LABRADOR IRON MINES HOLDINGS LIMITED

TECHNICAL REPORT

DIRECT SHIPPING IRON ORE PROJECTS

IN

WESTERN LABRADOR
PROVINCE OF NEWFOUNDLAND AND LABRADOR
AND
NORTH EASTERN QUEBEC
PROVINCE OF QUEBEC
CANADA

Prepared by
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March 14, 2011

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1. SUMMARY (ITEM 3)

This Technical Report address the ongoing exploration and development of the iron ore projects on various deposits owned and operated by Labrador Iron Mines Holdings Limited ("LIMH") in western Labrador and north eastern Quebec. The Report has been produced as a result of additional metallurgical testwork and process design and following the completion of the construction of the Silver Yards processing plant facility and other associated infrastructure and the commencement of initial mining at the James deposit.

The Report notes the recent new resource estimates for the nearby Houston and Denault deposits as a result of additional exploration drilling carried out in 2010.

The Report makes recommendations regarding further exploration on the various deposits and regarding other associated work required to advance the deposits towards production. The Report also discusses various proposed additions to the Silver Yards plant as a result of the recent metallurgical testwork. The Report discusses a preliminary production schedule for these current resources together with the future development of further twelve deposits containing historic resources through to the year 2028.

The authors of this Report are either directors and/or officers of LIMH and/or of Labrador Iron Mines Limited ("LIM"), a wholly owned subsidiary of LIMH, which holds the mineral claims on which the various iron deposits are located in Labrador, or of Schefferville Mines Inc. ("SMI") a wholly-owned subsidiary of LIMH, which holds the mineral claims on which the various iron deposits are located in Quebec.

The authors are "qualified persons" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators. The authors are not independent of either LIMH, LIM or SMI as described in section 1.4 of NI 43-101.

The current resource estimates for the James, Redmond, Houston and Denault deposits are summarised in Table 1-1.

Table 1-1
Total NI 43-101 Compliant Resources, NL and QC

Area	Classification	Tonnes (x1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
James	Indicated	8,098,000	57.7	0.027	0.7	14.1	0.5
James	Inferred	111,000	53.6	0.036	0.1	19.9	0.5
Redmond 2B	Indicated	849,000	59.86	0.12	0.37	5.05	2.09
Redmond 2B	Inferred	30,000	57.27	0.133	0.64	5.87	4.09
Redmond 5	Indicated	2,084,000	54.95	0.048	1.17	10.97	0.81
Redmond 5	Inferred	78,000	52.34	0.068	1.95	10.84	0.96
Houston	Measured + indicated	19,499,000	58.3	0.064	0.9	12.3	0.7
Houston	Inferred	1,024,000	55.8	0.055	1	16.5	0.5
Denault	Measured and Indicated	6,384,000	54.8	0.076	2.3	8	1
Denault	Inferred	369,000	53.9	0.069	2.7	9.4	0.9
Total	**Measured & Indicated**	**36,914,000**	**57.41**	**0.06**	**1.09**	**11.71**	**0.75**
Total	**Inferred**	**1,612,000**	**55.07**	**0.06**	**0.76**	**14.64**	**0.68**

The historical resource estimates for the other deposits in Labrador and Quebec are summarized in Tables 1-2 and 1-3.

Table 1-2
Summary of Historical IOC Mineral Resource Estimates in Labrador
(Non-compliant with NI 43-101)

	Iron Resources			Manganese Resources			
Property	**Tonnes (x 1000)**	**Fe%**	**SiO_2%**	**Tonnes (x 1000)**	**Fe%**	**SiO_2%**	**Mn%**
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	**64,423**	**58.0**	**7.1**	**661**	**42.7**	**7.1**	**8.8**

Table 1-3
Summary of Historical IOC Mineral Resource Estimates in Quebec
(Non-compliant with NI 43-101)

	Iron Resources			Manganese Resources			
Property	**Tonnes (x 1000)**	**Fe%**	**SiO_2**	**Tonnes (x 1000)**	**Fe%**	**SiO_2**	**Mn%**
Barney 1	6,281	53.9	7.7	62	49.1	3.5	5
Eclipse	37,159	56.3	5.2	2,068	49.9	4.5	4.1
Fleming 6	802	48.3	8.8	23	42.1	7	7.3
Fleming 7S	1,946	56	7.6				
Fleming 9	417	54.1	8.9				
Lance Ridge	1,370	53.9	8.5	281	41.5	5.7	10.3
Malcom 1	2,879	56.2	6.1	422	51.4	4.9	5.8
Partington 2	3,377	55.2	9.2				
Squaw-Wollett 1	2,303	54.9	5.8				
Star Creek 1	1,492	51	7.3	1,972	45.9	6.2	6.5
Star Creek 3	63	55.2	8.4				
Sunny 3	460	57.8	6.7				
Trough 1	1,969	48.8	8.5	230	43.8	6.5	5.8
Total:	**60,518**	**55.4**	**6.1**	**5,058**	**47.7**	**5.4**	**5.6**

The historical resources referred to in this document are based on work completed and estimates prepared by the Iron Ore Company of Canada ("IOC") prior to 1983 and were not prepared in accordance with NI 43-101. These historical estimates are not current and do not meet NI 43-101 Definition Standards. A qualified person has not done sufficient work to classify the historical estimate as current mineral reserves. These historical results provide an indication of the potential of the properties and are relevant to ongoing exploration. The historical estimates should not be relied upon.

Property Description and Location

LIM holds title to 52 Mineral Rights Licenses as of the date of this Report issued by the Department of Natural Resources, Province of Newfoundland and Labrador, representing 635 mineral claims located in western Labrador covering approximately 15,875 hectares. SMI holds interests in 279 Mining Rights issued by the Ministry of Natural Resources, Province of Quebec, covering approximately 11,703 hectares. SMI also holds an exclusive operating license in a mining lease covering 23 parcels totalling about 2,036 hectares. The LIM and SMI properties are located in the western central part of the Labrador Trough iron range and are located approximately 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 1, Gill, Ruth Lake 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 SMI properties in Quebec are all within a 70 km radius from Schefferville with the exceptions of Eclipse and Murdoch Lake which are about 85 km distant. The properties close to Schefferville are mostly accessible by gravel roads while the properties far away from the town are only accessible by helicopter.

History

The Quebec-Labrador iron range has a tradition of mining since the early 1950s 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 Iron Ore company of Canada ("IOC") 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 1940s 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 Labrador Trough. Mining and shipping from the Hollinger lands began in 1954 under the management of the IOC, 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. In 1982, IOC closed their operations in the Schefferville area.

Following the closure of the IOC mining operations the mining rights held by IOC 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. LIM subsequently acquired additional properties in Labrador by staking. In 2009, SMI acquired the properties in Quebec held by Hollinger. All of the properties comprising LIMH's Schefferville area projects were part of the original IOC Schefferville holdings and formed part of the 250 million tons of reserves and resources identified but not mined by IOC in the area.

The IOC historical iron ore resources contained within LIM's properties in Labrador, not including James, Redmond 2B, Redmond 5 and Houston deposits, total 64.4 million tonnes with grades greater than 50% Fe (Table 1-5) and are not yet compliant with the standards prescribed by NI 43-101. They are predominantly based on estimates made by IOC in 1982 and published in their Direct Shipping Ore Reserve Book published in 1983. The IOC historical iron ore resources contained within SMI's Quebec holdings, not including Denault, total 60.5 million tonnes with grades greater than 50% Fe (Table 1-6).

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 formations;
- 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 Sawyer 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 lump 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 IOC until the closure of their operation in 1982. 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 IOC or by consultants working for them. Recent exploration was carried out by LIM since 2005. On some of the properties trench sampling as well as bulk sampling, was carried out. The exploration data used for the NI 43-101 compliant resource estimates has been developed for the James, Redmond 2B, Redmond 5, Houston and Denault deposits. Additional exploration drilling and trenching will be required for the other deposits to confirm the historical resource estimates and to be able to produce NI 43-101 compliant resource estimations.

Additional bulk sampling for metallurgical testing will also be necessary to prepare the final process flow sheet for treatment of the iron and manganiferous ore resources from these deposits.

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 IOC used a combination of reverse circulation (RC) drilling, diamond drilling and trenching to generate data for reserve and resource calculation. A significant portion of the original IOC data has been recovered and reviewed by LIM. Systematic drilling has been carried out on sections 30 metres apart.

During the time that IOC 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 Report has been carried out by LIM during 2006, 2008, 2009 and 2010, predominantly with RC drilling. The geological sections originally prepared by IOC have been updated with the information obtained through LIM's exploration. A total of 11,800 metres in 188 holes were drilled in Labrador, 172 of which were reverse circulation ("RC") drilled holes. A total of 4,150 metres of trenching has been carried out on six of the properties (James, Redmond 2B, Redmond 5, Houston 1, Houston 3, Gill and Ruth Lake 8). During 2010, a 50 hole RC drill program was carried out on Denault in Quebec, collecting 946 samples from 2726m of drilling. Of the 50 holes drilled on Denault, 26 were drilled on Denault 1 collecting 588 samples from 1688m of drilling.

A bulk sample program was started in 2006 (3,600 kgs from James and Houston) with the major bulk sampling conducted in 2008. During that year, a total of 5,900 tonnes was excavated from the James South, Knob Lake 1, Redmond 5 and the Houston deposits. No bulk samples have been taken from any of the other deposits.

Sample Preparation, Security and Data Verification

The IOC sampling procedures have not been located but it is believed that LIM has followed similar procedures to those used by IOC 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 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 by LIM 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 200 kg samples from each of the raw ore types, (James: blue ore, Knob Lake 1: red ore, Houston: blue ore and Redmond 5: blue ore) that were 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, Florida, 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.

Based on the samples provided to it which were solely sourced from the James blue ore, SGA concluded: "In summary, it can be stated that the tested sample showed excellent sintering behaviour, 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."

The samples sent to Derrick Corporation for screening test work determined optimum screen capacity and design for sinter fines production. From the material sent to Derrick Corporation, a sample of -300 microns was sent to Outotec (USA) Inc., for Wet Gravity Separation and Magnetic Separation using HGMS Magnet test work. The results of this study indicate that it is possible to produce an iron product containing +65% Fe and less than 5% silica using wet gravity separation, followed by spiral concentration. Recovery of 83% Fe was achieved. Testing using a magnetic separator to recover Fe from the Floatex overflow combined with the gravity tail produced a product containing 65.1% Fe.

Lump and fine samples were sent to MBE for BATAC jig tests. The test work indicated that a concentrate grade of +65% Fe for the fines +65 % Fe for lump ore is possible.

Ten samples from the James deposit were sent to SGS Lakefield in 2010 for mineralogical characterization to aid with the metallurgical beneficiation program.

FLSmidth Minerals carried out tests on the Density Separator product for James deposit samples to confirm feasibility of using Pan Filters to decrease the moisture content of the concentrate. The filtration results clearly indicate that filter cake with moisture in the range of 8% is achievable.

No metallurgical testing has been carried out on any deposits other than James, Redmond 5, Houston and Knob Lake 1.

Mineral Resources and Mineral Reserves

As of the date of this Report, only the resources for James, Redmond 2B and Redmond 5, Houston and Denault deposits for which Technical Reports have been issued (December 18, 2009, May 19, 2010, February 21, 2011 and March 14, 2011) are NI 43-101 compliant. The current resource estimates for the James, Redmond, Denault and Houston deposits are summarised in Tables 1-4, 1-5, 1-6 and 1-7 and the total compliant resources are summarized in Table 1.8.

Table 1-4 - Estimated Mineral Resources James Deposit (NI 43-101 Compliant)

	Classification	Tonnes (x1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
James	Indicated	8,098	57.7	0.027	0.7	14.1	0.5
	Inferred	111	53.6	0.036	0.1	19.9	0.5

Table 1-5 - Estimated Mineral Resources Redmond Deposits (NI 43-101 Compliant)

	Classification	Tonnes (x1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
Redmond	Indicated	2,933	56.4	0.069	0.9	9.3	1.2
	Inferred	108	53.7	0.086	1.6	9.5	1.8

Table 1-6 - Estimated Mineral Resources Denault (NI 43-101 Compliant)

	Classification	Tonnes (X 1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
Denault	Measured and Indicated	6,384	54.8	0.076	2.3	8	1
	Inferred	369	53.9	0.069	2.7	9.4	0.9

Table 1-7 - Estimated Mineral Resources Houston Deposit (NI 43-101 Compliant)

	Classification	Tonnes (x1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
Houston	Measured and Indicated	19,499	58.3	0.064	0.9	12.3	0.7
	Inferred	1,024	55.8	0.055	1.0	16.5	0.5

Table 1-8 - Total NI 43-101 Compliant Resources, NL and QC

Classification	Tonnes (x 1000)	Fe%	Mn%	SiO_2 %
Measured and Indicated (NL)	30,530	58	0.8	12.5
Inferred (NL)	1,243	55.4	1	16.2
Measured and Indicated (QC)	6,384	54.8	2.3	8
Inferred (QC)	369	53.9	2.7	9.4
Total (Measured & Indicated, QC & NL)	**36,914**	**57.4**	**1.1**	**11.7**

All other resource estimates quoted in this Report are based on prior data and reports prepared by IOC prior to 1983 and were not prepared in accordance with NI 43-101. These historical estimates are not current and do not meet NI 43-101 Definition Standards. A qualified person has not done sufficient work to classify the historical estimate as current mineral reserves. These historical results provide an indication of the potential of the properties and are relevant to ongoing exploration. The historical estimates should not be relied upon

The IOC estimated mineral resources and reserves were published in their DSO Reserve Book published in 1983. The estimate was based on geological interpretations on cross sections and the calculations were done manually. Tables 1-9 and 1-10 show the summary of the estimate of the (non-compliant with NI 43-101) historical mineral resources of the LIM owned deposits in Labrador and the SMI deposits in Quebec. IOC categorized their estimates as “reserves”. The authors have adopted the same principle used in the 2007 Technical Report prepared by SNC-Lavalin that these should be categorized as “resources” as defined by NI 43-101.

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

Table 1-9
Summary of Historical IOC Mineral Resource Estimates in Labrador
(Non-compliant with NI 43-101)

	Iron Resources			Manganese Resources			
Property	**Tonnes (x 1000)**	**Fe**	**SiO_2**	**Tonnes (x 1000)**	**Fe%**	**SiO_2**	**Mn%**
Astray Lake	7,818	65.6	3.9				
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Ruth Lake 8	410	53.3	9.6				
Wishart Mine	207	53.7	12.2				
Wishart 2	554	52.0	12.9				
Total	**64,423**	**58.0**	**7.1**	**661**	**42.7**	**7.1**	**8.8**

Table 1-10
Summary of Historical IOC Mineral Resource Estimates in Quebec
(Non-compliant with NI 43-101)

	Iron Resources			Manganese Resources			
Property	**Tonnes (x 1000)**	**Fe%**	**SiO_2%**	**Tonnes (x 1000)**	**Fe%**	**SiO_2%**	**Mn%**
Barney 1	6,281	53.9	7.7	62	49.1	3.5	5
Eclipse	37,159	56.3	5.2	2,068	49.9	4.5	4.1
Fleming 6	802	48.3	8.8	23	42.1	7	7.3
Fleming 7S	1,946	56	7.6				
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Lance Ridge	1,370	53.9	8.5	281	41.5	5.7	10.3
Malcom 1	2,879	56.2	6.1	422	51.4	4.9	5.8
Partington 2	3,377	55.2	9.2				
Squaw-Wollett 1	2,303	54.9	5.8				
Star Creek 1	1,492	51	7.3	1,972	45.9	6.2	6.5
Star Creek 3	63	55.2	8.4				
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Trough 1	1,969	48.8	8.5	230	43.8	6.5	5.8
Total:	**60,518**	**55.4**	**6.1**	**5,058**	**47.7**	**5.4**	**5.6**

These historical estimates are not current and do not meet NI 43-101 Definition Standards. A qualified person has not done sufficient work to classify the historical estimate as current mineral reserves. These historical results provide an indication of the potential of the properties and are relevant to ongoing exploration. The historical estimates should not be relied upon.

Other Relevant Data and Information

For preliminary planning purposes and subject to detailed engineering and design, the LIMH projects have been divided into five operational stages. The first stage incorporates the James and Redmond deposits at the Silver Yards plant which is now constructed and where production is expected to commence in the spring of 2011. This stage also contemplates the treatment of other nearby deposits (Central Zone) and is expected to continue until 2021. Stage 2 contemplates a new plant at the Redmond Mine initially treating Houston ore and will continue until about 2022 (South Central Zone). Stage 3 based on a third plant near Howse, (North Central Zone) which will treat ore from Barney and Howse, will continue until about 2028. Stage 4 treating ore from the southern deposits Sawyer Lake and Astray Lake (South Zone) through the Redmond plant will continue until about 2028. Stage 5 based on ore from the Northern deposits (North Zone) will follow the first 4 stages.

Overall production of saleable iron ore product is planned to commence at around 1.5 mta in 2011 and will build up to about 5 mta by 2015 and, based on the future development of all other deposits, stages 1 to 4 will continue at this level until about 2028 when stage 5 is expected to commence.

Only the James and Redmond Deposits and the Silver Yards plant have completed environmental assessment and permitting. Further environmental assessment and permitting will be required for all the other deposits.

The James Redmond Silver Yards project is now well advanced with a processing plant essentially complete and with first mine production scheduled for April 2011. Recent metallurgical test work has indicated that increases in recovery and throughput can be achieved at the Silver Yards plant by the use of additional items of processing equipment. This will extend the life of the Silver Yards plant based on treatment of adjacent ore bodies to about eight years. During this period, a new plant of similar size to Silver Yards could be constructed, possibly at the site of the old Redmond 1 Mine, to treat ore from the Houston deposits.

LIM has established an active community relations program since mid-2005 and an ongoing effort is made to work very closely with the relevant First Nations to focus on developing and maintaining productive working relations, ensuring a good understanding of the proposed project. LIM has signed Impact Benefits Agreements with the Innu Nation of Labrador and with the Naskapi Nation of Kawawachikamach, a Memorandum of Understanding with the Innu of Matimekush-Lac John and an Agreement in Principal with the Innu Takuaikan Uashat Mak Mani-Utenam. LIM is currently engaged with those later two First Nations in negotiations for economic development or impact benefits agreements.

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

Conclusions

LIM has now defined over 36 million tonnes of current NI 43-101 compliant direct shipping hematite iron ore resources at the first four deposits that it intends to develop, which is considered sufficient to continue production for approximately the first 10 years. In addition a further 125 million tons of historical resources exist on LIM's other properties that were defined by IOC during their historical operations in the area.

LIM's exploration work has demonstrated good correlation between the resources estimated by LIM's recent drilling programs and the historical IOC resources. It can be expected that with further exploration the historical resources will be upgraded such that operations can be continued for a number of years thereafter.

LIM intends to develop all these resources in five separate stages. The first four stages will see the various deposits treated in three beneficiation plants, to be built adjacent to several of the deposits that comprise the Central, South Central and North Central Zones. The final stage is not yet planned but will likely involve a fourth plant. A Feasibility Study has not been completed on any of these Projects.

Detailed mine design and metallurgical testwork has been carried out on those deposits that will form the basis of production for the initial years but further exploration, testwork and design is required for all the remaining resources.

The first plant at Silver Yards and mine construction at James are essentially complete and initial production is expected in the spring of 2011. Agreements have been reached with the major railroad companies that will be used to transport ore from the mine site to port.

Metallurgical testing of the first stage deposits has established that the ore can be successfully upgraded to marketable standards. Based on the current testwork, a program of plant enhancement on the Silver Yards plant is now planned with the objective to increase both the plant throughput and recovery.

Production of direct shipping lump ore and sinter fines is forecast at around 1.5 million tonnes in 2011 and, based on current and historical resources, growing to approximately 5 million tonnes in 2015 and thereafter. Production from the first four stages is expected to continue at about this rate through to about 2028.

Recommendations

Additional drilling is recommended to evaluate possible extensions of the James deposit to the south-east and Knob Lake 1 Deposit to the north. For Gill and Ruth Lake 8 deposits, a program of RC drilling is recommended to confirm historical resource (not NI 43-101 compliant) previously estimated by the IOC prior to 1982. Additional step out drilling is recommended to finalize the planning of Redmond 2B and Redmond 5.

The additional drilling of about 71 RC drill holes is recommended:

- A minimum of 9 RC drill holes for a total of 900 metres is proposed for the James Deposit in order to extend and define new mineralization to the south-east.
- A minimum of 12 RC drill holes for a total of 1,200 metres and 4,000 metres of trenching is proposed for the Knob Lake 1 deposit in order to extend the mineralization to the north.

- A total of 23 RC holes for a total of 2,300 metres are proposed for the Gill deposit. All holes are located to define historical resources.
- A total of 22 RC holes for a total of 2,200 metres are proposed for Ruth Lake 8 deposit. All holes are located to define historical resources.
- A total of 5 RC holes for a total of 500 metres are proposed for Redmond 2B and 5 to define further extensions.

Exploration programs are recommended to be carried out for all those remaining deposits in stages 2 to 4. This work will need to be scheduled to ensure that current resource estimates for each of these deposits are produced in time to enable planning, environmental assessment and permitting to be completed in sufficient time to allow construction and development to be achieved to match the overall project production schedule.

Continuing metallurgical test work is required in a number of areas to confirm the final process route for the planned Silver Yards plant expansion. Further metallurgical studies on the Denault, Gill, Ruth Lake 8 and Knob Lake 1 deposits are required to confirm their amenability to treatment using the current and planned Silver Yards plant facility and to confirm recoveries and grades.

At the same time as the recommended exploration programs outlined above, a number of specific items will be required to progress the development of the Denault, Gill, Ruth Lake 8 Knob Lake 1 and Houston deposits:

- Detailed mine plans, including geotechnical and hydrogeological studies and optimization of the development schedule;
- Ongoing additional environmental studies, traditional environmental knowledge programs, and community consultation;
- Completion of the environmental assessment and permitting process;
- Detailed mine plans, including geotechnical and hydrogeological studies and optimization of the development schedule;
- Additional metallurgical studies dependent on the mineralogy of the deposit;
- Completion of a beneficiation plant option evaluation study for selection of preferred beneficiation processes for the Houston ores;
- Detailed beneficiation plant engineering and design;
- Transport and infrastructure requirements studies, including selection of the preferred haulage route for transporting ore from the Houston Mine site to the beneficiation plant at Redmond;
- Engineering plans for the re-laying of 10 km of rail spur line from the TSH mainline to the Redmond turnabout

2. INTRODUCTION (ITEM 4)

This Report reviews the ongoing exploration and development in all of LIMH`s properties in Newfoundland and Labrador and Quebec. It reviews current progress and provides a conceptual schedule of projected production over a period up to 18 years.

The construction phase of the LIM's direct shipping iron ore projects at Silver Yards is scheduled to be complete by the end of March 2011. This Technical Report has been produced in order to provide an update on drilling and metallurgical testwork and design carried out to address the ongoing exploration and development of the various deposits during 2010 and focused on the mining and beneficiation of ores scheduled to comprise the phase 1 operation centered on Silver Yards.

The authors are directors and/or senior officers of Labrador Iron Mines Holdings Limited ("LIMH") and directors and/or officers of Labrador Iron Mines Limited ("LIM") and Schefferville Mines Inc. ("SMI"), wholly owned subsidiaries of LIMH, which hold the mineral licenses on which the iron deposits are located. The authors are "qualified persons" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators but are not independent of the LIMH or LIM or SMI.

The authors have personal knowledge of the iron deposits held by LIMH in western Labrador and north eastern Quebec, having been instrumental in the initial acquisition and direction of exploration of the properties dating from 2005. Two of the authors (McKillen and Hooley) were co-authors of an internal scoping study of LIM's iron ore projects in western Labrador in September 2006.

LIM engaged SNC Lavalin in 2007 to prepare an independent Technical Report (October 2007) on its western Labrador iron properties. One author of this current report (Dufort) was co-author of the SNC Lavalin Report in 2007.

In March 2010, LIM engaged the other author of the SNC Lavalin report (A. Kroon) to co-author, with SGS Canada Inc., a Revised Technical Report on an Iron Ore Project in Western Labrador, Province of Newfoundland and Labrador (March 2010) (filed on SEDAR March 11, 2010 with a revised version filed on SEDAR March 19, 2010) and an independent Technical Report of an adjacent Iron Project in Northern Quebec (March 2010) (filed on SEDAR March 11, 2010).

One author (McKillen) prepared a Resource Estimate and Technical Report on the Houston Deposit in May 2010 (filed on SEDAR May 25, 2010) and on Denault Deposit in March 2011 (filed on SEDAR March 14, 2011) and the authors prepared a Technical Report on the Houston Iron Ore Deposit, Western Labrador, Province of Newfoundland and Labrador, (February 2011) (filed on SEDAR February 21, 2011).

One author (McKillen) has reviewed the annual technical assessment reports prepared by LIM for submission to the Department of Natural Resources, Newfoundland and Labrador.

The authors have visited the Schefferville area iron deposits on numerous occasions from May 2006 to November 2010.

The terms "iron ore" and "ore" in this Report are used in a descriptive sense and should not be construed as representing current economic viability.

2.1 COMPANY INFORMATION

The Direct Shipping Iron Ore Projects located in the Province of Newfoundland and Labrador, near the town of Schefferville of Quebec (the Project) are being undertaken by Labrador Iron Mines Limited and Schefferville Mines Inc.

The parent company (Labrador Iron Mines Holdings Limited) is an Ontario registered company trading on the TSX Exchange under the symbol of "LIM".

2.2 ORGANIZATION OF TECHNICAL REPORT

This report represents the Technical Report identified in NI 43-101 required format.

The report is organized and presented in twenty three sections, as described in the table below.

Table 2-1 Report Concordance with NI 43-101 Guidelines

Table of Contents		Preparation Guidelines as required by the NI 43-101 and its Regulations and Guidelines
1.0	Summary	Item 3
2.0	Introduction	Item 4
3.0	Reliance of other Experts	Item 5
4.0	Property Description and Location	Item 6
5.0	Accessibility, Climate, Local Resources, Infrastructure and Physiography	Item 7
6.0	History	Item 8
7.0	Geological Setting	Item 9
8.0	Deposit Type	Item 10
9.0	Mineralization	Item 11
10.0	Exploration	Item 12
11.0	Drilling	Item 13
12.0	Sampling Method and Approach	Item 14
13.0	Sample Preparation, Analyses and Security	Item 15
14.0	Data Verification	Item 16
15.0	Adjacent Properties	Item 17
16.0	Mineral Processing and Metallurgical Testing	Item 18
17.0	Mineral Resources and Mineral Reserve Estimates	Item 19
18.0	Other Relevant Data and Information	Item 20
19.0	Interpretations and Conclusions	Item 21
20.0	Recommendations	Item 22
21.0	References	Item 23
22.0	Date and Signature Page	Item 24
23.0	Illustrations	Item 26

All dollar figures are expressed in Canadian funds unless otherwise noted.

3. RELIANCE ON OTHER EXPERTS (ITEM 5)

This report has been prepared for LIMH. The findings, conclusions and recommendations are based on the authors' interpretation of information in LIM's possession, comprising reports, sections and plans prepared by IOC between 1954 to 1982; reports prepared for other subsequent owners of some of the Schefferville area iron properties, reports of exploration and sampling activities of LIM during the period 2006-2010 and independent technical reports authored by SNC Lavalin, A. Kroon, SGS Geostat Ltd. and MRB & Associates.

A number of metallurgical testing laboratories have carried out work on these Properties at the request of LIM. These include "rpc – The Technical Solutions", SGS Lakefield, Corem, SGA, FL Schmidt, MBB and Outokumpu.

Detailed engineering design on the Silver Yards plant was carried out by DRA Americas and this has been extended to initial conceptual design for the potential Redmond plant.

The authors have verified the ownership of the mineral claims by reference to the websites of the Department of Natural Resources of the Province of Newfoundland and Labrador and the Ministry of Natural Resources, Province of Quebec, as of the date of this report, but do not offer an opinion to the legal status of such claims.

The assistance of LIM personnel Erick Chavez, Howard Vatcher, Eldon Roul, and Tara Schrama of LIM's Exploration Department, Linda A. Wrong, Vice-President Environment & Permitting, Georgi Doundarov, Manager Processing, Joanne Robinson, Senior Mining Engineer and Rodel Ortiz, CAD Manager in the preparation of this report and the underlying in-house technical reports is gratefully acknowledged.

4. PROPERTY DESCRIPTION AND LOCATION (ITEM 6)

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 80 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 4-1).

As of February 28 2011, LIM holds title, subject to various agreements described below, to 54 Mineral Rights Licenses in good standing, issued by the Department of Natural Resources, Province of Newfoundland and Labrador, representing 642 mineral claim units located in northwest Labrador covering approximately 16,050 hectares (Table 4-1). In addition to the Mineral Rights Licenses, LIM holds title to three Mining Leases and eight Surface Leases issued by the Department of Natural Resources, Province of Newfoundland and Labrador covering an area of 483 hectares (Table 4-2).

Under the terms of an Option and Joint Venture Agreement dated September 15, 2005 between Fonteneau Resources Limited ("Fonteneau") and Energold as subsequently amended on properties in Labrador, and which 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 in Labrador is payable to Fonteneau. This royalty shall be capped at US$1.50 per tonne on the Central Zone properties, (James, Knob Lake 1, Redmond, Gill and Houston); US$1.00 per tonne on the South Zone properties (Sawyer and Astray); and US$0.50 per tonne on the North Central Zone (Howse property) and the North Zone (Kivivic property).

In October 2009, LIM entered into an agreement with New Millennium Capital Corp ("NML") to exchange certain of their respective mineral licences in Labrador. The exchange eliminated 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, Gill and Knob Lake 1 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 Four Kivivic 2 and Kivivic 1 deposits.

Under the Agreement LIM and NML 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.

Schefferville Mines Inc. ("SMI") holds interests in 258 Mining Rights in the Schefferville area issued by the Ministry of Natural Resources, Province of Quebec, covering approximately 10,730 hectares, (Table 4.3). SMI also holds an exclusive operating license in a mining lease covering 23 parcels totalling about 2,036 hectares, which are part of the original mining lease issued to Hollinger in 1953 under a Special Act of the Quebec Parliament enacted in 1946, (Table 4.4). The 1953 mining lease remains valid under its current term to 2013 and is renewable for a further twenty years to 2033. SMI has the option to take a sublease of the properties subject to the approval of the

Government of Quebec. These mining rights and the operating license in Quebec are held subject to a royalty of $2.00 per tonne of iron ore produced from the properties.

Table 4-1
List of Licenses in Newfoundland and Labrador held by LIM
(as of February 28, 2011)

License Number	Property	Location	Claims	Area (Has)	Issued
011074M	Knob Lake No.1	Ruth Lake	2	50	1-Jun-05
011541M	Fleming 3	Pinette Lake	3	75	4-Jan-06
011542M	Elross No.3	Howells River	2	50	4-Jan-06
011543M	Timmins 5	Howells River	3	75	4-Jan-06
011544M	Timmins 6	Howells River	3	75	4-Jan-06
012894M	Howells River	Howells River	3	75	14-Dec-06
015115M	Abel Lake No.1 (Mn)	Gilling Lake	1	25	23-Jun-08
016285M	Astray Lake	Astray Lake	50	1,250	17-Dec-04
016286M	Houston	Gilling River	22	550	12-Apr-04
016287M	Howse	Howells River	15	375	2-May-05
016292M	Sawyer Lake	Sawyer Lake	16	400	18-Sep-03
016293M	Ruth Lake	Ruth Lake	20	500	14-Dec-06
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 No.1 (Mn)	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	1,375	17-Sep-09
016500M	Elross 3/Timmins 5	Howells River	46	1,150	21-Sep-09
016502M	Fleming 3	Pinette Lake	1	25	21-Sep-09
016516M	Houston	Astray Lake	36	900	2-Oct-09
016531M	Timmins 6	Howells River	3	75	15-Oct-09
016534M	Christine	Stakit Lake	13	325	15-Oct-09
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
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
016582M	Howse	Howells River	1	25	16-Dec-04
016583M	Howse	Howells River	1	25	16-Dec-04
016669M	Kivivic No.1	Kivivic Lake	7	175	2-May-05
017359M	James/Wishart	Knob Lake	28	700	12-Apr-04
017360M	Redmond	Gilling Lake	45	1,125	25-Aug-05
017720M	Houston-Redmond	Gilling Lake	9	225	3-Jun-10
017721M	Houston-Redmond	Houston Lake	6	150	3-Jun-10
017722M	Houston-Redmond	Gilling Lake	27	675	3-Jun-10
018226M	Howse	Kivivic Lake	22	550	13-Dec-10
018230M	Timmins	Pinette Lake	27	675	13-Dec-10
018235M	Elross/Timmins	Howells River	2	50	15-Dec-10
018256M	Redmond	Gilling Lake	8	200	17-Dec-10
018276M	Wishart Lake	Wishart Lake	10	250	23-Dec-10
018277M	Ruth Lake	Ruth Lake	26	650	23-Dec-10
018283M	Timmins 6	Howells River	3	75	24-Dec-10
018284M	Houston	Gilling River	1	25	24-Dec-10
018285M	Astray Lake	Astray Lake	16	400	24-Dec-10

License Number	Property	Location	Claims	Area (Has)	Issued
018286M	Sawyer Lake	Sawyer Lake	6	150	24-Dec-10
018405M	Gilling Lake	Gilling Lake	15	375	24-Jan-11
018466M	Abel Lake - Knob Lake	Gilling Lake	17	425	4-Feb-11
018470M	Houston-Malcolm	Gilling Lake	6	150	4-Feb-11
018521M	Houston	Petitsikapau Lake	5	125	14-Feb-11
018522M	Houston	Petitsikapau Lake	34	850	14-Feb-11
018638M	Timmins 6	Howells River	3	75	Recorded
018702M	Astray Lake	Astray Lake	4	100	Recorded
		TOTAL	**642**	**16,050**	

Table 4-2

Mining and Surface Leases in Labrador

Type	Name	No.	Area (Has.)
Mining Lease	James	200	95.7
Mining Lease	Redmond 5	201	27.7
Mining Lease	Redmond 2B	202	35.1
Surface lease	Spur Line	109	78.8
Surface lease	Silver Yards	110	81.5
Surface lease	Bean Lake Camp	111, 115	3.4
Surface lease	Ruth Pit	112	76.6
Surface lease	Pipe Line	113	3.3
Surface lease	Redmond Haul Road	114	11.0
Surface lease	James Discharge	119	35.0
Surface lease	James Creek Culvert Area	120	35.3
		TOTAL	**483.3**

Table 4-3

Mining Titles in Schefferville Area - Quebec

Title No.	Date of Registration	Expiry Date	Area (Has)	Titleholder
CDC-58039	24-Feb-05	23-Feb-13	20.81	Schefferville Mines Inc.
CDC-58040	24-Feb-05	23-Feb-13	4.44	Schefferville Mines Inc.
CDC-58045	24-Feb-05	23-Feb-13	49.76	Schefferville Mines Inc.
CDC-58048	24-Feb-05	23-Feb-13	47.86	Schefferville Mines Inc.
CDC-2016779	20-Jun-06	19-Jun-12	49.64	Schefferville Mines Inc.
CDC-2016780	20-Jun-06	19-Jun-12	49.63	Schefferville Mines Inc.
CDC-2016781	20-Jun-06	19-Jun-12	49.61	Schefferville Mines Inc.
CDC-2016787	20-Jun-06	19-Jun-12	49.11	Schefferville Mines Inc.
CDC-2016789	20-Jun-06	19-Jun-12	46.99	Schefferville Mines Inc.
CDC-2016790	20-Jun-06	19-Jun-12	44.96	Schefferville Mines Inc.
CDC-2016791	20-Jun-06	19-Jun-12	24.97	Schefferville Mines Inc.
CDC-2016797	20-Jun-06	19-Jun-12	49.36	Schefferville Mines Inc.
CDC-2016800	20-Jun-06	19-Jun-12	49.35	Schefferville Mines Inc.
CDC-2016803	20-Jun-06	19-Jun-12	49.34	Schefferville Mines Inc.
CDC-2016805	20-Jun-06	19-Jun-12	48.01	Schefferville Mines Inc.
CDC-2016806	20-Jun-06	19-Jun-12	47.23	Schefferville Mines Inc.

Title No.	Date of Registration	Expiry Date	Area (Has)	Titleholder
CDC-2016807	20-Jun-06	19-Jun-12	45.14	Schefferville Mines Inc.
CDC-2016808	20-Jun-06	19-Jun-12	35.78	Schefferville Mines Inc.
CDC-2016925	20-Jun-06	19-Jun-12	49.45	Schefferville Mines Inc.
CDC-2016926	20-Jun-06	19-Jun-12	49.45	Schefferville Mines Inc.
CDC-2016927	20-Jun-06	19-Jun-12	49.45	Schefferville Mines Inc.
CDC-2168457	30-Jul-08	29-Jul-12	3.35	Schefferville Mines Inc.
CDC-2168458	30-Jul-08	29-Jul-12	23.81	Schefferville Mines Inc.
CDC-2168459	30-Jul-08	29-Jul-12	0.6	Schefferville Mines Inc.
CDC-2168460	30-Jul-08	29-Jul-12	26.64	Schefferville Mines Inc.
CDC-2168461	30-Jul-08	29-Jul-12	46.59	Schefferville Mines Inc.
CDC-2168462	30-Jul-08	29-Jul-12	1.39	Schefferville Mines Inc.
CDC-2168463	30-Jul-08	29-Jul-12	48.09	Schefferville Mines Inc.
CDC-2168464	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168465	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168466	30-Jul-08	29-Jul-12	9.96	Schefferville Mines Inc.
CDC-2168467	30-Jul-08	29-Jul-12	14.85	Schefferville Mines Inc.
CDC-2168468	30-Jul-08	29-Jul-12	3.07	Schefferville Mines Inc.
CDC-2168469	30-Jul-08	29-Jul-12	0.31	Schefferville Mines Inc.
CDC-2168470	30-Jul-08	29-Jul-12	19.86	Schefferville Mines Inc.
CDC-2168471	30-Jul-08	29-Jul-12	8.07	Schefferville Mines Inc.
CDC-2168472	30-Jul-08	29-Jul-12	14.42	Schefferville Mines Inc.
CDC-2168473	30-Jul-08	29-Jul-12	5.02	Schefferville Mines Inc.
CDC-2168474	30-Jul-08	29-Jul-12	24.43	Schefferville Mines Inc.
CDC-2168475	30-Jul-08	29-Jul-12	34.47	Schefferville Mines Inc.
CDC-2168476	30-Jul-08	29-Jul-12	20.11	Schefferville Mines Inc.
CDC-2168477	30-Jul-08	29-Jul-12	22.13	Schefferville Mines Inc.
CDC-2168478	30-Jul-08	29-Jul-12	3.71	Schefferville Mines Inc.
CDC-2168479	30-Jul-08	29-Jul-12	25.28	Schefferville Mines Inc.
CDC-2168480	30-Jul-08	29-Jul-12	49.66	Schefferville Mines Inc.
CDC-2168481	30-Jul-08	29-Jul-12	49.66	Schefferville Mines Inc.
CDC-2168482	30-Jul-08	29-Jul-12	49.44	Schefferville Mines Inc.
CDC-2168483	30-Jul-08	29-Jul-12	1	Schefferville Mines Inc.
CDC-2168484	30-Jul-08	29-Jul-12	26.58	Schefferville Mines Inc.
CDC-2168485	30-Jul-08	29-Jul-12	34.59	Schefferville Mines Inc.
CDC-2168486	30-Jul-08	29-Jul-12	1.07	Schefferville Mines Inc.
CDC-2168487	30-Jul-08	29-Jul-12	0.18	Schefferville Mines Inc.
CDC-2168488	30-Jul-08	29-Jul-12	2.33	Schefferville Mines Inc.
CDC-2168489	30-Jul-08	29-Jul-12	1.01	Schefferville Mines Inc.
CDC-2168490	30-Jul-08	29-Jul-12	46.83	Schefferville Mines Inc.
CDC-2168491	30-Jul-08	29-Jul-12	43.56	Schefferville Mines Inc.
CDC-2168492	30-Jul-08	29-Jul-12	49.65	Schefferville Mines Inc.
CDC-2168493	30-Jul-08	29-Jul-12	46.18	Schefferville Mines Inc.

Title No.	Date of Registration	Expiry Date	Area (Has)	Titleholder
CDC-2168494	30-Jul-08	29-Jul-12	5.11	Schefferville Mines Inc.
CDC-2168495	30-Jul-08	29-Jul-12	14.91	Schefferville Mines Inc.
CDC-2168496	30-Jul-08	29-Jul-12	38.11	Schefferville Mines Inc.
CDC-2168497	30-Jul-08	29-Jul-12	49.65	Schefferville Mines Inc.
CDC-2168498	30-Jul-08	29-Jul-12	49.64	Schefferville Mines Inc.
CDC-2168499	30-Jul-08	29-Jul-12	46.99	Schefferville Mines Inc.
CDC-2168500	30-Jul-08	29-Jul-12	14.44	Schefferville Mines Inc.
CDC-2168501	30-Jul-08	29-Jul-12	6.16	Schefferville Mines Inc.
CDC-2168502	30-Jul-08	29-Jul-12	49.64	Schefferville Mines Inc.
CDC-2168503	30-Jul-08	29-Jul-12	49.64	Schefferville Mines Inc.
CDC-2168504	30-Jul-08	29-Jul-12	49.63	Schefferville Mines Inc.
CDC-2168505	30-Jul-08	29-Jul-12	49.63	Schefferville Mines Inc.
CDC-2168506	30-Jul-08	29-Jul-12	49.63	Schefferville Mines Inc.
CDC-2168507	30-Jul-08	29-Jul-12	49.63	Schefferville Mines Inc.
CDC-2168508	30-Jul-08	29-Jul-12	49.63	Schefferville Mines Inc.
CDC-2168509	30-Jul-08	29-Jul-12	49.63	Schefferville Mines Inc.
CDC-2168510	30-Jul-08	29-Jul-12	49.63	Schefferville Mines Inc.
CDC-2168511	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168512	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168513	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168514	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168515	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168516	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168517	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168518	30-Jul-08	29-Jul-12	49.62	Schefferville Mines Inc.
CDC-2168519	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168520	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168521	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168522	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168523	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168524	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168525	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168526	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168527	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168528	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168529	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168530	30-Jul-08	29-Jul-12	49.61	Schefferville Mines Inc.
CDC-2168531	30-Jul-08	29-Jul-12	20.33	Schefferville Mines Inc.
CDC-2168532	30-Jul-08	29-Jul-12	17.71	Schefferville Mines Inc.
CDC-2168533	30-Jul-08	29-Jul-12	27.79	Schefferville Mines Inc.
CDC-2168534	30-Jul-08	29-Jul-12	3.06	Schefferville Mines Inc.
CDC-2168535	30-Jul-08	29-Jul-12	0.37	Schefferville Mines Inc.

Title No.	Date of Registration	Expiry Date	Area (Has)	Titleholder
CDC-2168536	30-Jul-08	29-Jul-12	13.02	Schefferville Mines Inc.
CDC-2168537	30-Jul-08	29-Jul-12	34.11	Schefferville Mines Inc.
CDC-2168538	30-Jul-08	29-Jul-12	29.59	Schefferville Mines Inc.
CDC-2168539	30-Jul-08	29-Jul-12	21.17	Schefferville Mines Inc.
CDC-2168540	30-Jul-08	29-Jul-12	36.25	Schefferville Mines Inc.
CDC-2168541	30-Jul-08	29-Jul-12	48.39	Schefferville Mines Inc.
CDC-2168612	31-Jul-08	30-Jul-12	3.45	Schefferville Mines Inc.
CDC-2172892	14-Oct-08	13-Oct-12	40.63	Schefferville Mines Inc.
CDC-2183131	7-May-09	6-May-11	49.66	Schefferville Mines Inc.
CDC-2183132	7-May-09	6-May-11	49.66	Schefferville Mines Inc.
CDC-2183133	7-May-09	6-May-11	49.65	Schefferville Mines Inc.
CDC-2183173	8-May-09	7-May-11	49.74	Schefferville Mines Inc.
CDC-2183174	8-May-09	7-May-11	49.74	Schefferville Mines Inc.
CDC-2183175	8-May-09	7-May-11	49.67	Schefferville Mines Inc.
CDC-2183176	8-May-09	7-May-11	39.78	Schefferville Mines Inc.
CDC-2188494	16-Sep-09	15-Sep-11	39.17	Schefferville Mines Inc.
CDC-2188495	16-Sep-09	15-Sep-11	49.11	Schefferville Mines Inc.
CDC-2188496	16-Sep-09	15-Sep-11	49.11	Schefferville Mines Inc.
CDC-2188497	16-Sep-09	15-Sep-11	49.11	Schefferville Mines Inc.
CDC-2188498	16-Sep-09	15-Sep-11	15.9	Schefferville Mines Inc.
CDC-2188499	16-Sep-09	15-Sep-11	48.83	Schefferville Mines Inc.
CDC-2188500	16-Sep-09	15-Sep-11	49.1	Schefferville Mines Inc.
CDC-2188501	16-Sep-09	15-Sep-11	49.1	Schefferville Mines Inc.
CDC-2188502	16-Sep-09	15-Sep-11	49.1	Schefferville Mines Inc.
CDC-2188503	16-Sep-09	15-Sep-11	49.1	Schefferville Mines Inc.
CDC-2188504	16-Sep-09	15-Sep-11	38.44	Schefferville Mines Inc.
CDC-2188505	16-Sep-09	15-Sep-11	49.09	Schefferville Mines Inc.
CDC-2188506	16-Sep-09	15-Sep-11	49.09	Schefferville Mines Inc.
CDC-2188507	16-Sep-09	15-Sep-11	49.09	Schefferville Mines Inc.
CDC-2188508	16-Sep-09	15-Sep-11	33.24	Schefferville Mines Inc.
CDC-2188509	16-Sep-09	15-Sep-11	49.08	Schefferville Mines Inc.
CDC-2188510	16-Sep-09	15-Sep-11	49.08	Schefferville Mines Inc.
CDC-2188511	16-Sep-09	15-Sep-11	20.81	Schefferville Mines Inc.
CDC-2188512	16-Sep-09	15-Sep-11	22.13	Schefferville Mines Inc.
CDC-2188513	16-Sep-09	15-Sep-11	25.2	Schefferville Mines Inc.
CDC-2188514	16-Sep-09	15-Sep-11	46.33	Schefferville Mines Inc.
CDC-2188515	16-Sep-09	15-Sep-11	49.07	Schefferville Mines Inc.
CDC-2188516	16-Sep-09	15-Sep-11	49.07	Schefferville Mines Inc.
CDC-2188517	16-Sep-09	15-Sep-11	11.28	Schefferville Mines Inc.
CDC-2188518	16-Sep-09	15-Sep-11	44.65	Schefferville Mines Inc.
CDC-2188519	16-Sep-09	15-Sep-11	49.06	Schefferville Mines Inc.
CDC-2188520	16-Sep-09	15-Sep-11	49.06	Schefferville Mines Inc.

Title No.	Date of Registration	Expiry Date	Area (Has)	Titleholder
CDC-2188521	16-Sep-09	15-Sep-11	49.06	Schefferville Mines Inc.
CDC-2188522	16-Sep-09	15-Sep-11	48.51	Schefferville Mines Inc.
CDC-2188523	16-Sep-09	15-Sep-11	49.04	Schefferville Mines Inc.
CDC-2188524	16-Sep-09	15-Sep-11	49.04	Schefferville Mines Inc.
CDC-2188525	16-Sep-09	15-Sep-11	49.05	Schefferville Mines Inc.
CDC-2188526	16-Sep-09	15-Sep-11	49.05	Schefferville Mines Inc.
CDC-2188527	16-Sep-09	15-Sep-11	48.71	Schefferville Mines Inc.
CDC-2188528	16-Sep-09	15-Sep-11	48.71	Schefferville Mines Inc.
CDC-2188529	16-Sep-09	15-Sep-11	48.71	Schefferville Mines Inc.
CDC-2188530	16-Sep-09	15-Sep-11	48.71	Schefferville Mines Inc.
CDC-2188531	16-Sep-09	15-Sep-11	48.71	Schefferville Mines Inc.
CDC-2188532	16-Sep-09	15-Sep-11	48.71	Schefferville Mines Inc.
CDC-2188533	16-Sep-09	15-Sep-11	48.7	Schefferville Mines Inc.
CDC-2188534	16-Sep-09	15-Sep-11	48.7	Schefferville Mines Inc.
CDC-2188535	16-Sep-09	15-Sep-11	48.7	Schefferville Mines Inc.
CDC-2188536	16-Sep-09	15-Sep-11	48.7	Schefferville Mines Inc.
CDC-2188537	16-Sep-09	15-Sep-11	48.7	Schefferville Mines Inc.
CDC-2188538	16-Sep-09	15-Sep-11	48.7	Schefferville Mines Inc.
CDC-2188539	16-Sep-09	15-Sep-11	48.69	Schefferville Mines Inc.
CDC-2188540	16-Sep-09	15-Sep-11	48.69	Schefferville Mines Inc.
CDC-2188541	16-Sep-09	15-Sep-11	48.69	Schefferville Mines Inc.
CDC-2188542	16-Sep-09	15-Sep-11	48.67	Schefferville Mines Inc.
CDC-2188543	16-Sep-09	15-Sep-11	48.67	Schefferville Mines Inc.
CDC-2188544	16-Sep-09	15-Sep-11	48.68	Schefferville Mines Inc.
CDC-2188545	16-Sep-09	15-Sep-11	48.68	Schefferville Mines Inc.
CDC-2188546	16-Sep-09	15-Sep-11	48.68	Schefferville Mines Inc.
CDC-2188547	16-Sep-09	15-Sep-11	48.68	Schefferville Mines Inc.
CDC-2188548	16-Sep-09	15-Sep-11	48.69	Schefferville Mines Inc.
CDC-2188549	16-Sep-09	15-Sep-11	48.69	Schefferville Mines Inc.
CDC-2188826	17-Sep-09	16-Sep-11	49.77	Schefferville Mines Inc.
CDC-2189054	17-Sep-09	16-Sep-11	0.09	Schefferville Mines Inc.
CDC-2189055	17-Sep-09	16-Sep-11	45.36	Schefferville Mines Inc.
CDC-2189056	17-Sep-09	16-Sep-11	47.34	Schefferville Mines Inc.
CDC-2189057	17-Sep-09	16-Sep-11	49.66	Schefferville Mines Inc.
CDC-2189058	17-Sep-09	16-Sep-11	49.66	Schefferville Mines Inc.
CDC-2189059	17-Sep-09	16-Sep-11	49.66	Schefferville Mines Inc.
CDC-2189060	17-Sep-09	16-Sep-11	49.65	Schefferville Mines Inc.
CDC-2198039	18-Dec-09	17-Dec-11	48.69	Schefferville Mines Inc.
CDC-2198040	18-Dec-09	17-Dec-11	48.66	Schefferville Mines Inc.
CDC-2198041	18-Dec-09	17-Dec-11	48.66	Schefferville Mines Inc.
CDC-2198042	18-Dec-09	17-Dec-11	48.66	Schefferville Mines Inc.
CDC-2198043	18-Dec-09	17-Dec-11	48.67	Schefferville Mines Inc.

Title No.	Date of Registration	Expiry Date	Area (Has)	Titleholder
CDC-2198044	18-Dec-09	17-Dec-11	48.67	Schefferville Mines Inc.
CDC-2198045	18-Dec-09	17-Dec-11	48.67	Schefferville Mines Inc.
CDC-2198046	18-Dec-09	17-Dec-11	48.65	Schefferville Mines Inc.
CDC-2198047	18-Dec-09	17-Dec-11	48.65	Schefferville Mines Inc.
CDC-2198048	18-Dec-09	17-Dec-11	48.65	Schefferville Mines Inc.
CDC-2198049	18-Dec-09	17-Dec-11	48.64	Schefferville Mines Inc.
CDC-2198050	18-Dec-09	17-Dec-11	48.64	Schefferville Mines Inc.
CDC-2198889	13-Jan-10	12-Jan-12	49.31	Schefferville Mines Inc.
CDC-2198890	13-Jan-10	12-Jan-12	49.31	Schefferville Mines Inc.
CDC-2198891	13-Jan-10	12-Jan-12	49.32	Schefferville Mines Inc.
CDC-2198892	13-Jan-10	12-Jan-12	49.3	Schefferville Mines Inc.
CDC-2198893	13-Jan-10	12-Jan-12	49.3	Schefferville Mines Inc.
CDC-2198894	13-Jan-10	12-Jan-12	49.3	Schefferville Mines Inc.
CDC-2198895	13-Jan-10	12-Jan-12	49.29	Schefferville Mines Inc.
CDC-2198896	13-Jan-10	12-Jan-12	49.29	Schefferville Mines Inc.
CDC-2198897	13-Jan-10	12-Jan-12	49.29	Schefferville Mines Inc.
CDC-2198898	13-Jan-10	12-Jan-12	49.29	Schefferville Mines Inc.
CDC-2198899	13-Jan-10	12-Jan-12	49.28	Schefferville Mines Inc.
CDC-2198900	13-Jan-10	12-Jan-12	49.28	Schefferville Mines Inc.
CDC-2198901	13-Jan-10	12-Jan-12	49.28	Schefferville Mines Inc.
CDC-2198902	13-Jan-10	12-Jan-12	49.28	Schefferville Mines Inc.
CDC-2198903	13-Jan-10	12-Jan-12	49.28	Schefferville Mines Inc.
CDC-2198904	13-Jan-10	12-Jan-12	49.27	Schefferville Mines Inc.
CDC-2198905	13-Jan-10	12-Jan-12	49.27	Schefferville Mines Inc.
CDC-2198906	13-Jan-10	12-Jan-12	49.27	Schefferville Mines Inc.
CDC-2198907	13-Jan-10	12-Jan-12	49.27	Schefferville Mines Inc.
CDC-2198908	13-Jan-10	12-Jan-12	49.26	Schefferville Mines Inc.
CDC-2198909	13-Jan-10	12-Jan-12	49.26	Schefferville Mines Inc.
CDC-2198910	13-Jan-10	12-Jan-12	49.26	Schefferville Mines Inc.
CDC-2198911	13-Jan-10	12-Jan-12	49.26	Schefferville Mines Inc.
CDC-2198912	13-Jan-10	12-Jan-12	49.25	Schefferville Mines Inc.
CDC-2198913	13-Jan-10	12-Jan-12	49.25	Schefferville Mines Inc.
CDC-2198914	13-Jan-10	12-Jan-12	49.25	Schefferville Mines Inc.
CDC-2198915	13-Jan-10	12-Jan-12	49.25	Schefferville Mines Inc.
CDC-2198916	13-Jan-10	12-Jan-12	49.25	Schefferville Mines Inc.
CDC-2198917	13-Jan-10	12-Jan-12	49.24	Schefferville Mines Inc.
CDC-2198918	13-Jan-10	12-Jan-12	49.24	Schefferville Mines Inc.
CDC-2198919	13-Jan-10	12-Jan-12	49.24	Schefferville Mines Inc.
CDC-2214980	16-Apr-10	15-Apr-12	49.01	Schefferville Mines Inc.
CDC-2214981	16-Apr-10	15-Apr-12	49.01	Schefferville Mines Inc.
CDC-2214982	16-Apr-10	15-Apr-12	49.01	Schefferville Mines Inc.
CDC-2214983	16-Apr-10	15-Apr-12	49.01	Schefferville Mines Inc.

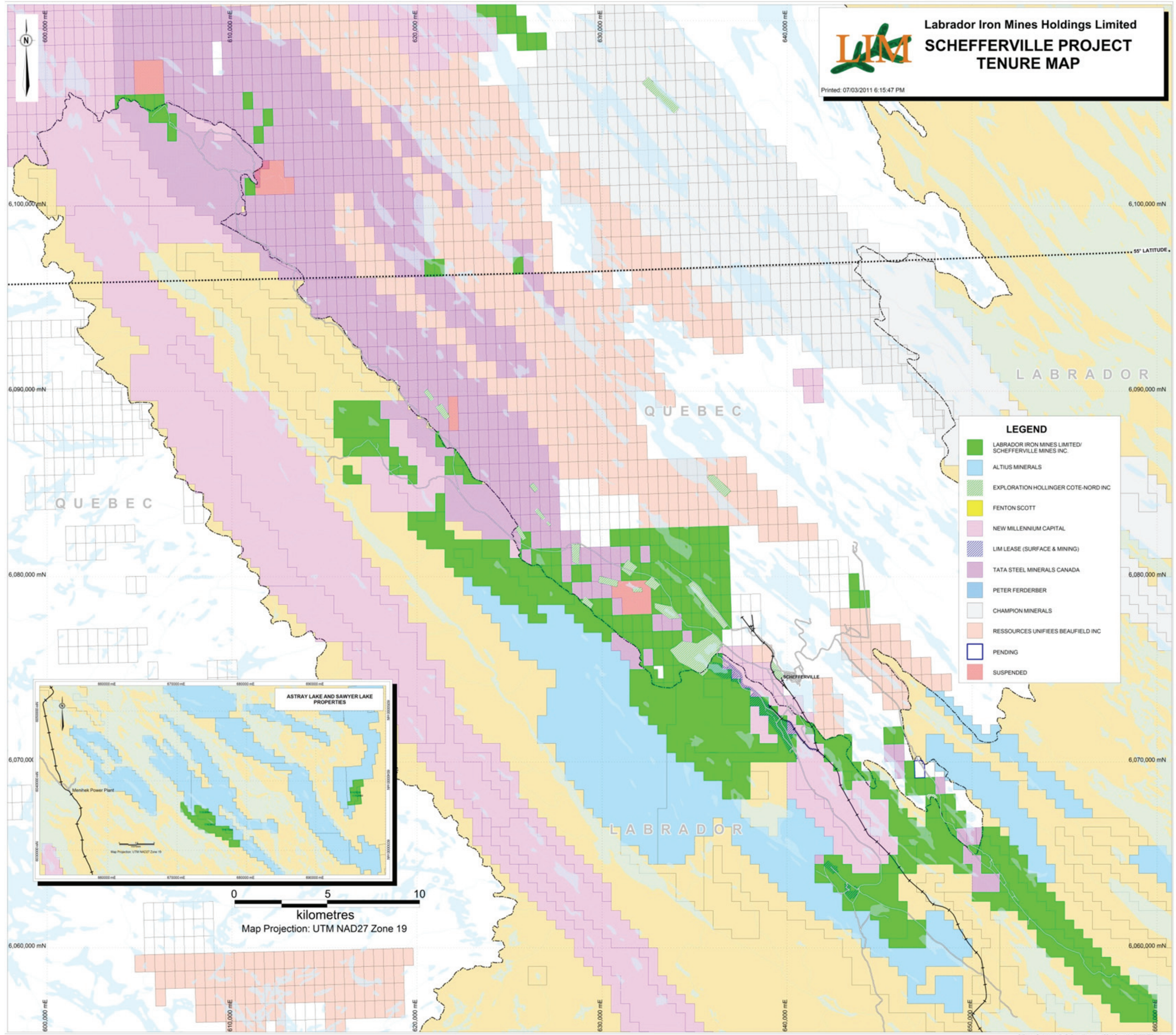
Title No.	Date of Registration	Expiry Date	Area (Has)	Titleholder
CDC-2214984	16-Apr-10	15-Apr-12	49.01	Schefferville Mines Inc.
CDC-2214985	16-Apr-10	15-Apr-12	49.01	Schefferville Mines Inc.
CDC-2214986	16-Apr-10	15-Apr-12	49.00	Schefferville Mines Inc.
CDC-2214987	16-Apr-10	15-Apr-12	49.00	Schefferville Mines Inc.
CDC-2214988	16-Apr-10	15-Apr-12	49.00	Schefferville Mines Inc.
CDC-2214989	16-Apr-10	15-Apr-12	49.00	Schefferville Mines Inc.
CDC-2214990	16-Apr-10	15-Apr-12	49.00	Schefferville Mines Inc.
CDC-2214991	16-Apr-10	15-Apr-12	49.00	Schefferville Mines Inc.
CDC-2214992	16-Apr-10	15-Apr-12	48.99	Schefferville Mines Inc.
CDC-2214993	16-Apr-10	15-Apr-12	48.99	Schefferville Mines Inc.
CDC-2214994	16-Apr-10	15-Apr-12	48.99	Schefferville Mines Inc.
CDC-2214995	16-Apr-10	15-Apr-12	48.99	Schefferville Mines Inc.
CDC-2214996	16-Apr-10	15-Apr-12	48.99	Schefferville Mines Inc.
CDC-2214997	16-Apr-10	15-Apr-12	48.98	Schefferville Mines Inc.
CDC-2214998	16-Apr-10	15-Apr-12	48.98	Schefferville Mines Inc.
CDC-2214999	16-Apr-10	15-Apr-12	48.98	Schefferville Mines Inc.
CDC-2215000	16-Apr-10	15-Apr-12	48.98	Schefferville Mines Inc.
CDC-2215001	16-Apr-10	15-Apr-12	48.98	Schefferville Mines Inc.
CDC-2215002	16-Apr-10	15-Apr-12	48.98	Schefferville Mines Inc.
CDC-2223062	28-Apr-10	27-Apr-12	49.69	Schefferville Mines Inc.
CDC-2223063	28-Apr-10	27-Apr-12	37.51	Schefferville Mines Inc.
CDC-2223064	28-Apr-10	27-Apr-12	49.68	Schefferville Mines Inc.
CDC-2223065	28-Apr-10	27-Apr-12	46.66	Schefferville Mines Inc.
CDC-2223066	28-Apr-10	27-Apr-12	49.67	Schefferville Mines Inc.
CDC-2223067	28-Apr-10	27-Apr-12	49.67	Schefferville Mines Inc.
CDC-2233265	11-May-10	10-May-12	11.63	Schefferville Mines Inc.
CDC-2233266	11-May-10	10-May-12	10.28	Schefferville Mines Inc.
CDC-2233267	11-May-10	10-May-12	48.76	Schefferville Mines Inc.
CDC-2233268	11-May-10	10-May-12	49.79	Schefferville Mines Inc.
CDC-2233269	11-May-10	10-May-12	37.6	Schefferville Mines Inc.
CDC-2233270	11-May-10	10-May-12	49.78	Schefferville Mines Inc.
CDC-2259638	9-Nov-10	8-Nov-12	49.77	Schefferville Mines Inc.
		TOTAL	**10,730.32**	

Table 4-4
Mining Lease Held by Hollinger North Shore Inc. in the Schefferville Area - Quebec

Title	Map Sheet	Issued	Expiry	Area (Has)
1	23J15	03-Feb-90	02-Feb-13	65
2	23J10	03-Feb-90	02-Feb-13	12
4	23O03	03-Feb-90	02-Feb-13	780
5	23O02	03-Feb-90	02-Feb-13	96
6	23J15	03-Feb-90	02-Feb-13	56
7	23O06	03-Feb-90	02-Feb-13	129
39	23O05	03-Feb-90	02-Feb-13	118
3A	23J15	03-Feb-91	02-Feb-13	35
3B	23J15	03-Feb-91	02-Feb-13	338
3C	23J15	03-Feb-91	02-Feb-13	119
3D	23J15	03-Feb-91	02-Feb-13	32
3E	23J15	03-Feb-91	02-Feb-13	12
3F	23J15	03-Feb-91	02-Feb-13	45
3G	23J15	03-Feb-91	02-Feb-13	37
3H	23J15	03-Feb-91	02-Feb-13	22
3J	23J15	03-Feb-91	02-Feb-13	47
3K	23J14	03-Feb-91	02-Feb-13	18
3L	23J14	03-Feb-91	02-Feb-13	5
3M	23J14	03-Feb-91	02-Feb-13	15
3N	23J14	03-Feb-91	02-Feb-13	11
3P	23J14	03-Feb-91	02-Feb-13	29
3Q	23J14	03-Feb-91	02-Feb-13	15
		TOTAL	**22**	**2,036**

Figure 4-1
Project Location Map

Figure 4-2Map of LIM Mining Licenses and SMI Titles



The properties considered in LIM's first phase are:

James Deposit

The James deposit is located in the NE portion of the license 017359M; which covers an area of 7 km². The license is held by Labrador Iron Mines Limited (Table 4-5) and entirely covers the James deposit. The status of this license is in good standing.

Table 4-5 James deposit Mineral License

License No.	Holder	Issued	Claims	Extension (km²)	Comments
017359M	Labrador Iron Mines Limited	Apr 12, 2004	28	7.00	This license replaces 016288M and 016571M as of Feb. 3, 2010

Redmond Deposits

The Redmond property is located between 8 and 10km south of the James deposit and is covered by the mineral license 017360M which covers an area of 11.25 km². It is held by Labrador Iron Mines Limited (Table 4-6). The deposits considered by LIM for exploitation are Redmond 2B and Redmond 5 and both are covered by the license 017360M. The status of this license is in good standing.

Table 4-6 Redmond deposits Mineral License

License No.	Holder	Issued	Claims	Extension (km²)	Comments
017360M	Labrador Iron Mines Limited	Aug 25, 2005	45	11.25	This license replaces 016291M and 016573M as of Feb. 3, 2010

Gill Deposit

The Gill deposit is located 2kms north of James deposit and 1.5kms north of Silver Yards processing plant. It is covered by 3 mineral rights licenses comprising 6.25 km² held by Labrador Iron Mines Limited (Table 4-7). The status of these licenses is in good standing.

Table 4-7 Gill deposit Mineral Licenses

License No.	Holder	Issued	Claims	Extension (km²)	Comments
016293M	Labrador Iron Mines Limited	14-Dec-06	20	5.00	This license replaces 012889M,014496M,014511M
016568M	Labrador Iron Mines Limited	16-Dec-04	4	1.00	This license replaces 010479M. Transferred from NML
016569M	Labrador Iron Mines Limited	16-Dec-04	1	0.25	This license replaces 010479M. Transferred from NML
		TOTAL	**25**	**6.25**	

Ruth Lake 8 Deposit

The Ruth Lake 8 property is located 2.5 km west of James deposit and 2 km west of Silver Yards processing plant. It is entirely covered by the license 016293M (Table 4-8). This mineral license also partially covers the Gill deposit. The status of this license is in good standing.

Table4-8 Ruth Lake 8 Property Mineral License

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
016293M	Labrador Iron Mines Limited	14-Dec-06	20	5.00	This license replaces 012889M,014496M,014511M

Knob Lake 1 Deposit

The Knob Lake 1 deposit is located 1.5 km east of James deposit and 2.3 km south of Silver Yards processing plant. It is covered by two mineral licenses with a total area of 0.75 km held by Labrador Iron Mines Limited (Table 4-9). The ore body is entirely covered by mineral licenses 011074 and 016567M which are in good standing.

Table 4-9 Knob Lake 1 deposit Mineral Licenses

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
011074M	Labrador Iron Mines Limited	1-Jun-05	2	0.50	
016567M	Labrador Iron Mines Limited	16-Dec-04	1	0.25	This license replaces 010479M. Transferred from NML
		TOTAL	**3**	**0.75**	

DENAULT 1 DEPOSIT

The Denault deposit occurs along a low hill immediately to the east of Denault Lake and is located 6 km northwest of Schefferville, Quebec. A year round gravel road from Schefferville crosses the property. The Denault property is covered by mining lease 3C held by Hollinger and by title claims 2016790, 2168483, 2168485, 2168494 and 2168496 held by SMI.

Table 4-10 Denault 1 deposit Mining Lease

Mine Lease No.	Holder	Issued	Claims	Area (Has)	Comments
13C	Hollinger North Shore Exploration	03-Feb-91	1	119	Held under operating license and mining claims

Houston Deposit – Expected to become LIM Second Stage

The Houston deposit is located approximately 14 km southeast of the James deposit.

Table 4-11 Houston deposit Mineral Licenses

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
016286M	Labrador Iron Mines Limited	12-Apr-04	22	5.5	This license replaces 010832M,010833M,010834M,010835M,010040M,010041M,010042M,010043M
016575M	Labrador Iron Mines Limited	10-Jan-05	1	0.25	
016576M	Labrador Iron Mines Limited	10-Jan-05	3	0.75	
016577M	Labrador Iron Mines Limited	10-Jan-05	1	0.25	
		TOTAL	**3**	**0.75**	

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, PHYSIOGRAPHY (ITEM 7)

5.1 ACCESSIBILITY

The LIMH 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 100 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.

The Stage One properties, subject of this technical report, are located in Labrador and Quebec within 30 km from the town of Schefferville, Quebec. These properties are accessible by existing seasonal gravel road network from Schefferville.

The beneficiation plant is located in Silver Yards, close to the Gill and James deposits and all the roads and crossings have been upgraded to be suitable for large plant and equipment and are kept in condition by the LIM fleet of contract road maintenance equipment.

The Redmond deposits are located in Labrador approximately 12 km south-southwest of the town of Schefferville and can be reached by existing high quality built ballast and topped roads.

The Ruth Lake 8 deposit is accessible via an original IOC rail connection that can be now driven as the rail tracks have been removed. A direct road of approximately 4km is to be built by the heavy plant and road building equipment that is at site and currently involved in active mining operations.

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.

Denault, Star Creek No.1, and Lance Ridge, are located in Quebec approximately 5 to 8 km north-northwest of the town of Schefferville and are accessible by existing gravel roads. Other properties include Christine, Fleming 7, Ferriman 3 and 5 and Timmins 5, are accessible by existing gravel road, and are located 11 km northwest from the town of Schefferville. The Christine deposit is partly in Labrador and partly in Quebec.

Malcolm 1 is located in Quebec approximately 10 km southeast of Schefferville can be reached by existing gravel roads.

The North Central properties in Quebec include Fleming 9 and Barney, and 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 IOC operations. The Sawyer and Astray properties are located about 50-60 km south east of Schefferville and do not have road access but are accessible by helicopter.

The Squaw Woollett 1 property is located approximately 11 km north-northwest of the town of Schefferville and is accessible by existing gravel roads. The Trough 1 property is approximately 21 km north-northwest of Schefferville and is currently not accessible by road but can be reached by helicopter.

The Sunny 2 & 3 deposits are located approximately 43 km to the northwest of the town of Schefferville and can be reached by existing gravel roads developed during the former IOC operations. Partington and Hoylet Lake, located approximately 55 km and 40 km, respectively, northwest of Schefferville, can also be reached by existing gravel roads developed during the former IOC operations. The Sawyer and Astray Properties are located about 50 – 60 km south east of Schefferville and do not have road access but are accessible by helicopter.

The Eclipse, Schmoo Lake, Murdoch Lake North and Murdoch Lake South properties, (North Zone) located respectively approximately 85 km northwest, 81 km northwest, 95 km north, and 60 km north of the town of Schefferville, do not have road access but are accessible by helicopter.

5.2 CLIMATE

The Schefferville area and vicinity have a sub-arctic continental taiga climate and can have 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. Certain parts of LIM's proposed operation involving washing the ore are restricted during the months of November through April. Mining of ore including the stripping of waste rock operates on a 12 month basis with equipment stoppage limited to a small number of extremely cold days.

5.3 LOCAL RESOURCES

The economy of Schefferville is, since the closure of the mining operations of IOC, based on hunting and fishing, tourism and public service administration. Several fishing and hunting camp operators are based in Schefferville.

Schefferville, an incorporated municipality in Quebec, remains largely intact after the closing of the iron mines of IOC in 1982. Many of the houses and original public buildings, including a recreation centre, hospital, and churches were demolished after IOC left. In the last few years, a number of new buildings and houses have been built including medical clinics and churches. The present population is about 1,250 permanent residents including the Matimekush (Innu) and Kawawachikamak (Naskapi) reserves. Kawawachikamak, 20 km north of Schefferville, is a modern community with its own school, medical clinic and recreational complex.

The majority of the workforce that are currently engaged in the mining operation in Labrador are from Labrador or Newfoundland. The operation of the mine and beneficiation plant is contracted to a Labrador company Innu Municipal Inc. A number of employees from the Quebec communities close to the project site are also trained and engaged in many support roles.

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 Lake 8 and Knob Lake 1 deposits are within the same area, while Houston is 7 km east of Redmond and 15 km southeast of James and Denault is about 5 km north west of James.

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 large local convenient store (Hudson Bay), 2 hotels, numerous outfitters accommodations are also present in Schefferville.

A modern airport includes a 2,000 m runway and navigational aids for large jet aircraft. A daily air service by a twin engine 9-seat Kingair is provided to and from Sept-Îles via Wabush and a larger Dash 8 service three times per week to Montreal via Quebec City.

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

5.4.1 *RAILROAD*

The Quebec North Shore & Labrador Railway ("QNS&L") was established by IOC 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, and QNS&L maintained a passenger and freight service between Sept-Îles and Schefferville up to 2005. In 2005, IOC sold the 208 km section of the railway between Emeril Yard at Emeril Junction and Schefferville (the Menihek Division) to Tshiuetin Rail Transportation Inc. (TSH), a company owned by three Quebec First Nations. TSH operates a passenger and light freight traffic between Sept-Îles and Schefferville three times a week.

Five railway companies operate in the area; TSH which runs passengers and freight from Schefferville to Emeril Junction; QNS&L hauling iron concentrates and pellets from Labrador City/Wabush area via Ross Bay Junction to Sept-Îles; Bloom Lake Railway hauling ore from the CML mine to Wabush; and Arnault Railways hauling iron ore for Wabush Mines ("Wabush") and Consolidated Thompson Limited ("CLM") between Arnault Junction and Pointe Noire. CRC hauls iron concentrates from Fermont area to Port-Cartier for Quebec Cartier Mining Company. The latter railway is not connected to TSH, QNS&L, Bloom Lake or Arnault.

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 700 m above sea level. The terrain is generally gently rolling to flat, sloping north-westerly, with a total relative relief of approximately 50 to 100 m. In the main mining district, the topography consists of a series of NW-SE trending ridges. 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. HISTORY (ITEM 8)

The Quebec-Labrador iron range has a tradition of mining since the early 1950s 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 IOC produced in excess of 150 million tons of lump and sinter fine ores over the period 1954-1982 (IOC Ore Reserves, January 1983). The properties comprising LIM's Schefferville area project were part of the original IOC Schefferville operations and formed part of the 250 million tons of reserves and resources identified by IOC but were not part of IOC's producing properties.

The Labrador Trough, which forms the central part of the Quebec-Labrador Peninsula, is a remote region which remained largely unexplored until the late 1930s and early 1940s 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.

In 1954, IOC 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 Projects were part of the original IOC Schefferville area operations and the reserves and resources identified at the James, Houston, Sawyer, Astray and Howse deposits were reviewed and in some instances under development by IOC.

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, IOC 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, IOC decided to close the Schefferville area mines in 1982.

With the exception of the Gill deposit and pre-stripping work carried out on the James, Redmond 2B and Ruth Lake 8 deposits, the iron deposits within the LIMH mineral licenses were not previously developed for production during the IOC period of ownership.

Hollinger, a subsidiary of Norcen Energy Ltd., was the underlying owner of the Quebec iron ore mining leases in Schefferville area. 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. The IOC historical iron ore resources not including James, Redmond 2B, Redmond 5, Houston and Denault 1 deposits contained within the properties totals 64.4 million tonnes with grades greater than 50% Fe (Table 6-2) and are not compliant with the standards prescribed by NI 43-101. They are predominantly based on estimates made by IOC in 1982 and published in their DSO Reserve Book published in 1983. IOC categorized their estimates as "reserves". The authors have adopted the principle (as in the 2007 SNC-Lavalin Technical Report) that these should be categorized at "resources" as defined by NI 43 -101.

These estimates were also 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.

Between September 2003 and March 2006, Fonteneau Resources and Energold began staking claims over the soft iron ores in the Labrador part of the Schefferville area. Recognizing a need to consolidate the mineral ownership, Energold entered into agreements with the various parties that have subsequently been assumed by LIM. LIM subsequently acquired additional properties in Labrador by staking. All of the properties comprising LIM's Schefferville area project were part of the original IOC Schefferville holdings and formed part of the 250 million tons of reserves and resources identified but not mined by IOC in the area.

The historic IOC 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 classifications 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 IOC 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 IOC for their production reports**.**

There is no reason to conclude that IOC utilized other than best industry practices. The historic resources from the James Property, Redmond, Houston and Denault properties 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 brought to compliance with NI 43 101 requirements with programs of verification as recommended in this report.

A summary of the historical resource estimates reported by IOC in their January 1983 statement is shown in Table 6-1 and Table 6.2. The resources are all in tonnes. It should be noted that in the IOC 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 IOC 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 IOC January 1983 statement.

Table 6-1 Summary of Historical IOC Mineral Resource Estimates in Labrador

	Iron Resources			**Manganese Resources**			
Property	**Tonnes (x1000)**	**Fe%**	**SiO_2%**	**Tonnes (x1000)**	**Fe%**	**SiO_2%**	**Mn%**
Astray Lake	7,818	65.6	3.9				
Howse	28,228	58	5				
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	9.2	9.2
Green Lake	366	51.4	7.8				
Kivivic 1	6,583	54	8.5				
Ruth Lake 8	410	53.3	9.6				
Wishart Mine	207	53.7	12.2				
Wishart 2	554	52	12.9				
Total	**64,423**	**58**	**7.1**	**661**	**42.7**	**7.1**	**8.8**

**Non-compliant with NI 43-101*

Table 6-2 Summary of Historical IOC Mineral Resource Estimates in Quebec

	Iron Resources			Manganese Resources			
Property	Tonnes (x 1000)	Fe%	SiO_2%	Tonnes (x 1000)	Fe%	SiO_2%	Mn%
Barney 1	6,281	53.9	7.7	62	49.1	3.5	5
Eclipse	37,159	56.3	5.2	2,068	49.9	4.5	4.1
Fleming 6	802	48.3	8.8	23	42.1	7	7.3
Fleming 7S	1,946	56	7.6				
Fleming 9	417	54.1	8.9				
Lance Ridge	1,370	53.9	8.5	281	41.5	5.7	10.3
Malcom 1	2,879	56.2	6.1	422	51.4	4.9	5.8
Partington 2	3,377	55.2	9.2				
Squaw-Wollett 1	2,303	54.9	5.8				
Star Creek 1	1,492	51	7.3	1,972	45.9	6.2	6.5
Star Creek 3	63	55.2	8.4				
Sunny 3	460	57.8	6.7				
Trough 1	1,969	48.8	8.5	230	43.8	6.5	5.8
Total:	**60,518**	**55.4**	**6.1**	**5,058**	**47.7**	**5.4**	**5.6**

**Non-compliant with NI 43-101*

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

7. GEOLOGICAL SETTING (ITEM 9)

7.1 REGIONAL GEOLOGY

The following summarizes the general geological settings of the various properties making up 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.

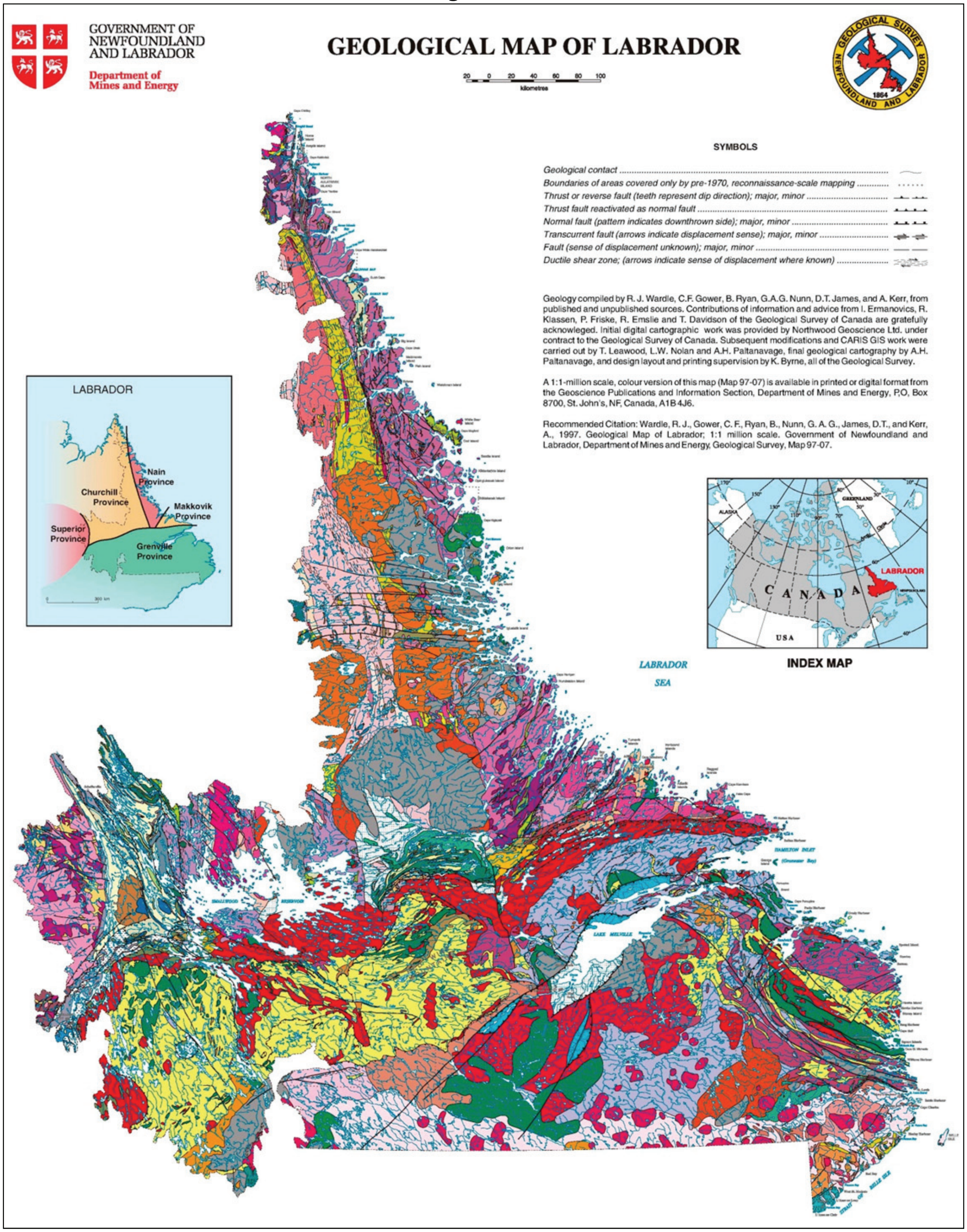
The southern part of the Trough is crossed by the Grenville Front. Trough rocks in the Grenville Province to the south are highly metamorphosed and complexly folded. Iron deposits in the Grenville part of the Labrador Trough include Lac Jeannine, Fire Lake, Mounts Wright and Reed and the Luce, Humphrey 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 IOC 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 and Quebec in Figure 7-2.

Figure 7-1



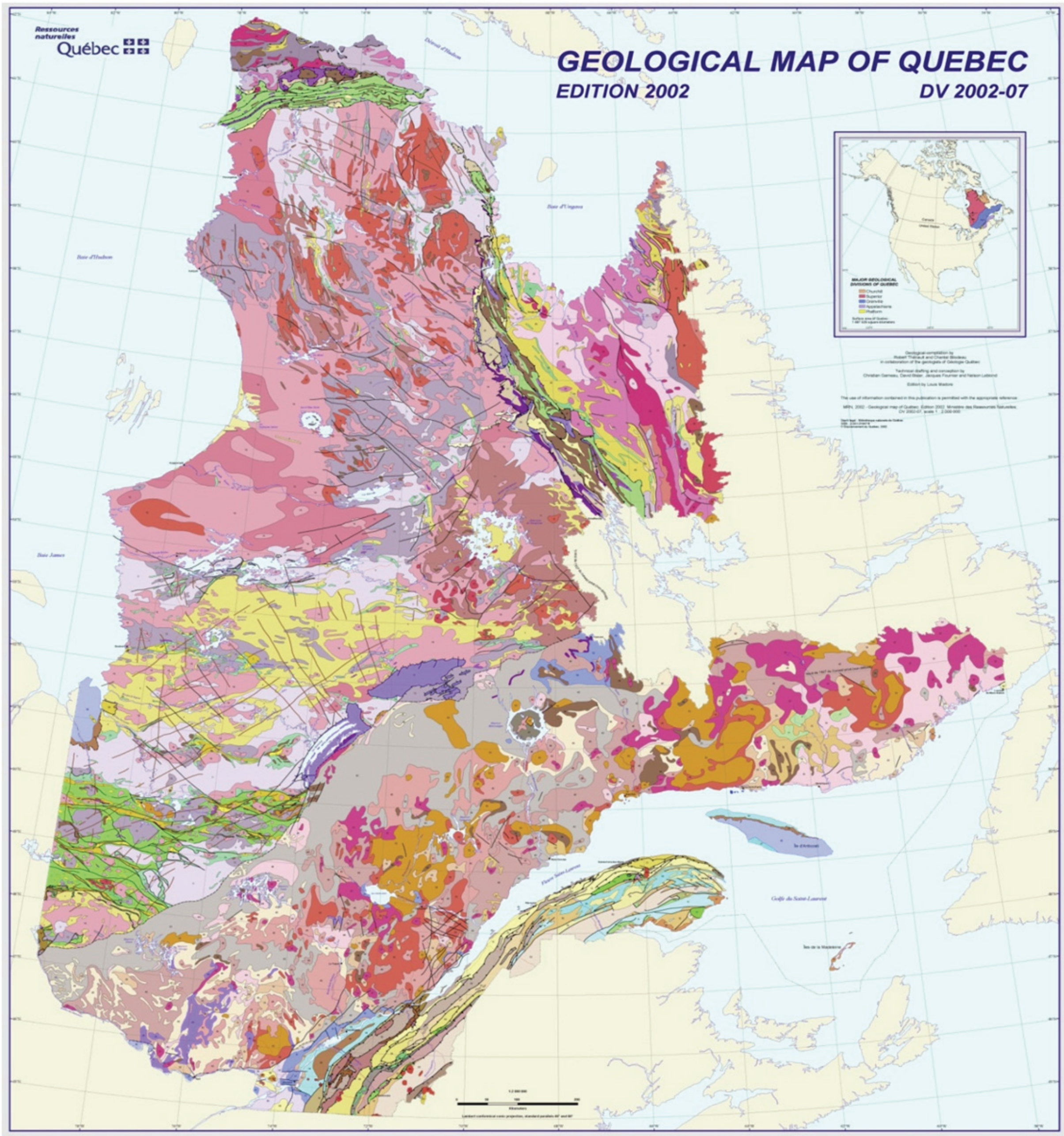

Ressources naturelles
Québec
GEOLOGICAL MAP OF QUEBEC
EDITION 2002
DV 2002-07

Figure 7-2

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 Lake 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

7.3.1 *ATTIKAMAGEN FORMATION*

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 (2-3 mm), fine grained (0.02 to 0.05 mm), 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.

7.3.2 *DENAULT FORMATION*

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.

7.3.3 *Fleming Formation*

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.

7.3.4 *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.

7.3.5 *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.

7.3.6 *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.

7.3.7 *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. Deposit Types (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 projects are further subdivided into:

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

8.1.1 *Central Zone*

8.1.1.1 *James Deposit*

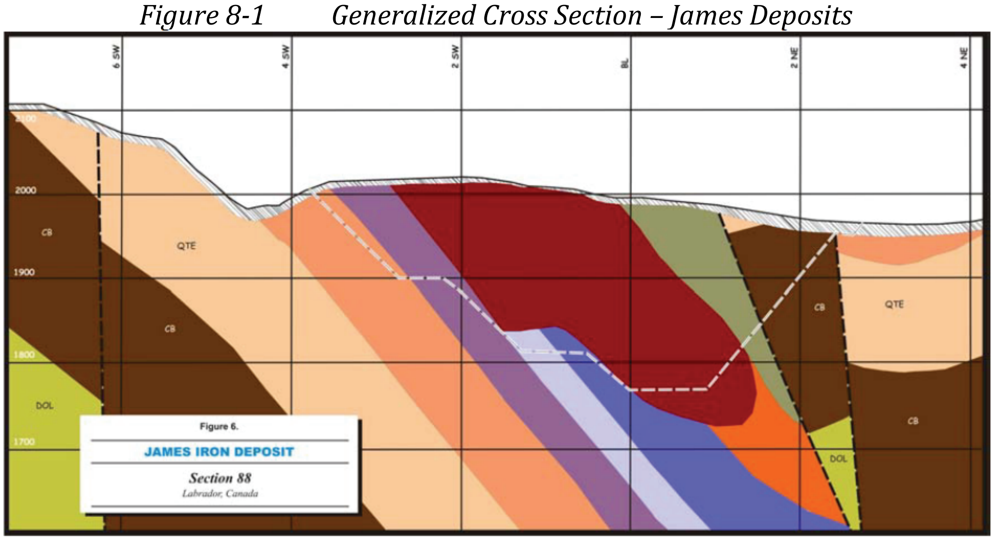
The James deposit is accessible by existing gravel roads and is located in Labrador approximately 3 km southwest of the town of Schefferville. The James deposit is a northeast dipping elongated iron enrichment deposit striking 330° along its main axis which appears to be structurally and stratigraphically 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.

Figure 8-1 Generalized Cross Section – James Deposits



Source: Labrador Iron Mines Limited

8.1.1.2 *Fleming 9*

The Fleming 9 deposit is located approximately 15 northwest of the town of Schefferville and can be reached by existing gravel roads. The centre part of the deposit is 2 km to the north of Iron Lake. The deposit was discovered in 1949 by IOC. The deposit is composed of iron bearing hematite ore, which represents the Sokoman Iron Formation. The mineralization is comformable with the stratigraphy.

8.1.1.3 *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 Yards 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.

8.1.1.4 *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 Yards/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 IOC during their work in the area.

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

8.1.1.5 *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 Yards area. The Wishart 1 and 2 deposits were mined by IOC 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% SiO_2. Wishart 2 resources are given as 554 K tonnes grading 52.02% Fe and 12.93% SiO_2. The Wishart 2 property contains a Mn resource of 9 K tonnes grading 46.37% Fe, 4.93% SiO_2 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.

8.1.1.6 *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 1 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 Lake 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).

8.1.1.7 *Denault*

The Denault property is accessible by existing gravel roads and is located in Quebec approximately 5 to 8 km north-northwest of the town of Schefferville. The property consists of three separate areas of Fe enrichment which are from north to south Denault 1, 2 and 3. The structure that crosses a low hillside is a rolling homocline. The ore type is predominantly yellow and is located primarily in the Ruth and silicate SCIF (carbonate iron formation) members of the LIF (lower iron formation). Overburden in the area is less than 5 m thick.

8.1.1.8 *Star Creek 1*

The Star Creek 1 deposit is accessible by existing gravel roads and is located in Quebec approximately 5 to 8 km north-northwest of the town of Schefferville. The deposit is located 2 km to the west of the Denault showing. The mineralization occurs in fault blocks within the LIF and Ruth Formation and is a mix of the red-yellow and blue types. The Star Creek 1 Deposit was partially mined out by IOC however there is still an iron and manganese resource in place. Recent work by a previous claim holder suggests that stockpiles immediately to the east of the open pit may contain further manganese resources.

8.1.1.9 *Lance Ridge*

The Lance Ridge deposit is accessible by existing gravel roads and is located in Quebec approximately 5 to 8 km north-northwest of the town of Schefferville. This property lies 1.5 km northwest from the Star Creek property. It is a combined iron/manganese resource. Lance Ridge 1 is an enriched iron deposit that contains several zones of manganese mineralization. IOC trenched, sampled and drilled the deposit in 1970. The area of enrichment is generally covered by 3 m to 7 m of glacial till and does not outcrop. IOC outlined an area of high manganese by trench sampling. Their analyses ranged from 30% to 31% Mn.

8.1.1.10 *Squaw Woollett 1*

The Squaw Woollett 1 property, located within the province of Quebec and approximately 11 km north-northwest of the town of Schefferville is accessible by existing gravel roads. This resource was delineated by IOC. The mineralization lies along the south east shore of Lake Vacher on gently sloping ground, overburden in the area is generally 2 m to 5 m thick. The structure is a northeast dipping homocline. The mineralization is a mix of the red, yellow and blue ore types.

8.1.2 *South Central Zone*

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 IOC 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 IOC stripped the overburden from their proposed open pit prior to their closing of the mines in 1982. There is historic IOC 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.

8.1.2.2 *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.

8.1.2.3 *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.

8.1.2.4 *Houston*

The Houston property is located approximately 20 km southeast of Schefferville and can be reached by existing gravel roads. The Houston project area is composed of what appear to be at least three separate areas of iron enrichment with a continuously mineralized zone of over 3 km in strike length and which remains open to the south. These three areas of enrichment are referred to as the Houston 1, Houston 2 and Houston 3 deposits. Houston 3 is currently less well explored and there appears to be significant additional DSO potential to the south of Houston 3 which requires additional drilling.

The Houston DSO iron deposits are stratigraphically and structurally controlled, and consist of hard and friable banded, blue and red hematite that locally becomes massive. Airborne magnetometer survey data available from the Geoscience Data Repository of Natural Resources Canada suggests that the iron ore is concentrated along the western flank (gradient) of a modest to strong magnetic feature, which trends approximately 330°. The Houston 1 and Houston 2S deposits are not coincident with the strongest magnetic features, due to the poor magnetic susceptibility of this type of mineralization. IOC drilled and trenched the Houston deposit and prepared reserve and resource calculations which were contained in their Statement of Reserves at December 31, 1982.

LIM carried out drilling during the 2006, 2008, 2009 and 2010 programs which indicated that the majority of the potentially economic iron 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 previously tested by IOC when mining operations in the area ended. At the present time there remains potential for additional resources to be developed at deeper levels in both the Houston 1 and 2 deposits (down dip).

The Houston 3 deposit appears to be more vertical in nature and drill holes testing the eastern margin of the known deposit have not intercepted any eastward extensions. However, this deposit has yet to be tested to its maximum vertical depth or for at least an additional 2 km of strike to the south.

Menihek Slate was encountered in drill chips in hole 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 IOC exploration indicate the presence of a reverse fault striking NW through the Houston 1 and 2 deposits.

8.1.2.5 *Malcolm 1*

The Malcolm 1 is located approximately 10 km southeast of Schefferville and can be reached by existing gravel roads. The center of the deposit localizes the refuge of Lake Malcolm. IOC discovered the deposit in 1950. The deposit contains iron in the form of hematite and the mineralization is located within the Sokoman Iron Formation along with slaty iron formation of the Ruth Formation. The deposit is oriented southwest and has an inclination of 60 degrees.

8.1.3 *North Central Zone*

8.1.3.1 *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 IOC operations. This iron occurrence was discovered in 1979 and was explored during the final days of IOC operations in the area when IOC 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 IOC who reported about 110 reverse circulation (RC) drill holes. Details of analytical results and geology of Howse deposit is the subject of ongoing compilation as of the date of this report. As of December 2009, 25 of the IOC drill hole logs with assays have been reviewed. In addition to the IOC 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.

8.1.3.2 *Barney 1*

The Barney 1 property is located approximately 25 km northwest of the town of Schefferville and can be reached by existing gravel roads developed during the former IOC operations. The Barney 1 deposit is located 3.5 km to the NE from Howse on the Quebec side of the provincial boundary. Geologically described as a complex syncline it is exposed in a low hillside. Overburden thickness varies between 2 m and 5 m. The ore type in the Barney area is greater than 75% blue ore.

8.1.4 *South Zone*

8.1.4.1 *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.

8.1.4.2 *Sawyer Lake*

The Sawyer Lake deposit, located 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 1 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.

8.1.5 *North Zone*

8.1.5.1 *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).

8.1.5.2 *Trough 1*

The Trough 1 property, also located within Quebec, is approximately 21 km north-northwest of Schefferville and is currently not accessible by road but can only be reached by helicopter. This property is located on a gently sloping hillside with very little overburden. Mineralization is within a syncline and is reported to be predominantly yellow ore within the SCIF.

8.1.5.3 *Partington*

The Partington deposit is located approximately 55 km northwest of Schefferville and can be reached by existing gravel roads developed during the former IOC operations. This property occupies gently sloping ground to the southeast of Partington Lake. Overburden ranges from 2 m to 5 m thick. The structure is described as a distorted syncline. The mineralization is reported to be predominantly blue type occurring in the MIF.

8.1.5.4 *Eclipse*

The Eclipse deposit is located approximately 85 km northwest of Schefferville and has no road access but is only accessible by helicopter. Eclipse is the second largest occurrence of iron ore in the Schefferville mining district. It is exceeded in size by only the Goodwood occurrence. The mineralization occurs in a northeast dipping faulted homocline and is composed of a mix of the red, yellow and blue types. Lying under a steep hillside on the east side of Sunspot Lake the overburden varies from 2 m to 5 m thick.

8.1.6 *Other Deposits*

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

8.1.6.1 *Fleming*

The Fleming 3 property was mined by IOC and SMI is interested in the manganese resources contained in stockpiles adjacent to the old open pits.

The Fleming 7 deposit is accessible by existing gravel road and is located approximately 10 km to 15 km from northwest of the town of Schefferville. Fleming 7 is located at the height of land that marks the Labrador-Quebec provincial border. This claim covers the southern extension of the Fleming 7 property from Labrador into Quebec

8.1.6.2 *Snow Lake*

The Snow Lake deposit is located 11 km northwest of the town of Schefferville, 2 km to the east of the Timmins area. This property is shown on IOC maps as an iron resource. At the moment, LIMH does not possess any description of the occurrence or historic resource volumes.

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 *CENTRAL ZONE*

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 Yards 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.

8.2.1.2 *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.

8.2.1.3 *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.

8.2.1.4 *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 m2 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.

8.2.1.5 *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.

8.2.1.6 *Avison*

The Avison occurrence covers an area of 2000 m2 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.

8.2.1.7 *Wishart 2*

The Wishart 1 and Wishart 2 area lies 4 km to the southwest of the James Mine/Silver Yards area. The Wishart 1 and 2 deposits were mined by IOC 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.

8.2.1.8 *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 IOC resource maps of the Schefferville area and LIM is in the early phases of an exploration program to access resources in the area.

8.2.1.9 *Timmins Area*

The Timmins area is accessible by existing gravel road, and it is located 11 km 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 IOC 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 IOC Resource Inventory. There is very little data available describing the deposits of these properties.

The Timmins 6 property was mined by IOC 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.

8.2.1.10 *Ferriman 3 and Ferriman 5*

These claims are located approximately 10-15 km northwest of Schefferville. These claims cover the area of the mined out Gagnon A and Gagnon B open pits. Exploration on these claims will focus on manganese resources in stockpiles around the open pits.

8.2.1.11 *French Mine*

The French Mine is located 11 km northwest of the town of Schefferville, 5 km north of the James Mine area. This manganese showing is adjacent to the former producing French Mine. Manganese mineralization is exposed in an area 6 m by 16 m. The mineralization is hosted by the Ruth Shale, and saddles a northwest trending fault zone. The fault appears to occupy the contact between the Ruth Shale and the Wishart quartzite.

8.2.1.12 *Christine*

The Christine manganese occurrence occupies this area that is the Quebec side of the Christine 1B and 1C properties in Labrador. It occurs in a small, southeast striking valley at the base of a steep northeast slope. Iron formation outcrops at the head (NW end) of the valley over an area of 30 m x 100 m. Veins and pods of manganese occur in a 1 m to 5 m wide band across the center of the outcrop area.

8.2.2 SOUTH-CENTRAL ZONE

8.2.2.1 *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 IOC 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.

8.2.3 *Other Manganese Deposits*

This group covers a number of properties acquired in 2009. All the properties are in Quebec, located to the north of Schefferville, and focus primarily on manganese resources. While some have been explored or developed in the past, SMI is only starting to carry out work here. .

8.2.3.1 *Sunny 2 and Sunny 3*

These two deposits are located 43 km from the town of Schefferville. Located in the Kivivic area these claims target potential manganese resources around known iron deposits as delineated by IOCC. No work has been carried out by SMI in these areas as of the time of writing this report.

8.2.3.2 *Hoylet Lake*

These claims are located 40 km northwest of Schefferville and 18 km east of Kivivic. These claims have recently been acquired by SMI as manganese targets and no work has been carried out to this date.

8.2.3.3 *Murdock Lake North and Murdock Lake South*

These claims are located 90 and 60 km northeast of Schefferville respectively, and have also recently been acquired by SMI as manganese exploration targets. No evaluation has been carried out to date.

8.2.3.4 *Schmoo Lake*

This prospect is located approximately 81 km northwest of Schefferville. The prospect is a high grade +50% manganese occurrence. IOCC carried out sampling and pitting on the prospect in the mid-1950s. The mineralization occurs within a silicate carbonate iron formation. Cherty iron formation occurs adjacent to the surface mineralization. The mineralization outcrops for a strike length of 45 m and is 10 m thick at its widest part.

9. MINERALIZATION (ITEM 11)

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 various deposits.

Only the direct shipping ore is considered beneficiable to produce lump and sinter feed and will be part of the resources for LIM's projects. The direct shipping ore was classified by IOC 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_Al_2O_3 %**
NB (non-bessemer)	Blue, Red, Yellow	>=50.0	<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
HiSiO_2 (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 Aluminum)	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 ores are 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.

During the IOC operations, the yellow ores, the low grade iron ores (TRX) and high silica ores ($HiSiO_2$) 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 saleable products. Some initial testwork has concluded favourable results.

Direct shipping ores and lean ores mined in the Schefferville area during the period 1954-1982 amounted to some 150 million tonnes. Based on the original ore definition of IOC (+50% Fe <18% SiO_2 dry basis), approximately 250 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.

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, aluminum, 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 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;
- 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. EXPLORATION (ITEM 12)

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 IOC 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 IOC 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. 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. 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 1). Surface rock sampling in the James deposit was intended for confirmation purposes. Results obtained were as expected being similar to those reported by IOC.

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 Kawawachikamach. 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, 2009 AND 2010 EXPLORATION

LIM continued its exploration program on the properties in the Schefferville area during 2008, 2009 and 2010.

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 IOC 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 IOC 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 1 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 1 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 Yards 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 Yards.

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 IOC 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 IOC, 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.

10.3.3 *2010 Program*

The work carried out during the 2010 exploration program included reverse circulation drilling in the Houston area totalled 1804 metres in 26 drill holes. A trenching program on the Ruth Lake 8 deposit totalled 1452 metres in 15 trenches. In addition, 68 test pits were dug and sampled over a low grade stockpile in the Redmond 2 area.

Drilling on the Houston claims focused on three areas. The first was the ground between Houston 1 and Houston 2. The goal of this work was to link these two deposits together. Insufficient work had been done in the past to accomplish this. The second area was the north end of Houston 2. In this area confirmation drilling was carried out in order to test the size and location of the iron ore deposit as modelled by IOC and more recent LIM drilling. The third area covered was along the eastern margin of the Houston 1 deposit. Work here was intended to test the down dip extensions of the ore body.

The 2010 trenching program was focused on the Ruth Lake 8 deposit. This area had been stripped of overburden in preparation for mining during the final days of IOC operations in Schefferville. A total of 15 trenches (1452m) were excavated and 458 samples were collected. The purpose of this work was to outline the surface expression of the ore body. This data is to be used for planning the 2011 drill program in the area.

The LIM stockpile testing program began in 2008 and was continued during 2010. Recently acquired historic maps of the Redmond area indicated a stockpile of low grade iron ore near the Redmond 2 pit. A test pitting program was carried out using a small back hoe and 68 samples were collected. The results of this work will be used to plan 4 to 5 RC drill holes on the stockpile in 2011.

During 2010, SMI completed a 50 hole RC drill program, 946 samples were collected from the 2,726 metres of drilling. Of the 50 drill holes in the Denault area 26 were on the Denault 1 deposit. This drilling totalled 1,688m and yielded 588 samples.

10.3.3.1 *Airborne Geophysical Survey*

During the 2010 exploration season an airborne gravity and magnetic survey was flown over four claim blocks of LIM's Schefferville area properties. The company contracted to conduct the survey was Fugro Airborne Surveys Pty Ltd, Australia.

Four claim blocks were selected by LIM for the survey being centered on the Howse, Houston/Redmond, Astray and Sawyer Lake areas. A total of 473.6 line kms were surveyed over the Howse area, 851.8 kms over Houston/Redmond areas, 354.6 kms over Astray and 215.7 line kms over the Sawyer Lake area. In all 1895.7 line kms were flown for the gravity and magnetic surveys.

An interim interpretation and evaluation of the processed and plotted airborne gravity gradiometer and magnetic data acquired by Fugro on behalf of LIM over four blocks in the Schefferville area has confirmed the projected utility of the survey in detecting and outlining Fe deposits, although only some of the recessive hematitic DSO deposits were detected. Several targets will be tested in 2011 using RC and/or Diamond Drilling.

On the Houston Block, predicted by other surveys and computer modeling, the vertical gravity gradient (Gzz), computed from the measured tensor component Tij, successfully detected and delineated narrow taconite Fe formations, aided by their expression as ridges and hence proximity to the airborne gradiometer.

The Howse Block, near the northern limit of LIM's current exploration and development efforts, contains numerous defined and/or exploited high-grade hematitic Fe deposits in at least five separate belts, as well the potential for extensions and/or new deposits.

11. DRILLING (ITEM 13)

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 IOC 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 IOC 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, 2009 and 2010. 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 rigs 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.

The work carried out during the 2010 exploration program included reverse circulation drilling in the Houston area totalled 1,804 metres in 26 drill holes.

During 2010, SMI completed a 50 hole RC drill program, 946 samples were collected from the 2,726 metres of drilling.

Tables 11-1 to 11-4 show the various drilling programs the results of which were included in the LIM/SMI 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 1	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	1,587
Houston (1,2S,3)	RC	12	791
Astray Lake	RC	1	132
Knob Lake 1	RC	9	612
Howse	RC	2	103
Sawyer Lake	DD	10	552
Total		**79**	**4,647**

** TRX - re 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	3,114
Knob Lake 1	RC	5	271
Howse	RC	5	396
Total		**72**	**4,753**

Table 11-4
2010 - Drilling Program (RC Drilling NL & QC)

Property	Type	Holes	Length (m)
Houston (1,2S,3)	RC	26	1,805
Denault	RC	50	2,726
Total		**76**	**4,531**

12. Sampling Method and Approach (Item 14)

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.

During the time that IOC 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 IOC but verbal information from consultants, former IOC employees and others suggests that the procedures used by LIM were similar to IOC'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 (27/8 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 labelled 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 Preparation and Size Reduction (2008)

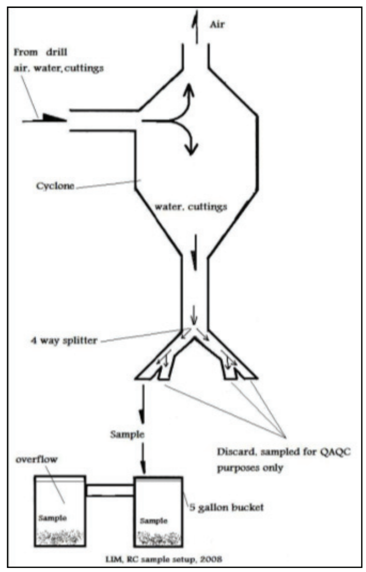
In order to reduce the size of the sample at the RC drill site to approximately 7.5 kg, the drill cuttings were split 4 ways after leaving the cyclone, during the 2008 drilling programme.

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 labelled 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 (2009-2010)

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.

In the 2010 RC drill program, a cyclone rotary splitter was mounted within the RC drill rig. When the sample flowed from the cyclone down into a rotary (wet) splitter, ½ of the material went to a discard exit, and the remaining material to be sampled was split into two equal portions of ¼ each. One of the portions was sent for assaying and one portion was kept as a reference sample. All RC samples for assaying were 3m in length. To facilitate sampling, the preferred drilling rate was set to 3m per 30 minutes.

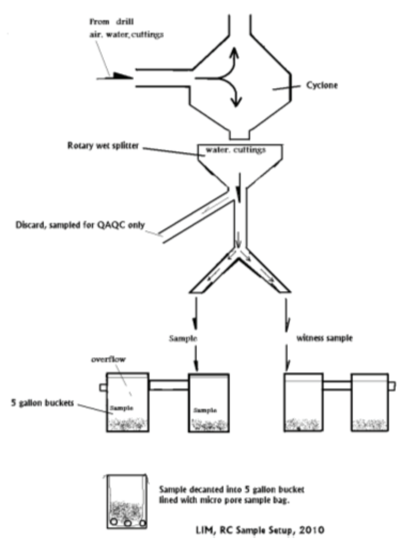
Upon arrival at the Sample Preparation Lab in Schefferville, all samples (core or RC) came under the care of LIM personnel. The modifications made to the previous year's use of the rotary splitter sampling system demonstrated efficiency, therefore LIM decided to continue its use in future programs with these modifications.

12.3 REVERSE CIRCULATION (RC)

The 2010 Drilling and Exploration Program used Cabo Ontario Limited from Kirkland Lake, Ontario to conduct the drilling. One Nodwell (track mounted) Acker RC drill and one skid mounted Acker RC drill rig were used. The rigs used a face sampling tricone bit where water was injected from the sides of the bit and water + 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. The sample flowed from the cyclone down into a rotary (wet) splitter where one-half of the material went to a discard exit and the remaining material to be sampled was split into two equal portions. One portion for assaying and one portion to be kept as a reference sample. All RC samples for assaying were 3m in length and to facilitate sampling the drill was limited to 3m advance every 30 minutes.

A small screen placed under one of the rotary splitter exits would collect material to be used for logging. Chips for logging were collected at 1 m intervals. Chips for were taken by the on-site Rig Geologist for drying and logging. Chip trays were labelled with hole ID and the interval in each compartment.

Figure 12-2. Reverse Circulation Drilling.
(used in the 2010 drilling Program)



The sample and reference sample were collected in 5 gallon pails placed at the exits from the rotary splitter. Each exit from the splitter had two buckets connected inline. Once the primary sample bucket filled it would overflow into the second pail. After a 3m sample was collected the pails were removed and allowed to stand for 20 to 30 minutes. This was to let the finer faction settle. The sample buckets were then decanted into another 5 gallon pail lined with a Sentry II Micro Pore sample bag. The material composing this sample bag allowed water to slowly drain thru while capturing very fine sample material. Holes in the side of this pail allowed water to flow out. The Micro Pore bag was then tied shut and sent to the LIM Schefferville warehouse. In order to dry the sample before shipping the sample would be placed in an oven for 3 hours at 200-250°F. The weight of the sample before and after drying was recorded.

12.4 2006, 2008, 2009 AND 2010 TRENCH SAMPLING

In 2006, 2008, 2009 and 2010, 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. SAMPLE PREPARATION, ANALYSIS AND SECURITY (ITEM15)

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.

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 IOC sampling procedures but verbal information from former employees and drillers lets them believe that the below described procedure is similar to that used by IOC 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 equalled 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.

13.1.3 *2010*

SMI sample preparation was carried out in the preparation lab by SMI personnel in a secure building in Schefferville. SMI had 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 IOC. Some later improvements were made to the procedures but overall they followed the same procedures as IOC put in place. These procedures were followed in the preparation laboratory of Schefferville, Quebec. Note that samples obtained from RC drills were wet. All samples were dried before 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.

13.3 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.

13.4 2010 Sample Preparation

All samples were delivered from the drill rig to a central shipping building at the end of every shift. If drilling was progressing quickly during a day shift a mid-day trip was made to the rigs by LIM staff to collect the samples. At this facility samples were placed on draining tables in numerical order. A sign in sheet was filled out by the sampler with the number of samples dropped off, sample reference numbers, time they were dropped off and the geologist on shift.

The RC samples would be documented and then allowed to air dry for 12 hours. The sample bags would then be weighed and placed in an oven to dry at 200-250°F for up to 4 hours. After drying the sample was removed from the oven and weighed. Both the sample and its "witness" would be dried and weighed same way.

The sample bags used for the 2010 RC drilling were Hubco Sentry II Strong Spun Polypropylene types which are heat resistant to 250°F. This allowed the sample to be dried without removing it from the bag.

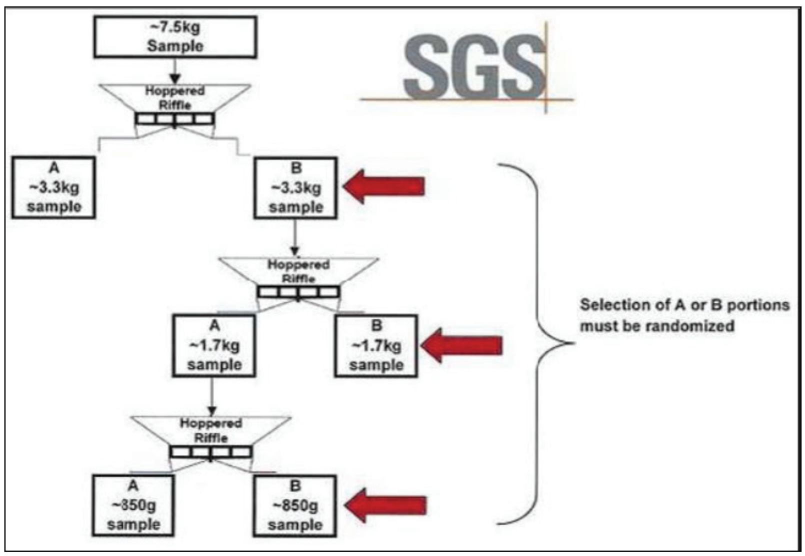
Once the sample was dry it would be packed in crates for shipping. The witness samples would be packed in crates and stored in a secure on site location.

All samples for the 2010 field season were shipped for analysis to Activation Laboratories in Ancaster, Ontario

13.5 SAMPLE SIZE REDUCTION

Sample reduction was done only in 2008 and 2009 and was designed by SGS-Geostat. Two sets of riffle splitters were used in regards of samples sizes. They were cleaned and in good condition before they were used. Each sample bag 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 labelled 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



13.6 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)

13.7 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, Fe2O3, MgO, CaO, Na2O, K2O, P2O5, MnO, TiO2, Cr2O3, Ni, Co, La2O3, Ce2O3,

Nd2O3, Pr2O3, Sm2O3, BaO, SrO, ZrO2, HfO2, Y2O3, Nb2O5, ThO2, U3O8, SnO2, WO3, Ta2O5,

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 with 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

13.8 SAMPLE PREPARATION AT ACTLABS

During the 2009 - 2010 exploration programs, 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

13.9 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 .

13.9.1 *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 H2O+, CO2, 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.

Elements analyzed

SiO_2 Al203 Fe2O3(T) MnO MgO CaO Na2O K2O TiO2 P2O5 Cr2O3, LOI

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

Oxide	Detection Limit
CaO	0.01
Na_2O	0.01
K_2O	0.01
P_2O_5	0.01
Cr_2O_3	0.01
LOI	0.01

13.10 SAMPLE SECURITY AND CONTROL

13.10.1 *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.

13.10.1.1 *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.

13.10.1.2 *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.

13.10.1.3 *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.

13.10.2 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

13.10.3 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 Meth.

QAQC Sample Insertion - 2010

While drilling progressed Standards and Blanks were inserted into the sample stream at a rate of 1:20. Also rig duplicates, collected from the "discard line", were collected at a rate of once every 25 samples. Table 8 below outlines the QAQC protocols followed at the rig. The actual standard and blank material was inserted at the Schefferville shipping building.

13.11 SAMPLING PROTOCOLS QA/QC

Developed by Third Party and available in Appendix IV; it was modified by LIM to include standards and to accommodate the introduction of Micro Pore sample bags. (See section below for current LIM standards characterization work).

13.12 LIM STANDARDS

During the 2010 season LIM began work on "characterizing" two standards to be used in future QA/QC programs. Sample material to be used as a medium grade standard was selected from the Knob Lake 1 deposit and material to be used as a high grade standard was selected from the James Mine. Both sets of sample material had been collected and homogenized during the 2009 exploration season.

Three labs were used during the 2010 program, ACTLABS, ALS Minerals and SGS. A breakdown of the distribution of samples is listed below. All assay results have been returned from the laboratories but at the time of writing there has been no statistical analysis carried out to determine final standard values. Assays are listed in Appendix III of this report.

James Fine High Grade Standard Material:

30 to ACTLABS

40 to SGS

40 to ALS Chemex

Knob Lake 1 Fine Medium Grade Standard Material:

-50 to ACTLABS

-50 to SGS

-50 to ALS Chemex

Note: All samples submitted weighed between 500-800g. Sample bags were labelled with sample number series such as JM-STD-01-10 or KL-STD-01-10.Note: All samples submitted weighed between 500-800g. Sample bags were labelled with sample number series such as JM-STD-01-10 or KL-STD-01-10.

13.13 SPECIFIC GRAVITY

During the 2010 field season the program to determine the specific gravity and bulk densities of the different ore types continued as per the 2009 program. This involved tests of hand samples collected from Ruth Lake 8 trenches and RC cuttings from drill holes.

13.13.1 *Specific Gravity (SG) in Paraffin Wax - Ruth Lake 8 trench Samples*

During the sampling of trenches specimens (10cm + diameter) for SG testing were collected at a rate of 1 in every 5 sample intervals (1 SG sample for every 15m of trenching). The SG sample collected was representative of the predominant ore type in the interval.

The testing began with the dry weight of the sample in air. The sample was then coated with hot wax and weighted. The final measurement was made by suspending the sample in a container of water and measuring its weight.

The specific gravity of the core is then calculated by the following formula:

$$SG = \frac{A}{(D-E)-(\frac{D-A}{0.9052})}$$

SG=Specific Gravity
A=Weight in grams of dry sample before paraffin coating (Step 2)
D= Weight in grams of sample after paraffin coating (Step 7)
E= Weight in grams of sample after paraffin coating in water (Step 8)
Specific Gravity of paraffin = 0.9052 (measured in the lab)

13.13.2 *Specific Gravity of RC Drill Chips*

As RC drilling and sampling progressed material from every fifth sample was collected for specific gravity testing. The specific gravity of drill chips is carried out by measuring a quantity of chips in air and then pouring the chips into a graduated cylinder to measure the water displaced. A volume of water equal to the observed displacement is then weighed and the specific gravity of the chips is calculated using the equation listed below.

$$SG = \frac{A}{Ww}$$

SG=Specific Gravity of Sample
A=Weight of Sample (Step 3)
Ww=Weight of Water (Step 8)

14. DATA VERIFICATION (ITEM 16)

14.1 QA/QC 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.

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.

14.2 SAMPLE QUALITY ASSURANCE, QUALITY CONTROL AND SECURITY

Quality assurance and quality control protocol for its drilling and trenching sampling programs included the systematic addition of blanks, field duplicates and in house reference material to approximately 1 every 25.

The sealed sample bags were handled by authorized personnel and sent to the preparation lab in Schefferville. Authorized personnel did the logging and sampling in the secured and guarded preparation lab. Sample batches were sealed and sent by train or by express mail (plane). Traceability was present throughout the shipment to their destination.

14.3 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 26th sample was collected at exit 2. 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 the company to verify any bias in the 2010 RC sampling program.

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

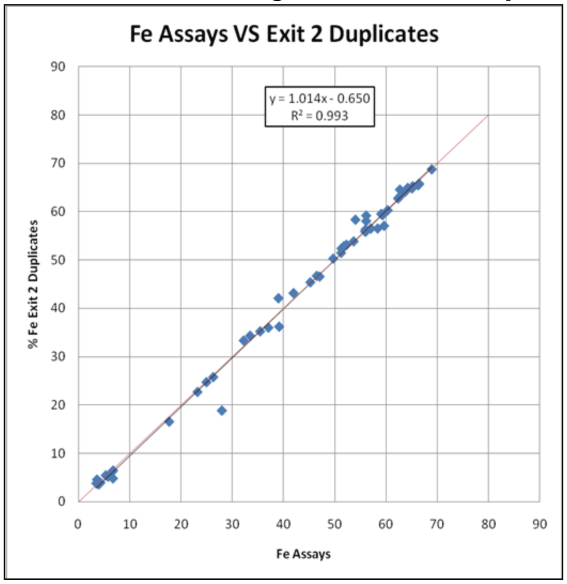
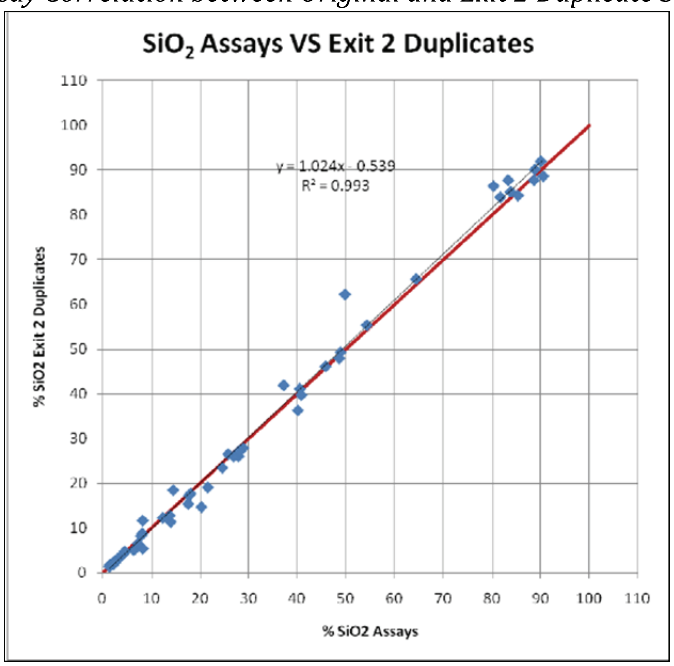


Figure 14-2
SiO_2 Assay Correlation between Original and Exit 2 Duplicate Samples



14.4 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 IOC historical RC drill results and RC drilling program results. LIM twinned a number of IOC RC holes in order to verify the iron (Fe) content.

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 (R2 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

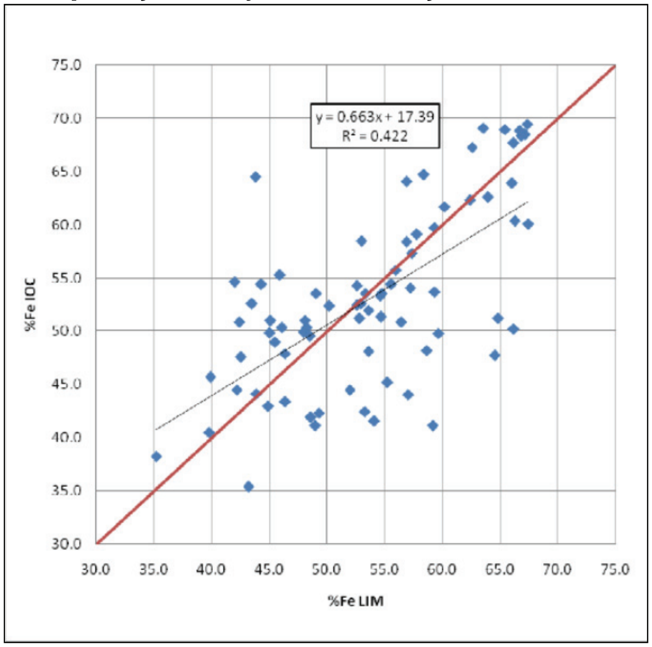
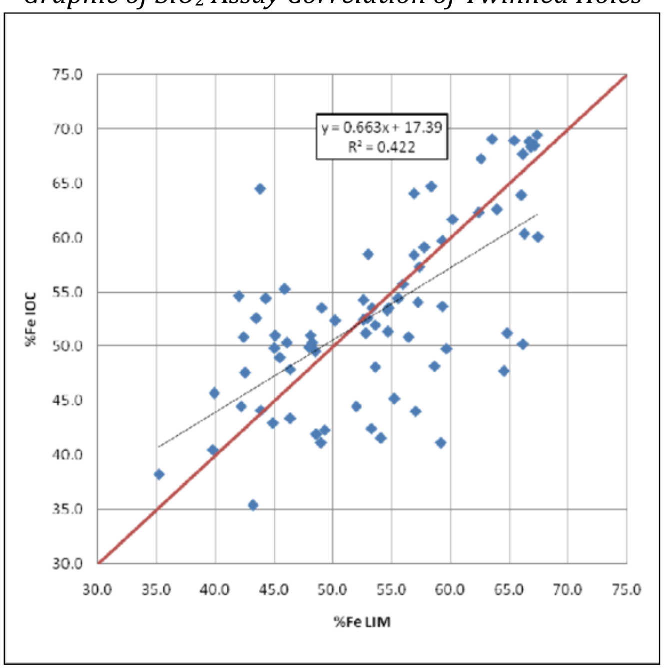


Figure 14-4
Graphic of SiO_2 Assay Correlation of Twinned Holes



Identical reproduction of historical results is not possible therefore the comparison would have to be using composites of 5 metres or longer. In case of LIM vs. IOC twin holes, results showed consistency between both sets of results.

14.5 BLANKS

A total of 152 blank samples were used to check possible contamination during analyses. 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.

14.6 IN HOUSE STANDARD REFERENCE MATERIAL

In 2010, there were another 30 samples of the high grade James standard material sent to ACTLABS and 40 samples sent to both SGS and ALS Chemex. There was a second standard picked which was composed of low grade Knob Lake 1 material with 50 samples sent to SGS, ACTLABS and ALS Chemex. The James Standard material was the only standards inserted into the sample sequence. In 2011, the Knob Lake 1 standard material will be worked into the sample sequence.

15. ADJACENT PROPERTIES (ITEM 17)

As of February 28, 2011, through its wholly-owned subsidiary Labrador Iron Mines Limited, LIMH holds title to three Mining Leases, eight Surface Leases and 53 Mineral Rights Licenses issued by the Department of Natural Resources, Province of Newfoundland and Labrador. The Mineral Rights Licenses cover an area of approximately 11,475 hectares. These Mineral Rights Licenses are held subject to a royalty of 3% of the selling price freight on board ("FOB") port of iron ore produced and shipped from the properties, subject to such royalty being not greater than $1.50 per tonne.

Through its wholly-owned subsidiary, SMI, LIMH holds title to 258 Title Claims in the Schefferville area issued by the Ministry of Natural Resources, Province of Quebec, covering approximately 10,730 hectares. SMI also holds an exclusive operating license in a mining lease covering 23 parcels totalling about 2,036 hectares. These mining rights and the operating license are held subject to a royalty of $2.00 per tonne of iron ore produced from the properties.

LIM's various properties comprise twenty different iron ore deposits which were part of the original IOC direct shipping Schefferville operations conducted from 1954 to 1982 and formed part of the 250 million tons of historical reserves and resources previously identified by IOC.

LIM has confirmed an indicated resource of 11 million tonnes on the James and Redmond deposits, a measured and indicated resource of 19.4 million tonnes on the Houston deposits and 6.4 million tonnes on the Denault deposit The remaining sixteen deposits (excluding James, Redmond, Houston and Denault), have a total combined historical resource estimated to be approximately 125 million tons based on work carried out by IOC prior to the closure of its Schefferville operations in 1984. The historical estimate was prepared according to the standards used by IOC and, while still considered relevant, is not compliant with NI 43-101. The Company plans to bring the historical resources on these other deposits into NI 43-101 compliant status sequentially in line with their intended phases of production.

Exploration drilling at the Houston deposits during 2010 significantly increased the size of the resources to 19.5 million tonnes of measured and indicated resource and as a result, the Houston deposits are now of sufficient tonnage that merits evaluation of a stand-alone operation and the development of a new Stage 2 (South Central Zone).

The Astray and Sawyer deposits in Labrador, located approximately 50 km to 65 km southeast of Schefferville (South Zone), do not currently have road access but can be reached by float plane or by helicopter.

The Kivivic deposit in Labrador and the Eclipse deposit in Quebec are located between 40 km to 85 km northwest of Schefferville (North Zone) and may eventually become Stage 5, but will require substantial infrastructure and building of road access.

A Joint Venture between Tata Steel Global Minerals Holdings, (80%) (a member of the Tata Group, the world's sixth largest steel producer) and New Millennium Capital Corp. (NML) (20%) is developing an adjacent DSO project on some of their claims in Labrador and Quebec about 30 km north of Schefferville.

NML published a Pre-Feasibility Study in April 2009 and on April 12, 2010 published a Feasibility Study on the development of the same project.

A Feasibility Study has also been carried out for NML on a taconite iron deposit known as the LabMag Property in the Howells River area of Labrador located some 30 km northwest of Schefferville. The property is owned by the partnership of New Millennium Capital Corp. and the Naskapi LabMag Trust and a Pre-Feasibility study has been carried out by NML on the adjacent K Mag taconite Property in Quebec.

In the Labrador City-Fermont area, 200 km to the south of Schefferville, iron ore mining and upgrade operations are being carried out by IOC at Carol Lake, by Cliffs Natural Resources at Wabush and at Bloom Lake (formerly Consolidated Thompson) and by Arcelor-Mittal at Mont-Wright

16. MINERAL PROCESSING AND METALLURGICAL TESTING (ITEM 18)

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 IOC 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 IOC 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_2O_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 IOC calculations. Additional SG testing was completed during the 2009 exploration program, obtaining a Fe-dependant variable SG.

The SG data has been used in the calculations of the resource and reserve volumes while the chemical test results has been used to compare them with the historical IOC data from neighbouring 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	CW (kWh/t)	AI (g)	UCS (Mpa)	Density CW (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)

Sample	156109	160566	156090	156032	156037	Analyzed
Hole	RC-JM001-2008	RC-JM001-2008	RC-JM001-2008	RC-JM001-2008	RC-JM001-2008	Sections
From	30	18	42	45	60	
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 1 deposit (1,100 T), and Houston deposit (1,900 T). The excavated material was hauled to the Silver Yards 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 1	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 1 (Red Ore)		**Fe**	**SiO_2**	**Al_2O_3**	**P**	**LOI**	**% Mass**
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)		**Fe**	**SiO_2**	**Al_2O_3**	**P**	**LOI**	**% Mass**
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)		**Fe**	**SiO_2**	**Al_2O_3**	**P**	**LOI**	**% Mass**
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.

Different screen openings were used to investigate the dependence of the recovery from the size of the product.

The test results proved that both 300 μm and 600 μm openings give very promising recoveries:

Table 16-9 2008 Screen Results

Screen	Feed	Oversize	Undersize	Efficiency
Openings	Fe_{tot}, %	Fe_{tot}, %	Fe_{tot}, %	%
300 μm	61.23	68.26	58.91	99.2
600 μm	61.23	66.62	59.28	99.6

16.8 Outotec (2009)

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 (SLon magnetic separator) test work.

Based on the results of this study, it is possible to produce an iron product containing +65% Fe and less than 5% silica using wet gravity separation by the means of Floatex Density Separator, followed by spiral concentration. Recovery of 83% Fe in the Floatex underflow was achieved (17% of the head feed weight).

Wet gravity treatment on the rougher spiral tail with a wet table indicates additional material can be recovered at acceptable grade.

Testing using a SLon magnetic separator to recover Fe from the Floatex overflow combined with the gravity tail did produce a product containing 65.1% Fe.

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 behaviour, 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 1 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, sulphur, 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 1 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, TiO2, V and non-ferrous metals are favourably low, whereas alkaline and P-contents are comparatively high. The physical testing of Knob Lake 1 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 1 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 16-10.

Table 16-10
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 Lake 1 Deposit					
Lump	58.03	6.89	0.84	0.104	0.118

16.10 MBE (2009)

Approximately 1,600 kg of the James fine sample and 1,300 kg of the James 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.

The test work on the fine ore sample produced a total of seven layers, whilst the Lump sample was split into five layer fractions.

Previous to the jigging trial on the fine sample, the material was screened at 1mm (wet screening) with an estimated cut point at 0,75 mm. The mass balance is given below:

>1mm	171.5 kg	162.4 kg dry
<1mm	133l at 1613g/l	214.5 kg dry
		376.9 kg dry total

To ensure highest accuracy, all elements were analysed by wet chemical analysis. All layer masses and their distribution specified in this report have been determined by weighing.

Table 16-11
Screen Analysis of the Lump Ore Sample as Received

Grain sizing [mm]	weight [%]	residue [%]	Fe [%]	SiO_2 [%]	Al_2O_3 [%]	density [g/cm^3]	LOI
>22.4	14.8	14.8	60.29	13.34	0.24	4.42	2.88
22.4-16.0	27.1	41.9	61.21	12.72	0.34	4.47	2.66
16.0-11.2	29.9	71.8	63.08	9.54	0.32	4.56	2.49
11.2-8.0	16.2	88.0	62.33	9.92	0.49	4.55	2.84
8.0-5.6	3.0	91.0	61.90	12.60	0.38	4.50	2.39
5.6-0	9.0	100.0	55.53	18.10	0.82	4.21	2.88
$Feed_{anal}$	100.0		60.29	13.34	0.24	4.45	3.04

Table 16-12
Chemical Analysis of Jigging Products – Course Ore

Layer #	weight [kg]	weight %	Fe %	SiO_2 %	Al_2O_3 %	P %	density [g/cm^3]	LOI
Layer 1	11.91	9.60	52.17	22.90	1.17	<0.05	4.00	4.33
Layer 2	16.89	13.61	57.05	13.30	0.46	<0.05	4.27	3.96
Layer 3	19.16	15.44	60.94	11.08	0.43	<0.05	4.42	3.65
Layer 4	22.78	18.36	62.11	10.59	0.37	<0.05	4.50	3.21
Layer 5	53.32	42.99	65.25	6.92	0.32	<0.05	4.76	1.89
$Feed_{calc.}$	124.06	100.00	61.64	10.69	0.45	<0.05	4.52	2.92
$Feed_{anal.}$	-	-	60.96	11.53	0.43	<0.05	4.47	2.98
Layer 4-5	76.10	61.35	64.31	8.02	0.33	<0.05	4.68	2.29
Layer 3-5	95.26	76.79	63.63	8.63	0.35	<0.05	4.63	2.56
Layer 2-5	112.15	90.40	62.64	9.34	0.37	<0.05	4.58	2.77

Table 16-13
Screen Analysis of the Fine Sample as Received

Grain sizing [mm]	weight %	residue %	Fe%	SiO_2%	Al_2O_3%	P %	Density [g/cm^3]	LOI
>8.0	3.7	3.7	63.46	8.40	0.22	<0.05	4.65	2.66
8.0-5.6	9.4	13.1	63.55	8.58	0.31	<0.05	4.59	3.17
5.6-2.8	14.7	27.8	63.46	8.24	0.39	<0.05	4.58	3.15
2.8-1.0	13.8	41.6	62.82	8.74	0.52	<0.05	4.55	3.22
1.0-0.50	6.0	47.6	62.64	9.23	0.49	<0.05	4.55	2.87
0.50-0.315	9.9	57.5	64.49	9.00	0.47	<0.05	4.60	2.47
0.315-0.125	12.4	69.9	58.80	16.15	0.43	<0.05	4.38	2.11
0.125-0	30.1	100.0	49.61	32.77	0.42	<0.05	3.96	1.81
$Feed_{anal}$			58.46	15.84	0.48	<0.05	4.34	2.63
Fraction <1mm	214.5	-	54.80	0.57	24.20	<0.05	4.21	2.13

Table 16-14
Chemical Analysis of Jigging Products – Fine Ore

Layer #	weight [kg]	weight %	Fe %	SiO_2 %	Al_2O_3 %	P %	density [g/cm³]	LOI
Layer 1	7.60	6.35	59.89	12.36	1.16	< 0.05	4.30	4.16
Layer 2	9.91	8.28	60.85	10.59	0.83	< 0.05	4.40	3.99
Layer 3	11.64	9.72	61.25	10.39	0.83	< 0.05	4.42	3.80
Layer 4	18.42	15.38	61.48	9.56	0.70	< 0.05	4.46	3.75
Layer 5	17.52	14.63	63.24	8.76	0.55	< 0.05	4.53	3.62
Layer 6	16.11	13.45	64.02	7.42	0.39	< 0.05	4.61	3.13
Layer 7	38.55	32.19	66.41	5.35	0.34	< 0.05	4.83	2.11
$Feed_{calc.}$	119.75	100.00	64.47	8.14	0.57	< 0.05	4.59	3.17
$Feed_{anal.}$	-	-	63.22	8.29	0.52	< 0.05	4.56	3.19
Layer 6-7	54.66	45.64	65.71	5.96	0.35	< 0.05	4.77	2.41
Layer 5-7	72.18	60.27	65.11	6.64	0.40	< 0.05	4.71	2.70
Layer 4-7	90.60	75.38	64.37	7.23	0.46	< 0.05	4.66	2.92
Layer 3-7	102.24	85.37	64.01	7.59	0.50	< 0.05	4.63	3.02
Layer 2-7	112.15	95.65	63.73	7.86	0.53	< 0.05	4.61	3.10

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 was recommended that consideration should be given to grinding the remaining 40 % (reject) in order to feed to an additional separation process step such as the WHIMS magnetic separation.

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 was further recommended that consideration be given to feeding 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/COREM

In an effort to seek ways to evaluate both feasibility and quality of eventual lump and sinter production, LIM contracted COREM to perform a series of characterization tests and to validate a proposed process flowsheet. The characterization tests (head assay, particle size distribution, specific gravity, bulk density, angle of repose, compressive strength, crushing work index, abrasion index and liberation characteristics) and the flowsheet were proposed by LIM and implemented at COREM's facilities.

The "Yellow Ore" samples from James South mainly consisted of iron hydroxide and hematite with silica, phosphorous and manganese as main contaminants. The NBY sample, when passed through a simple commination flowsheet (scrubbing, wet screening and stack sizing screen) can produce lump ore and sinter fines of commercial quality. Hence, no further work on this ore is needed.

Finally, the reject fines product still contained 56.27% Fe_{tot} that could possibly be recovered by traditional gravity technologies. An ideal recovery curve test using a Mozley table would be useful to evaluate the amount of valuable iron that could be recovered from the reject fines material.

Several characterization tests were performed on each sample to determine if a commercial product could be obtained after applying the simple beneficiation process proposed by LIM.

The mineralogical study showed that the valuable iron in the two head samples corresponded to iron hydroxide and hematite with silica, phosphorous and manganese as contaminants. The proportion of free iron particles in the – 300 µm fraction of the sample was as low as 69% and worse in the coarser fractions (under 50%).

A summary of the results is as follows:

Table 16-15
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

Given this possibility, no further work on this ore is needed. All the material finer than 150 microns is considered as rejects. This product contained 56.27% Fe_{tot}.

16.12 SGS Lakefield (2010)

Ten Fe-ore composite samples from the James deposit were submitted for mineralogical characterization to aid with the metallurgical beneficiation program. Emphasis was placed on the locking/liberation characteristics of the Fe-oxides and the silicates minerals, particularly of the coarse sizes including the +3350 µm and +1180 µm size fractions. This mineralogical program also provided data in order to determine the optimum size of an achievable concentrate within each of the samples. A summary of the mineralogical characteristics are listed below:

- The 10 submitted samples were received as "as-is" iron ore drill cuttings, which have been split from 3 meter intervals of exploration drill holes.
- Each sample was screened into five size fractions +3350µm (+6 mesh), -3350/+1180µm (-6/+14 mesh), -1180/+300µm (-14/+48 mesh), -300/+106µm (-48/150 mesh), and -106µm (-150 mesh). Each fraction was submitted for chemical analysis (Whole Rock) and QEMSCAN™ analysis.
- The chemical analyses showed that these samples are composed mainly of Fe and Si with low levels of Al and Mn in some of the samples. Other elements occur in trace amounts.

- The calculated heads showed that the samples are composed primarily of Fe-oxides and moderate amounts of quartz. "Textural condition" is significant in one sample accounting for approximately 20% of the sample.
- The QEMSCAN™ analysis showed that quartz and other silicates accumulate with decreasing size, generally in the +106 µm and -300/+106 µm size fractions.
- The mineral release curves show display that, for the finer material (-300 µm), a good liberation is achieved between 100 µm and 200 µm (~80% liberation) with the exception of one sample, which has more middling particles than the others.

16.13 FLSMIDTH MINERALS (2010)

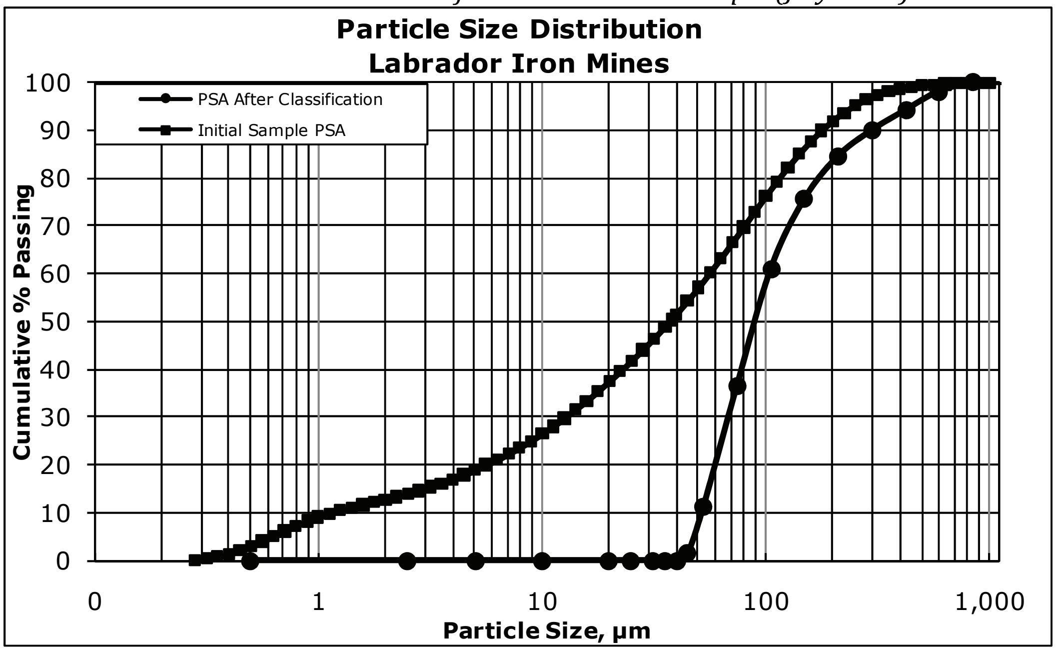
In 2010 LIM contracted FLSmidth Minerals to perform tests on the Density Separator product for James deposit samples to confirm feasibility of using filters to decrease the moisture content of the concentrate. The objective of the test work was to evaluate FLSmidth (FLS) Pan Filter technology. Testing was conducted at the FLSmidth Technology Center in Salt Lake City, Utah. The testing examined operating conditions for future operation on the pan filters.

Sample Characterization and Pan Filter testing was conducted separately on two (2) streams during the months of July and November of 2010.

Testing was first performed on a finer sample with a particle size range of approximately (+75 µm, -1 mm) obtained by de-sliming the sampled received which specified 78% below 100 microns. Tests made in November 2010 were performed on a coarser material with a particle size range of approximately (+100 µm, -6 mm). The sample was first submitted to screening to remove the very coarse particles (+6mm, -20 mm) and then de-slimed and classified to simulate different cuts from a fluid bed Density Separator to obtain the above mentioned sample (+100 µm, -6 mm).

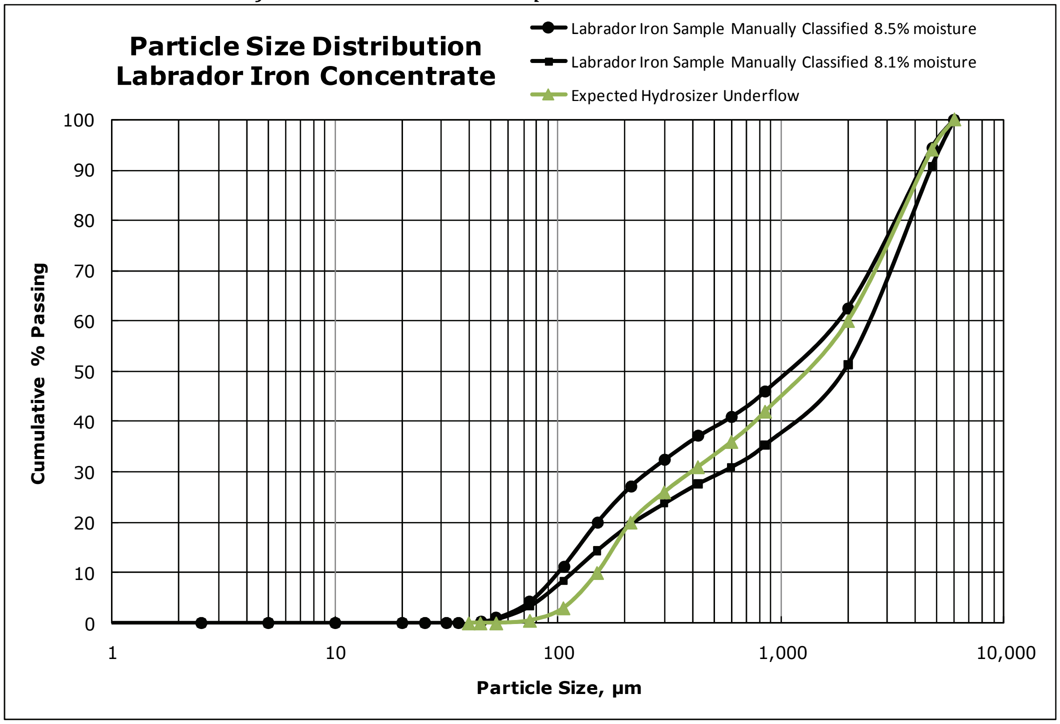
For the tests conducted in July 2010 particle size analysis showed approximately 78% of the sample under 100 µm. After de-sliming and classification the fraction (-100 µm) was only 60% and respectively 1.4% (-45 µm). To remove this undesired fraction the sample was manually classified (de-slimed) by repeatedly suspending the fine particles in the overflow then decanting to remove the fines from the sample. The following figure shows the particle size distribution (psd) of both the original sample and the sample after classification.

Figure 16-1
Particle Size Distribution for Labrador Iron Sample (July 2010)



The sample tested in November 2010 was much coarser with a fraction exceeding even 6-20mm. The coarse fraction above 6.0 mm was screened out of the sample and the remaining sample was manually classified to obtain a fraction between (+100 µm, -6 mm). Figure 16-2, below, shows the particle size distribution for two of the samples tested and also the psd that is expected for a hydrosizer underflow.

Figure 16-2
PSD for Labrador Iron Sample Tested November 2010



After the samples had been classified Vacuum Filtration simulating Pan Filter operation was performed on the samples without the use of steam or surfactant. The following table gives the results of the vacuum test sizing of both samples.

Table 16-16
Vacuum Filtration Sizing results

Sample	**50-1000 µm sample (July 2010)**	**100-6000 µm sample (November 2010)**
Cake Thickness, mm	65	80
Feed Solids, wt%	71	71
Rotational Speed, rpm	1	1
Cake Moisture, wt%	9,0%	<8.50%
Cycle Time, s	60	60
Filtration Rate, Kg/hr-m2	6250	8000

The filtration results clearly indicate the effect that particle size has on both filtration rate and residual moisture. Filter cake with finer particles have a higher resistance resulting in slower cake dewatering and lower filtration rates, with a moisture in the range of 9% is achievable for the finer particles and less than 8.5% expected for the coarser ones.

17. MINERAL RESOURCE ESTIMATION (ITEM 19)

17.1 SUMMARY

The Resource Estimates on James and Redmond described in this section are a summary 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", prepared by SGS Geostat Ltd., dated 18th December, 2009.

The Resource Estimates on Houston 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 on the Houston Iron Ore Deposit Western Labrador Province of Newfoundland and Labrador Canada" dated February 21, 2011, prepared by T.N. McKillen, B.A. (Mod), M.A., M.Sc., P.Geo. D. W. Hooley, B.Sc. (Eng.), FAusIMM, and D. Dufort, B.Sc. (P.Eng.) .

The Resource Estimates on Denault 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 and Resource Estimate on the Denault Iron Ore Deposit Province of Quebec, Canada dated March 11, 2011, prepared by T.N. McKillen, B.A. (Mod), M.A., M.Sc., P.Geo..

As of the date of this report, only the resources for James, Redmond 2B and Redmond 5 deposits (SGS-Geostat, 2009), Houston deposits (LIM, 2011) and the Denault deposit (LIM, 2011)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
Total NI 43-101 Compliant Resources, NL and QC

Classification	Tonnes (x 1000)	Fe%	Mn%	SiO_2%
Measured and Indicated (NL)	30,530	58	0.8	12.5
Inferred (NL)	1,243	55.4	1	16.2
Measured and Indicated (QC)	6,384	54.8	2.3	8
Inferred (QC)	369	53.9	2.7	9.4
Total (Measured & Indicated, QC & NL)	**36,914**	**57.4**	**1.1**	**11.7**

17.2 MINERAL RESOURCES ESTIMATE JAMES AND REDMOND

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 IOC 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 1, 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 17-3.

Table 17-3
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 equation listed below.

$$SG = \frac{A}{Ww}$$

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 IOC 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.

17.2.3.1 *James Deposit*

The geological modeling of the James mineral deposit was done using standard sectional modeling of 30 m spacing. Paper sections from IOC 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 IOC historical geological interpretations. SGS Geostat took into account the geological model on sections of the IOC 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.

17.2.3.2 *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 IOC 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 IOC geological interpretations available for this deposit.

17.2.3.3 *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 IOC 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 IOC 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. An 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

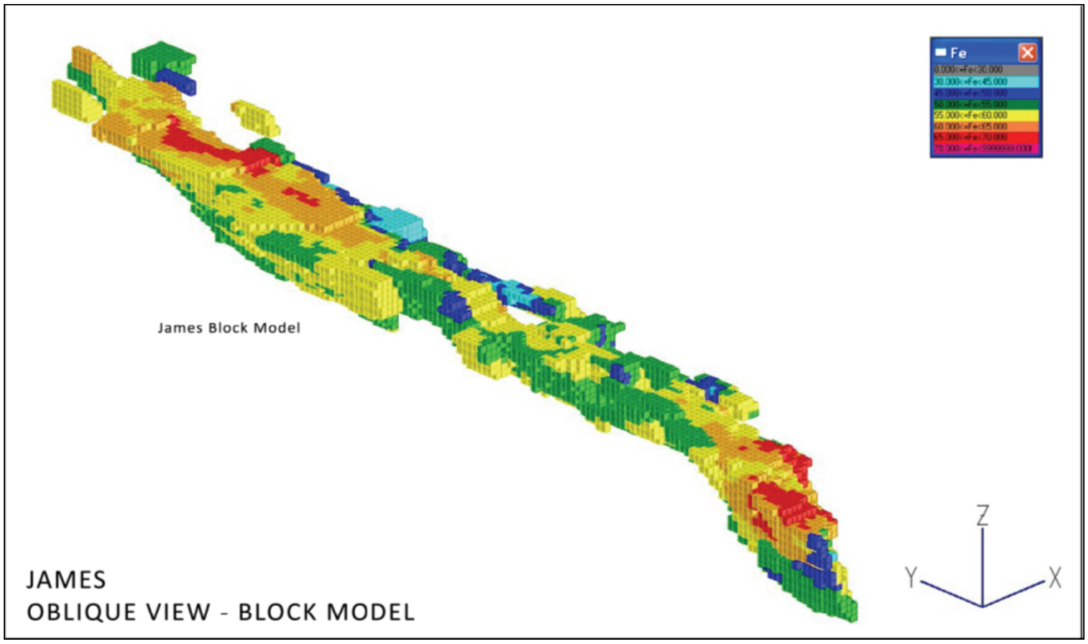


Figure 17-2
Oblique View (Looking down NE) of Redmond 2B Block Model

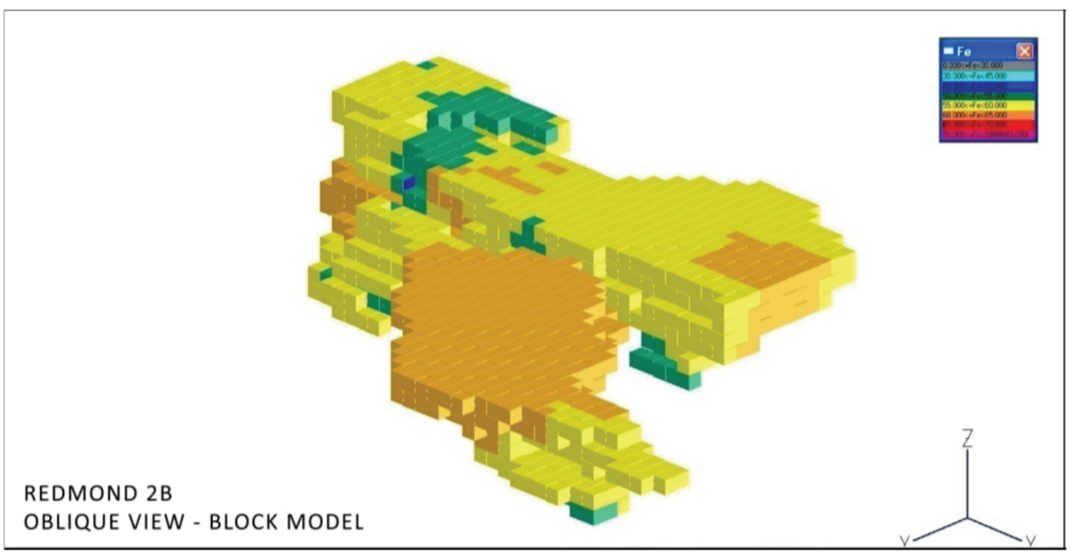


Figure 17-3
Oblique View of Redmond 5 Block Model

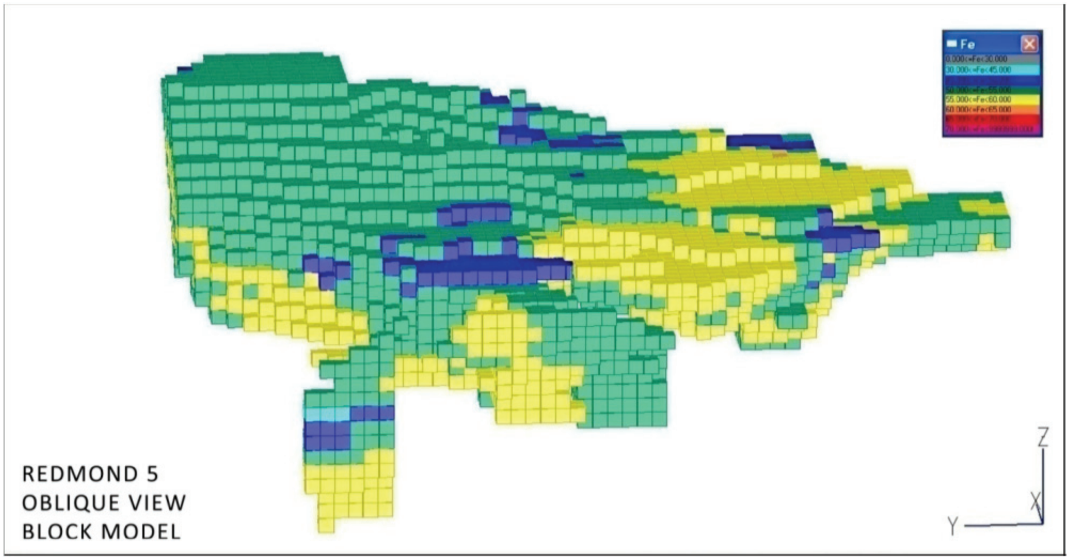
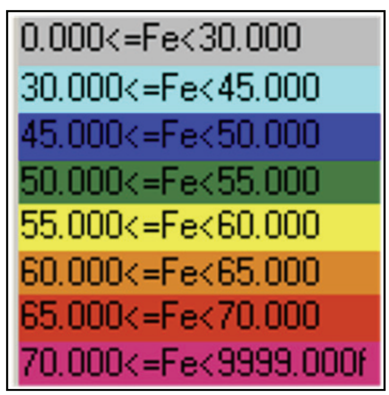


Figure 17-4
Legend of Fe-Values in the Block Models



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 and Redmond 5 deposits are shown Tables 17-4 and 17-5 respectively.

Table 17-4
Estimated Mineral Resources James Deposit (NI 43-101 Compliant)

Ore Type	Classification	Tonnes	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
NB-LNB	Indicated	5,802,000	59.60	0.029	0.69	11.05	0.48
	Inferred	35,000	57.22	0.080	0.14	11.50	0.59
HiSiO_2	Indicated	2,296,000	52.92	0.021	0.53	21.75	0.43
	Inferred	76,000	51.87	0.015	0.15	23.72	0.42
Total	**Indicated**	**8,098,000**	**57.71**	**0.027**	**0.65**	**14.08**	**0.47**
	Inferred	**111,000**	**53.56**	**0.036**	**0.14**	**19.88**	**0.47**

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

Ore Type	Classification	Tonnes	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
NB-LNB	Indicated	2,642,000	56.94	0.07	0.15	7.91	1.26
	Inferred	108000	53.71	0.09	1.59	9.46	1.83
HiSiO_2	Indicated	291,000	51.23	0.029	0.24	21.54	0.41
	Inferred	0	0	0	0	0	0
Total	**Indicated**	**2,933,000**	**56.37**	**0.07**	**0.16**	**9.26**	**1.18**
	Inferred	**108,000**	**53.71**	**0.09**	**1.59**	**9.46**	**1.83**

17.3 MINERAL RESOURCE ESTIMATE HOUSTON

LIM's current resource estimates for the Houston deposits of 19.5 million tonnes at an average grade of 58.3% Fe in the Measured and Indicated categories represents an increase of 26% over the previous NI 43-101 resources estimation of 15.5 million tonnes reported in April 2010 and 114% increase over the historical IOC resources of 9.1 million tonnes. The Houston deposits remain open to the northwest and southeast and to depth. The following Table 17.6 shows a summary of the Houston resources.

Table 17-6
Houston Deposit – Comparison of resources of the Houston deposit
[Technical Report SEDAR filed February 21, 2011]

		43-101 (February 2011)				43-101 (April 2010)				Historical 1982			
	Class	Tonnes	Fe	Mn	SiO_2	Tonnes	Fe	Mn	SiO_2	Tonnes	Fe	Mn	SiO_2
		x 1000	%	%	%	x 1000	%	%	%	x 1000	%	%	%
Fe Ore	M+IND	18,600	58.7	0.7	12.2	14,700	59.3	0.6	11.3	9,000	57.4	-	7.1
	INF	1,000	56.3	1.0	15.9	1,500	57.0	0.8	14.7	-	-	-	-
Mn Ore	M+IND	900	54.4	5.4	9.2	831	54.3	5.5	9.1	-	-	-	-
	INF	10	53.2	4.5	11.5	47	54.0	4.6	10.3	-	-	-	-
TOTAL	**M+IND**	**19,500**	**58.3**	**0.9**	**12.3**	**15,500**	**59.0**	**0.9**	**11.2**	**9,000**	**57.4**	**-**	**7.1**
	INF	**1,023**	**55.8**	**1.0**	**16.5**	**1,500**	**56.9**	**0.9**	**14.5**	**-**	**-**	**-**	**-**

17.4 MINERAL RESOURCE ESTIMATE DENAULT 1

Table 17-7 summarize the resources estimate for the Denault 1 deposit, which has been estimated in compliance with NI 43-101.

Table 17-7 – Resources for the Denault 1 deposit (NI 43-101 Compliant)

Category	Ore Type	Tonnage (X 1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
Measured	**LNB-NB**	3,003	56.6	0.078	0.8	7.4	1.0
	$HSiO_2$	239	51.7	0.032	0.1	20.2	0.9
	LMN-HMN	1,213	52.2	0.082	6.8	5.2	1.1
	Total	**4,456**	**55.1**	**0.077**	**2.4**	**7.5**	**1.1**
Indicated	**LNB-NB**	1,259	55.4	0.078	0.7	9.0	1.1
	$HSiO_2$	153	51.5	0.031	0.1	20.5	0.8
	LMN-HMN	516	52.1	0.077	6.8	5.6	1.0
	Total	**1,928**	**54.2**	**0.074**	**2.3**	**9.0**	**1.0**
Inferred	**LNB-NB**	208	55.0	0.071	0.6	10.4	0.9
	$HSiO_2$	30	51.4	0.036	0.1	20.1	0.8
	LMN-HMN	132	52.8	0.073	6.6	5.4	0.8
	Total	**369**	**53.9**	**0.069**	**2.7**	**9.4**	**0.9**
Measured and Indicated		**6,384**	**54.8**	**0.076**	**2.3**	**8.0**	**1.0**
	Inferred	**369**	**53.9**	**0.069**	**2.7**	**9.4**	**0.9**

SMI's current resource estimates for the Denault 1 deposit total ***6.4Mt @ 54.8%Fe and 8%*** **SiO_2** ***(measured and indicated)*** including ore with Mn grades greater than 3.5%.

The manganiferous iron ore resources with Mn grades >3.5% totals 1.7Mt @ 52.1% Fe, 6.8% Mn and 5.3% SiO_2 (measured and indicated).

The original IOC ore definition was: ≥50% Fe, ≤18% SiO_2 dry basis. LIM's resources definitions include Hi-SiO_2 ores (≥50% Fe, ≤30% SiO_2 dry basis).

The Denault 1 deposit, as it is presently known, is a northwest trending easterly dipping limb of a syncline. It measures approximately 130m by 450m and is still considered open at its northwest and southeast ends as well as at depth. The east margin of the Denault 1 deposit is capped by siliceous competent iron formation similar to that seen capping the Knob Lake 1 deposit. This cap was not drilled in 2010 but will be tested in later drill programs.

Ore at Denault 1 is observed to occur predominantly within the Silicate-Carbonate member (SCIF) of the iron formation and is mostly yellow. Above this unit is lesser blue ore of the Middle Iron Formation (MIF). Under the SCIF is the Ruth Member and its predominantly red ore. The manganiferous component of the Denault resource occurs near the boundary of the Ruth member and the SCIF

17.5 HISTORICAL RESOURCE ESTIMATE

A summary of the historical resource estimates reported by IOC in their January 1983 statement is shown in Tables 17-10 and 17.11. The resources are all in tons. It should be noted that in the IOC 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 IOC 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 IOC January 1983 statement.

IOC's estimated mineral resources and reserves were published in their Direct-Shipping Ore (DSO) Reserve Book prepared in 1983. The estimates were based on geological interpretations on cross sections and the calculations were done manually. IOC categorized their estimates as "reserves". The authors have adopted the principle, as the 2007 Technical Report on LIM's Western Labrador Iron Deposits prepared by SNC-Lavalin, that these "reserves" should be categorized at "resources" as defined by NI 43-101.

The IOC classification reported all resources (measured, indicated and inferred) within the total mineral resource. These historical estimates are not current and do not meet NI 43-101 Definition Standards and are reported here for historical purposes only. The historical estimates should not be relied upon.

Table 17-10
Historical Mineral Resources of LIM Properties NL

	Iron Resources			Manganese Resources			
Property	**Tonnes (x 1000)**	**Fe**	**SiO_2**	**Tonnes (x 1000)**	**Fe%**	**SiO_2**	**Mn%**
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	**64,423**	**58.0**	**7.1**	**661**	**42.7**	**7.1**	**8.8**

Table 17-11
Historical Mineral Resources of SMI Properties QC

	Iron Resources			Manganese Resources			
Property	**Tonnes (x 1000)**	**Fe%**	**SiO_2**	**Tonnes (x 1000)**	**Fe%**	**SiO_2**	**Mn%**
Barney 1	6,281	53.9	7.7	62	49.1	3.5	5
Eclipse	37,159	56.3	5.2	2,068	49.9	4.5	4.1
Fleming 6	802	48.3	8.8	23	42.1	7	7.3
Fleming 7S	1,946	56	7.6				
Fleming 9	417	54.1	8.9				
Lance Ridge	1,370	53.9	8.5	281	41.5	5.7	10.3
Malcom 1	2,879	56.2	6.1	422	51.4	4.9	5.8
Partington 2	3,377	55.2	9.2				
Squaw-Wollett 1	2,303	54.9	5.8				
Star Creek 1	1,492	51	7.3	1,972	45.9	6.2	6.5
Star Creek 3	63	55.2	8.4				
Sunny 3	460	57.8	6.7				
Trough 1	1,969	48.8	8.5	230	43.8	6.5	5.8
Total:	**60,518**	**55.4**	**6.1**	**5,058**	**47.7**	**5.4**	**5.6**

Notes: The tonnages shown are Measured and Indicated resources (or by IOC classification Measured and Indicated reserves) and no computerized block model is now available.

These historical estimates are not current and do not meet NI 43-101 Definition Standards. A qualified person has not done sufficient work to classify the historical estimate as current

mineral reserves. These historical results provide an indication of the potential of the properties and are relevant to ongoing exploration. The historical estimates should not be relied upon.

17.5.1 *KNOB LAKE 1 PROPERTY*

The Knob Lake 1 deposit is shown on eight original IOC sections some 100 feet (30 metres) apart which represents a strike length of about 500 metres. Not all sections within this strike length have yet been recovered. Some 25 drill holes have been drilled on this property which includes one hole drilled by LIM. Details of the IOC resource estimate will be verified in the future program through drilling and sampling.

The IOC estimate of the resources for Knob Lake 1 of some 3,662,000 tonnes is not yet NI 43-101 compliant.

17.5.2 *GILL MINE*

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

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.

17.5.3 *RUTH LAKE 8 DEPOSIT*

The Ruth Lake 8 deposit was discovered by IOC geologists in 1948. IOC carried out extensive mapping, trenching, geophysical surveys and drilling on the deposit up until 1977. Other than the location of the ore body on IOC assessment maps there is no other supporting data available to LIM that would allow a resource calculation. Prior to the closing of the mines by IOC this deposit was stripped of overburden in preparation for mining and three large diameter dewatering wells were installed. The deposit is reported to occur in a faulted syncline. The ore is noted to be 75% blue and has an erratic distribution with a maximum depth of 122m. The 1983 IOC Inventory of resources lists the resource of Ruth Lake 8 at 410,000 tonnes at 53% Fe and 10% SiO_2.

17.5.4 *FLEMING 9*

The Fleming 9 deposit is located approximately 15 northwest of the town of Schefferville and can be reached by existing gravel roads. The centre part of the deposit is 2 km to the north of Iron Lake. The deposit was discovered in 1949 by IOC. The deposit is composed of iron bearing hematite ore, which represents the Sokoman Iron Formation. The mineralization is comformable with the stratigraphy. Historical resources given in the 1983 IOCC inventory of Resources are 417 ktonnes at 54.05% Fe and 8.92% SiO_2.

17.5.5 *STAR CREEK 1*

The Star Creek 1 deposit is accessible by existing gravel roads and is located in Quebec approximately 5 to 8 km north-northwest of the town of Schefferville. The deposit is located 2 km to the west of the Denault showing. The mineralization occurs in fault blocks within the LIF and Ruth Formation and is a mix of the red-yellow and blue types. The Star Creek 1 Deposit was partially mined out by IOC however there is still an iron and manganese resource in place. Recent work by a previous claim holder suggests that stockpiles immediately to the east of the open pit may contain further manganese resources. Historical resources given in the IOCC 1983 Inventory of resources are 1,972 ktonnes at 45.91% Fe, 6.54% Mn and 6.22% SiO_2.

17.5.6 *LANCE RIDGE*

The Lance Ridge deposit is accessible by existing gravel roads and is located in Quebec approximately 5 to 8 km north-northwest of the town of Schefferville. This property lies 1.5 km northwest from the Star Creek property. It is a combined iron/manganese resource. Lance Ridge 1 is an enriched iron deposit that contains several zones of manganese mineralization. IOC trenched, sampled and drilled the deposit in 1970. The area of enrichment is generally covered by 3 m to 7 m of glacial till and does not outcrop. IOC outlined an area of high manganese by trench sampling. Their analyses ranged from 30% to 31% Mn. Historical resources for Lance Ridge given in the 1983 IOCC Inventory of Resources are 1,370 ktonnes at 53.87% Fe and 8.47% SiO_2.

17.5.7 *SQUAW WOOLLETT 1*

The Squaw Woollett 1 property, located within the province of Quebec and approximately 11 km north-northwest of the town of Schefferville is accessible by existing gravel roads. This resource was delineated by IOC. The mineralization lies along the south east shore of Lake Vacher on gently sloping ground, overburden in the area is generally 2 m to 5 m thick. The structure is a northeast dipping homocline. The mineralization is a mix of the red, yellow and blue ore types. Historical resources for Squaw Woollett given in the 1983 IOCC Inventory of Resources are 2,303 at 54.88% Fe and 5.75% SiO_2.

17.5.8 *MALCOLM 1*

The Malcolm 1 is located approximately 10 km southeast of Schefferville and can be reached by existing gravel roads. The center of the deposit localizes the refuge of Lake Malcolm. IOC discovered the deposit in 1950. The deposit contains iron in the form of hematite and the mineralization is located within the Sokoman Iron Formation along with slaty iron formation of the Ruth Formation. The deposit is oriented southwest and has an inclination of 60 degrees. Historical resources for Malcolm given in the 1983 IOCC Inventory of Resources are 2,879 ktonnes at 56.19% Fe and 6.14% SiO_2.

17.5.9 *HOWSE DEPOSIT*

Howse No. 1 deposit occurs in a broad syncline with tight second order folds in the hinge area. The hinge area of the first order syncline is faulted by a major reverse fault dipping steeply to the northeast. A major northeast-southwest striking cross fault separates the deposit into two parts. In the southern part, the ore zone has a surface width of about 76 m (250 ft.) and the southwest limb of the first order syncline is faulted against lower slate to the northeast. In the northern part, the ore zone has a width averaging about 152 m (500 ft.) and both limbs of the syncline in iron formation are preserved (NMI, Fe_028). The 1983 IOC Inventory of resources lists the resource of Howse at 28,800,000 tonnes at 58% Fe and 5% SiO_2.

17.5.10 *BARNEY*

The Barney deposit occurs in a north west trending synclinal feature. Average depth of the ore is listed at 180 ft. At the moment very little is known about the deposit other than its location and the 1983 IOCC resource given as 6,300,000 tonnes grading 53.9% Fe and 7.7% SiO_2. A manganese resource is given as 62,000 tonnes at 49.1% Fe, 3.5% SiO_2 and 5% Mn.

18. OTHER RELEVANT DATA AND INFORMATION (ITEM 20)

18.1 SCHEFFERVILLE PROJECT DESCRIPTION

LIM's Schefferville Project consists of 20 major DSO deposits lying along a 120 km strike length in both the provinces of Newfoundland and Labrador and in Quebec. The town of Schefferville, Quebec lies close to the middle of this 120 km strike.

Through its wholly-owned subsidiary, LIM, LIMH holds three Mining Leases and 52 Mineral Rights Licenses issued by the Department of Natural Resources, Province of Newfoundland and Labrador, covering approximately 15,875 hectares.

In addition, through a wholly owned subsidiary SMI, LIMH also indirectly holds interests in 279 Mining Rights issued by the Ministry of Natural Resources, Province of Quebec, covering approximately 11,703 hectares. SMI also holds an exclusive operating license in a mining lease covering 23 parcels totalling about 2,036 hectares.

LIM's various properties comprise twenty different iron ore deposits which were part of the original IOC direct shipping Schefferville operations conducted from 1954 to 1982 and formed part of the 250 million tons of historical reserves and resources previously identified by IOC.

LIM has previously confirmed an indicated resource of 11 million tonnes on the James and Redmond deposits. The 2010 exploration program at Houston significantly increased the size of the resources to 19.5 million tonnes of measured and indicated resource. The 2010 exploration program at Denault has enabled the resource estimate at that deposit to now be classified as a current resource. The measured and indicated resource at Denault of 6.4 million tonnes is more than double the previous IOC historic resource.

The remaining sixteen deposits (excluding James, Redmond, Houston and Denault), have a total combined historical resource estimated to be approximately 125 million tons based on work carried out by IOC prior to the closure of its Schefferville operations in 1984. The historical estimate was prepared according to the standards used by IOC and, while still considered relevant, is not compliant with NI 43-101. The Company plans to bring the historical resources on these other deposits into NI 43-101 compliant status sequentially in line with their intended phases of production.

LIM plans the development and mining of the various deposits in separate Stages. It should be noted that only the James and Redmond deposits have been permitted. All other deposits require environmental assessment and permitting.

Only the James and Redmond deposits have been subject to detailed mine design. The Houston deposit has had preliminary mine design carried out. All other deposits will require detailed mine design when further geological data is collected and compiled. Detailed metallurgical testwork has been carried out on blue ore from James, Houston, Redmond and Knob deposits and to a more limited extent on yellow and red ores from these deposits. Only limited review work has been carried out on the high-silica blue ores. All of this work will be needed to be complete to confirm the final process routes. Additionally some metallurgical work will be required to be conducted on each of the other deposits to characterize their metallurgical response and to confirm expected recovery levels.

Stage 1 – Central Zone

Stage 1, which will itself be undertaken in phases, comprises the deposits closest to existing infrastructure located in an area identified as the Central Zone.

The first phase of Stage 1 involves mining of the James and Redmond deposits in Labrador and Denault in Quebec. The second phase will involve the sequential development subject to permitting, of the Ruth Lake 8, Gill and Knob Lake 1 deposits in Labrador and the third phase the Star Creek, Squaw Woolett, Lance Ridge and Fleming 9 deposits in Quebec. The Ruth Lake 8, Gill, Knob Lake, Star Creek and Lance Ridge deposits are all located within approximately 10 km from the James deposit and close to the town of Schefferville and can also be reached by existing gravel roads. The Squaw Woolett and Fleming 9 deposits are within 20 kms of Silver Yards and the existing roads to them will require some upgrade.

The Silver Yards plant has been constructed and is essentially complete. Commissioning of this plant will take place during the second quarter of 2011. Some upgrades and additions to this plant to increase capacity and recovery are planned.

Stage 2 – South Central Zone

The South Central Zone comprises the Houston and Malcolm deposits. With the increased resource at Houston the deposits are now of sufficient tonnage that merits evaluation of a stand-alone operation. At the same time as the Silver Yards processing plant is operating, subject to completion of environmental assessment and permitting, Stage 2 will commence at the Houston deposits located in Labrador some 20kms south-east of Silver Yard. Houston currently comprises 19.5 million tonnes of compliant resource. The Houston deposits remain open and an additional drill program will take place in 2011 with the aim of increasing the size of these deposits and enhancing the resource estimate.

It was originally planned to treat Houston ore at the Silver Yard plant but the increased Houston resource suggests that a new stand-alone plant to treat Houston and other nearby deposits should be constructed. This plant is now planned to be built adjacent to the site of the currently permitted Redmond mine. When mining is largely complete at Houston it is planned, subject to permitting, to treat the ore from the nearby Malcolm deposit (Quebec) at the Redmond plant.

Phase 3 – North Central Zone

It is intended that during the mining of the Stage 1 deposits, planning will be undertaken for the future operation of the more distant deposits in subsequent stages. As currently envisioned Stage 3 which is the North Central Zone comprises the Barney (Quebec) and Howse (Labrador) deposits which are located in an area known as the North Central Zone about 25 km northwest of Schefferville and relatively close to existing infrastructure. It is planned to build a new processing plant in the vicinity of the Howse deposit. This will utilize a rail spur to be built to join with the NML/Tata Steel railspur facility. This arrangement is part of the asset exchange agreement between LIM and NML dated 16th October 2009. Initially it is intended that this plant will treat ore from Barney and will be subsequently enlarged to treat ore from Howse.

Phase 4 – South Zone

Following completion of the Houston and Malcolm deposits it is planned to treat material from the southern deposits of Sawyer Lake and Astray Lake. They form the Southern Zone and are expected to be treated through the Redmond Plant. These deposits do not currently have road access but can be reached by float plane or by helicopter. Development of these deposits will require the permitting and construction of a haulage road to the southern end of the Houston deposit area. This road will be approximately 60 kms long. Subject to future metallurgical testing it is not expected that the Redmond plant will need any modification to treat Sawyer or Astray ore.

Phase 5 – North Zone

LIM's northern deposits, at Kivivic, Trough, Partington and Eclipse form the North Zone. The Kivivic deposit in Labrador and the Eclipse, Trough and Partington deposits in Quebec are located between 40 km to 85 km northwest of Schefferville but will require substantial infrastructure and building of road access. All four of these deposits are based on historical resources and will need additional exploration to bring them to compliance, as well as metallurgical testing, environmental approvals and regulatory permits, and all will require significant new road access and infrastructure. The development of Stage 5 is not considered in any further detail in this technical report.

Summary

This combined development and production scenario of Stages 1 to 4 has a projected total operating life of approximately 18 years. This forecast is based on detailed mine design for James and Redmond and only limited design on Houston. Metallurgical testwork is limited to the James, Redmond, Knob Lake and Houston deposits. Further exploration, testwork and engineering design will be required on all deposits to confirm the assumptions used in this preliminary planning schedule.

With LIM`s concept of relatively small moveable plants, flexibility can be built into the development plan to allow for potential extensions to current deposits as a result of exploration, the discovery or acquisition of additional resources, and the ability to relatively quickly increase and decrease production tonnages in response to changes in market conditions.

18.2 THE SILVER YARDS OPERATIONS

James, Redmond and those Labrador deposits closest to the current Silver Yards infrastructure, namely Gill, Ruth and Knob Lake 1, together with Denault in Quebec will be brought into production as the first of a series of contemporaneous direct shipping ore projects.

Mine operations involving the extraction of iron ore from the open pit mines at James North and James South (waste stripping commenced January 2011), Redmond 2B, Redmond 5, Gill, Ruth Lake 8 and Knob Lake 1 deposits are scheduled to provide continued ore feed to the plant. Beneficiation will take place at the plant at the Silver Yards area. A rail spur has been re-established along the existing rail-bed to connect Silver Yards to the main TSH railway. Construction activities are essentially complete, with the remaining activities planned to be completed in March 2011, with commissioning of the plant scheduled to begin in April 2011.

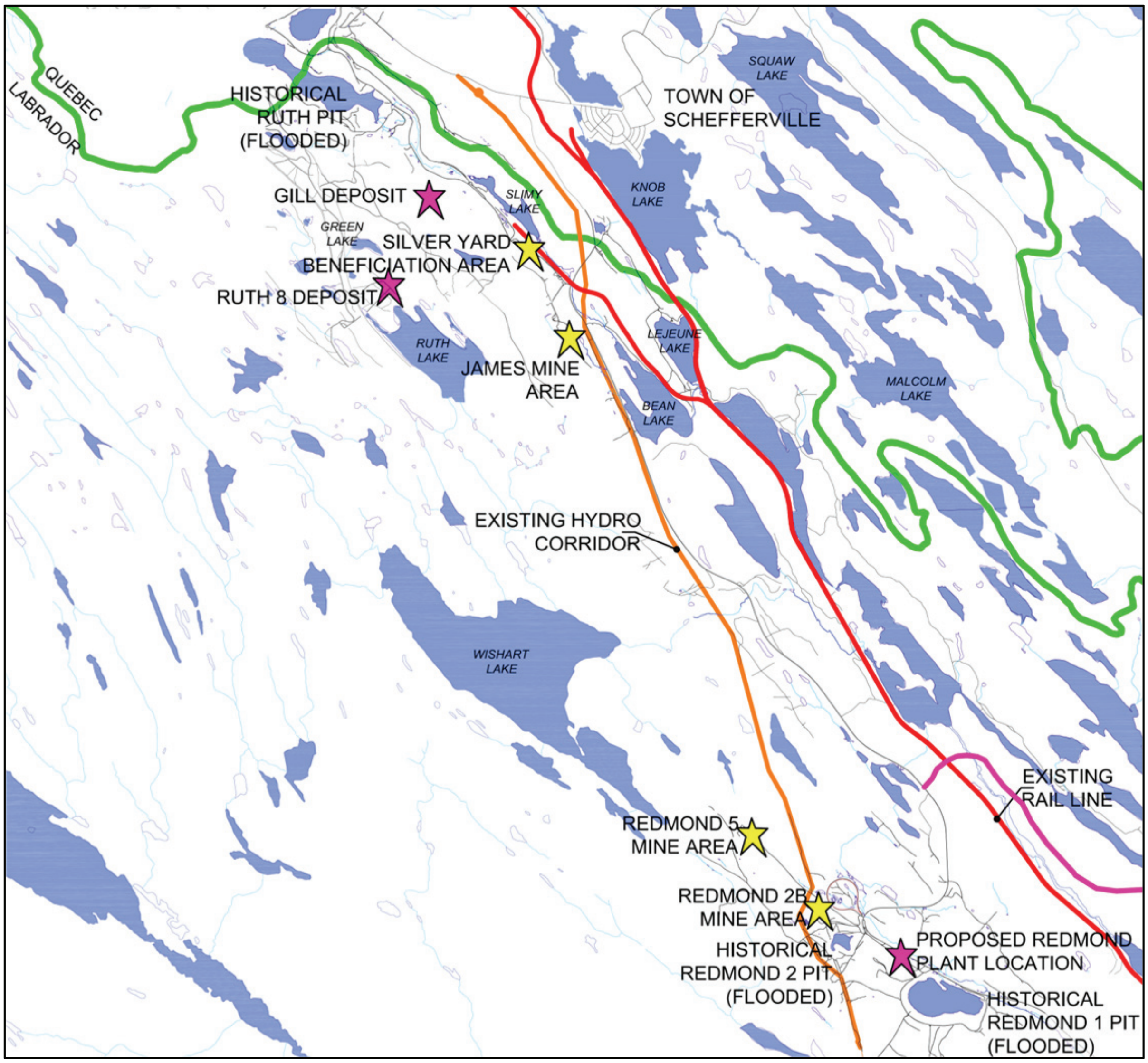
Major features of the Phase One Project include:

- the mining of DSO deposits in western Labrador in an area of previous iron ore mining;
- mining to be carried out using conventional open pit mining methods, employing drilling and blasting operations if required;
- ore will be beneficiated by crushing, washing and screening at the Silver Yards plant. No equipment requiring chemicals is included in the beneficiation plant;

- the beneficiation plant, as constructed, consists of a primary crusher, tumbling scrubber, secondary crusher, primary screening equipment, secondary screening equipment, filtration equipment, and various chutes, conveyors, and pumps;
- the beneficiation plant is designed to process 10,000 tonnes per day (tpd) of run of mine (ROM) iron ore following commissioning. Processing will be carried out over a period of approximately 210 -240 days per year, depending on weather conditions;
- other buildings at the Silver Yards 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 rail spur line previously operated and abandoned has been reconstructed, and a siding track is planned to be laid at the Silver Yards area.

Additions to the plant as currently constructed are planned or under consideration. These additions are intended to increase the throughput of the plant and increase the level of iron recovery. Some of these additions were part of the original development plan; some have been developed as result of recent metallurgical test-work indicating expected increases in recovery above the original plan; and some have been brought forward from the original planned schedule to take advantage of the favorable iron ore market. The additions will increase the volume of saleable product and are expected to provide a viable economic return. The general project location and features are shown on Figure 18-1.

Figure 18-1
Project Features



18.3 SITE DEVELOPMENT

Figures 18-2 to 18-6 present the 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 Yards area.

Figure 18-2
James and Silver Yards Infrastructure

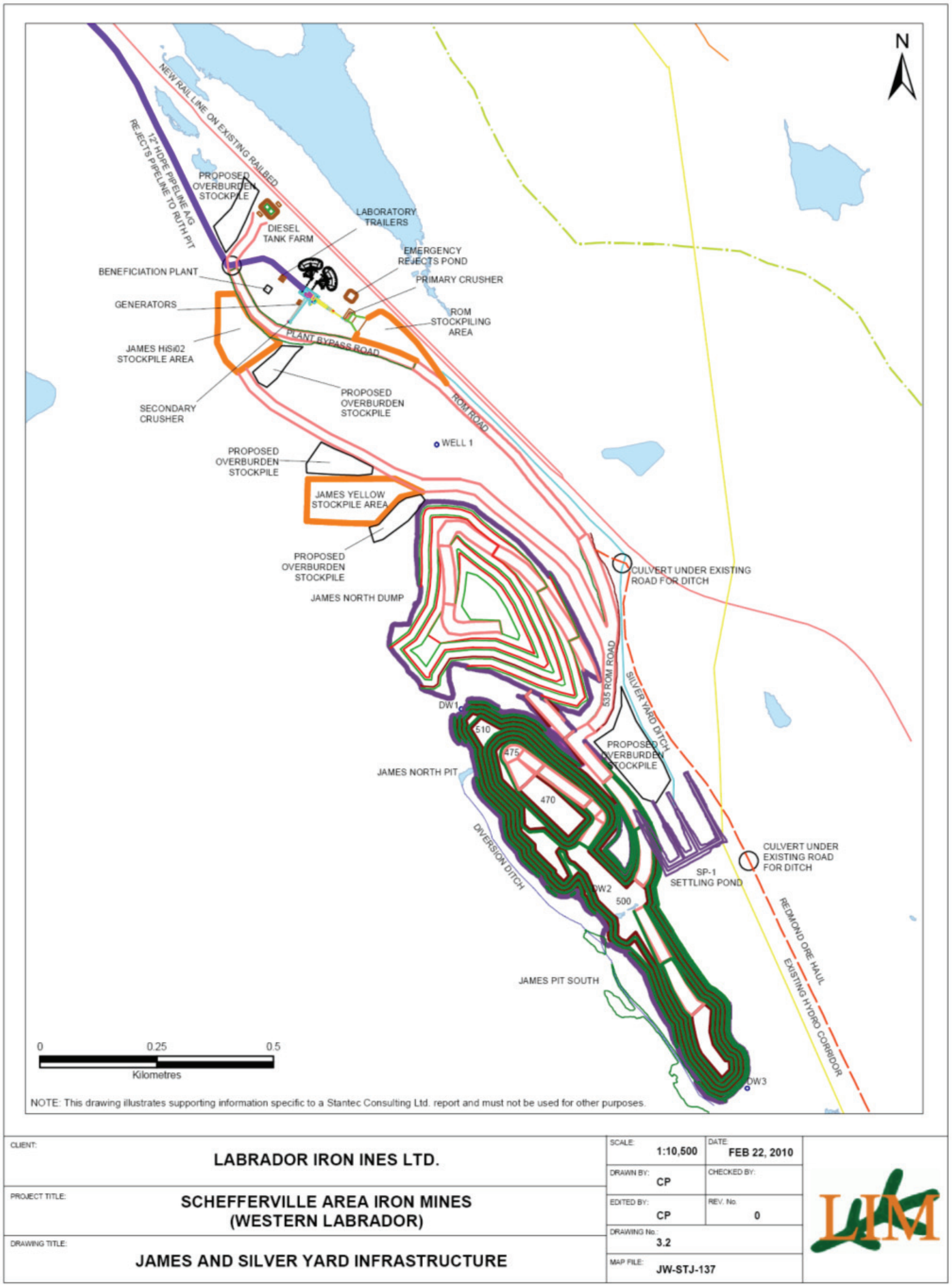


Figure 18-3 Redmond Infrastructure

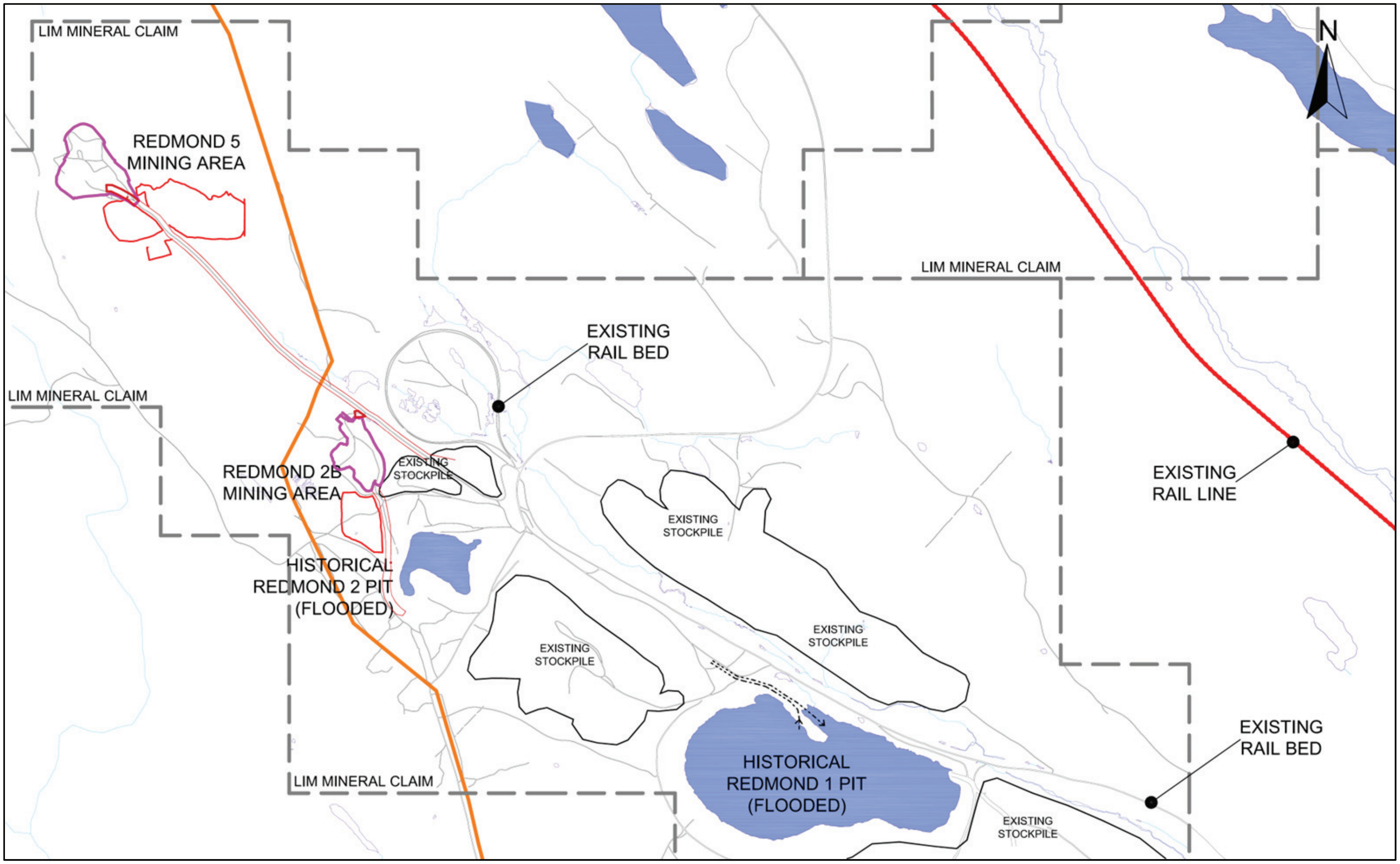


Figure 18-4
Ruth Lake 8 and Gill Infrastructure

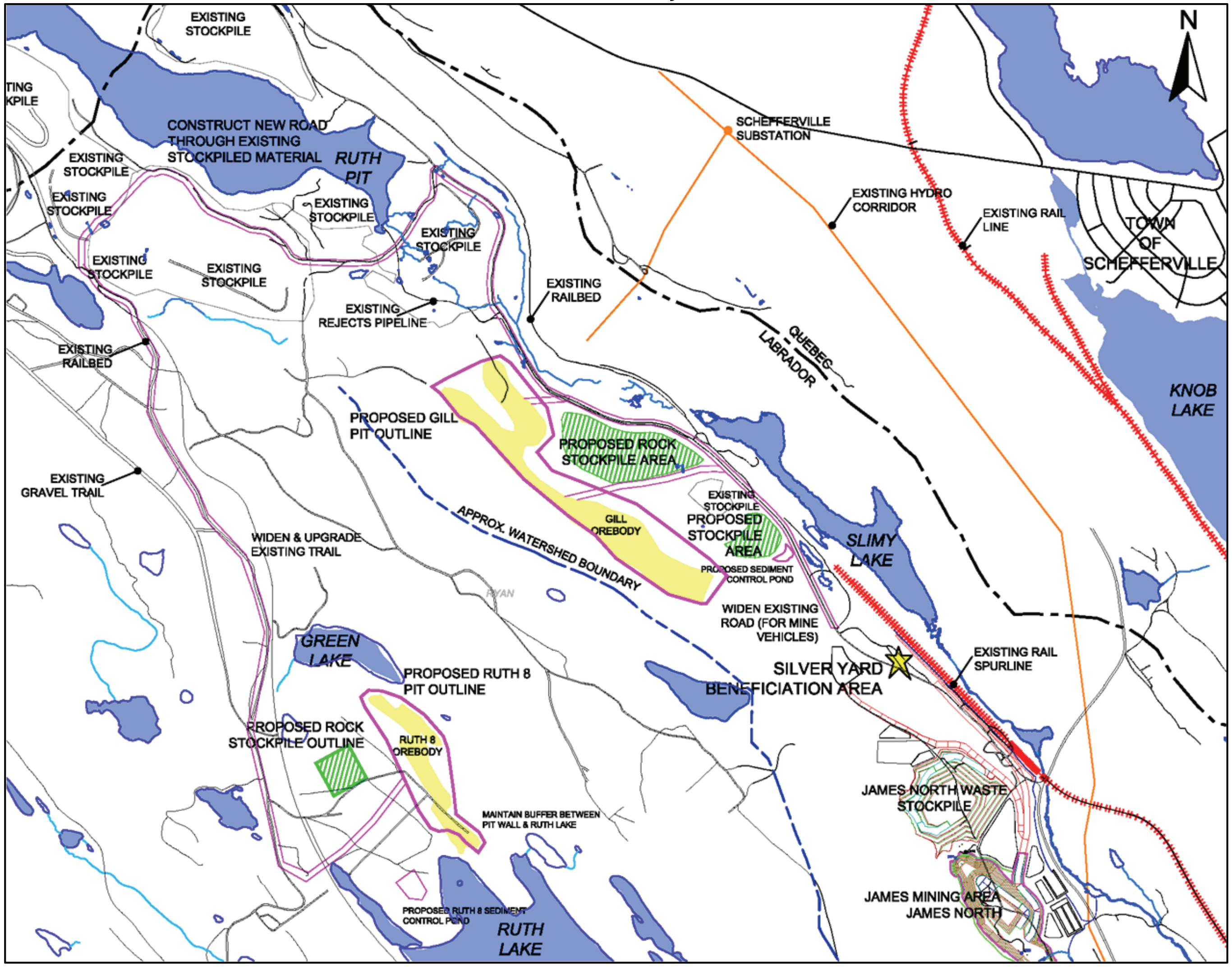


Figure 18-5
Ruth Lake 8 Infrastructure

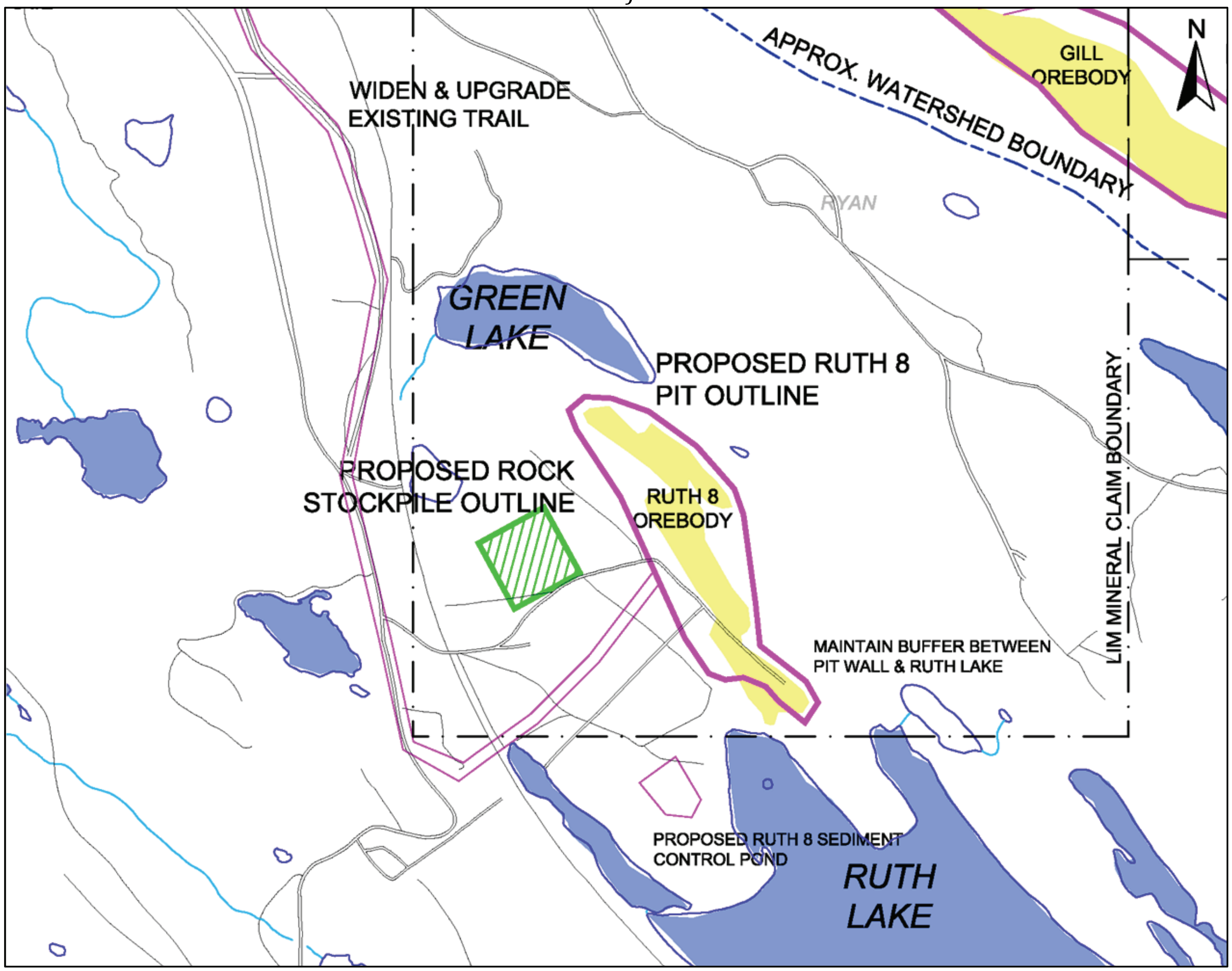
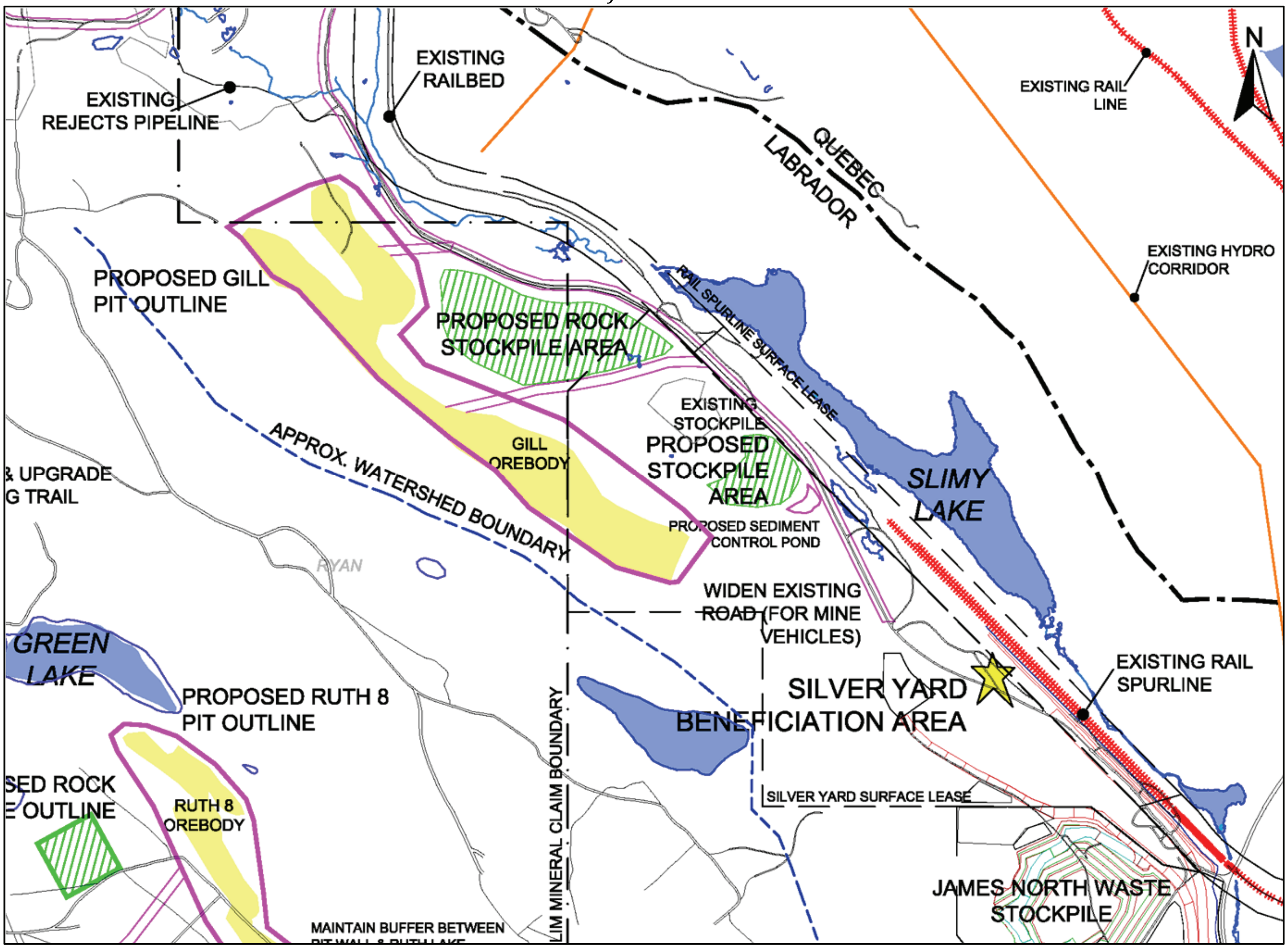


Figure 18-6
Gill Infrastructure



18.3.1 *Main Access and Site Roads*

Primary access to the Silver Yards area located approximately 3 km southwest of the Town of Schefferville is by an existing gravel road. The James property straddles an existing road connecting Silver Yards with the Redmond property, and continues to the Menihek hydroelectric dam, where the road is terminated. The main mine camp is situated adjacent to Bean Lake and accessed directly from the Menihek road. The existing roads, constructed historically by IOC, are well built from compacted ballast with fine topping and in good condition.

Within the area of operation, the access roads are limited only to authorized mine personnel. Haulage roads are designed and built to permit the safe travel of all of the vehicles in regular service by following accepted industry standards.

All of LIM's properties in this project area are located in the Province of Newfoundland and Labrador. Vehicles utilize existing historical mine access roads. Additional personnel access also includes the use of public roads extending from the nearby communities of Schefferville and Kawawachikamach, Quebec, and the use of the local Schefferville airport.

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

18.3.2 *Silver Yards Infrastructure*

All iron ore production from the James and Redmond properties will be beneficiated at the Silver Yards Area. Figure 18-7 illustrates the infrastructure at Silver Yards:

Beneficiation area, which includes the beneficiation towers, primary crushing plant, secondary crushing plant, scrubbers, screens, jigs, density and magnetic separators, filters, various conveyors, product stockpiles;

- Water supply tank and pump building module;
- Electrical module, mobile diesel generators, and transformer;
- Diesel storage tanks and fuel dispensing station for mobile equipment;
- Vehicle and equipment maintenance shed;
- Change-house:
- Laboratory;
- Storage container location:
- Standard mobile offices;
- Parking area;
- ROM ore stockpile area;
- Stockyard and railcar loading area;
- Reject fines disposal pipeline;
- Settling pond for emergency reject fines disposal and
- Security checkpoint, fencing and 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 organics stockpile;
- James overburden stockpile;
- James High Silica and Yellow ore stockpiles;
- James settling pond facility (SP-3)
- The infrastructure at the Redmond Mining Area includes the following:
- 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 ore stockpile area; and
- Redmond site office trailer.

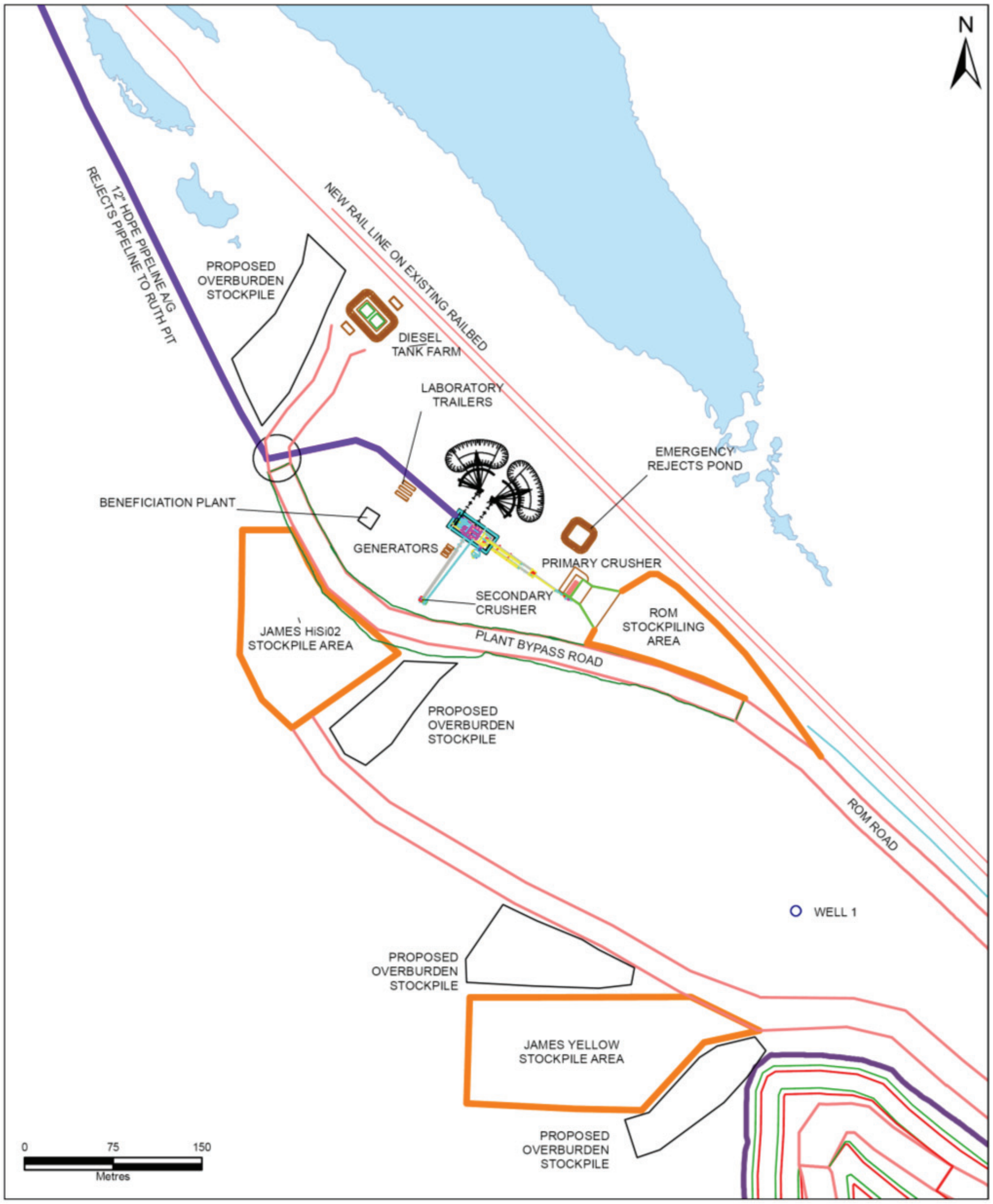
18.3.3 *Ore, Waste and Overburden Stockpiles*

The locations for the waste rock storage and low-grade ore stockpiles are indicated on the drawings (Figures 18-2 and 18-3). 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 bodies of water. Overburden and organics stockpiles will be used during site reclamation to support re-vegetation.

Figure 18-7
Silver Yards 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		

18.4 MINING OPERATIONS

In order to simplify operations and minimise capital costs LIM planned from the outset to outsource the direct production and service operations to experienced contractors and facility operators. Major work completed to date utilizing contractors includes: tree removal, overburden stripping, mine and haul-road construction, waste stripping from the James open pit, beneficiation plant design and construction, rail-track extension and mine laboratory construction and training. James pit is currently in the waste strip phase and ore exposed on two bench levels.

The major ore beneficiation period is planned to commence in April each year and to continue to November. This period is not fixed and is weather dependent. The period will be lengthened as long as conditions allow the wet beneficiation process to continue. Overburden, waste stripping and ore stockpiling will continue to some extent on a 12-month basis. This will ensure that the beneficiation plant can operate at maximum capacity and that the optimum blended ore feed is readily available. The mining contractor will implement the mine plan and carry out layout, surveying, measuring and reconciliation functions. The mine office is located Silver Yards where technical and administrative personnel operational personnel are based. LIM will continue to perform all strategic mine planning and resource/grade control with their own personnel.

The mining contractor operates a fleet of largely new equipment, used initially to construct the site, to break, load and haul ore, waste rock and top soils to the designated locations. The in pit trucks will also haul the short distance from the James, Gill, Ruth Lake 8 and Knob Lake 1 deposits to the beneficiation plant ore stockpiles. From the Redmond property, tractor-trailer units will haul the ore to the processing site. The waste will be hauled to the specific waste dump sites.

During the IOC operations, the yellow ores (limonitic), the lower grade iron ores (TRX) and high silica ores (HISI) were separated during the mining process and stockpiled as waste or for possible blending. LIM is considering plans to upgrade the Silver Yards beneficiation plant in 2012 to process the high silica, lower grade, and yellow ores to produce saleable products.

The pit designs for these 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. Current development of James pit indicates that the pit slope and bench height assumptions are practical.

Mining plans have been prepared and are in use for the James deposit.

18.4.1 *MINING METHOD SUMMARY*

Mining will initially occur at James North and James South, followed by Redmond 2B and Redmond 5 deposits, where approximately 9.8 million tonnes of measured and indicated (NI 43-101) iron ore resources have been delineated as mineable using current exploration results. In addition to ore, approximately 11.8 million tonnes of waste rock will be excavated and disposed of or stockpiled over the life of the properties. The overall strip ratio for the initial properties is approximately 1.2 tonnes of waste per tonne of ore. Historical results from IOC drilling indicate that LIM can expect, subject to confirmation, slightly lower strip ratios from Gill, Ruth Lake 8 and Knob Lake 1 deposits. Excavation and transport to the beneficiation area will be done using conventional truck and excavator methods except for Redmond as noted above.

18.4.2 *Pit Design and Production Scheduling*

18.4.2.1 *Optimal Pit Design*

The resources derived from the indicated mineral resources are based on computer generated block models of the deposits. The open pit geometry and mine plan were designed using the Whittle and Gems software packages from Gemcom. Each of the deposit block models was assessed for optimal pit design using the Whittle software.

The result of the optimizing process is a pit shell which will maximize the net present value of the resources according to the economic parameters that were used.

18.4.2.2 *Model Preparation*

The geological modeling procedures used are described earlier in this report. The geological modeling of the mineral deposits was done using standard sectional modeling of 25 m to 30 m spacing. Historic paper sections, when available, were digitized and used for the geological interpretation and modeling.

The geological interpretation of the mineral deposits was restricted to the soft friable direct shipping ores.

18.4.3 *Pit Optimization*

Pit Optimization was undertaken using the Gemcom Whittle Strategic Mine Planning Software, version 4.2. The pit optimization was carried out by a Whittle implementation of the well-known Lerchs Grossmann algorithm.

18.4.4 *Pit Analysis*

The estimated cost data was used as inputs into the Whittle software. An overall pit slope of 45^{o} was also used as an input variable. The results included a number of pit shells generated at various revenue factors. For the optimization, the pit shell yielding the largest NPV was selected as the outline for designing the pits. The optimization software used did not have a constraint for minimum mining widths. Therefore, some deviation was made to accommodate a minimum mining width of 30 m.

18.4.5 *Pit Design*

Using the selected pit shell as a guide for the pit limit, the details of the pit design were completed using GEMS software version 6.2 from Gemcom. The benches were designed on 10 m height with 5 m safety berms on each bench. A minimum mining width of 30 m was used.

18.4.5.1 *Ramp Design*

A single final ramp is planned for the transportation of both ore and waste rock. The minimizing of haul distances of the waste rock to the waste dump and the ore to the crusher was considered when determining the exit point of the road from the pits. A grade of 8% has been used in the design of the ramp.

The haul roads have been designed and constructed with a running surface width of 3.5 times (for double lane traffic) the widest vehicle operating on the road. The widest vehicle accounted for is a haul truck that is 5.4 m wide. The overall haul road design width also accommodates an adequate shoulder barrier and ditch. As per industry practice, a shoulder barrier is included along the edge of the haulage roads wherever a drop-off greater than 3 m exists. Based on a 5.4 m wide haul truck with tires having an overall radius of 1100 mm and a berm designed with a slope of 1:1.5, the overall final ramp width was designed at 25 m.

18.4.5.2 *Slope Angles*

A site visit of the former IOC mine pit confirmed the slope stability with the IOC design criteria. This IOC criteria was used as a reference for pit design. The pit slope angles used for pit design are summarized as follows:

Table 18-1 Open Pit Slope Angles

Type of Rock	Overall Pit Slope Angle	Batter Angle
Overburden	34°	40 °
Weathered Rock	50 °	55 °
Competent Rock	55 °	70 °

18.4.6 *Mine Plan*

The open pit development and stockpile re-handle is based on a 6 year plan to produce up to 10,000 tonnes per day, and approximately 2.2 to a maximum of 3.2 million tonnes per year. The mine plan will involve six years of mining.

Five meter (5 m) blocks were selected for use in the block models for the resource estimates based on the drilling and trenching information available and it is understood that this has limited bearing on grade control. As mining commences, grade control may shift the block size for the model and this will be undertaken as blast hole data improves the data set.

Figure 18-8 Year 1 (2011) Mine Plan for James

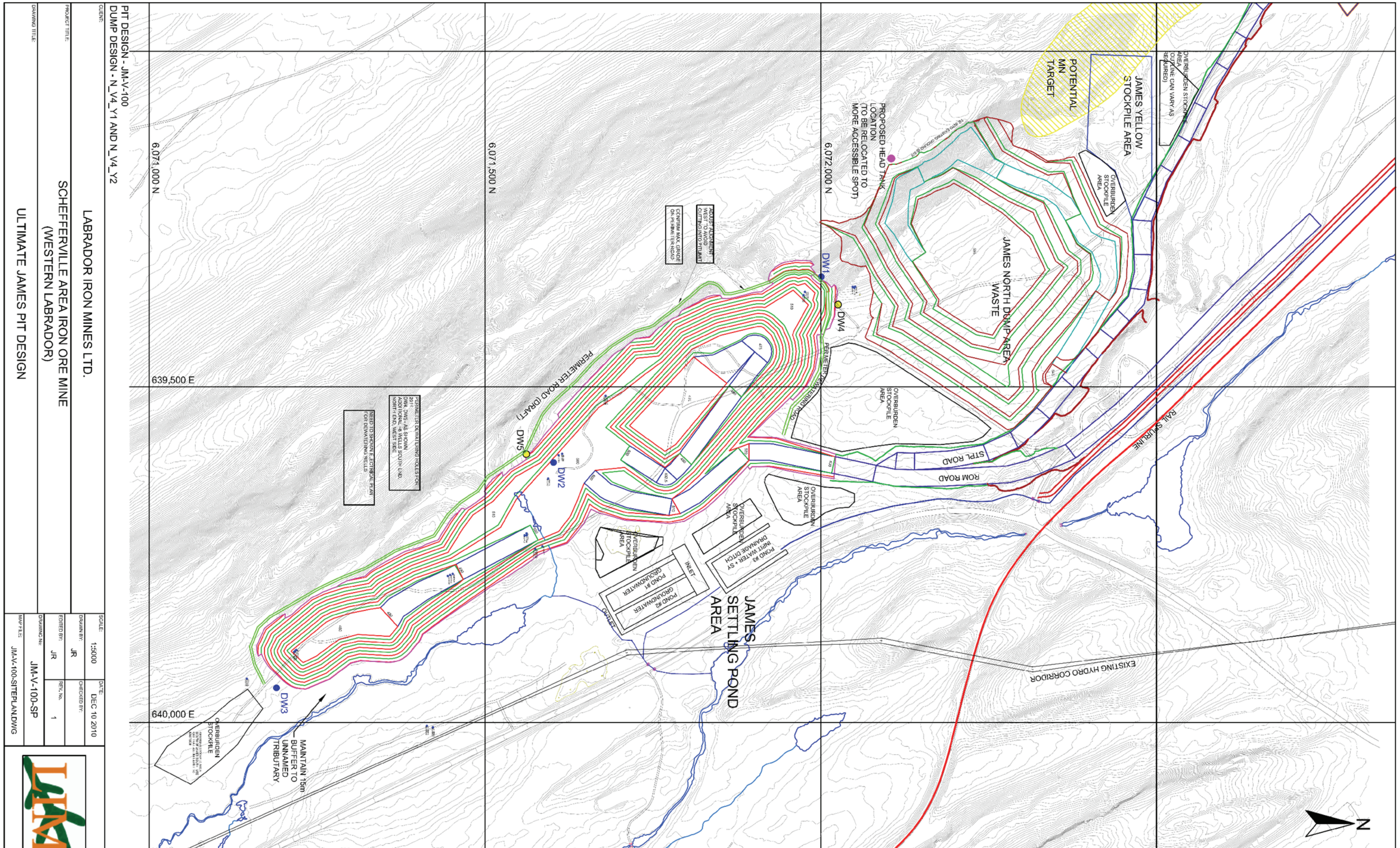
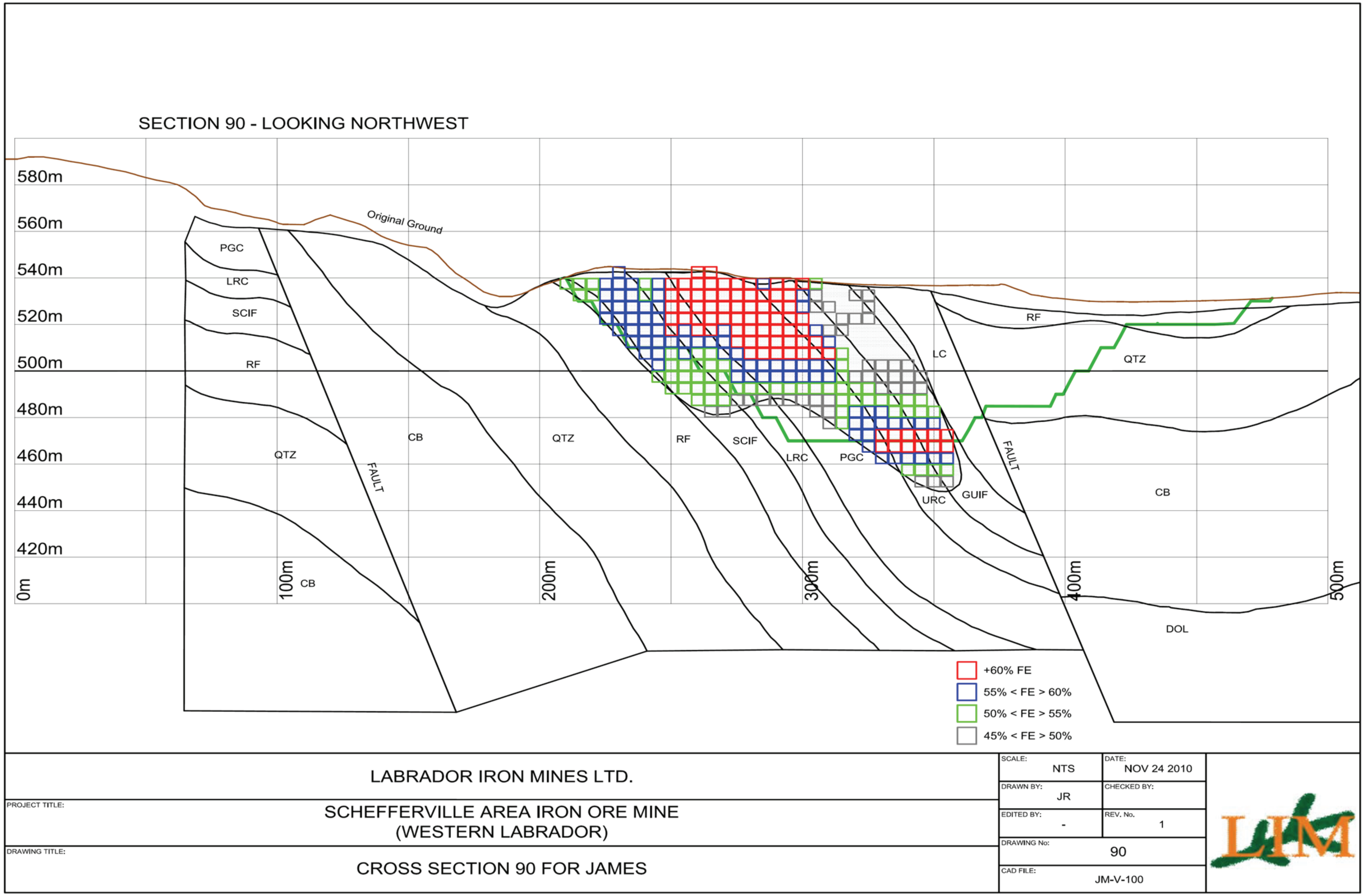


Figure 18-9 James Pit Cross Section Location Plan



18.4.7 *Mining Equipment*

The mobile equipment size selected for the mine was based on the proposed mining bench height. The fleet size is based on equipment cycle time, material movement schedules and estimated auxiliary equipment requirements. Equipment types were selected to allow mining of ore and waste materials and provide mine auxiliary equipment support including the requirement for road maintenance, dump maintenance and snow removal. Where possible, equipment types were standardized across the property. The mine plans and equipment fleet are amended in accordance with operation experience gained at other properties. Table 18.2 depicts the expected equipment types and numbers:

Table 18-2 Initial Equipment Types and Numbers

Equipment Type	**Number of Units**
	2011
Excavator	5
Wheel Loader	2
Mine Truck (Off-highway)	7
Track Dozer	3
Motor Grader	1
Float	1
Boom Truck	2
Manlift	1
Explosive Truck	1
Roller	1
Pick Up Trucks	10
Crew Bus	1
Fuel/Lube Truck	1
Drill Rig	1
Water Truck	1

18.4.8 *Production*

18.4.8.1 <u>*Excavation*</u>

Excavation will be conducted with the following types of mobile equipment:

- Komatsu PC400, PC450, Caterpillar 385, 345, 324 excavators; and,
- Caterpillar L988, IT38 loaders.

18.4.8.2 <u>*Haulage*</u>

James ore and waste will be hauled with Caterpillar 773 type off-highway trucks. Redmond waste will be hauled with the same type of truck. Redmond ore will be hauled from the pit by similar type off-highway trucks and stockpiled outside the pit. The ore is planned to be reloaded by a wheel front-end loader into road trains (currently 45T) and hauled to the Silver Yards beneficiation area.

18.4.8.3 <u>*Drilling and Blasting*</u>

Drilling will occur for both ore grade/quality control and for blasting purposes when required. Based on historic experience in the area, the drill pattern size for blasting is expected to be a 7.5 – 9 m square pattern. Blasting at James and Redmond will be episodic as the deposits are soft in nature Present experience in stripping waste at James pit indicates much of this ore body may be free digging. Any hard areas will be being handled by the larger break out force Caterpillar 385 excavator. Provision for blasting will be available. It is planned that blasting will initially be done if necessary with packaged/cartridge type explosives.

18.4.9 *MINE SERVICES*

18.4.9.1 *Maintenance Activities*

A maintenance/workshop shed 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. The building will have a self-contained foundation/flooring system sloped to collect all contaminants and closed circuit wash bay and an oil-water separator, which will be emptied by licensed contractor on a routine basis and managed in accordance with applicable regulations. There will be no discharge of this into the surrounding environment. The workshop will be equipped with compressed air and related tools, tire changing equipment, and hydraulic hose preparation.

Shipping containers are utilized for site storage of small retail-size quantities of hydraulic oils and other materials which may be required for the limited mine vehicle/equipment maintenance. LIM has ownership of the large Hollinger warehouse, situated on the outskirts of Schefferville, where major repairs can be carried out, if necessary, along with the storage of equipment and strategic spare parts.

18.4.9.2 *Road Maintenance*

Haul roads and the mine access roads are be maintained using a motor grader. A road roller is available for compacting areas of roadway which require rebuilding or repair.

18.4.9.3 *Communications*

All mining equipment and mine vehicles are equipped with a two-way radio system. This radio system is available within the beneficiation building, maintenance building, and mine offices. A transmitter/receiver station including antenna tower and housing for radio communication equipment may be required as Redmond, Gill, Ruth Lake 8 and Knob Lake 1 deposits are brought on line. The location of the tower would be selected to optimize communication transmissions between the James – Redmond – Silver Yards sites.

Telephone and internet services are provided through satellite services and installed at the mine site and Bean Lake personnel camp.

18.4.10 *PIT DEWATERING*

18.4.10.1 *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 m3/min. Discharge of the dewatering groundwater will be to: 1) the beneficiation area for process water; and 2) the remainder will be directed to two of the three settling ponds prior to release to the environment. A small controlled quantity of water will be discharged from these settling ponds 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. A third pond has been constructed to receive surface waters.

18.4.10.2 *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.

18.4.11 *Technical Services*

18.4.11.1 *Grade Control*

LIM staff will be responsible for grade control. LIM will sample the free digging ground and blast holes (where required), and use the resulting assays to guide the mining operations for the optimum separation of ore and waste. They will map and sample faces, using all the information to update sections and future bench plans.

18.4.11.2 *Mine Engineering*

LIM staff will work with the contractor to provide control of the mining. All blast holes will be surveyed in conjunction with grade control and blast design. As cost and geotechnical information is gathered, the pit design will be periodically reviewed and optimized.

18.4.11.3 *Geotechnical Monitoring*

Initially, slopes will be monitored with simple surveying techniques and with extensometers as required. A geotechnical consultant will be engaged to visit the mine regularly. Geology and survey staff will monitor and map as required.

18.5 Beneficiation

18.5.1 *Process Design*

The process design is based on mineralogy and equipment testing performed as described in Section 16. The Silver Yards plant is installed at the former Silver Yards marshalling area, just north of the James North deposit.

The building and contents are semi-mobile and modular to fit with the Project's long term plans. The Beneficiation buildings house the tumbling scrubber, primary screening equipment, secondary screening equipment, and various chutes, conveyors, and pumps. The beneficiation plant is designed to operate on average 7 to 8 months per year. Details of the process flow and equipment are provided in the following sections.

Other buildings at the beneficiation area include: site offices and analysis laboratory, which are standard mobile trailers/modular units; maintenance shed, which is a sprung type structure; and warehouse facilities, which is container type storage.

The current plant installation (Phase I) consists of a washing and screening plant to produce two products, namely lump and sinter fines. The plan for the first year is to only wash and screen the higher grade blue ore material, while higher silica blue and the yellow ore will be stockpiled for later treatment.

All the equipment and piping for the Phase I washing and screening plant has been installed. Electrical cabling will be installed in the early spring season 2011. The current plan indicates that commissioning of the Plant will commence in April 2011 and production will start in May 2011. The Plant was designed by DRA Americas and installed and built by a local engineering company from Labrador City.

The Plant was built with two parallel lines operating as modular units. This was done to decrease the downtime of the Plant as well as to make it modular for the possible future moving of the Plant closer to other deposits, once the first deposits have been depleted.

It is intended that the Silver Yards Plant will be upgraded and expanded to improve recoveries, treat lower grade and higher silica ores and increase throughput and output.

Phase II will consist of the installation of a fines recovery system, including a Floatex Density Separator on the (-600μm +38μm) fraction and a FLSmidth Pan Filter to dry the product to a moisture of <8%. This installation will be completed during the summer of 2011 and should commence operation in September 2011.

Phase III of Silver Yards Plant will be the installation of an additional line which will increase the plant throughput capacity and improve recoveries. As a result of metallurgical test-work carried out in 2010 it has been shown that the iron ore recovery can be increased by the incorporation of additional process equipment. This work is currently in the metallurgical test-work design phase. Current indications are that this enhanced recovery, and consequential increase in product grade, will provide a viable return on the additional capital requirement.

This work is currently being planned and will entail the installation of jigs to upgrade the final products and the installation of a magnetic separation stage on the slimes fraction to produce ultra-fines, which will be another saleable product. Testing and design of the Phase III expansion is currently in progress and, dependent on the results of that program, the Phase III expansion should be installed for operation in mid-2012. The additional line when installed will initially be used to process the higher silica ore. The yellow ore will also be processed when the equipment in Phase 3 is fully installed.

The products will be stockpiled via two radial stackers. Train loading will be carried out with front end loaders straight into the rail wagons. A spur line dedicated for the loading operation is now complete and an extension to provide further wagon storage is to be built shortly.

18.5.2 *Products Specification*

Due to the fact that silica and clays are favourably concentrated mainly in the finer size fractions, it is expected that for a ROM feed of 60-61% Fe, the lump and coarse sinter feed product grades will be in the range of 64-65% Fe, and this is confirmed by the specifications presented in the different test programs.

The James ore body will form the majority of the feed to the plant in the first few years. The expectation is that the average grade fed to the plant in the first two years will be higher than the resource average grade, which will give LIM enough time to install the additional equipment, such as jigs and magnetic separation equipment to process a feed of 55-57% Fe and still be able to maintain the products grades of above 63% for the lump and sinter products.

Heavy liquid separation tests on the James blue ore showed promising results with high upgrade ratios at high Fe recoveries. This indicates that an upgrade of the ore via jigging should increase product grades to the levels stated above, as well as ensure a more consistent product specification.

18.5.3 *Process Description and Flowsheet*

The process flowsheet consists of the following areas:

18.5.3.1 *Primary Crushing Area*

The ROM ore from the pits will be delivered via off-highway end dump trucks to the primary mobile crushing plant and either directly dumped into the feed hopper or stockpiled nearby for subsequent reclaiming into the feed hopper by a front end loader or a loader and truck.

The primary mobile crushing plant includes a hopper, vibrating grizzly feeder, jaw crusher, various chutes, bins, and conveyors, and lubricating system.

The ROM feed will have a top size of 600 mm. It is expected that approximately 50% of the feed will bypass the primary crushing as it will already be minus 100 mm.

The primary crushing plant is not enclosed. There will be a dust collector system accompanying the Primary Crushing circuit.

18.5.3.2 *Tumbling Scrubbers Area*

The discharge from the Primary Crusher will be conveyed via a splitter to two lines starting with a Tumbling Scrubbers circuit. The purpose of this step is to beneficiate the ore by incorporating water to wash the clay materials from the ore materials. The scrubbers are sized at 2,100 mm x 5,000 mm each and have motors with 90kW (each) power installed.

18.5.3.3 *Primary Screening Area*

The discharge from the Tumbling Scrubbers circuit proceeds to the Primary Screening circuit. This is the first stage of classification. The primary screening units are double deck screens with openings of 25 mm and 1 mm and are sized at 1,840 mm x 4,870 mm.

The oversize material (+25 mm) on the top deck is sent to the secondary crushing circuit, the undersize material (-1 mm) from the bottom deck is sent to the Secondary Screening circuit, and the remaining material (+1 mm, -25 mm) is conveyed to the Lump Ore screening area.

18.5.3.4 *Lump Ore Screening Area*

The oversize of the second deck from the Primary Screens (+1 mm, -25 mm) will be fed to a single Lump Ore Screen with the same size as the primary screens 1,840 mm x 4,870 mm. The Lump Ore Screen deck has an opening of 8mm and the oversize material (+8 mm, -25 mm) will be stockpiled via stacking conveyor as a final Lump product and the screen undersize (+1 mm, -8 mm) along with the oversize of the Secondary Screens will be transported via a stacking conveyor to a stockpile as a final Sinter Fines product.

18.5.3.5 *Secondary Crushing Area*

The oversize (+25 mm) from the primary screening circuit is transferred to the secondary crushing circuit. The secondary crusher is a standard cone crusher, 4.1/4 foot Symons. The product from the cone crusher will be re-circulated back to the primary screening circuit.

18.5.3.6 *Secondary Screening Area*

The undersize (-1 mm) from the Primary Screening circuit will be pumped to the Secondary Screening circuit. It consists of two four deck Derrick Screens type 2SG48-60R.

The oversize material (+300 μm for the higher grade material and +600 μm for the lower grade material) from the secondary screen is conveyed to the Sinter Fines Stockpile.

At the plant start-up, the undersize from the secondary screen will be pumped to the reject rock fines disposal area. In summer 2011, new equipment will be installed to recover the (-600 μm/-300 μm) fraction. This equipment will include two stages of de-sliming via cyclones, a Floatex Density Separator and filtration equipment.

18.5.3.7 *Fines Recovery Plant*

The undersize material (+100 μm, -600 μm) from the secondary screen is pumped to the two stages de-sliming cyclones with the primary cyclone underflow feeding a twin 6' x 6' Floatex Density Separator model LPF-1830 HM and the secondary cyclone underflow along with the Density Separator overflow feeding temporary ponds for future Wet High Intensity Magnetic Separator (WHIMS) feed. The undersize material (-100 μm) from the Floatex Separator will be dewatered in a 4,000 mm dia., $10m^2$ filtering area FLSmidth Dorr-Oliver Heavy Duty Horizontal Pan Filter type HPF $10m^2$ to a moisture of below 8% and then stockpiled as a Sinter Fines product. The water from the filter is pumped to the reject rock disposal area.

18.5.3.8 *Products Storage*

The iron ore products from the beneficiation process will be conveyed from the enclosure to the respective radial stackers. The lump ore product and the sinter fines products will be stockpiled separately. An area of approximately 4,300 m^2 is available for clean ore storage providing total capacity of approximately 20,000 tonnes. Drainage from the ore stockpiles will be managed through site grading and ditching. The surface run-off will be directed to the Silver Yards ditch, which drains to the James Settling Pond.

18.5.3.9 *Rejects Disposal Area*

The existing historically-mined and flooded Ruth Pit, located north of the Silver Yards Plant, will be used as a final plant rejects disposal.

The undersize material from the Secondary Screening circuit (-100 μm) and the filtration filtrate will be combined and pumped as a slurry to the reject rock fines disposal area. The design for the reject fines disposal will include the following:

- The reject fines slurry will be pumped approximately 2.9 km via an above ground, 300 mm diameter HDPE pipeline to the Ruth Pit. The Ruth Pit is an exhausted mine that is now flooded. The surface area of the Pit is 61.5 ha and the depth of the pit is 120 m.
- An emergency disposal/storage area within the Silver Yards area is also designed to provide room in the case the reject fines pipeline or beneficiation process equipment needs to be purged. Its location is coincident with the Silver Yards settling pond.

18.5.3.10 *Plant Expansion and Upgrade*

LIM is planning to expand and upgrade the Silver Yards Plant by the installation of additional equipment and a new processing line. This installation will be subject to completion of the test-work program conducted for the High Silica ore, and is scheduled for potential installation in time for the 2012 production season. The additional line will consist of a Primary Crusher, Tumbling Scrubber, Primary and Secondary Screening, Secondary Crusher, High Pressure Grinding Rolls (HPGR), Sinter Jig, Roller Crusher, De-sliming Cyclones, Hydrosizer, and Vacuum Disc Filter to produce Sinter Fines and Pellet Feed products.

LIM is also planning to install additional process equipment to process the (-100 μm) products and to beneficiate lower grade iron ore to produce a high grade saleable product. This will include installation of a lump jig and a coarse sinter jig to increase the two products grades to a desired 64-66% Fe and a Wet High Intensity Magnetic Separator (WHIMS) to further process the (-100 μm, +25 μm) overflow of the Floatex Separator and the underflow of the Secondary De-sliming Cyclone to produce a third product – Ultra Fines (pellet feed). The product will be subsequently dewatered in a Vacuum Disc Filter.

This testing on the proposed equipment includes:

- HPGR – High silica ore samples will be sent to KHD Humboldt Wedag International AG in Cologne, Germany to confirm the possible utilization of a High Pressure Grinding Rolls (HPGR) equipment to further grind the and determine the optimal grinding size parameters
- Lump ore and coarse sinter feed jigs – The HPGR crushed sample of the size fraction (-5mm + 1mm) and (-3mm + 1mm will be send to MBE Coal & Minerals Technology GmbH in Cologne, Germany, for BATAC® jig testing to increase the lump and sinter fines grade and determine the process recovery parameters.
- Hydrosizer – The screened out -1mm from the HPGR product will be tested at AKW Apparate + Verfahren GmbH in Germany to determine the additional sinter fines recovery and potential WHIMS feed
- WHIMS – Products from the jigs and the AKW hydrosizer and the middlings products from the jigs will be further tested in a JONES® Wet High Intensity Magnetic Separator (WHIMS) to determine the recovery and grade of the Ultra Fines (Pellet Feed) product. The tests will be carried out with different magnetic intensities at feed solid concentrations of 500 g/l and 550 g/l to obtain the best process conditions.

This test program is currently in progress and it is expected to be completed in May 2011. Additional test work will be conducted in 2011 to determine the optimal process parameters for the yellow and red ores. It will consist of mineralogy and equipment testing to optimize process thresholds for the blue ores.

18.5.3.11 *Laboratory*

An on-site mobile laboratory in a portable modular building is established at the Silver Yards area. The laboratory 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. The analytical methods used will be fusion (lithium metaborate) followed by XRF spectrometry.

18.5.3.12 *Rail Loadout Area*

The material from the Sinter Fines stockpiles and the Lump Ore stockpile will be reclaimed with front end loaders and delivered to rail cars.

18.5.4 *Plant Production Rates*

The current plant production capacity was originally designed for a 400t/h and a base case of 212d/y of operation. Overall the equipment as built is able to handle 10-15% more feed and, dependent on the weather conditions, the plant should be able to operate 230-240 days per year and process a maximum of 10,500t/d. With the installation of the equipment for Phases II and III, the plant throughput is expected to increase by 50% and the overall plant recovery is expected to increase to over 80%.

Figure 18-10 Silver Yards Processing Plant Plan

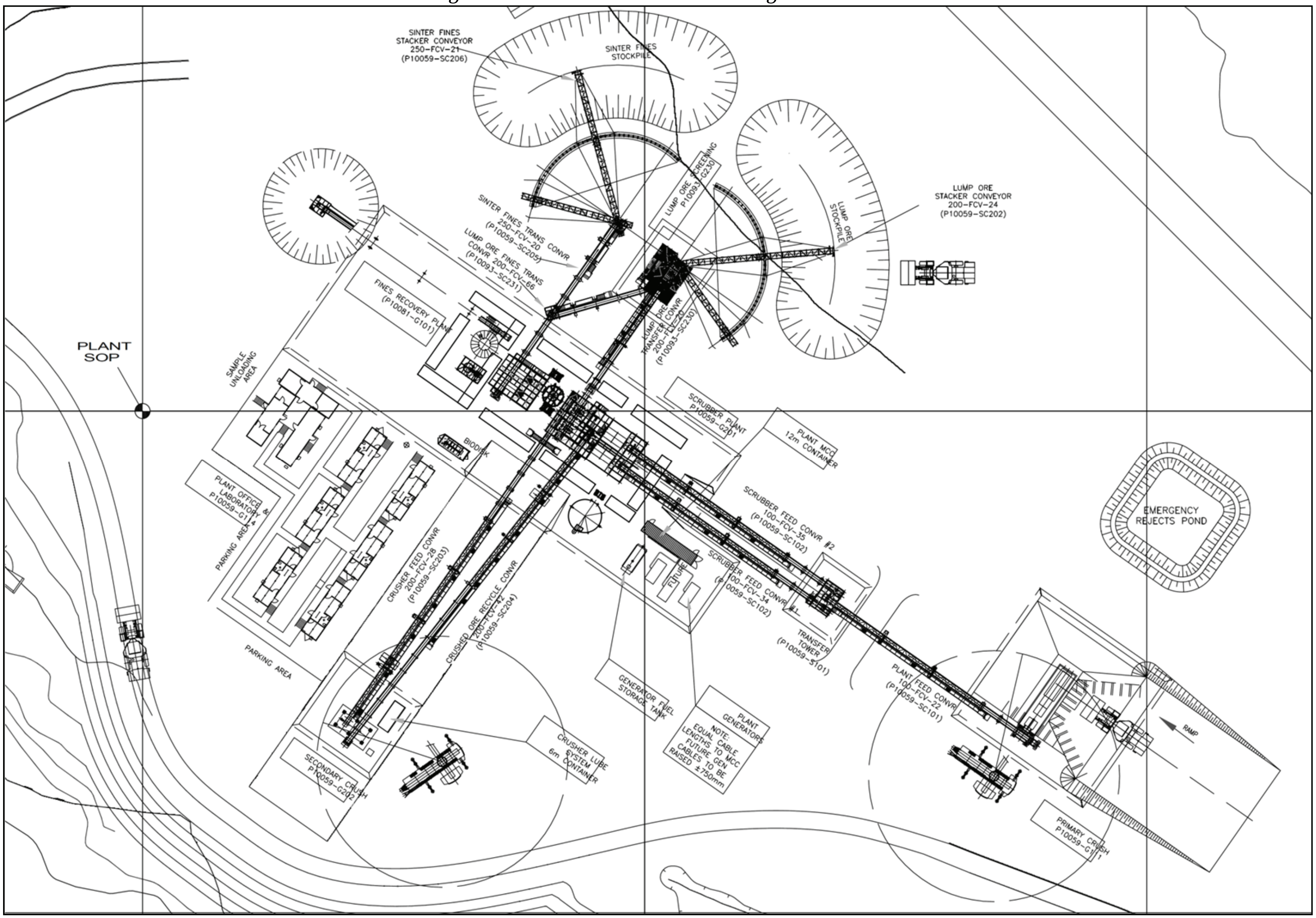


Figure 18-11 Silver Yards Processing Plant Flowsheet – Start-Up 2011 (Phase I)

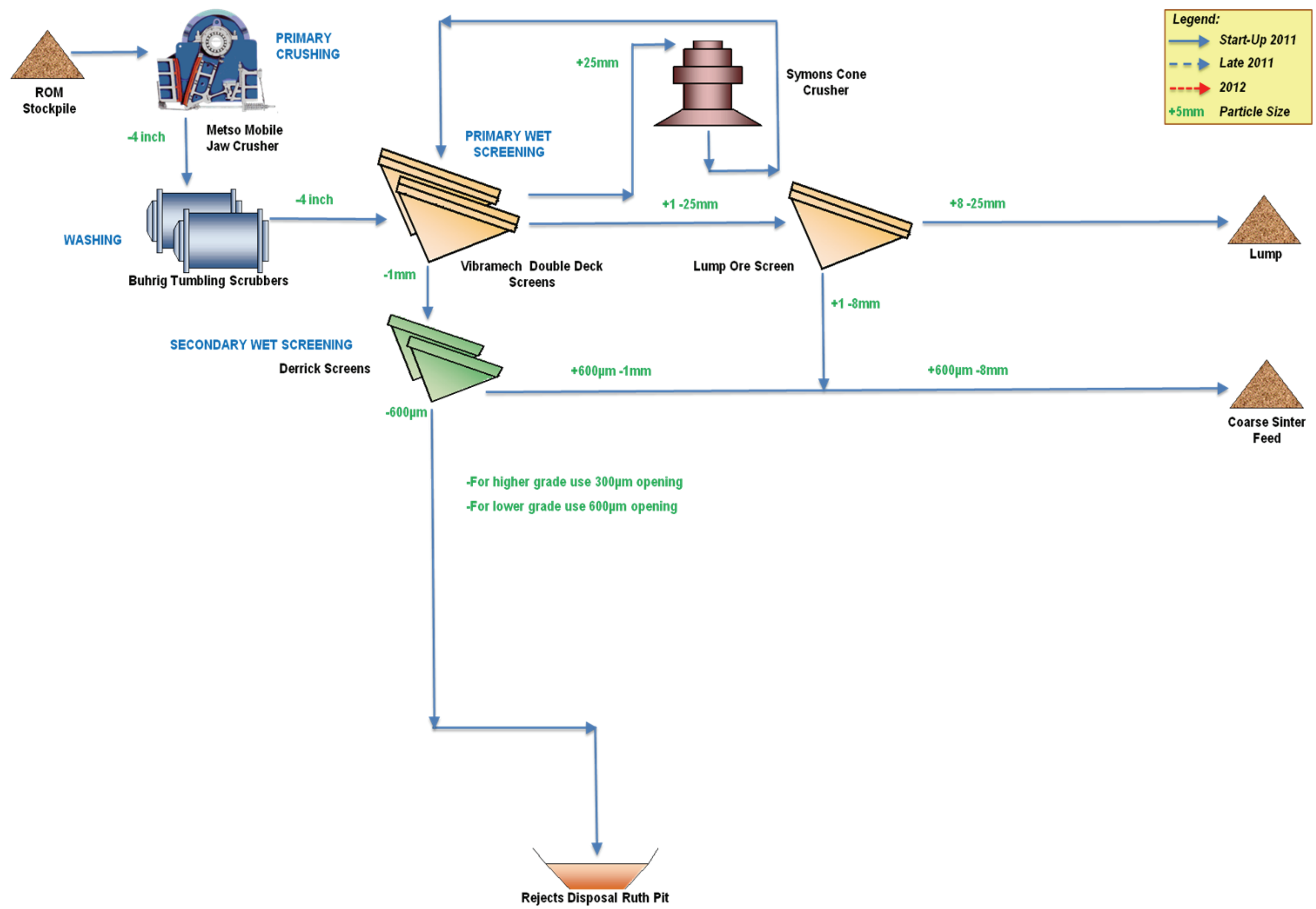


Figure 18-12 Silver Yards Processing Plant Flowsheet – Late 2011 (Phase II)

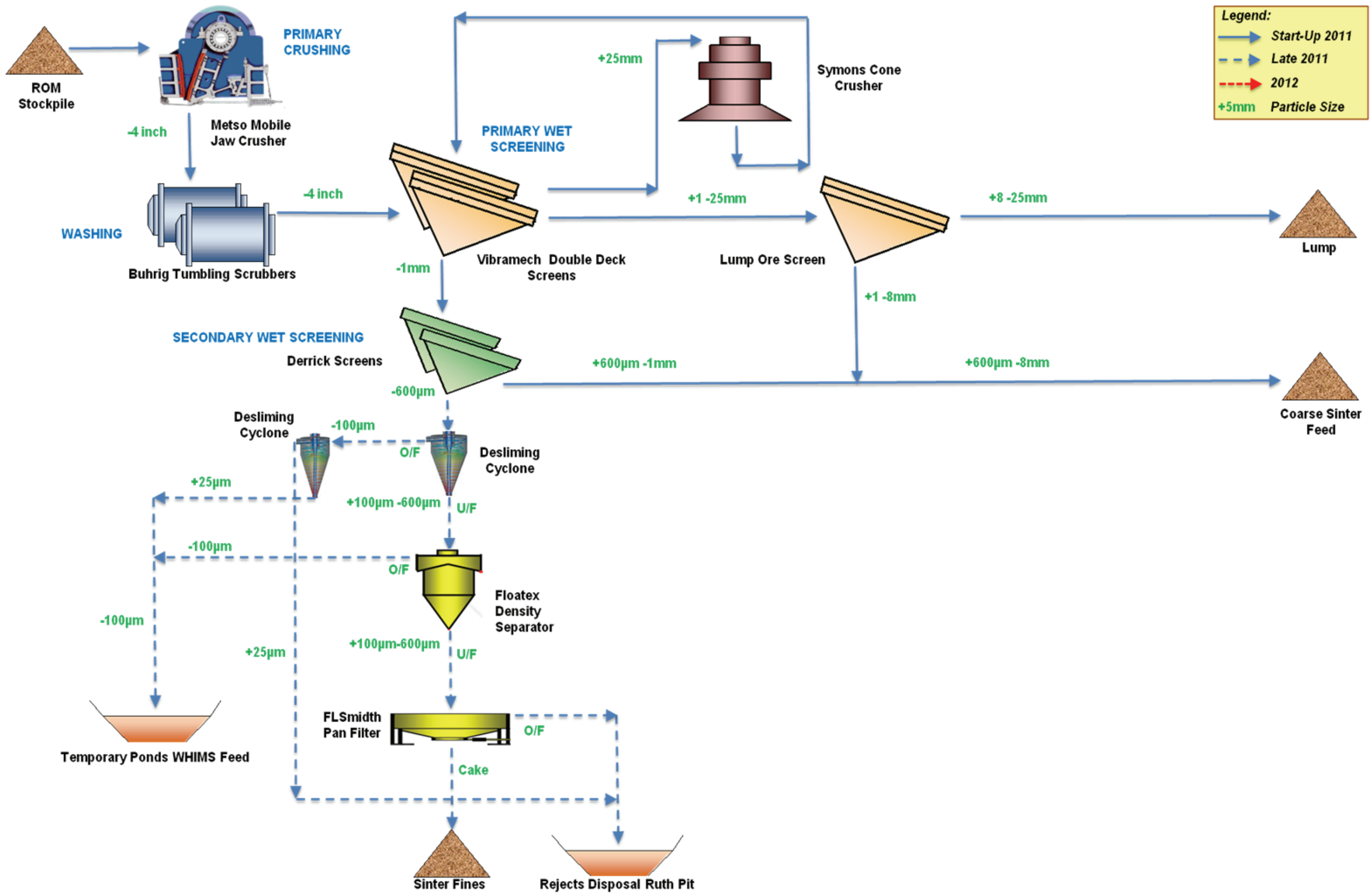
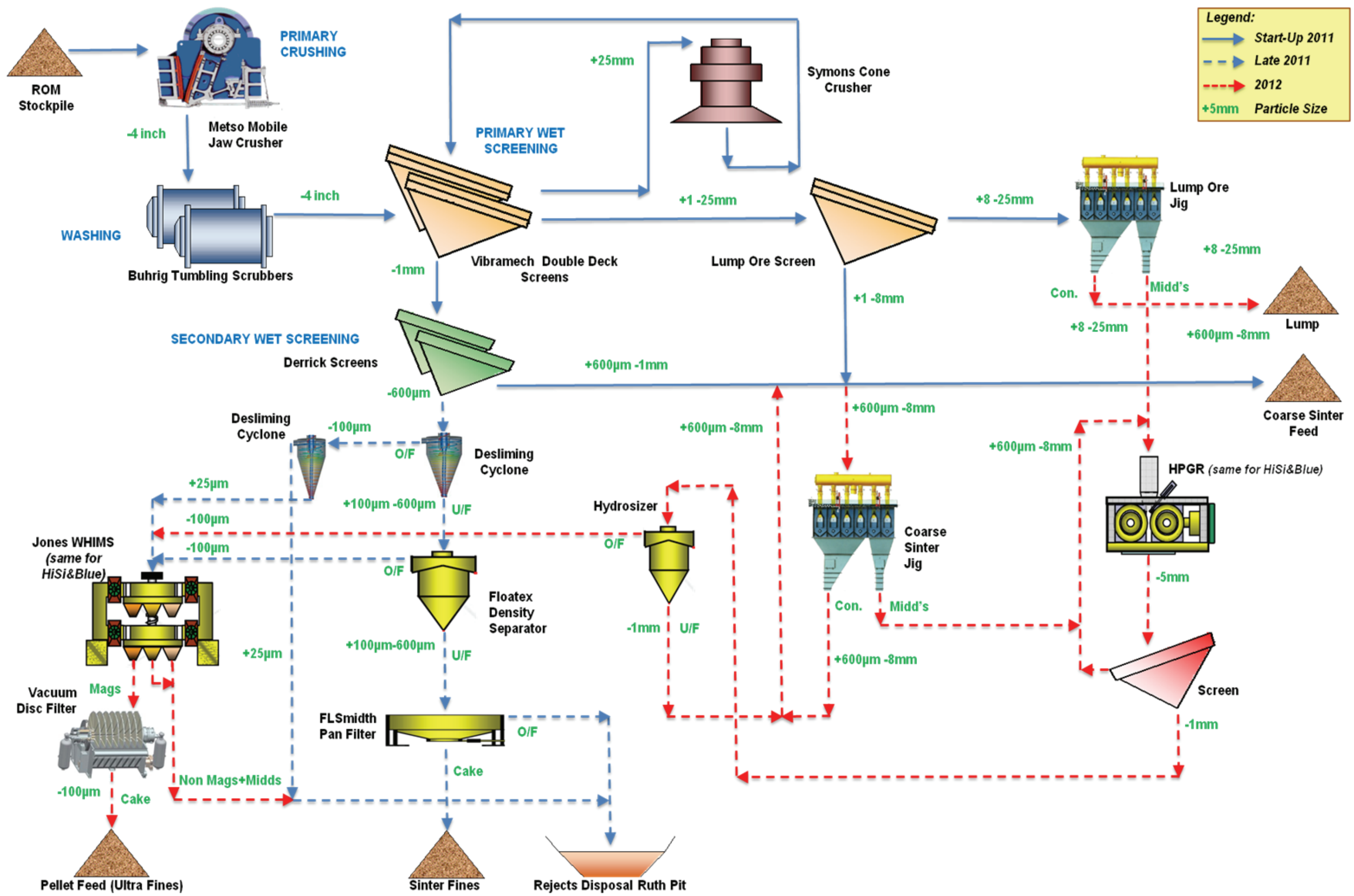


Figure 18-13 Silver Yards Processing Plant Flowsheet – 2012 (Phase III)



18.5.5 *Process Recoveries and Grades – Silver Yards Plant*

Silver Yard Plant

Based on the existing testing and engineering design the expected recoveries for the two final products from Phase I (processing blue ore only) of the current Plant are:

Lump	19.0%	~65% Fe
Sinter Fines	43.0%	64-65% Fe
Total Recovery	62.0%	

Phase II – Additional Equipment

The inclusion of the density separation and the filtering process is expected to recover part of the previously treated rejects fraction (-600μm) and the Sinter Fines product and is expected to increase recovery by about 13.2%. The Phase II recoveries for the Lump ore will stay the same as there is no change to this part of the processing flowsheet.

Lump	19.0%	~65% Fe
Sinter Fines	56.0%	64-65% Fe
Total Recovery	75.0%	

Phase III – Expansion

With the installation of the jigs, the expected recoveries will change as shown below. The Lump and Sinter Fines products will improve in terms of grade at the expense of the recovery. The Phase III equipment will add another product – Ultra Fines or Pellet feed (+25 μm, -100 μm), expected to be approximately 12.2% recovery, for a combined overall recovery of over 80%, based on tests of the blue ore only.

Lump	14%	65-66% Fe
Sinter Fines	54%	64-66% Fe
Ultra Fines	12%	61-63% Fe
Total Recovery	80%	

In addition, the Expansion Line is expected to produce two more products yielding the following recoveries from the treatment of lower grade and higher silica blue ores:

Extension Line Sinter Fines	50%	63-66% Fe
Extension Line Ultra Fines	17%	61-63% Fe
Total Recovery	67%	

The processing recoveries and grades on the expansion line are still to be confirmed by test programs, currently in progress, which will be completed in May 2011. The current process parameters are estimated based on of the equipment test results for the blue ore and assuming the high silica ores will be more difficult to process compared to the standard blue ore.

18.6 PRODUCTION SCHEDULE

Production is scheduled to commence from the James deposit in the second quarter of 2011. This will be treated through the Silver Yards plant. Production is planned to commence at the rate of 10,000 tonnes of ore per day and continue through to November. There will be a number of enhancements made to the Silver Yard Plant during the next year. It is intended that other Central Zone deposits, in addition to James and Redmond, including Denault, Ruth Lake 8, Gill, Knob Lake, Star Creek, Squaw Woolett, Lance Ridge and Fleming 9 will also be treated at the Silver Yard plant. It is expected that production from Silver Yards will continue until about 2021.

It is expected, subject to permitting, that a new plant will be built at the Redmond site to receive first ore from the Houston deposit during 2013. This plant, which is likely to be of a similar size to the Silver Yard Plant, will after Houston is complete then treat ore from the nearby Malcolm deposit, and then in about 2021 begin to treat ore from the more distant Sawyer Lake and Astray Lake South Zone deposits. It is forecast that this plant will continue to operate until about 2028. No modifications or expansions are expected to be made to this plant following initial construction.

Subject to further engineering and design, it is contemplated that a third plant will be built close to the Howse deposit and will commence operations on a limited scale in 2015 treating ore from the nearby Barney deposit. This plant will be expanded during 2021 to treat increasing tonnages of ore from the Howse deposit and will continue to operate through to about 2028.

Table 18.14 shows the preliminary production schedule for the years 2011 through to 2028 for Stages 1 through to Stage 4 of LIM's future operations. This table shows both the tonnes of Run of Mine (ROM) ore treated from each deposit or group of deposits and the forecast tonnes of saleable product from each such deposit. The table is divided into the three processing plants and shows both ore in current resources and ore in historical resources. Production of direct shipping lump ore and sinter fines is forecast at around 1.5 million tonnes in 2011 and, based on current and historical resources, growing to approximately 5 million tonnes in 2015 and thereafter. Production from the first four stages is expected to continue at about this rate through to about 2028.

This production forecast, particularly in the medium to longer term is dependent upon further exploration to bring the historical resources to a current status and upon successful permitting of these future planned operations and upon further metallurgical test-work on individual deposits and engineering design. A Feasibility Study has not been completed on any of these projects.

Detailed mine planning has been carried out on the current resources at the James and Redmond deposits but only preliminary planning carried out on the newly revised current resource at Houston. The results from this planning have been extrapolated to the other deposits, both current and historical, in the development of this preliminary production schedule. Based on James and Redmond testwork planning a mineable recovery of between 80-85% of the resource is assumed and adjustments have been made around this number based on the general topography and known characteristics of individual deposits. Within the schedule a level of 5% mining loss is assumed and a 5% dilution factor has been added.

The Silver Yards Plant as currently installed has a capacity of 10,000 tonnes per day over an assumed 220 day operational year giving a processing capacity of 2.2 mtpa on conventional ores.

During 2011, which will be the start up and commissioning year, it is expected that throughput will be limited to a total of 2.0 mt. It is planned to add an additional line to the Silver Yards Plant to increase capacity and treat high silica ores. This additional line, which will be available for the 2012 processing year, will be designed with a processing capacity of 1.0 mtpa and will give a total capacity for the Silver Yards Plant of 3.2mtpa over an assumed 220 day operational year.

The new Redmond Plant will be designed with a more composite arrangement than the Silver Yards Plant with the high silica section integrated into the main body of the plant. This Redmond Plant will have a design capacity similar to Silver Yards at about 3.0 mtpa but based on the current Houston resource estimate initial throughput will be about 2.5 mtpa. Should the resource at Houston be increased with the additional planned drilling then it will be possible to increase the mining and treatment rate up to 3 mtpa over an assumed 220 day operational year.

At present the Howse plant is envisioned as a modular arrangement with an initial unit capacity of 0.8 mtpa to treat only blue ore. This will then be extended with a second module to 1.6 mtpa, again for blue ore, and then eventually a third module to take the capacity to 4 mtpa of combined blue ore and high silica feed.

Volumes of saleable product are derived from the projected tonnages treated in each plant by ore type and assuming recoveries for each ore type as noted in section 18.5.5. In general this assumes recovery of 80% for conventional blue ore and 67% for High Silica ore. No adjustments have been made for yellow or any red ore that may be treated following detailed metallurgical testwork on these ore types.

It is expected that the Stage 5 deposits will eventually be brought to production following the completion of operations at both the Redmond and Howse plants and much of the equipment from those plants is expected to be utilised to treat these more distant Stage 5 deposits. However there is currently insufficient detailed information available on the deposits to make any long-term estimate of future production schedules.

The projected production schedule is preliminary in nature and includes the assumed mining and treatment of historical resources. The historical resources are not current and do not meet NI43-101 Definition Standards. A qualified person has not done sufficient work to classify the historical estimate as current mineral resource. These historical results provide indication of the potential of the properties and are relevant to ongoing exploration. The historical estimates should not be relied upon. There is no certainty that the production schedule will be realized.

Table 18.14 Planned Production Schedule Stages 1 to 4 (tonnes x 1,000) (Subject to exploration, permitting and detailed engineering)

Deposit		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Silver Yards Plant – Central Zone																				
James	ROM	2,000	3,200	1,140	1,000	420														7,760
	Product	1,475	2,456	786	673	282														5,672
Redmond	ROM			1,500	700	400														2,600
	Product			1,216	567	269														2,052
Denault	ROM			560	1,500	1,620	820													4,500
	Product			454	1,216	1,289	551													3,510
SubTotal Current	ROM	2,200	3,200	3,200	3,200	2,440	820													14,860
	Product	1,475	2,456	2,456	2,456	1,840	551													11,234
Gill-Ruth	ROM					760	2,380	3,120	1,200	1,000	640									9,100
Knob	Product					616	1,905	2,402	972	810	518									7,223
SK+SW+	ROM								1,700	1,200	1,560	240								4,700
LR+F9	Product								1,281	972	1,264	194								3,711
SubTotal	ROM					760	2,3800	3,120	2,900	2,200	2,200									13,800
Historical	Product					616	1,905	2,402	2,253	1,782	1,782									10,934
Total Silver Yards	ROM	2,000	3,200	3,200	3,200	3,200	3,200	3,120	2,900	2,200	2,200	240								28,660
Plant	Product	1,475	2,456	2,456	2,456	2,456	2,456	2,402	2,253	1,782	1,782	194								20,386
Redmond Plant - South Central Zone and South Zone																				
Houston	ROM			1,250	2,500	2,500	2,500	2,500	2,500	1,850	380	760								16,700
Current	Product			979	1,957	1,957	1,957	1,957	1,957	1,465	255	513								12,097
Malcolm	ROM									650	2,120	640	320							3,730
	Product									492	1,702	557	216							2,962
Sawyer Astray	ROM											1,100	2,180	2,500	2,500	2,500	2,500	2,500	2,220	18,000
	Product											891	1,741	1,957	1,957	1,957	1,957	1,957	1,755	14,172
Total	ROM									650	2,120	1,740	2,500	2,500	2,500	2,500	2,500	2,500	2,200	21,730
Historical	Product									492	1,702	1,448	1,957	1,957	1,957	1,957	1,957	1,957	1,755	24,692
Total Redmond	ROM			1,250	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,250	38,430
Plant	Product			979	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,957	1,755	29,231
Howse Plant – North Central Zone																				
Barney	ROM					750	750	750	1,000	1,400	1,300	50								6,000
	Product					608	608	608	776	1,079	1,012	34								4,725
Howse	ROM									200	300	3,500	3,800	3,800	3,800	3,800	3,800	2,000	1,800	26,800
	Product									162	243	2,767	2,969	2,969	2,969	2,969	2,969	1,562	1,407	20,986
Total Historical	ROM					750	750	750	1,000	1,600	1,600	3,550	3,800	3,800	3,800	3,800	3,800	2,000	1,800	32,800
Howse Plant	Product					608	608	608	776	1,241	1,255	2,801	2,969	2,969	2,969	2,969	2,969	1,562	1,407	25,711
Total																				
Current	ROM	2,000	3,200	4,450	5,700	4,940	3,320	2,500	2,500	1,850	380	760								31,560
	Product	1,475	2,456	2,456	2,456	3,797	2,508	1,957	1,957	1,456	255	513								23,331
Historical	ROM					1,510	3,130	3,870	3,900	4,450	5,920	5,840	6,300	6,300	6,300	6,300	6,300	6,300	4,050	68,330
	Product					1,224	2,513	3,010	3,029	3,515	4,739	4,621	4,926	4,926	4,926	4,926	4,926	3,519	3,162	51,997
Total	ROM	2,000	3,200	4,450	5,700	6,450	6,450	6,370	6,400	6,300	6,300	6,280	6,300	6,300	6,300	6,300	6,300	4,500	4,050	99,890
	Product	1,475	2,456	3,435	4,413	5,021	5,021	4,967	4,986	4,971	4,994	4,918	4,926	4,926	4,926	4,926	4,926	3,519	3,162	75,328

18.7 SITE BUILDINGS AND INFRASTRUCTURE

18.7.1 *SUPPORTING INFRASTRUCTURE*

A workshop, warehouse, small fuelling station, offices, and a lunchroom including services such as washrooms and a first aid room have been established at the Silver Yards Beneficiation site. Other buildings, including the grade control laboratory, storage and electrical containers are also present.

18.7.2 *WORKSHOP*

A workshop has been constructed to conduct routine maintenance and non-major repairs for mine and beneficiation operations. The building will be equipped with the necessary tools and equipment to maintain the mobile fleet.

In addition, diesel storage is provided for power generation.

18.7.3 *WAREHOUSE*

The warehouse will be used to store strategic spare parts, service spares, and consumables such as tires, filters, lubricants/oils, and brake parts, drill steel, bits and parts for drill rigs.

18.7.4 *FUEL STORAGE*

Two Raymac Arctic Guard urethane coated nylon fabric bladders with a capacity of 113,500 Litres (30,000 USG) each, form the diesel oil storage tank system to be used for fuel supply at the Silver Yards area. The diesel fuel will be transported by rail to Silver Yards 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 is designed to retain 110 percent of the tank volume. The diesel truck will carry the diesel from the bulk storage tank to the equipment and diesel day tanks. All tanks will feed via oil/water separators. The effluents from the oil/water separator will be disposed of as per environmental standards and regulatory approvals.

18.7.5 *EXPLOSIVES STORAGE AND MIXING FACILITIES*

The contractor will be responsible for the transport, storage and use of all explosives. Magazines, vehicles and use and charging procedures will comply 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. The Contractor will hire experienced/licensed blasters.

18.7.6 *CAMP*

The mine camp is designed to accommodate 71 persons, has an overall footprint of approximately 7,000 m2, and is located on the site of a former ski hill and lodge close to Bean Lake (Figure 18-8). The site for the camp was previously cleared and developed for facilities associated with the ski hill. The original ski lodge remains on the site and will be utilized as storage. Camp structures consist of semi-mobile pre-fabricated modular units linked together forming a single storey complex. The camp was constructed by a specialized camp management company and will be commissioned and in full operation in March 2011.

The dormitories are comprised of single ensuite rooms with TV and internet access. The camp includes a kitchen and dining room block, laundry facilities, and a recreation area. The recreation facilities currently includes two pool tables, television lounge and exercise equipment.

Initially two diesel generators (each 450 kW) will be used as a temporary power source for the camp until electricity can be connected from the nearby grid. Grid access is within 20 metres and no significant construction is anticipated to facilitate connection.

Camp water requirements will be provided by a certified and tested groundwater well onsite. 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 in the settling pond down-gradient of the camp.

Figure 18-14
Camp Location and Features

18.8 POWER SUPPLY

Currently, all energy for LIM's Silver Yard beneficiation plant and camp is provided by diesel generators. It is anticipated that future electrical power needs will be met by the Menihek hydro-electric generating plant owned by Newfoundland and Labrador Hydro (Nalcor).

The Menihek Power Plant is located 32 km southeast from Silver Yard and is the only provider of electric power to the area. The Menihek plant was built by IOC specifically to support iron ore mining and services in Schefferville. The plant contains two 5 MW Westinghouse generators and one 12 MW unit. Presently two lines are distributing power to the Township of Schefferville. The existing transmission corridor runs across the proposed Redmond processing site. The main substation lowering the voltage of distribution to Schefferville town is close to Silver Yards. Refer to Figure 18.1 for locations.

LIM understands that in the near future, Nalcor plans to refurbish one line to continue to supply power to the town of Schefferville and the other line will be available for commercial service including mining. For the purposes of this report it is assumed that power for the Redmond Processing Plant will be supplied by Nalcor from the Menihek Power Plant.

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 Yards. These generators will be continuous duty, 750kW, 60 Hz, and 600 V 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, drawing hydro-electric power from the Menihek power grid. A substation will be required and it is expected to be located near the Silver Yards area.

18.9 WATER USE

18.9.1 *PROCESS/WASH WATER*

Water for use in the beneficiation process will be sourced from the dewatering of James pit 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 m3/min (2,187,000 m3/year).

The wash water will be transported for discharge to Ruth Pit by a 10 inch HDPE aboveground pipeline that follows the existing road.

18.9.2 *POTABLE WATER*

Potable water will be required at the beneficiation building, various site office trailers at Silver Yards, 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. Pending additional assessment, potable water may eventually be sourced from groundwater pending receipt of applicable regulatory approvals.

18.9.3 *Fire Water Supply*

The fire protection systems design is based on good engineering practice, using National Fire Protection Association (NFPA) standards, IBC and IFC to provide appropriate life and loss protection. The fire protection system is based on the understanding that the beneficiation shed structures and lining are non-combustible and are providing easy exit on all sides.

18.9.4 *Silver Yards Settling Pond*

The Silver Yards Settling Pond will serve two functions. The primary function of the Pond will be to receive the flush of water from the regular maintenance of the pumping/pipeline system. The secondary function of the pond will be to receive the emergency discharge from the pipeline during a power or pumping failure.

18.10 Sewage Treatment and Disposal

Wastewater and sewage collection and treatment required at Silver Yards is identical to that described at the personnel camp.

18.11 Waste Management

The objectives of waste management are to prevent, minimize, and mitigate the impact of the waste materials on the environment. The plan is to control the on-site management and final disposal of wastes during the construction and operation phases. Where and when possible, a Reduction, Reuse and Recycling policy, will be implemented to minimize waste generation.

18.12 Waste Rock Management

Waste rock will be hauled from the pit and disposed of outside the pit limits at a sufficient distance from the active pit limits, rivers and lakes. The locations of the waste rock storage areas have been selected to provide sufficient capacity as close as practical to the source of waste, and on moderate slopes to minimize the risks of failures. Precipitation infiltration and site drainage during construction may result in run-off water containing suspended solids. As a result, stockpile construction and mine design will include prevention and mitigation strategies for control and treatment of the suspended solids, as required (e.g., ditch blocks, filter cloths, settling ponds, etc.).

Any off-grade product from the beneficiation process will be hauled to a nearby stockpile location.

18.13 RAILWAY INFRASTRUCTURE

18.13.1 *RAILWAY INFRASTRUCTURE*

The plant product from the sinter fines stockpiles and the lump ore stockpile at Silver Yards will be reclaimed with front end loaders and delivered to rail cars on the re-laid Silver Yards spur line. It is also planned to re-establish track along the existing 10 km Redmond rail spur bed, currently located within the Redmond mine lease area, to connect the Redmond Mine Area to the main TSH rail line.

Under a Rail Co-operation Agreement LIM and NML have jointly agreed 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 rail co-operation agreement states that each Party 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.

The Parties have also 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.

The approximately 560 km (355 mile) main rail line between Schefferville and Sept-Îles, which was originally constructed for the shipment of iron ore from the Schefferville area, has been in continuous operation for over fifty years. The QNS&L, a wholly-owned subsidiary of IOC, was established in 1954 by IOC to haul iron ore from the Schefferville area mines to the port of Sept-Îles. After the shutdown of IOC's Schefferville operations in 1982, QNS&L maintained a passenger and freight service between Sept-Îles and Schefferville up to 2005. In 2005, QNS&L sold the section of the railway known as the Menihek Division (200 km) between Emeril Junction and Schefferville to Tshiuetin Rail Transportation Inc. ("TSH").

TSH owns and operates the approximately 235 km (130 mile) main line track between Schefferville and Emeril Junction where it connects to IOC's QNS&L Railroad, which connects the remaining approximately 360 km (225 miles) to Sept-Îles.

TSH is owned equally by a consortium of three local Aboriginal First Nations, Naskapi Nation of Kawawachikamach, Nation Innu Matimekush-Lac John and Innu Takuaikan Uashatmak Mani-Utenam (collectively, the "TSH Shareholders"). TSH currently operates passenger and light freight service between Schefferville and Sept-Îles twice per week.

LIM entered into a Memorandum of Understanding with TSH in 2007 pursuant to which LIM and TSH agreed to work together towards concluding a Transportation Services Agreement under which TSH will provide rail transportation and other related infrastructure services to LIM to transport the iron ore products. As provided in the MOU, the transportation of iron ore cars requires the unanimous consent of the TSH Shareholders pursuant to a unanimous shareholders' agreement dated August 23, 2004 among such parties. Such consent will be necessary in order for LIM to transport iron ore from the Houston Properties to Emeril Junction for onward connection via QNS&L to the port of Sept- Îles.

In February 2011, LIM entered into an Agreement with TSH for the transportation of iron-ore from LIM's Schefferville Area DSO Project over the 235 kilometre TSH Railway, which connects Schefferville to Emeril Junction, for the calendar year 2011.

The Agreement which includes a confidential tariff and other terms anticipates that iron ore will be hauled approximately eight months per year (April to November) with shipments on the TSH Rail commencing in April 2011, with the tonnage in calendar 2011 expected to be up to 1.5 to 2 million tonnes.

It is contemplated that a separate agreement between will be concluded with TSH for calendar 2012 and subsequent years. LIM's negotiations are continuing with other rail operators for the onward transportation of LIM's iron ore from Emeril Junction to the Port of Sept-Iles.

LIM has agreed to advance to TSH a capacity reservation deposit of $750,000 to enable TSH to prepare for smooth ramp up of its operations to ship LIM's iron ore in calendar 2011 in accordance with LIM's operating requirements. TSH will repay the reservation deposit over a two year period beginning in 2013 as a deduction against monthly haulage rates.

The Agreement acknowledges that it is in the best interests of both parties that the TSH Railway be rehabilitated as soon as possible in 2011 and that additional rehabilitation and capital funding will be necessary to increase tonnage capacity on the TSH Rail in subsequent years. Some refurbishment of the rails, ties and culverts will need to be carried out to enable the line to continuously carry large volumes of iron ore traffic. The 2011 rehabilitation program is the first year of an estimated ten year rehabilitation program to be carried out by TSH.

Under the Agreement TSH and LIM have agreed to co-operate, and to co-operate with others, on sourcing funding for the rehabilitation of the TSH Railway. TSH is in discussions with the Federal Government and with the Government of Quebec with regard to the financing of this upgrade. To expedite the rehabilitation program LIM has agreed to contribute $3.5 million towards the cost of the program, with expenditures to be approved and managed by a Partners Committee comprised of two representatives of TSH and two representatives of LIM.

Under the Rail Co-Operation Agreement LIM and NML have also agreed to collaborate to determine the most expedient means to refurbish the TSH rail main line to standards required to carry out the transportation of minerals extracted from the direct shipping ore deposits.

QNS&L operates the railway from Emeril Junction to Sept-Îles and this southern section of the railway currently carries the iron ore products from the Labrador City, Wabush and Bloom Lake iron mines to the port of Sept-Îles for each of IOC, Wabush Mines and Consolidated Thompson (Cliffs) respectively.

In March 2011, LIM entered into a Life of Mine agreement with QNS&L that provides that QNS&L will carry LIM's iron ore from Emeril Junction to Sept-Iles. This confidential agreement provides for a confidential tariff, with various capacity and volume commitments on the part of each of QNS&L and LIM.

At the Port of Sept-Îles (Arnaud Junction) the QNS&L railroad connects to the Arnaud Railroad (Chemin de fer Arnaud (CFA)), owned by Wabush Mines, which runs approximately 34 km around the bay to the terminal at Pointe-Noire.

LIM is in negotiations with CFA with regard to the transportation of LIM's iron ore products in 2011 and future years. CFA is a Common Carrier as such term is defined under the Canada

Transportation Act ("CTA"). Federal railway companies that are Common Carriers must by law issue tariffs in respect of the movement of traffic at the request of a shipper, and must meet statutory "level of service" obligations to all shippers, detailed in sections 113 to 116 of the CTA.

The existing rail services were extensively utilized by LIM during the latter part of 2010 to successfully transport all of the mining equipment and plant components to Schefferville.

18.13.2 *Rolling Stock*

LIM plans to lease rotary gondola ore cars each with a capacity of about 100 tonnes, with a car body suitable for a gross rail load of about 119 tonnes (263,000 lbs.). It is anticipated that three car sets will be required to transport LIM's iron ore tonnage in an eight month period in each year. Each car set will consist of 124 railcars in the first two years increasing to 240 railcars thereafter. The total railcar cycle time from the Silver Yards site to Pointe-Noire for the loaded movement and empty return of a train is expected to be approximately 68 hours.

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, and by the outcome of evaluations of railway operation.

The locomotives to run between the Silver Yards loading area and Emeril Junction will be leased by LIM and shared with TSH in a run through operation. Each train will likely be powered by two robotized SD40 locomotives equipped with Locotrol and proximity detection devices.

The locomotives to run on the QSN&L line between Emeril Junction and Sept-Iles will be supplied by QSN&L and LIM has agreed to make certain advance payment to QSN&L to secure the locomotive equipment and infrastructure capacity to meet LIM's service needs under the Contract. LIM will advance $5 million to QNS&L upon commencement of the Contract, with a further $5 million advance payable in October 2011 and a final advance payment of $15 million in June 2012 to secure the locomotives required to haul LIM's anticipated increases in production and shipment volumes. These advance payments will be repaid by QNS&L to LIM by means of a special credit of $3.50 per tonne against all tonnes hauled, commencing July 2012, until all advance payments have been repaid in full.

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Figure 18-15 Existing Railway Infrastructure

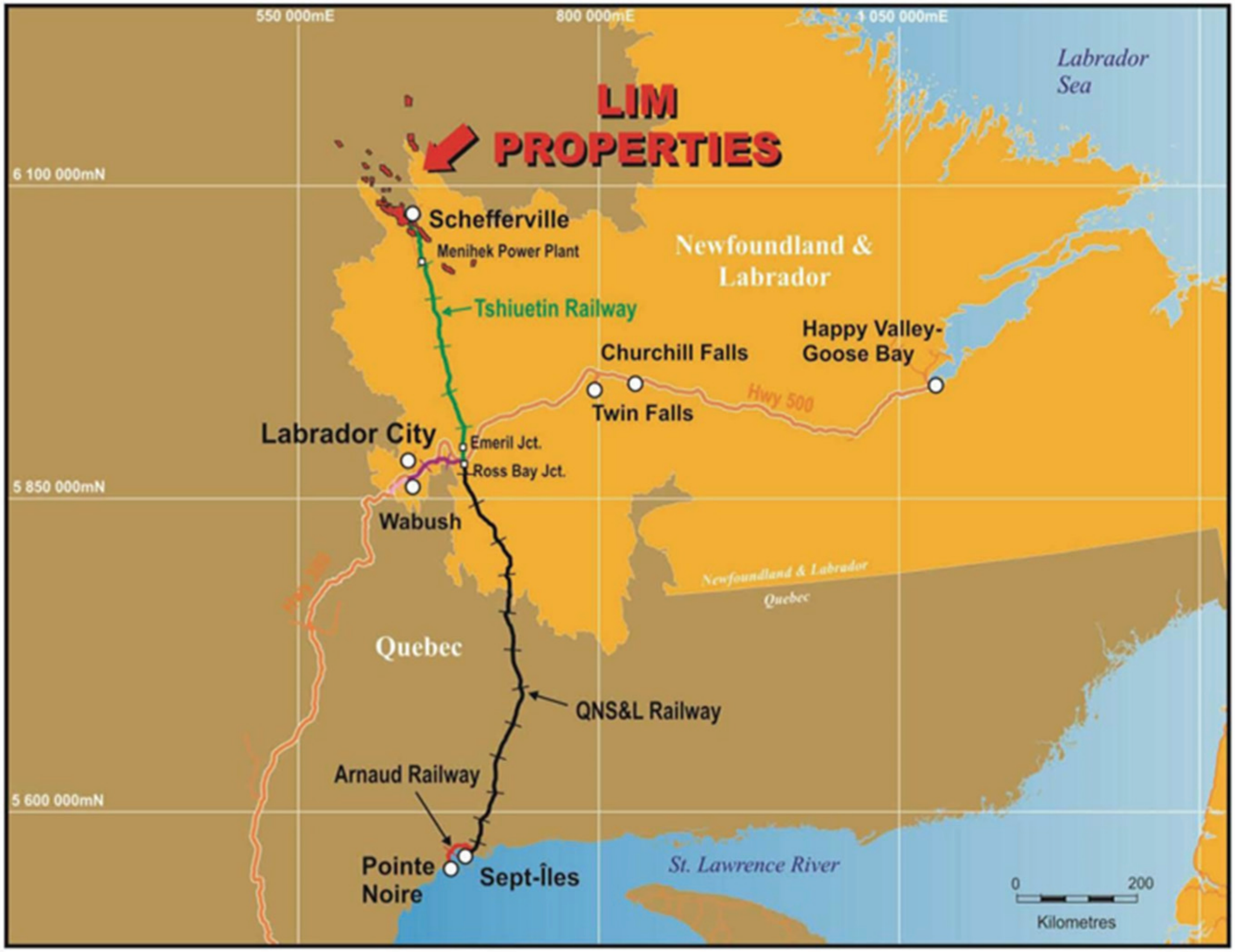


Figure 18-16
Existing Railway Infrastructure with Inset of Silver Yards Area

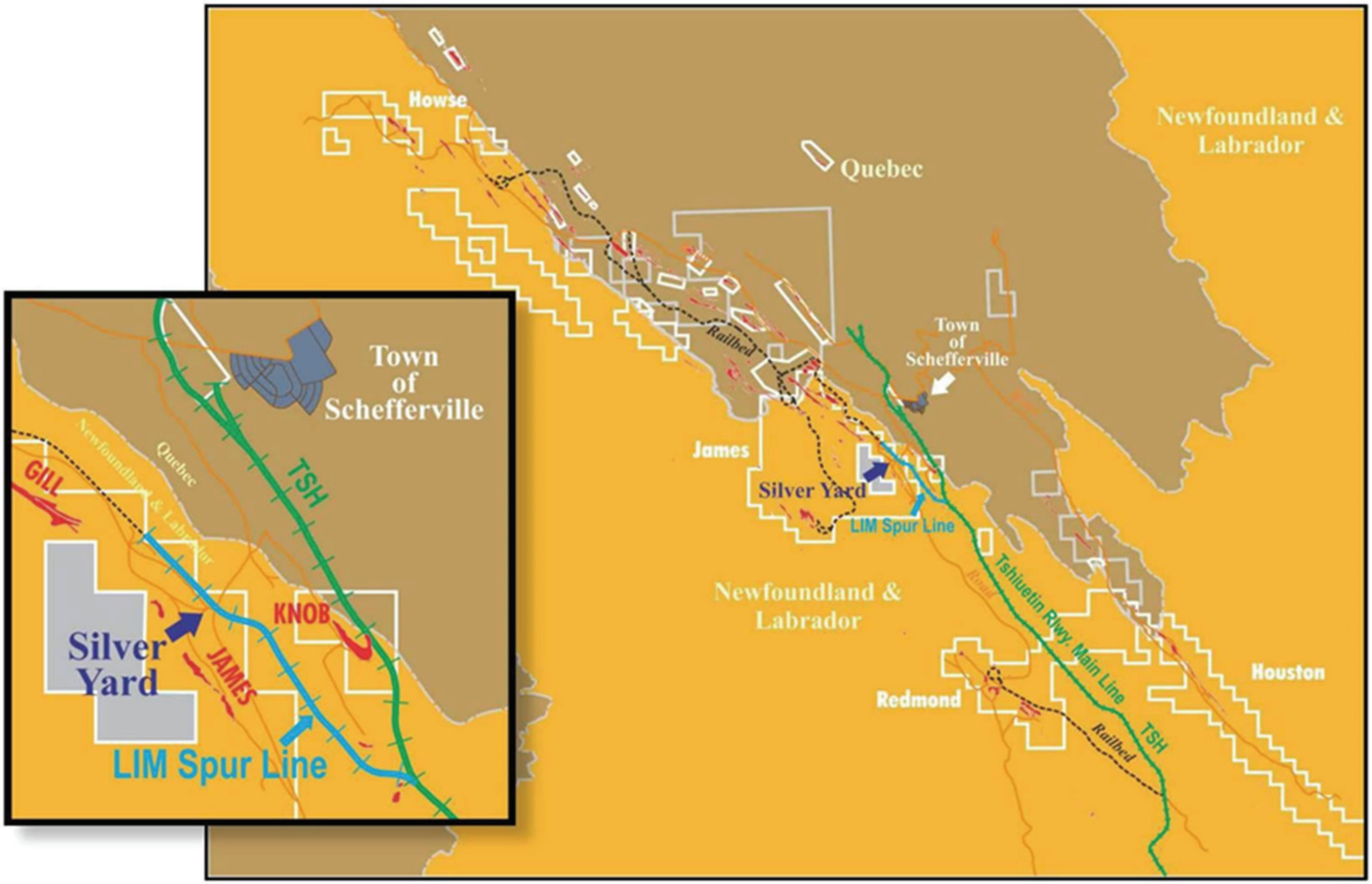
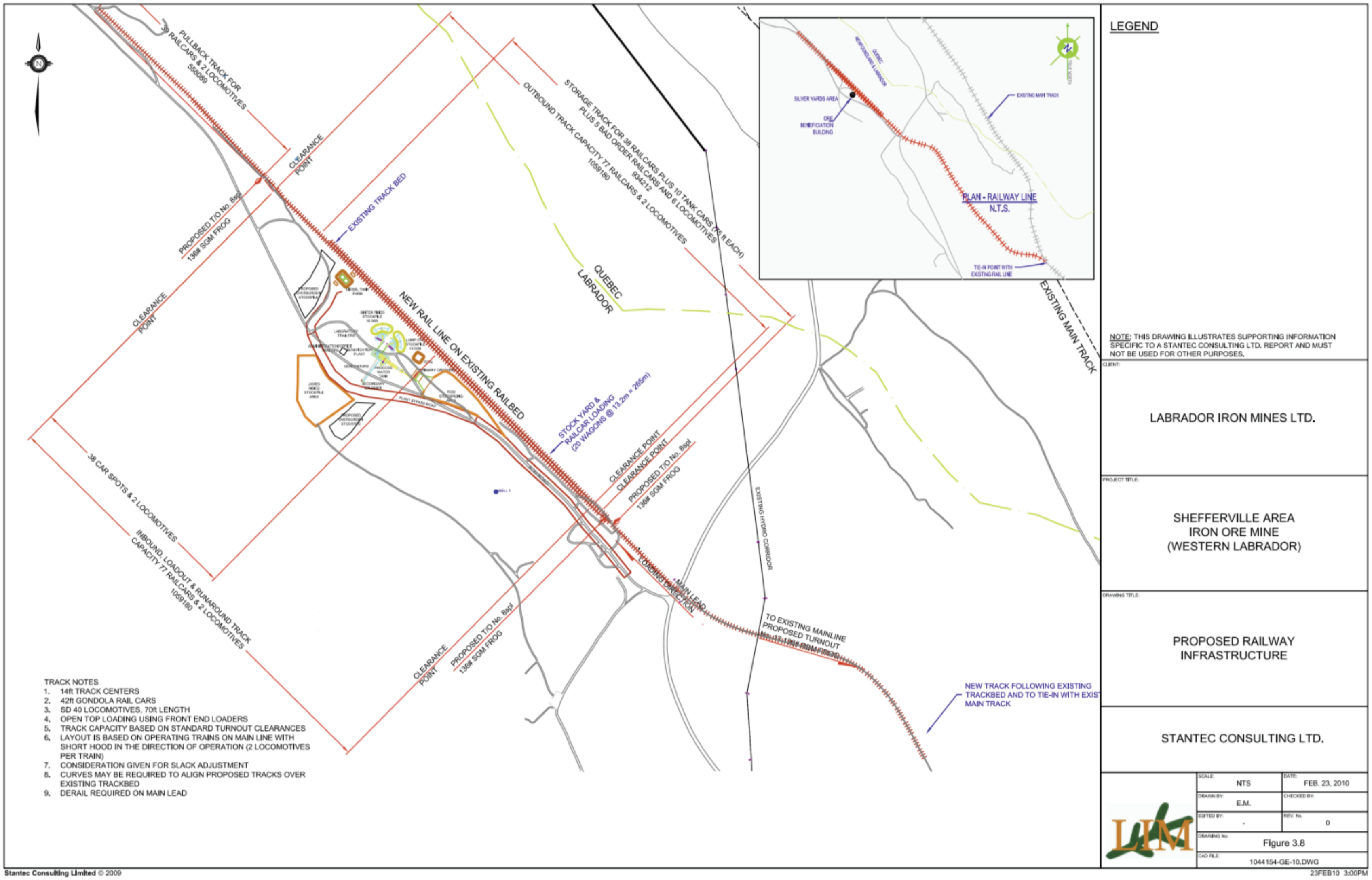


Figure 18-17
Proposed Railway Infrastructure at Silver Yards



18.13.3 *Regulatory Framework*

LIM's spur line will operate entirely within Labrador and as such will be regulated under the provincial Rail Service Act 2009. As LIM will only operate within the Province of Newfoundland and Labrador, it will therefore not 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. The other companies operate under Federal jurisdiction regulated by Transport Canada.

18.14 Port Facilities

LIM intends to transport the ore to be produced from the Project to the Port of Sept-Îles for onward shipment to steel mills in Europe or Asia.

The Port of Sept-Îles, situated 650 kilometres down river from Quebec City on the North Shore of the Gulf of St. Lawrence on the Atlantic Ocean, is a large natural harbour, more than 80 metres in depth, which is open to navigation year round. The Port of Sept-Îles is an international marine hub, and nearly 80% of its merchandise traffic, mostly iron ore, is destined for international markets. The Port of Sept-Îles is the most important port for the shipment of iron ore in North America, serving the Quebec and Labrador mining industry. Each year approximately 30 million tonnes of merchandise is handled, comprised mainly of iron ore.

With a full range of high-performance equipment, the Port of Sept-Îles is one of North America's leading iron ore ports and will now become Canada's second largest in terms of annual volume handled, with over 35 million tons.

In 2009 the Government of Canada announced it would invest up to $19.5 million in the improvement of operations at the Port of Sept-Îles, with optimization projects for Pier 30 and the Relance Terminal (Pier 40).

In its 2009 Annual Report, the Sept-Îles Port Authority stated "for the iron ore sector experiencing unparalleled growth since the 1970's, additional major investments will be required in the very short term to optimize existing infrastructure and build a new multi-user wharf".

In February 2010, the Minister of Transport announced the Government of Canada's contribution to a new project for the development of the Pointe-Noire terminal at the Port of Sept-Îles. The Government of Canada agreed to contribute up to $5 million for a new project to develop the Pointe-Noire Terminal, part of the Port of Sept-Îles facilities modernization plan.

The plan includes work on the land owned by the Port near the eastern part of Pier 31 of Pointe-Noire, as well as marine work to extend the pier. The project consists mainly of a 60-metre extension to the east, as well as the installation of two piled steel platforms linking the pier to the land with a conveyer. On land, dynamite and backfill work was undertaken to build warehousing space with a capacity of up to 1.5 million tonnes, of dry bulk cargo. Anticipated project results include increasing the capacity of the Pointe-Noire Terminal to accommodate two vessels at the same time, and the installation of handling equipment required for new iron ore mining companies.

In September 2010, in announcing support for the second phase of revitalizing the Relance Terminal (Pier 40) in the Port of Sept-Îles, Prime Minister Stephen Harper stated "The Port of Sept-Îles is the cornerstone of the economy of this region. The modernization of the Relance Terminal will create greater economic opportunities for businesses and industries of Quebec's North Shore and will provide local businesses with better access to foreign markets."

In February 2010 LIM signed an agreement with the Sept-Îles Port Authority for the use of the Pointe-Noire facilities at the Port to ship LIM's iron ore products. LIM agreed to a base fee schedule with the Port Authority regarding wharfage fees for iron ore loading for LIM's shipping operations.

LIM is currently evaluating a number of different options for its Sept-Îles operations including use the facilities of Wabush Mines or other facilities of the Sept-Îles Port Authority.

It is expected that Pier #30, which is the property of the Port Authority and currently utilized by Wabush Mines on a senior berthing privilege basis, will be used for loading ships. The extension of Pier #30 (Pier #31) is currently utilized by Consolidated Thompson to load self-unloading laker vessels which then tranship to cape size ships in the deeper waters of the bay. Alternatively, LIM's ships could be loaded at the nearby Pier #40, which is operated by the Port Authority or, on an interim basis at Pointe aux Basques also owned by the Port Authroity.

Presently, Pier #30 can accommodate ships up to 150,000 DWT, while Pier #40 can accommodate ships up to 60,000 DWT. It is anticipated that ships to be loaded with LIM's DSO Products will range in size from 60,000 DWT to 140,000 DWT. At the Wabush facilities, some modifications and additions to existing conveyers and equipment will be required to handle LIM's iron ore products.

There are two ships loaders on Pier #30/#31, one owned and operated by Wabush Mines and the other owned and operated by Consolidated Thompson. On January 11, 2011 Cliffs Resources Inc., the parent of Wabush Mines, announced the acquisition of Consolidated Thompson which will result in Cliffs/Wabush having duplicate ore handling facilities, including two ship loaders which should have excess loading capacity.

In the long term, LIM anticipates that it will be able to utilize the new multi-user wharf planned by the Port Authority and, when built, this should enable the loading of cape size vessels.

18.15 ENVIRONMENTAL CONSIDERATIONS

18.15.1 *ENVIRONMENTAL IMPACT*

Labrador Iron Mines was released from the Environmental Assessment process by the Lieutenant-Governor in Council of the Government of Newfoundland and Labrador on February 12, 2010 for the James and Redmond mine development, including the Silver Yards, Spur Line and the Ruth Pit (the James and Redmond Project). Registration documents for the Ruth Lake 8 and Gill deposits are being prepared and are expected to be submitted to the Government of Newfoundland and Labrador in the near future. A determination of the Knob Lake 1 registration date will be made shortly. Existing infrastructure, approved in the existing James and Redmond project, are expected to be used for these future projects.

The size of the operation for this Project is small by world-wide iron ore standards and small compared to other iron ore projects carried out elsewhere in the Province and previously in this area. The Project is based on previously developed brownfield sites and this and the small size will ensure that the adverse social and environmental impacts of the Project will be both limited in range and in time.

Testing of the mine rock for acid generation potential has been conducted on a variety of rock types in the region, and to date, sufficient historical and baseline data as well as current laboratory test work indicates that ARD potential is extremely low. Although no ARD impacts are anticipated, based on existing data, LIM has committed to a program of ongoing monitoring and sampling of new rock types, if encountered.

18.15.2 *SURFACE WATER*

18.15.2.1 *James North and James South Deposits*

There are two surface water features within the James North and James South properties:

- James Creek flows along the eastern edge of the sites; and
- An unnamed tributary which originates from two small springs situated between the James North and James South mine pits areas flows southeast into Bean Lake.

Surface water features of relevance on and in the immediate vicinity of the James Property include Bean Lake (east of site), James Creek (which flows from east of Ruth Pit to Bean Lake), and two springs that originate on the James property and form an unnamed tributary that flows southeast from the site to Bean Lake.

The locations of the two springs at the James deposit (James North and James South Springs) are such that they will likely be affected by pit dewatering, and since they are the source of water for the unnamed tributary, mitigation measures are planned to ensure that there will be no net negative effect on the unnamed tributary. A mitigation strategy and monitoring plan to address this has been developed in cooperation with DFO and a Letter of Advice and monitoring program approval have been received. As well, two Real Time Water Monitoring Stations have been established along James creek and at the Unnamed Tributary, in cooperation with the Newfoundland and Labrador Department of Environment and Conservation, and satellite uploads of recorded water quality and quantity data from these stations are available on the DOEC Water Resources website:

18.15.2.2 *Redmond Deposit*

The Redmond deposit area contains isolated ponds and pits, primarily created from past mine workings. There are currently flooded abandoned mine pits on-site. There are natural small water-bodies present and a small stream is located approximately 5 km from the proposed mine operation. The stream flows in a south easterly direction through existing abandoned ore stock piles towards Redmond Lake.

The main surface water features in the vicinity of the proposed Redmond 2B pit are a wetland/pond area located north of the proposed pit which serves as a source for a stream that runs southeast past the north side of Redmond 1 Pit and ultimately discharges into Redmond Lake. A groundwater discharge appears to be the main source of water discharging from the wetland at the headwater of this stream. Monitoring of this area is proposed during the development period.

Other surface water features of note include the now flooded Redmond 1 and Redmond 2 pits, located southeast of the proposed Redmond 2B pit. The groundwater water table at Redmond 2 is approximately 25 m below ground surface in the proposed Redmond 2B pit area. Therefore, pit dewatering may be required after the first year of mining to lower the water table in the immediate vicinity of the pit to allow mining to occur to the base depth of the proposed pit.

Surface water collected from pit dewatering activities within the Redmond 2B and 5 pits will be pumped to the existing Redmond 2 pit.

18.15.2.3 *Silver Yards*

The surface drainage water from the catchment area of the beneficiation plant will be diverted to the Silver Yards Settling Pond and/or to a ditch along the Silver Yards area that drains to the James Settling Pond, before release into the environment. The reject fines disposal pipeline and beneficiation plant emergency drainage are also located at that pond.

18.15.2.4 *Knob Lake 1*

The Knob Lake 1 deposit is located on the shores of Lejeune Lake. Detailed environmental baseline data, including surface water quality and monitoring of naturally occurring springs, have been collected at this site since 2005.

18.15.2.5 *Ruth Lake 8*

The Ruth Lake 8 site is located in an area of historical mining impacts with limited nearby surface water features. A small lake, Ruth Lake, is located in a previously stripped area to the south of the deposit; however, this lake was damaged by historical mining operations, which sealed its discharge outlet. Currently, this lake has no discharge and appears to be larger than its original size as a result of trapped and ponded water. The development of the deposit will not impinge on this small water-body.

18.15.2.6 *Gill*

The Gill deposit is located at the western edge of the Silver Yards, on the side of a ridge. Based on its location and orientation, water management is not expected to be a concern and, if present, would be minimal and managed in the same manner as the Silver Yards and James areas.

18.15.3 *GROUNDWATER*

A qualified and highly experienced hydrological and hydrogeological consulting group, have conducted ongoing hydrogeological assessments in the Project and surrounding areas on behalf of LIM since 2008 to present.

18.15.3.1 *James and Redmond Properties*

Extensive hydrogeological and hydrological assessments have indicated that there will be no significant adverse environmental effects on the environment as a result of the proposed operations at James and Redmond.

18.15.3.2 *Ruth Pit*

An additional item in the James Creek/Bean Lake water balance includes process water used to wash the ore in preparation for shipment. It is estimated that up to 8.4 m3/min of water will be required for this purpose and the water will be taken from the James Property pit dewatering system. The reject fines wash water will contain approximately 21 percent solids after washing and will be pumped to Ruth Pit for settling. This additional volume will have a negligible hydraulic impact on Ruth Pit, which has an area of 61 hectares (hydraulic loading of 0.001 cm/min).

18.15.3.3 *Knob Lake 1*

The Knob Lake 1 deposit is located near the shores of Lejeune Lake and has been the focus of annual hydrological monitoring since 2005. During these field assessments, several naturally-occurring groundwater springs have been noted on the property. Prior to the finalization of a development decision for this deposit, a detailed hydrogeological program would be conducted and appropriate mitigation and monitoring measures recommended. However, groundwater from this area resulting from dewatering activities would be managed in the same manner and using the same infrastructure as the current Project.

18.15.3.4 *Ruth Lake 8*

The Ruth Lake 8 site is located in an area of historical mining impacts with limited nearby surface water features. Three existing metal groundwater well casings, a historical remnant of former IOC operations in this area, have been identified on the Ruth Lake 8 property.

These groundwater wells have been accessed and appear to be in good condition and will be further assessed to verify groundwater quality and well depth. Groundwater encountered at this deposit, if any, will be managed through a settling pond system and discharged to nearby surface water features.

18.15.3.5 *Gill*

The Gill deposit is located at the western edge of the Silver Yards, on the side of a ridge. No springs have been noted in the area, however, the area has been extensively assessed during the James and Redmond Project preparation and development. Groundwater, if encountered in the development of this deposit, will be addressed in the same manner and using the same infrastructure as the current Project.

18.15.4 *Valued Environmental Components*

LIM conducted an extensive issues scoping process in relation to the James, Redmond, Silver Yards and Spur Line Project, which included consultation with appropriate regulatory agencies, the public, and Aboriginal groups, in order to identify the potential environmental issues associated with it. Valued Environmental Components (VECs) were identified in the Environmental Impact Statement (EIS) and potential Project related environmental effects were evaluated. Mitigation measures which are technically and economically feasible have been incorporated into Project design and planning and additional VEC-specific mitigation has also been identified and proposed as required and appropriate. The VECs include Employment and Business, Communities, Fish and Fish Habitat, and Caribou.

The detailed Environmental Assessment conducted for this Project, including community consultation and traditional environmental knowledge (TEK) program discussions, determined that there would be no significant adverse environmental effects on these VECs. The Labrador Iron Mines Limited Schefferville Area Iron Ore Mine Environmental Impact Study (August 2009) was released by the Lieutenant-Governor of Newfoundland and Labrador from further assessment in February 2010. The Ruth Lake 8, Gill and Knob Lake 1 properties are located within the general assessment area covered by the original environmental assessment and, as such, the VECs are expected to be the same and no significant adverse environmental effects are expected.

18.15.4.1 Overall

Significant adverse environmental effects are not predicted in relation to the current Project's construction, operation, or decommissioning phases, or as a result of accidental events. The Project was concluded, therefore, to likely not cause significant adverse environmental effects. A monitoring and follow-up program will be undertaken to assess the accuracy of the effects predictions made in the environmental assessment, and to determine the effectiveness of mitigation measures.

Based on extensive baseline data collection, locally and in the region since 2005, the conclusions of the James and Redmond Project are appropriate for application to the development of the Knob Lake 1, Ruth Lake 8 and Gill deposits and similar benefits are expected as a result of the sustainable development of these projects.

18.15.5 PERMITS, APPROVALS AND AUTHORIZATIONS

The Environmental Assessment Registration for the current James and Redmond mine and associated infrastructure development was submitted in May 2008, and can be accessed at the following link http://www.env.gov.nl.ca/env.

An Environmental Impact Statement (EIS) was subsequently 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 and a revised version was submitted in August 2009. The EIS presents information about the Project and the results of its environmental assessment. The project was approved by the Minister of Environment and Conservation in November 2009 and released by the Lieutenant-Governor in Council on February 12, 2010. Following release of the current Project in February, 2010, all major permits for the construction and operation of the James and Redmond mine development were obtained by August 2010.

A list of regulatory approvals and compliance standards that were obtained for the James, Redmond, Silver Yards and Ruth Pit project are presented in Table 18.3:

Table18-3 Environmental Authorizations: Obtained
James, Redmond, Silver Yards and Ruth Pit Project Areas

Permit, Approval or Authorization Activity	Issuing Agency
Federal	
Letter of Advice regarding Protection of Fish Habitat	Fisheries and Oceans Canada
Provincial	
Rail Service Act Rail Spur Construction Approval	Department of Transportation and Works
Rail Service Act Rail Spur Operations Approval	Department of Transportation and Works

Permit, Approval or Authorization Activity	Issuing Agency
Certificate of Environmental Approval to Alter a Body of Water Schedule A: Culvert Installation Schedule H: Other works within 15 m of a body of water Water Use License Non-Domestic Well Permit	DOEC – Water Resources Management Division
Certificate of Approval - Mine Construction Industrial Processing Works Certificate of Approval (Operation) Certificate of Approval - Generators Water Resources Real-time Monitoring MOU Development and Implementation Approval of MMER Emergency Response Plan (under review) Approval of Waste Management Plan (under review) Approval of Environmental Contingency Plan (Emergency Spill Response)(under review) Approval of Environmental Protection Plan – Mine Construction and Operations Approval of Environmental Protection Plan – Spur Line	DOEC – Pollution Prevention Division
Approval of Caribou Mitigation Strategy and Monitoring Program Approval of Avifauna Management Plan	DOEC – Wildlife Division
Certificate of Approval for a Sewage/Septic System Greater than 4546 litre per day (Biodisk) Certificate of Approval for Construction of Sewage Works (DOEC through GSC) Approval for Storage & Handling Gasoline and Associated Products Fuel Tank Registration Approval for Used Oil Storage Tank System Certificate of Approval for a Water Treatment System (DOEC through GSC) Food Establishment License - Kitchen National Building Code Fire, Life and Safety Program: Camp Dormitories, Kitchen-Recreation Building, SY Administration Buildings, Maintenance Workshop, Laboratory, Beneficiation Building Building Accessibility Design Registration: Camp Dormitories, Kitchen-Recreation Building, SY Administration Buildings, Maintenance Workshop, Laboratory, Beneficiation Building Motor Vehicle Special Permits	Government Service Centre (GSC)
Certificate of Registration of Radiation Equipment – Laboratory	GSC – Occupational Health & Safety
Approval for Operation of Lunchroom/Washroom Facilities	DH – Public Health Inspector
Approval of Development Plan, Rehabilitation and Closure Plan, and Financial Security – Mine Approval of Development Plan, Rehabilitation and Closure Plan, and Financial Security – Bean Lake Camp Approval of Development Plan, Rehabilitation and Closure Plan, and Financial Security – Rail Spur Mining Leases Surface Rights Lease Approval of Women's Employment Plan Approval of NL Benefits Plan	DNR – Mineral Lands Division

Permit, Approval or Authorization Activity	Issuing Agency
Operating Permit to Carry out an Industrial Operation During Forest Fire Season on Crown Land Permit to Cut – all areas Permit to Burn	DNR – Forest Resources

Additional regulatory approvals and compliance standards that are anticipated for the proposed and described future developments are presented in Table 18.4.

Table18-4 Environmental Authorizations: Anticipated
Ruth Lake 8, Gill and Knob Lake 1 Projects

Permit, Approval or Authorization Activity	Issuing Agency
Federal	
Review and Approvals regarding Protection of Fish Habitat	Fisheries and Oceans Canada
Review and Approvals regarding Navigable Waters Protection	Transport Canada, Navigable Waters Protection
Provincial	
Certificate of Environmental Approval to Alter a Body of Water Schedule A: Culvert Installation Schedule H: Other works within 15 m of a body of water Water Use License Non-Domestic Well Permit	DOEC – Water Resources Management Division
Certificate of Approval - Mine Construction Industrial Processing Works Certificate of Approval (Operation) Certificate of Approval - Generators Water Resources Real-time Monitoring MOU Development and Implementation Approval of MMER Emergency Response Plan Approval of Waste Management Plan Approval of Environmental Contingency Plan (Emergency Spill Response) Approval of Environmental Protection Plan – Mine Construction and Operations	DOEC – Pollution Prevention Division
Contingency: Permit to Control Nuisance Animals, if required Approval of Caribou Mitigation Strategy and Monitoring Program Approval of Avifauna Management Plan	DOEC – Wildlife Division

Permit, Approval or Authorization Activity	Issuing Agency
Gasoline and Associated Products Fuel Tank Registration Approval for Used Oil Storage Tank System National Building Code Fire, Life and Safety Program Building Accessibility Design Registration Motor Vehicle Special Permits	Government Service Centre (GSC)
Approval of Development Plan, Rehabilitation and Closure Plan, and Financial Security – Mine Mining Leases Surface Rights Lease Approval of Women's Employment Plan Approval of NL Benefits Plan	DNR – Mineral Lands Division
Operating Permit to Carry out an Industrial Operation During Forest Fire Season on Crown Land Permit to Cut Permit to Burn	DNR – Forest Resources

All applicable environmental and mining studies and permits for the proposed next phases of development will be completed, submitted and approved as required prior to the start of construction, mining and beneficiation.

18.15.6 *WASTE MANAGEMENT*

18.15.6.1 *Acid Rock Drainage*

Based on the geology associated with iron ore deposits and specifically the deposits associated with the James and Redmond Properties that form the Project, the geological materials to be excavated, exposed and processed during mining of the James and Redmond Properties have low to no potential for Acid Rock Drainage or metal leaching (ARD/ML).

18.16 MINE REHABILITATION AND CLOSURE

Environmental monitoring programs will be conducted as part of the mine development and operations and this data will be utilized to evaluate the Rehabilitation and Closure Plan, required under the Newfoundland and Labrador Mining Act, on an ongoing basis. Additional studies, such as re-vegetation trials, will be conducted as required over the operational phase of the mine which will be integrated into ongoing progressive rehabilitation activities and will be used in the development of the final closure rehabilitation design. Progressively rehabilitation costs are forecast at $3 million and a suitable bond for the purpose has been provided to the Provincial Government.

18.17 COMMUNITY AND SOCIO-ECONOMIC ISSUES

LIM has established an active community relations program since mid-2005 and an ongoing effort is made to work very closely with the adjacent and potentially impacted First Nations to focus on developing and maintaining productive working relations, ensuring a good understanding of the proposed project.

Extensive community consultation has been conducted with the nearby communities of Matimekush-Lac John and Kawawachikamach, as well as communities in western and central Labrador (Labrador City, Wabush, Happy Valley-Goose Bay) and at Uashat (Sept-Îles, Quebec).

LIM has signed Impact Benefits Agreements (IBA) with the Innu Nation of Labrador and the Naskapi Nation of Kawawachikamach. A Memorandum of Understanding has been signed with the Innu of Matimekush-Lac John and an Agreement in Principle signed with the Innu Takuaikan Uashat mak Mani-Utenam. Ongoing discussions for the completion of impact benefit agreements with these two Innu are being undertaken. The TSH railway company is owned by a consortium of First Nations comprising the Naskapi Nation of Kawawachikamach, the Innu of Matimekush-Lac John and Innu Takuaikan Uashat mak Mani-Utenam.

Project design and implementation will include consideration of information resulting from ongoing consultation with the communities, traditional environmental knowledge, environmental and engineering considerations and best management practices. These consultations and agreements will ensure a close working relationship with the local communities with respect to their involvement in the provision of labour, goods, and services to the Project.

Direct and indirect economic benefits for various communities and stakeholders are expected and this will continue the positive developments initiated by LIM as part of its Schefferville Area Iron Ore Mines at James and Redmond. The ongoing economic impact of such employment and contracting business will be very positive and lead to the development of other support and service sector jobs and the consistent and planned development and growth.

18.18 MARKETS

The viability and profitability of LIM's planned DSO iron ore operations in western Labrador are believed to be most sensitive to the sale price of iron ore.

High demand for iron ore in recent years has been driven primarily by China and south-east Asia. This demand effectively raised the price of iron ore "fines" (FOB Brazil) from around US$42 per tonne in 2005, to about US$50 per tonne in 2006, to about US$55 per tonne in 2007, and to about US$95 per tonne in 2008.

During 2009 negotiations with the Chinese industry represented by the China Iron & Steel Association failed to agree on a 2009 benchmark price and China effectively bought iron ore at spot, which began to rise during the second half of the year reaching around US$105 per tonne by the end of calendar 2009.

Negotiations regarding setting a traditional benchmark price continued during the last months of 2009 and the first months of 2010 but eventually broke down. The major suppliers and consumers each reached separate agreements but all based around a quarterly pricing mechanism using average spot prices during a preceding three month period. Spot prices generally increased during 2010 to around US$145 per tonne by the end of March 2010 and reaching US$175 per tonne in April 2010, before falling back slightly later in the year.

In early 2011, the world-wide iron-ore market remains very positive with recent spot prices for 62% Fe sinter fines approaching US$190 per tonne (CFR China).

Despite efforts by the Chinese government to slow down some aspects of growth of the Chinese economy, including restricting credit and raising base interest rates, demand for iron ore continues to grow. This demand, coupled with some recent interruptions in supply from Australia and Brazil, has driven iron ore prices to an all-time high. This is expected to slow somewhat in future months as the effects of bad weather in both Brazil and Australia return to normal and if, as expected, some Indian export restrictions are lifted.

The current increases in iron ore costs will inevitably lead to increases in steel prices, which may lead to reduced levels in steel demand in subsequent periods. In the short to medium term demand for iron ore is expected to remain strong and prices are forecast to retract only marginally. In the longer term as major new production capacity comes on line in Brazil and Australia, the balance between supply and the continuing increasing demand is likely to remain close. The extent to which demand continues to exceed supply will be influenced by new and increased growth in demand from other markets, including south-east Asia, and renewed growth in Europe led by Germany, and by the levels at which new iron ore supply, particularly from West Africa, may emerge.

The general consensus of current forecasts is that iron ore supply and demand will remain generally in balance until around 2015, with prices only dropping 10-15% in that period, followed by a supply surplus with prices declining somewhat thereafter. For the purposes of this report it is assumed that iron ore prices will remain strong for both calendar 2011 and calendar 2012.

The projected long-term iron ore spot prices for sinter fine ore at 62% Fe assumed for the project (per tonne FOB Sept-Îles), are: 2011-US$110; 2012-US$110; 2013-US$100; 2014-US$90; 2015 and following years US$80. Lump ore has traditional been priced at a premium of about 10% to sinter fines.

LIM has undertaken extensive marketing discussions with potential customers, and samples have been dispatched to a number of steel mills. While Europe is the logical market for LIM's iron products, given the proximity of the Port of Sept-Îles to Europe, demand from China is so strong that it is likely that at least a portion of LIM's production will be shipped to Chinese or Asian customers.

18.19 CONTRACTS

LIM intends to sign a contract with a major Labrador City based mining contractor to perform the mining of the James deposit and processing of iron ore at the Silver Yards Plant. The contract terms are within industry norms.

The production of LIM's products from the Silver Yards Project will not involve concentrating, smelting or refining, and consequently LIM does not have any contracts for performing such activities.

LIM has signed tariff negotiations with two railway operators whose rail lines LIM will use to transport its iron ore from the Silver Yards to the Port of Sept-Iles. The tariffs are considered to be within industry norms.

LIM is in negotiations with port loading and handling providers in the Pointe-Noire. Although agreements have not been finalized with these parties, LIM expects the terms of such agreements to be within rail transportation.

LIM is in advanced negotiations with major commodity trading companies to assist in the marketing of LIM's iron ore product, expected to be primarily on an agency basis. Although a marketing contract has not been finalized, LIM expects the terms to be within industry norms.

LIM has not entered into, and does not anticipate entering into, any hedging or forward sales contracts with respect to sales of its iron ore.

18.20 CAPITAL AND OPERATING COST ESTIMATES

18.20.1 *INTRODUCTION*

As at December 31, 2010 LIM had expended approximately $25 million in capital expenditures on the development of its Schefferville area iron ore projects, including approximately $22 million in construction of infrastructure plant and equipment and approximately $3 million in environmental reclamation and bonding. This does not include expenditures on exploration, environmental or marketing studies.

The capital cost required to complete the plant construction at Silver Yards and mine development at James was estimated in February 2011 at about $5 million.

LIM has ordered additional equipment for the Silver Yards plant to improve recoveries at an estimated additional cost of $2.5 to $3 million.

A two phase enhancement and expansion program to upgrade the Silver Yards plant to enable the treatment of lower grade ore and which will also increase the output capacity of the plant is under evaluation. The capital investment required for the plant upgrade and expansion has not yet been determined but is expected to be in the region of $15 to $20 million. Additional further process improvements are planned as detailed in Section 16 and these are expected to have capital costs in the range of $15 million.

LIM also expects to make some capital contributions towards completion of its rail and port operations and has agreed to contribute $3.5 million towards the cost of the TSH railway rehabilitation program.

LIM has agreed to make advance payments to QNS&L to secure the locomotive equipment and infrastructure capacity to meet LIM's service needs. LIM will advance $5 million in March 2011, a further $5 million in October 2011 and a final $15 million in June 2012. The advance payments will be repaid by QNS&L by means of a special credit of $3.50 per tonne commencing in July 2012 until all advance payments have been repaid in full.

The detailed capital and operating costs in this report are limited to the James Redmond Silver Yards Project, which is the first phase of Stage 1 of LIM's overall Schefferville area iron ore project. The capital and operating costs reflect all costs expected to be incurred after January 1, 2011, with prior costs being treated as sunk costs. Estimated future capital costs at the Silver Yards processing site and the associated mining activities are described. Similarly operating costs at various stages of production through the Silver Yards processing site are described.

Following completion of all production at Silver Yards after approximately seven years it is planned to move the processing facility to another location as part of future stages of the overall Schefferville projects.

18.20.2 *CAPITAL COSTS*

18.20.2.1 *Preparation Basis*

Capital costs include construction of the beneficiation plant and associated infrastructure (crusher, concentrate storage, residue pipeline, utilities, electrical/water/fuel supply and storage, settling pond), camp infrastructure, James settling pond and dewatering facilities, ongoing construction and replacements, closure and rehabilitation. Costs for infrastructure, buildings, process equipment, water management, engineering, procurement, construction management, and mine rehabilitation and closure were estimated by LIM and its consultants. Where possible, costing data has been developed using quotes on comparable new and used equipment, as well as equipment and material rates based on local or specialty contractors and suppliers.

18.20.2.2 *Capital Cost Estimates*

The capital cost estimates for the Silver Yards Project are outlined in Table 18.5.

Table18-5
Capital Cost Estimates for the Silver Yards Project

Capital costs already incurred up to December 31, 2010	$22,000,000
Capital costs expected to be incurred subsequent to January 1, 2011 until production commences	$5,000,000
Total Phase I	$27,000,000
Phase II Capital cost estimate for additional processing plant equipment in 2011 to enhance fines recovery	$3,000,000
Phase III Capital cost estimate of processing plant expansion and product	$35,000,000
Total capital cost estimate for 2011-2012	$38,000,000
Total capital cost estimate for the Silver Yards Plant, including capital costs incurred up to December 31, 2010	$65,000,000

It is not expected that development of the Denault, Ruth Lake 8, Gill and Knob Lake 1 or other deposits will require significant capital expenditure. No addition capital expenditure on the processing plant is expected to be required for the treatment of these deposits.

The initial capital cost of the Houston Mine Project for mine site preparation and overburden removal is estimated to be approximately $2 million. It is assumed that all mine operating equipment will be supplied by the mining contractor. An additional $3 million is estimated for the cost of the new haul road to Houston. Additional capital expenditures will be required in future years as the other Houston deposits are developed into production.

Houston Mine	
Mine site preparation/overburden removal	$2 million
Houston haul road, including bridge over Gilling River	$3 million
TOTAL	**$5 million**

If it decided to proceed with the Redmond Plant the capital cost is estimated to be approximately $35 million based on the actual cost incurred by LIM on the construction of the Silver Yard plant but modified to incorporate the single line design now planned for the Redmond plant. These costs estimates are subject to final permitting and detailed engineering and design.

Redmond Plant	
Major Processing Equipment	$10 million
Secondary Equipment, conveyers	$3 million
Steel and Civil Works	$7 million
Electrical and Piping	$10 million
Sub-Total	**$30 million**
Contingency	$5 million
TOTAL	**$35 million**

An additional $8 to $10 million is estimated for the cost of re-laying the Redmond rail spur line. Working capital is not included in the initial capital cost estimate.

18.20.3 *Operating Costs*

The average operating costs for the James Redmond Silver Yards Project are estimated to be in the range of approximately CAD$50 per tonne, with all mining and processing activities are carried out by contractors, and with rail transportation and port handling costs collectively accounting for approximately half of the total operating costs. The year 2011 is considered to be a start-up year and initial unit operating costs are expected be about 10% higher than average.

Table 18-6 - Estimated Operating Costs for the James Redmond Silver Yards Project

	Average 2011 -2017 ($/dmt shipped)
Mining & Hauling	$12
Processing	$8
Transportation & Port	$25
General and administration	$5
Total per tonne product	$50

The estimated operating costs include:

- Contractor cost and overheads;
- Equipment fuel consumption, rental & operation, mobilization each year, and maintenance;
- Power for dewatering, for beneficiation plant, for general administration, for camp, for laboratory. Power is assumed to be supplied by mobile generators in Year 1 and by hydroelectric power in Year 2 and beyond;
- Explosives and accessories;
- Consumables and Operating supplies;

- Labour for mine operations, mine technical staff, beneficiation plant, site management, camp, laboratory, transportation of product; and
- Fly-in fly-out Catering and boarding.

Given that Ruth Lake 8, Gill Knob Lake 1 and Denault deposits appear to be very similar to James and Redmond, and given that they lie in close proximity to the Silver Yards Plant, operating costs for these deposits are expected to be similar to James and Redmond.

18.20.3.1 *Mining Costs*

The mine operating cost estimates are based on contracting the mining services to a contractor that will supply mobile equipment and labour required for the operation and maintenance. The mining contractor will mobilize each year in early April to prepare the mine and site for the upcoming operation season. The mine will operate on 2 shifts of 12 hours. The operating costs have been estimated using unit rates provided from mining contractor, manufacturer's cost data for power, fuel, and other consumables and hourly maintenance costs.

Other key assumptions include:

- The mobile equipment operating costs include the hourly cost and operation based on mining contractor's rates. The fuel has been included in this cost;
- No. 2 diesel fuel use is based on estimated operating hours and rated fuel consumption for the various pieces of equipment;
- Explosives and accessories are based on typical unit consumption for similar operations;
- An allowance is included for consultants and service personnel for equipment;
- The Mining costs include the following items:
- Equipment mobilization costs (per year);
- Winter Shutdown costs;
- Equipment operating costs;
- Equipment fuel costs;
- Blasting and accessories;
- Operations Labour;
- General and Safety consumables, office supplies;
- Allowance for Consultant/service personnel;
- Allowance for training; and
- Processing Costs.

The processing cost estimates are based on mine plans developed by LIM for the various deposits which comprise the Silver Yards Project. The processing cost estimates include the following items:

- Operating and maintaining the plant equipment;
- Loading the product into railcars;
- Mobilization, transportation of personnel, and winter shutdown; and
- Operating labour.

18.20.3.2 *Transportation Costs*

Transportation cost estimates include the costs associated with loading ore on the train by front end loader with the product from the product stockpiles at Silver Yards, the haulage of the product from Silver Yards to Pointe-Noire by train, and the handling of the product at the port in Sept-Iles.

18.20.3.3 General and Administration Operating Costs

These cost estimates include the general administration and support infrastructure. The support infrastructure but includes accommodations for employees (camp), laboratory facilities, mobilization and rotation of employees, labour costs for site management, operating supplies, allowance for building maintenance, equipment maintenance, and other expenses.

18.20.4 Environmental Rehabilitation Cost Estimate

Progressive environmental rehabilitation costs over the life of the Silver Yards Project have been estimated to be approximately $3,000,000.

18.20.5 Taxes, Royalties and Other Payments

The following fiscal considerations are expected to apply to the James Redmond Silver Yards Project.

- the Federal income tax rate is 15% and Provincial income tax rate is 14% for the Province of Newfoundland and Labrador.
- accelerated depreciation of 25% per year up to 100% on Class 41A processing and power supply assets; depreciation of 25% on the declining balance for Class 41B mining and port installation assets;
- Canadian development expenditure depreciation on the basis of 30% per year. Canadian exploration expenditure depreciation is on the basis of 100%;

For Provincial mining tax in Newfoundland and Labrador a 15% tax is imposed on the net income of the operator, where net income is calculated as gross revenue less allowable expenses including, operating and processing, depreciation, pre-production, exploration, crown royalties, processing and smelting allowances, and other prescribed deductions.

For Provincial mining tax in the Province of Quebec the mining tax rate is 12%, with allowances of 15% per year of the cost of processing assets to a maximum of 65% of the profit for the year and with a Northern Mine allowance of 166.6% of the cost of processing assets deductible in the first ten years of production.

All of the iron ore sold by LIM from the Silver Yards and Houston Projects will be subject to a royalty in the amount of 3% of the selling price (FOB Port) of iron ore shipped, subject to such royalty being no greater than $1.50 per tonne.

It is likely that all of the iron ore sold by LIM from the Silver Yards Project will also be subject to additional revenue sharing with local First Nations groups. These additional payments have not all been finalized as at the date hereof, however LIM does not expect that such additional payments will in aggregate exceed the royalty in the preceding paragraph.

LIM does not anticipate any other significant taxes or royalties other than as set out above.

19. CONCLUSIONS (ITEM 21)

LIM has now defined over 36 million tonnes of current NI 43-101 compliant direct shipping hematite iron ore resources at the first four deposits that it intends to develop, which is considered sufficient to continue production for approximately the first 10 years. In addition a further 125 million tons of historical resources exist on LIM's other properties that were defined by IOC during their historical operations in the area.

LIM's exploration work has demonstrated good correlation between the resources estimated by LIM's recent drilling programs and the historical IOC resources. It can be expected that with further exploration the historical resources will be upgraded such that operations can be continued for a number of years thereafter.

LIM intends to develop all these resources in five separate stages. The first four stages will see the various deposits treated in three beneficiation plants, to be built adjacent to several of the deposits that comprise the Central, South Central and North Central Zones. The final stage is not yet planned but will likely involve a fourth plant. A Feasibility Study has not been completed on any of these Projects.

Detailed mine design and metallurgical testwork has been carried out on those deposits that will form the basis of production for the initial years but further exploration, testwork and design is required for all the remaining resources.

The first plant at Silver Yards and mine construction at James are now complete and initial production is expected in the spring of 2011. Agreements have been reached with the major railroad companies that will be used to transport ore from the mine site to port.

Metallurgical testing of the first stage deposits has established that the ore can be successfully upgraded to marketable standards. Based on the current testwork, a program of plant enhancement on the Silver Yards plant is now planned with the objective to increase both the plant throughput and recovery.

Production of direct shipping lump ore and sinter fines is forecast at around 1.5 million tonnes in 2011 and, based on current and historical resources, growing to approximately 5 million tonnes in 2015 and thereafter. Production from the first four stages is expected to continue at about this rate through to about 2028.

20. RECOMMENDATIONS (ITEM 22)

Following the review of all relevant data and the interpretation and conclusions of this review, it is recommended that exploration on the James, Redmond 2B, Redmond 5, Denault, Gill, Ruth Lake 8, Knob Lake 1 properties should continue. The results of past exploration have been positive and have demonstrated the reliability of the IOC data, which has been confirmed with the recent exploration.

Additional drilling is recommended to evaluate possible extensions of the James deposit to the south-east and Knob Lake 1 deposit to the north. For Gill and Ruth Lake 8 deposits, a program of RC drilling is recommended to confirm historical resource (not NI 43-101 compliant). Additional infill drilling is recommended to finalize the evaluation of Redmond 2B and Redmond 5 deposits.

The additional drilling of about 71 RC drill holes is recommended:

- A minimum of 9 RC drill holes for a total of 900 metres is proposed for the James Deposit in order to extend and define new mineralization to the south-east.
- A minimum of 12 RC drill holes for a total of 1,200 metres and 4,000 metres of trenching is proposed for the Knob Lake 1 deposit in order to extend the mineralization to the north.
- A total of 23 RC holes for a total of 2,300 metres are proposed for the Gill deposit. All holes are located to define historical resources.
- A total of 22 RC holes for a total of 2,200 metres are proposed for Ruth Lake 8 deposit. All holes are located to define historical resources.
- A total of 5 RC holes for a total of 500 metres are proposed for Redmond 2B and 5 to define further extensions.

Continuing metallurgical testwork is required in a number of areas to confirm the final process route for the planned Silver Yards plant extension. Further metallurgical studies on the Denault, Gill, Ruth Lake 8 and Knob Lake 1 deposits to confirm their amenability to treatment using the current and planned Silver Yards plant facility.

Estimated budget for the additional exploration:

Drilling	7,100 metres @ $ 600/metre =	$ 4,260,000
Trenching	4,000 metres @ $ 120/metre =	$ 480,000
	Total =	$ 4,740,000

Exploration programs are recommended to be carried out for all those remaining deposits in stages 1 to 4, to convert the historic resources to current compliant resources. This work will need to be scheduled to ensure that current resource estimates for each of these deposits are produced in sufficient time to enable planning, environmental assessment and permitting to be completed in sufficient time to allow construction and development to be achieved to match the overall project production schedule.

At the same time as the recommended exploration programs outlined above, a number of specific items will be required to progress the development of the Gill, Ruth Lake 8, Denault and Knob Lake 1 deposits:

- Ongoing additional environmental studies, traditional environmental knowledge programs, and community consultation;

- Completion of the environmental assessment and permitting process.
- Detailed mine plans, including geotechnical and hydrogeological studies and optimization of the development schedule;
- Additional metallurgical studies dependent on the mineralogy of the deposit;
- Completion of a beneficiation plant option evaluation study for selection of preferred beneficiation processes for the Houston ores;
- Detailed beneficiation plant engineering and design;
- Transport and infrastructure requirements studies, including selection of the preferred haulage route for transporting ore from the Houston Mine site to the beneficiation plant at Redmond;
- Engineering plans for the re-laying of 10 km of rail spur line from the TSH mainline to the Redmond turnabout.
- Hydrology investigations should be completed to determine groundwater movement and to determine the amount of pit dewatering that will be required.

21. References (Item 23)

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

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"Technical Report of an Iron Project in Northwest Labrador, Province of Newfoundland and Labrador". Dufort, D. P.Eng and Kroon, A.S. P.Eng SNC-Lavalin, Original Date September 10th, 2007, Amended October 10th, 2007;

"Report on Summer-Fall 2008 Exploration Program". 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;

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"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 1 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. , 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. 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". Labrador Iron Mines Ltd. December 2009;

"Investigation into Ten Composite Samples from the Schefferville Area". SGS Lakefield Research Ltd. January 2011;

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NMI FILE NUMBER 23J/14/Fe028, Newfoundland and Labrador Department of Natural Resources;

"Technical Report and Resource Estimate on the Denault Iron Ore Deposit Province Of Quebec, Canada"; Schefferville Mines Inc.; . T.N. McKillen, B.A.(Mod), M.A., M.Sc., P.Geo. March 14, 2011

22. DATE AND SIGNATURE PAGE (ITEM 24)

This Technical Report is dated March 14, 2011 and reports on all exploration work done up to December 31st of 2010.

Signed and dated

Dated at Toronto, ON
March 14, 2011

[SIGNED] *"Terence N. McKillen"*

Terence N. McKillen, P.Geo.

QUALIFICATIONS CERTIFICATE

I, Terence N. McKillen, Professional Geologist, do hereby certify that:

1. I am a consulting geologist residing at 965 Davecath Road, Mississauga, Ontario, L5J 2R7.
2. I am a co-author of the report entitled "Technical Report Direct Shipping Iron Ore Projects in Western Labrador Province of Newfoundland and Labrador and North Eastern Quebec, Province of Quebec, Canada" dated March 14, 2011.
3. I graduated from the University of Dublin, Trinity College in 1968 and hold a Bachelors and a Masters Degree in Natural Sciences (Geology). I obtained a Masters Degree in Mineral Exploration and Mining Geology from the University of Leicester in 1971.
4. I am a member in good standing of the Association of Professional Geoscientists of Ontario (#0216); the Professional Engineers and Geoscientists of Newfoundland and Labrador (#04525) and the Order of Professional Geologists of Québec (#1392) and am designated as a specialist in Geology and Mineral Exploration and Development.
5. I have worked as a geologist and mining executive in the minerals industry for over 40 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) and by reason of my education, membership of professional associations and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
7. I am responsible with the other author for parts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19 and 20 of this Technical Report Direct Shipping Iron Ore Projects in Western Labrador Province of Newfoundland and Labrador and North Eastern Quebec, Province of Quebec, Canada ("Technical Report"). I have visited the project site on many occasions from 2005 to 2010, including most recently on 28 Oct. 2010.
8. I was instrumental in the original acquisition of the iron ore properties held by Labrador Iron Mines Limited, have been involved in the corporate development thereof and have prepared earlier technical and business reports and evaluations pertaining to the iron ore properties held by LIMH in Labrador and Quebec or directly supervised the preparation of such technical reports.
9. I am not independent of either Labrador Mines Limited or Labrador Iron Mines Holdings Limited or Schefferville Mines Inc. as described in section 1.4 of NI 43-101, being a director and officer of both companies.
10. I have read National Instrument 43-101 – Standards of Disclosure for Mineral Projects and Form 43-101F1 and Companion Policy 43-101CP and certify that this Technical Report has been prepared in compliance with such instrument(s).
11. As of the date of the report and to the best of my knowledge, I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the report, the omission of which disclosure would make the Technical Report misleading.

12. I consent to the filing of the Technical Report with any stock exchange or 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 Report.

DATED

March 14, 2011

[SIGNED] *"Terence N. McKillen"*
Terence N. McKillen, P. Geo.

This Technical Report is dated March 14, 2011 and reports on all exploration work done up to December 31st of 2010.

Signed and dated

Dated at Toronto, ON
March 14, 2011

[SIGNED] *"D.W. Hooley"*
D.W. Hooley, FAusIMM

QUALIFICATIONS CERTIFICATE

I, D.W. Hooley, FAusIMM, Mining Engineer, do hereby certify that:

1. I am a mining engineer residing at 65 Rhos Road, Rhos-on-Sea, Conwy LL28 4RY, UK.
2. I am a co-author of the report entitled "Technical Report Direct Shipping Iron Ore Projects in Western Labrador Province of Newfoundland and Labrador and North Eastern Quebec, Province of Quebec, Canada" dated March 14, 2011.
3. I graduated from the Royal School of Mines, Imperial College, University of London with Bachelor of Science degree in Mining Engineering 1968.
4. I am a Fellow in good standing of Australasian Institute of Mining and Metallurgy.
5. I have worked as a mining engineer and mining executive in the minerals industry for over 40 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) and by reason of my education, membership of professional associations and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43 101.
7. I am responsible with the other authors either singularly or jointly for parts 1, 2, 3, 4, 5, 6, 15, 19 and 20 and singularly for parts 16 and 18 of this Technical Report Direct Shipping Iron Ore Projects in Western Labrador Province of Newfoundland and Labrador and North Eastern Quebec, Province of Quebec, Canada ("Technical Report"). I have visited the project site on many several occasions from 2006 to 2010, including most recently on 1st November 2010.
8. I am not independent of either Labrador Mines Limited or Labrador Iron Mines Holdings Limited or Schefferville Mines Inc. as described in section 1.4 of NI 43-101, being a director and President and Chief Operating Officer of both companies.
9. I have read National Instrument 43-101 – Standards of Disclosure for Mineral Projects and Form 43-101F1 and Companion Policy 43-101CP and certify that this Technical Report has been prepared in compliance with such instrument(s).
10. As of the date of the report and to the best of my knowledge, I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the report, the omission of which disclosure would make the Technical Report misleading.

11. I consent to the filing of the Technical Report with any stock exchange or 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 Report.

DATED

March 14, 2011

[SIGNED] *"D.W. Hooley"*
D.W. Hooley, FAusIMM

This Technical Report is dated March 14, 2011 and reports on all exploration work done up to December 31st of 2010.

Dated at Toronto, ON
March 14, 2011

[SIGNED] *"Daniel Dufort"*
Daniel Dufort, P. Eng.

QUALIFICATIONS CERTIFICATE

I, Daniel Dufort, professional engineer do hereby certify that:

1. I am an engineer residing at 61 Wetherburn Drive, Whitby, Ontario, L1 P 1M8.
2. I am a co-author of the report entitled "Technical Report Direct Shipping Iron Ore Projects in Western Labrador Province of Newfoundland and Labrador and North Eastern Quebec, Province of Quebec, Canada" dated March 14, 2011.
3. I graduated from Polytechnique University, Quebec in 1979 and hold a BSca in Mining Engineering.
4. I am a member of the Order of Professional Engineers of Québec and Ontario, and I am designated as a Mining Engineer.
5. I have worked as a mining engineer in the minerals industry for 31 years since my graduation from Polytechnique University.
6. I have read the definition of ''qualified person'' set out in National Instrument 43-101 (NI 43-101) and 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.
7. I worked on with the other authors on Section 18 (Other Relevant Data and Information) and specifically on 18.1 to 18.3 and 18.5 to 18.13 of this Technical Report Direct Shipping Iron Ore Projects in Western Labrador Province of Newfoundland and Labrador and North Eastern Quebec, Province of Quebec, Canada ("Technical Report"). I have visited the site many times during 2009.
8. I am not independent of either Labrador Mines Limited or Labrador Iron Mines Holdings Limited or Schefferville Mines Inc. as described in section 1.4 of NI 43-101, being from 2009 to 2011, Vice-President Operations and more recently, Vice President, Technical Services, of both companies.
9. I have read National Instrument 43-101 – Standards of Disclosure for Mineral Projects and Form 43-101F1 and Companion Policy 43-101CP and certify that this Technical Report has been prepared in compliance with such instrument(s).
10. As of the date of the report and to the best of my knowledge, I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the report, the omission of which disclosure would make the Technical Report misleading.
11. I consent to the filing of the Technical Report with any stock exchange or 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 Report.

[SIGNED] *"Daniel Dufort"*

Daniel Dufort P. Eng.

Dated: March 14, 2011

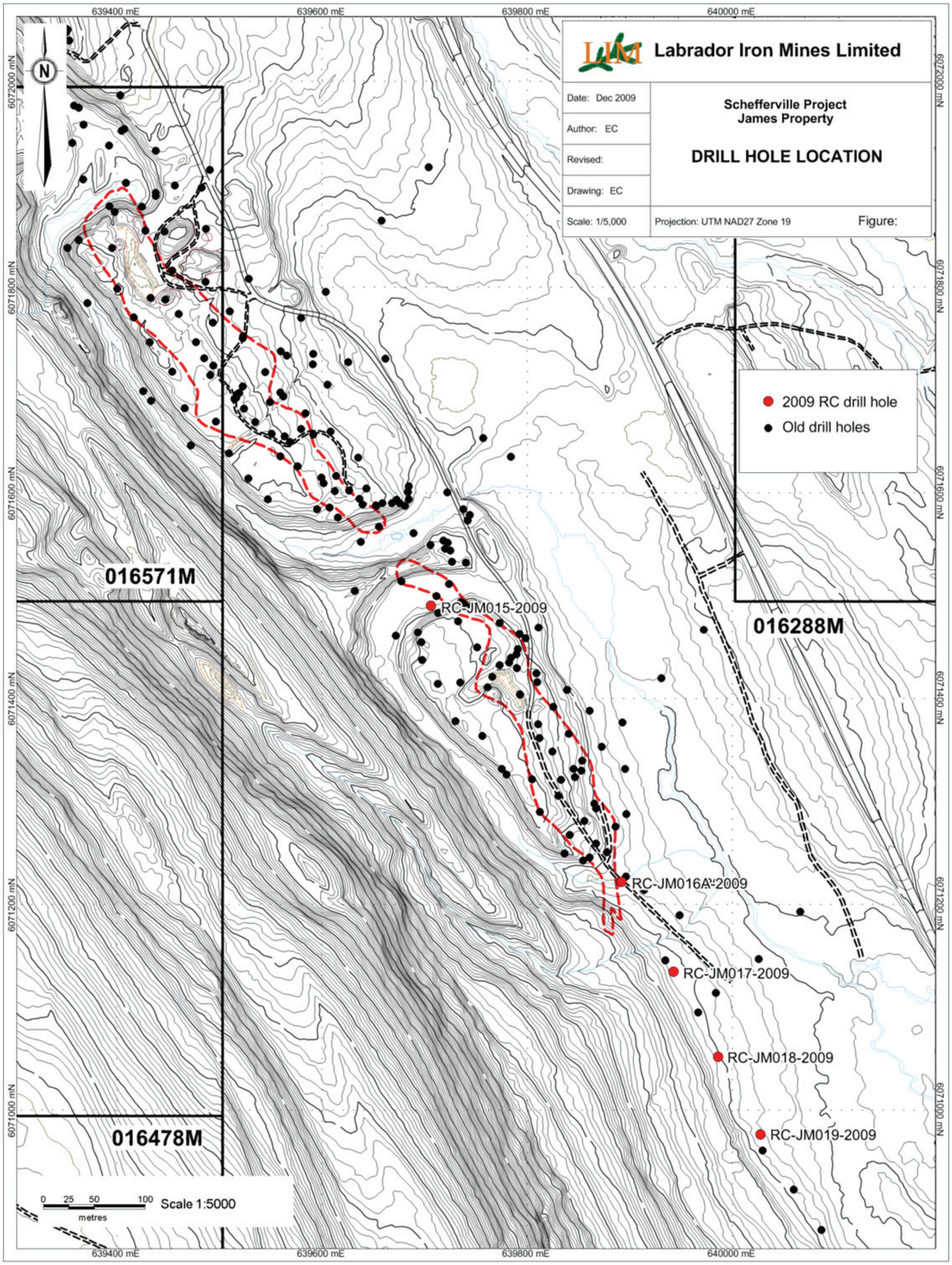
23. Illustrations (Item 26)

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

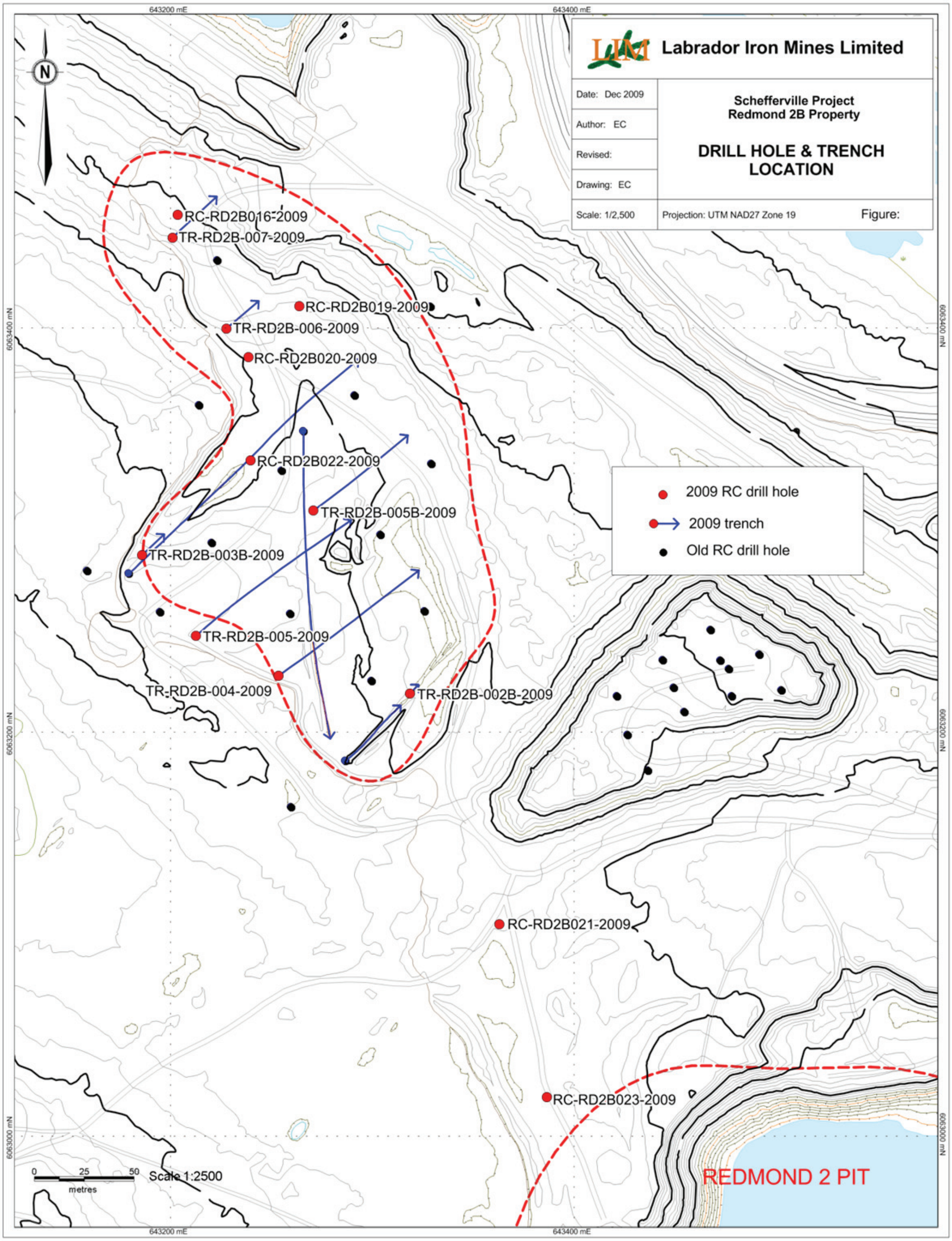
List of Plans

1. James Drilling
2. Redmond 2B Drilling and Trenching
3. Redmond 5 Drilling and Trenching
4. Knob Lake 1 Drill Holes
5. Trenching Gill Mine

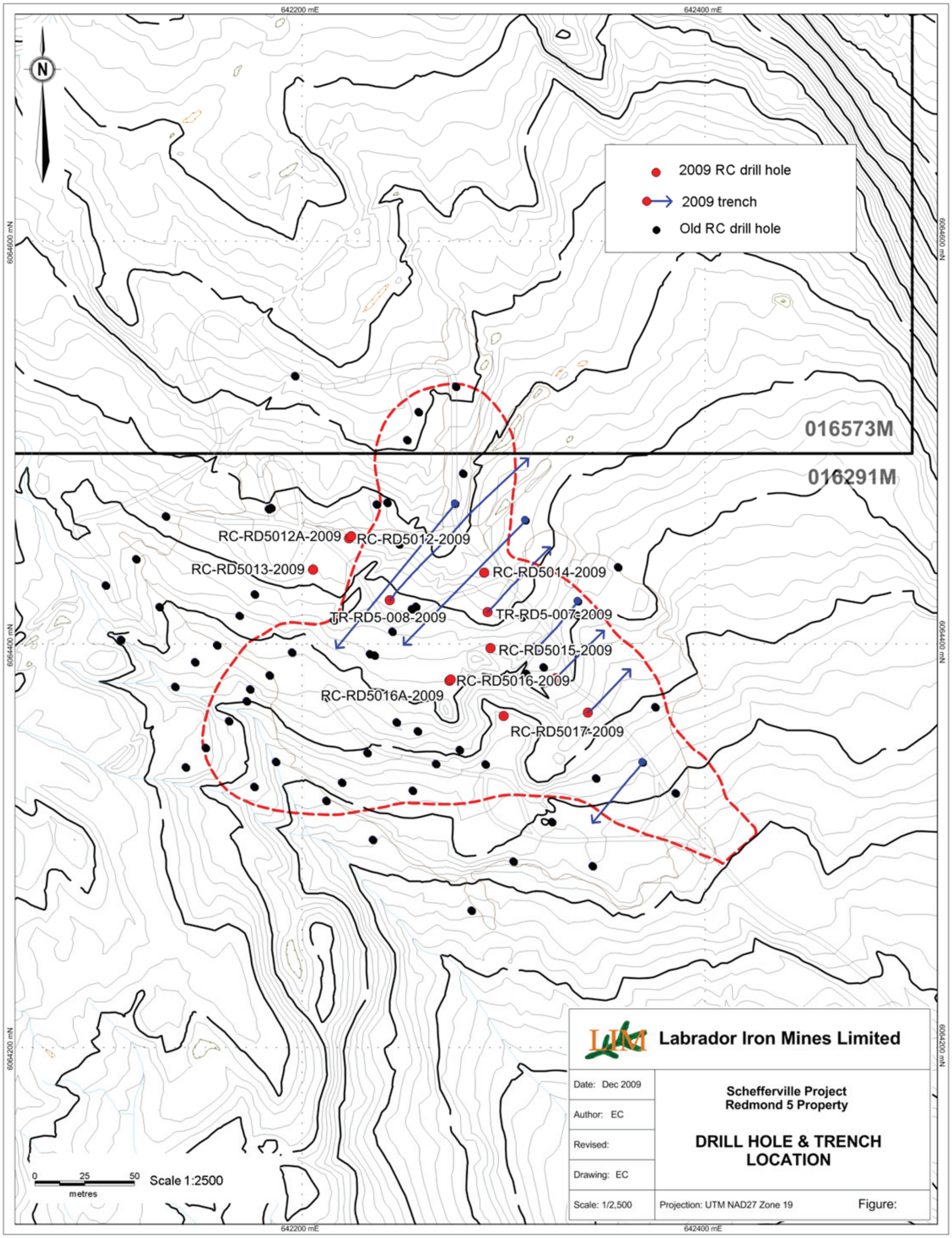
James Drilling


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

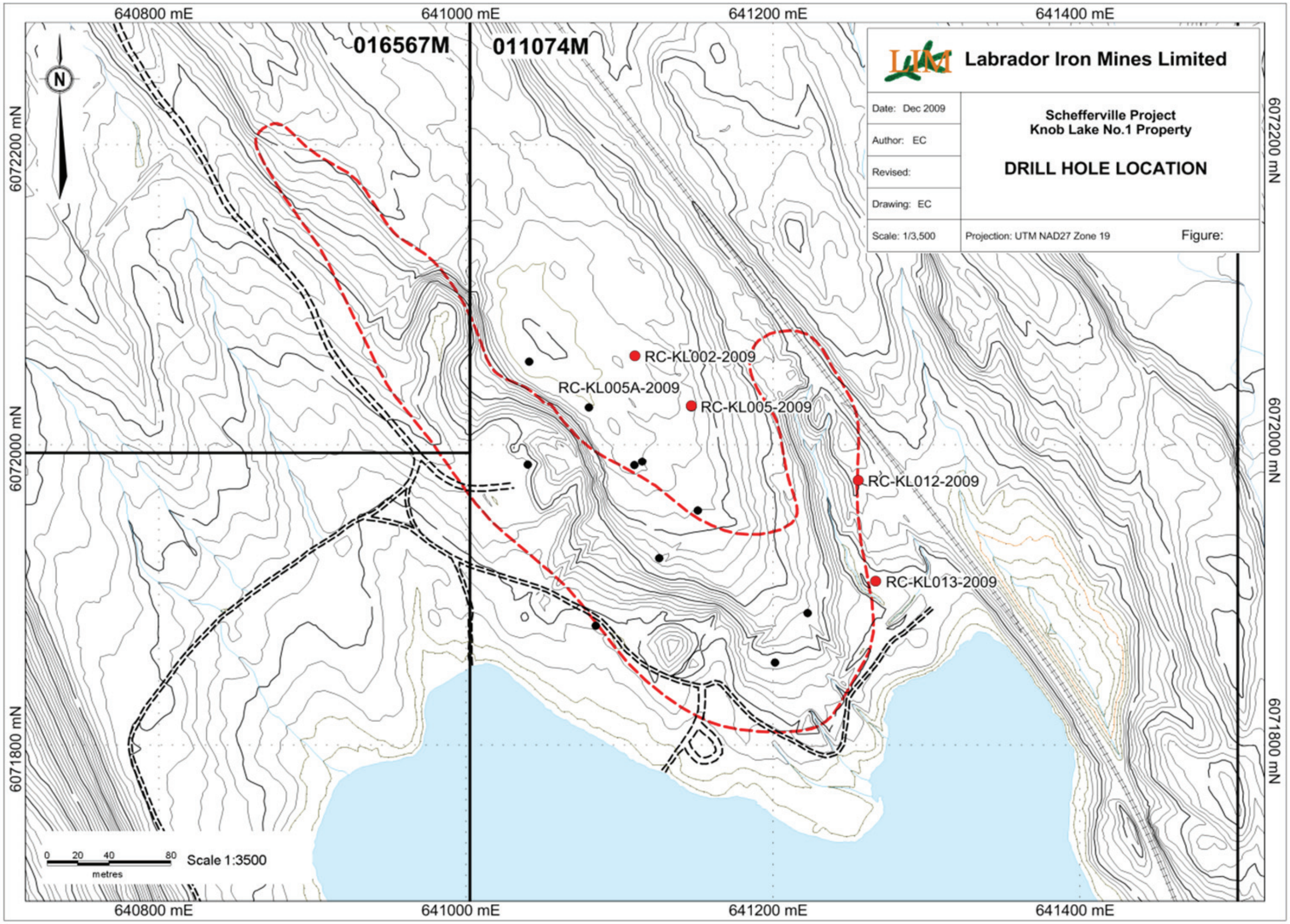
Redmond 2B Drilling and Trenching


643200 mE
643400 mE
N
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:
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
2009 RC drill hole
2009 trench
Old RC drill hole
6063400 mN
6063200 mN
6063000 mN
0 25 50 Scale 1:2500
metres
REDMOND 2 PIT

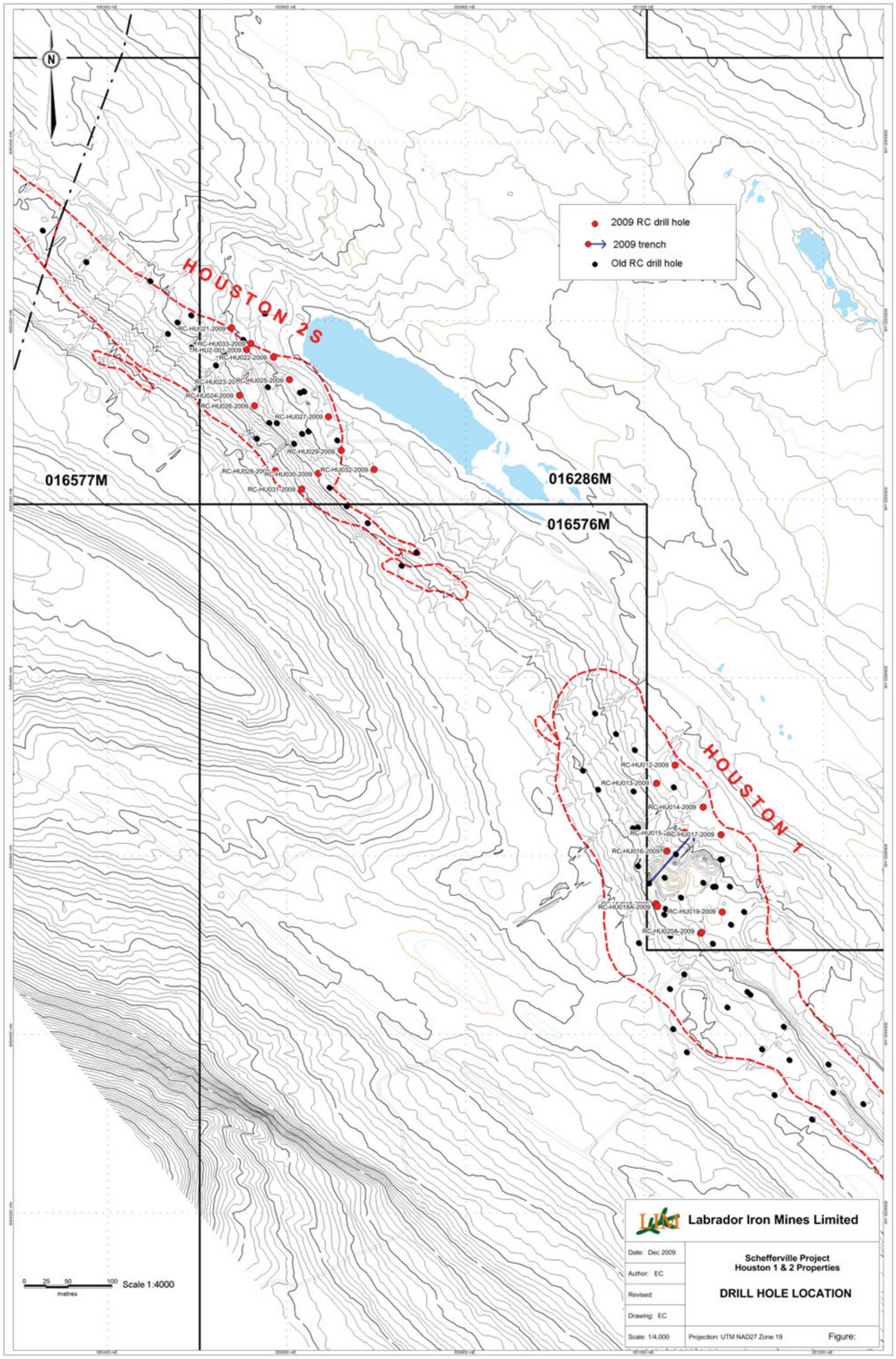
Redmond 5 Drilling and Trenching


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
0 25 50
metres
Scale 1:2500
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:

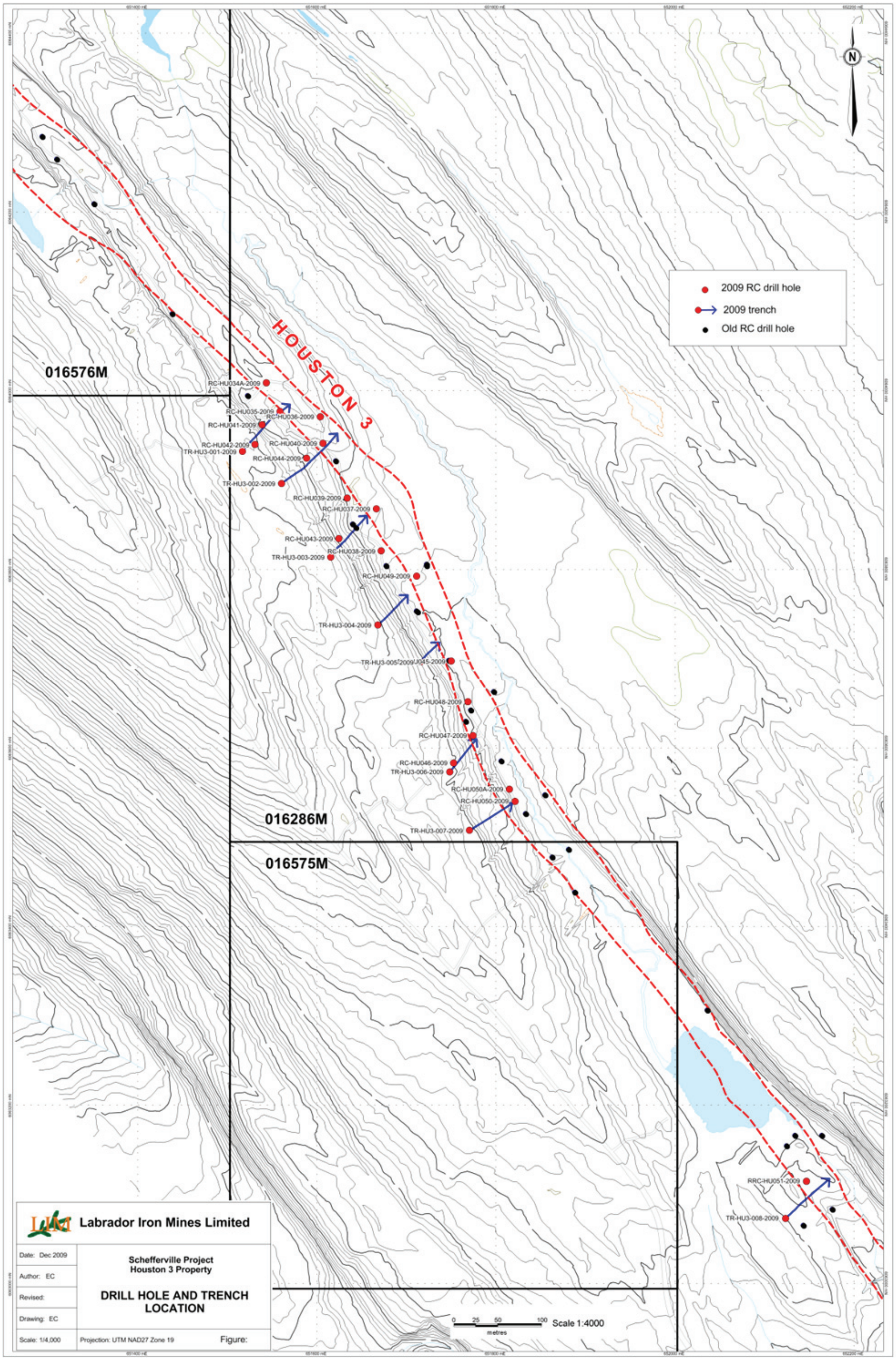
Knob Lake 1 Drill Holes


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:
640800 mE
641000 mE
641200 mE
641400 mE
6072200 mN
6072000 mN
6071800 mN
016567M
011074M
RC-KL002-2009
RC-KL005A-2009
RC-KL005-2009
RC-KL012-2009
RC-KL013-2009
N
Scale 1:3500
0 20 40 80
metres

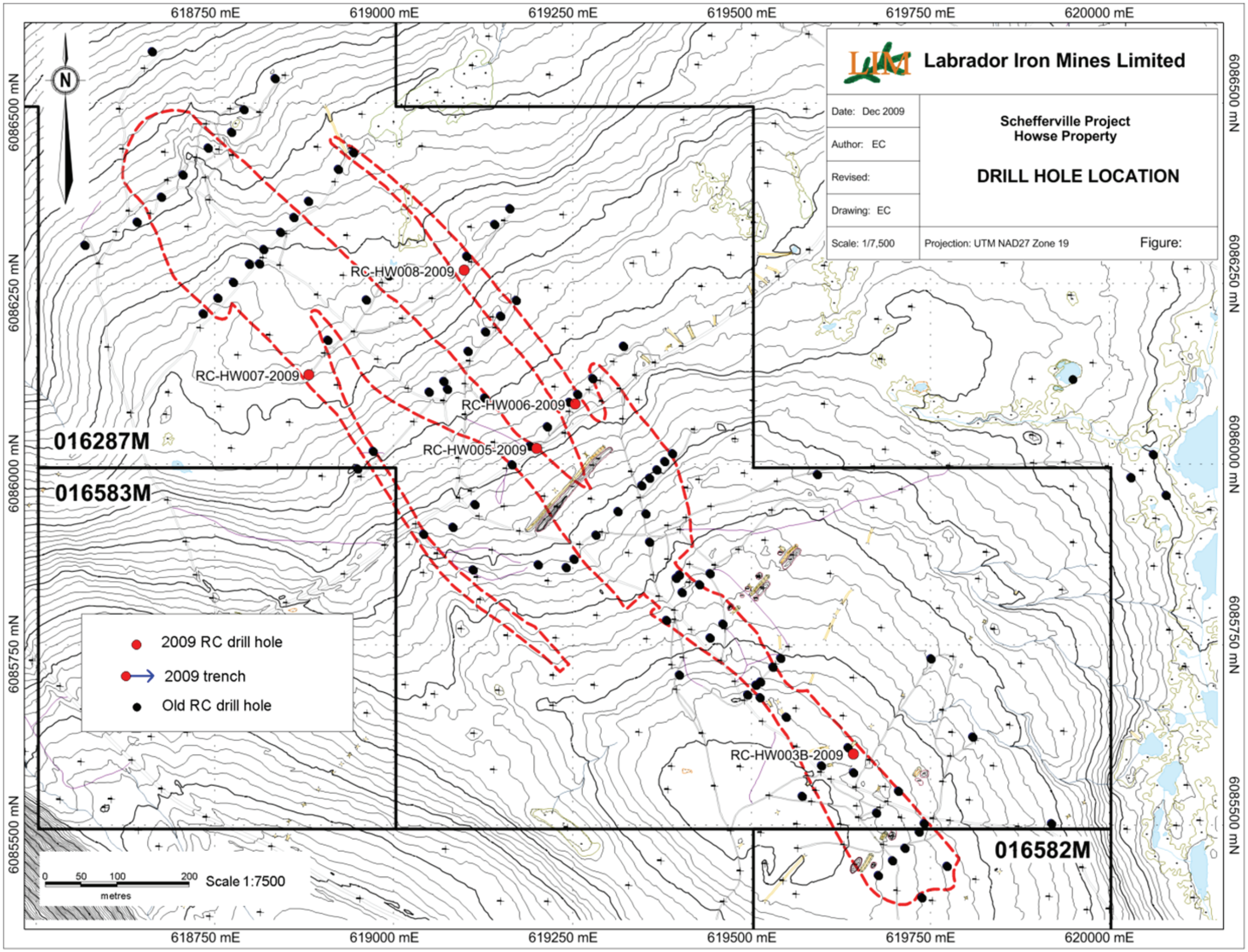
Houston 1 & 2 Drill Holes


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-HU032-2009
RC-HU030-2009
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:

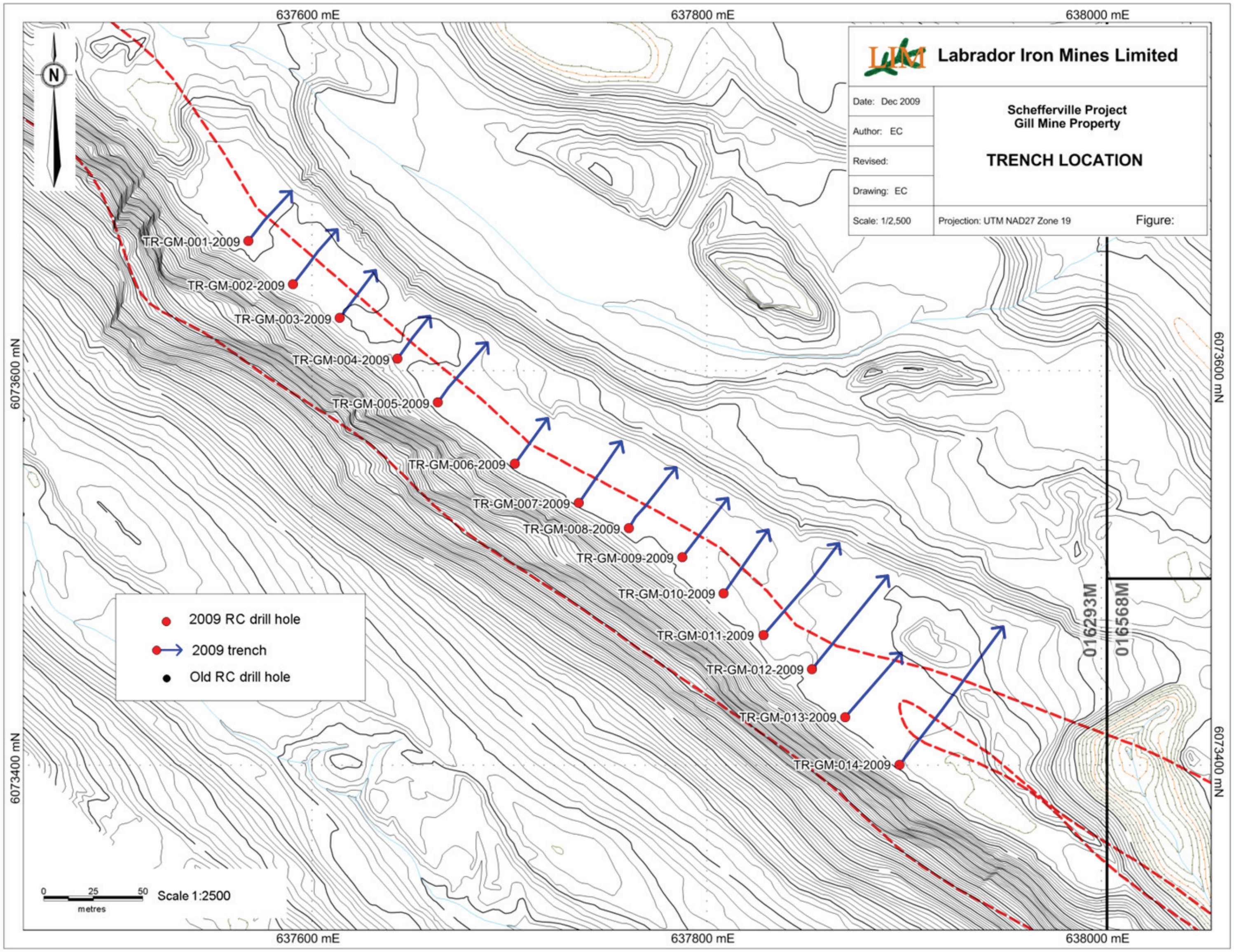
Houston 3 Drill Holes


2009 RC drill hole
2009 trench
Old RC drill hole
016576M
016286M
016575M
HOUSTON 3
RC-HU034A-2009
RC-HU035-2009
RC-HU036-2009
RC-HU041-2009
RC-HU042-2009
TR-HU3-001-2009
RC-HU040-2009
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
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
N

Trenching Gill Mine


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:
637600 mE
637800 mE
638000 mE
6073600 mN
6073400 mN
016293M
016568M
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
2009 RC drill hole
2009 trench
Old RC drill hole
0 25 50
metres
Scale 1:2500