 

Labrador Iron Mines Limited

Labrador Iron Mines Holdings Limited

Revised Technical Report

On an Iron Ore Project in Western Labrador

Province of Newfoundland and Labrador

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SGS Canada Inc.

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1.0 Summary (Item 3.0)

On January 12th, 2010 A.S. Kroon was requested to assist Labrador Iron Mines Limited ("LIM"), a wholly owned subsidiary of Labrador Iron Mines Holdings Limited ("LIMHL") to prepare an updated Technical Assessment Report covering the modifications to the mineral inventory of the iron and manganese project owned by LIM in western Labrador, as a result of additional geological work and engineering studies, and the acquisition of some manganese deposits in Labrador.

Property Description and Location

LIM holds title to 36 Mineral Rights Licenses as of the date of this report issued by the Department of Natural Resources, Province of Newfoundland and Labrador, representing 395 mineral claims located in western Labrador covering approximately 9,875 hectares. The LIM properties are located in the western central part of the Labrador Trough iron range and are located about 1,000 km northeast of Montreal and adjacent to or within 70 km from the town of Schefferville (Quebec).

There are no roads connecting the area to southern Labrador or to Quebec. Access to the area is by rail from Sept-Îles to Schefferville or by air from Montreal and Sept-Îles. The Labrador properties are located inside a 70 km radius from Schefferville. The James, Houston, Knob Lake, Gill, Ruth 8 and Redmond deposits are within 20 km from Schefferville and form the first group of properties from which mining would commence. The Sawyer Lake and Astray Lake properties are some 50 to 65 km southeast from Schefferville and cut off from the local infrastructure by connected lakes. The Howse and Kivivic deposits are some 25 and 45 km northwest from Schefferville. The Iron Ore Company of Canada ("IOCC") had previous mining activities close to all properties other than Sawyer and Astray Lake.

History

The Quebec-Labrador iron range has a tradition of mining since the early 1950's and is one of the largest iron producing regions in the world. The former direct shipping iron ore (DSO) operations at Schefferville (Quebec and Labrador) operated by IOCC produced in excess of 150 million tons of lump and sinter fine ores over the period 1954-1982. The first serious exploration in the Labrador Trough occurred in the late 1930s and early 1940's when Hollinger North Shore Exploration Company Limited (Hollinger) and Labrador Mining and Exploration Mining Company Limited ("LM&E") acquired large mineral concessions in the Quebec and Labrador portions of the Trough. Mining and shipping from the Hollinger lands began in 1954 under the management of the IOCC, a company specifically formed to exploit the Schefferville area iron deposits.

As the technology of the steel industry changed over the ensuing years more emphasis was placed on the concentrating ores of the Wabush area and interest and markets for the direct shipping Schefferville ores declined. Finally, in 1982, the IOCC closed their operations in the Schefferville area.

Following the closure of the IOCC mining operations the mining rights held by IOCC in Labrador reverted to the Crown. Between September 2003 and March 2006, Fenton and Graeme Scott, Energold Minerals Inc. ("Energold") and New Millennium Capital Corp. ("NML") began staking claims over the soft iron ores in the Labrador part of the Schefferville camp. Recognizing a need to consolidate the mineral ownership, Energold and subsequently LIM, entered into agreements together. All of the properties comprising LIM's Schefferville area project were part of the original IOCC Schefferville holdings and formed part of the 250 million tons of reserves and resources identified but not mined by IOCC in the area.

Geology

At least 45 hematite-goethite ore deposits have been discovered in an area 20 km wide that extends 100 km northwest of Astray Lake, referred to as the Knob Lake Iron Range, which consists of a tightly folded and faulted iron-formation exposed along the height of land that forms the boundary between Quebec and Labrador. The Knob Lake properties are located on the western margin of the Labrador Trough adjacent to Archean basement gneisses. The Central or Knob Lake Range section extends for 550 km south from the Koksoak River to the Grenville Front located 30 km north of Wabush Lake. The principal iron formation unit, the Sokoman Formation, part of the Knob Lake Group, forms a continuous stratigraphic unit that thickens and thins from sub-basin to sub-basin throughout the fold belt.

The sedimentary rocks in the Knob Lake Range strike northwest, and their corrugated surface appearance is due to parallel ridges of quartzite and iron formation which alternate with low valleys of shales and slates. The Hudsonian Orogeny compressed the sediments into a series of synclines and anticlines, which are cut by steep angle reverse faults that dip primarily to the east. The synclines are overturned to the southwest with the east limits commonly truncated by strike faults. Most of the secondary earthy textured iron deposits occur in canoe-shaped synclines, some are tabular bodies extending to a depth of at least 200m, and one or two deposits are relatively flat lying and cut by several faults. Subsequent supergene processes converted some of the iron formations into high-grade ores, preferentially in synclinal depressions and/or down-faulted blocks.

The Labrador Trough contains four main types of iron deposits:

- Soft iron ores formed by supergene leaching and enrichment of the weakly metamorphosed cherty iron formation; they are composed mainly of friable fine-grained secondary iron oxides (hematite, goethite, limonite);
- Taconites, the fine-grained, weakly metamorphosed iron formations with above average magnetite content and which are also commonly called magnetite iron formation;
- More intensely metamorphosed, coarser-grained iron formations, termed metataconites which contain specular hematite and subordinate amounts of magnetite as the dominant iron minerals;
- Minor occurrences of hard high-grade hematite ore occur southeast of Schefferville at Swayer Lake, Astray Lake and in some of the Houston deposits.

Second stage of enrichment included the addition of secondary iron and manganese which appear to have moved in solution and filled pore spaces with limonite-goethite. Secondary manganese minerals, i.e., pyrolusite and manganite, form veinlets and vuggy pockets. The types of iron ores developed in the deposits are directly related to the original mineral facies. The predominant blue granular ore was formed from the oxide facies of the middle iron formation. The yellowish-brown ore, composed of limonite-goethite, formed from the carbonate-silicate facies, and the red painty hematite ore originated from mixed facies in the argillaceous slaty members. Only the direct shipping ore is considered beneficiable to produce lumps and sinter feed and will be part of the resources for the LIM project.

Exploration

Most historic exploration on the properties was carried out by IOCC until the closure of their operation in the 1980s. A considerable amount of data used in the evaluation of the current status of the resource and reserve evaluation is provided in the documents, sections and maps produced by IOCC or by consultants working for them. Recent exploration was carried out by LIM in the last four years (2005 to 2009). On some of the properties trench sampling as well as bulk sampling was carried out. The exploration data that can be used for the NI 43-101 compliant resource estimates has been developed for the James, Redmond 2B and Redmond 5 deposits.

Ongoing exploration on LIM's Schefferville area other properties will essentially focus at two or three different levels depending upon the proposed development schedule for the particular deposit. The Houston, Knob Lake, Sawyer Lake, Howse and Astray Lake deposits are currently at the most advanced stage, and additional RC drilling will be required to enable the classification of resources to be compliant with NI 43-101. Additional RC drilling programs and trench sampling is required for other deposits. Bulk sampling for metallurgical testing of the manganese deposits will be necessary to prepare the final process flow sheet for treatment of the manganese material.

Drilling and Sampling

Diamond drilling of the Schefferville iron deposits has been a problem historically in that the alternating hard and soft ore zones tend to preclude good core recovery. Traditionally IOCC used a combination of reverse circulation drilling, diamond drilling and trenching to generate data for reserve and resource calculation. A large number of original IOCC data have been recovered and reviewed by LIM The systematic drilling has been carried out on sections 30 metres apart.

During the time that IOCC owned the properties sampling of the exploration targets were by trenches and test pits as well as drilling. In the test pits and trenches geological mapping determined the lithologies and the samples were taken over 10 feet (3.0 metres). The results were plotted on vertical cross sections. All drilling and sampling of the iron deposits covered in this study has been carried out by LIM during 2006, 2008 and 2009, predominantly with RC drilling. The geological sections originally prepared by IOCC have been updated with the information obtained through LIM's exploration. A total of 162 holes were drilled, 141 of which were RC drilled holes. A total of 2,647 metres of trenching has been carried out on six of the properties (James, Redmond 2B, Redmond 5, Houston 1, Houston 3 and Gill). A bulk sample program was started in 2006 (3,600 kgs from James and Houston) but the major bulk sampling was carried out in 2008. During that year a total of 5,900 tonnes was excavated from the James South, Knob Lake, Redmond 5 and the Houston deposits.

Sample Preparation, Security and Data Verification

The IOCC sampling procedures have not been located but it is believed that LIM as well followed procedures that are similar to those used by IOCC in the past. All samples were prepared in the preparation laboratory, located in Schefferville that was established by LIM. Sampling as well as the preparation was carried out under supervision of LIM or SGS Geostat personnel for both by experienced geologists or technicians following well established sampling and preparation procedures. The samples were reduced to representative smaller size samples that were sent to SGS Lakefield laboratory or ACTLABS for further analysis and testing.

Metallurgical Testing

During February 1989 three mineralized samples comprising approximately 12.7 tonnes or 45 drums of James ore were treated at Lakefield Research Laboratories (now SGS-Lakefield), Lakefield, Ontario. In 1990, a bulk sample of mineralized material from James deposit weighing approximately three tonnes was transported to Centre de Recherches Minerales (CdRM), Quebec City, for testing.

Trench samples taken in 2006 from the James and Houston deposits were tested for compressive strength, crusher work index and abrasion index at SGS Lakefield. Composite crushing, dry and wet screen analysis, washing and classification tests were done at "rpc - The Technical Solutions Centre" in Fredericton, New Brunswick.

From the 2008 Exploration Drill Program, five iron ore composite samples from the James deposit were submitted to SGS-Lakefield for mineralogical characterization to aid with the metallurgical beneficiation program. The samples were selected based on their lower iron grade. Emphasis was placed on the liberation characteristics of the iron oxides and the silicates minerals.

The 2008 bulk sample program, during which a total of some 5,900 tonnes was collected, provided representative 200 kg samples from each of the raw ore type, (James: blue ore, Knob Lake: red ore, Houston: blue ore and Redmond 5: blue ore) that was sent to SGS Lakefield laboratories for metallurgical testing. Other tests (angle of repose, bulk density, moisture, direct head assay and particle size analysis determinations) were also carried out. Preliminary scrubber tests were performed on all four samples. Only the James South sample was submitted for Crusher Work Index tests. The potential of beneficiation by gravity was explored by Heavy Liquid Separation and Vacuum filtration testwork was also carried out by Outotec.

The material collected from the James South bulk sample was sent to a number of other laboratories for additional test work, including Derrick Corporation for screening tests, Outotec in Jacksonville, and SGA Laboratories in Germany for Sinter Tests and Lump Ore characterization. Material from the Redmond deposit was sent to MBE Coal & Minerals Technologies in Germany and to Corem in Quebec City.

SGA concluded: "In summary, it can be stated that the tested sample showed excellent sintering behavior, clearly improving sintering productivity and metallurgical properties of the sinters. The high iron content and low gangue as well as the low portion of fines determine the high quality of this ore grade. Such fines will be well accepted in the market." SGA also concluded: "High reducibility evaluated for James South being superior to other ore grades on the European market. In summary, it can be stated that James South ore represents a high quality lump ore grade which will be well accepted on the European market."

Mineral Resources and Mineral Reserves

As of the date of this report, only the resources for James, Redmond 2B and Redmond 5 deposits, for which SGS-Geostat prepared a resource estimate

(Technical Report dated December 18, 2009), are NI 43-101 compliant. The total of these resources is shown in Table 1-1.

Table 1-1
Total NI 43-101 Compliant Resources

NI 43-101 Compliant	Tonnes	Fe%	SiO_2%	Mn%
Indicated	11,031,000	57.4	12.8	0.7
Inferred	220,000	53.6	14.7	0.9

All other resource estimates quoted in this report are based on prior data and reports prepared by IOCC, the previous operator. These historical estimates are not current and do not meet NI 43-101 Definition Standards and are reported here for historical purposes only. A qualified person has not done sufficient work to classify the historical estimate as current mineral reserves. The historical estimates should not be relied upon. These historical results provide an indication of the potential of the properties and are relevant to ongoing exploration.

The IOCC estimated mineral resources and reserves were published in their Direct-Shipping Ore (DSO) Reserve Book published in 1983. The estimate was based on geological interpretations on cross sections and the calculations were done manually. Table 1-2 shows the summary of the estimate of the (non compliant with NI 43-101) historical mineral resources of the LIM owned deposits. IOCC categorized their estimates as “reserves”. The author has adopted the same principle of the 2007 Technical Report prepared by SNC-Lavalin that these should be categorized as “resources” as defined by NI 43-101.

Table 1-2
Summary of Historical IOCC Mineral Resource Estimates
(The estimates are not compliant with NI 43-101 and are based on historical standards used by IOCC)
The old IOCC classification reported all resources (measured, indicated and inferred): the total mineral resource.

Non-compliant with NI 43-101	Tons	Fe%	SiO_2%	Mn%
Iron Resources	73,537,000	58.0	7.1	
Manganese Resources	1,163,000	44.8	6.9	8.6

Other Relevant Data and Information

The Knob Lake Iron Range is well known for the hematite-goethite iron deposits and this region has been exploited for some 30 years by IOCC. The LIM Project will attempt to reactivate the area. The short-term strategy will be to establish the operation on the best-known deposits of James, Redmond 2B & 5 and Houston, all relatively close to Schefferville.

LIM proposes to advance the Project in a number of Phases. The first will involve the development and production from the compliant resources nearest to the current infrastructure specifically the James and Redmond deposits. Subsequent stages and phases will follow from other deposits as their resource estimates are brought into compliance. It is expected that resource estimates for all the remaining deposits will be made over a number of years in line with a long term development plan for the total project. Following James and Redmond it is expected that those deposits closest to the current infrastructure, namely Houston, Knob Lake, Gill and Ruth 8 will be the next to be brought into resource compliance and into production. Those deposits further from the infrastructure, Howse, Sawyer Lake, Astray and Kivivic will not follow for some time.

The first stage of the Phase One Project to be developed by LIM will involve the reactivation of the James and Redmond 2B & 5 deposits which following submission of an Environmental Impact Statement (EIS), which has been released from the Environmental Assessment process by the Government of Newfoundland and Labrador. LIM's proposed mine operations will involve the extraction of iron ore by developing open pit mines at the James and Redmond deposits. It is proposed that beneficiation will take place at the Silver Yard area and a 4.4 km rail spur will be re-established along the existing railbed to connect with the main rail line. Construction activities are planned to commence in mid-March 2010 with initial mine development to begin in July 2010.

As was the case with IOCC, all mining operations will be by conventional open pit mining methods. The working period is anticipated to start in April and to continue to November with a work stoppage of four months. The mining contractor will provide all equipment to drill, blast, load and haul ore, waste rock and top soils to the designated locations. Mining plans have been prepared to determine mineable mineral resources for the James and Redmond deposits. The mineable mineral resources for these deposits have been estimated at 8.9 million tonnes and about 10.8 million tonnes of waste.

It is believed that the "direct shipping" iron ore produced by IOCC needed none or only very little processing and that only crushing and screening was performed before the ore was loaded on trains to be transported to Sept-Îles. LIM has evaluated washing and screening of the ore to improve the quality and grade of products and to ensure a greater degree of consistency in the production of lump ore and sinter fines. It is expected that the proposed washing and screening process will remove low grade and silica material and should increase the grades of the final product by about 10-15% of the mined grade.

The only means to transport iron ore from Schefferville to sea-ports is by rail. The railway originally constructed by IOCC is still available and in operation. Some refurbishing of the tracks, rails and culverts will have to be carried out through a recommended multi-year repair and replacement program. LIM is negotiating an agreement with Tshiuetin Rail Transport ("TSH"), a company owned by three Quebec First Nations and also with Quebec North Shore & Labrador Railway (QNS&L) to reach Sept-Îles.

LIM has been collecting seasonal baseline data since mid-2005. The James and Redmond properties have recently completed environmental assessment and have been released from any further environmental assessment. Each mine site will be closed after depletion of mineable reserves and restored according to regulations.

LIM has established an active community relations program since mid-2005 and an ongoing effort is made to work very closely with the four relevant First Nations to focus on developing and maintaining productive working relations, ensuring a good understanding of the proposed project. LIM has signed an Impact Benefits Agreement with the Innu of Labrador and Memoranda of Understanding with other First Nations. LIM has also assisted three Quebec based First Nations to identify and undertake the work necessary to allow for a timely expansion/upgrade of the TSH operations to include the shipment of iron ore.

The successful start up of LIM's direct shipping iron ore project will likely be the first positive economic stimulus to the northwest Labrador economies in 30 years. It should lead to 20+ years of economic stability. The project will develop deposits of iron ore and manganese not previously worked by IOCC but which were evaluated by IOCC and were part of IOCC's reserves and resources at the time of closure of its operations in the area in 1982.

There is a high level of existing infrastructure in the Schefferville area, and LIM currently intends to utilize contractors for the majority of the operational activities who will supply their own capital equipment except for the beneficiation plant will be supplied by LIM. The Central Zone and South Central Zone deposits are located within reach of existing infrastructure, including road access, adjacent to electrical power lines and close to the railway terminal and proposed loading yard.

The market for iron ores and related products has seen some substantial changes in recent years. It is expected that the European market is the most likely destination for products from the LIM Project given the freight advantage of Sept-Iles due to its proximity to Europe. However, there remains a strong demand for iron ore from the Far East and in particular from China.

Conclusions

The review of the data that was made available to the author and the knowledge of the project obtained during the 2007 SNC-Lavalin study (of which he was the major participant) of LIM's project related to a renewed development of LIM's iron deposits in Labrador has shown that there is more than sufficient merit to continue the exploration to further confirm the resources estimated by IOCC. The results of the program of trenching and RC drilling in 2006, 2008 and 2009 have confirmed a large amount of the resources in the James, Redmond 2B and the Redmond 5 deposits. The exploration on the other properties, as well as the properties obtained in an exchange with NML, should bring the historic estimates of resources to comply with the requirements of NI 43-101.

The resource estimates for the properties comprising LIM's Project were established by IOCC, an experienced iron ore operator, during the 20+ year period that IOCC successfully operated mines in the Schefferville area which were developed on the basis of similar resource estimates. There is no reason to conclude that IOCC utilized other than best industry practices. It is reasonable, therefore, to conclude that such historic resources can be brought to compliance with NI 43-101 requirements with a continued program of verification as recommended herein. The next step for this study is to continue with the confirmation of the resources for the properties and to make more of the resource estimates NI 43-101 compliant.

The resources closest to the existing Schefferville infrastructure and contained in the James and Redmond deposits have been confirmed and made NI 43-101 compliant, and exploration on the Houston deposit is sufficiently advanced to justify the estimation of an NI 43-101 compliant resource, though some additional drilling will be required on the portion of that deposit recently acquired from NML.

Most infrastructure around Schefferville is already in place and relative low capital expenditures will be required to restore these facilities. The relatively low cost new washing plant to produce “direct shipping” ore will be able to be used for the production of some 15 - 18 million tonnes. The newly obtained properties close to Schefferville (Gill and Ruth Lake) and the recommended exploration on these properties should confirm additional NI 43-101 compliant resource estimates.

The other deposits (Astray Lake, Sawyer Lake, Howse and Kivivic) are further from Schefferville and require more infrastructure development and therefore higher capital expenditures. The knowledge of these deposits is also less detailed and more exploration will be required to bring these historic inferred resources to a NI 43-101 compliant indicated classification.

Recommendations

Following the review of all supplied data and the interpretation and conclusions of this review, there is more than sufficient merit to continue exploration to further confirm the historic resources estimated by IOCC. The results of the past exploration have been very positive and have already shown that the IOCC data is very reliable and can be confirmed with the recent exploration. Exploration completed on the first phase deposits (James, Redmond 2B and Redmond 5) have confirmed and added to these resources, bringing them into compliance with NI 43-101. Some additional drilling is recommended to explore possible extensions to these first phase deposits.

An exploration program is also recommended to evaluate the historical IOCC resources for the deposits (including newly acquired claims) that are next in line to be developed after the James, Redmond 2B and Redmond 5 deposits. Establishment of NI 43-101 compliant resources on these second phase deposits (Houston, Knob Lake, Gill and Ruth Lake) will add to the life of the planned operations.

2.0 Introduction (Item 4.0)

On January 12th, 2010 A.S. Kroon was requested to assist LIM in the preparation of an updated Technical Assessment Report covering the modifications to the mineral inventory of the iron project owned by LIM in western Labrador as a result of additional geological work and engineering studies and an asset exchange with NML. The author prepared a Technical Report of the project in 2007 (as a consultant for SNC-Lavalin) when the properties consisted of the James, Redmond, Knob Lake, Houston, Sawyer Lake, Astray Lake, Howse and Kivivic deposits, that all were previously owned by the IOCC.

Following the publication of the Technical Report in October 2007, LIM carried out additional geological exploration on the properties during 2008 and 2009, and mandated SGS Geostat to carry out a NI 43-101 compliant Resource estimation. This resource estimate was contained in a report by SGS Geostat dated December 18, 2009 and entitled “Technical Report – Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits located in Labrador, Canada for Labrador Iron Mines Limited. The author of this report, Maxime Duperé Geo. Is a member of the Ordre de Geologues du Quebec (#501) and as such is a ‘qualified person’ within the meaning of NI 43-101. In October 2009 LIM and NML rationalized their mineral property ownership by an exchange of certain respective mineral licenses in Labrador. The agreement represents the exchange by each party of equal quantities of approximately 13 million tons of iron ore. These exchanges were based on historical estimates of gross quantities of iron ore (non NI 43-101 compliant) contained in the various DSO deposits. Under the Agreement, NML agreed to transfer to LIM ten mineral licenses in Labrador and six adjacent claim blocks in Quebec, which claims adjoin or form part of LIM’s Phase One James, Houston, Redmond and Knob Lake deposits, and a small portion of LIM’s Phase Three Howse deposit. LIM agreed to transfer to NML two mineral licenses in Labrador comprising part of LIM’s Phase Three Kivivic 2 and Kivivic 1 deposits.

The updated study had to be prepared following the requirements of NI 43-101 and contains a budget estimate for the exploration program that would allow the resources to be classified according to the standards prescribed by NI 43-101. The author was to review and summarize the results of the 2008 and 2009 exploration as well as the SGS Geostat Resource estimation on the original LIM properties, review the geological and historical data to be supplied by LIM (with respect to the exchanged NML properties) and determine the potential of the resource and reserve estimates made by the IOCC and what exploration program would be required to make those comply with the standards prescribed by NI 43-101.

The author made no site visit because the site is completely snow covered, obscuring geological features and impeding access. A site visit will be coordinated as soon as it will be practicable. The co-author of the Technical Report dated September 2007 made a site visit during May.

M. Dupéré made two site visits from May 26th to May 28th, 2009 and August 31st to September 2nd, 2009, respectively, and assisted and instructed LIM on reverse circulation drilling and sampling procedures. SGS Geostat implemented a quality assurance/quality control procedure for the drilling and sampling program.

3.0 Reliance on Other Experts (Item 5.0)

This report has been prepared for LIM. The findings, conclusions and recommendations are solely based on the information provided by LIM that consisted of reports, sections and plans prepared by IOCC during 1954 to 1982 reports prepared for other subsequent owners of the properties, and reports of exploration and sampling activities of LIM including the SGS Geostat resource estimation report and metallurgical test reports.

The evaluation of the manganese deposits described in this report has been carried out by MRB & Associates and their Technical Report has been used as reference for those deposits.

The author did not conduct any fieldwork or sampling or independently verify the legal titles to the properties. The site was not visited because of snow cover but independent geological consultants from SGS Geostat or geological personnel from LIM have supervised all exploration work.

4.0 Property Description and Location (Item 6.0)

The properties are located in the western central part of the Labrador Trough iron range and are located about 1,000 km northeast of Montreal and adjacent to or within 70 km from the town of Schefferville, Quebec (Figure 4-1).

There are no roads connecting the area to southern Labrador or to Quebec. Access to the area is by rail from Sept-Îles to Schefferville or by air from Montreal and Sept-Îles (Figure 4-2 and Figure 4-3).

LIM holds title, subject to various agreements described below, to 36 Mineral Rights Licenses as of the date of this report issued by the Department of Natural Resources, Province of Newfoundland and Labrador, representing 395 mineral claims located in northwest Labrador covering approximately 9,875 hectares (Table 4-1).

Under the terms of an Option and Joint Venture Agreement dated September 15, 2005 between Fonteneau Resources Limited ("Fonteneau") and Energold and as subsequently amended on properties in Labrador, such agreement which was subsequently assigned to LIM, a royalty in the amount 3% of the selling price FOB port per tonne of iron ore produced and shipped from any of the properties shall be payable to Fonteneau. This royalty shall be capped at US$1.50 per tonne on the James, Knob Lake, Redmond, and Houston properties; US$1.00 per tonne on the Sawyer and Astray properties and US$0.50 per tonne on the Howse and Kivivic properties).

On October 22, 2009, LIM announced that it has entered into an agreement with NML to exchange certain of their respective mineral licences in Labrador. The exchange eliminates the fragmentation of the ownership of certain mining rights in the Schefferville area and will enable both parties to separately mine and optimise their respective DSO deposits in as efficient a manner as possible.

Under the Agreement, NML transferred to LIM 375 hectares in ten mineral licenses in Labrador that adjoin or form part of LIM's Phase One James, Houston, Redmond and Knob Lake deposits, and a small portion of LIM's Phase Three Howse deposit.

LIM transferred to NML two mineral licenses in Labrador comprising part of LIM's Phase Three Kivivic 2 and Kivivic 1 deposits.

Under the Agreement the parties have agreed to work collaboratively to facilitate their respective extraction, processing and transportation activities by enabling each party to apply for all required surface rights. The parties have also agreed to finalize the layout or detailed technical descriptions of the surface rights that each requires to access the DSO deposits on their respective mineral claims, including any necessary roads, rail lines, processing and storage areas.

Table 4-1
List of Licenses in Newfoundland and Labrador held by LIM

License Number	Property	Location	Claims	Area (Has)	Issued
016292M	Sawyer Lake	Sawyer Lake	16	400	18-Sep-03
016286M	Houston	Gilling River	22	550	12-Apr-04
016288M	James-Wishart	Knob Lake	27	675	12-Apr-04
016567M	Knob Lake No.1	Knob Lake	1	25	16-Dec-04
016568M	Gill Mine	Knob Lake	4	100	16-Dec-04
016569M	Gill Mine	Knob Lake	1	25	16-Dec-04
016582M	Howse	Howells River	1	25	16-Dec-04
016583M	Howse	Howells River	1	25	16-Dec-04
016285M	Astray Lake	Astray Lake	50	1250	17-Dec-04
016571M	James	Ruth Lake	1	25	10-Feb-05
016575M	Houston	Huston Lake	1	25	10-Feb-05
016576M	Houston	Huston Lake	3	75	10-Feb-05
016577M	Houston	Huston Lake	1	25	10-Feb-05
016287M	Howse	Howells River	15	375	02-May-05
016669M	Kivivic No.1	Kivivic Lake	7	175	02-May-05
011074M	Knob Lake No.1	Ruth Lake	2	50	01-Jun-05
016291M	Redmond	Gilling Lake	44	1100	25-Aug-05
011541M	Fleming 3	Pinette Lake	3	75	04-Jan-06
011542M	Elross No.3	Howells River	2	50	04-Jan-06
011543M	Timmins 5	Howells River	3	75	04-Jan-06
011544M	Timmins 6	Howells River	3	75	04-Jan-06
012894M	Howells River	Howells River	3	75	14-Dec-06
016293M	Ruth Lake	Ruth Lake	20	500	14-Dec-06
016573M	Redmond	Gilling Lake	1	25	27-Apr-07
015115M	Abel Lake	Gilling Lake	1	25	23-Jun-08
016391M	Houston	Gilling River	1	25	27-Aug-09
016392M	Houston	Gilling River	1	25	27-Aug-09
016393M	Houston	Gilling River	1	25	27-Aug-09
016459M	Abel Lake	Gilling Lake	1	25	16-Sep-09
016474M	Ruth Lake (Mn)	Ruth Lake	4	100	17-Sep-09
016478M	Ruth Lake (Mn)	Ruth Lake	55	1375	17-Sep-09
016500M	Elross 3/Timmins 5	Howells River	46	1150	21-Sep-09
016502M	Fleming 3	Pinette Lake	1	25	21-Sep-09
016516M	Houston	Astray Lake	36	900	02-Oct-09
016531M	Timmins 6	Howells River	3	75	15-Oct-09
016534M	Christine	Stakit Lake	13	325	15-Oct-09
		TOTAL	395	9,875	


Ungava Bay
LIM Project
N
Kuujjuaq
Inukjuak
Nunavik
Hudson Bay
LABRADOR TROUGH
LABRADOR
Schefferville
Labrador City
NEWFOUNDLAND
St. John's
QUEBEC
Sept Iles
Moosonee
Sydney
P.E.I.
NEW BRUNSWICK
NOVA SCOTIA
ONTARIO
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500 km
New York
Major Iron Deposits

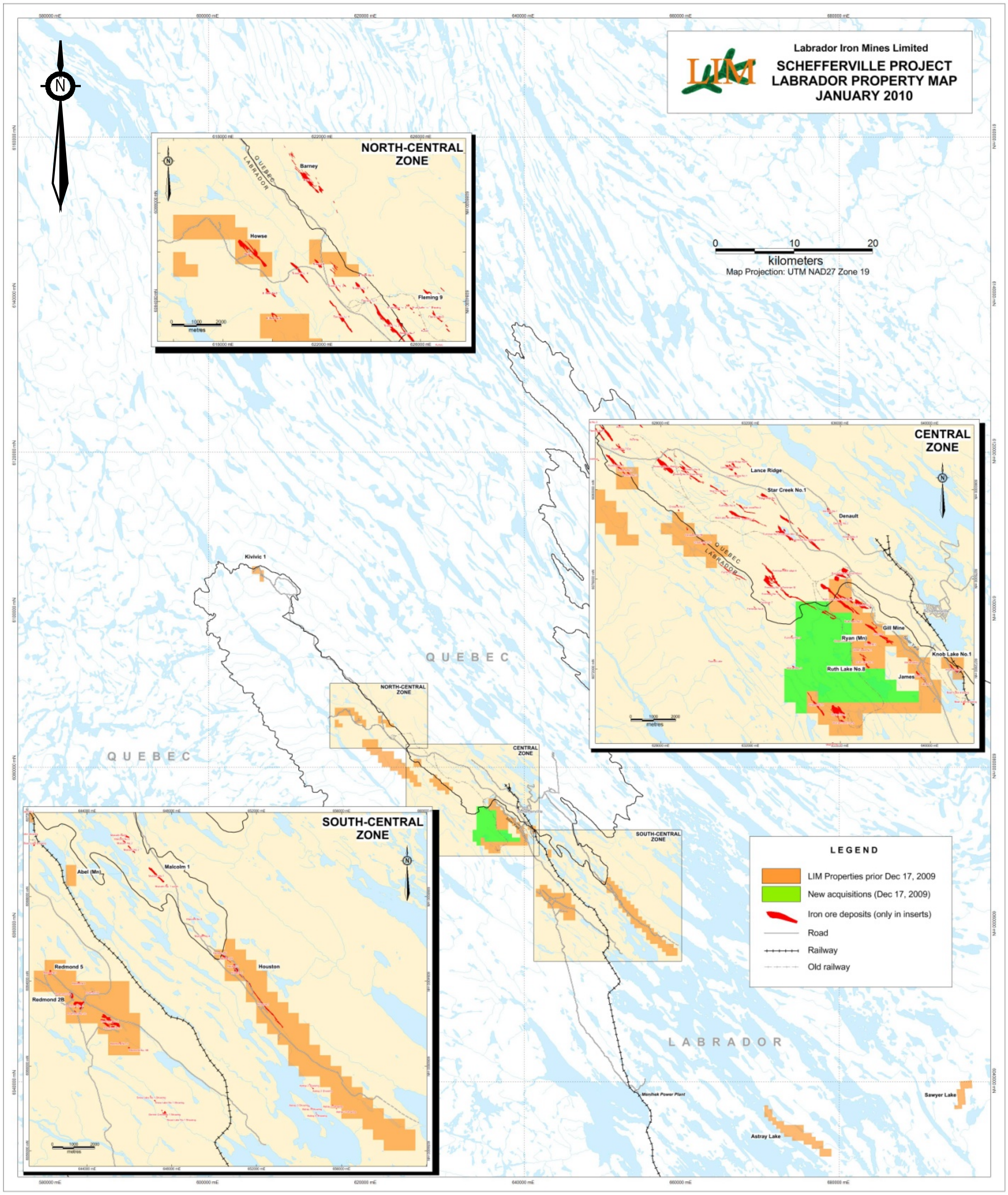


Figure 4-2
Location Map of the LIM Properties

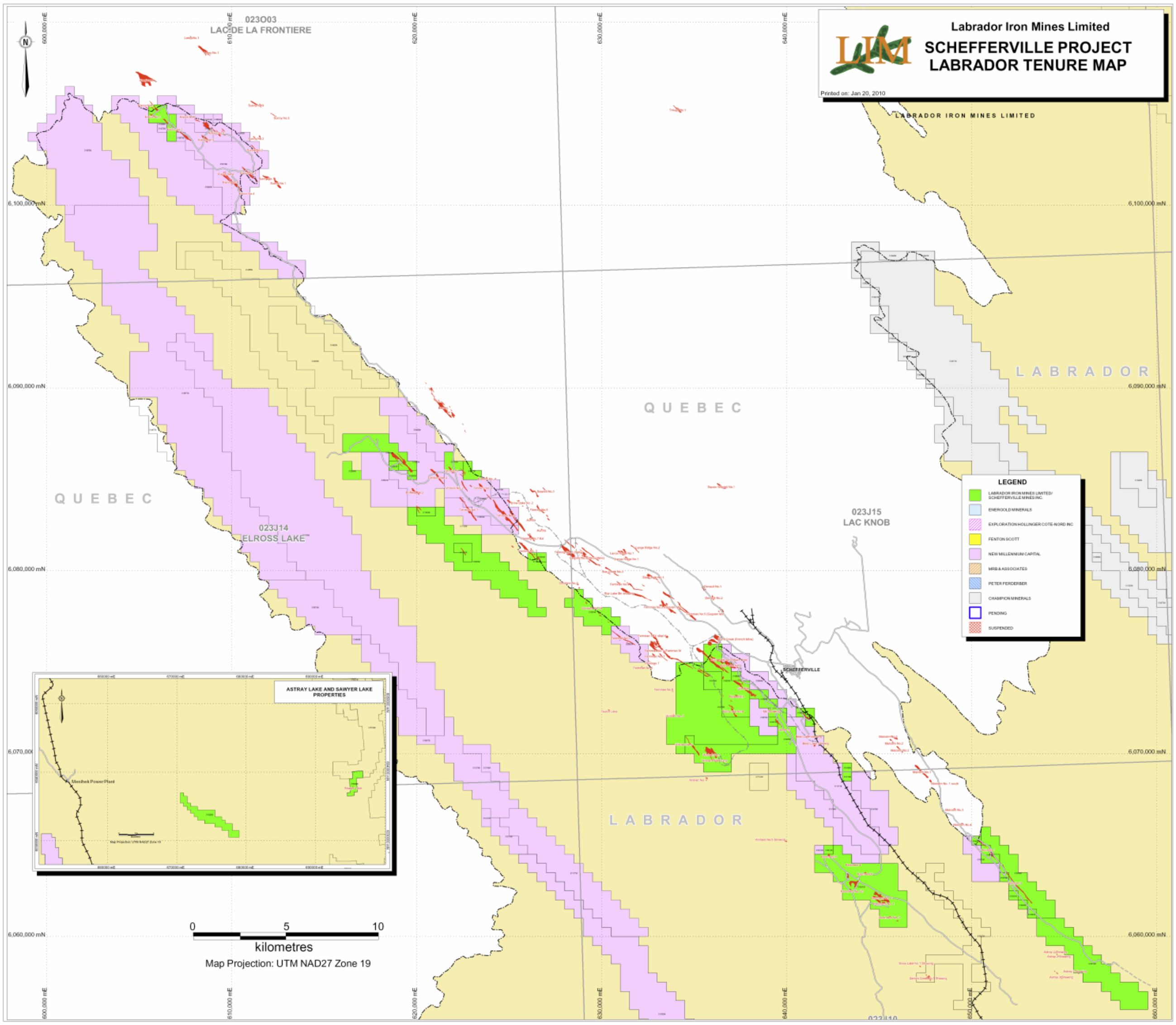


Figure 4-3
Map of the LIM Claims and Mining Licenses

5.0 Accessibility, Climate, Local Resources, Infrastructure, Physiography (Item 7.0)

5.1 Accessibility

The LIM properties are part of the western central part of the Labrador Trough iron range. The mineral properties are located about 1,000 km northeast of Montreal and adjacent to or within 70 km of the town of Schefferville (Quebec). There are no roads connecting the area to southern Labrador or to Quebec. Access to the area is by rail from Sept-Îles to Schefferville or by air from Montreal and Sept-Îles.

Some of the initial properties that LIM intends to exploit, James, Gill Mine, Ruth Lake 8, Green Lake, Ryan, and Knob Lake 1 are accessible by existing gravel roads and are located in Labrador approximately 3 to 6 km south-southwest of the town of Schefferville. The Christine deposits are partly in Labrador and partly in Quebec. The Timmins 5 deposit is located within Labrador, about 3 km southeast of Elross 3. Access to the James and Knob Lake 1 deposits is possible all year round as they are located close to the road connecting Schefferville to the Menihek Dam. The other access roads are not currently maintained during winter.

The Redmond deposits are located in Labrador approximately 12 km south-southwest of the town of Schefferville and can be reached by existing gravel roads. The Houston deposit is located approximately 20 km southeast of Schefferville and can also be reached by existing gravel roads. Abel is currently accessible by ATV and is located in Labrador approximately 7 km south-southeast of the town of Schefferville.

The northerly properties include Howse, Timmins 6 and Elross 3. These deposits are located approximately 15 to 25 km northwest of the town of Schefferville and can be reached by existing gravel roads developed during the former IOCC operations.

The Astray and Sawyer Lake deposits, located in Labrador approximately 50 to 65 km southeast of Schefferville, do not currently have road access but can be reached by float plane or by helicopter. The Kivivic deposits, located approximately 43 km north-northwest of the Silver Yard, have existing road access that will require upgrading.

5.2 Climate

The Schefferville area and vicinity have a sub-arctic continental taiga climate with very severe winters. Daily average temperatures exceed 0°C for only five months a year. Daily mean temperatures for Schefferville average -24.1°C and -22.6°C in January and February respectively. Mean daily average temperatures in July and August are 12.4°C and 11.2°C, respectively. Snowfall in November, December and January generally exceeds 50 cm per month and the wettest summer month is July with an average rainfall of 106.8 mm. Field operations are restricted to the months of April through November.

5.3 Local Resources

It is assumed that the majority of the workforce will come from Labrador or Newfoundland to work on the project. A number of employees will also be recruited from the Quebec communities close to the project site.

5.4 Infrastructure

James, Redmond 2B and Redmond 5 are within 12 km of each other and form the first group of properties from which mining by LIM will commence and are also within 12 km of Schefferville. The Gill, Ruth and Knob Lake deposits are within the same area, while Houston is located about 20 km southeast of Schefferville. Sawyer Lake and Astray Lake properties are some 50 to 65 km southeast from Schefferville and are cut off from the local infrastructure by connected lakes. Howse and Kivivic are some 25 and 43 km northwest from Schefferville. IOCC had excavation or trenching activities close to all properties other than Sawyer/Astray.

The town of Schefferville has a Fire Department with mainly volunteer firemen, a fire station and firefighting equipment. The Sûreté Du Québec Police Force is present in the town of Schefferville and the Matimekosh reserve. A clinic is present in Schefferville with limited medical care. A municipal garage, small motor repair shops, a local hardware store, a mechanical shop, and a local convenient store, 2 hotels, numerous outfitters accommodations are also present in Schefferville.

A modern airport includes a 2,000 metre runway and navigational aids for large jet aircraft. Air service is provided three times per week to and from Wabush, Labrador, with less frequent service to Montreal.

A community radio station, recreation centre, parish hall, gymnasium, playground, childcare centre, drop-in centre are also present in Schefferville.

The Menihek power plant is located 35 km southeast of Schefferville. The hydro power plant was built to support iron ore mining and services in Schefferville. Back-up diesel generators are also present.

The Railroad

Schefferville is accessible by train from Sept-Iles by Tshiuetin Rail Transportation Inc. (TSH), a company owned by three Quebec First Nations. The mandate of TSH is to maintain the passenger and light freight traffic between Sept-Iles and

Schefferville. Train departures from Sept-Iles and Schefferville occur three times a week.

The QNS&L was established by IOCC to haul iron ore from Schefferville area mines to Sept-Îles a distance of some 568 km starting in 1954. After shipping some 150 million tons of iron ore from the area the mining operation was closed in 1982, although, as a common carrier, the railroad maintained a passenger and freight service between Sept-Îles, Labrador City and Schefferville up to 2005. In 2005 the IOCC sold the 208 km section of the railway between Ross Bay Junction and Schefferville to TSH.

Three other railway companies operate in the area, Arnault Railways between Arnault Junction and Pointe Noire to haul iron ore for Wabush Mines (Wabush), QNS&L for hauling iron concentrates from Labrador City area to Sept-Iles and CRC hauls iron concentrates from Fermont area to Port-Cartier for Quebec Cartier Mining Company. The latter railway is not connected to Arnault, QNS&L or TSH.

5.5 Physiography

The topography of the Schefferville mining district is bedrock controlled with the average elevation of the properties varying between 500 m and 700m above sea level. The terrain is generally gently rolling to flat, sloping north-westerly, with a total relief of approximately 50 to 100 m. In the main mining district, the topography consists of a series of NW-SE trending ridges while the Astray Lake and Sawyer Lake areas are within the Labrador Lake Plateau. Topographic highs in the area are normally formed by more resistant quartzites, cherts and silicified horizons of the iron formation itself. Lows are commonly underlain by softer siltstones and shales.

Generally, the area slopes gently west to northeast away from the land representing the Quebec – Labrador border and towards the Howells River valley parallel to the dip of the deposits. The finger-shaped area of Labrador that encloses the Howells River drains southwards into the Hamilton River watershed and from there into the Atlantic Ocean. Streams to the east and west of the height of land in Quebec, flow into the Kaniapiskau watershed, which flows north into Ungava Bay.

The mining district is within a “zone of erosion” in that the last period of glaciation has eroded away any pre-existing soil/overburden cover, with the zone of deposition of these sediments being well away from the area of interest. Glaciation ended in the area as little as 10,000 years ago and there is very little subsequent soil development. Vegetation commonly grows directly on glacial sediments and the landscape consists of bedrock, a thin veneer of till as well as lakes and bogs.

The thin veneer of till in the area is composed of both glacial and glacial fluvial sediments. Tills deposited during the early phases of glaciations were strongly affected by later sub glacial melt waters during glacial retreat. Commonly, the composition of till is sandy gravel with lesser silty clay, mostly preserved in topographic lows. Glacial melt water channels are preserved in the sides of ridges both north and south of Schefferville.

Glacial ice flow in the area has been recorded as an early major NW to SE flow and a later less pronounced SW to NE flow. The early phase was along strike with the major geological features and the final episode was against the topography. The later NE flow becomes more pronounced towards the southern end of the district near Astray Lake or Dyke Lake.

6.0 History (Item 8.0)

The Quebec-Labrador iron range has a tradition of mining since the early 1950's and is one of the largest iron producing regions in the world. The former direct shipping iron ore operations at Schefferville (Quebec and Labrador) operated by IOCC produced in excess of 150 million tons of lump and sinter fine ores over the period 1954-1982 (IOCC Ore Reserves, January 1983). The properties comprising LIM's Schefferville area project were part of the original IOCC Schefferville operations and formed part of the 250 million tons of reserves and resources identified by IOCC but were not part of IOCC's producing properties[1].

There are currently three major iron ore producers in the Labrador City-Wabush region to the south, IOCC, Quebec Cartier Mining Company and Wabush Mines. Two or three major new iron ore projects in the Quebec-Labrador Peninsula are currently at the feasibility or construction stage.

The Labrador Trough which forms the central part of the Quebec-Labrador Peninsula, is a remote region which remained largely unexplored until the late 1930's and early 1940's when the first serious mineral exploration was initiated by Hollinger and LM&E. These companies were granted large mineral concessions in the Quebec and Labrador portions of the Trough. Initially, the emphasis was on exploring for base and precious metals but, as the magnitude of the iron deposits in the area became apparent, development of these resources became the exclusive priority for a number of years.

Mining and shipping from the area began in 1954 under the management of the IOCC, a company specifically formed to exploit the Schefferville area iron deposits. As the technology of the steel industry changed over the ensuing years more emphasis was placed on the concentrating ores of the Wabush area and interest and markets for the direct shipping Schefferville ores declined. Finally, in 1982, the IOCC closed their operations in the Schefferville area. From 1954 to 1982, a total of some 150 million tons of ore was produced from the area.

In 1954, IOCC started to operate open pit mines in Schefferville containing 56-58% Fe, and exported the direct-shipping product to steel companies in the United States and Western Europe. The properties and iron deposits that currently form LIM's Labrador Project were part of the original IOCC Schefferville area operations and the reserves and resources identified at the James,

[1] This is an historic estimate made in compliance with the standards used by IOCC described in Section 17 of this report.

Houston, Sawyer, Astray and Howse deposits were reviewed and in some instance under development by IOCC.

A summary of the total Historical Resources estimated by IOCC for properties held by LIM, other than the James, Redmond 2B and Redmond 5 deposits is shown in Table 6-1.

Table 6-1
Historical (Non NI 43-101 Compliant) Resources (IOCC Reports)

The old IOCC classification reported all resources (measured, indicated and inferred): in the total mineral resource.

Non-compliant with NI 43-101	Tons	Fe%	SiO_2%	Mn%
Iron Resources	73,537,000	58.0	7.1	
Manganese Resources	1,163,000	44.8	6.9	8.6

All mineral resources shown in this report other than in Section 17.0 relating to the James, Redmond 2B and Redmond 5 mineral deposits are not yet compliant with the standards prescribed by NI 43-101. The resources shown for the other deposits are considered historic resource estimates and are non NI 43-101 compliant. They are predominantly based on estimates made by IOCC in 1982 and published in their Direct-Shipping Ore (DSO) Reserve Book published in 1983. IOCC categorized their estimates as "reserves". The author has adopted the principle again (as in the 2007 Technical Report) that these should be categorized at "resources" as defined by NI 43 -101. These estimates were part of a review carried out by Kilborn Inc. (at that time an independent engineering company with the head office in Toronto) in 1995 for Hollinger. SOQUEM Inc. (a mining company owned by the government of Quebec) with experts of Metchem (an independent engineering company from Montreal), evaluated the same properties again in 2002. All estimates were based on geological interpretations on cross sections and the calculations were done manually. A computerized estimate for LIM prepared in 2006 by Wardrop Engineering Inc. for the James deposit used also the data shown on vertical cross sections prepared by IOCC for their reserve calculations.

Those historic estimates are based on prior data and reports prepared by IOCC, the previous operator. These historical estimates are not current and do not meet NI 43-101 definition standards and are reported here for historical purposes only. A qualified person has not done sufficient work to classify the historical estimate as current mineral resources. The historical estimates should not be relied upon.

These historical results provide an indication of the potential of the properties and are relevant to ongoing exploration.

The historic IOCC ore reserves classifications used in the reports are not compliant with reserves classifications compliant with NI 43-101. The historic reserves were for DSO which was ore that was sold directly to the customer in its raw state. The only processing done was the crushing to 4-inch size in the mine screening plant and, in case of wet ore, reduction of moisture content in the drying plant in Sept-Îles. It should be noted that the following estimates are based on economics of 1983 and that although the geological, mineralogical and processing data will be the same today, economics and market conditions will have changed. The classification used in the IOCC reports is as follows:

Measured: The ore is measured accurately in three dimensions. All development and engineering evaluations (economics, ore testing) are complete. The deposit is physically accessible and has a complete pit design. The reserve is economic and is marketable under current conditions.

Indicated: Development and engineering evaluations (economics, ore testing) are complete. Deposits in this category do not meet all the criteria of measured ore.

Inferred: Only preliminary development and evaluation are completed. Deposits may not be mineable because of location, engineering considerations, economics and quality.

The above shown terms, definitions and classification are not compliant with NI 43-101 but were used by IOCC for their production reports. Current compliant mineral resources are categorized on the basis of the degree of confidence in the estimate of quantity and grade or quality of the deposit, as follows:

Inferred mineral resources,

Indicated mineral resources and

Measured mineral resources.

Compliant mineral reserves are that part of a measured mineral resource or indicated mineral resource which can be extracted legally and at a profit under economic conditions that are specified and generally accepted as reasonable by the mining industry and which is demonstrated by a preliminary feasibility study or feasibility study as follows:

Probable mineral reserve and

Proven mineral reserve

There is no reason to conclude that IOCC utilized other than best industry practices. Part of the historic resources from the James Property and the historic resources of the Redmond property have been further explored and have been estimated according to NI 43-101 accepted methods. It is reasonable, therefore, to conclude that other historic resources can be easily brought to compliance with NI 43-101 requirements with a program of verification as recommended in this report.

As described before, most of the properties contain resources that are not compliant with NI 43-101 standards. In the Technical Report dated 2007 an exploration program was recommended to confirm the IOCC reported resources and make the resources compliant with NI 43-101. Exploration on the James and Redmond deposits has sufficiently advanced to justify the work shown in the SGS Geostat report and the results that have been reported in Section 17.0

The following deposits have been explored also, but have not yet advanced enough and the estimating work by SGS Geostat has not yet been completed.

Houston (1, 2S, 3)

This property was explored with 5 DD drill holes (2006), 12 RC holes (2008) and 43 RC holes (2009). Eight trenches (439 m) were excavated and sampled. The estimated resources are still based on IOCC data. The Company is currently finalizing an NI 43-101 compliant resource estimate.

Astray Lake

This property was explored with 3 DD drill holes (2006) and 1 RC hole (2008). The estimated resources are still based on IOCC data.

Howse

This property was explored with 2 RC holes (2008) and 5 RC holes (2009). The estimated resources are still based on IOCC data.

Knob Lake 1

This property was explored with 1 DD drill hole (2006), 9 RC holes (2008) and 5 RC holes (2009). The estimated resources are still based on IOCC data.

Sawyer Lake

This property was explored with 10 DD drill holes (2008). The estimated resources are still based on IOCC data. The Company is currently finalizing an NI 43-101 compliant resource estimate.

Gill Mine

This property was explored with 14 trenches (603 m) (2008). The estimated resources are still based on IOCC data.

A summary of the historical resource estimates reported by IOCC in their January 1983 statement is shown in Table 6-2. The resources are all in tons. It should be noted that in the IOCC statements all “reserves” were included.

The historical resources contained in the manganese deposits were reported in the MRB & Associates report dated October 30th, 2009 and were based on the IOCC estimates of 1979. Because some of the properties were still producing at that time, this report shows some differences due LIM's reference date of IOCC January 1983 statement.

Table 6- 2
Historical Mineral Resources of LIM Properties (1,000 tons)

Excluding the James and Redmond 2B & 5 deposits

Property	Fe Resources	Fe	SiO_2	Mn Resources	Fe%	SiO_2	Mn%
Houston 1	3,587	58.8	6.0	294	48.6	5.2	8.5
Houston 2N	24	52.3	12.6	-	-	-	-
Houston 2S	2,606	57.4	7.0	40	48.1	7.4	7.6
Houston 3	2,897	55.8	8.6	157	45.7	9.0	8.4
Astray Lake	7,818	65.6	3.9	-	-	-	-
Howse	28,228	58.0	5.0	-	-	-	-
Knob Lake 1	3,662	49.1	7.8	363	41.7	5.3	8.4
Sawyer Lake	12,000	61.8	11.4	-	-	-	-
Gill Mine	4,595	50.5	10.6	298	44.0	9.2	9.2
Green Lake	366	51.4	7.8	-	-	-	-
Kivivic 1	6,583	54.0	8.5	-	-	-	-
Ruth Lake 8	410	53.3	9.6				
Wishart Mine	207	53.7	12.2	-	-	-	-
Wishart 2	554	52.0	12.9				
Total:	**73,537**	**58.0**	**7.1**	**1,152**	**44.8**	**6.9**	**8.6**

During the 1960's, higher-grade iron deposits were developed in Australia and South America and customers' preferences shifted to products containing +62% Fe or higher. In 1963, IOCC developed the Carol Lake deposit near Labrador City and started to produce concentrates and pellets with +64% Fe, so as to satisfy the customers' requirements for higher-grade products. High growth in the demand for steel, which began after the end of World War II, came to an abrupt end in the early 1980's due to the impact of increasing oil prices. The energy crisis affected steel production in the U.S. and Western Europe as consumers switched to energy-efficient products. As a result, the demand for iron ore plummeted, creating a severe overcapacity in the industry. Consequently, IOCC decided to close the Schefferville area mines in 1982.

Hollinger, a subsidiary of Norcen Energy Ltd., was the underlying owner of the Quebec iron ore mining leases in Schefferville area. Following the closure of the IOCC mining operations, ownership of the mining rights held by IOCC in Labrador reverted to the Crown. In the early 1990's, Hollinger was acquired by La Fosse Platinum Group Inc. ("La Fosse") who conducted feasibility studies on marketing, bulk sampling, metallurgical test work and carried out some stripping of overburden at the James deposit. La Fosse sought and was granted a project release under the Environmental Assessment Act for the James deposit in June 1990 but did not go ahead with project development and the claims subsequently were permitted to lapse.

With the exception of the pre-stripping work carried out on the James deposit and the mining of the Redmond #1 orebody by IOCC (adjacent to LIM's current Redmond property), none of the iron deposits within the LIM mineral claims were previously developed for production during the IOCC period of ownership.

Between September 2003 and March 2006, Fenton and Graeme Scott, Energold and NML began staking claims over the soft iron ores in the Labrador part of the Schefferville camp. Recognizing a need to consolidate the mineral ownership, Energold entered into agreements with the various parties that have subsequently been assumed by LIM.

7.0 Geological Setting (Item 9.0)

7.1 Regional Geology

The following summarizes the general geological settings of the various properties making up the LIM's project. The regional geological descriptions herein are based on published reports by Gross (1965), Zajac (1974), Wardel (1979) and Neale (2000).

At least 45 hematite-goethite ore deposits have been discovered in an area 20 km wide that extends 100 km northwest of Astray Lake, referred to as the Knob Lake Iron Range, which consists of tightly folded and faulted iron-formation exposed along the height of land that forms the boundary between Quebec and Labrador. The iron deposits occur in deformed segments of iron-formation, and the ore content of single deposits varies from one million to more than 50 million tonnes.

The Knob Lake properties are located on the western margin of the Labrador Trough adjacent to Archean basement gneisses. The Labrador Trough otherwise known as the Labrador-Quebec Fold Belt extends for more than 1,000 km along the eastern margin of the Superior craton from Ungava Bay to Lake Pletipi, Quebec. The belt is about 100 km wide in its central part and narrows considerably to the north and south.

The western half of the Labrador Trough, consisting of a thick sedimentary sequence, can be divided into three sections based on changes in lithology and metamorphism (North, Central and South). The Trough is comprised of a sequence of Proterozoic sedimentary rocks including iron formation, volcanic rocks and mafic intrusions known as the Kaniapiskau Supergroup (Gross, 1968). The Kaniapiskau Supergroup consists of the Knob Lake Group in the western part of the Trough and the Doublet Group, which is primarily volcanic, in the eastern part.

The Central or Knob Lake Range section extends for 550 km south from the Koksoak River to the Grenville Front located 30 km north of Wabush Lake. The principal iron formation unit, the Sokoman Formation, part of the Knob Lake Group, forms a continuous stratigraphic unit that thickens and thins from sub-basin to sub-basin throughout the fold belt.

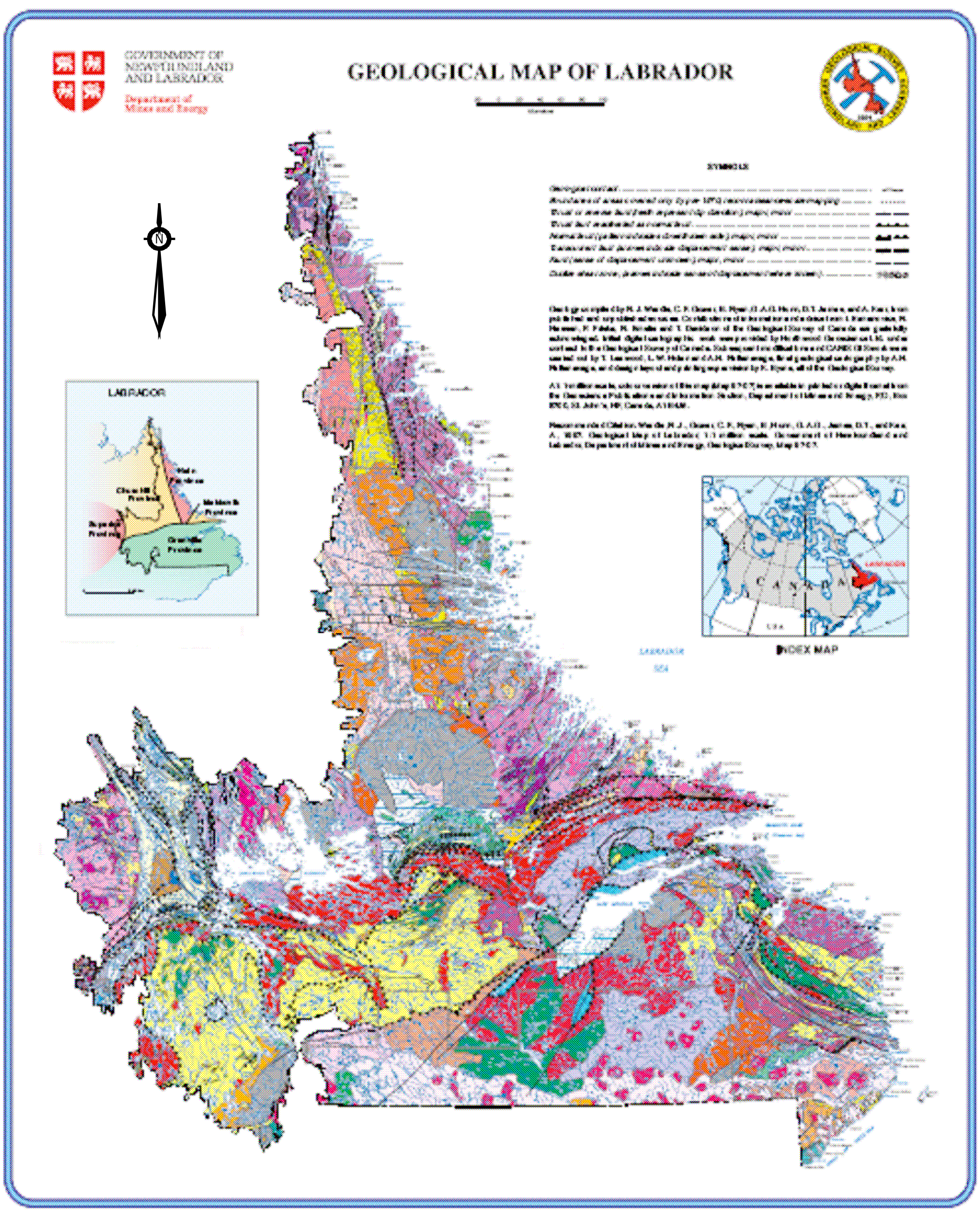
The southern part of the Trough is crossed by the Grenville Front. Trough rocks in the Grenville Province to the south are highly metamorphosed and complexly folded. Iron deposits in the Grenville part of the Labrador Trough include Lac Jeannine, Fire Lake, Mounts Wright and Reed and the Luce, Humphrey and Scully deposits in the Wabush area. The high-grade metamorphism of the Grenville Province is responsible for recrystallization of both iron oxides and silica in primary iron formation producing coarse-grained sugary quartz, magnetite, specular hematite schists (meta-taconites) that are of improved quality for concentrating and processing.

The main part of the Trough north of the Grenville Front is in the Churchill Province and has been subjected to low-grade (greenschist facies) metamorphism. In areas west of Ungava Bay, metamorphism increases to lower amphibolite grade. The mines developed in the Schefferville area by IOCC exploited residually enriched earthy iron deposits derived from taconite-type protores.

Geological conditions throughout the central division of the Labrador Trough are generally similar to those in the Knob Lake Range.

A general geological map of Labrador is shown in Figure 7-1.

Figure 7-1
Geological Map of Labrador



7.2 Local Geology

The general stratigraphy of the Knob Lake area is representative of most of the range, except that the Denault dolomite and Fleming Formation are not uniformly distributed. The Knob Lake Range occupies an area 100 km long by 8 km wide. The sedimentary rocks including the cherty iron formation of this area are weakly metamorphosed to greenschist facies. In the structurally complex areas, leaching and secondary enrichment have produced earthy textured iron deposits. Unaltered banded magnetite iron formation, often referred to as taconite, occurs as gently dipping beds west of Schefferville in the Howells River deposits.

The sedimentary rocks in the Knob Lake Range strike northwest, and their corrugated surface appearance is due to parallel ridges of quartzite and iron formation which alternate with low valleys of shales and slates. The Hudsonian Orogeny compressed the sediments into a series of synclines and anticlines, which are cut by steep angle reverse faults that dip primarily to the east. The synclines are overturned to the southwest with the east limits commonly truncated by strike faults.

Most of the secondary earthy textured iron deposits occur in canoe-shaped synclines; some are tabular bodies extending to a depth of at least 200 m, and one or two deposits are relatively flat lying and cut by several faults. In the western part of the Knob Range, the iron formation dips gently eastward over the Archean basement rocks for about 10 km to the east, then forms an imbricate fault structure with bands of iron formation, repeated up to seven times.

Subsequent supergene processes converted some of the iron formations into high-grade ores, preferentially in synclinal depressions and/or down-faulted blocks. Original sedimentary textures are commonly preserved by selected leaching and replacement of the original deposits. Jumbled breccias of enriched ore and altered iron formations, locally called rubble ores, are also present. Fossil trees and leaves of Cretaceous age have been found in rubble ores in some of the deposits (Neal, 2000).

7.3 Geology of Schefferville Area

The stratigraphy of the Schefferville area is as follows:

Attikamagen Formation – is exposed in folded and faulted segments of the stratigraphic succession where it varies in thickness from 30 metres near the western margin of the belt to more than 365 metres near Knob Lake. The lower part of the formation has not been observed. It consists of argillaceous material that is thinly bedded (2-3mm), fine grained (0.02 to 0.05mm), grayish green, dark grey to black, or reddish grey. Calcareous or arenaceous lenses as much as 30 cm in thickness occur locally interbedded with the argillite and slate, and lenses of chert are common. The formation grades upwards into Denault dolomite, or into Wishart quartzite in area where dolomite is absent. Beds are intricately drag-folded, and cleavage is well developed parallel with axial planes, perpendicular to axial lines of folds and parallel with bedding planes.

Denault Formation – is interbedded with the slates of the Attikamagen Formation at its base and grades upwards into the chert breccia or quartzite of the Fleming Formation. The Denault Formation consists primarily of dolomite, which weathers buff-grey to brown. Most of it occurs in fairly massive beds which vary in thickness from a few centimetres to about one metre, some of which are composed of aggregates of dolomite fragments.

Near Knob Lake the formation probably has a maximum thickness of 180 metres but in many other places it forms discontinuous lenses that are, at most, 30 metres thick. Leached and altered beds near the iron deposits are rubbly, brown or cream colored and contain an abundance of chert or quartz fragments in a soft white siliceous matrix.

Fleming Formation – occurs a few kilometres southwest of Knob Lake and only above dolomite beds of the Denault Formation. It has a maximum thickness of about 100 metres and consists of rectangular fragments of chert and quartz within a matrix of fine chert. In the lower part of the formation the matrix is dominantly dolomite grading upwards into chert and siliceous material.

Wishart Formation – Quartzite and arkose of the Wishart Formation form one of the most persistent units in the Kaniapiskau Supergroup. Thick beds of massive quartzite are composed of well-rounded fragments of glassy quartz and 10-30% rounded fragments of pink and grey feldspar, well cemented by quartz and minor amounts of hematite and other iron oxides. Fresh surfaces of the rock are medium grey to pink or red. The thickness of the beds varies from a few centimetres to about one metre but exposures of massive quartzite with no apparent bedding occur most frequently.

Ruth Formation – Overlying the Wishart Formation is a black, grey-green or maroon ferruginous slate, 3 to 36 metres thick. This thinly banded, fissile material contains lenses of black chert and various amounts of iron oxides. It is composed of angular fragments of quartz with K-feldspar sparsely distributed through a very fine mass of chlorite, white mica, iron oxides and abundant finely disseminated carbon and opaque material. Much of the slate contains more than 20% iron.

Sokoman Formation – More than 80% of the ore in the Knob Lake Range occurs within this formation. Lithologically the iron formation varies in detail in different parts of the range and the thickness of individual members is not consistent.

A thinly bedded, slaty facies at the base of the formation consists largely of fine chert with an abundance of iron silicates and disseminated magnetite and siderite. Fresh surfaces are grey to olive green and weathered surfaces brownish yellow to bright orange where minnesotaite is abundant.

Thin-banded oxide facies of iron formation occurs above the silicate-carbonate facies in nearly all parts of the area. The jasper bands, which are 1.25 cm or less wide and deep red, or in a few places greenish yellow to grey, are interbanded with hard, blue layers of fine-grained hematite and a little magnetite.

The thin jasper beds grade upwards into thick massive beds of grey to pinkish chert and beds that are very rich in blue and black iron oxides. These massive beds are commonly referred to as “cherty metallic” iron formation and make up most of the Sokoman Formation. The iron oxides are usually concentrated in layers a few centimetres thick interbedded with leaner cherty beds. In many places iron-rich layers and lenses contain more than 50% hematite and magnetite.

The upper part of the Sokoman Formation comprises beds of dull green to grey or black massive chert that contains considerable siderite or other ferruginous carbonate. Bedding is discontinuous and the rock as a whole contains much less iron than the lower part of the formation.

Menihek Formation – A thin-banded, fissile, grey to black argillaceous slate conformably overlies the Sokoman Formation in the Knob Lake area. Total thickness is not known, as the slate is only found in faulted blocks in the main ore zone. East or south of Knob Lake, the Menihek Formation is more than 300 metres thick but tight folding and lack of exposure prevent determination of its true thickness.

The Menihek slate is mostly dark grey or jet black. It has a dull sooty appearance but weathers light grey or becomes buff colored where leached. Bedding is less distinct than in the slates of other slate formations but thin laminae or beds are visible in thin sections.

8.0 Deposit Types and Deposits (Item 10)

8.1 Iron Ore

The Labrador Trough contains four main types of iron deposits:

- Soft iron ores formed by supergene leaching and enrichment of the weakly metamorphosed cherty iron formation; they are composed mainly of friable fine-grained secondary iron oxides (hematite, goethite, limonite).
- Taconites, the fine-grained, weakly metamorphosed iron formations with above average magnetite content and which are also commonly called magnetite iron formation.
- More intensely metamorphosed, coarser-grained iron formations, termed metataconites which contain specular hematite and subordinate amounts of magnetite as the dominant iron minerals.
- Occurrences of hard high-grade hematite ore occur southeast of Schefferville at Sawyer Lake, Astray Lake and in some of the Houston deposits.

The LIM deposits are composed of iron formations of the Lake Superior-type. The Lake Superior-type iron formation consists of banded sedimentary rocks composed principally of bands of iron oxides, magnetite and hematite within quartz (chert)-rich rock, with variable amounts of silicate, carbonate and sulphide lithofacies. Such iron formations have been the principal sources of iron throughout the world.

The Sokoman iron formation was formed as a chemical sediment under varied conditions of oxidation-reduction potential (Eh) and hydrogen ion concentrations (pH) in varied depth of seawater. The resulting irregularly bedded, jasper-bearing, granular, oolite and locally conglomeratic sediments are typical of the predominant oxide facies of the Superior-type iron formations, and the Labrador Trough is the largest example of this type.

The facies changes consist commonly of carbonate, silicate and oxide facies. Typical sulphide facies are poorly developed. The mineralogy of the rocks is related to the change in facies during deposition, which reflects changes from shallow to deep-water environments of sedimentation. In general, the oxide facies are irregularly bedded, and locally conglomeratic, having formed in oxidizing shallow-water conditions. Most carbonate facies show deep-water features, except for the presence of minor amounts of granules. The silicate facies are present in between the oxide and carbonate facies, with some textural features indicating deep-water formation.

Each facies contains typical primary minerals, ranging from siderite, minnesotaite, and magnetite-hematite in the carbonate, silicate and oxide facies, respectively. The most common mineral in the Sokoman Formation is chert, which is closely associated with all facies, although it occurs in minor quantities with the silicate facies. Carbonate and silicate lithofacies are present in varying amounts in the oxide members.

The sediments of the Labrador Trough were initially deposited in a stable basin which was subsequently modified by penecontemporaneous tectonic and volcanic activity. Deposition of the iron formation indicates intraformational erosion, redistribution of sediments, and local contamination by volcanic and related clastic material derived from the volcanic centers in the Dyke-Astray area.

The Iron Ore deposits that form part of the LIM project are further subdivided into:

- The deposits in the Central Zone;
- The deposits in the South Central Zone;
- The deposits in the North Central Zone, and
- Other Iron Ore deposits.

8.1.1 Central Zone

8.1.1.1 James Deposit

The James deposit is accessible by existing gravel roads and is located in Labrador approximately 3 km southwest of the town of Schefferville. The James deposit is a northeast dipping elongated iron enrichment deposit striking 330° along its main axis which appears to be structurally and stratigraphically controlled. The stratigraphic units recorded in the James mine area go from the Denault Formation to the Menihek Formation. The main volume of the ore is developed in the Middle Iron Formation (MIF), and lower portion of the Upper Iron Formation (UIF) both part of the Sokoman Formation.

The iron mineralization consists of thin layers (<10 cms thick) of fine to medium grained steel blue hematite intercalated with minor cherty silica bands <5 cms thick dipping 30° to 45° to the northeast. The James mineralization has been affected by strong alteration, which removed most of the cementing silica making the mineralization with a sandy friable texture.

The James property comprises three areas of mineral enrichment: the main deposit, a manganese occurrence and a minor and isolated Fe occurrence located ~150 meters south of the main deposit. Most of the resources come from the main deposit, which are of direct shipping quality. The main deposit has a total length of approximately 880 metres by 80 metres wide and 100 metres deep of direct shipping grade. It shows low grade in its central part defining two separated high-grade zones: the northern and southern zones.

Magnetic susceptibility of the iron in the James deposit measuring by using the KT-9 Kappameter in outcropping mineralization returned an average value of $1.2x10^{-3}$ SI units. The relatively low magnetic nature of mineralization found in the James deposit can be identified as magnetic lows due to the stronger magnetic nature of the surrounding rock.

8.1.1.2 Gill Mine

The Gill Mine is accessible by existing gravel roads and is located in Labrador approximately 3 km south-southwest of the town of Schefferville. The Gill Mine (also known as Ruth Lake 1) has approximately 1.6 km of strike. The mineralization is located along a steep dip slope along the west side of the Silver Yard Valley. It is described as a NW-SE trending homocline with concordant bands of Bessemer and non Bessemer mineralization. The mineralization is concentrated in the upper portion of the MIF (Middle Iron Formation). Several cross faults have been mapped along the deposit. Pods of manganiferous material have been noted near the northwest end of the deposit.

Despite being a former iron ore producer (1954-1957), LIM has currently very little mining data with which to verify the resources in this location.

8.1.1.3 Ruth Lake 8

The Ruth Lake 8 deposit is accessible by existing gravel roads and is located in Labrador approximately 6 km south-southwest of the town of Schefferville. Discovered in 1948, Ruth Lake 8 is 1.5 km SW of the Silver Yard/James Mine area. Ruth Lake No. 8 deposit is located on flat ground having an average elevation of 682 m (2270 ft.). The structure of Ruth Lake No. 8 is a faulted syncline the axis of which trends NW. Drilling in 1976 showed that in part of the deposit mineralization extends to a depth of up to 122 m (400 ft.). The deposit consists of more than 75% blue ore (Stubbins et al., 1961). A manganiferous resource was delineated by IOCC during their work in the area.

Prior to the closure of the IOCC mining operation in Schefferville the Ruth Lake 8 deposit was partially stripped of overburden in preparation for mining and three dewatering wells were installed.

8.1.1.4 Wishart 1 and 2

The Wishart 1 and Wishart 2 areas are accessible by existing gravel roads and lie 4 km to the southwest of the James Mine/Silver yard area. The Wishart 1 and 2 deposits were mined by IOCC early in their Schefferville mining program. In the process large tonnages of lean ore and treat rock were stockpiled for future consideration. LIM has commenced a program of documenting the grade and tonnage of treat rock that still remains in the area, focusing on two large piles that are located immediately to the southwest of the Wishart 1 pit.

In addition to the treat rock there are resources still remaining in the dormant open pits. Wishart 1 has a resource listed in historical records as 207 K tonnes grading 53.69% Fe and 12.17% SiO2. Wishart 2 resources are given as 554 K tonnes grading 52.02% Fe and 12.93% SiO2. The Wishart 2 property contains a Mn resource of 9 K tonnes grading 46.37% Fe, 4.93% SiO2 and 4.35% Mn.

Wishart 1 was located in a broad symmetrical syncline that plunges gently to the southeast. The deposit was known to have an overall length of nearly 762 m (2500 ft.), was hook-shaped in plan, and had a maximum width in the central part of 244 m (800 ft.). Ore extended 244 m (800 ft.) farther southeast in the east limb of the syncline than in the west limb and this extension was about 76 m (250 ft.) wide. More than 90% of the ore is of the blue variety with a high metallic lustre and a fairly granular texture.

8.1.1.5 Knob Lake 1

The Knob Lake 1 deposit is accessible by existing gravel roads and is located in Labrador approximately 3 km south of the town of Schefferville. The deposit is a northeast dipping ellipsoidal iron deposit with a direction of N330° in its main axis and it appears to be structurally and stratigraphically controlled. Despite the proximity of the deposit to James deposit, the mineralization in Knob Lake 1 is different. The deposit at Knob Lake is capped by a medium grade very hard siliceous hematite mineralization dipping 35° - 45° to the northeast. The high grade iron mineralization is concentrated at the end of a hill restricted between Knob and Lejuene Lakes which consists of thin banded hematite intercalated with layers of cherty silica <10 cms thick. The overall texture of the underlying mineralization is softer and moderately unconsolidated, similar to that in the Houston deposit (see Section 8.1.2.2).

8.1.2 South Central Zone in Labrador

8.1.2.1 Redmond

The Redmond deposits are located in Labrador approximately 12 km south-southwest of the town of Schefferville and can be reached by existing gravel roads. The Redmond iron deposits occur in a northwest trending synclinal feature that extends from the Wishart Lake area in the north to beyond the Redmond 1 pit in the south.

A lack of geological data from IOCC regarding the Redmond 2B property required an intense drill and trenching program in 2008 and 2009. Exploration and development at Redmond 2B is aided by the fact that IOCC stripped the overburden from their proposed open pit prior to their closing of the mines in 1982. There is historic IOCC data available for the Redmond 5 area such as drill logs, collar locations, assays and geological sections. Also a geological model showing geology, assays and ore body outline is in LIM's possession.

Redmond 2B:

The Redmond 2B enrichment occurs in a northwest trending synclinal feature. A northwest trending reverse fault that runs through the centre of the deposit appears to have thrust older rocks of the Wishart Formation over the younger Sokoman Formation. Smaller faults and folds occur on the limbs of the syncline.

The ore occurs predominantly within the lower half of the Sokoman Iron Formation (including the Ruth Formation). Ore is mainly red with lesser yellow. The red ore occurs in the Ruth Formation. The yellow ore occurs in the SCIF (silicate carbonate iron formation). Some blue ore does occur and is possibly part of the MIF (middle iron formation) or a blue component of the SCIF.

Redmond 5:

The Redmond 5 deposit is separated into three blocks by two major reverse faults striking in a north westerly direction (Daignault, 1976). The deposit occurs in the central block and consists of two second order synclines separated by an anticline (Orth, 1982a). Three northeast dipping normal faults occur along the south western side of the deposit. A normal sequence from Wishart Quartzite, Ruth Formation, SCIF (silicate carbonate iron formation), MIF (Middle Iron Formation) to UIF (Upper Iron Formation) occur in the deposit (Daignault, 1976). Ore occurs predominantly in the lower part of the MIF, the SCIF and some in the Ruth Formation.

8.1.2.2 Houston

The Houston property is located approximately 20 km southeast of Schefferville and can also be reached by existing gravel roads. The Houston project area is composed of three separate areas of iron enrichment that are referred to as Houston 1, Houston 2S and Houston 3 deposits. Iron ore of direct shipping quality extends NW-SE for 5 kilometers by 150 meters in its wider zone. The Houston iron deposits are stratigraphically and structurally controlled, and consist of hard and friable banded blue and red hematite that locally becomes massive. The airborne magnetometer survey suggests that the iron ore is concentrated along the west flank of a modest to strong magnetic feature, which trends approximately 330°. Houston 1 and Houston 2S are not coincident with the strong magnetic feature, due to the poor magnetic susceptibility of this type of mineralization. This was confirmed in the testing of hand specimens. No further description of this deposit is available in IOCC records; however, IOCC drilled and trenched the deposit for reserve and resource calculations.

Drilling by LIM carried out during the summer 2008 program indicates that the majority of mineralization in the Houston area occurs within the upper iron formation (UIF) and middle iron formation (MIF) with lesser amounts in the SCIF (silicate carbonate iron formation). The amount of red ore associated with the Ruth Formation appears to be minimal if not absent. Mineralization in several holes is found to terminate in a red chert, which may be the Lower Red Chert member that occurs at the boundary of the MIF and SCIF.

Striking northwest and dipping to the northeast both Houston 1 and 2 mineralization has been found to extend down dip to the northeast. These down dip extensions had not been tested by IOCC when the mining operations in the area ended. Drilling by LIM has intersected these extensions and at the moment the Houston 1 and 2 deposits are open down dip.

The Houston 3 deposit appears to be more vertical in nature and drill holes drilled off the east margin of the known deposit have not intercepted any eastward extensions. However, this deposit has yet to be tested to its maximum vertical depth.

Menihek Slate was encountered in drill chips (RC-HU011-2008) in the most southerly hole drilled on the Houston 3 property. At this location Menihek Slate has been thrust up and over the Sokoman Iron Formation. Cross sections of the Houston deposit dating from IOCC exploration indicate the presence of a reverse fault striking NW through the Houston 1 and 2S deposits.

8.1.3 North Central

8.1.3.2 Howse

The Howse iron deposit is located approximately 25 km northwest of the town of Schefferville and can be reached by existing gravel roads developed during the former IOCC operations. This iron occurrence was discovered in 1979 and was explored during the final days of IOCC operations in the area when IOCC geologists put the possibility of a deposit existing under the thick overburden forward in the 1960's. This deposit lies under 10 m to 40 m of overburden. In 1978 a gravimetric survey detected anomalies that were subsequently drilled to make the discovery. Trenching in the area between 1979 and 1982 failed to reach bedrock.

The Howse deposit was drilled by IOCC who reported about 110 reverse circulation (RC) drill holes. Details of analytical results and geology of Howse deposit are being subject of an ongoing compilation as of the date of this report. As of December 2009, 25 of the IOCC drill hole logs with assays have been reviewed. In addition to the IOCC drill results, LIM carried out two short RC drilling programs on the Howse property in 2008 and 2009 for a total of 7 holes for a total of 409 metres.

8.1.4 Other Iron Ore Deposits in Labrador

This section describes LIM properties that are predominantly composed of iron ore but do not fall into the above three categories of Central, South Central and North Central Zones.

8.1.4.1 Kivivic 1

Kivivic 1 is located some 43 km northwest of Schefferville and can be reached by gravel roads. It is located in a wide valley having an average elevation of 802 m (2630 ft.). The structure of Kivivic 1 is a faulted syncline. The average depth of the deposit was said to be 43 m (140 ft.) and the maximum depth greater than 61 m (200 ft.). The deposit consists of more than 75% blue ore that occurs predominantly in the MIF of the Sokoman Iron Formation (Stubbins et al., 1961).

8.1.4.2 Astray Lake

The Astray Lake deposit is approximately 50 km southeast of Schefferville and has currently no road access but can be reached by float plane or by helicopter. The Astray Lake occurrence is a northeast dipping undefined iron deposit located approximately 500m northeast from the eastern shore of Astray Lake and on the west side of a steeply sided NW-SE trending ridge. The occurrence occurs in iron formation in the south corner of the Petisikapau Synclinorium, a major structural feature of this part of the Labrador Trough.

The mineralization is localized in the Lower Sokoman Formation in the trough of a major north-plunging syncline. The surface outline of the occurrence has a northwest-southeast alignment consistent with the distribution of the iron formation generally located along the ridges. Some of the hematite jasper iron formation is brecciated and ore is developed where hard blue hematite cements this breccia or replaces silica in the banded iron formation. Ore is developed up to the top of this member along the contact with the overlying basalt flows.

The jasper iron formation is not highly metamorphosed and contains more than 40% Fe in the form of hard dense blue to dark grey-black hematite distributed in fine granular textured layers inter-banded with deep red jasper. The iron formation has been highly leached and secondarily enriched in martite, goethite and hematite (Wardle, 1979).

Due to the hard nature of the mineralized iron formation and its differential erosion with respect to other rock units, iron ore mineralization tends to be on or about the hilltops. Consequently it is believed that the Astray Lake mineralization will favor a significant amount of lump ore compared to the other "soft ore" deposits. The local stratigraphic units are dipping approximately between 30° and 40° to the northeast. Taking into consideration the previous characteristics, the most prospective areas for iron mineralization are the eastern hillsides along the Astray Lake Mountain, which was confirmed by the mineral occurrences identified so far.

8.1.4.3 Sawyer Lake

The Sawyer Lake deposit, approximately 65 km southeast of Schefferville, has currently no road access but can be reached by float plane or by helicopter. The Sawyer Lake mineralization is a medium-sized iron ore occurrence located approximately 1.6 km northwest of Sawyer Lake. The mineralization occurs in iron formation in the south corner of the Petisikapau Synclinorium.

Cross-sections outlining the mineralization, show that it has an inverted "V" shape or saddle reef-like structure, suggesting that hematite enrichment followed bedding over the crest of the small anticline. Some of the hematite jasper iron formation is brecciated

The general geological sequence of this occurrence is high grade massive blue hematite on top of medium grade banded iron formation, which is over top of low grade banded iron formation where yellow ore begins to show up. Specular martite grains show up within the massive blue hematite zones.

The Sawyer Lake iron deposit does not fit the two most common models for iron formation in the Labrador Trough. It differs from the Knob Lake deposits in that the ore is very hard dense blue hematite with practically no goethite present. Silica is replaced in many places with very little porosity or friability developed in the iron formation and the effects of oxidation are not conspicuous in either the iron formation or adjacent rocks.

The deposit lacks sulphur and magnetite, indicating that there was little mineralogical disturbance after deposition.

8.2 Manganese Deposits

The manganese deposits in the Schefferville area were formed by residual and second stage (supergene) enrichment that affected the Sokoman (iron) Formation, some members of which contain up to 1% Mn in their unaltered state. The residual enrichment process involved the migration of meteoric fluids circulated through the proto-ore sequence oxidizing the iron formation, recrystallizing iron minerals to hematite, and leaching silica and carbonate. The result is a residually enriched iron formation that may contain up to 10% Mn. The second phase of this process, where it has occurred, is a true enrichment process (rather than a residual enrichment), whereby iron oxides (goethite, limonite), hematite and manganese are redistributed laterally or stratigraphically downward into the secondary porosity created by the removal of material during the primary enrichment phase.

Deposition along faults, fractures and cleavage surfaces, and in veins and veinlets is also seen, and corroborates the accepted belief that the structural breaks act as channel-ways for migrating hydrothermal fluids causing metasomatic alteration and formation of manganiferous deposits. All the manganese occurrences in the Labrador Trough are considered to have been deposited by the processes described above.

The Manganese Ore deposits have been subdivided in the same format that form part of the LIM project are further subdivided into the same zones as the iron deposits.

8.2.1 North Central

8.2.1.1 Ruth Lake (Manganese)

The Ruth Lake (Manganese) deposit is accessible by existing gravel roads and is located in Labrador approximately 6 km south-southwest of the town of Schefferville. Located immediately to the west of the Gill Mine and Silver Yard area the Ruth Lake (Manganese) property covers an area 2.5 km long by 200 m wide that trends NW/SE. Up to 2009 seven manganese showings have been documented by previous claim holders. From northwest to southeast these are the Ruth Lake A, B & C showings, Dry Lake, Ryan, Dannick and in the south the Avison Showing.

Ruth A, B & C

The Ruth A, B and C occurrences are NE-plunging lenses of massive manganese mineralization hosted in a fault gouge consisting of altered quartzites and chert breccias of the Wishart and Fleming formation respectively. The Ruth B and C deposits are northwest extensions to the Ruth A deposit. The Ruth A occurrence is interpreted as a pinch-and-swell structure, 450 ft (=137 m) along strike, with a maximum thickness of 20 ft (=6 m). The Ruth B occurrence is

300 ft (=91 m) northwest of Ruth A and is completely hosted within Fleming Formation chert breccia. The Ruth C deposit is 220 ft (= 67 m) north of Ruth B and is recognized over a length of 600 ft (= 183 m) , after which it is covered by the Ruth iron mine waste pile. The mineralized zone, which has a maximum reported thickness is 110 ft (=34 m), is hosted entirely by altered, Fleming Formation chert breccia.

Dry Lake:

Located 500 metres southeast of the Ruth A occurrence of manganese enrichment in the Dry Lake deposit is reported to occur in Wishart Formation quartzites and Fleming Formation cherts. The Wishart Formation quartzite in this area is highly leached by ground water and appears as friable and unconsolidated sand and muddy soils with lenses of the remaining original rock.

Ryan:

The Ryan manganese showing comprises two manganese lenses hosted by the Sokoman Formation (iron formation) and Wishart Formation (quartzite). Manganese mineralization occurs as 0.5 to 25 cm thick veins, cavity fillings and fine grained disseminations. The occurrence covers approximately 15,000 m^2 in the centre of the Property. According to La Fosse, Lens 1 (560 ft x 30 ft = 171 m x 9 m) contains up to 25% Mn, with Mn:Fe ratios around 1.0, whereas Lens 2 (600 ft x 30 ft = 183 m x 9 m) contains 16.2% Mn and 10.7% Fe. The two zones are separated by approximately 30 ft (9 m) of barren, fault-gouge material.

Dannick:

A recent discovery (MRB, 2008) this newly exposed zone of manganese mineralization occurs some 200-300 metres northwest of the Avison occurrence along the trace of the central thrust fault that transects the Property, and in close proximity to the Sokoman-Ruth Formation contact. This property is now in an early phase of exploration.

Avison:

The Avison occurrence covers an area of 2000 m^2 near the south end of the known zone of manganese enrichment. It is hosted by the silicate-carbonate iron formation of the Sokoman Formation, just above Ruth Formation slates. It is interpreted to have formed by an in situ enrichment of a manganese-rich iron formation. Previous work returned values of up to 42% Mn from grab samples, whereas channel samples from across the showing ranged from 15% to 25% Mn. The location of these showings along the same fault zone as the Ruth and Ryan manganese occurrences is noteworthy.

8.2.1.2 Wishart 2

The Wishart 1 and Wishart 2 area lies 4 km to the southwest of the James Mine/Silver yard area. The Wishart 1 and 2 deposits were mined by IOCC early in their Schefferville mining program. As described in Section 8.1.1.4 the Wishart 2 property contains a manganese resource of 9,000 tonnes grading 46.37% Fe, 4.93% SiO_2 and 4.35% Mn.

8.2.1.3 Christine

The Christine deposit is accessible by existing gravel road, and are located 11 km from northwest of the town of Schefferville. This property is located 10 km northwest of the James Mine area along the Labrador-Quebec border. This property is an exploration project centered on the Christine 1B and 1C manganese showings. These showings are noted on IOCC resource maps of the Schefferville area and LIM is in the early phases of an exploration program to access resources in the area.

8.2.1.4 Timmins Area

The Timmins area is accessible by existing gravel road, and it is located 11km northwest of the town of Schefferville. LIM is exploring a group of claims in the Howse/Timmins area. These 4 claim groups cover the Elross 3, Timmins 5, Timmins 6 and Irony Mountain properties.

Elross 3 and Timmins 5 properties were explored by IOCC and iron and manganese occurrences were noted. This historical work did not progress beyond an early exploration phase and no resources are listed in the 1982 IOCC Resource Inventory. There is very little data available describing the deposits of these properties.

The **Timmins 6** property was mined by IOCC and LIM is interested in the Mn resources contained in stockpiles adjacent to the old open pits. During 2009 field prospecting work began on Timmins 5 and Elross 3. Although Timmins 6 and Elross 3 are located within the North Central Zone they are grouped into this category because they are part of the same property.

8.2.1.5 Abel Lake 1

Abel is currently accessible by ATV and is located in Labrador approximately 7 km south-southeast of the town of Schefferville. The Abel area was first prospected by LM&E and its location is noted on IOCC maps. Little to no information dating from this time is available. In 1989 La Fosse carried out field work on the Abel occurrence as part of their manganese exploration program. More recently in 2008 the previous property owner Gravhaven Ltd. (“Gravhaven”) carried out a sampling program on this prospect.

The occurrence lies on the east shore of Abel Lake and is underlain by bedrock of the Wishart Formation and Sokoman Iron Formation (the Ruth Formation is considered to be the basal unit of the Sokoman Iron Formation). The strike of the bedrock in the area is consistent with the north-westerly strike of the region. Dip varies from 20 degrees to 70 degrees to the east. A dextral cross fault occurs in the northern area of the prospect.

The Wishart formation occurs on the west side of the prospect and consists of massive fine grained quartz sandstone. This unit is overlain by the Sokoman Formation and it is in this unit that the manganese enrichment occurs.

The manganese enrichment occurs in two zones. In the western area it occurs between the Ruth Formation and the overlying Iron formation. In this zone manganese occurs as lenses varying from a few cm to 1.0 m in width. Manganese veinlets are noted to crosscut bedding. This zone varies from 3 to 30 metres width and is mapped over a strike of 200 m. Channel samples taken by La Fosse in 1989 ranged from 5% Mn to 38% Mn.

The eastern zone of manganese enrichment averages 15 m width and is exposed over a strike length of 240 m. manganese occurs in lenses ranging from 2 cm to 1.5 m. Channel samples taken by La Fosse returned grades of 45 to 23% Mn. Again veinlets of manganese are noted to crosscut bedding.

9.0 Mineralization (Item 11.0)

9.1 Iron Ore

The earthy bedded iron deposits are a residually enriched type within the Sokoman iron formation that formed after two periods of intense folding and faulting, followed by the circulation of meteoric waters in the fractured rocks. The enrichment process was caused largely by leaching and the loss of silica, resulting in a strong increase in porosity. This produced a friable, granular and earthy-textured iron ore. The siderite and silica minerals were altered to hydrated oxides of goethite and limonite. The second stage of enrichment included the addition of secondary iron and manganese which appear to have moved in solution and filled pore spaces with limonite-goethite. Secondary manganese minerals, i.e., pyrolusite and manganite, form veinlets and vuggy pockets. The types of iron ores developed in the deposits are directly related to the original mineral facies. The predominant blue granular ore was formed from the oxide facies of the middle iron formation. The yellowish-brown ore, composed of limonite-goethite, formed from the carbonate-silicate facies, and the red painty hematite ore originated from mixed facies in the argillaceous slaty members. The overall ratio of blue to yellow to red ore is approximately 70:15:15. The proportion of each varies widely within the deposits.

Only the direct shipping ore is considered beneficiable to produce lump and sinter feed and will be part of the resources for the LIM project. The direct shipping ore was classified by IOCC in six categories based on their chemical, mineralogical and textural compositions. This classification is shown in Table 9-1.

Table 9-1
Classification of Iron Ore Types

Schefferville Ore Types (From IOCC):					
TYPE	**ORE COLOURS**	**T_Fe%**	**T_Mn%**	**T_Si%**	**T_Al2O3%**
NB (Non-bessemer)	Blue, Red, Yellow	>=55.0	<3.5	<10.0	<5.0
LNB (Lean non-bessemer)	Blue, Red, Yellow	>=50.0	<3.5	<18.0	<5.0
HMN (High Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50.0	>6.0	<18.0	<5.0
LMN (Low Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50.0	3.5-6.0	<18.0	<5.0
HiSIO2 (High Silica)	Blue	>=50.0		18.0-30.0	<5.0
TRX (Treat Rock)	Blue	40.0-50.0		18.0-30.0	<5.0
HiAl (High Aluminium)	Blue, Red, Yellow	>=50.0		<18.0	>5.0
Waste	All material that does not fall into any of these categories.				

The blue ores, which are composed mainly of the minerals hematite and martite, are generally coarse grained and friable. They are usually found in the middle section of the iron formation.

The yellow ores, which are made up of the minerals limonite and goethite, are located in the lower section of the iron formation in a unit referred to as the "silicate carbonate iron formation" or SCIF.

The red ore is predominantly a red earthy hematite. It forms the basal layer that underlies the lower section of the iron formation. Red ore is characterized by its clay and slate-like texture.

Direct shipping ores and lean ores mined in the Schefferville area during the period 1954-1982 amounted to some 150 million tons. Based on the original ore definition of IOCC (+50% Fe <18% SiO_2 dry basis), approximately 200 million tonnes of iron resources remain in the Schefferville area, exclusive of magnetite taconite. LIM has acquired rights to approximately 50% of this remaining iron resource in Labrador.[2].

9.2 Manganese Ore

For manganese to be mined economically, there will be a minimum primary manganese content required at a given market price (generally greater than 5% Mn), but also the manganese oxides must be amenable to concentration (beneficiation) and the resultant concentrates must be low in deleterious elements such as silica, aluminium, phosphorus, sulphur and alkalis. Beneficiation involves segregating the silicate and carbonate lithofacies and other rock types interbedded within the manganese-rich oxides.

The principle manganese deposits found in the Schefferville area can be grouped into three types:

- manganiferous iron deposits that occur within the lower Sokoman Formation. These are associated with in-situ residual enrichment processes related to downward and lateral percolation of meteoric water and ground water along structural discontinuities such as faults and fractures, penetrative cleavage associated with fold hinges, and near surface penetration. These typically contain from 5-10 % Mn.
- ferruginous manganese deposits, which generally contain 10-35% Mn. These types of deposits are also associated with structural discontinuities (e.g., fault-, well developed cleavage-, fracture-zones) and may be hosted by the Sokoman (iron) Formation (e.g., the Ryan, Dannick and Avison

[2] These numbers are based on historic estimates made in compliance with the standards used by IOCC described in Section 17 of this report.

deposits), or by the stratigraphically lower silica-rich Fleming and Wishart formations (e.g. the Ruth A, B and C deposits). These are the result of residual and supergene enrichment processes;

- so called manganese-occurrences or manganese-ore deposits contain at least 35% Mn. These deposits are the result of secondary (supergene) enrichment and are typically hosted in the Wishart and Fleming formations, stratigraphically below the iron formation.

10.0 Exploration (Item 12.0)

10.1 Past Exploration

In 1929, a party led by J.E. Gill and W.F. James explored the geology around present day Schefferville, Quebec and named the area Ferrimango Hills. In the course of their field work, they discovered enriched iron-ore, or “direct-shipping ore” deposits west of Schefferville, which they named Ferrimango Hills 1, 2 and 3. These were later renamed the Ruth Lake 1, 2 and 3 deposits by J.A. Retty.

In 1936, J.S. Wishart, a member of the 1929 mapping expedition, mapped the area around Ruth Lake and Wishart Lake in greater detail, with the objective of outlining new iron ore occurrences.

In 1937, W.C. Howells traversed the area of the Ruth Lake Property as part of a watercourse survey between the Kivivic and Astray lakes – now known as Howells River.

In 1945, a report by LM&E describes the work of A.T. Griffis in the “Wishart – Ruth – Fleming” area. The report includes geological maps and detailed descriptions of the physiography, stratigraphy and geology of the area, and of the Ruth Lake 1, 2 and 3 ore bodies. Griffis recognized that the iron ore unit (Sokoman Formation) was structurally repeated by folding and faulting and remarked that “The potential tonnage of high-grade iron deposits is considered to be great.”

Most exploration on the properties was carried out by the IOCC from 1954 until the closure of their Schefferville operation in 1982. Most data used in the evaluation of the current status provided in the numerous documents, sections and maps produced by IOCC or by consultants working for them.

In 1989 and 1990, La Fosse and Hollinger undertook an extensive exploration program for manganese on 46 known occurrences in the Schefferville area, including those on the Ruth Lake Property, divided at the time into Ruth Lake prospects, Ryan showing and Avison showing.

Work performed during the summer and fall of 1989 consisted of geological mapping, prospecting and sampling, airtrac drilling (26 holes totalling 478 ft = 146 m), and a VLF ground geophysical survey. Also in 1989, the La Fosse Platinum Group carried out exploration on the Ryan manganese showing. Work consisted of stripping and trenching (12 trenches totalling 1970 ft = 601 m), chip sampling and airtrac drilling (25 holes) coupled with sampling of cuttings. In addition, an 1,800 ton bulk sample was obtained and stockpiled for analysis. Nineteen representative samples were taken from the bulk sample stockpile and yielded an average of 23.1% Mn and 20.4% Fe (see Geofile 23J/15/0277).

In 1990, La Fosse returned to the Ryan manganese showing to continue exploration. Their work further defined the two manganese lenses into Zone 1 (560 ft x 30 ft = 171 m x 9 m) containing up to 25% Mn with Mn: Fe ratios around 1.0 and, Zone 2 (600 ft x 30 ft = 183 m x 9 m) containing 16.2% Mn and 10.7% Fe. The two zones are separated by approximately 30 ft (9 m) of barren, fault-gouge material.

Work consisted of stripping and trenching (14 trenches totalling 1600 ft = 488m), 3 diamond-drill holes (447 ft = 136 m), and 4 airtrac drill holes (97 ft = 30 m) with simultaneous sampling of cuttings. In addition, another 400 tons of manganese "ore" was mined and added to the 1800 ton stockpile from the previous year. The average grade of the 400 ton addition was 18.8% Mn and 24.2% Fe, whereas the average grade for the 2200 ton bulk sample was 22.3% Mn and 21.1% Fe.

During 1990, Hollinger investigated and named the Avison manganese showing (Geofile 23J/15/0290), located 1.5 miles (2.4 km) southeast of the Ruth deposit and along the same fault zone as the Ruth and Ryan deposits. Work consisted of geological mapping and sampling, stripping and trenching totalling ~150 ft (46 m), and airtrac drilling totalling 125 ft (38 m) with concomitant sampling. Selected samples from the zone returned values of up to 42% Mn, whereas channel samples from across the showing ranged from 15% to 25% Mn. It's location along the same fault zone as the Ruth and Ryan deposits were noteworthy to the project geologist.

A large part of Hollinger's efforts in 1990 were devoted to the Ruth Lake deposit(s). Work included detailed geological mapping, trenching, sampling, airtrac drilling (5 holes) with concurrent sampling, and diamond drilling (21 holes totalling 2393 ft = 729 m) that outlined two new deposits: Ruth B and Ruth C.

During the summer and autumn of 2008, an exploration program of prospecting, trenching and diamond-drilling was completed by Gravhaven on their mineral concessions in the Schefferville Iron District (SID) of Labrador and Quebec. The program and results have been reported in the Work Assessment Report by MRB & Associates ("MRB") (October 30th, 2009).

A total of 42 trenches totalling 1,672 metres were excavated, and 1,042 grab and 35 core samples from 8 drill holes were obtained and assayed from 10 of Gravhaven's mineral concessions in the SID. Trenches were excavated on a large number of their properties. A local contractor was hired to excavate the trenches, which ranged from 0.5 to 2.5m in depth, and all trenches were mapped. The diamond drill program was comprised 8 holes (345.5 metres) drilled on the Ruth Property in October 2008. The intent of this sampling program was to quantify the manganese content of different mineralized areas underlying Gravhaven's property holdings throughout the Schefferville area. GPS northings and eastings were taken at each sample location. The goals of Gravhaven's exploration campaign were two-fold:

- to re-evaluate the previous trenching and mapping campaign completed by La Fosse during the late 1980's and early 1990's and to authenticate their results, and
- to locate new manganese-rich mineralized zones underlying their mineral claims in the SID.

10.2 LIM Exploration from 2005 - 2007

2005 - Three geologists travelled to Schefferville to start the exploration and reconnaissance program over the properties held by Energold and those held by Fenton Scott and Graeme Scott, among them the Sawyer Lake claims. The crew flew in to the Sawyer Lake property and spent 9 days in the properties surveying the old workings (trenches, pits and drill holes), prospecting, mapping and collecting rock samples. A total of 18 rock samples, 6 composite and 12 from trenches, and 1 from drill cuttings (hole RX-1083) were also collected from the James deposit for the sole purpose of grade verification with respect to historical data. Iron grades varied from 49.69% Fe (James) to 66.77% Fe (Knob Lake). Surface rock sampling in the James deposit was intended for confirmation purposes. Results obtained were as expected being similar to those reported by the IOCC.

2006 - The diamond drill program totalled 605 metres in 11 holes completed between July 21st and August 26th of 2006 on the James, Knob Lake No.1, Houston and Astray Lake deposits using Cartwright Drilling Inc. of Goose Bay, Labrador. Also, a short program of bulk sampling was carried out in 2006 consisting of 188 metres of trenching for bulk sampling that was completed in two stages; the first at Houston deposit (75 m) conducted between August 22nd and 24th and the second one at James deposit (113 m) conducted between September 29th and October 2nd of 2006.

2007 – The exploration program for 2007 ran from September 20th until October 5th. The crew spent 5 days in Sawyer Lake between September 25th and September 30th and 4 days in Astray Lake between September 30th and October 3rd of 2007 prospecting and trenching. The company contracted the services of local labour through the Public Works division of the Naskapi Band in Kawawachicamach. The results of the exploration program of bulk sampling trenching and the drilling program carried out by LIM in 2006 were reported in the Technical Report dated October 10th, 2007.

A summary of the drilling program has been shown in Section 11.0.

A summary of the bulk sampling and trench sampling of 2006 is shown in Table 10-1 for the Houston Deposit and in Table 10-2 for the James Deposit.

Table 10-1
Trench Sample Results – Houston 1 Deposit

From (m)	To (m)	Len (m)	Fe%	SiO_2%	Ore Type
0.00	26.00	26.00	66.14	1.39	NB
26.00	50.00	24.00	60.50	6.82	NBY
50.00	69.00	19.00	59.26	11.57	LNB
69.00	75.00	6.00	44.52	34.07	TRX

Table 10-2
Trench Sample Results – James Deposit

From (m)	To (m)	Len (m)	Fe%	SiO_2%	Ore Type
0.00	12.50	12.50	15.67	72.30	HIS
12.50	21.80	9.30	34.05	45.21	NBY
36.30	52.30	16.00	35.84	45.15	LNB
52.30	88.30	36.00	62.93	6.44	NB
88.30	113.30	25.00	54.56	16.81	TRX

10.3 2008 and 2009 Exploration

LIM continued its exploration program on the properties in the Schefferville area during 2008 and 2009.

10.3.1 2008 Program

In addition to the drilling program (See Section 11.0) LIM selected Eagle Mapping Ltd of Port Coquitlam, BC to carry out an aerial topographic survey flown over their properties in the Schefferville Area covering a total of some 16,230 ha and 233,825 ha at a map scale of 1:1000 and 1:5000 respectively. Using a differential GPS (with an accuracy within 40 cm) LIM surveyed their 2008 RC drill holes, as well as the trenches and a total of 90 old IOCC RC drill holes that were still visible and could be located.

Because the proposed mining of the properties was to start with the James and Redmond deposits a trenching program was initiated on these properties to better define the extent of the mineral zones. In addition to the 113 metres long trench excavated in 2006, LIM developed 5 trenches (for a total of 333.82 metres) on the James property, 3 trenches (for a total of 348.02 metres) on

Redmond 2B property and 4 trenches (for a total of 252 metres) on the Redmond 5 property.

During the IOCC exploitation of the Redmond and Wishart properties the then sub-economic "Treat Rock" and waste was stockpiled. LIM carried out a sampling program with test pits that were excavated (and RC drilled see Section 11.0) and sampled. A total of 117 test pits were excavated on the Redmond property and 41 on the Wishart property. The results of these tests were not used in the resource estimates.

A bulk sampling program was carried out with material from the James, Redmond, Knob Lake and Houston deposits. A total of 1,400 tonnes of blue ore was excavated from the James South deposit, 1,500 tonnes of blue ore from the Redmond 5 deposit, 1,100 tonnes of red ore from the Knob Lake deposit and 1,900 tonnes of blue ore from the Houston deposit.

The material was excavated with a T330 backhoe and/or a 950G front end loader and loaded into 25 ton dump trucks for transport to their individual stockpiles at the Silver Yard area where the crushing and screening activities were carried out. The samples were crushed and screened to produce two products:

- Lump Ore (-50 mm + 6 mm)
- Sinter Fines (- 6 mm)

Representative samples of 200 kg of each raw ore type were collected and sent to SGS Lakefield laboratories for metallurgical test work and assays. Representative samples of 2 kg of each product were collected and sent to SGS Lakefield laboratories for assays. Other samples were collected for additional screening tests. Five train cars were used for the transport of the samples to Sept-îles, the rest of the sample material remained at the Silver Yard.

10.3.2 2009 Program

In addition to the drilling program (See Section 11.0) LIM used a differential GPS (with an accuracy within 40 cm) to survey their 2009 RC drill holes, trenches as well as any old IOCC RC drill holes or survey markers that were still visible and could be located.

The 2009 trenching program focused on the Redmond 2B, Redmond 5 and Houston 3 properties. Between May 25th and November 1st of 2009 a total of 1,525 metres of trenching were excavated. LIM developed 8 trenches (for a total of 439 metres) on the Houston 3 property, 5 trenches (for a total of 294 metres) on Redmond 2B property, 4 trenches (for a total of 189 metres) on the Redmond 5 deposit and 14 trenches (for a total of 603 metres) on the Gill Mine property.

The information obtained from this and the 2008 exploration program was intended for the confirmation and validation of the resources reported by IOCC, making them NI-43-101 compliant. For this purpose, LIM retained SGS Geostat for the preparation of the mineral resource evaluation of the James, Redmond 2B and Redmond 5 deposits. The results of this evaluation are shown in Section 17.0.

LIM has expended approximately $17.5 million on exploration and development of the properties between 2005 and 2009.

11.0 Drilling (Item 13.0)

Diamond drilling of the Schefferville iron deposits has been a problem historically in that the alternating hard and soft ore zones tend to preclude good core recovery. Traditionally IOCC used a combination of reverse circulation (RC) drilling, diamond drilling and trenching to generate data for reserve and resource calculation. A large number of original IOCC data have been recovered and reviewed by LIM and are included in the data base that is used for the estimation of the resources.

LIM carried out exploration drilling programs in 2006, 2008 and 2009. The first year (2006) a total of 605 metres were completed in 11 diamond drill holes on the various properties.

In 2008 LIM used a RC drill rig(s) from Forages Cabo of Montreal. Cabo's RC rigs provide LIM with accurate geological information without fluid or cutting loss. Cabo's RC drills include the Acker long stroke drills which, when mounted on one of the Flex Trac Nodwell carriers or Fly skids, provides LIM with highly mobile and stable drilling platforms with very small environmental footprints. LIM's drill rigs from Cabo are outfitted with a sample cyclone, housed within the drill enclosure, the drills allow the driller and the geologist to coordinate the production and collection of samples efficiently and cost effectively.

Up to two helicopters (Heli Boreal of Sept Isles, QC) were used to support the drill program on the Sawyer Lake and Astray Properties. The helicopter also supported a regional survey dedicated to laying markers for the air photo survey (see Section 10.3.1).

In 2008, 10 diamond drill holes were drilled for a total of 552 metres. The majority of the drilling program was carried out with RC drilling namely 69 RC holes for a total of 4,095 metres. In 2009 only RC drilling was carried out in 72 drill holes for a total of 4,753 metres.

Tables 11-1 to 11-3 show the various drilling programs the results of which were included in the LIM database for the resource estimations.

Table 11-1
2006 - Drilling Program - (Diamond Drilling)

Property	Type	Holes	Length (m)
James	DD	2	29
Houston (1,2S,3)	DD	5	253
Astray Lake	DD	3	279
Knob Lake	DD	1	44
Total		**11**	**605**

Table 11-2
2008 - Drilling Program - (RC and Diamond Drilling)

Property	Type	Holes	Length (m)
James	RC	14	870
Redmond (2B, 5, TRX*)	RC	31	1587
Houston (1,2S,3)	RC	12	791
Astray Lake	RC	1	132
Knob Lake	RC	9	612
Howse	RC	2	103
Sawyer Lake	DD	10	552
Total		**79**	**4,647**

* TRX are drill holes to sample “Treat Rock” stock pile (4 holes)

Table 11-3
2009 - Drilling Program - (RC Drilling)

Property	Type	Holes	Length (m)
James	RC	5	333
Redmond (2B, 5)	RC	14	639
Houston (1,2S,3)	RC	43	3114
Knob Lake	RC	5	271
Howse	RC	5	396
Total		**72**	**4,753**

12.0 Sampling Method and Approach (Item 14.0)

The Sampling Method and Approach described in this section are a résumé of the more detailed Section 12.0 - Sampling Method and Approach (Item 14.0) of the technical report entitled: *Technical Report Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits Located in Labrador, Canada for Labrador Iron Mines Ltd, SGS Geostat Ltd., dated 18th December, 2009. Written by Maxime Dupéré geo.*

During the time that IOCC operated in the area, sampling of the exploration targets were by trenches and test pits as well as by drilling. In the test pits and trenches geological mapping determined the lithologies and the samples were taken over 10 feet (3.0 metres). The results were plotted on vertical cross sections. No further information was provided regarding the sampling procedures followed by IOCC but verbal information from consultants, former IOCC employees and others suggests that the procedures used by LIM were similar to IOCC's during its activities in the Schefferville area.

LIM followed industry sampling standards and protocols for exploration. Sealed boxes and sample bags were handled by authorized personnel and sent to the preparation lab in Schefferville. RC sampling was done on site at the drill site and at the preparation laboratory in Schefferville. Logging was carried out at the preparation laboratory in Schefferville by LIM geologists.

During the 2008 Field Season a sample preparation laboratory was installed in Schefferville and was operated by SGS Geostat. In addition to the preparation laboratory personnel, SGS Geostat provided a geologist and two geo technicians to perform sampling duties on one of the two rigs utilized for the drill program. While SGS Geostat staffed one of the rigs, the second rig followed sampling procedures as outlined by them and SGS Geostat monitored and supervised the second rig which was manned by LIM personnel. As soon as samples were delivered to the Schefferville preparation laboratory, they fell under the responsibility of SGS Geostat. The sampling procedures outlined below were designed and formulated by SGS Geostat.

RC Drilling was carried out by two reverse circulation drill rigs from Cabo Drilling of Montreal, Quebec. The RC rigs used a 75mm ($2^{7/8}$ inch) rod mounted RC tricone where water was injected from the sides of the bit and water and drill cuttings returned via an inner tube along the centre of the drill rod. Once at the surface, the cuttings entered a cyclone where the water and cuttings exited from the bottom and air through the top of the cyclone.

LIM sampled the entire length of the RC drill holes of the 2008 RC drilling campaign. The average length of the RC samples was 3 m. A description of the cuttings was made at every meter drilled. A representative small fraction of the cuttings was placed in a plastic chip tray for every metres drilled. The chip trays were labeled with Hole ID and the interval represented in each compartment. The metres drilled with no recovery were marked with an X inside the chip tray compartment. LIM geologists made descriptions of the cuttings after the contents were dried.

12.1 RC Sample Size Reduction (2008)

In order to reduce the size of the sample at the RC drill site to approximately 7.5 kg, the drill cuttings were split 4 ways after leaving the cyclone, during the 2008 drilling programme.

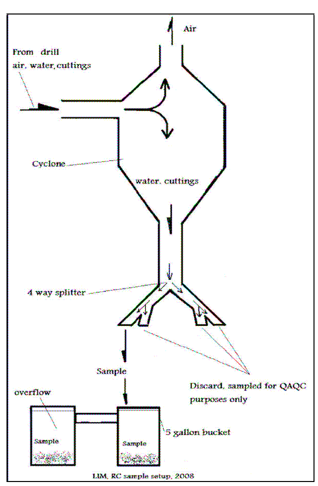
The cuttings from 3 of the exit ports were discarded and the cuttings from the 4th port were collected in a 5 gallon bucket. As part of the QA/QC program the cuttings from three of the four ports were routinely sampled (see Section 14.0). Once the bucket was full, a pipe mounted near the rim directed the overflow into a second 5 gallon bucket.

The water in the second bucket allowed the fines to settle out. When the 3 m sample was complete, both buckets were removed and allowed to stand to allow further settling of fines. The contents were then decanted to labeled plastic sample bags. Normally all the water that was collected in the buckets was included in the sample bags that were to be sent to the onsite sample preparation lab. This served as a further guarantee that fines were not being lost in the drilling/sampling process.

At this point the sample would be taken by truck directly to the preparation lab in Schefferville under supervision of SGS Geostat. Upon arrival at the Sample Preparation Lab in Schefferville, all samples (core or RC) came under the care of SGS Geostat personnel.

Figure 12-1 - RC Size Reduction and Sampling Method

(used in the 2008 drilling Program)



12.2 Rotary Splitter RC Sample Size Reduction (2009)

In the 2009 RC drill program, drill cuttings were split with a rotary splitter mounted directly under the cyclone. The Rotary splitter is divided into pie shape spaces and is equipped with a hydraulic motor. The speed of the rotation of the splitter and the closing of the pie shape spaces was set in order to have a 7.5-10 kg sample from the 3 m rod sample. Cuttings from the remaining material were discarded on site. As part of the QA/QC program the cuttings from the remaining discarded material were routinely sampled (see Section 14.0).

Upon arrival at the Sample Preparation Lab in Schefferville, all samples (core or RC) came under the care of LIM personnel. The use of the rotary splitter sampling system demonstrated efficacy, therefore LIM decided to continue its use in future programs.

12.3 2006, 2008 and 2009 Trench Sampling

In 2006, 2008 and 2009 trenches were dug in in several properties for resource estimations and ore body surface definition. The trenches were excavated with a Caterpillar 330 excavator with a 3-yard bucket. The excavator was able to dig a 1m-wide trench with depths down to 3 m, which was enough to penetrate the overburden.

Trenches were sampled on 3 m intervals with the sample considered to be representative of the mineral content over that interval. After cleaning off the exposure, samples were collected from the sides of trenches. Samples were collected with a small rock pick along a line designated by the supervising geologist. In most cases the material being sampled was soft and friable.

13.0 Sample Preparation, Analysis and Security (Item 15.0)

The Sample Preparation. Analysis and Security described in this section are a résumé of the more detailed Section 13.0 – Sample Preparation, Analysis and Security (Item 15.0) of the technical report entitled: *Technical Report Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits Located in Labrador, Canada for Labrador Iron Mines Ltd, SGS Geostat Ltd., dated 18th December, 2009. Written by Maxime Dupéré geo.*

The sample procedures described by SGS Geostat and detailed below appear to be in accordance with standard industry practices and therefore reliable. The described procedure standardized the preparation and reduction methods of samples obtained during the 2008 and 2009 RC drilling campaign in the sample preparation laboratory established by LIM in Schefferville.

SGS Geostat did not possess the IOCC sampling procedures but verbal information from former employees and drillers, lets them believe that the below described procedure is similar to that used by IOCC during their activities in Schefferville. Selected sample results were used for the geological modeling and resources estimation of the different mineral deposits. The relevant sample results and sample composites used for the resources estimation are described in section 17.0.

13.1 Sample Preparation and Size Reduction in Schefferville

13.1.1 2008

The sample preparation and reduction was done at the preparation lab in Schefferville that was operated by SGS Geostat personnel, in a secure building. In addition to the preparation lab personnel, SGS Geostat provided a geologist and two geo technicians to perform sampling duties on one of the two rigs utilized for the drill program. This procedure was implemented in order to facilitate the shipping and analysis to the SGS-Lakefield laboratory in Ontario.

The vast majority of samples have a width of 3 m that equaled the drill rod length. As soon as samples were delivered to the Schefferville preparation lab, they fell under the responsibility of SGS Geostat. The sampling procedures were designed and formulated by SGS Geostat. These procedures were followed in the preparation laboratory of Schefferville, Quebec. Note that samples obtained from RC drills were wet. All samples were dried and reduced correctly for analyses and then sent to SGS-Lakefield in Ontario.

13.1.2 2009

The same 2008 procedures for sample preparation and reduction were carried out in the preparation lab but LIM personnel operated the lab in the same secure building in Schefferville. LIM had a lab supervisor and well trained geo technicians to perform the sampling duties on the two rigs utilized for the drill program. The sampling procedures were the same as those designed and formulated by SGS Geostat for 2008. Some later improvements were made to the procedures but overall they followed SGS guidelines. These procedures were followed in the preparation laboratory of Schefferville, Quebec. Note that samples obtained from RC drills were wet. All samples were dried and reduced correctly for analyses and then sent to Actlabs in Ontario.

13.2 Arrangement of Samples at the Schefferville Preparation Laboratory

All sample bags that arrived in the preparation laboratory were displayed in a sequential and ordered way in a designated area.

13.2.1 2008 and 2009 Sample Preparation

At the end of every shift, the samplers and geologist delivered the samples to the preparation laboratory. Sample bags were placed in sequential order on a draining table and a “Sample Drop Off” form was completed noting the date, time, person, number of samples and sample sequence. These bags were left over night, so that the fine material could settle to the bottom of the sample bag.

After leaving the samples for 12 hours, excess water was drained out.

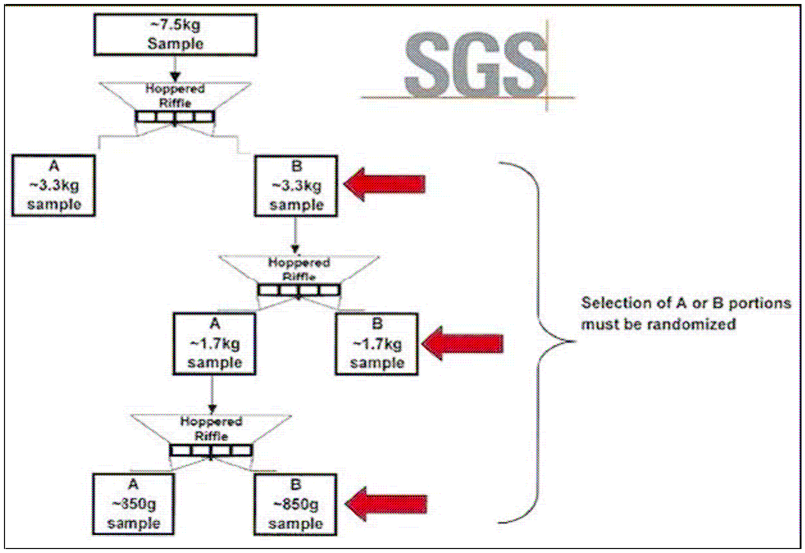
Sample bags were then emptied into metal pans and samples were spread uniformly. Each sample was weighed wet, and the weight as well as the sample number was recorded on the drying form. The metal pans were placed in ovens in a sequential and orderly way. A drying form was filled out when each sample was placed in the oven..

The samples were allowed to dry and cool down before being weighed dry..

13.2.2 Sample size reduction

Two sets of riffle splitter were used in regards of samples sizes. They were cleaned and in good condition each time they were used. Each sample bags was put in the splitter and passed through the riffle splitter 4 times before reduction, to ensure a good homogeneity after the splitting, the rejects were put in a sample bag that was kept on site as a witness sample. The analytical split was put in a new labeled sample bag with the same initial number. All witness sample bags were retained in a secure site in Schefferville for future reference and assay, if needed. The analytical split sample bags were sent to SGS-Lakefield for analysis.

Figure 13-1
Riffle Splitting Procedure



13.3 Sample Preparation at SGS-Lakefield Laboratory

The following is a table taken from the SGS Geostat report, describing the RC drill hole sample preparation protocols used at the SGS Lakefield laboratory facility in Lakefield, Ontario.

Table 13-1

SGS-Lakefield Sample Preparation Methodology

Parameter	Methodology
Met Plant/Control quality assays - not suitable for commercial exchange	
PRP89	Crush up to 3kg of sample to 75% passing 9 mesh (2mm)
	Pulverize up to 250g of riffle split sample to 200 mesh (75µm)

13.3.1 Sample Analyses at SGS-Lakefield

All of the 2008 RC drilling and trenching program were sent for analysis to the SGS-Lakefield Laboratory in Lakefield, Ontario, Canada. The analysis used was Borate fusion whole rock XRF (X-Ray Fluorescence). The following is a description of the exploration drill hole analysis protocols used at the SGS-Lakefield laboratory facility in Lakefield, Ontario. This description was given by SGS-Lakefield.

X-Ray Fluorescence Analysis Code: **XRF76Z**

Parameters measured, units:

SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, P_2O_5, MnO, TiO_2, Cr_2O_3, Ni, Co, La_2O_3, Ce_2O_3,

Nd_2O_3, Pr_2O_3, Sm_2O_3, BaO, SrO, ZrO_2, HfO_2, Y_2O_3, Nb_2O_5, ThO_2, U_3O_8, SnO_2, WO_3, Ta_2O_5,

LOI; %

Typical sample size: 0.2 to 0.5 g

Type of sample applicable (media): Rocks, oxide ores and concentrates

Method of analysis used: The disk specimen is analyzed by WDXRF spectrometry.

Data reduction by: The results are exported via computer, on line, data fed to the Laboratory Information Management System with secure audit trail.

Corrections for dilution and summation with the LOI are made prior to reporting.

Table 13-2

Borate Fusion Whole Rock XRF Reporting Limits

Element	Limit (%)	Element	Limit (%)	Element	Limit (%)
SiO_2	0.01	Na_2O	0.01	CaO	0.01
Al_2O_3	0.01	TiO_2	0.01	MgO	0.01
Fe_{total} as Fe_2O_3	0.01	Cr_2O_3	0.01	K_2O	0.01
P_2O_5	0.01	V_2O_5	0.01	MnO	0.01

13.4 Sample preparation at ACTLABS

During the 2009 exploration programme all trench and RC drill samples were shipped to Activation Laboratories (ACTLABS) facility in Ancaster, Ontario. Trench samples were taken to the preparation lab in Schefferville at the end of the day. The trench samples were not prepared like the rig samples, and were just bagged and shipped to the analytical laboratory.

Once the samples arrived in the laboratory, ACTLABS ensured that they were prepared properly. As a routine practice with rock and core, the entire sample was crushed to a nominal minus 10 mesh (1.7 mm), mechanically split (riffled) to obtain a representative sample, and then pulverized to at least 95% minus 150 mesh (106 microns). All of their steel mills are now mild steel, and do not induce Cr or Ni contamination. As a routine practice, ACTLABS automatically used cleaner sand between each sample at no cost to the customer.

Quality of crushing and pulverization is routinely checked as part of their quality assurance program. Randomization of samples in larger orders (>100) provides an excellent means to monitor data for systematic errors. The data is resorted after analysis according to sample number. The following is a table describing the rock, core and drill cuttings sample preparation protocols used at the ACTLABS.

Table 13-3

Rock, Core and Drill Cuttings Sample Preparation Protocols - ACTLABS

Rock, Core and Drill Cuttings	
code RX1	crush (< 5 kg) up to 75% passing 2 mm, split (250 g), and pulverize (hardened steel) to 95% passing 105µ
code RX1 Terminator	crush (< 5 kg) up to 90% passing 2 mm, split (250 g), and pulverize (hardened steel) to 95% passing 105µ
code RX1+500	500 grams pulverized
code RX1+800	800 grams pulverized
code RX1+1.3	1.3 kg pulverized
code RX2	crush (< 5 kg), split and pulverize with mild steel (100 g) (best for low contamination)
code RX3	oversize charge per kilogram for crushing
code RX4	pulverization only (mild steel) coarse pulp or crushed rock) (< 800 g)
code RX5	pulverize ceramic (100 g)
code RX6	hand pulverize small samples (agate mortar & pestle)
code RX7	crush and split (< 5 kg)
code RX8	sample prep only surcharge, no analyses
code RX9	compositing (per composite) dry weight
code RX10	dry drill cuttings in plastic bags
code RX11	checking quality of pulps or rejects

Following table shows the Pulverization Contaminants that are added by ACTLABS

Table 13-4

Pulverization Contaminants that are Added by – ACTLABS

Mill Type	Contaminant Added
Mild Steel (best choice)	Fe (up to 0.2%)
Hardened Steel	Fe (up to 0.2%). Cr (up to 200ppm), trace Ni, Si, Mn, and C
Ceramic	Al (up to 0.2%), Ba, Trace REE
Tungsten Carbide	W (up to 0.1%), Co, C, Ta, Nb, Ti
Agate	Si (up to 0.3%), Al, Na, Fe, K, Ca, Mg, Pb

13.5 Sample Analysis at ACTLABS

Following is a description of the exploration analysis protocols used at the Activation laboratories facility in Ancaster, Ontario. ACTLABS provided this description to SGS Geostat .

13.5.1 X-Ray Fluorescence Analysis Code: 4C

To minimize the matrix effects of the samples, the heavy absorber fusion technique of Norrish and Hutton (1969, Geochim. Cosmochim. Acta, volume 33, pp. 431-453) are used for major element oxide) analysis. Prior to fusion, the loss on ignition (LOI), which includes H_2O+, CO_2, S and other volatiles, can be determined from the weight loss after roasting the sample at 1050°C for 2 hours. The fusion disk is made by mixing a 0.5 g equivalent of the roasted sample with 6.5 g of a combination of lithium metaborate and lithium tetraborate with lithium bromide as a releasing agent. Samples are fused in Pt crucibles using an AFT fluxer and automatically poured into Pt molds for casting. Samples are analyzed on a Panalytical Axios Advanced XRF. The intensities are then measured and the concentrations are calculated against the standard G-16 provided by Dr. K. Norrish of CSIRO, Australia. Matrix corrections were done by using the oxide alpha – influence coefficients provided also by K. Norrish. In general, the limit of detection is about 0.01 wt% for most of the elements.

13.5.2 Elements used:

SiO_2 $Al20_3$ Fe_2O_3(T) MnO MgO CaO Na_2O K_2O TiO_2 P_2O_5 Cr_2O_3, LOI

13.5.3 Code 4C Oxides and Detection Limits (%)

The following table shows the Code 4C Oxides and Detection Limits (%)

Table 13-5

Code 4C Oxides and Detection Limits (%)

Oxide	Detection Limit
SiO_2	0.01
TiO_2	0.01
Al_2O_3	0.01
Fe_2O_3	0.01
MnO	0.001
MgO	0.01
CaO	0.01
Na_2O	0.01
K_2O	0.01
P_2O_5	0.01
Cr_2O_3	0.01
LOI	0.01

13.6 Sample Security and Control

13.6.1 LIM Sample Quality Assurance, Quality Control and Security

LIM initiated a quality assurance and quality control protocol for its 2008 RC, DDH, and trench sampling program. The procedure included the systematic addition of blanks, field duplicates, preparation lab duplicates to approximately each 25 batch samples sent for analysis at SGS Lakefield.

The sealed sample bags were handled by authorized personnel from LIM and SGS Geostat and sent to the preparation lab in Schefferville. Authorized personnel did the logging and sampling in the secured and guarded preparation lab.

Each sample was transported back to the preparation lab with a truck at the end of each shift by the lab supervisor on a regular basis. The samples were transported to the lab near Schefferville, a warehouse facility rented by LIM. The lab was locked down during the night. Sample batches were sealed and sent by train or by express mail (plane). Traceability was present throughout the shipment to Lakefield.

13.6.2 Field Duplicates

The procedure included the systematic addition of field duplicates to approximately each 25 batch samples sent for analysis to the lab. As outlined in

Section 12.0, the cuttings from the second and third exits were routinely sampled every 25th batch. The 24th sample was collected at exit 2. The 26th sample was collected at exit 3. These samples went through the same sample preparation, analysis and security procedures and protocols as the regular 3 m samples collected from the exit 1. This QA/QC procedure enabled SGS Geostat to verify any bias in the 2008 RC sampling program.

13.6.3 Preparation Lab Duplicates

The procedure included the systematic addition preparation lab duplicates to approximately each 25 batch samples sent for analysis at SGS-Lakefield. As explained in Section 12.0, a second portion of cuttings from the first exit size reduction procedure was routinely sampled every 25 batch similarly as described above.

13.6.4 Blanks

Blank samples were created onsite in Schefferville from barren slates located south east of the town. These blanks were used to check for possible contamination in laboratories. Some were sent to SGS-Lakefield and others to Corem and ALS-Chemex for verification of the average tenure in the blanks. Blank samples were introduced every 50 sample batch.

13.6.5 SGS-Lakefield Sample Quality Assurance, Quality Control and Security

The following is a description of the quality assurance and quality control protocols used at the SGS-Lakefield laboratory facility in Lakefield, Ontario. The following description was given by SGS-Lakefield.

Quality control: One blank, one duplicate and a matrix-suitable certified or in-house reference material per batch of 20 samples.

The data approval steps are shown in the following table.

Table 13-6

SGS-Lakefield Laboratory Data Approval Steps

Step	Approval Criteria
1. Sum of oxides	Majors 98 – 101% Majors + NiO + CoO 98 –102%
2. Batch reagent blank	2 x LOQ
3. Inserted weighed reference material	Statistical Control Limits
4. Weighed Lab Duplicates	Statistical Control Limits by Range

13.6.6 ACTLAB Sample Quality Assurance, Quality Control and Security

Following is a description of the quality assurance and quality control protocols used at the ACTLABS facility. This description is based on input from ACTLABS.

A total of 34 standards are used in the calibration of the method and 28 standards are checked weekly to ensure that there are no problems with the calibration.

Certified Standard Reference Materials (CSRM) are used and the standards that are reported to the client vary depending on the concentration range of the samples.

The re-checks are done by checking the sample's oxide total. If the total is less than 98% the samples are reweighed, fused and ran. The data is compared to the original results. Sometimes there are bad fusions or LOI needs to be repeated.

The amount of duplicates done is decided by the Prep Department, their procedure is for every 50 samples only if there is adequate material. If the work order is over 100 samples they will pick duplicates every 30 samples.

General QC procedure for XRF is: The standards are checked by control charting the elements. The repeats and pulp duplicates are checked by using a statistical program which highlights any sample that fail the assigned criteria. These results are analyzed and any failures are investigated using our QCP Non-Conformance (error or omission made that was in contrast with a test method (QOP), Quality Control Method (QCP) or Quality Administrative Method (QAP)).

14.0 Data Verification (Item 16.0)

14.1 QAQC Procedures and Protocols

The Data Verification described in this section is a résumé of the more detailed Section 14.0 – Data Verification (Item 16.0) of the technical report entitled: *Technical Report Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits Located in Labrador, Canada for Labrador Iron Mines Ltd, SGS Geostat Ltd., dated 18th December, 2009. Written by Maxime Dupéré geo.*

The data verification of the iron (Fe), phosphorus (P), manganese (Mn), silica (SiO_2) and alumina (Al_2O_3) values was done with the assay results from the 2008 RC drilling program. SGS Geostat introduced a series of quality control procedures including the addition of preparation lab duplicates, exit 2 duplicates, exit 3 duplicates and blanks as explained in Section 13.0.

SGS Geostat supervised the RC sampling. In 2008, a total of 166 exit duplicates were taken and analyzed. Results show that assay values are precise and dependable. These quality control results permitted SGS Geostat to confirm the presence and content of iron(Fe), phosphorus (P), manganese (Mn), silica (SiO_2) and alumina (Al_2O_3) of all QA/QC samples, as well as the integrity of the sample results used in the resource estimation of James, Redmond 2B and Redmond 5 mineral deposits. See Figure 14-1 and 14-2. The author has not independently verified the mineral values as such verification, which the author considers to be in accordance with industry practice, had been completed by SGS Geostat and included in their report.

Figure 14-1
Fe Assay Correlation between Original and Exit 2 Duplicate Samples

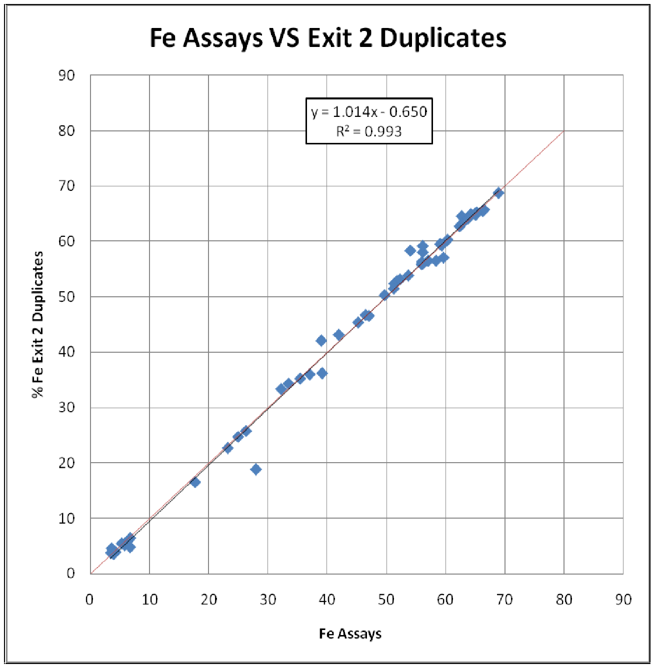
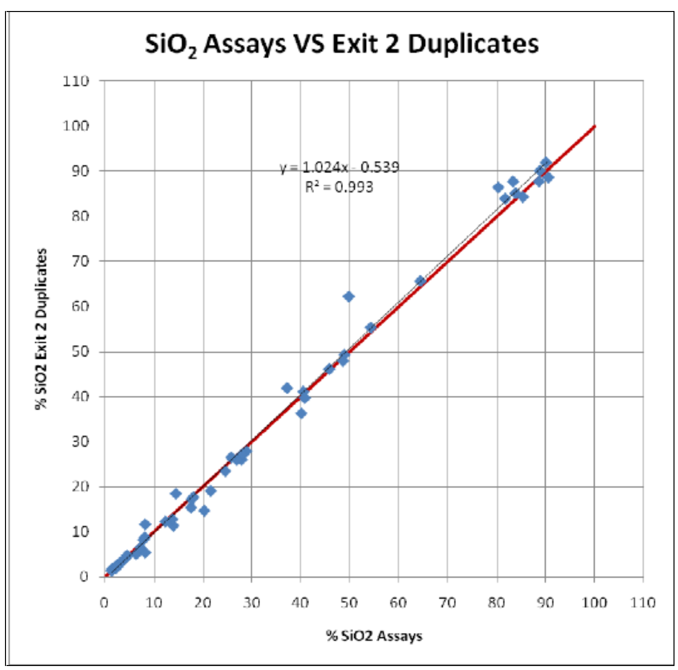


Figure 14-2
SiO_2 Assay Correlation between Original and Exit 2 Duplicate Samples



14.2 Assay Correlation of Twinned Holes

The data verification was done on the iron (Fe) and silica (SiO_2) values with the assay results from the IOCC historical RC drill results and the 2008 RC drilling program results. LIM twinned some IOCC RC holes in order to verify the iron (Fe) content. A total of 7 paired RC holes (14 in total) were considered for a total of 76 assay results. With these results, SGS Geostat did a series of tests: Sign test, Student logarithmic test, Student normal test.

As illustrated in Figure 14-3 and 14-4, the scatter of old and new values in the twinned holes is more important than with duplicates in the new holes. It translates into a rather low coefficient of correlation (R_2 around 0.4) but one should keep in mind that they are not sampled in the same hole and we do not have duplicates in the old RC drill holes to determine the sampling error attached to the numbers from those holes.

Figure 14-3

Graphic of Fe Assay Correlation of Twinned Holes

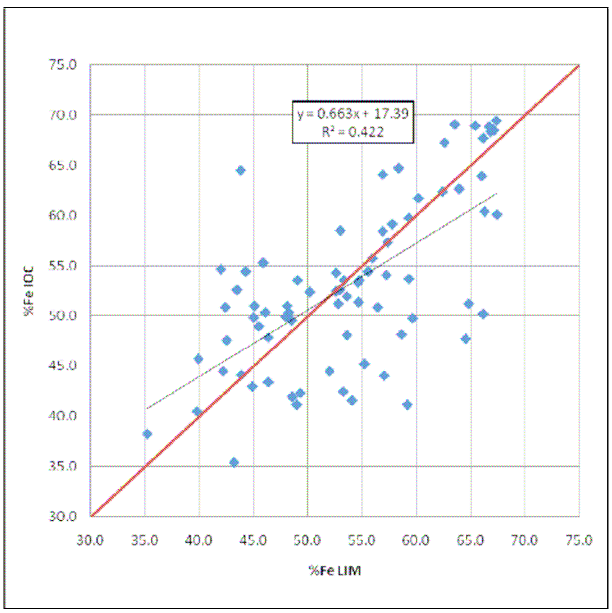
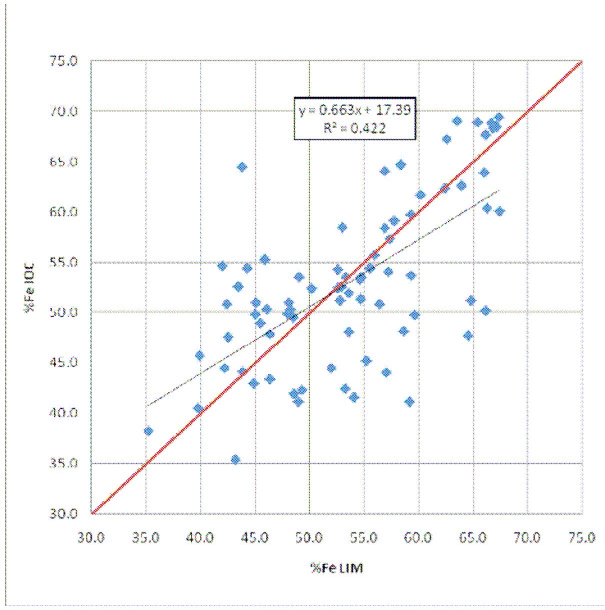


Figure 14-4
Graphic of SiO_2 Assay Correlation of Twinned Holes



According to SGS Geostat, what is more important than good reproduction of individual sample grades when looking at results of twinned holes, is the comparison of average old values and average new values. If those averages are significantly different (given the variability of data and number of samples being compared), then one is faced with a bias problem which means that old and new data cannot be used together in the estimation of resources unless data in one of the two sets (generally the old ones) have been corrected to match those in the other set.

In this case, the T-test of paired data shows that the average %Fe in the old samples (53.7%) is not significantly different from the average %Fe in the new samples (53.1%) with a T of 0.84 well below the limit of 1.99. For silica, the conclusions are not as clear as for iron i.e. the mean %SiO_2 of old samples (17.9%) is significantly different from the mean % SiO_2 of new samples (20.2%) with a T of 2.10 just above the limit of 1.99. However, a sign test shows that the proportion of pairs with an old sample value greater than the new samples value (41 out of 76 i.e. 53.9%) is not significantly different from the non-bias target of 50% given the number of pairs available (limit is 61.5%).

14.3 Blanks

A total of 60 blank samples was used to check for possible contamination in laboratories. SGS Geostat made the blank sample from a known slate outcrop located near Schefferville. SGS Geostat homogenized an average 200 kg of material on site at the preparation lab in Schefferville. LIM and SGS Geostat also sent two separate batches of fifteen (15) blank samples to the Corem and ALS-Chemex independent laboratories of Vancouver and Quebec City, respectively, for analysis.

An average 4.82% Fe and 61.96% SiO_2 was noted for the entire batch of 60 blank samples. For SGS-Lakefield, an average of 5.37% Fe and 61.40% SiO_2 was noted. For ALS-Chemex, an average of 4.22% Fe and 62.60% SiO_2 was noted. For COREM, an average of 4.34% Fe and 62.25% SiO_2 was noted.

At this stage SGS Geostat cannot determine whether or not any contamination of the 2008 RC samples occurred. This is due to the fact that SGS-Lakefield blanks were sent along with the original batch, homogenization and reduction were not performed in an independent laboratory and that there are no rocks outcroppings near Schefferville with no iron content.

15.0 Adjacent Properties (Item 17.0)

Adjacent to the properties owned by LIM in Labrador are other former operations of IOCC in Labrador and Quebec that were either mined out or abandoned by IOCC in 1982. IOCC produced an approximate total of some 150,000,000 tons of direct shipping iron ore from all their properties in Quebec and Labrador during the operating years of 1954 to 1982 (IOC Ore Reserves, January 1983). IOCC is currently operating the Carol Lake iron property some 200 km south of Schefferville near Labrador City in Labrador.

The previously owned IOCC operations in Quebec have reverted to the ownership of Hollinger, while LIM and NML owns some of the properties in Labrador. A wholly own subsidiary of Labrador Iron Mines Holdings Limited has recently entered in to a number of agreements giving it ownership of 214 claims and mining leases in Quebec containing a number of these iron and manganese deposits with a total historic resource of 50 million tons based on the IOCC 1983 reserve book.

A feasibility study has been carried out for NML on an iron deposit in the Howells River area of Labrador known as the LabMag Property located some 30 km northwest of Schefferville. The property is owned by the partnership of New Millennium Capital Corp. and the Naskapi LabMag Trust. NML published a Pre-feasibility Study in April 2009 on a DSO Project on some of their claims in Labrador and Quebec and is currently preparing a feasibility study to develop the same project.

The Mont-Wright mining complex (owned by Arcelor Mittal) as well as the Wabush mines are located in the same area near Wabush and Fermont in Quebec. An 8 to 16 Mtpa iron operation at the Bloom Lake deposit, located east of the of Mont-Wright operation, near Labrador City, is currently under construction by Consolidated Thompson Mines.

16.0 Mineral Processing and Metallurgical Testing (Item 18.0)

16.1 Lakefield Research Laboratories

During February 1989 three mineralized samples comprising approximately 12.7 tonnes or 45 drums of James ore were treated at Lakefield Research Laboratories (now SGS-Lakefield), Lakefield, Ontario. This test work program was supervised by W. R. Hatch Engineering Ltd. (“Hatch”) of Ontario, and the results were detailed in the report entitled "Wet Spiral Classification of Iron Ores" for La Fosse, dated March 6 1989. Descriptions of the test samples are not available; however, the average head grade of 62.1% Fe and 10.1% silica was about 3.5 units higher in iron and 0.9 units lower in silica than the IOCC estimated average in the James deposit.

The samples were crushed to 100% -1½ inches (in) and screened at ½ in. The Lump Ore product (-1½ in to ½ in) was weighted and assayed and the -½ in wash feed was weighed and fed at a controlled rate to a washing circuit. The washing process included a rotary scrubber (mill without grinding media) and a spiral classifier. The spiral classifier fines overflow and sands products were collected and analyzed. The Lakefield test results are summarized in Table 16-1.

Table 16-1
Lakefield Washing Test Results

	Wt %	Fe %	Silica %
Sample # 1			
Head	100	67.8	2.2
Lump (-1/1/2”+1/2”)	10.3	65.5	6.1
Fines (-1/2”)	53.1	68.3	2.3
Tails (-100 mesh =150µm)	36.9	67.3	0.9
Calc. Head	100.3	67.6	2.2
Sample # 2			
Head	100	59.4	13.6
Lump (-1/1/2”+1/2”)	13.8	58.9	9.7
Fines (-1/2”)	65.0	65.3	5.88
Tails (-100 mesh =150µm)	23.7	37.2	35.6
Calc. Head	102.7	57.9	13.3
Sample # 3			
Head	100	59.1	14.6
Lump (-1/1/2”+1/2”)	6.7	62.4	9.5
Fines (-1/2”)	62.2	65.3	5.9
Tails (-100 mesh =150µm)	31.0	46.0	33.2
Calc. Head	100.0	59.1	14.6

The washing results were used to evaluate the James deposit mineralization as part of the open pit evaluation. The washing results provided an indication of the Lump, Fines and Tailings products quality. Plotting the feed iron and silica grade relationship of the three samples on scatter diagram established from the IOCC sample population, all test sample points were above the trend line which indicates a type of mineralization containing high iron and low silica. When comparing the test samples to the block model data, it becomes apparent that it would be desirable to test representative samples containing lower iron grades so that the up-grading potential can be assessed. Hatch concluded that at low silica content (68% iron and 2.3% silica) only minor upgrading occurred. For the relatively high silica samples (57.7% to 59.7% Fe and 15.6% to 14.0% silica), silica concentrated into fines overflow (tailings), resulting in upgrading the sands fraction with respect to iron.

16.2 Midrex Tests

Midrex Technologies, Inc. (Midrex) is an international iron and steel making technology company based in Charlotte, North Carolina. In 1989 Midrex sampled and tested lump ore samples # 632 from James, #620 from Sawyer Lake deposit and #625 from Houston 1 deposit for standard raw material evaluation purposes. The sample analyses are presented in Table 16-2.

Table 16-2
Midrex Lump Ore Samples Analyses

Sample #	Dry Wt% Yield at +6.7 mm	Fe %	S %	P %
632/ James	82.16	67.95	0.003	0.016
620/ Sawyer	90.50	68.57	0.003	0.011
625/ Houston 1	92.33	68.32	0.007	0.057

All lump ore samples were estimated by Midrex to be suitable for commercial production using its technology.

16.3 Centre de Recherches Minérales (1990)

In 1990, a bulk sample of mineralized material from the James deposit weighing approximately three tonnes was transported to Centre de Recherches Minerales (CdRM), Quebec City, for testing, on behalf of La Fosse Platinum Group Inc. This material was crushed to -1 in, which was finer than the Lakefield tests, and wet screened at ¼ in. The results from the screen tests on this bulk sample are summarized in Table 16-3.

Table 16-3
James Bulk Sample Screen Analysis (CRM)

Size Fraction	kg	Wt%	Wt%
Sample received	3,121	100	
+2" rejected	227	7.3%	
Total -1"	2,862	91.7%	100
-1" to +¼ "	2,340	75.0%	81.8%
-¼ "	398	12.8%	13.9%
Assumed fines	124	4.0%	4.3%

In addition to the James bulk sample, a sample from Sawyer Lake was submitted for testing. The results of the screening and size fraction assays are presented in Table 16-4.

Table 16-4
Sawyer Lake Sample Screen and Chemical Analysis (CRM)

Size Fraction	wt%	Fe %	SiO_2	$Al_2 O_3$	Mn	P
-1" to +¼ "	21.5	68.2	0.97	0.13	0.56	127
-¼ "to 100#	48.9	66.2	3.27	0.17	0.84	146
-100# to 200#	1.3	51.4	28.1			
-200#	28.3	62.6	27.1			
-100#	29.6	62.1	27.1			
Calc. Feed	100.0	65.4	4.85			
Feed Assay	65.0	4.97				

16.4 2006 Bulk sampling by LIM

Bulk samples from trenches at the James and Houston deposits were collected during the summer of 2006 from two trenches 113 metres and 78 metres long respectively. Three bulk samples of some 400 kg each were collected from the James trench and four bulk samples of some 600 kg each were collected from the Houston deposit trench for testing. The testing for compressive strength, crusher index and abrasion index were done at SGS Lakefield. The composite crushing, dry and wet screen analysis, washing and classification tests were done at “rpc – The Technical Solutions Centre” in Fredericton, New Brunswick. An additional five composite samples from the different ore zones in the trench were collected and tested in the ALS Chemex Lab in Sudbury for chemical testing.

The bulk sampling tests produced data for rock hardness and work indices for crushing and grinding, average density data for the various ore zones as well as chemical data. The specific gravity tests, completed on the bulk samples, have shown that there was a possibility that the average SG is higher than the 3.5 kg/t which was used in the IOCC calculations. Additional SG testing was completed during the 2009 exploration program, obtaining a Fe-dependant variable SG (See Section 17.2.2).

The SG data will be used in the calculations of the resource and reserve volumes while the chemical test results will be used to compare them with the historical IOCC data from neighboring drill holes. Table 16-5 show the summary of the results of the tests on the 2006 bulk samples for the various ore types.

Table 16-5
Summary of Tests by SGS-Lakefield

Sample Name	CWI (kWh/t)	AI (g)	UCS (Mpa)	Density CWI (g/cm^3)	Density UCS (g/cm^3)
NB-Houston A	8.2	0.187	106.4	4.26	4.61
NB-Houston B	-	0.213	48.9	-	4.42
LNB Houston A	7.3	0.108	-	3.95	-
LNB Houston B	-	0.189	-	-	-
TRX-Houston A	6.7	0.098	22.3	3.47	3.00
TRX-Houston B	-	0.067	-	-	-
NB4-Houston A	5.7	0.086	73.0	3.77	4.36
NB4-Houston B	-	0.080	-	-	-
JM-TRX A	7.0	0.023	24.8	3.29	3.02
JM-TRX B	-	0.086	33.9	-	4.31
JM-LNB A	2.6	0.047	16.7	3.15	3.32
JM-LNB B	-	0.029	11.9	-	3.35
JM-NB A	4.8	0.143	-	3.48	-
JM-NB B	-	0.144	-	-	-
Average	**6.1**	**0.107**	**42.2**	**3.6**	**3.8**

16.5 SGS Lakefield (2008)

From the 2008 Exploration Drill Program, five iron ore composite samples from the James deposit were submitted to SGS-Lakefield for mineralogical characterization to aid with the metallurgical beneficiation program. The samples were selected based on their lower iron grade. Emphasis was placed on the liberation characteristics of the iron oxides and the silicates minerals.

The overall liberation of the Fe-Oxides is generally good for each sample, except for sample 156037. However, each sample shows slightly different liberation characteristics by size. Samples 156109 and 156090 have relatively constant liberation throughout the size fractions (~70 % to 90% per fraction). Fe-Oxide liberation is ~60% in the +1700 µm, +850 µm and + 300 µm fractions, but increases to ~80% to 90% in the finer fractions in sample 156032. Liberation is increased significantly with decreasing size in samples 160566 and 156037. Results of the test are summarized in Table 16-6.

Table 16-6
Results of Mineralogical Characterization Tests (SGS – Lakefield)

						Number
Sample	156109	160566	156090	156032	156037	Analyzed
Hole	RC-JM001-2008	RC-JM001-2008	RC-JM001-2008	RC-JM001-2008	RC-JM001-2008	Polished
From	30	18	42	45	60	Sections
To	33	21	45	48	63	
% Fe	51.13	54.48	51.13	51.69	50.08	
Size-3000+1700µm	30.10	8.00	23.60	24.90	38.30	14
Size-1700+850µm	5.60	5.70	7.00	8.70	12.10	8
Size-850+300µm	12.40	15.40	19.30	13.60	14.70	8
Size-300+150µm	9.50	14.10	7.30	12.20	8.80	4
Size-150+75µm	17.70	13.70	17.30	14.30	7.10	2
Size-75+3µm	24.60	43.00	25.00	26.30	19.00	2

Other conclusions from the report include:

- Mineral release curves: samples 160566 and 156037 display poor liberation in coarse size fractions. A poor quality coarse concentrate with elevated silicate levels is anticipated for these two samples. For the finer material (-300 µm) good liberation might be achieved between 100 µm and 200 µm (~80% liberation) with the exception of sample 156037;
- For each sample, silicate liberation might be achieved in the 300 µm to 400 µm size range. It should be noted, that this is where most of the silicates accumulate;
- The grade recovery charts for Fe and Si also reveal that sample 156037 is significantly different from any of the other samples and might be more problematic for processing.

16.6 2008 Bulk Sampling By LIM

A Bulk Sample program was undertaken during the summer of 2008. 1,000 to 2,000 tonne samples were excavated with a CAT-330 type excavator from four of LIM's Stage 1 deposits: James South deposit (1,400 T), Redmond 5 deposit (1,500 T), Knob Lake deposit (1,100 T), and Houston deposit (1,900 T). These samples were considered representative of the different ore types. The excavated material was hauled to the Silver Yard area for crushing and screening. The raw material was screened at approximately 6 mm into two products – a lump product (-50 mm+6 mm) and a sinter fine product (-6 mm). The material excavated from each deposit and the products produced from each deposit were kept separate from the others.

Representative 200 kg samples of each raw ore type was collected and sent to SGS Lakefield Laboratories for metallurgical tests and other (angle of repose, bulk density, moisture, direct head assay and particle size analysis determinations).

Preliminary scrubber tests were performed on all four samples. Only the James South sample was submitted for Crusher Work Index tests. The potential of beneficiation by gravity was explored by Heavy Liquid Separation. Vacuum filtration testwork was also carried out. The results of the bulk sample test are shown in Tables 16-7 and 16-8

Table 16-7
Calculated Grades from 2008 Bulk Samples (SGS-Lakefield)

Deposit	James South	Knob Lake	Houston	Redmond 5
Ore Type	**Blue Ore**	**Red Ore**	**Blue Ore**	**Blue ore**
Fe[1]	63.8	58.5	66.1	57.8
SiO_2	6.64	7.29	2.22	13.1
P[1]	0.02	0.11	0.07	0.02
Al_2O_3	0.21	1.05	0.30	0.32
LOI	1.88	8.51	1.33	2.63

[1] Calculated from WRA oxides

Table 16-8
2008 Bulk Samples Test Results (SGS-Lakefield)

		Assays %					Distribution %
James South (Blue Ore)		**Fe**	**SiO_2**	**Al_2O_3**	**P**	**LOI**	**Mass**
Lump Ore	50mm- +6.7mm	67.7	1.33	0.12	0.013	1.59	41.1
Sinter Feed	-6.7mm +150µm	64.5	5.69	0.20	0.020	1.95	33.3
Pellet Feed	-150µm +38µm	50.1	26.1	0.15	0.016	1.42	13.1
Slimes	38µm	63.3	6.29	0.38	0.030	2.10	12.5
Calc. Head		63.8	6.64	0.18	0.018	1.75	100.0
Knob Lake (Red Ore)							
Lump Ore	50 mm +6.7 mm	58.8	5.02	0.69	0.114	9.95	60.4
Sinter Feed	-6.7mm +150µm	58.3	6.49	1.13	0.111	8.70	26.0
Pellet Feed	-150µm +38µm	54.5	11.2	1.58	0.110	7.89	1.87
Slimes	- 38µm	53.2	11.0	2.40	0.108	6.90	11.7
Calc. Head		57.9	6.22	1.02	0.112	9.23	100.0
Houston (Blue Ore)							
Lump Ore	50 mm +6.7 mm	68.1	1.08	0.20	0.060	1.00	33.9
Sinter Feed	-6.7mm +150µm	66.2	3.30	0.41	0.078	1.22	35.5
Pellet Feed	-150µm +38µm	65.8	3.84	0.38	0.082	1.37	6.43
Slimes	- 38µm	63.7	1.99	0.54	0.089	2.17	24.1
Calc. Head		66.2	2.27	0.37	0.075	1.38	100.0
Redmond 5 (Blue Ore)							
Lump Ore	50 mm +6.7 mm	62.4	6.54	0.24	0.020	3.39	26.5
Sinter Feed	-6.7mm +150µm	61.0	8.91	0.59	0.021	3.16	42.0
Pellet Feed	-150µm +38µm	45.0	31.8	0.39	0.016	1.80	12.1
Slimes	- 38µm	52.1	21.2	0.74	0.023	2.81	19.5
Calc. Head		57.7	13.4	0.50	0.021	2.99	100.0

The material collected from the James South bulk sample was sent to a number of other laboratories for additional test work, including Derrick Corporation for screening tests, Outotec, and SGA Laboratories for Sinter Tests and Lump Ore characterization. Material from the Redmond deposit was sent to MBE Coal & Minerals Technologies and to Corem in Quebec City.

16.7 Derrick Corporation (2008)

From the James Fines product, 8 - 45-gallon drums of the sample were sent to Derrick Corporation in Buffalo, NY for screening test work. The purpose of the test work was to determine optimum screen capacity and design for sinter fines production.

16.8 Outotec (2008)

From the material sent to Derrick Corporation, a sample of -300 microns was sent to Outotec (USA) Inc., in Jacksonville, Florida for Wet Gravity Separation and Magnetic Separation using HGMS Magnet test work.

16.9 SGA Laboratories (2009)

A 1.3 tonne sample from the James South fines product, obtained during the 2008 Bulk Sample Program, was sent to Studiengesellschaft für Eisenerzaufbereitung (SGA) in Germany, to conduct pot grate sintering tests to evaluate the sintering behaviour. Three series of tests were performed to evaluate the sintering behaviour of the fines measuring above 0.3 mm. The iron content of the hematitic sample was analyzed at 67.23% with favourably low acidic gangue contents of silicon dioxide and aluminum oxide in addition to very low levels of manganese, titanium and vanadium. The portion of fines smaller than 0.3 mm was only 1.7% which is expected to have a positive effect on sinter productivity. SGA concluded that "In summary, it can be stated that the tested sample showed excellent sintering behavior, clearly improving sintering productivity and metallurgical properties of the sinters. The high iron content and low gangue as well as the low portion of fines determine the high quality of this ore grade. Such fines will be well accepted in the market."

A 100 kg sample of James South and of Knob Lake lump ores were also tested at SGA for their physical, chemical, and metallurgical properties. The results of the James South lump ore sample indicate that the iron content is high at 66.98%, while the content of non-ferrous metals, manganese, phosphorus, sulfur, alkaline materials, titanium and vanadium are favourably low. The high reducibility was evaluated as being superior to the typical ore grades available on the European market. In addition, the physical testing of the lump ore resulted in a favourable size distribution with a low amount of fines. The tumbler test revealed well acceptable strength and abrasion for lump ores. SGA concluded that "High reducibility was evaluated for James South being superior to other ore grades on the European market. In summary, it can be stated that James South ore represents a high quality lump ore grade which will be well accepted on the European market."

For the Knob Lake sample (red ore), the iron content was analysed at 58.08 %. Accordingly high gangue contents of 6.89% SiO_2 and 0.84% Al_2O_3 were analysed as well as an LOI of 8.66 %. The contents of Mn, S, TiO_2, V and non-ferrous metals are favourably low, whereas alkaline and P-contents are comparatively high. The physical testing of Knob Lake lump ore resulted in a favourable size distribution with a low amount of fines. Also the tumbler test revealed good results with high strength and low abrasion for lump ores. Regarding metallurgical properties, reducibility of Knob Lake ore was found to be very high being superior to other ore grades. Also disintegration testing resulted in excellent results.

The results of the SGA tests are shown in Table 16-9

Table 16-9
SGA Test Results

	Total Fe (%)	SiO_2 (%)	$Al_2 0_3$ (%)	P(%)	Mn (%)
James Deposit					
Lump	66.98	1.81	0.17	0.02	0.09
Sinter (+0.3 mm)	67.23	1.49	0.17	0.02	0.09
Knob Deposit					
Lump	58.03	6.89	0.84	0.104	0.118

16.10 MBE (2009)

Approximately 1,600 kg of the Redmond fine sample and 1,300 kg of the Redmond lump sample were sent to MBE Coal & Minerals Technology GmbH, in Cologne, Germany, in November 2009. A representative part of each material was processed in two separate batch trials using a BATAC jig.

Regarding the fine ore trials, the test work indicated that it was possible to achieve a concentrate grade of +65% Fe at a mass yield of +60%. It should be considered to grind the remaining 40 % (reject) in order to feed to an additional separation process step.

The lump ore could be upgraded successfully to a +65 % Fe at +43 % weight recovery or +64 %Fe at a weight recovery of +61%. It should be considered to feed the lump ore material into a three product lump ore jig to produce final reject, a middlings fraction, which could be fed after further crushing to the fines jig, and a final high grade concentrate.

16.11 2009 Bulk Sample by LIM

During the summer of 2009, a one tonne bulk sample of yellow ore was excavated from trenches at Redmond 5. The sample was transported to Corem, in Quebec City, Quebec for characterization tests and determination of beneficiation potential. The Yellow Ore sample material was mainly constituted of iron hydroxide and hematite with silica, phosphorous and manganese as main contaminants. The results of the test at Corem are shown in Table 16-10

Table 16-10
Corem Yellow Ore Test Results

Product	% Weight ROM	Fe_{tot}	SiO_2	Mn	P	Al_2O_3	LOI	SG
Head	100	59.07%	4.97%	0.23%	0.21%	0.78%	10.40	4.1
Lump	30.20	60.11%	3.16%	0.23%	0.20%	0.61%	10.00	
Sinter Feed	33.13	59.62%	3.96%	0.31%	0.23%	0.73%	10.10	
Reject Fines	36.67	56.27%	10.10%	0.31%	0.20%	1.06%	8.53	

These products could meet for some of the future LIM clients market specifications with dilution of Phosphorous by blending low Phosphorous Blue Ore to obtain following products:

- Lump: 64% Fe_{tot}, 4% SiO_2, 0.5% Mn, 0.1% P
- Sinter Feed: 62% Fe_{tot}, 4% SiO_2, 0.5% Mn, 0.1% P

16.12 Manganese Properties

To date, the only laboratory testing that has been carried out on manganese ore has been on Ruth Lake Ore. In November 1988, Lakefield Research conducted test work to investigate the recovery of coarse manganese. Work included heavy liquid tests at different gravities. Heavy liquid test showed that 80% manganese recovery could be achieved at a specific gravity 3.16 and 31% weight would be rejected. Samples were not identified in the Lakefield report so it is not possible to conclude how well they represent the Ruth Lake deposit.

In December 1989, four samples (approximately 60 lbs) were submitted to Lakefield Research for mineralogical analysis. Several types of tests were carried out in order to identify physical separation processes that may be successful in rejecting iron (goethite) and upgrading the manganese product. Selective crushing/screening, gravity concentration, and high tension/electromagnetic separation indicated upgrading on the –6 mesh material tested. Magnetic separation and wet scrubbing processes showed no significant upgrading.

17.0 Mineral Resource and Mineral Reserves Estimates (Item 19.0)

17.1 Summary

The Resource Estimates described in this section are a résumé of the more detailed Section 17.0 - Mineral Resources and Mineral Reserves Estimates (Item 19.0) of the technical report entitled: *Technical Report Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits Located in Labrador, Canada for Labrador Iron Mines Ltd, SGS Geostat Ltd., dated 18th December, 2009. Written by Maxime Dupéré geo.*

The author of the SGS Geostat report, Maxime Dupéré Geo., is a member of the Ordre de Geologues due Quebec (#501) and as such is a 'qualified person' within the meaning of NI 43-101. M. Dupéré has certified that he is independent of LIM and Labrador Iron Mines Holdings Limited within the meaning of NI 43-101. M. Dupéré is the qualified person responsible for the resource estimate and related data verification.

As of the date of this report, only the resources for James, Redmond 2B and Redmond 5 deposits, prepared by SGS-Geostat (December 18, 2009), are NI 43-101 compliant.

Resource estimates are conclusions based on geologic data and calculated in accordance with standards and practices mandated by NI 43-101. Consequently, such estimates are not materially affected by any known environmental, permitting, legal, title, taxation, socio economic, marketing, political, mining, metallurgical, infrastructure or other similar factors.

A summary of the total NI 43-101 Compliant Resources is shown in Table 17-1.

Table 17-1
Summary of NI 43-101 Compliant Resources

NI 43-101 Compliant	Tonnes	Fe%	SiO_2%	Mn%
Indicated	11,031,000	57.4	12.8	0.7
Inferred	220,000	53.6	14.7	0.9

17.2 Mineral Resources Estimate NI 43-101 Compliant

17.2.1 SGS Geostat Data Base

SGS Geostat prepared a Technical Report in December 2009 from which the following text has been extracted. The data used for the estimation came from the drill holes database managed by LIM and they provided also a complete database of all relevant IOCC historical RC and diamond drill holes with the latest 2008 and 2009 RC drilling/trenching results as of November 09th, 2009. SGS Geostat's GeoBase database contains only the relevant drill holes and trenches information for the resources estimation of the James, Redmond 2B and Redmond 5 mineral deposits. All other data concerning the other properties (Ex: Houston, Howse, Knob Lake, Wishart, etc) was not included in this database and will be used at a later date.

SGS Geostat's database consisted of a total of 310 collar records (including RC, diamond and trench records), a total of 15,049 meters, mostly RC and 4,567 assay records as shown in Table 17.2.

Table 17-2
SGS Geostat Database Record Information

Property	Hole Type	Number	Meters	Assays
James	Diamond	2	29	0
	RC	122	6806	2278
	Trench	79	3651	939
Redmond 2B	RC	21	1104	364
	Trench	10	663	205
Redmond 5	RC	68	2335	681
	Trench	8	461	100

SGS Geostat did not carry out a detailed verification of all the historical data in comparison with the original logs, but rather did selective checking on the data found with the documents provided by LIM. The site visit, 2008 and 2009 field work and discussions with the personnel gave them the belief that the database (after some minor corrections) is accurate and managed correctly. Drilling was done mostly vertical for the RC drill holes. The diamond drill holes and some exploration RC holes were drilled perpendicular to the directions of the mineral deposits with dips varying from -55° to -70°.

17.2.2 Specific Gravity (SG)

The SG testing was carried out on reverse circulation drill chips. The SG was obtained by measuring a quantity of chips in air and then pouring the chips into a graduated cylinder containing a measured amount of water to determine the water displacement. A volume of water equal to the observed displacement is then weighed and the SG of the chips is calculated using the following equation:

$$\boxed{SG \quad \frac{A}{Ww}}$$

SG=Specific Gravity of Sample

A=Weight of Sample in air (dry)

Ww=Weight of Water displaced

A variable specific gravity (density) was used for the modeled ore types. SGS Geostat used the following equation:

$SG_{(in\ situ)} = ((0.0258 * Fe) + 2.338) * 0.9$

The regression formula was calculated by LIM using 229 specific gravity tests completed during the 2009 drilling program, The formula was validated by SGS Geostat and is considered a safe and conservative measure of density. The 0.9 factor corresponds to a security factor to take into account porosity in the deposits.

17.2.3 Geological Interpretation and Modeling

The geological interpretation of the mineral deposits noted in this document is restricted to the soft friable direct shipping ores. The historical IOCC parameters of the Non-Bessemer and Bessemer ore types were considered together for the geological interpretations and modeling of the selected mineral deposits. The three Hi silica ($HiSiO_2$) Ore Types containing from 18% up to 30% SiO_2 were also considered for the geological interpretation and modeling of the selected mineral deposits.

James Deposit

The geological modeling of the James mineral deposit was done using standard sectional modeling of 30 m spacing. Paper sections from IOCC were digitized and used for the geological interpretation and modeling. A total of 69 sections were used. LIM provided the majority of the sections with the IOCC historical geological interpretations. SGS Geostat took into account the geological model on sections of the IOCC geologists for its geological interpretation and modeling and incorporated it into their software.

As described in the document “Estimation of Mineral resources and Mineral Reserves – Best Practice Guidelines” adopted by the CIM Council in 2003, the geological model interpretation was sliced again in another direction in order to verify the spatial continuity of the geological model. A slicing of the geological model was done on a set of horizontal plan views every 5 metres. A total of 25 plan views were created for the James mineral deposit centered on elevations from 425 metres to 545 metres above sea level. The geological model of the James mineral deposit covers an area of 995 meters long by 150 metres wide by 125 metres vertical.

Redmond 2B Deposit

The geological modeling of the Redmond 2B mineral deposit was done using standard sectional modeling of 25 m spacing. A total of 12 sections were used. LIM provided the geological model in 3D digital format. SGS Geostat took into account LIM's geological model for its geological interpretation and modeling and incorporated it into SectCad.

The historical IOCC parameters of the Non-Bessemer and Bessemer ore types were considered together for the geological interpretations and modeling of the Redmond 2B mineral deposit. The 3 treat rock (Hi SiO_2) Ore Types containing from 18% up to 30% silica (SiO_2) were also considered for the geological interpretations and modeling of the Redmond 2B mineral deposit.

A total of 12 plan views were created for the Redmond 2B mineral deposit centered on elevations from 570 metres to 470 metres above sea level. The geological model of the Redmond 2B mineral deposit covers an area of 300 metres E-W by 200 metres N-S by 55 metres vertical. The Redmond 2B mineral deposit was defined in several mineralized envelopes. Each envelope was defined according to LIM's geological model in 3D digital format. Note that there are no historical IOCC geological interpretations available for this deposit.

Redmond 5 Deposit

The geological modeling of the Redmond 5 mineral deposit was done using standard sectional modeling of 30 m spacing. A total of 11 sections were used. LIM provided the majority of the sections with the IOCC historical geological interpretations. A total of 21 plan views were created for the Redmond 5 mineral deposit centered on elevations from 610 m to 510 m above sea level. The geological model of the Redmond 5 mineral deposit is 275 metres long by 220 metres wide by 100 metres vertical. The Redmond 5 mineral deposit was defined in several mineralized envelopes. Each envelope was defined according to the IOCC historical sections.

17.2.4 Composites

The method used to estimate the resources is by the inverse distance squared on regular blocks inside the mineralized envelope. This method requires the use of samples of regular length. Composites are then created starting from the original samples. SGS Geostat used a 3 m composite length for the James, Redmond 2B and Redmond 5 mineral deposits. The length is considered suitable in comparison to the dimension of the blocks used for the model. The selected length of the composites directly influences the amount of dilution of the model. The longer composites are, more they will be diluted. The length of the composites is in direct relation to the length of the original RC sample results used in the modeling. 3 m is corresponding to the length of a 3 m sample used by LIM corresponding to a 3 m length drilling rod used by Cabo Drilling. Historically, IOC used an average 10 foot length sample corresponding to the total length of an RC drilling rod during its mining and exploration activities.

The block models for the three deposits are shown in Figures 17-1, 17-2 and 17-3. A enlarged example of the legend of the block Fe values is shown in Figure 17-4.

Figure 17-1
Oblique View of James Mineral Deposit Block Model

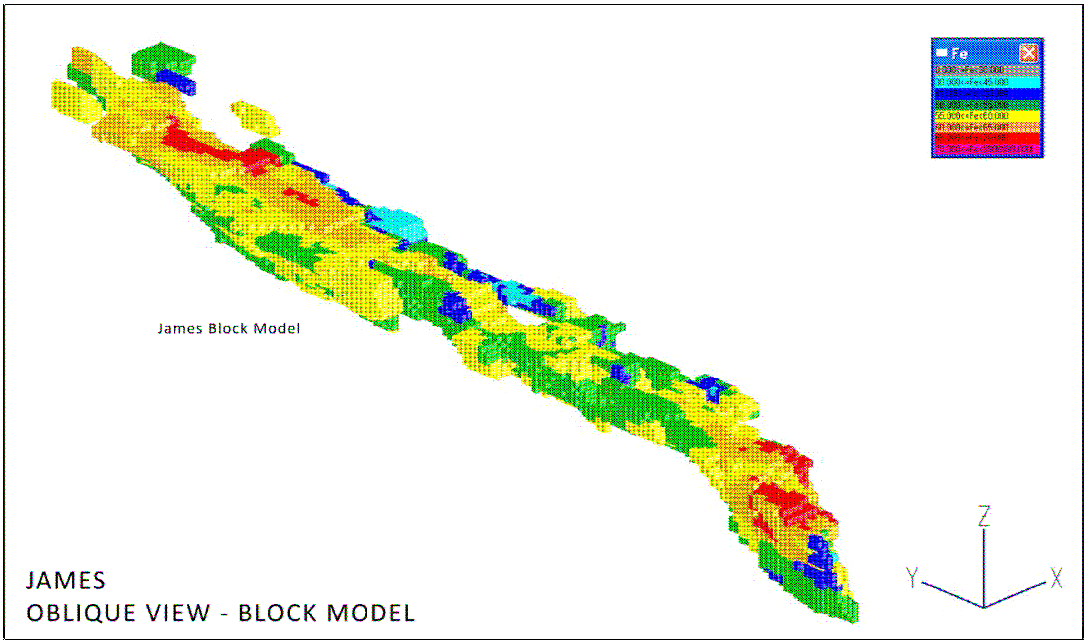


Figure 17-2
Oblique View (Looking down NE) of Redmond 2B Block Model

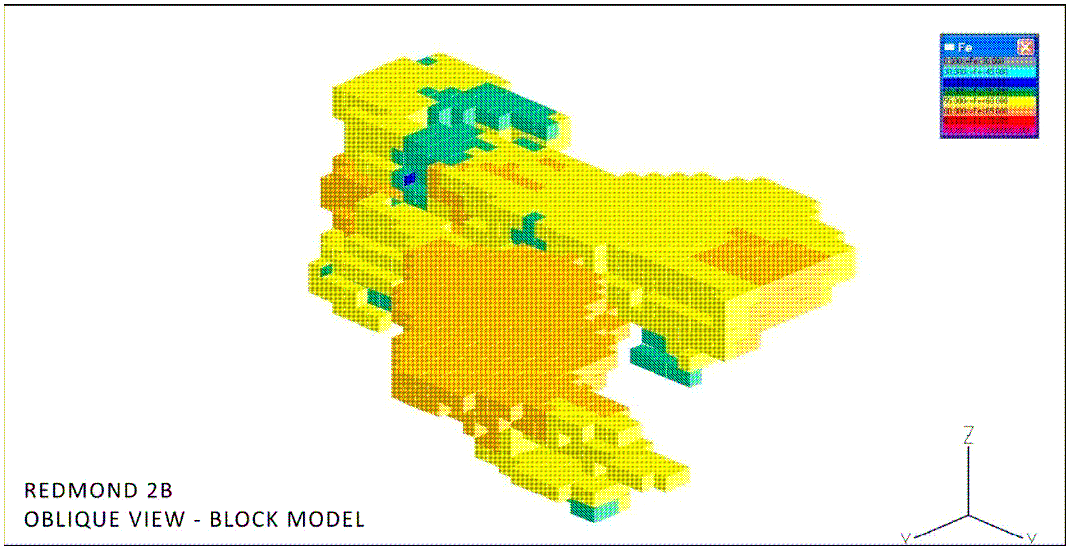


Figure 17-3
Oblique View of Redmond 5 Block Model

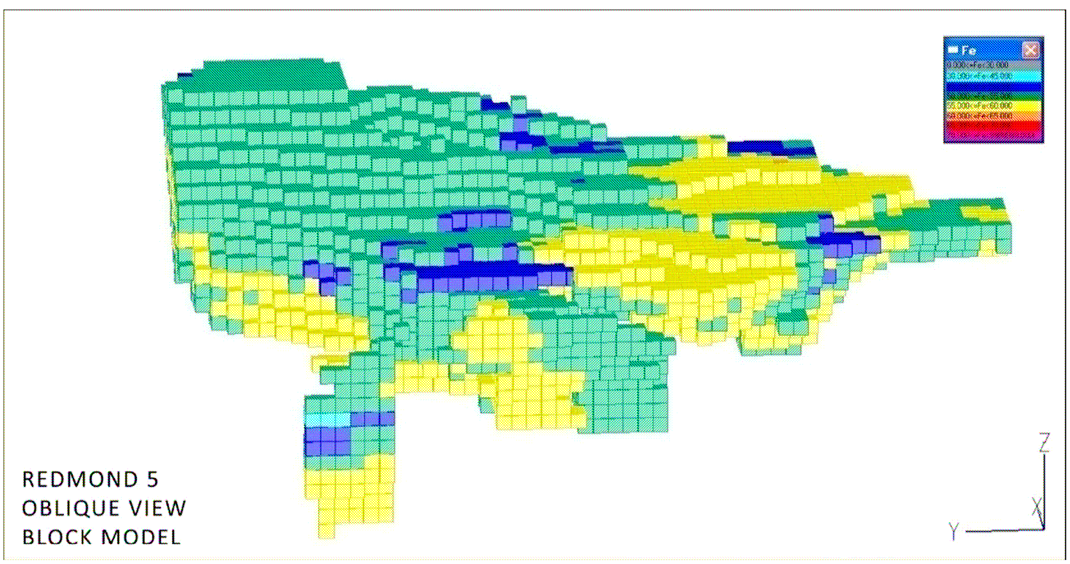
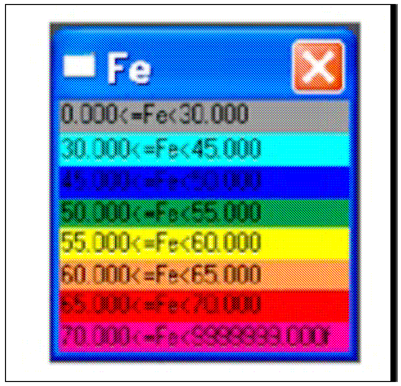


Figure 17-4
Legend of Fe-Values in the Block Models



17.2.5 Resource Classification

The estimated resources were classified in accordance with the specifications of the 43-101 Policy, namely in measured, indicated, and inferred resources. Currently, there are no measured resources. Because of the difficulty with the RC drilling, the degree of fines lost and the relative variability of assays between twinned holes, it did not allow inclusion of any measured resources at this time. The results of the estimates for the James, Redmond 2B and Redmond 5 deposits are shown Tables 17-3, 17-4 and 17-5 respectively.

Table 17-3
Estimated Mineral Resources James Deposit (NI 43-101 Compliant)

Ore Type	Classification	Tonnes	SG	Fe%	P%	Mn%	SiO2%	Al2O3%
NB-LNB	Indicated	5,802,000	3.49	59.60	0.029	0.69	11.05	0.48
	Inferred	35,000	3.43	57.22	0.080	0.14	11.50	0.59
HiSiO2	Indicated	2,296,000	3.33	52.92	0.021	0.53	21.75	0.43
	Inferred	76,000	3.31	51.87	0.015	0.15	23.72	0.42
Total	**Indicated**	**8,098,000**	**3.44**	**57.71**	**0.027**	**0.65**	**14.08**	**0.47**
	Inferred	**111,000**	**3.35**	**53.56**	**0.036**	**0.14**	**19.88**	**0.47**

Table 17-4
Estimated Mineral Resources Redmond 2B Deposit (NI 43-101 Compliant)

Ore Type	Classification	Tonnes	SG	Fe%	P%	Mn%	SiO2%	Al2O3%
NB-LNB	**Indicated**	**849,000**	**3.71**	**59.86**	**0.120**	**0.37**	**5.05**	**2.09**
	Inferred	**30,000**	**3.76**	**57.27**	**0.133**	**0.64**	**5.87**	**4.09**

Table 17-5
Estimated Mineral Resources Redmond 5 Deposit (NI 43-101 Compliant)

Ore Type	Classification	Tonnes	SG	Fe%	P%	Mn%	SiO2%	Al2O3%
NB-LNB	Indicated	1,793,000	3.40	55.55	0.051	1.32	9.26	0.87
	Inferred	78,000	3.30	52.34	0.068	1.95	10.84	0.96
HiSiO2	Indicated	291,000	3.30	51.23	0.029	0.24	21.54	0.41
	Inferred	-	0.00	0.00	0.000	0.00	0.00	0.00
Total	**Indicated**	**2,084,000**	**3.40**	**54.95**	**0.048**	**1.17**	**10.97**	**0.81**
	Inferred	**78,000**	**3.30**	**52.34**	**0.068**	**1.95**	**10.84**	**0.96**

18.0 Other Relevant Data and Information (Item 20.0)

18.1 Project Description

LIM proposes to advance the project in a number of Phases. The first will involve the development and production from the compliant resources nearest to the current infrastructure specifically the James and Redmond deposits. Subsequent stages and Phases will follow on from other deposits as their resource estimates are brought into compliance. It is expected that resource estimates for all the remaining deposits will only be made over a number of years in line with a long term development plan for the total project. Following James and Redmond it is expected that those deposits closest to the current infrastructure namely Houston, Knob Lake, Gill and Ruth 8 will be the next to be brought into resource compliance and into production. Those deposits further from the infrastructure, Howse, Sawyer Lake, Astray and Kivivic will not follow for some time.

The first stage of the Phase One Project to be developed by LIM will involve the reactivation of the James and Redmond 2B & 5 deposits which following an Environmental Impact Statement (EIS), have been released from the Environmental Assessment process by the Government of Newfoundland and Labrador. Mine operations will involve the extraction of iron ore by developing open pit mines at James North, James South, Redmond 2B and Redmond 5 deposits. Beneficiation will take place at the Silver Yard area and a 4.4 km rail spur will be re-established along the existing railbed in Labrador. Construction activities are planned to commence in mid-March 2010 with initial mine development to begin in July 2010.

The Phase One Project will operate under current regulations, environmental protection standards, and industry best practices.

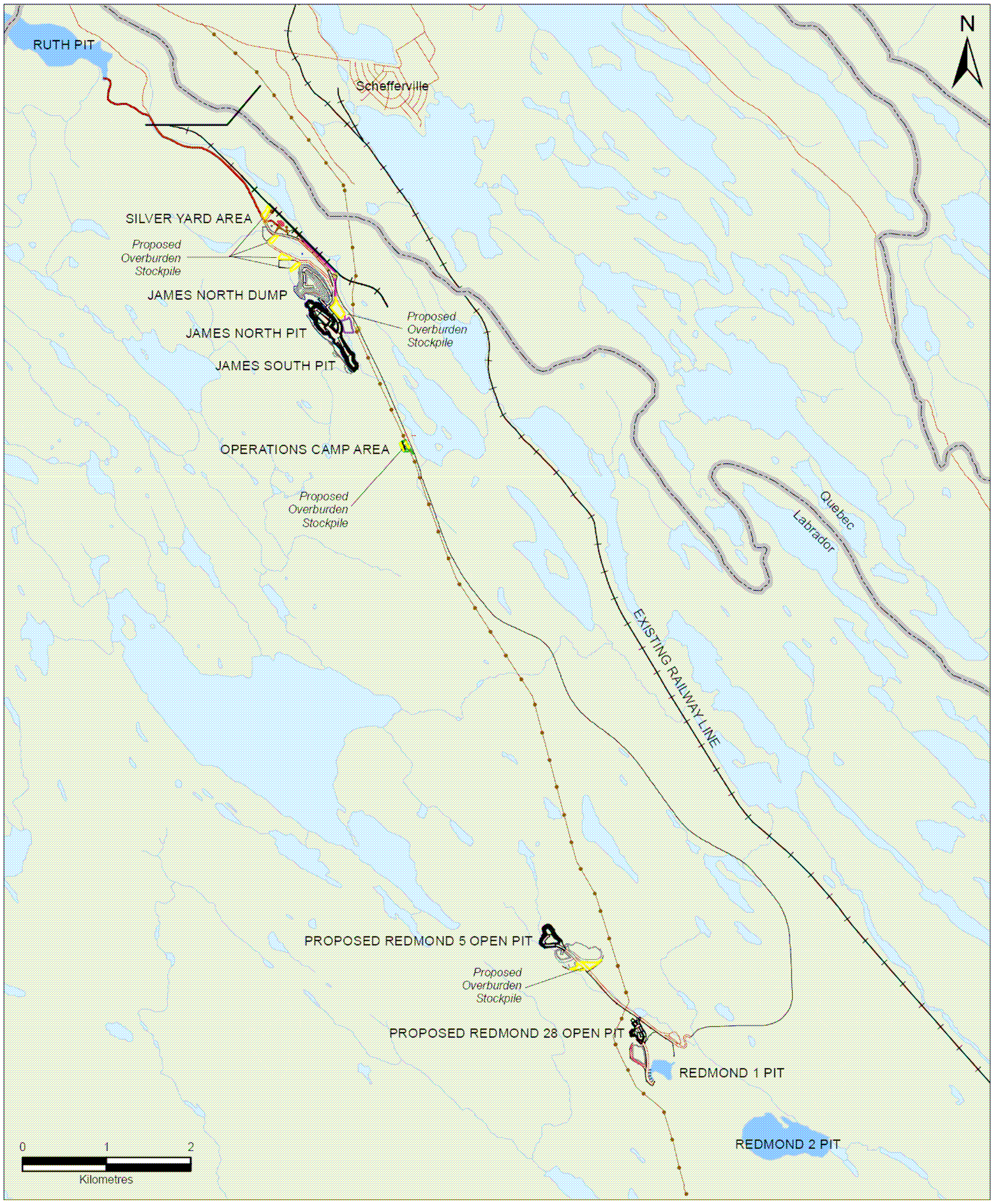
Major features of the Phase One Project include:

- the mining of DSO deposits in western Labrador in an area of previous iron ore mining;
- mining will be carried out using conventional open pit mining methods, employing drilling and blasting operations;
- additional small excavations that may be required will include borrow pits, quarries and side-hill cuts associated with the construction and maintenance of access roads, mine haulage roads, sumps and settling ponds, and railway spur line construction;
- ore will be beneficiated by crushing, washing and screening at the Silver Yard area. No chemicals will be used in the beneficiation process;
- the beneficiation building will house a primary crusher, tumbling scrubber, secondary crusher, primary screening equipment, secondary screening equipment, filtration equipment, and various chutes, conveyors, and pumps;

- the beneficiation plant will be designed to process 10,000 tonnes per day (tpd) of iron ore, however during operation, the initial processing rate will be 6,000 tpd over a period of approximately 212 days per year;
- other buildings at the Silver Yard will include: site offices, laboratory, maintenance shed, and warehouse facilities;
- subsequent to the washing and screening process, reject fines will be pumped via pipeline to be deposited in Ruth Pit, a flooded historical open pit, which will act as a settling pond to remove suspended solids; and
- a 4.4 km rail spur line previously operated and abandoned will be restored, and a siding track will be laid at the Silver Yard area.

The general project location and features are shown on Figure 18-1

Figure 18-1
Project Features



CLIENT: LABRADOR IRON INES LTD.	SCALE: 1:64,000	DATE: FEB 18, 2010	
	DRAWN BY: CP	CHECKED BY:	
PROJECT TITLE: SCHEFFERVILLE AREA IRON MINES (WESTERN LABRADOR)	EDITED BY: CP	REV. No. 0	
	DRAWING No.: 3.1		
DRAWING TITLE: PROJECT FEATURES	MAP FILE: JW-STJ-131		

A comprehensive closure and rehabilitation plan will be prepared and integrated into the overall mine planning. Rehabilitation work will be carried out on a progressive basis and in a timely manner.

A summary of project details is presented in Table 18.1, below.

Table 18-1

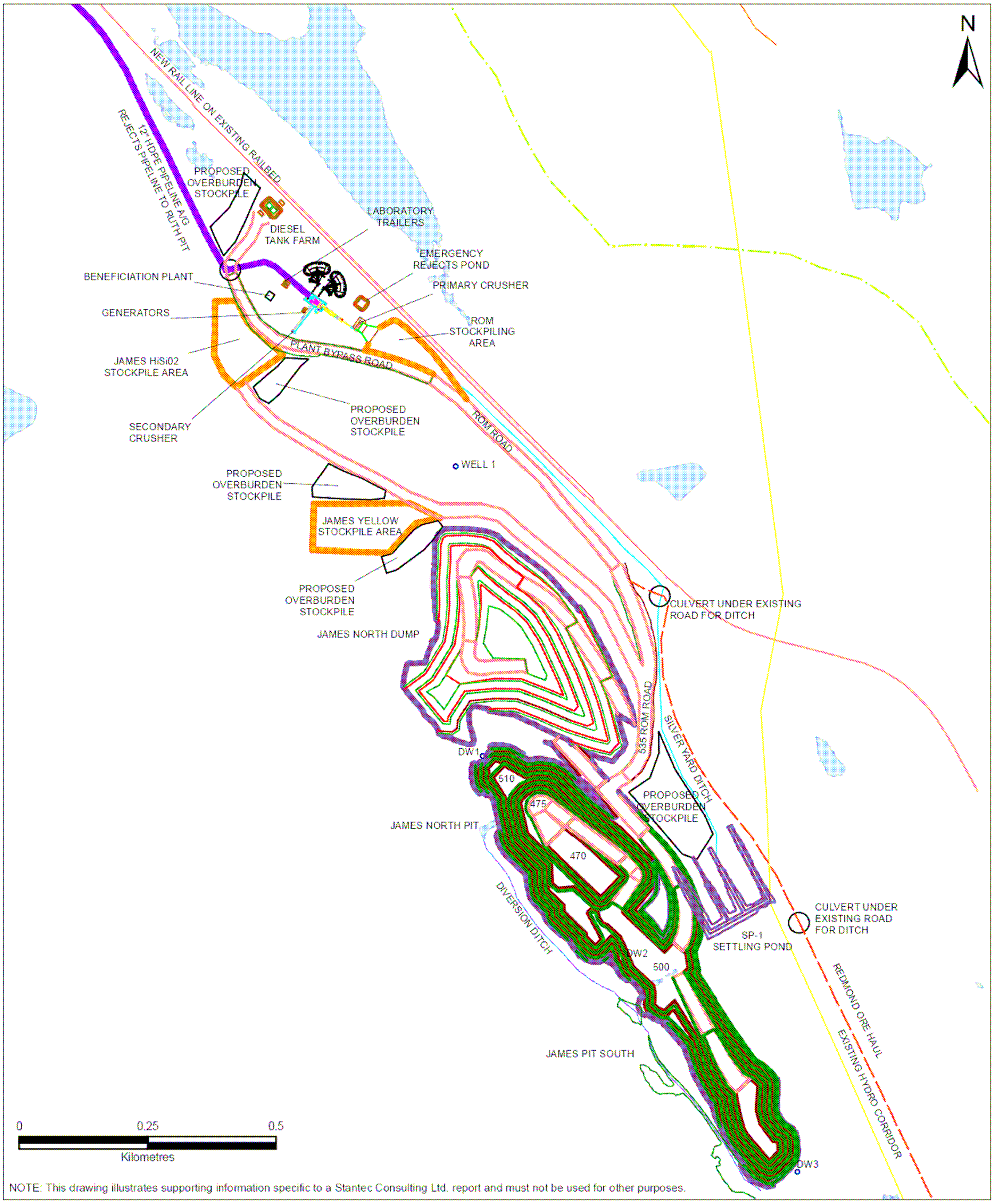
Summary of the Proposed Schefferville Area Iron Ore Mine Phase One Project (Western Labrador)

Project Element	Proposed Details
Total area of development	**James Property** 64.5 ha **Redmond Property** 73.6 ha
Ore processing rate	3,000 t/d from each pit 1,500,000 tonnes in the 1st year increasing to 2,500,000 tonnes in the 3rd year
Open Pit	**James North/South Pit** Area: 17.0 ha **Redmond 2B Pit** Area: 3.5 ha **Redmond 5 Pit** Area: 5.6 ha
Waste Rock and Low Grade Ore Stockpile	**James North Waste Rock Stockpile** Area: 11.8 ha **James Low Grade Ore** Area: 1.8 ha **Redmond Waste** Mined-out Redmond 2 Pit **Redmond 2B Low Grade Stockpile** Area: 2.8 ha **Redmond 5 LG Stockpile** Area: 2.5 ha
Reject Fines disposal rate	8 m^3/min of slurry at 21% Total Suspended Solids 2,055,000 m^3/year
Reject Fines Ruth Pit Disposal Area	East end of existing flooded pit
Beneficiation Area - Silver Yard	Area: 80.9 ha
Overburden stockpiles	Various locations around the site Total Area (approx.): 4.5 ha
Power supply	Initial Phase – 4 mobile diesel generators Future - Menihek Power Plant 32 km south of Silver Yard
Phase One Project	5 years

18.2 Site Development

Figures 18-2 and 18-3 present the post-development surface site plans including end-of-mining pits, ore stockpiles, settling ponds and waste rock areas, as well as the infrastructure to be developed at the Silver Yard area.

Figure 18-2
James and Silver Yard Infrastructure



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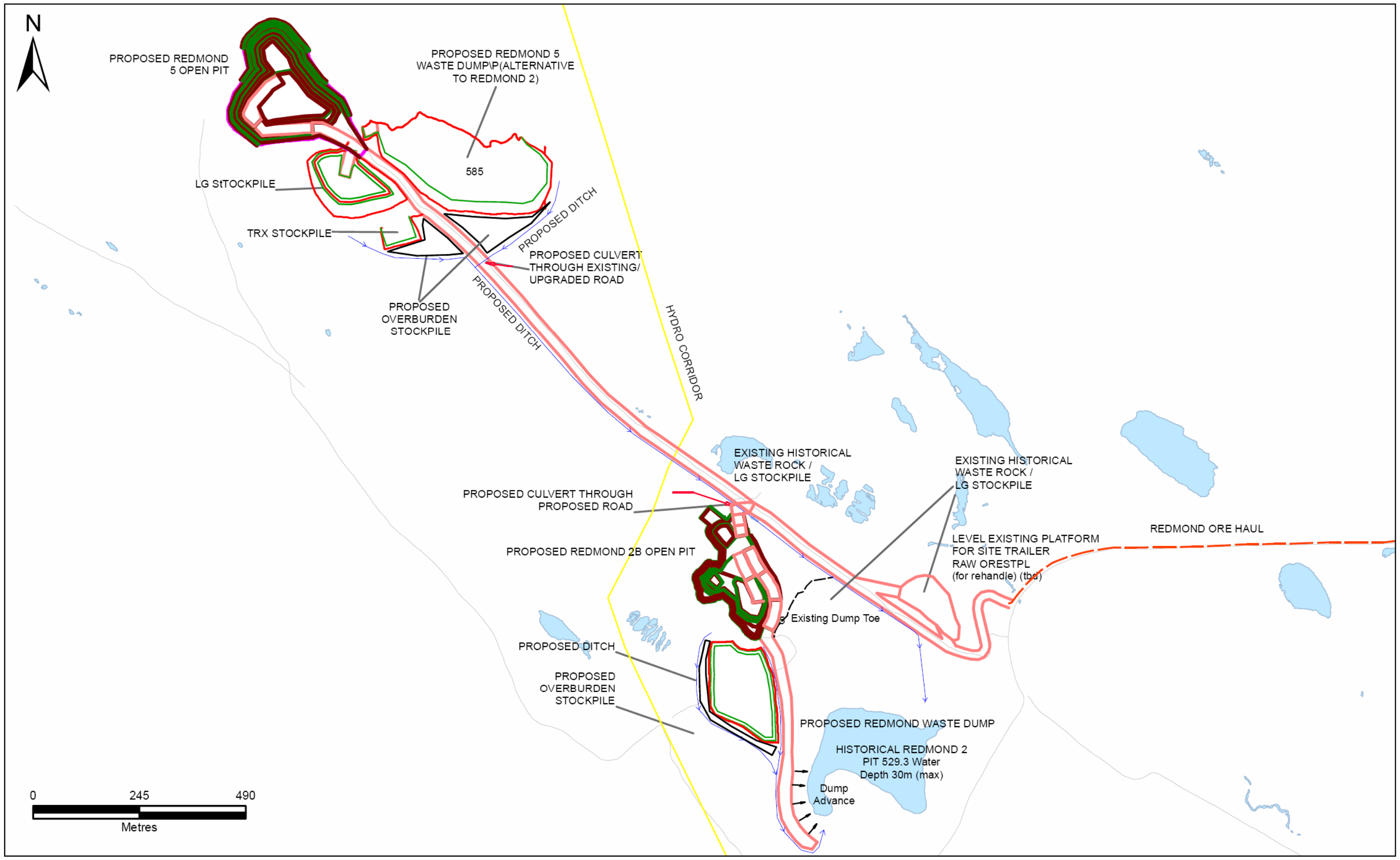
		DRAWN BY: CP	CHECKED BY:		
PROJECT TITLE:	SCHEFFERVILLE AREA IRON MINES (WESTERN LABRADOR)	EDITED BY: CP	REV. No. 0		
		DRAWING No.: 3.2			
DRAWING TITLE:	JAMES AND SILVER YARD INFRASTRUCTURE	MAP FILE: JW-STJ-137			

Figure 18-3
Redmond Infrastructure



CLIENT: LABRADOR IRON INES LTD.	SCALE: 1:12,800	DATE: FEB 18, 2010	
	DRAWN BY: CP	CHECKED BY:	
PROJECT TITLE: SCHEFFERVILLE AREA IRON MINES (WESTERN LABRADOR)	EDITED BY: CP	REV. No. 0	
	DRAWING No.: 3.5		
DRAWING TITLE: REDMOND INFRASTRUCTURE	MAP FILE: JW-STJ-133		

18.2.2 Main Access and Site Roads

Primary access to the James mineral deposit is by an existing gravel road which is located approximately one km southwest of the Silver Yard area. The James property straddles an existing road connecting Silver Yard with the Redmond property, and continues to the Menihek hydroelectric dam, where the road is terminated. The existing roads are in reasonable condition and may require brushing to improve visibility and grading to establish road surface.

The access roads will require proper signage. The signage will include posted speed limits, stop signs at intersections, and caution signs about the co-use of mine and public traffic. Adequate numbers of signs will be posted in all local languages.

Within the pit designs, the access roads will be limited to only mine personnel. The haulage roads will be designed and built to permit the safe travel of all of the vehicles in regular service by following accepted industry standards and following Section 27 of the Mines Safety of Workers Regulations.

The pit haulage roads will be designed at 8 percent grade. All haul roads at the mine sites will be engineered and built to permit the safe travel of all vehicles and in accordance with provincial regulations (CNLR 1145/96). The running surface width of proposed haul roads will be designed to conform to current industry standards.

Although all of LIM's properties are located in the Province of Newfoundland and Labrador, they will utilize, to some extent, present connecting roads and possibly some of the services available from the town of Schefferville and the surrounding communities.

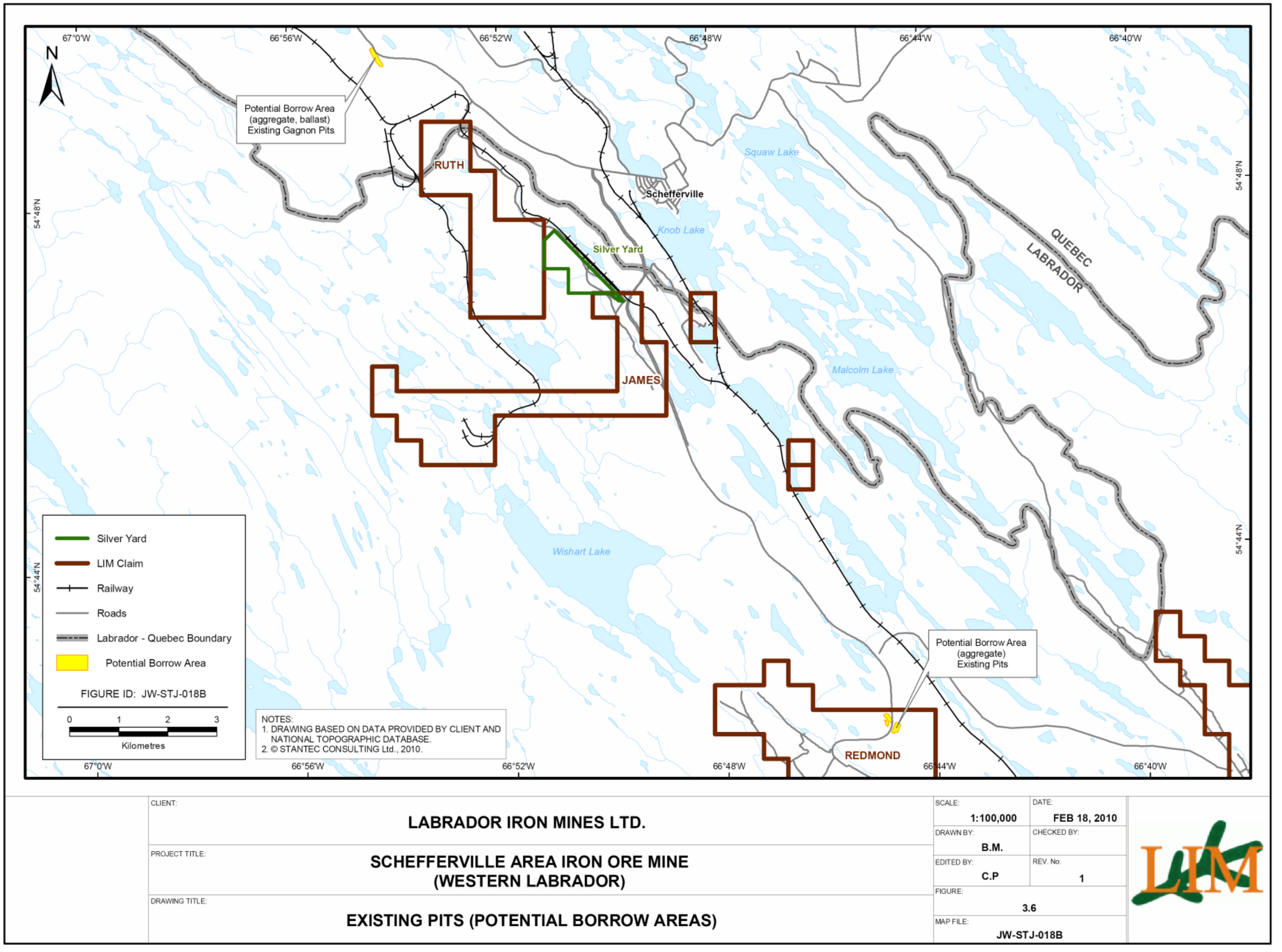
There are no roads connecting the area to southern Labrador or to Quebec. Access to the area is by rail from Sept Iles to Schefferville or by air from Montreal, Sept Iles or Wabush.

18.2.3 Mine and Borrow Pits

Open Pits

Mining will occur at James North, James South, Redmond 2B and Redmond 5 deposits, where approximately 8.9 million tonnes of mineable iron ore resources have been estimated using current exploration results. In addition to ore, approximately 10.8 million tonnes of overburden and waste rock will be excavated and disposed or stockpiled over the life of the individual properties. Excavation and transport to the beneficiation area will be done using conventional truck and excavator methods.

Figure 18-4
Existing Pits (Potential Borrow Areas)



18.2.4 Silver Yard (Mineral Beneficiation) and Mine Infrastructure

All iron ore production from the James and Redmond properties will be beneficiated at the Silver Yard Area. Figure 18-5 illustrates the proposed infrastructure at the Silver Yard:

- Beneficiation area, which includes the beneficiation building, primary mobile crushing plant, various conveyors, product stockpiles;
- Water supply tank and pump building module;
- Electrical building module, mobile diesel generators, and transformer;
- Diesel storage tanks and fuelling dispensing station for mobile equipment;
- Vehicle and equipment maintenance shed;
- Standard mobile offices;
- Parking area;
- Run of mine (ROM) ore stockpile area;
- Stockyard and railcar loading area;
- Reject fines disposal pipeline;
- Settling pond for emergency reject fines disposaland
- Security fencing and/or signage.

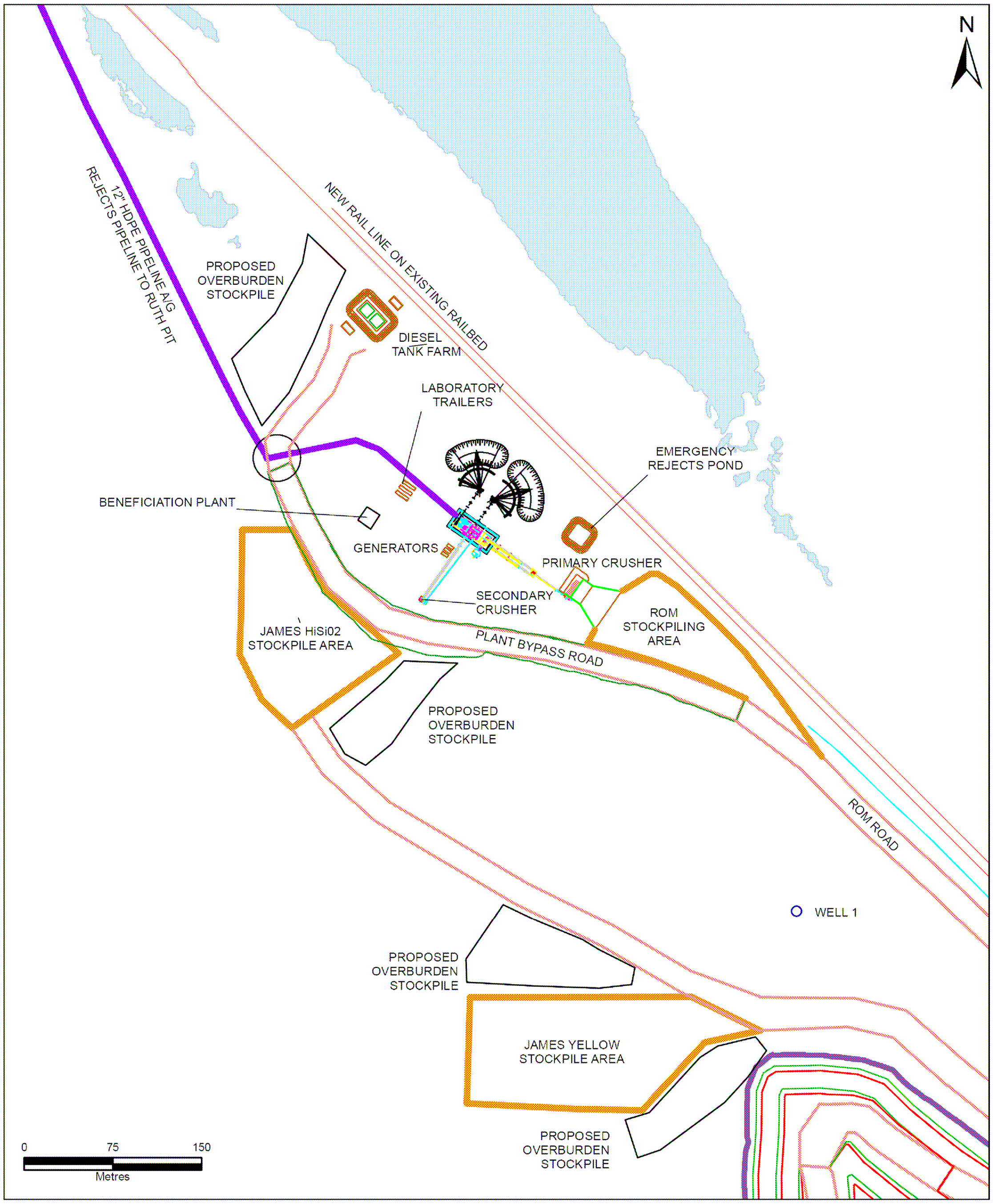
The infrastructure at the James Mining Area includes the following and is illustrated in Figure 18-2:

- James North Pit and associated haulage roads;
- James South Pit and associated haulage roads;
- James low grade and waste rock stockpile areas;
- James settling pond facility (SP-1)

The infrastructure at the Redmond Mining Area includes the following and is illustrated in Figure 18-3:

- Redmond 2b Pit and associated haulage roads;
- Redmond 5 Pit and associated haulage roads;
- Redmond 2b low grade stockpile;
- Redmond 5 low grade stockpile;
- Redmond ROM 0re stockpile area; and
- Redmond site office trailer.

Figure 18-5
Silver Yard Beneficiation Area Infrastructure



CLIENT: LABRADOR IRON INES LTD.	SCALE: 1:4,550	DATE: FEB 18, 2010	
	DRAWN BY: CP	CHECKED BY:	
PROJECT TITLE: SCHEFFERVILLE AREA IRON MINES (WESTERN LABRADOR)	EDITED BY: CP	REV. No. 3.7	
	DRAWING No.: 3.5		
DRAWING TITLE: SILVER YARD BENEFICIATION AREA	MAP FILE: JW-STJ-134b		

Beneficiation Building and Process

The building and contents will be semi mobile and modular to fit with the Project's long term plans. The beneficiation buildings will house the equipment needed for the beneficiation process. The beneficiation plant is designed to operate on average 7 to 8 months per year.

Other buildings at the beneficiation area include: mine dry, site offices and analysis laboratory, which will be standard mobile trailers/modular units; maintenance shed, which will be a sprung type structure; and warehouse facilities, which will be housed within containers.

The other infrastructure that will be located at the Silver Yard area include fuel storage tanks, mobile diesel generators, laydown areas, and process water pump building.

18.2.5 Reject Fines Storage Area - Ruth Pit

The mined ore will be taken to the Silver Yard area for beneficiation, which involves the crushing, screening and washing of the rock, and which does not involve the use of any chemicals. The resulting washwater consists of water and fine rock material (reject fines) and, mineralogically, this material is the same as the surrounding rocks. The reject fines will be produced at an estimated rate of 30 percent of feed. The preferred option involved the deposition of these reject fines into nearby historically mined pits until such time as the new mine pits are decommissioned.

Hydrological studies conducted by WESA of the Project area, including Ruth Pit, confirm that Ruth Pit has the capacity to meet the water demands required for the reject fines deposition for the life of the First Phase Project operation. Based on this information, in combination with the determination from Department of Fisheries and Oceans, and in consideration that the Ruth Pit is an existing man-made feature, LIM concluded that the deposition of the reject fines at this location presented the least potential for environmental impacts.

18.2.6 Ore, Waste and Overburden Stockpiles

The proposed locations for the waste rock storage and low-grade ore stockpiles are indicated on the respective mine drawings (Figures 18-2 and 18-3). The waste rock disposal plan for the James mining area includes an option of storing the waste rock at a site north of the James North pit or in the James South pit. The footprint for the waste rock storage and low-grade stockpiles at the James North site requires an area of approximately 12 ha and 1.8 ha respectively. The slopes of the waste rock storage areas and stockpiles will be 1.5:1 and the average height for the quoted footprint is 40 m. In-pit disposal will be utilized wherever feasible.

The waste rock disposal plan for the Redmond deposits includes a combination of the use of the existing mined-out Redmond 2 pit, on-land stockpile area, and in-pit disposal wherever feasible. This will reduce the requirement for additional disturbance due to waste rock storage. There may be some new disturbance required for low-grade stockpiles, an area of approximately 2.8 ha for the Redmond 2b site, and 2.5 ha for the Redmond 5 site. The use of existing stockpiles will be investigated and if shown to be economical will be the preferred method.

Waste rock and overburden will be stockpiled and contoured in a manner that conforms to provincial guidelines and regulations. Where applicable, waste rock storage areas will be built up in lifts to limit the overall dumping height. While this will increase haul distance, it will stabilize the waste rock and minimize the risk of the storage area edge slumping. The stockpiled materials will be managed to limit the possibility of suspended solids being introduced into site drainage or adjacent waterbodies. Overburden will be used during site reclamation to support revegetation.

Due to the very low probability of the presence of sulphide minerals in the waste rock and uneconomic mineralized zones waste rock storage sites are not planned to be contoured or capped with clay to control any acidic runoff.

18.2.7 Site Buildings and Infrastructure

Supporting Infrastructure

It is not anticipated that any permanent structures will be erected for the mining and beneficiation operations at the Silver Yard area, although some temporary stores and workshops will be established. As this will be a beneficiation site, a workshop and warehouse will be established, as well as a small fuelling station nearby. A portable office and lunchroom facility will also be set up, which will include services such as washrooms and a first aid room. All of the buildings, including foundations if required, will be removed upon completion of operations. General services and infrastructures will be shared with the contractor.

Laboratory

It is planned to establish an on-site mobile laboratory in a portable modular building at the Silver Yard area. The laboratory will include a sample preparation section with a drier, crushers, screens, pulverisers and rifle splitters and an analytical lab section for daily ore control and exploration samples analysis. It is anticipated that the analytical methods used will be fusion (lithium metaborate) followed by XRF spectrometry.

Workshop

A maintenance/workshop shed (sprung type structure or pre-engineered building with rubberized flooring) and maintenance yard will be provided to conduct routine maintenance and non-major repairs for the mine and beneficiation operations. The building will be equipped with the necessary tools and equipment to maintain the mobile fleet. It is expected that the workshop would be equipped with compressed air and related tools, tire changing equipment, and hydraulic hose preparation. A closed-circuit wash bay and oil-water separator will be developed within the Maintenance Building and collected material will be pumped out on a routine basis for disposal by a licensed and experienced contractor at an approved facility. There will be no discharge of this into the surrounding environment. Solvents may be used for parts cleaning and if so, will be properly stored and disposed of in accordance with applicable regulations.

It is anticipated that onsite storage of small retail-size quantities of hydraulic oils and other materials may be required for the limited mine vehicle/equipment maintenance. In addition, diesel storage associated with local or emergency back-up power generation may be required. Petroleum/oil/lubricant (POL) transport, storage, use and disposal will be conducted in accordance with applicable legislation and all workers will be trained in the appropriate Environmental, Health & Safety (EHS) approach to working with these materials. Spill kits will be available at key locations on site and workers will be trained in their use and other emergency response procedures.

It is anticipated that major repairs would be conducted elsewhere at the contractor's discretion.

Warehouse

The warehouse will contain critical components for the vibrating screens and ware parts for crushers and conveyors. The contractor may want to store tires, filters, retail quantities of lubricants/oils and brake parts for trucks and drill steel, bits and parts for drill rigs.

Fuel Storage

Fuel storage in Newfoundland and Labrador is regulated by the Storage and Handling of Gasoline and Associated Products Regulations, 2003. A Certificate of Approval for a fuel storage system must be obtained from the Department of Government Services and Lands. Fuel caches in remote areas of Newfoundland and Labrador should abide by the Environmental Guidelines for Fuel Cache Operations as stipulated by the Department of Environment and Labour.

Transportation, storage, and use of fuels at the Project site will be conducted in compliance with all relevant laws, standards and regulations. Before transporting or storing fuel at the Project site, contracted fuel suppliers will be required to provide a copy of a fuel spill contingency plan acceptable to LIM. LIM and its contractors are required to ensure that fuel and other hazardous materials are handled by persons who are trained and qualified in handling these materials, in accordance with government laws and regulations.

Two Raymac Arctic Guard urethane coated nylon fabric bladders with a capacity of 113,500 Litres (30,000 USG) each, will form the diesel oil storage tank system used for fuel supply at the Silver Yard area. The diesel fuel will be transported by rail to Silver Yard prior to being transferred to the above ground storage tank system. The storage tank is of double wall design, puncture resistance up to 225 lbs. and will include a retention lined dike. The tank foundation is to be made of compacted sand and includes a geomembrane that covers the entire dike area.

The dike retention volume will be able to retain at least 110 percent of the tank volume. The diesel vehicle refuelling tank truck will carry the diesel from the bulk storage tank to the equipment diesel day tanks. Any water rejected from the tanks will be directed into a closed circuit oil/water separator. The effluents from the oil/water separator will be disposed of as per environmental standards. The oil/water separator will require approval by Government Services Canada (GSC). Used and collected oil will be delivered to a licensed used oil collector.

Drums of fuel oil, if required at the site, will be tightly sealed to prevent corrosion and rust and will be placed within appropriate secondary containment.

Explosives Storage and Mixing Facilities

Iron ore extraction will be conducted by a Labrador-based mining contractor. Mechanical methods will be used, where possible, to break up the rock. The contractor may also require the use of explosives. The contractor will be responsible for complying with the required permit and/or approvals under the Natural Resources Canada Explosive Regulatory Division. The Contractor will ensure that blasting will follow all provincial regulations, including the Occupational Health and Safety Regulation, under the *Newfoundland and Labrador Occupational Health and Safety Act* 1165 and the Mine Safety of Workers under Newfoundland and Labrador Regulation 1145/96. The Contractor will hire experienced/licensed blasters.

Lighting

All buildings will include sufficient perimeter lighting with outdoor fixtures. Exterior lighting will be timer or photocell controlled. Lighting will also be provided at doorways and overhead doors. There will be no street lighting on any access roads. Portable lighting plants and lights on mobile equipment will be used within the pit areas to illuminate working areas.

18.2.8 Camp

Camp accommodations will be constructed for workers at a previously developed former ski hill lodge location in Labrador. The camp will have an overall footprint of approximately 7,000 m^2. and will be located on the site of a former ski hill and lodge (Figure 18-6). The site for the camp was previously cleared and developed for facilities associated with the ski hill, and an abandoned ski lodge (also referred to as “Cabin 1”) remains on the site. Camp structures will consist of mobile to semi-mobile pre-fabricated modular trailers and will accommodate approximately 60 workers seasonally, from approximately April to November on an annual basis. The construction and operation of the camp will utilize Newfoudland and Labrador (NL) workers, materials, goods, and services where possible.

The proposed dormitories will be comprised of single rooms and will include an adequate number of rooms for the number of people on-site at any given time. Each single room will include its own washroom. The camp will include a kitchen (with catering), dining room, laundry facilities, and a recreation area. The recreation facilities may include such features as a pool table, television lounge, exercise equipment, and access to outdoor recreation. The camp will also have internet and telecommunications access.

Initially, up to two diesel generators (450 and 150 kw) will be used as a temporary power source for the camp until electricity can be connected from the nearby grid. Grid access is nearby and no significant construction is anticipated to facilitate the grid connection. Minimal quantities of generator fuel will be temporarily stored in a double-walled storage tank in accordance with applicable regulations until the permanent grid connection is in place.

Generator sets, installed outdoors (including trailer mounted), will be equipped with noise attenuating enclosures providing a combustion exhaust muffler, air supply silencers and air exhaust silencers.

Water requirements for the seasonally operated camp are anticipated to be supplied from a nearby groundwater well. Sanitary waste at the camp will be collected and treated using a domestic wastewater treatment system that uses a Rotating Biological Contactor (RBC) form of aeration. This system produces minimal sludge, which will be removed at an estimated rate of once per operating season and disposed of at an NL-approved facility by a licensed contractor. Surface water drainage, consisting of site drainage and the RBC system, will be contained and directed to a settling pond down-gradient of the camp. Proposed locations of these features are shown in Figure 18-6.

Any domestic waste will be collected on-site and delivered to an experienced Labrador-based contractor and placed in a landfill facility in Labrador West, in accordance with applicable regulations. Food storage and handling will be conducted in accordance with applicable regulations and any organic waste generated will be stored in animal-proof containers prior to offsite disposal in NL. Where and when possible, a Reduction, Reuse and Recycling policy, will be implemented to minimize waste generation at the camp.

Figure 18-6
Camp Location and Features

CLIENT: LABRADOR IRON MINES LTD.	SCALE: 1:1,300	DATE: FEB 18, 2010	LIM
	DRAWN BY: C.P	CHECKED BY:	
PROJECT TITLE: SCHEFFERVILLE AREA IRON ORE MINE (WESTERN LABRADOR)	EDITED BY:	REV. No. 0	
	DRAWING No.: 3.8		
DRAWING TITLE: CAMP LOCATION AND FEATURES	MAP FILE: JW-STJ-091		

18.2.9 Railway Infrastructure

The only means to transport iron ore from Schefferville to sea-ports is by rail. LIM must transport by rail, approximately 568 km to the port of Sept Îles for further shipping by marine transport. LIM will operate a short spur line (4.4 km = 2.5 miles) linking the Silver Yard with the existing rail system. The existing rail system includes:

- a 208 km link from Schefferville to Emeril Junction that is owned and operated by TSH, a company jointly owned by the Innu Nation of Matimekush-Lac John, the Naskapi Nation of Kawawachikamach, and the Innu Takuaikan Uashat mak Mani-Utenam;
- the 360 kilometres of rail from Emeril Jct M.P. 225.3 to Sept Îles that is operated by QNS&L, a wholly owned subsidiary of the Iron Ore Company of Canada IOCC; and
- at Sept Îles, the rail link from Arnaud Junction to Pointe-Noire that is operated by Arnaud Railways, (AR), a wholly owned subsidiary of Wabush Mines.

The northern portion of the railway originally constructed by IOCC is still available and in operation. It is operated by TSH which owns the railway track from Schefferville to Emeril Jct. (217 km), but operates from Schefferville to Sept-Îles for passenger and light freight traffic. No iron ore is currently hauled on the TSH section of the track. An independent preliminary study of the TSH railway was carried out for LIM in August 2006 by Hatch Mott MacDonald (Hatch) which concluded that the Menihek Subdivision was in very good condition despite more than 20 years of under capitalization. However, some refurbishing of the tracks, rails and culverts will have to be carried out through a recommended multi-year repair and replacement program.

A rail co-operation agreement has been developed between LIM and NML regarding the reconstruction of the "Timmins Extension" rail spur line. The scope of work addressed in this submission consists of the approximately 4.4 km (2.5 miles) which will run from the TSH railroad main rail line near Schefferville to LIM's planned processing center at Silver Yards (this document's subject "Spur Line") and to the Labrador border with Quebec.

Existing and proposed railway infrastructure is detailed in Figures 18.7 and 18.8.

Infrastructure

Work along the spur line previously operated and abandoned by IOCC will include the restoration of sidings to the spur line, and the re-laying of 4,400 track meters of track along the existing railbed. The infrastructure components involved in the re-laying of rail include:

- ballast - the existing rail bed and most of the necessary ballast are already in place and some preparatory grading and levelling may be done.
- culverts - all necessary culverts are in place and require no upgrade;
- ties – new hardwood track;

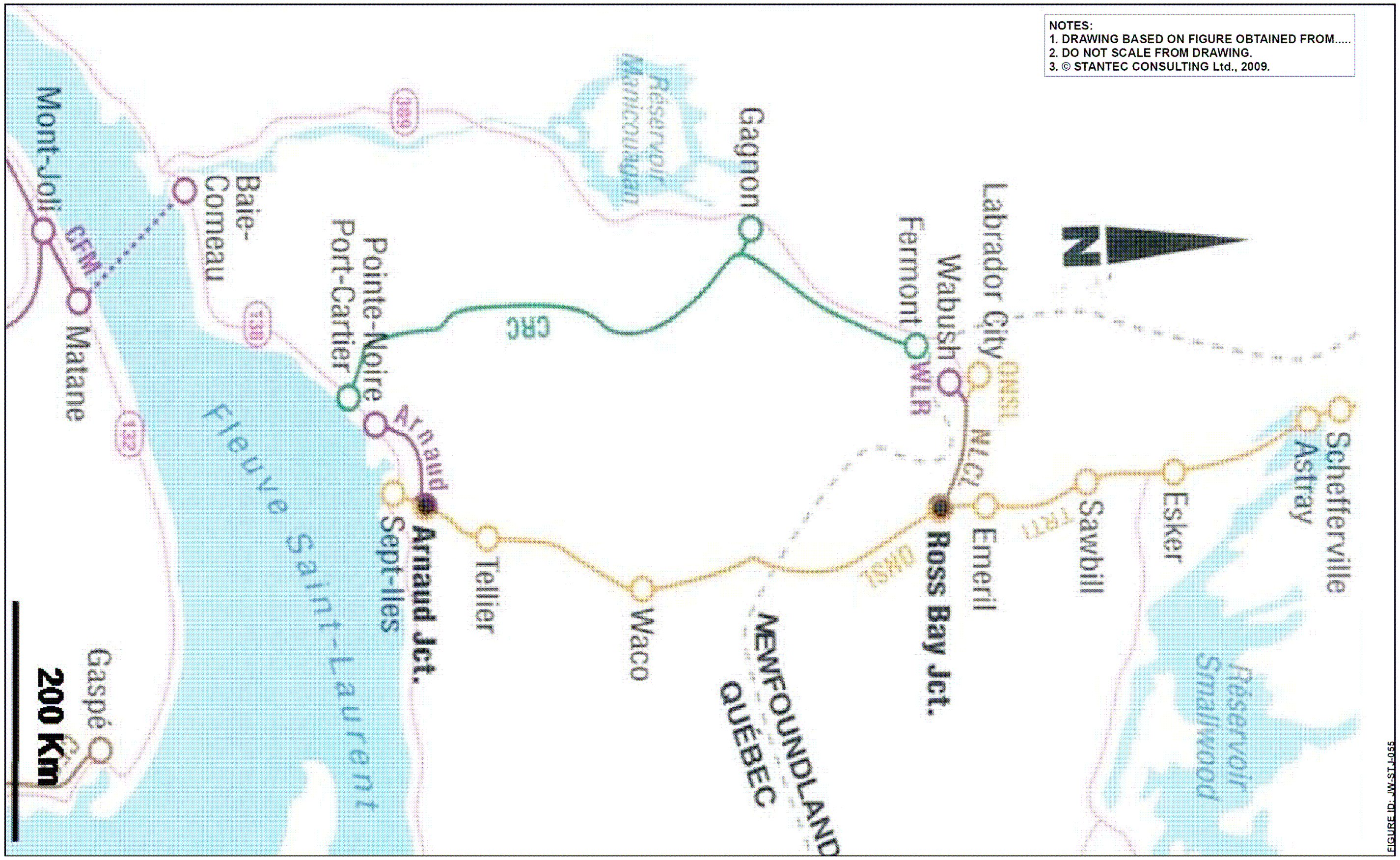
- rails – new or second-hand rails;
- turnout and switch – new turnout, new switch points and switch stand to main line;
- bumping posts and derail;
- other track material (OTM) – new spikes, new or used rail anchors, new or used tie plates and joint bars, new track bolts, nuts and spring washers; and
- There will also be a split platform static railway scale and scale house, to weigh the loaded ore cars.

The new track and associated infrastructure will be installed in conformance with the latest edition of the American Railway Engineering and Maintenance-of-way Association (AREMA) recommended practices.

Rolling Stock

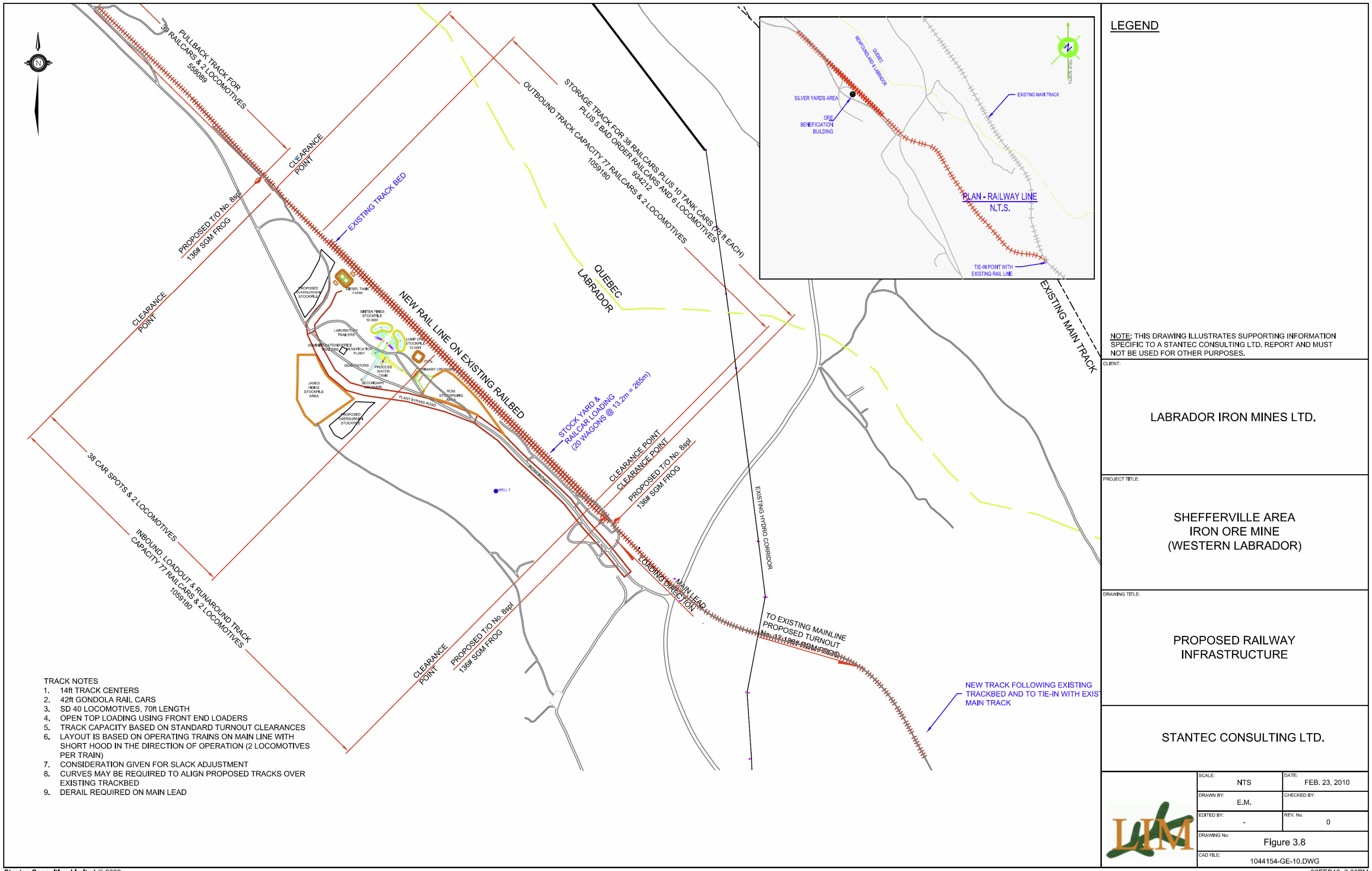
LIM will operate with sufficient power units and rolling stock to meet the operational needs of the Project. The numbers of locomotives and ore cars will be initially determined on the start-up operations (i.e., the first year production level), and by the outcome of ongoing negotiations on railway operation). Locomotives will be SD40-2 type diesel locomotives or similar and the rolling stock will be 40-foot gondola iron ore cars with a nominal capacity of 93 tonnes of ore.

Figure 18-7
Existing Railway Infrastructure



CLIENT: LABRADOR IRON MINES LTD.	SCALE: NTS	DATE: Dec 16, 2009	
	DRAWN BY: B.M.	CHECKED BY:	
PROJECT TITLE: SCHEFFERVILLE AREA IRON ORE MINE (WESTERN LABRADOR)	EDITED BY: C.P	REV. No. 0	
	FIGURE: 3.9		
DRAWING TITLE: EXISITING RAILWAY INFRASTRUCTURE	MAP FILE: JW-STJ-055		

Figure 18-8
Proposed Railway Infrastructure at Silver Yard



Regulatory Framework

LIM will operate entirely within Labrador and as such will be regulated under the provincial Rail Service Act 1993.

As LIM will only operate within the Province of Newfoundland and Labrador, it will therefore not, at least initially, be required to be designated as a Common Carrier under the provisions of the Canada Transportation Act 1996. Nevertheless, it will operate as if it were a common carrier for the purposes of ensuring that other potential users of LIM track and facilities will be granted a suitable level of service.

Rail Co-operation Agreement

The rail co-operation agreement states that LIM will enter into the requisite agreements with third parties to design and construct their respective portion of the Timmins Extension to standards required to transport the iron ore to be extracted from their DSO deposits.

Under the Rail Co-operation Agreement LIM and NML jointly agree to apply to Government authorities for all required rights of way and/or surface rights and for the grant to each party of the rights on a specific portion of the Timmins Extension, along with rights of access to, construction on and use of such specific portions as are mutually granted by one party to the other party.

The Parties have agreed to negotiate and enter into a Rail Operating Agreement which will provide the terms of access to and use of the Timmins Extension and the tariff to be paid by each party with respect to its use of the portion of rail line for which the other party holds the rights of way and have also agreed to collaborate to determine the most expedient means to refurbish the TSH Railway main line to standards required to carry out the transportation of minerals extracted from the DSO deposits.

18.2.10 Port Facilities

LIM intends to transport its ore to Pointe Noire at Sept Iles where an existing ship-loading facility will be utilized. Additional operations will be needed to provide train unloading and by-pass operations together with some extensions to the existing reclaim facilities. It is expected that vessels up to 140,000 dwt capacity will be able to be loaded. This should enable economic transport of ore to all parts of the world.

18.2.11 Power Supply

The Menihek Power Plant, owned and operated by Newfoundland and Labrador Hydro (Nalcor), is located 32 km southeast from Silver Yard and is the only provider of electric power to the area. The plant was built to support iron ore mining and services in Schefferville. The plant contains two 5 MW Westinghouse generators and one 12 MW unit. The main substation is close to Silver Yard lowering the voltage of distribution to Schefferville town.

The existing transmission corridor runs across and adjacent to the Redmond and James properties as well as the Silver Yard area. Refer to Figure 18.1 for locations. The expected peak demand load from the beneficiation process is currently estimated at 1500kW and total connected load is 3000kW. The expected peak demand load from the dewatering is currently estimated at 2000kW and total connected load is 3000kW.

The initial phase of the Electrical Supply Plan will have power generated by up to four mobile diesel generators located at Silver Yard. These generators will be continuous duty, 750 kW, 60 Hz, and 600 V and placed within containers. A mobile generator will also be required at the field trailer at Redmond. Up to four additional 750kW mobile generators will be located nearby the dewatering wells at the James site. An aerial transmission line at 4160V will distribute the power to each pump at the James Site. Local starters will control each individual pump.

As soon as it is possible, the second phase of the Electrical Supply Plan will be initiated. This phase involves drawing hydro-electric power from the existing regional power grid. A substation will be required and it is expected to be located near the Silver Yard area.

18.2.12 Communication

All mining equipment and mine vehicles will be equipped with two-way radio system. This radio system will be available within the beneficiation building, maintenance building, and offices. A transmitter/receiver station including antenna tower and housing for radio communication equipment may be required. The location of the tower would be selected to optimize communication transmissions between the James – Redmond – Silver Yard sites.

Telephone and internet services would be provided through satellite services.

18.2.13 Beneficiation Plant Waste Effluent and Pit Dewatering Settling Ponds

Silver Yard

The production of the DSO requires only a simple process of crushing, screening, and washing. Effluent originating from the beneficiation area will contain rock fines but will have no chemical constituents. Current mine plans anticipate that the washwater will be directed into existing historical mine pits to settle out solids. For the properties addressed in this plan, the existing pit to which the washwater will be directed is the existing Ruth Pit as previously discussed in Section 18.2.5.

Although the Ruth Pit outflow is the start of James Creek, environmental baseline information, including a preliminary aquatic habitat assessment, confirms that the abandoned pit has no surface connectivity to existing fish habitat. The outlet at Ruth Pit is a submerged culvert that is located in the southwest portion of the pit. Historical pit wall rock debris has partially blocked the pit-side end of the culvert, and the pit water level is approximately 2 m above the top of the culvert. Water still flows through the culvert but more by infiltration rather than surface level flow due to the blockage. However, the discharge end of the culvert is perched approximately 1 m above the James Creek inlet, therefore, fish cannot enter Ruth Pit from James Creek because the culvert is perched and is blocked by coarse rock.

LIM and their consultants have assessed the existing outlet structure at Ruth Pit and determined that some modifications will be required to ensure high precipitation events and the increased flows from the reject fines pipeline are addressed.

James Property

The water drawn from the proposed dewatering wells around the James pit is estimated to be discharged at a rate up to 30 to 60 m^3/min (WESA, 2009). This flow rate is based on early calculations and limited data and is considered to be conservative. Currently, it is proposed to discharge the dewatering groundwater to: 1) the beneficiation area for process water; and 2) the remainder will be directed to a settling pond (SP-1) prior to release to the environment. A small quantity of water will be discharged from SP-1 to the unnamed tributary to maintain flow in the tributary, and the remaining majority of water will be discharged to Bean Lake, and/or via James Creek.

Redmond

Redmond 2 pit, which currently has no surface connectivity to nearby surface water bodies, will be used as a settling pond for pit dewatering from the proposed Redmond 2b and Redmond 5 open pits. It will also be a waste rock storage area for some portion of the waste rock from Redmond 2b and Redmond 5. It is planned to maintain the non-connectivity of Redmond 2 to nearby surface water bodies. In order to maintain this hydraulic isolation at Redmond 2, the water level in Redmond 2 will be monitored during operations and once the water level reaches a pre-determined level, waste rock disposal from the proposed pits into Redmond 2 will cease and be stockpiled in other locations. In this manner, no overflow will occur.

18.2.14 Water Use

Process/Wash Water

Water for use in the beneficiation process will be sourced locally from within the Project area. Groundwater sourced from the dewatering system and not used to supplement the flow in the unnamed tributary may be diverted to the Process

Water Tank at a current estimated flow rate of up to 8.4 m^3 /min (2,187,000 m^3 /year).

Although there will be some water loss in the washing process due to absorption by the ore, it is not possible to quantify this loss. Therefore, as a conservative measure it is assumed that all the used wash water will be pumped to Ruth Pit. Therefore, the estimated rate of wash water is 8.4 m^3./min and the rate of flow to Ruth Pit is estimated at 8.4 m^3./min.

The wash water will be transported to Ruth Pit by an aboveground pipeline that will follow an existing gravel road from the Silver Yard Area to Ruth Pit. The location of the discharge end of the wash water fines pipeline into Ruth Pit will be chosen to maximize the retention time of the water in Ruth Pit. Given the size of Ruth Pit, it is anticipated that some storage will occur depending on seasonal and environmental conditions, etc.; however, using a conservative approach, it is assumed that the additional discharge of water from Ruth Pit will be equal to the discharge rate of wash water into Ruth Pit.

Potable Water

Potable water will be required at the beneficiation building, various site office trailers at Silver Yard, and at the site trailer at Redmond. Initially, it is anticipated that potable water will be tanked to the site and/or bottled water will be transported to the Project. The water will be stored in the potable water distribution system. It is also recognized that existing ground water testing has shown that the water may be of suitable quality upon completion of well development and so it is possible that groundwater may be considered at some point in the future. If so, testing and use of groundwater for potable water use will be taken in accordance with applicable regulations and permit requirements. Testing of the potable water quality will be conducted regularly in accordance with provincial requirements. Potable water at the Redmond site trailer will be provided by bottled water.

18.2.15 Sewage Treatment and Disposal

Wastewater and sewage collection will be required at the Silver Yard area, at the Redmond site, and at the work camp. At the Redmond site, washroom facilities will be provided within a mobile trailer unit. Wastewater and sewage will be handled by holding tanks and transported to the Silver Yard wastewater treatment module.

As indicated in Section 18.2.8, sanitary waste at the camp will be collected and treated using a domestic wastewater treatment system that employs biological oxidation of wasterwater using a rotating biological contactor (RBC) form of aeration. This system produces minimal sludge, which will be removed at an estimated rate of once per operating season and disposed of at an NL-approved facility by a licensed contractor.

At the Silver Yard area, wastewater and sewage will be handled and treated by a similar system as that proposed for the camp. Grey water is sterilized before its final discharge at the outlet of the wastewater treatment module. It is proposed that sterilization of grey water will be by means of UV disinfection in the waste water's last section of the treatment system. After sterilization, this water will be transferred to Ruth Pit.

During the construction phase and until the sewage treatment is operational, wastewater and sewage will be collected in holding tanks, emptied by vacuum truck and disposed of at a licensed facility. All management will be conducted in accordance with applicable regulations.

18.2.16 Domestic and Solid Disposal

There is no on-site landfill proposed for the Project. It is planned that garbage and litter will be collected on-site and delivered to an experienced Labrador-based contractor and placed in a landfill facility in Labrador West, in accordance with applicable regulations. Any food or organic garbage onsite will be held in animal-proof containers to prevent attracting bear, birds, and other wildlife.

No wastes will be deposited in or near watercourses or wetlands. A recycling program is being considered for the area and LIM will support and participate in this initiative, where possible.

18.2.17 Hazardous Waste

It is not expected that the mine will generate large quantities of hazardous waste. Should any hazardous wastes be generated, they will be stored, transported, and disposed of according to federal and provincial waste disposal regulations.

LIM will require contractors to follow provincial waste diversion regulations or policies, including provincial programs for beverage containers, tires and waste oil and other petroleum products. Discarded tires will be handled according to the requirements of the provincial tire recycling program established by the Waste Management Regulations and used oil will be collected for recycling or reuse according to the Used Oil Control Regulations. In addition, any scrap metals will be taken to a scrap metal recycling operation.

18.3 Project Schedule

Subject to approval, construction is scheduled to start in 2010. The Project areas are already partially pre-stripped and a limited amount of iron ore product could be readily developed for shipment on a limited basis using the existing railway.

The life of the Phase One Project is five years. It is recognized and acknowledged that the proposed schedule is subject to the approval of the Development Plan, the Rehabilitation and Closure Plan and the negotiation and implementation of financial assurance.

18.3.1 Mine and Environmental Studies and Permits

All applicable environmental and mining studies and permits will be completed, submitted and approved as required prior to the start of construction, mining and processing.

The Environmental Assessment Registration was submitted and can be accessed through the Department of Environment and Conservation website http://www.env.gov.nl.ca/env/

An EIS was prepared for the Project in accordance with the *Newfoundland and Labrador Environment Protection Act*, *Environmental Assessment Regulations* and the final *EIS Guidelines* issued on December 9, 2008. The EIS presents information about the Project and the results of its environmental assessment. It was submitted to government in December 2008 and in response to review comments issued by the Minister of Environment and Conservation, received in March 2009, was revised and resubmitted in August 2009 and approved in November 2009. The report can be accessed through the same website as above. The Project was released from any further environmental assessment by the Minister of Environment and Conservation on February 12, 2010.

18.3.2 Engineering Design

Detailed engineering design and procurement will be completed prior to and during the initial site works, overburden removal, pre-stripping, and custom mineral processing (mobile plant) components of the project. All infrastructure and site design drawings will be submitted to Department of Natural Resources prior to construction and as-built construction drawings will be submitted once construction is completed.

18.3.3 Site Infrastructure Construction

Spur line reconstruction, Silver Yard site infrastructure (mobile plant) and the James Property mine infrastructure construction is planned to commence in the second quarter of 2010. Mobilization to the site and set-up of basic site services and access will commence once the required permits are in place. Site preparation, infrastructure construction and plant commissioning and full start-up (ready for production) are anticipated to take 2 to 3 months.

18.3.4 Pit Development

The James property requires clearing and grubbing within the waste rock storage and low-grade stockpile footprints and pit footprints. The Redmond property requires minimal clearing and grubbing within the possible low-grade stockpile and waste rock dump storage footprints. No clearing and grubbing is required for the Redmond 2 waste rock dump storage option. Stripping within the pit footprints has already been done by IOCC during previous mining operations. Suitable reclamation material from the clearing and grubbing will be stockpiled in strategic locations for future reclamation purposes.

Pit dewatering for the James and Redmond pits will be required, as discussed in Section 18.2.13.

Based on the proposed schedule, the required clearing and grubbing for the James property pit development will begin by the second quarter of 2010. As mentioned above, the Project areas are already partially pre-stripped and a limited amount of iron ore product could be readily developed for shipment.

18.3.5 Processing Plant Commissioning and Operation

The Silver Yard area is the location of the railway marshalling yard previously operated by IOCC. With minor exceptions, the original railway subgrade and track ballast remains in place although the steel tracks were removed sometime after IOCC terminated its mining operations in 1982. The LIM beneficiation plant will be located in the Silver Yard area and related disturbance of the natural environment will be managed to limit the overall size of the facilities footprint. Structures will include the beneficiation building itself, along with related support infrastructure such as finished product stockpiles, run-of-mine ore stockpiles, laydown yards, office facilities, plant access roads, the railroad marshalling yards and associated ore car loading facilities.

Excavated volumes have been utilized to backfill areas required for ore stockpile pads, the rail car loading area, site access roads, etc. When cut and fill volumes are balanced, a total of only 15,000 cubic meters will need to be borrowed (from James deposit area). That is, there will be no net surplus of excavated material from the Silver Yard site preparation.

Topsoil material salvaged from the Silver Yard site preparation will be stockpiled around the site for future reclamation purposes. These areas will be seeded to provide stability to the stockpile.

The Silver Yard Beneficiation Plant is scheduled for commissioning and full operation starting in the mid 2010.

18.4 Mining

The initial production can commence with only minimal additions to the current existing infrastructure. It is the intention of LIM to outsource as much of the direct production operations, including mining operation and maintenance, camp operation and maintenance and beneficiation operation and maintenance, to experienced contractors and facility operators, as is practical both from an operating and from a financial standpoint. As was the case with IOCC, all mining operations will be by conventional open pit mining methods.

The major production period is anticipated to start in April and to continue to November with a possible work stoppage of four months. However it is possible that some overburden stripping could occur during the winter months. The contractor will then generally mobilize every year in the beginning of April to fix roads and service lines, assure adequate supplies and rehabilitate the operating pits to a working condition after winter. Some work will be performed in winter such as dewatering and routine maintenance. The owner will perform all mine planning and resource/grade control with their own personnel. Office space with technical and administrative personnel and computers will be required on site.

The mining contractor will provide all equipment to drill, blast, load and haul ore, waste rock and top soils to the designated locations. Because of the short distance from the James deposit, ore transport to the processing and shipping site will most likely not require an additional haulage fleet because the mining trucks could be used. From the Redmond property, semi-trailer units will haul the ore to the processing site. The waste will be hauled to the specific waste dump sites.

During the IOCC operations, the yellow ores (limonitic), the low grade iron ores (TRX) and high silica ores (HISI) were separated during the mining process and stockpiled as waste or for possible blending. LIM plans to evaluate the potential for further processing of the high silica, low grade iron ores, and yellow ores to produce a saleable product.

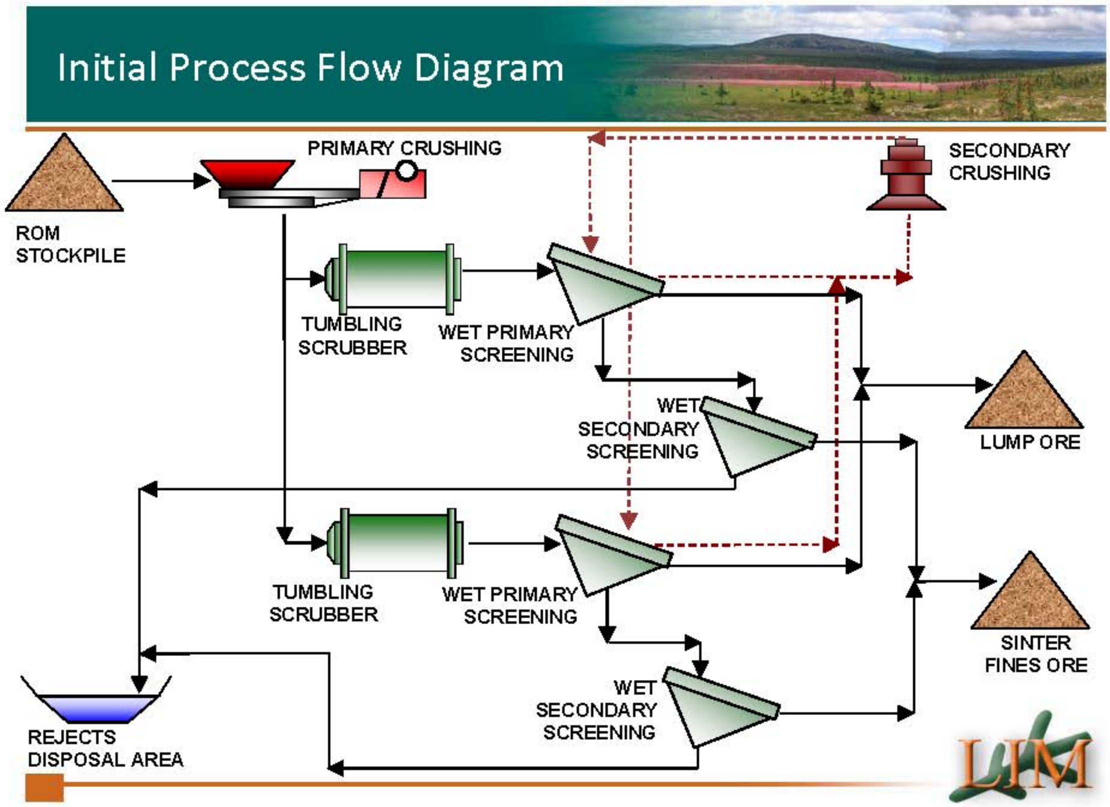
The pit designs for the referenced deposits will have overall pit wall angles that will range from 34^{o} in overburden to 55^{o} in competent rock. The face angles will range from 40^{o} in overburden to 70^{o} in competent rock. These angles are based on dewatered/depressurized pit walls and controlled blasting techniques. The excavations will be mined in 10 m benches.

Mining plans have been prepared to determine the mineable portion of the indicated mineral resource for the James and Redmond deposits.

18.5 Beneficiation

It is believed that the DSO produced by IOCC needed none or only very little processing and that only crushing and screening was performed before the ore was loaded on trains to be transported to Sept-Îles. Wet screening to wash out the fines, containing some of the SiO_2, was not performed. Some testing has been carried out in the past which showed that most of the ore was "self draining" so that there was only a low moisture ore shipped in case of washing. LIM has evaluated washing and screening of the ore to improve the quality and grade of products and to ensure a greater degree of consistency in the production of lump ore and sinter fines. It is expected that the proposed washing and screening process will remove low grade and silica material and should increase the grades of the final product by about 10-15% of the mined grade. The proposed flow diagram for the beneficiation circuit is shown in Figure 18-9.

Figure 18-9
Proposed Beneficiation Flow Diagram



18.5.1 Comminution

The ROM ore will be brought to the storage area where the ore will be fed to the Primary Jaw Crusher with a vibrating Grizzly feeder. It is assumed that 20% of the feed will be less than 100 mm and will then by-pass the Jaw crusher and will be combined with the minus 100 mm product from the Jaw crusher. The combined product from the comminution circuit will then be conveyed to the Beneficiation Plant.

18.5.2 Beneficiation

Beneficiation is proposed in three stages: first scrubbing, then screening, followed by secondary crushing. The scrubbing will be done in a tumbling scrubber that will enhance the quality of the ore by the removal of slimes and clays particles that are agglomerated to hematite. Water will be added to the tumbling scrubber to facilitate clay removal and screening.

From the tumbling scrubber, a double deck primary screen is planned, from which the oversize (+50 mm) will be sent to a secondary cone crusher in closed circuit with primary screening. The -50 mm and the +6.3 mm fraction will be the lump ore product, which will then be conveyed into a lump ore stockpile. The 6.3 mm fraction will be sent to a secondary screening stage. Following the primary screening, the material will feed a 600 micron stack sizer. The oversize fraction will be conveyed to the Sinter product stockpile.

After the first year of operations it is planned to install additional units to increase metal recovery. At this point the undersize will feed a hydrosizer. The +150 µm fraction will be sent to dewatering where extra water removal might be required for the -600 µm +150 µm product. The dewatered fraction will combine with the +600 µm and be conveyed to the sinter product stockpile. A horizontal belt filter will be considered for the dewatering of the –600 µm +150 µm stream of material. The undersized (-150 µm) product will be considered as a rejects and will be pumped to Ruth Pit for disposal.

It is not planned to install the dewatering component of the process for the initial start up. Therefore, the sinter product will be cut at +600 µm, which is considered to be self-draining and the –600 µm will report to the rejects line. The equipment to recover the –600 µm +150 µm in the plant feed will be installed later.

18.5.3 Complementary Process

Complementary process equipment may be required depending on the ore test results and product recoveries. The use of jigs, magnetic separators, and roller press will continue to be tested to improve some product specifications and improve product recoveries.

18.5.4 Manganese Recovery

The ores from the manganese deposits will be subject to some form of beneficiation to achieve greater manganese content and to remove undesirable impurities. Beneficiation technology as applied to manganese ores is similar to that for iron ores. Most ores are crushed and screened, with the lump product (+6 mm) generally being smelted and the fine product (-6 mm) used as feed for chemical and/or electrolytic processing. Sink-float (heavy liquid media), jigging, tabling, flotation, and high-intensity magnetic separation are among the methods used to upgrade fine manganese ore.

18.6 Community and Social Issues

LIM has established an active community relations program since mid-2005 and an ongoing effort is made to work very closely with the First Nations to focus on developing and maintaining productive working relations, ensuring a good understanding of the proposed project and with TSH, to identify and undertake the work necessary to allow for a timely expansion/upgrade of the TSH operations to include the shipment of iron ore.

LIM has signed an Impact Benefits Agreement (IBA) with the Innu Nation of Labrador. In addition, Memoranda of Understanding have been signed with the Innu Nation of Matimekush-Lac John and the Naskapi Nation of Kawawachikamach and extensive community consultation has been conducted with the nearby communities, as well as communities in western and central Labrador (Labrador City, Wabush, Happy Valley-Goose Bay). These consultations and agreements will ensure a close working relationship with the Innu of Labrador with respect to their involvement in the provision of labour, goods, and services.

18.7 Benefits of the project

The successful start up of LIM's DSO project will likely be the first positive economic stimulus to the northwest Labrador economies in 30 years. It should lead to 20+ years of economic stability.

The project will develop deposits of iron ore and manganese not previously worked by IOCC but which were evaluated by IOCC and were part of IOCC's reserves and resources at the time of closure of its operations in the area in 1982. The Central Zone and the North and South Central Zone deposits are located within reach of existing infrastructure, including road access, adjacent to electrical power lines and close to the railway terminal and proposed loading yard.

Cost effective and reliable rail transportation is going to be a key component of any direct shipping iron ore operations. The TSH railway company is already owned by a consortium of First Nations and provides an ideal basis upon which to develop other transportation solutions for the project.

For the first phase of operations, which includes the beneficiation site at Silver Yard and mining the James and Redmond deposits, the construction phase could generate up to 40 jobs with that number increasing to about 110 on an ongoing production basis. The economic impact of such employment and contracting business on the surrounding communities could be very positive and lead to the development of other support and service sector jobs and the consistent and planned development and growth of the town of the Labrador area and surrounding communities.

18.8 Markets

The market for iron ores and related products has seen some substantial changes in recent years. These have been driven in the most part by the booming resurgence of the Chinese economy and that country's rapidly increasing demand for raw materials particularly steel and its feed product, iron ore. This demand in the first instance has been met by increases in Australian and, to a lesser extent, Indian and Brazilian supply.

It is expected that the European market is the most likely destination for products from the LIM project given the potential freight advantage over other producers, but there remains a strong demand from the Far East and in particular from China for iron ore.

Iron ore prices, other than for pellets and some minor Direct Reduced Iron feeds, are based on sinter fine prices, with a premium for lump.

19.0 Interpretation and Conclusions (Item 21)

The review of the data that was made available to the author and the knowledge of the project obtained during the 2007 SNC-Lavalin study (of which he was the major author) of LIM's project related to a renewed development of the iron deposits in Labrador near Schefferville, Quebec has shown that there is more than sufficient merit to continue the exploration to further confirm the resources estimated by IOCC. The results of the program of trenching and RC drilling in 2006, 2008 and 2009 have confirmed and added to the resources in the James, Redmond 2B and the Redmond 5 deposits. The exploration on the other properties, as well as the properties obtained in an exchange with NML and on the other properties relatively close to Schefferville should bring the historic estimates of resources to comply with the requirements of NI 43-101.

IOCC has worked in the same areas of Quebec and Labrador between 1954 and 1982 and produced some 150 million tons of "lump and direct shipping" iron ore and carried out exploration to extend the life of these operation to well after 1982. When the economic conditions changed and the market for that ore was no longer attractive, the mines closed. However, the explored deposits remained ready for exploitation when favorable market conditions would return and the economics of new mines could be demonstrated.

The resource estimates for the properties comprising LIM's project were established by IOCC, an experienced iron ore operator, during the 20+ year period that IOCC successfully operated mines in the Schefferville area which were developed on the basis of similar resource estimates. There is no reason to conclude that IOCC utilized other than best industry practices. It is reasonable, therefore, to conclude that such historic resources can be easily brought to compliance with NI 43-101 requirements with a continued program of verification as recommended herein. The next step for this study is to continue with the confirmation of the resources for the properties and to make more of the resource estimates NI 43-101 compliant.

The resources closest to the existing Schefferville infrastructure and contained in two deposits (James and Redmond) have been confirmed and made NI 43-101 compliant. The Houston deposit is sufficiently advanced to justify a NI 43-101 compliant resource estimation. This estimate will be updated after the completion of proposed supplementary drilling for the recently exchanged claims with NML.

Most infrastructure around Schefferville is already in place and relative low capital expenditures will be required to restore and revamp the old structures and rail yards. The production of DSO requires only a simple process of crushing, washing and screening and the capital cost of building such a beneficiation plant in Labrador will be relatively low. This plant would be able to be used for the possible production of some 15 - 18 million tonnes.

The recommended exploration on the newly obtained properties close to Schefferville (Gill Mine and Ruth Lake 8) should add additional resources close to the beneficiation plant which will help extend the life of the first phase of operations.

The other deposits in Labrador, Astray Lake and Sawyer Lake, southeast of Schefferville, as well as Howse and Kivivic, northwest of Schefferville are further from the town of Schefferville and require more infrastructure development and therefore higher capital expenditures. The knowledge of these deposits is less detailed and more exploration will be required to bring these historic inferred resources to NI 43-101 compliance and indicated classification.

20.0 Recommendations (Item 22.0)

20.1 Introduction

Following the review of all supplied data and the interpretation and conclusions of this review, it is recommended that exploration on the iron properties should continue. The results of the past exploration have been very positive and have already shown that the IOCC data is very reliable and can be confirmed with the recent exploration.

Some minor drilling is recommended to evaluate possible extensions of the James and Redmond deposits.

An exploration program is recommended to confirm and outline additional resources for the Houston, Ruth and Gill Mine properties to include the newly acquired claims.

It was recommended in the study prepared by MRB that an exploration program also should start on the newly acquired manganese properties.

20.2 Exploration Program

A program of RC drilling should continue to further confirm the interpretation of the IOCC grades and geological formations on the various deposits.

Minor additional drilling should be considered at the James and Redmond deposits to explore for additional resources. On the other iron deposits that have been identified for second stage development, RC drilling as well as trench sampling should continue.

The recommended programs and budgets required to test for additional resources at James and Redmond and to bring additional resource and reserve estimates of the other deposits to be NI 43-101 compliant are as follows:

20.2.1 James Deposit

Additional RC drill holes should be drilled to the SE portion of the property confirming the extension of the mineral deposit. A minimum of 3 RC drill holes for a total of 360 m is proposed, in order to explore for a possible southern extension. The total drilling recommended would improve the quality and geological interpretation of the targeted areas.

Estimated budget for the James Deposit:

Drilling	360 m @ $ 315/m	$ 113,400
Total James Deposit		$ 113,400

20.2.2 Redmond 2B Deposit

Additional RC drill holes for a total of 160 m are proposed in order to further define the possible extension of the mineralization. One drill hole will test the northern extension and one hole will test the connectivity between Redmond 2 and Redmond 2B. The total recommended drilling would improve the quality and geological interpretation of the targeted areas.

Estimated budget for the Redmond 2B Deposit:

Drilling	160 m @ $ 315/m	$ 50,400
Total Redmond 2B Deposit		$ 50,400

20.2.3 Redmond 5 Deposit

Additional RC drilling of 2 holes is proposed for a total of 200 m to further define the northern extension of the mineralization. The total recommended drilling is intended to improve the quality and geological interpretation of the targeted areas.

Estimated budget for the Redmond 5 Deposit:

Drilling	200 m @ $ 315/m	$ 63,000
Total Redmond 5 Deposit		$ 63,000

20.2.4 Houston 1, 2 and 3 Deposits

The additional drilling of 18 RC drill holes is proposed. A minimum of 4 RC drill holes for a total of 400 m is proposed for Houston 1 on the newly owned part of the property, in order to extend and define the possible eastward, down-dip extension of the mineralization. In Houston 2, 11 RC holes for a total of 1,100 m are proposed. Five of the 11 holes are located between Houston 1 and 2 on the newly acquired property. Six of the 11 holes will test the continuity to the north of Houston 2N. In Houston 3, 3 holes are planned for a total of 300 m to test the continuity between Houston 3 and Houston 1 also on the newly acquired property. The total drilling program will improve the quality of the geological interpretation of the targeted areas.

Estimated budget for the Houston 1, 2 and 3 Deposits:

Drilling	1,800 m @ $ 315/m	$ 567,000
Total Houston Deposits		$ 567,000

20.2.5 Gill Mine Deposit

A total of 23 exploration RC drill holes are proposed for a total of 2,300 m. In addition a trenching program of 12 trenches is proposed for a estimated total of 840 m. The total exploration program should confirm and improve earlier IOCC geological interpretation of the targeted area.

Estimated budget for the Gill Mine Deposit:

Drilling	2,300 m @ $ 315/m	$ 724,500
Trenching	840 m @ $ 90/m	$ 75,600
Total Gill Mine Deposit		$ 800,100

20.2.6 Ruth Lake 8 Deposit

This property is also newly acquired and should be explored for the Fe and Mn mineralization. It is proposed to drill 22 exploration RC drill holes for a total of 1,760 m. In addition 14 trenches should be excavated for a total of 1,930 m. This drilling and trenching program would confirm and improve earlier IOCC geological interpretation of the targeted areas.

Estimated budget for the Ruth Lake 8 Deposit:

Drilling	1,760 m @ $ 315/m	$ 554,400
Trenching	1,930 m @ $ 90/m	$ 173,700
Total Ruth Lake 8 Deposit		$ 728,100

20.2.7 Exploration for Manganese Deposits

According to the Work Assessment Report prepared by MRB & Associates in October 2009 by John Langton, the review of all available data on the area suggests that the property contains a potential manganese resource. The grade and amount of manganese deposits in the areas most suitable for mining have yet to be determined, but there exists the possibility of deposits of economic grade and tonnage. Therefore, the properties, in particular the Ruth Lake 8 property, warrants further evaluation and an exploration program to delineate the location of manganese deposits to determine the extent of these deposits, and calculate the inferred resources.

The exploration program should be focused on the five known occurrences that lie along the central boundary fault on the Ruth Lake 8 property, specifically Ruth A deposit, Dry Lake zone, Ryan occurrence, Dannick zone and the Avison occurrence. Areas outside of the Ruth Lake 8 property that show the best potential to date are the Abel and Knob Lake 1 properties.

The recommended exploration program should include systematic stratigraphic interpretation, trenching and sampling. A RC drilling program should be initiated to confirm the sub-surface continuity of the manganese mineralization, and allow the preparation of an NI 43-101 compliant Mineral Resource estimate.

Estimated budget for the Manganese Exploration:

Drilling	500 m @ $ 315/m	$ 175,500
Trenching	1,000 m @ $ 90/m	$ 90,000
Total manganese sampling and drilling budget		$ 247,500

The interpretation and results of the above drilling and sampling programs should be sufficient to convert some of the historical IOCC resources estimates for these deposits into an estimate compliant with NI 43-101.

The budget estimate for the total program including cost for support, surveys, professional and technical staff, equipment rentals etc. is shown in Table 20-1.

Table 20-1
Budget Estimate for Confirmation Exploration

Description	Cost
Mobilization/Demobilization Contractors	$ 80,000
RC Drilling, Sampling, Transport and Assaying	$ 2,230,200
Trenches, Sampling, Transport and Assaying	$ 339,300
Geologists, Field Technicians, Labor	$ 305,000
Bulk sampling	$ 100,000
Field Accommodation etc.	$ 150,000
Equipment/aircraft Rentals	$ 75,000
Office drafting, etc.	$ 50,000
Consultants	$ 50,000
Total Estimated Cost Confirmation Exploration	$ 3,379,500

20.3 Future Studies

Subsequent to the exploration programs, outlined in the foregoing section, a number of items would need further development to bring the resources to a feasibility level. The following are areas that need more work:

- Detailed mine plans, including geotechnical and hydrogeological studies, should be prepared for each deposit to optimize mine production, blending of different ore types and scheduling;
- Optimization of the development schedule;
- Additional metallurgical studies may be required dependent on the mineralogy of the deposits;
- Transport and infrastructure requirements, including haulage alternatives for transporting ore from each site to the beneficiation plant location will need to be designed and engineered.

LIM's EIS for the operation of the James and Redmond deposits has been approved by the Department of Environment and Conservation of Newfoundland & Labrador and the James and Redmond project released from further environmental assessment. Additional environmental studies should be completed for each of the other deposits or phase of development. Additional community consultation and permit applications will be required on each subsequent phase of project development.

21.0 References (Item 23.0)

The following documents were in the author's files or were made available by LIM:

- Geology of Iron Deposits in Canada. Volume I. General Geology and Evaluation on Iron Deposits. G.A. Gross. Department of Mines and Technical Surveys Canada. 1965;
- Iron Ore Company of Canada, 1983 01-01. Reserve and Stripping Estimate.
- Overview Report on Hollinger Knob Lake Iron Deposits. Fenton Scott. November 2000;
- SOQUEM Inc. Assessment of an Investment Proposal for the Hollinger Iron Ore Development Project. Final Report. February 2002;
- Feasibility Study for the Labrador Iron Ore Project. Province of Newfoundland & Labrador, Canada. Volume I. Labrador Iron Mines Ltd. September 28, 2006;
- Technical Report of an Iron Project in Northwest Labrador, Province of Newfoundland and Labrador, By D. Dufort, P.Eng and A.S. Kroon, P.Eng SNC-Lavalin, Original Date September 10th, 2007, Amended October 10th, 2007;
- Report on Summer-Fall 2008 Exploration Program. Prepared by Labrador Iron Mines Ltd. . February 2009;
- "A Mineralogical Characterization of Five Composite Samples from James Iron Ore Deposit Located in Labrador Newfoundland", SGS Lakefield Research Ltd., February 2009;
- "An Investigation into Direct Shipping Iron Ore from Labrador Iron Mine prepared for SNC-Lavalin Inc. on behalf Labrador Iron Mines Ltd. Project 12010-001 – Final Report", SGS Lakefield Research Ltd., February 2009;
- "Report on Chemical, physical and metallurgical properties of James South Lump ore", Studien-Gesellschaft für Eisenerz-Aufbereitung, May 2009;
- "Report on Chemical, physical and metallurgical properties of Knob Lake Lump ore", Studien-Gesellschaft für Eisenerz-Aufbereitung, May 2009;
- "Upgrading Iron Ore Using Wet Gravity Separation", Outotec (USA) Inc., May 2009;

- "Magnetic Separation of Iron Ore Using HGMS Magnet", Outotec (USA) Inc., June 2009;
- "Schefferville Area Iron Ore Mine Western Labrador Environmental Impact Assessment", August 2009;
- Work Assessment Report, The Ruth Lake Property, Western Labrador Province of Newfoundland & Labrador, MRB & Associates, John Langton M.Sc, P.Geo., October 30th, 2009;
- "Report on Batch Stratification Test Work for LIM Labrador Iron Mines Ltd.", MBE Coal & Minerals Technology GmbH, November 2009;
- "Report on Sintering tests with Labrador Iron Mines sinter fines", Studien-Gesellschaft für Eisenerz-Aufbereitung, November 2009;
- Technical Report Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits Located in Labrador, Canada for Labrador Iron Mines Ltd, SGS Geostat Ltd., 18th December, 2009.
- "Labrador Iron Mines Ltd. Ore Beneficiation Potential and Physical Properties Determination Final Report No. T1054", COREM, December 2009;
- Report on 2009 Exploration Program. Prepared by Labrador Iron Mines Ltd. December 2009.

22.0 Date and Signature Page (Item 24.0)

This Technical Report is dated March 18th, 2010 and reports on all exploration work done up to the 31st December 2009.

DATED
March 18th, 2010

A.S. Kroon, P. Eng.

This Technical Report is dated March 18th, 2010 and reports on all exploration work done up to the 31st December 2009.

GÉOLOGUE / GEOLOGIST
MAXIME DUPÉRÉ
501
QUÉBEC

DATED
March 18th, 2010

Maxime Dupéré, P.Geo.
Geologist
GSG Canada Inc.
(SGS Geostat)

QUALIFICATIONS CERTIFICATE

I, A.S. Kroon, Professional Engineer, do hereby certify that:

1. I am the author of the report entitled “Labrador Iron Mines Limited – Technical Report on an Iron Ore Project in Western Labrador Province of Newfoundland and Labrador” dated March 18th, 2010.
2. I am an Engineer working for my own account. My office is located at Naples Avenue, Brossard, Quebec, Postal Code J4Y 1V8 (Tel: 450-676-4032).
3. I graduated from the University of Amsterdam in 1966 and hold an (equivalent of) Masters Degree in Geology.
4. I am a member of the Order of Professional Engineers of Québec and am designated as a specialist in Geological Engineering, classes of Exploration and Development.
5. I have worked as a geologist and mining engineer in the minerals industry for over 43 years since my graduation from university.
6. I have read the definition of ‘’qualified person’’ set out in National Instrument 43-101 (NI 43-101) by reason of my education, association with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101. I worked as an exploration geologist, mining geologist and mining engineer in Zambia from 1966 to 1971. From 1971 to 1973, I was the mine planning engineer for Texas-Gulf in Timmins Ontario. From 1973 to 1976, I worked in New York City and was in charge of an exploration and mining project in Greece. From 1976 to 1996, I worked for Kilborn (Québec) and was in charge of feasibility studies and other technical studies for mining projects. When Kilborn was purchased by SNC-Lavalin, I became a consultant for SNC-Lavalin for various feasibility studies carried out by the company. I am also working for my own account.
7. I am responsible for all sections of this Technical Report but Section 18 (Other Relevant Data and Information (Item 20.0)) was prepared with the assistance of engineers of Labrador Iron Mines (LIM). I have not visited the LIM properties for this study because the snow covered all areas.
8. I have prepared an earlier Technical Report on these Labrador iron properties for LIM as a consultant for SNC-Lavalin in 2007 (Technical Report and Preliminary Assessment of an Iron Project in Northwestern Labrador).
9. As of the date hereof, to the best of my knowledge, information and belief this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.
10. I am independent of LIM applying all of the tests set out in section 1.4 of NI 43-101.
11. I have no interest, direct or indirect, in the property for which this Technical Report has been written, nor do I expect any.
12. I have read NI 43-101 and Form 43-101 F1, and the Technical Report has been prepared in accordance with NI 43-101 and meets the form requirements of that instrument and Form 43-101 F1.

13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

DATED
March 18th, 2010

A.S. Kroon, P. Eng.

SGS

Certificate of Maxime Dupéré, P.Geo.

To accompany the Report entitled:"*Labrador Iron Mines Limited - Labrador Iron Mines Holdings Limited – Revised Technical Report of an Iron Ore Project in Western Labrador, Province of Newfoundland and Labrador*" dated March 18, 2010.

1. I, Maxime Dupéré, reside at 9660, Rue de la Chouette, Mirabel, Quebec, Canada, J7N 0C9.

2. I am a graduate from the Université de Montréal, Quebec in 1999 with a B.Sc. in geology and I have practiced my profession continuously since 2001.

3. I am a registered member of the Ordre des Géologues du Québec (#501), and I am currently employed by SGS Canada Inc.SGS Group (SGS Geostat) since May 2006.

4. I am responsible for the preparation of sections 12, 13, 14, and 17 of the report entitled : "*Labrador Iron Mines Limited - Labrador Iron Mines Holdings Limited – Revised Technical Report of an Iron Ore Project in Western Labrador, Province of Newfoundland and Labrador*" dated March 18, 2010 The mentioned sections were taken and resumed from Technical Report Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits Located in Labrador, Canada for Labrador Iron Mines Limited dated December 18th, 2009" filed and available on www.sedar.com.

5. I visited the sites from May 26th to May 28th, 2008 and from August 31st to September 2nd, 2009 and I helped to supervise the sampling and QAQC procedures during the 2008 RC Drilling Program.

6. I certify that there is no circumstance that could interfere with my judgment regarding the preparation of this technical report.

7. Neither I, nor any affiliated entity of mine, is at present, under an agreement, arrangement or understanding or expects to become, an insider, associate, affiliated entity or employee of Labrador Iron Mines Limited, or any associated or affiliated entities.

8. Neither I, nor any affiliated entity of mine, own directly or indirectly, nor expect to receive, any interest in the properties or securities of Labrador Iron Mines Limited, or any associated or affiliated companies.

9. I have read NI 43-101 and Form 43-101 F1, and the Technical Report has been prepared in accordance with NI 43-101 and meets the form requirements of that instrument and Form 43-101 F1.

10. To the best of my knowledge, information and belief, and, as of the date of this certificate, the parts taken from and resumed from the technical report entitled: Technical Report Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits Located in Labrador, Canada for Labrador Iron Mines Limited dated December 18th, 2009" contain all scientific and technical information that is required to be disclosed to make this section of the technical not misleading.

Signed at Blainville, Québec this December 18th, 2009

GÉOLOGUE / GEOLOGIST
MAXIME DUPÉRÉ
501
QUÉBEC

Maxime Dupéré, P. Geo.

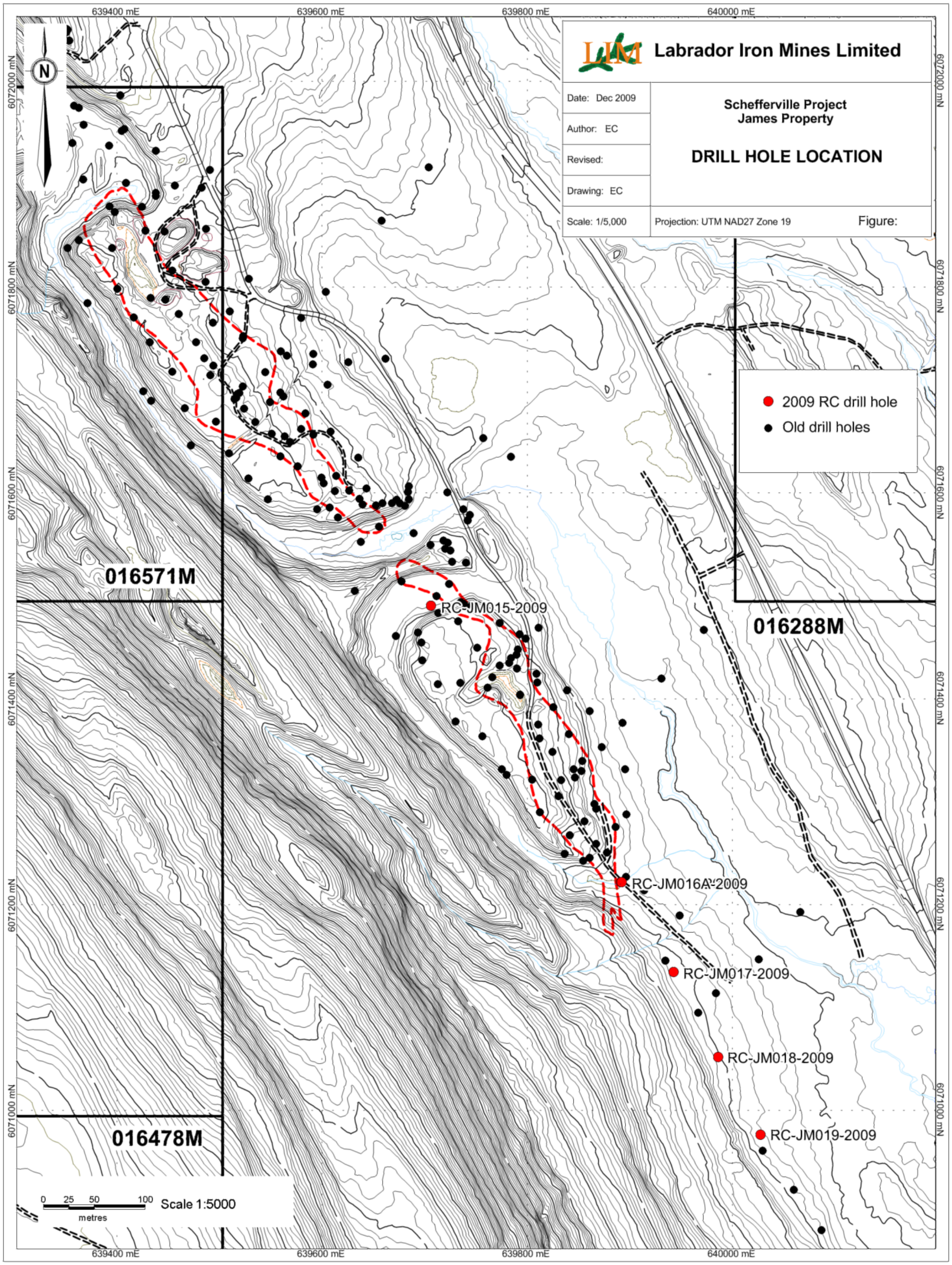
23.0 Illustrations (Item 26.0)

The following plans are attached as illustrations of the exploration drilling and trench sampling programs carried out LIM to date.

List of Plans and Sections

1. James Drilling
2. Redmond 2B Drilling and Trenching
3. Redmond 5 Drilling and Trenching
4. Knob Lake 1 Drill Holes
5. Houston 1 & 2 Drill Holes
6. Houston 3 Drill Holes
7. Howse Property Drill Holes
8. Trenching Gill Mine

James Drilling


Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/5,000
Scheffervile Project
James Property
DRILL HOLE LOCATION
Projection: UTM NAD27 Zone 19
Figure:
2009 RC drill hole
Old drill holes
639400 mE
639600 mE
639800 mE
640000 mE
6072000 mN
6071800 mN
6071600 mN
6071400 mN
6071200 mN
6071000 mN
016571M
016288M
016478M
RC-JM015-2009
RC-JM016A-2009
RC-JM017-2009
RC-JM018-2009
RC-JM019-2009
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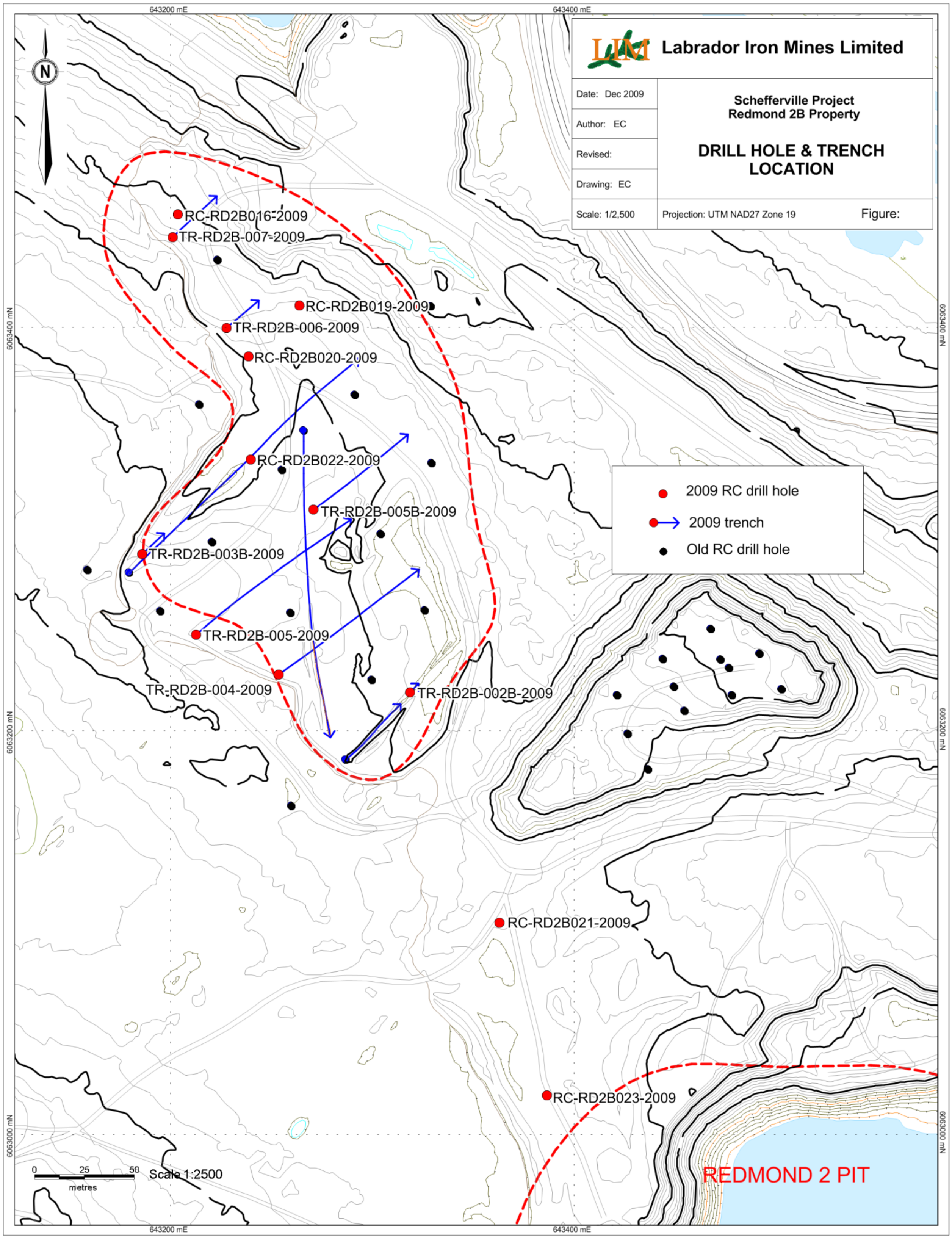
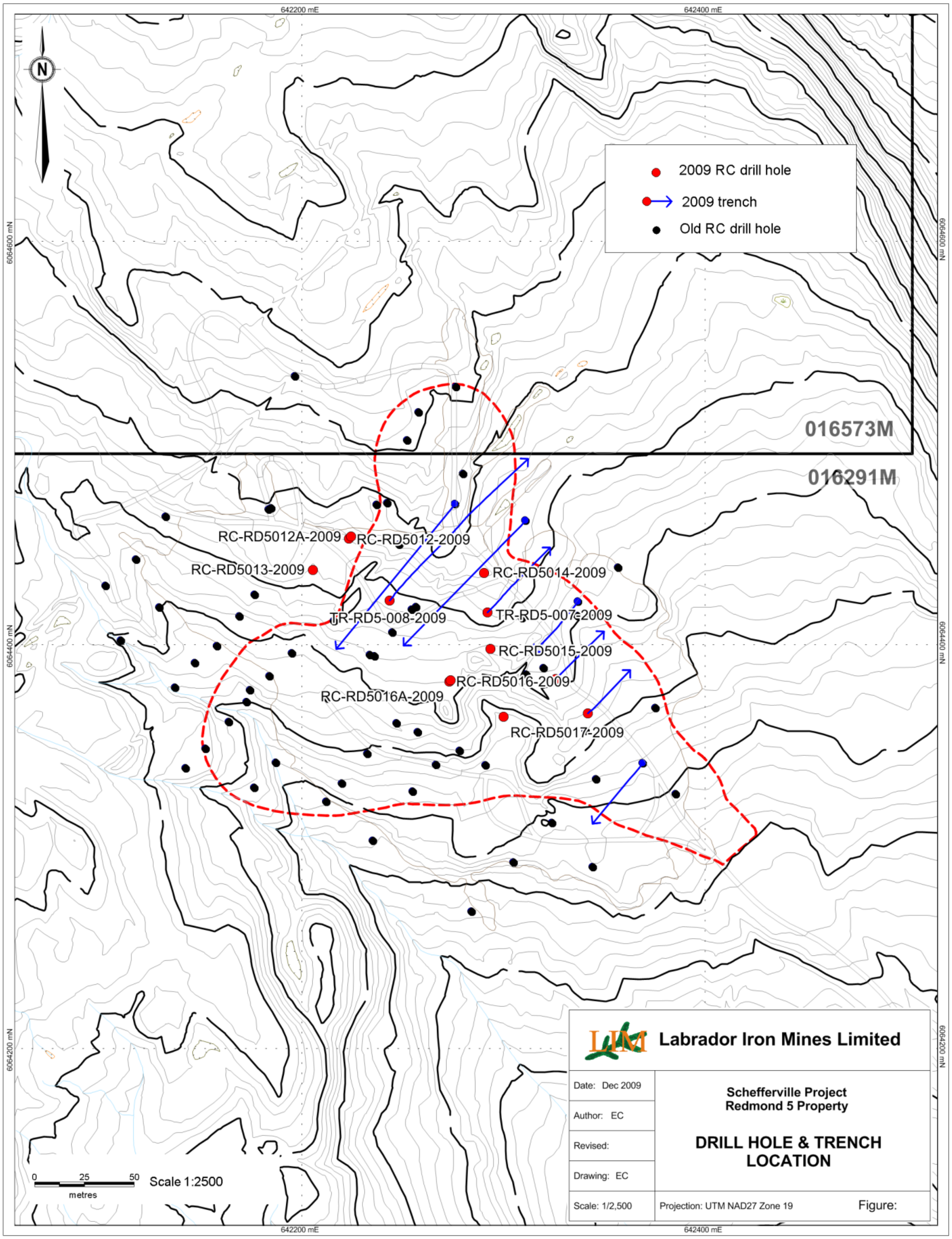
metres
Scale 1:5000

Redmond 2B Drilling and Trenching

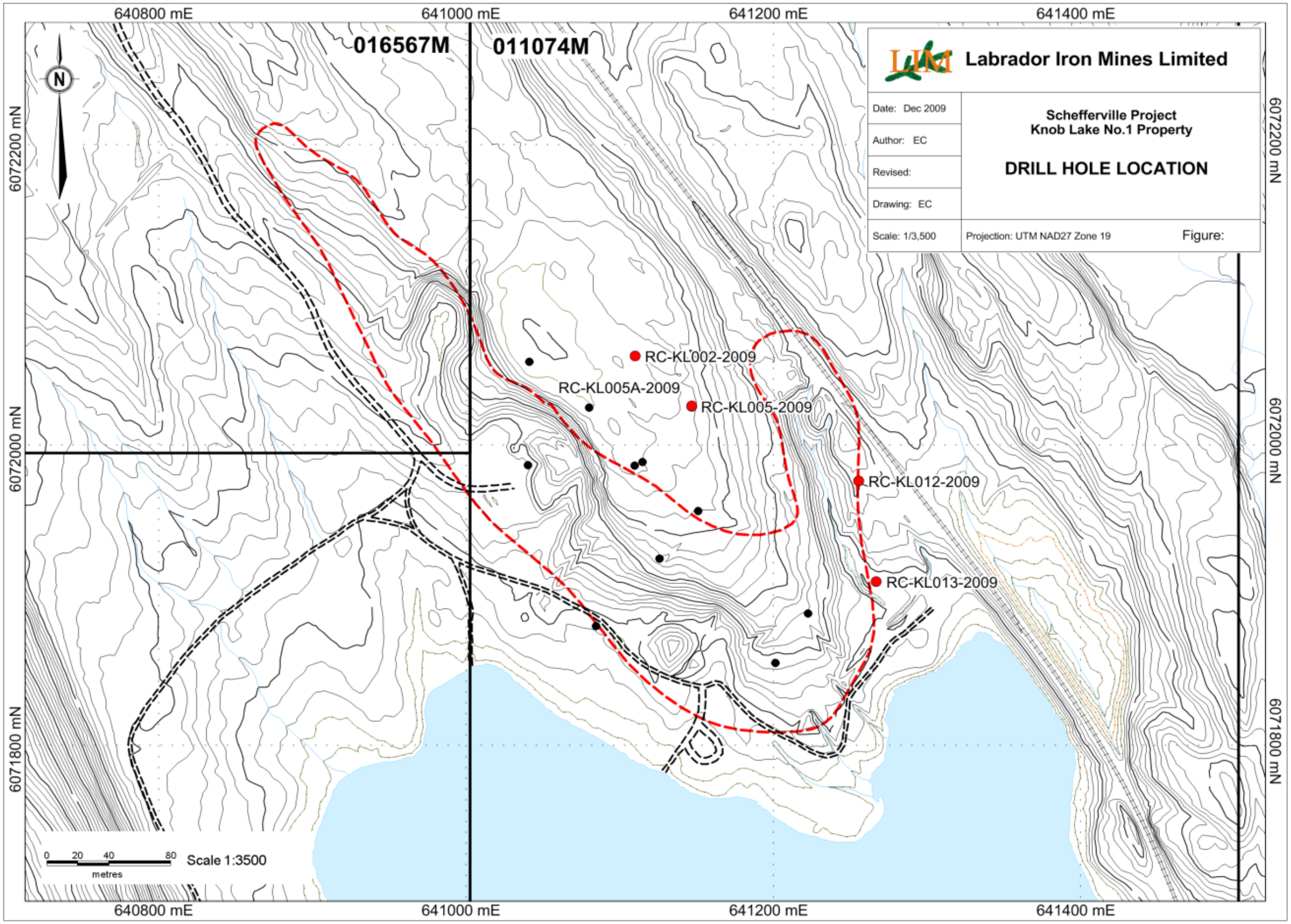

Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/2,500
Schefferville Project
Redmond 2B Property
DRILL HOLE & TRENCH LOCATION
Projection: UTM NAD27 Zone 19
Figure:
2009 RC drill hole
2009 trench
Old RC drill hole
RC-RD2B016-2009
TR-RD2B-007-2009
RC-RD2B019-2009
TR-RD2B-006-2009
RC-RD2B020-2009
RC-RD2B022-2009
TR-RD2B-005B-2009
TR-RD2B-003B-2009
TR-RD2B-005-2009
TR-RD2B-004-2009
TR-RD2B-002B-2009
RC-RD2B021-2009
RC-RD2B023-2009
REDMOND 2 PIT
Scale 1:2500
0 25 50
metres
643200 mE
643400 mE
6063400 mN
6063200 mN
6063000 mN

Redmond 5 Drilling and Trenching



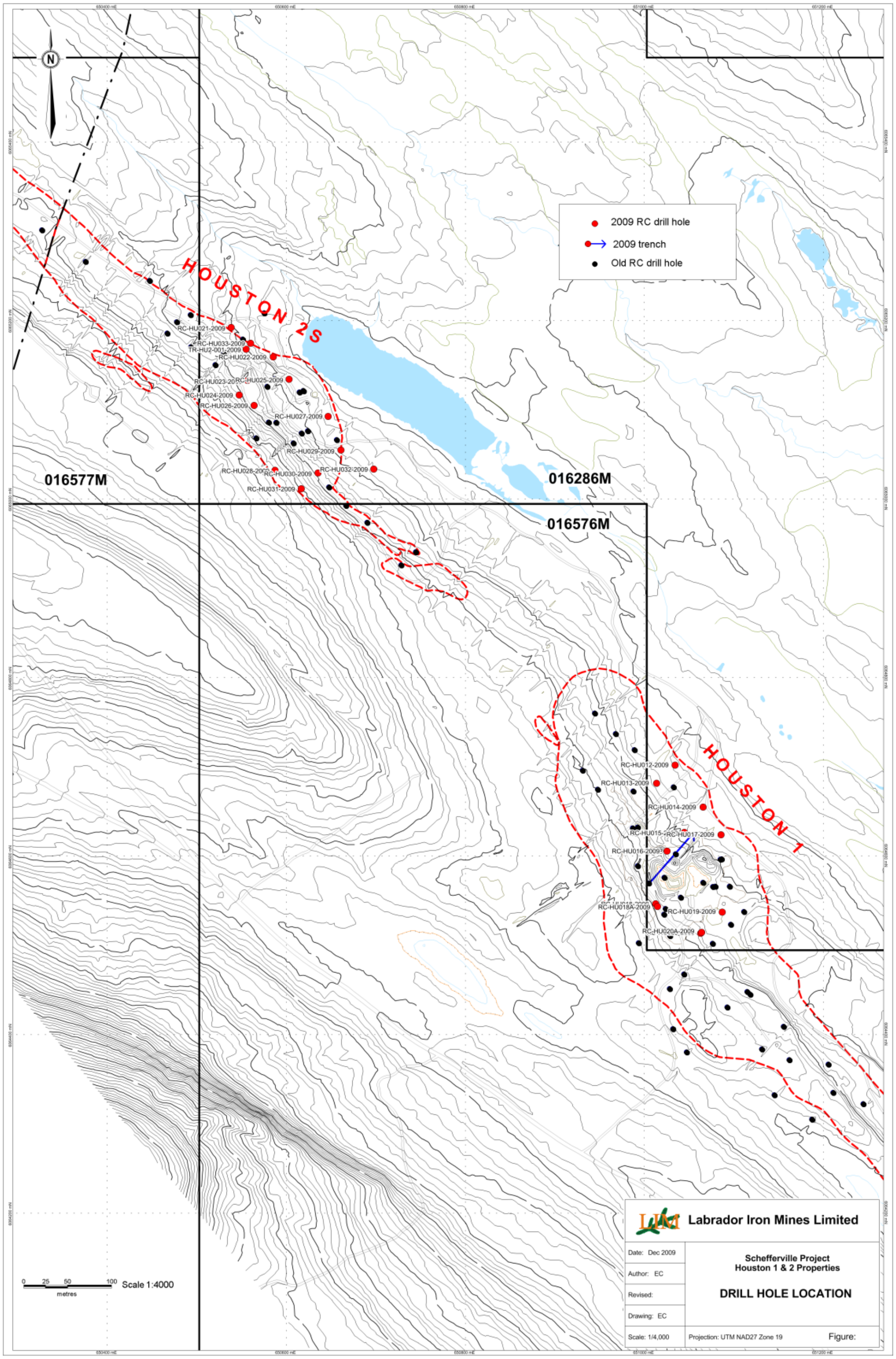
642200 mE
642400 mE
6064600 mN
6064400 mN
6064200 mN
N
2009 RC drill hole
2009 trench
Old RC drill hole
016573M
016291M
RC-RD5012A-2009
RC-RD5012-2009
RC-RD5013-2009
RC-RD5014-2009
TR-RD5-008-2009
TR-RD5-007-2009
RC-RD5015-2009
RC-RD5016-2009
RC-RD5016A-2009
RC-RD5017-2009
Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/2,500
Schefferville Project
Redmond 5 Property
DRILL HOLE & TRENCH LOCATION
Projection: UTM NAD27 Zone 19
Figure:
0 25 50
metres
Scale 1:2500

Knob Lake 1 Drill Holes



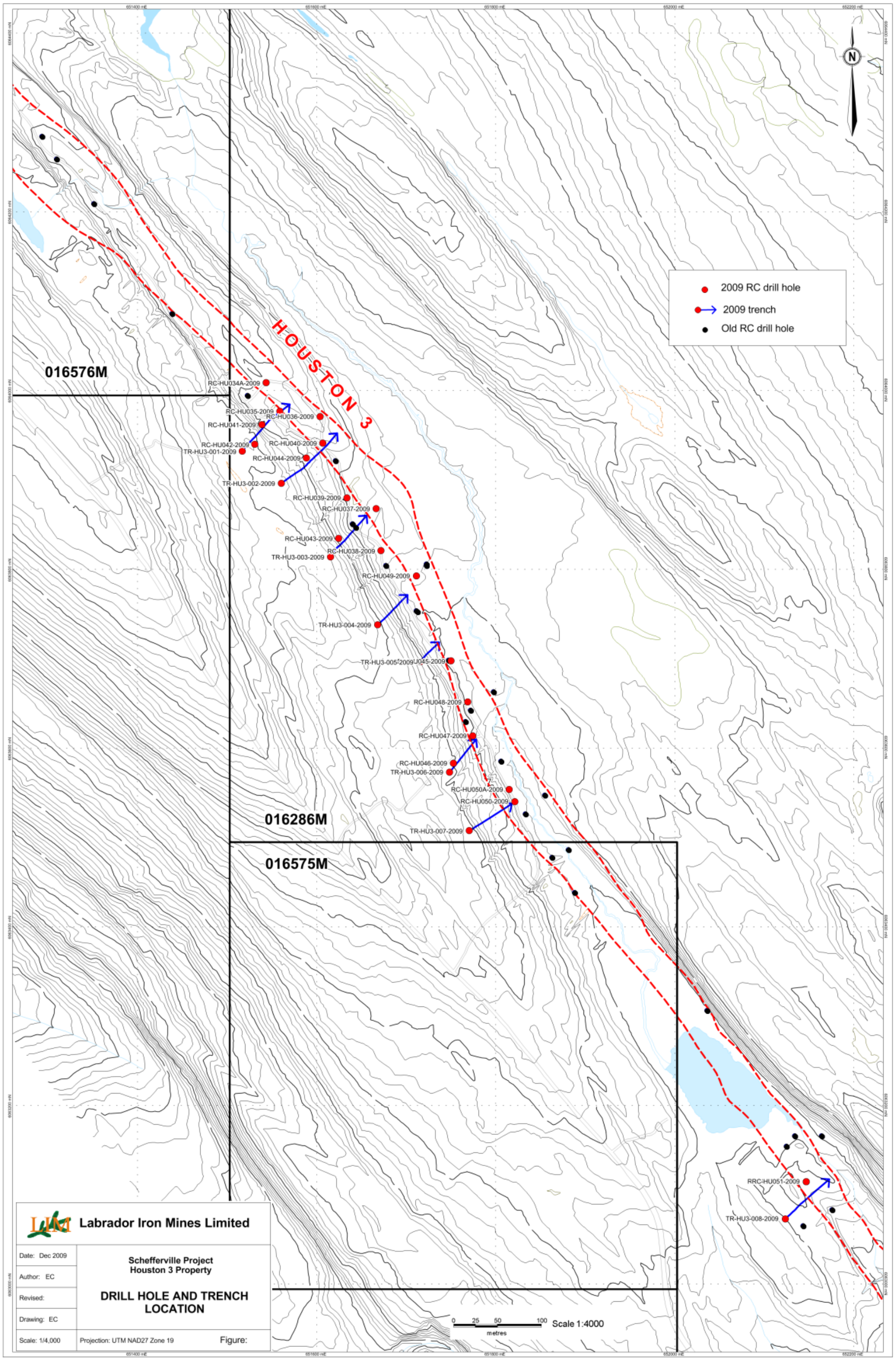
640800 mE
641000 mE
641200 mE
641400 mE
016567M
011074M
N
6072200 mN
6072000 mN
6071800 mN
Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/3,500
Schefferville Project
Knob Lake No.1 Property
DRILL HOLE LOCATION
Projection: UTM NAD27 Zone 19
Figure:
RC-KL002-2009
RC-KL005A-2009
RC-KL005-2009
RC-KL012-2009
RC-KL013-2009
0 20 40 80
metres
Scale 1:3500

Houston 1 & 2 Drill Holes

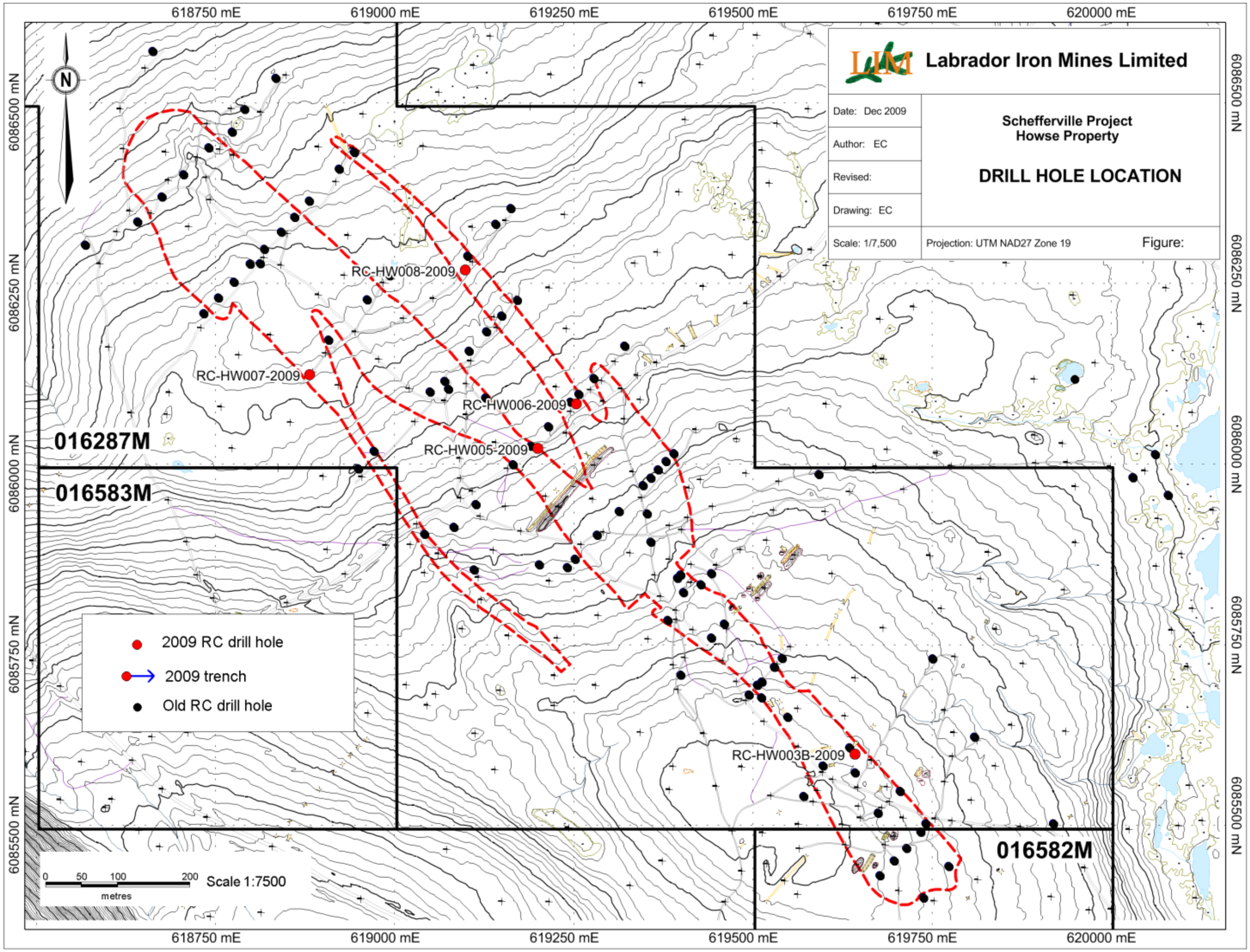


2009 RC drill hole
2009 trench
Old RC drill hole
HOUSTON 2S
HOUSTON 1
016577M
016286M
016576M
RC-HU021-2009
RC-HU033-2009
TR-HU2-001-2009
RC-HU022-2009
RC-HU025-2009
RC-HU024-2009
RC-HU026-2009
RC-HU027-2009
RC-HU029-2009
RC-HU028-2009
RC-HU030-2009
RC-HU032-2009
RC-HU031-2009
RC-HU012-2009
RC-HU013-2009
RC-HU014-2009
RC-HU017-2009
RC-HU016-2009
RC-HU018A-2009
RC-HU019-2009
RC-HU020A-2009
Scale 1:4000
metres
Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/4,000
Schefferville Project
Houston 1 & 2 Properties
DRILL HOLE LOCATION
Projection: UTM NAD27 Zone 19
Figure:

Houston 3 Drill Holes

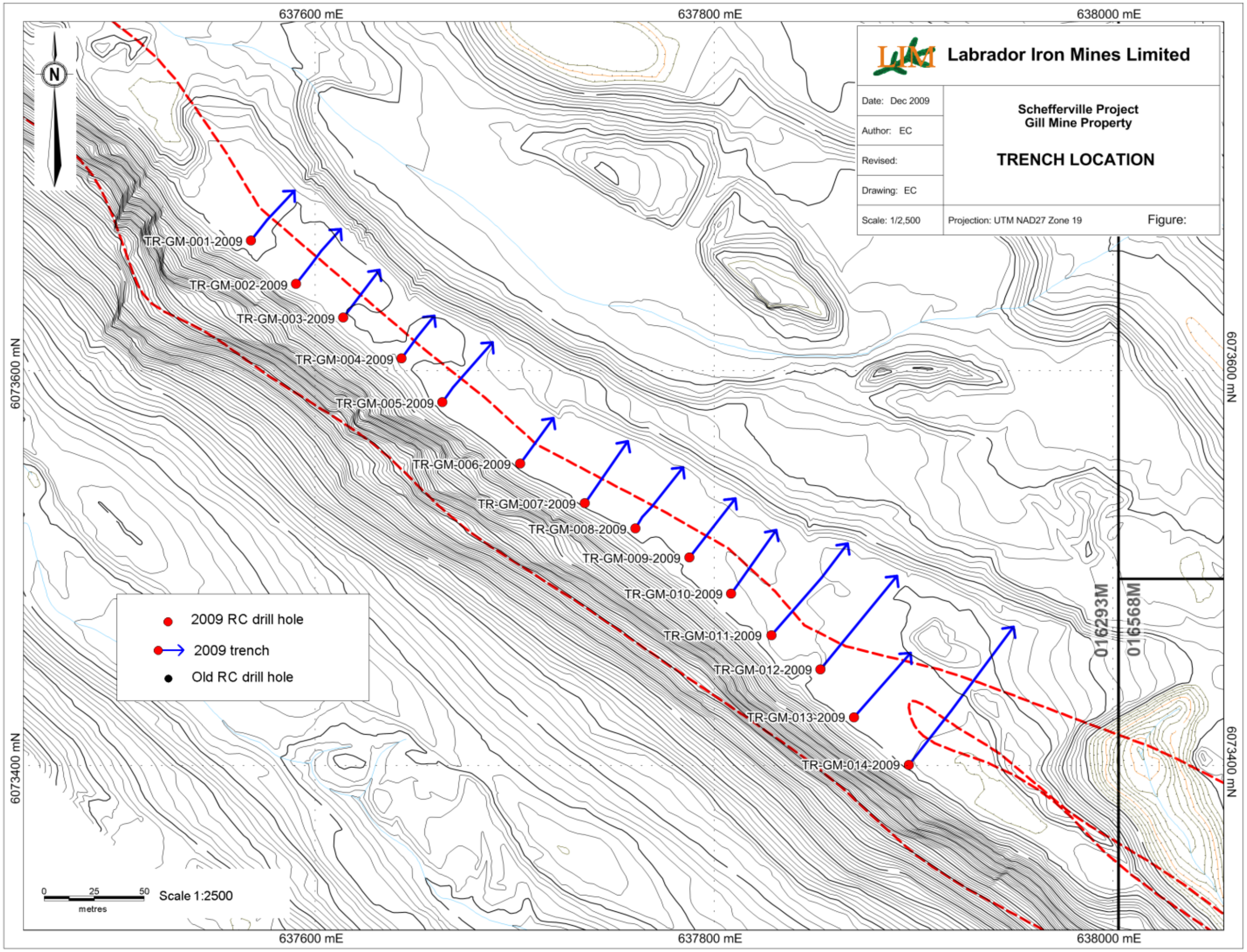

HOUSTON 3
016576M
016286M
016575M
2009 RC drill hole
2009 trench
Old RC drill hole
RC-HU034A-2009
RC-HU035-2009
RC-HU036-2009
RC-HU041-2009
RC-HU042-2009
RC-HU040-2009
TR-HU3-001-2009
RC-HU044-2009
TR-HU3-002-2009
RC-HU039-2009
RC-HU037-2009
RC-HU043-2009
RC-HU038-2009
TR-HU3-003-2009
RC-HU049-2009
TR-HU3-004-2009
TR-HU3-005-2009
RC-HU048-2009
RC-HU047-2009
RC-HU046-2009
TR-HU3-006-2009
RC-HU050A-2009
RC-HU050-2009
TR-HU3-007-2009
RRC-HU051-2009
TR-HU3-008-2009
Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/4,000
Schefferville Project
Houston 3 Property
DRILL HOLE AND TRENCH LOCATION
Projection: UTM NAD27 Zone 19
Figure:
0 25 50 100
metres
Scale 1:4000

Howse Property Drill Holes



Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/7,500
Schefferville Project
Howse Property
DRILL HOLE LOCATION
Projection: UTM NAD27 Zone 19
Figure:
618750 mE
619000 mE
619250 mE
619500 mE
619750 mE
620000 mE
6086500 mN
6086250 mN
6086000 mN
6085750 mN
6085500 mN
N
016287M
016583M
016582M
RC-HW008-2009
RC-HW007-2009
RC-HW006-2009
RC-HW005-2009
RC-HW003B-2009
2009 RC drill hole
2009 trench
Old RC drill hole
0
50
100
200
metres
Scale 1:7500

Trenching Gill Mine


637600 mE
637800 mE
638000 mE
Labrador Iron Mines Limited
Date: Dec 2009
Author: EC
Revised:
Drawing: EC
Scale: 1/2,500
Schefferville Project
Gill Mine Property
TRENCH LOCATION
Projection: UTM NAD27 Zone 19
Figure:
N
TR-GM-001-2009
TR-GM-002-2009
TR-GM-003-2009
TR-GM-004-2009
TR-GM-005-2009
TR-GM-006-2009
TR-GM-007-2009
TR-GM-008-2009
TR-GM-009-2009
TR-GM-010-2009
TR-GM-011-2009
TR-GM-012-2009
TR-GM-013-2009
TR-GM-014-2009
6073600 mN
6073400 mN
016293M
016568M
2009 RC drill hole
2009 trench
Old RC drill hole
0 25 50
metres
Scale 1:2500