- Matthews (New York Graphite Company) Mine, Lots 9, 10, and 11, 22nd Concession, Cardiff Township, Haliburton County, Ontario. The mine and mill were situated south of the Irondale and Bancroft Railway, about 1 km west of Mumford Station. It was being developed in 1912 (1913). A large modern mill was built in 1913, and 35 workers were on the property (1914).
- Miller (Keystone) Mine, Lot 10, 5th Range, Grenville Township, Argenteuil County, Québec. About 4 km northwest of Grenville, and worked in 1845, this was the first graphite mine to have been opened in Canada. It was worked briefly at that time and again between 1890 and 1900. Sabina (1986) did not report on ownership. The geology was reported to be that of a contact deposit, similar to the Graphite Limited Mine (1936) (see the listing).
- Monteagle Occurrence, Lot 16, 5th Concession, Monteagle Township, Hastings County, Ontario. This small showing was reported to be close to the north side of a lake on the south half of the lot. Flake graphite occurred in a crystalline limestone that had been intruded by granite gneiss and pegmatite (Hewitt, 1955).
- Multispar Syndicate Limited. This company, of London, England, was reported as an owner in Québec in 1916 (1917).
- National Graphite Mine, Lot 24, 13th Concession, Monteagle Township, Hastings County, Ontario. The mine was near Maynooth, on the Canadian Northern Railway, and Harcourt. Adjacent to the Tonkin-Dupont Mine, on Lot 23 (refer to the listing below), the orebody was reported to be a continuation of it (Hewitt, 1955). It was mentioned as having produced in 1915, when it was one of the two Ontario producers - the other being the Black Donald (1916). The company was organized in 1915 and represented a combining of the interests of Messrs. Matthews and Foster in lands in Hastings County and the New York Graphite Company. Development continued in 1916, with the *Number 1* shaft being 125 ft deep, and *Pits Numbers 2 and 3*, 40 ft and 20 ft deep, respectively. Work was in progress to connect *Pits 1 and 2* at the 125-ft level (1917). 900 000 pounds of finished graphite flakes were shipped in 1916. The development continued in 1917 (1918). By 1942, the mineral rights were owned by S. H. Law, of Toronto. In 1952, S. H. Law and Mackenzie Red Lake Gold Mines diamond-drilled the property, de-watered the shaft and sampled the workings (Hewitt, 1955). There were then four pits on the property (Hewitt, 1955): (1) *Pit E*, on the east side of the property at the boundary with Lot 24, was 60 by 30 ft on the surface and was a large open stope which had been mined to the 150-ft level. At this lower level, it was reported to be 150 ft long and from 20 to 40 ft wide (Hewitt, 1955); (2) *Pit F*, about 25 m west of the aforementioned was 30 ft long, 20 ft wide, and 20 ft deep; (3) *Pit G*, about 40 m further to the west, was 40 ft by 40 ft and 10 ft deep; (4) *Pit H*, about a further 40 m to the southwest, was 30 ft long, 20 ft wide, and seven ft deep. The graphite occurred as flakes in crystalline limestone. The minerals present included phlogopite, graphite, molybdenite, diopside, epidote, magnetite, tremolite, garnet, scapolite, pyrrhotite, titanite (sphene), and apatite (Thomson, 1943).
- National Graphite (New York Graphite) Mine, Lots 9 to 11, 22nd Concession, Cardiff Township, Haliburton County, Ontario. The mine was about 1.5 km west of Harcourt (Mumford Station). In 1918, a mill was constructed at this location and graphite produced from a

- nearby pit (1919). The pits, in the north side of a hill facing the railway, were in Lot 11, with the largest being 60 ft long, 15 ft wide, and 40 ft deep (Hewitt, 1959). These were opened in 1912 by the New York Graphite Company and were operated intermittently until 1915. When the company merged with National Graphite, in 1915, this mine was closed and the ore for the mill was supplied from the other operation in Monteaule Township (see the listing above). In 1951, the property was explored by the Black Donald Division of Frobisher Limited. Hewitt noted that an orebody of 1 440 000 tons grading 4.1% carbon, containing a richer zone of 800 000 tons, grading 5% carbon, was disclosed.
- North Québec Mining Development Company, Lots 11 and 12, 5th and 6th Ranges, Amherst Township, Les Laurentides, Québec. The deposit was prospected in 1920 (1921). The main showing was on Lot 12. The company was reported from time-to-time as an owner/operator from 1921 to 1934 (1922-1935).
- O'Brien Prospect, Lot 16, 3rd Concession, Brougham Township, Renfrew County, Ontario. The prospect was reported to have been immediately southeast of the boundary between the 3rd and 4th Concessions and a few hundred feet northeast of Black Donald (Whitefish) Lake. A small shaft, six by six ft, had been sunk 20 ft and a crosscut driven by M. J. O'Brien. This prospect was two lots east of the Black Donald deposit (Satterly, 1945).
- Peerless (Diamond) Mines, Lots 14b, 14c, south half of Lots 13 and 12c, 10th Range, and the north half of Lot 11, 9th Range, Buckingham Township, Québec. About 15 km north of Buckingham, it was worked: from 1906 to about 1910 by the Diamond Graphite Company, of Rochester, New York; from 1910 to 1918 by the Peerless Graphite Company, also of Rochester; and, from 1918 by the Consolidated Graphite Mining and Milling Company, of Nashville, Tennessee. In 1910 it was reported (1911) that little mining was taking place of the above-mentioned lots but that the mill was being supplied from another mine on Lot 12, in the 9th Range, about 2.5 km from the mill. It closed in 1912 (1913), but seems to have been reopened in 1918 (1919). The mine in the 9th Range was reopened but was abandoned once again (1920). Operations resumed for a short period in the spring of 1920 (1921). In 1986, Sabina reported that the property was then owned by Mr. E. Deguire.
- Peever Prospect, Lots 17 and 18, 11th Concession, Herschel Township, Hastings County, Ontario. The property was reported to have been owned by Frank Peever, of Maynooth. A number of small pits had been dug in exposures of flaky graphite in rusty gneiss (Thomson, 1943).
- Plumbago Syndicate, Toronto, Ontario. The syndicate was reported as an owner/operator in Québec from before 1918 to 1922 (1919-1923).
- Pusey Lake Prospect, Lot 1, 21st Concession, Cardiff Township, Haliburton County, Ontario. A small pit was reported to be about 240 m east of Pusey Lake, in a large outcrop of marble (Hewitt, 1959).
- Québec Graphite Company Mine, Lots 1 to 5, 4th Range, Buckingham Township, Papineau County, Québec. A mine and mill were opened on this property by the Québec Graphite Company in 1912 (1913). It was the only producer in the district in 1913 and 1914 (1914, 1915). Two shafts, 310 ft apart, and 65 and 70 ft deep, were sunk in 1913. The property was taken over by the New Québec Graphite Company, in 1916 (1917). It operated from 1917 and closed in early 1918 due to labour shortages and the costs of supplies (1918-1919). Milling resumed in 1920 (1921). The Québec Graphite Company was reported to

- be in liquidation in 1923 (1924). In 1925, it was reported that a Montréal group had obtained option on this and the Bell Graphite Company properties (see above), and was examining the possibilities of combining the operations (1926).
- Robinson Prospect, Lots 13 and 14, 14th Concession, Monteagle Township, Hastings County, Ontario. On the property of Sam Robinson, of Greenview, the occurrence was on a hillside above the east side of a road (Hewitt, 1955). The flake graphite occurred in crystalline limestone cut by a pegmatite. A pit was mentioned (Thomson, 1943). Hewitt mentioned that this was 12 by eight ft, on the side of a hill. The graphite occurred as flakes in crystalline limestone and paragneisses.
- Ross Occurrence, Lot 9, 10th Concession, Ross Township, Renfrew County, Ontario. A small prospect pit had been dug to expose a brecciated band in crystalline limestone. The band contained coarse, bladed, tremolite and fine-grained graphite (Satterly, 1945).
- Rutledge Prospect, Lot 16, 5th Concession, Monteagle Township, Hastings County, Ontario. The prospect was reported to have been owned by George Rutledge of Hybla. The graphite occurred in a band of crystalline limestone between granite and pegmatite. Mica was also noted (Thomson, 1943).
- Steel and Graphite Company Property, Lots 19 and 20, 6th Range, McGill Township, Labelle County, Québec. The property was about 10 km east of Notre-Dame-du-Laus on the Masson-Mont Laurier Highway (309), 70 km from Mont Laurier, and 76 km from Buckingham. The deposit occurred in bands of paragneiss and Grenville crystalline limestone (1953). The company did some stripping and diamond drilling in 1952.
- Stewart Lake Resources (Kirkham) Property, Bedford Township, Frontenac County, Ontario. This was reported to be a property of 59 claims, or about 3 000 acres, about 40 km north of Kingston. The Kirkham property was being explored by Frobisher Limited in 1952, in a search to find sources other than the old Black Donald Mines (see the listing, above) (Canada Mines Branch, 1953). In the early 1990s, it, and surrounding acreage, was acquired by Stewart Lake Resources. After outlining about 1 000 000 tons of ore grading 8.61% carbon, the company was trying to arrange financing in 1991 (Canadian Mines Handbook, 1992-1993).
- Stratmin Mine, see the listing for the Lac-des-Îles Mine, above.
- Stuart (Stewart) Mine, Lots 20 and 21, 5th Range, Buckingham Township, Papineau County, Québec. The property was being developed by the Dominion Graphite Company in 1910 (1911), and it was reported that the plant, at a capacity of 200 tons of ore per day would be the largest and most up-to-date in the district. The deposit was located on the line between the two lots, on a hill about 500 ft north of the mill. The mine produced until 1912, and was closed in 1913 (1914).
- Syndicate Iroquois Graphite, Labelle, Québec. The company was reported to have owned this property in 1909 (1910).
- Timmins Mine, north half of Lot 25, 5th Concession, south half of Lot 25, 6th Concession, and the mineral rights to Lots 24 and the south half of Lot 25, Lot 26, 5th Concession, North Burgess Township, Lanark County, Ontario. The mine was about 22 km southwest of Perth, 11 km northeast of Westport, and on the Frank Haughan Farm at the western end of Black Lake. In 1918 the deposit was purchased by Noah Timmins, of Montréal. A few tests pits had been dug previously. In 1918, construction of the mill began. The products

were to be shipped to Narrow Locks, on the Rideau Canal, about 3 km distant. The orebody was in crystalline limestone, with the graphite being disseminated in a gangue (a mixture of worthless minerals) of calcite and pyroxene. Small amounts of pyrite, barite and apatite were also reported (1919). 10 000 tons was reported to have been on the stockpile in early 1919. Forty-eight men were employed. Milling commenced in May, 1919 (1920) and continued intermittently until 1926, when shipments were made from stock (1927).

Tonkin-Dupont Mine, Lot 23, 13th Concession, Monteagle Township, Hastings County, Ontario. This mine was beside the National Graphite Mine, on Lot 24. Both companies mined opposite ends of the same orebody. It was on the farm of Fred Lebow, and near Graphite Station on the Canadian National Railway. Mining by the Tonkin-Dupont Company began in 1911. By 1942, the mineral rights were owned by S. H. Law, of Toronto. In 1952, S. H. Law and Mackenzie Red Lake Gold Mines drilled the property, de-watered the workings and sampled the deposits. There were four pits on the property (Hewitt, 1955): (1) *Pit A*, southeast of the barn, was 80 ft long, 40 ft wide, and 25 ft deep; (2) *Pit B*, northwest of the barn, was 120 ft long, 35 ft deep, and filled with water; (3) *Pit C*, about 100 m northwest of the farmhouse, was 40 ft long, 30 ft wide, and 15 ft deep; (4) *Pit D*, the main pit, was immediately adjacent to the line between Lots 23 and 24, and was 200 ft long, 15 to 40 ft wide, and 75 ft deep. The graphite occurred in crystalline limestone bounded by granite, gneiss, and pegmatite. The flakes were medium to large-sized. Other minerals included mica, molybdenite, diopside, epidote, magnetite, tremolite, garnet, scapolite, pyrrhotite, sphene, and apatite (Thomson, 1943).

Tonkin-DuPont Mines, Lots 34 and 35, 16th Concession, Monmouth and Monteagle Townships, Hastings County, Ontario. Both properties were reported to have been developed in 1913 by the Virginia Graphite Company. The property in Monmouth Township, near Wilberforce, on the Irondale Railway, was explored in 1913 (1914). The pit, on the west side of a hill, was reported to be 75 ft long, 40 ft wide, and 37 ft deep. It was abandoned later that year and some of the equipment was moved to a second property near Maynooth, in Monteagle Township (1915). Shipments were made via the Central Ontario Railway and the Irondale, Bancroft and Ottawa Railway.

Turcotte Lake Occurrence, Lot 27, 3rd Range, Waltham Township, Pontiac County, Québec. The occurrence was reported to have been about 3 km northeast of the Black River Chute and about 150 meters north of Turcotte Lake. On it, graphite occurred in crystalline limestone along a ridge (Retty, 1933).

Victoria Graphite Property, 836 acres near Portland, Ontario. The company was reported to have drilled the property in 1989 and refurbished an existing mill in 1990 (Canadian Mines Handbook, 1992-1993).

Walker's Mines, north half of Lot 19, north halves of Lot 21, Lots 23 and 24, 7th Range, south three-quarters of Lot 19, south half of Lot 20, south half of Lot 21, 8th Range; south half Lot 19, Lot 21, 9th Range, of Buckingham Township, Papineau (formerly Ottawa) County, Québec. About 8 km north-west of Buckingham, it was worked by W. H. Walker and sold to the Dominion of Canada Plumbago Company in 1875. Twenty-five persons were reported to have worked on the property in 1889. No production was reported in 1892. It was worked again in 1894 (1895). The company was

reported as being having been liquidated in 1897 (1897). The deposit was worked again in 1906, and was famous for the quality of its products.

Wallace, Wallace and Woolton Prospect, north half of Lot 24, 10th Concession and Lots 24 and 25, 11th Concession, and vicinity, Herschel Township, Hastings County, Ontario. The properties were staked by W. W. Wallace, J. H. Wallace, and E. A. Woolton, in 1912-1913. Several pits were dug in the graphitic granite gneisses. A short tunnel was driven into a ridge on the property on the 11th Concession (Thomson, 1943).

Wesley Prospect, Lot 19, 4th Concession, Oso Township, Frontenac County, Ontario. Close to the southwest corner of the lot, then owned by Tom Wesley, of Maberly (Harding, 1951). It was reported that test pits were dug at the beginning of the 20th Century. Harding noted that Precambrian sediments had been intruded by hornblendite, in which small veins of graphite could be seen.

Wilberforce Mine, at Wilberforce, about 32 km west of Bancroft, Ontario, on the Irondale, Bancroft, and Ottawa Railway. It was being developed in 1910 (1911). The company also operated a second property, near Maynooth, on the Central Ontario Railway (1912).

Wilson Property, Lot 1, 3rd Range, Wentworth Township, Argenteuil County, Québec. The graphite occurred with pyrite in veins of pyroxenite. It was diamond-drilled in 1919 and an adit driven to intersect the vein (Osborne, 1938).

Young Prospect, east half of Lot 3, 1st Concession, Oso Township, Frontenac County, Ontario. Harding (1951) reported that the property was then owned by Myron Young, and that, some years previously, a number of shallow pits had been dug near the centre of the lot. On this property, crystalline limestone had been intruded by granite and pegmatites. Disseminated graphite was reported.

Idocrase (Vesuvianite)

Idocrase, also known as vesuvianite, is a hydrous calcium iron magnesium silicate mineral, which, in transparent crystalline form, is valued as a gemstone.

Laurel Occurrence, Argenteuil County, Québec. The occurrence was reported to be at Laurel, near the south end of Sixteen Island Lake. The deposit, in a pegmatite dike cutting metamorphosed limestone, was mined for mica. Sinkankis (1959) reported that beautiful small faceted stones could be cut from the crystals that had been badly shattered during their formation. The colours were a rich yellow with orange-brown overtones. In the list of mica mines, which follows later, it appears that the possibilities are the Argall and the Montcrief Mines.

Iron

Iron, the greatest of the metals and the most useful of them all, has so many uses that it would be a challenge to try to list these. The *Iron Age*, when the metal was first used for tools and weapons, was one of the great turning points in human civilization. The mining of iron ore was one of the basic building blocks of the Canadian mining industry. Before Canada was born, in

1867, iron ore was mined in Nova Scotia, Québec, and Ontario. The region around Ottawa was of major importance since the birth of the industry in Ontario was in 1820, at the Blairton, or Big Ore Bed mine, near Marmora. The construction of the Central Ontario and Kingston and Pembroke Railways in 1885 made many deposits in the region potentially viable, and a number of mines opened. Prior to that, from the 1860s, iron ore had been hauled by wagon from the Glendower and Howse mines, in Bedford Township, to Kingston - a distance of more than 40 km. Smelting began at Kingston in 1895.

In Québec, the Forsyth mine deposit in Hull was first reported in 1830. The mine was opened in 1854, and it became one of those rare operations which continued for almost a century.

Allan Mine, Lot 27, 4th Concession, North Crosby Township, Leeds County, Ontario. An excavation was reported to have been made in 1868 (1892).

Allison Property, Lot 17, 6th Concession, Carlow Township, Hastings County, Ontario. On the farm of John Allison, near Boulter, magnetite occurred in an amphibole-pyroxene bounded by granite and pegmatite. A magnetometer survey was reported to have been made in 1911 (Thomson, 1943).

American Chibougamau Mines Property, Lots 20 and 21, Hartwell (Houdet) Township, Papineau County, Québec. A magnetometer survey was completed in 1963 (1967). Drilling and stripping took place in 1964 (1967). The prospect was magnetite in a gneiss.

Amiot Property, St-Jérôme Parish, Québec. Mrs. Alexina Blais Amiot, of Montréal, was listed as a working owner/operator in 1942 (1943).

Bagot Prospect, Lot 28, 6th Concession, Bagot Township, Renfrew County, Ontario. A small old pit, to expose a magnetite-bearing zone, was referenced by Satterly (1945). The iron mineralization was at a contact between limestone and hornblende gneiss. The minerals included magnetite and pyrrhotite.

Bagot Prospect, west half of Lot 16, 9th Concession, Bagot Township, Renfrew County, Ontario. Satterly (1945) noted that a shallow pit was dug in 1882 to expose magnetite in amphibole. See also the listings for Unnamed Mines, below.

Baker Mine, Lot 18, 19th (18th) Concession, Tudor Township, Hastings County, Ontario (Canada, Mines Branch, 1912). There were three open pits and a number of test pits on a ridge on this property. The ore, a fine-grained magnetite, occurred on the contact of crystalline limestone and diorite. Pyrite was also present. The ore was in small detached bodies (Thomson, 1943).

Baldwin Mine, Lot 14, 6th Range, Hull Township, Gatineau County, Québec. The mine was on the north side of Hull, and is accessible from Mine Road, near the Chemin des Hautes Plaines exit of Highway 105. About 1 km west of the Forsyth Mine, it was opened in 1854. In the 1912 report (1913), the mine was described as a series of small excavations which one could assume had been long-abandoned.

Bannockburn Pyrite Mine (also known as the Jarman Mine and the Mudic Mine), about 3 km south of Bannockburn, Ontario and 15 km north northwest of Madoc. It was worked by: Stephen Wellington, from 1898 to 1899; American Madoc Mining Company, from 1900 to 1907. Sabina (1987) did not report on the ownership of the property.

Bedford Mine, Lot 3, 2nd Concession, Bedford Township, Frontenac County, Ontario. Near

Zanesville, about 6.5 km east of Bedford Station on the Kingston and Pembroke Railway. Belonging to the Kingston and Pembroke Mining Company, the property was reportedly worked, in 1898, by William Edgar of Sharbot Lake (1899).

Belmont (Ledyard) Mine, west half of Lot 19, 1st Concession, Belmont Township, Peterborough County, about 15 km north of Marmora, Ontario, on the Cordova Mine Road. The mines were worked as open pits as early as 1857. Leased in 1891 to the Belmont Bessemer Ore Company, the mine was operated by the Buffalo Union Furnace Company from 1912 to 1914 and the Canadian Furnace Company Limited. In 1912 and 1913, a three-compartment shaft was sunk to 260 ft and levels cut at 100, 170, and 235 ft. There were 50 men employed (1914). The mine closed in 1914, but was expected to reopen in 1915 (1915).

Bessemer (Mayo) Mine, Lots 2, 3, 4, and 5, 6th Concession, and Lot 1, 7th Concession, Mayo Township, Hastings County, Ontario. A railway, known as the Bessemer and Barry's Bay, connected the mine with the Central Ontario Railway at L'Amable - about 125 km north of Trenton. The mine was about 8 km east of Bessemer Junction, on the Bancroft-Trenton line of the Canadian National Railway. The workings were on Lots 4 and 5 of the 6th Concession, immediately east of Little Mullet Lake (Hewitt & James, 1956). It was first mined by H. C. Farnum, through the Mineral Range Iron Mining Company during the period 1902-1907 (Thomson, 1943). It was then known as the Mayo Mine (1946). The Canada Iron Furnace Company next operated it from 1908 to 1910. The company closed in 1910 and the property was taken over in 1912, and operated until 1913, by Canada Iron Mines Limited. During the early period it was the largest iron ore producer in Hastings County. There were several deposits that were known collectively as the Mayo Mines: *Number 1: (Childs) Mine*, Lots 11 and 12, 9th Concession, Mayo Township, Hastings County, Ontario. About 11 km east of L'Amable Station on the Central Ontario Railway. Development of the open pit was begun, by the Mineral Range Iron Mining Company, of Windsor, Ontario, in 1901 (1902). In 1906, a connection to the Central Ontario Railway was being developed by the Barry's Bay and Bessemer Railway (1907). In 1908, the properties were leased to the Canada Iron Furnace Company, which then operated them (1908). In 1909, the operator was then known as the Canada Iron Corporation, and the lease was surrendered in mid-1910 (1910). *Number 2 Mine*, Lot 2, 6th Concession, Mayo Township, Hastings County, Ontario. About 6.5 km east of L'Amable Station (1902). *Number 3: Mine*, Lot 3, 6th Concession, Mayo Township, Hastings County, Ontario. A short distance (about 400 m) from the above (1902). It was brought into production in 1906 (1907). There were two pits separated by about 15 m of rock. The larger was reported to have been 60 ft long, 60 ft wide, and 20 ft deep, while the smaller was 90 x 40 x 6 (in Hewitt & James, 1956). *Number 4: (Bessemer) Mine*, on Lot 4, 6th Concession, Mayo Township. This was the largest and richest mine of the group, and extended to the west under Little Mullet Lake. It was brought into production in 1906 (1907) as an open pit. In 1908, an inclined shaft was sunk. In 1908 it was also reported that there were then five mines operated by the company: the *Childs*, and four others at *Bessemer* (1908). The Mineral Range Iron Mining Company closed in mid 1910 and the properties were taken over in mid 1912 by Canada Iron Mines Limited. At that time, the *Number 4* mine workings were de-watered and a shaft sunk to 250 ft, with

levels cut at 60 ft, 115 ft, 175 ft, and 250 ft. It was reported that considerable drifting and stoping took place (1913). On Lots 4 and 5, 6th Concession, an inclined shaft, known as the *Number 4* (1946), was sunk at 65 degrees to 250 ft and considerable underground development was performed. There were levels at 60, 115, 175, and 250 ft, and considerable stoping (1913)(1914). (See also entry under Mayo Mines, below). Hewitt & James (1956) reported that about 100 000 tons was mined during the period from 1902 to 1913. The mine was idle from 1913 until it was taken over by the Frobisher Exploration Company, in 1941 (the company also took over the *Childs* mine and optioned the *Rankin* property). The company de-watered the workings, erected new buildings and a headframe, and obtained samples (1946). In 1942, *Number 2 and 3* workings, on Lots 2 and 3, respectively were sampled, and diamond-drilling conducted. The workings were shut down in August, 1942 (1946). The ore, magnetite, occurred as lenses in interbedded marble, paragneiss, and quartzite. Hornblende, garnet, epidote, pyroxene, hedenbergite, calcite pyrite, pyrrhotite, and chalcopyrite, were mentioned as minerals (Hewitt & James, 1956).

Bethlehem, Bethlehem Chile Mine, see the listing for the Marmoraton Mine, below.

Big Jim Property, west half of Lot 17, 9th Concession, Grattan Township, Renfrew County, Ontario. Acquired by the Canada Iron Furnace Company in 1902, it adjoined the Radnor Mine property. (1903). About 180 tons were reported to have been mined in 1901. Mining was suspended in 1902 (Satterly, 1945).

Black Bay Mine, see the listing for the Williams Mine, below.

Black Lake Mine, Lot 8, 4th Concession, Bedford Township, Frontenac County, Ontario. The mine was on the northwest shore of Sangster (Black) Lake, and about 2.5 km northeast of the Glendower mine. Harding (1951) reported that this was worked in the 1880s and that a small amount was produced. At the time, it was leased by the Bethlehem Mining Company. There were two pits, each on a point. At this location, magnetite was disseminated in altered sediments.

Black River Mining Prospect, Wexford Township, Sainte-Marguerite-du-Lac-Masson, Les-Pays-d'en-Haut, Québec. This was reported to be a titaniferous magnetite prospect which had been acquired in 1964 (1967).

Black Rock Mine, about 80 km north northwest of Madoc, Ontario, and accessible via Highways 62 and 620, and the Wollaston Lake Road South. Opened in the 1910s, it was reported to have been investigated in the 1980s by Ventures Limited and the Black Rock Mining Company (Sabina, 1987).

Blairton (Big Ore bed) Mine, Lot 8, 1st Concession, Belmont Township, Peterborough County, about 26 km west of Marmora, Ontario, from Highway 7 and Blairton Road. On the shore of Crow Lake. This historic mine was the first iron mine in Ontario and was operated intermittently from 1820 to 1875. The first attempt was made to smelt Blairton ore into pig iron was made at Marmora in 1820 (Canada, Mines Branch, 1912). The operation was not successful and the mine was soon closed. It was reopened in 1867 and was subsequently reported, by Harrington, to be the largest iron mine in Canada, in 1872-1873 (30 000 tons annually). In 1908 the property was leased to the Canada Iron Furnace Company. It was later owned by Canada Iron Mines Limited in 1913 (1914).

Blessington Mine (1892). While the name was found in the literature, there were no details.

- Blithfield Occurrence, Lot 13, 1st Concession, Blithfield Township, Renfrew County, Ontario. The occurrence was reported to be on the railroad, about 5 km south of Calabogie. The magnetite was disseminated in a band of hornblende gneiss. A cut had been opened in a vein of magnetite (Canada, Mines Branch, 1910).
- Bluff Point Mines (two), Lot 16, 10th and 11th Concessions, Bagot Township, Renfrew County, Ontario. On the northeast side of Calabogie Lake and about 1.5 km south of Calabogie, the mine was once connected by a spur, about 1.2 km long, to the line of the Kingston and Pembroke Railway. Development was begun in 1881 by an American syndicate. The following year the work was continued by the Calabogie Iron Company. The ore was hauled by team over Calabogie Lake to Barryvale, the terminus of the Kingston and Pembroke Railway. In 1883, a second deposit (*Number 4*), was opened on Lot 16, 8th Concession. A shaft was sunk to 45 ft. Mining ceased later that year but was resumed in 1886 when a 300 foot shaft was sunk at the *Bluff Point* mine. It was leased to the American Mining Company in 1886, closed in 1887, and operated intermittently until 1901 (Canada, Mines Branch, 1912). In 1894, a few shipments were made, by the Canadian Iron Furnace Company, from stock piles, to Radnor, Québec. The magnetite was in irregularly-shaped lenses along the contact of a crystalline limestone with an amphibolite. There were five workings on the property, numbered from southwest to northeast (Satterly, 1945). It was reported to have been investigated by Algoma Ore Properties in 1952 (Canada, Mines Branch, 1953). Total production for the *Bluff Point* and *Campbell* mines was reported to have been about 9000 tons (Satterly, quoting Lindeman and Bolton).
- Bow Lake Mine, south half of Lot 21, 10th and 11th Concessions, Faraday Township, Hastings County, Ontario (Canada, Mines Branch, 1912). About 300 m west of Bow Lake, and 400 m north of Highway 28 (Hewitt, 1959), several small pits were reported to have been dug in magnetite associated with biotite schist and pyroxenite at a contact between granite and limestone. The deposit was too small to be mined (Thomson, 1943).
- Brazeau Property, 5th and 6th Concession, Papineau Township, District of Nipissing, Ontario. The property, about 11 km south-southwest of Mattawa, consisted of claims E.O. 3,263 to 3,268 and 3,267, in the north half of Lot 18. The claims were staked in 1942 by Henry Brazeau, of Mattawa. The magnetite ore was in gneiss. Some of the other minerals were white plagioclase, hornblende, red garnet, quartz, biotite, and coulsonite (an oxide of iron and vanadium, thought to be present since vanadium was identified in the analyses) (Harding, 1946).
- Brennan Mine, Lot 7, 6th Concession, Madoc Township, Hastings County, Ontario. Reported to have been owned by Mr. D. E. K. Stewart, of Madoc, production began in 1901 (1902).
- Bristol Mine, Québec. See the listing for the Hilton Mine, below.
- Brougham Occurrence, Lot 7, 10th Concession, Brougham Township, Renfrew County, Ontario. The occurrence was on the northeast bay of Kennedy Lake, and about 350 m north of the road between the 9th and 10th Concessions. Satterly (1945) reported it as an old showing on which a pit had been dug. The magnetite (granular) occurred along a contact between granite gneiss and crystalline limestone.
- Bygrove Mine, Lot 3, 1st Concession of North Crosby Township, Leeds County, Ontario. It was reported to have been opened in 1869 by George Oliver, of Perth (1892).

- Calabogie Mine, Holden Pits, Lot 16, 11th Concession, east half of Lot 16, 9th Concession, east half of Lot 16, 8th Concession, and Lot 14, 7th Concession, Bagot Township, Renfrew County, Ontario. It was first operated by the Calabogie Mining Company, of Perth, and subsequently leased to the Pembroke Mining Company. Two shafts were reported to have been sunk in 1892. The ore was reported to have been too high in phosphorous for a Bessemer ore (that is, suitable for smelting in a Bessemer furnace). The mines were reported to have been controlled by the Hamilton Iron and Steel Company in 1900. An 86-ft inclined shaft was sunk in 1902 (1903).
- Caldwell Mine, east half of Lot 22, 4th Concession, Lavant Township, Lanark County, Ontario. Close to Flower Station on the Kingston and Pembroke Branch of the Canadian Pacific Railway, and adjacent to the Radenhurst Mine (on the west half of Lot 22, in the 3rd Concession), it was an old mine which had been worked prior to 1899. There were two pits on the property, the deepest being 90 ft (Canada, Mines Branch, 1916). It was worked by T.B. Caldwell, of Lanark (Canada, Mines Branch, 1914). It was investigated by the Frobisher Exploration Company, in 1942, and by Algoma Ore Properties in 1952 (Canada, Mines Branch, 1953). Locally, magnetite occurred along the contact between gneiss and limestone.
- Caldwell (Coe) Mine, east half of Lot 16, 9th Concession, Bagot Township, Renfrew County, Ontario. A Mr. Coe, of Madoc, began to work this property in 1883 with the excavation of the *Jeanette Pit*. Subsequently, the lease was obtained by the Hamilton Steel and Iron Company. It was later owned by T. B. Caldwell. There were several pits on the property. Some of these were: the *Tommy R.*, near the west border; the *Jeanette*; and the *T.B.*, near the east corner of the lot. All were about 100 ft long. There were also many open cuts and test pits. The rocks consisted of alternating bands of magnetite and amphibole. The country rocks were hornblende gneiss (Satterly, 1945).
- Campbell (Number 4) Mine, Lot 16, 8th Concession, Bagot Township, Renfrew County, Ontario. The mine was in the south corner of the lot and on the same ore zone as the Caldwell Mine (above, and not to be confused with the mine of the same name in Lanark County, also listed above). It was about 2.5 km east of Calabogie. When Satterly reported on it, in 1945, the open cut was then 100 ft long, 40 ft wide and 55 ft deep. There were also three pits. All exposed a dark plagioclase-scapolite-amphibolite which contained mica and chlorite. The magnetite and coarse pyrite occurred in pockets. In 1953, Algoma Ore Properties was reported to have examined a property of this name (Canada, Mines Branch, 1953).
- Campbell's Bay Magnetite Pit (1908). The name, without a further description, was found in the literature.
- Canada Iron Furnace Company Mine, Lot 25, Range D South, Opeongo Road, Brougham Township, Renfrew County, Ontario. About 0.4 km south of Dacre, and about 50 m west of the road, the deposit was reported to have been opened up by a small pit in 1901 (Satterly, 1945). Disseminated magnetite and pyrite occurred.
- Carfrae Prospect, Lot 3, 12th Concession, Faraday Township, Hastings County, Ontario. On the farm of Alfred Carfrae, the magnetite was found along the south slope of a ridge. It occurred in pyroxenite (Thomson, 1943).
- Carlow Prospect, south half of Lot 21, 6th Concession, Carlow Township, Hastings County,

- Ontario. Hewitt (1955) reported that Louis Moyd had outlined an anomaly in 1949 and that it was drilled (six holes) in 1950. Minor magnetite was found in association with gabbro, diorite, and pyroxenite.
- Casselman Property, Wexford Township, Sainte-Marguerite-du-Lac-Masson, Les-Pays-d'en-Haut, Québec. A magnetometer survey was reported to have been conducted on these claims in 1963 (1967).
- Chaffey (Crosby) Mine, Lot 27, 6th Concession, South Crosby Township, Ontario. On a small island, about 500 ft square, in Mud Lake and about 2 km from the Village of Newboro, on the Rideau Canal, it was reportedly opened in the 1850s (1892). It was mentioned as having been long-abandoned when it was examined by the Canadian Mines Branch in 1909 (1910). There were reported to be three large pits.
- Child's Mine, south halves of Lots 11 and 12, 9th Concession, Mayo Township, Hastings County, Ontario. The mine was about 11 km east of L'Amable Station on the Central Ontario Railway, and 5 km from the Bessemer Mine (to which it was connected by the Bessemer and Barry's Bay Railway). The orebody continued onto the adjacent Rankin Property. Development began in 1901 (1902) by the Mineral Range Iron Mining Company, of Windsor, Ontario. The company closed in 1910 and the properties were taken over in mid 1912 by Canada Iron Mines Limited (1912). There were two open pits, 300 ft apart (1913)(1914). (See also entry for Mayo Mines, below). In 1913, 9649 tons were produced from the property (Hewitt & James, 1956). It did not produce in 1914 (1915). The property was later explored by the Frobisher Exploration Company in 1941 but not developed (Thomson, 1943). It was explored further in 1956, along with the Bessemer and Rankin properties. At this mine, the ore, a disseminated magnetite, occurred with garnet, calcite, zoisite, epidote, pyroxene, and hornblende, in a skarn (Hewitt & James, 1956).
- Christie's Lake Mine, Lots 17 and 18 of the 8th Concession of South Sherbrooke Township, Haldimand County, Ontario (1892).
- Clarken (Mag-Iron) Mine, Lots 18 and 19, 3rd and 4th Concessions, Lake Township, Hastings County, Ontario. An additional property of the company, in Wollaston Township, was reported in 1952 (1954). At this property, the company (incorporated in 1949) was reported to have produced magnetite concentrate at the rate of three tons per day in 1950 (1952). Between 1951 and 1954, from 2000 to 9375 tons were mined annually (1953, 1954, 1955, 1956). The ore was hauled to Bannockburn for shipment by rail. In 1955, Clarken Development, which had been incorporated that year, operated the property. On November 4, 1955, the mill was destroyed by fire and operations were suspended (1957). By the following year the mill had been re-built. The mine produced 1 350 tons in 1956 (1958). By 1957, however, production was only 100 tons (1960).
- Coe (Caldwell) Mine, Lot 16, 9th Concession, Madoc Township, Hastings County, Ontario. About 1 km west of Eldorado, and 11 km north northwest of Madoc, it was mined for iron, under lease, by A. W. Coe, of Madoc, in 1883. The property was bought afterwards by T. B. Caldwell, of Lanark. It was then leased to the Hamilton Steel and Iron Company (Canada, Mines Branch, 1912). It was operated from 1883 to 1903. About 10 000 tons was produced from the property. When a copper orebody was discovered under the deposit being mined for iron it then became the Eldorado copper Mine (see the listing

under Copper).

Coe Hill (Coehill) Mine, Lots 15 and 16, 8th Concession, Wollaston Township, Hastings County, Ontario. The mine was at Wollaston, about 60 km north northwest of Madoc, Ontario, and accessible from Highways 62 and 620 and the Wollaston Lake Road. The orebody, at the hamlet of Coe Hill, was mined by William Coe (Hansen, 1997) from 1884 to 1887. About 80 000 to 100 000 tons of ore was mined - - of which one-third was left on stockpiles (Thomson, 1943). Sabina (1987) reported that it was originally owned by a Mr. Ritchie. Shipments were then made from the stockpiles in 1900 and 1909. The mine was reported as early as 1909 (Canada, Mines Branch, 1910). At that time, it was reported that there were three shafts and an open pit - all in a bad state of repair. About 30 000 tons of ore had been stockpiled by the track of the Central Ontario Railway. The deposit was diamond-drilled in 1910 and was then owned by Canada Iron Mines Limited in 1913 (1914). There were two open pits on the hillside north of the railway, and three shafts. *Number 1*, was 95 ft deep, while *Numbers 2 and 3* were 130 and 100-ft, respectively. The ore was a fine-grained magnetite with hornblende, pyroxene, and calcite (Thomson, 1943).

Consolidated Iron and Steel Corporation Property, Lot 13, 9th Concessions and Lot 23, 10th Concession, Bastard Township, Leeds County, and adjoining land in Lansdowne Township, Ontario. The property was reported to have been about halfway between Delta and Lyndhurst on the Brockville and Westport Railway. The company was drilling and test-pitting this property in 1919. Four cars of hematite were shipped (1920). A number of test pits were dug. The iron, an ochreous hematite, cemented the basal conglomerate in the Potsdam sandstone layer above the Precambrian floor (1922).

Cook Mine, Lot 15, 5th Concession, Madoc Township, Hastings County, Ontario, 2.5 km south of El Dorado. It was reported to have been owned by A. W. Coe, of Madoc, and others (1899).

Crescent Mine, Lot 16, 7th Concession of Marmora Township, Hastings County, Ontario. It was reported to have been developed by the Crescent Gold Mining Company in 1891.

Crow Bay Prospect, Lot 28, 4th Concession, Bedford Township, Frontenac County, Ontario. The prospect was about 100 m northwest of the north end of Crow Bay on Bob's Lake. Three large pits and several smaller pits and trenches had been dug during the 1890-1900 period. Magnetite, and some pyrite, were disseminated in altered sediments (Harding, 1951).

Culhane Mine, Lot 21, 7th Concession, Bagot Township, Renfrew County, Ontario. About 5 km northeast of Calabogie, and close to the south shore at the east end of Norway Lake, it was reportedly developed in the 1880s. It was noted that no ore was ever shipped (Canada, Mines Branch, 1912). Satterly (1945) reported that the four old workings were then within the grounds of summer cottages and that little could be seen. The old workings were being used as garbage dumps. There were two shafts, one up to 70 ft deep, and open pits. The minerals included magnetite, calcite, quartz, pyroxene, pyrite, and pyrrhotite.

Dacre Mine, Lot 26 and the south half of Lot 14, in the Range south of the Opeongo Road, Brougham Township, Renfrew County, Ontario. It was reported to have been acquired by the Canada Iron Furnace Company in 1902. The mine was about 11 km south of the Radnor Mine (1903).

- Dalhousie Mine, east half of Lot 1, 4th Concession, Dalhousie Township, Lanark County, Ontario. The mine was about 1.5 km southeast of Sheridan Rapids and 19 km from Perth. Opened in 1866, six shafts had been sunk by 1871 (1892). In 1958, Smith reported that two old shafts and trenching could be seen on either side of a road southeast of Sheridan Rapids. The trenches were about nine ft wide, while the shaft was said to be about 80 ft deep. The ore was a coarsely-crystalline hematite containing much tremolite.
- Desgrosbois Mine, Lots 39 to 41, 6th Range, Beresford Township, Terrebonne County, Québec. This mine was reported to have been close to the line of the Canadian Pacific Railway between Montréal and Mont Laurier, with Desgrosbois Station being two lots away. It was also about 10 km northwest of Sainte-Agathe-des-Monts, Québec, and beside Highway 117. It was reported to have been discovered by the owner of the property, Joseph Beauchamp, in 1912, when he noticed an outcrop of magnetic iron ore behind his house. Prospecting pits were dug at that time (1913). A small pit was also cut by Pershing Amalgamated Limited in 1952 (Sabina, 1986), and the company continued diamond drilling in 1953 (1955) and performed bulk sampling in 1954 (1956). A detailed description was given in the 1935 report (Osborne, 1936). The ore was ilmenite and magnetite.
- Dominion Mine, about 6 km west of Madoc, Ontario. It was reported by Sabina to be an old mine, but no further details were given on either its history or its ownership (Sabina, 1987).
- Drummond Copper Corporation Property, Lot 15, 3rd Range, Wexford Township, Sainte-Marguerite-du-Lac-Masson, Les-Pays-d'en-Haut, Québec. Two short holes were reportedly drilled on this titaniferous magnetite prospect in 1962 (1964). Further drilling took place in 1963-1964 (1967).
- Dufferin Mine, Lot 15 or 17, 7th Concession, Marmora Township, Hastings County, Ontario. Just southeast of Malone, on the Central Ontario Railway, it was owned by the Bethlehem Company of Pittsburgh. The mine was reported, in 1891, to have been idle since 1883. It was reopened in 1900 by Thomas Barnes, of Hamilton, with three cars a week going to the Hamilton blast furnace (1901).
- Eagle Lake Mine, northeast corner, Hinchinbrooke Township, Frontenac County, along the western boundary of Bedford Township, Ontario. No further details were found.
- Emily Mine, Lot 7, 19th Concession, Tudor Township, Hastings County, Ontario (Canada, Mines Branch, 1912). The mine was a very old one, with a large open pit, 125 ft long, 15 ft wide, and 10 ft deep, having been excavated before 1885. The minerals noted were pyroxene, garnet, magnetite, calcite, specularite, and epidote (Thomson, 1943).
- Emily Mine, Lot 8, 15th Concession, Tudor Township, Hastings County, Ontario (Canada, Mines Branch, 1912).
- Equitable Mine, Lot 20, 10th Concession, Storrington Township, Frontenac County, Ontario. This was reported to have been an open pit near Dog Lake which had been operated in 1899 (1900).
- Fahey (Bell) Mine, Lot 26, 11th Concession, Darling Township, Lanark County, Ontario. The mine was reported to have been about 300 m east of the shore of White Lake. In 1909, the Canadian Mines Branch reported that a shaft had been sunk to 20 ft in a vein of hematite ore. To the southwest of this pit, on Lot 23, on the line between the 11th and 12th

- Concessions, another iron-bearing zone was reported (1910). Yet another zone was located 350 m southeast of the last-mentioned. On Lot 23, 11th Concession, Darling Township, a pit in hematite had been dug to a depth of seven ft. Another small occurrence was reported on Lot 21, of the 9th Concession, south of Three Mile Bay on White Lake (Peach, 1958). The ores were in crystalline limestone (Peach, 1958).
- Ferguson Pit, Palmerston Township, Frontenac County, Ontario. Near the Lizzie Mine at Robertsville, it was reported to have been owned by H. A. Ferguson, of Kingston (1900).
- Ferreri Mine, southeast half of Lot 12, 5th Range, Litchfield Township, Québec. This was reported to have been opened as a small operation in 1899 (1900).
- Foley Mine, Lot 10, 8th Concession, Bathurst Township, Ontario (1892).
- Forsyth Mine, Lots 11 and 12, 7th Range of Hull Township, Gatineau (Ottawa) County, Québec. The mine is on the north side of Hull, Québec, on Mine Road, near the Chemin des Hautes Plaines exit off Highway 105. It is about 8 km northwest of the City of Hull. The deposit was reported in 1830 and opened in 1854 by Forsyth and Company of Pittsburgh, Pennsylvania. It was developed in the 1860s by the Canada Iron Mining and Manufacturing Company. It operated for more than 100 years, with a blast furnace (unsuccessful) being installed in 1867 (Sabina, 1987).
- Fournier Mine, Lot 14, 1st Concession of South Sherbrooke Township, North Crosby County, Ontario. The last attempt to mine this deposit was reportedly in 1873, when 600 tons was raised to the surface via a 110-ft shaft (1892). The description in the literature appears to be incorrect since the township is in Haldimand County!
- Gatineau Hematite Properties, Hincks and Northfield Townships, Gatineau County, Québec. The company, from Toronto, was listed as an owner/operator from 1946 (1947).
- Gilmour (Emily) Mine, near Gilmour, Ontario, about 42 km north northwest of Madoc. No details on operations or ownership were given (Sabina, 1987).
- Glendower (Zanesville) Mine, Lots 6, 2nd and 3rd Concessions, Bedford Township, Frontenac County, Ontario. The mine was reported to have been close to the west shore of Thirty Island Lake, about 6.5 km east of Bedford on the Kingston and Pembroke Railway, and 40 km from Kingston. Harding (1951) reported that mining began in the 1860s, with the ore being hauled to Kingston by wagon. By 1900, 50 000 tons of magnetite ore had been mined (smelting had begun at Kingston in 1895). It was operated: prior to 1873 by the original owners (not named); by the Glendower Company from 1873 to 1880; and by the Zanesville Company from about 1883 to 1887 or 1888. It was then known as the Zanesville Mine. It was idle from about 1890 to 1899, when the Hamilton Steel and Iron Company shipped a little ore. It was reported out of production in 1899. There were two shafts: *Number 1*, reported to be 180 ft deep; *Number 2*, of unknown depth. Harding (1951) reported that all of the installations had been removed and that the pits were filled with water.
- Gravimetric Surveys Property, Ste. Marguerite, Québec. This anomaly was explored in 1952, as were others in Gatineau and Buckingham Counties (Canada, Mines Branch, 1953).
- Hamilton Prospect, Lot 17, 5th Concession, Carlow Township, Hastings County, Ontario. The prospect was reported to be on the farm of Alexander Hamilton. After drilling a magnetic anomaly in 1950, it was determined that the mineral zone was magnetite in syenite, amphibolite and gneiss. Hewitt (1955) reported that outcrops are scarce in the area.

- Hancock Prospect, Normand Township, Laviolette County, Québec. Some short holes were reported drilled on this property in 1963 (1967). The mineralization was titaniferous magnetite.
- Hastings Road Occurrences, Lots 41, 42, 54, and 55, East of Hastings Road, and Lot 55, West of Hastings Road, Tudor Township, Hastings County, Ontario. Southeast of the Horton and Ricketts Mines (see the listings), there were reported to be small isolated deposits of titaniferous magnetite (Thomson, 1943).
- Haycock Mine, Lot 1, 10th Range and Lot 1 and Lot 28, 11th Range, of Hull Township, Gatineau County, and also Lots 27, 28, and 29, 6th Range, Templeton Township, Papineau County, and about 3 km west of Quinnville, Québec. Both present counties were originally known as Ottawa County. First reported in the 1860s, the deposit was sampled by Edward Haycock in 1872 and worked from 1873 until 1875 by the Ottawa Iron and Steel Manufacturing Company. The ore was exceptionally high in iron, at over 60%, but also high in titania (from 2% to 4% titanium dioxide). The ore reserves were estimated at 6 300 000 tons containing 64% iron. Unfortunately, after constructing a camp (called *Hematite*), an aerial tramway, and a Railway to Gatineau, the developer was overextended and the enterprise collapsed. It was never reopened since it was believed that the quantities could not justify a commercial operation. Sabina (1986) reported that the property was then owned by Henri Charette, of Gatineau.
- Hilton (Bristol) Mine, Lots 21(c) and half of 22 (b), 2nd Range and other Lots in Ranges 3,4,5,6, Bristol Township, Pontiac County, Québec. In 1958, both the mine and the plant were located near Shawville, in Bryson Township, about 56 km northwest of Ottawa. Opened in 1872, production really began when the property was acquired by the Bristol Iron Company, in 1885. Messrs. Ennis and Company, of Philadelphia, took over operations in 1891 and ran it until 1894, at which time the work was abandoned (1913). There were two shafts: *Number 1*, 200 ft deep, and *Number 2*, 100 ft deep, as well as four pits, up to 70 ft deep. Production was reported to have been at the rate of 125 tons per day (1956). Magnetic surveys were made by the Department of Mines, Ottawa, in 1910 (1913). The Bristol Iron Company, c/o R. L. Blackburn, of Ottawa, was listed as the owner/operator from 1929 to 1930 (1930-1931). In 1951-1952, Trent River Iron, a subsidiary of W. S. Moore Company, of Duluth, Minnesota, explored the property through 18 000 ft of diamond drilling of the property (Canada, Mines Branch, 1953)(1956). The parent company was also listed as the Minnesota-Huron Iron Company (1953). It was leased in 1954 to the Steel Company of Canada and Pickands, Mather and Company of Cleveland, Ohio (1956). In 1955, it was planned to bring it into production in 1957, at the rate of almost seven million tons of concentrates per annum (1957). Construction of the concentrator was completed in 1957 (1959). Production began in February, 1958, and soon reached the full daily capacity of 1 500 tons of iron ore pellets. It operated in 1959-1962, and production was progressively increased. More than 3.5 million long tons of ore were mined in 1962 (1964). Three hundred and eighty-three persons were then employed in 1959 (1961). The pit was 260 ft deep by 1963 (1967). The ore occurred in lenses of magnetite.
- Hincks Township Occurrence, Lots 1 to 4, 6th Range, Hincks Township, Gatineau County, Québec. Some surface work was reported on this hematite deposit in 1942-1943 (1944).

The minerals noted were goethite, limonite, and red hematite.

Hobson, Nelson and Knob Mines (three), about 12 km northwest of Madoc, Ontario. Sabina reported that the deposits, which are close together, were discovered in about the 1890s. No report on ownership was given (Sabina, 1987).

Holannah Mines Property, Houdet Township, Pontiac County, Québec. In 1957, the company, owned by Hollinger Consolidated and Hannah Coal and Ore Corporation, explored claims that were the property of O'Leary Malartic Mines. Diamond drilling did not outline the quantity required for economic production (1959). Trans-Nation Minerals conducted magnetometer surveys and mapping in 1960 (1962).

Horten Mine, Lot 57, Hastings Road, Tudor Township, Hastings County, Ontario (Canada, Mines Branch, 1912).

Horten Mine, Lot 17, 11th Concession, Lake Township, Hastings County, Ontario (Canada, Mines Branch, 1912).

Horten Mine, Lots 19 and 20, 4th Concession, Lake Township, Hastings County, Ontario (Canada, Mines Branch, 1912).

Horton Occurrence, 6th Concession, Horton Township, Renfrew County, Ontario. Immediately west of the Ottawa River, small deposits of titaniferous magnetite were reported in an area of grey gabbro (Satterly, 1945).

Howland Mine, Lot 26, 4th Concession, Snowdon Township, Haliburton County, Ontario. The mine was reported to have been along the line of the Irondale, Bancroft, and Ottawa Branch of the Canadian Northern Railway and about 2 km southeast of Irondale Station. Mining began in 1880. By 1890, a shaft had been sunk to 75 ft. By 1916, the property had been long-abandoned and only the rotted headframe remained (Canada, Mines Branch, 1916).

Howse Mine, Lot 4, 1st Concession to Lots 8 and 9 of 4th Concession, Bedford Township, Frontenac County, Ontario. The lot was owned by the Howse family, of Godfrey, for almost 100 years. It was first worked in 1869 and 1870 (1892), at the time of Richard Howse, with the ore being hauled to Kingston by wagon. The Kingston and Pembroke Railway was completed in 1885 and smelting began in Kingston in 1895 (Harding, 1951). By 1945, the surface rights were owned by Mrs. Katharine Fitzgerald (Harding, 1951). The open pit, filled with water, was about 100 ft long and 30 ft wide. Magnetite occurred in Grenville sediments.

Ironside Mine, Hull Township, Gatineau County, Québec. The mine was at Ironside, near Hull. In 1958, Hull Iron Mines drove an adit at 15 degrees to the horizontal for more than 300 m and began to sink a shaft. In 1959, Québec South Shore Steel Corporation acquired the assets of the company. It was planned to use the Strategic-Udy direct reduction process (1961). In 1959, a three-compartment shaft was sunk to 816 ft and six levels cut. A headframe was started (1961). Ore reserves were estimated at 4 250 000 tons. In mid-1960 work was suspended (1962).

Ironsides Mine, Québec (1908). While the name was found in the literature, there were no further details. This could be the same mine as mentioned above.

Ivry Mine, Lots 37 west and 38, 5th Range, Beresford Township, Terrebonne County, Québec. The mine was reported to have been within 5 km of Sainte-Agathe-des-Monts, Québec, and about 2 km west of the Post Office at Lac Manitou. Work began in 1912, with many

prospecting pits and trenches on the property (1913). It continued until 1922. A trial shipment was made in 1927 to experiment in the production of titanium pigments (1936). Titanium Development Corporation worked on a treatment process for the ore in 1953 (1955) and obtained bulk samples in 1954 (1956). It was worked again in 1958 by Heavy-Rock Mines Limited. Sabina did not report on ownership (Sabina, 1986). The ore is an intergrowth of hematite and ilmenite. Feldspar and quartz are also present. Other minerals include scapolite, pyrrhotite, chalcopyrite, pyrite, and marcasite (the iron minerals being associated with the ilmenite) (Osborne, 1936).

Jalore Mining Company Properties, Peterborough and Kingston areas, Ontario. The company was reported to have optioned and explored three magnetite properties in 1952 (Canada, Mines Branch, 1953).

Jenkins Mine, Lots 17 and 18, 8th Concession, Wollaston Township, Hastings County, Ontario. This mine was reported to have been about 1000 ft southwest of the Coehill Mine. In 1909, it was reported that the mine was worked "some years ago", as an open cut in a small pocket of magnetite (Canada, Mines Branch, 1910). The shallow open pit, about 180 ft long and 40 ft wide, was on Lot 18. The magnetite was associated with hornblende and pyroxene (Thomson, 1943).

Jenkins Mine, Lots 9 and 10, 15th Concession, Wollaston Township, Ontario (Canada, Mines Branch, 1912).

Jodoin and Peltier Property, Saint-Jérôme Parish, La-Rivière-du-Nord, Québec. Henri Jodoin and Jos Pektier, of Montréal, were listed as owners/operators who had worked on their property in 1941 (1942).

Jodoin and Thibault Property, Dudley Township, Labelle County, Québec. Henri Jodoin and E. Thibault were also listed as working owners/operators in 1941 (1942).

Kazabazua Hematite Properties, Lot 1, 6th Range, Hincks Township, with a second property in Northfield Township, Gatineau County, Québec. The company, from Toronto, was listed as a working owner/operator from 1946 (1947). In 1947, the Kazabazua Corporation was reported to have explored the first property through diamond drilling. The property was reported to be on the bed of Henry Lake (1948).

Keller Occurrence, Lot 26, 7th Concession, Raglan Township, Renfrew County, Ontario. On the farm of E. Keller (Hewitt, 1954), narrow stringers (10 cm) of magnetite occurred in a metagabbro.

Kennedy Property, Lot 17, 5th and 6th Concessions, Carlow Township, Hastings County, Ontario (Canada, Mines Branch, 1912).

Kennedy Property, Lot 30, 13th Concession, Dungannon Township, Hastings County, Ontario (Canada, Mines Branch, 1912).

Laurentian Exploration Company Property, Saint-Jérôme Parish, La-Rivière-du-Nord, Québec. The company, of Montréal, was reported as an owner/operator from 1942 to 1946 (1943-1947).

Leduc Mine, Lot 23, 6th Range of Wakefield Township, Gatineau (previously Ottawa) County, Québec. The mine was reported in 1889 but was not operating (1900).

Ledyard Mine, Lot 19, 1st Concession, Belmont Township, Peterborough County, Ontario. Development was reported to have begun late in 1911 by the Buffalo Union Furnace Company. A shaft had been sunk to 100 ft (1912).

- Lee Mine, Lot 22, 19th Concession, Tudor Township, Hastings County, Ontario. This was reported to be an old mine by Thomson, in 1943. The old open pit was then 70 ft long, 10 ft wide, and 10 ft deep. The magnetite, with sulphides, occurred along the contact between limestone and granite.
- Lerond Mine, Lot 23, 9th Concession, Bagot Township, Renfrew County, Ontario. The mine was reported to have been 40 m south of the shore of Norway Lake and about 100 m northeast of the Kingston and Pembroke Branch of the Canadian Pacific Railway (Satterly, 1945). The shaft was sunk prior to 1890, and was then almost filled with water. The rock in which the bands of disseminated magnetite occurred was a hornblende-biotite-feldspar gneiss.
- Lizzie (Robertsville) Mine, Lot 3, 9th Concession, Palmerston Township, Frontenac County, Ontario. Owned by the Kingston and Pembroke Mining Company, it was reported to have been operated by William Edgar, of Sharbot Lake (1899). It was an underground mine, with 27 men employed. It was also known as the Robertsville Mine (1901).
- Longnecker Property, about 1.6 km northeast of Madoc, Ontario. Initial development was reported in 1910. G. A. Longnecker had sunk a shaft to 35 ft and a diamond drill was in operation (1911).
- Longstone Lake Occurrence, South Canonto Township, Frontenac County, Ontario. The occurrence was reported to be near the east end of Longstone Lake, and about 800 m south of Redhorse Lake. Smith (1958) reported a prospect pit in a contact between limestone and sedimentary gneiss. Massive magnetite was on the dump.
- Lyndoch Prospect, Lot 1, Range B, Lyndoch Township, Renfrew County, Ontario. A small pit had been dug in a sheared hornblendite cut by a granite pegmatite. Magnetite, hematite, pyrite, chalcopyrite, specularite, garnet, and biotite were mentioned (Hewitt, 1954).
- MacPherson Prospect, Lot 17, 11th Concession, Olden Township, Frontenac County, Ontario. On the farm of Colin S. MacPherson (Harding, 1951), two pits, the deepest about 25 ft, were reported to have been dug by Folger and Grady of Kingston, during the last part of the 19th Century. These were in highly altered Grenville sediments containing disseminated magnetite.
- McCrimmon Prospect, Lot 21, 11th Concession, Olden Township, Frontenac County, Ontario. The prospect was reported to have been owned by Sam McCrimmon (Harding, 1951). Two pits were dug south of a road, early in the 20th Century, by J. Harris, of Tichborne. It was reported that test shipments were made from Oso Station on the Canadian Pacific Railway. On the property, white crystalline limestone contained disseminated magnetite, with some pyrite.
- McDiarmid Prospect, Lot 17, 6th Concession, Carlow Township, Hastings County, Ontario. On the farm of Angus McDiarmid, magnetite occurred in a rusty amphibolite that was interbanded with syenite. The zone had been stripped for a length of 180 ft and from 20 to 30 ft wide (Hewitt, 1955). A diamond drill hole was drilled in 1950.
- McGowan Prospect, Lot 3, 3rd Concession, Bedford Township, Frontenac County, Ontario. A prospect pit was reported east of the Desert Lake Road and on the farm of Dan McGowan (Harding, 1951).
- McNab Mine, Lot 26, Seymour Street, Village of Mansfield, McNab Township, Renfrew County, Ontario. The mine was reported to be about 100 m northeast of a road corner of the

highway in Mansfield, in turn about .75 km north of Highway 17 (Satterly, 1945). This old mine, a trench 200 ft long, from 15 to 25 ft wide, and reputedly 200 ft deep at one end, was worked in the period 1873 or 1874 by the Peter Bell Iron Company of Boston. It was reported that from 10 000 to 15 000 tons of ore was mined. Further exploratory work was done by J. Bell, in 1883. Another trench, about 300 m to the northwest, at 34 Arthur Street, was also reported to have been worked for iron.

McVeigh Deposit (1892). No further details, other than a reference to the name, were found.

Mag-Iron Mine, see the listing for Clarken Mine, above.

Maloney Mine, Lot 18, 1st Concession, Marmora Township, Hastings County, Ontario. The mine was reportedly on the line between the 1st and 2nd Concessions, and about 700 ft south of the Ontario, Belmont and Northern Railway (Canada, Mines Branch, 1916). First reported by the Canadian Mines Branch in 1911 (1912), it was being developed, with two pits having been sunk into magnetite.

Maloney Mine, Lots 12, 13, and 14, 1st Concession, Marmora Township, Hastings County, Ontario (Canada, Mines Branch, 1912).

Maloney Mine, Lot 17, 2nd Concession, Marmora Township, Hastings County, Ontario. This mine was reported to have been about 520 m east of the Maloney property mentioned above. Also reported by the Canadian Mines Branch in 1911 (1912), it too, was being developed in 1915 (Canada, Mines Branch, 1916). Two test pits had been sunk, 400 ft south of the railway, into decomposed gabbro in which was disseminated magnetite and hematite.

Marmoraton (Bethlehem, Bethlehem Chile) Mine, Marmora and Rawdon Townships, Hastings County, Ontario. The mine was about 1.5 km east of Marmora and 50 km east of Peterborough. The orebody was indicated from an aeromagnetic survey in 1949. Stripping began in 1951-1952 (1953) by the Marmoraton Mining Company Limited, a subsidiary of Bethlehem Steel Corporation. By 1953, the subsidiary was known as Bethlehem Mines Corporation (1955). The parent company, Bethlehem Steel, became the Bethlehem Chile Iron Mines Company about 1967 (1969). The orebody, 2000 ft long and 700 ft wide, was overlain by about 120 ft of limestone. By the end of 1952, overburden was being removed at the rate of 700 000 tons a month (1954). In 1953, it was reported that 9 500 936 tons of limestone had been stripped, surface buildings constructed, and shipping facilities established about 3 km north of Picton, on the Bay of Quinte (1955). Mining, by the Marmoraton Mining Company, a subsidiary of Bethlehem, was begun in 1954 (1957), and continued until 1978. From the late 1960s, the parent company was known as the Bethlehem Chile Iron Mines Company. The annual output was about 1.1 to 1.5 million tons of ore, which was concentrated into up to 540 000 tons of pellets at the mine site (1972). In some years, however, such as 1959, production was reduced (to about 850 000 tons) (1961). The pellets were transported by rail to the Bethlehem Steel Marmoraton ore dock, at Picton (Hansen, 1997). The upper portion of the pit was mined in 45-ft benches, while the lower portion featured 55-foot benches. By 1962, the pit was 304 ft deep (1964). In 1963, a program began to expand the pit to new ultimate dimensions of: 2800 ft long; 1500 ft wide; and 745 ft deep (1965).

Martel (Martell) (Wilson) Mine, Lot 13, 10th Concession, Lot 16, 9th Concession, and Lot 16, 8th Concession, Bagot Township, Renfrew County, Ontario. About 3 km from Calabogie, it was first mentioned in 1908, and was then reported to have been long-abandoned (1908).

The Canadian Mines Branch reported that about 4000 tons of good-quality ore was mined at this property (1912). Satterly (1945) reported that there were two pits, then filled with water and logs and vegetation. Amphibolite and massive magnetite were found on the dumps. This old property was reported to have been examined by Algoma Ore Properties in 1952 (Canada, Mines Branch, 1953). Satterly also noted that 1000 tons of the ore from this property was used at the Radnor furnace, in Québec.

Mary Mine, near Lots 3 and 4, 9th Concession, Palmerston Township, Frontenac County, Ontario. Smith (1958) mentioned that the old workings of this mine were located about 150 m north of the end of the abandoned railway spur to the Robertsville Mine, near Robertsville, about 35 km west of Perth. The property was presumably mined during the period 1880-1895, but no other reference to it has been found. The ore was a magnetite that occurred in diorite and schist.

Mercier Property, Wexford Township, Sainte-Marguerite-du-Lac-Masson, Les-Pays-d'en-Haut, Québec. The claims were reported to have belonged to Donatien Mercier. A magnetometer survey was conducted in 1963 (1967).

Meyers Deposit (1892). While a reference to the name was found, there were no further details.

Miller Mine, Lot 12, 6th Concession, Madoc Township, Hastings County, Ontario. It was reported to have been owned by Mrs. Jane A. Wallbridge, of Toronto, in 1898 (1899).

Mine de fer Grenville, south half of Lot 3, 5th Range of Grenville Township, Argenteuil County (1889).

Mississippi Mine, north of the Mississippi River, Lavant Township, Lanark County, Ontario (1892).

Morin Heights Property, near Lot 43, 4th Range, Morin Township, Les Laurentides, Québec. A few hundred metres north of the railway, a small pit had been dug in iron mineralization between anorthosite and quartz monzonite (Osborne, 1938).

Neadow Prospect, Lot 27, 3rd Concession, Hinchinbrooke Township, Frontenac County, Ontario. In the middle of the northwest quarter of a lot owner by E. K. Neadow, two shallow pits were reported to have been dug late in the 19th Century. Magnetite and pyrite were associated with a vein of basic rock in granite gneiss (Harding, 1951).

Norvex Mine, Terrebonne County, Québec. In Mille-Iles Seignior. This was reported to have been a small operation, from which 720 tons was produced in 1959 (1961).

Olden Prospect, Lot 18, 10th Concession, Olden Township, Frontenac County, Ontario. Two shafts had been sunk in a zone of disseminated magnetite in Grenville limestone. These were filled with water (Harding, 1951). Magnetite, pyrite, and hornblende were mentioned.

Orton Mine, Lots 56 and 57, West of the Hastings Road, Tudor Township, Hastings County, Ontario. The mine was reported to have been about 6.5 km west of McDonald's Siding on the Central Ontario Branch of the Canadian National Railway, and about 9 km from Millbridge. A diamond-drill hole was reported to have been made on the property in 1885 (Thomson, 1943). Work, by J. W. Evans and associates, began in 1912 and continued in 1913 with the ore body being stripped and some ore shipped for experimental purposes (1913). It was not worked in 1913 (1914). In another report, however, in 1915, the Canadian Mines Branch reported that it had been mined in 1912 and 1913 by the Tivani Electric Steel Company, of Belleville, to which a few tons of titaniferous magnetite had

been shipped. Since Mr. Evans was one of the developers of the furnace, the interests were probably the same. At the time, the workings consisted of strippings, three small pits, and a 32-foot-deep shaft (Canada, Mines Branch, 1916). The magnetite occurred in small bodies surrounded by gabbro-diabase.

Palmerston Prospect, Lots 27 and 28, 11th Concession, Palmerston Township, Frontenac County, Ontario. The prospect was about 30 m north of the Ompah-Plevna Road and about 1.6 km along the road west of Lavant Station. A small pit had been dug in an occurrence of magnetite at the contact between limestone and gneiss. Smith (1958) obtained this reference from Ingall's report of 1899.

Parks Occurrence, Lot 16, 8th Concession, Grattan Township, Renfrew County, Ontario. Outcrops of banded ore in gneiss were found on the Parks Property (Satterly, 1945, making reference to Lindeman and Bolton).

Playfair (Dalhousie) Mine, Bathurst Township, Lanark County, Ontario. Near Playfairville, and about 20 km northwest of Perth, the mine was worked between 1866 and 1873 (Sabina, 1987). Abandoned for more than 40 years, it was re-opened in 1917 by Canadian Union Iron Mines Company, of Montréal. The 110-ft shaft was being de-watered and 1000 tons of ore were to be mined (1918).

Quarry Lake Anomaly, Lots 48 and 49, Hastings Road East, Dungannon Township, Hastings County, Ontario. The magnetic anomaly was about 400 m east of Highway 62, just north of the 10th and 11th Concession Sideroad north of Quarry Lake (Hewitt & James, 1956). A test pit had been dug in a magnetite-bearing biotite schist. The property was explored by Louis Moyd in 1950 (Hewitt & James, 1956).

Radenhurst Mine, west half of Lot 22, 3rd Concession, Lavant Township, Lanark County, Ontario. The mine was near Flower Station on the Kingston and Pembroke Branch of the Canadian Pacific Railway, about 45 km northwest of Perth, and adjacent to the Caldwell Mine (east half of Lot 22, 4th Concession). Mined prior to 1899, there were five pits on the property. The deepest was 108 ft with a drift to the east about 20 ft in length. The other pits were: 80, 80, 30, and 20 ft deep, respectively (Canada Mines Branch, 1916). According to Sabina (1987), it was explored in the early 1940s by Frobisher Exploration Company Limited. Four separate zones, known as *A* through *D* were identified (Peach, 1958). Sabina reported that it was on the Crosbie farm. The deposit is adjacent to the Caldwell Mine. The magnetite occurred along the contact between gneiss and limestone.

Radnor Mine, Lot 16, 9th Concession, Grattan Township, Renfrew County, Ontario. The mine was about 6.5 km from Caldwell Station on the Canada Atlantic Railway. The ore was reported to have been transported by wagon to Caldwell. It was developed by the Canada Iron Furnace Company, of Montréal, and operated continuously from 1901 to 1907 (1903)(Satterly, 1945), during which time 18 824 tons of ore were shipped to Radnor Forges. There were eight pits by 1904 (1905). It was the only steady producer in the eastern part of the province in 1905 (1906). Production was increased in 1907 (1907). The coarse-grained magnetite ore occurred in narrow lenses from about one to eight m thick. These were in a biotite gneiss cut by pegmatite dikes.

Rankin (Rankin-Coe)(Property) Mine, south half of Lot 10, 9th Concession, Mayo Township, Hastings County, Ontario. On the top of a hill about 400 m west of the Bessemer Road, the Rankin Mine orebody was a westward extension of the Childs Mine orebody. It was

developed in 1908, with some test pits (1909). In 1909 Messrs. Coe and Rankin sold the property under option to H. H. Lang and associates. Only stripping had been done (1910). It was worked under lease, with an option to purchase, until the beginning of 1913 by Canada Iron Mines Limited (1913). The option expired and work was abandoned (1914). In 1941, the property was acquired by the Frobisher Exploration Company. It was diamond-drilled but not developed (Thomson, 1943). This, and the Bessemer and Childs properties were further explored in 1956 (Hewitt & James, 1956). The magnetite occurred as lenses in a skarn. Pyrite and pyrrhotite stringers were mentioned.

Ricketts Mine, Lots 16 and 17, 11th Concession, Tudor Township, Hastings County, Ontario. It was about 13 km from the Central Ontario Railway, the nearest Station being Gilmour. In 1909, the Canadian Mines Branch reported that about six test pits had been dug (1910). The ore, a titaniferous magnetite, was said to be similar to that at the Orton Mine (Thomson, 1943).

Ridge Mine, Lots 17 and 18, 2nd Concession, and Lots 16 and 17, 3rd Concession, Wollaston Township, Hastings County, Ontario. The mine was located near Ridge, about 7 km south of Coehill. A test pit had been made in an exposure of magnetite in a mica and hornblende schist, on Lot 17 of the 2nd Concession. A magnetometer survey indicated that the orebody was perhaps 1 km long (Thomson, 1943) (Canada, Mines Branch, 1912).

Ridge Mine, Lot 28, 28th Concession, Chandos Township, Peterborough County, Ontario (Canada, Mines Branch, 1912).

Robertson Mine, Lot 1, 1st Concession, Bagot Township, Renfrew County, Ontario. On the east side of White Lake, this property was reported in 1901 by Dr. Ells of the Geological Survey of Canada (Canada, Mines Branch, 1910). It was later stated that it could not be located in 1909.

Robertsville (Mississippi) Mine, Lots 3 and 4, 9th Concession, Palmerston Township, Frontenac County, Ontario. Near Robertsville, Ontario, and about 35 km west of Perth, it was worked between 1880 and 1895. Tests on the ore were performed by the Canadian Mines Branch in 1911 (1912). the property was explored by Trent River Iron Limited in 1951 (Sabina, 1987). Smith (1958) reported that an option was taken the same year (1951) by the Minnesota-Huron Iron Company. He also noted that several old pits were at the end of the abandoned railway spur. About 150 m north of the end of the spur were the old workings of the Mary mine. On the property, magnetite was associated with diorite and schist. Pyrite, apatite, pink calcite, sphene, and lime silicates were also mentioned as minerals.

Saint Charles Mine, about 2 km north of Madoc, Ontario. The mine was operated in 1898 and 1899, and was reported to be on the farm of Mr. A. Walsh (1987). It was reportedly owned by A. W. Coe, in 1899.

Saint Charles Magnetite Mine, Lot 19, 11th (12th) Concession, Tudor Township, Hastings County, Ontario. The mine was reported to have been about 33 km north of Madoc, 300 m west of Highway 62, and 1 km west of McDonald Siding on the Central Ontario Railway. It was reported as being newly developed, in 1900, by the Anglo-American Iron Company. It was subsequently operated by the Cataraqui Mining and Development Company of Ontario. There were reported to be three pits (1901). Three thousand tons were reported to have been shipped in 1900 (Thomson, 1943). The magnetite ore occurred along the

- contact of crystalline limestone and diorite. Other minerals included garnet, hornblende, pyroxene, and calcite.
- Saint-Jérôme Occurrence, North Concession of Rivière-du-Nord, Québec, about 4 km west of Saint-Jérôme, and north of the road to Saint-Canut. The deposit, of narrow bands of magnetite in gneisses, was reported to have been worked before 1895 (Osborne, 1938).
- Seymour Mine, west half of Lot 11, 5th Concession, Madoc Township, Hastings County, Ontario. The Mine was about 7 km north northwest of Madoc from Highway 62. Sabina reported (1987) that this open-pit mine operated between 1837 and 1845. Owned by Fred E. Seymour, of Madoc, it was leased to Stephen Wellington, of Madoc, who pumped out the shaft and prepared for further production in 1900 (1901).
- Silver Lake Mine, Lots 13, 14, and 15, 4th Concession of South Sherbrooke Township, Haldimand County, Ontario. The deposit was reported to have been discovered in 1873 (1892).
- Snowden Mine, about 11 km east of Howland Junction, on the Toronto and Nipissing Extension Railway (later the Irondale, Bancroft and Ottawa). It was reported to have been opened about 1878 by M. Myles, and to have operated for about 10 years (Hansen, 1997).
- Spectacle Lake deposits, Lots 18 and 19, 8th Concession, North Crosby Township, Leeds County, Ontario, and about 1.5 km east of Wolf Lake (1892).
- Stevens Property, Lots 13 and 14, 9th Concession, Mayo Township, Hastings County, Ontario (Canada, Mines Branch, 1912). There were reported to be a number of test pits and strippings on the property (Thomson, 1943).
- Tamara Mining Properties, Lot 23, 5th Range, Lot 22, 4th Range, and Lots 21 and 22, 2nd Range, Wexford Township, Sainte-Marguerite-du-Lac-Masson, Les-Pays-d'en-Haut, Québec. Mapping and bulk sampling took place on these titaniferous magnetite prospects in 1960 (1962). Three diamond drill hole were sunk in 1962 (1964). Further drilling took place in 1963-1964 (1967).
- Tomahawk Iron Mines Property, part of Lots 18, 19, and 20, 3rd and 4th Concessions, Lake Township, Hastings County, Ontario. The property was reported to be on the east side of Whetstone Lake, and accessible by the road from Havelock to Tangamong Lake. Thomson (1943), reported that the deposit had been known for many years but that development had only begun, by the company mentioned, in 1941-1942. Some drilling had taken place previously in 1924. In 1945, it was reported that additional stripping was being done to expose a sheared zone containing iron. A small mill was built in 1946, but no mining took place (1948). In 1947, test runs of ore were milled and 150 tons treated (1949). The magnetite was in amphibolite and talc-actinolite near a granite contact.
- Twin Lake Occurrence, Lot 8, 3rd Concession, Methuen Township, Peterborough County, Ontario. Small showings of ilmenite, magnetite, and hematite, with prospect pits west of the Oak Lake Road, were reported. There had been staking and prospecting on adjacent lots in 1956 (Hewitt, 1961).
- Unnamed Mines, Lot 18, 9th Concession, Bagot Township, Renfrew County, Ontario. This old mine was reported to have been in the northwest corner of the west half of the lot, about 350 m northwest of the road to Calabogie. Satterly (1945) reported these old workings but noted that the names and histories had been lost. There was a shaft, said to be more than 50 ft deep, an open cut, and a trench. Locally, white crystalline limestone was

mineralized with magnetite.

Unnamed Occurrence, Lot 3, 4th Range, Grenville Township, Argenteuil County, Québec. This was an old deposit that was reportedly covered with debris from mining and exploration (Osborne, 1938).

Unnamed Occurrence, Lot 7a, Range 5, Leeds County, Ontario (1905).

Unnamed Mine, Lot 17, 2nd Concession, Darling Township, Lanark County, Ontario. Peach (1958) reported that small pits had been dug "about 60 years ago" in concentrations of magnetite in diorite.

Unnamed Mine, Lot 22, 4th Concession, Darling Township, Lanark County, Ontario. In 1909, the Canadian Mines Branch reported that several small pits had been dug and some magnetite shipped. It was once considered to have been an unimportant deposit (1910).

Unnamed Mine, Lot 22, 5th Concession, Darling Township, Lanark County, Ontario. A pit, 20 ft deep, had been sunk into a pocket of fine-grained magnetite (Canada, Mines Branch, 1910).

Unnamed Mine, Lots 21 and 22, 3rd Concession, Darling Township, Lanark County, Ontario. This old mine was reported to have been opened about 1892. By 1909, the trenches had caved in (Canada, Mines Branch, 1910). Peach (1958) reported a number of small pits in local concentrations of magnetite in the local diorite.

Unnamed Mine, Lot 11, 1st Concession, Lavant Township, Lanark County, Ontario. Peach (1958) reported that a small pit had been dug in a concentration of magnetite in the local diorite. This would have been about 60 years old at the time.

Unnamed Mine, Lot 18, 9th Concession, Bagot Township, Renfrew County, Ontario. In 1909, the Canadian Mines Branch reported that a pit had been opened in the side of a small hill. The deposit was magnetite mixed with hematite. Further, 30 ft south of the pit, a shaft had been sunk (1910).

Unnamed Mine, Lot 28, 6th Concession, Bagot Township, Renfrew County, Ontario. A pit had been sunk to 18 ft in a deposit of alternating layers of magnetite and gneissic rock carrying magnetite (Canada, Mines Branch, 1910).

Unnamed Mine, Lot 26, 6th Concession, South Canonto Township, Frontenac County, Ontario. On the line dividing the 5th and 6th Concessions, a pit had been opened up in a vein of magnetite (Canada Mines Branch, 1910).

Walker Property, Lot 8, 15th Concession, Tudor Township, Hastings County, Ontario. Some stripping, in 1915, had exposed magnetite in chlorite and hornblende schists (Canada, Mines Branch, 1916).

Wallbridge Mine, east half of Lot 12, 5th Concession, Madoc Township, Hastings County, Ontario. The mine was reported as being in production in 1900 (1901).

Wallingford and Gauthier Property, Hincks Township, Gatineau County, Québec. George Wallingford and Louis Gauthier, of Timmins, Ontario, were reported as owners in 1944-1945 (1945-1946).

Watson Mine, Lots 18, 19, 20, 3rd Concession, South Sherbrooke Township, Haldimand County, on the shore of Christie's Lake, Ontario (1892).

Welch Mine, about 5 km north of the St. Charles Mine. Owned by A. W. Coe, it was both an open pit and an underground mine in 1899.

Wilbur Mine, Lots 4, 12th and 13th Concessions, Lavant Township, Lanark County, Ontario. It

was about 3 km south of Lavan, on the Kingston and Pembroke Railway. Smith (1958) reported that old openings, dumps, and remains of surface plants could be seen along the abandoned railway spur, about 400 m east of Wilbur Station and near the Palmerston Township boundary. *Pits 1* and *2* were on Lot 4, 12th Concession, while *Pits 3* and *4* were on Lot 4, 13th Concession. According to Smith (1958) most of the activity on this property took place before 1890, with some of the openings having been 100 ft deep at that time. Later, the property was owned by William Caldwell, of Toronto, and was being redeveloped by a force of 18 men in 1899 (1900). It was next taken over by the Wilbur Iron Ore Company in 1907 (1908). A second shaft, inclined at 27 degrees, following the dip of the ore was sunk to a depth of 226 ft - with levels being cut every 50 ft. In 1908, it was reported that the upper part of the old workings were in very unsafe conditions (1908). It was reopened in 1910 by the Exploration Syndicate of Ontario and the shafts rehabilitated. A workforce of 100 was on the property in newly-built camp buildings (1911). In 1911, the company, now known as the Exploration Syndicate of America, ceased all work (1912). On the property, magnetite orebodies were found at the contact between gneissic rocks and limestones. It was estimated that a total of about 125 000 tons of ore was mined (Smith, 1958).

Williams (Black Bay) Mine, Lot 22, 11th Concession, Bagot Township, Renfrew County, Ontario. The mine was about 3 km northwest of Calabogie. Opened in the 1880s, it was reported that about 10 000 tons were shipped (Canada, Mines Branch, 1912). In a later report, Satterly (1945), quoting Lindeman and Bolton, gave the figure as 25 000 tons. The magnetite occurred along the contact between a crystalline limestone and an amphibolite.

Wilson Mine, near Calabogie, Ontario (1893).

Yankee (Matthews) Mine, Lot 1, 6th Concession, North Crosby Township, Leeds County, Ontario. On the shore of Mud Lake, about 1 km north of the Chaffey Mine, it was reported to have been opened in 1860 (1892). It was reported to have been long abandoned when it was examined by the Canadian Mines Branch in 1909 (1910). The pit was reported to be 300 ft long by 100 ft wide.

Yates Prospect, Lots 35 and 36, 5th Range, Beresford Township, Les Laurentides, Québec. Short holes were reported to have been drilled on this property in 1963 (1964).

Yuill Mine, southwest half of Lot 25, 5th Concession, Darling Township, Lanark County, Ontario. The property was reported to have been operated for the first time in 1889. From then until 1909, more than 2000 tons of high-grade magnetite were extracted. The pit was reported to have been from 30 to 40 ft wide, 100 ft long, and 70 ft deep (Canada, Mines Branch, 1910). The ore, magnetite, occurred at the contact of a diorite and schist with a crystalline limestone.

Jasper

Jasper is a cryptocrystalline (extremely small crystals) chalcedony, a member of the quartz family. Its colour is usually a shade of red. Hard, and attractive, it is used as a decorative stone, and as jewellery.

Hull Occurrence, Lot 15, 10th Concession, Hull Township, Gatineau County, Québec. Sinkankis (1959) reported that large quantities of rich red jasper could be found at this location.

Kaolinite (see also Clay)

Clay, a firm, fine-grained earth, is produced by the deposition of fine particles of rock in water. It is used for the manufacture of bricks, tiles, and pipes. Some clays, which can withstand high temperatures, are known as refractories, and are used for making firebricks. Others, of higher qualities, are suitable for stoneware, pottery, and china. The deposits near Saint-Rémi-d'Amherst, Québec, were, in the early 20th Century, the only ones in Canada from which china clay was produced. These produced until 1946, but there seems to have been no production thereafter (1948).

British Metal Corporation (Canada) Properties, Lots 9 to 12, the south half of the 6th Range, Amherst Township, Terrebonne County, and Lots 31 and 32, 7th Range, Ponsonby Township, Papineau County, Québec. In 1923, prospecting on these properties was reported (1924).

Robert A. Bryce Property, Amherst Township, Terrebonne County, Québec. Mr. Bryce, of Toronto, was listed as the owner/operator from 1928 to 1935 (1929-1936). There were no reports of production.

Canada China Clay and Silica (Saint-Rémi China Clay) Mine, Lots 5 and 6, 6th Range south, Amherst Township, Terrebonne County, Québec (on part of Lots 2 to 8, which were reported to be held by the company in 1934 [1935]). The mine was at Saint-Rémi-d'Amherst, about 13 km from Arundel, and along the road to Huberdeau. Sabina reported (1986) that the deposit had been known since 1894 and had been worked for kaolinite from 1910 to 1923 and from 1941 to 1946. The first operator was the Saint-Rémi Kaolin Company, which began to exploit it in 1911. The Canadian China Clay Company Limited, absorbed it in 1912, developed the mine from 1912 to 1914, and worked it until it closed in 1923. (Osborne, 1938). At the time, it was reported to be the only workable deposit of kaolinite in Canada (1915, 1917). In 1916, a spur, about eight miles long, was completed from Huberdeau Station on the Canadian Northern Railway (1917). A second pit was also being developed on Lot 6. Until it closed it was known as being of considerable importance (1936). The company was reported as the owner/operator until 1927 (1928). In 1929, Toronto interests acquired the property (1933). After its closing, in 1923, the property was idle until 1937. Canada China Clay seems to have acquired it in 1936 (1937). In 1937-1938, a shaft was sunk 267 ft and a mill installed (Canada, Mines Branch, 1938)(1939). A concentrator was constructed in 1938-1939 (1939-1940). It was idle in 1940 (1941), but was taken over and brought back into production in 1941 by Canada China Clay and Silica, a new company (1942). It operated until 1945 (1946). The kaolin was disseminated between grains of quartz in a fractured zone in granite gneiss and quartzite (1923).

Canada China Clay and Silica Mine, Amherst Township, Terrebonne County, Québec. At Kasil, this property was listed from 1942 to 1946 (1943-1947). It was reported that about 50

- men were employed (1947). It operated until about 1948 (1951).
- Canadian Kaolin and Silica Products, Lots 9, 10, 11, and 12, 6th Range South, Amherst Township, Terrebonne County, Québec (1933). This company, of Montréal, was reported, in 1931, to have opened up the properties adjoining those of the Canadian China Clay Company (described in the listing below), and to have installed a small mill (1932). Small shipments, some for test purposes, were made between 1932 and 1936 (1933-1937). The kaolin was produced as a by-product to the silica in which it occurred (1936). A detailed description was given in the 1935 report (Osborne, 1936). The company was listed as an owner/operator until 1940 (1941).
- Coupal-Kominik-Kendler Property, Lots 27 and 28, 8th Range, Arundel Township, Terrebonne County, Québec. The property was reported to be about 10 km northeast of the Saint-Rémi-d'Amherst mines. Louis Coupal, of Brébeuf, was listed as the owner from 1945 to 1946 (1946-1947). In 1950, the company was reported to have been doing development work on the property (1951). The deposit was a shattered quartzite, in which kaolin occurred between the grains and as lenses.
- La Société Minière Gatineau, Enregistrée Property, 8th Range, Blake Township, Gatineau County, Québec, near the southeast end of Thirty-One-Mile Lake. Prospecting and the digging of test pits and trenches were reported in 1940 (1941). S. R. Ouellette, of Hull, was listed as owner/operator of a property (unspecified) in Blake Township in 1939 (1940), and the company mentioned from 1940 (1941).
- Laurentian Art Pottery Property, Lots 27 and 28, 8th Range, Arundel Township, Terrebonne County, Québec. The company, of Saint-Jérôme, was reported to have mined the property intermittently during the period 1941-1944 (1942-1945). It was reported that no mining was done in 1942-1943, as sufficient quantities had been mined for their ornamental pottery operation the year before (1943-1944).
- Société Minière Gatineau (Thirty-One-Mile Lake) deposit, Lots 21, 22, and 23, 8th Range, Blake Township, Gatineau (once Hull) County, Québec (Canada, Mines Branch, 1947). Near Point Comfort, and the southeast end of the lake, it was explored and developed by this company in 1941-1943 (1942-1944). Since most of the deposit was found to be beneath the lake, it was planned to mine it hydraulically through boreholes. No work was reported in 1944-1946 (1945-1947).

Lead (see also Zinc)

Lead, a heavy, soft, malleable metal, is used in storage batteries, coverings for cables, plumbing supplies, solder, ammunition, paint pigments, glass-making (lead crystal) and rubber manufacturing. It is toxic when ingested and is being eliminated from uses which present such possibilities - such as lead-based paints and ammunition. In the National Capital Region and the surrounding areas many occurrences of galena, or lead sulphide (PbS) have been reported. Most of these are small, but a few, such as the mines on Calumet Island, Québec, and at Galetta, in Carleton County, Ontario, are famous in Canada mining. In the mid 1920s the Galetta, or Kingdon, mine, was the only producing lead-zinc mine in Ontario and one of only two in eastern Canada. Near Carleton Place there are trenches which were reputed to have been mined more

than 100 years ago for the local manufacture of bullets.

Bedford Lead Prospects: (1) Lot 21, 8th Concession, Bedford Township, Frontenac County, Ontario. A calcite vein, about one metre wide, in which a shaft had been sunk to a depth of 25 ft; (2) on the line between Lots 18 and 19, 8th Concession, two similar veins; (3) Lot 19, 7th Concession, then the property of Weston Hunt, five nearly-parallel lodes; (4) about 1.5 km east of the aforementioned, on property also then belonging to Weston Hunt, shallow shafts had been sunk; (5) Lot 13, 5th Concession, on land belonging to Foley and Company, of Montréal, a shallow shaft had been sunk to 16 ft. The most important of these was considered to be on Lots 16 to 18 in the 6th Concession. It was about one metre wide and cut white crystalline limestones, gneisses and schists. Only galena was noted, with no sphalerite or pyrite being seen. The gangue (worthless) minerals were calcite and barite. Very large crystals of galena were seen - so large that these could not be lifted out without being broken. There were reported to have been nine pits over a distance of about 500 m (1916).

Buckingham Lead Veins: (1) Lot 21, 4th Range, Buckingham Township, Papineau County, Québec. On property then belonging to James B. Gorman it was reported that there were several small veins. These were first reported in the Québec report of 1888 (Ontario, 1916).

Burridge Road Prospect, Lot 19, 8th Concession, Bedford Township, Frontenac County, Ontario. On a hill, about 40 m west of the road, a small pit had reportedly been dug to expose stringers of galena and barite in white crystalline limestone (Harding, 1951).

Butterill Prospect, Lot 18, 8th Concession, Bedford Township, Frontenac County, Ontario. The prospect was reported to have been about 300 m west of the Burridge-Fermoy Road on the land of George Butterill, of Fermoy. Harding (1951) reported that a prospect pit was dug "many years ago", in white crystalline limestone. Barite, calcite, galena, and graphite were listed as the minerals present.

Calumet Island Mines, Grand Calumet Township, Pontiac County, Québec. The mines of Calumet Metals, and later New Calumet Mines were known principally as zinc producers. These are described under Zinc.

Calumet Metals Company Properties (five): (1) Lot 2, 4th Range, Calumet Island, Pontiac County, Québec. In 1910, this company opened a short tunnel, about 20 ft long., to expose pyrite and sphalerite; (2) Lot 18, 3rd Range, a shaft 22 ft deep was sunk on a contact of diorite to expose a small vein of galena and sphalerite; (3-5) Lots 6, 10, and 11, 2nd Range, shafts and trenches were used for exploratory purposes. All of these properties were acquired in 1910 by the Canada Metals Company, which continued the exploration in 1911 and 1912. The Calumet Zinc and Lead Company acquired them in 1913 and these were subsequently sold when the company was liquidated (1927).

Campbell's Prospect, Fitzroy Township, Carleton County, Ontario. Near the northwestern end of Chats Island in the Ottawa River. The prospect was thought to be a continuation of the Galetta Mine deposit, with the greater part being exposed in a shallow bay of the river during the period of low water in August, when a small island appeared. A shallow shaft and some pits was reported to have been excavated by the owner, Joseph Campbell, of Arnprior (1916). Clusters of distorted cubes of galena were noted.

- Cashel Occurrence, Lot 20, 1st Concession, Cashel Township, Hastings County, Ontario. The occurrence was reported to have been quartz containing galena (Thomson, 1943).
- Consolidated Rochette (Benn, Olden, Richardson, Long Lake Zinc) Mine, south half of Lots 3, 5th and 6th Concessions, Olden Township, Frontenac County, Ontario. This well-known old mine was about 0.5 km west of the Long Lake Post Office, about 8 km east of Parham Station on the Kingston and Pembroke Railway, and about 67 km north-northwest of Kingston. It was discovered about 1897, on land then owned by Howard Ritchie. Leslie Benn, the discoverer, dug the first pit and produced about 100 tons of ore. It was then acquired by James Richardson and Sons, of Kingston, who owned it for almost a half of a century. All of the work, however, up to 1948, was done between 1897 and 1915 (1950). Development began in 1902 and continued through 1904 (1903)(1905). Closed during the winter of 1906, it was reopened in 1907 (1907). This pattern was repeated the following year (1908). It was worked in 1908, with the *Rothwell Shaft* being deepened to 117 ft (1909). A new vein was being developed in 1909 (1910). It was the only zinc mine operating in Ontario in 1910, and was closed late that year (1911). In 1911, with the name then changed to the Olden Mine, it was reopened. The shaft was deepened to 150 ft and another shaft east of the old power house sunk to 50 ft (1912). It was closed again in 1912 and was acquired in 1914 by the Long Lake Zinc Company, an American company, which de-watered the workings and performed some development (1915). The option was dropped, however, and the property was then dormant for about a decade. In 1925, the Canada Mines Branch reported that reopening had been mooted, but that no new work had been done (1926). In 1927, some of the workings were de-watered and an examination made (Alcock, 1930, quoted by Harding, 1951). By 1946, the mine buildings had been removed and the property abandoned (Harding, 1951). In 1948, the property was leased to the Rochette Gold Mines Company (incorporated 1936), which de-watered it and erected a new headframe (1950). The development continued in 1949-1950 (1951-1952), with 800 tons mined in 1950 (1952). There were five shafts, from 60 to 125 ft deep, three open cuts, up to 60 ft long and 40 ft deep, and 25 pits and trenches, from three to 30 ft deep, on the property. The ore zone was in a band of crystalline limestone between granite and diorite. Sphalerite, galena, pyrite, pyrrhotite, and chalcopyrite, were reported. Large masses of galena, as well as sphalerite crystals up to 5 cm in diameter were mentioned.
- Crozier Prospect, Lot 20, 6th Concession, Bedford Township, Frontenac County, Ontario. The prospect was on the farm of Rupert Crozier and close to the farmhouse. It was reported that a prospect pit had been dug at about the beginning of the 20th Century. The galena was in a narrow vein of calcite which cut crystalline limestones (Harding, 1951).
- Crozier Prospect, Lot 19, 8th Concession, Bedford Township, Frontenac County, Ontario. This prospect was on land belonging to A. Crozier, of Westport (Harding, 1951) and close to the intersection of the Godfrey-Fermoy and Burrige-Maberly Roads. A vertical shaft, about 30 ft deep, had been sunk in a vein in crystalline limestone. Galena in calcite was seen on the dump.
- Deseco Mines Property, Lots 6 and 7, 3rd Concession, Ramsay Township, Lanark County, Ontario. Stripping and trenching was reported on this galena occurrence, "just east of the highway", in 1951 (1953). Operations ceased at mid-year.

Draper Lake Frontenac Lead-Zinc Mines Property, see the Frontenac Mine listing, below.

Frontenac Mine, part of Lot 15, south half of Lot 16, 9th Concession, and south half of Lot 14, 10th Concession, Loughborough Township, Frontenac County, Ontario. The mine was about 29 km north of Kingston and adjacent to the Toronto-Ottawa main line of the Canadian Northern Railway, which crossed the south part of Lot 16 within 200 ft of the *Number 1 Shaft*. This was the first producing lead mine in Ontario. First described in the Geological Survey of Canada report for 1866-1869, it was opened with the sinking of a shaft in 1866 (Canada, Mines Branch, 1926). It was mined in a desultory fashion until 1875 (1916) when the property was leased to an English company which operated it until 1882 (1904). A lead smelter was erected in 1880, but both it and the mine were reported to have been abandoned in 1882. Apart from some testing, involving the cutting of one opening and the mining of a small amount of ore, in 1904, for a mill test, at the Kingston School of Mining (1904), the property remained dormant until 1911. In 1912, the North American Smelting Company, of Kingston, took over the property, sunk a new *Number 3 Shaft* to 150 ft and performed some underground development. The mill was located next to *Number 1 Shaft*, and the ore transported 4000 ft from *Number 3 Shaft* by a Leschen aerial tramway (1913). It was closed early in 1913 (1914) and remained so for several years. In 1916, the Indian Lake Lead Mining Company was organized for the purpose of taking over the property but no work was reported to have been done in the mine (1917). In 1920, the Kingston Smelting and Refining Company was incorporated to work the mine but it was reported to have performed only repair work that year (1921). In 1921, the property was purchased by the Northern Lead Company, of Montréal (1922). In 1925, it was reported that the owners, the North American Smelting Company, of Kingston, had optioned it to C. N. Thompson, of Perth Road. The intention was that *Number 1 Shaft*, then 270 ft deep, would be rehabilitated, and the property brought back into production in 1926 (Canada, Mines Branch, 1926). It was reported that there were then three shafts on this old property: 97, 150, and 306 ft deep, respectively (1953). In 1926, it was bought by John M. Forbes and Forbes Galena Mines was incorporated. De-watering and rehabilitation then began (1926). In 1951, Draper Lake Frontenac Lead-Zinc Mines, which had been formed to succeed Picairium Gold Mines (incorporated in 1937), began to sample a vein near the old *Number 3 Shaft*. The shaft was de-watered once again in 1952 and sampling took place (1954). The vein in which mining took place was reported to have varied in thickness from a few centimeters to about seven m, and averaged about three. It extended across the lots for about 2.5 km. Of calcite, it cut across the local formations of interbedded siliceous and micaceous gneisses and crystalline limestones. The minerals were galena, sphalerite and pyrite, with clusters of large crystals of the former being noted (1916). The latter were in minor quantities.

Frontenac Lead Mine Number 2 (Back Lead Mine), parts of Lots 15 and 16, 9th Concession, and Lot 14, 10th Concession, Loughborough Township, Frontenac County, Ontario. Adjacent to the original mine, it was known as the *Back Mine*. Further work was done on this part of the property in 1905 and 1906 (1906) (1907), with a shaft being sunk to 50 ft.

Frontenac Vein, Lot 18, 8th Concession, Loughborough Township, Frontenac County, Ontario. This vein, about one to two metres wide, was reported to have been parallel to the Frontenac Mine vein and about 100 m north of it. Galena and barites were noted (1916).

Hawley Property, Lot 21, 2nd Concession, Monteagle Township, Hastings County, Ontario. On the farm of John Hawley, galena was reported to have occurred in vugs and fractures in pyroxenite and granite gneiss (Thomson, 1943). Hewitt (1955) mentioned that a few pounds of massive galena had been taken from a prospect pit on the property. The lead occurred in a calcite vein in metapyroxenite.

Heck and Drummond Property, see the listing for Rideau Base Metals, below.

Hollandia (Hollandis) Mine), Lots BA and BB, 6th Concession, Madoc Township, Hastings County, Ontario. This mine was about 3 km northeast of Bannockburn, Ontario, and about 21 km north northwest of Madoc. It was owned between 1898 and 1907 by Leopold Meyers, of Angels Camp, California, and R. C. Van der Meulen, of Aix-la-Chapelle, Belgium, (1899), and, from 1903, by the Ontario Mining and Smelting Company. Idle for a period, it was reopened in 1906 by the Stanley Smelting Works (1907). It seems to have produced for only about a year or two since, in the 1916 report, it was stated that it had been closed for about eight years (1916). There were reported to have been four shafts: *Number 1*, the main shaft, 90 ft deep; *Number 2 S.E.*, 132 ft; *Number 2 N.W.*, 65 ft; *Number 3 N.W.*, 40 ft. There were about 600 ft of drifts. The part of the mine between *Numbers 2* shafts had been mined through to the surface (Thomson, 1943). In 1921 a syndicate of people from Arnprior explored the adjoining property on Lots 1 and 2, Block A, Tudor Township, but the option was allowed to lapse. The Hollandia property was drilled in 1956 by Teck Exploration Company Limited. Sabina (1987) reported that a reduction plant was in operation at the old mine site. There was once a lead smelter at Bannockburn (1906). The orebody was in a calcite vein which cut crystalline limestone, micaceous quartzite and quartzose schists. The principal sulphide was galena, with minor amounts of sphalerite and pyrite (1916).

Hull Lead Veins: (1) west half of Lot 7, 10th Range, Hull Township, Gatineau County, Québec. About 6.5 km from the Gatineau River, and about one metre wide, the vein was reported to have been traced for about 100 m. It was reported that this was "a beautiful vein" of highly crystalline white limestone, which had been cut by a vein of opaque white barites and sea-green fluorspar containing galena; (2) south half of Lot 7, 10th Range, then on the property of Morris Foley. A vein, similar to the foregoing, but without galena, was reported (Ontario, 1916).

International Mine, beside Mississagagon Lake, about 40 km north of Kaladar, Ontario. It was reported to have been mined in 1902 and 1903. Sabina (1987) did not report on the ownership of the property.

Katherine Mine, Lot 7, 11th (it is to be noted that the 1901 Ontario report places the mine in the 2nd Concession), Lake Township, Hastings County, Ontario. About 27 km northwest of Madoc and five km northwest of Millbridge on the Central Ontario Railway, it was reported to have been opened in 1899, by the British Colonial Mining and Development Company of Ontario Limited. There were two shafts, 100 ft and 18 ft deep. After a period of inactivity, it was taken over by the Stanley Smelting Company, in 1906, and brought back into production (1906). The mine was worked again in 1910 and 1925. In 1937, Katherine Lead Mines Limited was incorporated and took over the property. A new camp and plant buildings were constructed, the shaft reconditioned, and some underground development done (1939). After a short period, however, the mine was abandoned. The

equipment, buildings, and headframe, were subsequently removed from the property (Thomson, 1943). The ore was argentiferous galena and zincblende, in calcite, between wall rocks of diorite (1916). It was reported that it averaged 10 ounces of silver to the ton (1901). The galena was reported to have occurred in a calcite-barite gangue (a mixture of worthless minerals) (Thomson, 1943).

Kingdon (Galletta, Kingdom) Mine, Lots 22, 23, and 24, 6th Concession, Fitzroy Township, Carleton County, Ontario. The mine was on Chats Island in the Ottawa River, about 3 km west of Galletta Station on the Ottawa, Arnprior and Parry Sound, and later the Grand Trunk Railway, and about 3 km west of Galletta and 8 km directly east of Arnprior. It was reported to have been worked, as the Kingdon Mine, in 1884 (1973), and was then owned by the Kingdon Mining, Smelting and Manufacturing Company. At the time, a shaft was sunk to 50 ft (1915). The property was examined by the Canadian Mines Branch after tin had been reported in 1910 and the report was proven to be inaccurate. About 1914, practically the whole island was acquired by James Robertson, of Montréal. The executors of his estate managed it and sunk a two-compartment shaft to about 200 ft, some 200 ft from the old workings. A second shaft, of three compartments, had been sunk to 225 ft by 1917 (1918). It was reported in 1914 (1915) that about 5000 tons were on the dump and could be processed when the mill had been completed (1915). In 1915, a winze (an inclined internal shaft) was being sunk in the *West Drift* about 160 ft from the shaft (1916). A double-drum electrically-operated Flory hoist had been installed over the main shaft. There were then 70 employees on the property. By 1916, the ore above the first level, at 100 ft, had been stoped out and a winze sunk to the 185-foot level (1917). In 1919, stoping was completed on the first and second levels and the shaft deepened to 400 ft (1920). By 1920, the main shaft had been deepened to 418 ft (1921). Mining continued in 1921, with a steel head frame and a Marsh hoist being installed (1922). In 1922, a blast furnace for smelting the ore was installed (1923). One hundred and ten men were then employed. In 1925, it was reported to have been the only lead-zinc mine producing in Ontario, and one of two in eastern Canada. By then, the workings had reached a depth of 1045 ft and a lateral extent of more than 2000 ft. From 300 to 400 tons of ore were hoisted per day while the smelter produced 18 tons of pig lead daily. The workforce, excluding office staff, numbered 173, of whom 136 were underground (1926). It was in continuous operation in 1926-1929 (1930), when the shaft was deepened to 1326 ft (1929). The lead smelter was the only one in the province of Ontario, and produced 4 201 803 pounds of lead in 1929 (1930). The vein was a fissure filling of the same type as the Frontenac and cut the local crystalline limestones and biotite gneisses. Galena was the principal sulphide present, with minor quantities of sphalerite and pyrite. It was noted that there was some silver also present, but rarely over an ounce per ton (1916). The mine closed permanently in 1931 (Canada, Mines Branch, 1934). In 1948, it was reported that preparations were being made to reopen it (Canada, 1949).

Lake Lead Veins: (1) west half of Lot 10, 11th Concession, Lake Township, Hastings County, Ontario. Known as the *Donahue Vein*, it was on property which was bought by Messrs. Gillum and Kesterman, of Belleville. It was subsequently reported that little had been done; (2) Lot 8, 10th or 11th Concession, possibly on the property of William Sweeney, of Tudor. It was said that little had been done up to 1867. The ownership of the property

was later in dispute (1916).

Lansdowne Lead Veins: (1) Lot 2, 8th Concession, Lansdowne Township, Leeds County, Ontario. Traced for about 400 m, the vein was reported to have been about 0.6 m wide. Trial shafts had been sunk but the mine was abandoned; (2) Lot 3, 8th Concession, a trial shaft, to a depth of 50 ft, was sunk in 1854 on the property of Mr. Buel. It was reported that sufficient ore had been raised to pay for the sinking. Four other veins were noted on this property; (3) Lot 4, 8th Concession, Messrs. Foley and Company had sunk a small shaft (1916).

Lennox Mine, 15th and 16th Concessions, Sheffield Township, Lennox and Addington County, Ontario. See the listing under Zinc.

McMurray Property, Lot 2, 2nd Concession, Limerick Township, Hastings County, Ontario. The property was originally owned by W. A. Murray, of Gilmour, and was about 6.5 km east of Gilmour, on the Canadian National Railway. The workings were about 400 m south of the Gunter-St. Ola Road. The calcite-galena vein was in a fault fissure which cut across banded limestones and quartzite (Thomson, 1943).

Methuen Lead Vein Mine, Lot 2, 1st Concession, Methuen Township, Peterborough County, Ontario. In 1868 a shaft was sunk by Messrs. Parker and Baker. On this same lode, two more shafts had also been sunk on the eastern edge of Lot 2, 1st Concession, close to the boundary of the lake (1916). Hewitt (1961) noted that galena occurred in a narrow vein of calcite. It was reported that an opening 70 ft long, six ft wide, and up to 50 ft deep, had been excavated.

Murphy (Murphy Lead Mine) Prospect, Lot 17, 6th Concession, Bedford Township, Frontenac County, Ontario. About 15 km north of Godfrey Station on the Kingston and Pembroke Branch of the Canadian Pacific Railway, it was reportedly owned by George Heck, of Prescott, and optioned to J. D. McLaurin, of South Orange, New Jersey. Preparations were being made to work this property in 1919 (1920).

Murphy Mine, south half of Lot 17, 6th Concession, Bedford Township, Frontenac County, Ontario. The McLaurin Development Company was reported to have been incorporated in 1920 to work this deposit of galena. It was being developed that year, with the shaft having been sunk 40 ft. The galena was disseminated in a vein of calcite in crystalline limestone wall rock (1921).

Murphy Mine, Lots 31 and 32, Range East of the Hastings Road, Tudor Township, Hastings County, Ontario. Mined in 1867 and 1868 by the Hastings Lead Mining Company, which sunk a shaft to 125 ft, the mine was subsequently reported to have been abandoned (1916).

Murphy Prospect, Lot 12, 4th Concession, Bedford Township, Frontenac County, Ontario. On the farm of Leo Murphy and close to both the farmhouse and the Godfrey-Fermoy Road (Harding, 1951). A prospect pit was dug, prior to 1920, in white crystalline limestone containing galena.

Murphy Prospect, Lot 13, 5th Concession, Bedford Township, Frontenac County, Ontario. On the farm of John Murphy and between the Godfrey-Fermoy Road and Potspoon Lake. The prospect was also reported to have been about 0.4 km southwest of the school at Sangster. Harding (1951) reported that a pit had been dug by Nicholas Murphy during the first quarter of the 20th Century. The veinlets occurred in Grenville crystalline limestone

and contained barite, calcite, galena, and pyrite. Graphite and mica were present in the limestone.

Murphy Prospect, Lot 14, 5th Concession, Bedford Township, Frontenac County, Ontario. This prospect was on the farm of James Murphy, close to a barn and the Godfrey-Fermoy Road. Harding (1951) reported that there was shaft filled with water, and galena, calcite, and barite on the dump.

Murphy-Hickey Mine, Lot 17, 6th Concession, Bedford Township, Frontenac County, Ontario. The mine was about 2.5 km east of Bob's Lake. Known since the mid-19th Century, the deposit was mined from about the beginning of the 20th Century. There were then two shafts. One, developed about 1920, on the P. J. Murphy (south) half of the Lot, was about 300 m north of the Godfrey-Westport Road. The second, on the Edmund Hickey (north) half, was about 65 ft deep. There were also several pits on the vertically-dipping calcite-barite-galena vein, which could be followed for about 350 m. The vein was reported to have cut both crystalline limestones and granite (Harding, 1951).

New Calumet Mines, see the listing for Calumet Island Mines, above.

Patterson Prospect, north half of Lot 21, 8th Concession, Bedford Township, Frontenac County, Ontario. On the farm of W. H. Patterson, at Burrige, two pits had been sunk in veins in white crystalline limestone. One of these may be the shaft that was reported in a Geological Survey of Canada report, published in 1854, to have been sunk several years previously by Hunt and Brooke (Harding, 1951, making reference to Alexander Murray).

Petite-Nation River Lead Veins, Québec. On the north shore of the Ottawa River, a few kilometres east of Ottawa, and on the Seigniorship of the Hon. L. J. Papineau (Ontario, 1916).

Ramsay (Ramsey) Mine, Lot 3, 6th Concession, Ramsay Township, Lanark County, Ontario. About 1.5 km from Carleton Place, with outcrops on the banks of the Mississippi River, it was first worked in 1858, when shafts were sunk and a smelting furnace built. The flow of water into the mine was so large, however, that the attempt was unsuccessful and the property abandoned. Further attempts, with larger pumps, were reported in the 1916 report. In 1925, the mining rights were obtained by an exploration and development company (not named), and the property was being reinvestigated (Canada, Mines Branch, 1926). The vein, in dolomite, was reported to have been from 0.75 to 1.5 m in width, with galena, sphalerite, pyrite, chalcopryrite, occurring in a calcite gangue.

Reader Mine, Calumet Island, Pontiac County, Québec. It was reported to have been operated intermittently from 1896 to 1913 (1926).

Reelman Mine, Lot 9, Block 8, Tudor Township, Hastings County, Ontario. Development, by George Reelman, of Detroit, Michigan, was reported to have begun in December, 1924. A shaft was started and five tons shipped (1926).

Renprior Mine, Lots 1 and 2, 4th Concession, Admaston Township, Renfrew County, Ontario. Renprior Mines was incorporated in 1950 and began the development of this property about mid-year. Overburden was stripped and 500 ft of trenches blasted (1952). In 1951, about 100 tons of zinc concentrate were produced before the mill closed (1953).

Richardson Mine, see the listing under Zinc.

Rideau Base Metals Mine (Heck and Drummond Property), Lot 17, 6th Concession, Bedford Township, Frontenac County, Ontario. Near Godfrey. Work began in 1916 with the

excavation of test pits and the shipment of one car load of hand-picked ore (1917).

George Heck then began operations again in 1927, when a pit was dug to about 30 ft. The vein was about 14 in wide but then pinched out (1927). In 1955, Rideau Base Metals, a newly-incorporated company, acquired a lease on the property. The *Hickey Shaft*, formerly sunk to 80 ft on Claim E.O. 5405, was rehabilitated and a level cut at 60 ft. It was reported that about 200 tons of ore was hoisted (1957). The development continued in 1956 (1958).

Robinson Mine, Lot 18, 7th Concession, Bedford Township, Frontenac County, Ontario.

Originally owned by Dan Robinson, of Fermoy, and later by J. Howse, of Fermoy (Harding, 1951), the mine was reported to have been about 3.5 km east of Bob's Lake. The *West Shaft*, about 100 ft deep, was about 325 m north of the Fermoy Road and slightly east of the road on the boundary of the 6th and 7th Concessions. The *East Shaft* was about 0.4 km due east of the *West Shaft*. Both were reported to have been sunk by the Dominion Mining and Smelting Corporation, of Toronto, during the period 1926-1929. Locally, the galena-bearing veins were reported to have cut white crystalline limestone which had also been intruded by granite. Some sphalerite was noted (Harding, 1951). There was no indication that there had ever been production from the property.

Rochette Gold Mines Property, see the listing for Consolidated Rochette, above.

Russell Mine, Lots 10 and 11, 4th Range, Calumet Island, Pontiac County, Québec. Opened in 1891 by Mr. Lawn and the Russell Brothers, of Renfrew, the mine was served by Clark and Campbell's Bay Stations on the Pontiac Pacific Junction Railway (1895). There were reported to have been five openings. It was mined in 1897 by Messrs. Watts, and others, of Toronto, with a crew of 10 to 15 men (1897).

Schlievert Property, east half of Lot 9, 11th Concession, McNab Township, Renfrew County, Ontario. Trenches and pits were dug on this property in 1925 and some drilling performed. The main pit was reported to have been about 250 m west of the old farm house. Some galena was present in a coarsely-crystalline vein of white calcite in crystalline limestone (Satterly, 1945).

Silver King Mine, about 10 km north of Queensboro, and 22 km northeast of Madoc, Ontario.

While there is supposed to be a long history of mining on this property, only a few details were found. It was acquired by Republic Lead Mines Limited in 1945 (later Republic Ores and Mining Corporation), and some underground exploration done. (Sabina, 1987) reported that the mine was then on the farm of Roy Cliff.

Storrington Lead Vein, Storrington Township, Frontenac County, Ontario. The vein was about 3 km from the village of Battersea, and near the shore of Dog Lake. It was thought to be a continuation of one of the veins belonging to the Frontenac Company (1916).

Trumble Lead Occurrence, Lot 29, 4th Concession, Cashel Township, Hastings County, Ontario.

This occurrence was about 3 km south of Gunter, Ontario, and about 44 km north of Madoc. The deposit, on the farm of Fred Trumble, was reported to have been opened by a trench. Sabina (1987) reported that the farm then belonged to G. Trumble. The vein, containing scattered crystals of galena was in banded limestone and diorite (Thomson, 1943).

Tudor Lead Veins; (1) Lot 28, Concession B, Tudor Township, Hastings County, Ontario. In 1866, it was reported that a shaft had been sunk to 37 ft in a vein of barite and calcite

containing galena. W. Kesterman, of Belleville, was superintending the mine and six tons of galena had been mined; (2) Lots 28 and 29, 14th Concession, Tudor Township. Discovered in 1858, it was first mined in 1859. In 1867, Messrs. Lombard and Company, of Boston, were reported to have leased the mine. The vein was noted to be of red and white heavy spar containing galena. In 1868, at a depth of 42 ft, the mine was abandoned (1916).

Tudor Occurrence, Lot 11, 2nd Concession, Tudor Township, Hastings County, Ontario. An old shaft was reported in the vicinity of small veins and stringers cutting limestone (Thomson, 1943).

Tudor Occurrence, Lots 1 and 2, Concession A, Tudor Township, Hastings County, Ontario. A shaft, 20 ft deep was reported on this property. The galena was in a calcite vein (Thomson, 1943).

Tudor Occurrence, Lots 4 and 5, Concession B, Tudor Township, Hastings County, Ontario. The property was about 50 m west of the Canadian National Railway line. An old shaft was reported, as well as dilapidated buildings and trenches and pits filled (with debris). Galena, as well as pyrite, occurred in a calcite vein (Thomson, 1943).

Union Creek Lead Mine, Lot 20, Range A, Galway Township, Peterborough County, Ontario. The mine was reported to have been worked in 1911, when a shaft was sunk to about 100 ft and a short tunnel driven along the vein into the side of a hill. The minerals were barite, calcite, galena, sphalerite, and pyrite. It was reported that about 30 kegs (small barrels) of galena were mined (1916).

Victoria Mine, Lot 2, 5th Concession, Somerville Township, Victoria County, Ontario. This was reported to have been an old property which had been previously operated by Summerville Lead Mines. In 1936, Consolidated Lead Mines was incorporated and took it over. A camp and plant buildings were erected, in 1937, and the old shaft de-watered and rehabilitated. Some development was done and a small (50 tons per day) concentrator erected (1939).

Webber Property, Lots 29, 5th and 6th Concessions, Madoc Township, Hastings County, Ontario. Near Bannockburn. On the 6th Concession, pits had been dug in quartz veins, in which pyrite, galena, and sphalerite were present. On the 5th Concession, the veins, carrying chalcopryite, galena, and feldspar, cut Grenville limestone (Thomson, 1943).

Limestone

Limestone, a sedimentary rock, results from the deposition of calcium carbonate in water. It is produced in a marine environment and is abundant in the region around Ottawa - much of which was once covered by the Champlain Sea. Limestone is used for building stone, road ballast, the manufacture of cement, smelter flux, and a multiplicity of other uses. It has been quarried in eastern Ontario and western Québec since the arrival of the first settlers and has been used extensively in the construction of small and large buildings, canals, and bridges. Kingston is known as the "Limestone City". An important historical note is that the first hydraulic cement produced in Canada was manufactured in Hull in 1840.

- Acres (Graham's) Quarry, Lot 16, 2nd Concession, Ottawa front, Nepean Township, Carleton County, Ontario. On the farm of H. Acres, the quarry was reported to have been reopened by the Ottawa Suburban Road Commission in 1921 (1921).
- Adamston Quarry, Lot 4, 11th Concession, Adamston Township, Renfrew County, Ontario. A small quarry in grey and brown limestone was reported by Satterly (1945).
- Airmat Corporation Quarry, Bouchette Township, Gatineau County, Québec. This quarry was reported to have produced crystalline limestone and dolomite in 1964 (1967).
- Alexandria Quarry, Lot 27, 5th Range, Lochiel Township, Glengarry County, Ontario. The stone was reported to have been used to build the new Reformatory at Alexandria (1904).
- Allied Chemical Canada Quarry, Amherstberg, Ontario. The quarry was listed as a producer of lime from 1968 to 1970 (1970-1972).
- Aluminum Company of Canada Mines, Wakefield Township, Gatineau County, Québec. These were listed as a producer of lime as a by-product from 1941 to 1962 (1942-1964). See also the listing for the company under Brucite, above.
- Ambro Materials and Construction Quarry, Gloucester Township, Carleton County, Ontario. Listed as a producer from 1973 until at least 1974 (1977-1978).
- Ambro Materials and Construction Quarry, Marmora Township, Hastings County, Ontario. At Marmora, it was listed as a producer from 1973 until at least 1974 (1977-1978). It may have succeeded the Armstrong Quarry (see the listing below).
- American Nepheline Corporation/Aluminum Company of Canada Property, Lots 22 to 24, 10th Concession, Dungannon Township, Hastings County, Ontario. The property was reported to be beside the Canadian National Railway line. It was mentioned that a ridge of crystalline limestone, about 150 m wide, crossed the lots. Traces of pyrite, mica, and graphite, were reported. It was diamond-drilled in 1942 (Hewitt & James, 1956).
- Armstrong Brothers Limited Quarry, Gloucester Township, Carleton County, Ontario. Near Greeley, the quarry was as a source of limestone from 1968 until 1972 (1970,1977) (Sabina, 1986).
- Armstrong Brothers Limited Quarry, Marmora Township, Hastings County, Ontario. This quarry was reported to be about 3 km south of Marmora, Ontario, on Highway 14. The company was reported as a producer from 1968 until 1971 (1970,1977). The quarry was reported to have been abandoned by Sabina (1987).
- Arnaud and Beaudry, Joliette, Québec. The company was listed as producers of lime from about 1932 to 1940 (1933-1941). Mrs. Edwilda Arnaud was then listed from 1941 to 1946 (1942-1947).
- Ashdod Quarry, Lot 29, 8th Concession, Bagot Township, Renfrew County, Ontario. This was reported to be an abandoned quarry on the southwest side of a hill, just east of the Canadian Pacific Railway line, and about 2 km from Ashdod Station. Heavily bedded grey and white crystalline limestone with beds of dolomite were exposed. Graphite, tremolite, and pyrite were mentioned as minerals (Satterly, 1945).
- Ballard Quarry, Manotick, Ontario. Operated by W. Ballard, it was reported to have been the source of crushed limestone (1924).
- Barry Quarry, Lot 2, 5th Concession, Ramsay Township, Lanark County, Ontario. Operated by J. R. Barry, of Carleton Place, it was reported to have produced crushed stone (1924).
- Barry Construction Quarry, Lot 9, 3rd Concession, West Hawkesbury Township, Prescott

- County, Ontario. Production of crushed limestone was reported from this quarry (1922).
- Bath Road Quarry, Frontenac County, Ontario. On Bath Road, Kingston, the quarry provided building stone for the city (1904).
- Beaudry Quarry, Joliette, Québec. Joseph Pitre Beaudry was listed as an owner/operator from 1937 to 1946 (1938-1947).
- Beauseigle Quarry, Portland Township, Papineau County, Québec. Théodore Beauseigle, of Notre-Dame-de-la-Salette, was listed from 1946 (1947).
- Beckwith Construction Quarry, Carleton Place, Ontario. The quarry was reported to have been opened in 1963 by the Beckwith Construction Company (Sabina, 1987).
- Bedford's Quarry, east half of Lot 9, 4th Concession, Ross Township, Renfrew County, Ontario (1904).
- Belton Quarry, Nepean, Carleton County, Ontario. This quarry was reported to have been operated by Peter Belton of Saint Catharines (1926).
- Bennett Paving & Materials Quarry, Kingston Township, Frontenac County, Ontario. First reported as a producer in 1971(1977), it was active until at least 1974 (1978).
- Bergin Quarry, Lot 19, 7th Concession, North Fredericksburg Township, Lennox and Addington County. The quarry was reportedly mined for limestone and lime (1922).
- Bertrand & Frère Quarry, Alfred Township, Prescott County, Ontario. It was first reported as a source of limestone in 1973 (1977).
- Bertrand & Frère Quarry, Gloucester Township, Carleton County, Ontario. First reported as a producer in 1972 (1977), production was mentioned until at least 1974 (1978).
- Bertrand & Frère Quarry, Longueuil Township, Prescott (later Prescott and Russell) County, Ontario, off Highway 17 and about 10 km north of Hawkesbury. Operated by Bertrand & Frère Construction Company, it was listed as a source of limestone from 1968 until at least 1974 (1970,1978) (Sabina, 1986).
- Bertrand & Frère Quarry, Plantagenet Township, Prescott County, Ontario. Production from the quarry was first reported in 1972 (1977).
- Bertrand & Frère Quarry, Cambridge Township, Russell County (later Prescott and Russell), Ontario. The quarry was listed as a producer in 1973 (1977).
- Bertrand & Frère Quarry, Clarence Township, Russell County, Ontario. Production was first reported in 1973 (1977).
- Biederman Quarry, Lot 20, 18th Concession, Wilberforce Township, Renfrew County, Ontario. The quarry was reported to have been about 11 km northeast of the Village of Golden Lake, and on the slope of a hill. Albert G. Biederman, of Golden Lake, was listed as a producer of lime from 1924 to 1939 (1926-1941). The rock was a medium-grained light-brownish crystalline limestone. Satterly (1945) reported that no operations had been reported for 1940-1943.
- Billie and Son Quarry, Perth, Ontario. It was reported to have been operated by F. R. Billie, of Smiths Falls, in 1936 (1937).
- Blair Quarry, Roxborough Township, Stormont County, Ontario. A. L. Blair was reported as a producer in 1968 (1970).
- Blue Ridge Limestone Quarry, Huntley Township, Carleton County, Ontario. It was reported as a producer in 1968 (1970).
- Boldeners Quarry, Dysart and Guildford Townships, Haliburton County, Ontario. Reported

- previously as a granite quarry, the operation was also reported to have been a limestone producer from 1969 (1971) until at least 1974 (1978).
- Bonnechere Lime, Grattan Township, Renfrew County, Ontario. The quarry was reported as active in 1960-1970 (1962-1972) but production was not reported afterwards.
- Bonter Quarry, Lot 9, 10th Concession, Marmora Township, Hastings County, Ontario. F. and J. Bonter, and then J. W. Bonter, were listed as operators from 1930 to 1934 (1931-1935). The Bonter Marble and Calcium Company was then listed intermittently from 1935 to 1946 (1936-1946). W. F. Bonter, of Malone, was listed in 1942 and 1944 (1946-1947). J. W. Bonter was listed again from 1944 to 1946 (1947-1948). A second property, on the same lot in the 4th Concession was also listed.
- Boucher Quarry, Portland East Township, Papineau County, Québec. Télésphore Boucher, of Notre-Dame-de-la-Salette was listed as an operator from 1942 to 1945 (1943-1946).
- Bourdon (Winning) Quarry, Lot 6, 2nd Concession, North Plantagenet Township, Ontario. On the farm of E. Bourdon, and about 1.5 km west of Plantagenet Springs Station on the Canadian Pacific Railway, it was reported to have been worked originally for building stone. In 1920 the Counties of Prescott and Russell obtained limestone for road construction from it (1921).
- Bourgie Quarry, 8th Concession, Russell Township, Russell County, Ontario. Near Gregnon, it was operated by J. B. Bourgie, of Embrun from about 1925 to 1938 (1926-1939).
- Braeside Quarry, Renfrew County, Ontario. At Braeside (1904), it was reported to have been operated by a Mr. Barnet.
- T. G. Brigham Quarry, Hull, Québec (Canada, Mines Branch, 1916).
- Britnell and Company Quarry, Lot 13, 6th Concession, Somerville Township, Victoria County, Ontario. Crushed limestone was reported to have been produced from this quarry (1916).
- Bromley Quarry, Lot 7, 7th Concession, Bromley Township, Renfrew County, Ontario. An abandoned quarry, in limestone, was reported on the north side of the road in Lot 7 (Satterly, 1945).
- Bromley Quarry, Lot 1, 8th Concession, Bromley Township, Renfrew County, Ontario. The quarry was mentioned as being northwest of Douglas Station on the Canadian National Railway, and about 125 m west of the east boundary of the lot (Satterly, 1945). The limestone was described as fine-grained brownish-grey, with chert nodules and silicified fossils. It was mined for stone to construct culverts along the railway, and for houses.
- Bromley Quarry, Lot 2, 8th Concession, Bromley Township, Renfrew County, Ontario. In the west half of the lot and about 1.25 km northwest of Douglas Station on the C N R, it was reportedly mined for road metal (Satterly, 1945).
- E. D. Brulé and Sons (Hog's Back, Billings Bridge) Quarry, Gloucester Township, Carleton County, Ontario. These old quarries, at Hog's Back, on the bank of the Rideau Canal, were reported to have been abandoned for several years in 1903 (1904). Crushed limestone was produced by the Brulé company from about 1921 to 1934 (1922-1935).
- Brundige Construction Company Quarry, Wolford Township, Grenville County, Ontario. First reported as a source of limestone in 1972 (1977), mining continued until at least 1974 (1978).
- Brundige Construction Company Quarry, Augusta Township, Grenville County, Ontario. Production began in 1972 (1972) and continued until at least 1974 (1978).

- Brundige Construction Company Quarry, Drummond Township, Lanark County, Ontario. This quarry was reported as being mined in 1972 (1977).
- Brundige Construction Company Quarry, Montague Township, Lanark County, Ontario. First reported as a producer in 1972 (1977), it was active until at least 1974 (1978).
- Brundige (and Quinton) Construction Company Quarry, Kitley Township, Leeds County, Ontario. The company, from Jasper, was reported as a producer from 1927 to 1971 (1929-1977).
- Brundige Construction Company Quarry, Bastard & South Burgess Township, Leeds County, Ontario. The quarry seem to have opened in 1972 (1977) and to have been mined until at least 1974 (1978).
- Brundige Construction Company Quarry, Elizabethtown Township, Leeds County, Ontario. First reported in 1972 (1977), it was active until at least 1974 (1978).
- Brundige Construction Company Quarry, Rear of Yonge and Escott Townships, Leeds County, Ontario. First reported as a producer in 1972 (1977), it was active until at least 1974 (1978).
- Brunner Mond Canada, Amherstburg, Ontario. The quarry was reported as active in 1960-1967 (1962-1969).
- Bryson Quarry, Lot 7, 2nd Concession, Elizabethtown Township, Leeds County, Ontario. The quarry was reported to have been operated by G. H. Bryson (1922).
- Butler's Quarry, East Hawkesbury Township, Prescott County, Ontario, about 5 km west of L'Orignal (1904).
- Cameron Quarry, Lot 24, 11th Concession, Drummond Township, Lanark County, Ontario. The stone was reportedly used to manufacture lime (1924)
- Cameron Quarry, Ramsay Township, Lanark County, Ontario, about 3 km north of Carleton Place. Sabina reported (1986) that the quarry was operated about 1940 by Mr. W. D. Cameron, of Carleton Place. It was also operated by W. M. Cameron from 1915 to 1942, with the crystalline limestone being used to produce lime (1922, 1927, 1929-1946).
- Cameron Brothers and Hultz Quarry, Elmsley Township, Lanark County, Ontario. Production of crushed limestone was reported from this quarry (1924).
- Campbell Construction Company Quarry, Tudor Township, Hastings County, Ontario. It was reportedly operated by N. S. Campbell, of Toronto from 1938 (1940).
- Canada and Dominion Sugar Company, Leeds County, Brockville, Ontario. The quarry was listed from 1944 to 1945 (1947-1948).
- Canada Cement Quarry, Hull Township, Gatineau County, Québec. At Saint-Raymond Street, Hull, the property was reported to have been opened by the International Portland Cement Company Limited in 1903 and acquired by the Canada Cement Company in 1909. It was reported as operating in 1913 (1914) and continued until 1975 (Sabina, 1987). The output in 1958 was reported at 1125 tons per day (1959), while in 1959 production was 260 000 tons (1961). It was 176 000 tons in 1962 (1964).
- Canada Cement (Company) Lafarge Quarry, Thurlow Township, Hastings country, Ontario. At Point Anne, about 10 km east of Belleville, it was operated from 1913 until at least 1973 (1915-1977). The limestone was shipped on the Grand Trunk, Canadian Northern, and later, Canadian National Railways. The Canada Cement Company became Canada Cement Lafarge in 1972. Production was not reported in 1974 (1978).

- Canada Cement Lafarge Quarry, Bath, Ontario. Close to the shore of Lake Ontario, on a property of about 2 000 acres, the quarry was opened in 1973 (1974). Initial production was at the rate of about 1 000 000 tons per annum (1975).
- Canada Cement Lafarge Quarry, Ernestown Township, Lennox and Addington County, Ontario. It was reported as a producer in 1974 (1978).
- Canada Cement Company Quarry, Port Colborne, Ontario. The quarry was reported as active from 1959 until 1967 (1961-1969).
- Canada Lime Company, Lots 37 to 40, Somerville Township, Victoria County, Ontario. This quarry was listed in 1916 and from 1937 to 1941 (1939-1946).
- Canada Lime Company, Lots 4 to 6, in the village of Coboconk, and a quarry at Sand Point, McNab Township, Renfrew County, near Renfrew, Ontario. Once was reported to have been the largest producer of pure white lime in the province (1916), it was listed again as producing in 1937-1938 (1939-1940).
- Canada Marble and Lime Company Quarry, Québec, near the village of L'Annonciation. Described in the 1934 report (Osborne, 1935), it was mentioned that the quarry had been opened many year ago and that it had supplied the lime for the plaster in the village church. It was later operated by the L'Annonciation Marble Company, and then by the Canada Marble and Lime Company. The quarry was reported to have been along a hillside that slopes eastward towards a stream and a swamp. The minerals reported were: serpentine (including an amber variety known locally as onyx), tremolite, scapolite (the altered blue and lilac variety known as willsonite), and cinnamon-brown chondrodite (1935).
- Canada Talc Limited, Huntingdon Township, Hastings County, Ontario. This mine was also listed as a producer of limestone. See the main listing under Talc.
- Canadian Magnesite Company Quarries, Lot 15, 9th Range and Lot 18, 11th Range, Grenville Township, Argenteuil County, Québec. These were reported in 1914 by the Canadian Mines Branch (1915).
- Canadian Refractories Limited, Kilmar, Québec. The company was listed as a producer of lime from 1942 (1943).
- Canfarge (Francon) Quarry, Gloucester Township, Carleton County, Ontario. Near Bearbrook and Orleans, it was reported to have been operated by Ottawa Valley Crushed Stone Limited, and then Francon (1966) Limited. In 1973 it became the Francon Division of Canfarge Limited. It was listed as a producer from 1968 (1970) to at least 1974 (1978)(Sabina, 1986).
- Canfarge (Permanent Concrete) Quarry, Elizabethtown Township, Leeds County, Ontario. Permanent Concrete was listed as a producer from 1968 (1970) until 1973 (1977). The quarry was taken over by Canfarge and produced under that name in 1974 (1978).
- Canfarge (Permanent Concrete) Quarry, Cornwall Township, Stormont County, Ontario. This quarry was listed as a producer in 1974 (1978).
- Carleton Lime Products, east half of Lot 8, 4th Concession, Ramsay Township, Lanark County, Ontario. The company, of Carleton Place was listed as a producer of lime and limestone from 1944 to 1970 (1947-1972).
- Carswell Quarries, Pontiac County, Québec. At Bryson, These two quarries were reported by the Canadian Mines Branch in 1914 (1915). R. B. Carswell, of Bryson, was reported as an

- owner/operator in 1923 (1924) and from 1929 to 1943 (1930-1944). The stone was reported to have been used for lime.
- Caughnawaga Quarry Limited Property, Pontiac County, at Bryson, Québec. The company was listed as an owner/operator in 1932 (1933).
- Central Experimental Farm Quarry, Ottawa (1922).
- Central Paving and Excavation Quarry, Templeton Township, Papineau County, Québec. The quarry was reported to have begun operating in late 1964 (1967).
- Chromasco Corporation (Dominion Magnesium) Mines, Ross Township, Renfrew County, Ontario. Mining at this property began in 1942. See the listing under Dolomite.
- City of Hull, Québec. The city was reported as an owner/operator from 1923 to 1924 (1924-1925).
- City of Kingston Quarry, Montréal Street. The limestone was reported to have been used for street purposes (1916-1919).
- City of Ottawa Improvement Commission Quarry, Carleton County, Ontario. The quarry was reportedly at the corner of Carlington Avenue and Le Breton Street, Ottawa (1922).
- Cloutier and Grenon Quarry, Lot 20, 16th Concession, South Plantagenet Township, Prescott County, Ontario, near Casselman (1923-1930).
- Cloutier and Grenon Quarry, 10th Concession, Cambridge Township, Ontario. Near Limoges. It produced in 1929-1931 (1930-1931).
- Cloutier and Grenon Quarry, Russell County, Ontario, near Rose's Corners (1923-1924).
- Clyde Construction Company Quarry, Pakenham Township, Lanark County, Ontario. Near Vernon, it was reported to have been operated by E. Jamieson, of Carleton Place, in 1936 (1938). It was listed again in 1939 (1941).
- Code Quarry, Oso Township, Frontenac County, Ontario. S. B. Code, of Smiths Falls, was listed as an operator from 1927 to 1929 and in 1938 (1929-1930, 1939).
- Cornwall Gravel Company Quarry, Cornwall Township, Stormont County, Ontario. This quarry was listed as a producer from 1970 (1972) to at least 1974 (1978).
- Corporation Quarry, Prince Edward County, Ontario, at Picton (1904).
- Corporation (Municipality) of Pembroke Quarry. The corporation was listed as an operator from 1927 to 1942 (1929-1946). See also the listing for the Markus Quarry (below).
- Corporation of Prescott Quarry. Production from this quarry was reported in 1919 (1920).
- Côteau-du-Lac Quarry, Parish of Saint-Ignace-du-Côteau-du-Lac, Vaudreuil-Soulanges County, Québec. Operated by Carrière Côteau-du-Lac Inc. from 1962 to 1964, it was reported to have produced between 1500 to 2000 tons of crushed limestone per day (1964-1967).
- Coughlin Quarry, Smith's Falls, Ontario. Operated by D. Coughlin, it was reported as idle in 1915 (1916).
- Counties (United) of Dundas, Stormont, and Glengarry Quarry, Finch, Ontario. The United Counties were reported as an operator from 1927 to 1928 (1929-1930).
- Counties of Prescott and Russell Quarry, Winning Quarry, Lot 6, 2nd Concession, North Plantagenet Township, Prescott County, Ontario. The limestone was reported to have been used for roads (1923-1924).
- Counties (United) of Stormont, Dundas and Glengarry Quarry, Lot 13, 8th Concession, Finch Township, Ontario. It was reportedly mined for crushed stone (1924-1927).
- County of Carleton Quarry, Gloucester Township, Ontario. The quarry was operated from 1925

to 1929 (1926-1930).

- County of Frontenac Quarry, 2nd Concession, Pittsburgh Township, Frontenac County, Ontario. Crushed limestone was produced from this quarry (1922).
- County of Lanark Quarry, Lot 11, 13th Concession, Pakenham Township, Lanark County, Ontario. Production of crushed limestone for roads was reported (1922).
- County of Lennox and Addington Quarry, Lot 23, 3rd Concession, South Fredericksburg Township, near Bath. The limestone was reported to have been used for roads (1922).
- County of Lennox and Addington Quarry, Lot 35, 1st Concession, Ernestown Township, near Bath. The limestone was used for roads (1922).
- County of Lennox and Addington Quarry, Lot 45, 4th Concession, Camden Township, near Enterprise. The limestone was used for roads (1922).
- County of Lennox and Addington Quarry, Lot 18, 2nd Concession, Fredericksburg Township. It was reported to have been mined for crushed stone (1924).
- County of Prescott Quarry, South Plantagenet Township, Prescott County, Ontario. It produced crushed stone for roads (1922).
- County of Prescott Quarry, Winning Quarry, Lot 6, 6th Concession, North Plantagenet Township, Prescott County, Ontario. The limestone was reportedly used for roads (1922).
- County of Prince Edward Quarry, 2nd Concession, Hallowell Township, Prince Edward County, Ontario, near Picton. The limestone was crushed for roads (1922).
- County of Prince Edward Quarry, 2nd Concession, Hillier Township, Prince Edward County, Ontario, near Picton. The limestone was crushed for roads (1922).
- County of Prince Edward Quarry, Lot 107, 4th Concession, Hillier Township, Prince Edward County, Ontario. It was mined to produce crushed stone (1924).
- County of Prince Edward Quarry, Hillier Township, Prince Edward County, Ontario, near Allisonville. The stone was used for roads (1922).
- County of Russell Quarry, 4th Concession, Clarence Township, Russell County, Ontario. Near Bourget. The stone was crushed for roads (1922).
- County of Russell Quarry, Embrun Quarry, Lot 8, 8th Concession, Russell Township, Russell County, Ontario, near Embrun. The limestone was crushed for roads (1922-1924).
- County of Russell Quarry, Francoeur Quarry, 6th Concession, Cambridge Township, Russell County, Ontario. About 1 km from Casselman on the east bank of the South Nation River and on the farm of G. L. Francoeur, it was worked by the Counties of Prescott and Russell in 1921-1922 for road stone (1921-1922).
- County of Russell Quarry, Lot 9, 5th Concession, Clarence Township, Russell County, Ontario. The stone was used for roads (1923-1924).
- Crookston Quarry, Lot 19, 9th Concession, Huntingdon Township, Hastings County, Ontario. Near Crookston Station on the Belleville-Madoc Branch of the Grand Trunk Railway and about 10 km south southeast of Madoc, it was mined between 1890 and 1927 (with Sabina reporting that the limestone was used for the piers of the Victoria and South Shore Bridges, in Montréal). In 1914, it was operated by Messrs. Quinlan and Robertson (1915). Dimension stone was reported to have been produced.
- Crushed Stone Limited, Lot 49, Eldon Township, Victoria County, Ontario, on the Trent Canal near the village of Kirkfield (1916).
- Crystallite Products Quarry, Bancroft, Ontario. The company was reported as an operator from

1930 to 1931 (1931).

Davidson Quarry, Lot 59, Range D North, Opeongo Road, Grattan Township, Renfrew County, Ontario. On the farm of A. Davidson, the limestone was reported to have been used, about 1880, in the construction of the Esmonde Church (Satterly, 1945). See also the Grattan listing, below.

Delta Lime Company Quarry, Lot 27, 8th Concession, Bastard Township, Leeds County, Ontario. In 1914, it was reported that this quarry was then one of the oldest producers in eastern Ontario (1915). It operated until 1916 (1917).

Dennison Quarry, Ernestown Township, Lennox and Addington County, Ontario. J. C. Dennison was listed intermittently as a producer from 1968 (1970) to 1973 (1977). S. & G. Dennison was listed the following year (1978).

S. & G. Dennison Quarry, North Fredericksburgh Township, Lennox and Addington County, Ontario. This quarry was listed from 1969 (1971) to at least 1974 (1978).

Department of Highways, Ontario, Carleton County. The Department was reported as a producer in 1969-1970 (1971-1972).

Department of Highways, Ontario, Frontenac County. Production from this quarry was mentioned in 1969-1970 (1971-1972).

Department of Highways, Ontario, Hastings County. Production in 1969-1970 was also reported from this quarry (1971-1972).

Department of Public Highways of Ontario Quarry, Lot 28, 1st Concession, Augusta Township, Grenville County, Ontario. The crushed rock was reported to have been used for highways (1922).

Department of Public Highways of Ontario, Windmill Point Quarry, near Prescott. It produced crushed limestone for roads (1922).

Department of Public Highways of Ontario Quarry, Lot 30, 2nd Concession, Tyendinaga Township, Hastings County, Ontario. It also was mined for crushed limestone for roads (1922).

Department of Public Highways of Ontario Quarry, Lots 16 and 17, 3rd Concession, Thurlow Township, Hastings County, Ontario. Production of crushed limestone for roads was reported (1922).

Department of Public Highways of Ontario Quarry, Lot 30, 8th Concession, Beckwith Township, Lanark County, Ontario. The quarry was reported to have been mined for limestone, which was then crushed (1922).

Deschênes Construction Quarry, Hull Township, Gatineau County, Québec. A quantity of 911 000 tons of crushed limestone was reportedly mined in 1962 (1964). Production was reported until 1964 (1967), with twenty-six then employed.

Devonshire Park Quarry, Coulange and Black River area, Pontiac County, Québec. In 1932, it was reported that this quarry had been operated several years previously but that the adjacent land had been divided into cottage lots (1933).

Diblee Construction, Bowes Quarry, McCarthy Road, Ottawa, Ontario. The quarry was reported by Sabina (1986) to have been inactive. It was, however, probably the one belonging to the company that was reported to have operated in 1968 (1970).

Diblee Construction Limited, Boyce Quarry, Greeley, Ontario (Sabina, 1986).

Dibblee Construction Company Quarry, Gloucester Township, Carleton County, Ontario. First

- reported in 1969 (1971), it was still active in 1974 (1978).
- Dibblee Construction Company Quarry, Montague Township, Lanark County, Ontario. First reported in 1972 (1977), it was still active in 1974 (1978).
- Dibblee Construction Company Quarry, Nepean Township, Carleton County, Ontario. First reported as a producer in 1972 (1977), production was mentioned until at least 1974 (1978).
- Dibblee Construction Company Quarry, Lot 14, 2nd Concession, Beckwith Township, Carleton County, Ontario. Operation was reported from 1930 until 1933 (1931-1933). It was possibly also active in 1968 (1970).
- Dibblee Construction Company Quarry, Grenville County, Ontario. The company was reported as an operator at this site from 1930 to 1931 (1931).
- Dibblee Construction Company, Stevens Quarry, about 3 km south of Hawkesbury, Ontario. It was listed as being a source of limestone from 1935 to 1936 (1936-1937).
- Dibblee Construction Company Quarry, Kingston Township, Frontenac County, Ontario. This quarry was also listed as having been mined in 1972 (1977).
- Dibblee Construction Company Quarry, Cornwall Township, Stormont County, Ontario. Production was reported from 1972 (1977) until at least 1974 (1978).
- Dominion Rock Products Quarry, Lot 16, 17th Concession, Grattan Township, Renfrew County, Ontario. The company, of Eganville, was listed intermittently as a producer from 1927 to 1939 (1929-1941). The limestone was then mined for dimension stone to construct culverts on the Grand Trunk (now Canadian National) Railway, and for burning into lime in a kiln situated on Lot 10 of the same Concession. When Satterly reported on it in 1944 (1945), the quarry was the 300 by 150 by six to 10 ft.
- Dominion Tar and Chemical (Gypsum Lime and Alabastine Canada, Standard Lime Company) Quarries, Saint-Paul-de-Joliette, Québec. The Standard Lime Company was mentioned as mining the quarry from 1936 to 1958 (1937-1959). It was reported that underground operations began at Joliette in late 1937 (1939). In 1959, Gypsum Lime and Alabastine succeeded Standard Lime (1961). It, in turn, was succeeded by Dominion Tar and Chemical in 1962 (1964). The production was reported at about 50 000 tons per month in 1959 (1961), and 3 000 tons per day of crushed limestone in 1962 (1964). It produced from 1960 (1962).
- Domtar Chemicals Quarries, Saint-Pierre and Sainte-Emilie Townships, Joliette County, Québec. Crushed limestone was produced from about 1964 (1967).
- Donaldson Quarry, Lot 26, 12th Concession, Bathurst Township, Lanark County, Ontario. Operated by C. Donaldson, of Lanark, the stone was used to manufacture lime (1924).
- J. Dufresne, of Hull, Québec. He was listed as a producer in 1913 (1914).
- Dupuis et Fils Quarry, Hull, Québec. It was reported to have been south of the Fleming-Dupuis Quarry (Canada, Mines Branch, 1916) (see the listing below).
- Dyer's Quarry, Brockville, Ontario. A short distance from the Insane Asylum (now the Brockville Psychiatric Hospital), it adjoined Sherwood's Quarry (1904).
- Eagleson Quarry, Mountain Township, Dundas County, Ontario, at Winter. Operated by F. M. Eagleson, it was reported to have been the source of crushed limestone (1922).
- East Hawkesbury Quarries, Lot 15, 7th Range, East Hawkesbury Township, Prescott County, Ontario. At the crossing of a road at the Rivière à la Graise, it was reported to have been

- one of several quarries in the area (1904).
- Easton's Quarry, Brockville, Ontario. The quarry was reported to have been about 3 km northwest of Brockville on the Perth Road (1904).
- Eckford's Quarries, Renfrew County, Ontario, east of Arnprior (1904).
- Eganville Quarry, Lot 19, 20th Concession, Grattan Township, Ontario. Close to Eganville, on the east, the quarry was opened by the Standard Chemical, Iron and Lumber Company. Thirty-five were employed in 1913 (1914). This could be the same quarry, just south of the Lutheran Church between the Bonnechere River and a road, that was reported as abandoned by Satterly (1945). The rock may have been used for the construction of the Roman Catholic Church and the Eganville Bridge.
- Ellis Quarry, on the Bay of Quinte Railway, Ontario. It was reported to have been a short distance south of Actinolite (formerly Bridgewater) (1904).
- Embrun Quarry, Russell County, Ontario. This quarry was mentioned as being about 2 km south of Embrun Station on the Ottawa and Cornwall Railway (1904).
- George Farmer and Sons Quarry, Gloucester Township, Ontario. The quarry was listed as a shipper in 1926 (1927).
- George Farmer Construction Company (George Farmer and Sons) Quarry, Lot 31, 7th Concession, Osgoode Township, Carleton County, Ontario. At Vernon, it was reported as a source of crushed limestone (1922-1926).
- Faubert Quarry, Lachute, Québec. The company was listed as an owner/operator in 1928 (1929).
- Federal Lime Quarry, see the Shane Lime and Charcoal listing, below.
- Federal Stone and Supply Company Quarry, Hull, Québec. On the south side of Brewery Creek and bounded by Regent, Garneau, and Carillon Streets, it was 22 ft deep when it was reported by the Canadian Mines Branch in 1915 (1916). The company was reported as an owner/operator in 1923 (1924) and 1929 (1930).
- Fergus Quarry. This quarry was reported to have been operated by James Gow, of Fergus, Ontario, in 1936 (1937).
- Ferguson Quarry, Lot 23, 2nd Concession, Hallowell Township, Prince Edward County, Ontario. Operated by E. Ferguson, of Picton, it was mined to produce crushed stone (1924).
- Fetterly's Rock Quarry, Matilda Township, Dundas County, Ontario. Production from this quarry was reported from 1968 to 1974 (1970-1978).
- Filion Quarry, Argenteuil County, Québec. Adélard Filion, of Lachûte, was reported as an owner/operator from 1924 to 1939 (1925-1940). Aldège Filion was then listed from 1940 to 1946 (1941-1947).
- Filion Quarry, Hull, Québec. Donat Filion, was listed as an owner/operator from 1936 (1937).
- Filion Quarry, Lachûte, Québec. Joseph Filion was listed as an owner/operator in 1943 (1944).
- Fleming Dupuis Supply Company Quarry, Hull, Québec. This large quarry, south of Brewery Creek, was not operating when it was reported by the Canadian Mines Branch in 1915 (1916).
- Forbes Building Materials Quarry, Mountain Township, Dundas County, Ontario. The company was listed as a producer in 1971 (1977).
- Foster Quarry, Nepean Township, Carleton County, Ontario. At Merivale Road, Ottawa, it was reported to have been operated by R. R. Foster from 1925 to 1939 (1926-1941). It was reported as idle in 1935.

- Foster and Cram Quarry, Gloucester Township, Carleton County, Ontario. The quarry was reported to have been on the bank of the Rideau Canal (1922-1924).
- Foster and Cram, City View Quarry (1922).
- Francon Quarry, see the listing for Canfarge, above.
- Fraser Brace Engineering Company Quarry, Low and Denholm Townships, Gatineau County, at Chelsea Falls, Québec. The company was reported as an owner/operator in 1925 (1926) and 1928 (1929).
- Fras(z)er Duntile Quarry, Gloucester Township, Carleton County, Ontario. At Carling and Clyde Avenues, Ottawa, and operated by Fras(z)er Duntile Company Limited, it was listed as a producer from 1968 (1970) to 1970 (1972). Sabina reported (1986) that it was then inactive.
- Frontenac Quarries Limited, Kingston Township, Frontenac County, Ontario. Production was reported in 1968-1969 (1970-1971).
- Gamble Quarry, Lot 20, 1st Concession, Alfred Township, Prescott County, Ontario. The quarry, near Lefaivre, was reported to have been mined by Fred Gamble and Company for limestone for roads (1922).
- Garvock Quarry, Carleton County, at the corner of Willow and Preston Streets, in Ottawa (1922).
- Gauthier Quarry, Hull Township, Gatineau County, Québec. It was reported to have been operated by Roland Gauthier in 1959-1960, at a production rate of 16-30 tons per day (1961-1962). The product was used in nearby paper mills.
- Gibson's Quarry, Crookston, Hastings County, Ontario. Once owned by Senator Gibson, the quarry is beside the North Hastings Branch of the Grand Trunk Railway (1904).
- Glen Lawrence Construction Quarry, Kingston Township, Frontenac County, Ontario. The quarry was listed as producing in 1968-1974 (1970-1978).
- Glen Robertson Quarries, Glengarry County, Ontario (1904).
- Gloucester Quarry, Gloucester Township, Carleton County, Ontario. About 5 km from Cummings Bridge on the Montréal Road, it was operated by H. Robillard and Sons in 1910, with 25 workers on the property in the summer (1911).
- Gosselin's Quarry, Lot 22, Gloucester Township, Carleton County, Ontario. Close to Robillard's Quarry (see the listing below) and on the Montréal Road, the quarry was reported to have been opened in 1913 by C. Gosselin. Ten people were employed (1914) and it appears that it operated until 1915 (1916).
- Grant Quarry, Lot 9, 1st Concession, Gloucester Township, Carleton County, Ontario. This was mentioned as being a former Gosselin quarry (1923-1924).
- Grant Quarry, Lot 16, 2nd Concession, Nepean Township, Carleton County, Ontario. This was also mentioned as a former Gosselin quarry (1923-1924).
- Grant Quarry, 6th Concession, Cambridge Township, Russell County, Ontario, near Casselman. Operated by Grant Brothers, the stone was reported to have been used used for roads (1922).
- Grant Quarry, Smiths Falls, Ontario. It was reported to have been operated by Grant Brother Construction, of Ottawa, in 1927 (1929).
- Grant Brothers Construction Company Quarry, Cardinal, Ontario. Shipments were reported in 1926 (1927).

- Grant Brothers Construction Company Quarry, Leeds County, Ontario. Reported to have been about 3 km north of Brockville, it was operated from about 1930 to 1931 (1931).
- Grassy Bay Quarry, Lot 14, 11th Concession, Bagot Township, Renfrew County, Ontario. This quarry was reported to be just west of Grassy Bay on Calabogie Lake, and south of Barryvale. Satterly (1945) reported a shallow quarry in grey limestone.
- Grattan Quarry, Lot 55 or 56, Range D North, Opeongo Road, Grattan Township, Renfrew County, Ontario. Satterly (1945) reported that a small pit, in limestone, was said to have been worked at this location about 1880 to provide stone for the Esmonde Church. See also the Davidson listing, above.
- Grenon Quarry, Ontario. Near Saint Isadore, it was reported to have been operated by Chautier Grenon, of Casselman (1926). James Grenon was listed in 1935-1937 (1936-1938).
- Grenville Crushed Stone (Grenville Crushed Rock Company, until 1923) Quarry, east half of Lot 9, 4th Concession (Gaw Farm), Lot 8, 4th Concession (Hanlan Farm), and south half of Lot 8, 3rd Concession (Kelsey Farm), Oxford Township, Grenville County, Ontario. Near Deek's Siding on the Montréal to Smith's Falls line of the Canadian Pacific Railway, it was reported to have been opened in 1920 and operated until 1933 (1922-1933).
- Griffin Brothers Limited Quarry, Front of Leeds and Lansdowne Township, Leeds County, Ontario. At Gananoque, it was listed as a producer in 1968-1969 (1970-1971).
- Guilbault & Frère Quarry, Sainte-Elizabeth, Joliette County, Québec. The company was listed as an owner/operator from 1936 to 1943 (1937-1944).
- Halliday Quarry, Lot 23, Gloucester Township, Carleton County, Ontario. The quarry was reported to have been operated by Fred Halliday, of Ottawa, from 1925 to 1927, 1933, and 1935-1936 (1926-1929, 1933, 1936-1937). It was reported as being idle in 1935.
- Harnden and King Construction Quarry, Lennox and Addington County, Ontario. At Napanee, production was mentioned in 1974 (1978).
- Harrison's Quarry, Actinolite, Ontario (1904).
- Harvey Quarry, at Actinolite, Ontario. This quarry was reported to have been operated by D. Dewar, of Kingston, in 1937 (1939).
- Harvey Quarry, at Alexandria, Ontario. This quarry was also reported to have been operated by D. Dewar, of Kingston, in 1937 (1939).
- Hastings Quarry, Lot 11, 13th Concession, Hungerford Township, near Actinolite, Ontario. It was reported to have been operated from 1913 to 1915 (1914-1916) with 20 employed.
- Henniger Quarry, Goulbourn Township, Carleton County, Ontario. M. G. Henniger, of Smiths Falls, was listed as an operator from 1928 to 1929 (1930).
- Henniger Quarry, Kitley Township, Leeds County, Ontario. This quarry was also operated by M. G. Henniger, of Smiths Falls, from 1932 to 1936 (1932-1937). It was reported as being idle in 1935.
- Henniger Quarry, Drummond Township, Lanark County. Also operated by M. G. Henniger, it was mined from 1930 to 1931 (1931).
- Henniger Quarry, North Elmsley Township, Lanark County, Ontario. This quarry was operated by C. F. Henniger, of Smiths Falls, from 1936 to 1937 (1938-1939).
- Higginson and Stevens, Hawkesbury, Ontario. Operations were reported in 1915 and 1916 (1916-1917).
- Highway 14 Quarry, about 14 km from Marmora, Ontario (Sabina, 1987).

- Highway 17 Quarry, about 6 km south of Orleans, Ontario. Sabina (1986) reported that it was inactive.
- David T. Hodgins, Shawville, Québec. He was reported as an owner/operator in 1924 (1925).
- Holdcroft Construction Company Quarry, Ontario. The quarry was reported in 1930, and was probably in the Kingston area (1931).
- Holmes Quarry, Mallorytown, Ontario. F. T. Holmes, of Kemptville, was listed as an operator from 1926 to 1927 (1927-1929).
- Horton Quarry, Lot 16, 1st Concession, Horton Township, Renfrew County, Ontario. On the west face of a hill, the quarry exposed crystalline limestone above fine-grained hornblende gneiss. The stone was used for road metal (Satterly, 1945).
- Hull Cut-Stone Quarry, Hull, Québec. The company was listed as owner/operator in 1932 (1933).
- Hungerford Quarry, Lot 10, 9th Concession, Township of Madoc, Hastings County, Ontario. Opened in 1902, its limestone was reported to have been used for heavy construction such as the bridges across Toronto's Don Valley (1904).
- Hungry Bay Quarry, Hungry Bay, Lochiel Township, Glengarry County, Ontario. Limestone from this quarry was reported to have been used in the construction of the Canada Atlantic Railway Bridge (1904).
- Hydro Electric Power Company Quarry, Township not specified, Lennox and Addington County, Ontario. The company was reported as a producer from 1970 (1972) to 1971 (1977).
- Hydro Electric Power Quarry, Addington Township, Lennox and Addington County, Ontario. Production from this quarry was reported in 1972 (1977).
- Hydro Electric Power Quarry, South Fredericksburgh Township, Lennox and Addington County, Ontario. Production was reported in 1973 (1977).
- Indian River Quarry, Lot 24, 9th Range, Ramsay Township, Lanark County, Ontario. Close to the Indian River, the quarry was reported to have provided foundations and facings of buildings in Almonte and Pakenham (1904). The name of the quarry was not given in the reference and has been assigned by this author.
- Irvine Quarry, Frontenac County, Ontario. Near Harrowsmith, it was reported to have been operated by the Edgar Irvine Company from 1936 (1938).
- Irvine Quarry, Glengarry County, Ontario. Near Alexandria, it was also operated by the Edgar Irvine Company from 1936 to 1937 (1938-1939).
- Irvine Quarry, near Pembroke, Ontario. The Edgar Irvine Company, of Alexandria, was listed operating this quarry from 1927 to 1929 (1929-1930).
- Jamieson Quarries (three), Lot 10, 10th Concession, Ross Township, Renfrew County, Ontario. The quarry was reported to be on the slope of a hill beside the road (Satterly, 1945). J. M. Jamieson, of Forester Falls, (near Cobden), was listed as a producer from 1925 to 1927 (1926-1929). These may be the quarries which he mined.
- Jamieson's Quarries (Du Valiquette, Frood Farm, Jamieson, McLaren, Third Line), Horton Township, Renfrew County, Ontario, at Renfrew (1904). In 1914, it was reported that the Jamieson Lime Company operated three quarries: one inside the town limits of Renfrew, north of the Roman Catholic Church, and two in the 2nd Concession, Horton Township, about 3 km south (1915). The quarries in Renfrew were in blue and grey crystalline limestone. These were worked from 1890 to 1923, for both building stone and lime. The Roman Catholic Church was built of stone from this location. All were reported to have

been abandoned by 1944 (Satterly). Of the quarries in the 2nd Concession, one of these, on Lot 5, 2nd Concession, was on the J. B. McLaren, or Frood, Farm, and on the Du Valiquette Farm. This quarry, about 500 by 250 by 25 to 30 ft, was in a pale blue-grey clean crystalline limestone. The minerals identified were phlogopite, muscovite, biotite, pyroxene, vesuvianite, and purple fluor spar (Satterly, 1945). Two other quarries were in Lot 9 of the 2nd Concession. These were mined for building and dimension stone prior to 1922, and for lime thereafter. Both were abandoned by 1944 (Satterly). Another quarry, on the east side of Renfrew, was known as the *Third Line Quarry*. This latter quarry, in crystalline limestone, was reputed to have been worked by Archie Anderson, of Renfrew, for monument stone about the turn of the century. A fourth quarry, north of Renfrew, was on the east half of Lot 14, 3rd Concession, Horton Township - on the Jamieson Homestead (it was not mined in 1920). The stone from these quarries was used for foundations. A few years previously the limestone had been used as flux in the Sudbury smelters. Mining was reported from 1916 to 1946 (1917-1948). The *Frood Farm Quarry* location was listed in 1934.

Johnson Brothers Quarry, Lot 26, 2nd Concession, Cornwall Township, Stormont County, Ontario. At Mille Roches, it operated from 1931 to 1932 (1931-1932).

Joliette Quarry, Sainte-Thérèse Parish, Joliette County, Québec. Operated by Carrière Joliette Limitée, it was reported to have been the source of 1000 tons of crushed limestone per day in 1960-1964 (1962-1967).

Joliette Asphalt Quarry, Saint-Jacques Parish, Joliette County, Québec. It was operated for crushed limestone, from about 1964, by Joliette Asphalte Limitée (1967).

Kehoe Brothers Quarry, Pembroke Township, Renfrew County, Ontario. Adjoining the Markus Quarry on the north, stripping was reported to have begun in 1914 (1915-1916).

Kingdon Mining and Smelting Company Quarry, Galetta, Ontario. Intermittent production was reported from 1925 to 1929 (1926-1930).

Kingston Quarries (see the listing for Roddy and Monk, below).

Kingston Penitentiary Quarry, Portsmouth, Ontario. At Penitentiary Reserve, operations were reported from 1925 to 1946 (1927-1948).

Kirby Quarries (Baseline Road, Junction Gore), Gloucester Township, Carleton County, Ontario, on Baseline Road. The T. Sidney Kirby Company was listed as producing limestone and sandstone early in the century (1915) and as a producer of limestone in 1924 (1926) and 1933 to 1936 (1933-1937). A quarry at *Junction Gore* was reported in 1936-1941 (1938-1946), while the *Baseline Road* location was listed from 1942. It was operated by the Kirby Brothers Supply Company until 1943 (1944).

Kirkley Property, Ontario, at North Fredericksburgh. Harry Kirkley, of Napanee, was listed as a shipper in 1926 (1927).

Lake Ontario (Portland) Cement Operations, Sophiasburg Township, Prince Edward County, Ontario. Near the shore of Lake Ontario, and about 3 km northeast of Picton, it has been operated from about 1959 to the present (1961). In 1973, production was at the rate of 2200 tons per day (1974).

Lalonde Ready Mix Concrete, Cornwall Township, Stormont County, Ontario. The company was listed as a producer from 1968 (1970) to 1970 (1972).

A. Laurendeau and Company Quarry, Lachûte, Québec. The company was listed as an

- owner/operator from 1936 (1937).
- Laurentian Quarries, Terrebonne County, Québec. At Saint-Antoine-des-Laurentides, and operated by Les Carrières Laurentiennes Limitée, it was reported to have produced 1000 tons per day in 1960-1964 (1962-1967).
- Laurentian Stone Company Quarry, Hull, Québec. The company was reported as the owner/operator of a quarry at Wrightville (later Hull) from 1925 to 1931 (1926-1932) and from 1934 to 1946 (1935-1947).
- Laurentian Stone Company Quarries, Ontario. Reportedly near Ottawa, it was listed from 1937 (1938).
- D. O. Laviolette, Hull, Québec. Mr. Laviolette was reported as an owner/operator in 1924 (1925), 1929 (1930), and 1935-1938 (1936-1939).
- Lehigh Quarry, at Point Anne, about 10 km east of Belleville, Ontario. In 1910, it was reported that the quarry was then 700 ft long, 350 ft wide, and about 30 ft deep (1911). It was operated until 1913 (1914) by the Canada Cement Company. From 30 to 50 men were employed (1912, 1913).
- Leitch's Quarry, Renfrew County, Ontario. At Renfrew, the limestone was reported to have been used for columns (1904).
- Les Carrières Laurentiennes Limitée Quarry, Sainte-Marguerite Range, Terrebonne County, Québec. At Saint-Antoine-des-Laurentides, production began in 1959, at the rate of 1000 to 1500 tons per day (1961).
- Limekiln Quarry, Carlow Township, Ontario. This quarry was reported to have been near Foster's Rapids on the York River (1904).
- Limestone Quarries (three), Lots 9 and 10, 6th Concession; Lots 9 and 10, 4th and 5th Concessions; Lot 16, 2nd Concession, Ramsay Township, Lanark County, Ontario (1904). Note: in the reference the Concessions were listed as Ranges.
- Limestone Quarry, southeastern part of East Hawkesbury Township, Prescott County, Ontario. The quarry was reported to be about 3 km west of St. Anne de Prescott on the Rivière à la Graisse (1904).
- MacDonald and Dibblee Quarry, Clarence Township, Russell County, Ontario. The quarry was mentioned as being near Rockland (1922-1923).
- McDon(n)ell, Dibblee and Covey Quarries, Richmond and Wendover, Ontario. The company was listed as producers from 1925 to 1926 (1926-1927).
- McFarland Quarry, Carleton County, Ontario. On Moodie Drive, about 2 km south of Bell's Corners. Operated by H. J. McFarland Construction Co. Ltd., the quarry was in operation in 1997.
- McGinnis and O'Connor Quarry, Ernestown Township, Lennox and Addington County, Ontario. This quarry was reported to have been operated by T. A. McGinnis from 1932 to 1933 (1932-1933).
- McGinnis and O'Connor Quarry, Kingston Township, Frontenac County, Ontario. At Lemoines Point, it was reported to have been mined from 1941 to at least 1974 (1946, 1970, 1977, 1978).
- McGinnis and O'Connor Quarry, 1st Concession, Pittsburgh Township, Frontenac County, Ontario. This quarry was reported to have produced crushed limestone (1922). Quarries at Rossmore and Cataraqui were also listed in 1926 (1927). A quarry at Barriefield was

reported in 1930 (1931), while a quarry at Collins Bay, Frontenac County, was reported in 1935-1938 (1937-1940). Another, on the Murphy Farm, in Pittsburgh Township, was mentioned in 1942 (1946). This latter probably produced until 1945 (1948). The company was reported intermittently as a producer of limestone in Pittsburgh Township until at least 1974 (1978)

McGinnis and O'Connor Quarry, Rockcliffe, Ontario. This quarry, operated by the company, from Kingston, was first listed in 1946 (1948).

McIlvenna Quarry, South Elmsley Township, Lanark County, Ontario. It was operated by Robert McIlvenna, of Smith's Falls, with the limestone being used for roads (1922).

McIntosh's Quarry, near Madoc, Hastings County, Ontario (1904).

McKinnon's Quarry, Hastings County, Ontario (1904).

McLaren Quarry, Gloucester Township, Carleton County, Ontario. It was reported as being operated by H. R. Robillards and Sons in 1921 (1922).

McLaurin Quarry, Lot 3, 3rd Concession, Gloucester Township, Carleton County, Ontario. This quarry was reported to have been in operation in 1920 (1921).

McLean and Stidwell Quarry, Yonge Township, Leeds County, Ontario. At Cornwall. It was listed as a shipper in 1926 (1927).

McMillan Quarry, lot 19, 7th Concession, Williamsburg Township, Dundas County, Ontario. Near the village of Dunbar, it was mined for building stone by James McMillan (1916).

McNab Quarry, Lot 7, Concession B, McNab Township, Renfrew County, Ontario. South of the bridge over Dochart Creek, this large quarry (600 ft long, from 25 to 100 ft wide, and from three to 20 ft deep) was reported to have been mined for road metal (Satterly, 1945). The grey crystalline limestone contained white stringers of carbonate. No dates were found in the references.

McNab Quarry, Lot 11, Concession B, McNab Township, Renfrew County, Ontario. This was reported as an old quarry (Satterly, 1945).

McNab Quarry, Lot 1, Concession C, McNab Township, Renfrew County, Ontario. The quarry was mentioned as being on the northeast side of Highway 17, and about 1.5 km east of the Madawaska River. The fine-grained limestone was grey-brown in colour. The quarry was abandoned by 1944 (Satterly, 1945).

McNab Quarries (two), Lot 4, Concession D, McNab Township, Renfrew County, Ontario. The quarries were on a small point on the east side of the mouth of the Madawaska River, and about 0.8 km north of Highway 17. Both, in crystalline limestone, seem to have been in operation in 1944 (Satterly, 1945).

McQuigge Quarry, Clarence Township, Russell County, Ontario. It was reportedly operated by J. R. McQuigge, of Arnprior, from 1930 to 1932 (1931-1932).

McQuigge Quarry, Lot 2, Concession B, McNab Township, Renfrew County, Ontario. On the south side of Arnprior, it was operated by J. R. McQuigge in 1925 (1926). The stone was used for highways (Satterly, 1945).

McQuigge Quarry, 9th Concession, Ramsay Township, Ontario. This quarry was also reportedly operated by J. R. McQuigge, but in 1929 (1930).

McTierman Quarry, Lot 21, 4th Concession, Torbolton Township, Renfrew County, Ontario. It was operated by J. McTierman, of Arnprior, for limestone and lime (1922).

Machabée Quarry, Terrebonne County, Québec. At Sainte-Anne-des-Plaines. Lucien Machabé

- was listed as a producer of lime from 1941 (1942).
- Mahoney and Rich Quarries**, Lot 3, 2nd Concession, Gloucester Township, Carleton County, Ontario (1922).
- Mahoney and Rich Quarry**. The company was reported as an owner/operator in Québec in 1923 (1924).
- Marhill Calcite (Mines) Quarry**, west half of Lot 4, 7th Concession, Palmerston Township, Frontenac County, Ontario. This operation, about 1.5 km west of Robertsville Siding was first mentioned in 1946 (1948). Two openings had then been made in a calcite vein in pink granite gneiss. Smith (1958) reported that the larger was 330 ft long, 85 ft wide, and up to 40 ft deep. The calcite occurred as cream-coloured crystals up to 15-20 cm in diameter. It was used in the pulp industry and was shipped to Baie-Comeau, Québec, via Deseronto.
- Markus Quarry**, Lot 12, 1st Concession, Pembroke Township, Ontario. The quarry was reported to be about 3 km southeast of Pembroke, on land that was originally owned by Peter White. It was worked by William Markus Limited from 1914 to 1926 (1915-1927) and by the Municipality (Corporation, from 1930) of Pembroke from 1927 to 1942 (1928-1946). It was mined for building stone and crushed stone for concrete.
- Martin Quarry**, Glen Williams, Ontario. This quarry was first mentioned in 1946 (1948).
- Mille Roches Quarries** (four), Lots 24, 25, 26, 4th Concession, Cornwall Township, Stormont County, Ontario. About 3 km west of Mille Roches and near the Grand Trunk Railway, these were worked at short intervals since 1895. The stone was used in the construction of the Cornwall Canal (1916). The Johnson Brothers Company was reported as the operator in 1930 (1931).
- Milligan Quarry**, Lot 1, 2nd Concession, Edwardsburg Township, Dundas County, Ontario. Operated by F. Milligan at Iroquois, it was a source of crushed limestone (1922). Shipments were reported until 1928 (1927-1930).
- Montréal Street Quarry**, within the City Limits, Kingston, Ontario. It was reported to have been operated by Henry MacRow in 1913 and 1914. The quarry was owned by the City of Kingston (1915).
- Mooney and St. Denis Quarry**, Prescott County, Ontario. Near McAlpine, it was mined to produce crushed limestone (1922).
- Morris Quarry**, Leeds County, Ontario. This quarry was reported to have been operated for lime by Stanley Morris, of Delta, from 1933 to 1936 (1933-1937).
- Municipal Sand and Gravel Quarry**, Kingston Township, Frontenac County, Ontario. The quarry was listed as a producer in 1968-1970 (1970-1972).
- Murphy's Quarry**, near Brockville, Ontario, at Murphy's Corners (1904).
- Murphy's Quarry**, Tweed, Ontario. Reported to have been operated by J. S. Murphy, it was mined from 1914 to 1915 (1915-1916).
- Murray's Quarry**, Prescott County, Ontario, about 2 km south of L'Orignal (1904).
- Nepean Quarry**, on the shore of the Ottawa River (1904). The limestone was reported to have been used in the manufacture of cement.
- Noël Quarry**, Wrightville, Québec. It was owned and operated by Oscar Noël, of Hull, from 1926 to 1945 (1927-1946).
- Olden Quarry**, Lot 19, 2nd Concession, Olden Township, Frontenac County, Ontario. The quarry was reported to be on the south side of Highway 7. It was mentioned that a few tons of

white crystalline limestone were mined in 1942 and transported to Verona (Harding, 1951).

Ontario Rock Company Quarry, Lots 6 and 7, 4th and 6th Concessions, Belmont and Methuen Townships, Peterborough County, Ontario. Operations from 1936 to 1941 were reported (1938-1946).

Ontario Rock Company Quarry, Methuen Township, Peterborough County, Ontario. The quarry was reportedly operated from 1936 (1938).

Ontario Rock Company Quarry, Prince Edward County, Ontario. At Massassauga Point, directly across the Bay of Quinte from Point Anne, the quarry was opened in 1914 (1915). While it was not operated in 1915 (1916), mining was reported 1916-1917 (1917-1918).

Ormond Quarry, Lot 10, 2nd Concession, Gloucester Township, Carleton County, Ontario. This quarry was operated by Robert Ormond, of Cyrville (1923-1924).

Ottawa and Gloucester Construction Company. The company was listed as an operator in 1927 (1929).

Ottawa Improvement Commission Quarry, Ontario. Production was reported in 1924 (1926).

Ottawa Silica and Sandstone Company, Templeton Township, Papineau County, Québec. The company was listed as an owner/operator from 1939 to 1940 (1940-1941).

Ottawa Suburban Road Commission Quarries (Acres, Kirby). One of these is known as the *Acres Quarry* (see the listing above). The second, known as the *Kirby Quarry*, was on Lot 3, 3rd Concession, Gloucester Township, Carleton County. These were operated during 1919-1923 (1924).

Paddock and McCrow Quarry, Lot 24, 1st Concession, Thurlow Township, Hastings County, Ontario, near Belleville. The quarry was a source of crushed limestone for roads (1922).

Patterson Construction Company Quarry, 2nd Concession, Thurlow Township, Hastings County, Ontario (1923-1924).

Perley Quarry, Gloucester Township, Carleton County, Ontario. Operated by A. G. Perley, it was at Hog's Back, on the banks of the Rideau Canal (1922-1924).

Permanent Concrete Quarry, see the listing for Canfarge, above.

John Peterson, Hull, Québec. Mr. Peterson was reported as an owner/operator in 1927 (1928).

Plantagenet Quarry, near Plantagenet, Ontario. Sabina (1986) reported that the quarry was not in operation in 1967.

Point Anne Quarry, Thurlow Township, Hastings County, Ontario. About 0.8 km from the Lehigh Cement plant, and about 10 km east of Belleville, Ontario, it was operated by Point Anne Quarries Limited from 1910 to 1922 (1911-1922). About 40 people were then employed. The limestone was shipped on the Canadian Northern Railway (1915). In 1915, the quarry was about 4000 ft long, 100 ft wide, and 24 ft deep. It produced in 1916-1924 (1917-1926).

Pointe Sèche Quarry, Coulonge and Black River area, Pontiac County, Québec. It was reported, in 1932, that this quarry had been operated for a number of years with the stone being used locally for construction and road material (1933).

Prescott Quarries, Grenville County, Ontario. (1904).

Quinlan and Robertson Quarry, Lot 10, 9th Concession, Huntington Township, Hastings County, Ontario. Near Crookston on the Madoc (North Hastings) Branch of the Grand Trunk Railway (1904), it was reported to have been operated until about 1919 (1920), with 15

employed.

- Quinn's Quarry, east half of Lot 19, 6th Concession, Ross Township, Renfrew County, Ontario. The limestone was reported to have been used for building stone (1904).
- Quinton and Brundige Quarry, Kitley Township, Leeds County, Ontario. West of Brockville. The company, from Jasper, was listed as a shipper from 1925 to 1926 (1926-1927). W. Y. Quinton was listed from 1930 to 1934 (1931-1935).
- Rathburn Quarry, Lennox and Addington County, Ontario. The quarry, opened in 1888, was at Rollin's Hill, Napanee Mills (1904). The limestone was reported to have been used for cement.
- Rayner Construction Company Quarry, Wolford Township, Grenville County, Ontario. The company was reported to have operated this quarry from 1930 to 1931 (1931). Other quarries at Forfar, Merrickville, Campbellford, and Ivanhoe, were mentioned in 1934 (1935), while a quarry at Madoc was listed in 1935-1936 (1936-1937).
- C. F. Reid Quarry, Odessa, Ontario (1917-1920).
- Richardson Quarry, 2nd Concession, Nepean Township, Carleton County, Ontario. This quarry was mentioned as having been operated by Richardson and Henry (1922).
- Rideau Canal Supply Company Quarry, Nepean Township, Carleton County, Ontario. This quarry, just outside the city limits of Ottawa, was reported in 1914 to have been one of the largest quarries in the Ottawa district (1915-1920).
- Robillard's Quarries, Lots 22 and 23, 1st Concession of (Ottawa Front) Gloucester Township, Carleton County, Ontario. On Montreal Road, about 5 km from Cumming's Bridge, it was reported to have been operated from 1903 to 1933 (1915- 1933) by Messrs. H. Robillard and Son(s) (1904). Thirty men were then employed.
- Roblindale Quarry, Roblindale, Ontario, about 37 km south of Kaladar on Highway 41. Sabina reported (1987) that the quarry was active in 1987, and that it was then owned by the H. J. McFarland Construction Company.
- Roch Quarry, Terrebonne County, Québec. René Roch, of Sainte-Anne-des-Plaines, was listed as an operator from 1945 to 1946 (1946-1947).
- Rochon and Filiatrault Quarry, on Saint Louis Street, a short distance from the Aylmer Road, Hull, Québec (Canada, Mines Branch, 1916).
- Rock Construction Company Quarry, Ontario. At Bancroft, it was reported to have been operated by C. F. Stewart, of Toronto, from 1936 (1938).
- Roddy and Monk (J. M. Roddy) Quarries (Division Street, Montréal Street, Patrick Street), Kingston, Ontario. There were three quarries: the first, known as the *Division Street*, was worked for dimension stone; the second, on the west side of Montréal Street, was worked for crushed rock (known as "road metal"); the third, on Patrick Street, was worked for building and dimension stone. These were worked from about 1914 to 1923 (1915-1924), and then by J. M. Roddy from 1925 to 1932 (1926-1932).
- Ross Quarry, East Hawkesbury Township, Prescott County, Ontario. The stone from this quarry was reported to have been used in building the Grenville and Carillon Canals (1904).
- Ross Quarry, east half of Lot 20, 6th Concession, Ross Township, Renfrew County, Ontario. This was an abandoned quarry, in white crystalline limestone, that was once mined for road metal (Satterly, 1945).
- Routley Quarry, Portland Township, Frontenac County, Ontario. Operations from 1937 to 1939

were recorded (1939-1941).

Routley Quarry, Lots 14 and 15, 1st Concession, Thurlow Township, Hastings County, Ontario.

The quarry was mined for the production of crushed limestone (1922).

Routley Quarry, Augusta Township, Grenville County, Ontario. It was reportedly operated by H. T. Routley, of Toronto, from 1930 to 1931 (1931).

Routley (Routly) Quarry, Rawdon Township, Hastings County, Ontario. This quarry was also operated by H. T. Routly, of Toronto, from 1931 to 1939 (1932-1941).

Routly Quarry, 2nd Concession, Thurlow Township, Hastings County, Ontario. On the Bush Farm, it was also reported to have been operated by H. T. Routly (1923-1924).

Routley and Sons Quarry, Lot 65, Gerow Gore, Hallowell Township, Prince Edward County, Ontario. The quarry was mined as a source of crushed stone (1924).

Saint-Barthélemi Quarry, Dusablé Seignior, Joliette County, Québec. Operated by Carrière Saint-Barthélemi Limitée, production of 1000 tons of crushed limestone a day was reported in 1960 (1962).

Saint-Eustache Quarry, Saint-Eustache Parish, Deux-Montages County, Québec. Operated by Carrières St-Eustache Limitée, it was the source of crushed limestone, at the rate of 3000 tons per day, from 1962 to 1964 (1964-1967).

Sand Point Quarries (three), Lots 18, 19, and 21, Concession B, McNab Township, Renfrew County, Ontario. Two quarries were reported to be within the village and a third about 1.5 km away. The stone was reported to have been used for building the roundhouses and other structures of the Temiskaming and Northern Ontario Railway (1904). The first two quarries were probably those on Lots 18 and 19. Satterly (1945) noted that one (on Lot 18) was north of the road and about 0.8 km southwest of the village, while the second (Lot 19) was at the northwest end of the village. The third quarry (Lot 21) was on the bank of the Ottawa River, east of Roddy Bay. The grey limestone, with silicified fossils, was once shipped to Shawinigan Falls, Québec, for use in the manufacture of calcium chloride. The kilns were reported to have been first operated by J. A. Jamieson, of Renfrew, and then the Canada Lime Company (ca. 1938). All were abandoned by 1944.

Sauvé Quarry, Hull Township, Gatineau County, Québec. This quarry was reported to have been operated by J.-O. Sauvé, at a rate of 55 tons per day. The limestone was used by the MacLaren Paper Company at its Masson plant. It produced from 1959 to 1964 (1961-1967).

Scott's Quarry, Renfrew County, Ontario. At Renfrew. The limestone was used for foundations (1904).

Shane Lime and Charcoal Company (Kneichel) Quarry, Lot 9, 15th Concession, Grattan Township, Renfrew County, Ontario. The quarries and kilns were about 0.6 km southwest of Fourth Chute, on the Canadian Pacific Railway. The Shane Lime Company of Eganville, was listed as a producer from 1927 to 1944 (1929-1947). The quarry was reported idle in 1935. The name of the company changed to Shane Lime and Charcoal in 1943 (1944) and that company was listed from 1945 to 1946 (1948). One of the quarries, once known as the *Kneichel*, was reported to have been mined many years previously to supply lime and rock to the Iroquois Falls mill of the Abitibi Pulp and Paper Company. Satterly reported on the operations in 1944 (1945).

Shane Lime and Charcoal Company (Federal Lime Company) Quarry, Lot 10, 17th Concession,

- Grattan Township, Renfrew County, Ontario. At Fourth Chute, and about 7 km southeast of Eganville. Beside the River Road and the Canadian Pacific Railway. The Federal Lime Company built the plant and kilns in 1927 (Satterly, 1945). It was then worked by Dominion Rock Products from 1933 to 1939, and the Federal Lime Company until it was acquired by Shane Lime and Charcoal in 1942. It was also reported as being operated by W. Lawson, of Eganville, from 1941 to 1942 (1946). The limestone was reported as brownish-grey and fine-grained with nodules of black chert and silicified fossils.
- Shane Lime and Charcoal (Jamieson, Standard Chemical) Quarries, Lot 19, 20th Concession, Grattan Township, Renfrew County, Ontario. The two quarries were to the southwest of the Canadian Pacific Railway, while two kilns were to the east of the railway. All were about 1.2 km from Eganville. Satterly (1945) reported that J. A. Jamieson, of Renfrew, had operated the quarries and kilns from about 1900 to 1915. The Standard Chemical Company then purchased these and continued operations from 1915 to 1927. The limestone was used to make lime for chemical plants, from about 1921 to 1926 (1922-1927). Finally, the Shane company produced from 1927 to 1938. Renfrew County, Ontario. The limestone was reported to be fine-grained, brownish-grey, with black chert nodules and many silicified fossils.
- Sheck's Island Quarry, Glengarry County, Ontario. Opposite Mille Roches, on the St. Lawrence River, this quarry was opened to provide building material for the canal. It was reported to have been mined at the rate of about 15 000 cubic yards a year (1904).
- Sherwood's Quarry, Brockville, Ontario. The quarry was reported to be a short distance north of the Insane Asylum (now the Brockville Psychiatric Hospital) (1904).
- Skyrock Enterprises Limited Quarry, near Clarence, Ontario. Sabina reported (1986) that it had not been operated for several years.
- Smiths Construction Arnprior Limited Quarry, McNab Township, Renfrew County, Ontario. This quarry was first listed as a producer of limestone in 1974 (1978).
- Snider Quarry, Lot 16, 5th Concession, Ernestown Township, Lennox and Addington County, Ontario. It was reported to have been operated by Reuben C. Snider, of Odessa (1923-1924).
- South Mountain Quarry, Lot 2, 1st Range, Mountain Township, Dundas County, Ontario. The limestone from this quarry was used for foundations. (1904).
- Stafford Quarry, Lots 16 and 17, 4th Concession, Stafford Township, Renfrew County, Ontario. The quarry was on the road between Stafford and Alice Townships. The limestone had been used for making lime (Satterly, 1945).
- Standard Chemical Quarry, see the listing for Shane Lime and Charcoal, above.
- Standard Lime Company Quarries, Québec. See the listing for Gypsum Lime and Alabastine, above.
- Stewart Quarry, Rockland, Ontario. This quarry was reported to have been idle for many years (Sabina, 1986).
- Stinson-Reeb Builders Supply Company Quarry, Portage-du-Fort, Québec. The company was listed as an owner/operator in 1928 (1929).
- Stockloser Quarry, Ontario. At Eldorado, it was operated by Karl Stockloser, of Madoc, from 1941 to 1943 (1946). A second quarry, at Madoc, was mentioned in 1943 (1944).
- Stoney Construction Quarry, South Fredericksburgh Township, Lennox and Addington County,

- Ontario. Production from this quarry was reported from 1970 (1972) to 1971 (1977).
- Sullivan's Quarry, Prince Edward County, Ontario. The quarry was reported to be near the Catholic Cemetery in Picton (1904).
- Syndicate de Pierre-à-Chaux-de-Ferme-Neuve Quarry, Labelle County, Québec. The company was reported as an operator from 1942 to 1946 (1943-1947).
- Tessier Quarry, Hull Township, Québec. Stanislas Tessier, of Hull, was reported as an owner/operator from 1939 to 1945 (1940-1946).
- Thibault (Thebault) Quarry, Ottawa South, Ontario. Owned by Adelard Thibault, of Billings Bridge, it was reported as inactive in 1915 (1916). It produced in 1917 (1918).
- Town of Napanee Quarry, 7th Concession, North Fredericksburg Township, Lennox and Addington County, Ontario. The stone was reported to have been used for roads (1922).
- Town of Pembroke Quarry, Lot 12, 1st Concession, Pembroke Township, Renfrew County, Ontario. The quarry was on top of a low hill at the southeast edge of the town (Satterly, 1945). Satterly reported that it was originally owned by Peter White and operated by Messrs. Barr and Markus. It was then 1000 ft long, 450 ft wide, and from six to 12 ft deep. The limestone was fine-grained, brownish-grey, and contained significant pyrite. The quarry provided building stone for many buildings in Pembroke, including the Convent, churches, the Munroe Block, and the General Hospital. It was operated from 1944 to 1946 (1947-1948).
- Town of Renfrew Quarry, 2nd Concession, Horton Township, Renfrew County, Ontario (1919-1922).
- Town of Smith's Falls Quarry, Smith's Falls, Ontario (1922).
- Township of Camden Quarry, Lot 25, 4th Concession, Camden Township, Lennox and Addington County, Ontario. It was reported to have produced crushed stone (1924).
- Township of Clarence (Hammond) Quarry, Clarence Township, Russell (later Prescott and Russell) County, Ontario. The Township was listed as a producer in 1968 (1970), 1970-1972, 1974 (1978).
- Township of Ernestown, Lennox and Addington County, Ontario. The Township was listed in 1974 (1978).
- Township of Kingston Quarry, Frontenac County, Ontario. Production of limestone was reported in 1972 (1977).
- Township of Nepean Quarry, Carleton County, Ontario, at Taylor's Hill on Richmond Road (1923).
- Township of North Plantagenet Quarry, Prescott County, Ontario. Production was reported in 1972 (1977).
- Tremblay Quarry, on the west side of Chêne Avenue, north of Mountain Road, Hull, Québec. The quarry was reported to have been operated by Napoléon Tremblay from 1915 (Canada, Mines Branch, 1916) to 1941. He was listed as an owner/operator in Québec from 1923 to 1945 (1924-1946).
- Triangle Paving Quarry, Sidney Township, Hastings County, Ontario. The quarry was listed as a producer in 1969 (1971).
- Tweed Limestone Quarry, 1 km south of Tweed. Sabina (1987) reported that this quarry had been then inactive. There was no mention of ownership.
- Van Camp's Mill Quarry, about 3 km northeast of Van Camp's Mill, Dundas County, Ontario

- (1904).
- Vankleek Hill Quarry, Prescott County, Ontario. About 2 km south of Vankleek Hill (1904).
- Vearwith Quarry, Lots 3 to 5, 8th Concession, Faraday Township, Hastings County, Ontario. Near Bancroft, it was used to produce lime (1922).
- Victoria (McKinnon) Quarry, Madoc Township, Hastings County, Ontario. Extending over 40 acres, and convenient to the North Hastings Railway, the stone was used for the foundations of the new Parliament Buildings in Toronto (1904).
- Villemure and Casaubon Quarry, Joliette County, Québec. At Sainte-Elizabeth, the quarry was listed from 1945 to 1946 (1946-1947).
- Villeneuve Quarry, Saint-Jérôme, Terrebonne County, Québec. Raoul Villeneuve was listed as a producer of lime from 1935 to 1941 (1936-1942).
- Walker Quarry, Lot 11, 5th Concession, Athol Township, Prince Edward County, Ontario. Operated by H. Walker, of Cherry Valley, it was mined for crushed stone (1924).
- Wallace Quarry, Kingston Township, Frontenac County, Ontario. On the Brown Farm, near Kingston, it was operated by Robert Wallace and Sons. It was mined to produce limestone for building during the period 1921-1931 (1922-1931).
- Wallingford Quarry, Hull Township, Gatineau County, Québec. At Cantley, the quarry was operated intermittently during 1959. The stone was used as backfill for road construction at Pointe-à-Gatineau (1961).
- Wehman Quarry, Lot 24, 2nd Concession, Kingston Township, Frontenac County, Ontario. Operated by John Wehman, of Kingston, intermittent production was reported from 1924 to 1946 (1926-1948).
- Western Québec Construction Quarry, Hull Township, Gatineau County, Québec. The quarry was reported as being prepared for production in 1959 (1961). It produced from 1960 (1962).
- Westmeath Quarry, Lot 19, 2nd Concession, Westmeath Township, Renfrew County, Ontario. The quarry was about 0.8 km south of Meath Station on the Canadian Pacific Railway and to the east of a road in the centre of the lot (Satterly, 1945). The limestone had been used as dimension stone to construct railway culverts. It had been abandoned by 1944.
- Westmeath Quarry, Lot 19, 2nd Concession, Westmeath Township, Renfrew County, Ontario. Just east of Highway 17 and about 1.2 km south of Meath Station on the Canadian Pacific Railway, this second quarry had been mined for road metal and had also been abandoned by 1944 (Satterly, 1945).
- Whaley and Morris Quarry, Leeds County, Ontario. At Delta, it was reportedly operated by S. Morris, for lime, from 1932 (1932).
- Wilberforce Quarry, Lot 16, 7th Concession, Wilberforce Township, Renfrew County, Ontario. It had been abandoned by 1944 (Satterly, 1945).
- Williamsburg Quarry, Lot 39, 8th Range, Williamsburg Township, Dundas County, Ontario. The limestone from this quarry was reported to have been used for flagstones (1904).
- Winter Quarry, Lot 7, 1st Range, Winter Township, Dundas County, Ontario. Owned by William Bolton, the limestone was used for flagstones (1904).
- Windle Quarry, Lot 27, 9th Concession, Bagot Township, Renfrew County, Ontario. The quarry was on the farm of James Windle, and about 0.75 km southwest of Ashdod Station on the Canadian Pacific Railway. Satterly (1945) mentioned that it had been quarried many years

previously for foundation stone.

Wolfe Island Quarry, Frontenac County, Ontario, opposite Kingston Harbour, on Wolfe Island (1904).

Woodland Quarry, Lot 10, 1st Concession, Edwardsburgh Township, Grenville County, Ontario. Near Cardinal, and operated by V. H. Woodland, it was mined to produce crushed limestone for roads (1922-29).

Woods Sand and Gravel Quarry, Kingston Township, Frontenac County, Ontario. The company was listed intermittently as a producer of limestone from 1970 (1972) until at least 1974 (1978).

Wright Builders Supply Limited Quarry, Hull, Québec. This company, first called Wright and Company, from Ottawa, was listed as a producer in 1913 (1914), and as an owner/operator in 1923, 1926, and from 1928 to 1931 (1924, 1927, 1929-1932). The name changed in 1932 (1933).

Wright Crushed Stone Company, Hull County, Québec. From Wrightville (now Hull), the company was listed as an owner/operator from 1934 to 1935 (1935-1936).

Wright's Quarry, Carleton County, Ontario. The quarry was reported to have been on the south side of the Ottawa River above Mechanicsville. The limestone was used for cement and the quarry was reported as having been long abandoned in 1903 (1904).

Lithium

Lithium is the lightest of the metals and has been used to add hardness to aluminum alloys. The mineral lepidolite, a mica which contains lithium, is used in the manufacture of heat-resistant flint (clear) and opal (milky) glasses.

See the listing for the Le Duc Mine, under Tourmaline.

Lithographic Stone

Lithography is a process of printing from a flat stone or metal plate. The qualities which make a stone useful for this purpose are exceptional uniformity, absence of cracks, weaknesses, and inclusions, small grains, and impermeability. Fine-grained, uniform, limestone is a usual choice.

North American Stone and Asbestos Company Quarry, parts of Lots 6 and 7, 3rd Concession, parts of Lots 7 and 8, 3rd Concession, and other small pieces in the 2nd and 3rd Concessions, Marmora Township, Hastings County, Ontario. The property was reported to have been prospected in 1892 and the quarry opened in 1893 (1893).

Volney Quarry, Lot 9, 3rd Concession of Marmora Township, Hastings County, Ontario. On the south side of Crow Lake, and on the farm of Thomas McGraw, the quarry was opened in 1892 by Dr. Volney, of New York (1893).

Magnesite (see also Brucite)

Magnesite, or magnesium carbonate, is used for the manufacture of refractory bricks for furnace linings. Nearly all of Canada's production came, until recently, from an area around Kilmar, in Argenteuil County, Québec. The orebodies were worked from about 1910 until the 1980s. The principal use was the preparation of magnesian refractories for use in open-hearth steel furnaces. These deposits, however, while known as magnesite, are really of high magnesian dolomite. The difference is that dolomite is a calcium magnesium carbonate, while magnesite is a pure magnesium carbonate and limestone is pure calcium carbonate. These deposits were the only ones of commercial grade magnesite or magnesitic dolomite in the eastern part of North America. Consequently, there was a market advantage.

- Boshart Mine, Lot 16, 9th Range, Grenville Township, Argenteuil County, Québec. Messrs. Fitzsimons and Boshart, of Ottawa, were reported to have been developing the property, on Lots 15 and 16, 8th Range in 1915 and 1916 (1916, 1917). The property was just south of those owned by Canadian Refractories (Osborne, 1938).
- R. W. Carswell Quarry, Bryson, Pontiac County, Québec. A small shipment of brucite-bearing dolomite was reported to have been made from this quarry in 1938 (1939).
- Dominion Magnesite Company, Calumet, Grenville Township, Argenteuil County, Québec. The company was reported to have not yet produced in 1915 (1916).
- Grenville Lumber Company, Grenville Township, Argenteuil County, Québec. This company, of Montreal, was reported as a producer in 1915 (1916).
- Harrington (International, Dobbie) Mine, Lot 13, 1st Range, Harrington Township, Argenteuil County, Québec. The mine was at Kilmar, and immediately north of the Shaw Mine (see the listing below). The deposit was discovered in 1916 by A. Lannigan and J. Milway, of Calumet. The mine was operated by the North American Magnesite Company in 1917 (1918), from 1918 to 1942 by International Magnesite Company, and from then until 1947, by Canadian Refractories Limited. In 1925, a pit on the south part of the property, in a band of grey magnesian rock containing white crystalline magnesite, was worked. The hanging wall was a greenish serpentine (1926). The pit closed in 1948. The mine was an open pit in a magnesitic dolomite deposit. The properties were taken over by Canadian Refractories in late 1942 (1943). The property was worked until 1948, but mention was also made in 1951 (1952).
- Kilmar (McPhee) Mine, Lots 15, 9th and 10th Ranges, Grenville Township, Argenteuil County, Québec. At Kilmar, about 16 km from Calumet Station on the Canadian Pacific Railway, the deposit was reported to have been discovered in 1900 by the Rev. W. P. Boshart. The Canadian Magnesite Company began operations in 1907, with 630 tons being mined in 1909 (1910) and a calcining kiln was installed in 1911 (1913). The North American Magnesite Company, of Montréal, continued the development of the property in 1915, and produced until 1931 (1916- 1932). In 1922, this company and the Scottish-Canadian Magnesite Company concluded an agreement for the joint operation of their properties (see the entries below) (1924). In 1933, the company was succeeded by Canadian Refractories. In 1936 the open pit was abandoned, and in 1937 a shaft was sunk to 420 ft.

This was deepened to 553 ft in 1940, when mining was by shrinkage methods (1941). By 1941, four levels had been established in the underground mine from a three-compartment shaft that had been sunk to 553 ft (1942). A new plant for the manufacture of chrome-magnesia and other refractory products began production in 1934 (1935). By 1943, the deposit was being mined to a depth of 700 ft and it was the sole producer (1944). In 1945, Harbison Walker Refractories Company, of Pittsburgh, Pennsylvania, took over ownership of the company. In 1944, most of the production was reported to have come from the 540-foot and 700-foot levels (1945). From 1953, it was the sole producer (1955). By then, the shaft had been deepened to 1 028 ft and new levels cut. A second shaft was being sunk about 2.2 km north of *Number 1 Shaft*. It was sunk to a final depth of 883 ft in 1957 (1959). Subsequent operators were Dresser Canada Incorporated, and Harbison Walker Refractories Company. The underground mines were closed in the late 1980s.

Magnesite Company Property, Harrington Township, Argenteuil County, Québec. The company was listed as an owner/operator and producer in 1934-1942 (1935-1943).

Scottish Canadian Magnesite Company, Lots 13, 15 and 16, 10th and 11th Ranges, Grenville Township, Argenteuil County, Québec. The property was reported to be about 19 km from the Canadian Pacific Railway. This company, of Montréal, was organized by S. Melkman in 1915 and was reported to have produced from 1915 to 1931 (1916-1932). In 1916 a narrow-gauge railway was being built by a subsidiary, Dominion Timber and Minerals Limited, to connect the quarry and the C P R. It was completed in 1917 and connected at Magnesite, 8 km east of Calumet Station. The main pit was then 150 ft long, 30 ft wide and 40 ft deep (1918). By 1932, the pits were 160 ft deep and new steel derricks had been installed (1933).

MARBLAN

Shaw Mine, Lot 18, 11th Range, Grenville Township, Argenteuil County, Québec, immediately south of the Dobbie Mine (see the listing above). In 1907, T. J. Watters, of Ottawa, formed the Canadian Magnesite Company to exploit the deposit on the north half of this lot. It was taken over by the North American Magnesite Company in 1914. In 1922, the North American Magnesite Company and the Scottish-Canadian Magnesite Company concluded an arrangement for the joint operation of their properties. This included the McPhee Mine (see the listing above), and this mine. This property probably was first mined in 1922-1923 (1924). It, and the McPhee Mine, were mined until 1933. In that year, Canadian Refractories was formed and operated the properties as a unit (Osborne, 1938). In 1936 (Osborne, 1938), it was reported that the mine had not been worked recently and the pit flooded.

Magnesium (see also Dolomite)

Timminco (Dominion Magnesium, Chromasco) Mine, east half of Lot 20, 5th and 6th Concessions, Ross Township, Renfrew County, Ontario. The mine is about 5 km from Haley Station and about 22.5 km north of Renfrew. The property was reported to comprise 403 acres (1969). The company was retained by the Department of Munitions and Supply, to construct and manage the plant in 1941. Dolomite was first mined at this location in 1942,

BRANCH LINE AUTHORIZED BY SBC ORDER 620674 APR 1942 n 6733 CHALKRIVER SUB.

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R-1294 30 JAN 1968 APPROVES RESTRICTED CLEARANCE AT FERROSILICON CRUSHER UNIT

and, employing the Pidgeon process, it was used to produce the first magnesium reported for Ontario (1946). For many years, it was the only plant in Canada which produced magnesium (1948). During 1942-1944 the operation was under the supervision of the Wartime Metals Corporation. In 1945, Dominion Magnesium purchased the plant from the government. In 1972, the company became the Chromasco Corporation. Still later, it became Timminco Metals. At the beginning of the operation, in 1943, 61 637 tons of dolomite were treated in the plant. Production in 1944 was reported at 69 549 tons (1947). Three hundred and ninety-five were reported to have been employed at that time, of whom five were in the quarry (1944). Because of large stockpiles, mining operations were discontinued in late 1945 (1948). These had resumed by 1947, however, and substantial production of several products was reported in 1947-1948 (1949-1950). Once again, however, in 1949, mining was again suspended because of the quantities on the stockpiles (1951). This is a large operation, with two quarries in the plant area, which has been mined continuously to the present (i.e., 1999). Production has been between about 50 000 to 175 000 tons annually (1960-1972). During the 1950s and 1960s there were from about 320 to 490 people on the property (1954-1970). The white Grenville dolomite deposit, about 1 000 m long, was opened up in the east side of a hill (Satterly, 1945).

Marble

Marble is a metamorphic rock which has been produced by the effects of temperature and pressure on limestone. Hard, crystalline or granular, it is found in a wide range of colours and textures. Taking a beautiful polish, it has been used for thousands of years for buildings, monuments, and sculptures. The region around Ottawa is one in which ancient limestones have been altered (metamorphosed) by intruding igneous rocks. Consequently, there are many locations at which marbles are found.

American Marble Company Quarry, Cardiff Township, Haliburton County, Ontario. The company, from Toronto, was reported to have operated this quarry from 1937 (1939).

American Marble Company Quarry, Faraday Township, Hastings County, Ontario. The company also operated this quarry from 1937 (1939).

Angelstone (Sharbot Lake) Quarry, about 35 km southwest of Perth, Ontario. It was reported to have been mined briefly, in 1962 and 1963 on the farm of N. A. McPherson (Sabina, 1987).

Angelstone Tatlock Quarry, Tatlock, Ontario, about 35 km northwest of Perth. The quarry was reportedly opened in 1962 by Angelstone Limited (Sabina, 1987).

Bancroft Quarry, near Bancroft, Ontario. It was reported to have been opened in 1905 by the Trenton Granite and Marble Company (1907).

Bancroft (Bronson) Marble Quarries Limited, Lots 28, 29, 30, and 41, 10th Concession, Dungannon Township, about 3 km south of Bancroft, Ontario, and 1 km from the Central Ontario Branch of the Canadian National Railway, near Bronson. In 1915, the quarry was reported to have been 60 ft long, 60 ft wide and 20 ft deep. Pink and green marble were produced (1916). Originally developed by Ontario Marble Quarries, as their *Number 1*

Quarry, and which operated it until 1915, the property was leased to Bancroft Marble Quarries in 1918. The plant was repaired and production resumed late in the year. The marble was used in the Federal Parliament Buildings. About 25 were employed (1919-1920).

- Barker Quarries (two), Lots 41 and 42 West, Hastings Road, Faraday Township (Hewitt, 1959) (listed as Dungannon in earlier reports), Hastings County, Ontario. The quarries were reported to be about 1 km southwest of the Stewart Quarries, and west of Highway 62 on the Hastings Road. These were also north of L'Amable Lake. The quarry, one of several known collectively as the *Bancroft Marble Quarries* was opened on the northeast slope of a hill, in 1908, by John Hoidge, of Toronto. From 1934, it was operated by the Rock Construction Company, also of Toronto. The rock was a siliceous fine-grained dolomite. In it, however, was a brecciated zone in which angular fragments of greyish-white and greenish-white dolomite were cemented together by a chocolate-brown material of brown and black mica. A marble, known as Laurentian Number 10 was mined from this. There was also a pink marble and another brecciated one with larger fragments (known as *Laurentian Number 14*). Further varieties included Laurentian Buff (Thomson, 1943). See also listings for McMillan and Stewart Quarries.
- Blackburn Quarry, near Fox Corners, Ontario, about 12 km north northwest of Madoc. Sabina (1987) reported that it was then inactive and that it had been formerly operated by Madoc Marble Quarries Limited, on the farm of Gerald Blackburn.
- Bolender Brothers (White Star Mines) Quarry, Dysart and Guilford Townships, Haliburton County, Ontario. This quarry was reportedly operated by P. H. Bolender, of Haliburton, from 1937 to 1968 (1939-1970).
- Bonter Marble and Calcium Quarry, Lot 9, 4th Concession, Marmora Township, Hastings County, Ontario. At Marmora, it was operated intermittently from 1938 to 1946 (1940-1948). W. F. Bonter, of Malone, was also listed in 1942-1943 and 1946 (1944, 1946, 1948).
- Bridgewater Quarry, Hungerford Township, Hastings County, Ontario. The quarry was about 2 km south of Bridgewater, on the Scootamatta River. It was reported to have been opened about 1887 by the Hungerford Marble Company and to have occupied 40 acres (1904).
- Britnell and Company, Lots A and B, 6th Concession, Somerville Township, Ontario, at Burnt River. It was reported to have been operated in 1914 (1915).
- Brooks Marble (Company) and Tile Quarry, Hungerford Township, Hastings County, Ontario. The company was listed as a producer in 1968-1969 (1970-1971).
- Canada Marble and Lime Company Quarry, L'Annonciation, Labelle County, Québec. This quarry was listed intermittently from 1936 to 1941 (1937-1942).
- Canadian Dolomite Company Property, Pontiac County, Québec. At Portage-du-Fort. The company was mentioned as having produced during the period from 1944 to 1951 (1945-1952). See the Portage-du-Fort listing below.
- Canadian Marble Company Quarry, Lots 30 and 31, Dungannon Township, Hastings County, Ontario, on the East Hastings road, near Bancroft, Ontario. It was reported idle in 1915 but producing in 1922 (1916, 1922).
- Canadian Talc Industries, Huntingdon Township, Hastings County, Ontario. The company was listed as a producer in 1968 (1970). See the listing for the company under Talc.
- Central Ontario Granite and Marble Company Quarry, Bancroft, Ontario. The quarry was

reported as idle in 1915 (1916).

Connolly Marble, Mosaic and Tile Company Quarry, 5th Concession, Madoc Township, Hastings County, Ontario. North of Madoc, it was operated from 1937 to 1942 (1939-1946). The company was reported as a producer of buff, red, white, green, and black marble (Canada, Mines Branch, 1946).

Curtis Quarry, about 5 km north of Madoc, Ontario, off Highway 62. Once operated by Stoklosar Marble Quarries, Sabina (1987) reported it as inactive.

Ferguson's Quarry, Lot 22, 4th Range, Ross Township, Renfrew County, Ontario (1904).

Freeman Quarry, about 10 km northwest of Madoc, Ontario. Formerly operated by Stoklosar Marble Quarries, the deposit was reported to be on the Freeman Farm (Sabina, 1987).

Gould Quarry, Lot 20, 5th Concession, Ross Township, Renfrew County, Ontario. About 5.5 km from Haley Station on the Canadian Pacific Railway, it was reported to have been opened in 1920 by the Pontiac Marble and Lime Company on the farm of Arthur Gould. The stone was a coarse-grained white marble used for monuments (1921).

Grenville Aggregate Specialties, Madoc Township, Hastings County, Ontario. The company was listed as a producer in 1968 (1970).

Hastings Quarries, Tweed, Ontario. These were reported as being idle in 1915 (1916).

Hazards Corners Marble Quarries, about 2 km north of Hazards Corners, Ontario, and 9 km north of Madoc. Sabina (1987) reported that the operators were Stoklosar Marble Quarries and Madoc Marble Quarries. The quarries are thought to be inactive.

Huntingdon Fluorspar, Angelsea Township, Lennox and Addington County, Ontario. The company was listed as producing from this quarry in 1968 (1970).

Huntingdon Fluorspar, Barrie Township, Frontenac County, Ontario. This quarry was also listed as having been active in 1974 (1978).

Kaladar Marble Quarries (two), about 2 km south of Kaladar, Ontario. Sabina (1987) reported that these were worked about the late 1930s. There was no report on ownership.

Lanark Quarry, near the town of Lanark, Ontario. In 1910, it was reported that this quarry had been worked for some time. The marble was shipped to Lavant Station on the Kingston and Pembroke Railway (1911).

McCann Quarry, about 14 km northwest of Madoc, Ontario. This quarry was reported to have been formerly operated by Hastings Quarries.

McDonald Quarry 1, Renfrew County, Ontario. At the corner of Russell and Elgin Streets in Arnprior, it was operated by R. McDonald & Son in 1903 (1904).

McDonald Quarry 2, Renfrew County, Ontario. About 2 km east of Arnprior on a cove of the Ottawa River, it was also operated by R. McDonald & Son in 1903 (1904).

McLean Quarry, Renfrew County, Ontario. At Renfrew (1904).

McLean Quarry, Templeton Township, Papineau (formerly Ottawa) County, Québec (1904).

McMillan Quarry, Lot 28, 10th Concession, Dungannon Township, Hastings County, Ontario.

The quarry was about 5 km south of Bancroft, about 70 km north of Madoc, and accessible from Highway 62 (Sabina, 1987). It was also beside the Canadian National Railway line from Bancroft to Trenton Junction (Hewitt & James, 1956). Originally opened in 1908 by John Hoidge, of Toronto, it was operated by Rock Construction Company, of Toronto, from 1934. It was one of a series of four quarries that were known collectively as the *Bancroft Marble Quarries*. The marble from these quarries was used in

- the Parliament Buildings in both Ottawa and Toronto, the Royal Ontario Museum, the Vancouver Court House, and Government buildings in Hamilton and Windsor (Hewitt & James, 1956). The quarry was in a band of white dolomite with lenticular bands of siliceous rock (Thomson, 1943). See also the listings for the Barker and Stewart Quarries.
- Madoc Quarry, in the village of Madoc, Hastings County, Ontario. Opened in 1887 by the Hungerford Marble Company, it was reportedly about 40 ft deep (1904).
- Madoc Marble Quarry, about 6 km northwest of Madoc, Ontario. Formerly operated by Madoc Marble Quarries, it is inactive (Sabina, 1987).
- Malone Quarry, about 14 km northwest of Madoc, Ontario. Once operated by W. F. Bonter and Company, Sabina reported (1987) that it was on property then owned by Mr. R. Pinchin.
- Maple Leaf Marble Quarries, Faraday and Dungannon Townships, Ontario, near Bancroft. The quarry was reported to have been operated from 1932 to 1933 (1932-1933).
- Marble Products Limited. The quarry was reported to be on the McCann Farm (Sabina, 1987).
- Marmora Road Quarries, about 15 km west of Madoc, Ontario, from Highway 7 and Hastings Road 11. It was formerly operated by Stoklosar Marble Quarries (Sabina, 1987).
- Morrison Quarry, about 3 km south of Bancroft, Ontario. It was reported that the quarry was opened by Mr. T. Morrison in 1908 (1908).
- North Lanark Marble and Granite Quarries, Marble Bluff, Ontario. The quarry was reported idle in 1915 (1916).
- Omega Marble Tile and Terrazzo Quarry, Darling Township, Lanark County, Ontario, at Tatlock, about 35 km northwest of Perth. The quarry was operated by the company of the same name since 1962 (Sabina, 1987). It was listed as a producer in 1968-1969 (1970-1971).
- Ontario Marble Quarries, Number 2 quarry, Lots 41 and 42, Faraday Township, Ontario. The quarry was reported to be beside the West Hastings Road, and about 1 km west of their *Number 1 Quarry*. It was then about 100 ft wide and 75 ft long. In 1910, there reported to be 65 workers on the property. Pure white marble was produced. A third quarry, *Number 3*, was reported in 1912 (1913), but the location was not specified. It was operated from 1913 to 1915 (1914-1916).
- Orser Ornamental Stone Products Quarry, Portland Township, Frontenac County, Ontario, near Verona. The company was listed from 1935 to 1937 (1936-1938), as Ornamental Stone Products, and from 1938 to 1939 (1940-1941) with the name Orser added (S. H. Orser).
- Pinewood Park Lake Road Quarries (two), about 4 km and 6 km east of Madoc, Ontario. Sabina (1987) reported that these were inactive and had been previously operated by Grenville Aggregate Specialties Limited.
- Pontiac Marble and Lime Company Quarry, Lot 141, Corporation of Portage-du-Fort, Pontiac County, Québec. The quarry was reported to be in the north part of the town, and beside the Canadian Northern Railway line from Ottawa to Pembroke. This quarry was being opened in 1912 (1913). It produced in 1913 and 1914 and was in white crystalline limestone (Canada, Mines Branch, 1914, 1915). The marble was reported to have been used in building the Court House at Bryson (1922). The company was reported as an owner/operator in 1923 (1924).
- Portage-du-Fort Quarries. Near Portage-du-Fort, Pontiac County, Québec, these quarries were reported to have provided the marbles in the interiors of the Houses of Parliament, in Ottawa (1904 Ont). These were operated by the White Grit Company, of Ottawa, Ontario,

- from about 1924 to 1943 (1925-1944) and by the Canadian Dolomite Company from 1944 to 1951 (1945-1952). While known locally as marble, the product was actually white crystalline limestone and dolomite, which were crushed for stucco and terrazzo flooring (1926).
- Pulverized Marble Products Quarry, Lennox and Addington County, Ontario, on the outskirts of Kaladar. A crystalline dolomite was quarried for use in plaster aggregate (Canada, Mines Branch, 1952-1955).
- Rainbow Quarry, at Smith Lake, about 70 km north northeast of Madoc, Ontario, from Highway 62, West Weslemkoon Lake Road and McArthur Mills Road (Sabina, 1987).
- Ritchie Quarry, south half Lot 2, 12th Concession, Faraday Township, Hastings County, Ontario. The quarry was about 2.5 km from the Central Ontario Railway (from which a spur had been built) and on the farm of William Goebel. The marble was coarse-grained and white. Inasmuch as it contained much pyrite it was found to be unsuitable for exterior use (Thomson, 1943).
- Rockway Valley Marble Quarry, near Rockway Lake, about 10 km from Arundel, Quebec (Sabina, 1986).
- Silvertone (Silverstone) Black Marble Quarries, Lots 8 and 9, 12th Concession, Finch Township, Stormont County, Ontario. The quarry was at St. Albert, about 48 km southeast of Ottawa. The beds of black marble were reported to be about one metre thick (Canada, Mines Branch, 1946). The product was used for mill blocks and terrazzo chips. The quarry was first listed in 1933 (1933) and was mined until at least 1954 (Canada, Mines Branch, 1955).
- Stewart Quarry, Lots 29 and 30, 10th Concession, Dungannon Township, Hastings County, Ontario. About 5.5 km south of Bancroft and about 70 km north of Madoc, the quarry was accessible from Highway 62. It is also about 600 m northeast of the McMillan Quarry. Originally opened in 1908 by John Hoidge, of Toronto, it is one of a series of quarries that are known collectively as the *Bancroft Marble Quarries*. From 1934, it was operated by the Rock Construction Company, also of Toronto. The rock was a siliceous dolomite of various colours - from light-blue to brownish-pink (Thomson, 1943). See also the listings for the Barker and McMillan Quarries.
- Stocklosar (Stoklosar) (Highway 62) Quarry, about 1 km north of Madoc, Ontario, on Highway 62, the quarry was operated by Karl Stockloser in 1938-1939 (1940-1941) and later by Stoklosar Marble Quarries Limited (Sabina, 1987). Another quarry at Eldorado was listed from 1944 to 1946 (1947-1948). Buff, red, pink, white, green, and black marbles were reported (Canada, Mines Branch, 1946). The quarry was in operation until at least 1954 (Canada, Mines Branch, 1955).
- Stoklosar (Marmora Road) Quarries, Madoc Township, Hastings County, Ontario, about 7 km west southwest of Madoc (Sabina, 1987). This is probably the quarry that was listed as a source of marble from 1968 (1970) to at least 1974 (1978).
- Tweed Marble Quarry, about 5 km north of Tweed, Ontario. Sabina reported (1987) that it was operated by the Ontario Marble Company.
- Unnamed (two), on Lot 6, 3rd Concession and Lot 7, 4th Concession, Darling Township, Lanark County, Ontario. The quarry was reported in 1909 by the Canadian Mines Branch (1910).
- Verona Rock Products Quarry, at Verona, about 32 km northwest of Kingston, Ontario. Listed as

a producer from 1944 to 1946 (1947-1948). The company was also mentioned as a producer of poultry grit and stucco, from a white crystalline limestone, from 1951 to 1952 (Canada, Mines Branch, 1952-1953).

White Grit Company Quarry, Stark's Corner, Québec. Listed in 1944-1945 (1945-1946). See also the listing under Portage-du-Fort quarries, above.

White Marble Company of Canada, Horton Township, Renfrew County, Ontario, near Haley Station. The quarry was reported to have closed in September, 1915, but it was mentioned that operations would be resumed in 1916 by the Canada Glass Mantles and Tile Company, of Toronto (1916).

Marl

Marl is a soft crumbly soil which is composed of calcium carbonate, clay, and sand. It is used for the manufacture of cement and bricks and as a fertilizer.

Black Lake Occurrence, Lot 16, 7th Concession, Olden Township, Frontenac County, Ontario.

The occurrence was in the southwestern bay of Black Lake, on lots then owned by Andrew MacPherson (Harding, 1951).

Canada Cement Company (Portland Cement Company) Mine, at Buckley Lake, about 3 km east of Lakefield, Ontario. The plant was opened in 1900 by the Portland Cement Company, acquired by Canada Cement in 1927, and closed in 1932. The A. G. Newson Company was reported to have excavated the marl (Hansen, 1997).

Judge Occurrence, Lot 6, 2nd Concession, Hinchinbrooke Township, Frontenac County, Ontario.

The occurrence was about 250 m east of Highway 38, in a depression on the farm of Richard Judge (Harding, 1951).

MacPherson Occurrence, Lot 17, 19th Concession, Olden Township, Frontenac County, Ontario.

The occurrence was reported to have been east of White Lake, about 0.5 km northwest of Highway 7, and in a meadow on the farm of Andrew MacPherson (Harding, 1951).

White Lake Occurrence, Lot 16, 7th Concession, Olden Township, Frontenac County, Ontario.

This occurrence was reported as being in the southwest bay of White Lake, beneath a few in of mud (Harding, 1951).

Mica

The micas are a group of complex silicate minerals which crystallize in thin, easily-separated layers which are either transparent or translucent. The micas are also resistant to heat and electricity and, as a result, were once used in a variety of applications as insulators. Clear, or white mica, the mineral muscovite, was once used in applications where transparency and resistance to heat were required - such as stove doors, furnace windows, carriage lamps, and protective goggles. Other types, phlogopite, or amber mica, and biotite, or black mica, were used in the manufacture of electrical equipment. During the early days of electricity, at the beginning of the 20th Century, Ottawa was the centre of the mica mining industry in Canada. There were literally hundreds of deposits mined in the Gatineau and Lièvre River areas of Québec and in

Frontenac, Lanark, and Leeds Counties of Ontario. The great majority of these deposits were found in small pegmatite dikes on farms. It was not unusual for these to be mined in the off-season as additional sources of income. Some of the deposits, however, were world-class. The Lacey Mine, near Sydenham, in Frontenac County, was said to be the largest mica mine in the world. The Blackburn Mine, also known as the Vavasour, in Templeton Township, Québec, just north of Ottawa, was the principal producer in the Province of Québec from 1940 onwards. Its closing marked the end of an important era in Canadian mining.

The listings below do not reflect the fact that from about 1952 (1954-1958) onwards there were about 20 to 40 other small operators, unidentified, in Québec who either performed development work or shipped small quantities. Most of the output from these small operations was sold either to Blackburn Brothers or W. C. Cross (1958). By 1959, mica was produced by Blackburn Brothers and only seven other operators in southwestern Québec. The Blackburn company was reported to have purchased nearly all of the output for re-sale (1961). Across the provincial boundary, in Eastern Ontario, between 1960 and 1964 the production of mica varied from about 345 000 to 430 000 pounds, valued at about \$6000 annually. As in Québec during this period, all of it was produced by individuals and no details were reported concerning the operations that were active (1962-1966). A once-great contribution to mining in the area, mica production had declined to the status of a "cottage industry". From 1965 onwards no production was reported.

Acton Mine, Lot 3, 4th Concession, Sherbrooke Township, Haldimand County, Ontario. In 1921, Acton Mines was incorporated to work this vein, which outcropped alongside the Canadian Pacific Railway line about 1 km east of Bolingbroke Station. A pit was being dug (1922).

Adams Mine, Lot 12, 6th Concession, North Burgess Township, Lanark County, Ontario. In 1905, Cirkel reported that this "old" mine was then being worked by the General Electric Company, of Schenectady, New York. A pit, 35 ft deep, had been excavated in a shattered zone of pyroxene. The mica was reported to have been very broken up.

Adams' Mine, Lot 7, 8th Concession, North Burgess Township, Lanark County, Ontario. About 5 km southwest of Perth, the property was owned in 1902 by W. Adams. Reported to have been an old mica property at that time, it operated intermittently in 1902 (1903). J. H. Adams was reported as a producer until 1919 (1920).

Adelina Lake Mine, about 15 km northwest of Notre-Dame-de-la-Salette and 3 km south of Val-de-Bois, Québec. Sabina reported (1986) that the mine was worked about 1915, but did not report on the ownership.

Ahearn Property, Hull Township, Gatineau County, Québec. W. Ahearn, Jr, of Ottawa, was reported as the owner/operator of a property from 1921 to 1946 (1922-1947). It produced in 1935-1936, 1939-1942, and 1945-1946.

Algonquin (Low) Mine, claims E.O. 3,449 and 3,451 to 3,454, south half of Lot 11, Lot 10, Lot 9, 13th Concession, Dickens Township, District of Nipissing (later Renfrew County), Ontario. The property was originally staked by T. A. Low, the discoverer. Opeongo Mica Mines, of Renfrew, was formed by him and mined it in 1919-1920. About 65 tons were reported to have been produced. It was re-staked by R. A. Coutts, for the Algonquin Mica Prospecting Syndicate Property (Satterly, 1945). In 1944, mining took place in a feldspar

vein, which contained both biotite and muscovite mica, on the south half of Lot 10 (1947). There were a number of workings in pegmatite dikes or sills cutting hornblende gneiss. Muscovite mica was mined.

Allan Mine, Lot 14, 10th Range, Hull Township, Gatineau (formerly Ottawa) County, Québec (1892)

Allan Mine, Lots 30 and 31, Range 1, Villeneuve Township, Papineau (formerly Ottawa) County, Québec. The mine was reported to have been started in 1884 (1885).

G. E. Allard, Loughborough Township, Frontenac County, Ontario. He was reported to have not produced in 1914 (1915).

Amber Ridge Mica Company (Property) Mine, Lots 9 and 10, 5th Concession, North Burgess Township, Lanark County, Ontario. The mine was reported to have been operated by Charles Frank, of Westport, for the Amber Mica Company, of New York City, in 1942-1943 (1944, 1946). The pit was reported to have been 30 ft long, eight ft wide, and 20 ft deep, in 1943 (1944).

Ambermica of Canada Properties, Thorne and Hincks Townships, Pontiac and Gatineau Counties, Québec. The company, of Ottawa, was listed as an owner/operator from 1938 to 1940 (1939-1941). Work was reported in 1938.

American Mica Company Property, Lot 14, 7th Range, Templeton Township, Papineau County, Québec. This Boston company was reported to have been prospecting on the property in 1905 (Cirkel).

Amey (Property) Mine, Lot 7, 9th Concession, Loughborough Township, Frontenac County, Ontario. Adjacent to the Freeman Mine, the property was being opened by H. Amey in 1906 (1907). Some work, in early 1910, was reported (1910).

Amic Mica Mine, Mattawan Township, District of Nipissing, Ontario. The company was formed in 1943 to succeed Mica Consolidated Mines. A headframe was erected on the property, a small mining plant installed, and a vertical two-compartment shaft sunk to 45 ft. Seventy-six tons of muscovite was reported to have been produced (1944).

Amy and Folger Mine, Lot 8, 8th Concession, Loughborough Township, Frontenac County, Ontario. The mine was worked in 1892 by Messrs. Folger and Williams (1892).

Anderson (Orser) Mine, Lot 32, 4th Concession, Bedford Township, Frontenac County, Ontario. This mine was mentioned as being a few ft from the east shore of Crow Lake, on land which then belonged to G. S. Anderson (who also held the mineral rights). Harding (1951) noted that C. Orser of Verona had mined it from 1940 to 1941, and had produced about one ton of mica. The mica-bearing vein was in greywacke, and contained calcite, pyroxene, some red apatite, and tourmaline.

Anderson and Son Properties, Ontario. The J. G. Anderson company, of Lucknow, was mentioned as having a property at Bancroft in 1934-1935 (1935-1936).

Anglin Mine, part of Lot 10, 10th Concession, Loughborough Township, Frontenac County, Ontario. The mining rights were acquired by the Anglin Mica Mining Company in 1915, and 15 tons had been hand cobbled by the end of the year. Fifteen were then employed (1916). By January, 1917, three pits had been excavated, the deepest having been 60 ft. Fifty persons were employed during the summer months (1917).

Antoine Property, Devil's Lake, Ontario. The property was mentioned in 1906 (1906).

Argall Mine, Lots 19 and 20, 10th Range, Wentworth Township, Argenteuil County, Québec.

- Wm. Argall, of Laurel, was reported as the owner/operator of this mine from 1909 to 1923 (1910-1924). Thomas H. Argall, of Pointe-du-Lac, was listed next from 1924 to 1928 (1925-1929). The minerals included phlogopite mica, euhedral diopside, scapolite, and other associated with pyroxenites (Osborne, 1938).
- Armstrong Occurrence, Lots 1 and 2, 14th Concession, Carlow Township, Hastings County, Ontario. The occurrence was on the Armstrong Farm, on the north side of a hill, and about 800 m south of the New Carlow Road. Hewitt (1955) reported books of phlogopite mica, up to 15 cm across, in a scapolite metapyroxenite.
- Asbestos Crude and Fibre Mine Property, see the listing for the Courte Mine, below.
- Ashley Mine, Lot 10, 11th Concession, Loughborough Township, Frontenac County, Ontario. Near Gould Lake, the deposit was being developed by the General Electric Company, Schenectady, New York, in 1903 (1904).
- Asseltine (Cook, Hannah) Mine, Lots 2 and 3, 7th Concession, Oso Township, Frontenac County, Ontario. The property was worked late in the 19th Century by Tom Cook, of Harrowsmith. In the 1920s, Frank Asseltine mined for short period. Harding (1951) reported that the surface rights were owned then by A. Hannah, of Bolingbroke. The pits extended about 120 m along the side of a hill within 75 m of the south shore of Sucker Lake. The largest pit was within 60 m of the shore of the lake, and was 30 ft long, three ft wide, and 25 ft deep. Locally, pegmatites were reported to cut pinkish and grey banded gneiss. Amber mica, pink calcite, and hornblende were mentioned as minerals.
- Auger Property, Gatineau County, Québec. Georges A. Auger, of Maniwaki, was listed as the owner/operator of a property at Lac à la Croix, in 1939 (1940).
- Austin (Property) Mine, Storrington Township (a search of the Natural Resources Canada database indicates that the name no longer exists), Ontario. Owned by Louis Austin, of Perth Road, it was listed as a source of shipments in 1925 (1926) and as in operation in 1930-1933 (1931-1933).
- Aylen Property, Lot 5, 12th Range, Templeton Township, Papineau County, Québec. White (1997) reported that the land belonged to Mr. H. Aylen of Ottawa in the early part of the 20th Century. It was worked by Mr. P. Hamilton, under lease, in 1908.
- Aylen Lake Mine, Lot 9, 13th Concession, Dickens Township, District of Nipissing, Ontario. Near the north end of Aylen Lake and about 1.5 km south of the Algonquin Park boundary, the mine was opened in 1919 by Opeongo Lake Mines. The vein was a pegmatite in a biotite gneiss (1921). Many veins were reported in the vicinity.
- Ayrhart Mine, Lot 14 or 15, 8th Concession, Methuen Township, Peterborough County, Ontario. The mine was reported to have been on the northwest shore of Big Mountain Lake, and below the Cabin Ridge section of American Nepheline's Mine (see the listing under Nepheline Syenite). A pit, 40 ft long, 25 ft wide, and up to 15 ft deep, was reported to have been excavated by J. E. Ayrhart, in 1941. It was in a muscovite pegmatite dike (Hewitt, 1961). A second pit was a short distance away.
- Ayrmic Prospecting Syndicate Properties, Portland West and Derry Townships, Papineau County, Québec. The company, from Toronto, was listed as an owner/operator from 1942 to 1943 (1943-1944).
- Baby Mine, Lot 13, 5th Concession, North Burgess Township, Lanark County, Ontario. The mine was reported as being on the south side of Long Lake, and about 23 km from Perth.

Owned by Mr. T. J. Watters, of Ottawa, it was worked for large-sized mica from 1895 to 1897. It was reopened, by Messrs. P. C. McPharland and J. J. Smith, in 1904 and operated in 1905 (1905)(1906). It seems that it was then again dormant until Mr. Richardson prospected on the property in 1910 (1911). In 1905, Cirkel reported that the main shaft was 95 ft deep.

Hugh Baker Property, Lot 12, 11th or 12th Range, Templeton Township, Papineau (formerly Ottawa) County, Québec (1899).

Banca Mining and Exploration Property, Portland East Township, Papineau County, Québec. The company was listed as an owner/operator from 1942 to 1943 (1943-1944), with work being reported in 1943.

Bancroft Mica and Stone Products Mining Syndicate Mine, see the listing for the Basin Mine, below.

Barrett Property, Hull Township, Gatineau County, Québec. Joseph A. Barrett, of Ottawa, was listed an owner/operator in 1925 (1926) and from 1929 to 1932 (1930-1933).

Barrette Property, Québec. Thomas Barrette, of Chénier, near Gracefield, was listed as an owner/operator from 1937 to 1940 (1938-1941).

Basin (Orser and Wilson, Bancroft Mica and Stone Products Mining Syndicate, Silver Crater Mines) Mine, Lot 31, 15th Concession, Faraday Township, Hastings County, Ontario. The property was about 13 km west of Bancroft, and about 3 km north of the Monck Road. The main pit was reported to have been on the southeast side of a hill. Satterly (1957) reported that this was an old property that had been mined for black mica by S. Orser and D. J. Wilson, in 1925, when a small quantity was produced (1926). This is probably also the same property that was reported to have been mined in 1927, when the Bancroft Mica Company (Sydney Orser) mined about 100 tons for their mill at Bancroft (Thomson, 1943). It was next reported to have been operated and closed, by S. H. Orser, of Bancroft, in 1943 (1944). Twenty-nine tons of biotite mica were then mined. From 1947 to 1951 it was operated for scrap and trimmed mica by the Bancroft Mica and Stone Products Mining Syndicate (Hewitt, 1959). In 1950, the operators were mentioned as having been Norman Weeks and Irvin Gibson, of Lanark, and Reuben Watts, of Perth, who had leased the property (1952). It was also reported to have mined by R. W. Watts, of Perth, in 1951 (Canada, 1952). During this period, 1947-1951, a total production of 469 tons was reported (Hewitt, 1959). Silver Crater Mines acquired it in 1953 and explored it during 1953-1957. At the time, the old open pit was reported to have been 30 ft in diameter and with a 65-foot-high wall into the hill, and a 12-ft wall on the other side. There were also underground openings, including an adit and a raise (a near-vertical connection between levels) on the property. Locally, a carbonate body occurred as a sill-like mass in hornblende-plagioclase gneiss. To the north, on one side, were granite and granite gneiss. To the south were marble and metasediments. The mica occurred in coarsely-crystalline white calcite. Some books were reported to have been up to 1.2 m in diameter (Hewitt, 1959). Satterly (1957) mentioned the following minerals: albite; amphibole; green apatite, brown to black octahedral and rare dodecahedral crystals of betafite up to 7.5 cm across (often found in close association with books of mica and apatite crystals); biotite; calcite; purple fluorite; hornblende; molybdenite; plagioclase; pyrite; pyroxene; pyrrhotite; titanite; and zircon. Several of the minerals occurred as large

crystals and crystal assemblages. It was widely reported to have been remarkable because of both the quantities and the sizes of the crystals (Canada, 1948). The mica was a dark-coloured phlogopite with poor splitting qualities. The mica was later analyzed to be lepidomelane rather than biotite. Other minerals reported by Thomson (1943) were albite, black hornblende, sphene, magnetite, purple fluorite, apatite, and white calcite.

Bastien and Bigras Property, Wells Township, Labelle County, Québec. Ephrem Bastien and Emmanuel Bigras, of Notre-Dame du Laus, Papineau County, were listed as working owners/operators in 1940-1944 (1941-1945). There was no work by them reported in 1943-1944 (1944-1945).

Battle Lake Mine, Lots 4 and 5, 13th Range, Templeton Township, Papineau County, Québec. The mine was reported to have been on the north shore of Battle Lake, south of Rheume Lake, and about 4 km from the Lièvre River. It was first mined in the mid 1880s for apatite. The phlogopite mica occurred in a vein of pyroxene cutting gneiss. When Cirkel reported on the property, in 1905, it was noted that there was a large number of old pits. Large crystals were obtained on the property; one weighing about 90 kg. Scrap mica was reported to have been produced from its dumps in 1946 (1947).

Bawden Mine, Lot 9, 5th Concession, Bedford Township, Frontenac County, Ontario. These were old pits, said to have been mined by Joseph Bawden, of Kingston, late in the 19th Century (Harding, 1951).

Bawden Property, Lots 4 and 5, 11th Concession, Miller Township, Frontenac County, Ontario. The property was reported to have been originally owned by J. Bawden, of Kingston. Stripping and stockpiling of mica took place in 1901 (1902).

Bazinet (Bazinet's) Mine, Lot 2, 2nd Range, Joliette Township, Joliette County, Québec. The mine was reported to have been worked intermittently by François Bazinet in 1935-1937 (1936-1938). The mica was a light amber variety (1937).

Bear Lake Mine, Lot 10, 11th Concession, Loughborough Township, Frontenac County, Ontario. The mine was on the shore of Bear Lake, 5 km north of Stoness Corners, and 5 km northwest of Perth Road. Originally owned by William Wallace and John Roberts, of Stoness Corners, it was first worked in 1898. J. H. Roberts, of Perth Road, then became the owner in 1901 and operated it until 1903 (1906). There was an inclined shaft, 95 ft deep (42 degrees), on the property (1902). Sabina reported that it had yielded large cuts of fine mica (1991).

Bedford (Folger) Mine, south half of Lot 5, 2nd Concession, Bedford Township, Ontario. The mine was reportedly on the farm of James Fitzgerald, about 5 km east of Godfrey Station on the Kingston and Pembroke Railway, and near Glendower. It was first worked in 1896 by F. Folger, of Kingston. Subsequently, it was worked intermittently by the Bedford Mining Company and others (1920). In 1918, Orser and Kraft began working this mine. They were succeeded in late 1919 by the Orser Mica Company. The shaft was then 70 ft deep (1920). It was worked until late 1920 (1921).

Bedford Mills Mine, Bedford Mills, Blue Lake, Ontario (1891).

Bedore Prospect, Lot 34, 5th Concession, Bedford Township, Frontenac County, Ontario. A prospect pit was reported to have been dug on this property by Hilliard Bedore before 1943 (Harding, 1951).

Felix Benjamin Mine, Lot 6, 8th Concession Loughboro Township, Frontenac County, Ontario

(1901).

Bennett Mine, Lots 14, 9th and 10th Concessions, Methuen Township, Peterborough County, Ontario. The mine was reported to have been near Mountain Lake (1899).

Bennett Mine, Lot 12, 7th Concession, Loughborough Township, Ontario. Operated by Hubert V. Bennett, it was reported as a producer in 1919 and 1924 (1920, 1926).

Bennett Mine, Lot 13, 6th Concession, North Burgess Township, Lanark County, Ontario. Shipments from this property were recorded in 1927 (1929).

Bennett Mine, South Elmsley Township, Leeds County, Ontario. Also owned by Herbert V. Bennett, of Perth, it was listed as having produced mica from 1925 to 1926 (1926-1927) and from 1936 to 1938 (1938-1940).

Bennett's Mine, Lot 14, 9th Concession, Methuen Township, Peterborough County, Ontario. This mine was mentioned as having been on the north slope of Blue Mountain, and about 60 m northwest of the mine road leading to American Nepheline's mine. The property was reported to have been opened in 1899 and later leased from American Nepheline by J. E. Ayhart, in 1940, and the White Mica Mining Syndicate, in 1941-1942. There were three cuts, all in the range of 60 to 90 ft long, that had been excavated in pegmatite dikes. These had been mined for muscovite and corundum (Hewitt, 1961).

Bérard Property, Huddersfield Township, Pontiac County, Québec. Omer Bérard, of Ile Calumet, was listed as an owner/operator from 1939 to 1940 (1940-1941).

Bernatchez Properties, Kensington and Cameron Townships, La-Vallée-de-la-Gatineau, Québec. Louis Bernatchez, of Sainte-Thérèse-de-Gatineau, was listed as an owner/operator from 1938 to 1939 (1939-1940) with work on the property having been reported in 1938.

Bertrim Mine, Lot 31, 4th Concession, Bedford Township, Frontenac County, Ontario. The mine was about 50 m west of Crow Lake, on the farm of George Bertrim (Harding, 1951). A pit was reported to have been dug in 1905, and four barrels of amber mica produced.

Bigelow Property, Portland East Township, Papineau County, Québec. Robert Bigelow, of Glen Almond, was listed as a working owner/operator in 1941 (1942).

Biglow Mine, Lots 32 and 33, 10th Range, Hincks Township, Gatineau County, Québec. The mine was reported to have been prospected by a Mr. Watters in 1898 (1899).

Bio Mica Mine, Ontario. Near Verona, it was listed as an operator in 1928 (1930).

Biram (Perth Mica) Mine, Lot 4, 5th Concession, North Burgess Township, Lanark County, Ontario. On the north shore of Rideau Lake, it was reportedly part of a property that was mined for phosphate about the middle of the 19th Century (1946). It was reopened in 1901, for mica, by a syndicate headed by J. M. Rogers, of Perth. It was then idle until 1942, when Perth Mica, incorporated the same year, again resumed operations (1946). The pit was then 40 ft long, 15 ft wide, and 60 ft deep. It was reported to have been taken over and operated by Biram Mines Limited, in 1943 (1944). One pit was on the edge of the lake while the second, about 100 ft away, was reported to have been 30 ft long and 20 ft deep. Thirty-one tons of amber mica was reported to have been mined in 1943. Five were employed at the mine and another five at the shop at Westport (1944).

Birch Lake Mine, Lot 14, 14th Concession, Loughborough Township, Frontenac County, Ontario. Owned by Thos. J. Brennan, of Schenectady, New York, and leased to Webster and Company, it was mined from an 80 ft-deep pit (1901). A shaft had been sunk to 80 ft, on an incline of 80 degrees, on the contact of the pyroxene (Cirkel, 1905).

- Birch Lake Syndicate Property, near Birch Lake, Loughborough Township, Frontenac County, Ontario. Several test pits, up to 40 ft deep, were sunk in 1911 (1912). The Birch Lake Mining Company Limited was reported to have not produced in 1914 (1915).
- Arthur Bishop Property, half of Lot 16, 15th Range, Hull Township, Gatineau (formerly Ottawa) County, Québec. This was mentioned as having been a small operation in 1899 (1900).
- Black Lake Mine, Lot 22, 11th Concession, Loughborough Township, Frontenac County, Ontario. Opened in 1916 by the Black Lake Mining Company, a narrow vein was reported to have been followed on an incline to a depth of 65 ft (1917).
- Blackall Mine, Lot 10, 5th Concession, Burgess Township, Lanark County, Ontario. The Standard Mica Company, of Toronto, acquired the property in 1900 and was reported to have been preparing it for production (1901).
- Blackburn Brothers Mines, see the listings for the Blackburn, Phosphate King and Vavasour Mines, below.
- Blackburn Mine, Hull Township, Gatineau County, Québec. At Perkins Mill. This mine was reported to have been operated sporadically in 1959-1960, with 21 men having produced 60 tons of mica. This was from an old open pit about 120 m west of the *Number 1 Shaft* and from some underground mining on the 100-ft level (1961-1962). Mining was suspended in early 1963 and a small quantity was recovered from the underground workings in 1964 (1967). This listing is confusing since the location does not seem to correspond with the other Blackburn listings.
- Blackburn Mine, Lots 8, 9, 10, and 11, 11th Range, Templeton Township, Gatineau County, Québec. This mine is about 5 km north of Perkins Mills and just southwest of Barnes Lake (White, 1997), and accessible by Chemin de la Mine. It was worked from 1888 to 1958, first for apatite by Messrs. Blackburn and L. K. McLaurin (1894). It then became a mica operation after the decline of the phosphate industry in the 1890s and was worked by a Mr. Hinginston in 1895, and by the Blackburn Brothers, with up to 50 men, from 1896 (1899). At one time, as many as 120 people were employed on the property. During the early years, until the mine closed in 1909, the total production was over 100 000 tons of apatite (White, 1997). The Blackburn Brothers, of Ottawa, were mentioned as the owners/operators of this property until 1958 (1959). In 1920, it was mentioned as being one of the most important producers. An inclined shaft, at 60 degrees, had been sunk to 260 ft, and five levels cut at 60, 110, 160, 210, and 260 ft, respectively. Drifting had been done to as much as 300 ft from the shaft on the several levels (1921). In 1929 the mine was reopened as a mica producer, with 25 employed (White). In the 1930s it was reported to have provided the bulk of the production in the province (1931-1937). It was then the "oldest and steadiest producer of mica in the Province" (1932). A mica grinding plant had been installed near the mine. In 1936, a new shaft was sunk at the north end of the deposit and the company acquired the Vavasour Mine (see the listing) (1937). It was reported as having been an important producer in 1938-1941 (1939-1941) but it was not worked in 1942 and the mica grinding plant was then moved to the Vavasour Mine. The property was explored by diamond drilling in 1946 (1947). Mica was recovered from the waste dumps in 1951 (1952). In 1958, it was reported that it was worked from three drifts, about 30 m below the surface, and a shaft, also about 30 m deep (1959).
- Blackburn Mine, Portland East Township, Papineau County, Québec. The Blackburn Brothers

- were listed as the owners/operators of this property from 1929 to 1940 (1930-1941). In the report for 1934, it was mentioned that this mine, and the Martin Mine, in Hull Township, had been the source of most of the production in the province that year (1935).
- Blackburn Mine, Loughborough Township, Frontenac County, Ontario. This mine was listed as a producer in 1951-1952 (Canada, Mines Branch, 1952-1953).
- Blair Mine, Lot 3, 6th Concession, Bathurst Township, Lanark County, Ontario. At the head of Bennett's Lake, 21 km southwest of Perth, it was reported to have been originally owned by R. Blair, J. Morrow, and L. J. Gemmell, of Perth. There were two prospect pits (1902).
- Bliss Mine, South Burgess Township, Lanark County, Ontario. About 19 km southeast of Perth, it was first worked about 1870. It was reported to have been operated at various times thereafter, and to have been reopened by L. J. Gemmell, of Perth, in 1901 (1902).
- Blood Mine, Lots 49 and 50, 1st Range, Denholm Township, Gatineau County, Québec. W. E. Blood, of New York City, was listed as a working owner/operator for most of the 1939-1943 period (1940-1944). A.P. Blood, was listed in 1944, and was mentioned as having shipped phlogopite that year (1945).
- Boal's Mine, Lot 8, 12th Concession, Storrington Township, Frontenac County, Ontario (1901).
- Bobs (Bob's, Bobbs) Lake (Taggart) Mica Mine, Lot 30, 6th Concession, Bedford Township, Frontenac County, Ontario. On the west side of Bob's Lake, near the south shore of Mud Bay, the property was first developed by the Montreal Mining Company, for apatite, in 1891. It was abandoned the following year, and was reopened by Tom Taggart, of Westport, as a mica operations, in 1897. It was then acquired, in 1903, by Messrs. Kent Bros. and Stoness, of Kingston (1904)(1905)(Harding, 1951). Known during this period as the *Bob's Lake Mica Mine*, it was operated until 1925. The pit was reported to be 60 ft deep in 1906 (1907), and 75 ft deep and 30 ft long in 1908 (1908). There were then several pits on the property, ranging from 25 to 50 ft in depth. These were known as the *Taggart, Butternut, Jones, and King Pits*. Each was in a separate vein on the south shore of Mud Bay. It was worked again, and intermittently for scrap mica, by William W. Lee, of Bedford Mills, in 1933-1939 (1935-1941), and by S. O. Fillion, of Ottawa (Harding, 1951). Harding mentioned that the largest of the workings was about 125 ft long, nine ft wide, and was reported to be 100 ft deep. These were filled with water. On the property, the mica veins cut greywacke and other Grenville sediments. The minerals mentioned were a dark amber phlogopite mica, calcite, pyroxene, apatite, feldspar (orthoclase), quartz, pyrite, and brown tourmaline.
- Boisvert Property, Wells Township, Labelle County, Québec. Ubald Boisvert, of Montréal, was listed as an owner/operator in 1940-1941 (1941-1942). Work was reported in 1940.
- Bonfield Mica Syndicate Mine, Claim E.O. 3,359, north half of Lot 9, 10th Concession, and Claim E.O. 3,446, south half of Lot 9, 10th Concession, Dickens Township, District of Nipissing (later Renfrew County), Ontario. On a point near the centre of Aylen (Little Opeongo) Lake, the claims were reported to have been staked by W. B. Cameron, in 1942. The pegmatite contained pink potash feldspar in masses or crystals up to 30-60 cm across, white soda feldspar, up to 10 cm across, white quartz, and biotite, in books up to 7.5 cm in thickness, and from 5 to 25 cm across (Satterly, 1945).
- Bonfield Mines Property, Claims S. 36,408 to 36,411 and 37,242 to 37,245, 4th Concession, southwestern part, Mattawan Township, District of Nipissing, Ontario. Some of the

- claims were reported as bordering the south shore of Kearney Lake. In 1943, the property was being prospected, with muscovite in pegmatite being reported (Harding, 1946).
- Bouchette Township Occurrence, Lots 10 and 11, 10th Range, Bouchette Township, La-Vallée-de-la-Gatineau, Québec.
- Boudreau Mica Mine, Lot 4, 14th Concession, Clancy Township, District of Nipissing (later Renfrew County), Ontario. The mine was reported as having been east of the Bonnechere River, about 43 km northwest of Round Lake, and in Algonquin Park. It was mentioned as having been worked by Joe Boudreau, of Traymore (between Killaloe and Round Lake Centre), about the time of World War I. In 1941, Joe Boudreau, of Mount St. Patrick, and a relative, a Mrs. Donovan, of Sudbury, were then reported as the owners. On the property, grey garnetiferous gneiss was reported to have been cut by pegmatite dikes. These were reported as containing red and white feldspar, quartz, mica, apatite, and muscovite mica (Satterly, 1945).
- Bradley Mine, Lot 16, 10th Range, Hull Township, Gatineau County, Québec. The mine was reported to have been operated by the Watters Syndicate (the Lake Girard Mica System), in 1892 (1892).
- Brassard Property, Huddersfield Township, Pontiac County, Québec. Alex Brassard, of Sandy Creek, was listed as an owner/operator from 1938 to 1939 (1939-1940).
- Brent (Property) Mine, Claim E.O. 5654, Deacon Township, in either Renfrew County or the District of Nipissing, Ontario. The North Bay Mica Company obtained an option on this property in Algonquin Park and was reported to have mined 560 tons of rock (from which 1.5 tons of mica had been obtained) in 1953. The option was then dropped (1955).
- Brock Mine, Lot 36, 12th Range, Low Township, Gatineau County, Québec. The mine was reported to have been worked in 1891. It was then the property of T. P. Coffee (1892).
- Brockville Mining Company Mine, Lot 7, 6th Concession, Bastard Township, Leeds County, Ontario, about 5 km from Elgin. In 1906, it was reported that work had been done some years ago, but, that, because the mica was dark, it had been stopped. The mine was opened once again in 1906, with 15 men reported to have been working in it. The pit was 100 ft deep and 40 ft long by 1908 (1908). It was reported that there had been no production in 1914 (1915).
- Brohart Occurrence, Lot 29, 1st Concession, Brudenell Township, Renfrew County, Ontario. The occurrence was on the farm of E. Brohart (Hewitt, 1954). Phlogopite mica in pegmatite or mica pyroxenite was mentioned.
- Brown Brothers Mines (two), south half of Lot 19, 7th Range and north half of Lot 20, 6th Range, Hull Township, Gatineau County, Québec. The mines were on the west side of the Gatineau River. In 1899, it was reported that there were numerous openings, several workers, and two derricks on the property (1900). About 1905 ownership was transferred to the Laurentide Mica Company, of Ottawa. Fifty men were then at work in developing it. The main workings consisted of three excavations in a pyroxene dike through grey granite gneiss. The mica occurred in pink calcite. Large crystals, both of mica and light green apatite, were reported as having been numerous. There were many other pits and trenches on the property (Cirkel, 1905). Brown Brothers, of Bouchette, and later Cantley, was listed as an owner/operator from 1909 to 1939 (1910-1940), but there were no reports of production.

- Brown and Fahey Property, Ontario. From Elgin, they were reported as shippers in 1924-1925 (1926).
- Buck Lake Mine, Bedford Township, Frontenac County, Ontario. Owned by W. W. Lee, of Bedford Mills, it was listed as an operation from 1925 to 1938 (1926-1940) (see the other listings for Lee, below).
- Buckingham Cartage Mine, Québec. The mine was mentioned as a source of feldspar and silica in 1960 (1962).
- Burke Mine, Lot 1, 13th Range, Hull Township, Gatineau (formerly Ottawa) County, Québec. On the east side of the Gatineau River, it was mined first for phosphate prior to 1890, and for mica from 1894 (Cirkel, 1905).
- Burke Property, Ontario. Jas. Burke, of Perth, was reported as a shipper in 1924 (1926).
- Burns Prospect, Lot 26, 5th Concession, Bedford Township, Frontenac County, Ontario. The prospect was reported as having been on the farm of P. Burns, with the pit having been on the shore of Green Bay of Bob's Lake. Developed in 1943-1944, it was found to be of no value. The dark mica, a phlogopite, occurred in crystalline limestone (Harding, 1951).
- Butterill Prospect, Lot 19, 9th Concession, Bedford Township, Frontenac County, Ontario. The prospect was on land owned by George Butterill, of Fermoy. A prospect pit was reported to have been sunk by B. Botting early in the 20th Century (Harding, 1951).
- Byrnes (Byrne's)(Burns) Mine, Lot 11 and east half of Lot 12, 7th Concession, Burgess Township, Lanark County, Ontario. About 13 km south of Perth, the mine was reported to have been operated by Patrick Byrnes in 1900 and 1901 (1901)(1902), and sold to the General Electric Company in 1902 (1903). It was called the *Burns Mine* in the 1903 report (1904). The mica was dark black, and occurred in a vein between pyroxene and hornblende gneiss. The largest opening, of several, was reported to have been 100 ft deep (Cirkel, 1905).
- C P R Prospect, Lot 14, 8th Concession, Methuen Township, Peterborough County, Ontario. On the south side of the railway line there were reportedly three small pits that had been dug in syenite pegmatite dikes. The mica was muscovite (Hewitt, 1961).
- Calumet Mica Company, Huddersfield Township, Pontiac County, Québec. This company, of Bryson, and later Campbell's Bay, Québec was reported as an owner/operator from 1909 to 1926 (1910-1927).
- Cameron Mine, north half of Lot 18, 8th Concession, Murchison Township, District of Nipissing, Ontario. The mine was reported to have been operated by Jas. D. Cameron, of Madawaska, from 1932 (1932).
- Cameron Mine, Lot 7, 2nd Range, Augmentation of Grenville Township, Argenteuil County, Québec (Osborne, 1938).
- Cameron (Property) Mine, Lots 5 and 6, 9th Range, Portland West Township, Papineau County, Québec. Operations, by Angus Cameron, of Buckingham, and six men were reported in 1988 (1900).
- Cameron Property, Québec. Peter U. Cameron, of Buckingham, was listed as an owner/operator in 1938 (1939).
- Campbell and Folger's Mine, Lot 12, 1st Concession, Oso Township, Frontenac County, Ontario. The mine was reportedly near Eagle Lake (1901).
- Campbell and Folger Mine, Lot 27, 2nd Concession, Hinchinbrooke Township, Frontenac County,

Ontario. The mine was about 0.4 km north of the southeast arm of Eagle Lake. There were five small pits within a radius of about 60 m. These were reported to have been dug by Tom Duffy, in 1905-1910, and by Harry J. Cain, in 1921 (Harding, 1951). The largest pit was 20 ft long, six ft wide, and 12 ft deep. Veins containing calcite and mica were reported to cut Grenville sediments which had been altered to paragneiss.

Campsall (Gray) Mine, Lot 12, 7th Concession, Oso Township, Frontenac County, Ontario. A pit, in the side of a hill about 200 m north of Fall River Road, was reported to have been dug on the farm of Ross Gray (Harding, 1951). Isaac and Oscar Campsall, of Tichborne, were also reported to have mined this property early in the 20th Century. The largest pit was 50 ft long, 20 ft wide, and from 10 to 40 ft deep. A smaller pit was located about 100 m southwest of the first. The local rocks were altered Precambrian sediments. The mica was light-coloured.

Campsall Mine, Lot 30, 2nd Concession, Hinchinbrooke Township, Frontenac County, Ontario. The mine was reported to have been within a few m of the shore, on a point, on the south shore of the northwest bay of Eagle Lake. The pit, then water-filled, was reported to have been mined during the period 1900-1910 by Wesley Campsall, of Thichborne (Harding, 1951). See also the Campsall listings under the Howes Mine, below.

Canada Industrial Company Mine, east half of Lot 9, 10th Range, Templeton Township, Papineau County, Québec. The deposit was first mined for apatite prior to 1891, and then by a Mr. White, of New York, with 15 men, in 1894 (1895). Cirkel (1905) noted that the cut in the pyroxene vein was 120 ft long and 45 ft deep. The property was reported to have been the source of large crystals of phlogopite.

Canada Mica Company Property, Lot 2, 5th Concession, Bedford Township, Frontenac County, Ontario. Near Lucknow, the property was listed in 1932 (1932).

Canada Mica Manufacturing Company, of Hull, Québec. The company was reported as owning a property in 1913 (1914).

Canadian Amber Mica Company Mine, Portland West Township, Papineau County, Québec. This company, of Montréal, was listed as an owner/operator from 1924 to 1939 (1925-1940). See also the entry under Feldspar.

Canadian Flint and Spar Company Mine, south half of Lot 27, 5th Concession, Dickens Township, District of Nipissing, Ontario. The company, from Buckingham, was reported to have operated this small showing in 1943 (1944). Three tons of muscovite mica was mined by five employees.

Canadian General Mining Company, Montréal, Québec. The company was listed as a producer in 1909 (1910).

Cantin (Canton) Mine, Lot 1, 4th Concession of South Burgess Township, Leeds County, Ontario. Originally owned, about 1895, by Messrs. Webster and Company, the mine was subsequently operated by the General Electric Company and the Loughborough Mining Company (1907). It was reported to have been in operation in 1906. In 1910, however, it was mentioned that it was not being worked (Canada, Mines Branch, 1911).

Capital Mica Company Properties Hull and Wakefield Townships, Gatineau County, Québec. This company, from Ottawa, with W. Ahearn as an early Manager, was reported to be a Québec owner/operator from 1912 to 1930 (1913-1931) and in 1932 (1933).

Captain Adams Mine, Lot 12, 6th Concession, North Burgess Township, Lanark County, Ontario.

- Idle for a number of years, it was reported to have been acquired in 1902 by the General Electric Company, of Schenectady, New York.
- Carmen Property, Hull Township, Gatineau County, Québec. Osborn Carmen (Carman), of Farm Point, was reported as the owner/operator of this property from 1925 to 1940 (1926-1941). The name reported alternated between Carmen and Carman. Work was reported in 1940.
- Carroll Creek Mica Mines Property, Portland East Township, Papineau County, Québec. The company was listed as an owner/operator from 1938 to 1939 (1939-1940), with work being reported in 1938.
- Cascades Mine, south part of Lot 22 and Lot 23, 15th Range, Hull Township, Gatineau County, Québec. The mine was on the west bank of the Gatineau River, about 1.5 km from Cascades Station. Opened in 1891, it was worked until 1896. It was then reopened in 1898 by the Cascades Mica Company (1899). Cirkel (1905) reported that it was known for both the large quantity mined and the large crystals - - one of which measured seven ft long and "several" feet across, and yielded almost three tons of mica. A great many openings were on the property. It was mentioned as being one of the principal producers in 1937 (1938).
- Cassidy's (Cassidy) Mine, Lot 15 and southwest half of Lot 16, 16th Range, Hull Township, Gatineau County, Québec. The mine was on the east side of the Gatineau River. Exploitation began in 1892 and continued until 1901 (Cirkel, 1905). It was then worked by a Mr. Mottard, and then Powell and Clemow in 1898 (1899), and by Dr. A. Syneck and Company in 1899 (1900). The deposit was reported to be of the pocket type, with mica occurring along fissures in a belt of pyroxene.
- Cawood Mine, Lot 18, 6th Range, Cawood Township, Pontiac County, Québec. Mining was reported to have begun in 1898 by Messrs. Brook and Pritchard, of Kazabazua, and four men (1899).
- J. A. Chabot Company Mine, Lot 15, 3rd Range, Portland West Township, Papineau County, Québec. Operated by the company of the same name, from 1899, the mine was situated on a hilltop (1900) about 500 ft high. The company was listed as an owner/operator until 1924 (1925). The property was reported as being accessible from either the Wakefield or the Lièvre River Roads (Cirkel, 1905).
- Chaibee Mine, Lots 6 and 7, Range A, Wright Township, Gatineau County, Québec. The mine was reported to have been about 5 km southeast of Wright, on Highway 105, and 1 km north of the Highway 105 junction to Marks. Worked in the 1890s by the Lake Girard Mica System, it was also mined by Mr. T. J. Watters, in 1898 (1899), and by the Webster Company and the General Electric Company. It was reported as being inactive since 1903. In 1910, the Canadian Mines Branch also reported the mine to be inactive (1911). In 1905, Cirkel reported that the underground mine consisted of a 75-ft-deep shaft from which an 80 foot drift had been driven at the bottom. Seven diamond drill holes had also been drilled for exploration. The mine was reported by Sabina (1987) to have been on the Lionel Emond Farm.
- Chapman Property, Québec, at Lac Commandant. J. E. Chapman, of Hawkesbury, Ontario, was listed as owner/operator in 1939 (1940).
- Chaput Property, south part of Lot 14, 7th Concession, Mattawan Township, District of Nipissing,

- Ontario, Claim S. 36,378, on the north shore of Antoine Creek at Lion Chute. A small prospect pit was reported to have been dug by H. G. Riddell, of Renfrew, in 1943. At the property, pegmatite dikes cut pink and grey gneisses. Minerals reported were soda spar, quartz, biotite, garnet, apatite (green), and muscovite (Harding, 1946).
- Chenier Property, Grenville Township, Argenteuil County, Québec. Z. E. Chenier, of Rockland, Ontario, was reported as the owner/operator from 1925 to 1945 (1926-1946) with work being reported in 1936 and 1940-1944. Hercule Chenier was listed next in 1946 (1947).
- Chislock Property, Portland West Township, Papineau County, Québec. Isidore (Cheslock) Chislock, of High Falls, Québec, was listed intermittently as an owner/operator from 1923 to 1936 (1924-1937). Production was not reported.
- Chubbuck Property, Lot 13, 16th Range, Hull Township, Gatineau County, Québec. The property was reported to have been on the east side of the Gatineau River. Cirkel (1905), reported an opening about 30 ft deep, in which mica crystals could be seen in reddish calcite. The property was operated from 1898 to 1900. Mica was also reported on the adjoining Lot 21, in the 15th Range.
- Clarendon Mine, Lot 24, 2nd Concession, Clarendon Township, Frontenac County, Ontario. This deposit, mentioned in Smith (1958), was reported to have been mined irregularly for muscovite and abandoned about the beginning of the century. With no details available, it has been named by this writer after its location.
- Cleary, Morris, and Poirier Property, Québec. Messrs. G. Cleary, M. Morris, and A. Poirier, of Wilson's Corners, were listed as owner/operators from 1934 to 1936 (1935-1937). The company (or partnership) was reported as being a producer.
- William Cleland, Bouchette, Wright County (now Gatineau County), La-Vallée-de-la-Gatineau, Québec. Ownership of a property was reported in 1913 and 1914 (1915).
- Clément Property, Derry Township, Papineau County, Québec. Damase Clément, of Glen Almond, was listed as a working owner/operator in 1941 (1942).
- Clemow and Powell Mine, Lot 22, 2nd Range, Hincks Township, Gatineau County (Ottawa County at the time), Québec. The mine was reported to have been worked in 1894 and 1895 by Messrs. Clemow and Powell, with 15 to 18 men. The pit was 50 ft deep (1897).
- Clemow and Powell Mine, Lot 22, 2nd Range, Hincks Township, Gatineau County, Québec. Operated by Messrs. Clemow and Powell, in 1894, it was reported that a large quantity of mica, of very great dimensions, with crystals of several ft and weighing several hundreds of pounds, were obtained.
- Cliff Mine, Mountain Road, about 9 km northwest of Hull, Québec. It was reported to have been worked by the Brown Brothers, of Cantley, Quebec, in 1898. There were three pits (Sabina, 1987).
- Comet Mica Works, Ottawa, Ontario. The company was listed as a Québec producer in 1909 (1910).
- Comic (Comet) Mine, south half of Lot 15, 2nd Range, Wakefield Township, Gatineau County, Québec. The mine was reportedly operated: by the Wakefield Mica Company, in 1894; by a Mr. Wilson; by Messrs. Chubbuck and J. A. Wilson; and by Messrs. Hurdmand and Arnoldi, in 1898, through the Comet Mica Company. The mine was closed in 1899 (1900).
- Commercial Mineral Products Company Property, Portland West Township, Papineau County,

- Québec. The company, from Montréal, was listed as an owner/operator in 1942 (1943).
 James Connor Mine, north half of Lot 13, 15th Range, Hull Township, Gatineau County, Québec.
 The mine was reported to have been worked in 1899 (1900).
- Connors and Daly Mine, east half of Lot 6, 8th Concession, Bedford Township, Frontenac County, Ontario. The pits were from 200 to 300 m south of the west end of Devil's Lake. The deposit was mined successively by: Connors and Daley; Stoness and Kent; and Sidney H. Orser, of Perth, 1910 (Harding, 1951). The latter was reported elsewhere to have begun working this mine in late 1919. It was a small operation (1920). Numerous pits were reported but these were reported to have been cleaned out in 1920 (1921). On the property, pegmatites cut beds of Grenville sediments. The mica was a dark amber variety of phlogopite, and occurred with apatite, feldspar, calcite, epidote, and quartz (Harding, 1951).
- Connors and Smith Property, Lot 3, 5th Concession, North Burgess Township, Lanark County, Ontario. The property was reported to have been operated by W. J. Connors and L. J. Smith, of Lombardy, in 1939 (1941).
- Constantineau Property, Augmentation of Grenville Township, Argenteuil County, Québec.
 Léon Constantineau, of Pointe Au-Chêne, was listed intermittently as a working owner/operator from 1942 to 1946 (1943-1947).
- Coombs Mines, north half Lot 25, 8th Concession, North Elmsley Township, Lanark County, Ontario. The mines were mentioned as being at the north end of Otty Lake, and about 5 km southeast of Perth. Prospecting was started in November 1920 on these mica-apatite-pyroxene deposits (1921). The deepest pit was reported to have been 50 ft.
- M. J. Cooper, Hull, Québec. He was reported as an owner/operator in 1924 (1925).
- Corvick Property, Ontario. The property was reported to have been operated by H. V. Corvick, of Perth, from 1941 (1946).
- Courte Mine, Lot 18, 8th Range, Harrington Township, Argenteuil County, Québec. The mine was about 1 km east of the Rouge River. Constant Courte, of Rouge-Vallée, Argenteuil County, operated the property from 1940 to 1944 (1941-1945). It was next operated by Asbestos Crude and Fibre Mines from 1945 to 1946 (1946-1947). It was noted that the phlogopite mica occurred in pyroxenite. Large crystals were found, but these were noted to have been distorted and of little value for sheet mica (1946).
- H. C. Cross Property, Québec. The owner, from Cantley, was listed an owner/operator from 1923 to 1924 (1924-1925).
- S. H. Cross Property, Hull Township, Québec. This owner/operator, from Farm Point, and later Ottawa, was listed from 1925 to 1946 (1926-1947). Work was reported in 1940.
- W. C. Cross Property, Hull Township, Québec. This owner/operator, from Cascades, was listed from 1924 to 1946 (1925-1947). He was mentioned as a producer in 1935, with work also being reported in 1938 and 1942-1946. The Estate of a W. C. Cross, was also reported as the operator of a property at Madoc, Ontario, in 1928 (1930).
- Cross and Wilson Property, Thorne Township, Pontiac County, Québec. The owners, from, Cascades, Québec were reported as owners/operators from 1913 to 1926 (1914-1927).
- Croteau (Claim) Mine, S. 36,221, Lot 1, 3rd Concession, Mattawan Township, and western part of Lot 1, Concession C, Orlig Township, District of Nipissing, Ontario. On the brow of a high hill that overlooks both the Mattawa River and Antoine Creek, the property was

reported to have been staked in 1942 for the Inspiration Mining and Development Company. There were two dikes and muscovite was mined from each, in the *East* and *West* pits, in 1942 (Harding, 1946). The minerals in the *East Pit* included muscovite, biotite, acid plagioclase, quartz, microcline, and orthoclase. To these should be added garnet, epidote, and pyrite, for the *West Pit*. See also the listing for the Purdy Mine, below.

- Croteau (Lipsett) Mine, Claims S. 36,374 to 36,377, 7th and 8th Concessions, western part of Mattawan Township, District of Nipissing, Ontario. About 1.5 km south of Antoine Creek, the claims were staked in 1942 by Wilfred Croteau for the Inspiration Mining and Development Company. In 1942-1943, Paul and Wilfred Croteau, with permission from the company, operated a small pit in the dike. About six tons of muscovite was mined. The pegmatite dike cut dark-coloured garnetiferous hornblende-feldspar gneiss. The minerals reported were quartz, feldspar, muscovite, and garnet (Harding, 1946). See also the listing for the Purdy Mine, below.
- Crown Corundum and Mica Company Mine, Lots 14, 9th and 10th Concessions, Methuen Township, Peterborough County, Ontario. The company was reported to have worked the property in 1901, when about 10 pits were excavated in the northwest corner of the boundary between the concessions. On the northeast side of a mountain, the pits were in pink syenite dikes. It was reported that about 150 tons of mica and corundum were said to have been shipped, but that there were no records of this (Hewitt, 1961).
- Dacey (Martin) Mine, Lot 11 or 12A , 15th Range, Hull Township, Gatineau County, Québec. About 6 km northwest of Cantley and 2.5 km southwest of Wilson's Corners, the mine was originally worked, about 1890, for apatite. It was then worked by Webster and Company, from 1900 to 1904, for mica. In 1899, it was reported that there were 15 men and two horse-powered derricks in the pit. The mica was sent to Ottawa (1900). Becoming an important source of mica, it was next worked by Mr. A.G. Martin, of Ottawa, in the 1930s. A. J. Martin, Ottawa, Ontario was reported an owner/operator in Québec from 1922 to 1923 (1923-1924) while A. G. Martin was listed intermittently from 1924 to 1943 (1925-1944). In the reports for 1934 and 1935, it was mentioned that this mine and the Blackburn Mine in Portland East Township had produced the bulk of the production in the province that year (1935-1936). An important producer in 1938 (1939), it was also mined in the 1950s and 1960s (the latter by Suncrest Mines). Sinkankis (1959) reported it as a scapolite occurrence. The mica was phlogopite, or the amber variety.
- Daisy Mine, Lot 11, 15th Range, Hull Township, Gatineau County, Québec. About 3 km northeast of Glen Almond, it was reported to have been mined by Webster and Company in 1898 (1899).
- Davis Mine, about 4 km north of Glen-Almond, Québec. Sabina (1986) reported that this mine operated briefly, about 1905. There was no report, however, concerning the ownership.
- Davis Mine, Lot 27, 5th Concession, Dickens Township, District of Nipissing (later Renfrew County), Ontario. The mine was about 2.8 km from Mile 13.5 on Highway 60. The deposit was reportedly mined for muscovite mica in the bed of a stream (which had been diverted) by N. B. Davis in 1943. The footwall was reported to have been a pale greenish-grey partly translucent oligoclase, in part peresterite, which contained red garnets up to 2.5 cm across. Euxenite and monazite (reddish-brown, flattened, barrel-shaped crystals)

- were reported (Satterly, 1945).
- Davis Property, Portland East Township, Papineau County, Québec. N. B. Davis, of Ottawa, was listed as owner/operator from 1939 to 1944 (1940-1945). Work was reported in 1942.
- De Rainville Property, Wakefield Township, Gatineau County, Québec. Joseph De Rainville, of Saint-Pierre-de-Wakefield was listed as an owner/operator from 1923 to 1926 (1924-1927).
- De Rainville Property, Wakefield Township, Gatineau County, Québec. David De Rainville, of Saint-Pierre-de-Wakefield, was listed as owner/operator from 1924 to 1936 (1925-1937).
- Derby and Salley Property, Onslow Township, Pontiac County, Québec. E. J. Derby and W. J. Salley, of Ottawa, were listed as owner/operators in 1942 (1943). Work was reported in 1943 (1944).
- Deschênes (Dechêne(s)) and McGlashan Property, Wakefield Township, Gatineau County, Québec. Pierre Deschênes and W. McGlashan, of Wilson's Corners, were listed as owners/operators from 1937 to 1941 (1938-1942). Work was reported intermittently between 1937 and 1940.
- Devil Lake Mine, Devil's Lake, Bedford Township, Frontenac County, Ontario. About 26 km north of Sydenham, the property was reported to have been owned by Fred Foxton, of Sydenham (1891).
- Déziel Property, Wakefield Township, Gatineau County, Québec. J. V. Déziel, of St-Pierre-de-Wakefield, was listed as working the property intermittently from 1942 to 1945 (1943-1946). Alex Déziel was listed from 1946 (1947).
- Deziel Mine, about 8 km northeast of Wilson's Corners, Québec. Sabina reported (1987) that it was worked in the 1960s by Mr. Alex Deziel, of St.-Pierre-de-Wakefield, who owned the property.
- Dillon (Wilson) Mine, Lot 4, 10th Concession, Hinchinbrooke Township, Frontenac County, Ontario. On the farm of Eugene Dillon, it was reported to have been mined during 1920-1930 by Dick Wilson of Desert Lake. A small production was reported. The pit was 25 ft long and 15 ft deep, and was dug in crystalline limestone. Phlogopite mica, pyroxene, and calcite were mentioned (Harding, 1951). In the report, it was stated that the pit had been de-watered in 1939.
- Dillon Property, Lot 10, 4th Concession, Camden Township, Frontenac County, Ontario. The property was reported to have been operated by Eugene Dillon, of Enterprise, from 1939 (1941).
- Dixon Mica Mine, Lot 28, 11th Concession, Cardiff Township, Haliburton County, Ontario. There were three small pits which had been dug in a lens pyroxenite between marble and paragneiss and amphibolite. Hewitt (1959) reported that this old mine was then the property of Bicroft Uranium Mines. Phlogopite mica and crystals of uraninite were mentioned.
- Doller Mine, south half of Lot 24, 3rd Range, Portland West Township, Papineau County, Québec. This mine was operated on a small scale, with eight workers and one derrick, in 1899 (1900). It was reported to have been owned by a Mr. Doller, of San Francisco (Cirkel, 1905).
- Dominion Improvement and Development Company, Lot 13, 5th Concession, North Burgess Township, Lanark County, Ontario. Optioned to this company, of Hamburg, New York, it

- was reported that the title had reverted to the original owner when the option expired (1906). It was reported to have not produced in 1914 (1915).
- Dominion Mineral Exploration Syndicate, Loughborough Township, Frontenac County, Ontario. It was reported that there had been no production from this property in 1914 (1915).
- Donnelley Mine, Lot 16, 5th Concession, North Burgess Township, Lanark County, Ontario. First worked for phosphate several years prior to 1902, it was reported to have been reworked by Messrs. Gemmell and Thompson, of Perth, for mica (1903).
- Donnelley Property, North Burgess Township, Lanark County, Ontario. J. C. Donnelley, of Stanleyville, was mentioned as a principal producer in 1954 (Canada, Mines Branch, 1955).
- Donnelly (Otty Lake) Mine, Lot 1, 8th Concession, North Burgess Township, Lanark County, Ontario. This is an old property which was first operated by Kent Brothers, of Kingston, Ontario (1909). While some development was done in 1909 (1910) it appears to have been dormant for a long time and was not mentioned again until 1949, when it was noted that J. C. (Charles) Donnelly, of Stanleyville, had operated it for part of the year with one assistant. Thirty-two tons of mica was mined (1951). In 1953, it was reported that 3300 pounds of mine-run mica and 25 tons of scrap mica had been produced (1955). By 1954, production had fallen to two tons of mine-run mica and 32 tons of scrap (1956).
- Dougherty Brothers, Bouchette, and later (1922) Wakefield, Québec. The Dougherty Brothers were reported as an owner/operator from 1920 to 1924 (1921-1925).
- Downey Mine, south-west quarter of Lot 7, 1st Concession, South Burgess Township, Leeds County, Ontario. The mine was reported to have been operated by Mr. A. B. Rudd, of Perth (1895).
- Dugas Mine, northeast half of Lot 15, 8th Range, Templeton Township, Papineau County (Ottawa County at the time), Québec. In 1892, this was reported to be an old phosphate mine then being mined for mica by the Hon. C. A. Dugas and others. Judge Dugas was from Dawson City, Yukon Territory (Cirkel, 1905). He and Father Forget, of Embrun, Ontario, had first worked it for asbestos from 1891 to 1893, and then for mica. It was then taken over by Messrs. Manchester and Baumgarten, of Ottawa, who operated it from 1896 to 1897. Mr. W. Webster next acquired the mine in 1897, and was reported to have produced a large quantity of mica (Cirkel, 1905). It was reported that 20 men worked on the property and that there were six shafts, the deepest being 50 ft (1897). Cirkel noted that the phlogopite crystals were nearly all well defined and perfect in shape, with few wrinkles or crevices.
- Duquette Property, Cantley Township, Les-Collines-de-l'Outaouais, Québec. Maldick Duquette, of Gatineau was reported as an owner/operator from 1937 to 1939 (1938-1940). Work was reported in 1937.
- Effingham Township Occurrence, Lot 7, 5th Concession, Effingham Township, Lennox and Addington County, Ontario (1891).
- J. J. Egan Mine, Lot 12B, 12th Range, Hull Township, Gatineau County, Québec. In 1948, it was reported that this, a spectacular discovery, had been made by James J. Egan within about 1.5 km of the Vavasour Mine. The deposit was lenticular, and was opened to a length of 30 ft, a width of 10 ft, and a depth of 40 ft. Exceptionally large crystals were produced (1949). It was worked by the Cantley Mining Company in 1949 (1950).

- Ellard Mine, Lot 10, 2nd Range, Alleyn Township, Pontiac County, Québec. Near Danford Lake, it was worked in 1899 by Joshua Ellard, of Pickanock (Picanoc), with seven men and a horse-powered derrick (1900). Joshua Ellard, of Wright, was reported as an owner/operator until 1920 (1921) while his Estate was listed from 1925 to 1937 (1926-1938). Production was not mentioned in this later period.
- Ellard Property, Alleyn Township, Pontiac County, Québec. Herbert M. Ellard, of Gracefield, was listed as an owner/operator in 1937 (1938).
- Ellsworth Mine, Lot 4, 10th Concession, Olden Township, Frontenac County, Ontario. Mining began in 1920, by George Ellsworth, a former owner, and Edward Patterson, of Inverary. The pit was reported as being 15 ft long, eight ft wide, and 18 ft deep. The mica was sold to Kent Brothers, of Kingston. The vein was between crystalline limestone and paragneiss, and contained biotite and pyroxene (Harding, 1951).
- Emond Property, Hincks Township, Gatineau County, Québec. Arthur Emond, of Wright, was listed as an owner/operator in 1939 (1940).
- Ennis Property, Ontario. E. Ennis, of Perth Road, was listed as a shipper in 1926 (1927).
- Erickson Property, Denholm Township, Gatineau County, Québec. Eri(c)k J. Erickson, of Alcove, was listed as an owner/operator from 1937 to 1941 (1938-1942). Work was reported between 1938 and 1940.
- Ethier property, Lot 19, Range B, Northfield Township, Gatineau County, Québec. The property was reported to have been opened in 1898 by Messrs. Syneck and others. Seven men and a horse-powered derrick were reported to be on the property (1899).
- Eureka Mine, Lot 6, 11th Range, Hull Township, Gatineau County, Québec. Operated in 1893 by J. W. Perkins, the property was reported sold in 1894 to the Canadian Mica Company.
- Fabre Property, Joliette Township, Joliette County, Québec. Louis Fabré, of Montréal, was listed as an owner/operator in 1938 (1939).
- Farrel Property, North Burgess Township, Lanark County, Ontario. Peter Farrel, of Stanleyville, was mentioned as a principal producer in 1954 (Canada, Mines Branch, 1955).
- Faure Mine, Lot 37, Range A, Wright Township, Gatineau County, Québec. The mine was reported to have been about 2.5 km from Gracefield Station (1897).
- Fergusson Mine, Lot 23, 15th Range, Hull Township, Gatineau County, Québec (1899).
- Fillion Property, Ontario. This property, near Sydenham, was reported as a shipper in 1924 (1926).
- Fillion Property, Lot 30, Bedford Township, Frontenac County, Ontario. At Bob's Lake, it was reported to have been operated by S. O. Fillion, of Ottawa, from 1941 to 1942 (1946).
- Fitzgerald (Kent) Mine, Lot 8, 1st Concession, Bedford Township, Frontenac County, Ontario. On the farm of Mrs. Katharine Fitzgerald, it was first mined at the beginning of the 20th Century by Kent Brothers, of Kingston. A small production was reported, and a shaft was sunk to about 25 ft. In 1938, T. Babcock de-watered the shaft, but no mica was produced. By 1942 (Harding, 1951), the shaft was again filled with water. At this property, pegmatites cut granite gneisses. Pyroxene, feldspar, pyrite, quartz, calcite, tourmaline, and phlogopite (up to 15 cm plates) were found on the dump.
- Fitzgerald Mine, Lot 9, 8th Concession, Bedford Township, Frontenac County, Ontario. On the farm of E. Fitzgerald (Harding, 1951). The property was reported to have been worked at about the beginning of the 20th Century, at which time James Fitzgerald was the owner of

- the farm. Some production was mentioned. Locally, Grenville limestones had been intruded by gabbro and granite. The "vertical pit" was reported to have been 22 ft deep.
- Flemming & Allan Mine (three pits), Lots 26, 27, and 28, 4th Range, Portland West Township, Papineau County, Québec. The mine was reported in 1893 to be a former phosphate mine which was then being exploited for mica. It was operated by Mr. H. McRae, from 1891 to 1893, with 35 to 40 men (1894). There were a number of pits in a high ridge of gneiss cut by light green pyroxene dikes. The minerals mentioned were iron pyrites, pink calcite, red and green apatite crystals, and calcite (Cirkel, 1905).
- Fleury Mine, south half of Lot 20, 7th Range, Hull Township, Gatineau County, Québec. On the west side of the Gatineau River, it was reported as being a small operation in 1899 (1900). It was worked intermittently, with one 200 kg. crystal reported (Cirkel, 1905).
- Flynn Property, Cameron Township, La-Vallée-de-la-Gatineau, Québec. H. T. Flynn, of Hull, was reported as an owner/operator from 1909 to 1928 (1910-1929).
- Flynn Mines, Hull and Wright Townships, Gatineau County, Québec. H. T. Flynn, of Hull, was reported as the owner/operator from 1929 to 1935 (1930-1936). The mines were reported as having produced in 1935.
- Foley Mine, Lot 7, 10th Range, Hull Township, Gatineau County, Québec. On the east side of the Gatineau River, it was worked intermittently by Messrs. Clemow and Powell, of Ottawa, from 1892 to 1895. While 12 men were reported to have been employed in 1892 the property was also reported, in 1894, as having been inactive for two years. The ownership of the property was then being disputed. Some further work was done by Mr. Watters in 1898 (1899). The deposits occurred near the contact between pyroxene and reddish gneiss (Cirkel, 1905).
- Folger Mine, Lot 27, 2nd Concession, Hinchinbrooke Township, Frontenac County, Ontario. The mine was on the farm owned by the Folger Estate, east of Eagle Lake, and about 2.5 km northwest of Tichborne. The property was mined in 1921 by Harry J. Cain, of Tichborne. Small pits were reported to have been dug in narrow veins (1922) (see also the listing for the Howes Mine, below).
- Fortin and Company Mine, Lot 25, 4th Range, Wakefield Township, Gatineau County, Québec. Several men and a horse-powered derrick were reported to have been on this property in 1899. There were three pits (1900).
- Fortin and Gravelle Mine, north half of Lot 18, 7th Range, Hull Township, Gatineau County, Québec. About 10 km northwest of Hull, in Gatineau Park, the deposit was worked from 1899 to 1906. When it was opened, in 1899, it was reported that eight men and a horse-powered derrick were in the pit (1900). The main workings were two openings in a vein of mica in pyroxene. A large quantity of large crystals was mined (Cirkel, 1905).
- Foxton Mine, Lots 5 and 7, 8th Concession of Loughborough, Frontenac County, Ontario. About 3 km west of Sydenham, it was reported to have been owned by Fred Foxton, of Sydenham (1891, 1892).
- Foy Mine, Lot 10, 14th Concession, Clancy Township, District of Nipissing (later Renfrew County), Ontario. The mine was reported to have been near the northeast corner of the north half of the lot. It was in Algonquin Park, about 0.8 km west of the Bonnechere River, and about 1.5 km southwest of Bonnechere Crossing. The ground, on the brow of a hill, was staked by Frank Foy at the beginning of the century prior to the formation of

- the Park. In 1942, it was re-staked by his son, John L. Foy. On the property, grey gneisses are cut by pegmatite dikes. The books of muscovite mica were reported to have been about 10 cm in diameter (Satterly, 1945).
- Fracleck Mine, Lot 8, 10th Concession, Loughborough Township, Frontenac County, Ontario. Operated E. L. Fracleck "for some time" (1904), there was reported to have been an open pit about 40 ft deep.
- Fraser Mine, north half of Lot 8, 4th Range, Harrington Township, Argenteuil County, Québec. In 1892 it was reported that this deposit had been worked for several years.
- Freeburn Mine, Lot 3, 7th Concession, Loughborough Township, Frontenac County, Ontario. The mine was about 3 km north of Sydenham. The pit was reported to be under water in 1900 (1901).
- Freeman Mica Mine, Lot 7, 9th Concession, Loughborough Township, Frontenac County, Ontario. Some development, with an 80-ft shaft, and stoping, was reported to have been done by Richardson Bros., of Kingston, in 1904 (1905). The mine was operated in 1905 and 1906, with the pit then being 50 ft deep and 40 ft long (1907). The New York and Ontario Mica Company next operated it in 1908, with the pit being reported as 60 ft deep and 40 ft long (1908). A workforce of 10 was on the site.
- Freeman's Mine, Lot 12, 8th Concession, Loughborough Township, Frontenac County, Ontario (1901). Cirkel (1905) commented that outcrops had been discovered at this location.
- Frontenac Mine, Lot 10, 8th Concession, Loughborough Township, Frontenac County, Ontario. The mine was reported to have been near Sydenham. Operations began in 1914 by the Frontenac Mica Company (1915). The pit had been dug to 30 ft and 12 men were then employed.
- Gagné Property, Wentworth Township, Argenteuil County, Québec. Louis Gagné, of Saint-Michel-de-Wentworth, was listed as a working owner/operator in 1944-1945 (1945-1946). No work was noted in 1946 (1947).
- Jean Gagnon, Bouchette, Québec. He was listed as a producer in 1909 (1910).
- Gatineau Valley Mica Company, of Hull, Québec. The company was reported as a producer in 1913 (1914).
- Gauthier Mine, Lot 19, Range B, Denholm Township, Gatineau County, Québec. See the listing for the Marcella Mine, below.
- Gauthier Property, Buckingham Township, Papineau County, Québec. J. B. Gauthier, of Buckingham, was listed intermittently as a working owner/operator from 1927 to 1945 (1928-1946).
- Gauthier Property, Wells Township, Papineau County, Québec. J. B. Gauthier was also listed as the owner/operator of this property from 1939 to 1940 (1940-1941). Work was reported in 1940.
- Gauthier Mine (Gauthier and Guilbault Property), Portland West Township, and later Buckingham Township, Papineau County, Québec. J. B. Gauthier, of Buckingham, was reported as the owner/operator of this property from 1911 to 1922 (1912-1923). Gauthier and Guilbault, also of Buckingham, were listed next from 1923 to 1925 (1924-1926) while Gauthier Brothers, also of Buckingham, were listed from 1926 (1927). The Gauthier property, in Portland Township, was mentioned as having been an important producer in 1939 (1940). J. B. Gauthier was listed again from 1944 (1945).

- General Electric Prospects, Lot 2, 5th Concession, Oso Township, Frontenac County, Ontario.
Harding (1951) reported that the land had been acquired by the General Electric Company early in the 20th Century. A number of pits had been dug along a ridge a few m north of the Canadian Pacific Railway, and east of Crow Lake Station. The pits were said to have been dug before the construction of the railway, in 1912. Locally, apatite and mica-bearing veins cut across beds of garnetiferous paragneiss and Grenville crystalline limestone. Phlogopite, brown and green apatite, pyroxene, and calcite, were mentioned.
- Gibson Property, Lot 12, 1st Range, Alleyn Township, Pontiac County, Québec. On the property of John Gibson, it was worked in 1898 by E. B. Haycock. About six workers and a horse-powered derrick were used in the pits, then about 12 ft deep (1899).
- Gibson Property, Lot 10, 2nd Range, Alleyn Township, Pontiac County, Québec. Also on the property of John Gibson, this mine was operated in partnership with Josuah Ellard (1899).
- Gibson's Mine, Lot 25, 9th Concession, Elmsley Township, Lanark County, Ontario. About 3 km southeast of Perth, the deposit was reported to have been found under the farm house and garden of E. N. Hayes. Originally owned by J. Jackland, mining began in 1901 (1902). The property was then transferred to L. J. Gemmell, of Perth, in 1902 and the ore exhausted shortly afterwards (1903).
- Glen Almond Mine, about 6 km north of Glen Almond, Québec. It was reported to have been opened by Mr. H. Mercier, of Glen Almond in 1930 (Sabina, 1986).
- Glover Property, Portland East Township, Papineau County, Québec. J. W. Glover, of Ottawa, was reported as a working owner/operator from 1945 to 1946 (1946-1947).
- Godfrey Mine (eight pits), Lot 2, 1st Concession, Hinchinbrook Township, Frontenac County, Ontario. This mine was reported to have been owned by Mr. C. H. Godfrey (1891).
- Godfrey Mine, north half of Lot 1, 3rd Concession, Hinchinbrooke Township, Frontenac County, Ontario. On part of the Godfrey Farm, it was owned by Roy Godfrey when Harding (1951) visited it. It was reported to have been first mined during the last part of the 19th Century by Chester H. Godfrey. There were then several pits. In 1940-1941, the property was operated under lease by S. Orser, of Verona. The deepest working on the property, at 60 ft, was known as the *Orser Shaft*. On the property, pegmatites cut granite gneisses. Phlogopite mica, pyroxene, and apatite were reported (Harding, 1951).
- Godfrey Mine, Lot A, 18th Concession, Cardiff Township, Haliburton County, Ontario.
W. C. Godfrey, of Wilberforce, and an assistant, were reported to have produced two tons of mica from this mine in 1949 (1951).
- Goods Island Prospect, Lot 25, 4th Concession, Bedford Township, Frontenac County, Ontario. The prospect was on the north shore of Goods Island in Bob's Lake. Harding (1951) noted that it was then owned by Stewart McEwan, of Toronto. The mica occurred in pyroxene in greywackes.
- Gorman Mine, Lot 27, 16th Range, Hull Township, Gatineau County, Québec. The mine was reportedly worked by a Mr. Bishop, with six men, in 1898 (1899). J. B. Gorman, of Buckingham, was reported as owner/operator of this property from 1914 to 1922 (1915-1923).
- Gorman Mine, Buckingham Township, Papineau County, Québec. J. B. Gorman was reported as owning/operating this property from 1925 to 1926 (1926-1927).
- Gorman Mine, Lochaber Township, Papineau County, Québec. Mr. Gorman was also listed in

- respect of this property from 1925 to 1926 (1926-1927).
- Gorman Mine, Derry Township, Papineau County, Québec. This property was also listed from 1925 to 1926 (1926-1927).
- Gosage Mine, east half of Lot 5, 8th Concession, Loughborough Township, Frontenac County, Ontario. The mine was reportedly being developed by the General Electric Company, Schenectady, New York, in 1903 (1904).
- Gould Lake Mine, Lots 6 and 7, 10th Concession, Loughborough Township, Frontenac County, Ontario. The mine was about 7 km west of Sydenham. These were reported as "old workings" (1901), which had been operated by Webster and Company until 1900. The mine was acquired by the General Electric Company, of Schenectady, New York, in 1901(1902). There were three shafts and two pits. *Number 1 Shaft*, on the west side of the Lot was 115 ft deep, while *Number 2 Shaft*, close-by, was 80 ft deep. The mica was reported to have been of excellent quality (Cirkel, 1905). The Gould Lake Mining Association was reported as a shipper in 1923 (1924), and presumably in 1924 - even though it was then listed as Gourd Lake (1926).
- Gourdeau Property, Wentworth Township, Argenteuil County, Québec. J. I. Gourdeau was listed as an owner/operator from 1935 to 1937 (1936-1938). See also the listing for the Laurel Mine, below.
- Gow (Nellis) Mine, Lot 10, 12th Range, Hull Township, Gatineau County, Québec. The mine was opened about 1890 and worked in 1892 by eight to ten workers. It became the Nellis Mine, in 1894. It was one of the more important mines, with four veins. A plant for cleaning and cutting mica was reported in 1894.
- Gowan Property, Portland West Township, Papineau County, Québec. William Gowan, of Holland Mills, Québec, and later Kirkland Lake, Ontario, was reported as the owner/operator of a property from about 1917 to 1930 (1918-1931).
- Grace Mine, Lot 24, 1st Range, Bouchette Township, La-Vallée-de-la-Gatineau, Québec. The mine was reported to have been worked by a Mr. Webster from about 1890. In 1898, Henry Flynn was authorized to work the property (1899).
- Gracefield Mica Mining Company Property, Northfield Township, Gatineau County, Québec. The company, of Montréal, was reported as the owner/operator of this property from 1929 to 1938 (1930-1939). There were no reports of production.
- Gracefield Mining Company, Sainte-Scholastique, Québec. The company was listed as an owner in 1911 (1912).
- Grant Property, Lot 8, 10th Concession, Loughborough Township, Frontenac County, Ontario. The property adjoins the McClatchey Mine and was reported to have been purchased, in 1906, by J. W. Trousdale, of Sydenham. A small workforce of six was prospecting at that time (1906).
- Gratton Mine, Lot 7, 5th Range East, Portland Township, Papineau County, Québec. The Bon Ami Company was reported to have produced several thousand pounds of large crystals of muscovite at this feldspar mine in 1948 (1949).
- Green Mine, Lot 30, 3rd Concession, Hinchinbrooke Township, Frontenac County, Ontario. On top of a hill, about 75 m from the northwest arm of Eagle Lake, the property was mined by William Green, of Perth Road, in 1942. A small quantity was produced. There were pits in three veins. The mica was reported to have been a dark phlogopite (Harding,

- 1951). Another pit, about 300 m to the east of those above was also mentioned.
- Green Properties, Bedford and Loughborough Townships, Frontenac County, Ontario. These were owned by George Green, of Perth Road, who was reported intermittently as a producer from 1919 (1920) to 1925 (1926). W. C. and W. E. Green, of Perth Road, were reported to have been operating a deposit of phlogopite mica near Portland in 1951 (Canada, Mines Branch, 1952).
- Grenville Mica Mining Company Property, Grenville Township, Argenteuil County, Québec. The company was listed as an owner/operator from 1937 to 1938 (1938-1939).
- Grey Nuns Property, north half of Lot 6, 11th Range, Hull Township, Gatineau County, Québec. The property was reported to have been worked by seven seven workers in 1899. It was reported that large crystals were obtained (1900).
- Grierson and Gallagher Mine, Lot 4, with the Concession, Township and County not having been specified, Ontario. The mine was reported to have been about 5 km west of Oliver's Ferry, on Rideau Lake. The property was reportedly leased from Edward Smith by Messrs. Grierson and Gallagher, of Perth. Production, by six workers, began in 1915 (1916). John K. Grierson and Sons, of Perth, were reported as producers until 1919 (1920).
- Albert Groulx Mine, Lots 35, 36, and 37, 5th Range, Hincks Township, Gatineau County, Québec (1899).
- Mark Haldane Mine, Lot 12, 1st Range, Wakefield Township, Gatineau County, Québec. Previously mined for phosphate, the property was reported to have been mined by Ch. Hughes and L. A. Robitaille for mica in 1892. Cirkel (1905) reported that several pits had been excavated into the side of a hill. The mica occurred on the contact between a pyroxene belt and a red orthoclase gneiss, and was a deep brown colour.
- Hamilton Property, North Templeton Township, Papineau County, Québec. The Hamilton Syndicate, of Perkins, Québec was reported as the owner/operator in 1921 (1922). Percy Hamilton, of Perkins Mill, was listed intermittently from 1925 to 1936 (1926-1937). It was not mentioned as a producer.
- Haney Property, Arundel Township, Les Laurentides, Québec. W. Haney, of Québec City, was listed in 1942 (1943).
- Hanlan (Hanlon) Mine, Lot 11, 6th Concession, North Burgess Township, Lanark County, Ontario, 16 km south of Perth. Owned by F. W. Webster and Company, it was developed in 1900 (1901). Operations were suspended in 1901 and the underground workings allowed to flood (1902). It was sold to the General Electric Company, Schenectady, New York, in 1902, and was under development again in 1902 (1903). After having been closed for some time, it was sold to the Loughboro Mining Company, a subsidiary of General Electric, in 1906 and was reopened (1907). It was in operation until 1909, when it was reported to have been abandoned (1910). By then, the workings were 175 ft deep and 200 ft long (1910). It was said to be "the best example of a true fissure vein of any amber mica mine in the Province" (1907). There was also a pit, 20 ft deep, about 50 ft north of the main workings. The vein was on the contact between pyroxene and gray gneiss (Cirkel, 1905).
- Hansen (Claim) Mine, Claim S. 36, 120, northern part of 2nd Concession, Mattawan Township, District of Nipissing, Ontario. The exact location was not determined by Harding (1946),

but it was said to have been about 1.2 km east of the Purdy Mine. The claim was reported to have been staked in 1942 for the Inspiration Mining and Development Company. Work was suspended in 1942. The pegmatite mass was triangular-shaped, filling a space between two faulted blocks of dark hornblende-biotite gneiss. Uraninite was identified as one of the minerals present. See also the listing for the the Purdy Mine, below.

John E. Hardman, East Templeton, Papineau County, Québec. He was reported as an owner/operator from 1919 to 1920 (1920-1921).

Harvey Property, Arundel Township, Terrebonne County, Québec. W. Harvey, of Québec City, was listed as an owner/operator in 1941 (1942).

Hastey Mine, about 4 km northwest of Lac-Sainte-Marie, Québec. The deposit was mined in the 1890s and again in 1937. Sabina reported (1987) that very large sheets of mica, up to 1.2 m across, were obtained.

Hastings Prospect, Lot 15, 3rd Concession, Bedford Township, Frontenac County, Ontario. The prospect was reported to have been on the farm of Walter Hastings and east of the White Lake road. A small pit, 12 ft in diameter and three ft deep had been dug in a dark mica schist in crystalline limestone. The mica was thought to be a dark phlogopite (Harding, 1951).

Haughian Property, Lot 13, 5th Concession, Bathurst Township, Lanark County, Ontario. Frank Haughian, of Perth, was listed from 1936 to 1939 (1938-1941).

Haughian Property, North Burgess Township, Lanark County, Ontario. This property was also operated by Frank Haughian, of Perth, from 1941-1942 (1946).

Hawley (Orser) Mine, Lot 18, 2nd Concession, Monteagle Township, Hastings County, Ontario. The mine was reported to have been on property then (1943) owned by Freeman Hawley, of Musclow. South of the road just west of the Musclow Post Office (Hewitt, 1955), it was reported to have been mined for amber mica by Sidney Orser in 1924, when about 50 tons were shipped. The pyroxenite, with phlogopite, was cut by pegmatite and granite (Thomson, 1943). The open pit, 75 ft long and 10 ft deep, was dug in a metapyroxenite that occurred with leuco (white)-granite gneiss and pegmatite. Books of phlogopite, up to 10 cm across, occurred in pyroxenite. Hewitt (1955) noted that the earlier production had been 12.5 tons of cobbled mica and 40 tons of scrap.

Hawley (Stoness) Mine, Lot 8, 2nd Concession, Oso Township, Frontenac County, Ontario. About 80 m from the east shore of Hawley Bay of Sharbot Lake and opposite a small island, it was first worked about 1925, by William Hawley, the owner of the lot. It was then mined between 1930 and 1935 by C. Stoness, of Westport. The land was owned later by George Clements. Production was very small - about one ton. The vein, in pinkish-grey gneiss, consisted of calcite, pyroxene, and phlogopite (Harding, 1951).

E. B. Haycock Mine, Lots 12 and 13, 11th Range, Hull Township, Gatineau County, Québec (1892).

Hayes Mine, Lots 16, 1st and 2nd Concession of Calvin Township, District of Nipissing, Ontario (1893).

Headley Mine, about 10 km northwest of Hull, Québec, off Notch Road in Gatineau Park. Sabina reported (1987) that the deposit was worked from about 1900 to 1910, and again in 1960 by Leo Joannis, of Hull. The property was reported to be owned by Walter C. Cross and Company.

- Herschel Occurrence, Lot 1, 4th Concession, Herschel Township, Hastings County, Ontario. Two small pits, in fine-grained pyroxenite, were mined for phlogopite in 1942. Books of mica, up to 30 cm square, were reported (Thomson, 1943).
- Herschel Occurrence, Lot 22, 6th Concession, Herschel Township, Hastings County, Ontario. Phlogopite in pyroxenite was noted on this property (Thomson, 1943).
- Hickey Prospect, Lot 1, 1st Concession, Hinchinbrooke Township, Frontenac County, Ontario. The prospect was reported to have been on the farm of Hugh Hickey (Harding, 1951). These were reported to have been old pits dug in dikes of pink pegmatite which cut a dark-coloured gneiss.
- Hinze Property, Lot 22, 9th Concession, Monteagle Township, Hastings County, Ontario. The prospect was reportedly (1943) on the farm of Ernest Hinze of Hybla. A very small pit was located near the buildings. Phlogopite occurred in pyroxenite (Thomson, 1943).
- Hitchcock and McLaurin Mine, Lot 12, 12th Range, Templeton Township, Papineau County, Québec. This, and an adjacent old phosphate mine on Lot 13, were mined in 1894 (1895).
- Hodgins and Brown Mine, Lot 41, 5th Range, Cawood Township, Pontiac County, Québec. About 32 km from Shawville Station on the Pontiac Pacific Junction Railway, it was reported to have been worked in 1898 by James Hodgins and John Brown (1899).
- Hogan Property, Sydenham, Ontario. G. P. Hogan was reported as a shipper in 1923 (1924).
- Hopper Property, Lot 2, 12th Concession, Loughborough Township, Frontenac County, Ontario. The deposit was about 5 km from Harrington Station on the Kingston and Pembroke Railway and was reportedly owned by R. T. Hopper, of Montréal. Cirkel (1905), reported that four openings were being developed. A deposit of pure feldspar was also mentioned on the property.
- Horse Shoe (Horseshoe) Mine, north half of Lot 15, Lots 16 and 17, 16th Range of Hull Township, Gatineau County, Québec. The mine was on the east side of the Gatineau River, about 4 km west of Wilson's Corners. It was worked for apatite in the 1880s, and again for mica, by the Lake Girard Mica System (Don. C. Watters), in 1891 and 1892. It was operated again in 1909 and 1937 (Sabina, 1987) and was mentioned as having been one of the principal producers in 1937 (1938). Mica occurred at the contact of the pyroxene belt with gneiss. Both fine crystals and crushed mica were found (Cirkel, 1905).
- Howes Mine, Lot 28, 2nd Concession, Hinchinbrooke Township, Frontenac County, Ontario. The mine was reported to have been on the farm of David J. Howes, about 250 m east of the main part Eagle Lake, and about 2.5 km northwest of Tichborne. The property has a long history, having been mined by: B. Folger, of Kingston, in 1898; J. Richardson, of Kingston, in 1908 (who mined it for apatite); Harry J. Cain, of Tichborne, in 1921; and Ernie Campsall, of Godfrey, who recovered mica from the dumps in 1925-1930. The veins were all narrow (1922) (see the listing for the Folger Mine above). There were six pits, within a radius of about 50 m, "on high ground". At the location, granite had intruded Grenville sediments. The minerals reported were pink calcite, actinolite, pyroxene, hornblende, light amber phlogopite mica, and apatite (Harding, 1951).
- Hull Township Occurrences (two), Lot 31, 10th Range, and south half Lot 14, 9th Range, Hull Township, Gatineau County, Québec (1892).
- Industrial Mica Company Property, Wakefield Township, Gatineau County, Québec. The company, from Montréal, was listed as a working owner/operator intermittently from

1942 to 1944 (1943-1945).

Jackson-Rae Mine, Lot 9, 10th Range, Templeton Township, Papineau County, Québec. The mine was reported to have been reopened and operated by the Perkins Mills Mica Company from 1945 to 1946 (1946-1947) (see also the listing under Phosphate).

Jamieson Mine, east half of Lot 15, 15th Range, Hull Township, Gatineau County, Québec. In 1899, it was reported that this was an old mine which had not been worked for several years. Once important, it was said that a large quantity of mica had been mined. A 75-ft shaft was mentioned as being on the property (1900).

Joanis Mine, Lot 28, 2nd Range, Egan Township, Gatineau County, Québec. In 1910, it was reported that Mr. Joanis, of Maniwaki, had mined several thousand dollars worth of fair amber mica (Canada Mines Branch, 1911).

Joanisse Mine, Lot 22, 1st Range, Wentworth Township, Argenteuil County, Québec. Léopold Joanisse was reported to have produced phlogopite at this location in 1944 (1945).

Johnson Mine, Lot 39, 1st Range, Bouchette Township, Gatineau County (La-Vallée-de-la-Gatineau), Québec (1899).

Johnson Property, Claim S. 36,246, 2nd Concession, southwestern part of Mattawan Township, District of Nipissing, Ontario. Close to the boundary of Mattawan and Orlig Townships, and about 1.5 km west of Purdy Lake. Stripping and trenching in pegmatite was reported in 1944 (Harding, 1946).

Johnston Property, Bouchette Township, Gatineau County, Québec. H. A. Johnston, of Rupert, Wright Township (the reference was in error and listed this as "County"), was listed as an owner/operator from 1941 to 1942 (1942-1943). Work was reported in 1941.

Joubert and Company Mine, Lots 13 and 14, 8th Range, Ripon Township, Papineau County, Québec. Opened in 1899, it was reported to have been the first mine in a new district (1900).

Jubilee (McLaurin) Mine, north half of Lot 10, 10th Range, Templeton Township, Papineau County, Québec. A small operation in 1894, it was mined by Louis McLaurin and Mr. McLaren, of East Templeton. The pits were reported to be as much as 40 ft deep, with steam equipment in use (1897). It was worked in 1894, 1897, and 1900 (Cirkel, 1905).

Kasshabog Lake Prospect, Lot 15, 8th Concession, Methuen Township, Peterborough County, Ontario. On the shore of the lake, northeast of the outlet to Big Mountain Lake, a small pit had been excavated in a muscovite-corundum syenite pegmatite. Muscovite books up to 15 cm across and grey-green corundum crystals, up to 2.5 cm in size, were mentioned (Hewitt, 1961).

Kasshabog Lake Prospect, Lot 16, 8th Concession, Methuen Township, Peterborough County, Ontario. At the north end of the lake, a small trench had been cut on the east shore across from a railway embankment. Muscovite and biotite were noted (Hewitt, 1961).

Kearney Mine, Lot 16, 10th Range, Hull Township, Gatineau County, Québec. The mine was reported, in 1892, as being worked by H. McRae and W. A. Allan and a dozen men.

Keene Mica Products, Notre-Dame-de-la-Salette, Québec. The company was reported as an owner operator in 1920 (1921).

W. H. Kellar Property, Cascades, Québec. He was listed as an owner/operator in 1932 (1933).

Kent (Pink Lake, Pinks Lake) Mine, Hull Township, Gatineau County, Québec. The mine was at Pinks Lake, in Gatineau Park, about 20 km northwest of Hull, Québec. It was first

operated by the Kent Brothers, of Kingston, Ontario, who were reported to be a Québec owner/operator from 1909 to 1913 (1910, 1914) and again from 1925 to 1931 (1926-1932). It was reopened in 1945 by the Pink Lake Mica Company, of Toronto, but no shipments were reported (Canada, Mines Branch, 1946).

Kent Mine, see also the listing for the Fitzgerald (Kent) Mine, above.

Kent Brothers (Property) Mine, Lots 2 and 3, 1st Concession, Burgess Township, Leeds County, Ontario. An old phosphate mine, it was reported to have produced large quantities in the early days of mining in eastern Ontario. It was re-opened as a mica mine in 1916 (1917).

Kent Brothers (Property) Mine, Loughborough Township, Frontenac County, Ontario. It was reported to have produced in 1923 (1924). See also the listings for the Stoness and Taggart mines (below).

Kent Brothers Property, Hull Township, Gatineau County, Québec. The company was listed as an owner/operator from 1932 to 1938 (1933-1939). There were no reports of production.

Kilbourn(e) Property, Grenville Township, Argenteuil County, Québec. Kenneth Kilbourne, of Magnesite, and later Kilmar, and then Montréal, was listed as the owner/operator from 1924 to 1935 (1925-1936). Production was not mentioned.

Kilfoyle (Meach Lake) Mine, Meach Lake, Québec. R. H. Kilfoyle, of Ottawa, was listed as the owner/operator of this mine in 1937 (1938).

Kilmar Occurrence, Lot 16, 10th Range, Grenville Township, Argenteuil County, Québec. The occurrence was reported to be on the steep hill west of the kilns at Kilmar. The mica occurred closely-packed in veins. Osborne (1938), reported that it had been worked recently.

Kingston (Folger, Orser, McDonald, Thirty Island Lake, Kingston Mica, Lemieux, Rochester) Mine, south half of Lot 5, 2nd Concession, Bedford Township, Frontenac County, Ontario. The mine was reported to have been about 100 m southwest of Thirty Island Lake. The property was first worked in 1896 by F. Folger, who mined a small quantity of mica. Subsequently, it was mined under lease during 1908-1909 by S. Orser, of Sydenham, and in 1910 by a Mr. McDonald, of Toronto. Mr. Orser then secured the mineral rights and operated it intermittently for several years, up to about the early part of 1938. It was then acquired by Charles Keller for American interests. The Kingston Mica Mining Company was formed in 1939 and acquired the property. A shaft, 140 ft deep, was sunk and some underground development done. Ten were reported to have been employed and 152 tons mined in 1939 (1940-1941). It operated throughout 1940-1945 (1942-1951). By 1942, underhand stull stoping (stulls are timber posts used as supports) was being used in the underground workings from depths of about 70 to 160 ft (1946). In 1943, it was reported that the *Number 2 Winze* (an internal inclined shaft) was deepened to 193 ft and 354 tons of mine-run amber mica hoisted (from which 144 tons of rough mica was produced). Twelve were employed at the mine and three at the trimming shop at Godfrey (1944). In 1944, sinking began on a new, *Number 2 Shaft*, and 115 tons of mine-run mica was produced that year (1947). In 1945, all activities ceased (Harding, 1951). In 1947, F. Lemieux, of Godfrey, acquired the property, pumped out the mine, and explored it. No production was reported (1949). In late 1948, the property was then taken over by R. V. Rochester, of Toronto, and later Verona (1951). A small quantity was produced in both 1949 and 1950 (1950-1951). The mica-bearing veins cut Grenville-age white crystalline

limestone. The minerals noted were pyroxene, phlogopite, calcite, orthoclase feldspar, quartz, pyrrhotite, molybdenite, and apatite.

Kingston Feldspar and Mining Company, Kingston, Ontario. The company was reported to have not produced in 1914 (1915).

Kitty Lynch Mine, adjacent to the Kodak Mine (see the listing below), and about 3 km north of Wilson's Corners, Québec. It was accessible from Rue Colonie to Lac Sainte Antoine. Worked for apatite in 1880 by J. A. Wilson, the deposits were worked again for mica from 1890 to 1908 and in 1936. Large apatite and pyroxene crystals were reported to have been common. The writer visited the site in mid-October, 1997, and obtained fine samples of weathered apatite crystals.

Knight (Brash) Mine, north half of Lot 1, 5th Concession, Oso Township, Frontenac County, Ontario. The mine was on a hill, about 150 m south of the Crow Lake-Bolingbroke Road, and on the farm of E. Brash. It was worked during 1915-1920 by Fred Knight, when mica was produced. The rock was a hornblendite containing a dark mica. Both a pit, 12 ft square, and a trench, 30 ft long, four ft wide, and five ft deep, had been dug (Harding, 1951).

Kodak Mine, Lot 16, 2nd Range, Wakefield Township, Gatineau County, Québec. The mine was reportedly 100 m southwest of the Kitty Lynch Mine. It was operated by: the Wakefield Mica Company, in 1894; Mr. Wilson; Webster and Company; Wilson and Chubbuck; and then by Mr. Chubbuck, in 1899, when it was reported that a large opening, 110 ft deep, was being worked again (1900). In 1905, Cirkel stated that a large amount of very fine mica had been mined, but that legal difficulties regarding ownership were interrupting production. It was reportedly worked by A. G. Martin in 1936 (1937). A shaft, 100 ft deep was reported to be on the property. The minerals included calcite, mica, pyroxene, and apatite.

Harry N. Kraft Property, Burk's Falls, Ontario. Production was reported from this property in 1918 (1919).

Krier Mine, Lots 1, 9th Concession, Carlow and Monteagle Townships, Hastings County, Ontario. The dike, about 400 m north of the Peter Freymond Farm, was reported to occur on the northern halves of these lots on either side of the township boundary. No early history was given, but Hewitt (1955) reported that the property had been worked in the 1920s. In 1952, the property was worked by Harvey Krier. It has, therefore, been given his name by the writer. The cut, in the hillside on Lot 1, 9th Concession, Carlow Township, had a face 50 ft long and 15 ft high. The mica, phlogopite, occurred in a basic pyroxenite pegmatite interbanded with granite gneiss. Red and green apatite crystals, up to 10 cm across, phlogopite crystals, up to 30 cm across, feldspar, calcite, and titanite (sphene), were reported (Hewitt, 1955).

F. A. Labelle and Company, Hull, Québec. Production was reported from this property in 1909 and 1914 (1910, 1915).

Lac (Lake) Girard Mine, Lot 23 (24), 2nd Range of Wakefield Township, Gatineau County, Québec. The mine was reported to have been on the south shore of Lac Girard, about 4 km northeast of Wilson's Corners. Cirkel (1905) noted that this was the most important mine in the district at one time. Sabina (1987) reported the above together with the information that it was acquired by the Lake Girard Mica System (in which Don. C.

Watters was an important figure), in 1891, after it had been worked for a year. It was operated until 1895, and then again in 1898 by the Mica Manufacturing Company (1899). It was worked intermittently until 1904 and again in the 1930s. The main shaft was sunk on an incline of from 73 degrees to 75 degrees to a depth of 165 ft. A further incline at the 165-ft level extended the workings to a depth of 210 ft. Drifts, as long as 140 ft, had been driven from the shaft. The mica occurred in pink calcite. In 1945, it was noted that the mine had been idle since 1934 but that scrap mica was being produced from the dumps (1946).

Lac Noir Mine, Lot 6, 4th Range, Hincks Township, Gatineau County, Québec. Close to Lac Noir, it was operated by Messrs. Richard and Company in 1898 (1899).

Lac Noir (Occurrence) Mine, about 15 km from Lac Noir, Québec, on the road to Morin Heights. Sabina reported (1986) that the deposit was worked briefly about the mid 1920s.

Lac (Lake) Rheame Mining Company Property, Lot 3, Gore of Templeton Township, Papineau County, Québec. The company was listed as an owner/operator in 1937 (1938). White (1997), reported that the mine was begun about 1901 by the Wallingford Mica Mining Company. There were two pits, each about 25 ft deep, on the side of a steep ridge about 270 m from the north shore of Lac Rheame. Dark silver-amber mica and high grade phosphate was mined.

Lac (Lake) Ste. Marie Mica Mines Property, Hincks Township, Gatineau County, Québec. The Company, of Ottawa, was listed intermittently as a working owner/operator from 1940 to 1946 (1941-1947).

Lac (Lake)Terror Mine, Lots 12 and 13, 3rd Range, Portland West Township, Papineau County, Québec. Prospected by the Lake Terror Mining Company (Lewis Brothers and Company), in 1892, it was reported to have been operated by the Perkins Mills Mica Company in 1945 (Canada, Mines Branch, 1946).

Lacey Mine, west half of Lot 11, 7th Concession, Loughborough Township, Frontenac County, Ontario. An old mine, it was first developed by Messrs. Smith and Lacey, in 1884, when a shaft was sunk (1907). It was abandoned in the early nineties and the mineral rights sold to the General Electric Company, of Schenectady, New York. It was reopened in 1899, under lease, by J. W. Trousdale, of Sydenham, after a new discovery of mica was made about 200 ft southeast of the original workings. The mineral rights reverted to General Electric when Trousdale's lease expired in 1901. The main shaft had been sunk to 185 ft by 1906. In 1904, it was described as "one of the most remarkable mica deposits ever worked in any country"(1904). It produced half of the production of Ontario in 1905 (1906), and was the largest producer of amber mica in the province for several years (1911-1917). It was also at one time the largest mica mine in the world (1916-1917). In 1906 it was acquired by the Loughboro (Loughborough) Mining Company, a subsidiary of General Electric, and a second shaft sunk (1907). It was then operated from 1908 to 1924 (1915-1926). During the summer mining was from a pit 90 ft deep, 100 ft long, and 75 ft wide. During the winter mining was from underground - one stope, in the parallel orebody that was exploited by underground methods, and known as the *Milky Vein Stope* was reported to have been 200 ft long, 16 ft wide, and 80 ft high (1918). Mica was reported in the bottom of the stope, at a depth of 200 ft (1920). In 1915, it was reported that this mine had produced more than 10 million pounds of closely cobbled rough mica over the

preceding 15 years (1916). In 1924, it was reported that mining in the winter was on the 200-foot level with the ore below having been mined out and that part of the mine abandoned. During the summer, mining was from the open pit. Production was reported at 6000 pounds per week, with 18 men employed in the open pit (1926). Production had fallen to about 3000 pounds per week in 1926 (1927). Mining was reported to have been discontinued in 1928 (1929), but the company continued to be listed as the operator until 1933 (1933). It was re-opened under lease by the Sydenham Mining Company in 1944, which company recovered substantial amounts of scrap mica from the old dumps (Canada, Mines Branch, 1946). During the same year, water was pumped from the old pit and mica mined from the benches. The shaft was also reconditioned to a depth of 60 ft (1947). In 1945, old horizontal pillars at the south end of the *Lacey Pit*, at a depth of 100 ft, were recovered (1948). By the end of 1946, all of the mica had been mined from the walls of the pit, then 125 ft deep, and mining was taking place at the bottom (1948). The mine closed in April, 1947 (Canada, 1948)(1949). The dumps were worked for scrap mica until 1948 (Canada, 1949).

Sylvio Lafortune Mining Company Property, Templeton Township, Papineau County, Québec. The company, of Pointe Gatineau was reported as an owner/operator from 1918 to 1920 (1919-1921) and from 1932 to 1935 (1933-1936). Production was not mentioned.

Lanciault and Chartier Property, Viel Township, Matawinie, Québec. Albert Chartier, of L'Ascension, Labelle County, and his partner were listed as owners/operators in 1936 (1937).

Lapointe (Property) Mine, Derry Township, Papineau County, Québec. Emmanuel M. Lapointe, of Notre-Dame-de-la-Salette and later Buckingham, was listed as the owner/operator of this property from 1925 to 1930 (1926-1931) and from 1932 to 1934 (1933-1935). See also the report under Feldspar. The writer visited this property in mid-September, 1998.

Laurel (Goudreau) Mine, Lots 19A and 19B, 10th Range, Wentworth Township, Argenteuil County, Québec. This property was first mentioned in the report for 1934, when it was stated that J. J. Goudreau and associates had started to mine it. It was previously owned by the Laurel Mining Company (1935). It was operated in the summer of 1935 with a force of eight men (1936). It produced in 1937-1938 (1938-1939).

Laurentide(s) Mine, Templeton (East?) Township, Papineau County, about 10 km northwest of Hull, Québec, in Gatineau Park. The mine was opened in 1899 by Brown Brothers and owned and operated by the Laurentide Mica Company, of Ottawa, from 1904 to 1922. Sabina reported (1987) that there were more than 20 pits. The Laurentide Mica Company, of East Pittsburgh, Pennsylvania, and then Ottawa, was listed as owner/operator from 1923 to 1934 (1924-1935). Scrap mica was reported to have been produced from its dumps in 1946 (1947).

Laurentide Mica Mine, Viel Township, Matwinie, Québec. It was operated by Laurentide Mica Mine and Products Limited, of Montréal, in 1937 (1938).

Leduc Mine, east half of Lot 25, 7th Range, Wakefield Township, Québec. The mine was reported as having been abandoned in 1885. Sinkankis (1959) reported that considerable amazonite was found in this mine, with crystals as large as 45 cm across.

Lee Mine, Lot 14, 11th Range, Templeton Township, Papineau County, Québec. This was reported, in 1899, as being an old mine which was then being reworked by Alfred Têtu,

- and others (1900).
- Lee Mine, Lot 4, 13th Concession, Bedford Township, Frontenac County, Ontario. W. W. Lee, of Perth Road, was reported to have been operating several old pits on this property in 1942 (1946). Amber mica was mined.
- Lee Property, Loughborough Township, Frontenac County, Ontario. The property was mentioned as being near Bedford Mills. W. W. Lee, of Kingston, was reported as a shipper in 1923-1924 (1924-1926).
- Lee Property, Ontario. Near Sydenham, and operated by Mostyn Lee, it was listed as a shipper in 1924 (1926).
- Lee Brothers Mine, Lot 4, 9th Range, Templeton Township, Papineau County, Québec. The mine was reported to have been operated, in 1892, from a shaft 100 ft deep. It was reworked in 1900 (Cirkel, 1905).
- Lemieux Mine, see the listing for the Kingston Mine, above.
- Lépine Property, Templeton Township, Papineau County, Québec. Hormidas Lépine, of Sainte-Rose-de-Lima, was listed as an owner/operator in 1935 (1936).
- Leushner Mine, Lot 8, Range A, Northfield Township, Gatineau County, Québec. The mine was reported to have been operated by Messrs. W. E. Hamil and Company, of Toronto, in 1898, when a small quantity was mined (1899).
- Frank Leushner's Mine, Lot 7, 1st Concession, Bedford Township, Frontenac County, Ontario. This mine was reported to have been the most westerly mine in Frontenac County at the time (1901).
- Levett and Davis Mine, Lot 3, 5th Concession, Burgess Township, Lanark County, Ontario. On the shore of Rideau Lake, and about 11 km south of Perth, the mine was reported to have been previously worked for both phosphate and mica (1893).
- L'Heureux Property, Wentworth Township, Argenteuil County, Québec. Georges L'Heureux, of Cap-de-la-Madeleine, was listed as an owner/operator from 1936 to 1944 (1937-1945). Work was reported in 1938.
- Lila Mine, north half of Lot 24, 3rd Range, Portland West Township, Papineau County, Québec. The mine was reported to have been on a hilltop about 50 km from Ottawa, where the mica was sent. Operated by the Lila Mining Company, of Ottawa, in 1899, there were reportedly 20 workers and two horse-powered derricks on the property (1900). Mica occurred with calcite in a pyroxene dike. Perfect crystals up to 25 cm, were reported by Cirkel (1905).
- Linmac Mines Property, Hull Township, Gatineau County, Québec. The company, of Montréal, was listed as a working owner/operator in 1943 (1944).
- Loughborough Township Occurrence, Lot 7, 8th Concession, Loughborough Township, Frontenac County, Ontario (1891).
- Low Mine, see the listing for the Algonquin Mica Prospecting Syndicate listing, above.
- Lunn (Whalen, Campsall and Orser, Green) Mine, south half of Lot 31, 2nd Concession, Bedford Township, Frontenac County, Ontario. The deposit was first mined about the beginning of the 20th Century by W. Whalen, of Westport, who was reported to have dug a pit about 400 m west of the farm house. Further mining was done by Ernie Campsall, of Godfrey, and Fred Orser of Verona, in 1924, and by William Green, of Perth Road, in 1942. Harding (1951) reported that the farm was then owned by Mrs. Edith Lunn. On the

- property, a mica-bearing vein cut gabbro-anorthosite. The mica was dark (biotite?).
- Lyman and Ross Property, Lots 3 and 4, 13th Range, Templeton Township, Papineau County, Québec. This was reported to have been an old property which had been opened up by Messrs. Lyman and Ross. A shaft 40 ft deep had been sunk. Mr. F. E. Leushner was reported to be prospecting on it in 1898 (1899).
- Lyndoch Occurrence, Lot 34, 15th Concession, Lyndoch Township, Renfrew County, Ontario. Two small pits had been dug in a mica pyroxenite which cut hornblende paragneiss. The mica was phlogopite (Hewitt, 1954).
- Lyndoch Prospect, Lot 12, 16th Concession, Lyndoch Township, Renfrew County, Ontario. The prospect was on the southeast slope of a ridge above Eneas Creek and about 200 m east of the farm road (Hewitt, 1954). A small pit and trenches were reported to have been dug at the contact between amphibolite and crystalline white Grenville limestone. Dark brown phlogopite occurred with diopside, scapolite, pyroxene, and tremolite. About 800 m to the east, another occurrence, this time with actinolite and scapolite, was reported. At this second location the pegmatite was cut by a later granite pegmatite that was mentioned as being rich in titanite (sphene).
- MacDonald and McDonald Property (Greer Mine?), Claims S. 35,358 to 35,361, Concessions D and E, Orlig Township, District of Nipissing, Ontario. About 1.5 km south of Perron Lake, the property was reported to have been staked by Albert MacDonald, of Toronto, in 1940. Huntley McDonald the joined the partnership. The property was mentioned as being prospected in 1944 (Harding, 1946). In his report, Harding noted that Bill Greer, of Haileybury, was reported to have mined several hundred pounds of mica during the period 1908-1910 from a muscovite-bearing vein in this vicinity.
- MacLelan Mine, Lot 11, 16th Range, Hull Township, Gatineau County, Québec. It was reported as not being worked in 1899 (1900).
- MacMartin Mine, Lot 1, 6th Concession, North Burgess Township, Leeds County, Ontario. The mine was reported to have been previously worked for phosphate. At the time, it was owned by a Mr. MacMartin (1895).
- MacMillan Property, Claims S. 36,311 to 36,314, 4th Concession, Mattawan Township, District of Nipissing, Ontario. The property was reported to have been staked in 1942 by George A. MacMillan. Pegmatite was reported (Harding, 1946).
- MacNamara Property, Ontario. Near Sydenham, it was operated by H. F. MacNamara and was listed as a shipper in 1924 (1926).
- McBride Mine, north half of Lot 6, 1st Range, Wakefield Township, Gatineau County, Québec. This was reported to be a small prospect that was noted for its exceptional samples of garnet, sphene, and blue calcite (1892).
- McCabe Property, Wells Township, Papineau County, Québec. Edward J. McCabe, of Notre-Dame-du-Laus, was reported as a working owner/operator in 1942 (1943). No work was reported in 1943 (1944).
- McCadden Property, Frontenac County, Ontario. H. McCadden, of Perth Road, was listed as a shipper in 1927 (1929).
- McClashan Mine, see the listing for the McGlashan Mine, below.
- McClatchey (Grant and McClatchey) (Grant) Mine, Lots 7 and 8, 10th Concession Loughborough Township, Frontenac County, Ontario. The mine was about 10 km north of Sydenham, on

the east side of Gould Lake. It was successively owned by: Messrs. Webster and Company, in 1895; by Dr. John Grant and Prof. McClatchey, of Napanee, in 1900; by Messrs. McClatchey and Hayden, of Belleville, in 1901; and by J. W. Trousdale, of Sydenham, in 1902.. There was reported to have been one shaft, 100 ft deep, on the property (1903). At the bottom, the shaft widened into a chamber of eight ft by 30 ft (Cirkel, 1905).

- McCloskey Mine, west half of Lot 92, 7th Range, Wentworth Township, Argenteuil County, Québec (1892).
- McConnell Mine, about 3 km northwest of Old Chelsea, Québec. Sabina reported (1987) that the deposit had been worked about 1910 and 1960. Rinaldo McConnell was reported as having produced at this location from 1911 to 1914 (1912, 1915).
- McConnell Mine, northwest side of Otty Lake, Ontario. This mine was also reported to have been worked by Rinaldo McConnell, during the winter of 1909 (1910).
- McCorkindale, Steele, and McFarlane Mine, east half of Lot 5, 8th Concession, Loughborough Township, Frontenac County, Ontario. The mine was reported to have been worked intermittently in 1940 (1942).
- McCrimmon (Campsall, Lee, Hetherington, Hollister) Mine, Lot 5, 2nd Concession, Oso Township, Frontenac County, Ontario. The mine was reported to have been on the farm of Dan McKinnon and within 100 m of the southwest corner of the lot. The pit was reported to be 30 ft long, 10 ft wide, and 10 ft deep. It was first worked by Oscar and Isaac Campsall early in the 20th Century. It was then worked by William Lee, John Hetherington, and John Hollister (the latter of Sydenham). Mining ended about 1915. The local rocks were Grenville sediments which had been cut by pegmatite dikes. Phlogopite was seen in the dump (Harding, 1951).
- McCuaig Mine, Lots 17 and 18, 2nd Range, Wakefield Township, Gatineau County, Québec. This was reported to be an old abandoned mine, previously operated by the McCuaig syndicate, in 1892.
- A. Roy McDonald, Mica, Pontiac County, Québec. He was reported as an owner/operator from 1920 (1921).
- McElroy (Property) Mine, Templeton Township, Papineau County, Québec. George W. McElroy, of Davidson's Corners, was listed as an owner/operator from 1925 to 1930 (1926-1931) and from 1932 to 1934 (1933-1935).
- McFadden Property, Loughborough Township, Frontenac County, Ontario. R. J. McFadden, of Sydenham, was reported as a shipper in 1923-1924 (1924-1926).
- J. S. McFarlane Mine, north halves of Lots 15 and 16, 15th Range, Hull Township, Gatineau County, Québec (1892).
- McGarry Property, Wakefield Township, Gatineau County, Québec. Edward McGarry of Wakefield was listed as a working owner/operator from 1936 to 1943 (1937-1944). Work was reported in 1944-1945 (1945-1946).
- McGillivray Lake Mine, Argenteuil County, Québec. This old mine was on the west side of McGillivray Lake, about 6 km north of Grenville. In her 1986 book, Sabina reported that it had been worked more than a hundred years ago.
- McGlashan (McClashan) Mine, Wakefield Township, Gatineau County, Québec. This mine was about 2 km west of St.-Pierre-de-Wakefield, about 1 km along Rue Eglise from its

intersection with Rue Ruisseau, on the west shore of Lac Saint Pierre, and near Wilson's Corners. Sabina reported (1987) that mining began in 1905 by Mr. R.W. Eady, and that Mr. R. J. McGlashan took over the property in 1907. Mr. McGlashan, of Wilson's Corners was still listed from 1911 to 1912 (1912, 1913). The McGlasham Mining Syndicate, of Cantley, was reported as the owner/operator from 1921 to 1924 (1922-1925) while R. J. McGlashan and Company, of Hull, was listed from 1925 to 1943 (1926-1944). Work was reported in 1939 and 1942-1943. The name, spelled as McClashan also appears in some of the reports 1914 (1915). The two small pits are visible from the road. When the writer visited the property in mid-October, 1997, the pits were found to be very overgrown and the opportunities for collecting poor.

McGlashan Property, Wakefield Township, Gatineau County, Québec. William McGlashan, of Wilson's Corners, was listed as an owner/operator from 1934 to 1936 (1935-1937).

Production was reported in 1935-1936.

McKay Mine, Lot 9, 1st Concession of Calvin Township, District of Nipissing, Ontario (1893).

McKenzie Property, Grenville Township, Argenteuil County, Québec. P.G. and J. F. McKenzie, of Montréal, were listed as owners/operators in 1940 (1941).

McLaren (McLaren's) Mine, Lots 4, 5, and 6, 8th Concession, North Burgess Township, Lanark County, Ontario. Owned by the Hon. Peter McLaren, of Perth, the mine "adjoins the old Capt. Adams mines" (1902) (see the listing for this under Phosphate). It was subsequently owned by W. L. McLaren, of Perth, and was operated intermittently from 1914 to 1929 (1915-1920, 1926, 1930).

McLaurin Property, Portland Township, Papineau County, Québec. T. G. McLaurin, of Ottawa, was listed as owner/operator from 1932 to 1935 (1933-1936). Production was not reported.

McLaurin Property, Templeton Township, Papineau County, Québec. John McLaren, Sainte-Rose-de-Lima was listed as the owner/operator in 1924 (1925). The name was given as McLaurin in subsequent reports, from 1925 to 1926 (1926-1927). The Estate of Alexander McLaurin was listed from 1927 to 1930 (1928-1931).

McLaurin Mica Property, Hull Township, Gatineau County, Québec. This Montréal company was listed as an owner in 1943-1944 (1944-1945). Work was reported in 1944.

McLean Property, Portland West Township, Papineau County, Québec. McLean Interests, Limited (D.V.), were listed as an owner/operator from 1939 to 1940 (1940-1941). Work was reported in 1940.

McLelan Mine, north half of Lot 15, 15th Range, Hull Township, Gatineau County, Québec. The mine was reported to have been worked by the Webster Company in 1892.

McManiman Property, Rawdon Township, Matawinie, Québec. C. McManiman, of Rawdon, was listed as an owner/operator from 1925 to 1927 (1926-1928) and from 1930 to 1939 (1931-1940). There were no reports of production.

M'Nally Mine, Lot 21, 5th Concession, Burgess Township, Lanark County, Ontario. About 5 km southwest of the Martha Mine and then owned by John McParland, it was reported to have been leased to H. W. McNally, of Westport (1901).

McNamara Property, Ontario. H. E. McNamara, of Sydenham, was reported as a shipper in 1923 (1924).

McNaughton Property, Lanark County, Ontario. George W. McNaughton, of Stanleyville, was

- listed as a shipper from 1926 to 1927 (1927-1929).
- McTiernan (McThierney) Mine, Lot 21, 4th Range, Templeton Township, Papineau County, Québec (1899).
- McVeity Mine, Lot 22, 4th Range, Templeton Township, Papineau County, Québec. On property then belonging to Taylor McVeity, this was a former phosphate property that had been reopened for mica in 1898 (Cirkel, 1905).
- Macjarlane Mine, near Lots 15 and 16, 16th Range, Hull Township, Gatineau County, Québec. The mine was reported to have been on the east side of the Gatineau River. In his 1905 report, Cirkel mentioned that this mine was in the immediate vicinity of Cassidy's Mine (refer to the listing).
- Mahon Brothers Property, North Burgess Township, Lanark County, Ontario. The company, of Rideau Ferry, was listed as a shipper in 1925 (1926).
- Maly (Sheppard) Mine, Lot 24, 2nd Concession, Palmerston Township, Frontenac County, Ontario. On the farm of Fred Maly, the deposit was reported to have been "worked many years ago" by Smith (1958). This deposit was worked for muscovite in the 1880s by a Mr. Sheppard. Plates of muscovite up to 45 cm long were noted (quoted in Smith, 1958). On the north contact of the sericite schist of the Fernleigh-Clyde Fault, the main pit was about 100 ft long and 15 ft wide.
- Marcelais (Marsolais) Mine, Lot 8, 10th Range, Templeton Township, Papineau County, Québec. The mine was reported to have been about 16 km from East Templeton. An old phosphate mine, with two shafts, of 70 and 90 ft, respectively, it was being mined for mica by E. Charette and A. Julien, in 1897 (1897). Cirkel, in reporting on it, in 1905, noted that; it belonged to the North Ottawa Mining Company, of Montréal; it "was worked extensively for apatite many years ago"; and that Messrs. Powell and Haycock, of Ottawa, were reworking it.
- Marcella (Gauthier) Mine, Lot 19, Range B, Denholm Township, Gatineau County, Québec. J. B. Gauthier, of Buckingham, was reported to have re-opened this old mine and to have produced a few thousand pounds of amber mica (Canada, 1948). It produced from 1946-1949 (1947-1950) (Canada, 1949).
- Marks Property, Bedford Township, Frontenac County, Ontario. Near Sydenham, it was operated by Oliver Marks. It was reported as a source of shipments in 1924 (1926) while he was mentioned as a principal producer in 1954 (Canada, Mines Branch, 1955).
- Marston Minerals Mine, see the listing for the Mazinaw Lake Mine, below.
- Martha Mine, east half of Lot 13, 6th Range of Burgess Township, Lanark County, Ontario. The mine was about 16 km south of Perth and about 1 km from the Hanlan Mine. The property was prospected in 1871 and worked by several operators. It is one of the oldest mines in Ontario and was first worked for phosphate. Acquired in 1892 by the Lake Girard System, of Ottawa, it was later owned by the Mica Manufacturing Company, of London, England, in 1900. It was operated in 1900 and 1901 and was reopened in 1902 (1903). In 1905 it was leased by Messrs. Sewell and Smith, of Perth and operated by them until 1906. There were three pits, the largest having been 150 ft long, from 20 to 30 ft wide, and 100 ft deep (Cirkel, 1905). The mica occurred in fissures in a pale pyroxene. Cirkel reported that it and the Pike Lake Mine were under water.
- Martin Mine, Hull Township, Québec. (see the Dacey Mine listing, above).

- Martin Mine, Lot 3, 3rd Concession, South Burgess Township, Leeds County, Ontario. The mine was listed intermittently as a source of shipments from 1925 to 1927 (1926-1929) and from 1932 to 1933 (1932-1933). It did not operate in 1927.
- Martin Properties, Lytton and Huddersfield Townships, Gatineau and Pontiac Counties, Québec. A. G. Martin was listed as the owner/operator of these properties from 1929 to 1932 (1930-1933).
- Martin Property, Loughborough Township, Frontenac County, Ontario. Shipments were reported in 1923 and 1924 (1924-1926).
- Math. Morris Mine, south half of Lot 71, 2nd Range, Wakefield Township, Gatineau County, Québec. The mine was reported to have been opened in 1894, and was next to the Kodak Mine.
- Mathé Property, Portland West Township, Papineau County, Québec. Eugène and F. Mathé, of Wilson's Corners, were listed as owners/operators from 1939 to 1942 (1940-1943). Work was reported in 1940-1942.
- Mattarig Mica Mining Syndicate Property, Claims S. 36,297 to 36,299, Lots 1 and 2, Concession C, Orlig Township, and Claim S. 36,232, Lot 1, 2nd and 3rd Concessions, Mattawan Township, District of Nipissing, Ontario. The Syndicate was incorporated in 1942 and began mining in a series of pegmatite dikes which were reported to radiate from a mass. Trenches and test-pits were dug in 1943, and four tons of amber mica produced. Six were employed (1944). The minerals reported were pink and white feldspar, biotite, muscovite, garnet, tourmaline, and pyrite (Harding, 1946).
- Mazinaw Lake (Marston Minerals) Mine, Lots 8 and 9, 6th Concession, south halves of Lots 8 and 9, 7th Concessions, Effingham Township, Lennox and Addington County, Ontario. The mine was reported to have been about 3 km west of the north end of Mazinaw Lake. Work by operators prior to 1944 was mentioned, but without details (1947). Marston Minerals was incorporated in 1943 and began development the following year. A shaft was sunk, in a vein, to 67 ft, and a level cut at 50 ft. The vein was reported to have contained both feldspar and muscovite mica (1947). In 1950, the property, last mined in 1944, was operated by Creighton Orser and two others (1952).
- Mica Company of Canada. This company, from Ottawa, was reported to be a Québec producer from 1911 to 1913 (1912, 1914).
- Mica Company of Canada (Property) Mine, Claims S. 36,233 to 36,236 and S. 36,143 to 36,152, 36,237 to 36,243, 36, 274, and 36,308 to 36,310. The claims were in the southwestern part of Mattawan Township and extended a short distance into Orlig Township, District of Nipissing, Ontario. These extended from close to the Purdy Mine to Bouillon Lake on the Mattawa River. Some of the claims were sold to Inspiration Mining and Development while others were held in the names of the Amic Prospecting Syndicate and the Mattawa Prospecting Syndicate, which were merged to form Mica Consolidated Mines. Production began in 1942 from Claim S. 36,151. Minerals on the properties included orthoclase (pink), soda plagioclase, quartz, muscovite, biotite, tourmaline, and epidote (Harding, 1946).
- Micambia Prospecting Syndicate Property, Bigelow Township, Papineau County, Québec. From Smithville, Ontario, the company was listed as a working owner/operator in 1942 (1943).
- Micaspar Industries Property, Portland West Township, Papineau County, Québec. The company,

from Hamilton, and later Toronto, Ontario, was listed as an owner from 1943 to 1946 (1944-1947). See the listing for the Richardson Mine, below.

Mid-Bay Mica Syndicate, see the listing for the Purdy Mine, below.

Miller Mine, Lots 1, 11th Concessions, Monteagle and Carlow Townships, Hastings County, Ontario. The mine was reported to be in a field, about 500 m south of the Monteagle Valley-New Carlow Road, and on property which straddled the township line. It was reported to have been worked by Max Miller in the 1920s (Hewitt, 1955) and consisted of four small pits, with the largest being 10 x 10 ft and six ft deep. The mica, phlogopite, occurred in scapolite stringers in a scapolite-pyroxenite. The minerals included phlogopite; white scapolite; dark green pyroxenite; titanite (sphene) in crystals up to 2.5 cm across; calcite; apatite; stilbite; and chabazite, often as well-formed crystals (Hewitt, 1955).

Miller Property, Lot 13, 9th Concession, Methuen Township, Peterborough County, Ontario. On the south side of Little Mountain Lake, it was reportedly worked for mica at about the beginning of the 20th Century. The mica, and some corundum, occurred near the contact between syenite and granite (in Hewitt, 1961).

Mills and Cunningham Mine, north part of Lot 9, 2nd Concession, South Sherbrooke Township, Lanark County, Ontario. Messrs. Mills and Cunningham, of Kingston, were reported to have done some work on this property in 1904 (1905).

Mineral Products Company Property, Wakefield Township, Gatineau County, Québec. This company, from Hull, and later Toronto, was listed as an owner/operator from 1923 to 1934 (1924-1935).

Moncrief Mine, Lot 28, 4th Range, Chatham Township, Argenteuil County, Québec (1892).

Monteagle Occurrence, Lot 1, 9th Concession, Monteagle Township, Hastings County, Ontario. This was an old property that had been worked many years before it was reported (Thomson, 1943). The minerals noted were phlogopite, scapolite, apatite, salite, calcite, titanite, quartz, and feldspar. The mica was of poor quality.

Monteagle Occurrence. Lot 1, 11th Concession, Monteagle Township, Hastings County, Ontario. There were reported to have been four shallow test pits over a length of several hundred ft along the top of a hill at the south end of the lot. The mica occurred in pyroxenite (Thomson, 1943).

Monteagle Prospect, Lot 22, 9th Concession, Monteagle Township, Hastings County, Ontario. A small pit had been dug in a metapyroxenite near the farm buildings on this lot. "A few" books of phlogopite, up to 10 cm across, were mentioned (Hewitt, 1955).

Montgomery and Adams Mine, west half of Lot 6, 9th Concession, North Burgess Township, Lanark County, Ontario. A 40-ft shaft was reported to have been sunk on this property in 1904 and some development done by Messrs Montgomery and Adams, of Perth (1905).

Dick Moore Mine, Lot 12, 5th Range, Wright Township, Gatineau County, Québec. About 4 km southeast of Wright, it was reported to have been opened in 1898 (1899), by Dick Moore, of Picanoc. Sabina reported (1987) that it was last worked in the 1910s and that it was then on the farm of Marc Carpentier. Richard Moore, of Picanock (variation on the spelling of Picanoc), was last listed as a producer in 1909 (1910).

Paddy Moore Mine, Lot 24, 15th Range, Hull Township, Gatineau County, Québec (1899).

Richard Moore Property, Lytton Township, Gatineau County (La-Vallée-de-la-Gatineau), Québec. Richard Moore, of Wright, was reported as the owner/operator of this property

- from 1931 to 1932 (1932-1933).
- Moore Mine, south part of Lot 32, 15th Range, Hull Township, Gatineau County, Québec. This mine was reported as being in operation in 1892.
- Moore Property, Lot 25, 1st Concession, Wollaston Township, Hastings County, Ontario. The occurrence was on property then (1943) belonging to Herbert Moore, of *The Ridge*. Sheet muscovite was reported to occur in a pegmatite dyke. Some books were up to 15 in long but the quantity was reported to have been small (Thomson, 1943).
- Moreland (Property) Mine, Lot 9, 10th Concession, Dickens Township, District of Nipissing, Ontario. The property was reported to have been on the north side of Aylen Lake. About one ton of mica was produced in 1943 (1944).
- Morey (Hoppins) Mine, Lot 1, 3rd Concession, Bedford Township, Frontenac County, Ontario. The mine was about 120 m from the northwest shore of Desert Lake and on land then owned by Mrs. Florence Hoppins (Harding, 1951). It was reported to have been first mined about 1937-1938 by Ross Morey, of Thirteen Island Lake. In 1944, Mrs. Minnie Morey, then the lessee of the property, continued mining. The mica-bearing vein was at the contact between crystalline limestone and granite. Phlogopite and pyroxene were noted.
- Morlot Property, Low Township, Gatineau County, Québec. Charles Morlot, of Low, was listed as an owner/operator and producer from 1935 to 1937 and 1941 (1936-1938, 1942).
- Morris Mine, south half of Lot 17, 2nd Range, Wakefield Township, Gatineau County, Québec (1895). Joseph Morris, of Wilson's Corner, was listed as an owner/operator from 1924 to 1936 (1925-1937). Joseph and Matthew Morris were listed from 1937 to 1941 (1938-1942). Work was reported in 1938. A second property in Hull Township was indicated in 1939-1941.
- Mullen Mine, north half Lot 13, 3rd Range, Wakefield Township, Gatineau County, Québec (1892).
- Mullingham Property, Lot 4, 2nd Range, Alleyn Township, Pontiac County, Québec. The property was about 13 km from "Kazebazoua" (variation on the spelling of Kazabazua) Station (1900). Leased by Dick Moore, of Picanoc, work on it began in 1898 (1899); five men were employed by the following year, when the deepest pit was reported to be at 25 ft (1900).
- Multi-Metals Mines Property, Ladysmith, Québec. The company, from Toronto, was listed as an owner from 1943 to 1944 (1944-1945).
- Munslow's Mine, west half of Lot 31, 6th Concession, North Burgess Township, Lanark County, Ontario. The property adjoins the Martha Mine (see the listing above) (1902).
- Murphy Mine, Lot 38 in the Gore of Templeton Township, Papineau County, Québec. The mine was reported to have been started in 1897 with 14 workers (1897).
- Murphy Mine, south half of Lot 10, 10th Range, Templeton Township, Papineau County, Québec. It was first worked by the Lake Girard Mica System in 1892, and later by Arthur Murphy and five workers in 1899 (1900). It was then leased by him, in 1900, to the Sills-Eddy Company (Cirkel, 1905).
- Nabco Manganese Mining Company (Douglas Mountain) Mine, north half of Lot 8, 6th Concession, Effingham Township, Lennox and Addington County, Ontario. The company was formed in 1940, and, in 1942, began to clean out the old pits and to prepare to mine

- muscovite (1946).
- Nault Property, Cameron Township, Gatineau County, Québec. A. Nault, of Maniwaki, and later Rivière Desert, was reported as an owner/operator from 1918 to 1922 (1919-1923). J. B. Nault, of Maniwaki, was listed from 1923 to 1932 (1924-1933).
- Nelles Property, Frontenac County, Ontario. F. Nelles, of Sydenham, was listed as a shipper in 1927 (1929).
- Nellie and Blanche Mine, Lot 10, 10th Range, Hull Township, Gatineau County, Québec. This old mine was about 3 km southwest of Cantley, 16 km north of Ottawa, and on the east side of the Gatineau River. About 1890 to 1892, the deposit was worked for apatite by Mr. J. T. Haycock, of Ottawa. It was then sold to the Lake Girard Mica System (Don. C. Watters), which then operated it from 1892 to 1893. It was operated once again, from 1925 to 1926 by Mr. W. Ahearn, of Ottawa (Sabina, 1987). Cirkel (1905) reported that it was a deposit of the pocket type, with the mica being irregularly distributed along fissure lines in a belt of pyroxene. Calcite and apatite were also found. Much of the mica was shattered. Sinkankis (1959) reported exceptional crystals of scapolite up to 20 cm long.
- Nellis Property, Ontario. T. Nellis, of Sydenham, was reported as a shipper in 1923 (1924).
- Estate T. F. Nellis Property, Hull Township, Gatineau County, Québec. The Estate was listed as an owner/operator in 1930 (1931) (see the Blackburn mine listing, above).
- New Calumet Mines, Grand Calumet Township, Pontiac County, Québec. The company was listed as an owner/operator from 1944 to 1946 (1945-1947).
- New York and Ontario Mica Company Limited, Ontario. The company was reported to have produced in 1914 (1915).
- Noble's Bay Mine, part of Lots 2, and 3, Lots 4, 6, 7, 8, 9, 5th Concession, Lots 7 and 23, 6th Concession, and Lot 24, 4th Concession, North Burgess Township, Lanark County, Ontario. The mine was reported to have been worked for phosphate about 40 years ago (i.e. 1862) and reworked at the beginning of 1902 (1903).
- North Bay Mica, see the listings for the North Burgess and Purdy Mines, below, and the Brent Property, above.
- North Burgess Property, North Burgess Township, Lanark County, Ontario. The property was explored, by drilling and trenching, for vermiculite by the North Bay Mica Company in 1951 (1953).
- Northern Mica Company, see the listing for the Purdy Mine, below.
- Northern Mica Company Property, Wentworth Township, Argenteuil County, Québec. This Montréal company was reported as an owner/operator from 1931 to 1932 (1932-1933).
- O'Brien and Fowler Property, Villeneuve Township, Papineau County, Québec. At-Val-des-Bois. This Ottawa company was reported as an owner/operator in Québec from 1911 to 1938 (1912-1939). No production was reported.
- O'Connor Mine, Lot 1, 3rd Concession of South Burgess Township, Leeds County, Ontario. Originally reported to have been owned by Mr. Anthony O'Connor (1893), it was being operated by W. J. O'Connor, of Lombardy, in 1943 (1944). Forty-six tons of scrap amber mica were reported to have been produced. W. J. O'Connor, of Lombardy, was also listed as an operator from 1930 to 1932 (1931-1932).
- O'Mara Mine, Lot 5, 1st Concession of South Burgess Township, Leeds County, Ontario. About 24 km from Perth, the property was reported to have been owned by James Joyce and

- leased to Patrick O'Mara (1893).
- O'Neill Mine, about 1 km northwest of Old Chelsea, Québec. Sabina (1987) reported that the mine was worked in 1903 by Mrs. J. O'Neill, of Old Chelsea.
- Ontario Mica Company Mine, south half of Lot 5, 2nd Concession, Bedford Township, Frontenac County, Ontario. The company was reported to have driven a crosscut on the 200-ft level to a new vein in 1950 (1952). One hundred and fifty thousand pounds of mine-run mica was produced (1952).
- Orser Mine, Bedford Township, Frontenac County, Ontario. See the listing for the Anderson (Orser) Mine, above.
- Orser Mine, Bedford Township, Frontenac County, Ontario. The mine was at Thirty Island Lake. In 1948 (Canada, 1949), it was reported that F. Lemieux, of Godfrey, had made small shipments from this old mine. In 1950, it was reported that Ontario Mica Mines was operating the property (Canada, 1951). This could be the property mined by the Kingston Mica Mining Company (see the listing above).
- Orser Mine, Hinchinbrooke Township, Frontenac County, Ontario. This mine was reported to have been worked in 1940-1941 by Sidney H. Orser, of Verona (1942-1946).
- Orser Mine, Olden Township, Frontenac County, Ontario. At Crow Lake, it was reported to have been worked by C. C. Orser, of Verona, in 1940-1941 (1942-1946).
- Sidney H. Orser Mica Company Mine, 6th Concession, Bathurst Township, Lanark County, Ontario. The mine was near Bennett Lake. Leased from Edward Stafford, the property was operated in 1915. A small pit was sunk and about six tons of cobbled mica produced (1916).
- Sidney H. Orser Mica Company Mine, North Burgess Township, Lanark County, Ontario. This old abandoned phosphate mine, about 5 km west of Oliver's Ferry on Rideau Lake, was reported to have been leased from Messrs. Webster and Stewart, of Perth, in 1915 (1916). It produced until 1919 (1920).
- Sidney H. Orser Mica Company (Burns) Mine, Lot 6, 8th Concession, Burgess Township, Lanark County, Ontario. This old pit, about 10 km south of Perth, and once known as the Burns Mine, and 45 ft deep, was cleaned out in 1916 and timber and lagging installed. The vein of mica was reported to have been about 1.8 m wide (1916). Several new veins were discovered in 1916 (1917).
- Sidney H. Orser Mica Company Mine, west half of Lot 3, 6th Concession, Burgess Township, Lanark County, Ontario. Work on this property was expected to commence in 1916 (1916).
- Sidney H. Orser Properties, Ontario. At Godfrey and Cloyne, the properties were listed in 1939 (1941).
- Sidney H. Orser Property, Lot 8, 6th Concession, Effingham Township, Lennox and Addington County, Ontario. The property was listed in 1942 (1946).
- Orser-McKenzie Mica Milling Company Mine, Lot 19, 6th Concession, Monmouth Township, Haliburton County, Ontario. This Bancroft company was listed as a shipper in 1927 (1929).
- Orser and Wilson Mine, see the listing for the Basin Mine, above.
- Orser and Wilson (Property) Mine, Lot 32, 15th Concession, Faraday Township, Hastings County, Ontario. This mine was also owned by S. Orser and D. J. Wilson, and was adjacent to the

- Basin Mine (see the listing above). About 200 tons of black mica was reported to have been produced in 1925 (1926).
- Osgood and Moore Mine, north half of Lot 19, 6th Range, Hull Township, Gatineau County, Québec. The mine was reportedly worked by five men in 1899 (1900).
- Osler Property, Hull Township, Gatineau County, Québec. Charles E. Osler, of Wilson's Corners, was listed as an owner/operator from 1939 to 1940 (1940-1941).
- Otter Lake Mica Syndicate Property, Amherst Township, Les Laurentides, Québec. The company, from Montréal, was listed as an owner in 1946 (1947).
- Otty Lake Mine, see the listing for Donnelly, above.
- Papineauville Lumber Company Property, Templeton Township, Papineau County, Québec. The company was reported as an owner/operator and producer from 1935 to 1944 (1936-1945). Work was also reported in 1935 and 1936.
- Paquet Mine, Lot 3, 4th Range, Hincks Township, Gatineau County, Québec. A Mr. Watters was reported to have produced from this mine in 1898 (1899).
- Paquin Property, Wabassée Township, Labelle County, Québec. Emile Paquin, of Val-Paquin, Wright County, was listed as the owner/operator of this property in 1939 (1940).
- Paradis Property, Québec. Pierre Paradis, of Laurel, Argenteuil County, was listed as an owner/operator in 1932 (1933).
- Parker Mine, Lot 52, 5th Range, Bigelow Township, Papineau County, Québec. About 4 km west northwest of Notre-Dame-du-Laus, the deposit was first worked about 1910 by W. Parker, of Buckingham. The location was known for the olivene crystals which could be found. W. L. Parker was reported as the owner/operator from 1912 to 1920 (1913-1921).
- Parker's Mine, Lot 7, 5th Range, Grenville Township, Argenteuil County, Québec. An old mine, about 10 km from Calumet Station on the Canadian Pacific Railway (1897), it was reported to have been worked in 1897 by the Grenville Mining Company, of Ottawa.
- Patterson Mine, Lots 20 and 21, 9th Concession, Bedford Township, Frontenac County, Ontario. The mine was reported to have been on the farm of W. H. Patterson, of Burrigge, and on the east side of a hill near the boundary between Lots 20 and 21. W. H. Patterson and Andrew Patterson were reported to have developed two pits, about 35 m apart, in 1942-1943. The largest was 25 ft long and 15 ft deep (Harding, 1951) The pits were reported to have been filled with water. Amber mica and pink calcite were mentioned.
- Perkins (Burke Property) Mine, south half of Lot 1, 13th Range, Hull Township, Gatineau County, Québec. This was reported to be "the old Burke Property" (1894), for which no Québec record has been found. It was operated by J. W. Perkins.
- Perkins Mine, Lot 14, 9th Range, Templeton Township, Papineau County, Québec. This was reported to be an old mine which was being reworked by Messrs. Jurkowski and Company, in 1899 (1900). This company was also reported to have been working Lot 21, 9th Range and Lot 19, 8th Range, of the same township. The Perkins Mills Mining Company, of Pointe-Gatineau, was reported as an owner/operator from 1922 to 1934 (1923-1935), while the Perkins Mining Company was listed from 1935 to 1945 (1936-1946). Work was reported in 1937-1938 and 1940, 1944. See also the listings for the Jackson-Rae and Lake Terror Mines, above.
- Perkins Mills Mica Company Properties, Portland West and Templeton Townships, Papineau

County, Québec. This Montréal company was listed as a working owner/operator from 1945 to 1946 (1946-1947).

Perth Mica Mine, see the listing for the Biram Mine, above.

Peters (Orser) Mine, Lot 8, 1st Concession, Oso Township, Frontenac County, Ontario. The mine was reported to have been about 120 m from the west shore of Hawley Bay of Sharbot Lake, on the farm of George Clements, and close to his barn. It was first worked in the 1930s by Charles Peters and later by S. Orser, of Verona. The mica was reported to resemble biotite (Harding, 1951).

Phosphate King Mine, west half of Lot 15, 8th Range, Templeton Township, Papineau County, Québec, near Perkins. The mine was reported to have been worked until 1895 by the Lake Girard Mica System and from 1896 to 1897 by Messrs. Webster and White. As many as 45 men worked on the property. The pits were 70 ft deep, and steam drills were employed (1897). It was worked again by the Mica Manufacturing Company in 1899 (1900), which acquired all of the properties of the Lake Girard Mica System. There was an inclined shaft 70 ft deep (Cirkel, 1905). The property was then taken over by Blackburn Brothers, of Ottawa, and operated until at least 1946 (Canada, Mines Branch, 1946)(1947). In 1942, a shaft was sunk to 80 ft and drifts opened on the bottom (1943). This failed to disclose additional reserves. It was mentioned as having been one of the three producers in Québec in 1945.

Pike Lake Mine, south half of Lot 16, south half of Lot 17, 9th Concession, Burgess Township, Lanark County, Ontario. The mine was about 1 km southwest of Stanleyville and 14.5 km from Perth. It was first worked by the Lake Girard Mica System, and was later owned by: Messrs. T. J. Watters and M. A. Allen, of Ottawa, in 1895; M. A. Allen and the Mica Manufacturing Company, in 1900 (1901); Messrs. D. Farry, of Ottawa, and P. C. McPharland, of Micaville, in 1902 (1903). It was said to be the oldest mica mine in Ontario, and to have been first worked in 1863 (1901). Cirkel reported that it and the Martha Mine were under water in 1905.

Pink Lake Mine, Lot 14, 6th Range West, Hull Township, Gatineau County, Québec, and now in Gatineau Park. The property was developed by Pink Lake Mica Mines in 1945 (1946), and worked in 1946 (1947).

Poirier Property, Hull Township, Gatineau County, Québec. Alélard Poirier, of Wilson's Corners, was listed intermittently as a working owner/operator from 1938 to 1946 (1939-1947). A. and C. Poirier were mentioned as producers in 1951-1952 (Canada, Mines Branch, 1952-1953).

Poirier and McDougall Properties, Bouchette and Aumont Townships, Gatineau County, Québec. J. H. Poirier and Laughlan McDougall, of Maniwaki, were reported as owners/operators from 1938 to 1941 (1939-1942). Work was reported in 1938-1939. It is to be noted that no reference was found to Aumont Township in the Natural Resources Canada, Geomatics Canada, database.

Poulin Property, Portland East Township, Papineau County, Québec. Joseph Poulin, of Saint-Lambert, Chambly County, was listed as an owner/operator in 1940 (1941).

Poulin and Holmes Property, Hull Township, Gatineau County, Québec. Ernest Poulin, of Cantley was listed as the owner/operator in 1924 (1925). He and Thomas Holmes, also of Cantley, were listed from 1925 to 1936 (1926-1937). Production was not mentioned.

- Poupore Mine, west half of Lot 1, 1st Range, Portland East Township, Papineau County, Québec. In 1894, it was reported that Mr. J. W. Poupore had mined three tons of mica in 1893 and that good crystals had been obtained.
- Powell Mine, south half Lot 13, 15th Range, Hull Township, Gatineau County, Québec. The mine was reported to have been worked by 10 men in 1899 (1900).
- Powell and Clemow Mine, Lot 12, 15th Range, Hull Township, Gatineau County, Québec. This was reportedly an old phosphate mine which was being worked by Messrs. Powell and Clemow, for mica, in 1898 (1899).
- Powers Mine, Lot 7, 11th Concession, North Burgess Township, Lanark County, Ontario. Fred Powers was reported to have operated this property in 1950 and to have produced about 134 tons of scrap mica. The pit was then 15 ft square and 15 ft deep (1952). The property was reported to have been operated by F. J. Powers, of Stanleyville, in 1951-1952 (Canada, Mines Branch, 1952-1953). The mica was phlogopite.
- Prestley Mine, Lot 12, 6th Range, Cawood Township, Pontiac County, Québec. A small quantity of mica was reported to have been mined by a Mr. Watters and six men on this property in 1898 (1899).
- Pritchard and Brook (Property) Mine, Lot 18, 6th Range, Cawood Township, Pontiac County, Québec. The mine was first reported in 1899 (1900), when it was reported as being operated by A. Pritchard and Brook, with eight men.
- Pritchard and Sparks Mine on the north side of Lac Lachapelle, and about 2 km northwest of Lac-Sainte-Marie, Québec. It was worked from 1904 to 1909, when A. Pritchard, of Kazabazua, was listed as the producer (1910). Sabina (1987) mentioned that it was on private property, but did not identify the owner at that time.
- Prud'homme (and Sabourin) Property, Templeton Township, Papineau County, Québec. Oscar Prud'homme and Valmore Sabourin, of Perkins Mills, were listed as working owners/operators from 1940 to 1941 (1941-1942). Oscar Prud'homme was listed as such intermittently from 1942 to 1945 (1943-1946).
- Pullan Mine, west half of Lot 15 and south half of Lot 16, 19th Range, Templeton Township, Papineau County, Québec. This was reported to have been a small operation in 1894.
- Purdy Mine, 37 Claims (S. 35,974, 37,975, and 36,095 (the original staking) and 36,120 to 36,134, 36,137, 36,154, 36,195 to 36,198 and 36,215 to 36,220), mostly in the 2nd and 3rd Concessions of the southwestern part of Mattawan Township, District of Nipissing, Ontario. The Purdy Mine was on Lots 6 and 7, 2nd Concession, Mattawan Township (1958), about 5 km north of Eau Claire (1947), and also between Kearney and Bouillon Lakes. A second group of seven Claims, 36,221 to 36,224 and 36,286 to 36,288, was to the northwest and extended across the Mattawan-Olrig boundary. These were also about 5 km north of Eau Claire. The discovery was made in late 1941 by Justin Purdy when large sheets of white mica were noticed in a pegmatite dike. Three main dikes, with lengths up to 400 ft and widths up to 20 ft were exploited on the side and top of a hill. These pits, known as the *Purdy Mine*, were operated in 1941-1942. When Justin Purdy died in 1942, his parents, Mr. and Mrs. George Purdy, became the owners. The property was then sold to the Inspiration Mining and Development Company and was operated through a subsidiary, Purdy Mica Mines. Another occurrence, the *Croteau Mine*, not mined in 1943, was on Claim, S. 36,221, which had been staked by the Croteau brothers

for the company. It was 700 m to the northeast. The mica occurred in books or crystals in pegmatite dikes which cut across hornblende-garnet gneisses. The mica was transported to a trimming plant at Mattawa. Twenty were employed (1944). Mining was from six pits in 1944, when 642 tons of muscovite mica was produced (1947). Further mining, of 106 tons of muscovite, took place in 1945 (1948) with the mica being shipped to the company's processing plant at North Bay. In 1949, it was reported that James J. Kenney, of Noranda, Québec, had obtained a lease on the property and had performed 150 ft of surface trenching (1951). In 1950, the property was operated by the North Bay Mica Company, which was incorporated that year, and which had been formerly known as Northern Mica (1952). In 1951, 263 tons of crude mica was mined from *Pits 2, 3, and 3N*. The product was trucked to North Bay (1953). In 1953, it was reported that 161 tons of mica had been produced from the mining of 5934 tons of rock from *Pits 1, 3, and 8* (1955). By 1955-1956, the mine was operated by the Mid-Bay Mica Syndicate, of North Bay. Some mica was mined from the pits, with 55 tons having been processed at the sorting plant in North Bay (1957). In 1956, when lateral development underground, from the adit, was suspended, the adit had attained a length 750 ft. In that year both *Pits 8 and 9* were mined, with the former being reported to have been 188 ft long, from eight to 10 ft wide, and 50 ft deep on a 70 degrees slope (1958). The mine became famous for the size of its crystals. One huge muscovite crystal, measured five ft by eight ft, discovered by Justin Purdy, was extracted in 1943, and became the source of spectacular sheets which are now displayed in the Royal Ontario Museum, Toronto, and in the lobby of the Canada Centre for Mineral and Energy Technology (CANMET) Building, at 555 Booth Street, in Ottawa. Between 1942 and 1945, production was 1 968 804 pounds (Harding, 1946). See also the listings for the Croteau and Hansen Mines, above.

Quilty (Jamieson) Mine, Lot 2, 4th Concession, Brougham Township, Renfrew County, Ontario. The mine, near the west end of Limestone Lake, was reached by a wagon road about 1.2 km long from the Calabogie-Black Donald Road. A vein of phlogopite was reported to have occurred in white crystalline limestone. The property was last worked by P. Quilty in 1931, and sold to J. A. Jamieson in 1943 (Satterly, 1945).

Rainville (Dugas) Mine, Templeton Township, Papineau County, Québec The mine, about 2 km southwest of Perkins Mills, was worked for apatite in 1875, and for mica between 1891 and 1906, and again in 1918 and 1937. It was reported as having been one of the main producers in 1937 (1938). Scrap mica was produced from its dumps in 1946 (1947). Sabina reported (1987) that the property then belonged to A. Rainville.

Raymond's Mine, south part of Lot 22, 11th Concession, Loughborough Township, Frontenac County, Ontario. About 2 km north of Stoness Corners, it was reported to have been operated for the first time in 1902 by Messrs. Stevens, Franklin and Kent Bros., of Kingston (1903).

Reed Property, Lot 25, 2nd Range, Northfield Township, Gatineau County, Québec. Opened by George B. Reed, of Gracefield, in 1899, it was a small operation (1900).

Reetom Syndicate (Manley) Property, Claims S. 36,355 to 36,358 and 36, 365, Lots 1 and 2, Concession C, southeastern part of Orlig Township, District of Nipissing, Ontario. About 1.5 km west of the Purdy Mine (refer to the listing above), the claims, on pegmatites, were reported to have been staked in 1942 and acquired by W. Manley for the Reetom

- Syndicate (Harding, 1946).
- Regimbal Property, Robertson Township, Labelle County, Québec. Elphège Regimbal, of Mont-Laurier, was reported as the owner/operator in 1925 (1926).
- Reid Occurrence, Lot 12, 4th Concession, Oso Township, Frontenac County, Ontario. The occurrence was reported to have been about 80 m north of Ungava Lake and on the farm of Fred Reid. The biotite was in altered Grenville sediments (Harding, 1951).
- Renaud Property, Hull Township, Gatineau County, Québec. E. and J. Renaud, of Perkins, were mentioned as producers in 1951 (Canada, Mines Branch, 1952).
- Rheaume Lake Mine, Lot 8, Gore of Templeton Township, Papineau County, Québec. Phlogopite mica was reported to have occurred in a pyroxene vein cutting gneiss. Cirkel (1905) noted that fine mica crystals were found in a calcite matrix which lined cavities. The property was reported as being newly-opened, in 1905, with drilling being done by hand.
- Richardson Mine, Lot 13, west half of Lot 14, 8th Concession, Loughborough Township, Frontenac County, Ontario, in the Sydenham area. Majormica Mines was incorporated in late 1942 and immediately began cleaning out the old pits on this property (1946). In 1943 a mill building, trimming shop, and a bunk-house were built, while a compressor was installed and the property explored by trenching (1944). Later that year the company was reorganized as Micaspas Industries. Eight were employed at the mine and five at the trimming shop. Five tons of amber mica was reported to have been mined in 1943 (1944). In 1944, a grinding-mill was completed and 1774 pounds of mica shipped (1947).
- Richardson Property, Lot 1, 11th Concession, Loughborough Township, Frontenac County, Ontario. It was reported that this property was being developed by H. Richardson, of Kingston, in 1909. By 1910 there were three pits, 35, 45 and 60 ft deep, respectively. In the deepest, drifts had been run out on the vein, about 20 ft, on either side (1911).
- Rideau Lake Mica Prospecting Syndicate, Lots 2 and 3, 5th Concession, North Burgess Township, Lanark County, Ontario. In 1943 the company was reported to have cleaned out old pits on this property, from which amber mica had once been mined. Some equipment was installed (1944).
- Roberts Property, Lot 18, 11th Concession, Loughborough Township, Frontenac County, Ontario. The property was reported to have been about 15 km from Sydenham. Two veins were opened, with one excavation, 40 ft wide, having been sunk to 100 ft. Cirkel (1905), reported that it was then being worked on a small scale. P. H. Roberts, of Sydenham, was reported as a shipper in 1924 (1926).
- Robertson Mine, Lot 6, 10th Range, Hull Township, Gatineau County, Québec. The mine was reported to have been operated by George Robertson (1892).
- Rock Lake Mine, Lots 7 to 10, 13th Concession, Storrington Township, Frontenac County, Ontario. The Rock Lake Mica Mining Company was listed as a shipper in 1925 (1926). The property was next operated by the Storrington Mica Mining Syndicate in 1941 (1946). The pit was reported to have been 100 ft long and 30 ft deep.
- Rogers Property, Lot 14, 3rd Concession, Bastard Township, Leeds County, Ontario. W. A. Rogers, of Portland, was listed as a shipper in 1924 (1926).
- Rousseau Property, Harrington Township, Papineau County, Québec. Côme Rousseau, of Saint-Rémi-d'Amherst, was listed as a working owner/operator in 1945 (1946). No work was

noted in 1946 (1947).

Rowan's Mine, Lot 9, 14th Concession, Storrington Township, Ontario. The mine, 19 km east of Stoness Corners, was reported to have been operated under lease by H. H. Gildersleeve, of Kingston (1901). It is to be noted that no reference to Storrington Township was found in the Natural Resources Canada, Geomatics Canada, database of geographical names.

Ruby Mine, Lots 5 and 6, 9th Range and Lot 1, 10th Range, Portland West Township, Papineau County, Québec. Mr. W. McIntosh was reported to have worked this property with several men in 1892.

Ryan Mine, Lot 7, 4th Range, Aylwin Township, Gatineau County, Québec (1892).

Saint-Amour Property, Villeneuve Township, Papineau County, Québec. Orphilia Saint-Amour, of Notre-Dame-de-la-Salette, was listed as a working owner/operator in 1942 (1943).

Saint-Antoine (Morin) Mine, Lot 15, Range D, Wright Township, Gatineau County, Québec. Located about 13 km from Gracefield Station on the Gatineau Valley Railway (1897) (later known as the Ottawa, Northern and Western Railway), the mine was reported to have been situated on a hill about 50 m high. The deposit, then considered to have been an important one, was mined first by Mr. M. C. Guay, in 1891 with seven or eight men, (1892). The work was suspended, however, until the mine was acquired by Mr. C. Gay, of Gracefield, in 1898. He renamed it the Saint-Antoine Mine. Thirty-three persons were employed and a horse-powered derrick used to raise the ore from the pit, then 47 ft deep (1899). By the following year, it was leased to the W. H. Sill Mica Company (also reported as the Sills Mica Company). Fifty men were employed and the mine was being worked by day and by night (1900). With the pit 100 ft deep by 1905, the mine was considered to have been one of the best producers in the Ottawa Valley (Cirkel, 1905).

Saint-Joseph Mine, Lot 23, 15th Range, Hull Township, Gatineau County Québec. The mine was reported to have been operated in 1899 by Henry Flynn, of Maniwaki. The pit was then 30 ft deep with a horse-powered derrick being used to lift the ore. The mica was sent to Cascades Station (1900).

Saint Lawrence Mining Corporation Mine, Grenville Township, Argenteuil County, Québec, at Kilmar. It was reported that a special grade of phlogopite, used for the manufacture of airplane spark-plugs, was mined at this property in 1941-1943 (1942-1944). Work was not reported in 1944-1945 (1945-1946).

Sabourin Property, Templeton Township, Papineau County, Québec. The property was reported to have been about 2 km southwest of Perkins Mills. Valmore Sabourin, of Perkins, was listed intermittently as a working owner/operator from 1942 to 1945 (1943-1946). Sabina reported (1987) that the workings were then on the farm of A. Sabourin.

Schlock Property, Thorne Township, Pontiac County, Québec. Ernest Schlock, of Otter Lake, was reported as the owner/operator of a property from 1925 to 1926 (1926-1927).

Scott Mine, Lots 14 and 15 north, 9th Range, Hull Township, Gatineau County, Québec. The mine, on the west side of the Gatineau River, was reported to have been operated by G. Robertson and six men in 1892. It seems that it was operated only during that year. In addition to mica, red apatite and a bright red jasper were found (Cirkel, 1905).

Scott Mine, Lot 7, 9th Concession, Bedford Township, Frontenac County, Ontario. This mine was reported to have been about 1 km from the west end of Devil Lake and on the south shore. The deposit was discovered in 1913 by Messrs. Scott Bros., of Bedford Mills and

was sold later that year to Messrs. Stoness, Anglin, and Gilbert, of Kingston (later known as the Anglin-Stoness-Gilbert Mica Company). Development began in 1913 (1914) and it produced throughout 1914 (1915). In 1915 it was taken over by the Anglin Mica Mining Company and operated for three months - when it was closed and the workforce reportedly transferred to the Tett lease (1916) (see the listings below).

Scriven and Whyte Property, north part of Lot 6, 8th Concession, Loughborough Township, Frontenac County, Ontario. Mining started about 1909, with a shaft being sunk to 50 ft by 1910 (1911). Production was reported in 1914 (1915).

Sergeant and Kilby Property, Wakefield Township, Gatineau County, Québec. Fred Sergeant was reported to have been the owner/operator of this property from 1939 to 1940 (1940-1941). Work was reported in both years..

Sergeant and Poirier Property, Hull Township, Gatineau County, Québec. Fred Sergeant and Adelard Poirier, of Wilson's Corners, were listed as owners operators in 1937 (1938) with work being reported.

Seybold (Moore) Mine, Lot 18, 2nd Range, Wakefield Township, Gatineau County, Québec. About 4 km north of Wilson's Corners, it was opened for apatite in 1880 by Isaac Moore, of Ottawa. Subsequently, it was worked by: Messrs. Seybold and Gibson, in 1889; a Mr. McLean, of Ottawa, in 1903; and by Messrs. Holland and Moore, in 1907. Sabina reported (1987) that attractive blue apatite crystals could be found. Cirkel (1905) noted that the dark mica was associated with calcite.

Shannahan Mine, Lot 1, 8th Concession, Adamston Township, Renfrew County, Ontario. On the land of Patrick Shannahan, it was reported to have been worked from a small cut about 1922 (Satterly, 1945). Books of muscovite occurred in a muscovite-rich pegmatite cutting a garnet-biotite schist.

Sheppard Mine, see the listing for the Maly Mine, above.

Sills Property, Ontario. A. C. Sills, of Sydenham, was listed as a shipper in 1924 (1926).

Silver Property, Lanark County, Ontario. J. W. Silver, of Perth Road, was listed as a shipper in 1927 (1929).

Silver Queen (Smith) Mine, Lot 13, 5th Concession, North Burgess Township, Lanark County, Ontario. The mine was reported to have been about 23 km southwest of Perth. When owned by the Dominion Development and Improvement Company it was originally mined for apatite. It was reportedly operated in 1906 with a workforce of 20 men (1907). In 1909 it was mentioned that Edward Smith was the owner, and that the pit was 80 ft deep, on an average dip of 45 degrees (1909). A considerable tonnage of apatite was also produced. The mine was closed about 1908 because of legal difficulties concerning the title (1910). By 1910, however, these had been resolved and it was reopened. Another pit was dug and some stoping done (1911). Mining continued until 1911 (1912). In 1919, the Dominion Improvement and Development Company reopened it as a phosphate mine. Sixteen men were employed to sort the dumps and to drive an adit into the side of the hill near the open cut -which was reportedly 60 ft long and 120 ft deep (1920).

Smith Mine, Lot 13, 7th Concession, North Burgess Township, Lanark County, Ontario. Directly south of the Hanlan Mine, it was opened by Terry Smith in 1906 (1907). Some mica was mined in 1908, with the pit being 20 ft deep (1908).

Smith Mine, Lot 4, 2nd Concession, North Burgess Township, Lanark County, Ontario. Damon

- Smith, of Perth, and later Brockville, was listed as a shipper from 1926 to 1928 (1927-1930).
- Smith Mines (2), Lot 9, 7th Concession and east half of Lot 13, 5th Concession, North Burgess Township, Lanark County, Ontario. There were reported to have been two pits on the first property. It was operated by Edward Smith, of Prescott (1906).
- William Smith Mine, Lot 20, 5th Range, Templeton Township, Papineau County, Québec (1899).
- Smith and Lacy Mine, Township of Effingham, Addington County (later Lennox and Addington), Ontario (1892).
- Smith and O'Connor Mine, Lot 3, 5th Concession, North Burgess Township, Lanark County, Ontario. The deposit was worked in 1940 by W. J. O'Connor, of Lombardy, and L. G. Smith, of Prescott (1942).
- Smith and O'Connor Mine, Lot 1, 3rd Concession, South Burgess Township, Leeds County, Ontario. The mine was reported to have been worked by L. G. Smith and W. J. O'Connor, from 1941 to 1942 (1946). Amber mica was mined from old pits leased from A. G. Martin, of Wilson's Corners, Québec. See the listings under Martin, above.
- Smythe Mine, Lot 6, 13th Concession, Bedford Township, Frontenac County, Ontario. The mine was reported to have been owned by Dr. E. H. Smythe, of Kingston, and operated by Jno. N. Glidden. Mining began in 1899, with two shafts (1901).
- Sparks Property, Hincks Township, Gatineau County, Québec. William J. Sparks, of Amos, and later Stevenson Place, and then Ottawa, Ontario, was reported as the owner/operator of this property from 1931 to 1941 (1932-1942). Work on it was reported in 1936 and 1940. W. M. E. Sparks, of Woodroffe, was listed next as a working owner in 1943 (1944). No work was reported in 1944-1946 (1945-1947).
- Split Mica Mining Syndicate, 7th Concession, Loughborough Township, Frontenac County, Ontario. The deposit was reported to have been worked in 1940 (1942).
- Spratt Property, Hincks Township, Gatineau County, Québec. R. E. Spratt, of Ottawa, was reported as an owner/operator from 1938 to 1941 (1939-1942), with work reported in 1938.
- Star Hill Mica Syndicate Property, Ontario. The syndicate, from Perth, was listed as a shipper in 1924 (1926).
- Sterling Mine, Lot 16, 9th Concession of Loughborough Township, Frontenac County, Ontario. About 11 km northeast of Sydenham, it was reported to have been owned in 1892 by C. I. Sterling, of Kingston. It was first operated in 1890 (1892).
- Stevenson Mine, Lot 10, 8th Range, Templeton Township, Papineau County, Québec. About 16 km from East Templeton, the mine was reported to have been worked by 10 men in 1894 (1895). The deposit was then reworked by the Templeton Mica Mining Company, Joseph Fortin and Company, of Hull, in 1899 (1900), and J. E. Asquith, of Ottawa, in 1900 (Cirkel, 1905).
- Stewart Mine, Lot 29, 11th Concession, Elzevir Township, Hastings County, Ontario. This was a very old former deposit that was reported to have been mined "many years ago" by D. E. K. Stewart, of Madoc. A pegmatite dyke of tourmaline, quartz, feldspar, and muscovite was reported to have cut a garnetiferous mica schist (Thomson, 1943).
- Stoness (Buck Lake) Mine, Lot 4, 12th Concession, Bedford Township, Frontenac County, Ontario. The mine was at the northeast end of Buck Lake, about 15 km from Stoness

Corners. Opened about 1885, and leased to Webster and Company, it was operated from two shafts (1901). J. M. Stoness was the owner of the property and operated it from 1901. A 425-foot inclined shaft provided access to the underground workings (42 degrees on surface flattening to 26 degrees at the bottom) (1902). By 1902 a lack of fuel to power the drills and the pumps resulted in the flooding of the lower levels (1903). Exceptionally large crystals were reported. When Cirkel reported on it in 1905 he noted that drifts had been driven on the 135 and 201 ft levels. Two shafts, 30 and 35 ft deep, respectively, had also been sunk on the adjoining property to the west.

Stoness (Stoness-Kent) Mine, Lot 4, 13th Concession, Bedford Township, Frontenac County, Ontario. Twelve to 18 workers were reported to have produced 34 tons of mica from this mine in 1898 (1899). It was operated by Kent Bros., of Kingston, in 1903 (1904). The Kent Brothers and the Estate of J. M. Stoness were reported as producers until 1927 (1929), but it was mentioned that the mine did not operate in 1927. This may have been the same mine as reported above, but it is noted that the lot was reported as being on the adjacent concession.

Stoness (Timmerman) Mine, Lot 13, 4th Concession, Oso Township, Frontenac County, Ontario. The mine was about 0.8 km west of the Crow Lake Road and on the farm of Mrs. Mary Ann Timmerman (Harding, 1951). Two pits were reported to have been dug in the 1915-1918 period by J. Stoness. Both were 15 ft deep, with one being 10 ft by 10 ft and the second 20 ft by five ft. Both were dug in veins of pink calcite containing mica. Other minerals reported were apatite, phlogopite mica, pyrite, and pyroxene (Harding, 1951).

Storrington Mica Mining Syndicate, Storrington Township, Frontenac County, Ontario. The syndicate was listed from 1942 (1946).

Sucker Lake Prospect, Lot 3, 7th Concession, Oso Township, Frontenac County, Ontario. The prospect was reported to have been about 0.4 km west of Sucker Lake and 15 m north of the Canadian Pacific Railway. A shallow prospect pit, with mica visible, had been dug in crystalline limestone (Harding, 1951).

Sullivan and Fahey Property, South Crosby Township, Leeds County, Ontario. This company, from Elgin, was reported as a producer in 1919 (1920).

Sullivan and Rogers Property, Bastard Township, Leeds County, Ontario. The firm, from Elgin, was reported as a shipper in 1923 (1924).

Sydenham Mine. The mine was reported to have been about 13 km from Sydenham, Ontario. It was opened about 1885 by Lacy and Smith, and acquired by Messrs. Webster and Company, of Kingston, in 1892 (1893).

Sydenham Company Mine, Township of Effingham, County of Addington (later Lennox and Addington), Ontario. The mine, near Sydenham Lake, was reported to have been owned by the Sydenham Mining and Mica Company (1891).

Sydenham Mica and Phosphate Mining Company Mine, Lot 7, 8th Concession, Loughborough Township, Frontenac County, Ontario. Mining was reported to have begun in 1916 (1917) and ended in September, 1917, by which time the shaft had been sunk to 50 ft (1918).

Sydenham Mining Company, see the listing for the Lacey Mine, above.

Sydenham Mining Company (Property) Mine, Hull Township, Gatineau County, Québec. In the Cantley area, this was reportedly an old property close to the Blackburn Mine. It was

- reported to have been worked by J. J. Egan for the company in 1948 (Canada, 1949).
Sylvanite Gold Mines Property, Portland West Township, Papineau County, Québec. The company, of Kirkland Lake, Ontario, was listed as a working owner/operator in 1942 (1943).
- Taggart Mine, Lot 30, 6th Concession, Bedford Township, Frontenac County, Ontario. On the south side of Mud Bay on the west shore of Bob's Lake, the deposit was discovered in 1898 by Thomas Taggart, who opened several shallow pits (1914). It was then owned and operated by Messrs. Kent Bros. and J. M. Stoness, of Kingston, from 1903. There were three pits: *Number 1*, or *Taggart*; *Number 2*, or *King*, and, *Number 3*, or *Klondike*. These ranged in depth from 55 to 70 ft (1914). The mine was reported to have produced for short periods in 1914, 1915, and 1916 (1915-1917). In 1919, two pits, the *Taggart* and the *Jones* were worked. The *Jones Pit* was 75 ft long and 100 ft deep, while the *Taggart* was 90 ft deep, 60 ft long, and five ft wide. The mica was the amber variety (1921). The company was reported as a shipper until 1927, but it was noted that the mine did not operate in that year (1929).
- Tarrad and Trépanier Property, Portland West Township, Papineau County, Québec. From Ottawa, these persons were reported as owners/operators in 1939 (1940).
- Taylor and McVeity Mine, Lot 22, 4th Range, Templeton Township, Papineau County, Québec. This was reported, in 1898, to have been an old phosphate mine which had been abandoned for a long time and which had been reopened that year for mica (1899).
- Templeton Township Occurrence, Lot 7, 10th Range, Templeton Township, Papineau County, Québec (1892).
- Tett Mine, Lot 4, 8th Concession, Bedford Township, Frontenac County, Ontario. Owned by Tett Brothers, of Bedford Mills, the mine was operated from 1899 to 1908. The deepest pit was reported to have been 95 ft (in Harding, 1951). The mica occurred along the contact between a gneiss and pyroxene. Harding reported that the pits were filled with water.
- Tett Mine, Lot 24, 8th Concession, Bedford Township, Frontenac County, Ontario. The property of J. P. Tett and company of Bedford Mills, Ontario, it was reported to have been worked under lease by Steve Bennett, of Westport, in 1920 (1921).
- Tett Brothers Mine, Lot 4, 10th Concession, Bedford Township, Frontenac County, Ontario. In 1913 this mine was reported to have been formerly a large and steady producer of high-grade mica. In 1913, it was operated under lease by Messrs. S. C. and W. E. Ennis, of Kingston (1914). In 1914, it was operated by Wm. E. and S. Silas and C. Ennis (1915).
- Tett's Mica Mine, Lot 2, 8th Concession, Bedford Township, Frontenac County, Ontario. The mine was on the north side of Birch Lake, 19 km northeast of Sydenham. It was reported that it was once the largest producer of mica in Ontario (1901).
- Thirty Island Lake Mica Company Properties, Frontenac and Lanark Counties, Ontario. The mine was operated by S. H. Orser, of Verona, from 1936 to 1937 (1938-1939).
- Thirty Island Lake Mine, see the listing for the Kingston Mica Mining Company, above.
- Tidewater Minerals and Mines Company Properties, rear half of Lot 1, 3rd Concession and Lot 10, 5th Concession, North Burgess Township, Lanark County, Ontario. The company, from Montréal, was listed in 1939 (1941).
- Toronto Mica and Manufacturing Company, Lots 1, 2, and 3, Range A and Lot 19, Range B, Northfield Township, Gatineau County, Québec. Opened in 1896 by Fred Desjardins, the

- mine was reported to have been operated by a Mr. Brazil, of Toronto, in 1898. Six or seven men were reported to have been working in pits 30 ft deep (1899).
- Toutloff Property, Joliette Township, Joliette County, Québec. Frank Toutloff, of Pointe-Gatineau, was listed as an owner/operated from 1937 to 1942 (1938-1943). Work was reported in 1937 and 1940-1942. See also the listings under Feldspar.
- Tremblay Property, Québec. André Tremblay, of Saint-Pierre-de-Wakefield, was listed in 1935 as having worked on the property (1936).
- Trilly Property, Ontario. James Trilly, of Perth, was listed in 1939 (1941).
- Trousdale Property, Lot 7, 9th Concession, Loughborough Township, Frontenac County, Ontario. Belonging to J. W. Trousdale, of Sydenham, this property had been worked on a small scale when Cirkel reported it in 1905. P. J. Trousdale, of Sydenham, was reported intermittently as a shipper from 1923 to 1927 (1924-1929).
- Trousdale Property, Lot 8, 10th Concession, Loughborough Township, Frontenac County, Ontario. It was close to the above-mentioned property. A 100-ft shaft had been sunk (Cirkel, 1905).
- J. W. Trousdale, Gould Lake, Ontario. He was reported to have not produced in 1914 (1915).
- Trousdale and Nellis Property, Ontario. J. Trousdale and F. Nellis, of Sydenham, were listed as shippers in 1926 (1927).
- Trudeau Property, Hull Township, Gatineau County, Québec. William Trudeau, of Old Chelsea, was reported as having worked on his property from 1935 to 1939 (1936-1940). Victor Trudeau was listed next in 1940 (1941). The Trudeau Mineral Exploration Partnership was mentioned as the operator in 1946 (1947).
- Trudeau Property, Wakefield Township, Gatineau County, Québec. James Trudeau, of Old Chelsea, was listed as an owner in 1946 (1947).
- Truesdale Mine, Lot 8, 3rd Concession of Loughborough Township, Frontenac County, Ontario (1892).
- Tully Mine, Lot 9, 5th Concession, Burgess Township, Lanark County, Ontario. It was reported that this mine was being developed by Edward Smith in 1909, with pits as deep as 40 ft having been sunk (1910). In 1919 the Dominion Improvement and Development Company owned it and reportedly planned to reopen it as a phosphate mine (1920).
- Tully Mine, Lot 10, 6th Concession, North Burgess Township, Lanark County, Ontario. This mine was operated by James Tully, of Perth, in 1941 (1946).
- Tully Property, Lot 1, 7th Concession, North Burgess Township, Lanark County, Ontario. Also the property of James Tully, of Perth, it was listed in 1942 (1946).
- Twin-Valley Prospecting Syndicate Property, Huddersfield Township, Pontiac County, Québec. The group was listed as a working owner/operator in 1944 (1945) but no work was reported in 1945-1946 (1946-1947).
- Unnamed Mine, Lot 7, 22nd Concession, Cardiff Township, Haliburton County, Ontario. The mine was reported to have been on the south side of the Canadian National Railway line and about 40 m from the mile-board for Mile 18. The pit was about 20 ft in diameter and 18 ft deep. Apatite, calcite, and dark mica were mentioned. It was noted that very large books of mica, up to 60 by 75 cm had been reported as coming from this pit. It was probably mined before 1910 (Hewitt, 1959).
- Unnamed Mine, Lots 12 and 13, Range B, Northfield Township, Gatineau County, Québec. In

- 1897 this mine was reported to have been worked for eight years (1897).
- Unnamed Mine, Lot 14, Range Road West, Maniwaki, Québec. On the Indian Reserve, this mine was reported to have been opened in 1898 by H. Flynn and seven men (1899). In 1899 it was operated by Mathias Joanis, of Maniwaki (1900).
- Unnamed Mine, Lot 23, 1st Range, Derry Township, Papineau County, Québec. It was reported that the property was prospected in 1897 by Wm. Wallingford for a Mr. McTierney. A small quantity was mentioned as having been mined (1899).
- Unnamed Mines (two), Lot 21, 9th Range and Lot 19, 8th Range, Templeton Township, Papineau County, Québec. These were reported to have been worked by Messrs. Jurkowski and Company in 1899 (1900).
- Unnamed Mine, Lot 14, 9th Range, Templeton Township, Papineau County, Québec. Cirkel (1905) noted that this property had been worked intermittently since 1894 and that there were several large excavations in the veins. Large mica crystals in calcite, and apatite, were reported.
- Unnamed Mine, west half of Lot 15, 10th Range, Templeton Township, Papineau County, Québec. The mine was reported to have been worked in 1893 (Cirkel, 1905).
- Unnamed Mine, Lot 8, 12th Range, Templeton Township, Papineau County, Québec. White (1997) refers to a mention of mining on this lot. Outcrops were also reported on Lot 3, 13th Range.
- Unnamed Mine, North half of Lot 19, 6th Range, Hull Township, Gatineau County, Québec. Worked in 1899 and 1900 (Cirkel, 1905), the mine was on the west side of the Gatineau River.
- Unnamed Mines, Lots 15 and 17, 9th Range, Hull Township, Gatineau County, Québec. Also on the west side of the Gatineau River, these were reported to have been mined (Cirkel, 1905). No further details were given.
- Unnamed Mine, Lot 14, 11th Range, Hull Township, Gatineau County, Québec. Again on the west side of the Gatineau River, Cirkel (1905) reported that the property had been mined some years previously for both mica and apatite. Once again, no details were given.
- Unnamed Mine, Lot 14, 14th Range, Hull Township, Gatineau County, Québec. The mine was reported to have been about 5 km from Kirks Ferry Station on the Canadian Pacific Railway. Sinkankis (1959) mentioned that much pale green amazonite had come from this property.
- Unnamed Mine, Lot 14, 2nd Range, Wakefield Township, Gatineau County, Québec. Cirkel (1905) reported that several pits had been dug on this property along a contact between pyroxene and gneiss. Both the pyroxene and the mica were reported as being broken up.
- Unnamed Mine, Lot 15, 2nd Range, Wakefield Township, Gatineau County, Québec. This was an old phosphate property, which was reportedly mined between 1897 and 1900 (Cirkel, 1905).
- Unnamed Mine, Lot 22, 2nd Range, Hincks Township, Gatineau County, Québec. The mine was reported to be located about 5 km from Aylwin Station on the Ottawa, Northern and Western Railway. Cirkel (1905) reported that mica had been mined from a pit about 50 ft long, 12 ft wide, and 30 ft deep.
- Valenti Property, Viel Township, Labelle County, Québec. The property was about 21 km northeast of L'Ascension. Work on it began in 1937 (1938). Production was reported in

1938 (1939).

Vance Mine, Lot 23, 3rd Concession, Herschel Township, Hastings County, Ontario. The mine was reported to have been "a few hundred ft north of a small lake". Thomson (1943) reported that the property was then owned by Sam Vance, of Baptiste. The pit, presumably in a pegmatite cutting crystalline limestone, was reported to have exposed crystals of calcite, pyroxene, and phlogopite.

Vavasour (also known as the Blackburn, Gemmill, Nellis, or Cantley) Mine, Lots 10 and 11, 12th Range, Hull Township, Gatineau County, Québec. On the east side of the Gatineau River, and about 3 km northwest of Cantley, it was first worked, from 1878 to 1884, by David Gour, of Cantley. Subsequent operators included: Messrs. R. Blackburn and T. McLaren, up to 1888; the East Templeton District Phosphate Mining Syndicate, from 1888 to 1895; Messrs. Nellis and Gemmill, about 1895; the Vavasour Mining Association, about 1898 to 1914 (1910, 1915); and Blackburn Bothers Limited, of Ottawa, from 1914 onwards. From 1929 to 1934, the Estate of F. T. Nellis was listed as an owner/operator (1930-1936)-presumably, of this property. In 1899, it was reported that two cable derricks with electric lighting, as well as 85 men, were employed in the mine (1900). The workings, in 1905, consisted of a pit 200 ft long, 100 ft wide, and 60 ft deep, as well as a shaft being sunk to 280 ft. There were extensive underground workings. It was acquired by the Blackburn Brothers in 1936, and reopened (1937). The property consisted of about 900 acres in the vicinity of McGregor Lake. From about 1940 onwards, the mine was the principal mica producer in the Province of Québec. It was known successively as the Vavasour Mine, from 1941-1948, 1951, and the Cantley Mine, in 1947-1950, in Québec, and as the Nellis Mine to the federal government (Canada, 1947-1948). In 1943, it was worked on a two-shift basis and the steam hoist replaced by an electric hoist (1944). It was worked for short periods in 1949-1953 (1950-1955). Often the leading producer in the district, producing more than half of the output in 1954 (1956), it was worked until at least 1958 or 1959. Sabina remarked (1987) that its closing marked the end of mica mining in the Gatineau-Lièvre District. Large crystals were reported (1899), and it was noted that there were chain-like accumulations of mica in a matrix of soft green pyroxene, with calcite and phosphate (Cirkel, 1905). The mica was embedded in a calcite matrix along the contact between a pale green pyroxene and a reddish gneiss.

Vavasour Mining Association, Ottawa, Ontario. The association was listed as a Québec producer from 1909 to 1914 (1910, 1915).

Venosta Occurrence, Aylwin Township, Gatineau County, Québec. The occurrence was reported to have been about 1 km north of Venosta Station. It was mentioned that large sheets of muscovite had been obtained at this location (Cirkel, 1905).

Victoria Mine, south half of Lot 16, 10th Range, Templeton Township, Papineau County, Québec. The property was first reported to belong to Messrs. McLaurin and McLaren, of East Templeton, who began mining in 1899. The open cut was 200 ft long and 60 ft deep, with 15 people employed (Cirkel, 1905).

Victory Mines Property, Hull Township, Gatineau County, Québec. The company, of Ottawa, was listed as a working owner/operator in 1944 (1945). No work was reported in 1945-1946 (1946-1947).

Villeneuve (Ottawa) Mine, Lots 31 and 32, 1st Range, Villeneuve Township, Ottawa County

- (now Papineau County), Québec, 32 km north of Buckingham and about 5 km from the Lièvre River. First operated by W. A. Allan, in 1884, the property was sold to the Canadian Mica and Mining Company, which worked it from 1884 to 1888. Subsequently, it seems to have been owned by the British and Canadian Mica and Mining Company about 1890 (Obalski). It was then acquired by Mr. S. P. Franchot, who operated it intermittently from 1890 to 1898. The workings consisted of a tunnel driven into a hill along the strike of the vein, a pegmatite dike. In 1942, it was reported that it was worked by Orphila Saint-Amour (1943). Cirkel (1905) reported that the dimensions were: 70 ft long, 15 to 20 ft wide, and 10 ft high. Known for its large crystals of muscovite, the deposit was prominent because of the many other minerals found there. These included uranite, monazite, cerite, cleveite, pitchblende, tourmaline, garnet, beryl, and kaolin. It was once regarded as the most prominent white mica mine in the country (Cirkel, 1905).
- Wadell Mine, Monteagle Township, Hastings County, Ontario. On the Wadell Farm, about 15 km north of Bancroft, the mine was reported to have been operated by Orser and Wilson, of Bancroft, in 1924 (1926).
- Wakefield Mica Mine, Lots 11, 12, 13, SW Range on the Colonization Road, Abinger Township, and Lot 7, 5th Concession of Effingham Township, Lennox and Addington County, Ontario. The mine was reported to have been owned by Mr. T. J. Waters (1891).
- Wallingford Property, North Burgess Township, Lanark County, Ontario. The property was listed for W. A. Wallingford, of Gatineau Point (Pointe-Gatineau), Québec, in 1941-1942 (1946).
- Wallingford (Property) Mine, Derry Township, Papineau County, Québec.
Joseph N. Wallingford, of Ottawa, and later Glen Almond, Papineau County, was listed as the working owner/operator of this property from 1942 to 1944 (1943-1945). No work was reported in 1945-1946 (1946-1947).
- Wallingford Property, Hull Township, Gatineau County, Québec. Waldick Wallingford, of Pointe Gatineau, was listed as a working owner/operator from 1941 to 1946 (1942-1947).
- Wallingford Mine, southwest half of Lot 15, west half of Lot 16 and, and the south half of Lot 17, 7th (8th) Range, Templeton Township, Papineau County, Québec. The mine was about 3 km southwest of Perkins Mills. It was reported in 1894 to have been the most important mine in the district, with 25 men and steam machinery being used. The pit was then 100 ft deep (1895). In 1905, Cirkel reported that the property was worked about 1885 for apatite, and later for mica. The underground openings then consisted of pits 125 and 200 ft deep as well as a 125-ft shaft. The Wallingford Mica and Mining Company Limited was still reported as an owner/operator from 1909 to 1924 (1910-1925). It was famous for its samples of phlogopite, apatite, and calcite. Arthur Wallingford, of Pointe-Gatineau, was listed as an owner/operator in 1923 (1924). Joseph Wallingford, of Perkins Mills, was listed in 1924 (1925). The George and Charles Wallingford Company, of Ottawa, was listed from 1925 to 1934 (1926-1935), as were the Wallingford Brothers and the Jos. N. Wallingford Company (1932-1935). Only the Wallingford Brothers were listed in 1935 (1936), while Edward Wallingford, Jr. was mentioned as mining it from 1936 to 1937 (1937-1938), and Edward Wallingford in 1938-1948 (1939-1949). It was mentioned, intermittently, as being one of the principal producers in 1937-1943 (1938-1944). A small quantity of phlogopite was produced in 1944 (1945). Scrap mica was produced

intermittently from its dumps in 1946-1949 (1947-1950). It was worked again in 1951 (1952). From the many interests attached to the Wallingford name there must have been several different pits operated by different members of the family. The absence of precise descriptions in the reports adds confusion to attempting to sort out who ran which property and when!

Wallingford Mine, about 10 km northwest of Hull, Québec, in Gatineau Park. It was reported to have been worked by Wallingford Brothers for one year, 1905 (Sabina, 1987).

Wallingford (Property) Mine, Gore of Templeton Township, Papineau County, Québec. Edward Wallingford, Jr., of Perkins, was listed as the owner/operator of this property from 1937 to 1938 (1938-1939). E. Wallingford was mentioned as a producer in 1951-1952 (Canada, Mines Branch, 1952-1952), and was reported as having been the principal producer in 1954 (Canada, Mines Branch, 1955).

Wallingford Property, Gore of Templeton Township, Papineau County, Québec.

E. B. Wallingford, of Saint-Pierre-de-Wakefield and later Perkins, was listed as the working owner/operator of this property from 1937 to 1942 (1938-1943). Work was not noted in 1943 (1944).

Wallingford (Property) Mine, Gore of Templeton Township, Papineau County, Québec.

John H. Wallingford, of Perkins Mills, was listed as an owner/operator from 1940 to 1946 (1941-1947) with work being reported in 1940 and 1944.

Wallingford (Property) Mine, Templeton Township, Papineau County, Québec. W. A. and J. N. Wallingford were reported as the owners/operators from 1937 to 1938 (1938-1939).

Work was reported in both years.

Warfel Mine, Lot 5, 7th Concession, Bedford Township, Frontenac County, Ontario. The mine was reported to have been on the farm of H. McNally, and about 30 m from the south shore of a peninsula in Kingsford Lake (Harding, 1951). W. Warfel was mentioned as having sunk an inclined shaft to about 30 ft early in the 20th Century. The phlogopite-bearing calcite vein was reported as being parallel to the sediments. Apatite, pyroxene, and pyrite were mentioned as minerals.

Waters Mine, Lot 13, 6th Concession (Range in the report), North Burgess Township, Lanark County, Ontario. The mine was reportedly being developed by a Mr. Waters, of Ottawa, in 1892 (1892).

Watters Mine, west half Lot 15, 8th Range, Templeton Township, Papineau County, Québec. It was reported that this mine was worked by 12 men in 1894 (1895). Mr. T. J. Watters was reported as a producer in 1909 and 1911 (1910, 1912).

Watters Mine, Lot 4, 9th Range, Templeton Township, Papineau County, Québec. This mine was reportedly worked by five to six persons for the Watters syndicate in 1892.

Watts Mine, Lot 12, 6th Concession, North Burgess Township, Lanark County, Ontario. Between the Martha Mine to the west and the Hanlan Mine to the east, this mine was reported to have been worked in 1906 (1907).

Watts Property, Lot 4, 12th Range, Templeton Township, Papineau County, Québec. White (1997) reported that the property was prospected during the first decade of the 1900s by Mr. E. Watts of Perth, Ontario. The property was then sold to Messrs. O'Brien and Fowler in 1909. There were several outcrops of mica, the most prominent being a few hundred yards from the south shore of Battle Lake and on the north side of a ridge

between Battle Lake and Corrigan Lake.

Watts Property, Ontario. R. W. Watts, of Perth, was listed as a shipper in 1924 (1926), and again in 1941 (1946).

Watts and Noble Mine, Lot 4, 4th Concession, Burgess Township, Lanark County, Ontario.

Owned by Norman S. Bentley, of Saratoga, New York, the mine was operated in 1900 by Watts and Noble, of Perth (1901). It was reported to have not produced in 1914 (1915).

Watts and Noble Properties, Québec. The firm, from of Kirk's Ferry, Québec, was reported as owners/operators in that province until 1921 (1922). Edward Watts, of Hull, and later Dodd's Lake, was reported as an owner/operator from 1922 to 1924 (1923-1925). Watts and Noble, of Dodd's Lake (Dodd in these reports), and then Perth, Ontario, were listed again from 1925 to 1926 (1926-1927).

Webster Mine, Lot 13, 5th Concession, Oso Township, Frontenac County, Ontario. The mine was reported to have been a few m south of an old wagon trail known as the *Klondike Road*.

Two pits were mentioned as having been dug about 1900 by Tom Webster, of Oso Township. These were both small, but production was noted. Phlogopite and biotite were mined from the veins, which cut a pink gneiss (Harding, 1951).

Webster Mine, Lot 38, 1st Range, Bouchette Township, Gatineau County, Québec. The mine was reported to have been worked by the Webster Company in 1892 and was mentioned as a source of production in 1909 (1910).

Webster Mine, north half of Lot 10, 5th Range, Grenville Township, Argenteuil County, Québec.

This mine was reported to have been worked by the Webster Company in 1892. Webster and Company, of Ottawa, was reported as a producer in 1914 (1915).

Webster Mine, Lot 13, 15th Range, Hull Township, Gatineau County, Québec. Reported to be an old property, once operated by Webster, it was being mined by the Development Mica Company in 1898 (1899).

Wells Mica Prospecting Syndicate Property, Bigelow Township, Labelle County, Québec. The company, from Toronto, was listed as a working owner/operator in 1942 (1943). Work was not reported in 1943-1946 (1944-1947).

Wheal Mary Mine, Lot 5, 14th Concession, Storrington Township, Frontenac County, Ontario.

About 13 km east of Stoness Corners, the mine was reported to have been owned by Joseph Bawden and Alexander Gunn, of Kingston (1901).

White Mine (Papineau Mica Mines Property), Lots 47 to 50, 1st Range, Wells Township, Labelle County, Québec. The company, from Toronto, was listed as a working owner/operator in 1941 (1942). Its interests, and those of the White Mica Mining Syndicate, were taken over by A. W. White Mica in 1942 (1943). A large quantity of good-quality amber mica (phlogopite) was reported to have been mined. It was reported as a large shipper in 1943 (1944) and was worked in 1944 (1945), but not in 1945-1946 (1946-1947).

White Mine, east half of Lot 20, 9th Range, Templeton Township, Papineau County, Québec. The deposit was reportedly mined by a Mr. White, of New York, in 1894 (1895).

White's Mine, about 3 km east of Notre-Dame-du-Laus, Québec. The deposits were reportedly worked in the 1940s. Sabina (1986) did not report on the ownership of the property.

White Mica Mining Syndicate Properties, Wells, Bigelow, and Bouthillier Townships, Labelle County, Québec. This Toronto company was listed as an owner/operator in 1941 (1942).

Williams and Adams (Thompson) Mine, Lot 17, 4th Concession, Bedford Township, Frontenac

- County, Ontario. The mine was reported to have been east of the Green Bay Road and on the farm of Douglas Thompson. Harding (1951) mentioned that the property was first mined near the end of the 19th Century. It was then mined, in 1905, by Williams and Adams, the owners, of Toronto. The mine consisted of a pit, 12 ft deep, with a 25-ft shaft from the bottom. Phlogopite mica had been mined from a vein in crystalline limestone.
- Williamson Property, Claims S. 36,863 to 36,865, Lots 3 and 4, Concessions C and D, southeastern part of Orlig Township, District of Nipissing, Ontario. About 3 km northwest of the Purdy Mine, the property was reported to have been staked by W. R. M. Williamson, of Copper Cliff, in 1943. Four pegmatite dikes were found but the muscovite was not present in sufficient quantities to warrant mining (Harding, 1946).
- Wilson Property, Thorne Township, Pontiac County, Québec. S. C. (E.?) Wilson, of Cascades was reported as an owner/operator from 1921 to 1924 (1922-1925). The Estate of S. Wilson was listed from 1929 to 1938 (1930-1939). Wm. S. Wilson, of Cascades, was listed as a working owner/operator in 1942-1944 (1943-1945). Work was not reported in 1945-1946 (1946-1947).
- Wilson (Martin, Bragg, Judge) Mine, Lot 4, 2nd Concession, Bedford Township, Frontenac County, Ontario. The mine was reported as being about 250 m from the farmhouse of F. Judge, the house being situated north of the Godfrey-Desert Lake Road and close to the south shore of Thirty Island Lake. The property was reported to have been first worked, for phosphate, at the beginning of the 20th Century, by A. Martin. It was subsequently mined by John Bragg for the same. About 1920-1925, Dick Wilson was reported to have produced a small amount of scrap mica. R. J. Wilson, of Hartington, was listed as a shipper in 1924 and 1926 (1926-1927), and this listing probably fits. Harding (1951) noted that there was a water-filled shaft, said to be 40 ft deep, on the property. Green apatite, pyroxene, and biotite were mentioned.
- Wilson (Frontenac, Stoness, Murphy) Mine, Lot 15, 5th Concession, Bedford Township, Frontenac County, Ontario. The mine was mentioned as being about 120 m south of the Bob's Lake Road in the northwestern part of the lot (Harding, 1951). An old mine, it was worked by: The Frontenac Mining Company, 1898; Messrs. J. and J. Stoness; Messrs. P. and W. Murphy, of Fermoy (the owners); and, Dick Wilson, of Desert Lake. Mining seems to have ended about 1909. The pit was in paragneiss which contained mica, pyroxene, apatite, calcite, and hornblende. It was about 75 ft long, with shaft at the bottom, and had been mined to a depth of about 60 ft. It was reported to have been filled with water.
- Wilson Property, Hastings County, Ontario. John Wilson, of Bancroft, was listed as a shipper in 1927 (1929).
- Bush Winning Property, Portland Township, Papineau County, Québec. Bush Winning was reported as a Québec owner operator from 1909 to 1921, 1923 to 1924 (1910-1922, 1924-1925), and from 1929 to 1935 (1930-1936). The Winning Mica Syndicate, of Notre-Dame-de-la-Salette, was reported as such in 1922 (1923). There were no reports of production.
- Winning and Cameron Property, Portland West Township, Papineau County, Québec. Bush Winning and Urbain Cameron were reported as the owners/operators of this property in 1936 (1937). Work was not mentioned.

Wood Property, Ontario. F. J. Wood, of Godfrey, was listed as a shipper in 1924 and 1926 (1926-1927).

Woodruff Property, Ontario. H. B. Woodruff, of Perth Road, was reported as a shipper in 1923 (1924).

Wright Property, Ontario. R. Wright, of Carleton Place, was reported as a shipper in 1923 (1924).

Zimmerling and McNeely Property, Cawood Township, Pontiac County, Québec.

Charles Zimmerling, of Otter Lake, was listed as an owner/operator in 1939 (1940). He, and James McNeely, of Ottawa, were listed in 1940-1941 (1941-1942). Work was reported in 1941.

Molybdenum

Molybdenum is used as an alloy in steel-making. Like nickel, it can be used to add strength and toughness to the finished steel product. During the First World War, when the demands for the production of armaments resulted in nickel being in short supply, there was considerable interest in the molybdenite (MoS_2) deposits in northeastern Ontario and northwestern Québec. The most important producers of the time were the Moss Mine, near Quyon, in Pontiac County, Québec, and the Ross Mine, at Mount St. Patrick, in Renfrew County, Ontario. The Moss Mine was said to have been the world's most important producer of molybdenum in 1916. The molybdenite was usually found either in pegmatite dikes or in metamorphic pyroxenite at, or near, the contacts between crystalline limestone and gneiss (Satterly, 1945).

Adair Property, Lot 5, 11th Concession, Laxton Township, Victoria County, Ontario. In 1916, a mine was reportedly being developed on this property by T. Horscroft. The molybdenite was in a small pegmatite dike in pyroxene (1916). It was adjacent to the Mud Turtle Lake Mine (see the listing below). A small quantity was mined in 1916 (1917).

Aldfield Mineral Syndicate Property, Lots 1, 2, and 3, 3rd, 4th, and 5th Ranges, Aldfield Township, La Pêche, Les-Collines-de-l'Outaouais, Québec. The property was reported to have been owned by the Syndicate, of Ottawa (1917). It was again reported in 1926 (1927).

Alloys Limited Properties, Onslow and Masham Townships, Pontiac County and La Pêche, Les-Collines-de-l'Outaouais, Québec. The company was listed as an owner/operator in 1939 (1940).

American Molybdenites (Molybdenum Products) Mine, Lots 32, 15th and 16th Concessions, Monmouth Township, Haliburton County, Ontario. At Wilberforce, on the Irondale, Bancroft and Ottawa Branch of the Canadian National Railways, it was being developed in 1917 by the Molybdenum Products Company (1918). A mill was erected and some ore mined. The work was stopped, however, in the spring of 1919. American Molybdenites was incorporated in 1917 to work the property. It began work in 1921, and was then the only active molybdenite mine in the province (1922).

Argyle Consolidated Gold Mines Property, Clarendon Township, Pontiac County, Québec. The company, from Ottawa, was listed as an owner/operator from 1939 to 1941 (1940-1942).

- Armstrong Property, Lot 5, southwest of the Frontenac road, Miller Township, Renfrew County, Ontario. On the farm of Thomas Armstrong, a pegmatite dike was reportedly opened up by C. G. Shannon, of Kingston (1916). The pegmatite dike was from six to eight ft wide, and cut gneiss. In 1916, three small pits were cut (1917).
- Avery Prospect, Lot 24, 9th Concession, Olden Township, Frontenac County, Ontario. The land reportedly belonged to S. Stinchcombe, of Long Lake, while the mineral rights were owned by Mrs. V. Avery, of Sharbot Lake (Harding, 1951). The occurrence was discovered about the time of World War I. Two shallow pits had been dug in white crystalline limestone which was cut by granite and pegmatite. Molybdenite and some graphite were reported.
- Bagot Mine, Lot 29, 4th Concession, Bagot Township, Renfrew County, Ontario. Developed by the Bagot Molybdenite Mining Syndicate in 1939-1940, the property was close to the *Number 3 Pit* of Buckhorn Mines on Lot 28 (see the listing for that operation). A pit and a trench were dug (Satterly, 1945).
- Bagot Property, see the listing for the Zenith Mine, below.
- Bertram Property, Lots 4 and 5, 12 Range, Clarendon Township, Pontiac County, Québec (1918).
- Brotton Prospect, south half of Lot 13, 2nd Concession, Burns Township, Renfrew County, Ontario. Staked by J. Brotton (as Claim E.O. 3,124), in 1940, the workings were in a pegmatite dike, on a hill, situated about 250 m northeast of a house near the north shore of Burns (Long) Lake (Satterly, 1945). There were several pits in the dike, which cut a garnet-biotite paragneiss. Some of the red garnets were reported to be as large as about 4 cm.
- Brough (Molybdenum) Lake Molybdenite Property, Lot 14, 10th Concession, Cardiff Township, Haliburton County, Ontario. The property was at Cheddar, near Wilberforce. Prospecting, by diamond drill, was reported in 1938 (Canada, Mines Branch, 1939). Hewitt (1959) noted that stripping of an area, about 200 m long, had taken place in 1937. This exposed a granite pegmatite containing molybdenite and pyrite.
- Brougham Prospect, Lot 18, 1st Concession, Brougham Township, Renfrew County, Ontario. The prospect was reported to have been near the Madawaska River. Satterly, in 1945, reported old pits and trenches that were rust-stained. Locally, the rocks were crumbly crystalline limestone, pyroxenite, and pegmatite. Pyrrhotite and pyrite were common, but molybdenite was rare (Satterly, 1945).
- Buckhorn Mine, Lot 29, 1st Concession, Bagot Township, Renfrew County, Ontario. The mine was near Ashdad, in the southwest corner of the lot, on the farm of Joe Kluck. The Buckhorn Mining Syndicate was formed in 1938, and sunk two pits during 1939-1940. In 1939, about 300 m of trenches and some test pits were reported (1941). It was worked during the summer of 1940 (1942). Interbedded crystalline limestone and gneisses were cut by a pegmatite and a band of amphibole slightly mineralized with pyrrhotite, pyrite, and some molybdenite. Coarsely crystallized pyrite and pyrrhotite were reported along fractures, as were vugs lined with pyroxene and feldspar crystals (Satterly, 1945).
- Buckhorn Mine, east half of Lot 28, 4th Concession, Bagot Township, Renfrew County, Ontario. A series of pits was dug by the Buckhorn Mining Syndicate and its successor, Buckhorn Mines, in 1939-1940. Test holes were also drilled in 1943. A mineralized band of rusty

- pyroxenite, with some flakes of molybdenite, cut hornblende gneiss. Other minerals reported were garnet, drusy, smoky, and amethystine quartz, carbonate, and rosettes of specularite (Satterly, 1945).
- Buckhorn Prospect, Lot 30, 4th Concession, Bagot Township, Renfrew County, Ontario. Ten trenches were reported to have been dug on this property by the Buckhorn Mining Syndicate (Satterly, 1945). On the property it was reported that interbedded crystalline limestone, pyroxenite, and hornblende gneiss had been intruded by pegmatite dikes and sills. The minerals included radiating clusters of actinolite, pyrite, and pyrrhotite.
- Burns Prospect, Lot 4, 15th Concession, Sheffield Township, Addington County (later Lennox and Addington County), Ontario. The prospect was reported to have been near the Chisholm Prospect and about 11 km south of Enterprise. Development, by C. Bellew, of Montréal, began in 1915 (1916).
- Cailloux Prospect, Lots 8 and 9, 15th Concession, Sheffield Township, Addington County (later Lennox and Addington County), Ontario. On the Spratt Farm, development began in 1915 by L. L. Cailloux, of Montréal (1916). An open cut, measuring 30 ft by 25 ft and 20 ft deep had been made. Five men were employed.
- Cailloux Prospect, Lot 11, 12th Concession, Sheffield Township, Addington County (later Lennox and Addington), Ontario. On the Oderdike Farm, it was also being developed by Mr. Cailloux in 1915 (1916).
- Canadian Molybdenite Mine, 13th and 14th Concessions, Monmouth Township, Haliburton County, Ontario. The company was formed in 1939. A camp was established and 200 000 cubic ft of overburden removed (1941). The mine was worked during the summer of 1940 (1942).
- Chabot and Company Deposit, Lots 21 and 22, 5th Range, Huddersfield Township, Pontiac County, Québec. The property was about 61 km north-west of Shawville, 45 km north of Campbell's Bay, and about 16 km east of Fort Coulonge. It was being developed in 1915, at which time a six-foot-deep pit had been dug (Canada, Mines Branch, 1916).
- Chaput-Payne (Payne) Mine, about 20 km northwest of Hull, Québec, and below the Champlain Lookout in Gatineau Park. Several prospect pits were reported to have been opened in World War I (Sabina, 1987).
- Charron Prospect, south half of Lot 15, 11th Concession, Brougham Township, Renfrew County, Ontario. The workings were on the slope of a hill and were close to the creek outlet at the south side of Jacktar Lake. The pits were reported to have been worked by J. Charron between 1910 and 1916 (Satterly, 1945). A granite pegmatite cut biotite and hornblende paragneisses and limestone. Coarse pyrrhotite, some pyrite, and less molybdenite was present.
- Chatelaine Molybdenite Prospect, north half of Lot 6, 10th Range, south half of Lot 6, 11th Range, Eardley Township, Gatineau County, Québec. In 1959, New Kelore Mines was reported to have explored the property through drilling (1961).
- Chisholm (Sheffield) Mine, east half of Lot 5, 14th Concession, Sheffield Township, Lennox and Addington County, Ontario. The mine was about 58 km north of Kingston, 10 km from Enterprise on the Bay of Quinte Branch of the Canadian Northern Railway, and about 4 km from the Canadian Pacific's Ottawa to Toronto line. It was first mined by A. M. Chisholm, of Kingston, in 1903 (1904), when 85 tons of ore were quarried. By 1915, it

was owned by A. M. Chisholm, of Kingston, and J. A. Seybold, of Ottawa. Two pits, the deepest 18 ft, had been sunk. The molybdenite occurred with pyrrhotite, pyrite, pyroxenite, and mica (Canada, Mines Branch, 1916). In 1916, it was reported that it was operated by the International Molybdenum Company (1916). The ore occurred in crystals of various sizes in a gangue (a mixture of worthless minerals) of pyroxene, pyrrhotite, and iron pyrites. Twelve men were employed in 1915 and nine in 1916 (1916-1917). A mill was erected in 1917. In 1934 it was reported that ore had been exposed at the bottom of a 27-ft shaft and in a pit 300 ft south of it (Canada, Mines Branch, 1935).

Coine and McCann Syndicate Property, Litchfield Township, Pontiac County, Québec. The syndicate was listed as an owner/operator in 1939 (1940).

Cole (Property) Mine, northwest half of Lot 24, 5th Concession, Bromley Township, Renfrew County, Ontario. About 5 km from Osceola (Satterly, 1945), the deposit was developed by J. E. Cole, of Renfrew, who had shipped a small quantity of ore (1916). A small quantity was mined in 1916 (1917). The molybdenite was in a pyroxenite mass over a length of about 120 m. By 1945, there were 19 small pits in an old clearing on the top of a hill, all within a small area. Some surface work was done in 1939, with Puritan Mines operating it from then until 1940. An adit was driven during this period. In 1942, the property was acquired by Ajax Tungsten and Molybdenite Mines. Buckhorn Mines acquired it in 1942, but no work was reported either then or in 1943 (Satterly, 1945).

Connelly-Chown Property, Lot 15, 11th Concession, Brougham Township, Renfrew County, Ontario. Two pits, in narrow pegmatite dikes, were reported to have been developed by a Mr. Murray (1916).

Culhane Property, Lot 28, 12th Concession, Bagot Township, Renfrew County, Ontario. Development of a number of pits was done, in 1915, by R. R. Gamey on the farm of John Culhane, of Ashdod. It was reported that about 200 pounds of picked flakes were produced that year (Satterly, 1945). The molybdenite occurred in a pyroxenite adjoining pegmatite (1916). A small quantity was mined in 1916 (1917). An additional pit in the face of a small hill was noted to the northwest, near the northeast corner of Snake Lake (Satterly).

Daley Molybdenite Company Mine, Lots G and J, 1st Range, Thorne Township, Pontiac County, Québec. The mine was about 1.5 km northeast of Shawville. Work began in 1919 with the sinking of a 50-ft shaft and some drifting at the bottom. The construction of a mill began in 1920 (1921). While no molybdenite was produced in Québec in 1921 (1922), the company continued with drifting and cross-cutting on this property.

Dominion Molybdenite Company, Quyon, Pontiac County, Québec. The company was reported as an owner/operator from before 1917 to 1922 (1918-1923).

Drader Occurrence, east part of Lot 18, 10th Concession, Hinchinbrooke Township, Frontenac County, Ontario. South of the Fifth Depot Lake Road, on the farm of Mrs. H. Drader. Flakes of molybdenite were identified in a pegmatite (Harding, 1951).

Dungannon Property, Lots 25, 13th and 14th Concessions, Dungannon Township, Hastings County, Ontario. In 1916 it was reported that the property had not been worked recently (1917).

Dwyer Property, Lot 8, 15th Concession, Sheffield Township, Addington County (now Lennox and Addington County), Ontario. A small pit, in crystalline limestone, was on the farm of

- Timothy Dwyer. It was reportedly not worked in either 1915 or 1916 (1916-1917). The molybdenite was associated with pyrite, quartz, and tourmaline.
- Edgemont Molybdenite Mine (Windle-Liedke, Windle-Liedtke Prospect), Lots 27, 9th and 10th Concessions, Raglan Township, Renfrew County, Ontario. The mine was on a low hill close to the west side of the Denbigh - Palmer Rapids Road and about 1200 m north of the Post Office at Schutt (Hewitt, 1954). Originally, there was one pit on this property, in the 10th Concession and on land owned by John Windle, and two on the adjacent lot, in the 9th Concession, and on land owned by H. Liedke (see the listing below). The dike was about four ft wide and the best pit was reported to be near the property line between the lots (1916). A small quantity was mined in 1916 (1917). The property was acquired by Edgemont Mines, in 1939, in the same year that the company became Edgemont Molybdenite Mines. It did considerable drilling and trenching and sunk a 10 by 15 foot shaft to 40 ft. A small quantity of low-grade ore was shipped in 1943 (Satterly, 1945). On the properties a granite pegmatite dike occurred on the contact between paragneiss and crystalline limestone, and could be followed for about 250 m from the shaft to the north workings (Hewitt, 1954). A fracture in the dike was filled with calcite, pyrrhotite, molybdenite, and smoky quartz. Hornblende crystals were also reported.
- Elliott's Mine, Lot 7, 9th Concession, Ross Township, Renfrew County, Ontario. The mine was reported to have been opened before 1883. The workings were reported to expose crystalline limestone containing molybdenite, pyrite, apatite, scapolite and titanite (sphene) (Satterly, 1945).
- Evans (O'Brien, Treasure Hill) Mine, Lot 11, 10th (also reported as 11th) Concession, Cardiff Township, Haliburton County (also reported as being in Renfrew County), Ontario. About 16 km south of Wilberforce, near Cheddar, the deposit was staked about 1907 by Alexander Evans, on his farm (Hewitt, 1959). In the 1916 report it was said to have been discovered by Messrs. Elliott and Bolmer, and worked in 1913 and 1914, under option, by M. J. O'Brien. No work was done after 1914 (1916). A vertical shaft, seven by nine ft, was sunk to 45 ft, and several pits were dug at the north end of the lot. A concentrating plant was also erected on the farm. Hewitt (1959) noted that 150 tons had been milled, producing one ton of concentrates. The ore occurred in metamorphic pyroxenite on the contact with a granite pegmatite. Both cut marble and paragneiss. Molybdenite, pyrite, and pyrrhotite were mentioned.
- Farley Mine, Lot 69, 4th Range, Egan Township, Gatineau County, Québec. The mine was reported to have been about 24 km north of Maniwaki. The deposit was first described by Obalski, in 1898. It was mined briefly in 1942 and 1943 by the Farley Mining Company, of Hull, which first shipped the ore to the Zenith Mine, at Ashdad, Ontario, about 15 km south of Renfrew. Later, shipments were made to the Lacorne Mine, in Abitibi Township, Abitibi County, Québec (1943-1944).
- Farrell Prospect, Lots 6 and 7, 2nd Range, Clapham Township, Pontiac County, Québec. There were several pits and trenches in a pyroxenic pegmatite, on Lot 7. The zone was reported to have been about 40 m long (1944).
- Felhaber Prospect, Lots 14 and 15, 2nd Concession, Sebastopol Township, Renfrew County, Ontario. On the land of W. Felhaber, there were two test pits about 350 and 800 m west of a farm house on Lot 16 (Satterly, 1945). The occurrences were in a pegmatite.

- Foley Property, north half of Lot 10, 7th Range, Onslow Township, Pontiac County, Québec. The property was reported to have been owned by Mr. W. L. Foley, of Quyon (1917).
- Giroux Property, Lot 21, 11th Range, Litchfield Township, Pontiac County, Québec. A deposit was reported on the Giroux Farm (1927).
- Gorman Prospect, west half of Lot 9, 9th Concession, Adamston Township, Renfrew County, Ontario. About 1.5 km east of Shamrock and immediately south of the Opeongo Road, the deposit was reported to have been found in 1865. The mineral was discovered to be molybdenite about 1915. Mr. J. O. Gorman, the owner, optioned the property to J. A. Gravelle, of Ottawa, who, with others, formed the Opeongo Mining Syndicate. A trial shipment was made in 1917 (Satterly, 1945, making reference to Eardley-Wilmot).
- Gratton Prospect, Lot 36B, 7th Range, Huddersfield Township, Pontiac County, Québec. On the shoreline of the north side of Mud Lake, the zone exposed, about one metre wide, was about nine m long. The molybdenite occurred as large flakes and seams in pyroxenite (1944). Hudon Mining and Exploration worked on it in 1960, trenched it, and was reportedly preparing to drive an adit (1962).
- Gray Occurrence, southwest quarter of Lot 19, 4th Concession, Olden Township, Frontenac County, Ontario, on the farm of Percy Gray (Harding, 1951). Scattered flakes of molybdenite occurred in a band of greywacke. Crystals of molybdenite were seen in crystalline limestone and 200 m to the northwest (Harding, 1951).
- Higgerty Mine, Lot 6, 11th Range, Eardley Township, Pontiac County, Québec. In 1914, some development work was done on this property by Charles J. Higgerty, of Ottawa. A vein was uncovered for about 60 m and a few hundred pounds of molybdenite produced (1915).
- Hopkins Property, Lot 7, 10th Concession, Lutterworth Township, Victoria County, Ontario. On the property of A. Y. Hopkins, of Kinmount, an opening was made in a small quartz vein in gneiss (1916).
- Hunt Mine (Belgian Property), Lots 8 and 9, 11th Concession, Brougham Township, Renfrew County, Ontario. The mine was reported to have been on the slope of a high ridge above Condon Lake, about 5.5 km southwest of the village of Mount St. Patrick, and about 18 km from Ashdad Station on the Kingston and Pembroke Railway. The deposit was discovered by Cornelius Hunt, the son of Daniel Hunt, who owned the farm. It was optioned at first to Americans, who allowed the option to drop. A second option was granted in 1912 to the Algonicon Development Company, which operated it through a subsidiary, Renfrew Molybdenum Mines (formed in 1915). The ore was tested by the Canadian Mines Branch in 1915 (1916). Intermittent mining began in 1912, with an adit being driven 92 ft into the south side of the Mount St. Patrick ridge. By 1916 a shaft had been sunk to 71 ft, and two stations for future levels cut. About 2000 ft of crosscuts and drifts were driven on four levels, as well as shafts and raises. The mine was closed in 1918. On the surface, the orebody was traced for a length of 400 ft. The molybdenite occurred with pyrite and pyrrhotite in pyroxenite, near the contact of crystalline limestone and pegmatite. The latter appeared to be similar to graphic granite (1917).
- Hunter (Property) Mine, south half of Lot 15, 10th Concession, Bagot Township, Renfrew County, Ontario. On land belonging to Samuel Hunter, of Calabogie, the deposit was first mined about 1890 and about 100 pounds of pure flake molybdenum produced (Satterly,

1945). In 1916, it was reported that no work had been done for several years (1916). The last work was said to have been done in 1926 (Satterly). A small pit had been sunk in a pyroxenite pegmatite dyke in crystalline limestone. Pyrite and tourmaline were reported as well as molybdenite (1917). The medium-grained pink pegmatite was also reported to be cut by vuggy (hollow cavities often lined with crystals) veinlets containing white carbonate, pink feldspar, and stumpy black tourmaline crystals up to 2.5 cm long (Satterly).

Hupon Mining and Exploration Corporation Property, Lot 36, 7th Range, Huddersfield Township, Pontiac County, Québec. Diamond drilling, of short holes, was reported to have taken place in 1962-1964 (1964-1967).

Indian Lake (Bain) Mine, Lots 53, 54, and 55, 10th Range, Masham Township, Hull County (now Gatineau County), Québec. The mine was near Indian Lake, about 58 km northwest of Ottawa. The deposit was worked by Mr. John Bain, of Ottawa, in 1917, and intermittently by others from 1918 to 1939. Some prospecting was done on this showing by H. H. Claudet and some associates in 1925 (1926). It was subsequently known as the Indian Lake Mine (1927). The Indian Lake Molybdenite Company was listed as an owner/operator in 1927 (1928) and from 1931 to 1932 (1932-1933). From 1934 to 1936, the Estate of John Bain was listed as the operator (1935-1937). In 1935 a shaft was sunk 25 ft, and drifting commenced in 1936 (Canada, Mines Branch, 1937). It was sampled by M. P. Manolovici and Bruce Robson in 1942 (1943) and a bulk sample sent to the Ore Testing laboratories of the Mines Branch. In that same year Vic-Ore Molybdenite Mines, a subsidiary of Goodrock Gold Mines, was formed to mine the properties. It was later staked for uranium, in 1953. In 1960, Denison Mines optioned the property, removed overburden, sampled, and mapped it (1962). The deposit was reported by Sabina (1987) to have then been on the farm of Mr. M. Bouchier. The molybdenite occurred with pyrite and pyrrhotite in a pyroxenite gangue (Canada Mines Branch, 1926).

International Molybdenum Company Mine, Lot 17, 10th and 11th Concessions, Brougham Township, Renfrew County, Ontario. The mine was reported to have been developed in 1915 and 1916, with two shafts, 40 and 32 ft, being sunk in 1916. The deposit was considered to be an extension of the pyroxenite found on the Morin Property (see the listing, below).

Jamieson Molybdenite Mine, Lots 5 and 6, 8th Concession, Lyndoch Township, Renfrew County, Ontario. The mine was about 72 km from Renfrew and 40 km from Eganville, on the Ottawa and Parry Sound Branch of the Grand Trunk Railway and also about 2 km from Highway 41, near Griffith Bridge. It was on the top of Mining Mountain and about 600 m west of D. Madigan's Farmhouse (Hewitt, 1954). Originally owned by the Jamieson Meat Company, (R.A. Jamieson) of Renfrew, it was opened in 1907. It was subsequently leased to Orillia Molybdenum Mines (Company), which reopened it in mid-1915 and operated it until 1916. There were two pits, connected by a trench, from which 285 tons had been mined by the end of 1915 (Canada, Mines Branch, 1916). There was an inclined shaft between the pits. In 1915, about 80 tons were shipped. Forty men were employed (1916). In 1916 it was idle, but was then later operated by the International Molybdenum Company (1916). The country rocks were gneisses interbedded with crystalline limestone. These were cut by granites and pegmatites. The orebody consisted of pyroxenite and pegmatite containing large crystalline flakes of molybdenite along with pyrite and

- pyrrhotite. Satterly (1945), reported the following on the dumps: bright, translucent, green apatite crystals, up to 2.5 cm in diameter; sphalerite bands, up to about one centimetre thick; pyrite; galena; small stumpy crystals of quartz; calcite, and chalcopyrite. Hewitt (1954) noted that the calcite was pink to salmon-coloured and contained lepidomelane.
- Johnston Prospect, Lot 3, 8th Concession, Miller Township, Frontenac County, Ontario. The deposit was reported by R. A. A. Johnston in 1916 (1917).
- Joiner (Property) Mine, north half of Lot 3, 20th Concession, Cardiff Township, Haliburton County, Ontario. The deposit was situated on a high ridge, about 50 m above the floor of the valley. It was about 8 km northeast of Wilberforce and 1.2 km east of the Canadian National Railway line. First developed in 1917 (1918) by W. E. Joiner and Company, it was then subsequently acquired by: Cardiff Molybdenite Mines, incorporated in 1920; United Molybdenum Corporation, incorporated in 1922; Shallberg Molybdenite Corporation, in 1935 (Satterly, 1943). In 1936, it was explored for Ventures, Limited. Three thousand ft of trenching was done, but, because of the low molybdenum content, the work was discontinued. Another deposit was mentioned at the west end of Baptiste Lake (Canada, Mines Branch, 1937). Locally, crystalline limestone and interbedded paragneiss had been intruded by syenite and pegmatite. The molybdenum occurred as coarse flakes (Hewitt, 1959).
- Kellar (Property) Mine, Lot 12, 13th Concession, Sheffield Township, Addington County (now Lennox and Addington County), Ontario. On the farm of A. Kellar, five small pits were opened up by O'Brien's-Greenfield, of Superior, Wisconsin. These were being worked by five men in 1916 (1916). The deposits were pegmatite dikes in gneiss, and the molybdenite was in quartz stringers in the pegmatite. Orthoclase, pyrite, calcite, and quartz also occurred (1917).
- Keller Property, Lot 21, Concession A (listed as 12th Concession in the 1943 report), Faraday Township, Hastings County, Ontario. On the farm of Walter Keller, about 450 m south of the Monck Road, a small test pit had been dug in a pyroxenite near the contact with a pegmatite (Thomson, 1943)(Hewitt, 1959).
- Kensington (Acme) Mine, about 10 km east of Maniwaki, Québec. Opened in 1939, it was operated for short periods by: Moldor Exploration Syndicate; Acme Molybdenite Mining Company; Kensington Moly Mining Company Limited. The latter was reported to have drilled short holes in 1964 (1967). Sabina (1987) did not report on the ownership of the property.
- Kert Mine, Lots 1 to 3, 3rd and 4th Ranges, Aldfield Township, Pontiac County, Québec. This property, while named previously, was first described in 1943 (1944). It then consisted of three large pits, ten smaller pits, and trenches. It was further noted that 30 tons had been shipped. The molybdenum occurred as scattered flakes, crystals, and pockets in pyroxene, tremolite, and phlogopite. The zone in which the pockets occurred was reported to have been about 500 m long (1944).
- Kidd Property, Lot 6, 9th Concession, Cardiff Township, Haliburton County, Ontario. The property was reported as belonging to Walter R. Kidd, of Paudash. An open cut had been made in two parallel pegmatite dikes, each about 0.3 m wide, in gneiss (1916). A cut, 40 ft long, eight ft wide, and up to 10 ft deep, was made in two parallel granitoid pegmatite veins, each about 0.3 m (1917). Flakes up to an inch across were reported.

- Kidd Property, Lot 11, 5th Concession, Cardiff Township, Haliburton County, Ontario. This was also the property of Walter Kidd. Two open cuts were reported to have been made to the northeast and close to the farmhouse on the lot (1916). In 1916, the cut was reported as 50 ft long, three to eight ft wide, and up to eight ft deep. A small quantity was reported to have been mined (1917).
- Kiley Property, east half Lot 8, 13th Concession, Adamston Township, Renfrew County, Ontario. A test pit, dug on the farm of M. P. Kiley in 1918 was dug out again in 1943. The molybdenite was in a rusty pegmatite cutting hornblende gneiss containing interbedded crystalline limestone (Satterly, 1945). A second test pit was reportedly dug in the west half of the lot, just west of the barn.
- Kindale Mine, 10th Range, Masham Township, Gatineau County, Québec. Kindale Mines Limited, of Montréal, was listed as an owner/operator of this mine from 1937 to 1940 (1938-1941). It worked on the property in 1937-1939 by developing an open pit and performing concentration tests on the ore (1939-1940). In 1939, Alloys, Limited, a subsidiary of Ventures Limited, did some exploratory drilling of this property and also at the Moss Mine. The options were dropped after the drilling.
- Kirkham Property, Lot 5, 12th Range, Clarendon Township, Pontiac County, Québec. A hole was reported to have been drilled on this property by Albert M. Kirkham in 1962 (1964).
- Kirt Property, Aldfield Township, La Pêche, Les-Collines-de-l'Outaouais, Québec. Samuel Kirt, of Duclos, Pontiac County, was listed as the owner/operator in 1939 (1940).
- Kring Prospect, Lot 5, northwest Range, Miller Township, Frontenac County, Ontario. Molybdenite occurring in a pegmatite was reported (1917).
- Lamarche Properties, 1st Range, Campbell Township, Labelle County and 4th Range, Kensington Township, Gatineau County, Québec. The properties were reported to have been owned and operated by J. Hermas Lamarche and Phrase Arbic, of Mont-Laurier. It was noted that a small quantity of molybdenite had been hand-sorted during exploration in 1938 (1939). These persons were reported as owners/operators from 1939 to 1944 (1940-1945).
- Legree Property, Lots 35 and 36, 14th Concession, Brougham Township, Renfrew County, Ontario. An open cut, about 10 ft by 70 ft, was opened by Legree Brothers of Dacre and a small quantity of molybdenite prepared for shipping (1916). It was reported as an orebody of considerable promise in 1916 (1917). The ore was a micaceous pyroxenite in gneiss.
- Legree Prospect, Lots 33 and 34, 4th Concession, Griffith Township, Renfrew County, Ontario. The prospect was adjacent to the Spain Mine property (see the listing below). A small quantity was mined from two prospect pits in 1915 (Satterly, 1945, making reference to Eardley-Wilmot).
- Legree Prospect, Lot 7 (9), 8th Concession, Lyndoch Township, Renfrew County, Ontario. The prospect was on Mining Mountain (Hewitt, 1954), and on the contact between pegmatite, gneiss, and limestone. There were three small pits from which some ore had been shipped (Satterly, 1945, making reference to Eardley-Wilmot, 1925). Pyrrhotite was also mentioned (Hewitt).
- Lepine Prospect, approximate location south half of Lot 18, 7th Concession, Griffith Township, Renfrew County, Ontario. It was reported that this prospect was worked on by Nelson Lepine, of Griffith, in then unsurveyed territory in 1939 (Satterly, 1945). It was between

- Round (Haley) and Godin (Green) Lakes, and about 400 m southwest of Haley Lake. The occurrence was in a pegmatite dike.
- Liedke Property, Lot 27, 9th Concession, Raglan Township, Renfrew County, Ontario. There were reported to have been two pits on this property, and one on the adjacent lot, then owned by John Windle (see below) (1916). A small quantity was mined in 1916 (1917).
- Lyndoch Mine, Lyndoch Township, Renfrew County, Ontario. About 1 km southwest of the Jamieson Mine, this property had been staked in 1915 by Orillia Molybdenum Mines. It was reported that the company intended to operate it in conjunction with the Jamieson Mine (Canada, Mines Branch, 1916).
- Lyndoch Occurrence, Lot 33, 5th Concession, Lyndoch Township, Renfrew County, Ontario. Two small pits, on top of a hill, were reported by Satterly (1945). A band of pale-green pyroxenite, in crystalline limestone, was mentioned as containing stringers of coarse calcite, actinolite crystals, and some pyrrhotite. Other small pits had been dug in a band of paragneiss, on Lot 33 in the 6th Concession, about 400 m to the north (Hewitt, 1954).
- Lyndoch Occurrence, Lot 4, 14th Concession, Lyndoch Township, Renfrew County, Ontario. The occurrence was reportedly east of the Wolfe Fire Tower (Hewitt, 1954), and in a low ridge of white (leuco) granite gneiss interlayered with pink biotite granite gneiss and amphibolite. The flakes of molybdenite were said to have been small and in irregular patches.
- Macdonnell (Neadow) Property, Lot 7, 6th Concession, Olden Township, Frontenac County, Ontario. The prospect was on the farm of Alfred Neadow (Harding, 1951), and about 8 km southwest of Mountain Grove. The mineral rights were once held by G. M. Macdonnell, of Kingston who performed some of the work. Locally, pegmatite was along the contact between crystalline limestone and granite. Molybdenite was associated with pink feldspar and pyroxene. A small shipment, for test purposes, was made to the Mines Branch, Ottawa, in 1915 (in Harding, 1951). A small quantity was reportedly mined in 1916 (1917).
- McCoy Molybdenite Mine, south half of Lot 34, 2nd Concession, Lyndoch Township, Renfrew County, Ontario, and about 1.5 km south of Bruceton. The original exploration was done in 1916-1917, with small quantities of picked ore having been sent to Ottawa and Renfrew. McCoy Molybdenite acquired the property in 1937 and sunk a two-compartment shaft to 40 ft in 1938 (Satterly, 1945). Some surface trenching was also done with a workforce of five men (1940). By 1943, there were several pits and trenches on the property (Satterly). The pyroxene syenite pegmatite was about 10 m thick, and underlain by white crystalline limestone. Tourmaline and quartz were present.
- McKarracher and Wanless Property, Maniwaki, Québec. This company, of Ottawa, was listed as the owner/operator of a property at Maniwaki in 1926 (1927).
- McKoy Molybdenite (Property) Mine. In the southwest corner of Lyndoch Township, Renfrew County, Ontario. Prospecting was reported in 1937 on this property, which had been mined in 1917 (Canada, Mines Branch, 1938). Stripping and shaft-sinking were reported in 1938.
- Maniwaki Molybdenum (Molybdenite) Mines Properties, Lots 6 to 13, 3rd Range, Egan Township, Gatineau County, Québec. The property was reported to have been about 5 km west of Maniwaki, along the Montcerf Road and near the Desert River. It was first

- worked in 1917 and 1918 by the Standard Molybdenite Company. Further prospecting was done in 1935 and 1940 (Sabina, 1987). Maniwaki Molybdenum Mines was listed as the owner/operator from 1937 to 1939 (1938-1940) and worked on exploring these properties in 1938-1939 (1939-1940). Locally, Grenville crystalline limestone was intruded by syenitic granite gneiss and pegmatite. The molybdenite occurred in small rich pockets, but the property was not regarded as being commercially viable (1944).
- March Property, Lot 6, 2nd Concession, March Township, Carleton County, Ontario. It was reported that a small pit was dug at this location in the mid-1890s, but that it was idle soon afterwards (1917).
- Mataris Property, Roberts Township, Renfrew County, Ontario. The property was reported to have been staked in 1915 (1916, 1917).
- Matthews- (and) McMahon (Property) Mine, Lot 12, 11th Concession, Cardiff Township, Haliburton County, Ontario. On the west side of Mud Lake, a small opening had been made in pegmatite (1916). Some of the flakes were reported to have been very large - up to 15 cm across. These were not abundant, however (1917). Hewitt (1959) noted that two small pits had been dug at the contact of a pegmatite dike and that 60 pounds of molybdenite concentrates had been sold in 1915.
- Meach Lake Occurrence, 9th Range, Eardley Township, Gatineau County, Québec. The occurrence was reported to have been on the west side of Meach Lake and about 24 km northwest of Ottawa. Some work was reported as having been done in 1936 (Canada, Mines Branch, 1937).
- Mills Mine, Lot 3, 1st and 2nd Concessions, Harcourt Township, Haliburton County, Ontario. The mine was reportedly worked about 1902 by S. Dillon Mills (1916).
- Mining Mountain Prospect, Lot 4, 8th Concession, Lyndoch Township, Renfrew County, Ontario. At the base of the southeast slope of Mining Mountain three small pits were reported to have been dug in a pyroxenite pegmatite which contained pyroxene, hornblende, smoky quartz, black mica, and calcite (Hewitt, 1954).
- Molybdenum Development Property, Masham Township, Gatineau County, Québec. This Montréal company was listed as the owner/operator of a property in 1938 (1939).
- Mooney Property, Lot 18, 9th Concession, Cardiff Township, Haliburton County, Ontario. No work had been done on this property up to 1916 (1916). The ore zone was about 1.5 m wide in an outcrop of granite. Flakes up to 2.5 cm across were noted. Work reportedly began in late 1916 (1917).
- Moran (Ross, Morin, International Molybdenum Company) Mine, Lot 16, 11th Concession, Brougham Township, Renfrew County, Ontario. The mine was reported to have been developed by C. G. Ross, of Ottawa, about 1913 (Canada, Mines Branch, 1914). The ore consisted of molybdenite with pyrrhotite and pyrite in a pyroxenite and actinolite gangue. Mica, quartz and calcite were also present (Québec, 1915). A series of parallel pegmatite-pyroxenite dikes were being exploited. It was subsequently sold to the Ross Syndicate, of Ottawa, who leased it in 1916 to Frank G. Todd, of Montréal, who in turn leased it to the International Molybdenum Company. By 1918, a vertical shaft had been sunk to 40 ft and open cuts made on promising veins. It was the only of the company's mines that operated in 1917. About 20 were employed (1917). Adjacent to the O'Brien Mine (see the listing below). Refer also to the listing for the International Molybdenum Company, above.

- Morin Property, Lot 25, 4th Concession, Bagot Township, Renfrew County, Ontario. The occurrence was on the farm of Mr. Morin, of Springtown (1916). It was reported that "one shot (of explosive) had been fired". The samples were reported to be of a typical molybdenite-pyrrhotite-pyroxenite association (1917).
- Moss (Wood) Mine, Lots 9 and 10, 7th Range, Onslow Township, Pontiac County, Québec. The mine was about 5 km from Quyon Station, on the Canadian Pacific Railway, and 53 km from Ottawa. Reported to have been known for a long time, the deposit was developed in 1916 by the Canadian-Wood Molybdenite Company. It was acquired later that year by the newly-formed Dominion Molybdenite Company, which kept control until 1924. The main pit was on the lot line between the Lots. In 1917, it was 170 ft long, 75 ft wide, and 60 ft deep. Driven by the requirements of the Imperial Munitions Board of the British Government the mine was developed very rapidly. It was stated that it was probably the world's largest single producer of molybdenite in 1916. Almost 130 000 pounds were produced (1917). In 1918, an inclined shaft (70 degrees), 200 ft deep, was being sunk in order to permit an increase in production through the use of the "glory hole" method (1918). At the end of World War I, the demand for molybdenite fell considerably. The company ceased operations early in 1919 (1920). In 1924, however, it was reported that the Canadian Wood Molybdenite Company had acquired it once again and had operated it for about three months (1925). It was reported to have been operated for five months in 1925 and in 1926 by the Henry. E. Wood Mining Company (1926). It was the only producer in 1926 (1927), but did not produce in 1927 (1928). The company, of Quyon, was listed as an owner/operator in 1927 (1928) and 1932 (1933). At some time in this period the mine became the property of the Dominion Molybdenite Company. In 1938 the Wood Mining Company was organized to take over the property. The mine was dewatered and the shaft retimbered at that time. In 1939, the company became the Quyon Molybdenite Company (1939). The property was then drilled by Alloys, Limited, a subsidiary of the Ventures organization. Ventures then dropped its option (1940). The Quyon Molybdenite Company, however, continued to rehabilitate the property and the mine was brought back into production in 1940 (1941). It produced throughout 1942, 1943, and the first half of 1944 (1943-1945). It was then closed, and sold in late 1944 to Toronto interests (1945)(Canada, 1952). The molybdenite, along with iron sulphides, was disseminated in a gangue of quartz, feldspar, and fluorite.
- Moyle Property, Lot 27, 8th Range, Huddersfield Township, Pontiac County, Québec. North of the easternmost bay of Big Squaw Lake, this property was reportedly being tested through pits and trenches in 1917 (1918).
- Mud Turtle Lake Mine, Lot 5, 12th Concession, Laxton Township, Victoria County, Ontario. The mine was adjacent to the Adair Property (see the listing above). In 1916, it was reported as being developed by Douglas Ponton and Captain A. J. H. Russell. The shaft, 50 ft deep, had flooded. The molybdenite was in a micaceous pyroxene (1916).
- National Molybdenum (Molybdenite) Company (Chaput) Property, Lot 1, 7th Range Eardley Township, Gatineau County, Québec. The property was originally known as the Chaput Property (1918) The company, from Toronto, was mentioned as having been the owner/operator from 1925 to 1926 (1926-1927).
- National Molybdenite Mining Syndicate Property, Piedmont Township, Les-Pays-d'en-Haut,

- Québec. The company, from Montréal was listed as a working owner/operator in 1942 (1943). Work was not reported in 1943-1944 (1944-1945).
- Neadow Prospect, see the listing for the Macdonnell Property, above.
- North American Molybdenum, see the listings for the Spain and Sunset Mines, below.
- North Crosby Prospect, Lot 14, 5th Concession, North Crosby Township, Leeds County, Ontario. Two pits were reported to have been opened up "many years ago", in 1916 (1917). The molybdenite was associated with granite or syenite, crystalline limestone, and pyroxene or scapolite.
- Norwin Molybdenite Mines Property, Lots 1 and 2, 10th Range, Eardley Township, Gatineau County, Québec. The company, from Toronto, was listed as a working owner/operator from 1940 to 1944 (1941-1945). In 1942 some work was done with a small quantity of sorted ore being piled on the dump (1943). No work was reported for the company in 1945-1946 (1946-1947).
- Norwin Molybdenite Mines Property, Lot 1(2), 6th and 7th Ranges, Eardley Township, Gatineau County, Québec. The property was first worked in 1917, when 35 tons of ore were mined from which 460 pounds of molybdenum were obtained (1944). In 1941, a small shipment of four tons was reported to have been made. Norwin seems to have acquired the property about 1943 (1944). The molybdenite was related to a pegmatite, and occurred as small lenses or thin seams. The country rocks were reported to be paragneiss, granite, pyroxenite, and pegmatite (1944).
- O'Brien Mine, south half of Lot 17, 11th Concession, Brougham Township, Renfrew County, Ontario, about 10 km from Mount St. Patrick. The rights to Lots 15 to 17, 11th Concession, and Lot 16, 10th Concession, were all originally held by the discoverers, Joseph Charron, of Renfrew and a Dr. Connolly. These were subsequently divided. The *Charron Prospect* was on Lot 15, while the *Moran Mine* was on Lot 16 (refer to the listing). Production at the *O'Brien Mine* began, by M. J. O'Brien, in 1915 and continued in 1916 (1916-1917) through his International Molybdenum Company. In 1942, it was acquired by the Mount Saint Patrick Molybdenite Syndicate. A small quantity was shipped to a mill at Quyon, Québec. Late in 1942 the company was reported to have been taken over by Major Molybdenite Mines. Exploration was conducted in 1943 (Satterly, 1945). Molybdenite occurred erratically in pyritic seams parallel to the gneissic structure.
- O'Brien Mine, see the listing for the Evans Mine, above.
- Orr-Kidd (Orr, Prospect, Property) Mine, Lot 11, 5th Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) reported that it had been staked in 1914 and that 50 lb of concentrates had been produced in 1915. In an earlier report (1916) it was said to have been discovered by Fred. O. Orr, of Peterborough, with several test pits having been dug (1916). Hewitt, however, mentioned a single pit 55 ft long, from four to six ft wide, and five ft deep. This was in a pegmatite dike which cut paragneiss. Molybdenite and pyrite were noted.
- Padwell Prospect, Lot 11, 15th Concession, Monmouth Township, Haliburton County, Ontario. It was reported that a pit had been opened and a few tons mined in 1916 (1917).
- Padwell Prospect, Lot 13, 13th Concession, Monmouth Township, Haliburton County, Ontario. This prospect was also exploited by George Padwell, in 1916, when fifteen tons of ore were mined (1917). The pyroxenite, contacting granite, was traced for about 60 m.

- Paterson Prospect, west half of Lot 28, 4th Concession, Bagot Township, Renfrew County, Ontario. The prospect was reported to have been developed by Mark J. Paterson, of Toronto. By 1915, 4 500 pounds of pure molybdenum flakes had been shipped (1916).
- Paudash Lake Molybdenite Mine, Lot 18, 9th Concession, Cardiff Township, Haliburton County, Ontario. On the Mooney Farm, it was reported as being developed in 1917 (1918). Hewitt (1959) noted that it was opened by W. E. Joiner in 1917, and that there were three pits from which several hundred pounds of flake molybdenite had been produced. The pits were in granite pegmatite dikes.
- Phoenix Mine, see the listing for the Zenith Mine, below.
- Poulin Property, Onslow Township, Pontiac County, Québec. Joseph Poulin, of Saint-Lambert, Chambly County, was listed as the owner/operator of this property in 1940 (1941).
- Powell and Anderson Prospect, Lot 6, 9th Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) mentioned three open pits on this property, the largest of which was 40 ft long, eight ft wide, and 10 ft deep. These had been dug in pegmatite dikes which cut granite gneiss. There was also a pit in Lot 7, to the east.
- Puritan Mine, south half of Lot 24, 5th Concession, Bromley Township, Renfrew County, Ontario. A number of test pits were reported to have been dug on this property from 1914 to 1918. In 1939, Puritan Mines was formed and began to drive a tunnel into the hillside under the old test pits (1941). The tunnel was driven 300 ft (1942).
- Québec Metallurgical Industries Property, near Quyon, Pontiac County, Québec. Exploratory work on this property was mentioned in 1954 (Canada, 1955).
- Québec Molybdenum Property, Huddersfield Township, Pontiac County, Québec. The company was reported to have performed geological and geophysical surveys in 1964 (1967).
- Quilty Property, east half of Lot 29, 1st Concession, Blithfield Township, Renfrew County, Ontario. Some development was reported on this deposit, on the farm of Thomas Quilty (1916). In 1916 six pits were reported along the contact of granite and limestone. The width of the mineralized zone was about 4.5 m, with pyrite and pyrrhotite occurring with the molybdenite. Flakes of up to 2.5 cm across were noted (1917).
- Quilty Prospect, west half of Lot 29, 1st Concession, Blithfield Township, Renfrew County, Ontario. The prospect was reported to have been on the northeast corner of this lot, and about 2.5 km southwest from a north-south road 4 km to the west of Ashdad (Satterly, 1945). The rights to the property were sold in 1917 to the Schutz, Schreiner, and Clyde Company, of Pittsburgh, Pennsylvania (Satterly, quoting Eardley-Wilmot). Locally, the white crystalline limestone was intruded by pink granite or pegmatite. There were two pits in pyroxenite containing disseminated pyrrhotite, pyrite, and molybdenite.
- Quyon Molybdenite Company Property, Onslow Township, Pontiac County, Québec. See the listing for the Moss Mine, above.
- Quyon Molybdenum Mines Property, Thorne Township, Pontiac County, Québec. The company, of Toronto, was listed as an owner/operator from 1939 to 1940 (1940-1941).
- Renfrew Molybdenum (Belgian, Algonican) Mine, Lots 7, 8, and 9, 11th Concession, and Lot 8, 12th Concession, Brougham Township, Renfrew County, Ontario, near Mount Saint Patrick. The property was originally developed by a Belgian syndicate, also known as the Algonican Development Company. Work began in 1914, with an adit being driven 75 ft and 150 ft of drifting. The ore was tested in 1914 by the Québec Mines Branch in 1914

- (1915), along with that from the *Ross Mine*. It was also reported to have been tested in 1913 by the Canadian Mines Branch (1914). The molybdenite occurred with pyrite and pyrrhotite in a pyroxenite gangue, between Grenville limestone and pegmatite. In 1916, it was reported that a 60-ft drift with a 90-ft cross cut had been driven in the deposit. Preparations were also being made, in 1915 and 1916, for the sinking of a shaft and the erection of a mill (1916, 1917). By the end of 1917 the shaft had been sunk to 150 ft and three levels cut. Sixty-five men were employed in the mine (1917). The deposit was reported to have been about 180 m long and 12 m wide.
- T. E. Richardson Property, Lots 26 and 1a, 13th Range, Clarendon Township, Pontiac County, Québec. The property was reported to have been owned by a Mr. Richardson of Portage du Fort (1917).
- Richardson Prospect (Rose Property), Lot 22, 2nd Concession, Ross Township, Renfrew County, Ontario. The prospect was reported to have been about 1.5 km southwest of Haley Station and on the farm of John Rose, of Haley. It was developed by Thomas E. Richardson, of Portage du Fort, Québec, when a 50-ft long cut was opened in a pegmatite dike from two to four ft wide (1916). The ore occurred in a well-defined quartz vein with a width of about five ft. Pyrites and feldspar also occurred. It was mined in 1916 (1917).
- Riley Prospect, Lot 2, 4th Range, Thorne Township, Pontiac County, Québec. A shipment of 750 lbs was reported to have been made from this property in 1917 (1944). James Riley was listed as an owner/operator from 1932 to 1936 (1933-1937), but production was not mentioned. Molybdenite was reported to have been found at five places on the property as lenses in pyroxene-quartz rock in paragneiss, and as thin flakes in pegmatite (1944).
- Rose Mine, Lot 22, 2nd Concession, Ross Township, Renfrew County, Ontario. Near Haley Station, the occurrence was near the southwest corner of the Rose Farm. A trench and a 40-ft shaft were reported on the property (Satterly, 1945). It was noted, from Eardley-Wilmot, that the Maple Leaf Exploration Company, of Toronto, had sunk the shaft and produced a small quantity of ore in 1916-1917.
- Ross Mine, Lot 16, 11th Concession, Brougham Township, Renfrew County, Ontario. The mining rights to this property were reportedly purchased by Mr. C. G. Ross, of the Aldfield Mineral Syndicate, in 1914. These were subsequently sold to Molybdenum Limited, which optioned them to Mr. F. G. Todd, of Montréal. In 1917, the International Molybdenum Company leased it. Satterly (1945) reported that there were two old pits and a shaft. The property was close to the *O'Brien Mine*. Narrow stringers of pyrrhotite, pyrite and molybdenite were present in rusty granitic gneisses.
- Ross Property, Lot 58, 9th Range and Lot 57, 10th Range, Masham Township, Gatineau County, Québec (1918).
- Ross (Kert) Mine, near Indian Lake, East Aldfield area, La Pêche, Les-Collines-de-l'Outaouais, Québec. Museum-quality specimens were reported to have been obtained at this location by Mr. R. H. G. Clapham, a local resident, in 1884. The deposit was staked by Mr. C. G. Ross, of Ottawa. Operators have included: The Foote Mineral Company, Philadelphia, 1894; Aldfield Mineral Syndicate, World War I; Mining Corporation of Canada, World War I. It was idle until 1939, when specimens were mined by a group from Quyon, Québec. Sabina stated that good crystals can still be found in the dumps but did not report on ownership (1987).

- Ross Township Property, west half of Lot 7, 9th Concession, Ross Township, Renfrew County, Ontario. Near Mount Saint Patrick Excavations were reported to have been made a few years previously, with no recent work (1917). In 1934, this was reported to have been the most important shipper in Ontario (Canada, Mines Branch, 1934).
- Russell-Ponton (Russell) Mine, Lot 5, 11th Concession, Laxton Township, Victoria County, Ontario. The mine was reported to have been on the shore of Mud Turtle Lake near the village of Norland. It was reputed to be the first discovery of molybdenum in the province of Ontario, and was referred to by Sir William Logan (1916). The molybdenite was disseminated in a pyroxenite gangue, without other sulphides being present. In 1915, Capt. A. J. H. Russell was developing it and a seven-ft by nine-ft rectangular shaft had been sunk to 35 ft.
- Shannon Prospect, Belmont Township, Peterborough County, Ontario. The prospect was reported by Edward Shannon in 1916 (1917).
- Sills Occurrence, Lot 26, 8th Concession, Hinchinbrooke Township, Frontenac County, Ontario. On land then reportedly owned by S. Sills, flakes of molybdenite were observed in a pink pegmatite dike (Harding, 1951).
- Smith Prospect, Lot 6, 6th Concession, Olden Township, Frontenac County, Ontario. The lot is immediately south of the Macdonnell Property and was reported to have been worked in 1916-1917 by Ed. Smith, of Perth. The pit, in "hornblendic rock" was 20 ft long, four ft wide, and eight ft deep. It was in Grenville rocks in granite gneiss (Harding, 1951). Shipments were made to the Mines Branch, Ottawa, in 1917.
- Snake Lake Prospect, west half of Lot 28, 12th Concession, Bagot Township, Renfrew County, Ontario. The prospect was on the shore of Snake Lake near the boundary between Bagot and Blythfield Townships. In 1915 it was reported that R. R. Gamey had done some work on the prospect (1916).
- Spain Mine (Legree Prospect), Lots 30, 31, and 32, 4th Concession, and Lots 31, 32 and 33, 5th Concession, Griffith Township, Renfrew County, Ontario. The mine was about 46 km from Renfrew and 30 km from Caldwell on the Ottawa and Parry Sound Branch of the Grand Trunk Railway. The workings of the mine were in Lot 31, 4th Concession, just south of Highway 41, and 10 km northeast of Griffith Bridge. The mine was reported to have been opened by Joseph Legree, of Renfrew, in 1912, and bought by William J. Spain, of New York City, in 1915. The Steel Alloys Corporation took it over in 1918. The original workings, excavated by Mr. Spain, in 1915-1916, consisted of two pits and a 50-ft-deep shaft (Canada, Mines Branch, 1916) (Satterly, 1945). The molybdenite occurred with iron sulphides in a pyroxenite-calcite gangue, in two dikes separated by about 10 ft of gneiss. The total width of the deposit was about 25 ft. The flakes could be quite large, with some as much as a 30 cm across and in masses weighing 50 lb (1916). It produced in 1916 and 1917 (1917-1918). The North American Molybdenum Corporation was formed in 1939 and acquired 500 acres in the 4th and 5th Concessions of Griffith Township, including the old Spain Mine. The buildings were repaired and preparations made for geophysical surveys and diamond-drilling. The sinking of a shaft was begun (1941), while diamond-drilling took place in 1940 (1942). The mineralized zone was on the contact between biotite gneiss and Grenville limestone. Both were intruded by pegmatite. Sinkankis (1959) reported pale green scapolite, of faceting grade.

- Spratt Property, Lot 8, 15th Concession, Sheffield Township, Addington County (now Lennox and Addington), Ontario. A small pit was reported to be on the farm of Matthew Spratt. It was not being worked in either 1915 or 1916 (1916-1917).
- Squaw Lake Mine, Lots 19 to 26, 8th Range, Huddersfield Township, Pontiac County, Québec. This property, near the eastern end of Big Squaw Lake, is about 58 km from Shawville. It was being developed Wood Molybdenite Company Property, in 1917 (1918) and produced about 2 000 pounds during the first part of 1918 (1919, 1944). In 1943, it was estimated that the greater part of the mineralization on surface had been removed (1944). There were then three pits on Lot 24. The property was restaked by Lorenzo Hudon in 1960 (1962). Reportedly developed by intense contact metamorphism of Grenville series sedimentary rocks by granite gneisses, the deposits were very erratic and irregular. Impure limestones were converted to pyroxenes. Minerals present include scapolite, apatite, calcite, sphene, phlogopite, fluorite, pyrrhotite, pyrite, and molybdenite. There were several pits and cuts on the property.
- Standard Molybdenite Company Property, Lots 11 and 12, 3rd Range, Egan Township, Gatineau County (La-Vallée-de-la-Gatineau), Québec (1918).
- Storey Prospect, Lot 31, 5th Concession, Herschel Township, Hastings County, Ontario. Near the north shore of Baptiste Lake on the farm of Roy Storey, the prospect was tested about 1942. The molybdenite, in pyroxenite, was associated with the usual pegmatites cutting limestones (Thomson, 1943).
- Stoughton (Prospect, Property) Mine, north half of Lot 5, 16th Concession, Dungannon Township, Hastings County, Ontario. About 13 km northeast of Bancroft, the property was reportedly worked from 1917 to 1920 by J. Waring, of Madoc, and A. A. Stoughton, of Bessemer. A few shallow pits had been dug in the pegmatites which cut crystalline limestone and gneiss. The Bancroft Mining Company obtained an option in 1917, mined a few hundred pounds of ore, and sold a very small quantity of molybdenite (Thomson, 1943).
- Sunset Mine, Lots 35 and 36, 14th Concession, Brougham Township, Renfrew County, Ontario. The main pit and shaft were reported (Satterly, 1945) to be adjacent to a farm road in Lot 36, about 1.2 km southeast of Highway 41. The property was developed in 1917 by the Steel Alloys Corporation of New York and was worked in conjunction with their Spain Mine (refer to the listing). The open pit was reported as being 100 ft long, 10 ft wide, and as deep as 35 ft (1918). Satterly, however, gave the dimensions as 70 by 30 by six ft, and noted that a 70-ft shaft had been sunk from the bottom of the pit. The rock exposed was a rusty weathered biotite-quartz paragneiss.
- Super Metals and Exploration Company Property, Lot 6, 3rd Range, Egan Township, Gatineau County, Québec. Exploration and some drilling were reported to have been done in 1962 (1964).
- Tipping Property, Lots 4 and 5, 12th rang, Clarendon Township, Pontiac County, Québec. This prospect was reported to have been tested in 1918, when 10 tons were sent to the Ore Dressing laboratories of the Mines Branch, in Ottawa. The pit, in a steep hillside, was reported to have been up to 60 ft long, 20 ft wide, and 25 ft deep. Molybdenite, in flakes, was associated with pyroxenite. The local rocks were crystalline limestone, gneiss, pegmatite, and prroxenite (1944).

- Treasure Hill Mine, see the listing for the Evans Mine, above.
- Unnamed Deposit, Lot 3, 8th Concession, Miller Township, Renfrew County, Ontario (1916).
- Unnamed Deposit, Lot 5, Northeast Range, Miller Township, Renfrew County, Ontario (1916).
- Unnamed Deposit, Lot 7, 9th Concession, Ross Township, Renfrew County, Ontario. It was reported that no work had been done on this property for several years (1916).
- Unnamed Prospect, Lot 11, 5th Concession, Bagot Township, Renfrew County, Ontario. This prospect was reported to have been staked and restaked between 1917 and 1939, and a small pit dug (Satterly, 1945).
- Unnamed Mine, Lot 26, 4th Concession, Bagot Township, Renfrew County, Ontario. The pit, 40 ft long, up to 20 ft wide, and seven ft deep, was reportedly dug in 1940 (Satterly, 1945). A granite pegmatite sill overlay a pale green pyroxenite with scattered flakes of molybdenite. Crystalline limestone was above the sill.
- Unnamed Mine, Lot 27, 4th Concession, Bagot Township, Renfrew County, Ontario. Satterly (1945) reported two trenches and a shaft in the southwest corner of this lot. There were a few flakes of molybdenite in a pegmatite cutting white crystalline limestone.
- Vic-Ore (Property) Mine, Lots 54 to 58, 10th Range, Masham Township, Gatineau County, Québec. The mine was reported to have been adjacent to the north end of Indian Lake. A second property, at an unspecified location in Aldfield Township, was also mentioned in 1942 (1943). The company, from Toronto, was listed as a working owner from 1942 to 1944 (1943-1945) but work was not reported in 1945 (1946). In 1943, it was reported that there were about 25 pits of various sizes on Lots 54 and 55, as well as a 30-ft-deep shaft on Lot 55. A short cross-cut had been driven from the bottom of the shaft. The ore reserves were estimated at about 10 000 tons of mineralized rock. Locally, the crystalline limestone, granitized paragneiss, and pyroxenite, was intruded by granite, granite gneiss, and pegmatite. The molybdenite occurred in pyroxenite as high-grade pockets and lenses (1944).
- Wager Property, Lot 15, 16th Concession, Sheffield Township, Addington County (now Lennox and Addington County), Ontario. The deposit was reported to have been on the farm of William Wager (1916).
- Warren Property, west half of Lot 27, 4th Concession, Bagot Township, Renfrew County, Ontario. Pits were reported to have been developed on the farm of William Warren by W. J. Urquhart and seven men working for Mark J. Paterson and Sir Henry Pellatt. R. R. Gamey had the mineral rights under option (1916). The work started in September, 1915. Molybdenite occurred in connection with iron sulphides under an eight-foot cap of gneiss. Some mining took place in 1916 (1917).
- Welsh Property, Lot 1, 13th Range, Clarendon Township, Pontiac County, Québec. The deposit was reported to have been on the Welsh Farm (1927).
- Wilberforce Molybdenite Company Property, Lot 33, 15th Concession and part of Lot 33, 14th Concession, Cardiff Township, Haliburton County, Ontario. It was reported as being opened up in 1917 with a concentrator then under construction at Wilberforce (1918).
- Williams Prospect, Lots 27 and 28, 4th Concession, Herschel Township, Lanark County, Ontario. The prospect was reported to have been about 3 km west of Baptiste Station. A small quantity of ore was mined for testing at the Tivani ferro-molybdenum plant in 1918 (Thomson, 1943).

- Wilsh Property, Lot 1A, 13th Range, Clarendon Township, Pontiac County, Québec. At the time of the report, 1943, there were 10 pits of various sizes and an adit, 45 ft long, on the property. The ore zone was reported to have been about 200 m long. Molybdenite-bearing veins of pyroxenic pegmatite were reported to have cut the local granite gneiss. Coarse "bunches" and large flakes were noted (1944).
- Wilson Prospect, Lot 3, 6th Concession, Matawatchan Township, Renfrew County, Ontario. The prospect was reported to be on the farm of James Wilson (1916), on the south side of Aird Lake. It was in a mass of pyroxenite in pegmatite (Satterly, 1945).
- Windle-Liedtke Mine, see the Edgemont Mine listing, above.
- Weldon C. Young Property, Lots 21 and 22, 5th Range, Huddersfield Township, Pontiac County, Québec (1918).
- Zenith (Phoenix) Mine (also referred to as the Bagot Property), west halves of Lots 27 and 28, 4th Concession, Bagot Township, Renfrew County, Ontario. At Ashdad, about 16 km south of Renfrew, it was reported to have been discovered by William Warren, who sold the mining rights to Sir Henry Pellatt, in 1914 (Satterly, 1945). It was worked by M. J. Patterson between 1914 and 1916, and A. W. Taylor from 1917. It was then purchased, in 1924, by the Phoenix Molybdenite Corporation, which had been incorporated in 1923 (1938). Between 1924 and 1937, a shaft was sunk 205 ft, levels cut at 95 and 175 ft, several hundred ft of development done, and about 8600 tons of ore hoisted (1935-1939). A small mill was erected and the property produced intermittently from 1934 to 1937 (it was reported idle in 1934). About 25 were then employed. The Zenith Molybdenite Corporation was formed in 1937 and acquired the property in early 1938. Some 4800 ft of surface trenching was reported in 1938 (1940), while surface trenching and stripping was done in 1939 (1941). The workings of the mine, however, were allowed to flood in September, 1940 and it was idle in 1941 (1942). In 1942 it was leased to the government and was operated by the Wartime Metals Corporation (Québec, 1943). The shaft was then deepened to 200 ft, a headframe erected, and several buildings constructed (1946). Levels were cut at 75 and 195 ft. During 1943, 410 tons of ore were mined. Fifteen were employed underground and 18 on the surface (1944). The local rocks, an interbedded series of biotite paragneiss and crystalline limestones were cut by pegmatites and calcite veins (Satterly, 1945).
- Ziebarth Property, Lot 18, 7th Concession, Sebastopol Township, Renfrew County, Ontario. Two small dikes in gneiss and crystalline limestone were reported on the farm of Edward Ziebarth (1916).
- Ziebarth Occurrence, Lots 36, 37, and 38, Range C South, Opeongo Road, Sebastopol Township, Renfrew County, Ontario. On the farm of Edward Ziebarth, two dikes of pyritic pyroxene and pegmatite, in gneiss and crystalline limestone, were reported to contain some molybdenite (Satterly, 1945). This property was reported as early as 1917.

Nepheline Syenite

Nepheline syenite is a mineral which, when cleaned of contaminants, can be used in the manufacture of clear glass for containers. It is also used in place of feldspar in ceramics, glazes,

and enamels - being preferred over feldspar because of the higher content of alumina. Until 1936 the only producer of this mineral was Russia, but their ores contained fine particles of iron minerals which could not be removed. The Canadian deposits, however, while containing magnetite and biotite mica, could be cleaned by a magnetic separation process.

In Ontario, a belt of nepheline syenite extends across Haliburton and Hastings Counties from Blue Mountain, in the west, to Bancroft and the York River, in the east. These were first examined in 1899 and mined in 1935 (Hansen, 1997). By the mid-1970s, the two companies mining the Blue Mountain deposit, Indusmin Limited and International Minerals and Chemical Corporation (Canada) Limited, shared a North American monopoly in mining nepheline syenite (1973).

American Nepheline Mine, see the listing for Industrial Minerals of Canada.

Blue Mountain Nepheline Syenite Mine, see the listing for the Industrial Minerals and Chemical Corporation Mine.

Bresnahan Lake Occurrence, Lots 11 to 13, 1st Concession, and Lots 8 to 11, 2nd Concession, Monteagle Township, Hastings County, Ontario. The occurrence was reported to have been to the east of Bresnahan Lake. Hewitt (1955) reported a band of nepheline-poor plagioclase gneiss that extended westward south of the lake and then south to the Welsh Corundum Mine, on Lot 13, 1st Concession.

Brougham Occurrence, Lot 8, 15th Concession, Brougham Township, Renfrew County, Ontario. A band of nepheline-poor albite gneiss, cut by pegmatites, was reported by Satterly (1945). Scattered crystals of corundum were noted.

Brudenell Occurrence, Lot 26, 5th Concession, Brudenell Township, Renfrew County, Ontario. The occurrence was on the west side of the Letterkenny Road and south of Beardwood Lake. Hewitt (1954) reported a narrow band of nepheline gneiss with amphibolite, crystalline limestone, and syenite gneiss.

Canadian Flint and Spar Mine, Lot 10, 13th Concession, Dungannon Township, Hastings County, Ontario. Listed in 1942, the mine was operated for about six months in mid-year (1946).

Canadian Flint and Spar Mine, Lot 9, 14th Concession, Dungannon Township, Hastings County, Ontario. The property was first listed in 1939 (1941), and mining started in early 1940 (1942). The mine was located in nepheline pegmatite. The crystals of nepheline were reported to have been large, with a white rim of cancrinite around these. There were also pockets of zircon, galena, apatite, and the rare mineral hackmanite (Thomson, 1943).

Carlow Occurrence, Lots 4 and 5, 6th and 7th Concessions, Carlow Township, Hastings County, Ontario. Outcrop areas of nepheline-plagioclase gneiss, interbanded with nepheline-poor plagioclase gneiss, syenite, and syenite pegmatite, were reported on the east bank of the York River (Hewitt, 1955).

Carlow Occurrence, Lots 12 and 13, 10th Concession, Carlow Township, Hastings County, Ontario. Outcrops of nepheline gneiss, with albite, hornblende, biotite, and magnetite, were reported by Hewitt (1955) on the north bank of the York River.

Carlow Occurrences, Lots 23 and 26, 10th Concession, Carlow Township, Hastings County, Ontario. On Lot 23, about 80 m east of the York River and 200 m south of a wagon road, the occurrence was of nepheline and pyroxene (Hewitt, 1955). A second occurrence was on the north bank of the river, on Lot 26, at the Prentice Cabin.

- Carlow Occurrence, Lot 28, 16th Concession, Carlow Township, Hastings County, Ontario. Hewitt (1955) reported a narrow band of nepheline-biotite-scapolite gneiss on the east shore of a small pond.
- Davis Quarry, Lot 9, 14th Concession, Dungannon Township, Hastings County, Ontario. The mine was about 3.5 km north of East Road and accessible by road from the York River bridge at Egan Chute (Hewitt & James, 1956). It was opened by Canadian Flint and Spar in 1940, and, from then until its closing in 1942, 944 tons of nepheline pegmatite were produced. The quarry was 100 ft long, from 30 to 40 ft wide, and with faces from 10 to 25 ft high. In a coarse-grained nepheline pegmatite, the minerals consisted of nepheline, albite, microcline, tourmaline, biotite, zircon, apatite, cancrinite, giesseckite, muscovite, hackmanite, calcite, allanite, and galena. Hewitt and James (1956) mentioned that the quarry was known for its hackmanite and large zircon crystals.
- Goddard Lake Occurrence, Lot 3, 4th Concession, and Lots 4 to 6, 3rd Concession, Monteagle Township, Hastings County, Ontario. On these properties, a band of nepheline gneiss was reported to extend for about 1.5 km in a southwest direction from the west shore of Goddard Lake. Magnetite was mentioned as a common accessory mineral, and nepheline crystals, up to 10 to 15 cm in diameter, were noted (Hewitt, 1955).
- Gooderham Nepheline, Lot 30, 4th Concession, Glamorgan Township, Haliburton County, Ontario. Near Gooderham, it was opened in 1937 by Gooderham-Nepheline (Canada, Mines Branch, 1939). It operated from 1938 (1940). The rock was reported to be coarsely pegmatitic, consisting of almost pure nepheline.
- Goulding-Keene Company/New England Nepheline Company (York River) Mine, Lot 12, 11th Concession, Dungannon Township, Hastings County, Ontario. The mine was on the west side of the York River, north of the Bancroft-Hermon Road, and 30 m north of the East Road (Hewitt, 1961). It was opened in 1937 by the Goulding-Keene Company of Keene, New Hampshire, and an affiliate, the New England Nepheline Company. It, and the *Vardy Quarry* (refer to the listing below) were mined until 1939. A total of 11 092 tons was produced (Hewitt & James, 1956). When Thomson (1943) reported on it the quarry was 80 ft by 60 ft, with a 40-ft face (Hewitt, 1961). The ore was described as coarsely-crystallized nepheline pegmatite, while Hewitt described it as a "giant nepheline pegmatite". Crystals and masses of nepheline and albite were mentioned as being up to about 2.5 m. in the largest dimensions, with large books of biotite mica, up to about 0.6 m in size. Other minerals mentioned were calcite, apatite, corundum, zircon, sodalite, cancrinite, and hydronephelite (Thomson, 1943).
- Goulding-Keene Company Mine, Lot 23, 14th Concession, Dungannon Township, Hastings County, Ontario. The mine, in a ridge of nepheline syenite, was reported to have been opened in 1937. It was abandoned prior to 1943, and was then 80 ft long, 50 ft wide, and with a 20-ft face (Thomson, 1943).
- Gutz Occurrence, Lot 34, 5th Concession, Brudenell Township, Renfrew County, Ontario. The occurrence, a band of gneiss containing nepheline, about five m wide, was south of the farmhouse of Richard Gutz (Hewitt, 1954).
- Heiderman Lake Occurrence, Lot 6, 13th Concession, Lyndoch Township, Renfrew County, Ontario. A part of the Wolfe nepheline belt, at this location the gneisses were about 150 m wide and 600 m long (Hewitt, 1954).

- Hennessey Quarry, Dungannon Township, Hastings County, Ontario. Opened in 1938 by New England Nepheline. The rock was reported to be coarsely pegmatitic and relatively pure nepheline (Canada, Mines Branch, 1939).
- Indusmin, see the listing for Unimin, below.
- International Minerals and Chemical Corporation Mine, see the listing for Sobin Chemicals (Canada) Limited, below.
- Wesley Kargus Prospect, Lots 13 and 14, 14th Concession, Lyndoch Township, Renfrew County, Ontario. On the Kargus Farm, the nepheline-bearing gneisses could be traced for about 800 m. Hewitt (1954) reported that shallow trenches and pits had been dug at the west end of the ridge. Apatite, fluorite, biotite, and hornblende were mentioned as the minerals present.
- Maloney Property, Lot 11, 14th Concession, Brougham Township, Renfrew County, Ontario. On the farm of J. J. Maloney a band of nepheline-albite gneiss was reported to have contained too much biotite to have been useful for ceramics (Satterly, 1945).
- Monteagle Minerals Property, Lots 2 and 3, 2nd Concession, Monteagle Township, Hastings County, Ontario. The property was reported to have been originally explored for corundum, in 1906, by the Canada Corundum Company. It was then drilled in 1915. In 1947, further exploration was done by Louis Moyd for the American Abrasive Company. The work consisted of further trenching and sampling. In 1950, Ortona Gold Mines obtained an option and test work was conducted during 1951-1953 by the Bureau of Mines, at Ottawa. From this, it was determined that a satisfactory nepheline-plagioclase-scapolite product could be produced through flotation (Hewitt, 1955). On the property, the principal deposit was a ridge, about 400 m long and 20 m wide. This was comprised of a muscovite-biotite-nepheline-scapolite-plagioclase-corundum gneiss.
- Morrison Quarries (three), Lot 10, 13th Concession, Dungannon Township, Hastings County, Ontario. The mine was on the Davis Quarry Road on the east side of the York River and about 2.5 km north of East Road (Hewitt & James, 1956). It was operated in 1939 and 1940 by the Temagami Development Company and 1 663 tons of nepheline pegmatite produced, with shipments being made to the United Feldspar Corporation, of Maine. It was then acquired by the American Nepheline Corporation and bulk-sampled (Thomson, 1943). The quarry, and two other smaller ones were in a nepheline-albite pegmatite which cut nepheline-plagioclase gneiss. Biotite, sodalite, cancrinite, apatite, and calcite were mentioned.
- Nepheline Company (Morrison) Property, Lot 14, 9th Concession, Methuen Township, Peterborough County, Ontario, at Mountain Lake. Originally owned by William Morrison, of Toronto, it was listed in 1934-1935 (1935-1936). The Nepheline Company was formed by William Morrison and associates, in 1935, with the intention of developing the deposit to supply the glass industry.
- New England Nepheline Company Mine, see the listing for Goulding-Keene, above.
- M. J. O'Brien Property, Methuen Township, Peterborough County, Ontario. The property was reported to have been at the east end of the Blue Mountain syenite body, and about 39 km north of Havelock (Canada, Mines Branch, 1939).
- Raglan Occurrence, Lots 12 to 14, 15th Concession, Raglan Township, Renfrew County, Ontario. Hewitt (1954) mentioned an occurrence of nepheline-albite gneiss, interbanded with

- syenite gneiss and amphibolite, about 400 m wide and 800 m long.
- Reid Lake Occurrences, Lot 34, 7th Concession, Brudenell Township, Renfrew County, Ontario. Hewitt (1954) reported occurrences, from about 30 to 60 m in width, both north and south of the lake. The rocks were described as a nepheline-scapolite-plagioclase gneiss.
- Robbins (Quarry) Mine, Lot 27, 13th Concession, Dungannon Township, Hastings County, Ontario. The mine was about 800 m south of East Road at the south end of the lot (Hewitt & James, 1956) and on the side of a hill which had been cut into benches (Hewitt, 1961). A small quarry was reported to have been opened by William Robbins in a nepheline pegmatite which cut a nepheline syenite gneiss. The minerals reported were nepheline, albite, biotite, magnetite, calcite, apatite, cancrinite, sodalite, giesseckite, hydronephelite (Hewitt & James, 1956).
- Sobin Chemicals (Canada) Limited (Blue Mountain Nepheline Syenite, International Minerals and Chemical Corporation) Mine, Lots 19, 20 and 21, 6th Concession, Methuen Township, Peterborough County, Ontario. The property, on six claims, or about 450 acres, and owned by the company was at the northeast end of Blue Mountain, about 40 km north of Havelock (1972), and 51 km northeast of Peterborough. In 1955 the Canadian Flint and Spar Company (incorporated 1931) became International Minerals and Chemical Corporation (Canada). The company owned these claims and began to construct a mill, with a capacity of 300 tons per day, in 1955. A limited quantity of ore, for testing in the mill, was mined from the mining benches which had been cut into the hillside (1957). The mill was completed in 1956 and mining began shortly before mid-year, with about 15 000 tons being mined (1958). By 1969, this had increased more-or-less steadily to 260 000 tons (1971). It was 237 000 tons the following year, 1970 (1972). In 1973, the company became Sobin Chemicals (Canada) Limited. It undertook a major expansion, by increasing capacity to about 900 tons per day (1974). Production was reported until at least 1974 (1978).
- Temagami Development Company Mine, see the listing for the Morrison Quarry, above.
- Unimin Canada (Blue Mountain, Nephton, Cabin Ridge, American Nepheline, Industrial Minerals of Canada, Indusmin) Mine, Lot 14, 9th Concession, Methuen Township, Peterborough County, Ontario. At Nephton, at the west end of Blue Mountain, about 43 km from Lakefield, and 50 km northeast of Peterborough, the property comprised 2466 acres (1970). It was opened in 1936 by Canadian Nepheline (Canada, Mines Branch, 1939). In 1945, American Nepheline was incorporated. The name was changed to Industrial Minerals of Canada in 1961, and to Indusmin in 1962 (1964). In 1967, Indusmin and the Canadian Silica Corporation amalgamated and resumed the name of Industrial Minerals of Canada (1969). By the following year, 1968, it became known as The Nepheline Syenite Division of Indusmin Limited (1970). Sometime later, it became known as Unimin Canada Limited, the name by which it is known today (i.e., 1999). At the beginning, the ore was transported in barges through Stony, Clear, and Katchewanooka Lakes, of the Kawartha Lakes to Lakefield (Hansen, 1997). Production in 1943 was 56 000 tons of nepheline syenite (1944). By 1945, the quarry was 2000 ft long with a face 60 ft high, in three benches. Plans were being made for developing a glory-hole at the top of the ridge. To that end, an adit had been driven in 250 ft, and a raise was to be driven the 150 ft to the surface (Canada, Mines Branch, 1946). American Nepheline, incorporated in 1937,

acquired the property and assets of their former subsidiary in 1940 (1942). This corporation was, in turn, acquired by American Nepheline, Limited, after the latter's incorporation in 1945 (1948). Production in 1944 was reported to have been 57 913 tons of nepheline syenite (1947), with 25 employed at the mine. In 1945, a tunnel, inclined at 10 degrees, was begun on the south side of the syenite ridge (1948). This was driven to 311 ft in 1946 (1948). Two shrinkage stopes were developed underground in 1947 (1949). A new quarry, the Cabin Ridge Section was opened in 1948, and total production was 94 206 tons (1950). Between 1947 and 1970 annual production increased from about 75 000 to about 380 000 tons (1949-1972). In 1952-1954, it was mentioned as being the sole producer in the western hemisphere (Canada, Mines Branch, 1953-1955). A 25-km spur of the Canadian Pacific Railway, from Nephton to the main line, at Havelock, was completed at the end of 1954. The mill at Lakefield was reported to have closed in 1955 (Hansen, 1997), but, concurrently, a new mill with a capacity of 600 tons per day, was constructed at Nephton (1957). Production was reported to at least 1974 (1978).

Vardy Quarry, Lot 23, 14th Concession, Dungannon Township, Hastings County, Ontario. The mine, on the north side of the Clark (Clear) Lake Road, was reported to have been opened in 1937 by the Goulding-Keene Company, of Keene, New Hampshire. The company operated this and the Goulding-Keene Quarry (refer to the listing) until 1939. Hewitt and James (1956) reported that the quarry was 80 ft long, 40 ft wide, and with a face from 10 to 16 ft high. It was in a nepheline-plagioclase gneiss (Hewitt, 1961).

Welk-Remus Ridge Occurrence, Lots 10 to 12, 14th Concession, Lyndoch Township, Renfrew County, Ontario. A part of the Wolfe Nepheline Belt, this occurrence, on the Welk and Remus Farms, was considered too low in grade to be of interest (Hewitt, 1954).

Nickel

Nickel is used as an alloy in steel to add both strength, toughness, and resistance to corrosion to the final product. Stainless steel is used for cutlery, utensils, counter tops, sinks, and many other culinary and medical applications. Pure nickel is used for coinage and in storage batteries.

McFarlane Occurrence. The occurrence was reported to have been on the farm of G. S. McFarlane, about 30 km from Ottawa (1891).

Ochre

Ochre, or iron oxide, was used for the manufacture of paints and, when hydrated, for the purification of illuminating gases. Early settlers in the area used the mineral to paint their houses, and Lac Nominigue, in Québec, where small deposits are found, derives its name from the Iroquois "place of red paint" (1935).

The local deposits occurred in "kettles", or pits, in the drift which were created by the melting of large blocks of glacial ice. These were later filled by the precipitation of hydrated iron oxide.

- Canadian Siennas Limited (Property) Mine, Lot 18, 4th Range, and Lots 19, 20, and 21, 3rd Range, Lynch Township, Labelle County, Québec. The deposits were known to the First Nations peoples and the settlers, and were reported to have been first exploited by François Dufresne about 1919 (1935). These were then worked by: Canadian Products, Iron Oxide Products, and Canadian Siennas. In 1934, the bogs were estimated to contain about 200 000 tons of limonite (Osborne, 1935). Production was not reported in 1935 (1936).
- Hart Property, Lynch Township, Labelle County, Québec. J. Hart, of Montréal, was listed as an owner/operator in 1938 (1939).
- McNicoll (Property) Mine, Lots 74 and 75 of the range southwest of the Rouge River and Lots 76 and 77 of the range northwest of the river, Marchand Township, Labelle County, Québec (the numbers of the ranges were not given). The mine was reported to have been about 6.5 km north of L'Annonciation Station on the Canadian Pacific Railway's Montréal-Mont Laurier line, and reportedly easily reached by automobile from the L'Annonciation - L'Ascension road (1941). From the description, it is assumed that this is the property that was worked by Iron Oxide Products, Limited between 1935 and 1937 (1941), and then for a brief period in 1939 by Eugène McNicoll (1940). The deposit lies in the old bed of the Rouge River, about 100 to 300 m west of its present course. The ochre is beneath peat and, on average, is about one metre thick (1941).
- South Crosby Occurrence, Lot 4, 5th Concession, South Crosby Township, Leeds County, Ontario. The occurrence was said to have been originally a pocket in Grenville limestone which had been filled with ochre leached from the overlying Potsdam sandstone. The sandstone then eroded, leaving the ochre exposed. Of the highest quality, the small quantity was mined and shipped to a paint factory (1922).
- Unnamed property, Lot 15, 10th Range, Hull Township, Wright County (now Gatineau County), Québec. This deposit was first reported in 1913 (1914).

Peat

Peat is partially decayed plant matter found in ancient bogs or swamps. When dried, it can be used as a fuel, or to dress gardens. The former was of interest in the early part of the 20th Century when peat was thought to be a potentially important supply of fuel. The latter is the common present application, when peat is used to enrich soils - - particularly regarding its value in breaking up clay soils and in retaining moisture.

- Alfred Bog, Lot 9, 7th Concession, Alfred Township, Prescott County, Ontario.. This huge bog of about 2835 hectares, south of Alfred and near Caledonia Springs, was reported to have been operated on an experimental basis by the Canada Department of Mines from 1910 to 1911. A subsequent attempt, by private interests prior to World War I, also failed. It was operated again in 1925 by Peat Fuels Limited, of Montréal (1927) and in the early 1940s (Sabina, 1986).
- Brockville Bog, Elizabethtown Township, Leeds County, Ontario. About 3 km north of Brockville, the bog covers an area of 1400 acres. The ownership was reportedly

- transferred to Peat Industries Limited, of Brantford, in 1902 (1903).
- Daley Bog, Lot 29, 5th Concession, Osgoode Township, Carleton County, Ontario. This bog was reported to have been mined in 1939 (1941).
- Diamond Clay Products, Roxborough Township, Stormont County, Ontario. The company was listed as a producer from 1968 (1970) to 1970 (1972).
- Diamond Peat Moss, Osnabruck and Roxborough Townships, Stormont County, Ontario. This company was listed as a producer from 1970 (1972) until at least 1974 (1978).
- La Compagnie de Charbon Oigny, Hull, Québec. This company was reported as an owner/operator in 1923 (1924).
- Perth Bog, Drummond Township, Lanark County, Ontario. This bog is about 2 km north of Perth and 1 km from the Canadian Pacific Railway. Estimated at 2000 acres, it was known locally as *Blueberry Marsh*. The Lanark County Peat Fuel Company, of Perth, reportedly owned a small portion of it in 1902 (1903).
- Sainte-Hyacinthe Bog, Sainte-Hyacinthe, Québec. Operated by the Hydropeat Company, it was first mined in 1929, when about 1600 tons were produced (1930). It was reported to have not been mined in 1931 as adequate stocks were on hand (1932). Reported as owner/operator from 1932 to 1934 (1933-1935). The operation was discontinued in 1935 since the product, in spite of being of high quality, could not compete with hardwood, which then sold for \$5 a cord in the vicinity (1936).

Phosphate (Apatite)

Phosphate is used principally in the manufacture of fertilizers. During the latter part of the 19th Century, particularly between the years 1880 and 1890, the area described in these listings was the centre of phosphate mining in Canada. Nearly all of the deposits were those same pegmatite dikes that contain important quantities of mica and feldspar. The most important areas were around the Gatineau and Lièvre Rivers in Québec and in Frontenac, Lanark, and Leeds counties, Ontario. In many instances small pits were opened by farmers, who mined them during the winter months. The apatite, together with the potash leached from wood ash from the wood burned from newly-cleared land, produced a secondary source of income in the off-season.

During the last part of the 19th Century, many of these deposits were mined first for apatite. The discovery of significant deposits of animal phosphates, or guano, in the southern United States of America, however, resulted in the more expensive Canadian products being driven from the markets. The period of peak production was from 1878 to 1892, and it declined rapidly thereafter. During the peak period, about 260 000 tons of hand-sorted ore were produced by the mines of the Buckingham area alone (1950). By 1930, the total production from Québec mines was only 40 tons (1931). Production continued at low levels for the following years, with none being recorded in 1947-1948, 1951-1953 (Canada, 1949, 1953-1954)(Québec, 1952).

At about the time that the demand for apatite was at its lowest, the electrification of the Ottawa area, and, indeed, North America, began. Mica, because of its properties as an insulator was in great demand. The result was that many of these same deposits were mined once again.

The cycle was repeated a third time after the peak demand for mica had passed but at a time when both silica (quartz) and feldspar were required.

In the following list, several names are listed as owner/operators long after the period of production had passed. Thus, "owner" is probably appropriate while "operator" is not! In the earlier years the listings in the annual reports did not indicate if work had been done in that particular period. In later years, those who had done work on their properties, were indicated by an asterisk.

Aetna (later Etna Hill Mine) Mine, south halves of Lots 17 and 18, 12th Range, Buckingham Township, Papineau County, Québec. The mine was next to the Emerald Mine. Operations were reported to have begun in 1889, by the Anglo-Continental Guano Company, of London, England. It seems to have become the Etna Hill Mine when the property was taken over by the British Phosphate Company, of London, England, about 1892.

Arnold Mine, Lot 3, 2nd Range, Derry Township, Papineau County, Québec. Operated by the Du Lièvre Milling and Manufacturing Company, Obalski (1890) reported that this mine and its neighbour, the Lillies Mine, had been operated for several years and were abandoned by 1890.

Bacon and Company, Lots 2 and 3, 2nd Range, with neither the Township nor the County stated, Québec. The mine was reported to have started in 1885 (Obalski, 1890).

Barber Mine, Lot 16, 16th Range, Hull Township, Ottawa County (now Gatineau County), Québec (Obalski, 1890).

Barry Lake Mining Company Property, Portland West Township, Papineau County, Québec. The company, from Québec City, was listed as a working owner/operator from 1941 to 1942 (1942-1943).

Battle Lake Mine (Lièvre River Land and Phosphate Company), Lots 4 and 5, 13th Range, Templeton Township, Papineau County, Québec. The mine, about 90 m from the north shore of Battle Lake, was reported to have been operated between 1886 and 1887 by the Anglo-Canadian Phosphate Company. Abandoned in 1887, it was acquired by the Wallingford Mica Company about 1900 and was worked for mica until at least 1920 (White). It may also have been worked by the East Templeton District Phosphate Mining Syndicate Limited, a company formed by Lomer, Rohr & Company, phosphate merchants of Montréal. The Anglo-Canadian Company was also reported to have had operations at Bob's Lake and Otty Lake, Ontario (Obalski). The pit was about 200 ft across and 70 ft deep, with drifts being cut to follow the veins at the bottom. Work by the original owners was also reported on Lots 6 and 7 (White).

Bedford Properties (four pits), Lots 27, 28, and 30, 10th Concession, Bedford Township, Frontenac County, Ontario, near Westport (1891).

Bedore (Adams, Anglo-Canadian Phosphate) Mine, Lot 32, 7th Concession, Bedford Township, Frontenac County, Ontario. The mine was reported to have been on property belonging to Hilliard Bedore (Harding, 1951). Harding reported that, during the 1880s and 1890s, apatite was produced from a band of numerous shallow pits along the peninsula separating Mud Bay from Bob's Lake (in Lots 32 and 33). Mining began, by R. C. Adams, in the

1880s, and was continued by the Anglo-Canadian Phosphate Company, of Liverpool, England. The ore was transported by boat to the south end of Bob's Lake, then by wagon to the railway. The pink apatite, in both massive and crystalline forms, occurred with mica, hornblende, and pyroxene.

- Big Union Mine, in the 7th to 10th Ranges, Portland West Township, Papineau County, Québec. This mine was reported to have been an important producer at the end of the 19th Century. In 1949, an option to purchase it, and other properties, was held by Québec Smelting and Refining (1950). (refer to that listing).
- Bigelow Property, Portland East Township, Papineau County, Québec. Robert Bigelow, of Glen Almond, was listed as a working owner/operator in 1941 (1942) (see also the listing for the Brazeau Mine, below).
- Bigelow Property, Lot 27, 5th Range, Bowman Township, Papineau County, Québec. Robert Bigelow was listed as the working owner/operator from 1942 to 1946 (1943-1947). Robert Bigelow and Sons was mentioned as being one of the two operators that produced intermittently in 1946 - the other being Stanley Cross. It was probably one of the two mines from which a small quantity was reported to have been produced in 1947 (1948).
- Blackburn Mine (R. Blackburn Mine) (McLaren & Blackburn Mine), Lot 10, 11th Range, Templeton Township, Papineau County, Québec. Operated in 1888 by Messrs. Blackburn & McLaren, the property was subsequently owned by Mr. R. Blackburn, and, in 1889, sold to the East Templeton District Phosphate Mining Syndicate Limited, which also mined it for mica (1892). The Blackburn Brothers, of Ottawa, were reported as owners/operators in Québec from 1909 to 1946 (1910-1947). It is not certain when it ceased producing phosphate as its principal product but it must have been well before 1930, as the total provincial output was only 40 tons during that year. It produced the entire provincial output of 100 tons in 1937 (1938), 208 tons in 1938 (1939), and that as a by-product. In 1912, the Canadian Mines Branch reported that it was one of the two phosphate mines then operating in the country (1913) - the other being the Little Rapids mine (refer to the listing).
- Brazeau Mine, Lot 27, 5th Range, Bowman Township, Papineau County, Québec. This old mine, which had been idle for many years, was reported to have been reopened in 1942 by Robert Bigelow, of Glen Almond. There were then several small openings on the property, the largest being 40 ft long, 20 ft wide, and 45 ft deep. These were in greyish-green to green apatite. About 500 tons were mined in 1942 (1943). In 1943-1945, it was run by Robert Bigelow and Tissel (Tessel) Hill. Mining was in the main pit, from which 900 tons of hand-picked apatite were shipped. Old workings, about 300 m northwest of the pit were de-watered and examined (1944-1946). Production was intermittent.
- Brazeau Mine, Lot A32, 6th Range, Bowman Township, Papineau County, Québec. Operated by R. Bigelow in 1945 (Canada, Mines Branch, 1946), it was reported to have been one of the three Québec producers that year. (See also the listing for Bigelow, above).
- Brecklin Mine, about 9 km northeast of Wilson's Corners, Québec, near Lac McGregor. It was reported to have been operated for two years, in the 1880s, by a Mr. Brecklin. Sabina reported (1987) that the property was then owned by Mr. Maurice Last.
- Campsall Occurrence, Lot 3, 2nd Concession, Hinchinbrooke Township, Frontenac County, Ontario, on the farm of Ernie Campsall. Small crystals of green apatite were reported to

- have been disseminated in crystalline limestone (Harding, 1951).
- Canada Industrial Company Mines (two), Lots 17A and 21B, 6th Range, Templeton Township, Papineau County, Québec. Owned by this company, of Montréal, the pits were worked prior to 1905. Cirkel reported that the dumps contained large amounts of mica.
- Canada Industrial Company Mine, north half of Lot 16, 10th Range, Templeton Township, Papineau County, Québec. The mine was reported by Cirkel (1905) to have been worked in the 1880s.
- Canada Industrial Company Mine, Lot 28, 10th Range, Templeton Township, Papineau County, Québec. This mine was also reported to have been worked in the 1880s (Cirkel, 1905).
- Canadian Phosphate Mining Company Mine, Lot 28, 10th Concession, Bedford Township, Frontenac County, Ontario. A small quantity was reported to have been mined from shallow pits in 1950 (1952).
- Cap Rock Mine, in the 7th to 10th Ranges, Portland West Township, Papineau County, Québec. The mine was reported to have been an important producer at the end of the 19th Century. In 1949, an option to purchase it, and other properties, was held by Québec Smelting and Refining (1950) (refer to the listing). While no work was done in 1959, some was planned for 1960 (1961).
- Capelton Fertilizer Company, Buckingham, Québec. The company was listed as a producer in 1909 (1910) and as an owner/operator from 1927 to 1932 (1928-1933).
- Captain Adams Mines, Lot 4, 8th Concession, North Burgess Township, Lanark County, Ontario. It was reported that these "were worked on a large scale for many years, until recently (1902) for apatite and amber mica". The property was adjacent to McLaren's Mica Mine.
- Card Occurrence, Lot 14, Faraday Township, Hastings County, Ontario, north of the Monck Road on the farm of William Card. The pit was mentioned as having been 20 ft long, four ft wide, and five ft deep. Thomson (1943) also reported small inclusions of crystalline limestone in the local red granites and pegmatites. Some of the open fissures and vugs were filled with crystals of apatite, calcite, pyroxene, and titanite (sphene). There were also crystals of garnet and zircon (or cyrtolite) in the pegmatites. The largest apatite crystals were reported to have been about 30 cm long and 15 cm in diameter.
- Card Occurrence, Lot 16, Faraday Township, Hastings County, Ontario. On this property, also north of the Monck Road, and belonging to Miner Card, a pit, 25 ft long, three ft wide, and five ft deep, had been excavated in a fissure in the granite. The walls were reported to have been lined with crystals of apatite, quartz, fluorite, pyroxene, hornblende, cyrtolite, and feldspar (Thomson, 1943). Calcite, apatite, and titanite (sphene) were also mentioned.
- Cardiff Occurrence, Lot 22, 19th Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) mentioned a small pit, then overgrown, to the north of the road on the lot. Crystals of green-brown apatite, up to 30 cm long, occurred in a calcite vein which cut syenite gneiss and amphibolite.
- Pierre Carisse (Carissi) Property, Templeton Township, Papineau County, Québec. Mr. Carisse, of Perkins Mills, was listed as an owner/operator from 1927 to 1928 (1928-1929) and 1932 (1933), as Carissi.
- Central Lake Mine, Lots 7, 8, 9, and 10, 10th Range, Portland West Township, Papineau County, Québec. The mine was reported to have been operated by S. P. Franchot and Company from 1887.

- Chapleau Mine, Portland Township, Papineau County, Québec (1885).
- Code Property, Québec. Willard Code, of Buckingham, was reported as an owner/operator in 1931 (1932).
- Coe Lake Mine, west half of Lot 5, 9th Concession of Loughborough Township, Frontenac County, Ontario. The mine was reportedly owned by a Mr. Sterling in 1892 (1892).
- Walter Cole Property, Québec. Mr Cole, of Buckingham, was reported as an owner operator from 1928 to 1929 (1929-1930). Willard Cole was listed in 1930 (1931), as was William Cole in 1932 (1933).
- Commercial Mineral Products Properties, Portland West and Buckingham Townships, Papineau County, Québec. The company, of Montréal, was listed as an owner/operator from 1940 to 1942 (1941-1943). Work was reported in 1941-1942.
- Concession Mine, Ontario. The mine was reported as being idle in 1892 (1891, 1892).
- Connor Mine, Hull Township, Gatineau County, Québec. It was reported as having produced a small amount in 1939 and 1940 (1940-1941).
- Cote Quarry, about 5 km northwest of Cantley, Québec. It was reported to have been worked from 1928 to 1929 by Mr. A. Wallingford, of Gatineau Point (Pointe-Gatineau), and in 1929 by the Gatineau Feldspar Company. It was again operated by the Wallingfords from 1948 to 1949. Sabina reported (1987) that the farm property then belonged to Mr. J. P. Brunet.
- Crang Corporation Property, Buckingham Township, Papineau County, Québec. The J. K. Crang Corporation, of Toronto, was listed as a working owner/operator in 1942 (1943).
- Cross Mine, Lot 13, 14th Range, Hull Township, Gatineau County, Québec. Walter C. Cross was listed as an owner/operator in 1936 (1937). In 1946, Stanley Cross was mentioned as having been one of the two intermittent producers in that year - the other being Robert Bigelow and Sons (1947). It was probably one of the two operations that was reported to have produced a small quantity in 1947 (1948).
- Crow Lake Mine, Ontario. The mine was reported as idle in 1892 (1892).
- Crown Hill Mine (three pits), Lots 3 and 4, 7th Range, Portland West Township, Papineau County (Ottawa County at the time), Québec. The mine was operated by the Union Phosphate Mining and Land Company, New York, from 1882 to 1888, and by the Canadian Phosphate Company, of London, England, thereafter (1892).
- Davis Mine, Lot 9, 12th Range, Hull Township, Gatineau County (Ottawa County at the time), Québec (Obalski, 1890).
- Davis Property, Portland East Township, Papineau County, Québec. N. B. Davis, of Ottawa, was listed as an owner/operator from 1939 to 1944 (1940-1945).
- De Rainville Property, Wakefield Township, Gatineau County, Québec. Jos. De Rainville, of St. Pierre de Wakefield, was reported as an owner/operator from 1923 to 1926 (1924-1927).
- Dominion Phosphate Mining Company, north half of Lot 8, 1st Range of Portland East Township, Papineau County, Québec. Operations were reported to have begun in 1889.
- Dugway Mine, Lots 1, 2, and 7, 8th Range, Portland West Township, Papineau County, Québec. Once operated by the Phosphate of Lime Company, the mine was reported as abandoned in the Québec report of 1885.
- Eagle Lake Mine, Lots 29 and 30, 1st Concession, Hinchinbrooke Township, Frontenac County, Ontario. The mine was reported to have been on the farm of D. J. Howes (Harding,

1951), west of Highway 38, and north of the north extension of the southeast arm of Eagle Lake. Harding reported that several pits along the side of a hill had been operated for phosphate by Boyd Smith during the period 1887-1891 (see also the listings for the Silver Lake and Smith Mines, below). Four thousand tons was reported to have been mined during this period. The property was reported idle in 1892 (1891, 1892). In 1943, the property was leased by I. S. Goudie, of Toronto, from Henrietta and Kathleen Jenkins, the owners of the mineral rights. The pits were in veins which cut gneisses. The mineral reported were green apatite, hornblende, pyroxene, and calcite. Other pits on Lot 30, near the highway, were mentioned.

Electric Reduction Company, of Buckingham, Québec. The company was reported as a producer from 1911 to 1912 (1912, 1913).

Elliott (Elliott's) Mine, Lot 7, 9th Concession, Ross Township, Renfrew County, Ontario. Several openings were reported to have been made in a band of limestone containing apatite, scapolite, and titanite (sphene) crystals. Masses of pyroxene studded with titanite crystals, black hornblende crystals, purple fluor spar, and black spinel were also mentioned. Production in 1883 was said to have been about one ton of crystals (Satterly, 1945, quoting others). It was later reported again as a source of sphene in pyroxene (Sinkankis, 1959).

Emerald Mine, Lot 19, 12th Range, Buckingham Township, Papineau County, Québec, about 2 km southwest of Glen Almond. The mine was reported to have been operated from 1875 to 1892 by the Buckingham Mining Company, Murray & Allan, W. A. Allan, the Ottawa Phosphate Company Limited (ca. 1888-1889), and either the MacLaren Phosphate Mining Syndicate Limited or the East Templeton District Phosphate Mining Syndicate (both holding companies formed by Lomer, Rohr & Company, phosphate Merchants, of Montréal) about 1890 (Obalski), the Dominion Phosphate Company, and again by Commercial Mineral Products from 1941 to 1942. It was also reported (Québec, 1885) that 80 men mined up to 5000 tons per annum. Sabina (1986) reported that the property was then on Mr. T. Lauzon's farm.

Fairy Mine, Lot 9, 7th Concession, North Burgess Township, Lanark County, Ontario. In 1919, the Dominion Improvement and Development Company, which owned this old mine, reportedly planned to reopen it (1920).

Farmers Phosphate Mines Properties, Derry Township, Papineau County, and Portland West Township, Papineau County, Québec. The company, from Toronto, was listed as the owner of these properties from 1943 to 1946 (1944-1947).

Fleming Mining Company, Lot 35, Gore of Templeton Township, Papineau County, Québec, (1891).

Fleming Phosphate Company, 4th Range, Portland Township, Frontenac County, Ontario (1891).

Foxton Mine, Ontario. The mine was reported as idle in 1892, but the location was not specified (1891, 1892).

Frontenac Mine, Ontario (1891). The name was listed, but without further details.

Gauthier Property, Buckingham Township, Papineau County, Québec. J. B. Gauthier, of Buckingham was listed as an owner/operator from 1927 to 1934 (1928-1935).

Gemmell Mine, south half of Lot 24, 4th Range, Wakefield Township, Gatineau County, Québec, about 7 km northeast of Wilson's Corners. The mine was reported to have been operated

from 1878 to 1886 by Messrs. Nellis and Gemmill. Obalski (1890) also reported that the company had other holdings, notably: the north half of Lot 24, 4th Range and Lots 22, 23, and 24, 5th Range, Wakefield Township; and Lot 10, 12th Range, and Lot 12, 13th Range of Hull Township. Sabina reported (1987) that the first-mentioned was then on the property of Emilien Levesque, of Hull.

General Phosphate Company Mine, Lot 3 and half of Lot 4, 7th Range, Templeton Township, and Lots 1, 2, 8, and 10, of the Gore (of Templeton Township), Papineau County, Québec. Operations reportedly began in 1890.

Glasgow Canadian Phosphate Company, Lots North 1 and East 2, 4th Range, Portland East Township, Papineau County (then Ottawa County) and Lot 1, 3rd Range, Derry Township, Papineau County, Québec (1885).

Gold Hill Mine, Templeton Township, Papineau County (then Ottawa County), Québec (1885).
Gore (Murphy, Watts and Noble, Kent) Mine, reportedly on the south half of a lot in Québec, with all further details missing (1895). This may be the same mine that was listed by White (1997) on Lot 6, Gore of Templeton Township, Papineau County. It was noted that it had been mined by a Mr. Murphy in the 1880s and later by Messrs. Watts and Noble, of Perth, in 1904. It was then acquired by the Kent Brothers about 1910. Another showing, on Lot 9, was reportedly explored in the 1880s by the Anglo-Canadian Phosphate Company (White).

J. B. Gorman, Buckingham, Québec. He was reported to have been a producer in 1914 (1915).
Grier Mine, south half of Lot 11, 12th Range, Templeton Township, Papineau County, Québec (Obalski, 1890).

Haggerty Mine, Lot 3, 5th Concession, North Burgess Township, Lanark County, Ontario. In 1919, the Dominion Improvement and Development Company, which owned this old mine, was reported to have planned on reopening it (1920).

Haldane Mine, Lot 12, 1st Range, Wakefield Township, Gatineau County, Québec. Obalski reported (1890) that there were several pits on this property, then operated by Mark Haldane.

Harris Mine, Lot 30, 9th Range, Wakefield Township, Gatineau County (then Ottawa County), Québec (Obalski, 1890).

Hayes and Company, Lot 2, 6th Range, Portland Township, Papineau County (then Ottawa County), Québec (1891).

Hickey Property, Lot 2, 1st Concession, Hinchinbrooke Township, Frontenac County, Ontario. The deposit was reported to have been on the farm of Hugh Hickey, near the northwest corner of the lot. A pit, about 20 ft long and 10 ft deep, was reported to have been dug in gneiss near crystalline limestone (Harding, 1951).

J. G. Higginson, Buckingham, Québec. He was reported to have been an owner/operator from 1909 to 1922 (1910-1923).

High Falls Mine, Lots A 1, 2, 3, 4, 5, 6, 4th Range, Bowman Township, Papineau County, and Lot 6, 10th Range, Portland West Township, Papineau County (then Ottawa County), Québec, at the head of the Great Falls of the Lièvre River. The mine was operated by the General Phosphate Corporation Limited. It was reported that operations began in 1890 and that 80 men were employed.

High Rock Mine, Lots 5, 6, 7, and 8, 7th Range, and Lots 1 and 2, 8th Range, Portland West

Township, Papineau County, Québec, about 4 km northwest of Notre-Dame-de-la-Salette. The deposit, on Lot 5, 7th Range, was reported to have been discovered in 1878 and sold in 1881 to the Phosphate of Lime Company, which worked it until 1894. The company was reported (Québec, 1885) to have produced from 6000 to 7000 tons per annum from a workforce of 110. It was an important producer at the end of the 19th Century. In 1936, it was reported that a new deposit of high-grade feldspar had been opened up and phosphate produced (Canada, Mines Branch, 1937). The mine was worked again in the early 1940s (1941) by O. C. Cote. In 1943, High Rock Phosphates dewatered the underground workings and installed additional mining equipment (1944). In 1944, a crosscut was driven to connect the ends of the *East* and *Hart* drifts, in order to provide access to a new lens, the *Long Lead* (1945). It was one of the three Québec producers in 1945 (Canada, Mines Branch, 1946). In 1945, the company began to remove waste rock in order to gain access to long-buried underground workings. It was noted that the adit had been driven north into Ross Mountain for about 700 ft and that there were five stopes, varying in length from 100 to 340 ft (1946). The total production to 1945 was estimated to have been about 90 000 tons - mostly of high-grade hand-picked apatite. It did not produce in 1946. The ore, green or greyish-green apatite occurred in pyroxenite. An option to purchase it was held, in 1949, by Québec Smelting and Refining, of Montréal (1950), which was reported as developing it in 1950 (Canada, 1951). Several hundred ft of drifting and cross-cutting were done, as well as more than 13 000 ft of diamond drilling (1951). The next reference was in 1959, when it was reported that no work had been done but that some was planned for 1960 (1961). The deposit is known for the mineral samples which can be obtained (Sabina, 1986).

Jackson-Rae Mine, west half of Lot 9, 10th Range of Templeton Township, Papineau County (formerly Ottawa County), Québec, about 3 km northeast of Perkins Mills. It was worked from 1878 to 1890 by a Mr. Rae, and from 1890 by the Jackson Rae Phosphate Company, which Mr. Rae was reported to have formed, in London, England (Obalski). It was next reported (Sabina, 1986) to have been worked again from 1945 to 1946 by the Perkins Mills Mica Company Limited. It was famous in the 1880s for the large quantities of phosphate produced (Cirkel, 1905).

Johnson Mine, 6th Concession, Loughborough Township, Frontenac County, Ontario. Owned by Lomer, Rohr and Company, it was reported as idle in 1892 (1891, 1892).

Kenehan Mine, Lot 2, 2nd Concession, Hinchinbrooke Township, Frontenac County, Ontario, on part of the farm then belonging to Bernard J. Kenehan (Harding, 1951). Harding noted that Art Kenehan stated that he had sunk the workings in 1907 to 35 ft for Messrs. Lake and Taggart, the developers. Some apatite was said to have been shipped from Godfrey, on the Kingston and Pembroke Railway. A narrow vein of disseminated apatite cut granite and granite gneiss.

Kent Brothers Property, Chelsea, Hull Township, Gatineau County, Québec. This company, from Kingston, was listed as an owner/operator from 1927 to 1939 (1928-1940). There were no reports of production.

King Edward Mine, Lot 8, range not specified, Templeton Township, Hull County (now Papineau County), Québec, at Gore Mountain on the west shore of Lac Rheaume. White (1997) noted that the mine was about 900 ft north of the northwestern shore of McLaren Bay of

Lac Rheaume. It was worked from three pits in 1886 by the Anglo-Canadian Phosphate Company. Later, the property was owned by Messrs. Wallingford, Cornu and Belcourt (White). Sinkankis (1959) reported sphene, apatite, calcite, and glassy-blue scapolite of cuttable quality at this location.

Lac Tamo Mines, Compagnie Française des Phosphates du Canada, Lots 1 and 2, Range 3; Lot 1, Range 4; Lot 16, Range 8; Lot 2, Range 3, Portland East Township, Papineau County, Québec. In the 1885 Report it is stated that this mine had been abandoned in 1883.

Lake Opinicon Mine, Bedford Township, Frontenac County, Ontario. The mine was reportedly owned by a Mr. Swift, of Ottawa, and others (1892).

Lee Property, Lot 2, 8th Concession, North Burgess Township, Lanark County, Ontario. This property was reported to have been operated by W. W. Lee, of Perth Road, in 1942 (1946).

Lillies Mine, Lot 2, 2nd Range, Derry Township, Papineau County, Québec. Operated by the Du Lièvre Milling and Manufacturing Company, Obalski reported that this mine, and its neighbour, the *Arnold Mine*, had been operated for several years but were abandoned by 1890.

Liscombe Mine, Lot 34, 15th Concession, Monmouth Township, Haliburton County, Ontario. The mine was reported to have been on the western slope of a ridge, about 1 km southwest of Wilberforce. Sinkankis (1959) reported that gem-quality green and brown apatite had been obtained from this property. The pits were in veins of calcite, phlogopite mica, and pyroxene.

Little Rapid(s) (Watts) Mine, Lot 6, 1st Range, Portland East Township, Papineau County, Québec. The mine was about 5 km north of Glen Almond, at Poupore, on the Lièvre River. It was reported to have been worked for about 40 years, beginning in the 1870s, first by the Buckingham Mining Company and, from 1883, by W. Allan, of Ottawa. Fifteen to 20 workers were reported to have mined up to 1000 tons per annum (Québec, 1885). It was then worked as a mica mine in 1892. In 1912, the Canadian Mines Branch reported that it was one of the two phosphate mines then being worked in Canada (1913) - the other being the *Blackburn Mine* (refer to the listing). Sabina (1986) reported that the property was then owned by Mr. R. Blanchard.

Little Union Mine, in the 7th to 10th Ranges, Portland West Township, Papineau County, Québec. This mine, an important producer at the end of the 19th Century (1950), was also mentioned as having been one of the important producers in 1941 (1942). In 1949, an option to purchase it, and other properties, was held by Québec Smelting and Refining (1950).

Luckridge Phosphate Mines Property, Québec. The property was reported to have been about 5 km north of Buckingham. The company performed some drilling in 1960 (1962).

MacLaren Mine, Lot 8, 12th Range; south half of Lot 7, north half of Lot 10, 11th Range; Lots 4, 5, 6, 7th Range, Portland Township, Papineau County, Québec. The property was reportedly sold about 1890 to the MacLaren Phosphate Mining Syndicate Limited, which started exploitation with a force of 50 men. The company had been formed by Lomer, Rohr & Company, phosphate merchants, of Montréal (Obalski).

H. MacRay (also spelled Mackray in the report) and Company Mine, Lots 9, 10, 11, 5th Range, Templeton Township, Papineau County (then Ottawa County), Québec. This was

- reported to have been the first mine in the province which used electricity as motive power. With its own power plant on the Rivière Blanche, it was reported that electricity was used for boring, extracting, lighting, and other purposes (1891). This could possibly have been the first use of electricity in Canadian mining.
- R. J. McGlashan (McGlasham) Property, Wakefield Township, Gatineau County, Québec. From Wilson's Corners, Mr. McGlashan was listed as a producer from 1909 to 1913 (1910, 1914). He was listed again, as an owner/operator, from Hull, from 1928 to 1935 (1929-1936). Production was not reported in this latter period.
- McIntosh Mine, Lots 5 and 6, 9th Range, Portland West Township, Papineau County, Québec. The mine was reported to have been worked prior to 1892 by a Mr. McIntosh. In 1892, Angus Cameron, of Buckingham, then mined it for mica. Work was continued by the Canadian Phosphate Company until 1900, when the mines were shut down (Cirkel, 1905).
- McLaren, MacLaren Mine, see the listing for Ontario Phosphate, below.
- McLaurin Mine, Lot 10, Range 11, Templeton Township, Papineau County, Québec. Considered at one time to have been the richest deposit in the Township (Quebec, 1885), it was reported that annual production was 3000 tons from a workforce of 40 (1885).
- McLaurin Mine, Lot 8, 11th Range, Templeton Township, Papineau County, Québec. The mine was reported to have been mined on a large scale in 1894 (1895).
- McLean Interests Property, Portland West Township, Papineau County, Québec. The company, of Montréal, was listed as an owner/operator from 1939 to 1940 (1940-1941).
- McLean-Hogan Property, Lot 8, 19th Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) mentioned that this was a small deposit from which there had been no commercial production. On it, apatite occurred, along with diopside, phlogopite mica, and scapolite, in a metamorphic pyroxenite.
- McLelland Mine, about 6 km north of Cantley, Québec. Worked for apatite from 1878 to 1883 by a Mr. Wilkinson, of Ottawa, it was worked for a short period, by Mr. R. McConnell, of Toronto, for mica. Sabina reported (1987) that the property was then owned by a Mr. Landry.
- Majeau Property, Québec. Donat Majeau, of Notre-Dame-de-la-Salette, was listed as an owner/operator from 1934 to 1936 (1935-1937). Production was not mentioned.
- Meany Mine, Lot 31, 11th Concession, Sebastopol Township, Renfrew County, Ontario. Sinkankis (1959) reported that outstanding crystals had been obtained at this property. In his report, Satterly (1945) noted that it was opened in 1880 and that 300 tons of apatite had been produced in the first three years. There were reportedly several openings in veins of pyroxene and apatite. Immense crystals of apatite and orthoclase had been noted on the next lot.
- James Millar (Miller) Property, Québec. From Glen Almond, he was listed as an owner/operator from 1928 to 1932 (1929-1933).
- Miller Mine, south half of Lot 12, 12th Range, Templeton Township, Papineau County, Québec (Obalski, 1890).
- Montgomery-Marshall Property, Lot 9, 21st Concession, Cardiff Township, Haliburton County, Ontario, about 1 km south of the Bancroft-Wilberforce Highway. Sinkankis (1959) reported that gem-quality apatite had been obtained at this location.
- Montreal Mining Company, Lot 3, 6th Concession, Bedford Township, Frontenac County,

- Ontario, at Bob's Lake (1891).
- Moore Mine, south half of Lot 12, 16th Range, Hull Township, Gatineau County (the Ottawa County), Québec (Obalski, 1890).
- Murphy Mine, south half of Lot 10, 10th Range, Templeton Township, Papineau County, Québec. First mined for phosphate (Obalski, 1890), the property was reported to have been mined later for mica by the Watters Syndicate (1892).
- North Star Mine, Lot 19, 3rd Range, Portland East Township, Papineau County, Québec, near Glen Almond. The mine was reported to have been originally owned and operated by the Haycocks (see the listing for the Haycock Mine under Iron) from 1879 to 1882, and then sold to the Dominion Phosphate Company, of New York, which operated it thereafter. Production was reported (Québec, 1885) to have been 4000 tons per annum from a workforce of 70. This was also reported (1885) to have been the first phosphate mine in the Ottawa area to have employed compressed air. A small quantity was reported to have been produced from 1939 to 1941 (1940-1942).
- O'Brien and Fowler, Ottawa, Ontario. The company was reported to have been an owner/operator in Québec from 1912 to 1924 (1913-1925).
- Ontario Phosphate (McLaren, MacLaren) Mine, Lots 27, 28, 29, and the east half of Lot 31, 10th Concession, and Lot 25, 9th Concession, Bedford Township, Frontenac County, Ontario (1891). The mine was also described as being on Lots 25, 27, 28, 29, 9th Concession, and the east half of Lot 31, 10th Concession (Harding, 1951). It was in the Rideau Lakes area, about 5 km northeast of Burridge, about 18 km, by road, from Westport, and 22 km from Godfrey. It was reported to have been operated for the first time between 1888 and 1890 by Edmund Watts and the Hon. Peter McLaren, of Perth (1946, Harding, 1951). During this period, about 500 tons of apatite was mined from a series of shallow pits and shipped from Westport. After about 50 years of inactivity, the mineral rights were acquired from the McLaren Family by Bruce C. Robson. He formed the Canadian Phosphate Mining Company and reopened the property in 1942. A road was built, a camp constructed, and diamond-drilling performed (1946). About 240 tons of phosphate were mined in 1942. Subsequently, in 1942-1943, it was optioned to Pioneer Gold Mines and later leased to C. Riley, of Toronto, and then to H. C. Cordick, of Perth (Harding, 1951). Two of the pits were known as the *Riley* and the *Cordick*. In 1944, the Ontario Phosphate Company (1944), which became Ontario Phosphate Industries (incorporated in 1944), continued the development of the property. A three-compartment shaft had been sunk to 190 ft on Lot 28 of the 10th Concession (1947). By the next year, 500 ft of drifting and cross-cutting had been driven, and a diamond drilling program was in process (Canada, Mines Branch, 1946). It operated intermittently during 1944 and 1945. In 1945, however, the hoist and compressor were removed (1948) and the mine was allowed to flood (Harding, 1951). Some sorting and stock-piling were reported in 1946 (1948). Small shipments were made until at least 1950 (Canada, 1951). Harding (1951) reported that the best showings were in the *Cordick* and *Riley* pits, in the northeastern part of the apatite belt. Hornblende, pyroxene, pink calcite, mica, pyrite, and actinolite were mentioned as minerals.
- Opinicon (Rock Lake) Mine, Lot 21, 5th Concession, Storrington Township, Frontenac County, Ontario. It was reported to have been owned by the Canada Company and leased by the Kingston Phosphate Company, of Montreal, and James Bell, of Arnprior (1891).

- Otter Mines (two), Lot 9 and east half of Lot 11, 7th Range, North Burgess Township, Lanark County, Ontario. About 13 km from Perth, the mines were reported to have been owned, in 1892, by Messrs. Cross and Foster, of Smith's Falls (1892).
- Papineau Lumber Company, Papineauville, Labelle County, Québec. The company was reported to have been a producer in 1914 (1915).
- Park Mine, Lot 23, 12th Concession, Sebastopol Township, Renfrew County, Ontario. It was reported that prospecting in 1883 disclosed abundant apatite crystals, up to 30 cm long, and large crystals of orthoclase, hornblende and pyroxene (Satterly, 1945).
- Perkins Mine, Templeton Township, Papineau County, Québec (1885).
- Philadelphia Mine, Portland Township, Papineau County, Québec (1885).
- Phosphate King Mine, Lot 15, 8th Range, Templeton Township, Papineau County, Québec. Mining began at this old mica mine in 1896 (see the listing under Mica). In 1943 a phosphate vein was discovered in the course of diamond drilling (1944). Two hundred tons of green apatite were then reported to have been produced in 1944 (1945).
- Poirier Property, Hull Township, Gatineau County, Québec. Henry Poirier, of Wilson's Corners, was listed as an owner/operator from 1939 to 1941 (1940-1942). Work was reported in 1939 and 1940.
- Post Mine, Lot 16, 9th Range and east half of Lot 9, 10th Range, Templeton Township, Papineau County, Québec. It was reported that production began in 1885, by the Canada Industrial Company. Obalski mentioned that Ch. Lionnais & Company had acquired a strong interest in it in 1889. Large quantities were produced from a number of pits. One crystal, weighing about one tonne, was reportedly mined (Cirkel, 1905).
- Poulin Property, Portland East Township, Papineau County, Québec. Joseph Poulin, of Saint-Lambert, Chambly County, was listed as the owner/operator of this property in 1940 (1941).
- Prud'homme Mine, south half of Lot 10, 14th Range, Hull Township, Gatineau County, Québec (Obalski, 1890).
- Québec Smelting and Refining Properties, 7th, 8th, 9th, 10th Ranges, Portland West Township, Papineau County, Québec. In 1949, it was reported that the company held 11 claims, comprising 1000 acres. The properties were about 35 km north of Buckingham. The company also held options to purchase the *Big Union*, *Cap Rock*, *High Rock*, and *Little Union Mines*, which were all important producers at the end of the 19th Century. It was next mentioned in 1959, when it was stated that no work had been done but that some was planned for the next year (1961). In 1960, the company was reported to have announced that it had formed a new company to develop some deposits in the Buckingham area (1962) (refer to the listings for the mines mentioned).
- Rainboth Mine, Lot 15, 10th Range West, Hull Township, Gatineau County, Québec. The mine was reported to have been developed by Victory Mines in 1944 and a small quantity of apatite mined (1945).
- Ross Mine, Portland Township, Papineau County, Québec (1885).
- Ross Prospects, Lot 4, Concession 6, Ross Township, Renfrew County, Ontario. Two prospect pits were reported on the Ross Farm. The *West Pit* was reported to be about 1.2 km west of the road on the east boundary of the lot, while the *East Pit* was about 0.8 km west of the same road. Both had been dug in a hornblende-microcline pegmatite containing masses

of coarsely crystalline calcite, which, in turn, contained reddish-brown crystals of apatite. Hornblende crystals and small terminated brown zircon crystals were also reported (Satterly, 1945).

- Ross Mountain Mine, Lots 5 and 6, 6th Range and Lots 1 and 2, 7th Range, Portland West Township, Papineau County, Québec. Operated by the General Phosphate Company Limited, mining reportedly began in 1890. Fifty-eight men were then employed. It was further reported that the mine did not produce in 1892.
- Saint-Amour Property, Portland East Township, Papineau County, Québec. The Abbé Saint-Amour, of Notre-Dame-de-la-Salette, was listed as an owner/operator from 1934 to 1940 (1935-1941). There were no reports of production.
- Saint George Lake Mine, Ontario. The mine was reported idle in 1892 but no details were given concerning its location (1891, 1892).
- Scott's Mine, north half of Lot 9, 11th Range, Hull Township, Gatineau County, Québec (Obalski).
- Seybold Mine, about 14 km northeast of Wilson's Corners, Québec. At east end of Lac McGregor, it was reported to have been operated for brief periods between 1880 and 1910 (Sabina, 1987).
- Silver Lake Mine, Lot 14, 6th Concession, Oso Township, Frontenac County, Ontario. The mine was reported to have been on a property that had been owned at different times by Charles Whittaker and later Harvey Stewart, of Perth (Harding, 1951). First opened, in 1891, by William Davis, of Perth, it was acquired the same year by Boyd Smith, of Washington, D.C. (see the listing for the Smith Mine, below). There were reported to have been more than 20 small shallow pits on the western part of the lot. Veins of pinkish-brown apatite were reported to cut pink syenite gneiss. In addition to apatite, hornblende, pyroxene, mica, and magnetite were noted.
- Silver Queen (Silver Lake) Mine, Lot 13, 5th Concession, North Burgess Township, Lanark County, Ontario. The Silver Lake Mine was reported idle in 1892 (1891, 1892), and to have been closed in 1920 by the Dominion Improvement and Development Company, which was then working it (1921). There were no reports on it between those dates. In 1942, it was reported that the mine, then known as the Silver Queen, was being worked by H. A. Maeshessault, of Montréal (1946).
- Smart Mine, Lot 31, 10th Concession, Sebastopol Township, Renfrew County, Ontario. The pit was reportedly opened for apatite prior to 1880 (Satterly, 1945). Sinkankis (1959) reported outstanding apatite crystals at this property as well as fine crystals of hyacinth-red zircon, enormous crystals of sphene, and amazonite. It was noted that the titanite crystals were very brilliant and often translucent.
- Smith (Hollywood) Mine, Lot 6, 1st Concession, Oso Township, Frontenac County, Ontario. The mine was reported to have been about 1.5 km from Olden Station on the Canadian Pacific Railway and about 500 m east of the tracks. It was in the middle of the lot, on the northwest side of a ridge facing the tracks, and on the farm of Tom Hollywood. Harding (1951) reported that this was once one of the largest phosphate mines in the district and was mined by Boyd Smith during the period 1885-1891 (immediately after the opening of the Kingston and Pembroke Railway, in 1885). It was estimated that a total of 1 500 tons had been mined. There were two openings, the largest being 200 ft long, 40 ft wide, and

50 ft deep. The smaller pit was 100 ft long, 25 ft wide, and 65 ft deep. The vein, containing pink apatite, calcite, hornblende, biotite, and pyrite, was between crystalline limestone and reddish gneiss (Harding, 1951) (see also the listing for the Silver Lake Mine, above).

Société Française des Phosphates du Canada Mine, Lot 2, 3rd Range, Portland East Township, Papineau County, Québec. Obalski reported that this Company, of Bordeaux, France, had extensive land holdings in Portland East, Portland West, and Templeton Townships. One of these, the above, was mined between 1881 and 1883.

Squaw Hill Mine, south half of Lot 18, 12th Range, Buckingham Township, Papineau County, Québec. The mine was reported to have been operated from 1876 to 1893 (1943) by the Anglo-Continental Guano Company, of London, England, and by the British Phosphate Company, also of London, which acquired the property about 1892. Several thousand tons of apatite were reported to have been produced in the early years (1943). The old mine was then taken over by the J. K. Crang Corporation, of Toronto, in 1942 (1943). The main shaft, 140 ft was de-watered. A small quantity was mined in 1943, reportedly from Lot 17 (1944).

Star Hill Mine, Lots 8 and 9, 8th Range and Lot 7, 9th Range, Portland West Township, Papineau County, Québec. The mine was reported to have been started in 1882 by the Union Phosphate Mining and Land Company, New York, and then sold to the Canadian Phosphate Company of London, England in 1888. Production was reported (Québec, 1885) to have been 4500 tons per annum from a workforce of 75.

Stewart Property, Portland Township, Papineau County, Québec. William Stewart, of Buckingham, was listed as a working owner/operator from 1940 to 1942 (1941-1943).

Sweeney Mine, about 1 km west of Old Chelsea, Québec. Sabina reported (1987) that it was originally worked for phosphate by John Sweeney, of Old Chelsea, and next worked for mica, from 1910, by the Kent Brothers, of Kingston.

Templeton and Blanche River Phosphate Company (1888). The company was reported to have been taken over by the Nederlandsche Phosphat Matschajpy d'Amsterdam, in 1891, and in production. No further details were given.

Trudel Property, Lot 14, 9th Range, Templeton Township, Papineau County, Québec. A. Trudel was mentioned as having mined a small quantity of apatite in 1945 (1946).

Turner's Island Mines, Island D, Lake Clear, Sebastopol Township, Renfrew County, Ontario, about 22 km from Eganville. The pits were reported to have been opened in 1879, for apatite. By 1892, 200 tons had been produced (Satterly, 1945). Magnificent sphene and other minerals were reported from this location. The workings were examined for radioactive minerals in 1943. An apatite crystal was obtained as well as a sphene crystal about 30 cm long (Sinkankis, 1959). The largest pit, near the north end of the island was reported as being 175 ft long, up to 15 ft wide, and up to 12 ft deep. It had been dug in a pegmatite dike of coarse-grained salmon-orange calcite containing large brown apatite crystals or rounded green to brown masses of the same. White scapolite and dark green pyroxene were also noted. Two other pits were also noted. In his report, Satterly (1945), made reference to a 700 lb apatite prism, a crystal of zircon 25 cm in diameter, and a titanite (sphene) crystal 25 cm long.

Union Mine, Canadian Phosphate Company (Lièvre) (1888).

- Vennor Mine, Lots 26 and 27, 12th Range, Buckingham Township, Papineau County, Québec. The mine, located a few hundred feet east of Lac du Chevreuil, was reported to have been opened as early as 1872 and mined until the early 1880s (White, 1997).
- Victory Mines, see the listing for the Rainboth Mine, above.
- Vinkle (Taggart Property) Mine, Lot 3, 10th Concession, Olden Township, Frontenac County, Ontario. The mine was close to the northern boundary at the northwestern part of the lot. It was first worked by John Taggart, of Westport, and then by John Laurie, of Perth, and John Vinkle. The apatite occurred as both crystals and irregular masses in a vein cutting light-coloured paragneiss (Harding, 1951).
- Wakefield Mine, Lot 30, 9th Range, Wakefield Township, Gatineau County, Québec. A small quantity was reported to have been mined at this location in 1942 (1943).
- Wallingford Mine (Property), west half of Lot 16, 8th Range, Templeton Township, Hull County (now Gatineau County), Québec, about 2.5 km west of Perkin's Mills. The Wallingford Mica and Mining Company, and then the Wallingford Brothers, of Perkins, and later Ottawa, were reported to have been the owners/operators from 1914 to 1926 (1915-1927) and from 1932 to 1936 (1933-1937). Edward Wallingford, of Perkins, was listed from 1940 to 1946 (1941-1947). Work was not reported in 1945-1946. Sinkankis (1959) reported fibrous scapolite altered into lilac-coloured pinite (called wilsonite locally).
- Washington (Landsdowne) Mine, Lot 19, 9th Range, Buckingham Township, Papineau County, Québec. It was reported to have been operated from 1882 to 1883 by the Dominion Phosphate Company, of New York.
- Watts and Noble Property, Bowman Township, Papineau County, Québec. Edward Watts, of Toronto, Ontario, and later Hull, Québec, was reported to have been an owner/operator in Québec from 1914 to 1924 (1915-1925). Watts and Noble, of Toronto, was listed from 1925 to 1927 (1926-1928). The address changed to Perth, Ontario in 1928 (1929).
- Watts and Noble Property, Wakefield Township, Gatineau County, Québec. As above (1926).
- Wellington Mine, Lot 14, 9th Range, Templeton Township, Papineau County, Québec. This mine was reported to have been opened by a Mr. Wellington about 1874 and operated as a phosphate producer for 20 years. In 1894, a Mr. Pullan mined it for mica. About 1898 it was operated by Webster and Company (1899).
- Wilson Mine, Wakefield Township, Gatineau County, Québec (1885).
- Bush Winning Property, Portland Township, Papineau County, Québec. Mr. Winning, of Notre-Dame-de-la-Salette, was listed as an owner/operator from 1927 to 1935 (1928-1936). Production was not mentioned. Bush Winning and Urbain Cameron were listed in 1936 (1937).
- Wolf Lake Mine, Lot 28, 8th Concession, Bedford Township, Frontenac County, Ontario. The mine was reported to have been owned by W. J. Webster, of Westport, in 1892 (1892).

Pyrite

Iron pyrites, FeS_2 , was mined as a source of sulphur for the manufacture of sulphuric acid, H_2SO_4 . The latter is an important acid for industry - being used in the manufacture of explosives, fertilizers, paints and dyes. In the early industrialization of Ontario there was a great demand for sulphuric acid and, as a result, the pyrite deposits were exploited. The earliest such mining

operation was at the Billings Property, in Elizabethtown Township, in Leeds County, Ontario, in 1868. Many of the deposits were small, however, and production was short-lived. In the Eastern Townships of Québec, cupriferous (copper sulphides) pyrites have been mined for the production of copper and sulphuric acid since 1871.

American Madoc Mining Company Mine 2, Lot 23, 12th Concession, Hungerford Township, Hastings County, Ontario. The mine was reported to have been worked by the company in 1904, with a 160-ft shaft (1905).

Bannockburn (Jarman) Pyrite Mine, Lot 25, 6th Concession, Madoc Township, Hastings County, Ontario. About 1.5 km southeast of Bannockburn Station on the Central Ontario Railway, it was first opened by Stephen Wellington, of Madoc, in 1898. It was then operated as an iron mine, with 11 car loads of limonite, the gossan above a pyrite deposit, being shipped from an open pit which was developed in 1900. The pit, 80 ft square, and 90 ft deep, was abandoned when the walls began to fail (Thomson, 1943). Subsequently it was owned by: the Rio Myra Company, of Madoc; the Madoc Mining Company, in 1902; and the American Madoc Mining Company, in 1904, which mined it by underground methods. A steeply-dipping inclined shaft (from 85 degrees on top, to 76 degrees further down, and then nearly vertical at the bottom) had also been sunk 230 ft (1906). It was closed in 1906 and the lease relinquished because of the high hazards of sloughing in the openings (1907). At the time, the south lens, 160 ft long, and from eight to 15 ft wide, was being mined to a depth of 275 ft. Further mining was considered to be too hazardous. During the six years it operated, it produced 580 tons per month, which was shipped to the General Chemical Company, at Buffalo, New York.

Billings Mine, Lot 19, 2nd Concession, Elizabethtown Township, Leeds County, Ontario. This was reported to have been the earliest pyrite mining operation in Ontario, and was operated from 1868 to 1879 by the Brockville Chemical Company (1916). The pyrite occurred with calcite in a series of lenses conformable to the lamination of highly-foliated pink granite gneiss. The main pit was sunk to 250 ft. The ore was used for making acids in Brockville.

British American Mine, Lot 11, 11th Concession, Madoc Township, Hastings County, Ontario. Development was reported to have begun in 1904 by the British American Pyrites Company, Limited, of Toronto (1905). By 1906 a shaft had been sunk to 80 ft (1906). Reported to have produced a considerable tonnage of ore, it was temporarily closed in 1906 because of difficulties in keeping the mine free of water (1907).

Brockville Chemical Company Mine, Lot 19, 2nd Concession, Elizabethtown Township, Leeds County, Ontario. Messrs. John Cowan and J. B. I. Robertson were reported to have begun mining in 1868. The main pit was sunk to a depth of 250 ft. Mining ceased in 1879 (1907).

Buffalo-Brockville Mining Company Mine, Elizabethtown Township, Leeds County, Ontario. A small amount was reported to have been shipped in 1911 from their deposit near Brockville (1912).

Caldwell Mine, Lots 1 and 2, 1st Concession, Blithfield Township, Renfrew County, Ontario. The mine was about 2.5 km northeast of the Clyde Lake Siding on the Kingston and Pembroke Railway, 10 km south of Calabogie, 36 km south of Renfrew, and near Flower Station on

the Canadian Pacific Railway. Said to have been discovered about 1885 by prospectors for gold who were attracted by the weathered iron ores, it was opened in 1915 by Thomas B. Caldwell, of Lanark, who purchased it from the original owner, W. Mackie, of Arnprior. An inclined shaft was sunk during the period 1915-1917 and lateral development begun. It was subsequently purchased by the Grasselli Chemical Company, in 1917, after the company had explored it through drilling (Satterly, 1945). In 1916, the inclined shaft was deepened to 95 ft and 10 cars of ore were shipped to the Nichols Chemical Company, at Sulphide (1917). Seventeen men were then employed. By 1917 the shaft had been sunk to 100 ft and 250 ft of drifting and cross-cutting had been done. The Grasselli Chemical Company developed it between 1918 and 1920 when two shafts were sunk: *Number 1*, inclined at 60 degrees and 75 ft deep, and *Number 2*, at 56 degrees and 234 ft deep. The two were connected by a 460-ft drift on the first level, at the bottom of *Number 1* shaft. There were 35 men employed at the time (1919). In 1919, a narrow-gauge railway was built to connect the mine to the Canadian Pacific Railway (1920). Mining ceased in 1920 but ore was shipped by Grasselli until 1928 (Satterly). Canadian Pyrites then acquired the property and shipped ore until 1930. The operation was listed until 1933 (1933). Satterly (1945) reported that he had visited the property in 1943 by following the abandoned railway spur from Clyde Lake Siding to the mine, and that little remained except large dumps of low-grade ore. The country rock was described as a fine-grained green to grey hornblende-biotite schist, which contained an abundance of red garnets in places. One of the ore types was a breccia comprised of pyrite with quartz and calcite and fragments of the schist. Another was pyrite in hornblende schist.

- Canada (Oliver Prospect) Mine, Lot 26, 12th Concession, Hungerford Township, Hastings County, Ontario. Formerly known as the Oliver Prospect, it was purchased by the Canadian Pyrites Company and was being developed in 1906 (1907). A shaft was sunk, on an incline of 50 degrees, to 110 ft, by the Canadian Pyrites Company in 1907. Some drifting was done on the 85-ft level. The ore was pyrite and pyrrhotite (1916).
- Canadian Sulphur Ore Company (Wellington) Mine, north half of Lot 9, 10th Concession, Madoc Township, Hastings County, Ontario. About 8 km northeast of Madoc, it was discovered in 1906 by Stephen Wellington, who shipped a car load of pyrites. Opened in 1908, it was later purchased by the Canadian Pyrites Syndicate who shipped a few hundred tons. It was then acquired by the Canadian Sulphur Ore Company, which mined it from 1910 to 1919. It was designed for a production rate of 100 tons per day. Electric power was supplied in 1912 by the Seymour Power Company, while a 4-km branch line of the Bay of Quinte Railway was connected from nearby Queensboro in 1913. The ore was shipped to the Nichols Chemical Company plant, at Sulphide. There were three shafts and two open pits on the property. *Numbers 1* and *3* shafts were 75 and 100 ft deep, respectively. By 1915, mining was from the *Number 3 Shaft* (vertical and deepened to 250 ft deep) and the two open pits (1916). Sabina reported (1987) that the deposit was then on the farm of S. Ralph Hennessey.
- Craig Mine, 11th Concession, Hungerford Township, Ontario. The mine was reported to have been about half a mile west of the Hungerford (Sulphide) Mine. Shaft sinking, following the dip of the ore, began in 1908 (1909). By 1911 it had been deepened to 300 ft and mining was taking place on the 100-ft and 200-ft levels (1912). During 1913, it was

- operated by the Sulphide Chemical Company, of Toronto, with 15 men on the property (1914). It was closed in 1913 (1915).
- Davis (Palmer) Mine, west half of Lot 10, 10th Concession, Madoc Township, Hastings County, Ontario. The deposit was reported to have been discovered in 1907 by H. Palmer, the owner of the property. A small open pit was developed and abandoned shortly afterwards (1913). The pyrite, in Grenville limestone, was two ft wide on the surface but was said to widen to 15 ft at depth. A few car loads were shipped (1916).
- Farrell Prospect, on the Farrell Farm about three km northeast of Madoc, Hastings County, Ontario. A shaft had reportedly been sunk to 25 ft by 1906 (1907). The deposit was about five ft wide and conformed with the strike of the schist (1916).
- Foley Prospect, about 9 km "by fair wagon road, north from Enterprise Station on the Bay of Quinte Railway" (1907). A pit 80 ft long, 40 ft wide, and from 10 to 15 ft deep was on the property (1907). The deposit occurred in an outlier of crystalline limestone surrounded at short distance distances on all sides by granite. There were small masses of pyrite and pyrrhotite in about equal proportions (1916).
- Fowle Prospect, Lots 6 and 10, 10th Concession, Madoc Township, Hastings County, Ontario. In 1916, J. C. Fowle, of Madoc, was reported to have performed considerable development work on a vein which outcropped on these lots. Twenty-three test pits were dug (1917).
- Gunter Prospect, Lot 23, 4th Concession, Cashel Township, Hastings County, Ontario. On this prospect it was reported that a shaft had been sunk to 25 ft by 1906 (1907) in a deposit of alternating bands of pyrite and quartz up to five ft wide (1916).
- Hungerford Western Extension Prospect, parts of Lots 21 and 22, 12th Concession, Hungerford Township, Hastings County, Ontario. Prospected in 1906 by surface trenches, it was still not developed by 1915 (1916). The lenses were thought to be extensions of the Hungerford (Sulphide) Mine orebodies.
- Ladore Prospect, Lot 19, 7th Concession, Dalhousie Township, Lanark County, Ontario. On this property, a fahlband (a layer of rock containing sulphides) was reported to strike along the contact between a coarse amphibolite and a fine-grained gray granite. The trenches and pits exposed gossan (weathered ores above the deposit) in the form of bog iron ore but not sulphides. The band was reported to continue into the adjoining lot to the east (1916).
- Little Salmon Lake Prospect, Lots 22 and 23, 7th Concession, Cashel Township, Hastings County, Ontario. On the side of a ridge at the northeast end of Little Salmon Lake (Thomson, 1943), the deposit, 15 ft wide and occurred in a chlorite schist. The country rock was white crystallized limestone. There was no report of any production by 1915 (1916).
- McIlwraith Mine, Lot 5, 4th Concession, Darling Township, Lanark County, Ontario. In 1907, the mine was reported to have been "first opened up many years ago by W. H. Wylie, of Almonte, and Wm. Hall, of Darling, while prospecting for gold" (1907). A shaft had been sunk to 35 ft. The Nichols Chemical Company began mining in 1899, deepened the shaft to 75 ft, and drove a tunnel 150 ft along the deposit. Work ceased in 1900. Only three carloads of ore were reported to have been shipped (1916). The pyrite was in quartz along the contact between amphibolite and crystalline limestone. Peach (1958) referred to tourmaline "of a peculiar light-brown colour".
- McKenty Mine, on the McKenty Farm at Mullet's Corners, about 3 km east of Madoc, Hastings County, Ontario. In 1906 it was reported that mining had begun about 30 years previously

- and that desultory mining had been carried on ever since. A pit, 60 ft deep, had caved-in (1907). The gossan cap was reported to have been hematite (1916).
- McKinnon Prospect, Lots 29, 8th and 9th Concessions, Palmerston Township, Frontenac County, Ontario. On the farm of Hugh McKinnon, about 800 m east of the south end of Sunday Lake, two pits had been opened in massive pyrrhotite and pyrite. One was in schist, while the other was on the contact between schist and crystalline limestone. Both pits were probably quite small (Smith, 1958).
- Mundic Mine, Lot 25, 6th Concession, Madoc Township, Hastings County, Ontario. Opened in 1917 by the Bannockburn Pyrite Mining Company, the pit was reportedly then 50 ft wide, 100 ft long, and 60 ft deep (1918).
- Ontario Sulphur Mines Mine, northwest quarter of the east half of Lot 21, 12th Concession, Hungerford Township, Hastings County, Ontario. About 1 km west of the Hungerford Mine, the deposit was reported to have been worked between 1908 and 1911 by Ontario Sulphur Mines. A shaft was sunk to 300 ft. By 1911, about 5000 tons had been shipped. In 1913, the property was operated by the Sulphide Chemical Company, which was reported to have raised considerable ore. No work was done subsequently (1916).
- Queensboro (Wellington Prospect) Mine, northeast quarter of Lot 9, 10th Concession, Madoc Township, Hastings County, Ontario. Known as the Wellington Prospect in 1906 (1913), it was originally developed by the Canadian Pyrites Syndicate, when two shafts, 50 and 75 ft deep, respectively, were sunk by G. H. Gillespie, in 1908 (1909). In 1910 the property was taken over by the Canadian Sulphur Ore Company and a third shaft was sunk to 75 ft. Some stoping was done (1911). Mining was by open-cut methods (1912). By 1918, the main shaft had been deepened to 460 ft (1919) and it was planned to continue to 500 ft (1918). Another shaft, 400 ft distant, had been sunk to 100 ft and was to be deepened to 200 ft (1917). The company proposed to build an aerial tramway from the mine to the Railway about 3 km away. There were several shafts and pits on the property. About 45 persons were employed in 1915 (1916). There were six levels in the mine (1919). Production was reported in 1919 (1920).
- Queensboro (Blakely) Mine, Lot 11, 11th Concession, Madoc Township, Hastings County, Ontario. The mine was reported to have been about 1.5 km southwest of Queensboro, less than 1 km west of the Bay of Quinte Railway, and 10 km northeast of Madoc. It was developed and worked by the British American Development Company from 1905 to 1908 (Sabina, 1987), and was the first pyrite mine to be opened in the area (1913). The first shaft was sunk to 30 ft in 1906 (1907). By that autumn 65 carloads of pyrites had been shipped (1916). By 1913, mining was taking place from *Number 3 Shaft* (150 ft deep) and *Numbers 3 and 4 Open Pits* (75 ft and 60 ft deep, respectively). Forty-four were employed on the property (1913). *Shafts Numbers 1 and 2* were reported to have been abandoned about 1913 (1914). About 175 ft of drifting had been done on the 50-foot and 85-foot levels. In 1919, it operated continuously with a workforce of 80 (1920). The pyrite occurred as a series of lenses along the contact of a garnetiferous schist and an intrusive pink felsite. A small vein of copper pyrites and argentiferous jamesonite cut one of the lenses (1916).
- Shipman Mine. This mine was reported to have been about 10 km west of the Billings property. The pyrite, intermixed with pyrrhotite and gneiss, was mined from a pit 40 ft long and 30

ft wide (1916).

Sloan Mine, Lot 18, 2nd Concession, Elizabethtown Township, Leeds County, Ontario. The Buffalo-Brockville Mining Company was reported to have shipped a small tonnage from this operation in 1911 and 1912. A 20-ft inclined shaft passed through six to eight ft of gossan (weathered ore on the surface) to intersect pyrite and crystallized calcite (1916).

Snooks Prospect, Lot 7, 14th Concession, Loughborough Township, Frontenac County, Ontario. A fahlband strikes northeast through a coarse impure crystalline limestone. It could be traced across the adjoining Lot 6 to Desert Lake. On the road allowance, the massive pyrite was seven ft wide. The zone, including crystalline limestone was 25 ft wide (1916).

Stalker Prospect, Lot 42, 6th Concession, Clarendon Township, Frontenac County, Ontario. About three km east of the village of Plevna, it was reported to have been opened in 1901 (1902). Presumably, it was not worked because of being too far from the railroad (1907). A small test pit, in a lens of pyrite, was reported. The gossan was described as hematite (1916).

Sulphide (Hungerford) Mine, Lot 23, 12th Concession, Hungerford Township, Hastings County, Ontario. The mine was about 8 km east of Tweed and 200 meters from Sulphide Station on the Canadian Pacific Railway. Originally opened about 1875 as a gold mine by the American Madoc Mining Company, it closed after the pyrite was found to be barren. A smelter was erected on the site, but operations were presumably suspended when no gold was found. Reopened in 1903 by the American Madoc Mining Company, it was mined, until 1924, by various operators, to supply pyrite to a sulphuric acid plant. These included: the Nichols Chemical Company, a subsidiary of the General Chemical Company, in 1903, closed in 1904, and again reopened in 1905; the Canada Nichols Chemical Company; and the Nicholls Chemical Company (1908). By 1906 a shaft had been sunk to 320 ft in the south vein. This was at an inclination of 79 degrees at the top and 57 degrees at the bottom. Levels were cut at 199, 200, and 300 ft (1907). Acid works were reported to have been completed in 1907 (1915). In 1908, a winze was sunk 75 ft on the inclination of the vein (1909). It became known as the *Sulphide Mine* in 1908. In 1909-1910 a second shaft, to a depth of five levels was sunk, and an electric hoist installed in the new headframe (1911). This shaft had been sunk to the sixth level, 575 ft, by 1911, and considerable development had been done (1912). In 1912, it was reported that 125 were employed on the property (1913). The pyrite occurred in three parallel deposits striking with the schist. By 1915, there were two shafts and about 3500 ft of drifting had been done on the six levels. The ore was coarsely granular with calcite, quartz, and a small amount of pyrrhotite. About 35 persons were employed at the mine and from 125 to 150 at the chemical plant in 1915 (1916). In 1916, the shaft was 575 ft deep and mining was taking place on the first through fourth levels (1917). It operated at full capacity in 1917 (1918), and at other levels of production until 1923 (1924). The end came in 1924, when the main ore body was exhausted and the mine closed. The mine, when abandoned, had a shaft 575 ft deep and six levels, about 100 ft apart. A winze had been sunk to a further 118 ft from the lowest level. During its life it produced about 300 000 tons of ore. The shaft pillars were not removed (1926).

Unnamed Mine, Lot 5, 4th Concession, Darling Township, Lanark County, Ontario. In 1909, the Canadian Mines Branch reported that this mine had been worked about 1899, with a

tunnel having been driven along the vein for about 100 ft. The vein was reported to have been almost vertical and eight ft wide (1910).

Quartz and Quartzite (see also Silica)

Quartz, for smelter flux, has been quarried in Ontario, Québec, and other provinces. Some quartz was also mined and sorted at the feldspar mines for use in the manufacture of ferro-silicon. It was also used for the manufacture of silica brick, a refractory for lining kilns and furnaces.

Quartz Crystal Mining Corporation Mine, Lot 9, 9th Concession, in Rear of Leeds and Lansdowne Townships, Leeds County, Ontario. The property was about 50 acres in extent. Near Lyndhurst, the pit was mined for quartz crystals until the company was declared bankrupt in 1950. It was reported to have been 18 ft in diameter, with a 25-ft wall at the front and a 50-ft wall into the hill. The crystals were found in vugs (cavities) in gneissic rock. One thousand pounds was reported to have been produced in 1950 (1952). Operations resumed in 1951, with 859 lb produced (1953). By the end of 1953, the pit was 75 ft long, 40 ft wide, and 35 ft deep (1955). Some of the crystals were supplied to the Canadian Government (1954). The next report of mining was in 1959, when "5610 tons of rock was removed and some crystals recovered" (1961).

Radium and Radioactive Minerals (see also Uranium)

Radium is used in radiation therapy for the treatment of cancer and as an ingredient in the manufacture of luminous paint for watch and clock dials and compasses. In the early part of the twentieth century it was estimated that the total supply then existing in the world was about 600 gm (Canada, Mines Branch, 1934). The Richardson deposit, therefore, was important. A carload of ore tested in the Ore Dressing Laboratories of the Mines Branch indicated that 2.56 lb of uranium oxide, U_3O_8 , and one gram of radium would be produced from 3422 tons of ore.

In 1930, very important deposits were discovered at Echo Bay, Great Bear Lake, Northwest Territories.

Atlin-Ruffner (Allanite) Property, Patented Lot 3, 16th Concession, and mining claims on Lots 1 and 2, and the north half of Lot 4, 16th Concession, Cardiff Township, Haliburton County, Ontario. On the northwest side of a hill, the property was reported to have been optioned to Stratmat Limited in 1953-1954 and then to Atlin-Ruffner (B.C.) Limited in 1955. Stripping and trenching took place in 1955. The showings were in a belt of syenite gneiss which had been intruded by pegmatites. Allanite occurred in massive veins along with pyroxene. Satterly (1957) reported that much of the Allanite was coarsely crystalline, up to 15 cm in size. Plagioclase feldspar, zircon, and black mica, were also reported.

Aumacho River Mines Property, south half of Lot 22, 9th Concession, Cardiff Township, Haliburton County, Ontario. The property was on a point on the east shore of the north bay of Paudash Lake. The company held a block of 15 claims in this area, and explored it

by trenching and drilling in 1954 (Satterly, 1957). On the property, a pyroxene granite pegmatite dike intruded amphibolite and biotite paragneisses. The dike contained biotite, hornblende, calcite, and scapolite. The radioactive minerals were uraninite, allanite, and possibly uranothorite.

- Bancroft Uranium Mines Property, Lots 4, 5, and 6, Cardiff Township, Haliburton County, Ontario. On the side of a hill south of Highway 500 and also north of the highway, the properties were held under option and were reported to have been explored by stripping and blasting in 1955. Locally, gneisses and syenite were intruded by syenite pegmatites. Allanite and uranothorite were identified as the radioactive minerals. Also present were purple fluorite, titanite (sphene), and zircon (Satterly, 1957).
- Canada Radium Corporation (Mines) Property, Lots 7 to 11, 12th Concession, and Lot 8 and the south half of Lot 7, 13th Concession, Cardiff Township, Haliburton County, Ontario (Lot 11, in the 12th Concession, was known as the *Jefferson Lot*, and was acquired in 1955) (Satterly, 1957). The property was near Cheddar. Canada Radium Mines was reported to have operated from 1932 to 1936, and from 1940 to 1942. In the early reports, it was reported that the company sank a shaft to 250 ft in 1933 and performed some underground development. Twenty-two were then employed (1933). By 1935 the shaft had been sunk to 388 ft and levels cut at 125, 250, and 365 ft (1937). In late 1939 and early 1940, a 100 ton per day mill was installed and some underground mining took place (1942). No mining was done in 1941 (1946) and the operation closed in mid-1942 (Hewitt, 1959). The deposit, in a pink graphic granite pegmatite dike, was also mined for feldspar and quartz. In 1954, the Canada Radium Corporation was incorporated to succeed the former company. The old workings were pumped out, sampled, and then allowed to fill (1956). It was subsequently explored in 1955 by the Geo-Technical Development Company. Locally, sediments were reported to have been cut by numerous pegmatite dikes. Containing pyroxene, hornblende, and biotite, these also contained uranothorite, uraninite, titanite, zircon, magnetite, apatite, and pyrite (Satterly, 1957). Hewitt (1959) reported that a small pit had been excavated in a vein of calcite, fluorite, and apatite. Mica and diopside were mentioned as occurring.
- Carr Prospect, Lots 7 and 8, 3rd Concession, Monteagle Township, Hastings County, Ontario. On this property, it was reported that S. J. Carr had stripped a slope on the line between Lots 7 and 8. The stripping exposed a granite pegmatite which cut amphibolite of metagabbro. Hewitt (1955) mentioned scattered crystals of allanite, from 2.5 to 5 cm by 12.5 cm in size, with lenses and grains of orange-brown uranothorite in the allanite.
- Ferrill Prospect, Lots 27 and 28, 3rd Concession, Monteagle Township, Hastings County, Ontario. Sometime prior to 1930 prospect pits were reported to have been opened by J. F. Ferrill on this lot (Hewitt, 1955). The deposit was in a pegmatite. Allanite was reported to be abundant, with zircon, titanite (sphene), magnetite, and hornblende also being present.
- Gorman Lake Occurrence, Lot 21, 10th Concession, Brudenell Township, Renfrew County, Ontario. The occurrence was reported to be on a small island in the lake. Large clusters of a black, resinous, radioactive mineral, thought to be allanite, were reported by Hewitt (1954).
- Lyndoch Occurrence, Lot 23, 15th Concession, Lyndoch Township, Renfrew County, Ontario. The beryl-pegmatite at this location was reported to contain lyndochite, columbite,

- columbian anatase, cyrtolite, monazite, and euxenite (Hewitt, 1954).
- Monteagle Prospect, Lots 27 and 28, 3rd Concession, Monteagle Township, Hastings County, Ontario. The prospect, in a granite pegmatite, was reported to have been opened by J. F. Ferrill. The minerals reported were allanite, titanite, magnetite, zircon, and hornblende. When tested at the Ontario Department of Mines, cerium, thorium, and zirconium were detected spectroscopically (Thomson, 1943).
- Printy Lake Occurrence, Lots 10 to 20, 14th and 15th Concessions, Brudenell Township, Renfrew County, Ontario. Hewitt (1954) mentioned that allanite occurred as an accessory mineral in the granite pegmatites of the area.
- Quirk Prospect, Lots 11 to 13, 4th Concession, Monteagle Township, Hastings County, Ontario. On the farm of J. E. Quirk, the main pits were reported to have been on the side of a hill, about 225 m south of the farmhouse. There were also other shallow pits and trenches. All exposed a red hornblende granite pegmatite. The minerals reported were pink to salmon-coloured calcite, apatite, biotite, titanite (sphene), zircon, black garnet, tourmaline, pyroxene, and black to reddish-brown uranothorite (Hewitt, 1955).
- Richardson Property, Lots 4 and 5, 21st Concession, Cardiff Township, Haliburton County, Ontario. The property was about 2.5 km east of Wilberforce, on the Irondale, Bancroft and Ottawa Branch of the Canadian National Railway, and 32 km from Bancroft. Discovered by W. M. Richardson, in 1922, the property, as well as Lots 4, 5, and 6, in the 22nd Concession, immediately north, were acquired by the Ontario Radium Corporation. The uraninite was discovered in a granite pegmatite dike which cut a sedimentary gneiss. The rim of a large granite batholith was reported to be about 8 km south of the deposit. There were several pits excavated on the property between 1922 and 1929, when it was visited by staff of the Canada Mines Branch (1930). The minerals included apatite, biotite mica, calcite, orthoclase feldspar, fluorite, hornblende, magnetite, molybdenite, and uraninite. Most were found as very large crystals: apatite to about 15 kg; feldspar to several cm; hornblende to 30 cm across; magnetite as large crystals; and uraninite to about 2.5 cm cubes modified to octahedra (Canada, Mines Branch, 1930). A concentrating plant was constructed on the property in 1931, but had not produced by 1933 (Canada, 1934). A shaft was being sunk in 1933 (1933).
- Thompson Prospect, Lot 2, 6th Concession, and Lots 4 and 5, 7th Concession, Monteagle Township, Hastings County, Ontario. The prospect was reported to have been on the farm of Mrs. W. M. Thompson. Hewitt (1955) mentioned that work had been done on the property during 1954 by R. H. Thompson and L. Black. A pegmatite had been exposed in the bed of a creek on Lot 4, 7th Concession. The minerals noted were titanite (sphene), magnetite, zircon, and rare uranothorite.
- Universal Light Metals Prospect, Lot 25, 15th Concession, Lyndoch Township, Renfrew County, Ontario. The prospect was reported to be on the top of Casey Hill, about 400 m east of the Quadeville-Letterkenny Road. Hewitt (1954) reported that the company had dug a series of pits at this location. Locally, pink granite pegmatite cut pink granite and hornblende granite gneiss. The minerals reported were allanite, zircon, titanite (sphene), magnetite, hornblende, and garnet.
- Welsh Occurrence, Lot 8, 10th Concession, Monteagle Township, Hastings County, Ontario. The occurrence was on the farm of Mr. Welsh, and about 225 m north of the barn. It was a

small exposure of interbanded amphibolite, pyroxenite, and granite pegmatite. There were reported to have been numerous knobs of black vitreous allanite, up to about 10 cm in diameter (Hewitt, 1955).

Sandstone

Sandstone is a sedimentary rock consisting of quartz grains that have been cemented together by silica. The colour usually ranges from yellow to red, to brown. Sandstone is used for the construction of buildings, flagstones, and as a source of crushed rock. The *Higginson Quarry*, near Hawkesbury, was one of the earliest quarries in the area, probably having been mined as early as 1825.

- Bartlett Quarry, 5th Concession, Pittsburgh Township, Frontenac County, Ontario. The quarry was reported to have been operated by A. D. Bartlett, of Kingston, from 1941 (1946).
- Bedard and Pauline Quarry, Lot 26, 10th Concession, North Elmsley Township, Lanark County, Ontario. This quarry was reported to have been mined by Jas. Bedard and P. Pauline, of Perth, for white sandstone (1922).
- Blue Ridge Limestone Quarry, March Township, Carleton County, Ontario. The quarry was listed as a producer in 1969 (1971).
- Blue Ridges Limestone Quarry, Huntley Township, Carleton County, Ontario. This quarry was listed as having produced sandstone from 1973 to at least 1974 (1977-1978).
- Bourbonnais Quarry, Vaudreuil, Québec. J. A. Bourbonnais, of Vaudreuil Station, was listed as an owner/operator in 1932 (1933).
- Britnell and Company Quarry, Lots A and B, 6th Concession, Somerville Township, Victoria County, Ontario. The quarry was reported to have been mined in 1913 (1914), with 40 then employed.
- Campbell (and Williams) Quarry, Nepean Township, Carleton County, Ontario. The firm, from Bell's Corners, mined sandstones for building purposes (1922). Campbell Sandstone Quarries was listed from 1932 to 1946 (1933-1948).
- Canadian Quarries and Construction Limited, Ottawa, Ontario. This quarry was reported as being idle in 1914 and 1915 (1915-1916).
- Electric Reduction Quarry, Lot 18C, 1st Range, Buckingham Township, Papineau County, Québec. The quarry was mined as a source of silica for flux, with the first mention of it having been in 1943 (1944). It was mined in 1944 (1945).
- Hart Road Quarry, Lot 26, 7th Concession, Bastard Township, Leeds County, Ontario. The quarry was reportedly beside Hart Road (a secondary road off Highway 42), to the west of the north end of Lower Beverley Lake. A small quarry in buff to grey siliceous sandstone was reported (Keith, 1949).
- Higginson Quarry, just south of the Canadian National Railway Station at Hawkesbury, Ontario. It was reported as being probably one of the earliest quarries to have been operated in the area. The sandstone was used in the construction of the canal at Grenville, Québec, just opposite Hawkesbury. There were reported to be blocks, into which the date 1825 had been cut, on both the first lock and in the keystone above the door of the Lockmaster's House (Canada, Mines Branch, 1934). The sandstone was also used in the construction of

the Christian Brothers School at Alfred. The quarry was probably operated by: (1) persons whose names have been lost; (2) J. C. Higginson, about 1912 (1934); and, (3) the Ottawa Valley Stone Quarry Limited (1934). The rock was reported to be a fine-grained grey sandstone with angular grains of quartz and occasional grains of feldspar.

Indusmin (Canadian Silica Corporation, Canadian Carborundum Company) Quarry, Lots 126, 127, and 129, Concession de la Rivière du Nord, Saint-Canut Parish, Lac-des-Deux-Montages Seignior, Deux-Montages (Two Mountains) County, Québec. At Saint Canut, near Saint Jérôme, the quarry was first mined in the 1940s (1944) by the Canadian Carborundum Company. It was then acquired by the Canadian Silica Corporation, of Toronto, in late 1954 (Canada, Mines Branch, 1955). Production was suspended for a period in 1954 (1956) during which the mill was renovated in 1955 (1957). Production was reported until at least 1962 (1964). In 1959 this was at the rate of 5000 tons per month. By 1962, the rate had increased to 500 tons-per-day (1964). In 1963, the company acquired adjacent lands and outlined additional reserves by diamond drilling. The total ore reserves were then estimated at 10 000 000 tons (1967). In 1964, the company was acquired by Indusmin (1967). The products, from Potsdam sandstone were used in the abrasives plant at Shawinigan Falls (Canada, 1948).

Indusmin (Industrial Minerals Property), Québec. Near Sainte-Scholastique. In 1963, Industrial Minerals, a subsidiary of Falconbridge, staked claims in the vicinity of Saint-Canut (1967). The property, with reserves of 55 million tons of sandstone containing 99% silica, was to be operated by Indusmin, their subsidiary. At the same time, the company obtained the property described above (1967).

Kingston (Silica Mines Quarry) Quarries Limited, Lots 13 to 15, 5th Concession, Pittsburgh Township, Frontenac County, Ontario. The quarries are near Joyceville, on the east bank of the Rideau Canal system, and about 18 km north of Kingston. In 1946, Keith (1949) reported that the deposit was about 2000 m long, from about 60 to 300 m wide, and with a commercial thickness of up to 15 m. The product, from Nepean sandstone, was used as moulding sands by the steel industry and for artificial abrasives. It was described as a fine to medium-grained, siliceous, creamy-white to grey, sandstone (Keith, 1949). It was mined from about 1942 (1946). (Canada, 1948, 1949, 1953). At the time, it was reported to be the only large-scale operation of its kind in southeastern Ontario (Keith). This are probably the *Kingston Quarries* that were listed as producers from 1968 (1970) until at least 1974 (1978).

Sidney (Sydney) Kirby Company Quarry, Sainte-Scholastique, Québec. This company, from Ottawa, Ontario, was reported as an owner/operator in Québec from 1923 to 1925 (1924-1926).

Sidney Kirby Company Quarry, Ottawa, Ontario. This quarry, operated in sandstone and limestone by the T. Sidney Kirby Company, was reported idle in 1915 (1916).

Laurin Property, Lot 25, 2nd Range, Templeton Township, Papineau County, Québec. The deposit was reported to be on the farm of X. Laurin, about 3 km north northeast of Talon Station on the Canadian Pacific Railway, and 3.5 km northwest of Gatineau. The sandstone was reported to be medium to fine-grained, and from white, to yellow, to brown in colour. It had not yet been mined when the Canada Mines Branch reported on it in 1932 (1934).

- McMillan Sandstone Quarry, Carleton Township, Carleton County, Ontario. The company was listed as a producer in 1970 (1972).
- Ottawa Silica Supply Company Property, Templeton Township, Papineau County, Québec. This company, of East Templeton, was listed as an owner/operator from 1930 to 1932 (1931-1933).
- Poirier Quarry, Papineau County, Québec. W. Poirier, of Montebello, was mentioned as the only producer of monumental and flagstone, from sandstone, in Québec, in 1951 (1952) and as one of two in the province in 1954 (1956).
- Silica Sand Company Quarry, Lots 19 and 20, 1st Concession, Pittsburgh Township, Ontario. This quarry was reported to be about 16 km east of Kingston, and on the shores of Batteau Channel. Operations began in 1923 and continued until 1924 (1926).

Scapolite

Scapolite is an aluminum silicate mineral which also contains calcium and sodium. In crystal form it occurs as stubby prisms of square cross section terminated at the ends by low four-faced pyramids. In transparent form it is a gemstone.

- Constantineau Property, Lot 3b, Augmentation of Grenville Township, Argenteuil County, Québec. In 1940, it was reported that L. Constantineau, of Pointe-au-Chêne, Argenteuil County, had produced several hundred pounds - mostly for museums and mineral collectors. Occurring in a pegmatite dyke, the mineral "was remarkable for its bright fluorescence" (1941).
- Dacey Mine, Lot 12A, 15th Range, Hull Township, Gatineau County, Québec. The mine was about 2.5 km southwest of Wilson's Corners (Sinkankis, 1959).
- Grenville Occurrence, near Grenville, Argenteuil County, Québec. Sinkankis (1959) reported that lemon yellow scapolite which could be faceted could be found at this location.
- King Edward Mine, Lot 8, Gore Mountain, Templeton Township, Hull County (now Papineau County), Québec. The mine was reportedly near the west shore of Rheaume Lake. Sinkankis reported glassy-blue scapolite of cuttable quality (1959).
- Loon Lake Occurrences: (1) Monmouth Township, Haliburton County, Ontario. The occurrence was reportedly near the shore of Loon Lake, about halfway between Drag Lake and Essonville. Sinkankis (1959) reported that exceptionally large crystals, up to 7.5 cm by 7.5 cm had been obtained from pits dug in the hills; (2) near Drag Lake, Dudley Township.
- McGill (Lawrence McGill) Mine, Lot 3, 3rd Range, Augmentation of Grenville Township, Argenteuil County, Québec. The mine was reported to have been about 4 km from Pointe-au-Chêne. Production was first reported in 1944, when it was noted that 700 lb had been produced (1945). Sabina reported that the property was worked for gem-quality minerals by the owner, Lawrence McGill (1986). The scapolite occurred in pegmatite and was said to be remarkable because of its bright fluorescence in ultra-violet light. Specimens were sold to museums and collectors (1945-1948).
- Mercier Dam Quarry, about 20 km northwest of Grand-Remous, Québec. A "dimension stone" quarry, it was opened in 1927 to provide stone for the Mercier Dam (Sabina, 1987).

Nellie and Blanche Mine, Lot 10, 10th Range, Hull Township, Gatineau County, Québec. The mine was reported to have been about 3 km southwest of Cantley. Sinkankis (1959) reported that crystals up to 20 cm long had been obtained (see also the listing under Mica).

Spain Mine, Lot 31, 4th Concession, Griffith Township, Renfrew County, Ontario. This molybdenite mine was about 10 km northeast of Griffith Bridge, and south of Highway 41. Sinkankis reported pale green facet-grade scapolite (1959) (see also the listing under Molybdenum).

Wallingford Mine, west half of Lot 16, 8th Range, Templeton Township, Hull County (now Papineau County), Québec. The mine was about 2.5 km west of Perkins Mills. Fibrous scapolite altered into lilac pinite (called wilsonite), which could be found at this location, was reportedly suitable for making into cabochons (Sinkankis, 1959) (see also the listing under Phosphate).

Serpentine

Duffy Occurrence, Lot 11, 5th Concession, Oso Township, Frontenac County, Ontario. The occurrence was on land reportedly belonging to Mrs. Tom Duffy. Green serpentine occurred in Grenville crystalline limestone (Harding, 1951) (see also the listing under Asbestos).

Jackson's Serpentine Mine, Leeds County, Ontario. The mine was about 3 km west of Gananoque on land originally owned by George Jackson, of Gananoque. Mining was reported to have begun about 1895.

Wood Land Mineral Company (Wilson) Mine, Lot 1, 5th Concession, Bedford Township, Frontenac County, Ontario. The land was reported to have belonged to Mrs. George Wilson. In 1941-1942, the Wood Land Mineral Company, of Hamilton, attempted to recover serpentine that occurred in beds of Grenville-age crystalline limestone. A pit, 10 ft deep, was reported to have been dug in the side of a hill (Harding, 1951).

Shale

Shale, a fine-grained sedimentary rock, is formed by the hardening of clay layers. It splits easily into layers, and was used for roofing tiles and a variety of other uses.

Merkeley's Quarry, Lot 18, 2nd Concession, Gloucester Township, Carleton County, Ontario (1923-1924).

Silica (see also Quartz and Quartzite)

Baskatong Quartz Mine. The mine was about 20 km north of Grand-Remous, Québec. Sabina (1987) reported that it has been mined since 1962 by Baskatong Quartz Products.

Bathurst Mine, Bathurst Township, Lanark County, Ontario. The mine was listed from 1939 to

- 1942 (1941-1946).
- Bigelow Property, Québec. B. Bigelow, of Buckingham, was listed as an owner/operator in 1932 (1933).
- Bigelow Property, Derry Township, Papineau County, Québec. Gordon Bigelow, of Glen Almond, Papineau County, was listed as the working owner of this property from 1943 to 1946 (1944-1947). Work was not reported in either 1944 or 1945.
- Bigelow Property, Papineau County, Québec. Earl Bigelow, of Glen Almond, was listed as an owner/operator in 1934 (1935).
- Bigelow Property, Portland East Township, Papineau County, Québec. Gordon Bigelow, of Glen Almond, was listed intermittently as an owner/operator from 1929 to 1934 (1930-1935).
- Bigelow Property, Buckingham Township, Papineau County, Québec. Robert Bigelow was listed as owner/operator of this property from 1932 to 1934 (1933-1935).
- Bigelow Property, Québec. Venard Bigelow, of Notre-Dame-de-la-Salette, was listed as an owner/operator in 1934 (1935).
- Bigelow and Parcher Property, Derry Township, Papineau County, Québec. Gordon Bigelow and Alton Parcher, of Glen Almond, were reported as owners/operators in 1939 and 1940 (1940-1941). Work was reported in both years.
- J. Bonnell, Buckingham, Québec. J. Bonnell was reported as an owner/operator from 1921 to 1922 (1922-1923). John Bonnell was listed in 1932 (1933).
- Brady Property, Buckingham Township, Papineau County, Québec. James P. Brady, of Masson, was listed the owner/operator from 1940 to 1942 (1941-1943), with work being reported in 1941. John E. Brady was listed as the owner from 1943 to 1945 (1944-1946).
- Buckingham Cartage Mine, Québec. This operation was mentioned as a producer of silica and feldspar in 1960 (1962).
- Buckingham Feldspar Properties, Buckingham Township, Papineau County, and Derry Township, Papineau County, Québec. The company was listed as the working owner/operator of these properties in 1946 (1947).
- Buckingham Mining Company, Buckingham, Québec. The company was reported as an owner/operator from 1926 to 1929 (1927-1930) and from 1931 to 1934 (1932-1935).
- Buckingham Mining Corporation, Buckingham Township, Papineau County, Québec. The company was listed as a producer in 1946 (1947).
- Cadieux Quartzite Quarry. The quarry was reported to have been about 2 km south of Glen Almond, Québec. Sabina (1987) reported that it was worked in 1954 by Omer Cadieux. It, and seven other pegmatite deposits that were worked for feldspar, were mined by the Canadian Flint and Spar Company. Production was reported in 1954 (1956).
- Cameron Properties, Derry and Buckingham Townships, Papineau County, Québec. William Cameron of Buckingham was reported as an owner/operator in 1924 (1925), while he and J. J. Cameron, were listed from 1926 to 1929 (1927-1930) and from 1932 to 1935 (1933-1936). Production was not indicated.
- Cameron Property, Buckingham Township, Papineau County, Québec. Reginald Cameron, of Buckingham, was listed as an owner/operator in 1940 (1941). Work was reported.
- Canada China Clay and Silica (Canadian Kaolin Silica Products) Mine, Lots 9 to 12, 6th Range south, Amherst Township, Les Laurentides, Québec. The property was reported to have been developed from 1931 to 1932 by Canadian Kaolin Silica Products, with a mill

capable of producing 100 000 tons annually having been constructed. The deposit was highly-shattered white Grenville quartzite with from 5% to 12% kaolin in the fractures (1933). The company operated it until a fire destroyed the plant in April, 1940, and operations were discontinued (1941). Canadian China Clay and Silica then took it over. Silica was the principal product, with kaolin being produced as a by-product. It produced until 1944 (1945) (see also the listing under Kaolin).

Canada China Clay and Silica Mine, Papineau County, Québec, at Kasil. The company was reported to have been mining kaolinized quartzite at this property in 1945-1948 (1946-1949). The property was reported to have been idle in 1950 (1951).

Canada Glass Products Property, East Templeton Township, Papineau County, Québec. This company, of Hull, was listed as an owner/operator from 1927 to 1929 (1928-1930) and 1932 (1933).

Canadian Carborundum Company Property, Saint-Canut Parish, Deux-Montagnes County, Québec. The property was about 40 km northwest of Montréal. The company, of Niagara Falls, Ontario, was listed as a working owner operator from 1941 to 1952 (1942-1953). The silica, produced from Potsdam sandstone, was used in the production of carborundum at their plant at Shawinigan Falls.

Canadian Flint and Spar Property, Derry Township, Papineau County, Québec. This company, from Ottawa, was reported as an intermittent producer from 1931 to 1952 (1932-1953) (see also the listing under Feldspar). Quartz was also produced by many of the feldspar producers working in the pegmatite dykes of the Buckingham area (1957). The company was succeeded by International Minerals and Chemical (Canada) in 1956 (1958).

Canadian International Paper Company Property, Calumet, Québec. The company was listed as an owner/operator in 1929 (1930).

Chisholm Wellage Quarry, 1st Concession, Elizabethtown Township, Leeds County, Ontario. The quarry was reported to have been mined for quartzite and granite, for use on roads (1922).

City of Brockville Quarry, Leeds County, Ontario. The quarry was reported to have been mined for quartzite and granite for roads (1922).

Corporation Administrative Services Property, Saint-Eustache Parish, Deux-Montagnes County, Québec. The claims, on a Potsdam sandstone property, were staked in 1963. Staining by iron oxides, however, were reported to have reduced the commercial possibilities (1967).

Couture Property, Québec. Edmond Couture, of Glen Almond, was listed as an owner/operator in 1934 (1935). Théodore Couture was listed in 1945 (1946).

Derry Mine, south half of Lot 7 and Lot 8, 1st Range, Derry Township, Papineau County, Québec. The mine was about 5 km northeast of Glen Almond. The Derry Mining Company Property was listed as having produced in 1935 (1936). For a complete description the reader is referred to the listing under Feldspar.

Desert Lake Mine. It was reported to have been operated by the Kingston Feldspar and Mining Company, of Kingston, Ontario. It was reported as active in 1915 (1916).

Dominion Silica Corporation (Arnold Property, Lac Loranger Property) Property, Lots 18 to 21, 1st Range, Loranger Township, Labelle County, Québec. The quarry was on the east shore of Loranger Lake, near Bellerive, and also near St. Donat, about 136 km north of Montréal. Originally the property of D. J. Arnold, it was reportedly acquired by the

- Dominion Silica Corporation in 1951 (1952). A mill was constructed at Lachine in 1951-1952 (1952-1953), and production began in late 1952. The property was tested in 1954 (Canada, Mines Branch, 1955). Production was reported to have been suspended in 1954 (1956). The deposit was a steeply-dipping band of quartzite, about 100 m wide, consisting of quartz, hornblende and biotite.
- Dominion Silica Corporation, Lots 22 and 23, 2nd Range, Lussier Township, Montcalm County, Québec. This property, near Saint-Donat was mentioned as having been worked from 1955 to 1960 (1957-1962). The product was shipped to the company's plant at Lachine where it was treated to produce silica for the glass industry (1961).
- Dominion Silica Corporation (Labelle, Montage Blanche Property), Lots 49 and 50, West Range of Rouge River, Clyde Township, Labelle County, Québec. The mine was about 8 km south of Labelle, on a hill between the Montréal-Mont Laurier Highway (to the west) and the Rouge River (to the east). The quartzite was reported to have been milky-white, with kaolin, mica, magnetite, ilmenite, and other dark minerals being mentioned (1955). It was mined from about 1953, but production was suspended in 1954 (1955).
- Robert J. Donaldson Property, Buckingham Township, Papineau County, Québec. From Glen Almond, Mr. Donaldson was listed as an owner operator from 1927 to 1929 (1928-1930) and from 1931 to 1940 (1932-1941). Work was reported in 1940.
- Eureka Flint and Spar Company, Verona, Ontario (1920).
- Evans Property, Buckingham Township, Papineau County, Québec. Ted Evans, of Buckingham, was listed as an owner/operator, who had worked on the property, in 1939 (1940).
- Feldspar Quarries Property, Derry Township, Papineau County, Québec. The company, from Trenton, New Jersey, was reported as an owner/operator from 1931 to 1932 (1932-1933).
- J. B. Gauthier Property, Buckingham Township, Papineau County, Québec. Mr. Gauthier was listed as an owner/operator from 1932 to 1934 (1933-1935).
- Gauthier Properties, Bigelow and Bowman Townships, Papineau County, Québec. Sylvio Gauthier, of Masson, was listed as a working owner/operator in 1944 (1945).
- J. B. Gorman, of Buckingham, Québec, was reported as an owner/operator from 1921 to 1922 (1922-1923).
- Greeley Quartz Crystal Occurrence, Greeley, Ontario. Sabina (1986) reported that doubly-terminated crystals were mined as gems by the owner, Jacques Rancourt.
- Hart Property, Portland West Township, Papineau County, Québec. Rodrigue Hart, of Notre-Dame-de-la-Salette, was listed intermittently as a working owner/operator from 1942 to 1944 (1943-1945).
- Hill Property, Lot 16, 11th Range, Buckingham Township, Papineau County, Québec. Nelson Hill, of Glen Almond, was listed as an owner/operator from 1934 to 1940 (1935-1941) with work on the property being reported in 1937-1938 and 1940. William Hill, Jr., was listed next as the working owner from 1943 to 1946 (1944-1947).
- Huggins Property, Lots 4, 5, 6, and 7, 2nd Concession, and Lot 4, 3rd Concession, Nepean Township, Carleton County, Ontario. A lease on this property was reported to have been acquired by F. W. Huggins, of Ottawa, in 1950. A vertical two-compartment shaft was sunk to 100 ft on Lot 5 that year. The purpose was to sample the lowest sandstone beds, which were thought to have been of glass-sand grade. During 1951-1952, drifting and

- sampling took place before the work was suspended (1954).
- Industrial Sands and Minerals Corporation Property, Templeton Township, Papineau County, Québec. The company, from Montréal, was listed as a working owner/operator in 1942 (1943). No work was noted the following year, 1943 (1944).
- International Crystal Property, unsurveyed part of Pontiac County, Québec. The company, of Montréal, and later Dunham, Missisquoi County, was listed as the owner/operator of this property from 1938 to 1946 (1939-1947).
- International Minerals and Chemical (Canada) Properties, Québec. The company succeeded Canadian Flint and Spar in 1956 (1958). It produced from 1957 to 1958 (1959), and was listed as the only producer in its area (i.e., Buckingham) in 1959 (1961).
- Johnson Property, Ontario. Felix Johnson, of Hybla, was listed as a producer in 1925 (1926).
- Kingston Feldspar and Mining Company, Verona, Ontario. The company also operated the Desert Lake and Reynolds Mines as quartz producers (see the listings under Feldspar).
- Kingston Silica Mine, Lots 13, 14, and 15, 6th Concession, Pittsburgh Township, Frontenac County, Ontario. Access to the property was reportedly by Highway 15. Kingston Silica Mines was incorporated in 1942 and began operations on this property in 1943. It was mentioned as late as 1952 (1953). By the end of 1946, 38 666 tons had been shipped. The rock was a loosely-banded, fine, silica (Potsdam) sandstone (1949) which was mined to produce silica for the manufacture of silicon carbide (1953).
- Lafrance Property, Buckingham Township, Papineau County, Québec. Ovila Lafrance, of Angers, was listed as a working owner/operator from 1941 to 1946 (1942-1947).
- Laurentian Silica Mines, Amherst Township, Papineau County, Québec. The company was reported as having operated a quartzite quarry in 1958, and selling the output to the Canada Cement Company (1959).
- Law Property, Derry Township, Papineau County, Québec. S. H. Law, of Toronto, was listed as a working owner/operator in 1944 (1945) but no work was reported in either 1945 or 1946 (1946-1947).
- Lyndhurst Occurrence, near Lyndhurst, Ontario. A small production of clear crystals, without flaws, was reported in 1953 (Canada, Mines Branch, 1954). These were used in radio frequency-control apparatus.
- Lyndoch Occurrence, south halves of Lots 30 and 31, Lyndoch Township, Renfrew County, Ontario. Sinkankis (1959) reported that pale rose quartz occurred in a pegmatite dike on this property.
- MacDonald Property, Ontario. P. MacDonald, of Hybla, was listed from 1934 to 1936 (1935-1937).
- McClements Property, Buckingham, Québec. J. McClements was reported as an owner/operator in 1921 (1922) while Albert McClements was listed from 1934 to 1936 (1935-1937). There were no reports of production.
- McDonell Property, Derry Township, Papineau County, Québec. Edmond McDonell, of Buckingham, was listed as an owner/operator from 1934 to 1935 (1935). B. A. McDonnell was listed next from 1937 to 1940, with work being reported (1938-1941).
- Maloney Property, Marmora Township, Hastings County, Ontario. M. J. Maloney, of Marmora, was listed as a producer in 1925 (1926).
- Morin Property, Buckingham Township, Papineau County, Québec. A. Henri Morin, of Glen

- Almond, and later Buckingham, was listed as a working owner/operator from 1941 to 1945 (1942-1946). No work was reported in 1946 (1947).
- Newton Property, Québec. Alfred Newton, of Glen Almond, was listed as an owner/operator in 1934 (1935).
- Newton (and Handyside) Property, Buckingham Township, Papineau County, Québec. Alfred A. Newton and L. R. Handyside, of Buckingham, were listed as working owners/operators from 1940 to 1941 (1941-1942). A.A. Newton was listed intermittently as such from 1942 to 1944 (1943-1945).
- O'Brien and Fowler Property, Derry Township, Papineau County, Québec. The company, of Ottawa, was reported as an owner/operator in Québec from 1924 to 1929 (1925-1930) and from 1931 to 1937 (1932-1938).
- Ontario Feldspar Company, South Sherbrooke Township, Lanark County, Ontario (1920).
- Orser Property, Bathurst Township, Lanark County, Ontario. The property was reported to have been near Verona. S. H. Orser, of Perth and later Sydenham, was listed as a shipper from 1926 to 1927 (1927-1929).
- Orser-Kraft Property, Lot 12, 5th Concession, South Sherbrooke Township, Lanark County, Ontario. S. H. Orser, of Perth, was reported to have shipped 75 carloads from this property, from Feldspar Station in 1923 (1924). The Orser-Kraft company was listed as having produced from properties in Bathurst, Drummond, and South Sherbrooke Townships in 1925 (1926).
- Ottawa Silica and Rock Wool Mine, Lots 14 and 15, 1st Range, East Templeton Township, Papineau County, Québec. The Ottawa Silica Supply Company, of East Templeton, was reported as an owner/operator in 1931 (1932). The name was changed to Ottawa Silica and Sandstone in 1932, and the company was reported until 1946 (1933-1947). The property was reported to have been leased to the Industrial Sands and Minerals Corporation in 1942 (1943) and the quarry was reported to have been idle in 1943-1946 (1944-1947). About 1948, Ottawa Silica and Rock Wool reportedly took it over and started a two-year program of diamond-drilling and rehabilitation of the surface plant (1951). The company, however, was liquidated early in 1952 (1953). The Potsdam sandstone was used for sand-blasting material, and the silica for cement.
- Ottawa Valley Mines Property, Buckingham Township, Papineau County, Québec. The company, of Montréal, was listed as an owner/operator in 1932 (1933).
- Parcher Property, Derry Township, Papineau County, Québec. Alfred Parcher, of Glen Almond, was listed as an owner/operator from 1928 to 1929 (1929-1930) and from 1931 to 1939 (1932-1940). Work was reported intermittently from 1935 to 1938.
- Parcher Property, Derry Township, Papineau County, Québec. Maggie Parcher, of Glen Almond, was listed from 1939 to 1940 (1940-1941). Work was reported in 1940.
- Pedneaud (Gonzague Pedneaud) Mine, Lot 14, 12th Range, Buckingham Township, Papineau County, Québec. The mine was about 2 km southeast of Glen Almond. The deposit was mined for both feldspar and quartz and was reported to have been first mined in 1912 (1922). The quartz was sold to the Electric Reduction Company, of Buckingham. It was mentioned in the 1935 report as being one of the important producers that year (1936). Gonzague Pedneaud, of Buckingham, and later Glen Almond, was reported as an owner/operator and producer intermittently from 1920 to 1937 (1921-1938). From 1938

- to 1940 (1939-1941), Louis and Aline Pedneaud were listed. The quarry was reported by Sabina (1986) to have then been on the Gauthier Farm (see the listing under Feldspar).
- Perkins Mining Company Property, Derry Township, Papineau County, Québec. The company, from Pointe-Gatineau, was listed as an owner/operator in 1935 (1936) and from 1939 to 1945 (1940-1946). Work was reported in 1939.
- Rayner Property, Hybla, Ontario. G. W. Rayner, of Toronto, was listed as a producer from 1925 to 1926 (1926-1927).
- Red Horse Lake Occurrences, Leeds County, Ontario. Sinkankis (1959) reported that crystals of perfect clarity had been mined from a deposit about 150 m south of Red Horse Lake and about 1.5 km east of Black Rapids. Others deposits in the area were reported to have been at the east ends of Higley and Foley Lakes, and about 600 m north of the Red Horse Lake deposit.
- Reynolds Mine. The mine was reported to have been operated by the Kingston Feldspar and Mining Company, of Kingston, Ontario, and was active in 1915 (1916).
- Saint Amour Property, Villeneuve Township, Papineau County, Québec. Orphila Saint Amour, of Notre-Dame-de-la-Salette, was listed as an owner/operator from 1934 to 1942 (1935-1943). Work was reported in 1937.
- Saint-Donat Quarry. Near the town of Saint-Donat-de-Montcalm, Québec, the quarry was reported to have been operated since 1955 by Minéraux Industriels du Canada Limitée, Division Silice (formerly Dominion Silica Corporation) (Sabina, 1986).
- Sellers and Parcher Property, Derry Township, Papineau County, Québec. Walter Sellers and Alton Parcher, of Glen Almond, were listed as owners/operators from 1935 to 1938 (1936-1939).
- Silica Sand Company Mine, Pittsburgh Township, Frontenac County, Ontario. The company was reported as being in liquidation in 1925 (1926).
- Stewart Property, Buckingham Township, Papineau County, Québec. William Stewart, of Buckingham, was reported as an owner/operator from 1931 to 1942 (1932-1943). Work was reported in 1936, 1939-1941.
- Stinson-Reeb Supply Company Quarry, Lots 125 to 130, Saint-Canut Parish, Québec. Osborne (1938) reported that this company began to develop the quarry in 1918. There were several changes of ownership and, in 1929, it was acquired by the Canadian Carborundum Company.
- Temple Sand and Silica Company, East Templeton Township, Papineau County, Québec. The company was reported as an owner/operator from 1920 to 1922 (1921-1923).
- Town of Gananoque Quarry, Leeds County, Ontario. The quarry was reported to have been mined for quartzite for roads (1922-1924).
- United Mining Industries Property, Buckingham Township, Papineau County, Québec. The company, from Montréal, was listed as a working owner/operator from 1942 to 1945 (1943-1946).
- Unnamed Mine, Lot 11, 3rd Concession, Bathurst Township, Lanark County, Ontario. It was reported that 20 carloads were shipped from this property in 1923 (1924).
- Verona Rock Products Quarry, Verona, Ontario. The product was reportedly used in the manufacture of sandpapers (Canada, 1948).
- Warwick Property, Québec. William Warwick, of Buckingham, and later Glen Almond, was listed

as owner/operator from 1932 to 1945 (1933-1946), with work being reported in 1939, 1940, and 1942.

Whitfield Property, Buckingham Township, Papineau County, Québec. T. Whitfield, of Buckingham, was listed as an owner/operator in 1935 (1936).

Winning Properties, Portland West Township, Papineau County, and Wells Township, Labelle County, Québec. Bush Winning, of Glen Almond, was reported as an owner/operator from 1934 to 1944 (1935-1945). Work on the Portland West property was reported in 1941-1942.

Winning and Downing Property, Buckingham Township, Papineau County, Québec. This firm, from Notre Dame-de-la-Salette, was listed as owner/operator in 1929 (1930) and from 1932 to 1936 (1933-1937). Work on the property was reported in 1935.

Sillimanite and Kyanite

Sillimanite (fibrolite), an aluminum silicate, is used in the manufacture of refractories. It occurs as aggregates or sheaves of fine fibrous needles, which vary in colour from white to straw yellow to brown.

Carlow Occurrence, Lots 21, 11th and 12th Concessions, Carlow Township, Hastings County, Ontario. The outcrop was reported to have been on the boundary between the concessions. Sillimanite was reported to be common in a sillimanite-garnet-biotite paragneiss (Hewitt, 1955).

Carlow Occurrence, Lots 23 and 24, 12th Concession, Carlow Township, Hastings County, Ontario. Hewitt (1955) reported several outcrops in open fields about 400 m south of the New Carlow-Combermere Road. These showed a kyanite-sillimanite-garnet-biotite paragneiss, with kyanite occurring as blue, bladed, crystals, up to about 0.75 cm in diameter. There were also needle-like aggregates of sillimanite with garnet and kyanite.

Dungannon Occurrence, Lot 22, 10th Concession, Dungannon Township, Hastings County, Ontario. Hewitt and James (1956) reported a band of sillimanite-rich gneiss which crossed the lot to the south of the railway line.

Lyndoch and Radcliffe Occurrences, Lot 34, 15th Concession, Lyndoch Township, Renfrew County, Ontario. Hewitt (1954) reported that narrow bands of sillimanite-garnet-hornblende gneiss, or variations thereof, occurred on this lot, to the west of the Wolfe Post Office and east of Wadsworth Lake in Radcliffe Township.

Silver

Silver, a soft, malleable, precious metal was once used extensively for coinage, as well as for jewellery, tableware and in the arts. Because it is no longer cost-effective to mint silver coins, this use has disappeared except for the production of special commemorative sets for collectors. Large quantities of the metal are also used in photography. At the beginning of the 20th Century most of the silver produced in Canada came from the famous mines of the Cobalt, Ontario, area. At present, most of the metal is recovered as a byproduct in the treatment of sulphide ores.

Barrie Silver Mine, Barrie Township, Frontenac County, Ontario. The mine was reported to have been north of the shore of Long Lake and a short distance from Ardoch. High values of silver were reported to have been associated with a variety of minerals (1902).

Silver Crater Mine, 19th Concession, Grimsthorpe Township, and Concessions A, B, 14th, and 15th, Faraday Township, Hastings County, Ontario. Silver Crater Mines was incorporated in 1951 and held properties in Coleman Township, District of Timiskaming, and Faraday Township, Hastings County. In 1955, drifting and crosscutting was done from an adit on Lot 31, 15th Concession. Concurrently, diamond drilling was performed (1957).

Silver King Mine. The mine was reported to have been about 11 km north of Queensboro, Ontario. It was being developed by an American syndicate in 1906 and a shaft had been sunk to 60 ft (1907).

Slate

Slate is a dark, hard, fine-grained, sedimentary rock, that parts easily into distinct layers. It was once used extensively for writing tablets (with chalk) and roofing tiles.

Canada (Canadian) Slate Products Quarry, Ontario. At Madoc, the quarry was reportedly operated in 1937 by S. E. Sill, of Toronto (1939). It was subsequently operated by J. H. Doige, also of Toronto, in 1939 (1941).

Crespey Slate Products Quarry, Ontario. At Madoc, this quarry was reported to have been operated by Arthur Andrews, of Madoc, in 1937 (1939).

Slate Quarry. The quarry was about 3 km north of Madoc, Ontario, on Highway 62. Sabina reported (1987) that it had been operated in the 1930s.

Soapstone

Soapstone is a soft talcose rock which has great resistance to chemicals and heat. Because it retains heat it was once used for oven liners, griddles, and foot warmers. Because of its resistance to chemicals it was used for counter tops, sinks, and hoods in chemical laboratories, as well as for laundry tubs. Today, it is used extensively for carving by the Inuit peoples of northern Canada.

Bell Property, Pakenham Township, Lanark County, Ontario. In 1938 it was reported that there had been no further development on this property (Canada, Mines Branch, 1939).

Queensboro Soapstone and Talc Occurrence. The occurrence was about 5 km north of Highway 7, on the road to Queensboro, Ontario, and 12 km northeast of Madoc. In 1987, Sabina reported that the property had been opened as a prospect "many" years ago.

Sodalite

Sodalite is a sodium aluminum silicate with chlorine. Somewhat resembling marble when polished, it is an attractive ornamental stone which is used for decorative purposes and for jewellery. Polished blocks or slabs are used as bookends and paperweights, etc., while polished cabochons

are used for bracelets, pendants, and brooches. Its colour is usually a beautiful deep blue. When associated with orange-yellow cancrinite, a mineral with which it is often found, the result is spectacular. It also occurs with pink hydronephelite.

Cancrinite Hill Occurrence, Lots 25, 13th and 14th Concessions, Dungannon Township, Hastings County, Ontario. The occurrence was reported to have been about 3.5 km from Bancroft and 1 km south of the Princess Quarry. It was on the south slope of Cancrinite Hill, in the south half of Lot 25, 13th Concession. This locality is noted for the considerable quantity of yellow cancrinite that can be found. Other minerals present include cleavelandite, hydronephelite, magnetite, molybdenite, nepheline, blue sodalite, and tourmaline (Hewitt, 1961).

Goulding-Keene Quarry, Lot 12, 11th Concession, Dungannon Township, Hastings County, Ontario. The quarry was on the west side of the York River. Sodalite and cancrinite were reported to have occurred along fractures in a pegmatite (Sinkankis, 1959).

Princess Sodalite (Quarry), Lot 25, 14th Concession, Dungannon Township, Hastings County, Ontario. The quarry was about 3.5 km southeast of Bancroft and about 100 m north of the East Road. It was also about 60 m long and 90 m north of the Bancroft-Hermon Road. It was reportedly opened for a Scottish company in 1905 (1906) with a shipment of 160 tons being made to England in 1906 (Thomson, 1943). The product was used as a decorative stone. There were two pits. One of these was mentioned as being 200 ft long with faces of from five to 10 ft (Hewitt & James, 1956). It was listed as a producer of quartz in 1968-1969 (1970-1971). The sodalite occurred as veinlets in nepheline syenite. Other minerals were biotite mica, cancrinite, plagioclase feldspar, magnetite, and nepheline (Sinkankis, 1959). Hewitt and James (1956) observed that much of the material present at the site had been damaged by blasting. It was reported as being one of the most-often visited mineral locations in the Bancroft area (Hewitt, 1961).

Unnamed Occurrence, Lots 25 and 29, 13th Concession, Dungannon Township, Hastings County, Ontario. It was reported that the overburden had been removed from this site some years before Sinkankis listed it in 1959.

Unnamed Quarry, Lot 23, 14th Concession, Dungannon Township, Hastings County, Ontario. Small amounts of sodalite and cancrinite were noted at this location by Sinkankis (1959).

Strontium

This is a pale yellow metallic element, resembling calcium in its properties, and found in nature only in combination with other elements. Its compounds burn with a red flame and are used in pyrotechnics - such as fireworks and tracer bullets. The mineral celestite (strontium sulphate) is used as a substitute for barite as a filler in paints and other applications. The mineral strontianite (strontium carbonate) is used in steel-making to increase the fluidity of slag.

Wilder (Fletcher) Mine, Lots 6 and 7, 10th Concession, Bagot Township, Renfrew County, Ontario. The mine was about 8 km from Calabogie and about 0.3 km west of Virgin (Dempsey) Lake. The principal occurrence, on Lot 7, was reportedly known as early as 1888. In 1918, J. E. Wilder purchased the mineral rights from the estate of

Hiram Robinson, of Ottawa (Satterly, 1945). The property was then owned by Cyrus Holden, during which time about 200 tons of celestite was mined and the ore stockpiled. A trial shipment was made to Dunlop Tire and Rubber Goods Company in 1921. In 1941, A. E. Fletcher obtained a lease from the Toronto General Trusts Corporation and pumped out the pit. There were then four workings, all cuts and pits, on the property. The local rock was reported to be a white to pink crystalline limestone containing brecciated zones cemented with radiating masses of white celestite (Satterly, 1945). Barite was also reported.

Talc

Talc is a very soft magnesium silicate mineral with a soapy feel. It is the softest of the minerals. In its purest form it is used in the manufacture of high-quality coated papers and in cosmetics. Other uses include paint fillers, glass polishes, and lubricants. The deposits at Madoc are known as some of the most important sources of high-grade talc in North America.

Baumhauer Prospect, Lot 11, 10th Concession, Faraday Township, Hastings County, Ontario.

Owned by Cornelius Baumhauer, the deposit of talc and soapstone was reported to have been near the shore of a small lake at the western part of the lot. The talc was in slip planes in limestone and amphibolite. The talc was fairly white and it was mentioned that there had been some interest in the property in 1942 (Thomson, 1943).

Bonter, Hutchison and Spry Mine, Lot 1, 14th Concession, Rawdon Township, Hastings County, Ontario. The open pit was opened in 1940, when some mining took place. It was operated by W. R. Bonter, Thomas Hutchison, and Clifford Spry (1942). See also the listing for the Victory Mine, below.

Canada Talc Industries Properties, see the listings for the Conley (Connolly) and the Henderson Mines, below.

Conley (Connolly, Asbestos Pulp Company) Mine, northwest quarter of Lot 15, 14th Concession, Huntingdon (also reported as Huntington) Township, Hastings County, Ontario. The mine was about 2 km south of Madoc and adjoined the Henderson Mine to the east. Discovered in 1896, the deposit has been worked continuously since 1915 (1974). The original Conley Mine, then owned and operated by the Hungerford Syndicate, was opened in 1911. It was further developed from 1912 to 1913 (1914), with a shaft being sunk to 70 ft and some drifting done. In 1915 it was operated by the Anglo-American Talc Corporation (1916), which deepened the shaft to 140 ft and cut levels at 65 ft and 130 ft. Little work was done underground in 1916 (1917) but development continued in 1917 with the deepening of the shaft to 188 ft and drifting on the levels (1918). In 1919, *Number 2 Shaft* was started 300 ft east of the *Main Shaft* (1920), while, in 1920, stoping was between the first and second, and second and third, levels (1921). About 6000 tons was reportedly produced that year. In 1921, after the failure of the parent company, the lease held by the Anglo-American Talc Corporation reverted to the owners. The Asbestos Pulp Company was then formed (1922) and mined it from 1922 to 1928 (1923-1930). In 1929 it became the Canada Talc Company (1930), which, in turn, became Canada Talc Industries in mid-1951 (1953). The shaft was deepened to 391 ft by 1928, when 20 men were employed. It was connected to

the *Henderson Mine* by a 748-foot drift on the 250-foot level (1942). In 1942, the *Number 3 Shaft* was deepened to 383 ft and a new level established at 370 ft (1946). It became the principal part of the combined operation, accounting for about 75 percent of the company's production. From 1947 to 1956, most of the production was from shrinkage stopes in the *Conley (Connolly) Section* (1949-1956). Later, mining was from the *Number 2 Shaft (Conley Mine)* and the *Number 3 Shaft (Henderson Mine)*. Mining was by induced caving. During the period 1950-1967, production was of the order of 9400 to 14 000 tons per year (1951, 1954, 1957, 1958, 1960-1969). There were then reported to have been three shafts: *Number 1* (431 ft deep) - reported as inactive in 1960 (1962); the *Number 2*, or *Conley Shaft*, on Lot 15, of the 14th Concession (420 ft) (1962) - once known as the *Number 3* (1947); and, the *Number 3*, or *Henderson Shaft*, on Lot 14 of the 14th Concession (1958) (and, once known as the *Number 4* (1947), (456 ft), and a 31-foot winze from the 7th level (1947) - reported as inactive in 1960 (1962). It appears that the shafts were renumbered again to their 1947 designations in 1965, thus adding confusion (1968). In a major expansion, that began about 1965, the *Number 3* shaft, in the *Conley Mine*, was deepened to 611 ft (1968). By 1966, production had been increased to 16 000 tons (1968). This was further increased to about 21 000 to 22 000 tons during the period 1968-1970 (1970-1972), and to about 30 000 tons per annum in 1971-1974 (1972-1975). In 1998, it was mentioned that production has been maintained at 30 000 tons per annum and that the total production from the *Conley* and *Henderson* mines, since the beginning, in 1896, has been 1 260 000 tons (listing on Natural Resources Canada website, www.nrcan.gc.ca, 1999).

Eagle Lake Soapstone Mines Property, Ontario. At Eagle Lake, the property was reported in 1932 (1932).

Eldorado (Eldorite) Mine, Lots 20 and 21, 4th and 5th Concessions, Madoc Township, Hastings County, Ontario. The mine was about 3 km north of Eldorado and close to Eldorado Station on the Central Ontario Railway. Opened in 1911 by the Canadian Talc and Silicate (Silica) Company, two shafts were sunk on the incline: *Number 1*, 90 ft deep; and, *Number 2*, 130 ft deep (1913). In 1914 it was acquired by Eldorite Limited (1915), which operated it until 1915 (1916). In 1919, it was operated by the Eldorado Mining and Milling Company, of Chicago, Illinois. *Number 1 Shaft* was then 153 ft deep, while *Number 2 Shaft* had been deepened to 155 ft. Levels at 75 and 135 ft connected the two shafts. The orebody was an altered siliceous magnesian limestone, with a width on surface of over 200 ft (1920). It was reported to have operated in 1920 (1921).

Eldorite Limited Mine, Lot 15, 14th Concession, Huntingdon Township, Hastings County, Ontario, adjacent to the Henderson mine (Canada, Mines Branch, 1915). This second Eldorite property had reportedly been idle since 1913. In 1916, however, it was reported that work had been resumed and that there were then two shafts, 65 ft and 15 ft deep, respectively (1917).

Grimsthorpe Prospect, Lot 9, 5th Concession, Grimsthorpe Township, Hastings County, Ontario, about 18 km northeast of Cooper. Test pits were reported to have been dug on this property in a very pure pale apple-green foliated talc. The talc was associated with crystalline dolomite in a band of serpentine (Thomson, 1943).

Harrison Mine, on the outskirts of Madoc, Ontario. It was reported that there was a shaft, 53 ft

deep, on this property in 1903 (1904).

Henderson (Gillespie) Talc Mine, Lot 14, 14th Concession, Huntingdon Township, Hastings County, about 2 km east of Madoc, Ontario. The deposits were discovered in the 1880s and mining began in 1896, by James E. Henderson, of Madoc, who held the property under lease (1901). Reportedly inactive in 1901 (1902), it was next reported to have been operated by C. Henderson, in 1903 (1904). It was then operated successively by: Stephen Wellington, of Madoc, from 1904 to 1911 (1905-1912); from 1912 to 1915 by Messrs. Cross and Wellington (1916); and George H. Gillespie and Company (1926). The main shaft was sunk to 250 ft, with levels at 120 and 185 ft. Annual production was then reported as 1000 tons (1907). It was also the only producer in the province in 1906. Continuous production was reported from 1907 to 1914 (1915). Mining was by the square-set method. In 1909, a mill was constructed in Madoc. In 1913, *Number 2 Shaft* was abandoned due to a fall of ground (1914), but, between 1914 and 1917 it seems to have been rehabilitated and sunk to 231 ft (1915-1918). A caving system of mining was introduced in 1914, and it was reported that eight men were then able to produce 1100 tons per month (1917). In 1920, a new shaft (probably *Number 3*) was sunk to 240 ft, between *Numbers 1 and 2 Shafts* (1921). Canada Talc Industries (Canada Talc until mid-1951) acquired the property in 1937, and became the only important operator in the area through its two properties (the adjoining Connolly (Conley) and Henderson mines, which it combined into a single operation) from 1938 to 1951 (Canada, Mines Branch, 1939, 1946, 1951, 1952). About 75% of production was then from the Conley and 25% from the Henderson. Another new shaft, probably the *Number 4*, or *Henderson Shaft*, was reported as having been completed to a depth of 320 ft in 1924 (1926). It was subsequently deepened to 541 ft in 1938 and a level cut at 443 ft (1940). In 1946, a new 7th level, at a depth of 443 ft, was opened at the *Henderson Mine* (1946). In 1952-1953, the company was reported to have rehabilitated the *Henderson Mine* (Canada, Mines Branch, 1953-1954). The talc at Madoc occurred as closely-spaced veins cutting white crystalline limestone.

International Pulp Company Prospect, Lot 16, 14th Concession, Huntingdon Township, Hastings County, Ontario. This company, of Gouverneur, New York, was reported to have sunk an inclined shaft to a depth of 50 ft on this property (1918).

Jackson Mine, Gananoque, Ontario. The mine was reportedly operated by George Jackson in 1903 (1904).

Madoc Talc and Mining Company Mine, Lots 16 and 17, 12th Concession, and south half of Lot 16, 13th Concession, Cashel Township, Hastings County, Ontario. In 1938 it was reported that a shaft had been sunk to a depth of 90 ft on this property and 135 ft of lateral development done. The material hoisted was reported to have been a considerably-sheared greenish chloritic talc schist. In parts it was a soapstone (Thomson, 1943).

Mississippi Station Showing, Lot 6, 6th Concession, Palmerston Township, Frontenac County, Ontario. Smith (1958) noted that two pits had been dug in a talc-tremolite schist zone, about 5 km northwest of Mississippi Station. The tremolite was reported to have occurred in well-formed transparent crystals. The talc was pale greyish-green. The deposit was at the contact between dolomitic limestone and a granite gneiss.

Moira Talc and Silica Mining Syndicate Property, part of Lots 16 and 17, 14th Concession,

- Huntingdon Township, Hastings County, Ontario. The property was listed in 1939 (1941).
- Mosque Lake (Showing) Mine, South Canonto Township, Frontenac County, Ontario. The mine was on the southeast shore of Mosque Lake in a corner of Miller Township. Smith (1958) reported that there were two shafts, about 90 m apart in an area along the power line. There was also an old pit about 1200 m east of these workings. No other reference has been found to this old mine.
- Ompah Mine, near Ompah, Frontenac County, Ontario. A small quantity of talc was reported to have been produced from this mine in 1943 (1944).
- Pipe Lake Occurrence, Lot 11, 10th Concession, Faraday Township, Hastings County, Ontario. Hewitt (1959) reported that this small showing was on the south shore of Pipe Lake. Talc occurred with tremolite in bedded marble.
- Soapy Mountain Mine, Lot 16, 12th Concession, and Lots 16 and 17, 13th Concession, Cashel Township, Hastings County, Ontario. Sabina (1987) reported that the mine was about 60 km north northeast of Madoc, from Highway 62 and the West Weslemkoon Lake Road. The deposit had been opened by the Madoc Talc and Mining Company in 1938, with a shaft being sunk to 90 ft and some cross-cutting done (1940).
- Trent Mining Syndicate (Price) Mine, northeast quarter of Lot 15, 14th Concession, Huntington Township, Hastings County, Ontario. The property was directly east of the Connolly Mine and the vein on it was thought to have been an extension of the Connolly vein. A test pit was reportedly sunk in 1920 (1921). The property was then prospected in 1922 by G. B. Hungerford, of Belleville, when trenching was done and a shaft sunk to 20 ft (1922). The Trent Mining Syndicate, formed in late 1939, acquired the property, and began development in 1940. A two-compartment inclined shaft was sunk to 80 ft and levels cut at 40 and 80 ft (1942). In 1941, a second shaft was sunk to 35 ft (1946). It was reported to have operated during the first half of 1942 (1946).
- Victory Mine, Lots 1 and 2, 1st Concession, South Canonto Township, Frontenac County, Ontario. This was a small mine which was reported to have been operated as an open-pit by Bonter, Hutchison, and Spry (see the listing above) from 1941 to 1942 (1946).
- Wollaston Prospect, Lot 10, 10th Concession, Wollaston Township, Hastings County, Ontario. Test pits were reported to have been opened in a white talc-bearing rock, which subsequently was proven to have been tremolite or anthophyllite with some carbonate (Thomson, 1943).

Tourmaline

Tourmaline is a complex silicate mineral (or family of minerals) which crystallizes in the hexagonal system as elongated columns with a somewhat rounded triangular cross-section. It occurs in a wide range of colours, including pink, green, "watermelon" (green, with a pink interior), and black. It is becoming highly-prized as a faceted gemstone and is a precious stone.

Calumet Falls Occurrence, Litchfield Township, Pontiac County, Québec. Sinkankis (1959) reported brown crystals in a flesh-red limestone at this location.

LeDuc (Leduc) Mine, Lot 23 and south half of Lot 25, 7th Range, Wakefield Township, Gatineau County, Québec. The mine is about 4 km northeast of Saint-Pierre-de-Wakefield and

1.5 km west of Glenlivet. Diotte Station (48 km north of Ottawa), on the now-abandoned Gatineau Branch of the Canadian Pacific Railway was about 19 km to the west. The mine is currently accessible from a point about 1 km along Rue Ruisseau after its intersection with Rue Eglise, and is situated on top of a range of hills west of Blanche Creek. It was reported to have been opened, in 1884, by Mr. L.H. Shirley, for gem tourmaline and mica. The tourmaline, although of a good green colour, was found to be too smoky and fractured for use as gems. The mica was not the type that it was believed to be and proved to be lepidolite (a lithium mica). The mine was acquired by Mr. M. J. O'Brien, in 1908, for purposes of mining gem-quality tourmaline. It is one of Canada's few such mines. The country rocks are sillimanite-garnet-gneiss and quartzite and the deposit is in a pegmatite dyke which cuts these. The minerals present include black, green, and pink tourmaline, common feldspars as well as perlite and amazonite, quartz, hornblende, garnet, uraninite, gummite, and fluorite. In 1925, the Canada Mines Branch (1926) reported this as being the only deposit in the world in which such large flakes of lepidolite could be found (up to 0.6 m. in diameter, and 5 cm thick). The workings, in 1926 (1927) were about 100 ft down the southwestern slope of the hill, with the pit being about 100 ft long, 20 ft wide, and 30 ft deep. It is to be noted that the dump, of small blocks of broken rocks and fines, is on the slope directly below the mine. Quite high, and at the angle of repose, it is potentially hazardous. The writer was told that the owner of the property does not permit visitors (1998).

Unnamed Occurrence, Lot 10, 11th Concession, Chatham Township, Argenteuil County, Québec. Sinkankis (1959) reported fine brown crystals in a flesh-red limestone.

Uranium (see also Radium and Radioactive Minerals)

Uranium (U-238), a hard, heavy, radioactive metal, which, when bombarded with neutrons, produces a series of isotopes of lighter atomic weights. One of these, U-235, can undergo continuous fission, in which enormous quantities of energy are released. Its applications are in nuclear energy and weapons.

In 1954, there was considerable prospecting activity of the Grenville sub-province of the Canadian Shield. Radioactive minerals had been discovered in limestones, skarns, pyroxenites, and pegmatites. In the area, the interest was focused on Calumet Island, Otter Lake, and the Maniwaki-Baskatong region.

Acmaac Mining Corporation Prospect, three laims in the vicinity of Lot 33, 14th Concession, Monmouth Township, Haliburton County, Ontario. The property was reported to have been explored about 1955 when an open cut was dug and an adit driven. On this property a mass of graphic granite had intruded marble, pyroxenite, and amphibolite. The minerals mentioned were albite, pale green apatite, augite, calcite, diopside, phlogopite, pyrite, pyroxene, pyrrhotite, small earthy-red crystals of thorite, titanite (sphene), uranothorite (Satterly, 1957).

Adams Properties, Clapham and Huddersfield Townships, Pontiac County, Québec. Several short holes were reported to have provided inconclusive results in 1955 (1957).

- Aldfield Mining Corporation Properties, Lots A to 12, 2nd Range, Lots 1 to 13, 3rd Range, Lots 2 to 9, 4th Range, Aldfield Township, Pontiac County, Québec. Radioactive zones were reported to have been drilled in 1955 without positive results (1957).
- Allanite (Property) Mine, Lot 2, 16th Concession, Cardiff Township, Haliburton County, Ontario. The prospect was in the north half of the lot, on the northwest side of a hill. The property was optioned to Stratmat in 1953-1954, and to Atlin Ruffner Mines (B.C.) in 1955. Three trenches were reported to have been dug to expose a syenite pegmatite that was reportedly rich in allanite. Hewitt (1959) mentioned that five tons had been shipped to the Electro-Metallurgical Laboratories, in Niagara Falls. On the property, syenite gneiss underlain by marble had been cut by pegmatite dikes. The veins were composed of allanite, apatite, calcite, feldspar, fluorite, pyroxene, and sulphides. The allanite, intergrown with pyroxene, was coarsely-crystalline, and up to about 15 cm in size.
- Alta Mines Property, Lot 1, 1st Range, Egan Township, Pontiac County, Québec. The property was reported to have been optioned from a Mr. McSheffrey in 1954, when some stripping and drilling was done (1956).
- Amalgamated Rare Earth Mines Properties. The company, incorporated in 1957, was an amalgamation of the Rare Earth Mining Company; Cavendish Uranium and Mining Company, and Halo Uranium Mines. The holdings included the Cavendish, Halo, Rare Earth, and Blue Rock Cerium Mines (see the listings for these).
- Annesley (Seymour Mining Company) Property, nine laims, northwestern part of Anstruther Township, Peterborough County, Ontario (it is to be noted that the county was erroneously identified as Haliburton in the report). Satterly (1957) reported that geophysical surveys were made in 1955. Located to the northwest of the contact of the Anstruther Granite Mass, the property featured exposures of marble and paragneiss which had been cut by pegmatite dikes.
- Anstruther Property, north half of Lot 34, 17th Concession, Anstruther Township, Peterborough County (also listed as Haliburton county in the report), Ontario. In 1957, an adit was started on Claim E.O. 21101, reportedly north of Eels Lake, and was driven about 65 m (1960).
- Anstruther Rare Metals Company Property, laims on Lots 21 to 24, 18th Concession, Anstruther Township, Peterborough County, Ontario. The company was mentioned as having explored the claims in 1955-1956 through geophysical surveys and drilling. On the edge of the Anstruther Batholith, the property featured exposures of biotite paragneiss which had been cut by granite pegmatite (Satterly, 1957).
- Arnora Sulphur Mining Corporation Property, Lots 29 to 34, Huddersfield Township, Pontiac County, Québec. Drilling on the property was reported in 1955 (1957).
- Aubelle Mines Property, 32 claims in Lots 19 to 28, 1st and 2nd Concessions, Anstruther Township, Peterborough County, Ontario. Adjacent to the south boundary of the township, and at the east end of Loon Call (Crab) Lake, the property was reported to have been about 5 km west of Apsley on Highway 28. It was explored through geophysical surveys and drilling during the period 1953-1955. The radioactive minerals were reported to have been in pegmatite dikes (Satterly, 1957).
- Aumacho River Mines Property, Lot 23, 10th Concession, Cardiff Township, Haliburton County, Ontario (Hewitt, 1959).

- Avillabona Mines Property, 28 claims in Lots 16 to 22, 4th and 5th Concessions, Anstruther Township, Peterborough County, Ontario. The property was reported to have been about 5.5 km west of the village of Apsley. As with the property described above, it was explored during the period 1953-1955 (Satterly, 1957).
- Bain Mine, Lots 54 and 55, 10th Range, Masham Township, Gatineau County, Québec. An old molybdenite property (see the listing under Molybdenum), it was reported to have been drilled by Stratmat Limited in 1954 (1956). The exploration was in a radioactive limestone-gabbro complex.
- Bancroft Uranium Mines - Cardiff Property, Lot 5, 22nd Concession, Cardiff Township, Haliburton County, Ontario (Hewitt, 1959),
- Bancroft Uranium Mines Property, 27 claims in the vicinity of the north half of Lot 21, 8th Concession, Glamorgan Township, Haliburton County, Ontario. The property, in the southeastern part of the Glamorgan Granite Gneiss Mass, was held under option in 1955-1956. The results of drilling were negative (Satterly, 1957).
- Baptiste Lake (Standard Ore and Alloys Corporation) Property, 18 claims in the vicinity of the north half of Lot 26, 5th Concession, Herschel Township, Hastings County, Ontario. Beside the south shore of Baptiste Lake, the property was explored in 1955. Locally, pegmatite dikes cut an amphibolite belt. Satterly (1957) mentioned that the radioactive mineral was uranothorite.
- Basin (Orser and Wilson, Bancroft Mica and Stone Products Mining Syndicate, Silver Crater Mines) Mine, Lot 31, 15th Concession, Faraday Township, Hastings County, Ontario. The property was about 13 km west of Bancroft, and accessible by the Monck Road. Satterly (1957) reported that this was an old property that had been mined for black mica by S. Orser and D. J. Wilson, in 1925. From 1947 to 1949 it was next operated for scrap and trimmed mica by the Bancroft Mica and Stone Products Mining. Production was reported until 1950. In 1953, it was acquired by Syndicate Silver Crater Mines, which explored it from 1953 to 1957. At the time, the old open pit was reported to have been 30 ft in diameter and with a 65-ft high wall into the hill, and a 12-ft wall on the other side. There were also underground openings, including an adit and a raise on the property. Locally, a carbonate body occurred as a sill-like mass in hornblende-plagioclase gneiss. To the north, on one side, were granite and granite gneiss. To the south were marble and metasediments. Satterly (1957) mentioned the following minerals: albite, amphibole, green apatite, brown to black octahedral and rare dodecahedral crystals of betafite up to 7.5 cm across (often found in close association with books of mica and apatite crystals), biotite, calcite, purple fluorite, hornblende, molybdenite, plagioclase, pyrite, pyroxene, pyrrhotite, and titanite, and zircon. Several of the minerals occurred as large crystals and crystal assemblages. Hewitt (1959) mentioned the apatite in veins of calcite.
- Baumhour-Campbell (Silver Crater Mines) Property, Lots 27 to 29, 14th Concession, and Lots 27 to 30, 15th Concession, Faraday Township, Hastings County, Ontario. Hewitt (1959) listed only Lots 29 and 30 in the 15th Concession. The property was reported to have been explored during the period 1954-1956 by Silver Crater Mines. Three occurrences were listed: *Number 1*, in the southern part of Lot 28, 15th Concession; *Number 2*, in Lots 29 and 30, 15th Concession; *Number 3*, near the north end of Lot 29, 15th Concession. On the property, a contact zone of amphibolite and hornblende gneiss was between granite and

granite gneiss and syenite and nepheline syenite. All of these were cut by pegmatite dikes. Satterly (1957) mentioned the following as minerals: allanite, titanite (sphene), uranophane, uranothorite, and zircon.

Bentley-Siddon Lakes (Red Bark Mines) Property, three water claims on Bentley Lake and two others on Siddon Lake, parts of Lots 12 to 14, 12th and A Concessions, Faraday Township, Hastings County, Ontario. These were reported to have been explored by drilling in 1955, but no pegmatite dikes were found (Satterly, 1957).

Bibis Yukon Mines Property, 18 claims in Lots 21 to 23, 4th, 5th, and 6th Concessions, Burleigh Township, Peterborough County, Ontario. The property was reported to be about 11 km west-southwest of Apsley. It was explored during the period 1953-1955 through the drilling of anomalies (Satterly, 1957). The property was taken over by Newkirk Mining Corporation.

Bicroft Uranium (Centre Lake, Croft) Mine. In the 1954 report the *Centre Lake Property* was described as Lots 23 to 30 in the 9th to 13th Concessions (1956), Cardiff Township, Haliburton County, Ontario. The mine was about 23 km southwest of Bancroft, and 1 km west of Cardiff, a town which had been established by the company and the provincial government in 1956-1957 (1958-1960). The property was also accessible by a road, about 5 km long, from Highway 28 at the south end of Paudash Lake. The main workings were on Lots 27 and 28, of the 11th Concession. Centre Lake Uranium Mines was incorporated in 1953 and owned 54 claims, comprising about 2160 acres, on the above-mentioned lots. Originally (1953-1954), the property was under the management of Consolidated Ranwick Uranium Mines, an associate company of Ventures Limited. In early 1953, an adit was driven 995 ft into a hill, on Claim E.O. 5939, and 510 ft of crosscuts were driven from it. Surface trenching and diamond drilling was also done (1955). In 1954, a vertical, three-compartment, shaft was sunk to 234 ft on Claim E. O. 5936 (north half of Lot 27, 11th Concession, Cardiff Township), and a level established at 205 ft (1956). In late 1954, the property was relinquished and was taken over by Bicroft Uranium Mines, a company formed in 1955 through a merger of Centre Lake Uranium Mines and Croft Uranium Mines. In 1961, the company and Macassa Mines were amalgamated as Macassa Gold Mines (1963). The mine then became known as the *Bicroft Division*. The *Croft Property* was a block of 51 claims comprising: (1) Lot 30 and the north half of Lot 3, 13th Concession; (2) Lots 26 to 32, 14th and 15th Concessions; (3) Lots 30 to 32, 16th Concessions, Cardiff Township, Haliburton County; (4) Lots 33 and 34, 1st Concession, Herschel Township; (5) Lots 32 and 33, 15th Concession and Lot 33, 16th Concession, Faraday Township, Hastings County, Ontario (Satterly, 1957). Near the east boundary of Cardiff Township, this property was 16 km west of Bancroft, and about 1.5 km south of the Bancroft-Wilberforce Road. The main workings were on lot 32, 15th Concession. Croft Uranium Mines was incorporated in 1953 and, in 1954, an adit was cut on this property, and about 1700 ft of drifting and crosscutting driven (1956). On the property, radioactive pegmatite dikes cut a series of metasedimentary gneisses. The minerals were reported to include feldspar, quartz, biotite, garnet, sillimanite, tourmaline, uranothorite, zircon, pyrite, and molybdenite. Hewitt (1959), reported well-formed rose-coloured corundum crystals, intergrown with magnetite and tourmaline, on Lot 31, 14th Concession, at a location which had been stripped to reveal the *H Hub*. The result of the

corporate merger, mentioned above, was extensive property holdings in Cardiff, Faraday, and Herschel Townships of Hastings County. In 1955, all of the company's work was focused on the *Centre Lake Property*. A second, four-compartment vertical shaft, the *Number 2*, was sunk on the south half of Lot 28, in 1955 (1957). This shaft was 626 ft deep by 1956 (1958). Elsewhere on the properties: (1) the *Kemp Showing*, on a hill south of Auger Lake, was on the north half of Lot 26, 11th Concession. It had been explored by trenching; (2) the *Metamorphic Pyroxenite Showing*, in the north half of Lot 29, 12th Concession, had also been explored by trenching. Pods of calcite with green apatite crystals and books of mica were mentioned. Crystals of uraninite, up to 2.5 cm across had been found in the past; (3) the *North Showing*, in the south half of Lot 29, 13th Concession. At this latter showing Satterly mentioned clusters of apatite crystals, magnetite in coarse aggregates, and uranothorite as rounded crystals (called "cigars"). In 1955, the company was contracted by the Eldorado Mining and Refining Company to supply uranium precipitates valued at almost \$36 million. In 1956, the company milled almost 54 000 tons of ore and shipped its first uranium precipitates. Mining continued in 1957-1962, at a rate of about 400 000 to 475 000 tons per annum, with as many as 616 men on the property (1960-1964). In 1963, however, production was reported as about 133 000 tons until the end of May (1965). The mine seems to have been closed at that time. On the property, the radioactive bodies were in syenite gneiss which had been intruded by pegmatite dikes. The minerals were allanite, anatase, betafite, calcite, fluorite, molybdenite, pyrite, pyrochlore, pyrrhotite, titanite, umangite, uraninite, uranothorite, and zircon (Satterly, 1957).

Blott Property, five claims in Lots 23 and 24, 11th Concession, and the south half of Lot 24, 12th Concession, Galway Township, Peterborough County, Ontario. The claims were reported to have been staked adjacent to Crystal Lake, by W. Blott, in 1953. In 1954, a number of radioactive pegmatite bodies were explored through stripping and trenching. Satterly (1957) mentioned the following minerals: feldspar crystals up to 25 cm across; molybdenite; titanite; uraninite; uranothorite; and, zircon.

Blue Rock Cerium Mine, see the listing under Rare Earth (Blue Rock Cerium) Mine, below.

Bonaventure Uranium Mines Property, Lots 11 and 12, 5th Range, Huddersfield Township, Pontiac County, Québec. Drilling was reported in 1954 (1956).

Bonville Gold Mines Property, Lots 21 to 24, Concession A, and the south half of Lot 23, Concession B, Faraday Township, Hastings County, Ontario. The property was explored in 1954. On it, marble was cut by amphibolite, metagabbro, gneiss, syenite, and granite pegmatite (Satterly, 1957). Mentioned as minerals were: pale blue apatite; salmon-pink calcite; yellow brown ellsworthite (pyrochlore); epidote; feldspar; dark green hornblende; quartz; tremolite; beta-uranophane; black vitreous uranothorite. Hewitt (1959) reported the apatite in veins of calcite.

Brunsmann Mines Property, 14 claims in Lots 23 to 27, 5th Concession, the north halves of Lots 23 to 27, 4th Concession, and the north half of Patented Lot 25, 4th Concession, Anstruther Township, Peterborough County, Ontario (Satterly, 1957). The property was about 3 km west of the village of Apsley on Highway 28. It was explored through geophysical surveys and drilling during the period 1953-1955. Locally, granite pegmatite dikes were reported to cut metasediments.

- Bunker Hill Extension Mines Property, 15 claims in the area of Lots 1 and 2, 15th Concession, Chandos Township, Peterborough County, Ontario. The property, beside Eels Creek, was reported to have been acquired (a 90% interest) from Pioneer Consultants in 1954 (Satterly, 1957). On it, pegmatite stringers were reported to have cut paragneiss.
- Burma Shore Uranium Mines Prospect, Lots 6 and 7, 19th Concession, and Lots 7 and 8, 20th Concession, Cardiff Township, Haliburton County, Ontario. The property was reported to have been explored through stripping, trenching, and drilling, in 1955. Locally, pegmatite dikes cut syenites. Satterly (1957) reported the minerals as brown scapolite, dark green pyroxene, red apatite in euhedral crystals up to 5 cm across, pink calcite, pyrite, molybdenite, grains of uraninite, glassy black grains of uranothorite, and purple fluorite.
- Cadesky Property, Lot 26, 16th Concession, Harvey Township, Peterborough County, Ontario. The property, owned by L. Cadesky, was on the north side of Nogies Creek, at Cedar Rapids (about 3 km north of Highway 36). The showing was reported to have been in a pegmatite that had been stripped (Satterly, 1957).
- Calumet Contact Uranium Mines Property, 8th Range, Grand Calumet Township, Pontiac County, Québec. It was reported to have been adjacent to the property of Calumet Uranium Mines. Trenching was reported in 1954, probably in radioactive pegmatites (1956).
- Calumet Uranium Mines Prospect, Grand Calumet Township, Pontiac County, Québec. Drilling was reported to have taken place in 1955 (1957). The ore occurred in calcite veins in Grenville limestone near the contacts with pegmatites and gneisses (1957). Beneficiation of the ore was being studied and a mining plant had been bought in anticipation of development (1957). Drilling continued in 1956 (1958).
- Canadian All Metals Explorations Mine, eight claims on Lots 5 through 8 and Patented Lot 9, 9th Concession, and Lot 6, 8th Concession, Monmouth Township, Haliburton County, Ontario. Near Gooderham, the adit was reported as being about 3 km from the Tory Hill - Gooderham Road (Satterly, 1957). The company was incorporated in 1955 and development of the property began that year with the driving of an adit, drifting, cross-cutting, and the excavation of several pits. There were three showings: *The North*, in Lots 6 and 7, 9th Concession; *The South*, in the south half of Lot 7, 9th Concession, and ; *The Track*, in the south half of Lot 6, 9th Concession, on the north side of the Canadian National Railway line. The property, on the southeast border of the Glamorgan Granite Gneiss Mass, was reported to have been underlain by marble, quartzite and paragneiss. The minerals mentioned were salmon-pink calcite, diopside, phlogopite mica, pyrite, pyrochlore, pyroxene, pyrrhotite, serpentine, talc (?), tremolite, and uraninite (thorian) (Satterly, 1957).
- Canadian Dyno (Dyno) Mine, 26 claims in the 7th, 8th, 9th, 11th, 12th, and 13th Concessions, Cardiff Township, Haliburton County, Ontario. The property was beside the Cheddar Road, about 5 km north of Highway 28, and about 29 km from Bancroft. The principal workings were on Lot 12, 8th Concession. McClellan Gold Mines, one of the original companies that evolved into Canadian Dyno, was incorporated in 1951. Dyno Mines was incorporated in 1941 and seems to have acquired the former about 1953. It began the development of this property in 1955, and evolved into Canadian Dyno, which was incorporated in 1956. There were three groups of claims, known as the *North*, *South*, and *West Groups*. On the *South Group* five zones in pegmatite bodies, known as *A* through *E*, were identified. Some of

the details are as follows: (1) the *A Zone* (or *Denfield Showing*), was on the boundary of Claims E.O. 3739 and 5585, or, on Lot 12, between the 8th and 9th Concessions. It was east of the Cheddar Road and exposed in the face of a cliff beside a creek; (2) the *B Zone* was on Claims E.O. 3739 and 3744, or Lot 12, 8th Concession. It was explored by both surface and underground development; (3) the *C Zone* was near the south end of Farrel Lake, on Claim E.O. 5742, or, on the south half of Lot 12, 7th Concession. It was explored by surface trenching and stripping. In 1955-1956, a vertical three-compartment shaft was sunk to 997 ft on Claim E. O. 3744 (south half of Lot 12, 8th Concession), over the *B Zone*, and levels cut at 180, 330, 480, 630, 780, and 930 ft (1957-1958). Some 1379 tons of ore were hoisted in 1956 (1957). By the following year, the shaft had been deepened to 997 ft, and further levels cut at 330, 480, 630, 780, and 930 ft. A mill was also under construction (Satterly, 1957). Mining began in 1957, with 14 570 tons of ore being hoisted. There were then 148 persons on the property (1960). Production increased to 260 000 tons annually, in 1958 (1960), and to about 360 000 tons the following year, with 437 persons on the property (1961). By 1960, however, the peak had passed and production had declined to about 210 000 tons (1962). On the property, slightly east of the Cheddar Batholith, metasediments were reported to have been intruded by syenite gneiss and pegmatite dikes. The minerals reported were: albite (peristerite), allanite, apatite, hematite, magnetite, microcline (perthite), pyroxene, smoky grey to black quartz, titanite, uraninite, uranophane, uranothorite, and zircon (Hewitt, 1959).

Cardiff Uranium Mine, Lots A and 1, and the north half of Lot 2, 17th Concession, Lot 2, 18th Concession; the south halves of Lots 1 and 2 and Lot 3, 19th Concession, Cardiff Township, Haliburton County, Ontario. The *Shaft* and *South Adits* were on Lot A, 17th Concession, while the *North Adit* was on Lot 1, 19th Concession (Hewitt, 1959). The property was about 5 km south of Wilberforce. The company was originally incorporated as Cardiff Fluorite Mines, in 1943, and performed the initial development of the property in 1947-1948 through the driving of adits and drilling. In 1950, a two-compartment shaft, inclined at 50 degrees, was sunk to 275 ft and levels established at 125 and 250 ft. Development continued until the property was closed in 1951. In 1953, however, the name of the company was changed to Cardiff Uranium Mines and activity was renewed. During 1954, surface buildings were constructed and a program of trenching conducted to explore the surface (1956). The development continued in 1955, with some 1139 tons having been hoisted (1957). There were no further reports after that time. Locally, the calcite-fluorite-uraninite veins were reported to have been within a band of paragneiss near the contact with crystalline limestone (Satterly, 1957). Crystals of uraninite, up to about 1 cm across, were reported, as were veins of calcite which contained apatite (Hewitt, 1959).

Carr-Quirk-Mellish Property, 15 claims in the vicinity, of Lots 4, 5, and 6, 1st Concession, Monteagle Township, Hastings County, Ontario. The property was west of the York River. Satterly (1957) mentioned three showings: (1) the *Main*, on the south half of Lot 5, 1st Concession; (2) the *Boundary*, near the south boundary of the township, in Lot 6, 1st Concession; (3) the *Cliff*, at a low cliff on Lot 4, 1st Concession. The property was reportedly explored through stripping, trenching, and drilling, about 1955. Locally, granite pegmatites cut amphibolite, marble, and other rocks. The minerals reported (Satterly,

1957) were: allanite, molybdenite, pyrite, titanite, uranothorite, and zircon.

Carr-Quirk-Robson (Mentor Option) Property, 64 claims in Carlow and Monteagle Townships, in the vicinity of Lots 1 to 4, 3rd to 5th Concessions, Carlow Township, and Lot 1, 4th Concession, Monteagle Township, Hastings County, Ontario. Beside the York River, these were reported to have been staked in 1955 by Jesse Carr, Harry Quirk, Ron Wilcox and B. C. Robson (Satterly, 1957). An option was then given to the Mentor Exploration and Development Company. In the report, Satterly (1957) made reference to seven occurrences: (1) the *Island Zone*, on Lot 1, 4th Concession, Monteagle Township; (2) the *Carr Zone*, on Lot 1, 5th Concession, Carlow Township; (3) the *Wash Tub Zone*, on Lots 2 and 3, 5th Concession, Carlow Township; (4) the *Southwest Wash Tub Zone*, on Lot 2, 4th Concession, Carlow Township; (5) the *Pine Hill Zone*, on Lot 4, 5th Concession, Carlow Township; (6) the *Flat Zone*, on Lot 4, 5th Concession, Carlow Township; (7) and the *South Zone*, on Lot 1, 3rd Concession, Carlow Township. All of the showings were in pegmatite dikes which cut amphibolite, marble, and other rocks. Mentioned as minerals were: allanite, hornblende, magnetite, molybdenite, pyrite, pyroxene, titanite, orange uranothorite, and zircon.

Cassiar Rainbow Gold Mines Property, 10 lots in the vicinity of Lots 34, 2nd and 3rd Concessions, Glamorgan Township, Haliburton County, Ontario. The property, about 7 km from Gooderham, was reported to have been explored by drilling in 1955-1956. On it, paragneiss and marble had been intruded by igneous rocks including granite pegmatite (Satterly, 1957).

Cavendish (Macfie Explorations) Property, 18 claims in the area of Lots 7 and 8, 4th Concession, Cavendish Township, Peterborough County, Ontario. The property, near the Squaw River, was reported to have been explored by test pits and drilling in 1955-1956. Locally, metasediments were cut by pegmatite. Satterly (1957) reported the following as minerals: allanite; biotite; garnet; magnetite; martite; titanite (sphene); tourmaline; and black uranothorite.

Cavendish Uranium Mine, 55 claims in Cavendish Township, Peterborough County, Ontario. These included E.O. 7316 to 7321, 7432-7433, 7466, 7489 to 7497, and 7608. Subsequently, E.O. 15161 to 15194 and 20294-20295 were added. The company also purchased five Patented Lots between its claims (Satterly, 1957). The Cavendish Uranium and Mining Company was incorporated in 1954 and began to develop the property in the following year. In 1955, a two-compartment vertical shaft was reported to have been sunk to 88 ft on Claim E.O. 7492 (comprising the northeast corner of the south half of Lot 14, 7th Concession) and a level established. There was substantial lateral development on this level, with 953 tons of ore having been hoisted (1957). In 1956, the company was reported to have received a letter of intent from Eldorado Mining and Refining for the purchase of uranium precipitates valued at about \$24 million. Development continued in 1956 (1958), but there were no further reports. The property was reportedly near the southwest contact of the Anstruther Batholith and was underlain by granite in paragneiss and marble. The radioactive minerals were in pegmatites, with the principal (*South*, or *Main*) showing having been in Lots 14 and 15 of the 7th Concession. The minerals reported were: allanite; anatase; biotite; graphic feldspar crystals up to 25 cm across; kasolite; magnetite; grey to black quartz; thorite; titanite; uraninite; uranophane,

uranothorite; and, zircon (Satterly, 1957).

Centre Lake, see the listing for Bicroft Uranium Mine, above.

Cheddar Road Property, four claims on the north half of Lot 10, 10th Concession, Lot 10 and the north half of Lot 11, 11th Concession, Cardiff Township, Haliburton County, Ontario. The property was reported to have been explored by the Molybdenum Corporation of America in 1953 and 1955. The principal showing was in the north half of Lot 11, about 125 m west of the Cheddar Road. This property was reported to have been near the contact between the Cheddar Granite Mass and paragneiss. Satterly (1957) reported that allanite crystals up to several cm long were seen, as well as what was probably weathered uranothorite. Molybdenum and pyrite were also noted.

Climax Molybdenum (Robertson) Property, south half of Lot 11, 11th Concession, Cardiff Township, Haliburton County, Ontario. The property, near the east border of the Cheddar Granite Mass, was reportedly on the property of W. S. Robertson (Satterly, 1957). On it a pegmatite was exposed, with the following identified as accessory minerals: allanite, magnetite, pyrite, titanite (sphene), uranothorite, and zircon.

Coballoy Mines and Refiners Prospect, see the listing for the Crystal Lake Property, below.

Consolidated Halliwell Mines Property, Lots 29 to 31, 1st Range, Huddersfield Township, Pontiac County, Québec. Some exploration was reported to have been done in 1954 (1956).

Consolidated Thor Mines (Thor Uranium Mines, Nealon Mines) Prospect, 11 claims, Cardiff Township, Haliburton County, Ontario, at Eels Lake. Satterly (1957) reported that the two companies (Consolidated Thor having succeeded Thor Uranium) had explored the property by trenching, stripping, and drilling, during the period 1954-1956. The company had then become Nealon Mines when Hewitt listed it (1959). The rocks were reported to be a complex of granites and granite pegmatite dikes. Magnetite, allanite, and orange uranothorite were mentioned as minerals.

Consolidated Tungsten Mining Corporation Property, a block of six claims in Cardiff Township, Haliburton County and in adjoining Faraday Township, Hastings County, Ontario. The principal showing was reported to have been on the south half of Lot 31, 13th Concession, Cardiff Township (Hewitt, 1959). The property, on which pegmatite dikes were reported to cut marble and syenite gneiss, was explored by drilling in 1954-1955. The minerals identified were: fluorite, apatite, titanite, magnetite, calcite, pyrite, pyrrhotite, chalcopyrite, uraninite and uranothorite (Satterly, 1957).

Consolidated Uranium Corporation Property, an option on nine claims in Lots 9 to 11, 16th and 17th Concessions, Chandos Township, Peterborough County, Ontario. The property, on which radioactive pegmatite dikes occurred, was explored by trenching and drilling in 1954. Satterly (1957) mentioned the following as minerals: allanite; brown anatase (?); bastnaesite; biotite; purple fluorite; hornblende; magnetite; red microcline; yellow-green sodic plagioclase; grey quartz; uranophane; and, uranothorite,

Cordell Gold Mines Property, see the listing for the Monmouth Prospect, below.

Cottrill Property, Lots 11 and 12, 6th Concession, Cardiff Township, Haliburton Township, Ontario. The property was reported by Satterly (1957) to have been held by J. C. Cottrill, who then had optioned it to Climax Molybdenum. The company was reported to have drilled three holes and allowed the option to lapse. It was explored during the period 1953-1955.

- Croft Uranium Mine, see the listing for the Bicroft Uranium Mine, above.
- Cromwell Uranium and Development Company Property, 28 claims in the area of Lots 13 and 14, 5th and 6th Concessions, Cavendish Township, Peterborough County, Ontario. Explored in 1955, the property was west of the Buckhorn Road. To the west of the Anstruther Batholith, it was reported to feature paragneiss cut by pegmatite dikes (Satterly, 1957).
- Crystal Lake (Silver Crater Mines) Property, six claims on Lots 23 and 24, 9th Concession, Lot 26, 9th Concession, the north halves of Lots 27-29, 9th Concession, two claims on Lot 21, 10th Concession, Lots 23 and 25, 10th Concession, the south halves of Lots 27-29, 10th Concession, Galway Township, Peterborough County, Ontario. Where claims were not specified the land was reported to have been owned. The property was first explored through pits, trenches and drilling in 1954-1955. In 1957, Coballoy Mines and Refiners was reported to have driven an adit on Lot 25, of the 10th Concession. After about 500 ft of lateral development, the work was suspended about mid-year (1960). Locally, marble and amphibolite had been intruded by granite and granite pegmatite. The minerals mentioned were allanite, feldspar (deep-red or purplish-red in areas of greater radioactivity), quartz (black in areas of greater radioactivity), thorite, titanite, uranophane, uranothorite, and, zircon (Satterly, 1957).
- Cudney Prospect, Lots 29 and 30, 16th Concession, Monmouth Township, Haliburton County, Ontario. Mountain Lake and Cockle Lake are on the property. Reportedly owned by T. Cudney, it was prospected in 1955. Locally, marble and lime-silicate rocks were cut by pegmatite dikes. The minerals mentioned were: amphibolite, yellow to orange kasolite, mica, pyrite, pyroxene, scapolite, uraninite-thorianite, uranothorite, and abundant zircon crystals (Satterly, 1957).
- Denfield Property, 34 claims in northwestern Cardiff Township, in the area of Lot 11, 21st Concession (Hewitt, 1959), Haliburton County, Ontario. Held by G. H. Denfield, the property was optioned to, and explored by, Stratmat Limited in 1954. A hole was reportedly drilled on Lot 11, 21st Concession, and the option dropped (Satterly, 1957).
- Desmont Mining Corporation (Homer Yellowknife Mines) Prospect, Lot 31, 16th Concession, Lots 29, 30, and 32, 17th Concession, seven claims on parts of Lots 25 to 28, 17th Concession, and three claims on Lot 31, 17th Concession, Monmouth Township, Haliburton County, Ontario. The property was reported to have been first explored by Homer Yellowknife Mines, in 1954, when both stripping and trenching took place. In 1955, the Desmont Mining Corporation acquired the former operator and continued the work. There were many test pits, trenches, and areas that had been stripped along a north-south line of more than over 1000 m. Locally, marble and gneisses had been cut by irregular masses and dikes of granite pegmatite. The minerals identified were salmon-pink calcite, molybdenite, pyrite, pyrrhotite, quartz, uraninite, and uranothorite. There was also reported to have been an old molybdenite showing on Lot 32 in the 16th Concession (Satterly, 1957).
- Diamond Lake (Standard Ore and Alloys Corporation) Property, seven claims, including E.O. 7922 and 7925, Herschel Township, Hastings County, Ontario. On the north shore of Diamond Lake, the property was reported to have been explored in 1955. Locally, pegmatite dikes cut an amphibolite belt. Satterly (1957) mentioned that the radioactive mineral was uranothorite.

- Doubt Property, a group of nine claims in the area of the north half of Lot 10, 2nd Concession, Cardiff Township, Haliburton County, Ontario. These were reported to have been explored through trenching and stripping in 1955-1956. The minerals identified were peristerite feldspar, biotite, muscovite, pyroxene, tourmaline, quartz, magnetite, allanite, uranothorite, and zircon (Satterly, 1957).
- Drude Uranium Mines Properties, Cavendish Township, Peterborough County, Ontario. Satterly (1957), reported that the company held seven groups of claims. The four that he described were: (1) the *Higgins Lake Group*, in the area of Higgins Lake, Lot 16, 9th Concession; (2) the *Picard (Big Clear) Lake Group*, in the area of Lot 14, 9th Concession; (3) the *Mississauga Lake Group*, in the area of Lot 21, 3rd Concession; (4) the *Buckhorn Road Group*, in the area of Lot 16, 3rd Concession. All were reportedly at exposures of granite pegmatite dikes. Exploration in 1955 featured geophysical surveys, trenching, and some drilling.
- Dunraven Mine Property, Lots 4 and 5, 5th Range, Grand Calumet Township, Pontiac County, Québec. Drilling and trenching in a pegmatite dyke was reported in 1954 (1956).
- Duvex Oils and Mines Property, Certificate 68381, for Claims 1 and 2, and Certificate 68384, for Claim 1, Lot 51, 3rd Range, Lytton Township, Pontiac County, Québec. Some stripping and trenching were reported in 1954 (1956).
- Dyno Mine, see the listing for Canadian Dyno, above.
- Eels Lake Property, in the area of Lots 3, 2nd and 3rd Concessions, Cardiff Township, Haliburton County, Ontario. On Eels Lake, the property was reportedly held by C. Paton from 1954 to 1956, while Red Bark Mines held an option on these in 1954. Reportedly at the south boundary of the Cheddar Granite Mass, the local gneisses were cut by granite pegmatite dikes. Three occurrence were noted, of which one was on the north shore of Big Runway Island (Satterly, 1957).
- El Sol Gold Mines Property, 30 claims in Lots 31 to 34, 9th, 10th and 11th Concessions, and Lots 29, 30, and 35, 9th Concession, Anstruther Township, Peterborough County, Ontario, about 8 km north of Apsley, on Highway 28. The property was explored, with others in the area, during the period 1953-1955. On the eastern border of the Anstruther Mass of granite gneiss. The radioactive minerals occurred in pegmatite dikes (Satterly, 1957).
- Elmridge Mines Property, 17 claims, in the area of Lot 11, 3rd Concession, Cardiff Township, Haliburton County, Ontario. The claims were from the north end of Silent Lake, at the east, to Eels Lake, at the west. It was reported to have been explored by the company in 1955-1956. Locally, granite pegmatite dikes cut gneisses (Satterly, 1957).
- Empire Oil and Minerals Property, 35 claims in the 12th to the 16th Concessions, Cardiff and Monmouth Townships, Haliburton County, Ontario. Hewitt (1959) listed Lot 2, 15th Concession. About 7 km south of Wilberforce, the property was traversed by the Cheddar Road. It was reported to have been explored by the Geo-Technical Development Company in 1954. On the north contact of the Cheddar Granite Mass, the property exposed granites, gneisses, syenites, and pegmatites (Satterly, 1957). The uranium-bearing mineral was uranothorite.
- Fab Metal Mines Property, a group of 11 claims on Inlet Bay, Paudash Lake, in the area of Lot 27, 10th Concession, Cardiff Township, Haliburton County, Ontario. The property was east of the Bicroft zone of pegmatite dikes. Drilling, in 1953, was reported to have

intersected marble, gneisses, and granite pegmatite (Satterly, 1957).

Fairley Red Lake Gold Mines Prospect, 11 claims in the vicinity of Lot 4, 3rd Concession, Monmouth Township, Haliburton County, Ontario. The property was reportedly explored in 1955-1956, when the company performed drilling and trenching. It was underlain by amphibolite and metagabbro which had been cut by dikes of pink leuco (white) granite. Minerals mentioned were: allanite, hornblende crystals, black quartz, uranophane, orange uranothorite, and zircon (Satterly, 1957).

Faraday Uranium Mine, 52 Lots and parts of four other lots, comprising about 2600 acres (1958) in Concessions A, B, and the 9th, 10th, and 11th Concessions, Faraday Township, Hastings County, Ontario. The underground workings were reported to have been on Lots 16 and 17, 11th Concession, beside Highway 28 and 8 km south of Bancroft (Hewitt, 1959). The company was incorporated in 1949 and became the Bancroft Division of Metal Mines in 1963 (1965). In 1967, after a series of mergers, it became Consolidated Canadian Faraday (1969). The same year (ie., 1967) Can-Fed Resources Corporation was incorporated (1970). Through Federal Resources Corporation it began to re-develop the mine. The mine first produced between 1957 and 1964, when its contracts to supply uranium oxide expired. In another report, it was mentioned that a property under this name, presumably this one, had been drilled by Newkirk Mining Corporation in 1953 (Canada, Mines Branch, 1954). In 1954, mining began with two adits being driven on Claim E.O. 5789. These adits, the *East* (later *Number 1*) and the *West* (later *Number 2*) were about 400 m apart and were in Lots 16 and 17 of the 11th Concession, respectively. Approximately 2500 ft of drifts and crosscuts were driven (1956). In 1955, a vertical three-compartment shaft, *Number 2*, was sunk to 275 ft, while a second three-compartment shaft, *Number 1*, was sunk to 78 ft. The latter was intended to be the main production shaft. In 1955, it was reported that 15 594 tons of ore had been hoisted (1957). By 1956, the *Number 1* shaft had been deepened to 863 ft and levels established at 150, 300, 450, 600, and 750 ft. Later, it was sunk further to 1455 ft (1963). In 1956, a contract was negotiated with Eldorado Mining and Refining for the supply of uranium precipitates valued at about \$30 million. In 1956 it was reported that almost 29 000 tons of ore had been hoisted (1958). Full production began in 1957, with almost 200 000 tons of ore being hoisted that year (1960). This had increased to about 440 000 tons in 1958 (1960), and about 540 000 tons by 1959 (1961). During the early 1960s, however, production declined to about 470 000 tons, in 1960, and to about 300 000 to 350 000 tons during the period 1961-1963 (1962-1965). In mid-1964, on the completion of all of its contracts to supply uranium oxide, the property was closed (1966). In 1967, however, in one of the largest pumping projects in Ontario mining history, the mine was reported to have been de-watered (1969). The development continued in 1968-1969 (1970-1971), but was discontinued in June, 1969. While there was no listing in the 1970 report (1972), it was mentioned that a small crew was maintaining the plant in 1971-1972 (1972-1973). On the property, the radioactive minerals occurred in granites and pegmatite dikes which cut metagabbro and amphibolites. The minerals present included: allanite, as thin tabular crystals up to about 3 cm across; honey-yellow calcite crystals in vugs; fluorite; hematite; magnetite; marcasite; microcline; microcline perthite; molybdenite; peristerite (albite); pyrite; dark green pyroxene; smoky grey to brown to re-stained quartz; well-developed small zircon-type orange crystals of

- thorite; titanite; tourmaline; uraninite; lemon-yellow stains of uranophane; rare radiating clusters of acicular crystals of beta-uranophane; uranothorite; and zircon (Satterly, 1957).
- Farcroft Mines Property**, 18 claims on Lots 22 to 28, 3rd Concession, south halves of Lots 23, 24, 26, and 27, 4th Concession, and the south half of Patented Lot 25, 4th Concession, Anstruther Township, Peterborough County, Ontario, about 3 km west of Apsley. On the southeast edge of the Anstruther Mass of granite gneiss, the property was explored through geophysical surveys and drilling during the period 1953-1955 (Satterly, 1957).
- Fission Mines (Richardson) Mine**, Lots 4 to 6 and the north half of Lot 7, 21st Concession, Cardiff Township, Haliburton County, Ontario, near Wilberforce. The underground workings were reported to have been in Lot 5, 21st Concession (Hewitt, 1959). Satterly (1957) reported that W. M. Richardson had discovered uraninite on Lot 4 of his property in 1922. It was then acquired by: Ontario Radium Corporation, in 1929; International Radium and Resources, the successor to the Ontario Radium Corporation, in 1931; Wilberforce Minerals, in 1937; and by Fission Mines, in 1946. First described in 1932, it was mentioned that an adit had been driven 460 ft into a hillside, and that raises had been driven 70 ft upwards into veins. A mill was also on the property. The first period of activity was from 1929 to 1933. It was then inactive until Fission Mines explored it in 1948. Again dormant from 1948 to 1954, it was re-activated again for a brief period in 1955. The radioactive occurrences were in pegmatite dikes cutting granite gneiss or in calcite-fluorite-apatite veins. The minerals reported were: apatite, calcite, feldspar, fluorite (some radioactive), hornblende, magnetite, and uraninite (nodular and crystals). It was mined for radium (1932). (The listing is also given under radium). Hewitt (1959) mentioned the apatite in veins of calcite, as well as a scapolite-corundum syenite occurrence about 60 m west of an adit.
- Foster Property**, a group of eight claims and one Patented Lot in the vicinity of Lot 20, 15th Concession, Cardiff Township, Haliburton County, Ontario. On the property, an occurrence of radioactive pegmatite dikes, south of Deer Lake and on the west side of the Monck Lake Road, was reported to have been explored by stripping and drilling in 1956, by E. H. Foster (Satterly, 1957).
- Ganymede Uranium Mines Property**, 28 claims in Lots 8 to 13, 5th to 7th Concessions, Cavendish Township, Peterborough County, Ontario. The property was explored in 1955. Locally, granite and granite pegmatite were reported to cut marble and paragneiss (Satterly, 1957).
- Garland Mining and Development Company Property**, 27 claims in Lots 4 to 12, 18th Concession, Anstruther Township, Peterborough County, Ontario. Accessible via the Hadlington Road from Tory Hill, the property was about 21 km from Tory Hill (Satterly, 1957). It was reported to have been explored through geophysical surveys and stripping in 1955. It was in an area of contact between marble and paragneiss and granite and granite gneiss, with the radioactive minerals being in granite pegmatite dikes.
- Gatineau Uranium Mines Prospect**, Lot 29, 2nd Range, Baskatong Township, and Certificate 69739, for Claim 3, Mitchell Township, La-Vallée-de-la-Gatineau, Québec. The prospect was reported to have been on an island and on the bottom of Baskatong Lake. Originally staked for lead and zinc, it was explored through trenching and drilling after it was reported that uranium had been found (1956).
- Gilbert Property**, Lot 9, 7th Concession, Cardiff Township, Haliburton County, Ontario. The

property was reported to have been held by J. Gilbert in 1955-1956 (Satterly, 1957).

Locally, gneisses were cut by granite pegmatite dikes.

Godfrey Property, 10 claims in the 16th Concessions, Galway and Cavendish Townships, Peterborough County, Ontario. The claims, west of Salmon Lake, were reported to have been staked by A. J. Godfrey in 1955. On the property, surface pits and trenches had been dug in a radioactive pegmatite (Satterly, 1957).

Gould Property, Lot 24, 13th Concession, Monmouth Township, Haliburton County, Ontario. B. Gould, who held the two claims on this lot, reportedly drilled it in 1955. At the east boundary of the Glamorgan Granite Gneiss Mass, the local rocks were identified as marble and diopside (Satterly, 1957).

Grand Calumet Island Occurrences, Québec (Canada, Mines Branch, 1954).

Gray Wolf Exploration Company, see the listings for the Nogies Creek and Stony Creek Properties, below.

Greyhawk Uranium Mine. The company was reported to have held three groups of claims, known as the *North, East, and South Groups*, which, collectively, included: Lots 8 to 13, Concession A; Lots 11 to 14, the east half of Lot 15, the east half of Lot 19, Lots 20 and 21, and claims on Lot 17, Concession B; Lot 10, 9th Concession; Lots 10 and 11, 10th Concession; Lots 3 and 12, Lots 4 to 11, and the north quarter of Lot 11, 11th Concession; Lots 3 to 5, the north and south halves of Lot 6, and Lots 7 to 12, 12th Concession; and claims on Lots 17 to 21, 14th Concession and Lots 16 to 22, 15th Concession; Faraday Township, Hastings County, Ontario. The underground workings were reported to have been in Lot 10 of the 12th Concession (Hewitt, 1959). The *East Group* was immediately west of Bancroft, on either side of the Monck Road. The *North Group* was north of this same road, while the *South Group* was southwest of the village and also Highway 28. The predecessor company was known as Goldhawk Porcupine Mines, Limited (incorporated 1944). In 1955, Greyhawk Uranium Mines acquired its assets and began to develop the Faraday Township claims. In late 1956 the company received a Letter of Intent from Eldorado Mining and Refining for the purchase of uranium precipitates valued at about \$20 million. A vertical three-compartment shaft, the *Number 1*, was started on the north half of Lot 10 in the 12th Concession (1957). By 1959, this had been sunk to 402 ft and levels established at 100, 200, 325, 390, and 425 ft (1961). Limited production, at 2 000 tons of ore, began in 1956. In 1957, about 17 000 tons were hoisted and sent to the Faraday Mill for treatment (1960). This had increased to about 55 000 tons by 1958 (1960). Mining continued in 1959 at a rate of about 125 tons per day (1961). There was no report of production in 1960 (1962). On the property, radioactive pegmatite bodies cut the local diorite and metagabbro. Satterly (1957) mentioned the following minerals: albite; allanite; amphibolite; apatite; biotite; carbonate; chlorite; clinozoisite; hematite; magneite; microcline (perthite); plagioclase; pyrite; pyrochlore; pyroxene; quartz; scapolite; titanite; black tourmaline; uraninite; black uranorthorite; and zircon.

Halo Uranium (Hogan, Stratmat) Mine, a block of 37 claims, comprising about 1830 acres, in the northwestern part of Cardiff Township, Haliburton County, Ontario (Satterly, 1957). The underground workings were reported to have been on Lot 4, 18th Concession, on the northwest shore of Hall Lake (Hewitt, 1959). Originally known as the Hogan Property, it

- was optioned to Stratmat Limited in 1953-1954. Halo Uranium Mines was then incorporated in 1954, acquired it, and commenced development in 1955. Two adits were driven, in addition to trenching and diamond drilling (1957). The *Number 1 Adit* and shaft were in the north half of Lot 4, 18th Concession, while the *Number 2 Adit* was in the south halves of Lots 4 and 5, also in the 18th Concession, and near Hall Lake. In 1956, a vertical three-compartment shaft was begun on Claim E.O. 7389 (north half of Lot 4, 18th Concession), by raising from the *Number 1 Adit* (1958). Several zones, known as the: *Northwest, Lake, Pyroxenite, South, and Bald Mountain*, were identified. The uranium minerals were reported to have occurred in pegmatite dikes which cut gneisses and metasediments, while apatite in veins of calcite were also mentioned by Hewitt (1959).
- Hazeur Chibougamau Mines Property, a group of nine claims at Eels Lake, in the area of Lot 6, 4th Concession, Cardiff Township, Haliburton County, Ontario. On the southeastern margin of the Cheddar Granite Mass, it was reported that the local rocks had been intruded by granites and granite pegmatite dikes. The property was explored in 1954-1956 (Satterly, 1957).
- Higgins Uranium Mines Property, 24 claims in Lots 1 to 4, 10th, 11th, and 12th Concessions, Anstruther Township, Peterborough County, Ontario. It was explored by trenching and drilling in 1955 (Satterly, 1957).
- Huddersfield Township Occurrence, near Campbell's Bay, Québec (Canada, Mines Branch, 1954).
- Huddersfield Uranium and Minerals Property, Lots 21 and 22, 5th Range, Huddersfield Township, Pontiac County, Québec. Radioactivity was reported in a skarn. Exploration was through stripping and trenching, in 1954 (1956), and drilling in 1955 (1957).
- Hylight Uranium Mines Property, 37 claims in the vicinity of Lot 12, 2nd Concession, Harcourt Township, Haliburton County, Ontario. The property, located between Farquhar Lake and Elephant Lake, was reportedly explored in 1955 by Stratmat. On it, metasediments were cut by granite pegmatite dikes (Satterly, 1957).
- Jem Exploration Corporation Property, 16 claims in the vicinity of Lot 23, 10th Concession, Harcourt Township, Haliburton County, Ontario. West of Benoir Lake on the York River, the property was explored by drilling in 1955. Locally, hybrid granite gneiss contained inclusions of marble. Pink to red feldspar, hornblende, mica, quartz, and scapolite, were noted (Satterly, 1957).
- Jesko Uranium Mines Prospect, 27 claims on Lots 6 to 16, 3rd and 4th Concessions, Monmouth Township, Haliburton County, Ontario. The company was reported to have held these claims in 1954-1955, and to have acquired two Patented Lots, 13 and 14, in the 4th Concession, which had previously been optioned to Urotomic Mines in 1955-1956 (Satterly, 1957). The block of claims was on the northeast shore of Hadlington Lake. Locally, metasediments had been intruded by a metagabbro mass. The radioactive minerals occurred in pegmatite dikes. Mentioned as minerals were: allanite, feldspar crystals up to 25 cm across, purple fluorite, magnetite, uraninite, uranothorite, and zircon (Satterly, 1957).
- Kelbee Rare Metals Corporation Property, 10 claims in the area of Lots 24 and 25, 14th Concession, Cavendish Township, Peterborough County, Ontario. The property, east of Pencil Lake, was reported to have been explored by stripping and drilling in 1955-1956.

- On the northwestern contact of the Anstruther Batholith, the property was underlain by amphibolite, marble, and gneisses that had been cut by granite and granite pegmatite (Satterly, 1957). The minerals reported were: allanite; biotite; magnetite; uraninite; uranophane; uranothorite; and zircon.
- Kemp Uranium Mines Property**, a group of nine claims, Lots 2 to 5, 14th Concession, and the south half of Lot 1, 14th Concession, Cardiff Township, Haliburton County, Ontario. The principal showings were on the north half of Lot 5, about 1.5 km east of the Cheddar Road. The property was reported by Satterly (1957) to be in a wide belt of marble adjacent to the north boundary of the Cheddar Granite Mass. It was reported to have been explored by the company in 1954-1955. Uranothorite occurred disseminated in pyroxene marble, while thorite crystals were found in skarn.
- Kenmac Chibougamau Mines Prospect**, Lots 6, 7, and 8, 14th Concessions, Cardiff Township, Haliburton County, Ontario. The property, traversed by the Cheddar Road, was about 8 km southeast of Wilberforce. In 1955 it was explored through stripping, trenching, drilling, and the driving of an adit on Lot 6. Locally, marble, paragneiss, and amphibolite, were cut by numerous pegmatite dikes. The minerals reported were: allanite, apatite, biotite, calcite, magnetite, pyroxene, scapolite, uranothorite, and zircon (Satterly, 1957).
- Kennedy Property**, Lots 22 to 26, 16th Concession, Harvey Township, Peterborough County, Ontario. The property, reportedly then owned by Roy Kennedy, was east of Nogies Creek and about 3 km north of Highway 36. On it, pegmatite dikes had been exposed by stripping and trenching in 1954. Satterly (1957) mentioned the following minerals: pale brown anatase (?); coarse magnetite; orange and black uranothorite; bleached zircon.
- Kennedy Property (Cavendish Uranium and Mining Company Option)**, Lots 17 to 20, 11th and 12th Concessions, and Lot 19, 13th Concession, Harvey Township, Peterborough County, Ontario. In 1954-1955 the property, then owned by Roy Kennedy, was optioned to the Cavendish Uranium and Mining Company. It was explored by stripping and drilling. The principal showings, exposures of pegmatites, were reported by Satterly (1957) to have been on a ridge in Lot 18, 12th Concession. The following minerals were mentioned: pyrite; altered pyroxene; brown thorite; black to brownish uranothorite; and, pale zircon crystals.
- Kerr Property**, Lot 28, Concession B, Faraday Township, Hastings County, Ontario. The prospect was on the farm of Howard Kerr north of the Monck road. Optioned to Silver Crater Mines in 1954, a small pit was reported to have been dug in a complex of marble, tremolite rock, and pegmatite. White calcite with crystals of red apatite and dark green pyroxene was mentioned by Satterly (1957). A few grains of allanite and uranothorite were also noted, as was pyrite.
- Lanark Uranium Mines Property**, a block of nine claims northwest of Eels Lake, in the area of Lot 5, 6th Concession, Cardiff Township, Haliburton County, Ontario. The property, held by this company in 1955 and 1956, was reported to have been acquired by the Mercedes Exploration Company in mid-1956. On the southeastern boundary of the Cheddar Granite Mass, the radioactive occurrences were in pegmatite dikes (Satterly, 1957).
- Lockwood Prospect**, Lot 29, Concession A, Faraday Township, Hastings County, Ontario. On a property beside the Monck road then owned by J. Lockwood. The property was optioned to Silver Crater Mines in 1954 and was explored through drilling, test pits, and trenches.

Apatite, pink calcite, diopside, graphite, phlogopite, pyrite, pyrrhotite, tremolite, and small grains of uraninite and uranothorite, were mentioned by Satterly (1957).

Long Ridge Uranium Mines Prospect, Lots 13 and 14, 11th Concession, Lots 11 to 13 and the south half of Lot 14, 12th Concession, Monmouth Township, Haliburton County, Ontario. The company, a subsidiary of Tory Hill Uranium and Rare Metals Mines, owned these patented lots. The property was in the southeastern margin of the Glamorgan Mass of granite gneiss. Explored about 1956, some of the minerals mentioned were: white and salmon-pink calcite, pale green diopside, phlogopite, and very small cubic crystals of uraninite (Satterly, 1957).

MacDonald (McDonald, Phillips-Doubt, Cloudmont) Mine, Lots 18 and 19, 7th Concession, Monteagle Township, Hastings County, Ontario. The mine, on the farm of Peter M(a)cDonald, was about 3 km east of Hybla Station on the Canadian National (Central Ontario) Railway and 16 km north of Bancroft. The main workings were reported to have been on Lot 18, while there were three smaller pits on Lot 19, to the west (Hewitt, 1955). The vein was exposed starting in late 1919 by the Pennsylvania Feldspar Company, of Philadelphia (1920), which had leased the rights from Peter MacDonald. The company was then taken over by the Verona Mining Company (1921-1922), a subsidiary, which operated it in 1920-1921, with about 20 persons. This company, in turn, was taken over by the Genesee Feldspar Company, of Rochester, New York, in 1922. The mine was operated until 1928. From 1929 to 1935, Peter MacDonald was reported to have produced from the dumps and the pits on Lot 19 (Hewitt, 1955). During this period it was reported to have been the largest feldspar operation in the Hybla area and the Bancroft district. The total production reported during this period was 35 048 tons of feldspar (Satterly, 1957). In 1956, the Phillips-Doubt Grubstake Syndicate held an option on the mining rights for Lots 16 to 20, and the north half of Lot 21, in the 7th Concession of Monteagle Township (Satterly, 1957). The property was then acquired by Cloudmont Mines in 1956. During the first period, as a feldspar mine: The *Main Pit* was 550 ft long, 70 ft wide, and 120 ft deep. To the west, on Lot 19, were the *Southwest Cut* (110 ft long, 25 ft wide, and 20 ft deep), the *Northeast Cut* (50 ft long, 20 ft wide, and eight ft deep), and the *Northwest Cut* (250 ft long, 40 ft wide, and from 25 to 30 ft deep). Additionally, a second operation of the company was located nearby on Lot 14, of the 8th Concession. Later, when it was explored for radioactive minerals, the Phillips-Doubt Syndicate worked the dumps and bagged 40 tons of dike rock containing ellsworthite. Additionally, there was development underground from the *MacDonald* workings in Lot 18, and under the *Sutherland* open pit, in Lot 19 of the 8th Concession (Satterly, 1957). The deposits, in granite pegmatites, were famous as sources of rare and unusual minerals. It was said to have yielded the largest quantity of radioactive minerals from a pegmatite dyke in the county (Thomson, 1943). The principal minerals of the dikes were quartz, microcline perthite, and plagioclase. Some of the feldspar crystals were reported to be as much as 4.5 m across. The other minerals included: hornblende, pyroxene, biotite, calcite, chlorite, fluorite (purple), galena, scapolite, abundant dark red-brown garnet, magnetite, ilmenite, pyrite, pyrrhotite, chalcopyrite, galena, molybdenite, titanite (sphene), and zircon. The rare minerals included: allanite (in masses up to 25 cm in diameter), antozonite (fetid fluorite), ellsworthite (a waxy, yellow-brown to shiny black radioactive mineral), euxenite,

feldspar, radioactive garnet, smoky quartz, titanite, uraninite, uranothorite, and zircon or cyrtolite (arranged alphabetically). Sinkankis (1959) reported that both amazonite and peristrite were found on this property. It was especially famous for its crystals of cyrtolite, a radioactive zircon. These occurred as single crystals, either elongated double prisms or with pyramidal faces, up to 2.5 cm long, and covered with hematite (Hewitt). These occurred often in feldspar or in pink calcite pods in quartz (Satterly, 1957). Hewitt also mentioned the allanite crystals which were found along the hanging-wall side of the dike in the *Northwest Cut*. These were up to 60 cm in length.

McLean-Hogan Property, four claims on Lots 8 to 10, 19th Concession, Cardiff Township, Haliburton County, Ontario. The showing was reported to have been on a ridge near Cope Creek in the south part of Lot 8. Satterly (1957) mentioned that it had been optioned to Anuwon Uranium Mines in 1954-1955, but that the option had been dropped. The occurrence was reported to have been in a mica pyroxenite band that had been cut by pegmatite dikes. Regarding minerals, it was noted that there were vugs in the pyroxenite that were lined with crystals of pyroxene, apatite, titanite (sphene), scapolite, and, rarely, octahedral crystals of uraninite. There was also salmon-pink calcite and purple fluorite (Satterly, 1957).

McWilliams Property, 14 claims and two lots in the vicinity of Lots 27 to 30, 8th and 9th Concessions, Galway Township, Peterborough County, Ontario. To the southwest of Loom Lake, the claims were reported to have been optioned to F. R. Joubin & Associates and Newkirk Mining Corporation in 1956. There were two showings: (1) *Loom Lake*, in the south half of Lot 30, 9th Concession; (2) *Limestone*, on the south part of Lot 27, 8th Concession. Locally, marble had been intruded by igneous rocks, including pegmatite dikes (Satterly, 1957).

Macfie Explorations, see the listing for the Cavendish Property, above.

Maniwaki Occurrence, Québec. A staking rush was reported in 1953 (Canada, Mines Branch, 1954). One property was mentioned as having been held by Opawica Explorers.

Michie Property, 12 claims, in the area of Lots 8 and 9, 18th Concession Cavendish Township, and Glamorgan Township, Peterborough County, Ontario. The property, then held by T. C. Michie, was immediately east of Fortescue Lake. It was explored through geophysical surveys and trenching in 1955 (Satterly, 1957).

Milhol Exploration and Development Property, 14 claims northeast of Eel Lake, in the area of Lots 10 and 11, 5th Concession (Hewitt, 1959), Cardiff Township, Haliburton County, Ontario. The property was southeast of the Cheddar Granite Mass, and featured amphibolite, gneisses, and marble that had been cut by pegmatite dikes. It was explored in 1954-1955 and optioned to Fab Metal Mines. The minerals mentioned were: feldspar, grey to black smoky quartz, titanite (sphene), pyrite, pyrrhotite, allanite, and orange, amber, or black grains of uranothorite (Satterly, 1957).

Mindus Corporation Property, 22 claims near Colbourne (West) Lake, in the area of Lot 10, 14th Concession (Hewitt, 1959), Cardiff Township, Haliburton County, Ontario. The property was explored during 1953-1955, with the company then being absorbed by Mindustrial Corporation in 1955. On the property, granites, gneisses, and syenite were cut by pegmatite dikes. Uranothorite was reported as the radioactive mineral (Satterly, 1957).

Molybdenum Corporation of America, see the listings for the Cheddar Road Property, above, and

the Paudash Lake Property, below.

- Monck Lake Property, south half of Lot 16, 14th Concession, Cardiff Township, Haliburton County, Ontario. Hewitt (1959) also listed Lot 17 in the 14th Concession. On the east shore of Monck Lake, the property was reported to have been optioned to Red Bark Mines. It was explored through drilling in 1955. Locally, gneisses were cut by granite pegmatite dikes. The minerals mentioned were: pyroxene, magnetite, titanite (sphene), and pyrite (Satterly, 1957).
- Montgomery (Nu-Age) Mine, Lot 9, 21st Concession, Cardiff Township, Haliburton County, Ontario. Satterly (1957) reported that the property had been originally developed for fluor spar, in 1942, by F. K. Montgomery, of Havelock. Open pits had been dug in two calcite-fluorite-apatite veins which also contained uraninite. The pits were located in a field on the boundary between Lots 8 and 9, and about 75 m east of a road (Hewitt, 1959). The larger, *Number 2*, was mentioned as being 60 ft long, from four to 20 ft wide, and seven ft deep. It was noted that the footwall was coated with black amphibolite crystals, up to 30 cm across, in a white calcite matrix. In the *Number 1* pit, reportedly much smaller and shallower, the wall of the vein was noted to be coated with crystals of black hornblende and red potash feldspar. Uraninite crystals, up to about 2 cm across, were also mentioned, as was apatite in veins of calcite (Hewitt, 1959).
- Monmouth (Red Bark Mines) Property, Lots 5 and 6, 11th Concession, Monmouth Township, Haliburton County, Ontario. Red Bark Mines was reported to have held the property under option in 1954. Within the southeast border of the Glamorgan Mass of granite gneiss, the local marble was cut by granite pegmatite dikes (Satterly, 1957).
- Monmouth Prospect, nine Claims in the vicinity of Lots 27 and 28, 16th Concession, Monmouth Township, Haliburton County, Ontario. Northeast of Esson Lake and about 3.5 km west of Wilberforce, the property was reported to have then belonged to Cordell Gold Mines. It was explored about 1955. On it, marble and pyroxenite were intruded by granite. The minerals mentioned in Satterly's report (1957) were: white albite, pale green apatite, salmon-pink calcite, phlogopite, pyrite, pyrrhotite, titanite, and uraninite.
- Musclow (Standard Ore and Alloys Corporation) Property, Lots 17 and 18, 2nd Concession, Monteagle Township, Hastings County, Ontario. Near Musclow, and about 450 m south of the Musclow Road, the property was reported to have been optioned to the company in 1956. Locally, granite pegmatite cut amphibolite and marble. Small cubic crystal of uraninite were mentioned, as was salmon-pink calcite (Satterly, 1957).
- Nakada Radioactive Minerals Property, Eardley Township, Pontiac County, Québec. Some drilling was reported to have been done in 1955 (1957). It was reported that there were widely scattered uraninite crystals in pink calcite.
- Newkirk Mining Corporation (A Group) Property, 55 claims on Lots 29 to 31, 5th Concession, Lots 22 to 31, 6th Concession, Lots 25 to 33 in the south half of the 7th Concession, Lots 27 to 33 in the north half of the 7th Concession and the south half of the 8th Concession, and Lots 28 to 33 in the north half of the 8th Concession, Anstruther Township, Peterborough County, Ontario. About 6.5 km north of the village of Apsley (on Highway 28), the property was reported to have been on the eastern border of the Anstruther Granite Mass. It was explored using geophysical methods and drilling during the period 1953-1955 (Satterly, 1957).

- Newkirk Mining Corporation (D Group) Property, 45 claims in Lots 21 to 25, 7th to 10th Concessions, Burleigh Township, Peterborough County, Ontario. About 6.5 km west-southwest of Apsley and 2.5 km west-southwest of Loon Call Lake, the property was explored during the period 1953-1955 through geophysical surveys and drilling. Within the northeast border of the Burleigh Mass of granite gneiss, the local rocks were reported to be granite gneisses, granite, and pegmatite dikes (Satterly, 1957).
- Newkirk Mining Corporation (E Group) Property, 18 claims in Lots 24 and 25, 4th to 7th Concessions, Burleigh Township, Peterborough County, Ontario. The property was explored during the period 1953-1955. Satterly (1957) reported that it was at the junction of the Anstruther and Burleigh Masses of granite gneiss.
- Nogies Creek (Gray Wolf Exploration Company) Property, an option on Lots 29, 30, and 31, 16th Concession, and the east halves of Lots 29 and 30, 17th Concession, Harvey Township, Peterborough County, Ontario. The showing, about 5.5 km north of Highway 36, was reported to be on a hill on the east side of Nogies Creek and opposite to a fish hatchery (Satterly, 1957). The property was explored in 1955-1956 and it was observed that amphibolite and marble had been intruded by granite gneiss (Satterly, 1957).
- Noranda Mines Prospect, Lots 26 and 27, 8th Range, Huddersfield Township, Pontiac County, Québec. Reported to have been close to the old Squaw Lake molybdenite property, it was noted that it had been optioned to the company by H. F. Klock. Stripping, trenching, and drilling were reported in 1954 (1956). Further drilling in 1955 did not disclose economic concentrations of uranium-bearing minerals (1957).
- Normingo Mines Prospect, Lot 14, 16th Concession, Dungannon Township, Hastings County, Ontario. The company reportedly held an option on this property in 1954 but work seems to have ceased about 1955 (in Hewitt & James, 1956). By that time an area had been stripped. On the property, a belt of micaceous crystalline limestone was found between two sills of pink granite which had been intruded into hornblende gneiss. Small cubic crystals of uranian thorium were found in the limestone, which was salmon-pink coloured in those areas. A description was also given by Satterly (1957).
- Northern Uranium Mines Property, 26 claims on Lots 18 to 22, 10th Concession, and Lots 19 to 22, 11th and 12th Concessions, Cardiff Township, Haliburton County, Ontario. The claims included the northern arm of Paudash Lake, with the principal showing having been on Lot 20, 12th Concession (Hewitt, 1959). The property was explored in 1955 and the claims canceled in 1956. The company later became Spooner Mines and Oils (Hewitt, 1959). On this property, granites and paragneisses were reported to have been cut by granite pegmatite dikes (Satterly, 1957).
- Nu-Age Uranium Mines, see the listings for the Montgomery and Tripp Mines, and the Old Smokey Prospect, above and below.
- Nu-Cycle Uranium Mines Prospect, Lots 25 to 28, 2nd Concession, and Lots 25 and 26, 3rd Concession, Glamorgan Township, Haliburton County, Ontario. About 2.5 km south of Gooderham, the property was explored about 1955. Satterly (1957) described 16 pits and trenches of various dimensions on the property. Locally, a large body of metagabbro had been intruded by granite and granite pegmatite. The minerals mentioned in the report were: allanite, amphibolite, biotite, magnetite, peristerite, pyroxene, pyrite, black and smoky, quartz, uranophane, uranothorite, and zircon.

- Nu-World Uranium Mines Prospect, 18 claims in the 1st to 3rd Concessions, and Lot 20, 2nd Concession, Glamorgan Township, Haliburton County, Ontario. About 6 km south of Gooderham, the property was explored in 1955 through a number of trenches and drilling. Reported to have been near the northwest boundary of the Green Mountain Mass of metagabbro, it was underlain by metasediments, syenite, and granite which had been intruded by granite pegmatite dikes. The minerals mentioned were: allanite, calcite, molybdenite, pyroxene, quartz, sphene, black tourmaline, and uranothorite (Satterly, 1957).
- Old Smokey (Nu-Age) Prospect, 14 claims on Lots 7, 8, and 11, 10th Concession, and Lots 9 to 12, 12th Concession, Monmouth Township, Haliburton County, Ontario. The property was explored through drilling, trenching, and the excavation of test pits, about 1955. In the southeast border of the Glamorgan Mass of granite gneiss, it was reported to have been underlain by amphibolite and granite which had been intruded by calcite veins and pegmatite dikes. The minerals mentioned in Satterly's description (1957) were: apatite, biotite, calcite, hornblende, pyroxene, and rare uranothorite.
- Pacemaker Mines and Oils Property, Lots 12 and 13, 10th Concession, Faraday Township, Hastings County, Ontario. Satterly (1957) reported that three holes had been drilled on this property.
- Patterson Property, 18 claims and two lots, Herschel and McClure Townships, Hastings County, Ontario. The showing was mentioned as being on Lots 17 and 18, 16th Range, Herschel Township, west of Little McGarry Lake and 8 km west of Maynooth. It was on a wooded hill and about 600 m north of a road. On the property granite gneiss with amphibolite bands had been cut a pegmatite. The radioactive minerals were described as resinous crystals of amber-black euxenite-polycrase (Satterly, 1957).
- Paudash Lake Property, four claims on Lots 16 and 17, 8th Concession, Cardiff Township, Haliburton County, Ontario. The property was explored by the Molybdenum Corporation of America in 1953 and 1955. Locally, amphibolite and marble were cut by pegmatite dikes (Satterly, 1957).
- Paudash Lake Property, nine claims on the south halves of Lots 29 and 30, 8th Concession, Cardiff Township, Haliburton County, Ontario. In 1954-1956 the claims were reported to have been held by L. Simard. These had been optioned to Red Bark Mines in 1954. On the property marble was reported to have been cut by granite pegmatite (Satterly, 1957).
- Paudash Lake Uranium Mines Property, the south half Lot 26, 10th Concession, Cardiff Township, Haliburton County, Ontario. The company, incorporated in 1955, was reported to have acquired the property from Centre Lake Uranium Mines at the time that it was merged into Bicroft Uranium Mines (see the listing). Underlain by the Centre Lake Granite Sill, the gneisses were cut by pegmatite dikes (Satterly, 1957).
- Pencil Creek (Silanco Mining and Refining) Property, 26 claims in Lots 18 to 23, 9th to 12th Concessions, Cavendish Township, Peterborough County, Ontario. The property was explored in 1955 through stripping and trenching in areas of radioactive pegmatite dikes (Satterly, 1957). The minerals mentioned were: allanite; molybdenite; very small cubes of uraninite; uranophane; uranothorite; and, zircon.
- Peter-Rock Mining (Herschel) Property, three claims in Lot 1, 8th Concession, and Lots 39 and 40, Hastings Road Concession, Herschel Township, Hastings County, Ontario. The

- property was reported to have been about 1.6 km west of Hickey, on Highway 62, north of Bancroft. Locally, granite and granite gneiss were cut by pegmatite dikes. Satterly (1957) listed the minerals as: allanite; biotite, in books up to 25 cm across; euxenite; pink microcline; pyrochlore; grey glassy quartz; and uranothorite.
- Peter Rock Mining (Monteagle) Property, 20 claims and one patented half-lot, Lots 27 to 30, 7th to 10th Concessions, Monteagle Township, Hastings County, Ontario. The property was explored during 1954-1955. Locally, the rocks were granite, granite gneiss, amphibolite, and granite pegmatite. Satterly (1957) listed the minerals as: biotite, magnetite; pyrite; pyroxene; orange or black uranothorite; and, zircon.
- Pole Star Mines Property, 16 claims on Lots 23 to 25, 11th and 12th Concessions, Burleigh Township and two Patented Lots, 26 and 27, 1st Concession Anstruther Township, Peterborough County, Ontario. On the northeast contact of the Burleigh Mass of granite gneiss, the property was reported to have been explored through geophysical surveys and drilling during the period 1953-1955. It was taken over by Newkirk Mining Corporation in 1955 (Satterly, 1957).
- Pool Mining Corporation Property, 2nd and 3rd Ranges, Huddersfield Township, Québec. The occurrence was reported to have been similar to the *Camp Zone* on the Yates Uranium property. Drilling and a scintillometer survey were reported in 1955-1956 (1957-1958).
- Québec Metallurgical Industries Property, 12th and 13th Ranges, Clarendon Township, Pontiac County, Québec. This was noted as having been a former molybdenite property on which radioactive anomalies had been drilled in 1955 (1957).
- Québec Nickel Corporation Mines Property, Lots 11 and 12, 9th Range, Grand Calumet Township, Pontiac County, Québec. Stripping and drilling of a radioactive brecciated pegmatite was reported in 1954 (1956).
- Quirk Property, Lots 11 and 12, 4th Concession, Monteagle Township, Hastings County, Ontario. On a hill south of the J. E. Quirk farmhouse, the property was reported to have been explored by J. E. Quirk and Harry Quirk about 1955 (Satterly, 1957). Locally, granite pegmatite dikes cut metasediments. Among the minerals were: apatite; calcite; hornblende; pyroxene; scapolite; and, uranothorite.
- Rare Earth (Blue Rock Cerium) Mine, 18 claims in the 5th and 6th Concessions, Monmouth Township, Haliburton County, Ontario. The company was incorporated in 1952, and, in 1954, the property was optioned to Stratmat Limited. By 1956, the name had changed from the Rare Earth Mining Corporation to the Rare Earth Mining Company. As the result of a scintillometer survey, a number of anomalies had been identified. Development of the mine, near Tory Hill, began in 1955. A vertical three-compartment shaft (in the southeast corner of Lot 19, 6th Concession), the *Number 1*, was sunk to 440 ft and three levels begun (1957) at 100, 250, and 400 ft. By 1956, this was known as the *Number 2 Shaft* (1958). The portal of an adit to the 100 ft level was reportedly near the west boundary of Lot 20. The company was merged into the Rare Earth Mining Company in 1956, and the *Blue Rock Cerium Shaft* became known as the *Number 2 Shaft* of the new operation (This had become the *Number 1 Shaft* by 1956 [1958]). It was then 657 ft deep, with levels at 240, 360, 480, and 630 ft. The development continued in 1956 (1958). Among the minerals were allanite, chlorite, chondrodite, diopside, potash and soda feldspars, black resinous crystals and grains of fergusonite, purple fluorite, graphite,

molybdenite, peristerite, phlogopite, yellow-brown plagioclase, pyrite, dark green pyroxene, pyrrhotite, smoky black quartz, serpentine, titanite (sphene), tremolite, uranophane, orange uranothorite, and zircon (Satterly, 1957).

Rare Earth (Lead Ura) Mine, 7th, 8th, 9th, 13th, 14th, 15th, 17th Concessions, Monmouth Township, Haliburton County, Ontario. The Rare Earth Mining Corporation of Canada was originally incorporated in 1948 as Lead Ura Mines. The name was changed in 1951. In 1955, it began development of this property with the sinking of a three-compartment vertical shaft, the *Number 1*, to 506 ft, on Lot 20 in the 8th Concession (1957). In 1956, the Company merged with Blue Rock Cerium Mines and changed its name to the Rare Earth Mining Company. There were several showings: the *Spence*, *Zircon*, and *Poker*, which collectively comprised the *Main Zone*, and also the *Monck*, *Northeast*, *Cliff*, *Otter Creek*, and *Pyroxenite Zones*. By 1956, the shaft had been deepened to 657 ft, and levels cut at 120, 240, 360, 480, and 630 ft. Locally, amphibolites, quartzite, and marble, had been intruded by syenite, granite, and granite pegmatite. Underground, there were numerous lenticular bodies which occurred "en echelon". There were several minerals, including black platy crystals of allanite, biotite, calcite, chlorite, white feldspar, molybdenite, pyrite, pyroxene, pyrrhotite, grey quartz, yellow, orange, and black grains of uranothorite (Satterly, 1957).

Reasor Prospect, 6 claims on Lots 31 and 32, 16th Concession, Faraday Township, Hastings County, Ontario. Hewitt (1959) also listed Lot 30 in the 16th Concession. The claims were reportedly held by Gerald L. Reasor, who explored these through stripping, pits, and trenches, in 1954-1955. On the property, amphibolite, marble, syenitized amphibolite, and syenite, were cut by syenite pegmatite and granite. Uraninite, uranothorite and a mineral of the pyrochlore-microlite series were reported (in Satterly, 1957).

Red Bark Mines, see the listings for the Bentley-Siddon Lakes, Eels Lake, Monck Lake, Monmouth, and Paudash Lake Properties, above.

Richardson Property, see the listing for Fission Mines, above.

Robson Property, 10 claims, on Lots 1 to 5, 3rd Concession, Monteagle Township, Hastings County, Ontario. The claims were reported to have been held by Bruce C. Robson in 1955. The showing, in a syenite pegmatite, was in a low cliff west of Goddard Lake (north half of Lot 3, 3rd Concession). Uraninite, in cubic crystals up to about 1.25 cm across, occurred in books of biotite mica or in feldspar. Brown zircon crystals, up to about 2 cm long, and purple fluorite, were also mentioned (Satterly, 1957).

Roford Mines Prospects, four groups of claims comprising ; five optioned claims on Lot 11, 13th Concession, two claims on Lot 13, 13th Concession, Lots 12, 13 and 14, 14th Concession, and the south half of Lot 11, 15th Concession, Monmouth Township, Haliburton County, Ontario. The property was reported to have been explored through pits, trenches, and drilling in 1955. Within the southeast border of the Glamorgan Mass of granite gneiss, the property was underlain by a complex of gneisses, granite, marble, and paragneiss. Mineralogically, the property was very interesting. The following minerals were identified: salmon-pink calcite; mica; pyroxene; grey to black quartz; thorite in tetragonal crystals up to about 0.5 cm across; titanite (sphene); black and orange-brown grains and long tetragonal crystals of uranothorite (up to about 4 cm long)(Satterly, 1957).

Saranac Uranium Mines Prospect, 14 claims in the vicinity of Lots 23 and 24, 9th Concession,

Monmouth Township, Haliburton County, Ontario. The property was adjacent to Esson Creek and south of Highway 500. It was explored during the period 1954-1956. The two principal showings on the property were known at the *Zircon* and *East Pegmatite Showings*. Locally, amphibolites and marbles were intruded by igneous rocks including granite pegmatites. In the *Zircon Showing*, a zircon-granite sill was reported to have been exposed by an open cut for about 30 m. Dark brown zircon crystals, up to about 2 cm long were abundant, as were altered earthy brown doubly-terminated pyramidal crystals of thorite, up to about 1 cm across (Satterly, 1957). Calcite, purple fluorite, mica, pyroxene, scapolite, were also present. In the *East Pegmatite Showing*, bladed hornblende crystals, from about 2.5 to 7.5 cm long, were noted. Also present were allanite, biotite, chlorite, pyrite, titanite, uranophane, and uranothorite.

Scaddore Gold Mines Property, 13 claims, Monmouth Township, Haliburton County, Ontario. Satterly (1957) reported that one drill hole had been drilled in 1955. On the property, amphibolite, marble, and paragneiss, was intruded by syenite, nepheline syenite, and granite pegmatite.

Seymour Mining Company, see the listing for the Annesley Property, above.

Silanco Mining and Refining, see the listings for the Pencil Creek, Tory Hill, and Windover Properties, above and below.

Silver Crater Mines, see the listings for the Basin, Baumhour-Campbell, Crystal Lake, Kerr, and Lockwood Properties, above.

Standard Ores and Alloys Corporation, see the listings for the Baptiste Lake, Diamond Lake, and Musclow properties, above.

Standard Ores and Alloys Corporation Property, Lots 4 to 7, 7th and 8th Ranges, Eardley Township, Pontiac County, Québec. The property was reported to have been optioned to the company by "Szitowski and others" in 1955 and drilled with disappointing results. The option was then reported to have been dropped (1957).

Stoney Creek (Gray Wolf Exploration Company) Property, 22 claims, in the vicinity of Lots 2 and 3, 9th Concession, Anstruther Township, Peterborough County, Ontario. The property was reported to have been near the west boundary of the township (Satterly, 1957). Within the Anstruther Mass of granite, it was explored in 1956 through trenching, test pits, and drilling.

Szitowski and Nicholson Properties, Lot 9, 8th Range, and Lot 3, 7th Range, Eardley Township, Pontiac County, Québec. A few shallow holes were reportedly drilled on these properties in 1955 (1957).

Thiffault Property, 26 claims in Lots 10 to 15, 8th to 12th Concessions, Cavendish Township, Peterborough County, Ontario. Reported to have been then held by A. J. Thiffault, the claims were explored through geophysical surveys in 1955 (Satterly, 1957).

Thompson Property, Lot 5, 6th Concession, and Lots 4 and 5, 7th Concession, Monteagle Township, Hastings County, Ontario. On the property of Mrs. W. M. Thompson, the mineral rights were reportedly optioned to R. H. Thompson and Larry Black in 1954. The showing was a pegmatite that was exposed in a Creek bed. Magnetite, titanite, uranothorite, and zircon were identified (Satterly, 1957).

Tomlinson and Mulliette Prospects, Lots 11 to 13, 10th Concession, Cardiff Township, Haliburton County, Ontario. Lot 11 was known as the *Mulliette Property*, while Lots 12 and 13

belonged to A. J. Tomlinson. Both were optioned in 1955 to Pickering Metal Mines. At one time, an old molybdenite occurrence on Lot 11 had been explored by stripping and trenching. Locally, amphibolites, paragneisses and pyroxene had been intruded by syenite, granite, and granite pegmatite. The minerals mentioned were: zircon, allanite, titanite (sphene), magnetite, and uranothorite (Satterly, 1957).

Topspar Fluorite Mine, Lot 13, 22nd Concession, Cardiff Township, Haliburton County, Ontario.

The mine was opened in 1940 by W. E. Clark, who was reported to have shipped 30 tons of acid-grade fluorspar between then and 1942 (Satterly, 1957). It was then successively acquired by the Tops Mining Syndicate, in 1943, and by Topspar Fluorite Mines, in 1950. During the development, the deposit was exploited through an open cut at the top of a hill which led into an adit (about 23 m long). A raise was driven to the surface from the end of the adit. Locally, syenite pegmatite cut hornblende gneisses. The minerals reported were: pink to buff feldspar, in crystals up to 60 cm across; pyroxene, in euhedral crystals up to 90 cm in diameter, salmon-pink calcite; purple fluorite, and uranothorite. Hewitt (1959) mentioned apatite in veins of calcite.

Tory Hill (Silanco Mining and Refining Company) Property, 18 claims on the east boundary of Monmouth Township, Haliburton County, Ontario. The company was reported to have explored it in 1955. Within the Cheddar Mass of granite, the property exposed a complex of amphibolite, skarn, and paragneiss cut by pegmatite dikes and other igneous rocks. Among the minerals were calcite, with large grains of uranothorite, feldspar, strings and clusters of hornblende crystals, pyrite, large blebs and ovate grains of reddish-brown uranothorite (Satterly, 1957).

Tripp (Nu-Age) Mine, Lot 8, 21st Concession, Cardiff Township, Haliburton County, Ontario.

Satterly (1957) reported that the property was originally developed by the Industrial Minerals Corporation in 1924, when a calcite-fluorite-apatite vein was mined for fluorspar. Mining was from what was later called the *Number 3 Pit* and a shallow shaft - reported as being 22 ft deep by Hewitt (1959). Two tons of fluorspar was reported to have been sold. Optioned to Nu-Age Uranium Mines in 1954, the property was explored further through stripping and deepening of the shaft. In 1956, the company became known as the Haitian Copper Mining Corporation. Locally, syenite gneiss and amphibolite had been cut by pegmatite dikes. In areas containing radioactive minerals the syenite was appreciably darker - being deep-red or chocolate-red. The minerals noted were magnetite, pyrite, chalcopyrite, biotite, zircon, allanite, yellow-brown to black thorite, uranothorite in round to elongated crystals in calcite and fluorite, calcite pods containing apatite and hornblende crystals, uraninite in small cubic crystals. Some of the hornblende crystals were reported to have been 15 to 30 cm long (Satterly, 1957).

Triton Uranium Mines Prospect, nine claims in Lots 7, 8, and 9, 1st and 2nd Concessions, Cardiff Township, Haliburton County, and an adjoining six claims in Lots 6 to 11, 18th Concession, Chandos Township, Peterborough County, Ontario. Hewitt (1959) also listed Lot 8 in the 2nd Concession. Some of the claims in Cardiff Township were previously held and explored, in 1954, by Tetra Uranium Mines. Triton continued the work in 1955, exploring four zones through trenching and drilling. Locally, amphibolite and hornblende gneiss was cut by granite pegmatite. Allanite, biotite, magnetite, peristerite, uranophane, and uranothorite, were mentioned as minerals that had been encountered (Satterly, 1957).

- Urotomic Mines Property, 21 claims and two patented lots, Monmouth Township, Haliburton County, Ontario. The property was explored in 1955-1956. On it, a band of marble was reported to have been located between amphibolite and granite. Anomalies were located in pegmatite dikes. Satterly (1957) mentioned that the minerals identified were green apatite, white to salmon-pink calcite, dark green hornblende crystals up to 10 cm long, pyrite, titanite (sphene), and minute grains of uraninite.
- Wadasa Gold Mines Limited Prospect, 22 claims in the vicinity of Lot 5, 6th Concession, Monmouth Township, Haliburton County, Ontario. The showing, on a ridge near the Irondale River, was explored using trenching and drilling in 1954. Locally, radioactive zones were located on the contacts between marble and granite pegmatite. The minerals mentioned were pink calcite, diopside, phlogopite, tremolite, and blebs and cubes of uraninite (Satterly, 1957).
- West Lake Mining Company Property, five claims in the area of Lot 9, 13th Concession, Cardiff Township, Haliburton County, Ontario, south of Colbourne (West) Lake. Satterly (1957) reported that the property had been previously explored between 1944 and 1951 and that it was held by West Lake Mining in 1955. Situated northeast of the Cheddar Mass of granite, the local rocks were reported to be amphibolite and marble cut by pegmatite dikes and calcite veins. The minerals mentioned were apatite, biotite, fluorite, magnetite, pyrite, titanite (sphene), zircon, and, rarely, uranothorite.
- Windover (Silanco Mining and Refining) Property, 24 claims in Lots 2 to 8, 2nd and 3rd Concessions, Cavendish Township, Peterborough County, Ontario. The property was explored through drilling, stripping, and trenching in several exposures of radioactive pegmatite dikes in 1955. Satterly (1957) mentioned the following minerals: amazonite; anatase (?); cyrtolite (zircon); fergusonite; magnetite; red melanocerite; microcline; peristerite; pyrite; sphene; black tourmaline in crystals up to 5 cm across and as radiating clusters; orange, brown, and black uranothorite; and zircon.
- Woodcox (Woodcock, Metro Minerals and Uranium Mines) Mine, Lots 16 and 17, 8th Concession, Monteagle Township, Hastings County, Ontario. On the farm of Harvey Woodcock, near Hybla, the mine was about 150 m south of the road, and in an open field (Hewitt, 1955). It was reported as being stripped by the Feldspar Mines Corporation, a subsidiary of the Pennsylvania Pulverizing Company in 1921 (1922). It was mined for feldspar in 1922-1923, with from 10 to 20 employed (1923-1924). It was abandoned in late 1923, however, because the ore had been stained by hematite and because the thickness of the overburden was then 20 ft (1924). The total production during this period was reported as having been 4087 tons (Hewitt, 1955). Later, in 1955, the old property was held by Metro Minerals and Uranium Mines (Satterly, 1957). The open pit, in a granite pegmatite dike, was reported to have been 325 ft long, 40 ft wide, and 25 ft deep (Thomson, 1943). Beautiful green feldspar (microcline) as well as white (plagioclase) and also red orthoclase were reported. Sinkankis (1959) also reported amazonite on this property. Some of the quartz was reported to have been exceptionally clear and flawless (Thomson, 1943). The minerals reported both by Hewitt (1955), and in the references cited were pink and white potash feldspar, amazonstone, peristerite, hornblende, magnetite, biotite, titanite (sphene), pyrite, columbite, ellsworthite, allanite, muscovite, calcite, hematite, epidote, cyrtolite, hatchettolite, and calciosamaraskite. In Ellsworth's

report (see references) it was stated "the Woodcox dyke is unique, for nowhere in Canada have such large individual masses of radioactive minerals been found in quartz and feldspar" (quoted from Hewitt's report, Ellsworth p. 209). Masses of brown to black radioactive minerals, with crystals of greyish cyrtolite and columbite, and weighing up to 100 lb (about 45 kg) were reported as "not unusual".

Yates Uranium Prospect, Lots 18 to 21, 4th Range, and Lots 17 to 20, 5th Range, Huddersfield Township, Pontiac County, Québec. The most promising showing, the *Camp Showing*, was a zone of radioactive pink calcite and pyroxenite several hundred ft long and a few ft thick. It was on Lot 19, 5th Range (1956). An adit was reported to have been started on the *Matte Showing* in 1955, and had reached a length of 300 ft by the end of the year (1957). A mill was constructed in 1956 (1958).

Yates Uranium Property, Lots 17 to 20, 5th Range, Huddersfield Township, Pontiac County, Québec. Adjacent to the above property, it was discovered in 1954. The deposit was reported to have been rich in apatite and fluorite (1956).

Zenmac Metal Mines Property, 32 claims in Lots 13 to 21, 1st to 3rd Concessions, Anstruther Township, Peterborough County, Ontario. About 8 km west of Apsley, the property was explored through geophysical methods and drilling during the period 1953-1955 (Satterly, 1957).

Vermiculite

Vermiculite is a hydrated form of micaceous magnesium silicates that expands tremendously when heated. The result is a very light-weight material which is suitable for insulating against both heat and sound. It resembles mica, but is duller and lacks elasticity. It is generally associated with pyroxenites and other ultra-basic rocks. Its colour ranges from light buff, to brown, to green, to black.

Northern Vermiculite Mine, Lot 14, 9th Concession, North Burgess Township, Lanark County, Ontario. The mine was reported to have been near Stanleyville, and about 13 km south of Perth. The company was incorporated and began operations in 1957. The vermiculite was processed at a plant at Glen Tay, about 5.5 km west of Perth. Thirteen persons were reported as being employed (1960).

Siscoe Vermiculite Mines Property, Lot 17, 8th Concession, North Burgess Township, Lanark County, Ontario. Near Stanleyville, the property was being developed, through trenching and drilling, in 1951 (1953, and Canada, Mines Branch, 1952).

Venosta Minerals Mine, about 8 km west of Venosta, Québec. In 1987, Sabina reported that the deposit had been exposed by stripping several years ago but that it was not accessible. The writer was told that it was being mined in 1996.

Zinc (see also Lead)

Zinc is a bluish-white metal which is used mostly for galvanizing items made from steel. The zinc coating provides protection against rust. A second important use is in brass - as an alloy with copper.

Alpha Mining Company Property, Wright Township, Gatineau County, Québec. The company, from Timmins, Ontario, was listed as the owner/operator of this property in 1932 (1933).
 Bowie (Reeder) Mine, Lots 3 and 12, 4th Range, Calumet Township, Pontiac County, Québec.

The mine was on Calumet island in the Ottawa River, about 80 km west of Ottawa. Lead and zinc was produced on this property in the last decade of the 19th Century and the first decade of the 20th. The property became idle in 1913. There were then six shafts, the deepest being 120 ft. There were reported to have been two zones of mineralization a few hundred ft apart. Mineralization consisted of galena, sphalerite, pyrite, chalcopyrite, magnetite, pyrrhotite, quartz, calcite, and lime-alumina silicates (Canada, Mines Branch, 1926).

Calumet Island Mines (four), south halves of Lots 9, 10, 11, 12, and 13, 4th Range, Calumet Island, Grand Calumet Township, Pontiac County, Québec. The mines were about 100 km west of Hull. The presence of a deposit of sphalerite and galena on Lot 10 was noted in Obalski's *Mines and Minerals of Québec*, published in 1890. Preliminary exploration and a trial shipment to Swansea, England was reported to have been made by James and Calvin Russell in 1891-1892 (1944). In 1897 and 1899, the Grand Calumet Mining Company, of Ottawa, made further shipments of about 400 tons. The properties were known as *Lawn* (Lot 12), *Succession* (Lot 13), *Russell* (Lots 10 and 11), and *Bowie* (Lot 9) (1899). With a crew of six or seven men a test pit was excavated to a depth of about 10 ft in 1897 (1897). In 1898, the *Number 1*, or *Sainte-Anne Shaft* was being sunk on the *Lawn* property and had reached a depth of 130 ft. Eight hundred tons was reported to have been mined on the *Russell* lot in 1897 (1899). In 1907, after having apparently been abandoned for several years, some exploratory work was done by a syndicate from the United States. In 1910, the Canada Metals Company resumed work, mainly on the *Bowie Mine* (1911). This company was succeeded by the Calumet Metals Company in 1911, and by the Calumet Zinc and Lead Company, of Larawls, Calumet Island, in 1913. By 1912 a new 90-ft shaft had been sunk and a 150 tons per day mill installed (1913). A new 100-ft three-compartment shaft was sunk in 1913, and considerable drifting done (1914). In 1916 (1917), it was reported that the property had been idle for about two years. In all, there were then five shafts on the property, the deepest being 143 ft (1926). The company was liquidated in 1915, and the mill destroyed by fire in 1916 (1917). In 1917, the property was auctioned and purchased by its bondholders (1944). In 1926, the British Metal Corporation (Canada) obtained an option and pumped the water from the *Bowie* and *Russell* Mines. The option was permitted to expire that fall (1927). The Calumet Zinc and Lead Company, of Montréal, was again listed as an owner/operator in 1932 (1933). In 1937 the properties were taken over by Calumet Mines, of Bryson, and later Montréal (1938). Until 1940, it performed exploratory diamond drilling (1941), during which time it reportedly outlined almost one million tons of ore grading 8.16% zinc, 2.51% lead, 0.036 oz. gold and 5.76 oz. silver per ton (1940). Work was then suspended in 1941. In 1942, however, interest was revived and New Calumet Mines was formed to replace Calumet Mines. A new shaft was then sunk to 340 ft (1943). Ventures Limited, the original partner of Calumet Mines, was replaced by Frobisher Exploration Company, its subsidiary, as a new partner of New Calumet Mines. The mine went into production in 1943 and was reported to have produced an average of 240 tons per day.

By 1946, this had increased to 570 tons per day, and the *MacDonald and Russell* orebodies were being opened up in addition to the *Longstreet* orebody which was being mined (1947) (Canada, Mines Branch, 1947). An internal shaft was sunk 900 ft to the 1500 foot level in 1948 (Canada, 1949), and was probably the *Number 4 Shaft* that was reported to have been deepened to 2205 ft in the *Longstreet* orebody in 1954 (Canada, 1955). Production continued to at least 1964 (1967). In 1954, it was reported that *Number 4 Shaft* had been completed to a depth of 2205 ft, and that the rate of mining had averaged 407 tons per day (1956). The shaft was placed in service in 1956 (1958). During 1959-1964, the mine produced at about 300 to 350 tons per day, while a development program in 1959 increased the reserves of ore to about 226 000 tons (1961). The drilling continued in 1960 (1962). In 1962, following an agreement with Grand Calumet Mines, a drift was driven into their adjacent property (1964). After encountering good values from the 1925 and 2050-ft levels of the mine, it took control of Grand Calumet. At the same time, it decided to sink a 760-foot internal shaft from the 1965-ft level to the 2685-ft level, to gain access to the rich new vein (1967). The rocks of the region are limestone, gabbro, and diorite. The ore deposit was a replacement in amphibolite, and extends over a length of 6000 ft. The minerals included sphalerite, galena, marcasite, pyrrhotite, pyrite, chalcopryite, and tennantite (1926).

- Calumet Zinc and Lead Company Property, Calumet Township, Pontiac County, Québec. The company was listed as an owner/operator in 1932 (1933). See the listing under Lead.
- Consolidated Mining and Smelting Company of Canada Property, Bouchette Township, Gatineau County, Québec. The company was listed as an owner/operator in 1927 (1928).
- Consolidated Mining and Smelting Company Property, Lots 35 and 36, 2nd Range and Lot 36 (also reported as 31), 3rd Range, Northfield Township, Gatineau County, Québec. Discovered in 1946, by Aubert de La Rüe, a Québec government geologist, the properties were acquired by the company (1947). In 1947, three lenses were exposed over a length of almost 200 m (1948). The minerals were reported to be sphalerite, pyrite, galena, chalcopryite, pyrrhotite, and greenockite.
- Consolidated Rochette, Benn, Olden, Richardson, Long Lake Zinc Mine, see the listing for Lynx-Canada Explorations, below.
- Grand Calumet Mining Property, Lot 11, 3rd Range Grand Calumet Township, Pontiac County, Québec. Adjacent to the New Calumet Mines property, it was drilled from the 1925 and 2050-ft underground levels by New Calumet in 1963 (1967). After obtaining good values it took control of the company the following year and decided to sink an internal shaft from its own property to gain access to the newly-discovered rich vein (1967). It was estimated that there were almost 140 000 tons grading 13.23% zinc, 4.06% lead, 7.5 oz. of silver to the ton and 0.013 oz./ton of gold (1967).
- Lac Bitobi Zinc Occurrence, Pointe-Comfort, Québec. Discovered by the Québec Department of Mines, in 1945, the vein was reported to have been on the property of Mr. Ludger Fontaine (Sabina, 1987).
- Lake Geneva Mine, Sheffield Township, Lennox and Addington County, Ontario. The mine was first listed in 1941 (1946) and was mentioned as having been one of the two producers in the province in 1942 (1946).
- Lennox Mine, 15th and 16th Concessions, Sheffield Township, Lennox and Addington County,

Ontario, at Enterprise. The Lennox Mines Company was formed in 1936 and was reported to have sunk two shallow shafts (18 and 52 ft deep) in early 1938. Some trenching was also cut (1940). By 1939, there were five shallow shafts and some underground development had been done (1941). It was listed until 1940 (1942).

Long Lake Mine, see the listing for Consolidated Rochette, above.

Lynx-Canada Explorations (Benn, Olden, Richardson, Long Lake Zinc, Consolidated Rochette) Mine, the south halves of Lots 3, 5th and 6th Concessions, Olden Township, Frontenac County, Ontario. The mine was about 0.5 km west of the Long Lake Post Office, 8 km east of Parham Station on the Kingston and Pembroke Railway, and about 55 km north-northwest of Kingston. The deposit was reported to have been discovered about 1897, on land then owned by Howard Ritchie. Leslie Benn, the discoverer, dug the first pit and was reported to have produced about 100 tons of ore. It was then acquired by James Richardson and Sons, of Kingston, who owned it for almost a half a century. All of the work, however, up to 1948, was done between 1897 and 1915 (1950). The original development began in 1902 and continued through 1904 (1903)(1905). Closed during the winter of 1906, it was reopened in 1907 (1907). This pattern was repeated the following year (1908). It was worked in 1908, with the *Rothwell Shaft* being deepened to 117 ft (1909). A new vein was being developed in 1909 (1910). It was the only zinc mine operating in Ontario in 1910, and was closed late that year (1911). In 1911, with the name then changed to the *Olden Mine*, it was reopened. The shaft was deepened to 150 ft and another shaft east of the old power house sunk to 50 ft (1912). It was closed again in 1912 and was acquired in 1914 by the Long Lake Zinc Company, an American company, which de-watered the workings and performed some development (1915). The option was dropped, however, and the property was dormant for about a decade. In 1925, the Canada Mines Branch reported that reopening had been mooted, but that no new work had been done (1926). In 1927, some of the workings were de-watered and an examination made (Alcock, 1930, quoted by Harding, 1951). By 1946, the mine buildings had been removed and the property abandoned (Harding, 1951). In 1948, the property was leased to the Rochette Gold Mines Company (incorporated 1936), which de-watered it and erected a new headframe (1950). The development continued in 1949-1950 (1951-1952), with 800 tons mined in 1950 (1952). There were five shafts, from 60 to 125 ft deep, three open cuts, up to 60 ft long and 40 ft deep, and 25 pits and trenches, from three to 30 ft deep, on the property. In 1973, the property was opened once again by Lynx-Canada Explorations. Producing at a daily rate of about 200 tons, the concentrate was shipped by truck to the plant of St. Joe Minerals at Balmat, New York (1974-1975). The ore zone was in a band of crystalline limestone between granite and diorite. Sphalerite, galena, pyrite, pyrrhotite, and chalcopyrite, were reported. Large masses of galena, as well as sphalerite crystals up to 5 cm in diameter were mentioned.

McGowan Prospect, Lot 5, 3rd Concession, Bedford Township, Frontenac County, Ontario. The prospect was reported to have been within 70 m of the northeastern shore of Thirty Island Lake, and on land then owned by Dan McGowan (Harding, 1951). Two pits were reported to have been dug by Sam Hunter for H. Richardson, of Kingston, in the period 1900-1910. The pits were about 10 ft deep (Harding, 1951). The sphalerite occurred disseminated in folded Grenville crystalline limestone. The deposit was not mined.

Pontiac Consolidated Metals Property, Grand Calumet Township, Pontiac County, Québec. The company, of Campbell's Bay, was listed as an owner/operator in 1939 (1940). Work was reported.

Renfrew Zinc Prospect, the west halves of Lots 1 and 2, 3rd Concession, and the east half of Lot 1, 4th Concession, Adamston Township, Renfrew County, Ontario. The prospect was reported to have been about 11 km south of Renfrew and east of the farm of John Hisko (Satterly, 1945). A power line was mentioned as crossing the lots. After zinc was discovered on the property in 1922, Messrs. Joseph Legree and William Dean acquired the mineral rights and developed a pit. Coniagas Mines the acquired an option in 1925 and performed exploration - - both through stripping and drilling. In 1926, Ottawa Valley Mines acquired a later option. This was followed by drilling by the British Metal Corporation in the same year. The local rocks were greenish-white coarsely-crystalline limestone with interbedded quartzite and paragneiss. The sphalerite was in the limestone. Other minerals were galena, tremolite (rosettes), phlogopite, diopside, apatite, pyrite, and pyrrhotite.

Vankleek Mine, Lot 24, 11th Concession, Madoc Township, Ontario. In 1908, W. A. Hungerford and associates were reported as developing the property. A shaft, 75 ft deep, and inclined at 709 degrees had been sunk (1909).

Zinc Mine, in the Farley area, about 10 km south of Maniwaki, Quebec. Known since 1899, it was reported to have been opened by a shaft in the late 1910s, and drilled and trenched in 1927 (Sabina, 1987).

Zinc Mine, Olden Township, Frontenac County, Ontario. About 3 km west of the Richardson Mine, this was reported as being opened up by Messrs. Kirkgaarde and Chisholm in 1906 (1906).

Zircon

Zircon (zirconium silicate) is a gemstone found in a range of colours from yellow to reddish-brown and green. Only reddish-brown crystal have been reported in Canada. Zirconium is used as an oxide for refractories, as an additive in steel-melting and to make enamelware more opaque (an opacifying agent).

Argenteuil Occurrence, Lot 10, 5th Range, Grenville Township, Argenteuil County, Québec. In metamorphic limestone with wollastonite, pyroxene and graphite (Sinkankis, 1959).

Dungannon Occurrence, Lots 12 and 13, 11th Concession, Dungannon Township, Hastings County, Ontario (Sinkankis, 1959).

Kuehl Lake Mine, Lot 1, 5th Concession, Brudenell Township, Renfrew County, Ontario. At the east end of Kuehl Lake, the deposit was reported to have been originally exploited, in 1930, by Prof. A. L. Parsons, of the Royal Ontario Museum, Toronto, for mineralogical specimens. The Universal Light Metals Company reopened it in 1943. Hewitt (1954) reported that the pit was 40 ft long, 10 ft wide, and five ft deep. At the property, a syenite pegmatite cut the local syenite gneisses. Lenses of hornblende, zircon, apatite, titanite (sphene), and calcite occurred in hornblende syenite. It was reported that little zircon was still visible. Some of the crystals mined were hyacinth, red, and orange coloured.

Lanark Occurrence. Two pits, about 6.5 km due south of Perth, were mentioned by Sinkankis (1959).

Parsons (Brudenell, Universal Light Metals) Occurrence, Lot 1, 5th Concession, Brudenell Township, Renfrew County, Ontario. The occurrence was reported to have been close to the water's edge at the east end of Kuehl Lake, on the farm of J. Kuehl, an about 14.5 km north of Quadeville. Satterly (1945) reported that the deposit was opened in 1930 by Professor A. L. Parsons, of the Royal Ontario Museum, to provide specimens. It was reopened in 1943 by the Universal Light Metals Company, of Hamilton. The rocks were a slightly-gneissic pink hornblende syenite with a green hornblende gneiss above. Both were flat-lying. Between the gneisses were irregular masses of coarsely-crystalline pink to cream calcite with apatite. Feldspar crystals and biotite were reported. Large zircon crystals, up to 30 cm long and 10 cm wide were said to have been found - but these were very scarce (according to Parsons, one could expect to find, on the average, only one crystal longer than 4 cm in each three tons of rock).

Sebastopol Occurrence, Lot 31, 10th Concession, Sebastopol Township, Renfrew County, Ontario. Sinkankis (1959) reported that most remarkable crystals had come from this location.

Short's Claim, on the north shore of Lake Clear, Renfrew County, Ontario (Sinkankis, 1959).

Smart Mine, Lot 31, 10th Concession, Sebastopol Township, Renfrew County, Ontario. Enormous crystals of sphene were reported to have been found on this property. (Sinkankis, 1959).

Templeton Occurrences, Lots 12 and 21, 12th Range and Lots 21 and 23, 13th Range, Templeton Township, Hull County (now Papineau County), Québec (Sinkankis, 1959).

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Appendix

An Index to the names of the mines and mineral properties

The names of all of the mines and properties mentioned in this book are arranged below in alphabetical order. Every effort has been made to include all of the names by which a mine was known. All of the mines and quarries from which mineral production was reported are shown in **boldface** type.

When a mine or property is mentioned under more than one mineral commodity or metal, the several references are included. In instances when the same name appears on a page, the page number is preceded by the number of mines in parentheses. Several of the names have been abbreviated to conserve space.

It is to be noted that there were difficulties in ensuring that the pagination of the electronic and printed versions corresponded exactly. Thus, while every effort has been made to ensure the accuracy of the index, there may be minor variations in the pages indicated for some entries.

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About the Author and this Book

John Eaman Udd, a Mining Engineer, was educated at McGill University, in Montréal, Québec. After receiving his Bachelor's, Master's, and Doctorate degrees he was a member of the faculty at McGill, progressing ultimately to the Director of the Mining Engineering program and the founding Director of the University's Office of Colleges and Schools Liaison. While at McGill he taught many of the courses in the Mining Engineering programs at all levels.

Subsequently, he joined Falconbridge Nickel Mines in the Sudbury area of Ontario. Shortly afterwards, in 1984, he was appointed Director of the Mining Research Laboratories of the federal government - a position he occupied until 1996. At present he is Principal Scientist - Mining.

Dr. Udd has written extensively and is the author or co-author of more than 100 technical papers published around the world. Many of these concern aspects of his particular expertise, rock mechanics and ground control (mine stability). Many others, however, are on more general topics relating to mining education and mining history. In 1998, to commemorate the Centennial of the Canadian Institute of Mining, Metallurgy and Petroleum, he wrote a series of 11 articles tracing the history of the development of Canada's minerals industries during the past century. This may appear shortly as a book, as may the history which he has written about the development of the mining engineering program at McGill. He is also a published amateur poet and producer of television programs on Scouting.

During his career he has received several honours and awards. The most significant of these are: Fellowships in the Canadian Academy of Engineering and the Canadian Institute of Mining, Metallurgy and Petroleum; the Engineering Medal of Professional Engineers Ontario; the Commemorative Medal for the 125th Anniversary of Canadian Confederation; the Medal of Merit of Scouts Canada; and the 1999 Distinguished Service Medal of the Canadian Institute of Mining, Metallurgy and Petroleum. He is also an Adjunct Professor of Mining Engineering at both McGill University and Laurentian University (Sudbury, Ontario).

Keenly interested in mining history, he began to develop a database of the old properties in eastern Ontario and southwestern Québec some years ago. This book is the product of that study. The research continues as other reports come to light.

As Dr. Udd states, the work is probably not complete. There are likely many deposits that were once mined on a small scale and never recorded in official reports. Any persons having information that would add to the contents of the book are encouraged to send it to the author.

Specifications for the text

This manuscript was prepared using Corel WordPerfect 7.0. The typeface used for the text was 12-point Times New Roman, while 16-point boldface Times New Roman was used for the headings. Standard margins of 1.0 inch were used throughout.

The printer used was a Hewlett Packard LaserJet IIP, without a font cartridge, on which the margins had also been set at 1.0 inch.

It is to be noted that variations in the final printed product can be expected if different printers are used. The reason for this is that there are minute differences in how the fonts and settings are recognized. In a long manuscript this can result in a difference of a few pages in the length of the manuscript.

As regards the main text, this will cause no difficulties since the order is maintained. The Table of Contents and the Index, however, will exhibit variations of a page or two between the page numbers indicated and where the entry can be found in the text.

The key point is that all of the listings are arranged alphabetically under the main headings.