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# GOLDEN CHALICE RESOURCES INC.

## TECHNICAL REPORT ON THE RADIO HILL IRON PROPERTY TIMMINS AREA ONTARIO, CANADA

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**April 30, 2010**

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# 1.0 SUMMARY

Golden Chalice Resources Inc. (GCR) has requested that Micon International Limited (Micon) undertake a review of historical technical documents and prepare an independent Technical Report under the requirements of Canadian National Instrument 43-101 (NI 43-101) on its Radio Hill iron property located west of Timmins, Ontario, Canada. The property encompasses portions of a historically explored iron formation consisting of the Radio Hill iron deposit and the mostly unexplored Nat River iron deposit 6 km to the east.

The Radio Hill property covers portions of iron formation that includes the historically identified iron deposits of Radio Hill and Nat River approximately 80 km southwest of Timmins. The property comprises 68 claims in two groups that extend along the known strike length of the iron formation over an area of approximately 12,160 ha. The claims are located at latitude 48° 09’ 26” N and longitude 82° 10’ 22” W. The location, close to the Canadian National Railway (CN) and to Timmins, together with the associated infrastructure in the Timmins area, is a significant advantage for the future development of the property.

The Radio Hill and Nat River iron deposits are part of GCR’s Timmins West property complex. The exploration work completed by GCR to date on the Radio Hill and Nat River deposits has been limited to the collection of historical documentation, completion of an airborne magnetic and VTEM geophysical survey, clearing of three historical trenching locations and the drilling of two test diamond core holes.

None of the claims are within parks, forest reserves or other areas that are restricted from exploration and mining.

The Radio Hill and Nat River deposits were discovered and explored during the 1950s and 1960s. The Radio Hill deposit covers outcrops of iron formation that strike in a general east-west direction. The Radio Hill deposit has had extensive sampling, drilling, and metallurgical work completed in support of the planning and development of an iron mine, while the Nat River deposit has had only limited exploration activities completed on it. However, neither of the deposits was developed to production and, since the mid 1960s, very little exploration or other work has been accomplished on the property.

Iron formations around the world are composed of iron oxides and assorted gangue minerals. Ore minerals are the iron oxides magnetite, hematite and goethite. North American iron formations can be subdivided into two types, Great Lakes or Superior-type and Algoma-type. These iron formations host iron ores which can be further subdivided into direct shipping and taconite ores. Direct shipping ores contain more than 60% iron and are usually composed of hematite and goethite with lesser amounts of magnetite. Taconite ores are lower in grade but can be upgraded to produce a marketable product by metallurgical processes that concentrate magnetite and/or hematite and, to a lesser degree, goethite. Taconite ores are typically composed of alternating bands of magnetite and/or hematite and waste minerals. The authors consider that the Radio Hill deposit should be classified as an Algoma-type taconite mineralization. The Soudan Mine in Tower, Minnesota, the Sherman Mine in Temagami, Ontario, and the Helen Mine in Wawa, Ontario, are examples of mines developed on Algoma-type iron deposits. The Sherman Mine was a taconite operation similar to the Radio Hill deposit.

The Radio Hill iron deposit is located in the Archean-aged northern Swayze Greenstone Belt. It is hosted in a stratigraphic sequence composed of sedimentary and volcanic rocks that are bound to the south by the Kukatush pluton and to the north by the Nat River igneous complex. The iron formation has a complex geologic history and has been metamorphosed to greenschist facies, folded and faulted, intruded by mafic dikes, oxidized by deep weathering and subsequently glaciated.

This report documents and summarizes the historic exploration and metallurgical work completed from the late-1950s to the mid-1960s on the Radio Hill iron property. That work included development of historical mineral resource estimates that do not comply with the current Canadian Institute of Mining, Metallurgy and Petroleum Resources (CIM) Definition Standards on Mineral Resources and Mineral Reserves as required by NI 43-101, Standards of Disclosure for Mineral Projects. Further work is required to evaluate the full extent and nature of the iron mineralization contained within the Radio Hill property.

The Micon team visited the property on October 29, 2009. The team consisted of Mr. Sam Shoemaker, mine engineer and team leader, Mr. Ronald Mariani, metallurgist, and Dr. Rodney Johnson, geologist.

Following its review of the historical documentation and field examination of the Radio Hill and Nat River iron deposits, Micon's conclusions are as follows:

1. The historical resource and reserve estimates were prepared to the standards of the day and the FENCO estimate is reasonably comprehensive. However, since none of the original core remains available and only limited amounts of the original metallurgical testwork information remains, none of the iron resources at the Radio Hill property meet the requirements for a NI 43-101 compliant mineral resource.

2. A very limited amount of information is available for the Nat River iron deposit and no historic iron mineral resource was found to have been reported. No documentation of metallurgical testwork has been identified for the Nat River deposit.

3. The Radio Hill deposit is a fine grained, lean magnetite resource that will require fine grinding and flotation to achieve concentrate quality suitable for pellet plant feed.

4. Magnetite in E- and F-type mineralization is fine-grained averaging 20 to 25 µm in size.

5. The Radio Hill iron formation does not contain amphiboles or amphibole asbestos minerals.

6. The Radio Hill deposit is geologically complex and contains numerous folds, faults and dikes. Because of this complexity, the preparation of a mineral resource estimate will require fairly closely-spaced exploration drilling.

7. The part of the Radio Hill deposit that is thickened by folding is open (i.e., untested by drilling) down-plunge to the northwest.

8. The distribution of metallurgical domains is complex in the Radio Hill deposit and cannot be determined by visual examination. Metallurgical domains will require metallurgical testing.

9. Historic metallurgical test work indicated that a commercially acceptable iron concentrate could be produced from Radio Hill mineralized material using magnetic separation followed by flotation.

10. The historical metallurgical testwork completed on the Radio Hill property was well done, but additional work, including pilot plant testing of representative blended samples, must be undertaken before the economics of potential production can be assessed.

11. Micon considers that there is an opportunity for development of the Radio Hill iron resource as feed for direct reduced iron (DRI), such as the Kobe ITmk3 iron nugget process.

12. Iron formation at the Nat River deposit is considered by Micon to be an effectively unexplored area with the potential for commercial iron deposits.

13. While iron formation clearly exists at Nat River, it is Micon's opinion that the current and near-term exploration activities should focus on the Radio Hill iron deposit.

Based on the all of the historical documentation reviewed, the results of GCR's exploration and its site visit to the property, Micon concludes that a moderate-sized iron resource is likely to exist at Radio Hill that may possibly be developed commercially as a conventional iron ore operation.

The iron formation lies in areas of high relief relative to surrounding flat-lying land, and as a result, the Radio Hill deposit will require minimal waste removal from any pits developed over the early years of a mine operation. Historical mine planning work, indicated a stripping ratio of approximately 1:1.

Micon, working with GCR staff, developed an exploration program to be conducted to develop a mineral resource estimate for the Radio Hill iron deposit. Very little of the historic drill core has survived in a usable state and the methods used for drill core sampling, preparation and analyses cannot be confirmed as being compliant with current industry standards. Therefore, a thorough program of drilling, assaying, and metallurgical analysis is recommended for the Radio Hill property.

Given the potential structural complexity of the Radio Hill deposit, the drilling program should be conducted on 300-m spaced drill lines with holes spaced at 300 m along those lines. The drilling program will also help understand the potential variation in mineralogy and in grain size of magnetite and/or hematite. The program is to be conducted in a single phase. The overall drilling program will require 36 holes with a cumulative length of 12,000 m.

The work programs will include surveying, mapping, drilling, and collection of samples for testwork. Core samples and bulk samples will be assayed and composites will also be analyzed using metallurgical tests that are commonly used in operations in Minnesota and Michigan in the United States and the Labrador Trough in Canada. The metallurgical test work will include Davis Magnetic Tube tests to determine the potential recovery of magnetite.

The cost of the drilling, assaying and the metallurgical testing program is estimated to be Cdn$3.5 million, as shown in Table 1.1 The entire program is planned to be completed within 12 months. All drilling is planned to be conducted between the months of May and October.

**Table 1.1**
**Exploration Budget**

| Item | Cost (Thousand Cdn$) |
|---|---|
| Drilling Costs | 1,200 |
| Project Costs | 51 |
| Staffing Costs | 156 |
| Analytical Costs | 1,627 |
| Contingency | 455 |
| **Total Estimated Exploration Costs** | **3,489** |

Micon recommends that additional bench-scale metallurgical testing as well as pilot scale testing using a continuous process, including flotation, should be conducted in order to verify earlier test results and better characterize the quality of the mineralization. An investigation into the application of a DRI technology such as the Kobe ITmk3 iron nugget process should be undertaken since Micon considers the DRI alternative as a promising possibility for future commercial development of the Radio Hill iron deposit.

Micon has reviewed the historical exploration results and developed an exploration program for the Radio Hill property to validate those results. It is Micon's opinion that the Radio Hill Iron property merits further exploration and that the proposed exploration plans are properly conceived and justified.

## 2.0 INTRODUCTION AND TERMS OF REFERENCE

At the request of Golden Chalice Resources Inc. (GCR), Micon International Limited (Micon) was retained to provide an independent review and summary of the previous exploration and historical mineral resource and reserve estimates for the Radio Hill iron property located west of Timmins, Ontario, Canada. This report presents a review of the historical work completed and offers an opinion as to whether the property merits further exploration expenditures. The report does not constitute an audit of any previously estimated mineral resources on the Radio Hill Iron property.

The geological setting of the property, mineralization style and occurrences, and exploration history were described in various reports that were prepared during the 1950s to mid-1960s, as well as in various government and other publications listed in Section 21 of this report. The relevant sections of those reports are reproduced or quoted herein where appropriate.

GCR has completed two diamond drill holes which were drilled to confirm geology in the central area of the Radio Hill deposit. Other than the drilling of these two holes, cleaning up of previous historical trench work, a new airborne geophysical survey, and assembly of the available historical documentation, GCR has not performed any other physical work on the property to date.

Micon has reviewed and analyzed data provided by GCR and the previous operators of the Radio Hill property, and has drawn its own conclusions therefrom, augmented by its direct field examination. Micon has not carried out any independent exploration work, drilled any holes or carried out an extensive program of sampling and assaying on any of the iron deposits contained on the property. Several samples were taken during Micon's site visit in 2009 in order to confirm the historically observed geology and mineralogy. Micon's program of sampling was not intended to duplicate the volume of data collected by the previous owners of the property. However, it was adequate to independently confirm the presence of the relevant mineralization on the property.

Several mineralized outcrops were located during Micon's site visit and the observed geology matched the previous descriptions. A number of historical drillhole locations were identified but, due to the passage of time, no evidence of the drillhole numbers could be seen.

Micon also examined the core from the two diamond core holes completed by GCR in 2008.

The Micon team visited the property on October 29, 2009. The team consisted of Mr. Sam Shoemaker, mine engineer and team leader, Mr. Ron Mariani, metallurgist, and Dr. Rodney Johnson, geologist.

Micon reviewed the results of previously published mineral resource and mineral reserve estimates completed on the property. These provide general estimates of the iron resource potential for portions of the Radio Hill property. These estimates are historical and do not comply with the CIM Definitions on Mineral Resources and Mineral Reserves as required by

NI 43-101 and are provided for information purposes only. They should not be relied upon for planning a work program or to establish a mineral resource on the property. Further fieldwork is required to evaluate the full extent and nature of the iron mineralization on the Radio Hill property.

The Qualified Persons responsible for the preparation of this report and the opinion on the propriety of the proposed exploration program are Sam J. Shoemaker, Jr., MAusIMM, and Dr. Rodney Johnson, MAusIMM.

In this report, all currency amounts are stated in Canadian dollars (Cdn$). Quantities are generally stated in SI units, the standard practice within Canada, including metric tons (tonnes, t) and kilograms (kg) for weight, kilometres (km) or metres (m) for distance, and hectares (ha) for area. Where applicable, imperial units have been converted to SI units, the standard Canadian and international practice. Table 2.1 provides a list of the various abbreviations used throughout this report.

Micon is pleased to acknowledge the helpful cooperation of GCR personnel, all of whom made available any and all data that Micon requested and responded openly and helpfully to all questions, queries and requests for material.

**Table 2.1**
**List of Abbreviations**

| Name | Abbreviation |
|---|---|
| Canadian dollars | Cdn$ |
| Canadian Institute of Mining, Metallurgy and Petroleum | CIM |
| Canadian National Instrument 43-101 | NI 43-101 |
| Centimetre(s) | cm |
| Day | d |
| Degree(s) | $^{o}$ |
| Degrees Celsius | $^{o}$C |
| Digital elevation model | DEM |
| Direct reduced iron | DRI |
| Foot or Feet (imperial units)) | ft |
| Greater than | > |
| Ground magnetic survey | GMS |
| Hectare(s) | ha |
| Inch(es) | in |
| Kilogram(s) | kg |
| Kilometre(s) | km |
| Less than | < |
| Litre(s) | L |
| Metre(s) | m |
| Micon International Limited | Micon |
| Micron(s) | µm |
| Million tonnes | Mt |
| Million years | Ma |
| Million metric tonnes per year | Mt/y |
| Milligram(s) | mg |

| Name | Abbreviation |
|---|---|
| Millimetre(s) | mm |
| North American Datum | NAD |
| Not available/applicable | n.a. |
| Parts per billion | ppb |
| Parts per million | ppm |
| Percent(age) | % |
| Pound(s) | lb |
| Qualified Person | QP |
| Quality Assurance/Quality Control | QA/QC |
| Scanning electron microscopy/Energy dispersive spectroscopy | SEM/EDS |
| Second | s |
| Specific gravity | SG |
| Système International d'Unités | SI |
| Ton(s) (short, 2,000 pounds) | ton |
| Tons (short) per day | tons/d |
| Tons(s) (long, 2,240 pounds) | l.ton |
| Tonne (metric) | t |
| Tonnes (metric) per day | t/d |
| Universal Transverse Mercator | UTM |
| Weight percent | wt% |
| X-ray diffraction | XRD |
| Year | y |

## 3.0 RELIANCE ON OTHER EXPERTS

While exercising all reasonable diligence in checking, confirming and testing it, Micon has relied upon GCR's presentation of the project data from previous operators for the Radio Hill iron property in formulating its opinion.

The descriptions of geology, mineralization, exploration and mineral resource estimation methodology used herein are from reports prepared by various companies or their contracted consultants for the various components of the Radio Hill iron property. The conclusions of this report rely on data available in published and unpublished reports supplied by the various companies which have conducted the exploration on the properties and information provided by GCR. The companies completing work in the 1950s and 1960s conducted their activities in accordance with industry standards at that time. Micon has no reason to doubt the validity of the information provided by GCR.

The agreement under which GCR holds title to the Radio Hill and Timmins West property has been reviewed by Micon and appears to be in order. However, Micon offers no legal opinion as to the validity of the mineral title claimed. A description of the property, and ownership thereof, is provided for general information purposes only. Comments on the state of environmental conditions have been made where required by NI 43-101. The statements are provided for information purposes only and Micon offers no opinion on the state of environmental conditions on the property.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

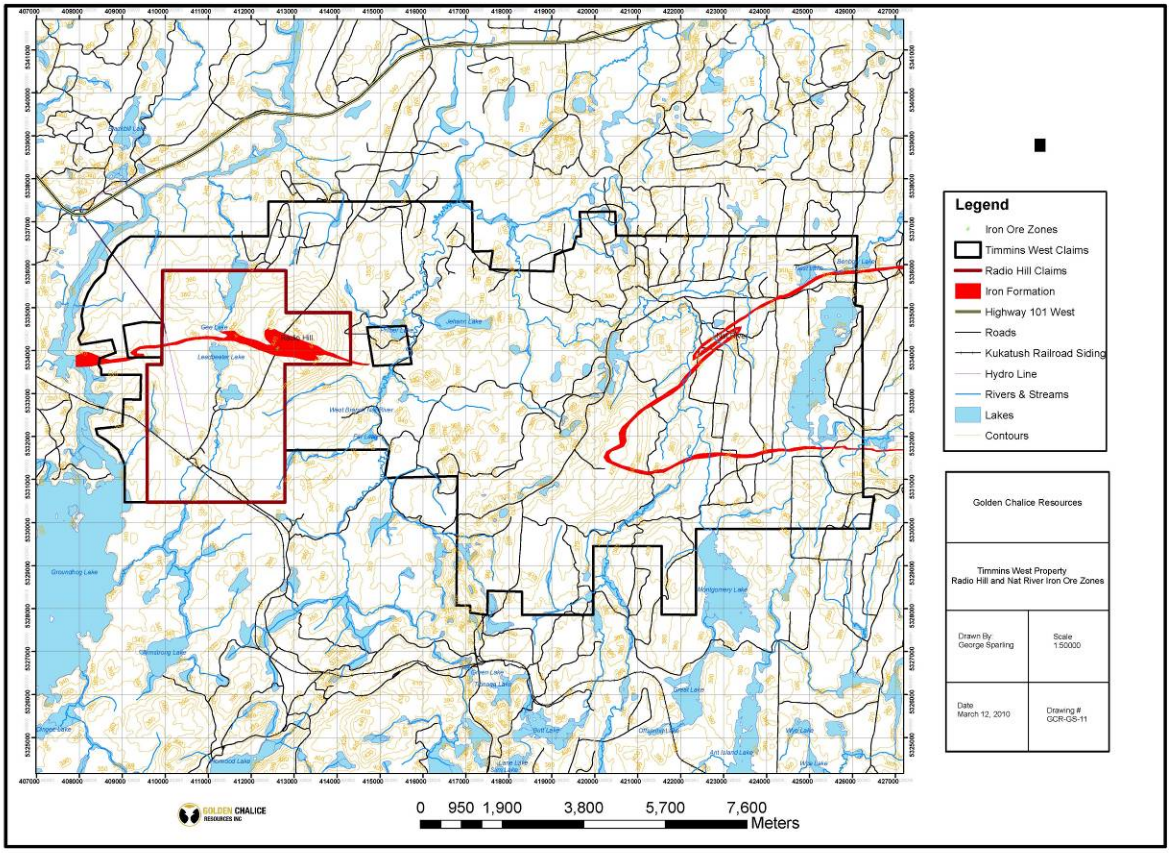
The Radio Hill property covers portions of iron formation that includes the historically identified iron deposits of Radio Hill and Nat River approximately 80 km southwest of Timmins Ontario Canada. The property covers an area of approximately 12,160 ha with the main line of the Canadian National Railway (CN) crossing its southern edge. The property's close location to the CN railroad and to Timmins, together with the associated infrastructure, is a significant advantage for its future development.

The property is located at latitude 48° 09' 26" N and longitude 82° 10' 22" W.

The location of the Radio Hill property is shown in Figure 4.1 and Figure 4.2 below.

**Figure 4.1**
**Location of the Radio Hill Iron Property near Timmins Ontario, Canada**

**Figure 4.2**
**Radio Hill and Timmins West Claim Group Outline**




## 4.1 OWNERSHIP

GCR described the consideration for acquisition of the Radio Hill property in a press release dated March 4, 2008 as follows:

> "Consideration for a 100% interest in the Property consists of the payment of $275,000 over a period of three years. There is a 3% net smelter return payable, of which two-thirds (2%) may be purchased for $3,000,000. Golden Chalice must also pay $7,000,000 (plus a cost of living increase) by January 1, 2012 to acquire a 100% interest in the iron ore rights on the property."

Micon's review of the agreement by which GCR holds title to the property indicates that there are no additional royalties or back-in rights other than those described above.

The Radio Hill and Nat River iron deposits are part of GCR's Radio Hill and Timmins West property group. The Radio Hill iron deposit is contained on the 11 claims making up the Radio Hill claim group (1,776 ha) while the Nat River iron deposit is contained on the 57 claims making up the Timmins West group (10,384 ha). The total area of the combined claims (Radio Hill and Timmins West) is 12,160 ha on 68 claims that extend along the known trace of the iron formation. All claim boundaries are un-surveyed. Details are provided in Table 4.1 and Figure 4.3 below.

GCR reports to Micon that exploration activities on the property do not require regulatory approval. None of the claims are within parks, forest reserves or other areas that are restricted from exploration and mining.

No historical or current environmental issues were observed by Micon during its site visit.

**Table 4.1**
**List of Claims**

| Group | Claim | Recorded | Due Date | Area (ha) | Work Required | Township/Area |
|---|---|---|---|---|---|---|
| Radio Hill | 4214719 | 1-Mar-07 | 1-Mar-11 | 192 | $4,800 | PENHORWOOD |
| Radio Hill | 4220731 | 22-Jun-07 | 22-Mar-11 | 256 | $6,400 | PENHORWOOD |
| Radio Hill | 4223266 | 19-Nov-07 | 19-Nov-10 | 224 | $5,600 | PENHORWOOD |
| Radio Hill | 4224187 | 19-Nov-07 | 19-Nov-10 | 256 | $6,400 | PENHORWOOD |
| Radio Hill | 4224188 | 19-Nov-07 | 19-Nov-10 | 256 | $6,400 | PENHORWOOD |
| Radio Hill | 4224189 | 19-Nov-07 | 19-Nov-10 | 256 | $6,400 | PENHORWOOD |
| Radio Hill | 3019027 | 17-Oct-06 | 17-Oct-11 | 64 | $1,600 | PENHORWOOD |
| Radio Hill | 4212618 | 17-Oct-06 | 17-Oct-11 | 64 | $1,600 | PENHORWOOD |
| Radio Hill | 3019028 | 14-Nov-06 | 14-Nov-11 | 48 | $1,200 | PENHORWOOD |
| Radio Hill | 4212499 | 14-Dec-06 | 14-Dec-11 | 64 | $1,600 | PENHORWOOD |
| Radio Hill | 3010209 | 25-Jun-04 | 25-Jun-12 | 96 | $2,400 | PENHORWOOD |
| Timmins West | 4201492 | 23-Mar-06 | 23-Mar-11 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4201493 | 23-Mar-06 | 23-Mar-11 | 128 | $3,200 | PENHORWOOD |
| Timmins West | 4201488 | 5-Apr-06 | 5-Apr-11 | 144 | $3,600 | KENOGAMING |
| Timmins West | 4201489 | 5-Apr-06 | 5-Apr-11 | 256 | $6,400 | KENOGAMING |
| Timmins West | 4201490 | 5-Apr-06 | 5-Apr-11 | 256 | $6,400 | KENOGAMING |
| Timmins West | 4201491 | 5-Apr-06 | 5-Apr-11 | 192 | $4,800 | KENOGAMING |
| Timmins West | 3019024 | 24-Apr-06 | 24-Apr-11 | 32 | $800 | PENHORWOOD |
| Timmins West | 4220806 | 30-Apr-07 | 30-Apr-10 | 64 | $1,600 | PENHORWOOD |
| Timmins West | 4207030 | 7-Jun-05 | 7-Jun-10 | 192 | $4,800 | PENHORWOOD |
| Timmins West | 4207031 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | KENOGAMING |
| Timmins West | 4207032 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207033 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207034 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207035 | 7-Jun-05 | 7-Jun-10 | 16 | $400 | PENHORWOOD |
| Timmins West | 4207036 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207037 | 7-Jun-05 | 7-Jun-10 | 160 | $4,000 | PENHORWOOD |
| Timmins West | 4207039 | 7-Jun-05 | 7-Jun-10 | 64 | $1,600 | KENOGAMING |
| Timmins West | 4207040 | 7-Jun-05 | 7-Jun-10 | 240 | $6,000 | PENHORWOOD |
| Timmins West | 4207041 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207042 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207043 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207044 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207045 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | KENOGAMING |
| Timmins West | 4207046 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207047 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207048 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |

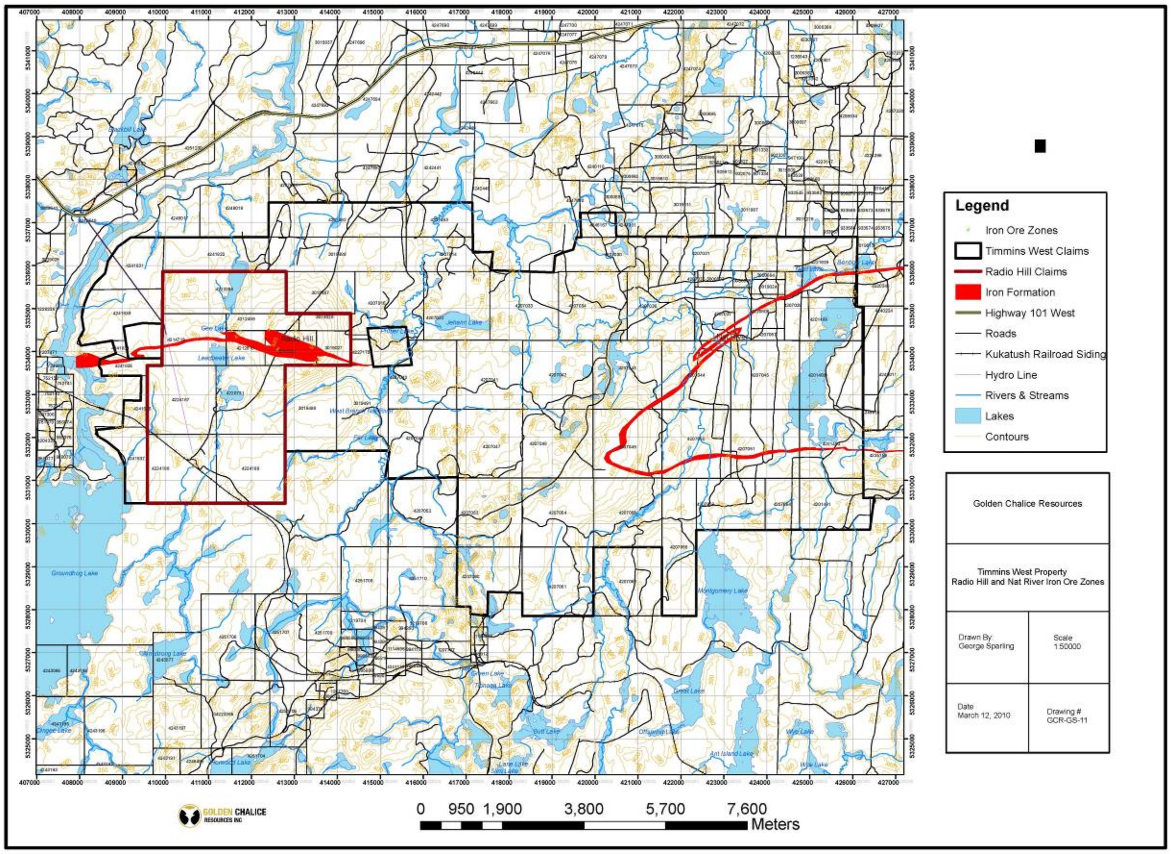
| Group | Claim | Recorded | Due Date | Area (ha) | Work Required | Township/Area |
|---|---|---|---|---|---|---|
| Timmins West | 4207049 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207050 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207051 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | KENOGAMING |
| Timmins West | 4207053 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207054 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207055 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207056 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207057 | 7-Jun-05 | 7-Jun-10 | 16 | $400 | PENHORWOOD |
| Timmins West | 4207058 | 7-Jun-05 | 7-Jun-10 | 192 | $4,800 | PENHORWOOD |
| Timmins West | 4207060 | 7-Jun-05 | 7-Jun-10 | 224 | $5,600 | PENHORWOOD |
| Timmins West | 4207061 | 7-Jun-05 | 7-Jun-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 4207064 | 7-Jun-05 | 7-Jun-10 | 96 | $2,400 | KENOGAMING |
| Timmins West | 4207914 | 7-Jun-05 | 7-Jun-10 | 144 | $3,600 | PENHORWOOD |
| Timmins West | 4207916 | 7-Jun-05 | 7-Jun-10 | 240 | $6,000 | PENHORWOOD |
| Timmins West | 4241831 | 11-Jul-08 | 11-Jul-10 | 176 | $4,400 | KEITH |
| Timmins West | 4241832 | 11-Jul-08 | 11-Jul-10 | 192 | $4,800 | PENHORWOOD |
| Timmins West | 4241833 | 11-Jul-08 | 11-Jul-10 | 192 | $4,800 | KEITH |
| Timmins West | 4241834 | 11-Jul-08 | 11-Jul-10 | 16 | $400 | KEITH |
| Timmins West | 4241835 | 11-Jul-08 | 11-Jul-10 | 80 | $2,000 | KEITH |
| Timmins West | 4241836 | 11-Jul-08 | 11-Jul-10 | 48 | $1,200 | KEITH |
| Timmins West | 4241837 | 11-Jul-08 | 11-Jul-10 | 128 | $3,200 | KEITH |
| Timmins West | 4221929 | 3-Aug-07 | 3-Aug-10 | 192 | $4,800 | KENOGAMING |
| Timmins West | 3000603 | 15-Oct-03 | 15-Oct-10 | 32 | $800 | PENHORWOOD |
| Timmins West | 3000604 | 15-Oct-03 | 15-Oct-10 | 32 | $800 | PENHORWOOD |
| Timmins West | 4246167 | 14-Nov-08 | 14-Nov-10 | 48 | $1,200 | PENHORWOOD |
| Timmins West | 3019487 | 19-Nov-07 | 19-Nov-10 | 160 | $4,000 | PENHORWOOD |
| Timmins West | 3019491 | 19-Nov-07 | 19-Nov-10 | 240 | $6,000 | PENHORWOOD |
| Timmins West | 4227175 | 19-Nov-07 | 19-Nov-10 | 48 | $1,200 | PENHORWOOD |
| Timmins West | 3019488 | 18-Dec-07 | 18-Dec-10 | 256 | $6,400 | PENHORWOOD |
| Timmins West | 3019490 | 18-Dec-07 | 18-Dec-10 | 240 | $6,000 | PENHORWOOD |
| Timmins West | 3000605 | 2-Jan-04 | 2-Jan-11 | 16 | $400 | PENHORWOOD |

## 4.2 RADIO HILL IRON DEPOSIT

The Radio Hill iron deposit is connected to Highway 101 by a gravel road. This road continues across the deposit and extends to the CN railroad siding at Kukatush (see Figure 4.2). During the early 1960s, a new railroad grade was constructed from this siding to the south edge of Radio Hill proper. Track was never laid on this railroad roadbed, but it remains intact for future possible use.

The Radio Hill iron deposit outcrops along the crest of Radio Hill and has widths exceeding 200 m. Strike length is about 3 to 4 km. Extensive exploration work was completed during the late 1950s into the early 1960s. Several resource mineral estimates were completed, along with detailed metallurgical testing and feasibility studies.

**Figure 4.3**
**Detailed Claim Locations for the Property**




## 4.3 NAT RIVER IRON DEPOSIT

The Nat River iron deposit is located about 6 km east of the Radio Hill deposit. This area of steeply dipping iron formation was not visited by Micon during its site visit to the Radio Hill property. The iron formation at Nat River is reported to have mainly narrow widths, with some reports indicating that folding may have increased the overall widths in some locations. Historical exploration of the property is very limited since most of the historical exploration work was focused on the Radio Hill iron deposit.

## 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Radio Hill iron property is accessible by paved (Highway 101) and gravel road from Timmins, Ontario. Timmins is serviced by regularly scheduled flights from various originating locations throughout Canada. The property location is well serviced from the Timmins area and the main line of the Canadian National Railway (CN) crosses the southern edge of the property.

The nearest community to the site is Foleyet with a population of 216 (2006) and is located approximately 23 km northwest of the property. The major population centre for the region is Timmins, located about 80 km northeast of the property with a population of 42,997 in 2006. Figure 5.1 shows the transportation network connecting with the property.

**Figure 5.1**
**Transportation Access to Radio Hill**

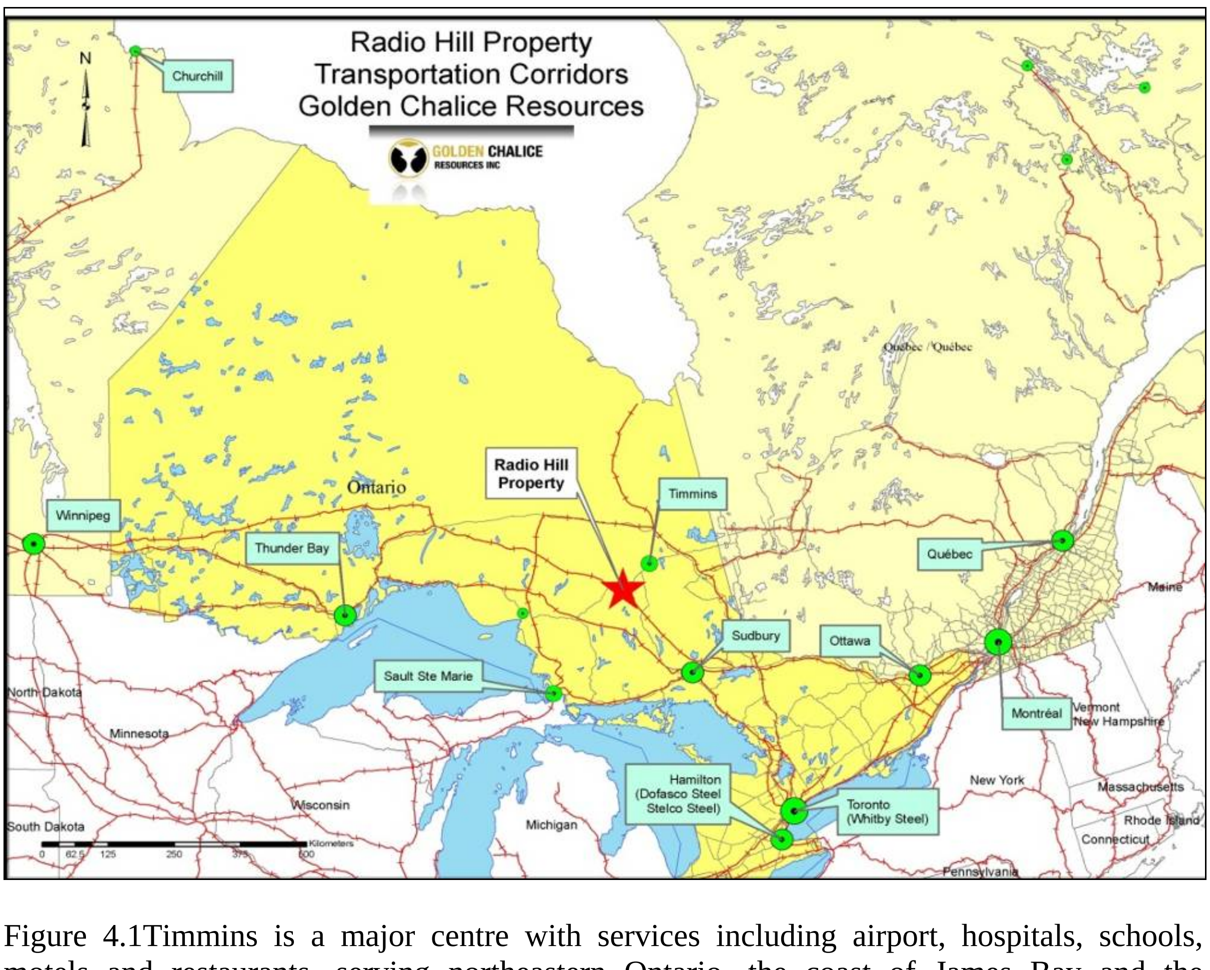



Figure 4.1Timmins is a major centre with services including airport, hospitals, schools, motels and restaurants, serving northeastern Ontario, the coast of James Bay and the Nishnawbe Aski Nation. As an important centre of mining activity, Timmins also has a workforce qualified to undertake mineral exploration and development activities

The Radio Hill iron property is located in the heavily forested region of the Canadian Shield. The total annual precipitation is approximately 831 mm/y of which an average of 352 cm/y is snowfall. The mean annual temperature is 7.5°C. The lowest annual temperatures occur during January (average low of -23.9°C) while the warmest temperatures occur during July (average high of 24.2°C). Wind direction is typically northerly during the winter and southerly during the summer. Winds are steady with an average velocity of about 12 km per hour.

The vegetation on the Radio Hill iron property is composed of various North American species including trees, small plants, mosses and lichens. Animal species present on the property include moose and bear. Figure 5.2 and Figure 5.3 provide typical views of the iron formation in outcrop and historical trenches.

GCR reports to Micon that surface rights to the property are "Crown Land" and that there are no pre-existing structures on the property.

**Figure 5.2**
**Trench at Near the Crest of Radio Hill**

**Figure 5.3**
**Trench Along the Flank of Radio Hill**

# 6.0 HISTORY

Micon has reviewed an extensive amount of historical data associated with previous exploration efforts on the Radio Hill and Nat River iron deposits. These exploration efforts started in 1958 with the staking of the original claims at Radio Hill and continued into the mid-1960s with the completion of a feasibility study by an independent consultant, FENCO (see Neal and Riddell, 1965). Extensive mapping, trenching, diamond drilling, sampling and metallurgical testing were completed at this time in order to determine the commercial feasibility of the iron deposits. Most of the historical exploration and metallurgical work focused on the Radio Hill iron deposit. A summary of the timeline of work completed in the Radio Hill area during the 1950s through 1965 is shown below in Table 6.1.

Since 1965, no significant exploration work was completed on the iron deposits until GCR optioned the Radio Hill property. During Micon's site visit, only the Radio Hill iron deposit was examined. Micon was able to inspect several trenches previously excavated in the 1960s, locate several historical diamond drillholes, visit the collars of the two holes drilled by GCR, and take several samples representing the surface outcrop of the Radio Hill iron formation.

**Table 6.1**
**Historical Timeline of Exploration Activities in the Radio Hill Area**

| Date | Event |
|---|---|
| Nov-58 | First mining claims filed at Radio Hill. |
| Jan-59 | One diamond drill active (AX sized core) on the Radio Hill property. |
| Jan-59 | Dip needle survey started on the Radio Hill area. |
| Feb-59 | First four diamond drill holes completed (2,000 ft). |
| May-59 | Five diamond drills active on the property. |
| May-59 | Metallurgical test work started. |
| May-59 | One drill active at Nat River. |
| Jun-59 | Magnetometer survey of Radio Hill started. |
| Jun-59 | Dip needle survey started on the Nat River area. |
| Jul-59 | Surface geologic mapping started on the property. |
| Aug-59 | Magnetometer survey is completed on the Radio Hill property (99.07 miles). |
| Aug-59 | Diamond drilling is completed at Nat River (5 holes, 4,053 ft). |
| Aug-59 | Six diamond drills active at Radio Hill. |
| Aug-59 | Trenching and bulk sampling work started. |
| Nov-59 | Diamond drilling is completed at Radio Hill (68 holes, 52,952 ft). |
| Nov-59 | Bulk sampling work is completed |
| Apr-60 | Magnetometer survey is completed on the Nat River property (118 miles). |
| Sep-60 | Pesonen completes first "reserve" estimate for Radio Hill. |
| Oct-60 | Bulk metallurgical test work completed. |
| Oct-60 | Testing of concentrate for direct reducibility. |
| Nov-60 | Additional bulk sampling. |
| Dec-61 | Behre Dolbear & Company complete "reserve" estimate. |
| Jun-62 | Feasibility study completed by A. G. McKee. |

| Date | Event |
|---|---|
| Dec-63 | Limited amount of diamond drilling completed (5,949 ft). |
| Feb-64 | Further laboratory grinding magnetic separation and flotation tests completed. |
| Jun-64 | Re-calculation of “reserves” completed. |
| Nov-64 | 62 shallow vertical drill holes completed. |
| Mar-65 | FENCO Feasibility Report. |

## 6.1 EXPLORATION HISTORY

The iron deposits in the Radio Hill area were first identified in 1902, with the first mineral claims staked on Radio Hill for iron in 1958 by the Kukatush Mining Corporation. Over the next several years, this company actively explored and developed the property with extensive geophysical, geological mapping, trenching, diamond drilling, sampling, and metallurgical testwork. Various resource and reserve estimates were completed on the property, with the most recent being published in March, 1965 (Neal and Riddell, 1965). The 1965 work included a detailed feasibility study to consider the production of 1.2 million long tons of iron pellets per year. Pit designs, a concentrator design, and a pellet plant were envisioned for the property as part of this study. Since March, 1965, no further exploration work was completed on the property prior to GCR’s involvement.

### 6.1.1 Radio Hill

Radio Hill was explored extensively between 1958 and 1965. The area was mapped during this period although there are only limited outcrops in the area. A dip needle survey was completed in January, 1959 and 160 line-km of ground magnetic surveys were completed between June and August, 1959. A total of 140 drillholes were completed between 1959 and 1964 for 18,966 m of drilling. In 1959, 10 trenches were completed with a cumulative length of 1,219 m. See Figure 5.2 and Figure 5.3 for examples of the historical trenching at Radio Hill.

During 1959, 68 holes were drilled by Kukatush Mining Corporation on the Radio Hill property reportedly producing 16,140 m of core. Another 10 holes totaling 1,813 m of core were drilled in 1963. A total of 1,013 m of drilling was completed in 62 shallow vertical holes in 1964 to test the surface/overburden taconite boundary and better define near surface iron-bearing zones. The whereabouts of the historical core is not known, but it is suspected that most of it may have been consumed in metallurgical testing in 1959 and the early 1960s.

The Kukatush Mining Corporation identified several types of iron formation. The relatively magnetite-rich iron formation was classified as E-type and F-type. E-type is characterized by massive magnetite beds up to 10 cm thick that have a distinct metallic luster and produce a Davis Tube concentrate with Fe >65% at 98% passing a minus 325 mesh grind. F-type is characterized by magnetite-rich beds that have a duller appearance than E-type massive beds, and which produce a Davis Tube concentrate with an Fe < 65% at 98% passing a minus 325 mesh grind.

There is a continuum between E- and F- type mineralization. The end-members can easily be identified in the field and in core. The E-type end member can be identified by relatively thick beds of massive magnetite, while F-type end member material can be identified by green minnesotaite and minnesotaite-chert beds interbedded with magnetite-rich beds. Approximately 50% of the E- and F-type material requires Davis Tube analyses at a 325 mesh grind for correct classification. Based on a few samples that were studied in the course of this evaluation and references to the petrographic work of Petruk (in Gerson, 1961) the E- and F-type material appear to have an average grain size of approximately 20 to 25 µm, although the F-type may be finer grained on average.

### 6.1.2 Nat River Area

A total of six diamond core holes were started at Nat River with five being completed during 1959 for a total of 1,235 m drilled. A dip needle survey was conducted in June, 1959 and a 190 line-km ground magnetic survey was completed in April, 1960. The work was completed by Kukatush Mining Corporation.

## 6.2 HISTORICAL RESOURCE ESTIMATES

The Radio Hill iron deposit has had extensive exploration, drilling, sampling, and metallurgical test work completed on it during the period between 1958 through 1965. However, the core from the drilling is not available and, therefore, there are not enough data to confirm the historical mineral resource estimates. Thus, all of the reported historical iron resource and reserve estimates are considered speculative since they do not meet modern reporting standards. Furthermore, an iron resource not only requires an iron head assay, but it also requires some metallurgical knowledge as to whether the assay has a reasonable expectation of producing a viable commercial product. Some of the historical resource estimates include this metallurgical work, while others do not.

Although a great deal of effort was expended on the property, additional work is required to determine if a viable commercial product can be produced that conforms to modern reporting standards (see Section 6.3 below).

### 6.2.1 Radio Hill

The historical exploration drilling, trenching, and bulk sampling work completed on the property is shown below in Table 6.2.

**Table 6.2**
**Historical Exploration Work Completed on the Radio Hill Iron Deposit**

| Year | Number of Holes | Metres Drilled | Number of Trenches | Trenching (m) | Bulk Samples (Tonnes) |
|---|---|---|---|---|---|
| 1959 | 68 | 16,140 | 10 | 1,219 | 0 |
| 1960 | | | | | 2,767 |
| 1961 | | | | | 45 |
| 1962 | | | | | |
| 1963 | 10 | 1,813 | | | 172 |
| 1964 | 62 | 1,013 | | | |
| **Total** | **140** | **18,966** | **10** | **1,219** | **2,985** |

Exploration at Radio Hill included the initial 68 diamond core holes (64 completed, four abandoned before completion), which were the basis of the various historical "reserve" estimates prepared in 1960 and 1961.

The Radio Hill iron deposit is comprised mainly of two types of mineralization, designated E- and F-types. Both are low grade, extremely fine grained magnetite. H or H3 mineralization is siderite and is considered as waste. See Table 6.3 below.

**Table 6.3**
**Description of Mineralization**

| Material Type | Description |
|---|---|
| C | Carbonaceous bands and quartz bands |
| E or E3 | Magnetite bands, massive and quartz bands |
| F or F3 | Magnetite-rich bands and quartz bands |
| G | Sulphide bands and quartz bands |
| H or H3 | Siderite bands and quartz bands |
| L | Lean F-type |

The term "reserve" was used by the individuals who prepared the estimates. The term, using quotation marks, has been retained within the present report. However, the reader is cautioned that this usage does not imply that the estimates conform to CIM definitions. The estimates are provided for information purposes only.

The first of these estimates was completed by Paul E. Pesonen in October, 1960 for the Kukatush Mining Corporation. Pesonen's "reserve" estimate is shown below in Table 6.4.

**Table 6.4**
**Pesonen's October, 1960 Radio Hill "Reserve" Estimate**

| Type | To 800 Ft Elev[1] | | To 400 Ft Elev[1] | | To 200 Ft Elev[1] | |
|---|---|---|---|---|---|---|
| | Long Tons | % Sol. Fe | Long Tons | % Sol. Fe | Long Tons | % Sol. Fe |
| E3 | 67,317,000 | 28.76 | 92,011,500 | 28.90 | 102,949,000 | 28.92 |
| F3 | 120,730,000 | 24.26 | 204,952,000 | 24.18 | 223,911,500 | 24.19 |
| Total E3 + F3 | 188,047,000 | 25.87 | 296,963,500 | 25.64 | 326,860,500 | 25.68 |
| | | | | | | |
| H3 | 11,707,500 | 27.22 | 11,842,500 | 27.22 | 11,842,500 | 27.22 |
| H3 | 33,967,500 | 22.20 | 46,567,000 | 22.31 | 47,848,000 | 22.27 |
| H3 | 31,813,000 | 18.00 | 37,391,500 | 17.70 | 39,604,500 | 17.66 |
| Total H3 | 77,488,000 | 21.23 | 95,801,000 | 21.11 | 99,295,000 | 21.02 |
| | | | | | | |
| Surface | 17,318,400 | - | 21,540,200 | - | 21,604,000 | - |
| Rock | 44,475,000 | - | 98,916,000 | - | 104,413,000 | - |
| | | | | | | |
| Total Waste (Includes H3) | 139,281,400 | - | 216,257,200 | - | 225,312,000 | - |
| Total Tons | 327,328,400 | - | 513,220,700 | - | 552,172,500 | - |
| Strip Ratio | 0.74 | | 0.73 | | 0.69 | |

[1] All elevations listed are above sea level.

Pesonen's estimate was based on calculating "reserves" to three different potential pit bottom elevations. It included only soluble iron for head assays and did not include any magnetic iron assays (Soluble iron can include iron bearing material that is typically not considered economically viable. Examples of this include various iron carbonates including the mineral siderite). The E3 and F3 mineralization types are the same as the later E- and F-type mineralization while, as noted above, the H3 type is siderite material, which was considered waste and was reported separately (see Section 9.0 below). The total material reported was bound by a very poorly defined pit shell and material outside of that pit shell was not reported. The estimate was based on cross-sections and does not conform to modern standards for mineral resource or mineral reserve estimation. It is provided for information purposes only.

A second "reserve" estimate was reported in October, 1960 by Mr. J. A. Retty, also for Kukatush Mining Corporation. Retty's estimate appears to be similar to Pesonen's but reported the resource only to the 200-ft elevation above sea level pit bottom. Retty's estimate is shown in Table 6.5 and was reported to be 'Indicated'.

**Table 6.5**
**Retty's October, 1960 Radio Hill "Reserve" Estimate**

| Type | Indicated | |
|---|---|---|
| | Long Tons | % Sol. Fe |
| E3 | 102,949,000 | 28.92 |
| F3 | 223,911,500 | 24.19 |
| Total E3 + F3 | 326,860,500 | 25.68 |
| | | |
| H3 | 99,295,000 | 21.02 |
| | | |
| Surface | 21,604,000 | - |
| Rock | 104,413,000 | - |
| | | |
| Total Waste (Includes H3) | 225,312,000 | - |
| Total Tons | 552,172,500 | - |
| Strip Ratio | 0.69 | |

Since this estimate uses the same basis as Pesonen's, it also does not conform to modern reporting standards. As for both Retty's and Pesonen's estimates, neither includes any magnetic head iron assays making it impossible to determine the actual quantity of final product (concentrate) to be produced. The estimate is provided for information purposes only.

In January, 1961, Mr. Harold S. Gerson reported a "reserve" estimate based on a re-interpretation of the known exploration data used in the previous two estimates. It was also prepared on behalf of Kukatush Mining Corporation. Gerson's estimate is shown below in Table 6.6.

**Table 6.6**
**Gerson's January, 1961 Radio Hill "Reserve" Estimate**

| Type | Long Tons | % Sol. Fe |
|---|---|---|
| E3 | 150,081,375 | 29.81 |
| F3 | 277,525,875 | 25.88 |
| Total E3 + F3 | 427,607,250 | 27.30 |
| | | |
| H3 | 117,632,250 | 22.31 |
| | | |
| Surface | 28,450,783 | - |
| Rock | 183,144,270 | - |
| | | |
| Total Waste (Includes H3) | 329,227,303 | - |
| Total Tons | 756,834,553 | - |
| Strip Ratio | 0.77 | |

Again, only the soluble head iron assay is reported. This estimate includes additional material that was not included in the previous estimates. Micon believes that it probably includes material well below the 200-ft elevation above sea level pit bottom depth limit of the two previous estimates but is otherwise based on the same data. The supporting information in Gerson's report is limited. Micon believes that this estimate does not have the technical merit of Pesonen's or Retty's and considers it to be very speculative. Gerson's estimate is provided for information purposes only.

In May, 1961 Mr. J. C. Dumbrille reported a revised "reserve" estimate (also prepared on behalf of Kukatush Mining Corporation), as shown in Table 6.7.

**Table 6.7**
**Dumbrille's May, 1961 Radio Hill "Reserve" Estimate**

| Type | To 800 Ft Elev[1] | | To 400 Ft Elev[1] | | To 200 Ft Elev[1] | |
|---|---|---|---|---|---|---|
| | Long Tons | % Sol. Fe | Long Tons | % Sol. Fe | Long Tons | % Sol. Fe |
| E3 | 67,317,000 | 28.76 | 92,011,500 | 28.90 | 102,949,000 | 28.92 |
| F3 | 120,730,000 | 24.26 | 204,952,000 | 24.18 | 223,911,500 | 24.19 |
| Total E3 + F3 | 188,047,000 | 25.87 | 296,963,500 | 25.64 | 326,860,500 | 25.68 |
| | | | | | | |
| H3 | 77,488,000 | 21.23 | 96,001,000 | 21.11 | 99,295,000 | 21.02 |
| | | | | | | |
| Surface | 17,318,400 | - | 21,540,200 | - | 21,604,000 | - |
| Rock | 44,475,000 | - | 98,916,000 | - | 104,413,000 | - |
| | | | | | | |
| Total Waste (Includes H3) | 139,281,400 | - | 216,457,200 | - | 225,312,000 | - |
| Total Tons | 327,328,400 | - | 513,420,700 | - | 552,172,500 | - |
| Strip Ratio | 0.74 | | 0.73 | | 0.69 | |

[1] All elevations listed are above sea level.

As with Pesonen's and Retty's estimates, only soluble head iron was reported with no magnetic head iron assays. It appears that this estimate is essentially the same as Pesonen's estimate, and to Retty's which was limited to the 200 ft elevation above sea level pit bottom.

In December, 1961, Behre Dolbear & Company (Behre Dolbear) produced the first "reserve" estimate using magnetic head iron assays. This estimate is shown in Table 6.8.

**Table 6.8**
**Behre Dolbear December, 1961 Radio Hill "Reserve" Estimate**

| Type | To 800 Ft Elev[1] | | | 800 to 400 Ft Elev[1] | | | To 400 Ft Elev[1] | | |
|---|---|---|---|---|---|---|---|---|---|
| | Long Tons | % Mag. Fe | % Sol. Fe | Long Tons | % Mag Fe | % Sol. Fe | Long Tons | % Mag. Fe | % Sol. Fe |
| E | 67,900,000 | 23.30 | 30.10 | 10,700,000 | 26.20 | 31.10 | 78,600,000 | 23.90 | 30.20 |
| F | 57,800,000 | 17.70 | 25.30 | 21,800,000 | 18.30 | 25.30 | 79,600,000 | 17.90 | 25.40 |
| Total E + F | 125,700,000 | 20.70 | 27.90 | 32,500,000 | 20.90 | 27.30 | 158,200,000 | 20.80 | 27.80 |
| | | | | | | | | | |
| L | 26,700,000 | 11.50 | 21.60 | 6,800,000 | 13.00 | 22.30 | 33,500,000 | 11.80 | 21.70 |
| | | | | | | | | | |
| Surface | 23,069,200 | - | - | 0 | - | - | 23,069,200 | - | - |
| Rock | 107,300,000 | - | - | 17,000,000 | - | - | 124,300,000 | - | - |
| | | | | | | | | | |
| Total Waste (Includes L) | 157,069,200 | | - | 23,800,000 | | - | 180,869,200 | | - |
| Total Tons | 282,769,200 | | - | 56,300,000 | | - | 339,069,200 | | - |
| Strip Ratio | 1.25 | | | 0.73 | | | 1.14 | | |

[1] All elevations listed are above sea level.

The Behre Dolbear estimate used all of the previous exploration work, together with additional metallurgical testing, in order to develop an entirely new estimate. A conceptual pit was designed and only material within that open pit was reported as a "reserve". Additional material outside of that pit was not characterized in the study. Material below the pit bottom clearly exists. Although this estimate is more advanced than the previous estimates, it does not achieve modern reporting standards and is provided for information purposes only.

The most recent historical "reserve" estimated for the Radio Hill property was completed by FENCO in March, 1965 (Neal and Riddell, 1965). This estimate updated the Behre Dolbear estimate and developed a refined pit design. The estimate is shown in Table 6.9.

**Table 6.9**
**FENCO March, 1965 Radio Hill "Reserve" Estimate**

| Type | To 680 Ft Elev[1] | |
|---|---|---|
| | Long Tons | % Mag. Fe |
| E | 56,039,000 | 29.81 |
| F | 34,206,000 | 25.88 |
| Total E + F | 90,245,000 | 27.30 |
| | | |
| Surface | 13,671,799 | --- |
| Rock | 76,104,368 | --- |
| | | |
| Total Waste | 89,776,167 | --- |
| Total Tons | 180,021,167 | --- |
| Strip Ratio | 0.99 | |

[1] All elevations listed are above sea level.

The volume of the FENCO estimate is significantly smaller than any of the previous estimates. This results from:

- A more detailed and refined pit design than was used in previous “reserve” estimates.

- Forcing the ratio of E- and F-type mineralized material to match the blend used in the metallurgical test work (70% E- and 30% F-type materials).

- Additional shallow exploration drill holes that better defined E- and F-type material near the surface.

- An improved estimate of the overburden covering the Radio Hill area.

It is Micon’s opinion that the FENCO estimate was technically advanced for the time period in which it was prepared (mid-1960s). However, since most of the original core is not available for inspection, the estimate is provided for information purposes only.

The major constraint in the FENCO “reserve” was the blend between E- and F-type materials. As described in other sections within this report, the E-type material tends to be more coarsely liberating, while the F-type material is very fine grained and will require very fine grinding for liberation. The assumed blend between the E- and F-type materials is 70% E and 30% F, based on the blend used for metallurgical testing.

Based on the Behre Dolbear estimate, Micon considers that the ratio of E- to F-type material in place is about 1:1 E to F. As a result, the FENCO estimate limits the amount of F-type material that could be considered as mill feed. Excess F-type material remains outside of the FENCO pit limits and represents a potentially significant amount of iron bearing material that could possibly be economically processed. Also, the E-type material extends below the base and beyond the limits of the FENCO pit and this material may represent additional potential resources.

### 6.2.2 Nat River

A total of six diamond core holes were started at Nat River with five being completed during 1959 for a total of 1,235 m drilled. The amount of information collected was not enough to report a mineral resource, however, Gerson reports a ‘potential’ of 30 million long tons per 100 ft of depth. The estimate is based on the five drill holes along with the magnetometer work completed on the property during 1959. Micon considers that this estimate is very approximate and does not conform to any modern or previous reporting standards. It is recommended by Micon that GCR should consider Nat River as unexplored with an extensive amount of drilling and metallurgical test work required before any resource could be determined.

## 6.3 HISTORICAL METALLURGICAL RESULTS

The Radio Hill iron deposit is comprised mainly of two types of mineralization, designated E and F. Both are low grade, extremely fine grained magnetite.

### 6.3.1 Radio Hill Metallurgy and Process Testing

A total of seven technical reports covering the metallurgical testing conducted during the 1960s were reviewed by Micon as part of the Radio Hill property assessment. Micon found the metallurgical work to be professionally executed and well-detailed. The documents reviewed ranged from summaries of laboratory and pilot testing of grinding, concentrating and pelletizing practices to a complete feasibility study by FENCO of a Radio Hill pelletizing operation, at an annual production rate of 1.2 million long tons of pellets. (See Neal and Ridell, 1965).

Initial metallurgical studies on the Radio Hill resource took place in 1960. While preliminary studies were initiated by a number of metallurgical laboratories, only Lakefield Research (Lakefield) of Canada (now SGS Lakefield Research Limited) and Klöckner-Humboldt-Deutz AG (KHD, now KHD Humboldt Wedag International Ltd.) of Germany were selected to provide initial assessments of the metallurgical response of the Radio Hill mineralized material.

The original samples submitted for evaluation consisted of drill core composites made up of core intervals having the same mineralogical classification and/or similar iron content. After extensive evaluation, a composite consisting of 40% E-type and 60% F-type material was chosen as the test sample.

Lakefield and KHD conducted similar bench-scale tests on the samples with the aim of producing a concentrate for pellet plant feed. With some minor variation in coarse fraction sizing, the test procedure used by both laboratories involved magnetic separation of a coarse fraction to remove non–magnetics followed by grinding of the remaining magnetics to minus 325 mesh. Test results are summarized in Table 6.10.

**Table 6.10**
**Bench-scale Metallurgical Test Results with Flotation, 1964**

| Facility | Weight recovery (%) | Concentrate Grade (% Fe) | Silica (% $SiO_2$) | Iron Recovery (%) |
|---|---|---|---|---|
| Lakefield | 25.9 | 63.27 | 7.46 | 61.1 |
| KHD | 32.2 | 61.60 | - | 66.0 |

These results indicated that the Radio Hill iron deposit had the potential to be developed commercially, based on the concentrate quality specifications of that time. These findings set the stage for additional work in the mid-1960s, which showed that silica in concentrate could be further reduced by the addition of a flotation step combined with crude blend control (Pesonen, 1960).

Samples of concentrate were provided to Allis-Chalmers Manufacturing Company (Allis-Chalmers) in Milwaukee, Wisconsin for pot grate testing to predict the pelletizing characteristics of Radio Hill concentrates. The testing indicated that high quality pellets could be produced in an Allis-Chalmers grate kiln induration system. The Radio Hill material produced good quality furnace feed as well as excellent final product physical quality and chemistry (see Glenn, 1961). A summary of the chemistries of the concentrate feed and pellets is presented in Table 6.11.

**Table 6.11**
**Chemical Analysis for Concentrate and Pellets – Radio Hill Property**

| Item | E-Type Magnetic Concentrate (%) | Pellets (%) |
|---|---|---|
| Soluble Fe | 65.83 | 64.28 |
| Total Fe | 66.09 | 64.40 |
| Ferrous Iron, Fe++ | 20.52 | 1.29 |
| Silica | 7.77 | 7.55 |
| Phosphorus, P | 0.014 | 0.014 |
| Manganese, Mn | 0.04 | 0.04 |
| Alumina, $Al_20_3$ | 0.40 | 0.50 |
| Calcium Oxide, CaO | 0.04 | 0.04 |
| Magnesium Oxide, MgO | 0.09 | 0.10 |
| Gain on ignition | 2.85 | 0.63 |
| Moisture | 10.0 | 0.04 |
| Sulphur, S | 0.015 | 0.003 |
| Cu, Ni, V, $TiO_2$, As, Pb, Zn | nil | nil |

Concentrate and pellet chemistries are excellent with the exception of silica which later testing showed could be reduced to near 4% with flotation as a final step in the concentrating process. Elements of concern, including arsenic, lead and zinc, were not detected at any significant levels.

Phosphorus, which is detrimental to steel production, was low at 0.014%, as was the sulphur content of both the concentrate and pellets from the Allis-Chalmers work. Since this testing was performed only on the E-type material, the sulphur content of concentrate including F-type material is likely to be higher.

In addition to pelletizing tests, samples of Radio Hill concentrates were sent to Strategic-Udy Processes Inc. for evaluation of this concentrate as feed to the Strategic Udy smelting process for the production of molten pig iron for electric furnace feed. (See Magyar, 1961). While this particular process was never developed commercially, the DRI technologies of today, including the Kobe ITmk3 or iron nugget process, remain a potentially viable market option for concentrates such as Radio Hill.

Additional testing was performed on a larger scale, during 1963 and 1964, and was summarized in the report by FENCO (Neal and Riddell, 1965). FENCO produced a feasibility study on the economics of construction of a 1.2 million long tons per year pelletizing plant at the Radio Hill site. Micon considers that this report provides the best comprehensive overview of the Radio Hill iron deposit to date.

During 1963, autogeneous grinding and concentrating tests were conducted by Lakefield at its pilot plant on bulk samples, totaling 190 long tons taken from four trenches cut within the Radio Hill resource area. Laboratory grinding and flotation testing continued into 1964. A revised laboratory flowsheet was tested extensively, designed for the FENCO "reserve" estimate (see Table 6.9), consisting of 70% E-type material and 30% F-type material and which incorporated flotation as the final step in the concentrating process. The results, adjusted to reflect a mineralized body average magnetic iron head of 21.5%, are shown in Table 6.12.

**Table 6.12**
**Bench Metallurgical Test Results with Flotation - Radio Hill, 1964**

| Crude Magnetite (% Fe) | Crude to Concentrate Weight Recovery (%) | Concentrate Grade (% Fe) | Silica Content (% $SiO_2$) | Magnetic Iron Recovery (%) |
|---|---|---|---|---|
| 21.5 | 28.7 | 67.1 | 4.21 | 87.5 |

The above results show that low silica concentrate could be produced with the addition of a flotation step to the flowsheet.

It is important to note that this work was performed on trench samples cut at the surface in the deposit and that the results represent a combination of pilot plant work and bench scale tests.

### 6.3.2 Nat River Metallurgy and Process Testing

No documentation of specific metallurgical testing on the Nat River iron deposit was found during the property review by Micon. All metallurgical work focused on the larger Radio Hill iron resource

## 6.4 HISTORICAL PRODUCTION

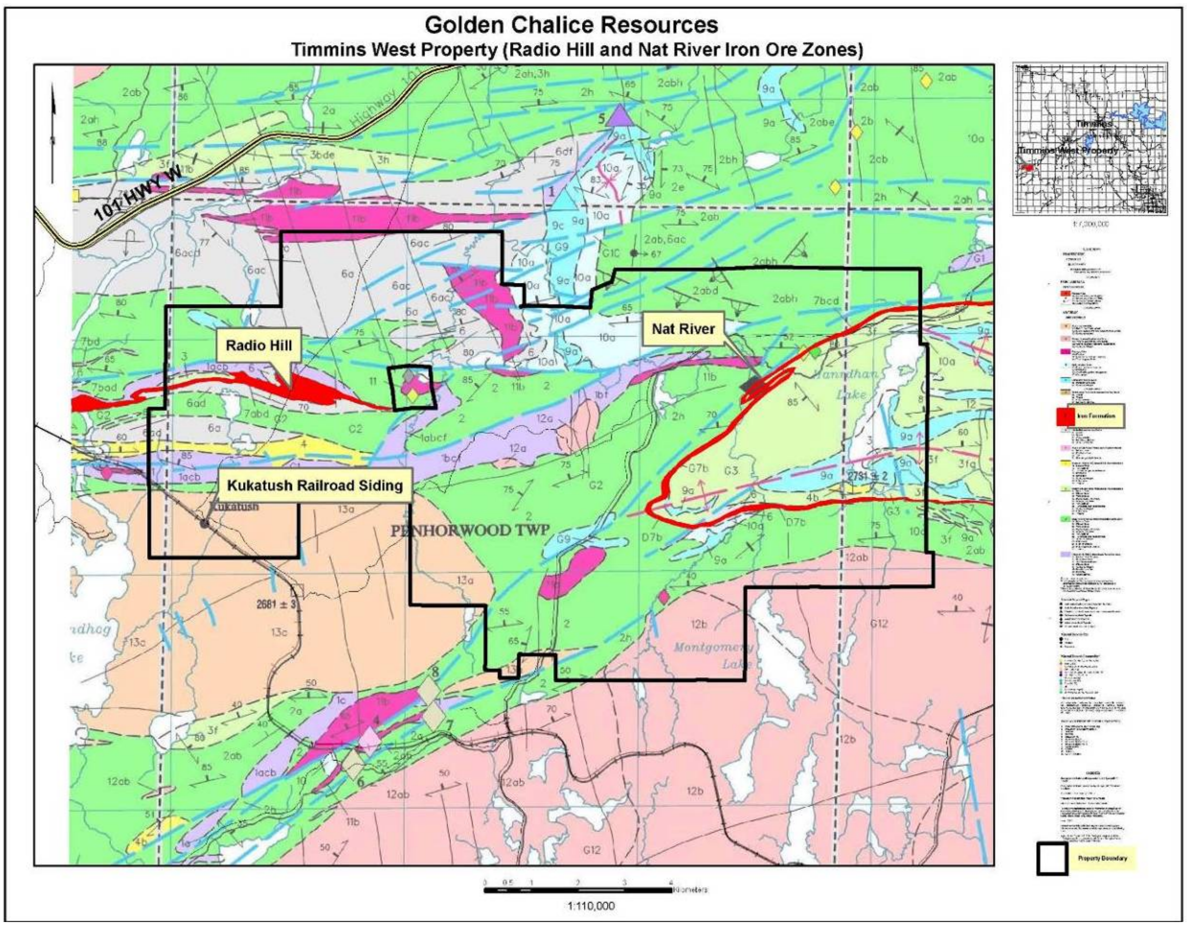
There has been no historical production from any of the iron deposits contained within the Radio Hill Iron property.

# 7.0 GEOLOGICAL SETTING

## 7.1 RADIO HILL AREA

The geology of the Kukatush-Sewall Lake Area has been summarized by Milne (1972). The Radio Hill iron formation is located in the Archean-aged northern Swayze Greenstone Belt as shown in Figure 7.1. The Radio Hill iron formation is hosted in a stratigraphic sequence composed of sedimentary and volcanic rocks that are bound to the south by the Kukatush pluton and to the north by the Nat River igneous complex. The iron formation has a complex geologic history and has been metamorphosed to greenschist facies, folded and faulted, intruded by mafic dikes, oxidized by deep weathering and subsequently glaciated.

**Figure 7.1**
**Radio Hill Property Geology**




The strata in the vicinity of Radio Hill are composed of thickly bedded wackes overlain by the Radio Hill iron formation which, in turn, is overlain by komatiite flows (see Table 7.1). The Radio Hill iron formation is a banded iron formation composed of beds of chert alternating with beds of magnetite, minnesotaite, iron carbonates (siderite and/or ankerite), or mixtures thereof. The bands or beds vary from a maximum thickness of approximately 10 cm to less than 1 mm.

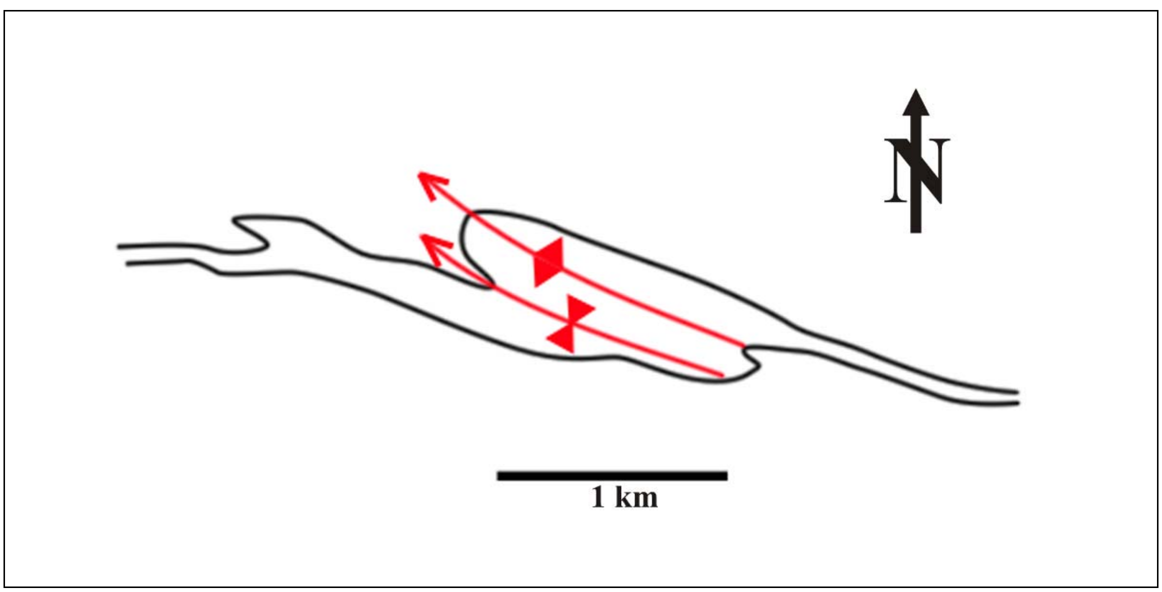
**Table 7.1**
**Generalized Stratigraphic Sequence in the Vicinity of Radio Hill**

| |
|---|
| **Komatiite flows** |
| **Radio Hill iron formation** |
| Sulphide facies (0-25 m thick) |
| Carbonate and silicate facies (10-80 m thick) |
| Oxide facies, with minor carbonate and silicate facies (30-100 m thick) |
| Sulphide, silicate, and carbonate facies (0-50 m thick) |
| **Graywacke** |

After Milne,1972.

Two main periods of deformation have folded and faulted the Radio Hill iron formation. The earliest period of deformation is related to regional-scale polyphase folding. The later period of deformation is associated with the development of ductile and brittle-ductile faults (Ayers, 1995). The iron formation is thickened by folding in the vicinity of Radio Hill. The iron formation is folded into an S-fold that plunges moderately (approximately 50º) to the northwest (see Figure 7.2). Additionally, many small mafic dikes (diabase and diorite) cross-cut the Radio Hill iron formation and the paucity of outcrop make projecting dikes and faults difficult.

**Figure 7.2**
**Sketch Map Showing Moderately Plunging Fold Axes**




The S-shaped fold results in thickening of the iron formation in the vicinity of Radio Hill.

## 7.2 NAT RIVER AREA

The Nat River iron formation is described as a chert-silicate-magnetite iron formation (Milne, 1972) with an average thickness of less than 100 ft (30.48 m). Local folding and en-echelon stacking result in the iron formation thickness increasing to a maximum known thickness of 200 ft (61 m). The dip of the iron formation is from moderate to vertical.

## 8.0 DEPOSIT TYPES

Iron formations around the world are composed of iron oxides and assorted gangue minerals. Ore-forming minerals are the iron oxides magnetite, hematite and goethite. North American iron formations can be subdivided into two types, Great Lakes or Superior-type and Algoma-type. These iron formations host iron ores which can be further subdivided into direct shipping and taconite ores. Direct shipping ores contain more than 60% iron and are usually composed of hematite and goethite with lesser amounts of magnetite. Taconite ores are lower in grade but can produce a valuable product by metallurgical processes that concentrate magnetite and/or hematite and to a lesser degree goethite. Taconite ores are typically composed of alternating bands of magnetite and/or hematite and waste minerals. The Radio Hill deposit would be classified as an Algoma-type taconite ore. The Soudan Mine in Tower, Minnesota, the Sherman Mine in Temagami, Ontario, and the Helen Mine in Wawa, Ontario, are examples of mines developed on Algoma-type iron deposits. The iron ore of the Sherman Mine would be classified as a taconite ore similar to the Radio Hill iron deposit.

# 9.0 MINERALIZATION

The Radio Hill iron formation is a typical Archean-aged Algoma-type iron formation. It is composed of alternating bands of magnetite with bands of gangue. The dominant gangue mineral is chert with subordinate amounts of siderite, ankerite, minnesotaite, pyrite, chalcopyrite, and pyrrhotite.

Milne (1972), noted:

> "During the drilling of the Radio Hill iron formation the Kukatush Mining Corporation (Ontario) Limited geologists subdivided the iron formation into a number of types designated by letters of the alphabet to assist in geological correlation and in the outlining of blocks of possible ore. The division of possible ore types was "based on a combination of magnetic iron content, texture and liberation" (Neal and Riddell, 1965)."

The "ore types" represent metallurgical or geometallurgical domains. The "ore types" are really metallurgical or geometallurgical domains and were defined by metallurgical response (head magnetic iron and Davis Tube concentrate iron) and geologic (or mineralogic) observation (the thickness of massive magnetite beds and the presence of minnesotaite for example). The "ore types" are not included in the Kukatush Mining Corporation drill logs because they were defined after the metallurgical analyses were returned. The "ore types" would more appropriately be called material types. Six material types are discussed in more detail below and are summarized in Table 9.1.

The E-type and F-type material would be considered potentially economic under current iron ore beneficiation and market conditions. The other material types would currently be considered as waste. E-type materials are characterized by massive magnetite beds up to 10 cm thick that have a distinct metallic luster and produce a Davis Tube concentrate with Fe >65% at 98% passing a minus 325 mesh grind (see Figure 9.1). F-type materials are characterized by magnetite-rich beds that have a duller appearance than E-type massive beds, which produce a Davis Tube concentrate with an Fe < 65% at 98% passing a minus 325 mesh grind (see Figure 9.2).

There is a continuum between E- and F- type material. The end-members can easily be identified in the field and in core. The E-type end member can be identified by relatively thick beds of massive magnetite, while F-type end member material can be identified by green minnesotaite and minnesotaite-chert beds interbedded with magnetite-rich beds. Approximately 50% of E- and F-type material requires Davis Tube analyses at a minus 325 mesh grind for correct classification. Based on a few samples that were studied in the course of this evaluation and references to the petrographic work of Petruk (in Gerson, 1961) the E- and F-type material appear to have an average grain size of approximately 20 to 25 µm, although the F-type may be finer grained on average.

**Table 9.1**
**Radio Hill Iron Deposit Material Types**

| Material Type | Description | Gerson Sol. Fe% | FENCO Mag. Fe % | FENCO DTT[1] Fe % | Behre Dolbear Mag. Fe % |
|---|---|---|---|---|---|
| C | Carbonaceous bands and quartz bands | | | | |
| E or E3 | Magnetite bands, massive and quartz bands | 25 - 35 | 14.5 | >65 | |
| F or F3 | Magnetite-rich bands and quartz bands | 15 - 25 | 14.5 | <65 | |
| G | Sulphide bands and quartz bands | 10 - 20 | | | |
| H or H3 | Siderite bands and quartz bands | 10 - 30 | | | |
| L | Lean F-type | | | | 9.2 - 14.5 |

[1] Davis Tube Test.

Behre Dolbear (1961) defined an L-type material in its “reserve” estimate. L-type material is a lower grade chert-minnesotaite-magnetite iron formation, or lean F-type. Magnetite beds would be thinner while chert and minnesotaite beds would be thicker than in F-type material.

Several of the historical resource estimates include an H-type material (see Figure 9.3). H-type material is bedded siderite (± ankerite) and chert. Siderite iron formation is no longer mined as a commercial iron ore. Siderite iron formation weathers easily. In drill hole RH08-01 weathered siderite iron formation was noted to a depth of 51.5 m. H-type material could be used to neutralize acid generated by potentially sulphide-bearing waste (for example, G-type material).

G-type material was described as banded sulphide and chert where the sulphides include pyrite and pyrrhotite. This material would be classified as waste and would be potentially acid-generating. G-type material was not observed during Micon’s visit to the Radio Hill property.

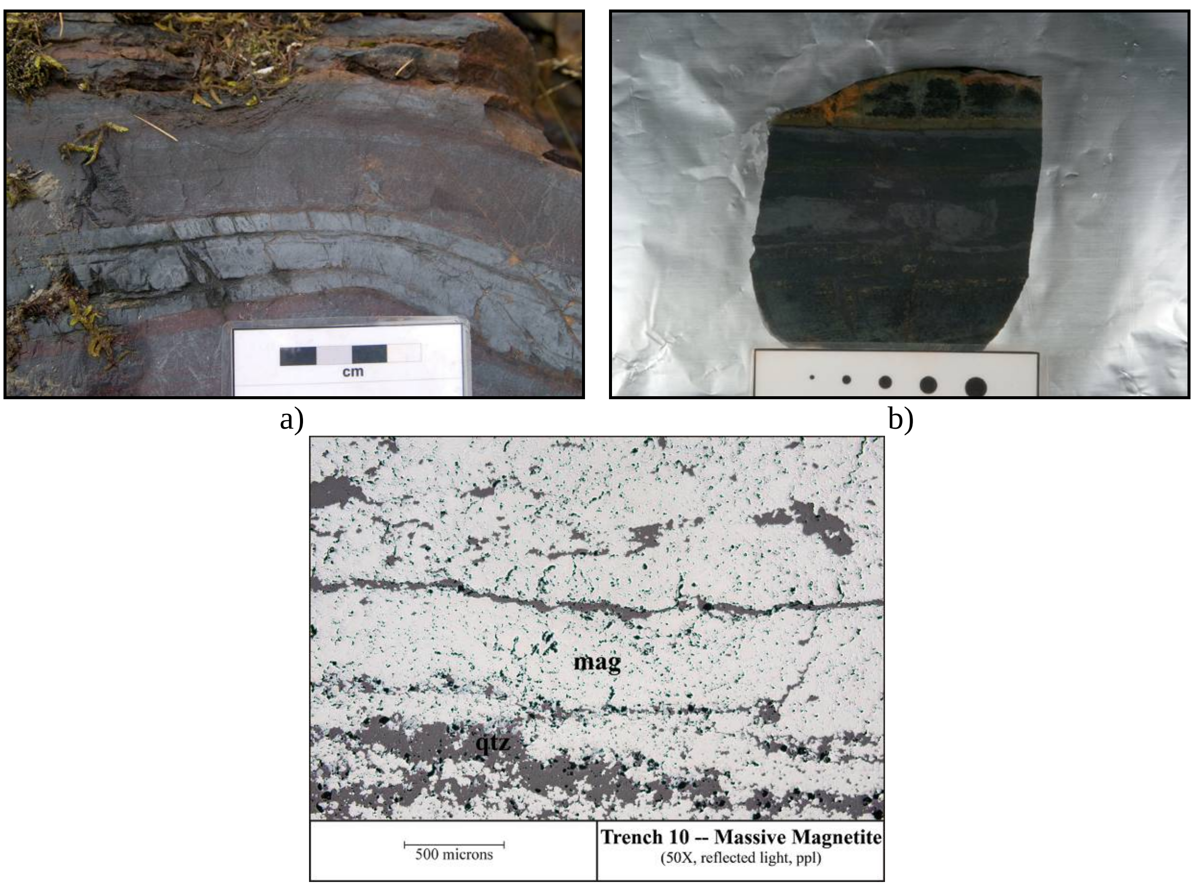
## 9.1 MINERALOGY

During Micon’s visit to the site in October 2009, Dr. Rodney Johnson collected several samples from the exposed historical trenching and the recently drilled GCR core. These samples were used to prepare thin sections for microscopic examination of the mineralogy of the property.

The Radio Hill iron formation has relatively simple mineralogy. The only iron oxide observed in the un-weathered iron formation is magnetite, other than trace amounts of micron-sized hematite in jasper layers. Chert is the dominant silicate mineral with subordinate amounts of minnesotaite. Both siderite and ankerite where observed with siderite being the dominant carbonate mineral. The presence of minnesotaite and carbonates indicate that the iron formation in the vicinity of Radio Hill has not reached amphibole grade metamorphism. This indicates that no amphiboles or amphibole-asbestos would be handled during potential mining activities at Radio Hill. Pyrite was observed disseminated in beds and along the contacts of dikes (see Figure 9.4). Most of the pyrite is relatively coarser-grained than associated magnetite and would be easily separated from it. Pyrrhotite is described in the G-type material and would be segregated as waste.

Gangue or waste minerals associated with iron ore generally include chert (microcrystalline quartz), often referred to as silica, and other silicate, carbonate, sulphide, oxide and phosphate minerals. The most valuable iron ore products contain less than 5 wt% $SiO_2$. Carbonate minerals in concentrate can contribute unacceptable amounts of MgO, CaO and/or MnO. Silicate minerals, other than chert (quartz), can contribute unacceptable amounts of $K_2O$, $Na_2O$, CaO, $Al_2O_3$ and/or MgO. Sulphides can contribute sulphur and phosphate minerals, particularly apatite (calcium phosphate), often contribute unacceptable amounts of phosphorus.

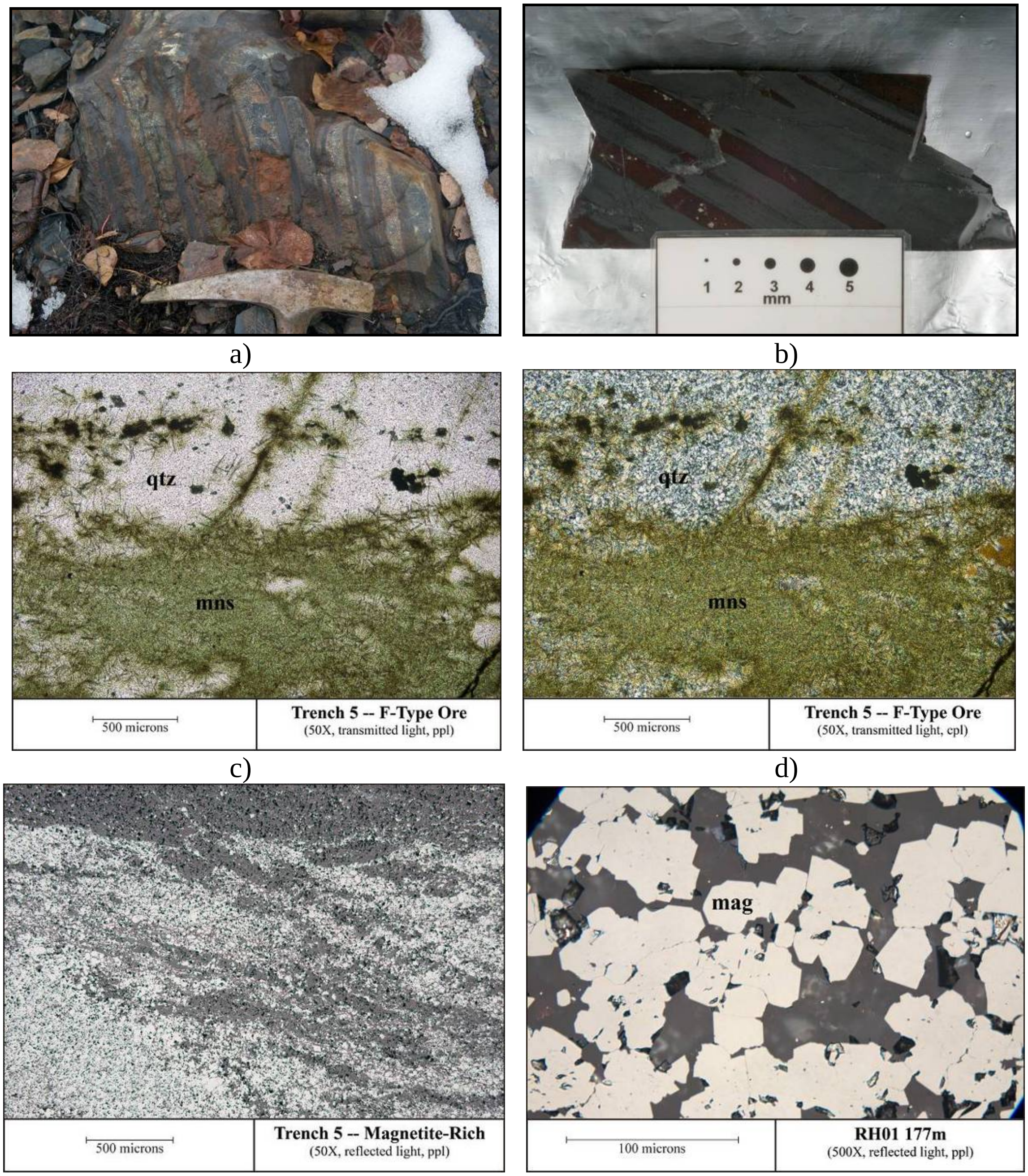
**Figure 9.1**
**Photographs and Photomicrograph of E-type Material**




a) b) c)

a) Photograph of massive magnetite beds observed in the historic trench 10 (east of the Kukatush road).
b) Photograph of polished surface of grab sample from the historic trench 5 (west of the Kukatush road).
c) Photomicrograph of massive magnetite band. Note that massive magnetite bands are composed of closely packed of 15 to 35 µm magnetite (brown) grains. Most of the magnetite grains are 20-25 µm. The gray areas are chert ($SiO_2$).

**Figure 9.2**
**Photographs and Photomicrographs of F-type Material**




a) Photograph of F-type ore from the historic trench 5 with interbedded minnesotaite-rich beds (green), chert beds (gray) and magnetite-rich beds brown to black.

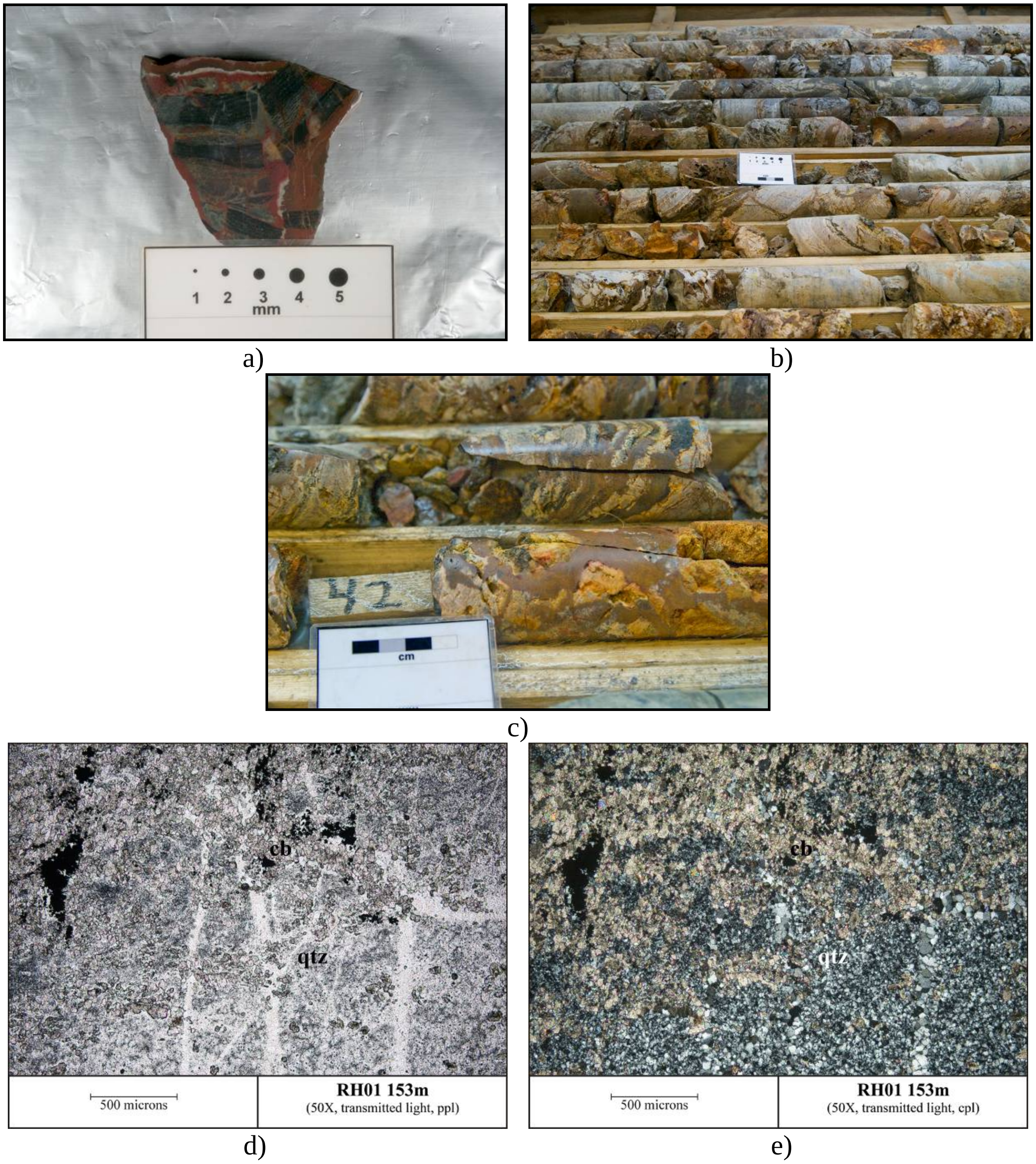
b) Photograph of drill core from RH08-01 (177 m) with interbedded magnetite-rich beds (dark gray) and jasper beds (red) with disseminated pyrite (yellow).

c) and d) Photomicrographs of minnesotaite (green) and chert beds.

e) Photomicrograph of magnetite-rich bed from Trench 5. Magnetite grains are 5 to 40 µm with an average grain size of approximately 20 m.

f) Photomicrograph of F-type magnetite-rich bed from GCR drill hole RH08-01 (177 m). Magnetite grains are 10 to 30 µm with an average grain size of approximately 20 µm.

**Figure 9.3**
**Photographs and Photomicrographs of H-type Siderite Iron Formation**

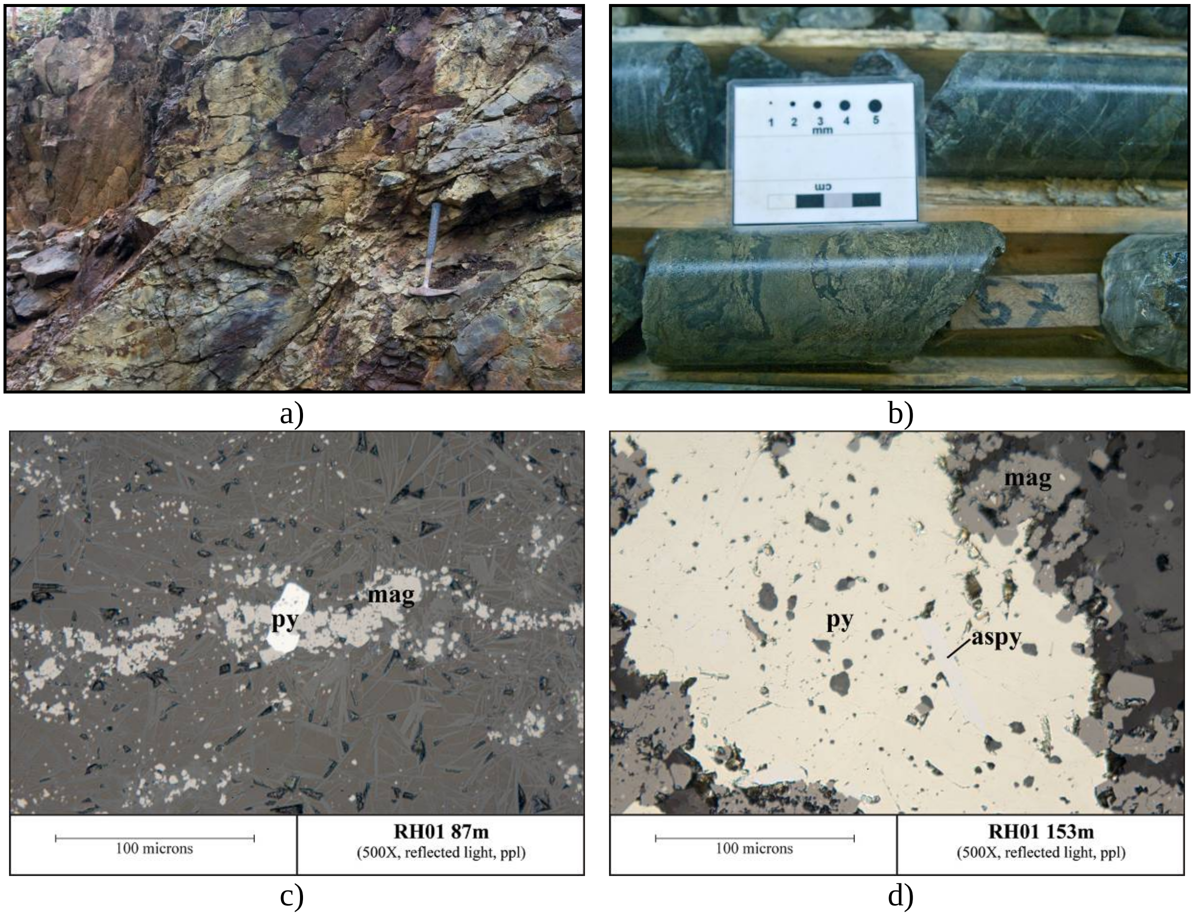



a) Photograph a grab sample of H-type material from trench 10 composed of siderite (gray, brown and red) and chert (black). The siderite is partially oxidized to hematite (red) and goethite (brown).

b) and c) Photographs from drill hole RH08-01 showing the oxidized siderite iron formation near the top of the hole.

d) and e) Photomicrographs of the contact between a siderite (cb) bed and a chert bed (qtz).

**Figure 9.4**
**Photographs and Photomicrographs of Sulphides Associated with the Radio Hill Iron Formation**




a) Photograph of sulphides at contact with mafic dike in trench 5.
b) Photograph of sulphides with chert and chlorite in drill hole RH08-01.
c) Photomicrograph of disseminated pyrite with magnetite in drill hole RH-01. Note that the pyrite is much coarser than the magnetite.
d) Photomicrograph of pyrite grain with inclusion of arsenopyrite. Arsenopyrite occurs in trace amounts.

# 10.0 EXPLORATION

A description of the historical exploration work conducted on the property is provided in Section 6.0.

The exploration work completed by GCR to date has been limited to the collection of historical documentation, completion of new airborne geophysical surveys, clearing of three historical trenching locations, and the drilling of two diamond core holes.

GCR completed the clearing of three trenches and drilled two diamond core drill holes in 2008. The diamond drillholes were completed primarily to confirm the presence of mineralization identified in the historical drilling programs and to satisfy the requirements for assessment work. The core was logged but was not sampled or assayed for iron ore quality pending GCR's evaluation of the work completed in the 1950s and 1960s.

Larchex Inc., of Timmins Ontario, an excavating contractor, completed clearing three trenches for GCR September 5-16, 2008. The purpose of the trenches was to expose iron formation outcrop in areas of historic trenches and bulk sampling. Bedrock of interest was washed using a high pressure pump by GCR geologic technicians from September 12-17, 2008. The trenches were mapped by GCR geological technicians from November 15-19, 2008. No sampling of the exposed iron formation was conducted at this time.

Two NQ diamond drill holes were completed on the iron formation in May 2008 for a total of 600 m. No systematic sampling of the iron formation for iron ore quality was undertaken at the time. However, 21 samples of sawn core 1 m or less in length were collected to determine if gold mineralization was present in altered and/or sulphide-bearing intervals in the iron formation and associated mafic volcanic rocks.

Micon's examination of the core and the drill logs, suggests that in places the lithology may not have been correctly interpreted. It is recommended that the core is re-logged by an expert in iron formation at the same time as core from the proposed drill program is logged.

GCR contracted Geotech Ltd. of Aurora, Ontario to conduct a combined magnetic-VTEM survey over the Timmins West property including the Radio Hill property (Barlow, R. and Bournas, N., 2009). The 742 line-km survey covered a 50 $km^2$ area with a 75-m line spacing. A number of electro-magnetic (EM) and magnetic anomalies were identified in the survey area. The Radio Hill iron formation is easily identified in the total field magnetic (Figure 10.1). An EM conductor is also associated with the Radio Hill iron formation (Figure 10.1). At this point in time the anomalies have been subject to detailed interpretation.

**Figure 10.1**
**Total Magnetic Intensity Color Image**

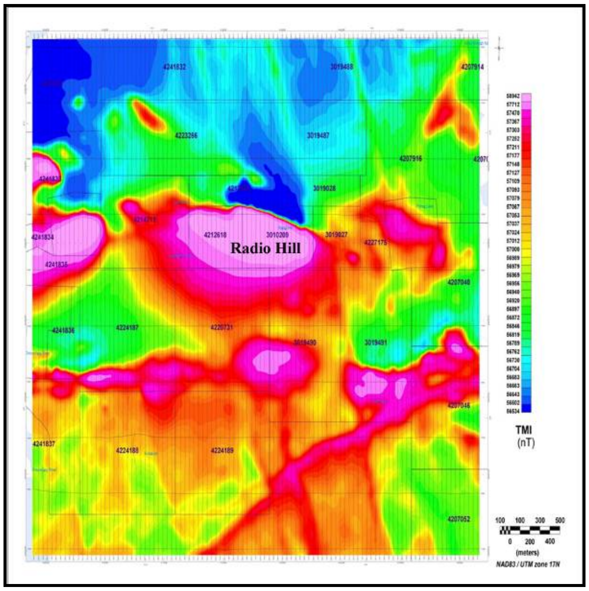
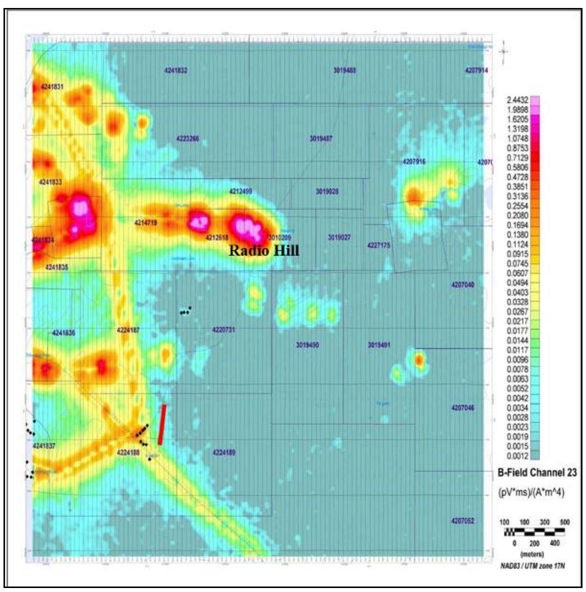


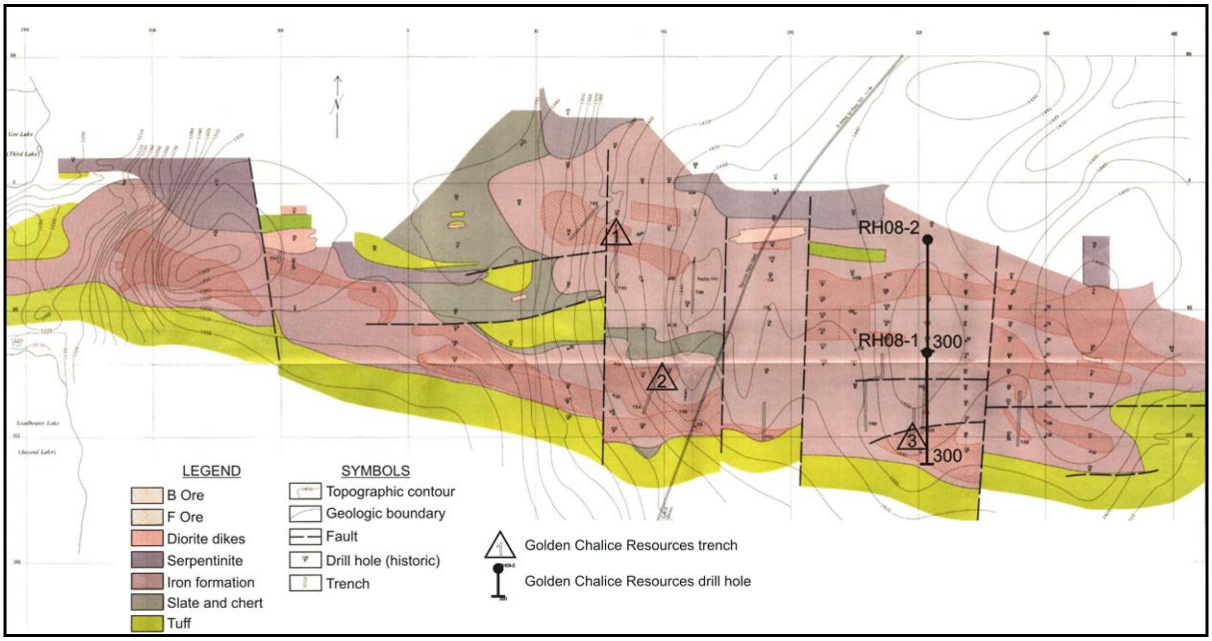

**Figure 10.2**
**VTEM B Field Late Time Gate 1.151 ms Color Image**



## 11.0 DRILLING

GCR drilled two 300-m deep holes (RH08-1 and RH08-2) on the Radio Hill deposit in May, 2008. The core is stored at the GCR facility in Timmins, Ontario. RH08-1 and RH08-2 have been logged, but have not been thoroughly sampled pending GCR's evaluation of the work completed in the 1950s and 1960s. The locations of the holes are shown in Figure 11.1.

**Figure 11.1**
**Plan Map of Radio Hill Showing GCR Trenches (1, 2 and 3) and Drill Holes RH08-1 and RH08-2**




Forage Orbit Garant Drilling of Val d'Or, Quebec, completed two NQ diamond, angled drill holes to a depth of 300 m (600 m total) on iron formation at Radio Hill for GCR in the period May 2-15, 2008. The core was logged by GCR geological technicians at the company's Hastings facility in Timmins. Overall core recovery was good (approaching 100%) with short fractured intervals and oxidized iron formation near surface with lower core recovery. Twenty-one samples 1 m or less in length were selected of altered and/or sulphide-bearing intervals. Intervals were sawn in half and one-half of the core was bagged and analyzed for Au, Pt, Pd, Ag, Cu, Ni, Zn, Pb, and Co. This sampling targeted zones suspected of having gold mineralization. Some of the samples were weakly anomalous for gold (52 ppb Au). Photographs of drill core and photomicrographs of core samples collected by Micon are shown in Section 9.0.

Micon's examination of the core and the drill logs, suggests that, in places, certain lithologies may not have been correctly interpreted. It is recommended that the core is re-logged by an expert in iron formation at the same time as core from the proposed drill program is logged.

GCR has not carried out any drilling on the Nat River deposit.

# 12.0 SAMPLING METHOD AND APPROACH

Drill core from holes RH08-01 and RH08-02 was logged by GCR geological technicians at the secure Hastings Facility, Timmins in May 2008. Selected altered and sulphide-bearing intervals from RH08-02 were sawed in half and one half of core bagged.

No samples of iron formation were collected from outcrop exposed during trenching in 2008.

All of the samples taken from the Radio Hill Iron property for determination of iron ore quality were collected in the 1950s and 1960s. The sampling practices may have been in compliance with industry standards in place at that time but they cannot be validated or compared to current norms. A description of the historical exploration work is contained within this report in Section 6.0.

None of the historical sampling can be documented to ensure it is compliant with current standards.

## 13.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Twenty one samples from drill hole RH08-02 were identified for analysis by GCR geological technicians for base and precious metals. At that time, in 2008 the focus of GCR was on the precious metal potential of the Radio Hill property and no analyses were undertaken for iron.

The bagged samples were shipped to Laboratoire Expert, Inc., Rouyn-Noranda, Quebec and analyzed for Au, Pt, Pd, Cu, Ni, Zn, Pb, and Co. Ni, Cu, Co, Pb and Zn were analyzed by atomic absorption (detection limit 2 ppm). Au, Pt, Pd and Ag were analyzed by lead fire assay atomic absorption finish on a 30-g pulp (detection limits: 2 ppb Au, 4 ppb Pt and 4 ppb Pd).

All of the samples taken from the Radio Hill Iron property for determination of iron ore quality were prepared and analyzed in the 1950s and 1960s. The practices that were used may have been in compliance with industry standards in place at that time but they cannot be validated or compared to current sample preparation and analytical methods. A description of the historical exploration work is contained within this report in Section 6.0.

The historical reports describe a variety of analytical methods used for samples and/or composites including Satmagan (Satmagan is an acronym for Saturation Magnetization Analyzer) and Davis Tube tests and analyses for total iron, soluble iron, phosphorus, silica, manganese, aluminum, sulphur, calcium, magnesium and loss on ignition. The results are not available for all of the samples and much of the data are poorly documented.

## 14.0 DATA VERIFICATION

Micon examined the core and the drill logs for the two holes drilled by GCR in 2008. These two holes confirmed the presence of iron formation at Radio Hill as reported in historical documents on the deposit.

Micon's examination suggests that, in places, certain lithologies may not have been correctly interpreted. It is recommended that the core is re-logged by an expert in iron formation at the same time as core from the proposed drill program is logged.

The twenty one samples from GCR RH8-02 were collected and analyzed to assess potential for gold mineralization in the Radio Hill iron formation. Since the analysis indicated low anomalous levels of gold duplicate analyses were not performed. Unsampled half-core is retained by GCR at its Hastings facility in Timmins, Ontario. The core has been maintained in good order and in secure conditions.

No data verification or quality control/quality assurance (QA/QC) program was in place during the drilling program conducted on the Radio Hill property in the 1950s and 1960s.

Since the assaying and metallurgical testing of samples from the Radio Hill property was conducted over several decades ago and no sample remains were available, Micon was unable to request additional work to verify the earlier results. Hence, Micon's findings are based entirely on historical documentation of previous assays and testwork. Although no verification work is possible, Micon considers that the groups involved with the earlier metallurgical testing are considered to be competent, respected and experienced in this field.

## 15.0 ADJACENT PROPERTIES

There are no adjacent iron formation properties in the area surrounding the Radio Hill deposit.

## 16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Historical mineral processing and metallurgical testwork is described in Section 6.3.

GCR has not carried out any mineral processing or metallurgical testwork on material from the Radio Hill property.

The following is provided for background information.

Low-grade iron formations such as those found in the Timmins-Kirkland Lake region of north eastern Ontario occur predominately as oxides with silica being the principal impurity. The iron oxides of the Radio Hill property occur predominantly as magnetite in which the iron mineral is magnetic. The resource is similar to the taconites of northern Minnesota which are lower in iron grade but can be processed metallurgically to produce a commercial concentrate.

Mineral processing operations involve the crushing and grinding of the magnetite ore to a size fine enough to liberate the iron mineralization from the silica waste. The medium of transport of the ground ore is water, which plays a primary role in the separation processes that follow grinding.

Once the iron minerals are ground fine enough to liberate the iron oxide particles from the silica waste, processing steps are introduced to reject the waste product. With magnetic ores, mechanical separation of the iron and silica is accomplished primarily using magnetic separators to trap the iron while the non-magnetic silica is washed away. With fine grained material such as at Radio Hill, concentrate quality is controlled by the addition of froth flotation as the final concentrating step. The iron ore concentrate is then dewatered using thickener tanks and filtration.

The iron ore concentrate is usually formed into 3/8-in diameter balls with a binder and the soft or “green” balls are hardened by firing in a special furnace to produce pellets for transport to blast furnaces where the process of converting the iron ore pellets into steel begins.

The authors consider that three potential commercial options exist for concentrates that may be produced from iron mineralized material at Radio Hill:

- The sale of concentrate to existing pelletizing facilities to supplement feed tonnages.

  Pellet feed grade concentrates could be produced for sale to existing pelletizing facilities in North America or sold to customers abroad. This approach typically will require the lowest capital investment.

  The handling and shipping of concentrates in cold weather will present challenges due to inherent moisture and the potential for freezing. Moisture content becomes a critical factor when shipping concentrates over water due to the high density of the material. A high moisture content increases shipping costs and settling of the concentrate during shipping can create stability issues for the vessel. These issues are the same for other operating facilities in northern latitudes and can be technically addressed.

- Pelletizing on site for transport and sale to steel makers.

  The option of producing pellets must be assessed on an economic basis alone. High capital and operating costs and a relatively small resource may challenge the economic viability of construction of a concentrating plant as well as a pelletizing facility at site. However, the economics could be enhanced if drilling identified additional tons for processing.

- The production of a DRI product on site.

  A leading DRI processing technology is the Kobe ITmk3 technology, which is utilized by the Mesabi venture in Minnesota. Such processes are becoming accepted technology due to the increase in electric furnace steel production and an increased demand for clean iron units to better control electric arc furnace product quality. In addition, the technology has a favorable impact on carbon dioxide emissions when compared to the blast furnace.

  The process blends iron oxide concentrate with a reductant (coal) which is then fed to a rotary hearth furnace. In the furnace, pellets are reduced at a relatively low temperature of 1,350°C and the hot metal is separated from the slag to form "nuggets" of metallic iron. A significant advantage to the raw material provider is that low silica feed is not required; however, energy requirement per tonne of product increases when processing lower grade ores. The advantage of flexibility in feed grade can be used to optimize costs in the overall production process.

  The location of the Radio Hill resource is favorable for the construction of such a DRI plant at the site. Sources of electrical power, rail and road transportation, water and a capable work force are readily available in the Timmins region.

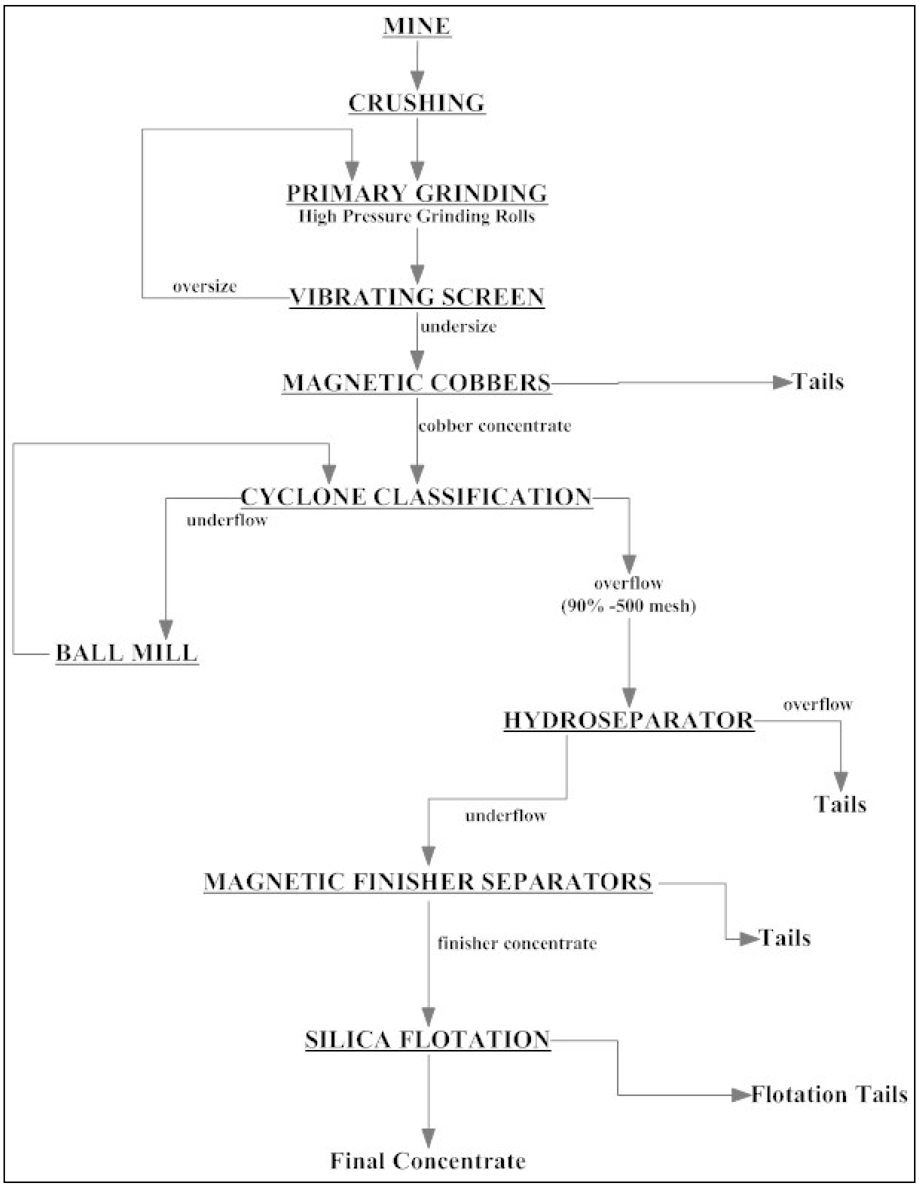
## 16.1 RADIO HILL PRELIMINARY PROCESS FLOWSHEET

Micon has developed a preliminary schematic conceptual flowsheet for the Radio Hill deposit based on the processing flowsheets which are utilized for the finer grained magnetite found on the Marquette Range in Michigan. It is similar to the concentrating flowsheet used at the Sherman Mine in nearby Temagami, Ontario. See Figure 16.1 below. Please note that additional metallurgical test work is required to determine if the mineralization is suitable for this flowsheet.

This processing scheme utilizes two stages of grinding, combining high pressure grinding roll technology with ball milling, to provide sufficient energy input to reduce the crude input material to 90% passing 500 mesh.

The initial stage of magnetic separation is introduced prior to ball milling to reject non-magnetics and to reduce the load on secondary grinding. The ball mills are operated in closed circuit with hydrocyclones to minimize over grinding and to provide control over final product size.

**Figure 16.1**
**Concentrator Flowsheet Model for Radio Hill Ore Deposit**



Cyclone overflow, the product from the grinding circuit, is deslimed in hydroseperators prior to the second stage of magnetic separation. Magnetic finisher concentrate then is sent to flotation for removal of remaining fine silica utilizing a cationic collector (amine). The concentrating section of the flowsheet is an updated version of the approach used for bench-scale and pilot work conducted by Lakefield in the mid-1960s on material from Radio Hill.

## 17.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

As discussed in Section 6.2, documentation exists for historical resource estimates on the Radio Hill property. Micon has reviewed the resource estimates completed during the 1950s and 1960s for the Radio Hill Iron property and notes that these provide an indication of the resource potential for the property. The estimates are historical in nature and do not conform to CIM Definition Standards for Mineral Resources and Mineral Reserves and have not been reported in accordance with the requirements of NI 43-101.

The historical data cannot be relied upon solely for planning a work program or to establish a mineral resource on the property. Further fieldwork is required to locate and evaluate the full extent and nature of the mineralization at the Radio Hill property.

## 18.0 OTHER RELEVANT DATA AND INFORMATION

There are no other relevant data or information for the Radio Hill iron property in addition to that provided herein.

## 19.0 INTERPRETATION AND CONCLUSIONS

In the Radio Hill iron property, GCR has acquired a property containing extensive iron formation with two potentially significant iron deposits, Radio Hill and Nat River. On the basis of work carried out by previous operators, the extensive zone of magnetite-bearing iron formation at Radio Hill appears amenable to processing by magnetic separation. The Nat River deposit is smaller and less well explored but appears similar.

The majority of the drilling on the Radio Hill deposit was conducted in the late 1950s and early to mid-1960s. The drilling practices may have been in compliance with industry standards in place at that time but they cannot be validated or compared to current norms. Further, an iron resource not only requires an iron head assay, but it also requires some metallurgical testwork in order to demonstrate whether there is a reasonable expectation that a viable commercial product may be produced from the material. Therefore, none of the reported historical iron resource estimates meet the standards of modern resource or reserve estimation and are considered speculative. The historical drillhole data cannot be used to develop a mineral resource in compliance with NI 43-101 standards.

All of the historic information on the Radio Hill iron property was collected before the mid-1960s, and none of the core and samples taken from it remain available. Therefore, the property will require extensive exploration before a mineral resource can be estimated. The known exploration targets and areas of significant potential should be regarded as an early stage project, with significant economic potential, should the mineralization prove to be consistent with the historical exploration results.

Work carried out by GCR in 2008 was directed, primarily, at the base and precious metal potential of the Radio Hill property. Two diamond holes were drilled but were not analyzed for iron.

Following its review of the historical documentation and field examination of the Radio Hill and Nat River iron deposits, Micon's conclusions are as follow:

1. The historical resource and reserve estimates were prepared to the standards of the day and the FENCO estimate is reasonably comprehensive. However, since none of the original core remains available and only limited amounts of the original metallurgical testwork information remains, none of the iron resources at the Radio Hill property meet the requirements for a NI 43-101 compliant mineral resource.

2. A very limited amount of information is available for the Nat River iron deposit and no historic iron mineral resource was found to have been reported. No documentation of metallurgical testwork has been identified for the Nat River deposit.

3. The Radio Hill deposit is a fine grained, lean magnetite resource that will require fine grinding and flotation to achieve concentrate quality suitable for pellet plant feed.

4. Magnetite in E- and F-type mineralization is fine-grained averaging 20 to 25 µm in size.

5. The Radio Hill iron formation does not appear to contain amphiboles or amphibole asbestos minerals.

6. The Radio Hill deposit is geologically complex and contains numerous folds, faults and dikes. Because of this complexity, any mineral resource estimate will require fairly closely-spaced exploration drilling.

7. The part of the Radio Hill deposit that is thickened by folding is open (i.e., untested by drilling) down-plunge to the northwest.

8. The distribution of metallurgical domains is complex in the Radio Hill deposit and cannot be determined by visual examination. Metallurgical domains will require metallurgical testing.

9. Historic metallurgical test work indicated that a commercially acceptable iron concentrate could be produced from Radio Hill mineralized material using magnetic separation followed by flotation.

10. The historical metallurgical testwork completed on the Radio Hill property was well done, but additional work, including pilot plant testing of representative blended samples, must be undertaken before the economics of potential production can be assessed.

11. Micon considers that there is an opportunity for development of the Radio Hill iron resource as feed for DRI, such as the Kobe ITmk3 iron nugget process.

12. Iron formation at the Nat River is considered by Micon to be an effectively unexplored area with potential for commercial iron deposits.

13. While iron formation clearly exists at Nat River, it is Micon's opinion that the current and near-term exploration activities should focus on the Radio Hill iron deposit.

Based on the its review of all of the historical documentation presented, the results of GCR's exploration and its site visit to the property, Micon concludes that a moderate-sized iron resource is likely to exist at Radio Hill that may be developed commercially as a conventional iron ore operation.

The iron formation lies in areas of high relief relative to surrounding flat-lying land, thus the Radio Hill deposit will require minimal waste removal from any pits developed over the early years of mine life. Historical mine planning work, indicated a stripping ratio of approximately 1:1.

It is likely that grind targets for the Radio Hill iron resource may be similar to those of the magnetite ores of the Marquette Range in Michigan which require grinding to 90% passing 500 mesh to achieve acceptable silica liberation.

Micon has reviewed the historical exploration results and developed an exploration program for the Radio Hill property to validate those results. See Section 20.0. It is Micon's opinion that the Radio Hill Iron property merits further exploration and that the proposed exploration plans are properly conceived and justified.

## 20.0 RECOMMENDATIONS

Micon recommends that GCR focus future exploration and development of the Radio Hill property as a potential source for feed to a DRI plant.

An investigation into the application of a DRI technology such as the Kobe ITmk3 iron nugget process should be undertaken since Micon considers the DRI alternative as a promising possibility for future commercial development of the Radio Hill iron deposit. This investigation is dependent on the completion of the proposed exploration and metallurgical programs described below.

The following program has been developed by Micon in conjunction with GCR and is recommended for implementation by GCR.

The work programs will include surveying, mapping, drilling and collection of samples for metallurgical testwork. Core samples will be assayed and composites will be analyzed using metallurgical tests that are commonly used in operations in Minnesota, Michigan and the Labrador Trough. The metallurgical testwork will include Davis Magnetic Tube tests to determine the potential recovery of magnetite.

The cost of the drilling, assaying and metallurgical testing program is estimated to be Cdn$3.5 million. The entire program is planned to be completed within 12 months. All drilling is planned to be conducted between the months of June and September, 2010.

### 20.1 RADIO HILL DRILLING PROGRAM

The proposed drilling program is designed to test the portion of the Radio Hill iron formation which is thickened by a tight S-fold that plunges moderately to the northwest. The mineralization may be open down-plunge to the northwest, but would be at depths greater than 100 m west of line 0 shown on Figure 20.1.

Proposed drillhole locations are shown on Figure 20.1, based on the Kukatush Mining Corporation historic grid. The proposed drill program for the property includes 36 drill holes for 12,000 m of drilling. Holes will be inclined at 45º. A few holes should be drilled east-west between sections to control the interpretation of the orientation of faults and dikes. Proposed drill hole location, depth and azimuth are summarized in Table 20.1.

Given the potential structural complexity the drilling program should be conducted on 300-m spaced lines with holes spaced at 300 m along the lines.

**Figure 20.1**
**Proposed Locations of Drillholes**

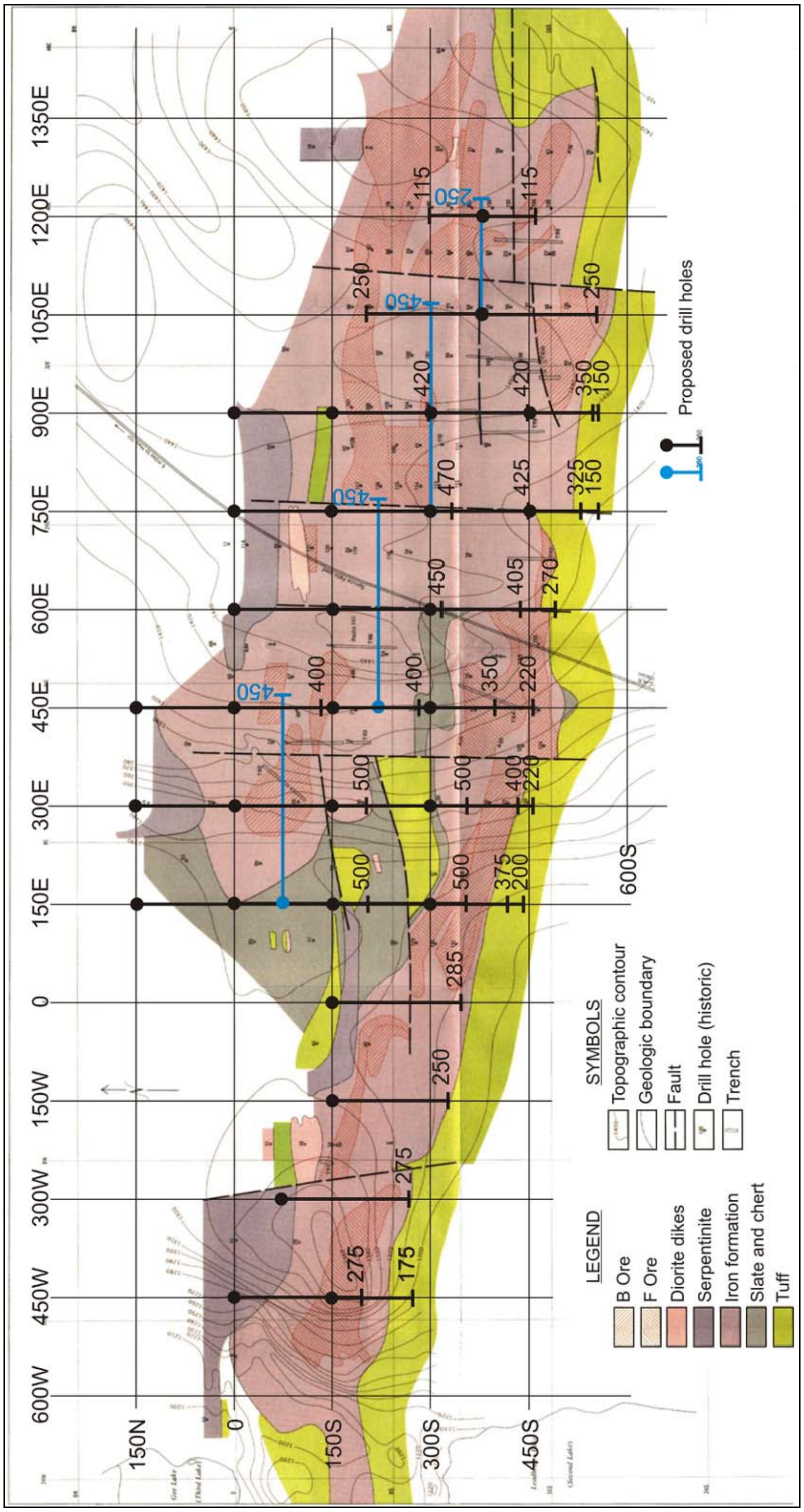


**Table 20.1**
**Summary Table of Proposed Drilling Program Hole Locations, Depths, Azimuth and Inclination**

| Collar Location | | Depth | Azimuth | Inclination |
|---|---|---|---|---|
| **East** | **North** | **(m)** | **(°)** | **(°)** |
| -450 | 0 | 275 | 180 | 45 |
| -450 | -150 | 175 | 180 | 45 |
| -300 | -75 | 275 | 180 | 45 |
| -150 | -150 | 250 | 180 | 45 |
| 0 | -150 | 285 | 180 | 45 |
| 150 | 150 | 500 | 180 | 45 |
| 150 | 0 | 500 | 180 | 45 |
| 150 | 0 | 450 | 90 | 45 |
| 150 | -150 | 375 | 180 | 45 |
| 150 | -300 | 200 | 180 | 45 |
| 300 | 150 | 500 | 180 | 45 |
| 300 | 0 | 500 | 180 | 45 |
| 300 | -150 | 400 | 180 | 45 |
| 300 | -300 | 220 | 180 | 45 |
| 450 | 150 | 400 | 180 | 45 |
| 450 | 0 | 400 | 180 | 45 |
| 450 | -150 | 350 | 180 | 45 |
| 450 | -225 | 450 | 90 | 45 |
| 450 | -300 | 220 | 180 | 45 |
| 600 | 0 | 450 | 180 | 45 |
| 600 | -150 | 405 | 180 | 45 |
| 600 | -300 | 270 | 180 | 45 |
| 750 | 0 | 470 | 180 | 45 |
| 750 | -150 | 425 | 180 | 45 |
| 750 | -300 | 325 | 180 | 45 |
| 750 | -300 | 450 | 90 | 45 |
| 750 | -450 | 150 | 180 | 45 |
| 900 | 0 | 420 | 180 | 45 |
| 900 | -150 | 420 | 180 | 45 |
| 900 | -300 | 350 | 180 | 45 |
| 900 | -450 | 150 | 180 | 45 |
| 1050 | -375 | 250 | 0 | 45 |
| 1050 | -375 | 250 | 180 | 45 |
| 1050 | -375 | 250 | 90 | 45 |
| 1200 | -375 | 115 | 0 | 45 |
| 1200 | -375 | 115 | 180 | 45 |
| **Total: 12,000 m** | | | | |

The drilling program will be conducted with skid mounted drill rigs (e.g., LY 38). The location of drill holes will be surveyed using differential GPS. NQ (47.6 mm diameter) core will be adequate for providing samples large enough for metallurgical testing. Core will be sawn in half with one-half of the core retained and stored. Lithologic and geotechnical core logging will be conducted at GCR's core logging facilities in Timmins, Ontario. Samples will be collected on the basis of geologic (mineralogic) units. A nominal sample length of 3 m will be used.

Micon considers that during sample collection, GCR should adopt the following procedures:

- Sampling methods should be documented.
- Core should be sawn (with one-half retained on-site in a secure and protected facility).
- Sample lengths should be consistent (or if samples intervals are determined by changes in lithology, then a minimum sample length should be adopted, i.e., 1 m).
- Compositing methodologies should be documented.
- Chain of custody procedures should be established and followed.

Micon recommends that core samples from GCR's 2008 drilling program, as well as from the program described above, should be submitted to an accredited, independent analytical and metallurgical laboratory for processing and analysis. Each sample will be subjected to bulk density, whole rock analysis and full chemical analysis. Samples will be composited for additional metallurgical testwork. Concentrates from the testwork will be analyzed to determine the liberation size of the iron minerals and metallurgical response.

If GCR plans to conduct sample preparation at the site, then a qualified consultant should review the equipment and methods that are to be used. The consultant should ensure that the protocols are adequate for this mineralization and that the equipment is capable of producing a quality subsample to be shipped from site. Pulverization and analyses should be completed by the independent laboratory.

Data security shall be the responsibility of the selected laboratory. GCR should take delivery of digital assay files and also the signed final assay certificates.

Micon considers that sampling and assaying of RH08-1 and RH08-2, and all future drillholes, should include the following data verification steps:

- A QA/QC program should be developed including certified standard reference samples, blanks, duplicates, external check assays.
- Duplicates should be prepared in some of the sample preparation steps.
- Twin holes should be drilled in order to check historical drillhole data.

- Arithmetic averages of the 3-m samples making up the composite should be compared to the analytical result of the composite sample. Composite of individual data should be compared with the analytical results of the composite samples.

#### 20.1.1 Timeline

The Radio Hill Property is located on high ground with good drainage and good road access making it a candidate for a summer drilling program. Using two drill rigs, the proposed drilling program could be completed within six months. Core drill penetration rates in iron formation are difficult to predict. A production rate of 25 m per rig shift (50 m per rig-day) was assumed in the estimate.

#### 20.1.2 Personnel

The drilling program will require one senior geologist, one senior technician and one junior technician. The senior geologist will provide oversight of the drilling program, core logging, and sampling. The senior technician will be responsible for overseeing the moving of the rig, logging core and sampling. The junior technician will be responsible for organizing core, and sawing or splitting core. In addition, a geologist familiar with magnetite iron ore deposits and the processing of those ores should be available on a consulting basis to provide expertise in logging, sampling and compositing of samples.

#### 20.1.3 Drill Program Budget

The proposed drilling program can be completed in one field season and will comprise 12,000 m of drilling. Companies currently active in the Timmins area budget Cdn$100/m for drilling cost (personal communication, Kevin Montgomery, GCR). This budgetary figure includes direct drilling costs, mobilization, demobilization, consumables and fuel. The proposed drilling program would cost Cdn$3.5 million (including a 10% contingency), as shown in Table 20.2.

#### 20.1.4 Assays and Metallurgical Analyses

The primary analytical tool in magnetite iron resource estimation is the Davis Magnetic Tube Test. The Davis Magnetic Tube consists of an extremely powerful electromagnet which can generate a magnetic field intensity of up to 4,000 gauss, a glass separation tube and a motor driven agitation mechanism. The tube is positioned between the poles of the magnet at an angle of approximately 45 degrees, filled with water and the ground sample is introduced into the tube and agitated. Particles containing magnetite are held in place between the poles of the magnet and gangue particles collect at the bottom of the tube. The gangue particles are flushed from the tube and the magnetite concentrate is collected, dried and weighed.

**Table 20.2**
**Budget For Proposed Drilling Program and Metallurgical Analysis**

| Item | Cost ($) |
|---|---|
| **Drilling** | |
| Footage cost[1] | 1,200,000 |
| | 1,200,000 |
| **Project costs** | |
| Surveying - ground control | 7,000 |
| Down hole gyroscopic surveys | 19,000 |
| Core boxes and storage | 21,000 |
| Sample bags | 4,000 |
| | 51,000 |
| **Staffing** | |
| Geology | |
| Senior (1) | 56,000 |
| Technician (1) | 49,000 |
| Technician (core splitting/sawing) | 33,000 |
| Consultants | |
| Geology (1) | 8,000 |
| Metallurgist (1) | 8,000 |
| Travel | 2,000 |
| | 156,000 |
| **Analytical costs** | |
| Metallurgical analysis | 1,593,000 |
| Ore and waste characterization | 27,000 |
| Shipping | 7,000 |
| | 1,627,000 |
| **Subtotal** | 3,034,000 |
| 10% contingency | 455,000 |
| **Total** | **3,489,000** |

[1]Includes mobilization, drilling, consumables, fuel, and demobilization.

Davis Tube tests are conducted on drill core to determine the magnetic iron content of the core as well as the potential weight recovery. Samples are ground using a puck and ring (Bleuler) or rotating plate (BICO) pulverisor to liberate the magnetic mineral.

Davis Tube tests are also conducted on composites to predict the metallurgical response of the samples. In this case, samples are ground to a target liberation size, generally in a laboratory rod mill rather than a pulverisor. Grind times are varied so that Davis Tube results can be used to predict the grind target necessary and the weight recovery at the desired concentrate silica grade.

The results of the assay analyses are used to identify low grade material (less than 15% magnetic iron) and samples with unacceptable levels deleterious components (S and P, e.g.).

Samples with acceptable magnetic iron acceptable levels of deleterious components are composited for metallurgical analysis.

#### 20.1.4.1 Assays

Core samples will be collected for submission to an independent commercial laboratory. All chert-magnetite iron formation will be analyzed. This is estimated to be 60% of the core and will be equivalent to approximately 2,400 samples.

Sample intervals will be determined by field geology and will not exceed 3 m.

GCR may decide to expedite the assays of the individual samples and also reduce the amount of material being shipped from facilities in Timmins by crushing and sub-sampling the samples at facilities in Timmins.

All sample intervals submitted to the laboratory will be subjected to the following analyses:

1. Davis Magnetic Tube Test (on pulverized sample)

2. Whole rock chemical analysis (by XRF) – $SiO_2$, $Al_2O_3$, $Fe_2O_3$, MgO, CaO, $Na_2O$, $K_2O$, $TiO_2$, $P_2O_5$, MnO, $Cr_2O_3$, $V_2O_5$.

3. Loss on ignition (LOI).

4. $Fe^{++}$ by titration.

5. $CO_2$ (carbonates).

6. Total S by combustion.

#### 20.1.4.2 Metallurgical Tests

Metallurgical testing will be performed on 9-m composites of split NQ core. Up to 26 kg of each composite sample will be available for metallurgical testing. These samples will be submitted to a competent metallurgical laboratory for the following characterization and concentrating tests.

The metallurgical work on the composites of the iron formation samples will consist of Davis Magnetic Tube Testing since the mineralization is predominantly magnetite. As noted above, based on the available geologic information, a total of 2,400 samples of drill core and approximately 800 composites will require testing.

Micon recommends that each 9-m drill core composite be characterized by performing the following analyses:

1. Davis Magnetic Tube Test (on timed rod mill grind sample)

2. Bulk density.
3. Whole rock chemical analysis (by XRF) – $SiO_2$, $Al_2O_3$, $Fe_2O_3$, MgO, CaO, $Na_2O$, $K_2O$, $TiO_2$, $P_2O_5$, MnO, $Cr_2O_3$, $V_2O_5$.
4. Loss on ignition (LOI).
5. $Fe^{++}$ by titration.
6. $CO_2$ (carbonates).
7. Total S by combustion.
8. Satmagan – magnetic iron determination.

In order for Davis Magnetic Tube tests to provide an accurate estimate of grade and recovery, knowledge of the optimum grind for liberation needs to be determined. Combining results of the characterization work described above with ore microscopy observations of in situ liberation size, a series of timed rod mill grind tests would be performed to determine the grind/grade curves necessary for a more detailed evaluation of the deposit. Weight recoveries would be determined from the Davis Magnetic Tube tests conducted on the ground products. Davis Magnetic Tube concentrate would undergo the same chemical analyses and loss on ignition tests as recommended for each drill core sample. Davis Tube tailings would also be analyzed for residual iron.

Metallurgical testing should be supplemented with mineralogic characterization of mineralized material and waste. A small subset of three samples of each material type, distributed across the deposit should be submitted for ore and waste mineralogic characterization. Ore and waste mineralogic characterization consists of determination of mineralogy, mineral grain size and textures. This work is accomplished with a combination of X-ray diffraction analysis, ore microscopy, scanning electron microscopy and energy dispersive spectrometry. Ore and waste mineralogic characterization data are used to better define ore and waste, improve concentrating plant design, and improve the environmental aspects of waste material management.

#### 20.1.4.3 Metallurgical Process Testing Cost Estimates

Discussions were held with the technical group from SGS Lakefield to obtain budgetary estimates for various testwork, ore characterization and chemical analyses. Technician charges of Cdn$100/h are assumed based on experience and current industry cost structures.

Core segments will be processed individually. The estimate for metallurgical testwork, of Cdn$ 1,593,000, is shown in more detail in Table 20.3.

**Table 20.3**
**Estimated Costs For Metallurgical Analysis of Samples and Composites**

| Item | | | Cost ($) |
|---|---|---|---|
| **Sample Tests** | **Cost per test** | **Tests** | |
| Davis Magnetic Tube Test[1] | $133.00 | 2400 | 319,000 |
| Analytical work (sample prep and analysis) | $300.00 | 2400 | 720,000 |
| Subtotal | | | 1,039,000 |
| **CompositeTests** | | | |
| Davis Magnetic Tube Test* | $133.00 | 800 | 106,000 |
| Analytical work (sample prep. and analysis) | $300.00 | 800 | 240,000 |
| Subtotal | | | 346,000 |
| Management and technical reporting (@15%) | | | 208,000 |
| **Total** | | | **1,593,000** |

[1]Contingency not factored into management and reporting charges.

As part of the pre-feasibility work, Micon recommends that additional metallurgical testing should be conducted at bench scale, as well as with a continuous process, including flotation, on a pilot scale to verify earlier test results and better characterize crude concentrate quality. Cost estimates for this additional testing are not included

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## 22.0 DATE AND SIGNATURE PAGE

The undersigned prepared this Technical Report, titled Technical Report on the Radio Hill Iron Property, near Timmins, Ontario, Canada, with an effective date of April 30, 2010, in support of the public disclosure of technical aspects of the property by GCR. The format and content of the report are intended to conform to Form 43 101F1 of National Instrument 43-101 (NI 43-101) of the Canadian Securities Administrators.

Signed,

MICON INTERNATIONAL LIMITED

*"Sam J. Shoemaker, Jr." {signed}*

Sam J. Shoemaker, Jr., Member AUSIMM
Senior Mining Engineer April 30, 2010

ROD JOHNSON & ASSOCIATES, INC.

*"Rodney C. Johnson" {signed}*

Rodney C. Johnson, Member AUSIMM
Principal April 30, 2010

*"Ronald D Mariani" {signed}*

Ronald D. Mariani
Principal April 30, 2010

# 23.0 CERTIFICATES

## CERTIFICATE OF AUTHOR
## RODNEY C. JOHNSON

As a co-author of this report entitled "Technical Report on the Radio Hill Iron Property Timmins Ontario Canada", dated 30 April, 2010, I, Rodney C. Johnson Member AusIMM do hereby certify that:

1. I am employed as a Geologist by Rod Johnson & Associates, Inc., and carried out this assignment for, Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. (416) 362-5135, fax (416) 362-5763, e-mail Rod@RJandA.com.

2. I hold the following academic qualifications:

   B.S. (Geology) Michigan Technological University 1985
   M.S. (Geology) Michigan Technological University 1987
   Ph.D. (Geology) Michigan Technological University 1993

3. I am a Qualified Person as defined in the Instrument.

4. I am a member of Australasian Institute of Mining and Metallurgy (Member Number 304388); as well, I am a member in good standing of other technical associations and societies, including the Society for Mining, Metallurgy, and Exploration, Inc.

5. I have worked as a geologist in the minerals industry for 25 years. My experience includes mineral exploration (gold, nickel, iron, PGE's, copper, diamonds and uranium), mining geology, geologic modeling, resource estimation, process mineralogy, geometallurgy, petrography, structural geology, and environmental mineralogy.

6. I have read the Instrument and that the technical report is prepared in compliance with the Instrument.

7. I am responsible for sections 6.1, 7.0, 8.0 9.0, 10.0, 11.0, 12.0, 13.0 14.0 and 20.1 of this report.

8. I am independent of the issuer for which this report is required, other than providing consulting services.

9. I have had no prior involvement with the mineral property in question.

10. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Dated this 30th day of April, 2010

*"Rodney C. Johnson" {signed}*

Rodney C. Johnson, MAusIMM

## CERTIFICATE OF AUTHOR
## SAM SHOEMAKER

As a co-author of this report entitled "Technical Report on the Radio Hill Iron Property Timmins Ontario Canada", dated 30 April, 2010, I, Sam J. Shoemaker, Jr. Member AusIMM do hereby certify that:

1. I am employed as a Senior Mining Engineer by, and carried out this assignment for, Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. (416) 362-5135, fax (416) 362-5763, e-mail sshoemaker@micon-international.com.

2. I hold the following academic qualifications:

   B.Sc (Mine Engineer) Montana College of Mineral Science and Technology 1983

3. I am a Qualified Person as defined in the Instrument.

4. I am a member of Australasian Institute of Mining and Metallurgy (Member Number 229733); as well, I am a member in good standing of other technical associations and societies, including the Society for Mining, Metallurgy, and Exploration, Inc.

5. I have worked as a mining engineer in the minerals industry for 28 years. My experience includes resource estimation, mine development, open pit production, environmental compliance, financial evaluation, mine commissioning, long and short range mine planning, and open pit optimization with a variety of deposit types including gold, silver, copper, zinc, lead, uranium, nickel, platinum-group metals, iron, and industrial minerals.

6. I am responsible for sections 1, 2, 3, 4, 5, 6, 15, 16, 17, 18, 19, and 20 of this report.

7. I am independent of the issuer for which this report is required, other than providing consulting services.

8. I have had no prior involvement with the mineral property in question.

9. I have read the Instrument and that the technical report is prepared in compliance with the Instrument.

10. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Dated this 30th day of April, 2010

*"Sam Shoemaker" {signed}*

Sam J. Shoemaker, Jr., MAusIMM

## CERTIFICATE OF AUTHOR
## RONALD D. MARIANI

As a co-author of this report entitled "Technical Report on the Radio Hill Iron Property Timmins Ontario Canada", dated 30 April, 2010, I, Ronald D. Mariani, do hereby certify that:

1. I am self employed as a consultant, and carried out this assignment for, Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. (416) 362-5135, fax (416) 362-5763, e-mail: marianird@aol.com

2. I hold the following academic qualifications:

   B.Sc (Metallurgical Engineering – Mineral Processing) Michigan Technological University 1975

3. I am a not a Qualified Person as defined in the Instrument.

4. I have worked as a research and process engineer and manager in the iron ore industry for 32 years. My experience includes: concentrating flowsheet development and unit operation improvement studies, due diligence studies and property assessments, Concentrating Plant Manager, Assistant General Manager of the Tilden Iron Ore Mine, General Manager of the Empire Iron Ore Partnership. I have been involved with iron ore property assessments in North America. Europe, Australia and South America.

5. I contributed to Section 16 of this report as well as to Sections 6, 19 and 20.

6. I am independent of the issuer for which this report is required, other than providing consulting services.

7. I have had no prior involvement with the mineral property in question.

8. I have read the Instrument and confirm that the technical report is prepared in compliance with the Instrument.

9. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Dated this 30th day of April, 2010

*"Ronald D. Mariani" {signed}*

Ronald D. Mariani, B.Sc.