TECHNICAL REPORT: SCHEFFERVILLE AREA DIRECT SHIPPING IRON ORE PROJECTS RESOURCE UPDATE IN WESTERN LABRADOR AND NORTH EASTERN QUEBEC, CANADA

FOR

LABRADOR IRON MINES HOLDINGS LIMITED

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Respectfully submitted to:
Labrador Iron Mines Holdings Limited

Effective Date: April 12th, 2013

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Contents

List of Table

List of Figures

1. Summary

This Technical Report addresses the ongoing exploration and development of the iron ore projects on various deposits owned and operated by Labrador Iron Mines Holdings Limited ("LIMHL") in western Labrador and north eastern Quebec known at the Stage 1 Central Zone deposits.

The Report has been produced following the completion of the construction of the Silver Yards processing plant facility and other associated infrastructure and two years of production from the James Mine and the Silver Yards plant. This report does not discuss the Houston or Malcolm deposits which are the subject of a separate report.

Mr. Maxime Dupéré P. Geo., the primary author of this report, is independent of Labrador Iron Mines Holdings Limited ("LIMHL"), Labrador Iron Mines Limited ("LIM") and Schefferville Mines Incorporated ("SMI"), wholly owned subsidiaries of LIMHL which holds the mineral claims on which the iron deposits are located.

Mr. Justin Taylor P. Eng., the secondary author of this report, is also independent of Labrador Iron Mines Holdings Limited.

Mr. Michel Dagbert, Eng., the third author of part of this report, is also independent of Labrador Iron Mines Holdings Limited.

Mr. Maxime Dupéré P. Geo., Mr. Justin Taylor, P. Eng. and Mr. Michel Dagbert, Eng. are all "qualified persons" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators. ("NI 43-101") The authors are independent as described in section 1.5 of NI 43-101.

The current compliant iron resource estimates for the James, Redmond, Knob Lake, and Denault deposits total 16.5 million tonnes of measured and indicated resources at an average grade of 55% Fe and are summarised in Table 1-1, while current compliant manganese resources for Knob Lake and Denault deposits are summarized in
Table 1-3.

In addition to the foregoing, LIM also holds some historical stockpiles with a confirmed NI 43-101 compliant, indicated resource of approximately 3.5 million tonnes with an average grade of 49.1% Fe and an inferred resource of approximately 2.9 million tonnes with an average grade of 48.8% Fe. These previously-mined stockpiles are located within 15 km of the Silver Yards processing plant and form part of LIM's Stage 1 deposits.

LIMHL is considered a "producing issuer" within the meaning of NI 43-101 as its audited financial statements for the year ended March 31, 2013, being the Company's most recently completed financial year, disclosed gross revenue, derived from mining operations of $95.7 million, which is more than an aggregate of $90 million for the Company's three most recently completed financial years and, accordingly, the information required under Item 22 of Form 43-101F1 for technical reports on properties currently in production is not included in this Technical Report

Table 1-1: NI 43-101 Compliant Iron Resources - James, Redmond, Knob Lake & Denault

Area	Classification	Tonnes (x1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
James	Indicated	3,480	56.2	0.02	0.7	16.3	0.42
	Inferred	83	53.5	0.04	0.1	19.5	0.49
Redmond 2B	Indicated	849	59.9	0.12	0.4	5.1	2.09
	Inferred	30	57.3	0.13	0.6	5.9	4.09
Redmond 5	Indicated	2,084	55.0	0.05	1.2	11.0	0.81
	Inferred	78	52.3	0.07	2.0	10.8	0.96
Knob Lake 1 (Fe Ore)	Measured	2,836	55.0	0.07	1.0	10.2	0.48
	Indicated	2,266	54.3	0.08	1.1	11.2	0.46
	Inferred	655	51.8	0.09	1.2	13.5	0.45
Denault (Fe Ore)	Measured	4,417	54.9	0.07	0.8	9.8	1.11
	Indicated	572	53.2	0.08	1.0	12.0	0.95
TOTAL	**Measured**	**7,253**	**55.0**	**0.05**	**0.9**	**9.9**	**0.67**
	Indicated	**9,251**	**55.6**	**0.01**	**0.9**	**12.5**	**0.22**
	Meas. + Ind.	**16,504**	**55.3**	**0.03**	**0.9**	**11.4**	**0.42**
	Inferred	**846**	**52.6**	**0.00**	**1.2**	**13.5**	**0.04**

Table 1-2: *Stockpiles Mineral Resource Estimates, by Deposit, as at March 31, 2013*

Area	Classification	Tonnes (x1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
Wishart	Indicated	1,151	48.6	0.04	0.10	27.1	0.50
	Inferred	1,280	48.2	0.04	0.10	27.5	0.50
Ferriman 1 (C&D)	Indicated	2,394	49.3	0.05	1.20	21.6	1.01
	Inferred	1,616	49.3	0.05	1.20	22.1	0.87
TOTAL	**Indicated**	**3,546**	**49.1**	**0.05**	**0.80**	**23.4**	**0.84**
	Inferred	**2,896**	**48.8**	**0.05**	**0.70**	**24.5**	**0.71**

Table 1-3: NI 43-101 Compliant Manganiferous Resources - Knob Lake & Denault

Area	Classification	Tonnes (x1000)	Fe%	P%	Mn%	SiO_2%	Al_2O_3%
Knob Lake 1 (Mn Ore)	Measured	377	50.6	0.09	5.6	8.4	0.68
	Indicated	214	49.4	0.08	4.9	9.5	0.79
	Inferred	138	49.1	0.05	4.8	9.8	0.40
Denault (Mn Ore)	Measured	1,448	52.1	0.08	6.4	6.0	1.09
	Indicated	362	51.7	0.07	6.5	6.6	0.97
TOTAL	**Measured**	**1,825**	**51.7**	**0.06**	**6.3**	**6.4**	**0.87**
	Indicated	**576**	**50.9**	**0.04**	**5.7**	**7.9**	**0.59**
	Meas. + Ind.	**2,401**	**51.5**	**0.06**	**6.2**	**6.7**	**0.80**
	Inferred	**138**	**49.1**	**0.05**	**4.8**	**9.8**	**0.40**

1.1 Property Description and Location

As of April 12th, 2013 LIM holds title to 26 Mineral Rights Licenses issued by the Department of Natural Resources, Province of Newfoundland and Labrador, representing 665 mineral claims located in western Labrador covering approximately 16,625 ha. SMI holds interests in 428 Mining Claims 428 mining claims in Québec, covering approximately 12,454.75 ha. SMI also holds an exclusive operating license over 146 mining claims totaling approximately 2,070.75 ha formerly contained in a mining lease. This lease expired in February 2013, and was replaced by the 146 mining claims which cover all of the land previously subject to the lease. 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, Denault, and Redmond deposits are within 20 km from Schefferville. LIM commenced production from the James Mine in 2011. 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.

1.2 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 LIMHL, entered into agreements together. LIMHL subsequently acquired additional properties in Labrador by staking. In 2009, SMI acquired the properties in Quebec held by Hollinger. All of the properties comprising LIMHL'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.

LIM commenced initial production at its James mine in June 2011 and through to the end of 2012, has produced 2.0 million dry tonnes of iron ore for 13 cape-size shipments sold into the Chinese spot market. The Company considers the fiscal year ended March 31, 2012 as having been a short, start-up and testing operating season during which the Schefferville Projects had not yet reached commercial production. LIM commenced its first season of commercial production in April 2012.

The IOC historical iron ore resources contained within LIM's properties in Labrador, not including James, Redmond 2B, Redmond 5 and Houston deposits, total 56 million tonnes with grades greater than 50% Fe 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 and Malcolm, total 52.4 million tonnes with grades greater than 50% Fe.

1.3 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 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.

Only the direct shipping ore is considered beneficial to produce lump and sinter feed and will be part of the resources for the LIMHL project.

1.4 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 LIMHL 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, Knob Lake 1 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.

1.5 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 LIMHL. Systematic drilling has been carried out on sections 30 m 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 m). 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 LIMHL during 2006, 2008 to 2012, predominantly with RC drilling. In 2012, LIM began using diamond drilling as newer techniques were able to rectify historical recovery issues. The geological sections originally prepared by IOC have been updated with the information obtained through LIMHL's exploration.

Including Labrador and Quebec (excluding the Houston and Malcolm Property drill holes) a total of 16,713 m of RC drilling in 347 holes, and 2,087.4 m of diamond drilling in 24 holes, were drilled to the effective date of this report. A total of 54 trenches totalling 3,438 m of trenching have been carried out on the James, Knob Lake No.1, Redmond 2B, Redmond 5, Gill and Ruth Lake 8 deposits. Between 2008 and 2012, sampling from testpitting totalled 1407 assays. The testpitting program was conducted on the stockpiles located in the Wishart, Ferriman, Burnt Creek, Gagnon, Knox and Redmond locations. Testpitting is used exclusively for historical stockpile assessment, with the exception of testpitting at Knob Lake 1 which was to determine the location of western edge of the deposit.

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.

1.6 Sample Preparation, Security and Data Verification

The IOC sampling procedures have not been located but it is believed that LIMHL has followed similar procedures to those used by IOC in the past. All samples were prepared in the preparation laboratory, located in Schefferville, which was established by LIMHL. Sampling as well as the preparation was carried out under supervision of LIMHL 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.

1.7 Metallurgical Testing

Material collected from the James deposits has been to a number of laboratories for metallurgical test work, including Lakefield Research, "rpc", Derrick Corporation, Outotec, FL Smidth and SGA Laboratories in Germany. Material from the Redmond deposit was sent to MBE Coal & Minerals Technologies in Germany and to Corem in Quebec City.

As a result of this testwork the Silver Yards plant was designed and following initial production and further testwork some modifications were installed.

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

1.8 Operations

LIM commenced its first season of commercial production in April 2012. The Company considers the fiscal year ended March 31, 2012 as having been a short, start-up and testing operating season during which the Schefferville Projects had not yet reached commercial production.

LIM's operating results for the fiscal years ended March 31, 2013 and 2012 are summarized in the table below.

	Year Ended March 31, 2013		**Year Ended March 31, 2012**	
(all tonnes are dry metric tonnes)	**Tonnes**	**Grade (% Fe)**	**Tonnes**	**Grade (% Fe)**
Total Ore Mined	1,828,398	61.3%	1,205,609	60.7%
Waste Mined	3,215,985	--	3,004,355	--
Ore Processed and Screened	954,813	58.2%	572,052	58.4%
Lump Ore Produced	98,693	61.2%	79,407	63.6%
Sinter Fines Produced	693,173	61.4%	152,735	65.0%
Total Product Railed	1,492,960	62.3%	563,569	64.9%
Tonnes Product Sold	1,559,620	62.5%	385,898	64.9%
Port Product Inventory	111,009	60.9%	177,669	64.9%
Site Product Inventory	3,551	58.4%	69,983	65.3%
Site Run-of-Mine Ore inventory	446,975	56.2%	195,117	59.0%

1.9 Mining Methods

Open pit mining methods using conventional truck and shovel operations are employed at LIM's James Mine. The mining rate ranges from 20,000 tpd to 30,000 tpd. Most ore and waste is direct digging. Drilling and blasting is employed approximately 20% of the time. Mining is undertaken using contractor equipment and manpower on a cost-plus basis. Planning and grade control is LIM's responsibility. Waste is trucked to dumps immediately adjacent to the open pits. Ore is trucked to the Silver Yards vicinity and stockpiled. Mining is typically seasonal, from April to November each year. Ore is generally divided into High Grade, Low Grade and Yellow Ore.

High grade ores (>60% Fe) are referred to as Direct Rail Ores ("DRO").

Low grade ores (>50% Fe<60%Fe) are referred to as Plant Feed ("PF").

Yellow ore is blended into the sinter fine product in minor proportions.

1.10 Silver Yards Plant

LIM currently employs two separate process streams for mined ore depending on the Fe head grade of the ore mined. There is a dry and a wet process stream.

The dry crushing and screening process is used to classify the higher grade ores. The wet process (crushing, scrubbing, screening, hydrosizing, magnetic separation, filtration) is use to upgrade the lower grade ores into products that are over 62% Fe in content.

The dry process operates from April through November. The wet process plant operates from May through October. The seasonal operation is dictated by the freezing of finer iron ore products. No chemicals are used in the processes.

1.11 Project Infrastructure

All the required infrastructure is established. Minor modifications to the Silver Yards yard track are planned to accommodate longer car train sets in the future. A maintenance shop and warehouse is planned as is a mine dry at the Bean Lake camp. Temporary fuel storage tanks are planned for installation at Silver Yards in 2013 as part of a new fuel delivery system. A grid power connection is planned at Silver Yards during the summer of 2013.

1.12 Mineral Resources

As of the date of this Report, the current resource estimates for the James Redmond 2B, Redmond 5, Knob Lake No.1 and Denault deposits are summarised in Table 1-4, Table 1-5, Table 1-6, Table 1-7, and Table 1-8. The resource update for stockpiles located in the Wishart and Ferriman properties are summarized in Table 1-9and Table 1-10

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

Area	Ore Type	Classification	Tonnes	Fe (%)	SiO_2 (%)	Mn (%)	P (%)	Al_2O_3 (%)
James	Fe Ore	Measured (M)	-	-	-	-	-	-
		Indicated(I)	3,480,000	56.18	16.25	0.68	0.022	0.42
		Total M+I	3,480,000	56.18	16.25	0.68	0.022	0.42
		Inferred	83,000	53.54	19.48	0.14	0.036	0.49

Dated: April, 2013

SGS conducted an audit of an extensive reconciliation carried out by LIM personnel in the fall of 2012 of the James Mine production from 2011 and 2012 with estimated resources in a block model produced by SGS at the end of 2009. SGS concluded that the average dry bulk density in the James Mine should be reduced from $3.45t/m^3$ down to $2.85t/m^3$.

Therefore, SGS's recommends that in calculating remaining resources in the James pit from the SGS model a correction to predicted volumes and average grades should not be applied and predicted densities in blocks should be reduced by another 15% to account for porosity greater than originally expected.

The current resource estimates for the James deposit, after 2012 mining depletion and following the reconciliation of the dry bulk density calculations, total 3.48 million tonnes, including LNB, NB and $HiSiO_2$ ore types as described, in the Measured and Indicated categories, at a grade of 56.18% Fe and 83,000 tonnes in the Inferred category at a grade of 53.54% Fe.

Table 1-5: Updated Mineral Resources of the Redmond 2B Deposits (NI 43-101 Compliant)

Area	Ore Type	Classification	Tonnes	Fe (%)	P (%)	Mn (%)	SiO_2 (%)	Al_2O_3 (%)
Redmond 2B	Fe Ore	Measured (M)	-	-	-	-	-	-
		Indicated(I)	849,000	59.86	0.120	0.37	5.05	2.09
		Total M+I	**849,000**	**59.86**	**0.120**	**0.37**	**5.05**	**2.09**
		Inferred	30,000	57.27	0.133	0.64	5.87	4.09

Table 1-6: Estimated Mineral Resources Redmond 5 Deposits (NI 43-101 Compliant)

Area	Ore Type	Classification	Tonnes	Fe (%)	P (%)	Mn (%)	SiO_2 (%)	Al_2O_3 (%)
Redmond 5	Fe Ore	Measured (M)	-	-	-	-	-	-
		Indicated(I)	2,084,000	54.95	0.048	1.17	10.97	0.81
		Total M+I	**2,084,000**	**54.95**	**0.048**	**1.17**	**10.97**	**0.81**
		Inferred	78,000	52.34	0.068	1.95	10.84	0.96

Table 1-7: Estimated Mineral Resources for Knob Lake 1 (NI 43-101 Compliant)

Area	Ore Type	Classification	Tonnes	Fe (%)	P (%)	Mn (%)	SiO_2 (%)	Al_2O_3 (%)
Knob Lake No.1	Fe Ore	Measured (M)	2,836,000	55.01	0.07	1.00	10.22	0.48
		Indicated(I)	2,266,000	54.33	0.06	1.08	11.19	0.46
		Total M+I	**5,102,000**	**54.71**	**0.07**	**1.03**	**10.65**	**0.47**
		Inferred	655,000	51.76	0.09	1.22	13.54	0.45
Knob Lake No.1	Mn Ore	Measured (M)	377,000	50.56	0.09	5.60	8.41	0.68
		Indicated(I)	214,000	49.57	0.08	4.86	9.58	0.79
		Total M+I	**591,000**	**50.20**	**0.08**	**5.34**	**8.84**	**0.72**
		Inferred	138,000	49.12	0.05	4.82	9.85	0.40

Updated March 2013

Table 1-8: Estimated Mineral Resources for Denault

Area	Ore Type	Classification	Tonnes	Fe(%)	P(%)	Mn (%)	SiO_2 (%)	Al_2O_3 (%)
Denault	Fe Ore	Measured (M)	4,417,000	54.89	0.075	0.84	9.78	1.11
		Indicated(I)	572,000	53.16	0.077	0.86	11.96	0.95
		Total M+I	**4,989,000**	**54.69**	**0.075**	**0.84**	**10.03**	**1.09**
		Inferred	-	-	-	-	-	-
	Mn Ore	Measured (M)	1,448,000	52.06	0.078	6.35	6.01	1.09
		Indicated(I)	362,000	51.73	0.071	6.48	6.60	0.97
		Total M+I	**1,810,000**	**51.99**	**0.077**	**6.38**	**6.12**	**1.07**
		Inferred	-	-	-	-	-	-
	Total	Measured (M)	5,865,000	54.19	0.076	2.20	8.85	1.10
		Indicated(I)	934,000	52.61	0.075	3.04	9.88	0.96
		Total M+I	**6,799,000**	**53.97**	**0.076**	**2.31**	**8.99**	**1.08**
		Inferred	-	-	-	-	-	-

Table 1-9: Estimated Mineral Resources for Wishart Stockpiles (NI 43-101 Compliant)

Area	COG	Classification	Tonnes	Fe (%)	P (%)	Mn (%)	SiO_2 (%)	Al_2O_3 (%)
Wishart	>45% Fe (Base Case)	**Indicated**	**1,151,000**	**48.57**	**0.04**	**0.09**	**27.14**	**0.50**
		Inferred	**1,280,000**	**48.24**	**0.04**	**0.08**	**27.54**	**0.50**
	>0% Fe	Indicated	1,512,000	47.07	0.04	0.09	28.97	0.67
		Inferred	2,134,000	45.72	0.04	0.09	30.64	0.78
	<45%Fe	Indicated	338,000	41.77	0.04	0.08	35.49	1.24
		Inferred	837,000	41.78	0.04	0.09	35.42	1.21

Dated: April, 2013

Table 1-10: Estimated Mineral Resources for Ferriman 1, C & D Stockpiles (NI 43-101 Compliant)

Area	COG	Classification	Tonnes	Fe (%)	P (%)	Mn (%)	SiO_2 (%)	Al_2O_3 (%)
Ferriman 1 (C&D) Stockpile	**>45% Fe (Base Case)**	**Indicated**	**2,394,000**	**49.34**	**0.05**	**1.21**	**21.63**	**1.01**
		Inferred	**1,616,000**	**49.3**	**0.05**	**1.17**	**22.06**	**0.87**
	>0% Fe	Indicated	3,454,000	46.83	0.07	1.22	24.50	1.40
		Inferred	2,396,000	47.41	0.05	1.55	23.83	1.02
	<45%Fe	Indicated	1,059,000	41.18	0.1	1.25	31.01	2.30
		Inferred	778,000	43.47	0.07	2.32	27.50	1.34

Dated: April, 2013

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. Table 1-11 show the combined summaries of the estimates 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 1-11: Combined Summary of Historical IOC Resource Estimates (Non 43-101 Compliant)

Province	Iron Resources			Manganese Resources			
	Tonnes (x 1000)	Fe%	SiO2%	Tonnes (x 1000)	Fe%	SiO2%	Mn%
NL	56,020	63.5	7.7	269	48.7	10.2	10.2
QC	52,420	60.9	6.8	4,182	52.5	6.0	6.2
Combined	**108,440**	**62.2**	**7.3**	**4,451**	**52.3**	**6.3**	**6.4**

* Historical resources in this table are reported on a dry basis. IOC reported historical resources on a “natural” basis, including moisture content. Non-compliant with NI 43-101.

These historical estimates, described in section, 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.

1.13 Market Studies and Contracts

LIM successfully sold 13 cape-size shipments of sinter fines into the Chinese spot market, for total sales of 2 million tonnes, in 2011 and 2012. Product was sold to IOC. The Rio Tinto marketing organization resold the product in market. Rio Tinto Marine provided the ships.

In 2013 and 2014, LIM plans to sell approximately 1.75 to 2.0 million tonnes of sinter fines and lump ore each year to IOC. RB Metalloyd, a global trader, has agreed to purchase the LIM iron ore from IOC for resale into the Chinese spot market

No marketing arrangements have been completed for sales beyond 2014.

1.14 Environmental Studies, Permitting and Social or Community Impact

All of the regulatory approvals required to mine and process the James and Redmond open pits are in place. Approvals for other mining and processing activities will be obtained as required, and no significant issues have been identified that would preclude obtaining regulatory approvals on a timely basis.

Five aboriginal agreements are in place and relationships with First Nations groups and local communities are considered to be very positive.

LIM continues to monitor progress towards full compliance with the Newfoundland and Labrador Benefits Plan, with steady progress in the areas of employment of NF&L residents, women's employment, aboriginal employment and NF&L procurement.

1.15 Capital and Operating Costs

As at March 31, 2013 LIM had incurred approximately $117 million in capital expenditures on the property, plant and equipment on its Schefferville Area iron ore project, including approximately $74 million in construction of the Silver Yards beneficiation plant and equipment, approximately $32 million in transportation infrastructure and equipment, approximately $10 million in service buildings and an accommodation camp and approximately $3 million in environmental reclamation and bonding. This does not include expenditures on exploration and mine development.

The capital investment required for the Phase III plant upgrade and expansion is $32 million total, of which $25 million had been expended at the end of fiscal year 2013 and $6 million remained to be spent as at March 31, 2013. Connection of the Silver Yard Plant to the Menehik hydroelectric power supply commenced in 2012 with overall cost of $8.5 million, and remainder of $3.2 million left to be completed in 2013.

Ongoing development costs of the Phase I satellite deposits and historical stockpiles including Redmond, Gill Knob Lake 1 and Denault over the remaining seven year mine life, including 2013 to 2019 are estimated at about $30 million of capital expenditure, mostly for road refurbishing/upgrade and dewatering requirements.

Operating costs, for mining, processing, site general operations, and rail operations, are projected to average $60 per tonne of dry product sold over the remaining seven year life of the Stage 1 deposits.

1.16 Interpretations and Conclusions

Of the total 2012 RC drilling campaign, (82 RC field duplicates), the student-T test did not highlight any bias. The sign test and student-T tests highlighted a small bias. Only 22% of all the 2011 original samples (ActLabs) returned values higher for iron than field duplicates (ALS). The opposite was observed for SiO_2. The correlation remains high and the absolute difference between samples is low. Furthermore almost all of the data fall within 20% difference.

LIMHL considers the difference to be acceptable. SGS Geostat considers the difference as acceptable as well and suitable for resource estimation but strongly suggests identifying the bias and addressing this matter in a proper timeframe.

The results from the check sampling done on the 2012 RC cuttings and core by SGS-Geostat indicate a small bias. The results indicate that there is sufficient reproducibility between laboratories and that the data has demonstrated validity.

1.17 Recommendations

Recommendations here are taken from the previous Technical Report titled "Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada" Revised dated October 24st, 2012 with minor updates.

Following the review of all relevant data and the interpretation and conclusions of this review, it is recommended that exploration on the Redmond 2B, Redmond 5, Denault, Gill, Star Creek, and Ruth Lake 8 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 for Gill and Ruth Lake 8 occurrence in order to continue the ongoing program to confirm historical resource (not NI 43-101 compliant). The additional drilling of about 35 drill holes is recommended:

- A total of 17 drill holes for a total of 1,700 mm are proposed for the Gill occurrence. All holes are located to define historical resources.
- A total of 6 drill holes for a total of 600 m are proposed for Redmond 2B and 5 to define further extensions.

A total of 7 drill holes for a total of 700 m are proposed for Denault occurrence to define further extensions.

Exploration programs are recommended to be carried out for all those remaining deposits 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 occurrences 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 Redmond 2B, Redmond 5, Gill, Ruth Lake 8, Denault and Star Creek targets:

- 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;
- Hydrology investigations should be completed to determine groundwater movement and to determine the amount of pit dewatering that will be required on all properties.

SGS recommends the continued use of diamond drilling in order to obtain core from all of its work areas. Recent 2012 DDH drilling campaign demonstrated a good recovery of core (over 85% recovery) making assay results, lithological and physical information more accessible with an almost constant volume in order to better define the in situ Specific Gravity and to gather material at depth for metallurgical tests and possibly geotechnical tests. The metallurgical tests should include general mineralogy, QEMSCAN, grindability and Bond Work Index, scrubbing tests, size analysis and assays from before and after scrubbing, density separation, jigging tests, WHIMS tests, settling tests without using flocculants, Vacuum filtration (assuming vacuum disc filter).

Finally, SGS suggest inserting real blanks and certified materials as well as regular field, prep course rejects pulp duplicates and the use of a second laboratory for checks.

2. Introduction

This Report reviews the ongoing exploration and development in LIMHL's Schefferville area *direct shipping ore (DSO)* properties in Newfoundland and Labrador and 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 of this report are independent, within the meaning of NI 43-101 of LIMHL, SMI and of LIM, wholly owned subsidiaries of LIMHL which hold the mineral claims on which the iron deposits are located.

LIMHL engaged SNC Lavalin in 2007 to prepare an independent Technical Report (October 2007) on its western Labrador iron properties.

In March 2010, LIMHL engaged an author of the SNC Lavalin report (A. Kroon) to co-author, with Maxime Dupéré of SGS – Geostat 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).

Maxime Dupéré and Justin Taylor are co-authors of the following Technical Reports:

"Technical Report Mineral Resource Estimation of the Houston Property Mineral Deposit for Labrador Iron Mines Limited" by Maxime Dupéré, P.Geo., SGS Canada Inc. concerning the Houston property in Labrador and filed on SEDAR March 25, 2011

"Technical Report Silver Yards Direct Shipping Iron Ore Projects in Western Labrador Province of Newfoundland and Labrador and North Eastern Québec Province of Québec Canada" by Justin Taylor, P.Eng., DRA Americas Inc., and Maxime Dupéré, P.Geo., SGS Canada Inc. concerning the exploitation of the James, Redmond 2B, Redmond 5, Gill, Ruth Lake 8 and Knob Lake deposits in Labrador and filed on SEDAR April 19, 2011.

"Revised Technical Report: Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Québec, Canada for Labrador Iron Mines Holdings Limited" by, Maxime Dupéré, P.Geo., SGS Canada Inc. and Justin Taylor, P.Eng., DRA Americas Inc. concerning the James Mine and Silver Yards project and the Redmond 2B, Redmond 5 and Knob Lake deposits in Labrador., dated March 31st, 2012 and revised October 24, 2012 and filed on SEDAR October 30, 2012

Maxime Dupéré visited the site from August 23rd to August 24th, 2012 as part of the reconnaissance visit of the all the properties of the Schefferville area for the 2012 RC drilling and trenching campaign. SGS – Geostat reviewed the different field, laboratory and QA/QC protocols and procedures.

Justin Taylor is the past project manager employed by DRA Americas Inc. responsible for the design of the Beneficiation Plant in Silver Yard. He visited the project site on numerous occasions most recently from May 15 to May 24, 2012 to evaluate the progress of the construction activities.

Michel Dagbert, Eng, is a Senior Geostatistician with SGS Canada.

The Schefferville Projects consist of the James Mine and adjacent Stage 1 deposits and Silver Yards processing plants (“Silver Yards”), and is considered an “advanced property” within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”).

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) is being undertaken by LIM and SMI.

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

Labrador Iron Mines Holdings Limited is considered a “producing issuer” within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) as its audited financial statements for the year ended March 31, 2013, being the Company’s most recently completed financial year, disclosed gross revenue, derived from mining operations of $95.7 million, which is more than an aggregate of $90 million for the Company’s three most recently completed financial years, and accordingly, the information required under Item 22 of Form 43-101F1 for technical reports on properties currently in production is not included in this Technical Report. In its fiscal year ended March 31, 2012 the Company recorded proceeds from the sale of iron ore in the gross amount of $32 million.

LIM’s Schefferville Projects comprise 20 different iron ore deposits, which were part of the original IOC direct shipping operations conducted from 1954 to 1982

Through its wholly-owned subsidiary Labrador Iron Mines Limited, LIMHL holds 3 Mining Leases and 55 Mining Rights Licenses (including 13 Licenses covering the Houston Property), issued by the Department of Natural Resources, Province of Newfoundland and Labrador, covering approximately 16,475 hectares.

Through its wholly-owned subsidiary, SMI, LIMHL holds interests in 277 Title Claims issued by the Ministry of Natural Resources, Province of Quebec, covering approximately 11,131 hectares in the Schefferville area. SMI also holds an exclusive operating license covering 23 parcels totalling about 2,036 hectares.

LIM’s plans for its Schefferville Projects envision the development and mining of the various deposits in stages. Stage 1, which is being undertaken in phases, comprises the deposits closest to existing infrastructure located at Silver Yards in an area identified as the Central Zone. The first phase of Stage 1 involves mining of the James deposits in Labrador.

LIM started production of its Stage 1 James deposit in the spring of 2011. LIM's mining operations are seasonal (April to November), with a planned winter closure from December to March each year. In the spring of 2013, LIM commenced its third season of operations.

Beyond 2013, LIM plans that operations in Silver Yards will continue with mining the remaining portions of the James deposit and, subject to permitting and detailed engineering assessment, a number of adjacent Stage 1 (Central Zone) deposits, including the Redmond and Gill deposits and the Wishart stockpiles, in Labrador, and the Denault deposit and Ferriman stockpiles in Quebec.

Stage 2, which will also be undertaken in phases, will involve the exploration, development and mining of the Houston and adjacent deposits.

A feasibility study has not been conducted on any of the Schefferville Projects and the Corporation's decision to undertake commercial production from the James and ongoing exploration and development of the Houston deposits has not been based upon a feasibility study of mineral reserves demonstrating economic and technical viability.

It is intended that during the mining of the Stage 1 and development of Stage 2 deposits, planning will be undertaken for the future operation of the other deposits in subsequent stages.

Stage 3 comprising the Howse (Labrador) and Barney (Quebec) deposits located approximately 25 km northwest of Schefferville (North Central Zone) and relatively close to existing infrastructure. The Howse deposit, located about 25 km north of LIM's James Mine and Silver Yards processing plant, has a historical resource of 28 million tonnes.

In March 2013 LIM entered into a framework arrangement with Tata Steel Minerals Canada Limited ("TSMC"), as part of which LIM and TSMC have agreed to enter into a transaction for the joint development of the Howse deposit, whereby LIM will sell a 51% interest in Howse to TSMC. In the future, TSMC may increase its interest to 70%. It is hoped that the agreement with TSMC will expedite the development of the Howse deposit and that significant cost savings and synergies can be achieved by processing Howse ore through TSMC's adjacent Timmins Area plant.

Stage 4 comprising the Astray and Sawyer deposits in Labrador, located approximately 50 km to 65 km southeast of Schefferville (South Zone) and currently accessible by float plane or by helicopter; and Stage 5 comprising the Kivivic deposit in Labrador and the Eclipse, Partington and Trough deposits in Quebec located between 40 km to 70 km northwest of Schefferville (North Zone).

The resources that comprise Stages 3, 4 and 5 of LIM's Schefferville Projects consist of non NI 43-101 compliant historical resources. There is currently insufficient detailed information available on these deposits to make any long-term estimate of future production schedules. Substantial additional exploration, infrastructure and road access will be required for the development of these stages.

3. Reliance on Other Experts

This report has been prepared for LIMHL. The findings, conclusions and recommendations are based on the authors' interpretation of information in LIMHL'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 LIMHL during the period 2006-2012 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 LIMHL. 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.

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 LIMHL personnel in the preparation of this report and the underlying in-house technical reports is gratefully acknowledged.

3.1 List of Terms

In this document, the following terms are used:

Actlabs: Activation Laboratories Ltd. Accredited independent Laboratory used for XRF analysis in Ancaster, Ontario, Canada.

DATUM NAD 27: North American Datum 1927 coordinates system

DRA Americas Inc., located in Toronto, Canada, a subsidiary of a multinational EPCM firm specializing in minerals processing and beneficiation.

DSO: Direct Shipping Ore, Fe content must be greater than 50% on a dry basis; SiO2 must be less than 18% on a dry basis.

Energold: Energold Minerals Inc., a junior exploration company having a joint venture agreement with Fonteneau.

Fonteneau: Fonteneau Resources Ltd., a junior exploration company having a joint venture agreement with Energold.

IOC: Iron Ore Company of Canada: Former producer of iron ore in the Schefferville area from 1954 to 1982 and owner of QNS&L Railway and IOC port facilities in Sept Iles.

LIM: Labrador Iron Mines Limited.

LIMHL: Labrador Iron Mines Holdings Limited.

Mineral deposit: A mineral deposit is a continuous, well-defined mass of material containing a sufficient volume of mineralized material.

MRE: Mineral Resources Estimates

NML: New Millennium Iron Corp. A junior exploration and development company having adjacent properties to Houston and other LIM properties.

Property: In this report, a property is described as an area comprised of one or a series of continuous claims and/or mineral licenses outlining in part or in total a mineral deposit, exploration target or a geological feature.

SGS: SGS–Geostat Canada Inc. Limited, part of SGS SA, a firm of consultants mandated to complete this study.

SGS-Lakefield: SGS Mineral services Laboratory, Accredited independent Laboratory and Member of the SGS group, used for XRF analysis in Lakefield, Ontario, Canada.

SMI: Schefferville Mines Incorporated.

SNC-Lavalin: SNC-Lavalin, an international engineering firm.

TSMC: Tata Steel Minerals Canada, a joint venture developing a DSO project adjacent to LIM properties

XRF: X-Ray Fluorescence Spectrometry. The type of analysis used for the assay analyses of 2006, and from 2008 to the date of this report.

Canadian dollars are used throughout this report unless stated otherwise.

3.2 List of Abbreviations

The metric units and measurements system is used throughout the report except for historical data mentioned in section 6.

A table showing abbreviations used in this report is provided below (Table 3-1):

Table 3-1: List of Abbreviations

tonnes or mt	Metric tonnes
tpd	Tonnes per day
tons	Short tons (0.907185 tonnes)
Long Tons	Long tons (1.016047 tonnes)
kg	Kilograms
g	Grams
ppm, ppb	Parts per million, parts per billion
%	Percentage
ha	Hectares
m	Metres
km	Kilometres
m^3	Cubic metres

4. Property Description and Location

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 March 31st 2013, LIM holds title, subject to various agreements described below, to 65 Mineral Rights Licenses in good standing, issued by the Department of Natural Resources, Province of Newfoundland and Labrador, representing 665 mineral claim units located in northwest Labrador covering approximately 16,625 ha. In addition to the Mineral Rights Licenses, LIM holds title to 3 Mining Leases and 8 Surface Leases issued by the Department of Natural Resources, Province of Newfoundland and Labrador covering an area of 483 ha (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 LIMHL 375 ha in 10 mineral licenses in Labrador that adjoin or form part of LIMHL's Phase One James, Houston, Redmond, Gill and Knob Lake 1 deposits, and a small portion of LIMHL's Phase Three Howse deposit. LIMHL transferred to NML two mineral licenses in Labrador comprising part of LIMHL's Phase Four Kivivic 2 and Kivivic 1 deposits.

SMI holds 447 mining claims in Québec, covering approximately 14,341.81 hectares. SMI also holds an exclusive operating licence over 146 of these mining claims (refer to Table 4-3) which cover approximately 2,070.75 ha formerly contained in a mining lease. This lease expired on June 15, 2013 and was replaced by the 146 mining claims which cover all of the land previously subject to the lease. These mining claims and the exclusive operating license in Québec are held subject to a royalty of $2.00 per tonne of iron ore produced, shipped and sold from the properties covered by the claims and license.

Table 4-1: List of Licenses in Newfoundland and Labrador held by LIM (As of March 31st, 2013)

Lic No.	*Map Sheet*	*Property*	*Location*	*# of Claims*	*Area (ha.)*	*Staked*	*Issued*
011541M	23J14	Fleming 3	Pinette Lake	3	75	5-Dec-05	4-Jan-06
011542M	23J14	Elross No.3	Howells River	2	50	5-Dec-05	4-Jan-06
011543M	23J14	Timmins 5	Howells River	3	75	5-Dec-05	4-Jan-06
011544M	23J14	Timmins 6	Howells River	3	75	5-Dec-05	4-Jan-06
012894M	23J14	Howells River	Howells River	3	75	14-Nov-06	14-Dec-06
016500M	23J14	Elross 3/Timmins 5	Howells River	46	1150	20-Aug-09	21-Sep-09
016502M	23J14	Fleming 3	Pinette Lake	1	25	20-Aug-09	21-Sep-09
016531M	23J14	Timmins 6	Howells River	3	75	15-Sep-09	15-Oct-09
016534M	23J15 23J14	Christine	Stakit Lake	13	325	15-Sep-09	15-Oct-09
016669M	23O03	Kivivic No.1	Kivivic Lake	7	175		2-May-05
018230M	23J14 23J15	Timmins	Pinette Lake	27	675	12-Nov-10	13-Dec-10
018235M	23J14	Elross/Timmins	Howells River	2	50	15-Nov-10	15-Dec-10
018283M	23J14	Timmins 6	Howells River	3	75	24-Nov-10	24-Dec-10
018638M	23J14	Timmins 6	Howells River	3	75	14-Feb-11	16-Mar-11
019461M	23J10 23J15	Malcolm	Gilling Lake	17	425	21-Sep-11	21-Oct-11
020317M	23J14	Timmins 6	Howells River	1	25	5-Jun-12	5-Jul-12
020318M	23J14	Timmins 6/Barney	Howells River	1	25	5-Jun-12	5-Jul-12
020319M	23J14	Timmins 6/Barney	Howells River	1	25	5-Jun-12	5-Jul-12
020320M	23J14	Timmins 6/Barney	Howells River	1	25	5-Jun-12	5-Jul-12
020321M	23J14	Timmins 6/Barney	Howells River	2	50	5-Jun-12	5-Jul-12
020430M	23J14	Howse	Howells River	39	975		16-Dec-04
020432M	23J10 23J15	James-Wishart	Knob Lake	148	3700		12-Apr-04
020433M	23J10	Houston	Gilling River	112	2800		12-Apr-04
020434M	23J08	Astray Lake	Astray Lake	70	1750		17-Dec-04
020435M	23I05	Sawyer Lake	Sawyer Lake	22	550		18-Sep-03
020440M	23J10 23J15	Knob Lake/Redmond	Knob Lake	132	3300		16-Dec-04
			Total	**665**	**16,625**		

Table 4-2: Mining and Surface Leases in Labrador

Type	Name	No.	Area (Ha)
Surface lease	Bean Lake Camp	111, 115	3.3
Surface lease	Ruth Pit	112	77.1
Surface lease	Pipe Line	113	3.29
Surface lease	Rail Spur Line	109	79.12
Surface lease	James Creek Culvert Area	120	35.75
Surface lease	James Discharge	119	34.9
Mining lease	James	200	96.14
Mining lease	Redmond 5	201	27.59
Mining lease	Redmond 2B	202	35.24
Surface lease	Redmond Haul Road	114	11.03
Surface lease	Silver Yards	110	81.79
Surface lease	Gill Surface Lease	125	70.03
Mining Lease	Houston 1 and 2 Project	216	351.94
Surface Lease	Houston 1 and 2 Project	135	1061.53
Surface Lease	Redmond Surface Lease	132	550.08
Surface Lease	Silver Yard Extension	137	17.53
		Total	**2536.36**

Table 4.3: Mining Titles in Schefferville Area – Quebec (As of March 31st, 2013)

Title No.	Sheet	Issued	Area (ha.)
CDC 58039	23J10	24/02/2005	20.81
CDC 58040	23J10	24/02/2005	4.44
CDC 58045	23J15	24/02/2005	49.76
CDC 58048	23J10	24/02/2005	47.86
CDC 2016779	23J15	20/06/2006	49.64
CDC 2016780	23J15	20/06/2006	49.63
CDC 2016781	23J15	20/06/2006	49.61
CDC 2016787	23J15	20/06/2006	49.11
CDC 2016789	23J15	20/06/2006	46.99
CDC 2016790	23J15	20/06/2006	44.96
CDC 2016791	23J15	20/06/2006	24.97
CDC 2016797	23O03	20/06/2006	49.36
CDC 2016800	23O03	20/06/2006	49.35
CDC 2016803	23O03	20/06/2006	49.34
CDC 2016805	23O03	20/06/2006	48.01
CDC 2016806	23O03	20/06/2006	47.23
CDC 2016807	23O03	20/06/2006	45.14

Title No.	Sheet	Issued	Area (ha.)
CDC 2016808	23O03	20/06/2006	35.78
CDC 2016925	23O03	20/06/2006	49.45
CDC 2016926	23O03	20/06/2006	49.45
CDC 2016927	23O03	20/06/2006	49.45
CDC 2168457	23J14	30/07/2008	3.35
CDC 2168458	23J14	30/07/2008	23.81
CDC 2168459	23J14	30/07/2008	0.6
CDC 2168460	23J14	30/07/2008	26.64
CDC 2168461	23J14	30/07/2008	46.59
CDC 2168462	23J14	30/07/2008	1.39
CDC 2168463	23J14	30/07/2008	48.09
CDC 2168464	23J14	30/07/2008	49.62
CDC 2168465	23J14	30/07/2008	49.62
CDC 2168466	23J15	30/07/2008	9.96
CDC 2168467	23J15	30/07/2008	14.85
CDC 2168468	23J15	30/07/2008	3.07
CDC 2168469	23J15	30/07/2008	0.31
CDC 2168470	23J15	30/07/2008	19.86
CDC 2168471	23J15	30/07/2008	8.07
CDC 2168472	23J15	30/07/2008	14.42
CDC 2168473	23J15	30/07/2008	5.02
CDC 2168474	23J15	30/07/2008	24.43
CDC 2168475	23J15	30/07/2008	34.47
CDC 2168476	23J15	30/07/2008	20.11
CDC 2168477	23J15	30/07/2008	22.13
CDC 2168478	23J15	30/07/2008	3.71
CDC 2168479	23J15	30/07/2008	25.28
CDC 2168480	23J15	30/07/2008	49.66
CDC 2168481	23J15	30/07/2008	49.66
CDC 2168482	23J15	30/07/2008	49.44
CDC 2168483	23J15	30/07/2008	1
CDC 2168484	23J15	30/07/2008	26.58
CDC 2168485	23J15	30/07/2008	34.59
CDC 2168486	23J15	30/07/2008	1.07
CDC 2168487	23J15	30/07/2008	0.18
CDC 2168488	23J15	30/07/2008	2.33
CDC 2168489	23J15	30/07/2008	1.01
CDC 2168490	23J15	30/07/2008	46.83
CDC 2168491	23J15	30/07/2008	43.56
CDC 2168492	23J15	30/07/2008	49.65

Title No.	Sheet	Issued	Area (ha.)
CDC 2168493	23J15	30/07/2008	46.18
CDC 2168494	23J15	30/07/2008	5.11
CDC 2168495	23J15	30/07/2008	14.91
CDC 2168496	23J15	30/07/2008	38.11
CDC 2168497	23J15	30/07/2008	49.65
CDC 2168498	23J15	30/07/2008	49.64
CDC 2168499	23J15	30/07/2008	46.99
CDC 2168500	23J15	30/07/2008	14.44
CDC 2168501	23J15	30/07/2008	6.16
CDC 2168502	23J15	30/07/2008	49.64
CDC 2168503	23J15	30/07/2008	49.64
CDC 2168504	23J15	30/07/2008	49.63
CDC 2168505	23J15	30/07/2008	49.63
CDC 2168506	23J15	30/07/2008	49.63
CDC 2168507	23J15	30/07/2008	49.63
CDC 2168508	23J15	30/07/2008	49.63
CDC 2168509	23J15	30/07/2008	49.63
CDC 2168510	23J15	30/07/2008	49.63
CDC 2168511	23J15	30/07/2008	49.62
CDC 2168512	23J15	30/07/2008	49.62
CDC 2168513	23J15	30/07/2008	49.62
CDC 2168514	23J15	30/07/2008	49.62
CDC 2168515	23J15	30/07/2008	49.62
CDC 2168516	23J15	30/07/2008	49.62
CDC 2168517	23J15	30/07/2008	49.62
CDC 2168518	23J15	30/07/2008	49.62
CDC 2168519	23J15	30/07/2008	49.61
CDC 2168520	23J15	30/07/2008	49.61
CDC 2168521	23J15	30/07/2008	49.61
CDC 2168522	23J15	30/07/2008	49.61
CDC 2168523	23J15	30/07/2008	49.61
CDC 2168524	23J15	30/07/2008	49.61
CDC 2168525	23J15	30/07/2008	49.61
CDC 2168526	23J15	30/07/2008	49.61
CDC 2168527	23J15	30/07/2008	49.61
CDC 2168528	23J15	30/07/2008	49.61
CDC 2168529	23J15	30/07/2008	49.61
CDC 2168530	23J15	30/07/2008	49.61
CDC 2168531	23O03	30/07/2008	20.33
CDC 2168532	23O03	30/07/2008	17.71

Title No.	Sheet	Issued	Area (ha.)
CDC 2168533	23O03	30/07/2008	27.79
CDC 2168534	23J14	30/07/2008	3.06
CDC 2168535	23J15	30/07/2008	0.37
CDC 2168536	23J15	30/07/2008	13.02
CDC 2168537	23J15	30/07/2008	34.11
CDC 2168538	23J15	30/07/2008	29.59
CDC 2168539	23J15	30/07/2008	21.17
CDC 2168540	23J15	30/07/2008	36.25
CDC 2168541	23J15	30/07/2008	48.39
CDC 2168612	23J15	31/07/2008	3.45
CDC 2172892	23J14	14/10/2008	40.63
CDC 2183173	23J15	08/05/2009	49.74
CDC 2183174	23J15	08/05/2009	49.74
CDC 2183175	23J15	08/05/2009	49.67
CDC 2183176	23J15	08/05/2009	39.78
CDC 2188494	23O07	16/09/2009	39.17
CDC 2188495	23O07	16/09/2009	49.11
CDC 2188496	23O07	16/09/2009	49.11
CDC 2188497	23O07	16/09/2009	49.11
CDC 2188498	23O07	16/09/2009	15.9
CDC 2188499	23O07	16/09/2009	48.83
CDC 2188500	23O07	16/09/2009	49.1
CDC 2188501	23O07	16/09/2009	49.1
CDC 2188502	23O07	16/09/2009	49.1
CDC 2188503	23O07	16/09/2009	49.1
CDC 2188504	23O07	16/09/2009	38.44
CDC 2188505	23O07	16/09/2009	49.09
CDC 2188506	23O07	16/09/2009	49.09
CDC 2188507	23O07	16/09/2009	49.09
CDC 2188508	23O07	16/09/2009	33.24
CDC 2188509	23O07	16/09/2009	49.08
CDC 2188510	23O07	16/09/2009	49.08
CDC 2188511	23O07	16/09/2009	20.81
CDC 2188512	23O07	16/09/2009	22.13
CDC 2188513	23O07	16/09/2009	25.2
CDC 2188514	23O07	16/09/2009	46.33
CDC 2188515	23O07	16/09/2009	49.07
CDC 2188516	23O07	16/09/2009	49.07
CDC 2188517	23O07	16/09/2009	11.28
CDC 2188518	23O07	16/09/2009	44.65

Title No.	Sheet	Issued	Area (ha.)
CDC 2188519	23O07	16/09/2009	49.06
CDC 2188520	23O07	16/09/2009	49.06
CDC 2188521	23O07	16/09/2009	49.06
CDC 2188522	23O07	16/09/2009	48.51
CDC 2188523	23O07	16/09/2009	49.04
CDC 2188524	23O07	16/09/2009	49.04
CDC 2188525	23O07	16/09/2009	49.05
CDC 2188526	23O07	16/09/2009	49.05
CDC 2188527	23O10	16/09/2009	48.71
CDC 2188528	23O10	16/09/2009	48.71
CDC 2188529	23O10	16/09/2009	48.71
CDC 2188530	23O10	16/09/2009	48.71
CDC 2188531	23O10	16/09/2009	48.71
CDC 2188532	23O10	16/09/2009	48.71
CDC 2188533	23O10	16/09/2009	48.7
CDC 2188534	23O10	16/09/2009	48.7
CDC 2188535	23O10	16/09/2009	48.7
CDC 2188536	23O10	16/09/2009	48.7
CDC 2188537	23O10	16/09/2009	48.7
CDC 2188538	23O10	16/09/2009	48.7
CDC 2188539	23O10	16/09/2009	48.69
CDC 2188540	23O10	16/09/2009	48.69
CDC 2188541	23O10	16/09/2009	48.69
CDC 2188542	23O10	16/09/2009	48.67
CDC 2188543	23O10	16/09/2009	48.67
CDC 2188544	23O10	16/09/2009	48.68
CDC 2188545	23O10	16/09/2009	48.68
CDC 2188546	23O10	16/09/2009	48.68
CDC 2188547	23O10	16/09/2009	48.68
CDC 2188548	23O10	16/09/2009	48.69
CDC 2188549	23O10	16/09/2009	48.69
CDC 2188826	23J10	17/09/2009	49.77
CDC 2189054	23J14	17/09/2009	0.09
CDC 2189055	23J15	17/09/2009	45.36
CDC 2189056	23J15	17/09/2009	47.34
CDC 2189057	23J15	17/09/2009	49.66
CDC 2189058	23J15	17/09/2009	49.66
CDC 2189059	23J15	17/09/2009	49.66
CDC 2189060	23J15	17/09/2009	49.65
CDC 2198039	23O10	18/12/2009	48.69

Title No.	Sheet	Issued	Area (ha.)
CDC 2198040	23O10	18/12/2009	48.66
CDC 2198041	23O10	18/12/2009	48.66
CDC 2198042	23O10	18/12/2009	48.66
CDC 2198043	23O10	18/12/2009	48.67
CDC 2198044	23O10	18/12/2009	48.67
CDC 2198045	23O10	18/12/2009	48.67
CDC 2198046	23O10	18/12/2009	48.65
CDC 2198047	23O10	18/12/2009	48.65
CDC 2198048	23O10	18/12/2009	48.65
CDC 2198049	23O10	18/12/2009	48.64
CDC 2198050	23O10	18/12/2009	48.64
CDC 2198889	23O03	13/01/2010	49.31
CDC 2198890	23O03	13/01/2010	49.31
CDC 2198891	23O03	13/01/2010	49.32
CDC 2198892	23O03	13/01/2010	49.3
CDC 2198893	23O03	13/01/2010	49.3
CDC 2198894	23O03	13/01/2010	49.3
CDC 2198895	23O03	13/01/2010	49.29
CDC 2198896	23O03	13/01/2010	49.29
CDC 2198897	23O03	13/01/2010	49.29
CDC 2198898	23O03	13/01/2010	49.29
CDC 2198899	23O03	13/01/2010	49.28
CDC 2198900	23O03	13/01/2010	49.28
CDC 2198901	23O03	13/01/2010	49.28
CDC 2198902	23O03	13/01/2010	49.28
CDC 2198903	23O03	13/01/2010	49.28
CDC 2198904	23O03	13/01/2010	49.27
CDC 2198905	23O03	13/01/2010	49.27
CDC 2198906	23O03	13/01/2010	49.27
CDC 2198907	23O03	13/01/2010	49.27
CDC 2198908	23O03	13/01/2010	49.26
CDC 2198909	23O03	13/01/2010	49.26
CDC 2198910	23O03	13/01/2010	49.26
CDC 2198911	23O03	13/01/2010	49.26
CDC 2198912	23O03	13/01/2010	49.25
CDC 2198913	23O03	13/01/2010	49.25
CDC 2198914	23O03	13/01/2010	49.25
CDC 2198915	23O03	13/01/2010	49.25
CDC 2198916	23O03	13/01/2010	49.25
CDC 2198917	23O03	13/01/2010	49.24

Title No.	Sheet	Issued	Area (ha.)
CDC 2198918	23O03	13/01/2010	49.24
CDC 2198919	23O03	13/01/2010	49.24
CDC 2214980	23O07	16/04/2010	49.01
CDC 2214981	23O07	16/04/2010	49.01
CDC 2214982	23O07	16/04/2010	49.01
CDC 2214983	23O07	16/04/2010	49.01
CDC 2214984	23O07	16/04/2010	49.01
CDC 2214985	23O07	16/04/2010	49.01
CDC 2214986	23O07	16/04/2010	49
CDC 2214987	23O07	16/04/2010	49
CDC 2214988	23O07	16/04/2010	49
CDC 2214989	23O07	16/04/2010	49
CDC 2214990	23O07	16/04/2010	49
CDC 2214991	23O07	16/04/2010	49
CDC 2214992	23O07	16/04/2010	48.99
CDC 2214993	23O07	16/04/2010	48.99
CDC 2214994	23O07	16/04/2010	48.99
CDC 2214995	23O07	16/04/2010	48.99
CDC 2214996	23O07	16/04/2010	48.99
CDC 2214997	23O07	16/04/2010	48.98
CDC 2214998	23O07	16/04/2010	48.98
CDC 2214999	23O07	16/04/2010	48.98
CDC 2215000	23O07	16/04/2010	48.98
CDC 2215001	23O07	16/04/2010	48.98
CDC 2215002	23O07	16/04/2010	48.98
CDC 2223062	23J15	28/04/2010	49.69
CDC 2223063	23J15	28/04/2010	37.51
CDC 2223064	23J15	28/04/2010	49.68
CDC 2223065	23J15	28/04/2010	46.66
CDC 2223066	23J15	28/04/2010	49.67
CDC 2223067	23J15	28/04/2010	49.67
CDC 2233265	23J10	11/05/2010	11.63
CDC 2233266	23J10	11/05/2010	10.28
CDC 2233267	23J10	11/05/2010	48.76
CDC 2233268	23J10	11/05/2010	49.79
CDC 2233269	23J10	11/05/2010	37.6
CDC 2233270	23J10	11/05/2010	49.78
CDC 2242564	24E08	27/07/2010	46.35
CDC 2242565	24E08	27/07/2010	46.35
CDC 2242566	24E08	27/07/2010	46.35

Title No.	Sheet	Issued	Area (ha.)
CDC 2242567	24E08	27/07/2010	46.35
CDC 2242568	24E08	27/07/2010	46.35
CDC 2242569	24E08	27/07/2010	46.34
CDC 2242570	24E08	27/07/2010	46.34
CDC 2242571	24E08	27/07/2010	46.34
CDC 2242572	24E08	27/07/2010	46.34
CDC 2242573	24E08	27/07/2010	46.34
CDC 2242574	24E09	27/07/2010	46.33
CDC 2242575	24E09	27/07/2010	46.33
CDC 2242576	24E09	27/07/2010	46.33
CDC 2242577	24E09	27/07/2010	46.33
CDC 2242578	24E09	27/07/2010	46.32
CDC 2242579	24E09	27/07/2010	46.32
CDC 2242580	24E09	27/07/2010	46.31
CDC 2242581	24E09	27/07/2010	46.31
CDC 2242582	24E09	27/07/2010	46.3
CDC 2242583	24E09	27/07/2010	46.29
CDC 2242584	24E09	27/07/2010	46.29
CDC 2259638	23J10	09/11/2010	49.77
CDC 2279509	23J15	25/03/2011	48.55
CDC 2298702	23J10	22/06/2011	17.22
CDC 2298703	23J10	22/06/2011	40.99
CDC 2298704	23J10	22/06/2011	10.88
CDC 2298705	23J10	22/06/2011	1.7
CDC 2298706	23J10	22/06/2011	36.79
CDC 2298707	23J15	22/06/2011	11.62
CDC 2298708	23J15	22/06/2011	37.3
CDC 2298709	23J15	22/06/2011	49.75
CDC 2298710	23J15	22/06/2011	49.74
CDC 2317779	23J10	13/10/2011	49.79
CDC 2317780	23J10	13/10/2011	32.37
CDC 2317781	23J10	13/10/2011	49.78
CDC 2317782	23J10	13/10/2011	28.74
CDC 2317783	23J10	13/10/2011	4.01
CDC 2317784	23J10	13/10/2011	39.44
CDC 2317785	23J10	13/10/2011	21.59
CDC 2317786	23J15	13/10/2011	3.61
CDC 2317787	23J15	13/10/2011	0.67
CDC 2350893	23J15	12/06/2012	49.69
CDC 2375170	23J15	14/01/2013	8.54

Title No.	Sheet	Issued	Area (ha.)
CDC 2375171	23J15	14/01/2013	45.41
CDC 2375172	23J15	14/01/2013	36.57
CDC 2375173	23J15	14/01/2013	34.28
CDC 2375174	23J15	14/01/2013	7.77
	Total	**301 Titles**	**12,271.06**

Table 4-3: Mining Claims Held by Hollinger North Shore Inc. in the Schefferville Area - Quebec

Title No.	NTS Sheet	Date of Registration	Area (ha.)
CDC 2386623	23J10	18/06/2013	10.17
CDC 2386624	23J10	18/06/2013	1.78
CDC 2386625	23J10	18/06/2013	1.91
CDC 2386626	23J14	18/06/2013	2.84
CDC 2386627	23J14	18/06/2013	8.98
CDC 2386628	23J14	18/06/2013	6.85
CDC 2386629	23J14	18/06/2013	0.95
CDC 2386630	23J14	18/06/2013	1.18
CDC 2386631	23J14	18/06/2013	3.62
CDC 2386632	23J14	18/06/2013	5.85
CDC 2386633	23J14	18/06/2013	0.14
CDC 2386634	23J14	18/06/2013	6.33
CDC 2386635	23J14	18/06/2013	1.13
CDC 2386636	23J14	18/06/2013	11.62
CDC 2386637	23J14	18/06/2013	8.8
CDC 2386638	23J14	18/06/2013	0.51
CDC 2386639	23J14	18/06/2013	0.04
CDC 2386640	23J14	18/06/2013	2.44
CDC 2386641	23J14	18/06/2013	4.37
CDC 2386642	23J14	18/06/2013	17.33
CDC 2386643	23J14	18/06/2013	5.35
CDC 2386644	23J14	18/06/2013	5.17
CDC 2386645	23J15	18/06/2013	0.88
CDC 2386646	23J15	18/06/2013	6.84
CDC 2386647	23J15	18/06/2013	25.39
CDC 2386648	23J15	18/06/2013	12.68
CDC 2386649	23J15	18/06/2013	1.65
CDC 2386650	23J15	18/06/2013	28.27
CDC 2386651	23J15	18/06/2013	0.54
CDC 2386652	23J15	18/06/2013	3.03
CDC 2386653	23J15	18/06/2013	36.66
CDC 2386654	23J15	18/06/2013	49.63
CDC 2386655	23J15	18/06/2013	49.68
CDC 2386656	23J15	18/06/2013	45.6
CDC 2386657	23J15	18/06/2013	15.62
CDC 2386658	23J15	18/06/2013	0.03
CDC 2386659	23J15	18/06/2013	0.21
CDC 2386660	23J15	18/06/2013	9.9
CDC 2386661	23J15	18/06/2013	16.87

Title No.	NTS Sheet	Date of Registration	Area (ha.)
CDC 2386662	23J15	18/06/2013	15.21
CDC 2386663	23J15	18/06/2013	29.57
CDC 2386664	23J15	18/06/2013	27.5
CDC 2386665	23J15	18/06/2013	0.42
CDC 2386666	23J15	18/06/2013	8.9
CDC 2386667	23J15	18/06/2013	11.17
CDC 2386668	23J15	18/06/2013	0.22
CDC 2386669	23J15	18/06/2013	22.08
CDC 2386670	23J15	18/06/2013	15.08
CDC 2386671	23J15	18/06/2013	0.3
CDC 2386672	23J15	18/06/2013	17.44
CDC 2386673	23J15	18/06/2013	0.88
CDC 2386674	23J15	18/06/2013	15.54
CDC 2386675	23J15	18/06/2013	24.64
CDC 2386676	23J15	18/06/2013	6.09
CDC 2386677	23J15	18/06/2013	3.48
CDC 2386678	23J15	18/06/2013	29.63
CDC 2386679	23J15	18/06/2013	11.55
CDC 2386680	23J15	18/06/2013	1.98
CDC 2386681	23J15	18/06/2013	1.53
CDC 2386682	23J15	18/06/2013	9.54
CDC 2386683	23J15	18/06/2013	9.62
CDC 2386684	23J15	18/06/2013	10.46
CDC 2386685	23J15	18/06/2013	9.12
CDC 2386686	23J15	18/06/2013	0.89
CDC 2386687	23J15	18/06/2013	20.06
CDC 2386688	23J15	18/06/2013	2.65
CDC 2386689	23J15	18/06/2013	29.05
CDC 2386690	23J15	18/06/2013	4.68
CDC 2386691	23J15	18/06/2013	0.02
CDC 2386692	23J15	18/06/2013	3.59
CDC 2386693	23J15	18/06/2013	10.2
CDC 2386694	23J15	18/06/2013	2.34
CDC 2386695	23J15	18/06/2013	25.02
CDC 2386696	23J15	18/06/2013	13.38
CDC 2386697	23J15	18/06/2013	1.24
CDC 2386698	23J15	18/06/2013	2.64
CDC 2386699	23J15	18/06/2013	33.63
CDC 2386700	23J15	18/06/2013	3.82
CDC 2386701	23J15	18/06/2013	0.52

Title No.	NTS Sheet	Date of Registration	Area (ha.)
CDC 2386702	23J15	18/06/2013	8.46
CDC 2386703	23J15	18/06/2013	6.86
CDC 2386704	23J15	18/06/2013	1.09
CDC 2386705	23J15	18/06/2013	22.13
CDC 2386706	23J15	18/06/2013	24.97
CDC 2386707	23J15	18/06/2013	2.29
CDC 2386708	23O02	18/06/2013	10.03
CDC 2386709	23O02	18/06/2013	30.11
CDC 2386710	23O02	18/06/2013	3.65
CDC 2386711	23O02	18/06/2013	3.97
CDC 2386712	23O02	18/06/2013	28.55
CDC 2386713	23O02	18/06/2013	23.53
CDC 2386714	23O02	18/06/2013	1.59
CDC 2386715	23O02	18/06/2013	0.76
CDC 2386716	23O02	18/06/2013	4.43
CDC 2386717	23O03	18/06/2013	0.03
CDC 2386718	23O03	18/06/2013	0.55
CDC 2386719	23O03	18/06/2013	1.23
CDC 2386720	23O03	18/06/2013	0.39
CDC 2386721	23O03	18/06/2013	12.01
CDC 2386722	23O03	18/06/2013	47.96
CDC 2386723	23O03	18/06/2013	49.07
CDC 2386724	23O03	18/06/2013	47.5
CDC 2386725	23O03	18/06/2013	22.69
CDC 2386726	23O03	18/06/2013	0.69
CDC 2386727	23O03	18/06/2013	3.69
CDC 2386728	23O03	18/06/2013	43.8
CDC 2386729	23O03	18/06/2013	49.22
CDC 2386730	23O03	18/06/2013	37.21
CDC 2386731	23O03	18/06/2013	7.22
CDC 2386732	23O03	18/06/2013	1.65
CDC 2386733	23O03	18/06/2013	4.85
CDC 2386734	23O03	18/06/2013	5.31
CDC 2386735	23O03	18/06/2013	0.29
CDC 2386736	23O05	18/06/2013	4.77
CDC 2386737	23O05	18/06/2013	34.45
CDC 2386738	23O05	18/06/2013	34.47
CDC 2386739	23O05	18/06/2013	22.47
CDC 2386740	23O05	18/06/2013	4.67
CDC 2386741	23O05	18/06/2013	9.55

Title No.	NTS Sheet	Date of Registration	Area (ha.)
CDC 2386742	23O05	18/06/2013	43.51
CDC 2386743	23O05	18/06/2013	49.03
CDC 2386744	23O05	18/06/2013	48.98
CDC 2386745	23O05	18/06/2013	27.09
CDC 2386746	23O05	18/06/2013	0.63
CDC 2386747	23O05	18/06/2013	16.93
CDC 2386748	23O05	18/06/2013	47.13
CDC 2386749	23O05	18/06/2013	49.02
CDC 2386750	23O05	18/06/2013	47.6
CDC 2386751	23O05	18/06/2013	18.25
CDC 2386752	23O05	18/06/2013	10.62
CDC 2386753	23O05	18/06/2013	31.93
CDC 2386754	23O05	18/06/2013	31.57
CDC 2386755	23O05	18/06/2013	31.07
CDC 2386756	23O05	18/06/2013	10.87
CDC 2386757	23O06	18/06/2013	7.2
CDC 2386758	23O06	18/06/2013	30.66
CDC 2386759	23O06	18/06/2013	6.94
CDC 2386760	23O06	18/06/2013	4.42
CDC 2386761	23O06	18/06/2013	28.66
CDC 2386762	23O06	18/06/2013	35.58
CDC 2386763	23O06	18/06/2013	10.01
CDC 2386764	23O06	18/06/2013	5.43
CDC 2386765	23O06	18/06/2013	12.91
CDC 2386766	23O06	18/06/2013	0.01
CDC 2386767	23J15	18/06/2013	0.01
CDC 2386768	23J15	18/06/2013	0.01
	Total	**146 Titles**	**2,070.75**

Figure 4-1: Project Location Map

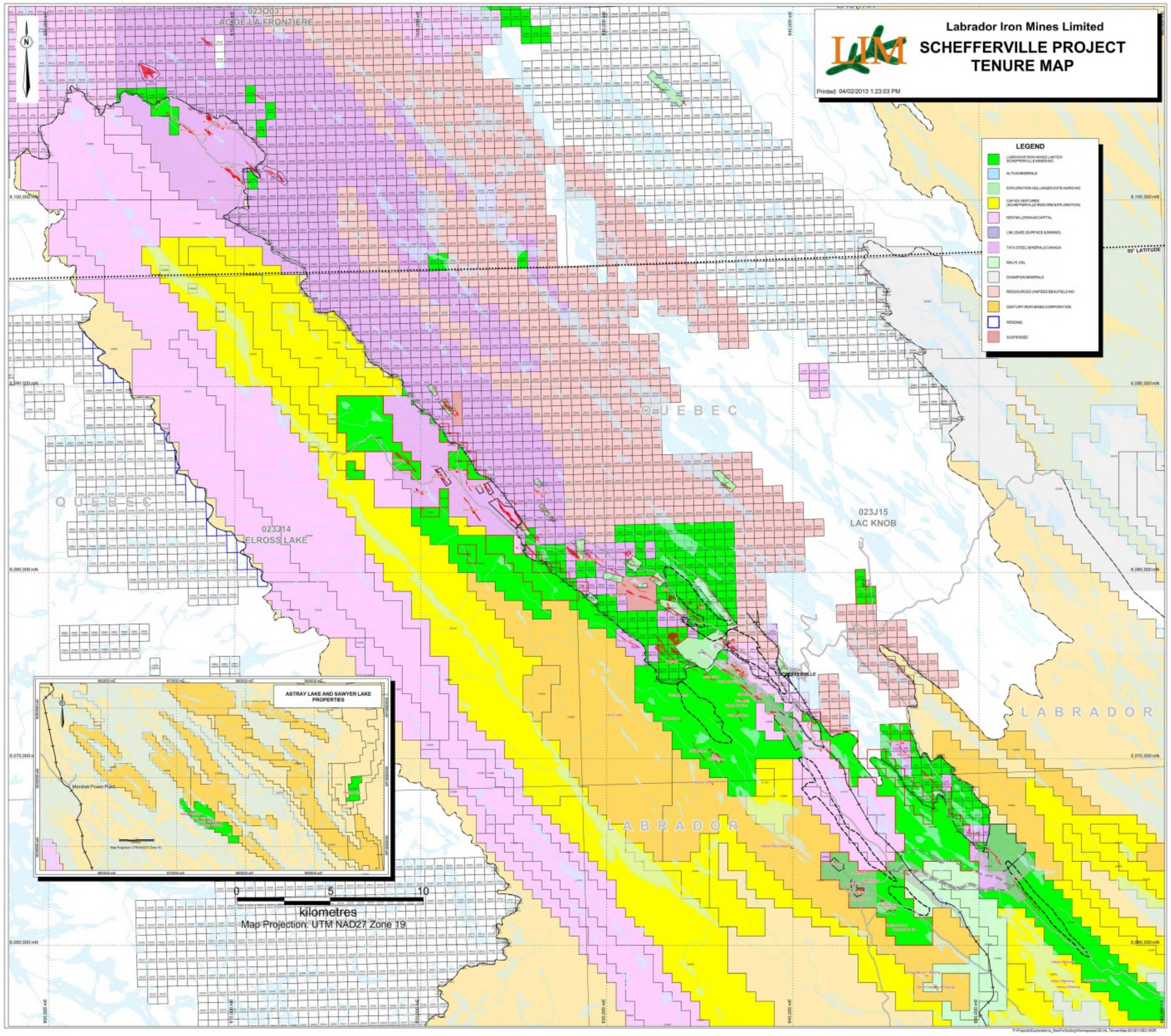


Figure 4-2: Map of LIMHL Mining Licenses and Titles (as of April 12th, 2013)

The properties considered in LIM's Stage One are:

4.1 James Deposit

The James deposit is located in the NE portion of the license 020432M; which covers an area of 37 km^2. The license is held by LIM (Table 4-4) and entirely covers the James deposit. The status of this license is in good standing.

Table 4-4: James Deposit Mineral License

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
020432M	Labrador Iron Mines Limited	Apr 12, 2004	148	37	This license is a "regrouping" that was executed during 2012 and replaces all previous licenses.

4.2 Redmond Deposits

The Redmond property is located between 8 and 10km south of the James deposit and is covered by the mineral license 020440M which covers an area of 33.00 km^2. It is held by LIM (Table 4-5). The deposits considered by LIM for exploitation are Redmond 2B and Redmond 5 and both are covered by the license. The status of this license is in good standing.

Table 4-5: Redmond Deposits Mineral License

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
020440M	Labrador Iron Mines Limited	Aug 16, 2004	132	33	This license is a "regrouping" that was executed during 2012 and replaces all previous licenses.

4.3 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 license number 020432M comprising 37.00 km^2 held by Labrador Iron Mines Limited (Table 4-6). The status of these licenses is in good standing.

Table 4-6: Gill Deposit Mineral Licenses

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
020432M	Labrador Iron Mines Limited	Apr 12, 2004	148	37	This license is a "regrouping" that was executed during 2012 and replaces all previous licenses.

4.4 Ruth Lake 8 Deposit

The Ruth Lake 8 property is located 2.5km west of James deposit and 2km west of Silver Yards processing plant. It is entirely covered by the license 020432M (Table 4-7). The status of this license is in good standing.

Table 4-7: Ruth Lake 8 Property Mineral License

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
020432M	Labrador Iron Mines Limited	Apr 12, 2004	148	37.00	This license is a "regrouping" that was executed during 2012 and replaces all previous licenses.

4.5 Knob Lake 1 Deposit

The Knob Lake 1 deposit is located 1.5km east of James deposit and 2.3km south of Silver Yards processing plant. It is covered by license number 020440M with a total area of 33.00 km^2 held by Labrador Iron Mines Limited (Table 4-8). The mineral license is in good standing.

Table 4-8: Knob Lake 1 Deposit Mineral Licenses

License No.	Holder	Issued	Claims	Extension (km^2)	Comments
020440M	Labrador Iron Mines Limited	Aug 16, 2004	132	33.00	This license is a "regrouping" that was executed during 2012 and replaces all previous licenses.

4.6 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 claims CDC2168483 and CDC2168494 held by SMI and by mining claims CDC2386678 and CDC2386690 held by Hollinger.

Table 4-9: Denault 1 Deposit Mining Claims

Mining Claims	Holder	Issued	Area (ha.)	Comments
CDC2168483	Schefferville Mines Inc.	July 30, 2008	1	
CDC2168494	Schefferville Mines Inc.	July 30, 2008	5.11	
CDC2386678	Hollinger North Shore Exploration Inc.	Jun 18, 2013	29.63	Held under operating license
CDC2386690	Hollinger North Shore Exploration Inc.	Jun 18, 2013	4.68	Held under operating license

4.7 Wishart Property

The Wishart property is located 6.5 km. southwest of Schefferville, past a large ridge formation west of the Knob Lake deposit, in Newfoundland. It is characterized by a historical IOCC mining pit and 2 distinct large stockpiles to the north and south of the pit. Table 4-10 summarizes the claim information.

Table 4-10: Wishart Property

Mine Claim No.	Holder	Issued	Claims	Extension (km^2)	Comments
020432M	Labrador Iron Mines Limited	Apr 12, 2004	148	37.00	This license is a "regrouping" that was executed during 2012 and replaces all previous licenses.

4.8 Ferriman Property

The Ferriman property is located 7 km. west of Schefferville, in Quebec. It is characterized by a historical mining open pit from IOCC, with 3 distinct stockpiles. Quebec claim numbers 2223067, 2183175 and 2223065 contain the stockpiles that had work conducted during the 2012 season. Table 4-11 below summarizes the claim information.

Table 4-11: Ferriman Property

Mine Claim No.	Holder	Issued	Claims	Area (Has)	Comments
CDC 2223067	Schefferville Mines Inc.	April 28, 2010	1	49.67	
CDC 2183175	Schefferville Mines Inc.	May 8, 2009	1	49.67	
CDC 2223065	Schefferville Mines Inc.		1	46.66	

5. Accessibility, Climate, Local Resources, Infrastructure, Physiography

5.1 Accessibility

The LIMHL 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 100km 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 30km 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 IOC 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 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 LIMHL'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 was, since the closure of the mining operations of IOC and until the recent recommencement of mining, 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 Kawawachikamach (Naskapi) reserves. Kawawachikamach, 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 LIM's 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 LIM's mining operations.

5.4 Infrastructure

Redmond 2B, and Redmond 5 are within 12 km of each other and after James will form the next group of properties from which mining by LIMHL 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 7km east of Redmond and 15km 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, 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. In addition to transporting iron ore TSH operates a passenger and light freight traffic between Sept-Îles and Schefferville three times a week.

LIM has established a 6 km spur line which connects the Silver Yards to the TSH railway.

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 Cliffs Bloom Lake Minemine to Wabush; and Arnaud Railways hauling iron ore for Wabush Mines ("Wabush") and the Bloom Lake Mine between Arnaud Junction and Pointe Noire. CRC hauls iron concentrates from Fermont area to Port-Cartier for Arcelor Mittal. The latter railway is not connected to TSH, QNS&L, Bloom Lake or Arnaud.

5.5 Physiography

The topography of the Schefferville mining district is bedrock controlled with the average elevation of the properties varying between 500 m and 700m above sea level. The terrain is generally gently rolling to flat, sloping north-westerly, with a total 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

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 LIMHL's Schefferville area project were part of the original IOC Schefferville operations and formed part of the 250 million tons of Historical reserves and resources identified by IOC but were not part of IOC's producing properties. 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.

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 LIMHL'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 LIMHL 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, Knob Lake and Denault 1 deposits contained within the properties totals 60.8 million tonnes with grades greater than 50% Fe 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 LIMHL's Schefferville area project were part of the original IOC Schefferville holdings and formed part of the 250 million tonnes 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 dry-basis 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 LIMHL'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 (x 1000)**	**Fe%**	**SiO_2%**	**Tonnes (x 1000)**	**Fe%**	**SiO_2%**	**Mn%**
* Astray Lake	7,271	70.5	4.2				
Howse	25,687	63.7	5.5				
Sawyer Lake	11,520	64.4	11.9				
Gill Mine	4,149	55.9	11.7	269	48.7	10.2	10.2
Green Lake	329	57.1	8.7				
Kivivic-1	6,004	59.2	9.3				
Ruth Lake-8	373	58.6	10.6				
Wishart Mine	188	59.0	13.4				
Wishart-2	499	57.8	14.3				
TOTAL	**56,020**	**63.5**	**7.7**	**269**	**48.7**	**10.2**	**10.2**

*Historical resources in this table are reported on a dry basis. IOC reported historical resources on a "natural" basis, including moisture content. 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	5,665	59.8	8.5	56	54.4	3.9	5.5
Eclipse	33,963	61.6	5.7	1,890	54.6	4.9	4.5
Fleming 6	700	55.3	10.1	20	48.2	8.0	8.4
Fleming 7S	1,777	61.3	8.3				
Fleming 9	383	58.9	9.7				
Lance Ridge	1,249	59.1	9.3	256	45.5	6.3	11.3
Partington 2	3,107	60.0	10.0				
Wollett 1	2,052	61.6	6.5				
Star Creek 1	1,331	57.2	8.2	1,759	51.5	7.0	7.3
Star Creek 3	56	61.9	9.4				
Sunny 3	421	63.1	7.3				
Trough 1	1,715	56.0	9.8	200	50.3	7.5	6.7
Total:	**52,420**	**60.9**	**6.8**	**4,182**	**52.5**	**6.0**	**6.2**

* Historical resources in this table are reported on a dry basis. IOC reported historical resources on a "natural" basis, including moisture content. Non-compliant with NI 43-101.

Table 6-3: Combined Summary of Historical IOC Resource Estimates

Province	**Iron Resources**			**Manganese Resources**			
	Tonnes (x 1000)	**Fe%**	**SiO2%**	**Tonnes (x 1000)**	**Fe%**	**SiO2%**	**Mn%**
NL	56,020	63.5	7.7	269	48.7	10.2	10.2
QC	52,420	60.9	6.8	4,182	52.5	6.0	6.2
Combined	**108,440**	**62.2**	**7.3**	**4,451**	**52.27**	**6.3**	**6.4**

* Historical resources in this table are reported on a dry basis. IOC reported historical resources on a "natural" basis, including moisture content. Non-compliant with NI 43-101

The historical dry-basis 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.

LIM commenced initial production at its James mine in June 2011 and through to the end of 2012, has produced 2.0 million dry tonnes of iron ore for 13 cape-size shipments sold into the Chinese spot market.

LIM considers the fiscal year ended March 31, 2012 as having been a short, start-up and testing operating season during which the Schefferville Projects had not yet reached commercial production.

LIM commenced its first season of commercial production in April 2012.

LIM's operating results for the fiscal years ended March 31, 2013 and 2012 are summarized in the table below.

	Fiscal Year Ended March 31, 2013		**Fiscal Year Ended March 31, 2012**	
(all tonnes are dry metric tonnes)	**Tonnes**	**Grade (% Fe)**	**Tonnes**	**Grade (% Fe)**
Total Ore Mined	1,828,398	61.3%	1,205,609	60.7%
Waste Mined	3,215,985	--	3,004,355	--
Ore Processed and Screened	954,813	58.2%	572,052	58.4%
Lump Ore Produced	98,693	61.2%	79,407	63.6%
Sinter Fines Produced	693,173	61.4%	152,735	65.0%
Total Product Railed	1,492,960	62.3%	563,569	64.9%
Tonnes Product Sold	1,559,620	62.5%	385,898	64.9%
Port Product Inventory	111,009	60.9%	177,669	64.9%
Site Product Inventory	3,551	58.4%	69,983	65.3%
Site Run-of-Mine Ore inventory	446,975	56.2%	195,117	59.0%

7. Geological Setting and Mineralization

7.1 Regional Geology

The following summarizes the general geological settings of the properties making up LIM's western Labrador iron ore project. The regional geological descriptions are based on published reports by Gross (1965), Zajac (1974), Wardel (1979) and Neale (2000) and were first prepared for an internal scoping study report for LIMHL in 2006.

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.

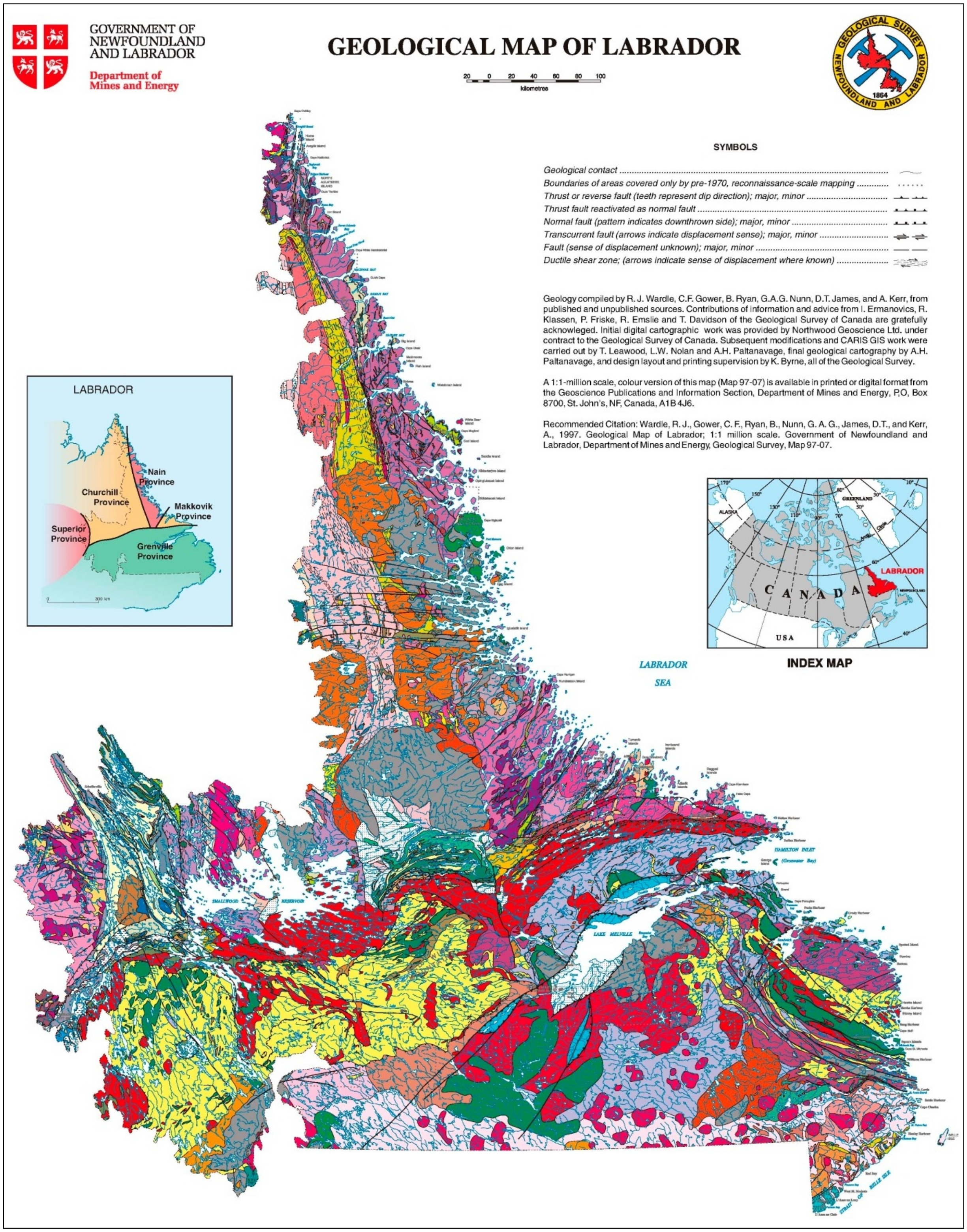


Figure 7-1: Geological Map of Labrador

7.2 Local Geology

The general stratigraphy of the Knob Lake area is representative of most of the Knob Lake Range, except that the Denault dolomite and Fleming Formation are not uniformly distributed. The Knob Lake Range occupies an area 100 km in length by 8 km in width. The sedimentary rocks, including the cherty iron formation, 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 area.

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.

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

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

7.2.1 Geology of Schefferville Area

The stratigraphy of the Schefferville area is as follows:

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

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

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

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

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

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

Sokoman Formation – More than 80% of the ore in the Knob Lake Range occurs within this formation. Lithologically the iron formation varies in detail in different parts of the range and the thickness of individual members is not consistent. A thinly bedded, slaty facies at the base of the formation consists largely of fine chert with an abundance of iron silicates and disseminated magnetite and siderite. Fresh surfaces are grey to olive green and weathered surfaces brownish yellow to bright orange where minnesotaite is abundant.

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

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

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

Menihek Formation – A thin-banded, fissile, grey to black argillaceous slate conformably overlies the Sokoman Formation in the Knob Lake area. Total thickness is not known, as the slate is only found in faulted blocks in the main ore zone. East or south of Knob Lake, the Menihek Formation is more than 300 m 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 coloured where leached. Bedding is less distinct than in the slates of other slate formations but thin laminae or beds are visible in thin sections.

7.2.2 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 in the Schefferville area deposits is approximately 70:15:15 but can vary widely within and between the deposits.

Only the direct shipping ore is considered amenable to beneficiation to produce lump and sinter feed which will be part of the resources for LIMHL's development projects. The direct shipping ore was classified by IOC in categories based on chemical, mineralogical and textural compositions. This classification is shown in Table 7.1.

Table 7-1: Classification of Ore Type

TYPE	ORE COLOURS	T_Fe%	T_Mn%	SiO2%	Al2O3%
NB (Non-bessemer)	Blue, Red, Yellow	>=55.0	<3.5	<10.0	<5.0
LNB (Lean non-bessemer)	Blue, Red, Yellow	>=50.0	<3.5	<18.0	<5.0
HMN (High Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50.0	>=6.0	<18.0	<5.0
LMN (Low Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50.0	3.5-6.0	<18.0	<5.0
HiSiO2 (High Silica)	Blue	>=50.0		18.0-30.0	<5.0
TRX (Treat Rock)	Blue	40.0-50.0		18.0-30.0	<5.0
HiAl (High 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 ore is predominantly a red earthy hematite. It forms the basal layer that underlies the lower section of the iron formation. Red ore is characterized by its clay and slate-like texture.

Direct shipping ores and lean ores mined in the Schefferville area during the period 1954-1982 amounted to some 150 million tons. Based on the original ore definition of IOC (+50% Fe <18% SiO_2dry basis), approximately 250 million tonnes of iron resources remain in the Schefferville area, exclusive of magnetite taconite. LIM has acquired the rights to approximately 50% of this remaining historic iron resource in Labrador. These numbers are based on historic estimates made in compliance with the standards used by IOC. The information in this paragraph was provided by LIM.

7.2.3 Manganese

For an economic manganese deposit, there needs to be a minimum primary manganese content 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 occurrences found in the Schefferville area can be grouped into three types:

Manganiferous iron occuring 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, 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.

So called *manganese "ore"* contains at least 35% Mn. These occurrences are the result of secondary (supergene) enrichment and are typically hosted in the Wishart and Fleming formations, stratigraphically below the iron formation.

8. Deposit Types

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 LIMHL 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 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 LIMHL 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*

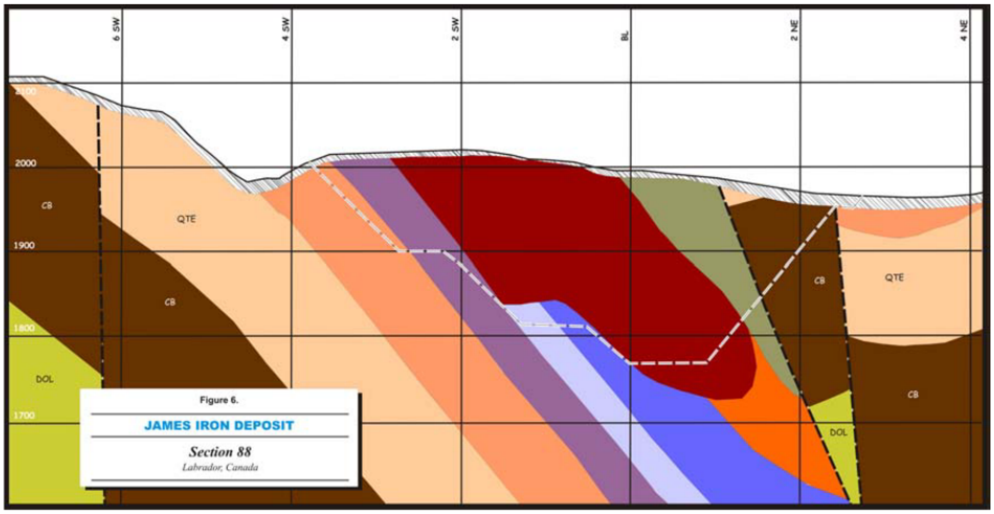
The James deposit is accessible by existing gravel roads and is located in Labrador approximately 3 km southwest of the town of Schefferville. The James deposit is a northeast dipping elongated iron enrichment deposit striking 330° along its main axis which appears to be structurally and stratigraphically 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 m 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 m by 80 m wide and 100 m 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 km 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 conformable 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. 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 12 m. 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 drilled two large treat rock piles that are located immediately to the southwest of the Wishart 1 pit and calculated an indicated resource of 1.1 million tonnes and an inferred resource of 1.2 million tonnes at 48.24%Fe.

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 207,000 tonnes grading 53.69% Fe and 12.17% SiO_2. Wishart 2 resources are given as 554,000 tonnes grading 52.02% Fe and 12.93% SiO_2. The Wishart 2 property contains a Mn resource of 9,000 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 760 m , was hook-shaped in plan, and had a maximum width in the central part of 240 m . 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 *Woollett 1*

The 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 5 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, and 2008 to 2012 programs in Houston which indicated that the majority of the potentially economic iron mineralization occurs within the lower iron formation (LIF) and middle iron formation (MIF). The majority of the economic mineralization in the Houston area is hosted within the Ruth Chert Formation.

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. 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°.

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 m.

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 . The structure of Kivivic 1 is a faulted syncline. The average depth of the deposit was said to be 43 m and the maximum depth greater than 60 m . 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.

8.1.5.5 *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

8.1.5.6 *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, LIMHL 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 LIMHL 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, 137 m along strike, with a maximum thickness of 6 m. The Ruth B occurrence is 91 m northwest of Ruth A and is completely hosted within Fleming Formation chert breccia. The Ruth C deposit is 67 m north of Ruth B and is recognized over a length of 183 m, after which it is covered by the Ruth iron mine waste pile. The mineralized zone, which has a maximum reported thickness is 34 m, is hosted entirely by altered, Fleming Formation chert breccia.

8.2.1.3 *Dry Lake*

Located 500 m 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 1 171 m 9 m) contains up to

25% Mn, with Mn:Fe ratios around 1.0, whereas Lens 2 183 m 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 m 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 m^2 near the south end of the known zone of manganese enrichment. It is hosted by the silicate-carbonate iron formation of the Sokoman Formation, just above Ruth Formation slates. It is interpreted to have formed by an in situ enrichment of a manganese-rich iron formation. Previous work returned values of up to 42% Mn from grab samples, whereas channel samples from across the showing ranged from 15% to 25% Mn. The location of these showings along the same fault zone as the Ruth and Ryan manganese occurrences is noteworthy.

8.2.1.7 *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 11km northwest of the town of Schefferville. LIM is exploring a group of claims in the Howse/Timmins area. These 4 claim groups cover the Elross 3, Timmins 5, Timmins 6 and Irony Mountain properties.

Elross 3 and Timmins 5 properties were explored by 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 by 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° to 70° 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 m 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 4.5 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 IOC. 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 exploration 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% MN occurrence. IOC 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. Exploration

9.1 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 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 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.

In 1990, La Fosse returned to the Ryan manganese showing to continue exploration. Their work further defined the two manganese lenses into Zone 1 171 m 9 m containing up to 25% Mn with Mn: Fe ratios around 1.0 and, Zone 2 183 m 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 488m, 3 diamond-drill holes 136 m, and 4 airtrac drill holes 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 tonne 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, located 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 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 m 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 m) 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.

9.2 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 m 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 m 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. LIM 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 10.

A summary of the bulk sampling and trench sampling of 2006 is shown in Table 9-1 for the James Deposit.

Table 9-1: 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

9.3 2008 and 2009 to 2012 Exploration

LIMHL continued its exploration program on the properties in the Schefferville area during 2008, and 2009 to 2012.

9.3.1 2008 Program

In addition to the drilling program (See Section 10) LIMHL 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) LIMHL 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 m long trench excavated in 2006, LIMHL developed 5 trenches (for a total of 333.82 m) on the James property, 3 trenches (for a total of 348.02 m) on Redmond 2B property and 4 trenches (for a total of 252 m) 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. LIMHL 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 tonne 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.

9.3.2 2009 Program

In addition to the drilling program (See Section 11.0) LIMHL 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 m of trenching were excavated. LIM developed 8 trenches (for a total of 439 m) on the Houston 3 property, 5 trenches (for a total of 294 m) on Redmond 2B property, 4 trenches (for a total of 189 m) on the Redmond 5 deposit and 14 trenches (for a total of 603 m) 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 13.0.

9.3.3 2010 Program

The work carried out during the 2010 exploration program included reverse circulation drilling in the Houston area totalled 1804 m in 26 drill holes. A trenching program on the Ruth Lake 8 deposit totalled 1452 m 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 (1,452m) 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 were used to plan 4 to 5 RC drill holes on the stockpile in 2011.

9.3.3.1 *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. LIM contracted Fugro Airborne Surveys Pty Ltd, Australia to conduct the survey.

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, 851.8kms 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 were 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.

9.3.4 2011 Program

For the 2011 Exploration season, the program consisted of 96 drill holes and 23 test pits. LIM contracted Cabo Drilling to conduct all RC drilling activities.

Exploration activities were planned for verification and validation of estimations compared with historical IOC findings. Work at Redmond 2B, Denault and Knob Lake properties also provided updates and possible expansions on resource estimations and locations.

On July 14th and 15th a two person crew carried out a test pitting program along the western margin of the Knob Lake 1 showing. The purpose of this program was to check the geology of the area for iron formation and what the iron content was of any iron formation encountered.

A small back hoe excavated a 2m to 3m deep pit. The rock type was noted and a 3 to 4 kg sample was collected from material excavated. The location of each pit was determined using a Trimble DGPS.

9.3.4.1 *2011 Geophysics Program*

During the 2011 season, two airborne geophysical surveys were carried out in the Schefferville area. The first was a helicopter mounted gravity survey. This survey was carried out as a test in order to determine the advantages of flying with helicopter over fixed wing aircraft. The second survey was a regional gravity and magnetics survey. LIM contracted to Fugro Airborne Surveys Pty Ltd, Osborne Park, WA Australia.

In addition, the consulting services of Mr. Jerry Roth, Strata Gex Geophysics were used in planning and interpreting the survey.

9.3.4.1.1 Airborne (Helicopter) Geophysical Survey

During the 2011 exploration season an airborne (helicopter) gravity survey was flown over two small claim blocks of LIM's Schefferville area properties.

This work was a test survey, since a fixed wing gravity survey carried out during 2010 failed to detect two known deposits. In particular the Howse and James deposits were not detected. It was felt that a helicopter would have greater ability to follow the contour of the local topography than the fixed wing mounted unit resulting in better overall resolution. The helicopter was Limited to carrying out a gravity survey. No magnetic survey was conducted due to space/weight restrictions.

The results of the test survey showed that there was a marginally greater resolution with the helicopter unit over the fixed wing survey but not enough to justify the extra cost of using helicopter. In addition any helicopter survey would not be able to complete a magnetic survey at the same time.

The results of this test survey were studied only enough to determine whether LIM would carry out a fixed wing or helicopter borne regional survey and no formal report was prepared by the contractor. In the case of Howse it was decided that neither the fixed wing nor helicopter mounted survey produced satisfactory results. Based on the test survey it has been decided to carry out a ground gravity survey in the Howse area during the 2012 season.

9.3.4.2 *Airborne (Fixed Wing) Geophysical Survey*

Subsequent to the Helicopter gravity test survey, a fixed wing gravity and magnetics survey was carried out over a 1346 sq km block of LIM claims in the Schefferville area.

Flight lines were orientated at 218° and spaced at 200m. Tie lines were flown at 308° and the total area covered was 1346 sq km.

9.3.5 2012 Program

For the 2012 season, a total of 102 drill holes totaling 4,393.4 m were completed. LIM had contracted Cabo Drilling to complete RC drilling activities, and contracted Major Drilling for the completion of diamond drill holes.

A stockpile assessment program of test pitting was carried out on historic IOCC treat rock and low grade stockpiles in the Wishart, Ferriman, Burnt Creek, Gagnon and Knox properties. A total of 1090 samples were collected from 1m deep test pits excavated by a small backhoe. Table 9-2 below summarizes the program.

Table 9-2: 2012 Testpit Program Summary

Property	# of Stockpiles	Total Number of Testpits
Wishart	3	769
Ferriman	2	166
Burnt Creek	4	29
Gagnon	3	58
Knox	2	68
Total		**1090**

Samples were collected from 1m deep test pits excavated by a backhoe. The backhoe would remove the top 30 or 40 cm of material and then remove one scoop of material and pile it beside the pit. The geologist would then collect representative sample material for assaying using a shovel. The spacing of test pits varied from 10m to 30m depending on the size of the stockpile.

9.3.5.1 *2012 Geophysics Program*

9.3.5.1.1 Ground Gravity and Total Field Magnetic Survey

During the 2012 season between June 15th and July 18th a Ground Gravity and Total Field Magnetics survey was carried out over four LIM properties. A total of 34,525 m in 40 lines was surveyed. A summary is below in

Table 9-3:

Table 9-3: Ground Gravity Survey

LIM, 2012 Ground Gravity and Total field Magnetic Surveys			
Area	**License**	**No. of Lines**	**Meters surveyed**
Howse	020430M	12	14550
James Mine	020432M	14	7075
Elizabeth lake	020432M	3	6400
Gagnon		3	6500
	Total	**32**	**34,525**

The company contracted to perform the work was GeoSig Inc.

9.3.5.1.2 Down Hole Gravilog Survey

A borehole gravity survey (Gravilog) was carried out in selected drill holes in the James South Extension and Houston properties. The goal of this geophysical campaign was to determine the bulk density of the hematite mineralization having friable texture (strongly altered), intersected by the boreholes. Holes selected for the survey and details are listed in Table 9-4 below:

Table 9-4: Down Hole Geophysical Survey

LIM 2012 Down Hole Geophysical Survey			
License	**Area**	**Hole Surveyed**	**m Surveyed**
020432M	James	DD-JM031-2012	85
020432M	James	DD-JM033-2012	70
020432M	James	DD-JM039-2012	100
020432M	James	DD-JM040-2012	100
			355

The contractor carrying out the survey was Abitibi Géophysique Inc.

10. Drilling

Traditionally, IOC used a combination of reverse circulation (RC) drilling, diamond drilling and trenching to generate data for reserve and resource calculation. A large amount 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.

LIMHL carried out exploration drilling programs in 2006, 2008 to 2012. A diamond drill was used in 2006, for a total of 352 m from 6 diamond drill holes with limited success due to recovery issues. It was not until 2012 that exploration drilling began using diamond drills on a regular basis using newer techniques that greatly improved recovery in the soft ground.

In 2008, LIMHL used an 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 TracNodwell carriers or fly skids, provided LIMHL with highly mobile and stable drilling platforms with very small environmental footprints. LIMHL's drill rigs from Cabo were 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.

In 2008, 10 diamond drill holes were drilled for a total of 552 m. The majority of the drilling program was carried out with RC drilling namely 67 RC holes for a total of 3,856 m.

For 2009, a total of 29 RC drill holes were completed for a total of 1,639 m in the James, Redmond 2B and 5, Knob Lake 1 and Howse properties.

The work carried out during the 2010 exploration program included reverse circulation drilling in the Denault area totalled 2,726 m in 50 drill holes.

In the 2011 drilling program a total of 6,669m of RC drilling was carried out in 129 drill holes excluding the Houston property drilling.

For the 2012 season, a total of 102 drill holes totaling 4,393.4 m were completed. Diamond drills operated by Major Drilling carried out 2,087.4 m of core drilling in 24 drill holes. A reverse circulation rig operated by Cabo Drilling completed 2,306m of drilling in 79 drill holes in the Wishart and Ferrimen properties from August 4th to October 4th.

Table 10-1 to Table 10-6 show the various drilling programs the results of which were included in the LIM/SMI database for the resource estimations.

Table 10-1: 2006 - Drilling Program - (Diamond Drilling)

Property	Type	Holes	Length (m)
James	DD	2	29
Astray Lake	DD	3	279
Knob Lake 1	DD	1	44
Total		**6**	**352**

Table 10-2: 2008 – Drilling Program – (RC and Diamond Drilling)

Property	Type	Holes	Length (m)
James	RC	14	870
Redmond (2B, 5, TRX*)	RC	31	1,587
Astray Lake	RC	1	132
Knob Lake 1	RC	9	612
Howse	RC	2	103
Sawyer Lake	DD	10	552
Total		**67**	**3,856**

**TRX - re drill holes to sample "Treat Rock" stock pile (4 holes)*

Table 10-3: 2009 - Drilling Program - (RC Drilling)

Property	Type	Holes	Length (m)
James	RC	5	333
Redmond (2B, 5)	RC	14	639
Knob Lake 1	RC	5	271
Howse	RC	5	396
Total		**29**	**1,639**

Table 10-4: 2010 - Drilling Program (RC Drilling NL & QC)

Property	Type	Holes	Length (m)
Denault	RC	50	2,726

Table 10-5: 2011 – Drill Program (RC Drilling NL & QC)

Property	Type	Holes	Length m
Gill Mine	RC	33	1375
James Mine	RC	5	447
Knob Lake 1	RC	5	321
Redmond 2B	RC	4	261
Ruth Lake 8	RC	49	2850
Star Creek	RC	7	350
Denault	RC	26	1065
	Total	**129**	**6,669***

*This total does not include the Houston property drilling program

Table 10-6: 2012 Drill Program (DD & RC, NL & QC)

Property	Type	Holes	Length (m.)
James Mine	DD	24	2,087.4
Wishart	RC	55	1,525
Ferrimen	RC	24	781
	Total	**102**	**4,393.4***

*This total does not include the Houston-Malcolm property drilling program

11. Sampling Preparation, Analysis and Security

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 m). 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 LIMHL were similar to IOC's during its activities in the Schefferville area.

LIMHL 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 at the drill site. Logging was carried out at the drill sites by LIMHL geologists.

Samples obtained during the 2008 to 2012 programs were prepared in the sample preparation laboratory setup in Schefferville by LIMHL.

The sampling procedures outlined below were designed and formulated by SGS – Geostat.

The entire lengths of the RC drill holes were sampled. The average length of the RC samples was 3 m. A description of the cuttings was made at every metre drilled. A representative sample was collected and placed in plastic chip trays for every metre drilled. The chip trays were labelled with Hole ID and the interval represented in each compartment. The m drilled with no recovery were marked with an X inside the chip tray compartment.

In 2012 LIMHL started drilling DDH holes in addition to RC holes. A geotechnician observed the drilling process and conducted basic geotechnical descriptions of the core at the drill. The drill core was boxed and tied with metal wire. The core was brought back to the LIMHL core shed on a regular basis. A geologist logged the core at the core shed, the core boxed we resealed with tape and the witness samples are stored. A technician split the core manually in combination with a hydraulic splitter and the samples were sent to LIMHL lab for preparation.

11.1 RC Sample Size Reduction

11.1.1 2008 RC Sample Size Reduction

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 program (figure 11-1).

The cuttings from three of the exit ports were discarded and the cuttings from the fourth exit were collected in 5 gallon buckets. As part of the QA/QC program the cuttings from three of the four exits were routinely sampled.

Samples were taken by truck directly to the preparation lab in Schefferville under supervision of SGS – Geostat. Upon arrival at the Preparation Lab, samples came under the care of SGS – Geostat personnel.

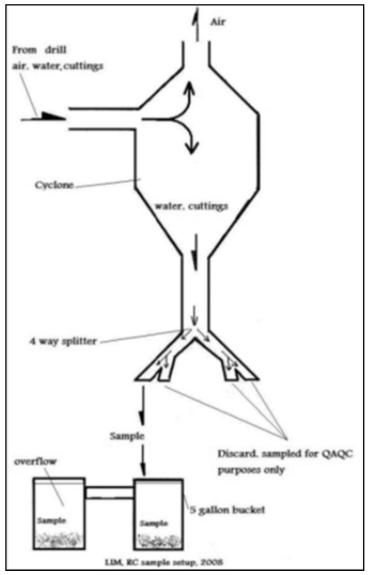


Figure 11-1: RC Size Reduction and Sampling (Method used in the 2008 drilling Program)

11.1.2 **Rotary Splitter RC Sample Size Reduction (2009-2012)**

Starting 2009, the RC 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 metre 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.

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

Starting 2010, LIMHL followed the same on-site sample reduction as described above; however the samples were collected in the pails lined with Sentry II micropore bags which allowed water to slowly drain through while capturing very fine sample material (Figure 11-2).

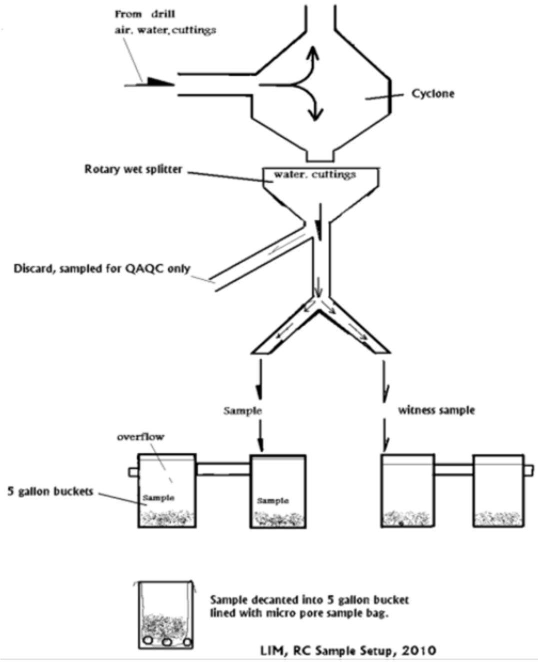


Figure 11-2: 2010 & 2011 Reverse Circulation Sampling Setup Diagram

11.1.3 **2006-2011 Trench Sampling**

In 2006, 2008 and 2009 trenches were dug 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 1metre-wide trench with depths down to 3 m, which was enough to penetrate the overburden.

Trenches were sampled on 3-metre 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 sampled was soft and friable.

The standardized procedures for the preparation and reduction of samples collected during the 2008 and 2009 RC drilling campaigns were prepared by SGS – Geostat and adopted by LIMHL for its sample preparation laboratory in Schefferville.

SGS – Geostat were not in possession of the exact sampling procedures carried out historically by IOC but verbal information from former employees and drillers, suggests that the described procedures is similar to that used by IOC during their activities in Schefferville.

11.2 Diamond Drill Core Sampling

Core was delivered from the rig to the company core shed on a regular basis by LIM employees or the drill contractors. Geotechnicians would first calculate recovery and photograph the core. A geologist would log the core and mark out sample intervals. After this the geotechnicians would take a split of the core for assaying leaving a ½ split in the box for reference.

11.3 Sample Preparation and Size Reduction in Schefferville

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.

In 2012 core samples were brought to the preparation laboratory on a regular basis. Samples were place in sequential order in durable zip tied plastic bags. Sample numbers where written on the bags and a ticket was placed in the bag.

11.3.1 2008

Sample preparation and reduction was done at LIMHL's preparation lab in Schefferville which was operated by SGS – Geostat personnel. In addition to the preparation lab personnel, SGS – Geostat also 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 majority of samples have a width of 3 m, equal to the length of the drill rods. As soon as samples were delivered to the Schefferville preparation laboratory, 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 by riffle splitting and then sent to SGS-Lakefield in Ontario. A witness portion of the samples is kept in Schefferville.

11.3.2 2009

The 2008 procedures were adopted in 2009 for sample preparation and sample reduction and were carried out by LIMHL in its sample preparation laboratory in Schefferville. LIMHL had a lab supervisor and well trained geo-technicians to perform the sampling duties on the two rigs utilized for the drill program. Some later improvements were made to the procedures but overall they followed guidelines developed by SGS in 2008. All samples were dried and reduced by riffle splitting prior to shipment for analyses at Actlabs in Ancaster, Ontario.

11.3.3 2010 - 2011

The 2010 and 2011 sample preparations consisted of cataloguing and drying samples before shipping.

11.3.4 2012

For the 2012 season, two types of samples were gathered, RC chips and diamond drill core.

RC drill cuttings followed previously established procedures from following years. All cores were delivered to LIM's James Mine Laboratory for sample preparation. The mine lab would prepare a pulp and coarse reject of each sample. The pulp would then be shipped via Canada Post to Actlabs (Ancaster) and the coarse reject would be stored on site for future reference.

11.4 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 11-1: 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 2mm
	Pulverize up to 250g of riffle split sample to 75µm

11.4.1 Sample Analyses and Security at SGS-Lakefield

All of the 2008 RC drilling and trenching program samples 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 below was given by SGS-Lakefield:

- **X-Ray Fluorescence Analysis Code:** XRF76Z
- **Parameters measured, units:** SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, P_2O_5, MnO, TiO_2, Cr_2O_3, Ni, Co, La_2O_3, Ce_2O_3,Nd_2O_3, Pr_2O_3, Sm_2O_3, BaO, SrO, ZrO_2, HfO_2, Y_2O_3, Nb_2O_5, ThO_2, U_3O_8, SnO_2, WO_3, Ta_2O_5,LOI; %
- **Typical sample size:** 0.2 to 0.5 g
- **Type of sample applicable (media):** Rocks, oxide ores and concentrates.
- **Method of analysis used:** The disk specimen is analyzed by WDXRF spectrometry.
- **Data reduction by:** The results are exported via computer, on line, data fed to the Laboratory Information Management System with secure audit trail.

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

Table 11-2: Table 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
Fetotal 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
Also includes Loss on Ignition					

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.

11.5 Quality Control at SGS Lakefield

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 11-3: 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

11.6 Sample Preparation at ACTLABS

During the 2009 to 2012 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 in the same way as RC drill samples, being just bagged and shipped to the analytical laboratory.

As a routine practice with rock and core samples, ACTLABS ensured 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 (105 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 11-4: 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

The following table shows the Pulverization Contaminants that are added by ACTLABS:

Table 11-5: 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

11.7 Sample Analysis and security at ACTLABS

Following is a description of the exploration analysis protocols used at the Actlabs facility in Ancaster, Ontario.

11.7.1 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 Ptmolds 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 Al_20_3 Fe_2O_3(T) MnO MgO CaO Na_2O K_2O TiO_2 P_2O_5 Cr_2O_3, LOI
Code 4C Oxides and Detection limits (%)

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

Table 11-6: Code 4C Oxides and Detection limits (%)

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

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 re-analyzed.

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

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

11.8 Sample Security and Control

11.8.1 LIMHL Sample Quality Assurance, Quality Control and Security

From the beginning of the 2008 RC drilling & trenching campaign, LIMHL initiated a quality assurance and quality control protocol. The procedure included the systematic addition of in-house blanks, in-house reference standards, field duplicates, and preparation lab duplicates (not included in 2010 sequence) to approximately each 25 batch samples sent for analysis at SGS Lakefield.

The sealed sample bags were handled by authorized personnel from LIMHL and SGS – Geostat (2008 RC drilling campaign) 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 LIMHL. During the 2012 field season core boxes were brought back to the warehouse facility on a regular basis by LIMHL personnel. They were stacked either in crossbox formation or on core racks. All core boxes are sealed with wire before transport from the drill site.

The lab is locked down during the night. Sample batches are sealed and sent by train or by express mail (by air). Traceability is present throughout the shipment to Lakefield and/or Ancaster.

11.9 Field Duplicates

11.9.1 RC duplicates

The procedure included the systematic addition of field duplicates to approximately each 25 batch samples sent for analysis to the lab. In 2008, 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 metre samples collected from the exit 1. From 2009 through 2012, the sample was split by a cyclone rotary splitter. One half of the material was discarded outside the drill, and the second half was sent into sampling buckets underneath the splitter. The field duplicate was taken for the material discarded outside the rig at every 25th sample. The 26th sample was the duplicate of the 25th sample. This QA/QC procedure enabled SGS and LIMHL any bias in the RC sampling program to be verified.

11.9.2 DDH Duplicates

There we no field duplicates included in the 2012 field program only lab duplicates for DDH core.

11.10 Preparation Lab Duplicates

11.10.1 RC Lab Duplicates

The procedure included the systematic addition of preparation lab duplicates to approximately each batch of 25 samples sent for analysis at SGS-Lakefield. In 2008, a second portion of cuttings from the first exit size reduction procedure was routinely sampled every 25 batch similarly as described above. In 2009, the every 25th sample was taken the same way as a regular sample describe above. Its duplicate sample was tied empty to it. Once at the lab, the sample was dried, and riffle split 4 times. From the material riffle split, a lab duplicate was composed. In 2010, there was no lab duplicates because the sample bags were not riffle split.

LIMHL started a quality assurance and quality control protocol for its 2008 RC, DDH, and trench sampling program. The procedure included the systematic addition of field duplicates, preparation lab duplicates to approximately each 25 samples sent for analysis at SGS-Lakefield along with a blank at every 50 sample. This protocol was adopted and used during the 2009 and 2010 exploration programs with modifications mentioned above.

11.10.2 DDH Lab Duplicates

The procedure included the systematic addition of lab duplicates of approximately 1 in 25 samples sent to the lab for analysis. In 2012 a split of the sample pulp is made and sent as a blind sample to the laboratory.

11.10.3 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 inserted every 50 samples. SGS – Geostat homogenized an average 200 kg of material on site at the preparation lab in Schefferville. LIMHL 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% SiO2 was noted for the entire batch of 60 blank samples. For SGS-Lakefield, an average of 5.37% Fe and 61.40% SiO2 was noted. For ALS-Chemex, an average of 4.22% Fe and 62.60% SiO2 was reported. For COREM, an average of 4.34% Fe and 62.25% SiO2 was reported.

Since the original batch of 200kg LIMHL has retrieved more blank material from the same location and homogenized the material using similar techniques, further sample was retrieved in 2010 and 2012 field seasons.

During the 2012 field season blanks were inserted into the RC sample stream one for every 50 samples. The 2010 blank material was fully exhausted for the 2012 RC program, the similar type of blank material collected in 2012 was used for the DDH program and inserted into the DDH sample stream one for every 20 samples sent to the laboratory.

11.11 Reference Material (Standards)

LIMHL introduced in-house standards with high grade James ore collected from a bulk sample taken in 2008. In 2009, LIMHL sent 20 samples to Actlabs and 10 sent to both SGS Lakefield and ALS Chemex starting the process of characterizing the standard material. In 2010, there were additional 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 medium grade Knob Lake ore material with 50 samples sent to SGS, Actlabs and ALS Chemex. The James Standard material was the only standards inserted into the sample sequence until 2010. In 2011 LIMHL introduced its in-house Knob lake standard into the sample sequence. The table below shows the results of the statistical analysis for each reference material.

Table 11-7: Summary of Statistical Analysis of LIMHL Reference Material

Ref Material	Count	Period		Expected Fe%		Observed Fe%				Expected SiO2%		Observed SiO2%				Mislabeled
		From	To	Average	Std. Dev.	Average	Std. Dev.	Min	Max	Average	Std. Dev.	Average	Std. Dev.	Min	Max	
BLK-SH	195	29-Aug-08	23-Dec-11	4.29	0.24	4.81	0.63	1.18	8.40	62.40	0.37	61.90	0.93	58.76	68.11	1
JM-STD	119	19-Aug-09	23-Dec-11	61.33	0.96	61.30	1.24	57.35	66.42	9.51	1.09	9.54	1.70	2.42	13.09	1
KL-STD	36	29-Aug-11	23-Dec-11	56.47	0.60	55.69	2.94	43.50	57.10	8.30	0.54	9.76	3.83	7.57	28.74	0

During the 2012 field season standards were inserted into the RC sample stream one (1) for every 50 samples and inserted into the DDH sample stream at a frequency of one (1) for every 20 samples sent to the laboratory.

11.11.1 2008 Exploration Program

The data verification of the iron (Fe), Phosphorus (P), Manganese (Mn), silica (SiO2) and alumina (Al2O3) 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. SGS – Geostat supervised the RC sampling. In 2008, a total of 166 duplicates were taken and analyzed. SGS – Geostat followed the QAQC and considered the data to be precise and reliable.

During the 2009 program, a total of 46 blanks were inserted. The analytical results showing that the results remained within ±1%, which is relatively good and unbiased.

11.11.2 2009 Exploration Program

LIMHL followed the same method of taking duplicates as in 2008. However, the field duplicate did not come from three exits but from two. The field duplicate came from a single discharge tube that flowed outside of the rig into a bucket. The lab duplicate sample bag was left empty and stapled to the sample bag that contained the sample that would serve as the host for the lab duplicate. The duplicates were treated as normal samples, and were prepared, riffle split and sent to Actlabs for analysis.

The analysis of data indicated that the repeatability of results is acceptable and the process of taking duplicates is good and reliable. There is very little variation in the data except for two outliers, which could be a result of contamination while processing or taking the sample.

11.11.3 2010 Exploration Program

During 2010, the field duplicate came from a single discharge tube that flowed outside of the rig into a bucket. There were no lab duplicates taken because no riffle splitting was necessary. Samples and duplicates were collected and sealed using Sentry II Micropore Polywoven bags. These bags allowed the excess water to flow through catching the fines. The samples were dried in ovens for 3-4hrs prior shipping or storing. There were a total of 54 duplicates taken over the course of the 2010 program. The analysis of Fe data indicated that the repeatability of results is acceptable and the process of taking duplicates is good and reliable.

During the 2010 program, a total of 62 samples of blank material were systematically inserted in the sample batches sent for analyses. The results remained within the zone between the average value and the 2σ. This states that the sampling procedures within the lab are very good, and there is very little to no bias. Blank sample 329707 that went outside the (±)3σ zones is possibly related to contaminated blank since the standards and duplicates included in the same batch showed not apparent problems.

11.11.4 2011 Exploration Program

During the 2011 RC drilling and exploration program, LIMHL followed its quality assurance and quality control protocol. The procedure included the systematic addition of in-house blanks, in-house reference standards, field duplicates, and preparation lab duplicates to approximately each 25 batch samples sent for analysis at ACTLABS.

A total of 75 blank samples were used to check for possible contamination in the analytical laboratories during the 2011 campaign including 22 on the RC drilling at Houston. A total of 16 out of the 75 blanks were outside the $\pm 3\sigma$ line, however, all of the blanks are under 5% iron grade. Geostat suggested that LIMHL to buy pure blanks that do not contain any iron.

In 2011, LIMHL inserted 76 in-house standards. There may have been some potential errors within the KL-STD, however most of the standards demonstrated controlled results.

In 2011 LIMHL sent 141 field duplicates. No preparation lab duplicates were analysed in 2011. The correlation is good between original and field duplicate results however, a bias was found. The bias identified in this statistical analysis of the 2011 samples indicates that the Fe grades may have lower analytical results for Fe. Furthermore 82% of the Fe % sample data is less than ±10% different and 63% of the data is less than 5% different. There is not a significant difference but there is a bias trend towards the field duplicates.

11.11.5 2012 Exploration Program

During the 2012 Exploration season, LIMHL drilled holes with both RC rigs and DDH rigs. RC drilling was conducted at both Malcolm 1 and Houston, and the diamond drilling was conducted for Houston.

For the 2012 RC drilling and diamond drilling exploration program, LIMHL followed its quality assurance and quality control protocol (QAQC). The procedure included the systematic addition of in-house blanks, in-house reference standards, field duplicates, and preparation lab duplicates to batch samples sent for analysis at ACTLABS.

During the 2012 RC drilling and exploration program, LIMHL followed its quality assurance and quality control protocol. The procedure included the systematic addition of in-house blanks (1 per 50), in-house reference standards (1 per 50), field duplicates (1 per 25). The approximate amount of control samples is 8% of the batch samples sent for analysis at ACTLABS. These sample bags were sent to the sample receiving warehouse empty, and the appropriate material was put into the bags before going to the prep laboratory in Silver Yard. The field duplicates (or rig duplicates) were collected from the "discard line".

For the 2012 DDH drilling and exploration program, LIMHL inserted control samples along with their diamond drill samples. For the 2012 field season the standards remained the same as those used for the RC program. The procedure included the systematic insertion of in-house blanks (1 per 20), in-house reference standards (1 per 20), and lab duplicates (1 per 25). The total is about 14% of the samples submitted for analyses are control samples. The lab duplicates constitute a representative split of the original pulp.

11.12 Blanks

A total of 170 blank samples were used to check for possible contamination in the analytical laboratories during the 2012 campaign, including 21 for the RC campaign at Houston and Malcolm and 149 for DDH holes including metallurgical and geotechnical holes. During 2008, SGS Geostat prepared blank samples from a known slate outcrop near Schefferville (Section 11.10.3). Since then LIM has accumulated more material from the same outcrop, homogenized it using similar processes to create additional blank material.

For QAQC on the diamond drill rig, while diamond drill core was being logged, the QAQC sample locations were marked out by the logging geologist. A geotechnician then inserted standards and blanks as required approximately 1 per 20 samples.

The only sample that does not fall within the zones of acceptance is 527460 for both the iron and silica content. The results for the blanks samples up to 524757 show small variance and fall within the zones of acceptance. However, after sample 524757, the blanks show a drastic fall in the iron content, and drastic rise in the silica content. The first sample after 524757 is 525220, which is a blank for the diamond drill samples, and the rest of the blank samples after 525220 pertain to blanks within the diamond drill samples, as shown in Figure 11-3 and Figure 11-4.

The blank material used with the RC samples (samples up to 524757) was from material collected and homogenized during 2010. However, this material ran out, and was replenished in 2012. The newly collected material started to be used with the blanks introduced into the diamond drill samples. The blank material was collected from the same Dolly Shale along the road to Houston. The only explanation that could have caused the drastic change from the RC blanks to the diamond drill blanks, is that the material may have been collected from deeper down from the surface of the Dolly Shale. The material collected in 2010, were surface samples, and material was not collected deeper from the surface.

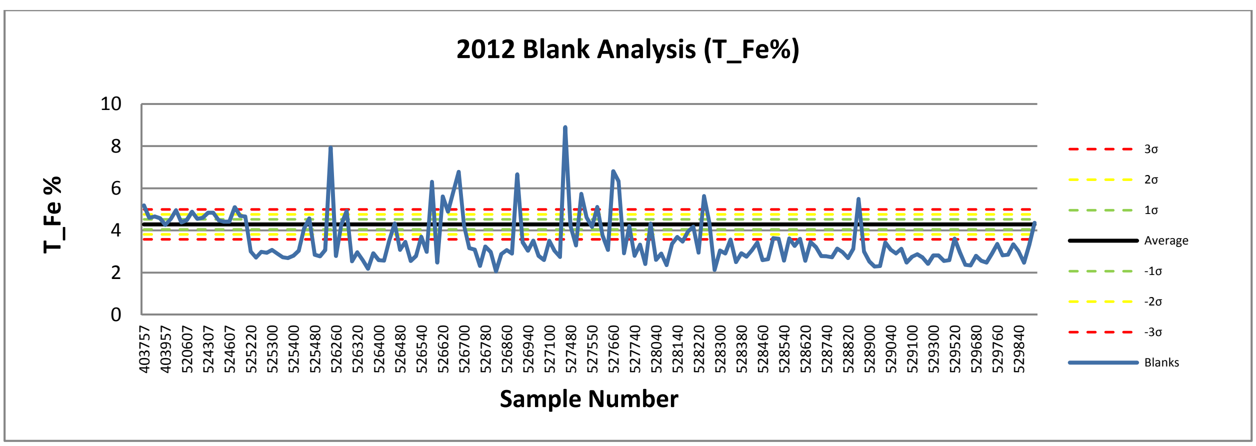


Figure 11-3: 2012 T_Fe% Blanks Comparison

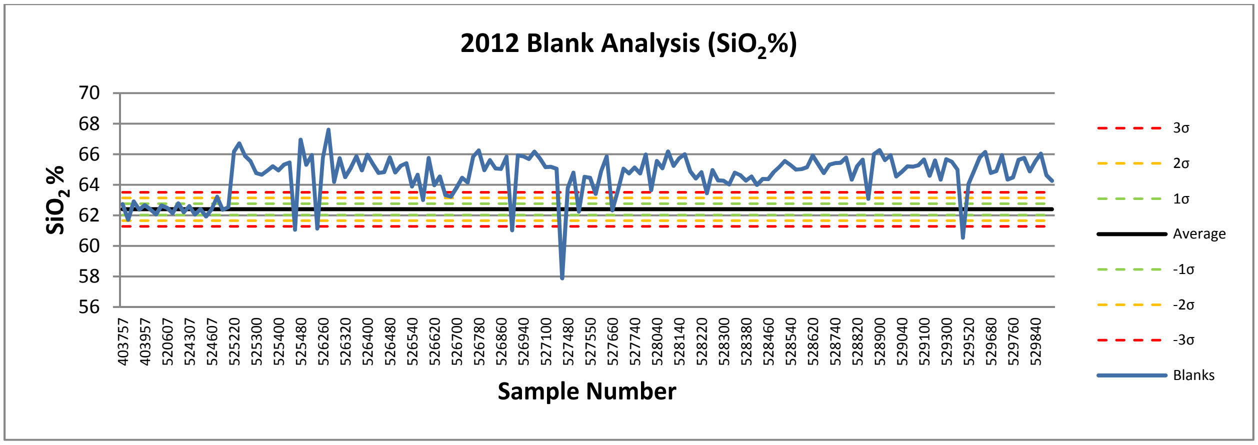


Figure 11-4: 2012 SiO2% Blanks Comparison

Given the variability of the new blank material compared with that of the 2008 results, Figure 11-5 was plotted using the standard deviation of the 170 blanks from 2012 as the control gates. With that in mind only two samples are outside the +3σ. We also get a clear picture of how the mean has shifted down for the new material. Given this information, it may be difficult to interpret contamination issues, however since all the values are below 9% Fe and the mean value is 3.53% Fe then it is not likely there is any major contamination. This is further supported by the analysis of the standards in the next section. It is recommended that LIMHL buy pure blanks (either commercial silica sand or decorative pebbles) that do not contain any iron.

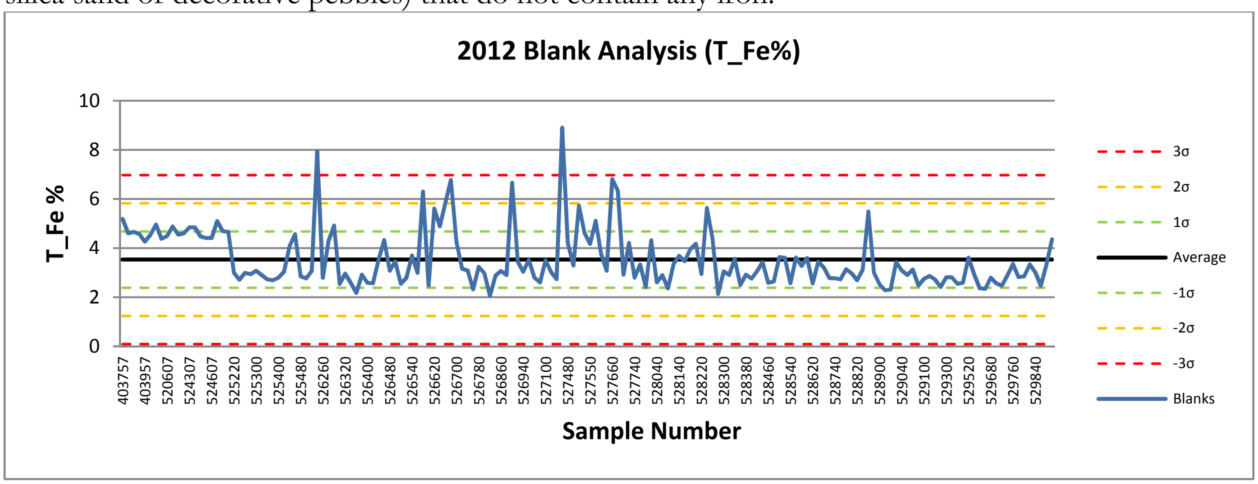


Figure 11-5: 2012 Fe% Blanks Comparison

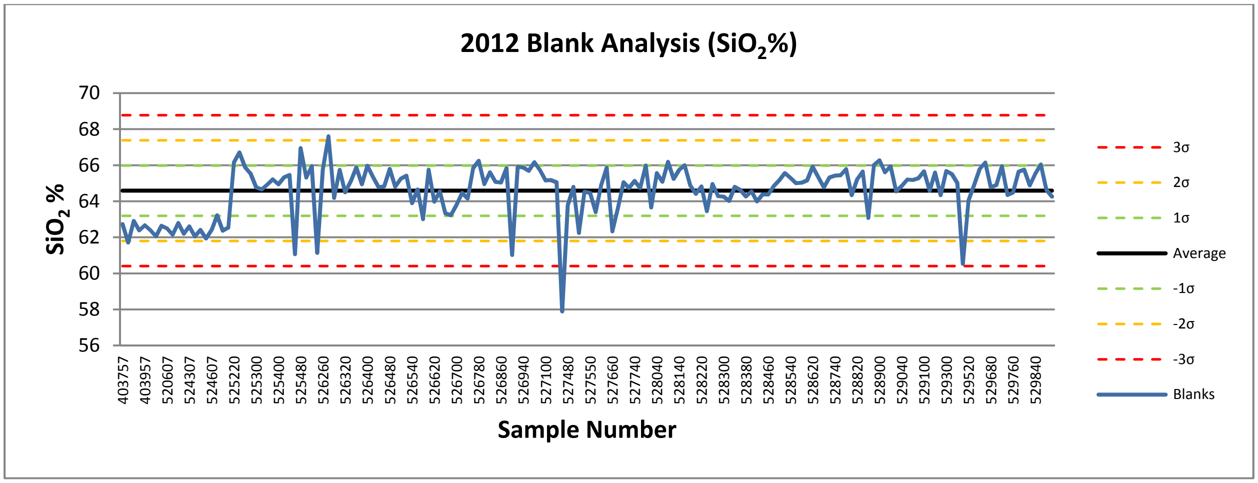


Figure 11-6: 2012 SiO2% Blanks Comparison

To quantify the number of standards between each standard deviation (performance gate) the following table has been tabulated. The number of samples outside of the ±3σ based on the 2008 defined control gates is 126 samples or 90% of the samples. Performance gates were recalculated based only on the ACTLABS results of the 140 samples in the second chart and with a wider standard deviation and lowered mean. Only 2 samples are outside the natural 3rd standard deviation, or 1.4% of the data. If LIM does not want utilize store bought blank material, it is recommended to re-homogenize the material and do another round of inter-laboratory testing.

Table 11-8: Comparison of Performance Gates

Using 2008 Performance Gates			**Performance Gates Calculated on 2012 Values**		
Bin	**Frequency**	**Cumulative %**	**Bin**	**Frequency**	**Cumulative %**
3.580686	111	66.07%	0.093631	0	0.00%
3.816346	8	70.83%	1.240436	0	0.00%
4.052006	1	71.43%	2.387242	9	5.36%
4.287667	8	76.19%	3.534048	101	65.48%
4.523327	9	81.55%	4.680853	36	86.90%
4.758987	10	87.50%	5.827659	14	95.24%
4.994647	6	91.07%	6.974465	6	98.81%
More	15	100.00%	More	2	100.00%

11.13 Standards

In 2012, LIMHL inserted a total of 163 standards for analysis, of which 88 were James standards, and 75 were Knob Lake standards. Figures Figure 11-7 and Figure 11-8 show the results plotted for JM-STD and KL-STD. Because the standards are the same for RC and DDH drilling we combined them all into one study.

For the James standard two (2) of the standards were below the -3σ and four (4) above the +3σ for a total of 7% of the samples outside of the ±3σ lines. Slightly better performance was witnessed for the SiO2 results with only 6% of the samples outside of the ±3σ lines. There appears a shift in the population for 2012 compared with 2011, where the 2012 results are slightly higher than the average and the 2011 results were slightly lower than the average. However, both years have proven to be adequately within the performance gates. The slight bias high is reflected in the sign test for iron ($0.39 \nleq \mathbf{0.73} \nleq 0.61$), and the silica values have no apparent bias which is also reflected in the sign test ($0.39 < \mathbf{0.45} < 0.61$). Based on the charts for iron and silica of the James Standards I would conclude there is not likely any serious contamination or mislabels or other issues.

The James standard samples that fell outside the zones of acceptance for the iron content are 526850, 528250, 528630, 528810 and 529790, those for silica content are 526450, 526490, 526690, 526850 and 528630. There are only two samples that fell outside the zones of acceptance for both the iron and silica content, which are 526850 and 528630 as shown in Figure 11-7 and Figure 11-8. It is possible that the material for these two standard samples could have been composed of slightly lower grade material within the larger barrel of the standard material.

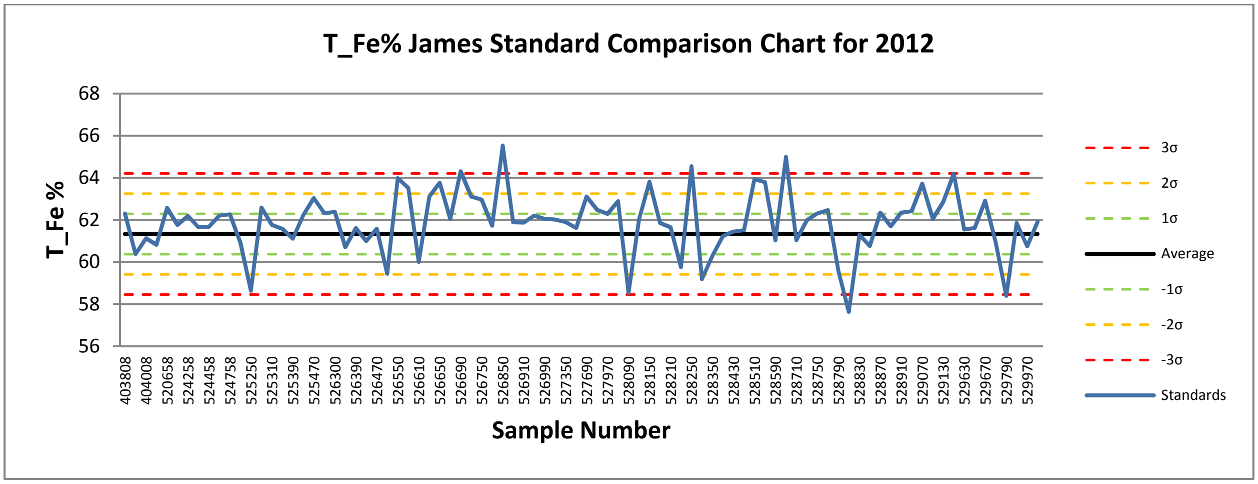


Figure 11-7: Fe High Grade JM-STD Standards in 2012

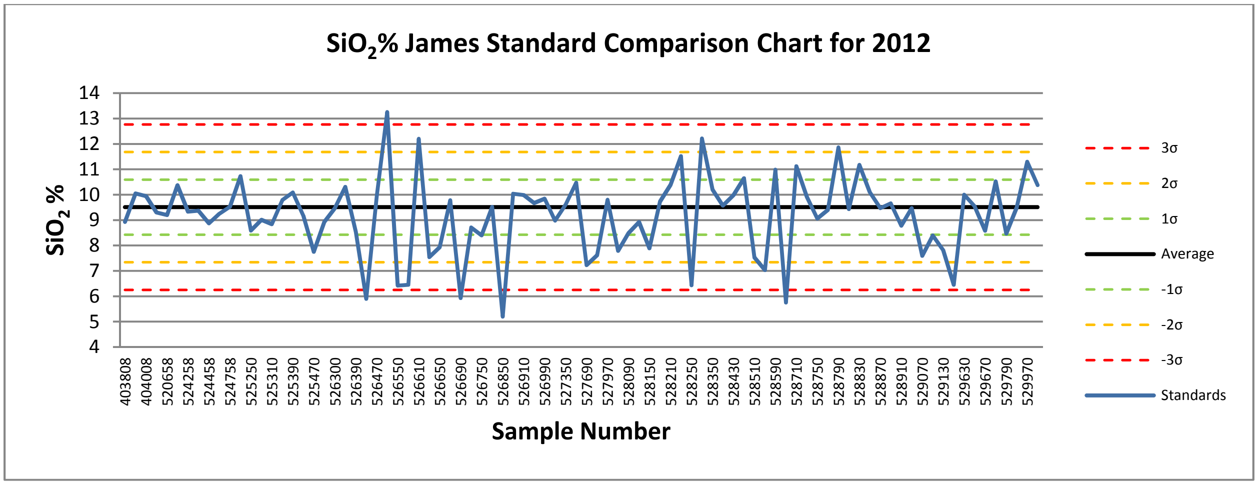


Figure 11-8: SiO2 Grades JM-STD Standards in 2012

For the knob lake standards only one (1) standard was below the -3σ and zero (0) above the +3σ for iron, representing 1% of the samples outside the control limits. Furthermore there were three (3) silica value above the +3σ and none below the -3σ. Again there is a bias high for the iron values, as visible on the figure and from the sign test ($0.38 \nleq \mathbf{0.87} \nleq 0.62$), and there is no apparent bias from the sign test for silica however there is a slight elevated mean compared to the 2008 control values (8.6% vs 8.3% SiO2). Regardless of the sign test bias the entire population of iron results were lower than the +3σ indicating there is no significant bias high. There was one standard with low iron value and that may warrant further investigation.

The Knob Lake standards that fell outside the zones of acceptance for the iron content are 527630, and 528930. For the silica content are 525550, 527630 and 528930. There are two samples that fell outside the zones of acceptance for both the iron and silica content, which are 527630 and 528930, illustrated in Figure 11-9 and Figure 11-10. The explanation for this could be that the material for these two standard samples could have been composed of slight amount of lower grade material within the larger barrel of the standard material.

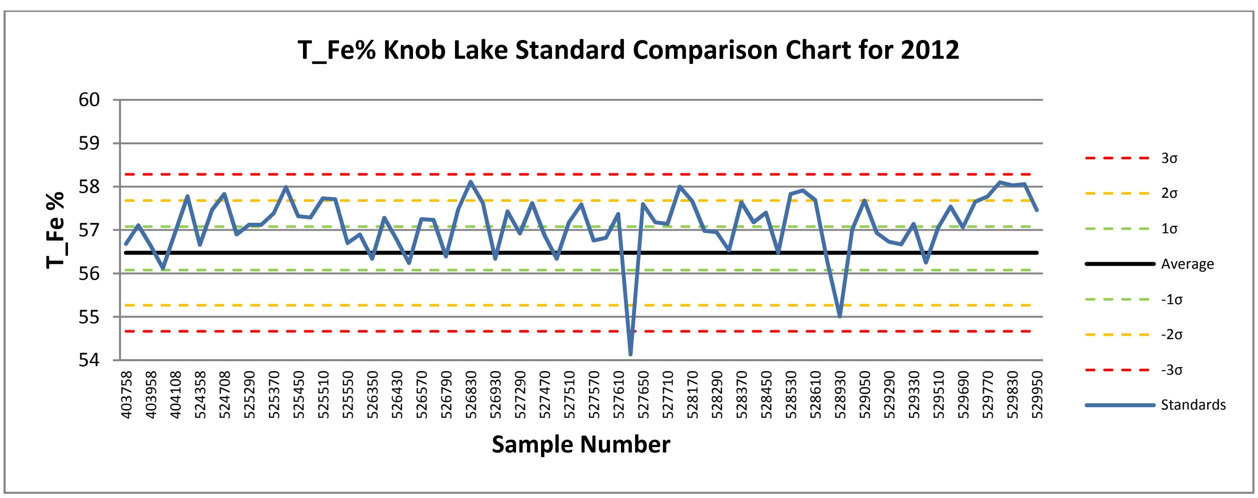


Figure 11-9: Fe High Grade KL-STD Standards in 2012

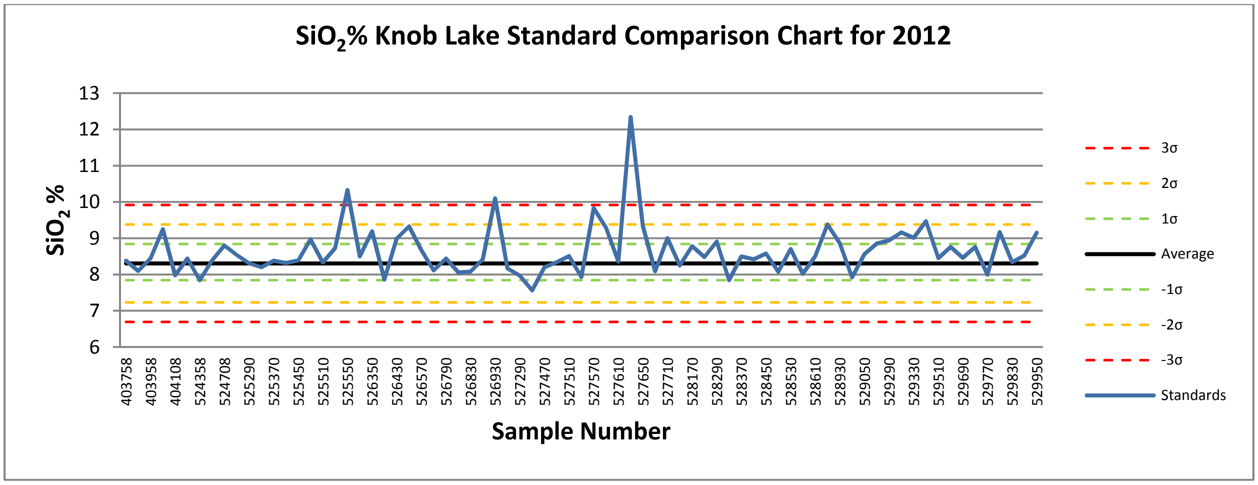


Figure 11-10: SiO2 Grades KL-STD Standards in 2012

11.14 Duplicates

11.14.1 Inter-laboratory Duplicates

Lim sent in 82 samples to ACTLABS and also to ALS Chemex for duplicate analysis. The coefficient of correlation is 0.9937 for iron and 0.9902 for silica, indicating a strong correlation. The t-stat for silica does not indicate any bias, however there is a bias for iron, even though the two sets are strongly correlated (as you can see from Figure 11-11) there is an obvious bias high on iron results from ACTLABS compared to ALS, this bias is also reflected in the sign test ($0.39 \nleq \mathbf{0.22} \nleq 0.61$) indicting that only 22% of the time the ALS values are higher than ACTLABS, and a comparison of the means 35.115Actlabs T_Fe% versus 34.832ALS T_Fe%. There is no strong bias for silica values. Even though there is significant bias, it is not concerning because the correlation is so high and the absolute difference between samples is so low, furthermore almost all of the data is within 20% difference. The bias could be explained by small differences in analytical techniques and digestions at the two different labs. From Figure 11-12 most of the data is below the 1% line and all of the data is below the 5% line, using the 10% line as a cautionary line and the 20% line as warranting investigation. The spread of the data indicates that as grade increases there is less difference between the pairs of results between laboratories, and there is a small overall difference in the two values compared with the paired mean value for iron and silica. This indicates that there are no extremely strong outliers.

There were three samples that were outsiders on the analytical graphs for the iron and silica content, which were 524892, 529893 and 529879. Figure 11-11 And Figure 11-13 show these results.

It can be concluded that there is good correlation between ACTLABS results and ALS Chemex results, indicating that there is confidence in the exploration results.

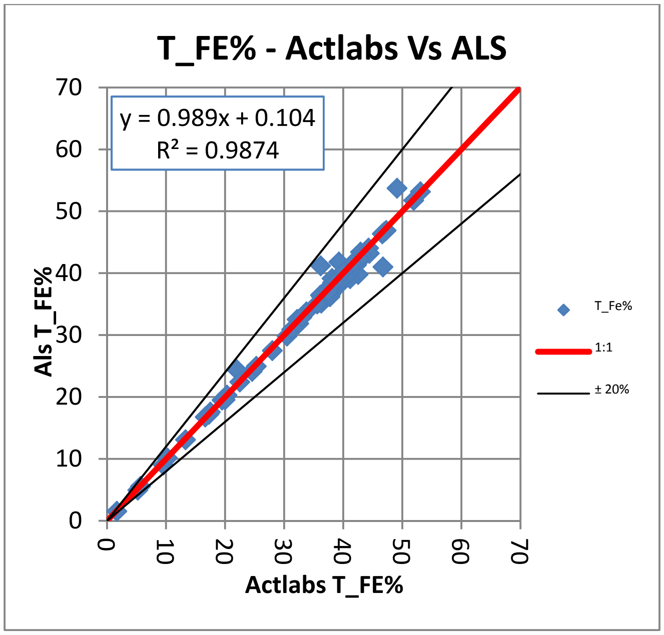


Figure 11-11: Duplicate Comparsion of T_Fe% from ALS Chemex vs. ActLabs

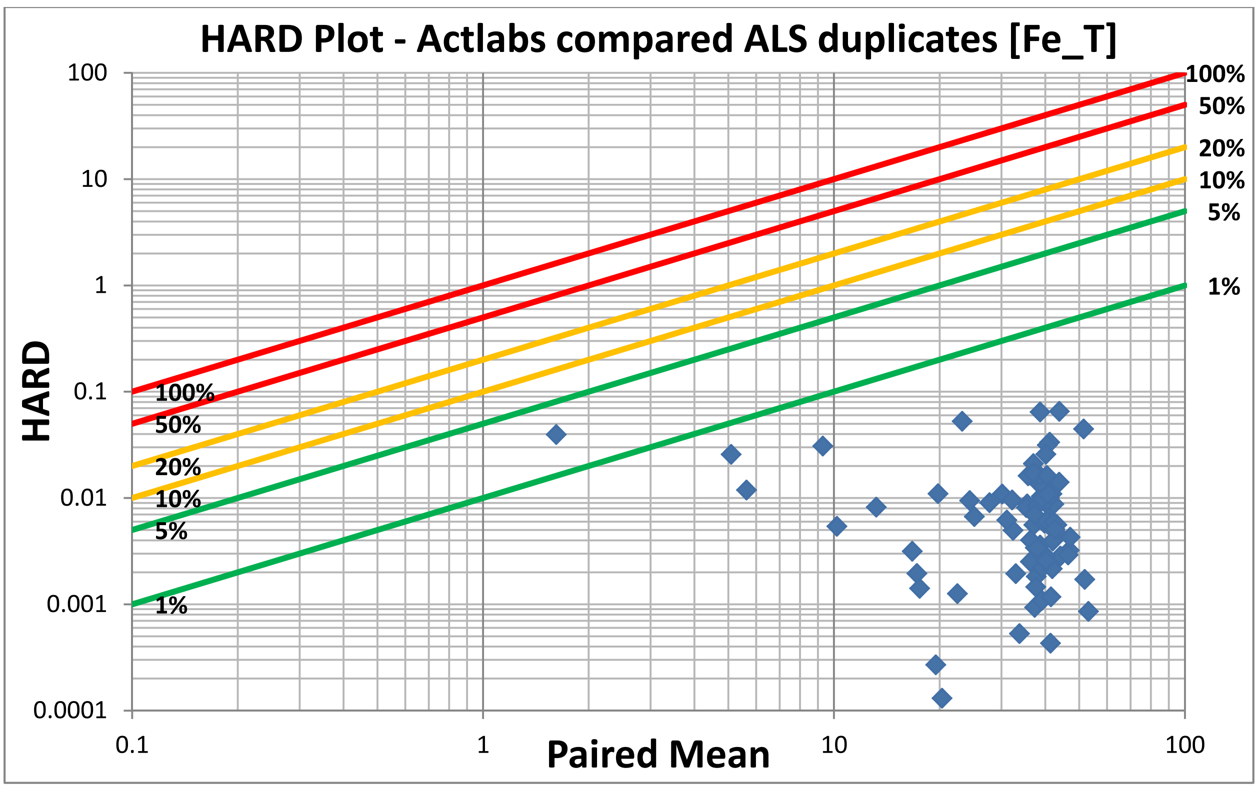


Figure 11-12: Pair Mean vs HARD of Duplicate Comparsion of T_Fe% from ALS Chemex vs. ActLabs

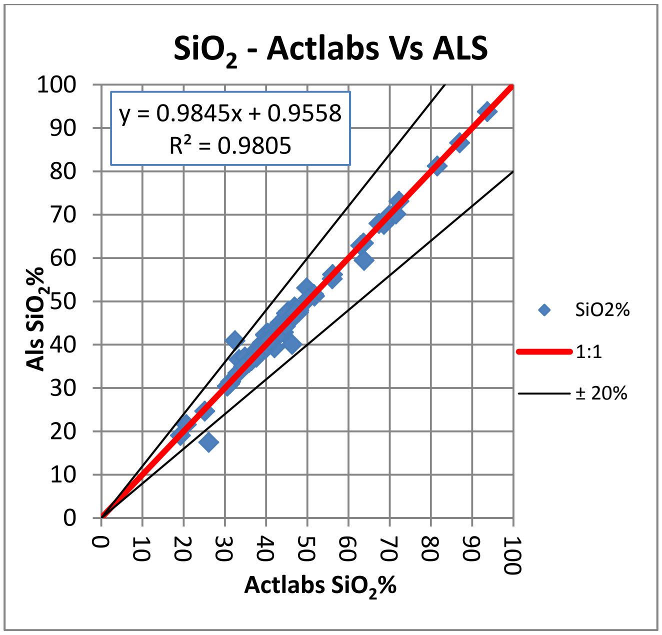


Figure 11-13: Duplicate Comparsion of SiO2% from ALS Chemex vs. ActLabs

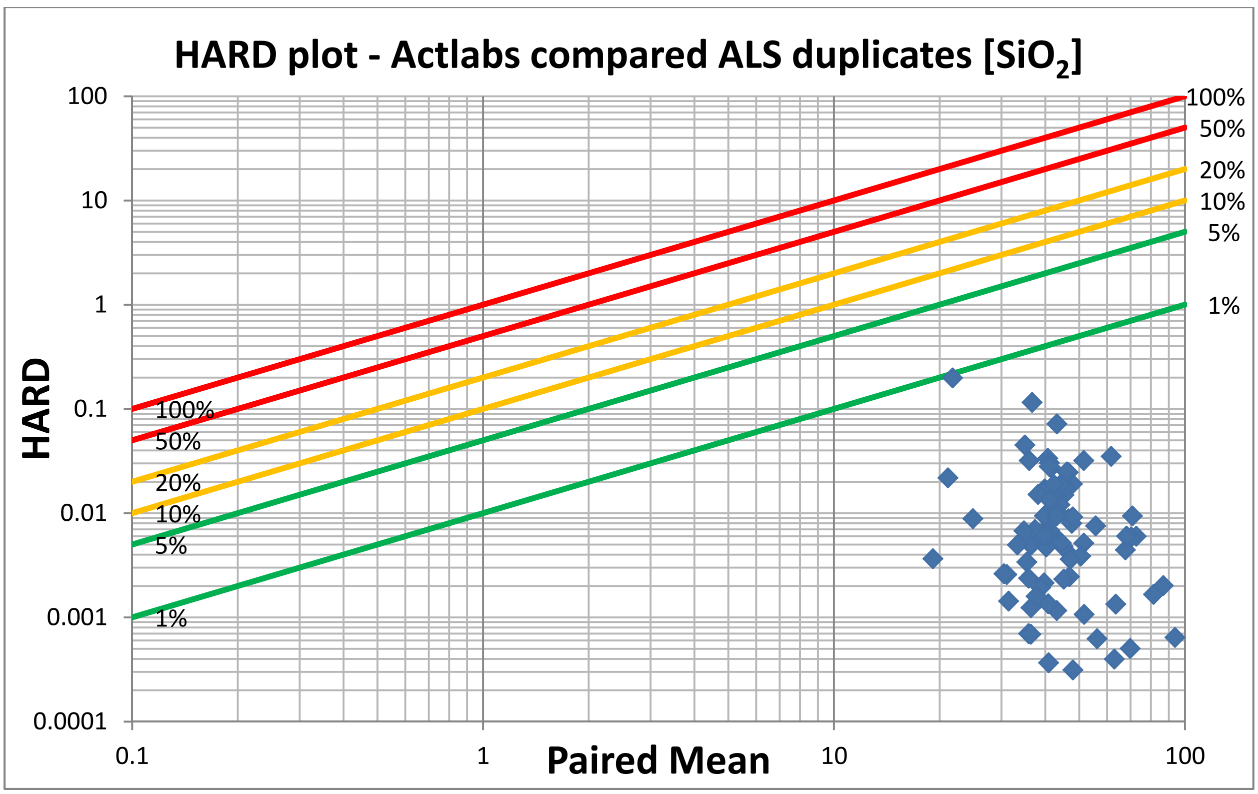


Figure 11-14: Pair Mean vs. HARD of Duplicate Comparsion of SiO2% from ALS Chemex vs. ActLabs

11.14.2 **DDH Duplicates**

Lim sent in 92 duplicate samples to ACTLABS from their DDH core. The coefficient of correlation is 0.9989 for iron and 0.9963 for silica, indicating a very strong correlation. The t-stat for iron and silica does not suggest any serious bias, the sign test may indicate a small bias for silica but no bias for iron, and in fact iron has a 50:50 high and low distribution for DDH duplicates. The result of the DDH duplicate testing is indicative of very strong repeatability of core samples.

There were three samples that were considered as outsiders on the analytical graphs for the iron and silica content, which were 526720, 528125 and 526367. Figure 11-15 and Figure 11-17 illustrate the comparisons, with Figure 11-16 and

Figure 11-18 summarizing statistical significance.

All of the pairs have values less than 10% on the HARD plots and most of the data less than 1%. There is demonstrated similarity between the difference of the pairs and their paired mean, providing reasonable correlation. Of the 5 points above the 1% line on the hard plots for silica and iron 3 of those points have paired values near 1% or less. It is expected that there may be higher variation at lower grades.

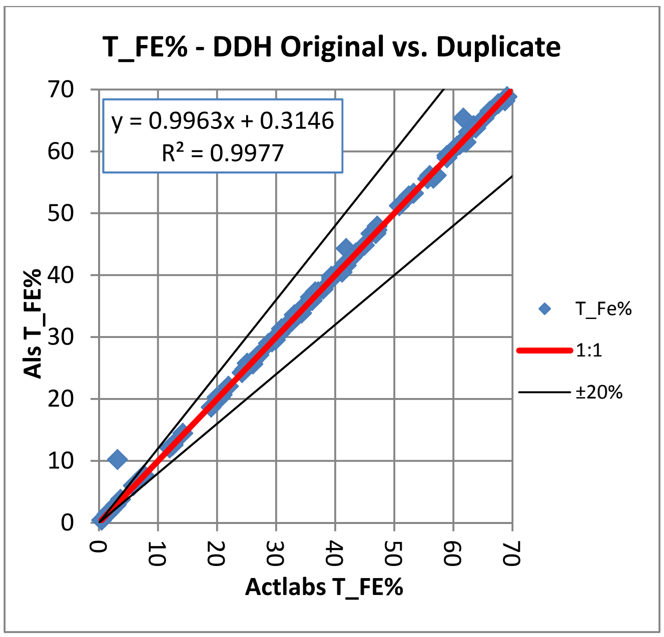


Figure 11-15: T_Fe% of Original Samples vs. Duplicate Results from Diamond Drill Holes

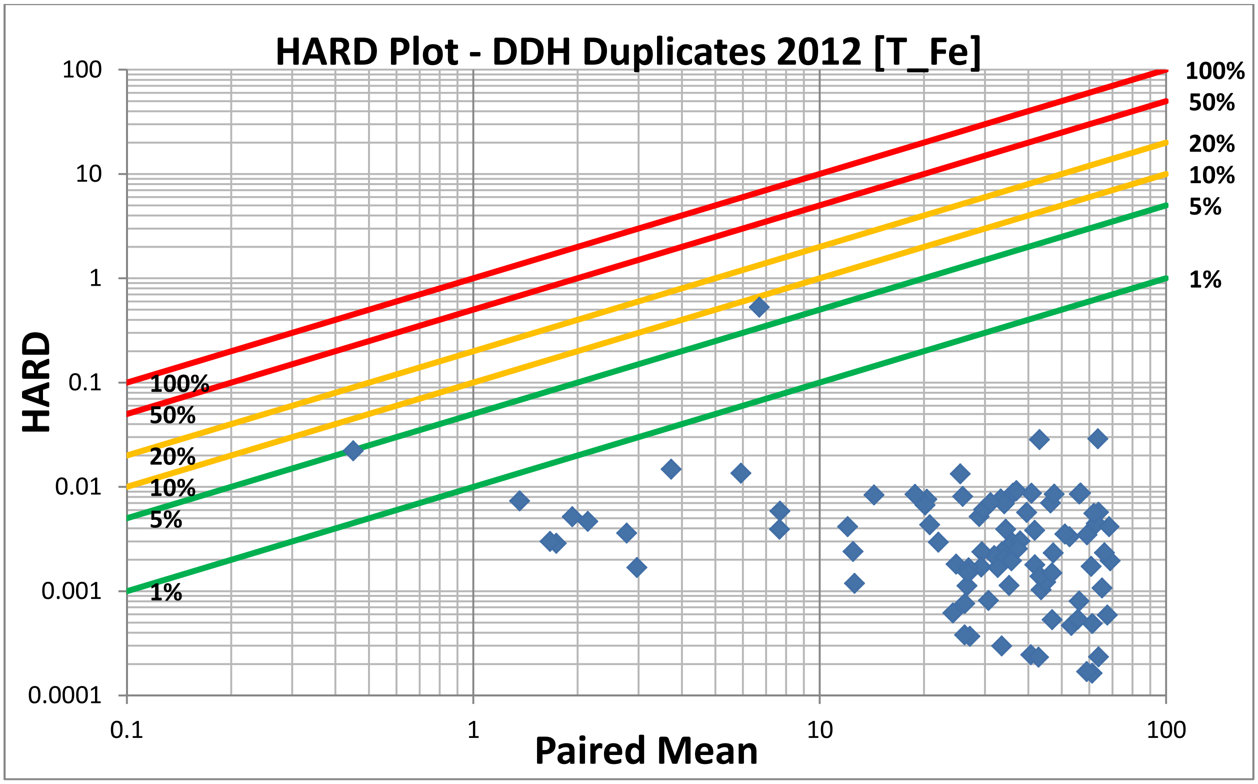


Figure 11-16: Pair Mean vs HARD of T_Fe% of Original Samples vs. Duplicate Results from Diamond Drill Holes

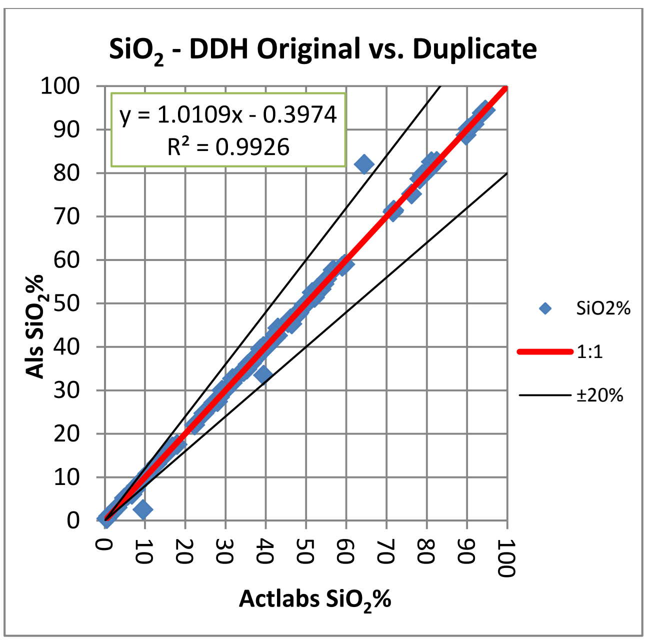


Figure 11-17: SiO2% of Original Samples vs. Duplicate Results from Diamond Drill Holes

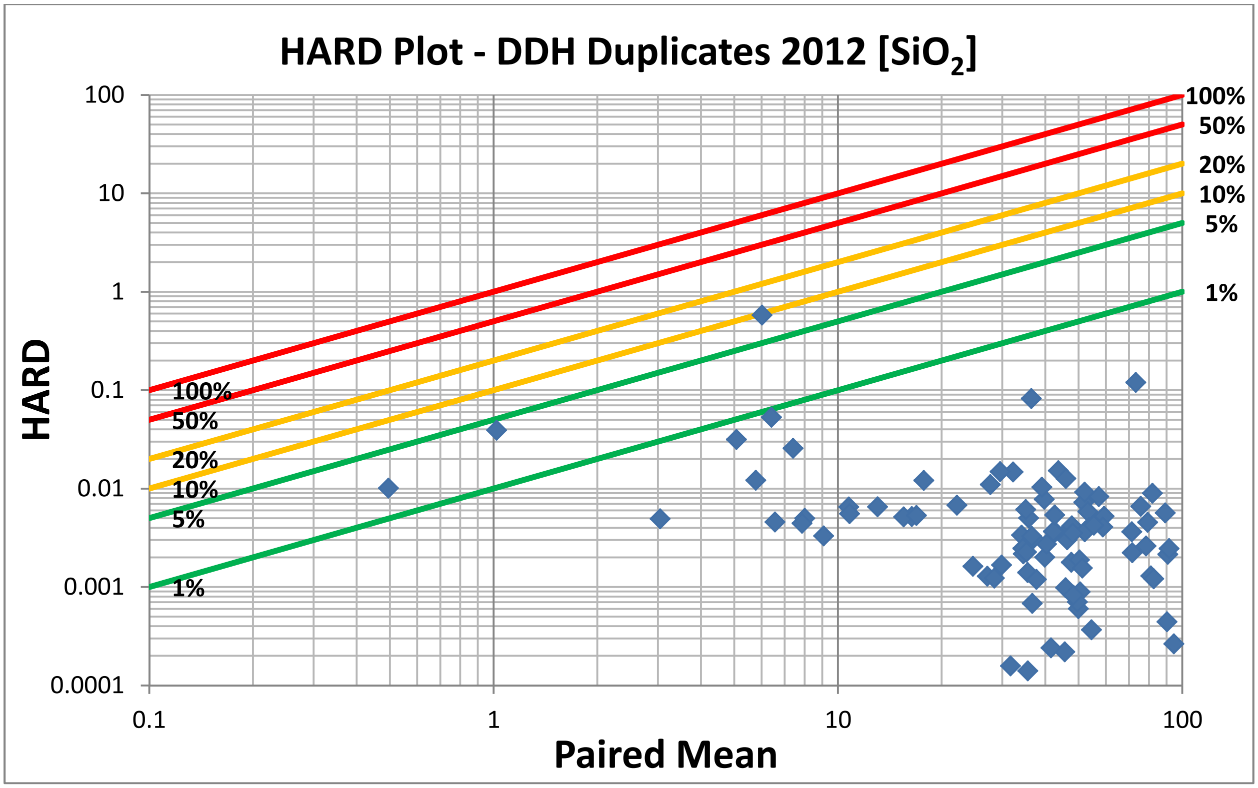


Figure 11-18: Pair Mean vs HARD of SiO2% of Original Samples vs. Duplicate Results from Diamond Drill Holes

11.14.3 RC Duplicates

Lim sent in 63 RC duplicate samples to ACTLABS. The coefficient of correlation is 0.8786 for iron and 0.8872 for silica. This is a fairly strong correlation, however less strong than the DDH samples. There is no bias indicated by the sign tests and a mild bias for silica indicated by the t-test. The mild bias indicates a slight high for the original samples. There may be a few explanations for this however the bias is not very strong. From the paired duplicate charts one can easily see that there is more deviation from the 50:50 line compared to DDH samples. There is one large outlier sample # 525725 and LIM may want to follow up on it, potentially there could be a mislabelled sample? The error could be related to the way samples are collected on the RC rig, potential the discard hose was not distributing the sample evenly or fines have been preferentially washed1.

There were seven samples that were outsiders on the analytical graphs for the iron and silica content, which were 524675, 525000, 525600, 525650, 525675, 525725, 525900, and 525925. There were two additional samples that were outsiders on the silica content graphs which are 524800, and 525050 as shown in Figure 11-19 and Figure 11-21. The explanation for this would be the way in which the duplicates were taken. The discard hose could have been partially blocked at the time of taking the sample, and the acquired ¾ was not going through the discard hose. Also, finer grained material

1 Potentially since the discharge sample has larger volume, the silica is washing down sample from the water pressure on the discharge hose, and so when it is time to take a subsample they have been separated. This would account for why the duplicate has elevated iron and reduced silica. Furthermore because the samples are significantly smaller than the duplicates it is easier to take closer to 100% of the sample.

could have leaked or washed through the microfiber sample bags, which could have affected the results.

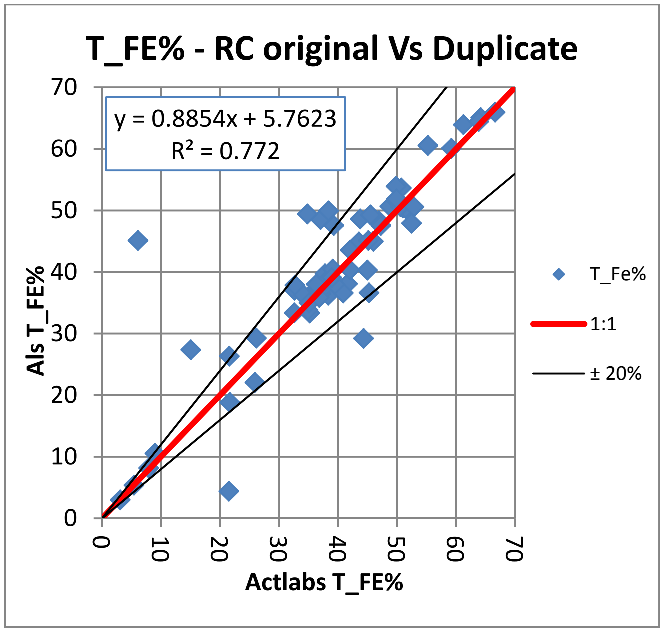


Figure 11-19: T_Fe% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

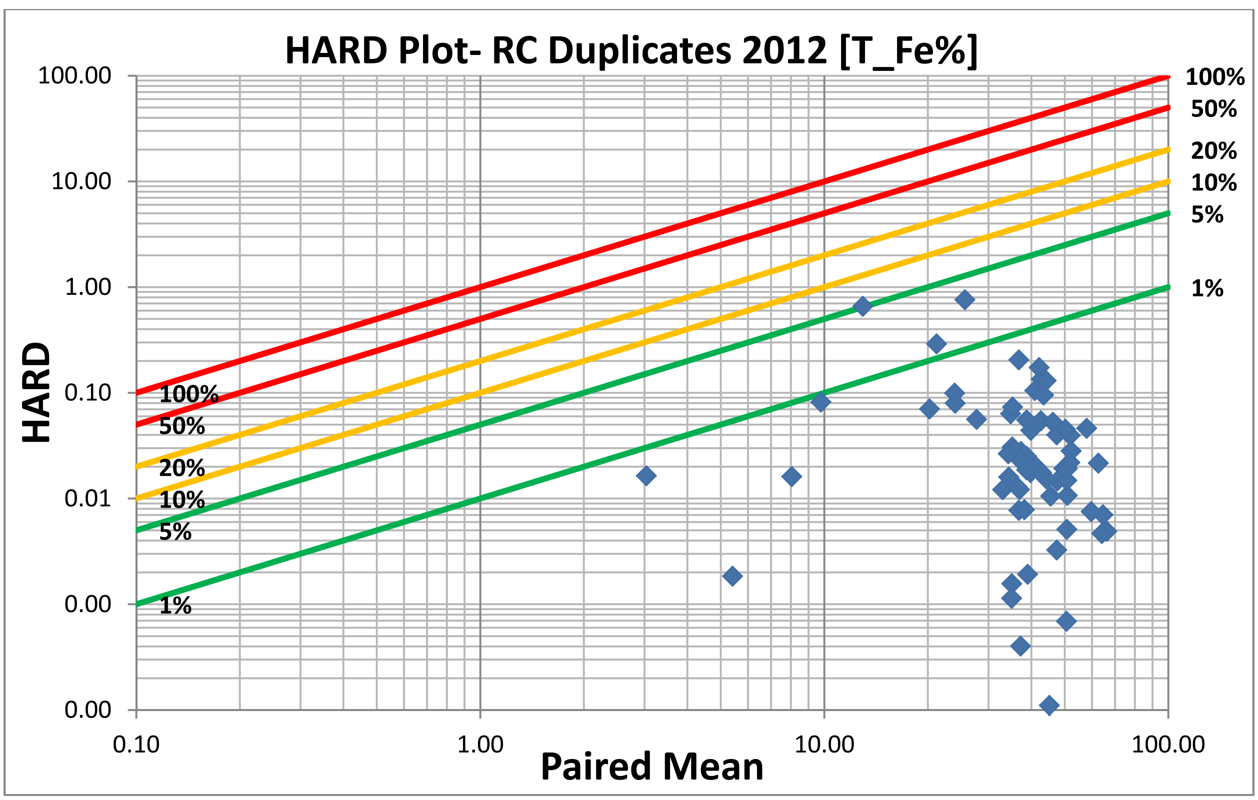


Figure 11-20: Pair Mean vs. HARD of T_Fe% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

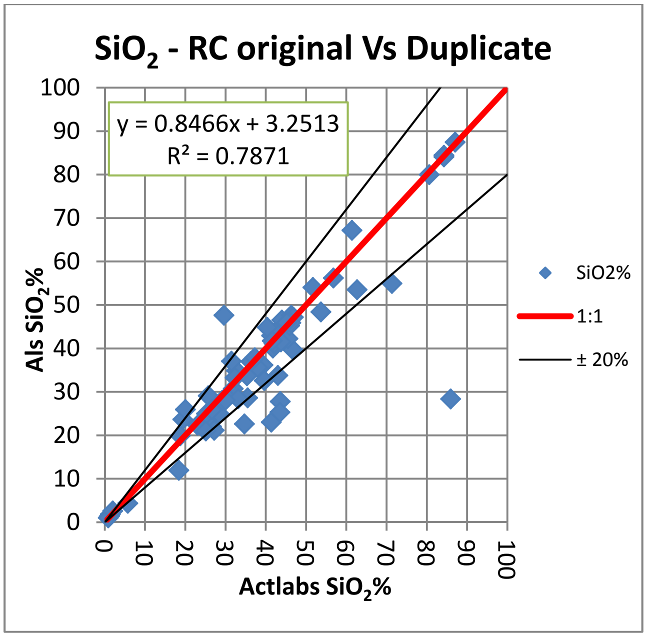


Figure 11-21: SiO2% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

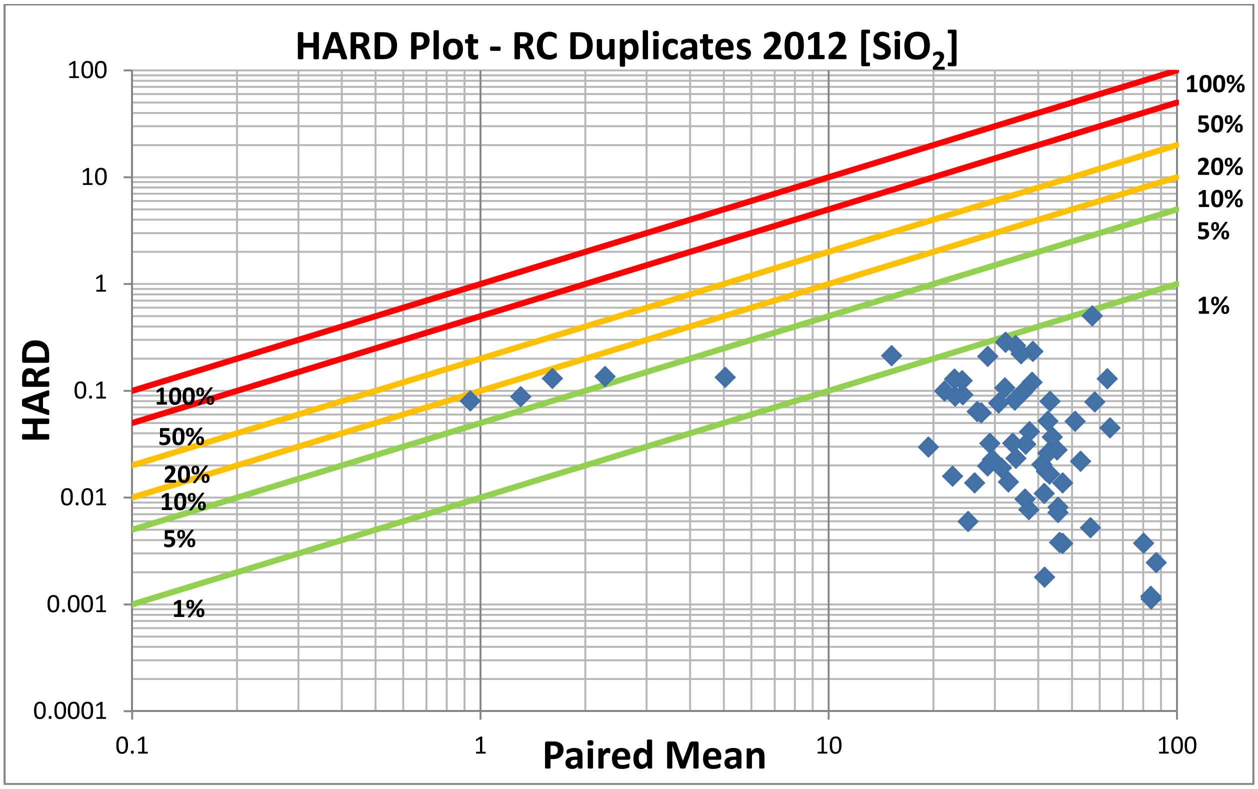


Figure 11-22: Pair Mean vs. HARD of SiO2% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

11.14.4 Second Run Duplicates

LIMHL sent 117 duplicates twice to Actlabs for duplicate analysis. The coefficient of correlation is 0.9938 for iron and 0.9910 for silica. This is a strong correlation, and indicates good repeatability of sample analyses. The difference in the means for both iron and silica is <1%, there is a bias high on iron for the duplicate samples, with 78% of the samples being greater than the original. All the evidence points to strong correlation between samples, furthermore repeatability of the samples. There were two samples that were outsiders on the analytical graphs for the iron and silica content, which were 524889 and 524892.

The hard plots illustrate good correlation between the difference in the pairs and there paired mean, and only one point is above the 1% line and that sample has less 4% paired mean iron value, the ore grade material has strong correlation.

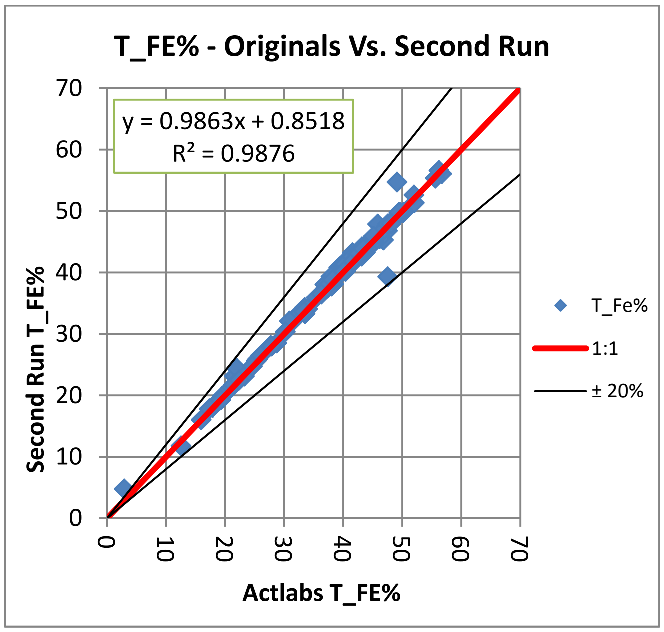


Figure 11-23: Comparison of T_Fe% of Original Sample vs. Second Duplicate Results

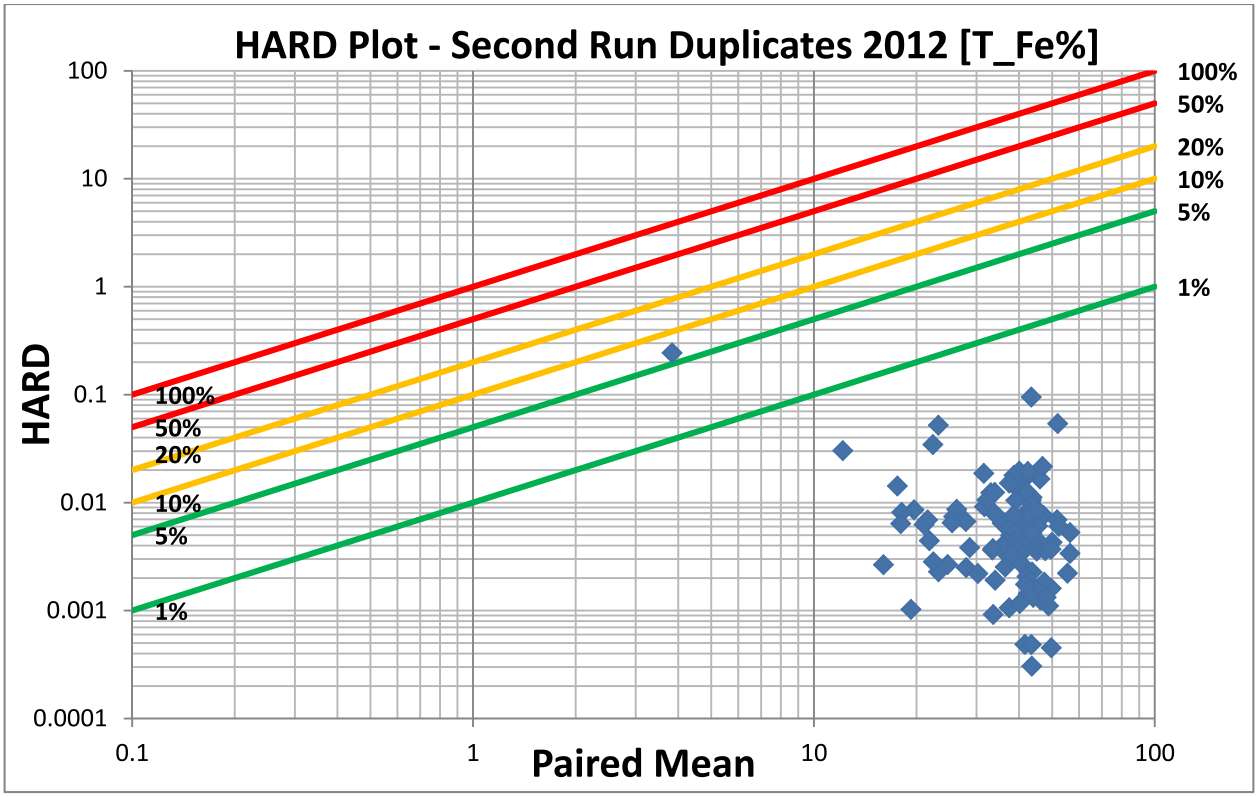


Figure 11-24: Pair Mean vs. HARD of Comparison of T_Fe% of Original Sample vs. Second Duplicate Results

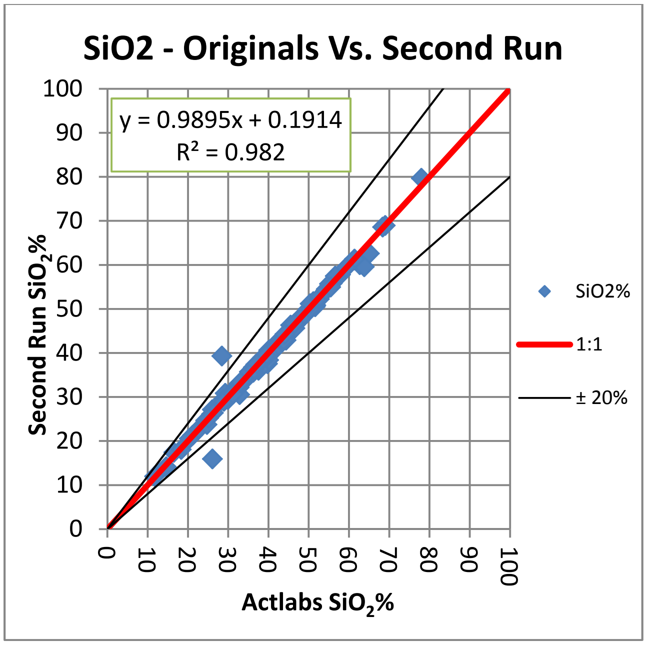


Figure 11-25: Comparison of SiO2% of Original Sample vs. Second Duplicate Results

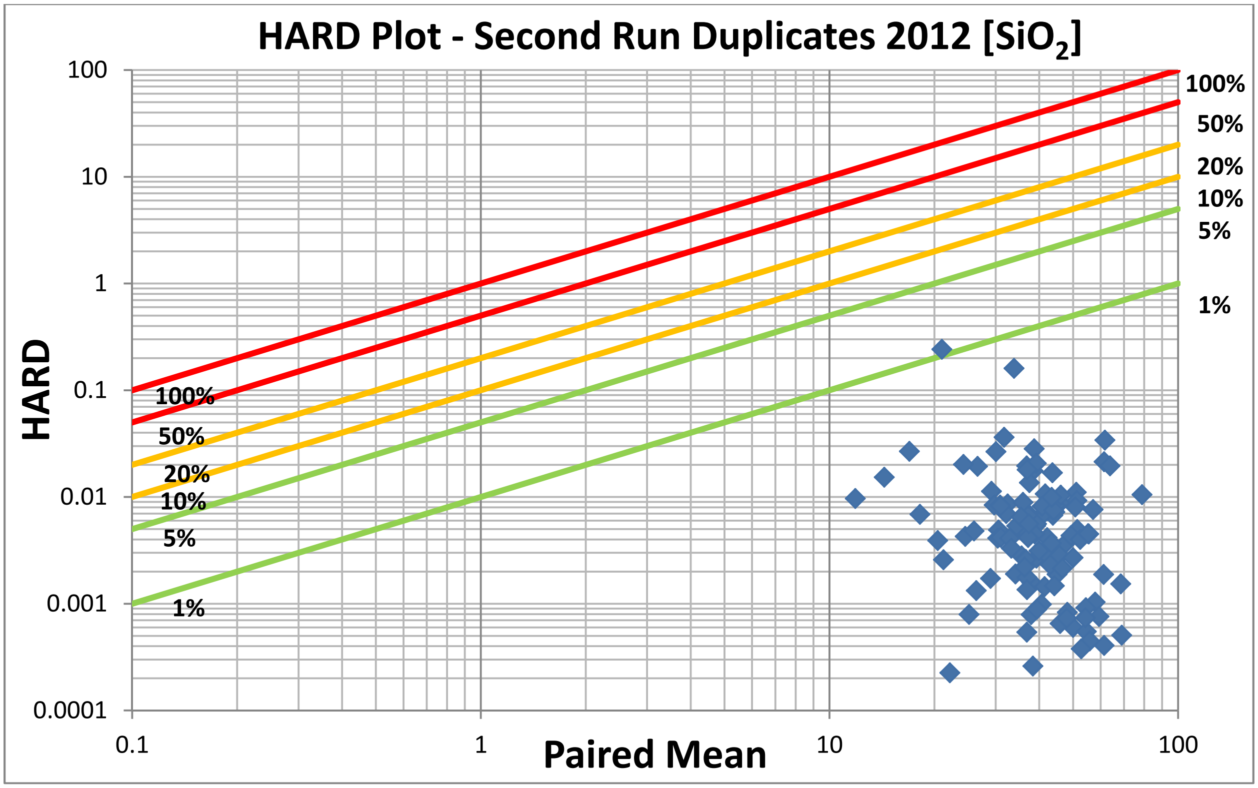


Figure 11-26: Pair Mean vs. HARD of Comparison of Comparison of SiO2% of Original Sample vs. Second Duplicate Results

11.15 Assay Correlation of Twinned Holes

The data verification was done on the iron (Fe) and silica (SiO2) assay results from the IOC historical RC drill results and the 2008-2010 RC drilling programs results. LIMHL twinned some IOC RC holes in order to verify the iron (Fe) content. A total of 6 paired RC holes from Houston were considered. Correlation coefficients showed adequate correlation. Refer to Figure 11-27 and Figure 11-28.

Visual analyses of the selected pairs also show satisfactory correlation. A hole showed lower correlation due to low grade ore layers within the deposit and sharp changes because of the structural complexity (see Figure 11-13).

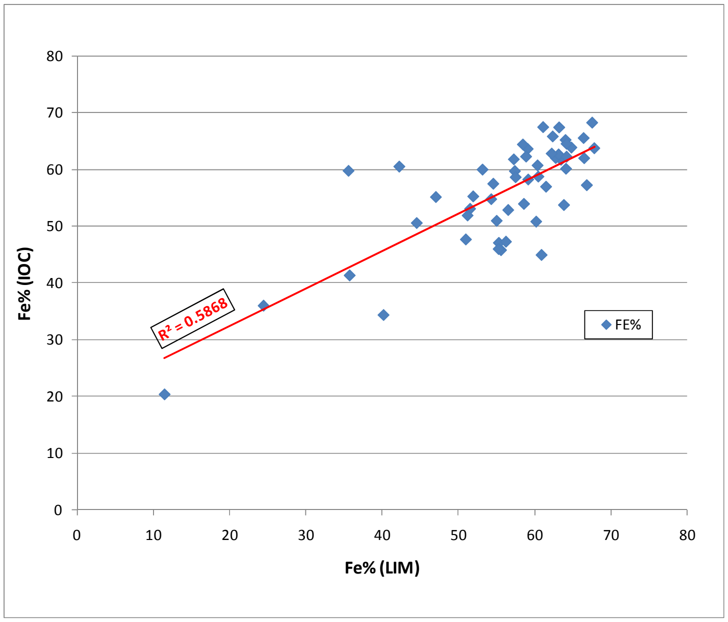


Figure 11-27: Graphic of Fe Assay Correlation of Twinned Holes

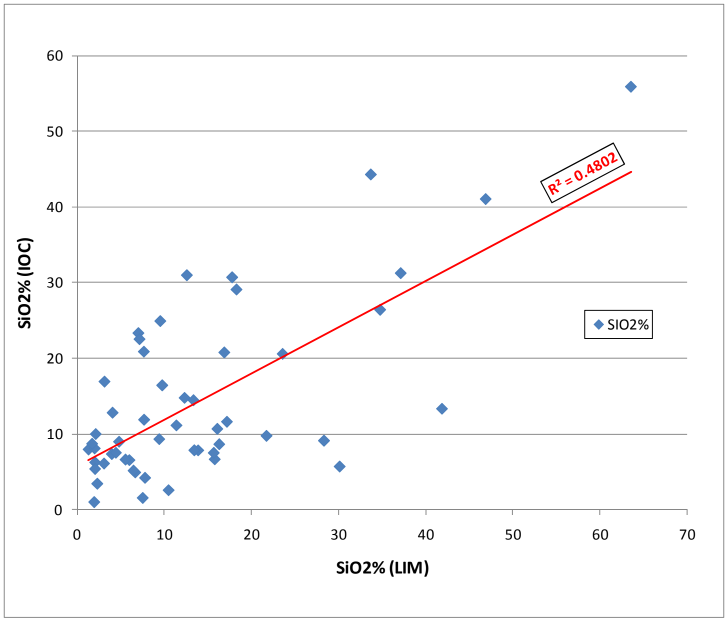


Figure 11-28: Graphic of SiO2 Assay of Twined Holes

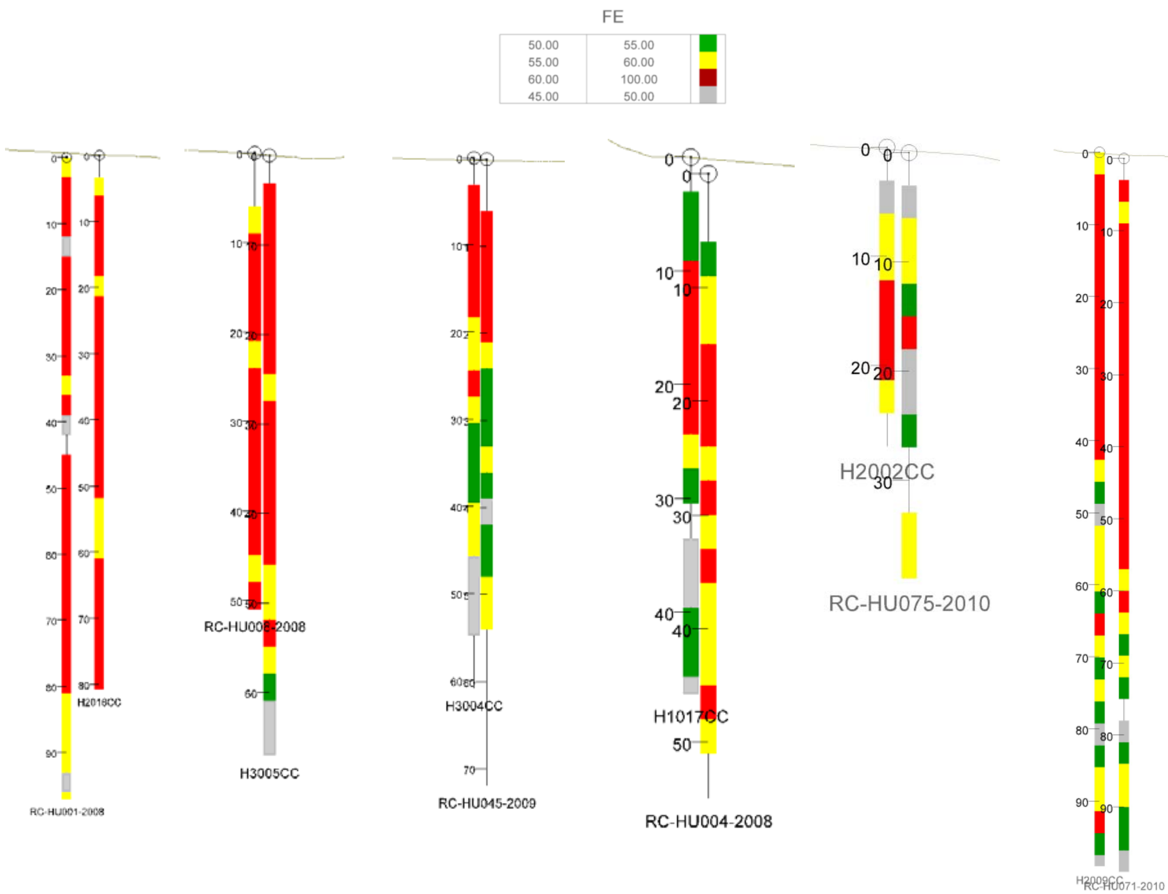


Figure 11-29: Visual Comparison of Fe Grades of 6 pairs of Holes

12. Data verification

12.1 James, Knob Lake 1, Redmond 2B and Redmond 5 Database Verification

The data verification of the iron (Fe), Phosphorus (P), Manganese (Mn), silica (SiO2) and alumina (Al2O3) values described in this section is taken in part from the entitled: Technical Report Resource Estimation of the James, Redmond 2B, Redmond 5 Mineral Deposits, Located in Labrador, Canada for Labrador Iron Mines Ltd, SGS Geostat Ltd, dated December 18, 2009 by M. Dupéré. No additional check sampling was done by SGS since the last resource estimation described in this previous report. No additional drilling data was incorporated for the resource update of the James, Redmond 2b and Redmond 5 mineral deposits. The final drill hole database includes historical and all LIM's RC holes and trenches. The database cut-off date was December 9th, 2009. SGS considers the resource database used for the resource estimation to be adequate. Relevant information on the database validation is also available in section 14.3.

The James, Redmond 2B and Redmond 5 deposits drill hole database supplied by LIM has been validated for the following fields: collar location, azimuth, dip, hole length, survey data and analytical values. The validation did not return any significant issues. As part of the data verification, the analytical data from the database has been validated with values reported in the laboratories analytical certificates. The total laboratory certificates verified amounts to approximately 10% of the overall laboratory certificates available for the Project. No errors or discrepancies were noted during the validation. Additionally, no additional drilling data sae incorporated in the resource update of the James, Redmond 2b and Redmond 5 mineral deposits.

The Knob Lake No.1 data used for the estimation of current mineral resources was initially compiled and validated by LIM using MapInfo Professional software in combination with Encom Discover and Microsoft Office Access. Data was then imported into Gemcom GEMS Software Version 6.2.4.1., which was used to perform the final validation of the Knob Lake No.1 database. LIM entered the historical data was entered from IOC's data bank listing print outs of drill holes, trenching and surface analyses. All of the data entering was done by LIM. SGS did a limited validation of the data as described also in Section 14.3.

As part of the 2011 site visit, the author collected 35 representative RC witness samples. Of the total (35 RC checks, the reproducibility of 97% of the assays was within ±10% and 100% of the assays returning values between 40% and 50% Fe grade was within ±10%. The sign test and student-T tests were not able to confirm the presence of any bias. Only 37% of 2011 original samples returned values higher than the KL1 RC Checks by SGS. In the author's opinion, the information in the section appears to be consistent and not misleading.

12.2 2012 Denault, Wishart and Ferriman Database Verification

The Denault, Wishart and Ferriman data used for the estimation of current mineral resources was initially compiled and validated by LIM using MapInfo Professional software in combination with Encom Discover and Microsoft Office Access. Data was then imported into Gemcom GEMS Software Version 6.2.4.1., which was used to perform the final validation of the Knob Lake No.1 database. LIM entered the historical data was entered from IOC's data bank listing print outs of drill holes, trenching and surface analyses. All of the data entering was done by LIM. SGS did a Limited validation of the data as described also in Section 14.3.

The Denault, Wishart and Ferriman deposits drill hole database supplied by LIM has been validated for the following fields: collar location, azimuth, dip, hole length, survey data and analytical values. The validation did not return any significant issues. As part of the data verification, the analytical data from the database has been validated with values reported in the laboratories analytical certificates. The total laboratory certificates verified amounts to approximately 10% of the overall laboratory certificates available for the Project. No errors or discrepancies were noted during the validation.

As part of the 2011 site visit, the author collected 49 representative RC witness samples for the drilling at Denault. The Duplicate results are summarized in section 12.3.1. As part of the 2012 site visit, 19 RC witness samples were requested by the author to verify the results for Wishart and Ferriman drilling. The Duplicate results are summarized in section 11.14.

12.3 Check Sampling by SGS

12.3.1 RC Independent Validation – Denault

A statistical analysis of the selected 2011 original and duplicate analytical values involving a series of tests for the RC sample was conducted by taking selected pulps and delivering them from ACTLABS in Ancaster to SGS Lakefield. A total of 49 pulp duplicates were analyzed at SGS Lakefield.

Descriptive univariate statistics (Table 12-1) was conducted first to check the similarities in the populations. Descriptive stats were conducted for silica, total iron, phosphorous, manganese, and alumina. All the relative differences in the means are less than 1.7% and for iron and silica (of greatest interest) the difference in the means are less than 1%. SGS reported marginally less iron and silica than Actlabs. The standard deviations are similar and the skewness, giving similar proportions to the population. The minimum values are the only values that have significant change, and only for phosphorus, manganese and particularly alumina, this difference at the low end could be a relic of laboratory methodology and reporting limits.

The Sign tests illustrate a bias low for SGS samples compared to actlabs samples for both iron and silica. The sign test for Iron $0.36 \nleq 0.18 \nleq 0.64$ illustrates that of the 49 samples only 18% of the SGS samples are larger than the Actlabs samples. The tolerance level for the sign test is the inverse root of the population above and below 0.5. The sign test for silica $0.36 \nleq 0.27 \nleq 0.64$ also shows a bias low for the SGS samples compared to the original. The student t-test for paired mean confirms that this bias exists.

The following figures and tables show excellent correlation (R^2=0.9903 for T_Fe and R^2 = 0.9997 for SiO_2) between check and original assays both for iron and silica. These values demonstrate the repeatability of the samples between the labs. Regardless of the bias these populations are strongly correlated.

Table 12-1: Summary Statistics Denault Assay results

	Summary Statistics (univariate)									
	Original (ActLabs)					Duplicate (SGS Lakefield)				
	SiO_2%	T_Fe%	P	Mn	Al_2O_3	SiO_2%	T_Fe%	P	Mn	Al_2O_3
Count	49	49	49	49	49	49	49	49	49	49
Min	1.90	46.17	0.026	0.050	0.080	1.87	46.37	0.022	0.039	0.220
Max	27.28	61.44	0.183	11.966	3.070	27.20	60.99	0.188	12.004	3.000
μ	8.09	56.10	0.073	1.820	0.901	8.04	55.77	0.075	1.819	0.916
median	4.12	56.61	0.070	0.137	0.660	3.98	56.03	0.074	0.139	0.680
skewness	1.12	-0.49	0.854	1.865	1.660	1.11	-0.43	0.795	1.882	1.663
σ	7.04	3.85	0.035	3.165	0.641	7.10	3.80	0.036	3.164	0.630

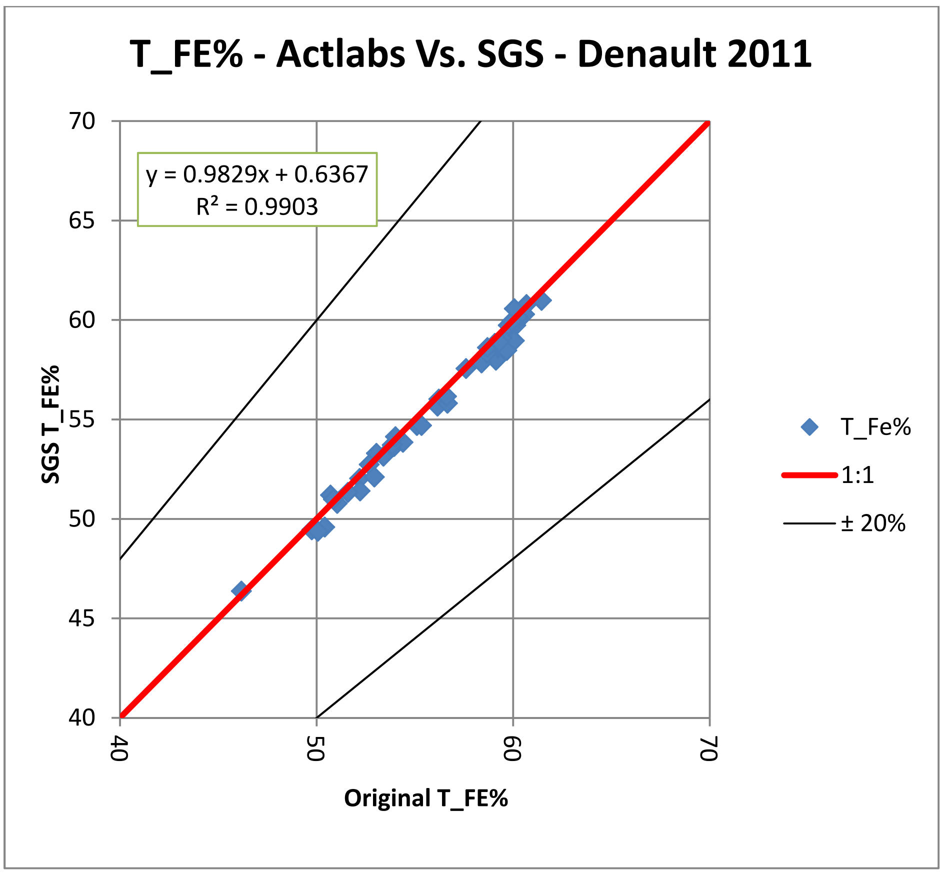


Figure 12-1: 2011 Denault - Independent duplicates T_Fe%

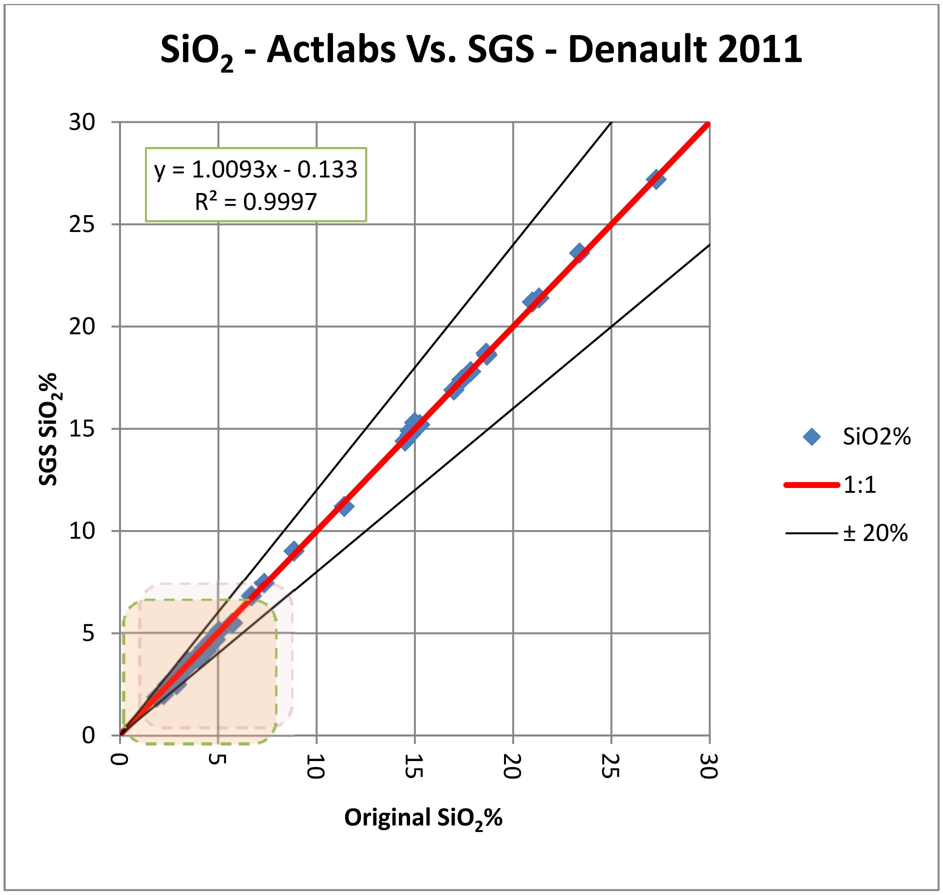


Figure 12-2: 2011 Denault - Independent duplicates SiO_2%

The preceding figures illustrate the paired duplicate values with the redline being 1 to 1, and the black lines representing 20% difference. All of the data falls between the 20% difference lines, in fact most of the data will be with 5% difference. It is evident that the SGS values are marginally lower for both iron and silica from these graphs, and at the same time being very close to 1 to 1. The enlarged the SiO_2 chart in Figure 12-3 makes it clearer to see that the bulk of the results are below the 1 to 1.

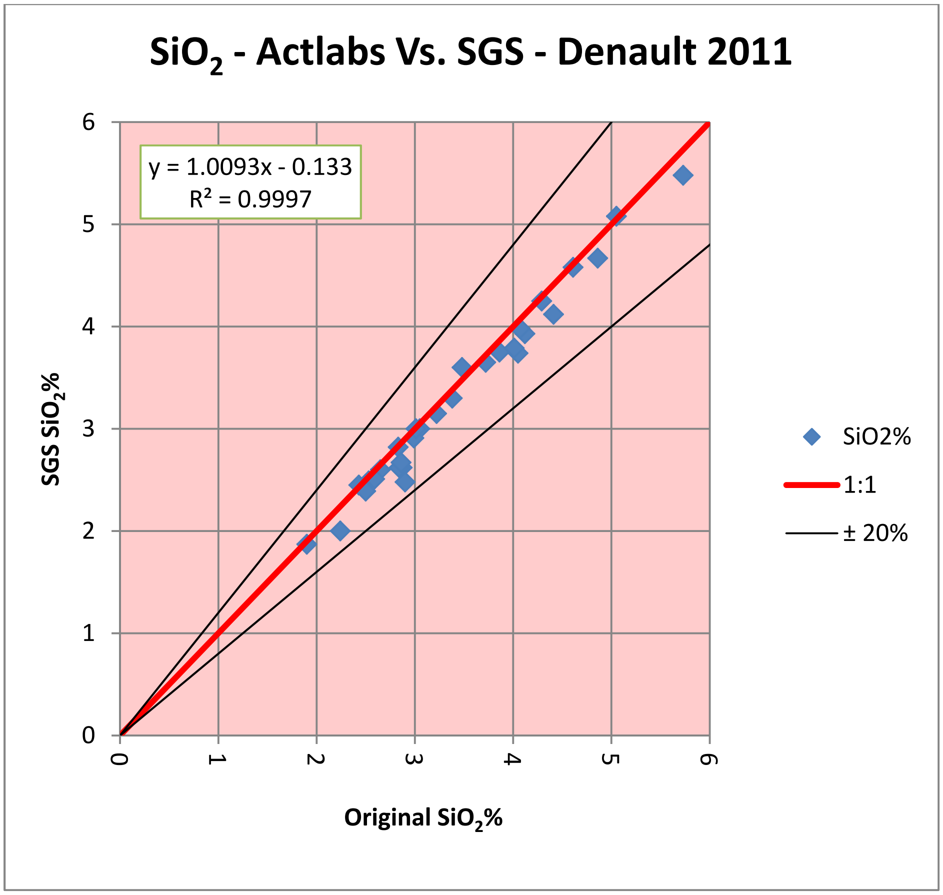


Figure 12-3: 2011 Denault - Independent duplicates SiO_2% - low silica

It is SGS's opinion that there is good reproducibility and the values are fit for purpose.

12.3.2 RC Independent Validation – Stockpiles Ferriman and Wishart

A statistical analysis of the selected 2012 original and duplicate analytical values involving a series of tests for the RC sample was conducted by taking selected witness samples and sending them to SGS Lakefield. A total of 19 samples were requested by SGS for validation of Wishart and Ferriman. Values for Silica (SiO_2), Fe, and Alumina (Al_2O_3) were compared. The sign test for Iron $0.27 \leq 0.42 \leq 0.73$ illustrates that of the 19 samples 42% of the SGS samples are larger than the Actlabs samples, and is within the selected tolerance. The tolerance level for the sign test is the inverse root of the population above and below 0.5. The sign test for silica $0.27 \leq 0.63 \leq 0.73$ is also within the tolerance limits. The paired mean student t-Test supports the sign test indicating no significant bias.

Table 12-2 summarized the univariate statistics for both the original and duplicate values, the populations are very similar. The means for silica and iron have relative differences under 5%. The mean for alumina has a very small absolute difference but a higher relative difference, alumina variability comes mostly from the low end material nearer to the analytical detection limits. The minimum for silica is slightly off, and it does appear that there could be a slight difference or shift in silica values low for originals. Through inspection of the duplicate paired plots Figure 12-4 and Figure 12-5 there appears to be reasonable reproducibility between the two labs, all of the data for

Iron is between the ±20% limits, there are 3 outliers for silica, and slightly more scatter (this is also observed on the hard plot for silica Figure 12-8), Alumina has the most variation but demonstrates better control with grade.

Table 12-2: Summary Statistics - Malcolm Independent Sampling

	Summary Statistics (univariate)								
	Original			Duplicate			Relative Difference		
	SiO_2%	T_Fe%	Al_2O_3	SiO_2%	T_Fe%	Al_2O_3	SiO_2%	T_Fe%	Al_2O_3
Count	19	19	19	19	19	19	0.00%	0.00%	0.00%
Min	14.14	36.96	0.070	17.50	35.46	0.250	23.76%	-4.05%	257.14%
Max	38.43	55.20	3.490	40.20	53.16	3.710	4.61%	-3.69%	6.30%
µ	26.31	47.56	0.982	26.71	47.52	1.068	1.50%	-0.09%	8.79%
median	25.96	47.28	0.540	26.30	49.10	0.530	1.31%	3.85%	-1.85%
skewness	0.24	-0.43	1.529	0.69	-1.33	1.489	192.12%	206.40%	-2.60%
σ	6.84	4.65	0.891	5.37	4.42	0.930	-21.48%	-5.03%	4.37%

The following figures and tables show good correlation (R^2=0.6291 for T_Fe and R^2=0.6486 for SiO_2 and R^2=0.9452 for Al_2O_3) between check and original assays both for iron and silica. These are very good values considering the nature of RC sampling.

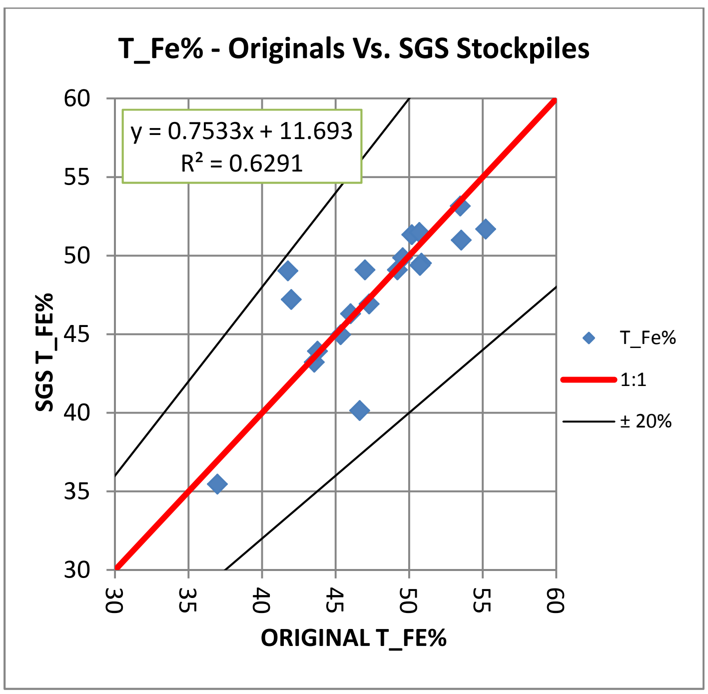


Figure 12-4: RC Original Values vs. Duplicate Values for T_Fe

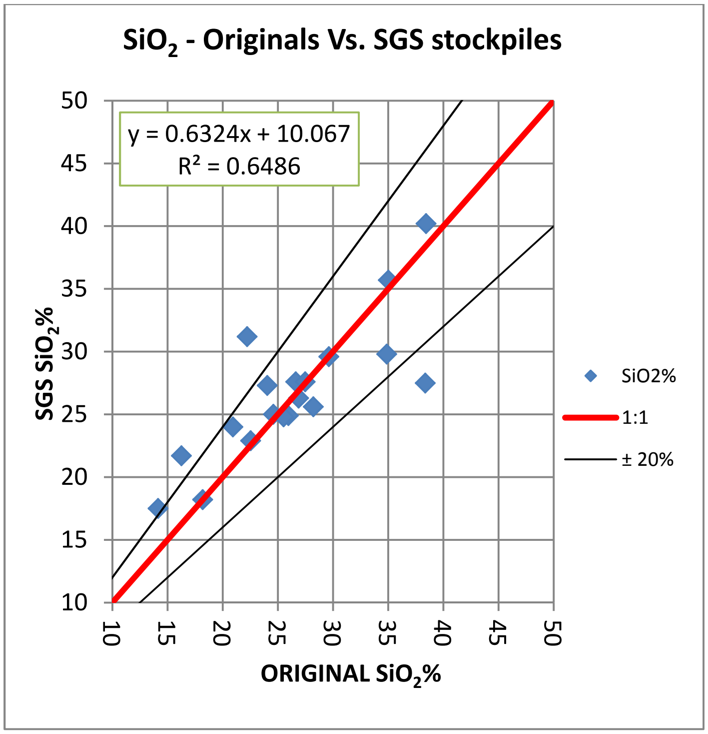


Figure 12-5: RC Original Values vs. Duplicate Values for SiO_2

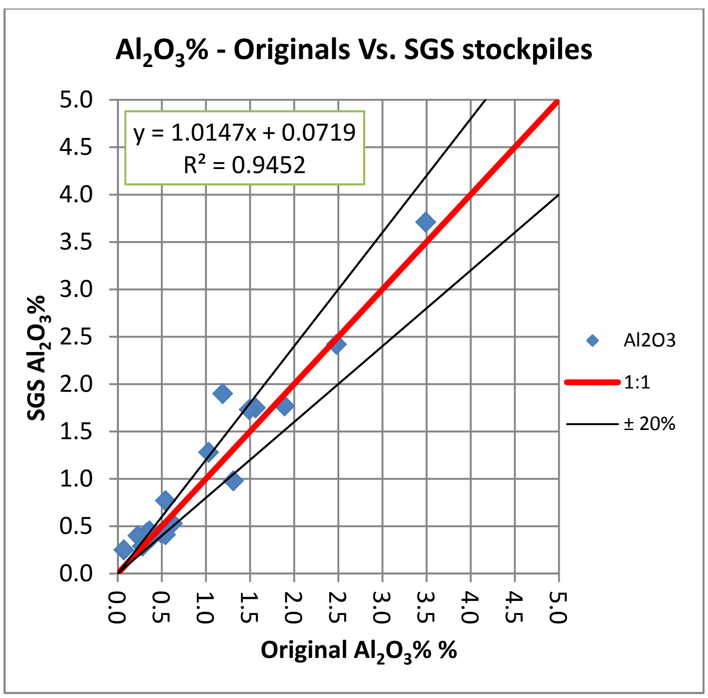


Figure 12-6: RC Original Values vs. Duplicate Values for Al_2O_3

HARD plots (Figure 12-7 and Figure 12-8) were created for iron and silica to illustrate the variation between the difference of pairs and the mean of pairs. All of the values on the hard plot are below the 1% lines and there appears to be no dramatic changes with the grade (paired mean), there is slightly more scatter for silica but is well within limits of concern.

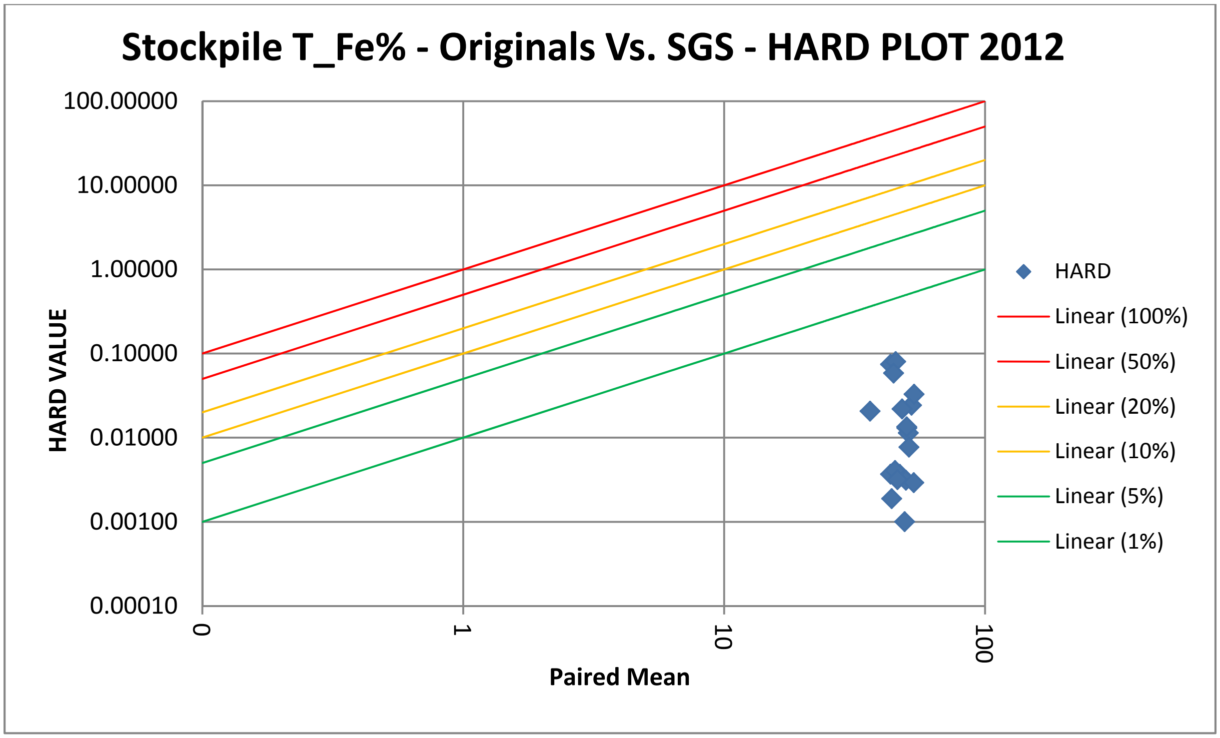


Figure 12-7: HARD Plot: Stockpile Independent Samples – T_Fe%

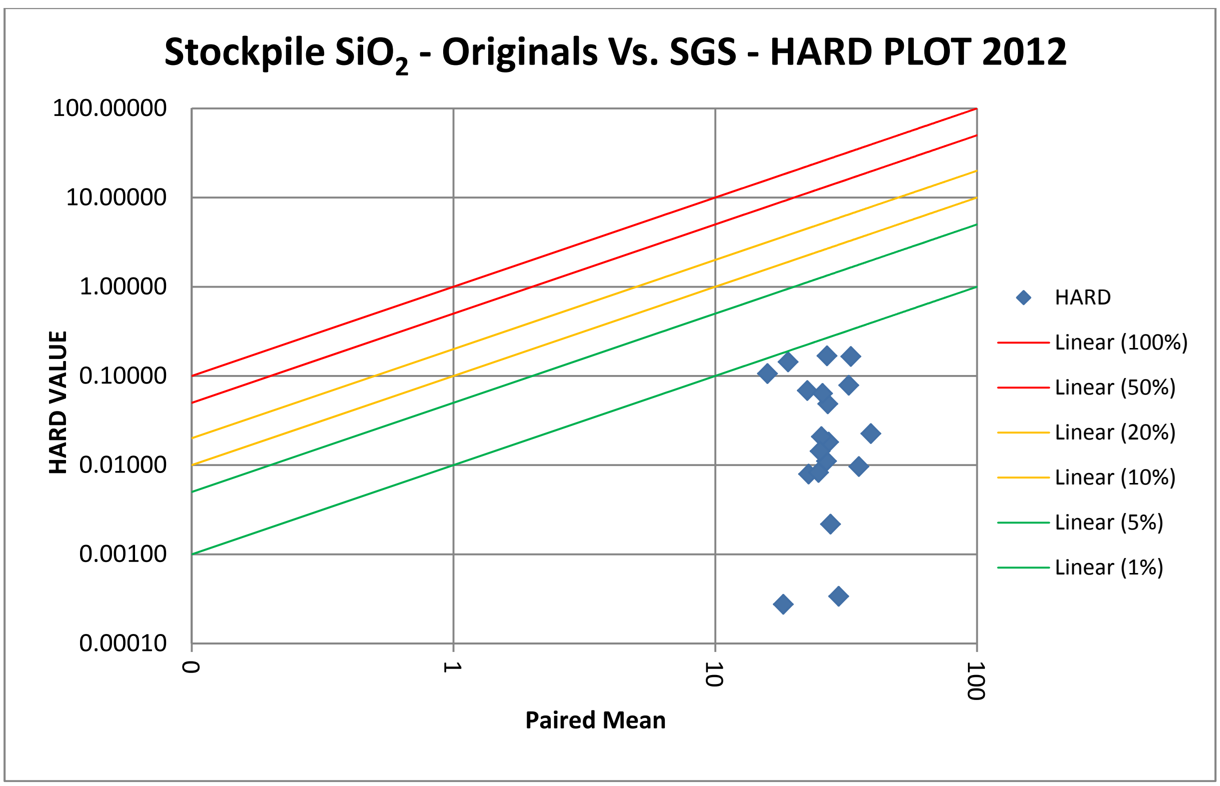


Figure 12-8: HARD Plot: Stockpile Independent Samples – SiO_2%

It is believed that the RC samples at Wishart and Ferriman are suitable for resource estimation.

12.4 Data Verification Conclusions and Recommendations

12.4.1 2012 Independent Sampling

The results indicate that there is sufficient reproducibility between laboratories and that the data has demonstrated validity.

In the author's opinion, the information in the section appears to be consistent and not misleading.

13. Mineral Processing and Metallurgical Testing

13.1 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 13-1

Table 13-1: 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.

13.2 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 13-2.

Table 13-2: 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.

13.3 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 13-3.

Table 13-3: 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 13-4.

Table 13-4: Sawyer Lake Sample Screen and Chemical Analysis (CRM)

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

13.4 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 m and 78 m 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 13-5 show the summary of the results of the tests on the 2006 bulk samples for the various ore types.

Table 13-5: Summary of Tests by SGS-Lakefield

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

13.5 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 13-6.

Table 13-6: Results of Mineralogical Characterization Tests (SGS – Lakefield)

Sample **Hole**	156109 RC-JM001-2008	160566 RC-JM001-2008	156090 RC-JM001-2008	156032 RC-JM001-2008	156037 RC-JM001-2008	Analyzed 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.

13.6 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 test work was also carried out. The results of the bulk sample test are shown in Table 13-7 and Table 13-8.

Table 13-7: 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 13-8: 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.

13.7 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 13-9: 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

13.8 Outotec (2009)

From the material sent to Derrick Corporation, a sample of -300 μm 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.

13.9 SGA Laboratories (2009)

A 1.3 tonne sample from the James South fines product, obtained during the 2008 Bulk Sample Program, was sent to StudiengesellschaftfürEisenerzaufbereitung (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% Fe 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% Fe, 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 % Fe. 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 13-10.

Table 13-10: 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

13.10 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 13-11: Screen Analysis of the Lump Ore Sample as Received

Grain sizing [mm]	Weight [%]	Residue [%]	Fe [%]	SiO_2 [%]	Al_2O_3 [%]	Density [g/cm³]	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 13-12: Chemical Analysis of Jigging Products – Course Ore

Layer #	Weight [kg]	Weight %	Fe %	SiO_2 %	Al_2O_3 %	P %	Density [g/cm³]	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 13-13: Screen Analysis of the Fine Sample as Received

Grain sizing [mm]	Weight %	Residue %	Fe%	SiO_2%	Al_2O_3%	P %	Density [g/cm³]	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 13-14: 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.

13.11 2009 Bulk Sample by LIMHL/COREM

In an effort to seek ways to evaluate both feasibility and quality of eventual lump and sinter production, LIMHL contracted COREM to perform a series of characterization tests and to validate a proposed process flow sheet. 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 flow sheet were proposed by LIMHL 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 flow sheet (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 LIMHL.

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 13-15: 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 LIMHL 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}.

13.12 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.

13.13 FLSmidth Minerals (2010)

In 2010 LIMHL 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. Figure 13-1 below shows the particle size distribution (psd) of both the original sample and the sample after classification.

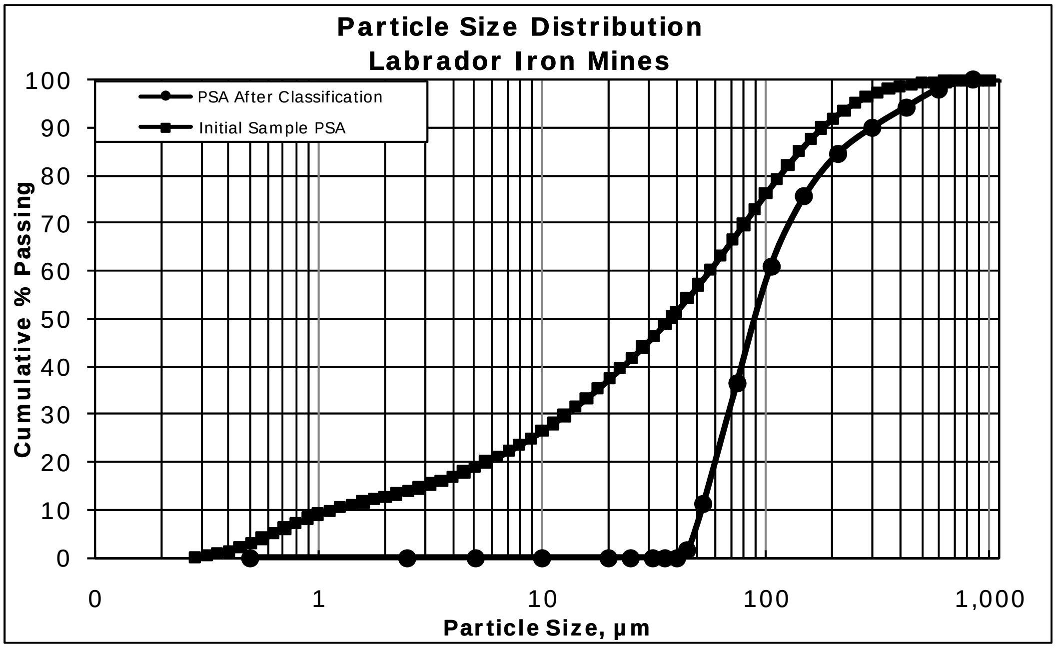


Figure 13-1: Particle Size Distribution for Labrador Iron Sample (July 2010)

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 13-2, below, shows the particle size distribution for two of the samples tested and also the psd that is expected for a hydrosizer underflow.

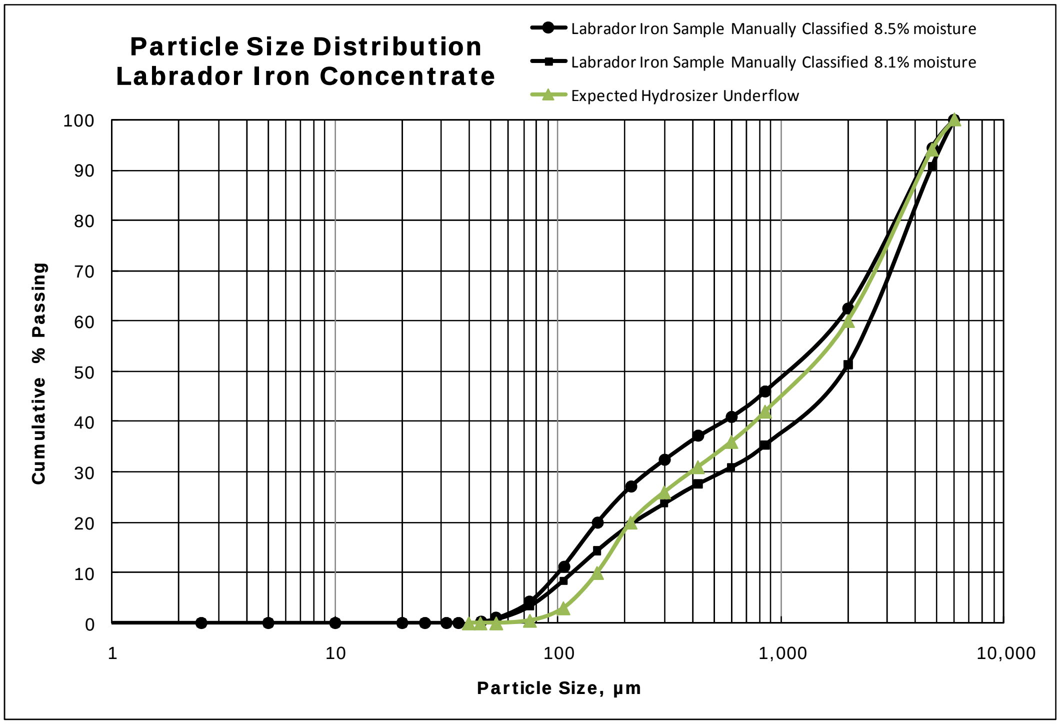


Figure 13-2: PSD for Labrador Iron Sample Tested November 2010

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 13-16: 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.

13.14 SGS Lakefield Manganese Tests (2012)

In 2012, manganese resource samples were tested by SGS Lakefield for compatibility with the Silver Yards wet plant flowsheet. The manganese samples were not beneficiated using the flowsheet, implying the Silver Yards plant is not capable of upgrading manganese resources to saleable manganese products. For this reason, manganese and iron ore resources are tabulated separately in this report and are not considered additive.

14. Mineral Resource Estimates

14.1 Introduction

This section reports the results of the Schefferville Area Direct Shipping Iron Ore Projects Resource Update which is based on new analytical data sampled from the drilling completed on the Ferriman and Wishart stockpiles and from an independent review of LIM's 2011 Denault mineral resources estimate (MRE). This section reports also the updated James deposit mineral resources estimates (MRE) based on SGS diligent review of LIM's reconciliation work of the James mine production in 2011 and 2012 and according to the updated November 2012 topographic surface after 2012 mining depletion. The previous mineral resource update was completed by SGS Geostat and was disclosed in the Company year-end Technical Report dated March 31st 2012. The present mineral resource update completed by SGS Geostat has been disclosed in the Company news release dated May 23, 2013.

As described in the Company's news release, all the resources of the Redmond 2B, Redmond 5 and Knob Lake 1 MRE were restated from previous report and were not updated. All of the mentioned MRE presented herein are considered current.

The mineral resources presented herein are reported in accordance with the National Instrument 43-101 and have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve.

The mineral resources have been estimated by Maxime Dupéré P.Geo., Geologist for SGS Geostat. Mr. Dupéré is a professional geologist registered with the Ordre des Géologues du Québec and has worked in exploration for gold and diamonds, silver, base metals and iron ore. Mr. Dupéré has been involved in mineral resource estimation work over different iron deposits on a continuous basis since he joined SGS Canada Inc. in 2006, which includes the participation in mineral resource estimate for the James, Redmond 2B, Redmond 5, Knob Lake 1, Denault, Houston and Malcolm 1 iron deposits in 2009 2010, 2011 and 2012. Mr. Dupéré is an independent Qualified Person as per section 1.5 of the NI 43-101 Standards of Disclosure for Mineral Projects and by virtue of education, experience and membership in a professional organization.

The previous mineral resource estimate of James, Redmond 2B and Redmond 5 mineral deposits was completed by Maxime Dupéré P.Geo., Geologist for SGS Geostat and was first disclosed in the Technical report dated December 18, 2009. The technical information is also summarised in the Silver Yards technical report dated April 15, 2011 and in the Silver Yards technical report dated March 31st, 2012.

SGS Geostat updated the mineral resource estimate for the James iron deposit (James Mine) using the new and updated November 30th, 2012 topographic surface provided by LIM. The James deposit insitu SG formula based on %Fe was also updated according to reconciliation work by LIM and from validation by Michel Dagbert, senior geostatistician for SGS Geostat.

The James database contains a total of 6,835 m of RC drilling in 122 RC drill holes and 2 diamond drill hole for a total of 2,278 assays. Also, 79 trenches for a total of 3,651 m of trenching and a total of 939 assays were included in the database. The database cut-off date is November 9th, 2009. The presence of 3 additional 2011 RC drill holes to the southeast of the James deposit were checked and validated and the opinion of SGS is that they do not affect materially the current mineral resources of the James deposit. 2 additional RC drill holes were drilled in the James mineral deposit for QA/QC and grade control by the mining staff of the James Mine. Additional diamond drill holes and grade control data involving additional diamond drilling and blast holes were also considered for the current diligent review.

Based on the additional information and from the diligent review of the reconciliation work on James, it is the author's opinion that the current James MRE update presented herein is an adequate and considered not misleading.

The current classified resources of the present Deposits reported below are compliant with standards as outlined in the National Instrument 43-101. The present resources were estimated and are disclosed according to the IOC Classification of Ore described in the next table.

Table 14-1: IOC Classification of Ore Types

Schefferville Ore Types (From IOC)					
TYPE	**Ore Colours**	**T_Fe%**	**T_Mn%**	**SiO2%**	**Al2O3%**
NB (Non-bessemer)	Blue, Red, Yellow	>=55.0	<3.5	<10.0	<5.0
LNB (Lean non-bessemer)	Blue, Red, Yellow	>=50.0	<3.5	<18.0	<5.0
HMN (High Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50.0	>=6.0	<18.0	<5.0
LMN (Low Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50.0	3.5-6.0	<18.0	<5.0
HiSiO2 (High Silica)	Blue	>=50.0		18.0 -30.0	<5.0
TRX (Treat Rock)	Blue	40.0 -50.0		18.0 -30.0	<5.0
HiAl (High Aluminum)	Blue, Red, Yellow	>=50.0		<18.0	>5.0

14.2 Specific Gravity (SG)

The SG testing was carried out on core using the conventional water immersion method. The SG was obtained by measuring a quantity of core in air and then pouring the core into a graduated cylinder containing a measured amount of water to determine the volume of water displacement. The core was first coated with wax. 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, Fe dependant, was used for the resource estimation of each deposit which was calculated using the formula below. The formula (SG (in situ) = [(0.0258 * Fe) + 2.338] * 0.9) was calculated from regression analyses in MS Excel using 229 specific gravity tests completed during the 2009 drilling program on the James, KL1, Redmond 2B, Redmond 5 And other similar iron deposits of the nearby area.. The 0.9 factor corresponds to a security factor to take into account porosity of an estimated average of 10% volume. This formula was validated and used by SGS in prior technical reports.

Updates were done on the James deposit according to reconciliation data provided in the James Reconciliation section Table 14-5and it was decided to apply 25% porosity (0.75 in the equation) according to these findings. The Wishart and Ferriman SG are fixed based on reasonable assumptions related to stockpiles.

Table 14-2: Deposit SG Formulas

Deposit	SG Formula (*In Situ*)
James	((0.0258*Fe)+2.338)*0.75
Redmond 2B	((0.0258*Fe)+2.338)*0.9
Redmond 5	((0.0258*Fe)+2.338)*0.9
Knob Lake 1	((0.0258*Fe)+2.338)*0.9
Denault	((0.0258*Fe)+2.338)*0.9
Wishart	2.2 (Fixed)
Ferriman	2.2 (Fixed)

14.3 Database and Validation

No significant inconsistencies were observed. LIM entered the historical data from IOC's data bank listing print outs of drill holes, trenching and surface analyses. All of the data entry was done by LIM. SGS did a full validation of the data in 2009 and a Limited but accurate validation of the 2010, 2011 and 2012 data. Most 2009 to 2012 certificates of analysis were verified on an average of 10-25%.

Most collar coordinate locations of drill holes were obtained using a Trimble DGPS with accuracies under 30cms. The locations of the remaining holes and trenches as well as geology were digitized using MapInfo v9.5 on historical maps that were geo-referenced using the DGPS surveyed points. The estimated accuracy of the digitized data is approximately 5 m. Historical cross sections were also digitized using MapInfo/Discover software then imported into Gemcom Gems software.
The table below is a summary of the database information used for each deposit estimated in this report.

Table 14-3: Drill holes summary

Deposit	Hole Type	All		LIM		IOC	
		Count	Meterage	Count	Meterage	Count	Meterage
James	DD	25	2116.4	25	2116.40		
	RC	131	7482.69	25	1666.50	106	5816.19
	Trench	77	3554.09	6	447.12	71	3106.97
Redmond 2B	DD	0	0				
	RC	52	2032.512	25	1365.00	27	667.51
	Trench	10	663.02	10	663.02		
Redmond 5	DD	0	0				
	RC	68	2331.686	20	961.00	48	1370.69
	Trench	8	461.04	8	461.04		
Knob Lake 1	DD	1	44.2	1	44.20		
	RC	69	2596.49	19	1218.00	50	1378.49
	Trench	23	77	23	77.00		
Denault	DD	0	0				
	RC	136	5051.18	76	3791.00	60	1260.18
	Trench	0	0				
Wishart	DD	0	0				
	RC	55	1525	55	1525.00		
	Test Pits	809	788.5	809	788.50		
Ferriman	DD	0	0				
	RC	23	781	23	781.00		
	Test Pits	236	223.5	236	223.50		

14.4 James Mineral Resource Update

As described above, SGS Geostat updated the mineral resource estimate for the James iron ore deposit (James Mine) using the new and updated November 30th, 2012 topographic surface provided by LIM. The James Mine in situ SG formula based on %Fe was also updated according to reconciliation work by LIM and from validation by Michel Dagbert, Senior Geostatistician for SGS Geostat.

This is an update of LIM's previously published NI 43-101 compliant mineral resource estimate (MRE) for the Silver Yards Direct Shipping Iron Ore Projects Effective Date: March 31st, 2012, (Revised October 24, 2012) and filed on SEDAR on October 30, 2012. All of the geological interpretations, 3D solid creation, block modeling and resource estimation information is fully described in the initial SGS March 2010 Technical Report.

The James database contains a total of 6,835 m of RC drilling in 122 RC drill holes and 2 diamond drill holes for a total of 2,278 assays. Also, 79 trenches for a total of 3,651 m of trenching and a total of 939 assays were included in the database. The database cut-off date was November 9, 2009. The presence of 3 additional RC drill holes in 2011, southeast of the James deposit, were also checked and validated and in the opinion of SGS, they do not materially affect the current mineral resources of the James deposit.

Two additional RC drill holes were drilled in the James mineral deposit for QA/QC and grade control by the mining staff of the James Mine. Additional diamond drill holes and grade control data involving additional diamond drilling and blast holes were also considered for the current diligent review.

Based on the additional information and from the diligent review of the reconciliation work on James, it is SGS's opinion that the current James mineral resource estimates presented herein are adequate and not considered misleading.

The James mineral resource estimates presented herein are reported in accordance with the National Instrument 43-101 and have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve. These resources were reported using the IOC Classification of Ore described in the Table 14-1.

The current resource estimates for the James deposit after 2012 mining depletion total 3.48 million tonnes including LNB, NB and HiSiO2 ore types as described in the Measured and Indicated categories at a grade of 56.18% Fe and 83,000 tonnes in the inferred category at a grade of 53.54% Fe.

The resources presented in this section are all inside the property boundary. The block model was cut by the November 2012 topography. SGS assigned a percentage to each block that was cut by the updated topography. This percentage was taken into account for the resource estimates.

Additional RC and diamond drilling was completed in 2012 to the southeast of the James deposit. No significant major discovery was made.

The James updated resource estimates are dated as of April 12, 2013.

The James deposit remains open to the northwest.

The results of the resource update for the deposit are shown in Table 14-4.

Table 14-4: Updated mineral resources of the James Deposit

Area	Ore Type	Classification	Tonnage	Fe (%)	P (%)	Mn (%)	SiO2 (%)	Al2O3 (%)
James	Fe Ore	Measured (M)	-	-		-	-	-
		Indicated(I)	3,480,000	56.18	0.022	0.68	16.25	0.42
		Total M+I	3,480,000	56.18	0.022	0.68	16.25	0.42
		Inferred	83,000	53.54	0.036	0.14	19.48	0.49
James	Mn Ore	Measured (M)	-	-		-	-	
		Indicated(I)	-	-		-	-	
		Total M+I	**-**	**-**		**-**	**-**	
		Inferred	-	-		-	-	

There are no known factors or issues related to environment, permitting, legal, mineral title, taxation, marketing, socio-economic or political settings that could materially affect the mineral resource estimate. LIM is currently extracting mineralized material from the James open pit mine and although not validated by the author, all legal, mineral title, socio-economic and community impact issues and settings are being addressed in a proper manner.

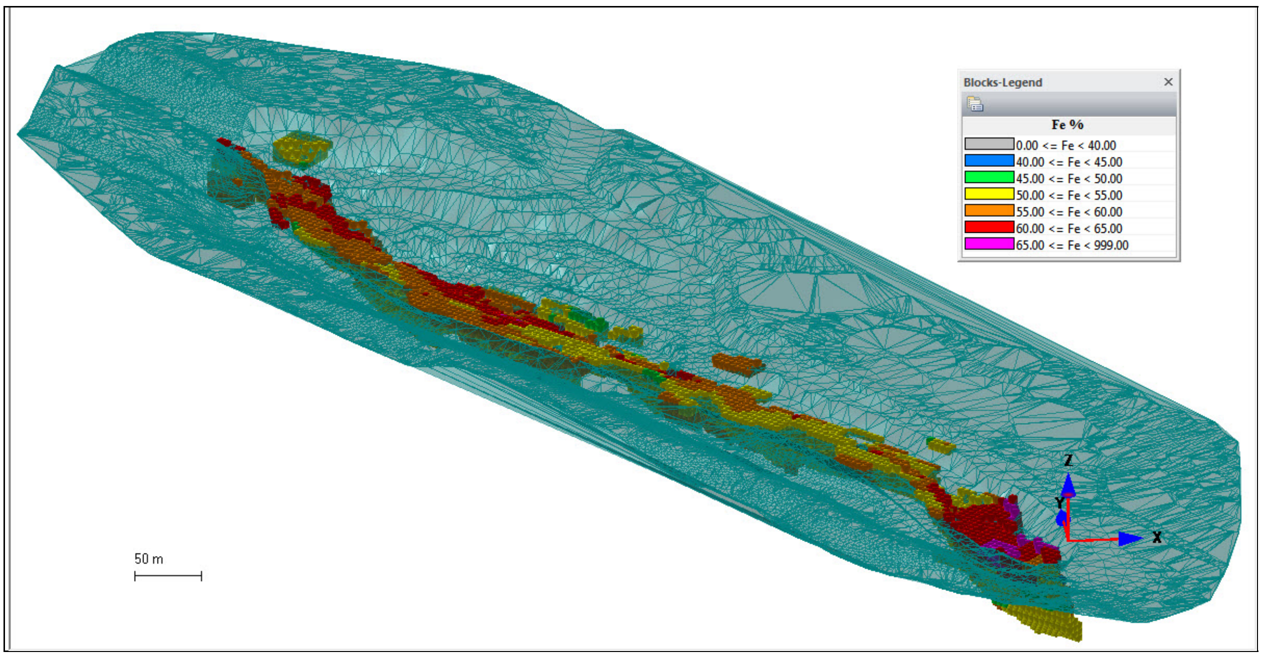


Figure 14-1: Updated James Topographic Surface and Deposit

14.5 Audit of James Mine 2011 – 2012 Reconciliation

This following section was completed by Mr. Michel Dagbert, Senior Geostatistician for SGS.

In the fall of 2012, LIM personnel conducted an extensive reconciliation of the James Mine production in 2011 and 2012 with estimated resources in a block model produced by SGS at the end of 2009 ("SGS 2009"). The reconciliation work conducted by LIM is presented in a report dated December 6, 2012 ("LIM 2012"). LIM requested SGS to audit that work.

LIM's reconciliation work can be divided in two parts.

The first part is a comparison of (in-situ) resource estimates using the original resource block model from DH data to that of the production resource model from grade control samples. This first part looks at a comparison of volumes and grades for different types of ore, illustrated in the following table, which summarizes a similar table from LIM 2012 (the original LIM table has details by bench).

Table 14-5: LIM Resource Comparison (Grade + Volume) from Start until end of Nov. 2012

	LIM Production Model			SGS Resource Model		
Ore type	Volume (m3)	%Fe	%SiO2	Volume (m3)	%Fe	%SiO2
DRO	647,973	62.27	7.7	631,855	62.48	8.83
PF	429,141	55.09	17.72	536,694	55.48	16.86
Yellow	58,540	58.76	4.66	72,198	56.73	9.95
Total	1,135,654	59.38	11.33[1]	1,240,747	59.12	12.37[2]
TRX	71,257	49.36	24.83	40,044	48.27	24.46
Grand total	1,206,911	58.78	12.13	1,280,791	58.78	12.75

[1] = 9.82% in LIM table, [2] =11.75% in LIM table

In the above table:

- DRO is the direct railing ore with %Fe> 60% (Z>530m) or %Fe>58% (Z<530m) and %P<0.05%
- PF is the plant feed ore with 50%<%Fe<60% or 58% and %P<0.05%
- Yellow is a silicate carbonate iron formation with %Fe > 50% and %P>0.05%
- TRX is the treat rock material with 45%<%Fe<50%

From that comparison, LIM concluded that:

- with the exception of Yellow ore (with "worse" values than the SGS model), average grades of ore fractions are similar.
- after subtracting a 50,000 m3 overburden from the total ore of the production model, the SGS resource model shows 12% more volume of total ore (DRO+PF+Yellow). These volume differences are more significant in the PF (20%) and Yellow (19%) ore. On the other hand, the production model shows 78% more TRX material.

The second part of the reconciliation work completed by LIM involves ore tonnages and density. LIM concluded that the 1,086,914 m3 of in-situ ore volume extracted from start of operations to the end of November 2012 corresponds to total material railed + ending inventories of 3,091,964 t.

From this LIM calculated an average density of 2.84t/m3, which is considerably less than the average estimated density of about 3.46 t/m3 in ore blocks of the SGS resource model.

14.5.1 Extracted Resources from SGS 2009 Model

The 2009 SGS resource block model for James comprises 20,999 blocks 5x5x5m below a starting topography. Blocks are on a grid with up to 81 columns, 201 rows and 41 benches (from Z=397.5 to Z=602.5) in a local reference system with an origin at X=639800E, Y=6,071,100N (which is the center of the block in the first column and the first row) and a local X along N43.5 plus a local Y along N315.5N.

In addition to its location and fraction below topography, each block is assigned estimated concentrations of up to 13 major and minor elements (Fe2O3 hence Fe, SiO2, Al2O3, LOI, MgO, CaO,K2O,TiO2,Cr2O3, V2O5, MnO hence Mn, P2O5 hence P and Na2O). A density is also assigned to the blocks based on its %Fe grade estimate and using a linear regression of density over iron content from 200+ chip samples corrected for an assumed 10% porosity. Blocks are also categorized into either an indicated (20,725 blocks) or inferred (274 blocks) resource.

A pit surface at the end of November 2012 was made available to SGS in the form of a DXF file (November ME 2012_2000.dxf) on Jan. 11, 2013. At about the same time, SGS also received from LIM the pit surfaces at the end of October 2012, September 2012 and August 2012. Within the James area, the lowest point of the pit at the end of November 2012 is at elevation Z=484.5.

SGS also received the original topography file as well as the last final pit design shell from LIM on Jan. 25, 2013.

These three reference surfaces (topography, November 2012 and final pit design) are shown on the bench maps with blocks of the SGS 2009 model colored according to their estimated %Fe. From these bench maps, it appears that most of the blocks of the 2009 resource model above Z=500 had been mined at the end of November 2012.

SGS extracted from the model all of the blocks or fractions of blocks above the pit surface at the end of November 2012. All together in total, SGS extracted 11,649 blocks with fraction above that pit surface and down to the bench between Z=482.5 and Z=487.5 representing a total volume of 1,191,260 m3.

This shows SGS's own calculation of volume extracted and average grades based on block or block fractions above the pit surface at the end of November 2012. Grades are just weighted by volume, not volume*density. For DRO and PF, SGS makes the distinction between top blocks with a limit at 60% Fe and bottom blocks with a limit at 58% Fe (hence, the bench centered at Z=530 is split between the two types). MAX is the maximum extracted with no special conditions on block values. Note that this is not far (only 9000 m3 difference) from the Grand Total = DRO+PF+YELLOW+TRX.

As a general rule, the volumes extracted from the SGS model that SGS has computed are closer to the production volumes than those calculated by LIM. This is particularly true for PF (SGS calculates 406 km3; i.e. 5% less than the production of 429 km3, but better than the LIM's calculation of 537 km3 or 25% difference) and YELLOW (SGS calculates 63 km3 i.e. 9% more than the production of 58 km3 but better than the LIM's calculation of 72 km3 or 24% difference).

For DRO, SGS calculated a volume of 671 km3; i.e. 2.5% more than the production of 648 km3 and about the same as the 632 km3, or 3.5% less, calculated by LIM.

Globally, the recalculated DRO+PF+YELLOW of 1140 km3 matches almost perfectly the production volume of 1136 km3. However, the recalculated TRX of 42 km3 is almost the same as what LIM calculated (40 km3), which is much less than the production volume of 71km3.

Differences of the average %Fe grade are minimal. For SiO2, SGS recomputed average for PF of 17.9% is closer to the production average of 17.7% than the average calculated by LIM of 16.9%. However the large differences between predicted average SiO2 and production average SiO2 in DRO (8.8% vs. 7.7%) and YELLOW (9.9% or 9.4% vs. 4.7%) persist.

Table 14-6: Resources Extracted until end of November 2012 According to SGS Model

Type	Bench	Volume (m3)	%Fe	%SiO2	%P	%Mn	%Al2O3
DRO1	28-30	62,366	63.24	8.29	0.023	0.30	0.50
DRO1	27	30,904	62.75	8.47	0.019	0.35	0.37
DRO2	27	45,296	61.55	9.31	0.020	0.39	0.40
DRO2	18-26	532,386	61.98	8.90	0.018	0.60	0.35
DRO	18-30	670,952	62.11	8.85	0.018	0.55	0.37
PF1	28-30	56,552	56.01	14.66	0.022	0.61	0.48
PF1	27	41,953	55.78	15.46	0.020	0.60	0.48
PF2	27	27,561	54.11	17.72	0.019	0.66	0.49
PF2	18-26	279,905	54.32	18.99	0.016	0.57	0.50
PF	18-30	405,971	54.69	17.93	0.018	0.59	0.49
YELLOW	18-30	63,130	56.78	9.36	0.097	1.30	2.24
TOTAL	18-30	1,140,052	59.17	12.11	0.022	0.60	0.52
TRX	18-30	42,020	48.13	25.46	0.014	0.39	0.70
GR. TOTAL	18-30	1,182,072	58.78	12.59	0.022	0.60	0.52
MAX	18-30	1,191,260	58.65	12.74	0.022	0.59	0.53

DRO1 = minimum 60%Fe – DRO2 = minimum 58%Fe – PF1 = maximum 60%Fe – PF2 = maximum 58%Fe. Bench 27 is centered at Z=530. Benches 28-30 are above. Benches 18-26 are below.

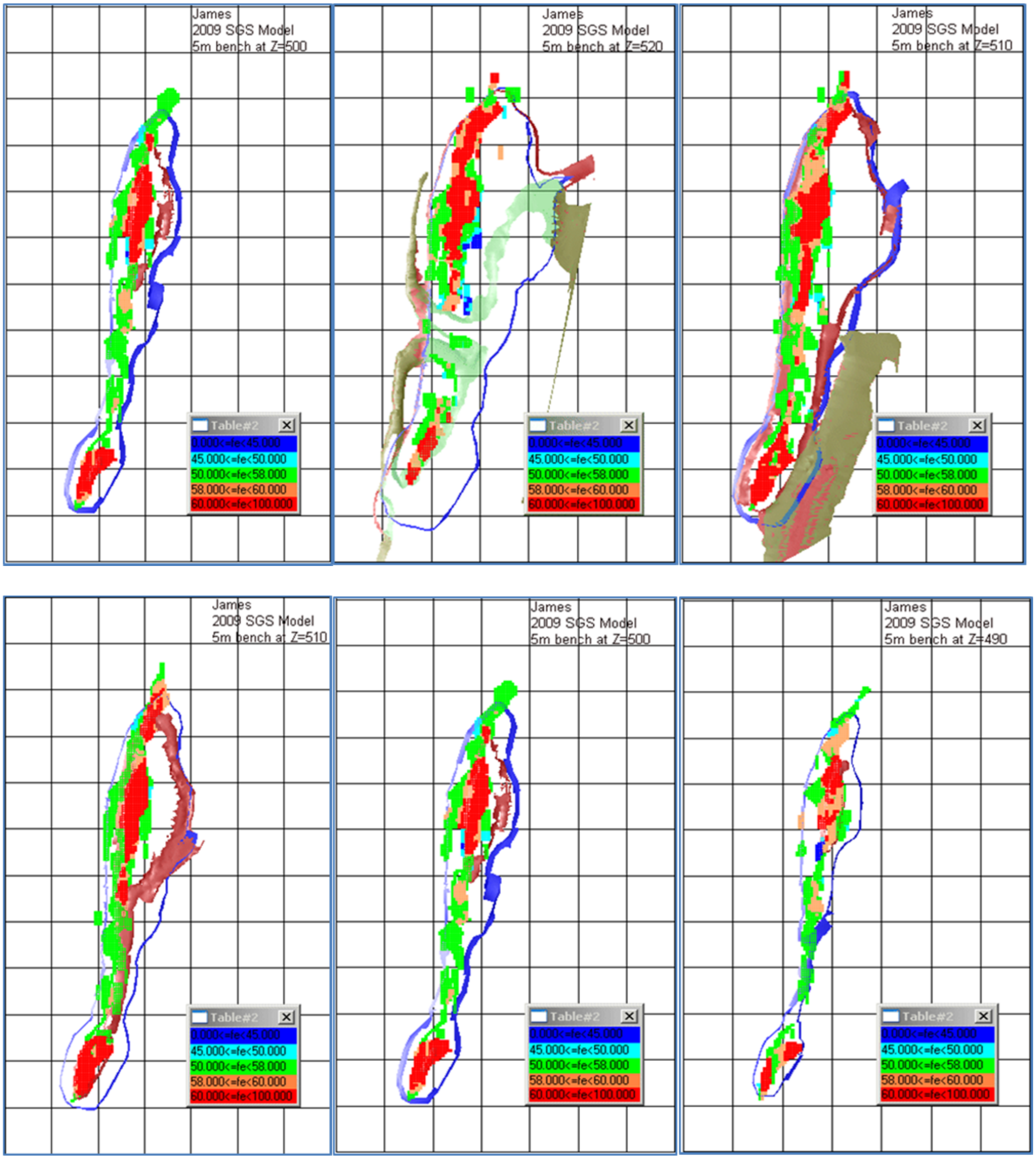


Figure 14-2: Bench Maps with SGS Model Blocks and Pit limits

Blocks are shown in the local reference system i.e. x is along N43.5 and y is along N313.5N. Green is the original topography surface; red is the pit surface at the end of November 2012 and blue is the final pit design.

14.5.2 Extracted Resources from LIM 2012 production model

The objective of the work described in this section is to audit the production model resource numbers proposed by LIM.

The James open pit operation uses 10m benches with pit floor at elevations at Z=530, 520, 510 and so on. The material in the exposed benches is classified into the same DRO (or DSO), PF (or PLANT), YELLOW and TRX types based on so-called grade control (hereafter GC) samples. The exact nature of these samples is not detailed but SGS received on Feb 01, 2013 two files entitled Sample Master 2011_Updated_010213.xls and Sample Master 2012_Updated_010213.xls on Feb 01, 2013, with all of the sample results for years 2011 and 2012 respectively.

In the first file, SGS found 2,319 "Mine" samples with UTM coordinates and in the second file, SGS found 1,051 samples. After removing 66 collocated samples (including 56 duplicates or replicates) in the 2011 dataset, as well as another 314 collocated samples (including 216 duplicates or replicates) in the 2012 dataset, SGS is left with a total of 2,989 grade control samples with UTM coordinates and a complete geochemical analysis including %Fe (derived from %Fe2O3), %Mn (derived from %Mno), %P (derived from %P2O5), %SiO2 and %Al2O3. A few values are missing for %P (16 samples), %SiO2 and %Al2O3 (24 samples). A few negative %Al2O3 values have been converted to zero.

The grade control sample data has been used by LIM personnel to delineate material of the different types in each bench. These "dig lines" have been supplied to SGS as polylines in DXF files for each bench (470EL_NOV2012_2000.DXF to 530EL_NOV2012_2000.DXF). Lines are tagged as DSO, PLANT, YELLOW, TRX but also ROCK (likely indurated material at the very northwestern extremity of top benches with floors at Z=520 and Z=510).

Received dig lines and GC samples are shown on bench maps but only GC samples with coordinates within bench limit elevations are shown. Since SGS has a significant amount of GC samples just above elevation Z=540 but no dig lines for the bench between elevations Z=540 and Z=550 (the original topography is just above Z=540 hence there is not much material in that bench), SGS has applied the dig lines of bench with floor at Z=530 to the truncated bench with floor at Z=540.

As a general rule, the dig lines are consistent with the GC sample data e.g. most GC samples within the red dig line of DSO have a %Fe above 60% (red color). However, it can be noted that, as SGS go down the benches, the bench coverage by GC samples tends to decrease. In the lower benches, these GC samples are concentrated along fences or close to contact between types. There is no GC sample in the bottom bench.

From the dig lines, the general interpretation of the James deposit structure is that of a narrow syncline along a NW-SE strike with a DSO Core surrounded by PF flanks and, finally, a TRX shell.

GC samples can be classified into the various ore types based on the dig lines of the bench where they are located.

As expected, average values are consistent with the definition of ore types (note, however, that the average %Fe of GC samples in TRX, of 49.3% Fe, is close to the upper limit of 50% Fe for that type).

Given the irregular grid of GC samples, straight mean sample data are not necessarily representative of the average grades of the material within the same dig lines. To acquire more representative average grades, SGS constructed another block model with blocks limited by dig lines and with grades interpolated from GC samples in the same ore type. For that short term block model, SGS used blocks 2mx3mx10m with the short 2m side along the NE axis and the longer 3m along the NW strike.

Blocks in a given ore type (from dig lines) have grades interpolated by GC samples in the same type using a simple ID interpolation with a base search ellipsoid 20 x 20 x 10 m tilted by 60º to the NE. SGS needs at least 3 GC samples in 3 different octants for interpolation to proceed (maximum number of samples retained in the ellipsoid is 15 and 2 in each octant). Blocks not interpolated in that first run are interpolated in subsequent runs with enlarged ellipsoids (40 x 40 x 20 m, 80 x 80 x 40 m and 160 x 160 x 80 m) and the same conditions on the minimum number of samples.

Once all blocks within dig lines have been interpolated, SGS extracted all those or fractions of those between the original topography and the pit surface at the end of November 2012. The production model resource numbers are then derived from those extracted blocks.

Extracted resources from the SGS model have been compared to the resources of the SGS production model. Note the differences between average sample values and average block values in the same ore type.

Volume wise, SGS concludes that the SGS 2009 model overestimates the DSO ore volume by 5.1% (vs. a LIM underestimation of 2.5%), while the estimated volume of PF ore is almost right on target 1.7% underestimation (vs. the huge 25% difference from LIM).

As expected, the volumes of the two minor types are more difficult to predict for Yellow ore, SGS concludes that the SGS 2009 model overestimates the volume by 23% (vs. 18% for LIM) while the volume of TRX ore is underestimated by 44% (vs. 50% for LIM).

When DSO+PF+Yellow are lumped together, the volume overestimation of the SGS 2009 model is a mere 3.2% instead of 9.3% estimated by to LIM. If SGS added the TRX ore to that total, SGS's volume difference is less than 1% (0.6%) vs. a 6.1% overestimation according to LIM.

Grade wise, SGS's difference for %Fe is less than 0.6%, except for the TRX ore.

Grade differences are higher for %SiO2 (although all less than 1% SiO2 except in Yellow ore) but not as high as in the LIM reconciliation. As with volume, overall average %Fe and %SiO2 are right on target.

At this stage of the reconciliation work (volume + grades), the SGS 2009 resource model derived from historical exploration and definition holes appears adequate in predicting the volume and average quality of the different ore types which can be extracted. Some improvement could be gained in the prediction of the minor ore types (Yellow and TRX) by:

- using those ore type limits in the domain of the resource model

- given the fairly narrow extension of ore type bands, by using rectangular blocks like 10 x 2.5 x 5 m (with 10m along the NW strike) rather than the cubic 5 x 5 x 5 m.

Table 14-7: Statistics of GC Sample Values Classified according to Ore Type from Dig Lines

Type	# GC samples	%Fe	%Mn	%P	%SiO2	%Al2O3
DRO	1097	62.44	0.66	0.023	7.32	0.21
PLANT	997	55.96	0.72	0.026	16.30	0.46
YELLOW	81	55.15	1.97	0.102	10.09	0.86
TRX	142	49.27	0.60	0.022	26.11	0.36
ROCK	15	55.44	0.86	0.014	17.25	0.18
Outside	657	45.15	0.46	0.026	31.46	0.48
Total	2989	55.62	0.67	0.027	16.64	0.38

Table 14-8: Extracted Resources up to Nov. 2012 based on LIM Dig Lines and GC samples

Type	# Blocks	Volume	%Fe	%Mn	%P	%SiO2	%Al2O3
DRO	13644	638,284	62.21	0.58	0.021	7.96	0.22
PLANT	10150	412,981	55.02	0.65	0.024	17.93	0.45
YELLOW	1719	53,587	57.34	1.53	0.112	6.96	0.81
All above	25513	1,104,852	59.28	0.66	0.026	11.64	0.33
TRX	2368	84,740	49.99	0.83	0.023	24.94	0.43
All above	27881	1,189,592	58.62	0.67	0.026	12.58	0.34

Table 14-9: Ore Resource Comparison (grade + volume) from start until end of Nov. 2012

	Our LIM Production Model			Our SGS Resource Model		
Ore type	Volume (m3)	%Fe	%SiO2	Volume (m3)	%Fe	%SiO2
DRO	638,284	62.21	7.96	670,952	62.11	8.85
PF	412,981	55.02	17.93	405,971	54.69	17.93
Yellow	53,587	57.34	6.96	63,130	56.78	9.36
Total	1,104,852	59.28	11.64	1,140,052	59.17	12.11
TRX	84,740	49.99	24.94	42,020	48.13	25.46
Grand total	1,189,592	58.62	12.58	1,182,072	58.78	12.59

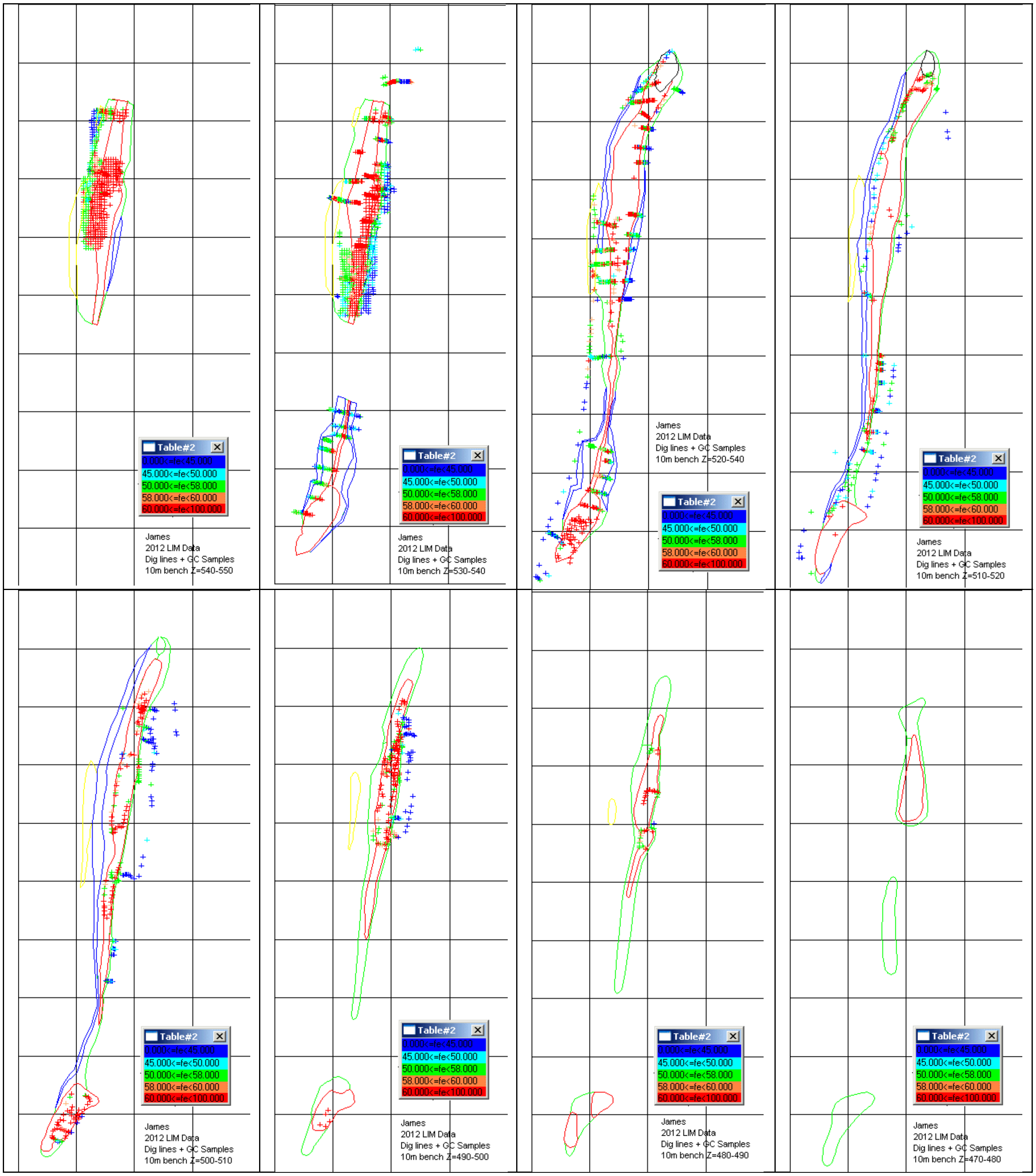


Figure 14-3: Bench Maps with LIM Dig Lines and GC Samples

Dig lines are colored according to type: DSO=red, PLANT=green, YELLOW=yellow, TRX=blue, ROCK=black. GC samples are shown with a + sign, colored according to %Fe

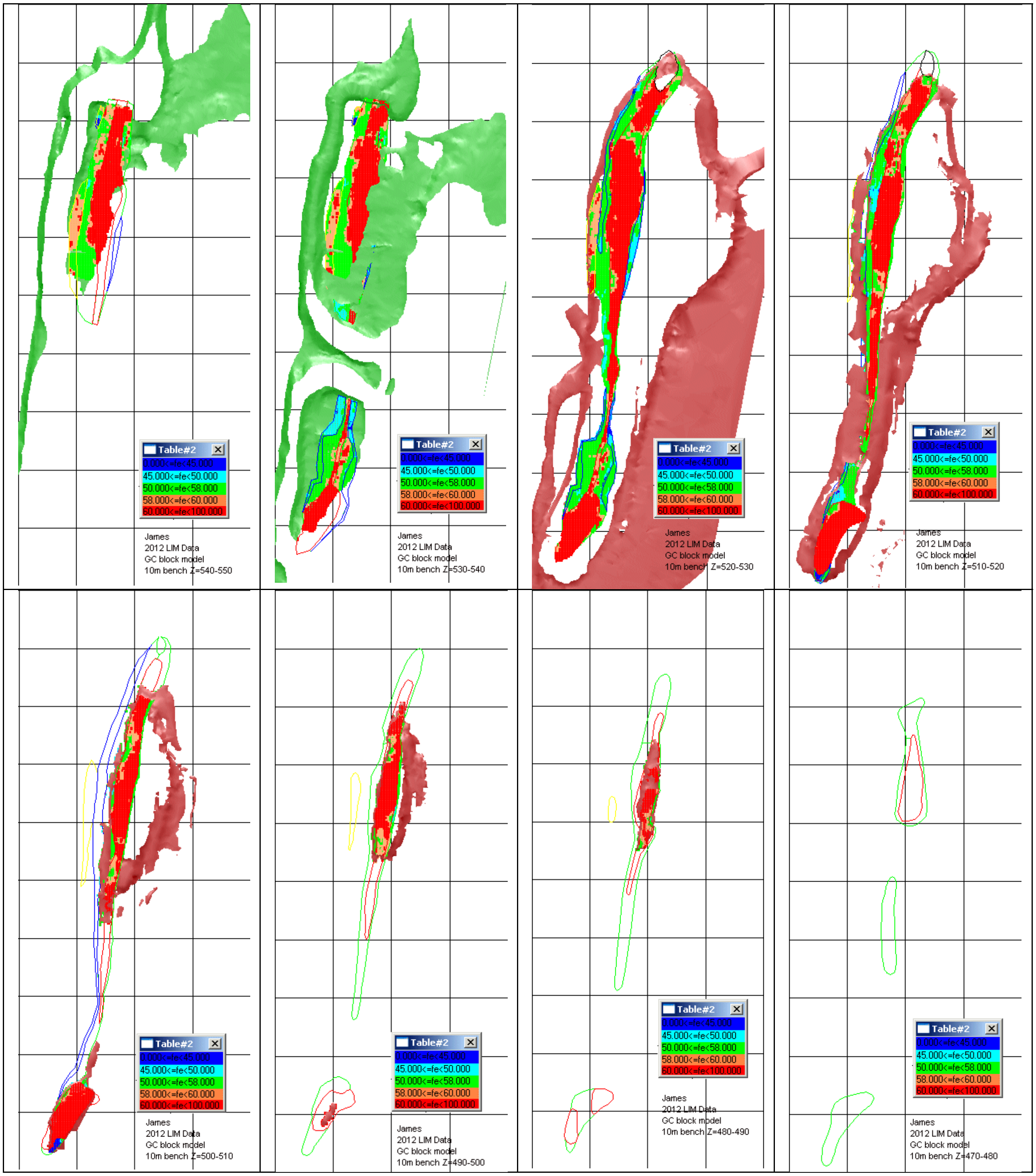


Figure 14-4: Bench Maps with Resource Block Model from GC Samples and Dig Lines

Dig lines are colored according to type: DSO=red, PLANT=green, YELLOW=yellow, TRX=blue, ROCK=black. 2x3m blocks below the original topography (green surface) and above the pit surface at the end of November 2012 (brown surface) are shown with a color according to interpolated %Fe from GC samples in the same type.

14.5.3 Produced Ore Tonnages in 2011-2012 and Resulting Density

According to LIM, total ore extracted from the James pit from inception in early 2011 to the end of November 2012 is 3,091,964 dry tonnes (dt). When compared to an in-situ ore volume of 1,086,914m3, it gives an average bulk dry density of 2.84t/m3 i.e. 18% less than the projected average density of the SGS model of 3.46 t/m3. The in-situ ore volume of 1,086,914m3 originates from the calculated in-situ ore volume of 1,135,654m3 for DRO+PF+Yellow by LIM minus 50,000m3 thought to be overburden.

The total tonnage of ore is made up of 1,263,566 dt extracted in 2011 plus 1,828,398 dt extracted in 2012. The in-situ volume of DRO+PF+Yellow ore extracted in 2011-2012 has been audited in the previous section and found to be adequate (SGS found 1,104,852m3 vs. 1,135,654m3). Hence, the low re-calculated average bulk dry density of 2.84 t/m3 depends more on the reported tonnages for ore extracted in 2011-2012.

Extracted, processed and transported ore and product tonnage numbers can be found in two spreadsheet files made available to SGS on January 24, 2013 i.e. Reconciliation DECEMBER_2011_Final_BM_Densities.xls for the year 2011 and Month-to-Date Table – November.xls for 2012.xls. The following table provides a summary of these production numbers, to the best of SGS understanding. Some comments on the tonnage figures are as follows:

- 2012 production appears to have started in April of that year. SGS did not find production numbers for the first 3 months of 2012.
- ore from the pit can be either stockpiled, directly railed or processed. Two types of processing were conducted: (1) a wet plant (in 2011 and early 2012) (2) a screening plant. Both plants generate a sized product described as either, lump, coarse sinter, sinter and fines. In the two cases, there is some reject, i.e. a difference between the tonnage of feed and the tonnage of product. This difference is minimal for the screening plant (less than 5% in the form of oversize), but much more important (close to 50%) for the wet plant. The railed (and ultimately shipped) material is either DRO or products from processing.
- all tonnage numbers are expressed in dry tonnes which is the actual tonnage reduced by a % of moisture, which keeps around 5%.
- for both periods (2011 and 2012), the total tonnage railed matches the total tonnage shipped plus changes in the port stockpile i.e. in 2011: 561 kdt railed vs. 175 kdt DRO shipped + 211 kdt products shipped + 178 kdt stockpiled; and, in 2012: 1,493 kdt railed vs. 819 kdt DRO shipped + 741kdt products shipped - 67 kdt from stockpile.
- similarly, the total tonnage of product matches the tonnage of product railed plus changes in the stockpiles of product i.e. in 2011: 219 kdt product railed vs. 239 kdt of product made – 13 kdt of product stockpiled; and, in 2012: 801 kdt product railed vs. 792 kdt of product made + 13kdt of product stockpiled.
- in both periods, SGS can back-calculate the tonnage of ore from the mine from the DRO railed, the feed of plant and variations of mine stockpiles. For 2011, SGS has 342 kdt DRO railed + 579 kdt plant feed + 265 kdt stockpiled for a total of 1,186 kdt; and, for 2012, SGS has 692 kdt DRO railed + 955 kdt plant feed + 182 kdt stockpiled for a total of 1,829 kdt.
- SGS re-calculated 1,829 kdt ore tonnage for 2012 matches the 1,828 kdt reported by LIM for the same period. However, SGS recalculated 1,186 kdt for 2011 is a bit low compared to the reported 1,264 kdt by LIM. Nevertheless, the calculated average bulk dry density based

on SGS re-calculated tonnage and volume i.e. (1829+1186)/(1105-50) = 2.86 t/m3 remains very low.

- about 2/3 of SGS recalculated ore tonnage of 1,829 + 1,186 = 3,015kdt ends up in material railed (2,054 kdt) and shipped or stockpiled at the port (994 kdt + 952 kdt + 111 kdt = 2,057kdt), the tonnage of which is difficult to question. The difference of 961 kdt is made up of the plant rejects (1,534 kdt – 1,031 kdt =503kdt) and the ore stockpiled at the mine (447 kdt). It is conceivable that the tonnage of ore stockpiled at the mine is given with some uncertainty, but even a 10% under-estimation would not substantially change the recalculated average dry bulk density of 2.86 t/m3.

Table 14-10: Summary of Production Tonnages from James Pit in 2011-2012

	Unit	01-Jan-11	13-Dec-11	Between	31-Mar-	30-Nov-	Differenc
Stockpile	kdmt feed	0	265	265	265	447	182
Waste	kdmt feed	0	0	0	0	31	31
Stockpile	kdmt	0	0	0	0	4	4
Stockpile	kdmt	0	13	13	13	0	-13
Plant feed	kdmt feed			579			283
Plant	kdmt			239			151
Screen	kdmt feed			0			672
Screen	kdmt			0			641
Total feed	kdmt feed			579			955
Total	kdmt			239			792
DRO	kdmt			342			692
Prod	kdmt			219			801
Total	kdmt			**561**			**1493**
Calculated				1186			1829
Reported				1264			1828
Stockpile	kdmt	0	178	178	178	111	-67
DRO	kdmt feed			175			819
Product	kdmt			211			741
Total	kdmt			**564**			**1493**

All values in thousands of dry metric tonnes (kdmt)

14.5.4 Discussion

Following completion of its Audit, SGS concludes that the volume and grades of in-situ ore planned to be mined in James pit up to the end of November 2012 are well defined (1,105 km3 @ 59.4% Fe and 11.6% SiO2) and reasonably well predicted by the current SGS resource block model (1,140 km3 @ 59.2%Fe and 12.1%SiO2). SGS also accepts the produced ore tonnage of about 3,050 kdt for the same period. As indicated before, this leads to a calculated average dry bulk density of about 2.85 t/m3, which is far below the predicted average dry bulk density of the SGS model of about 3.45t/m3.

This raises the question: should this new density be used to predict the ore tonnage left to be mined in the James pit?

The SGS density is derived from a regression model over %Fe grade applied to a set of 229 density measurements by pycnometer on dry pulp from RC chips. The regression equation is D = 0.0258*%Fe + 2.338. The predicted density is further reduced by 10% to allow for ore porosity. With that formula, ore with a grade of 60%Fe is assigned a density of about 3.9t/m3, reduced to 3.5 t/m3, while ore with a grade of 50%Fe is assigned a density of about 3.6t/m3, reduced to 3.3 t/m3, hence, the average predicted density of about 3.45 t/m3.

New in-hole Gravilog bulk density measurements by Abitibi Geophysics (2013) with densities over 5m in 4 holes over James South suggest that, indeed, the bulk density is increasing with iron grade but likely not as fast as predicted from the previous relationship. Nevertheless, the new data suggests bulk densities of about 3.1 t/m3 or more for material above 50%Fe.

Another factor to consider might be the difference between planned ore production (from dig lines) and actual volume of material excavated as ore. This is what was previously called "modifying factor" between resources (in-situ material) and reserves (what goes to the plant or is directly shipped).

One of those modifying factors is mine recovery (or loss) that affects metal and tonnage, the other one being dilution, which affects grade and tonnage. Typically, a mining recovery can be in the order of 90%-95% if ore selection in the pit (what goes where) is rather conservative for fear of dilution. That means that the actual excavated ore volume is only 90% of the planned volume. In that case, the re-calculated average bulk density is about 10% more than what can be derived from the planned volume, which in SGS's case is about 3.15 t/m3 instead of 2.85 t/m3.

However, some discussion with LIM operating staff indicates that a 90% mine recovery is very unlikely. Mining of James material is fairly selective with the use of a backhoe to recover specific ore material close to dig lines drawn on bench maps from available grade control samples. Moreover, the transition from one type of material to the next (say from DRO to PF) across the dig line is gradational and, hence, the effect of potential dilution is minimal.

SGS therefore concludes that the average density should be reduced from the calculated 3.45 t/m3 down to 2.85 t/m3. This can be achieved by simply replacing the 10% correction for dilution in the density formula by 25%.

Therefore, SGS's recommends that in calculating remaining resources in the James pit from the SGS model:

- a correction to predicted volumes and average grades should not be applied
- predicted densities in blocks should be reduced by another 15% to account for porosity greater than originally expected.

SGS also recommends continuing the reconciliation process on a regular basis (at least every quarter) with the above suggested corrections to predicted resources from the block model in order to verify that they continue to be valid.

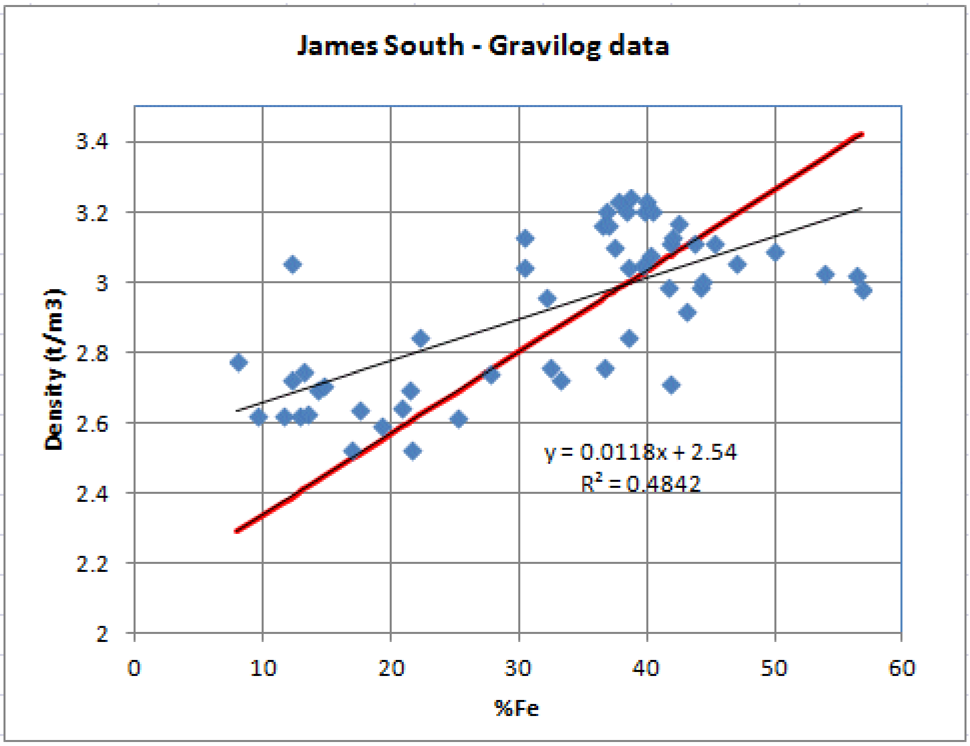


Figure 14-5: Gravilog densities as a function of %Fe in 4 holes of James South

In black, the new linear regression line from Gravilog data. In red, the old regression line from 2009 pycnometer data with 10% porosity.

14.6 Redmond deposits Mineral Resource update

The mineral resource estimate of the Redmond deposits (Redmond 2B and Redmond 5) were completed by Maxime Dupéré P.Geo., Geologist for SGS Geostat stated in the Technical report dated December 18, 2009. The technical information and resources statement are also summarised in the silver yards technical report dated date April 15, 2011. The mineral resources stated below remain current as of the date of this report. No relevant additional exploration or drilling has a material effect to the Redmond 2B deposit.

The Redmond 2B database used contains a total of 1,365 m of RC drilling in 125 RC drill holes for a total of 444 assays. Also, 10 trenches for a total of 663 m of trenching and a total of 205 assays were included in the database. The Redmond 5 database used contains a total of 2,335 m of RC drilling in 68 RC drill holes for a total of 681 assays. Also, 8 trenches for a total of 461 m of trenching and a total of 100 assays were included in the database. The database cut-off date is November 9th, 2009.

The mineral resources presented herein are reported in accordance with the National Instrument 43-101 and have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve. These resources were reported using the IOC Classification of Ore described in the Table 14-1.

The current resource estimate for the Redmond 2B deposit is of 849,000 tonnes including LNB, NB and HiSiO2 ore types as described in Table 14-11 in the Measured and Indicated categories at a grade of 59.86% Fe and 30,000 tonnes in the inferred category at a grade of 57.21% Fe. The resources presented in this section are all inside the property boundary. The block model was cut by the topography. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Redmond resources are dated as of March 31st 2012

The current resource estimate for the Redmond 5 deposit is of 2.1 million tonnes including LNB, NB and HiSiO2 ore types as described in Table 14-12 in the measured and indicated categories at a grade of 54.95% Fe and 78,000 tonnes in the inferred category at a grade of 52.34% Fe. The mineral resources presented in this section are all inside the property boundary. The block model was cut by the topography. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Redmond resources are dated as of March 31st 2012.

Table 14-11: Updated Mineral Resources of the Redmond 2B Deposits

Area	Ore Type	Classification	Tonnage	Fe (%)	P (%)	Mn (%)	SiO2 (%)	Al2O3 (%)
Redmond 2B	Fe Ore	Measured (M)	-	-	-	-	-	-
		Indicated(I)	849,000	59.86	0.120	0.37	5.05	2.09
		Total M+I	**849,000**	**59.86**	**0.120**	**0.37**	**5.05**	**2.09**
		Inferred	30,000	57.27	0.133	0.64	5.87	4.09

Table 14-12: Updated Mineral Resources of the Redmond 5 Deposits

Area	Ore Type	Classification	Tonnage	SG	Fe(%)	P(%)	MN(%)	SiO2(%)	Al2O3 (%)
Redmond 5	Fe Ore	Measured (M)	-	-	-	-	-	-	-
		Indicated(I)	2,084,000	3.38	54.95	0.048	1.17	10.97	0.81
		Total M+I	**2,084,000**	**3.38**	**54.95**	**0.048**	**1.17**	**10.97**	**0.81**
		Inferred	78,000	3.32	52.34	0.068	1.95	10.84	0.96

Redmond 5 restated Dated April 12th, 2013

Mineral resources which are not mineral reserves do not have demonstrated economic viability

There are no known factors or issues related to environment, permitting, legal, mineral title, taxation, marketing, socio-economic or political settings that could materially affect the mineral resource estimate.

The presence of 4 additional 2011 RC drill holes to the outside perimeter of the Redmond 2b deposits were checked and validated and the opinion of SGS is that this additional information does not affect materially the current James mineral resources at this stage.

14.7 Knob Lake No.1 Mineral Resource Estimation

The mineral resource estimate of Knob Lake No.1 was completed by Maxime Dupéré P.Geo., Geologist for SGS Geostat stated in the Silver Yards Technical Report dated October 24, 2012. The mineral resources stated below remain current as of the date of this report. No relevant additional exploration or drilling has a material effect to the Knob Lake No.1 deposit.

SGS Geostat conducted the current mineral resource estimate for the Knob Lake No.1 iron deposit using historical RC drill holes and trenches and recent RC drill holes and trench data compiled from the 2008 to 2011 exploration programs conducted on Knob Lake No.1. The database used contains a total of 2,095 m of RC drilling in 47 RC drill holes and 1 diamond drill hole for a total of 1008 assays. Also, 877.1 m of trenching and a total of 196 assays are included in the database. The database cut-off date is February 6th, 2012.

Compositing was done on the entire RC drill holes and trenches. A minimum length of 1.5 m was set. No capping was necessary.

At total of 671 composites were generated. The modeled 3D wireframe of the mineralized envelope was used to constrain the composites Table 14-13 summarises the statistics of the composite data. Figure 14-6 shows the histogram of the composites.

The Composites were built from assay intervals along sub-horizontal trenches and vertical RC holes. Spacing between holes and trenches varies along the 600 m strike length but at the best, we have trenches and RC holes on cross-sections at 30m distance along the N314.5° strike and the spacing between holes on the section is the same 30m. In practice most sections just have a single hole (owing to the narrow width of the mineralized zone) plus a trench at the top. Only composites with a center within the same mineralized envelope as blocks are kept (some trench composites are outside blocks because of the yes/no block elimination around the topography surface) and they need have a minimum 1.5m documented length. All together SGS has 4227 composites with at least a %Fe and a %SiO2 grade within the DSO envelope.

14.7.1 Distribution of Composite Grades

Data to be populated in blocks around composites are the %Fe, %SiO2, %Al2O3, %Mn and %P grades. Statistics of composite grades for those elements are on Table 14-13. Histograms are on Figure 14-6. Some correlation plots appear on Figure 14-7.

As expected the distribution of the %Fe of composites is negatively skewed (tail of low values) while the distribution of the %SiO2 is almost its mirror image (positively skewed with a tail of high values). This can be explained by the high negative correlation of %Fe and %SiO2 (Figure 14-8). Distribution of alumina and manganese and phosphorous are heavily skewed with a long tail of high values. All other correlations between variables are weak (best with R around 0.25 are between %Mn and %P (negative), %Fe and %Mn (negative).

Table 14-13: Statistics of Composite Data Used in the Interpolation of KL1 Resource Blocks

Statistics	*Fe*	*P*	*Mn*	*SiO2*	*Al2O3*
Mean	50.56	0.07	1.41	17.23	0.52
Standard Error	0.32	0.01	0.13	0.55	0.03
Median	52.00	0.04	0.15	11.87	0.43
Standard Deviation	8.21	0.28	3.23	14.17	0.56
Sample Variance	67.45	0.08	10.44	200.78	0.32
Kurtosis	-0.25	314.40	17.97	-0.84	17.68
Skewness	-0.62	17.13	3.83	0.66	2.79
Range	49.69	5.76	26.50	66.96	5.58
Minimum	12.81	0.00	0.00	0.50	0.00
Maximum	62.50	5.76	26.50	67.46	5.58
Count	670	669	667	670	382

14.7.2 Variograms of Composite Grades

The spatial continuity of the grades of composites is assessed through experimental correlograms computed along specific directions. A correlogram looks at the decrease of the correlation between samples as the distance between samples is increasing. It is presented like a variogram with a sill of 1 by graphing the function 1- correlogram (Figure 14-8).

Correlograms have been computed along the following directions:

- vertical holes and horizontal trenches at the same time i.e.an average of all directions with a short 3m lag to get the nugget effect and average range (in black on Figure 14-8)
- vertical holes only with the same short 3m lag (in light green on Figure 14-8)
- horizontal trenches only with the same 3m lag (in blue on Figure 14-8)

- average N134.4 horizontal strike with a lag of 35m corresponding to the spacing between sections (in red on Figure 14-8)

The correlograms of %Fe show (1) a moderate nugget effect of 20% (2) ranges between 30 and 250m (3) the same long range of about 250m in strike (4) a very similar continuity for vertical drill hole samples and horizontal trench samples.

As it could be expected from the strong negative correlation between %Fe and %SiO2 in composites, the correlograms of %SiO2 are basically the same as those of %Fe (Figure 14-8).

The correlograms of all three minor elements (%Al2O3, %Mn and %P) show a similar relative nugget effect of 0.20%. For %Al2O3, the anisotropy pattern looks the same as with %Fe and %SiO2 (best in strike) but ranges are shorter (60m for short and long axis). For %Mn and %P, the range along strike is longer (65m) than the range along dip (15m). All experimental variograms are modelled with the sum of a nugget effect and a spherical function.

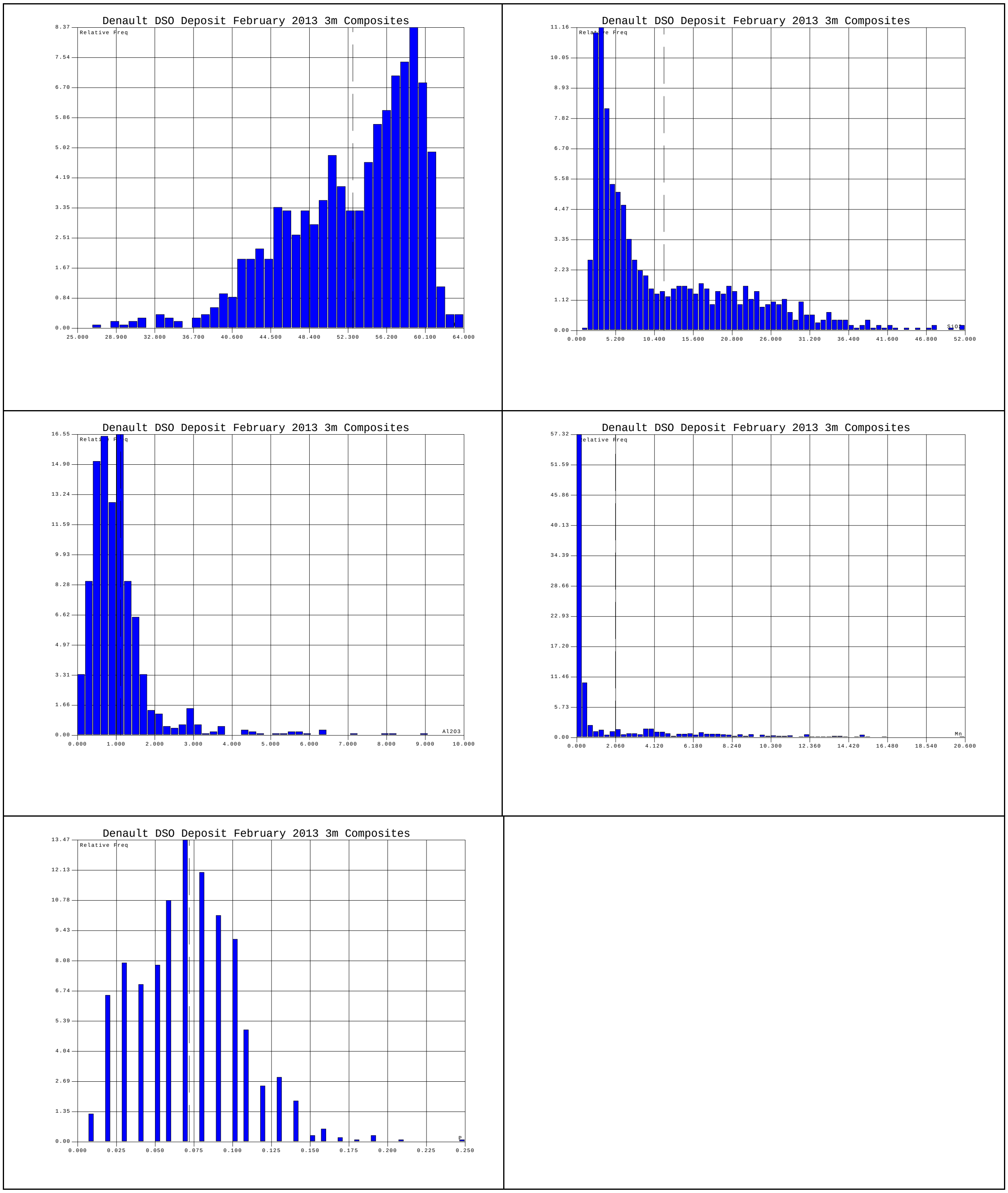


Figure 14-6: Histograms of KL1 Composite Data

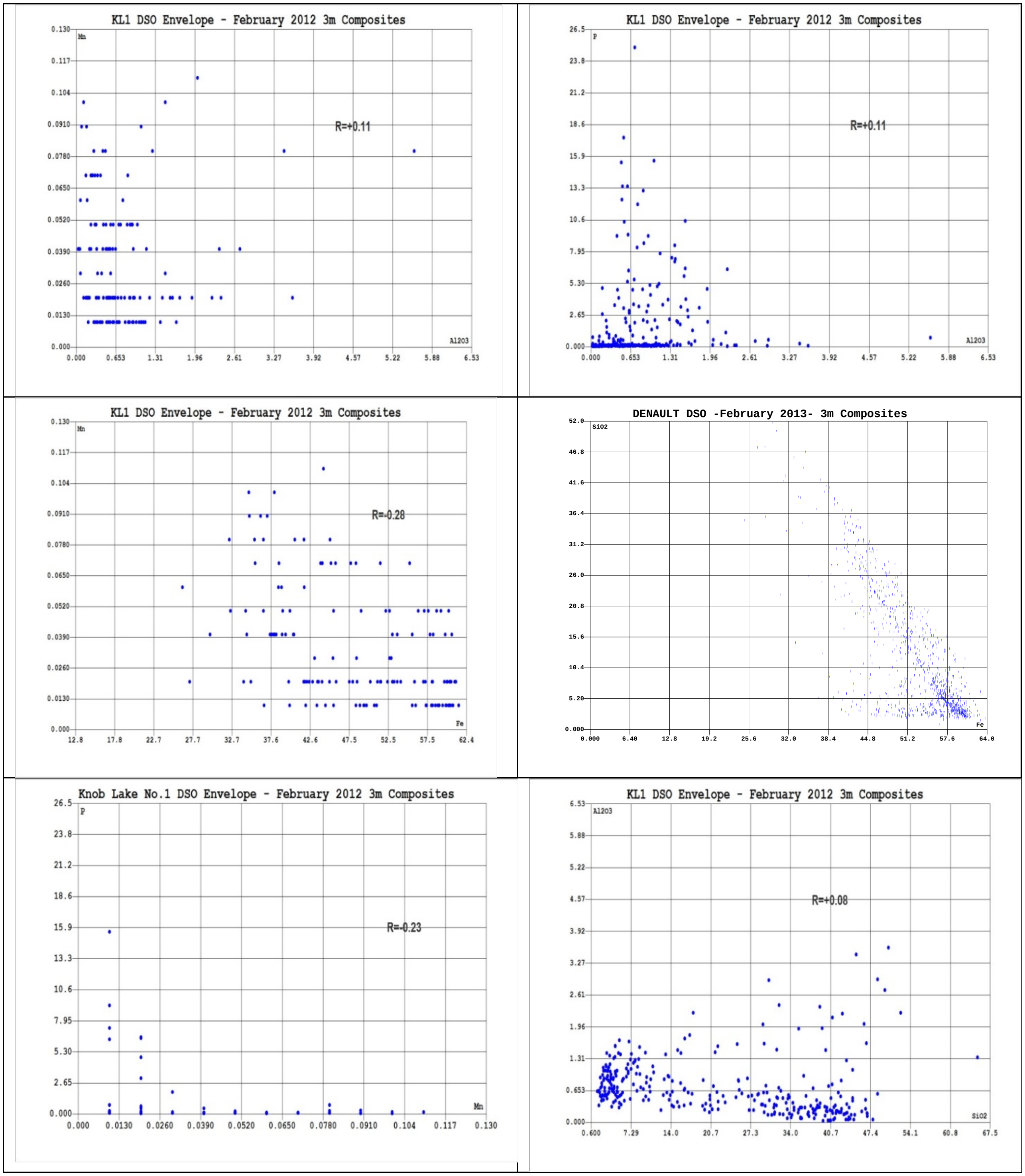


Figure 14-7: Some Correlation Plots of DSO Composite Grade Data (2012)

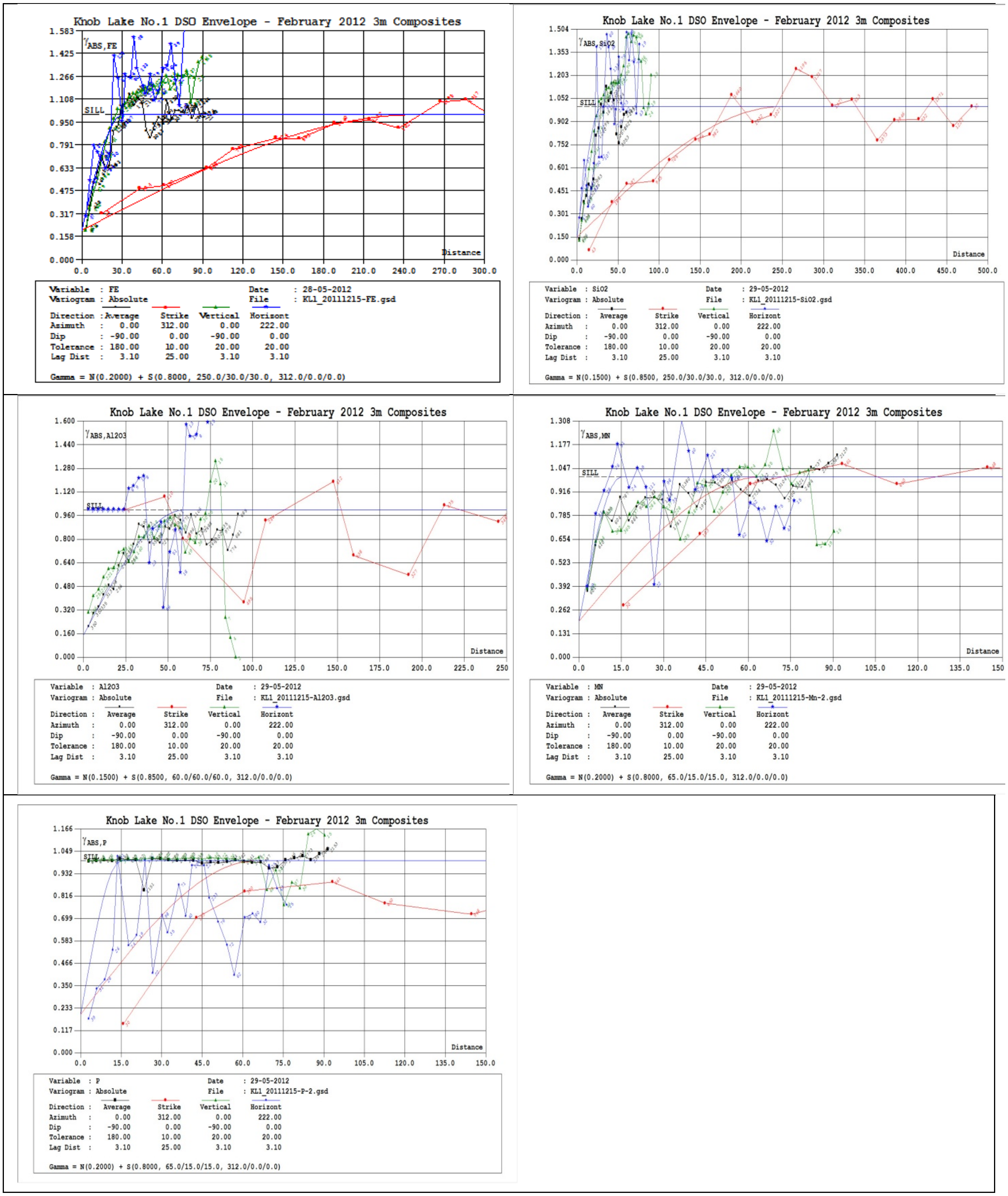


Figure 14-8: Variograms of DSO Composite Grade Data

14.7.3 Block Grades Interpolation

The %Fe, %SiO2, %Al2O3, %Mn and %P grades of each of the 29,793 blocks 5x5x5m within the DSO envelope are interpolated from the grades of nearby composites through the ordinary kriging method which fully uses the characteristics of variograms of each variable.

As usual, the interpolation is done in successive runs with minimum search conditions relaxed from one run to the next until all blocks are interpolated.

The basic search ellipsoid (to collect the nearby composites around a block to interpolate) is oriented according to the anisotropy of variogram i.e. its long radius is along the horizontal N144 strike, its intermediate radius is along the average dip of 60° to the N54 and its short radius is along the perpendicular to the average strike+dip i.e. a dip of 30° to the N234. For all variables the long radius is set to either 40m (%Al2O3) or 50m (all others) in order to catch samples on at least two adjacent sections. In the case of %Fe and %SiO2, the intermediate radius is the same 50m and the short radius is 25m. In the case of %Al2O3, the intermediate radius is 40m and the short radius is 20m. In the case of %Mn, the intermediate radius is 35m and the short radius is 25m. In the case of %P, the intermediate radius is 30m and the short radius is 20m. Those dimensions are simply doubled in the second interpolation run.

The maximum number of composites kept in the search ellipsoid is 30 with a maximum of 3 composites from the same hole or trench. The minimum number of composites required in order to the interpolation to proceed is 7 (i.e. in a minimum of 3 different holes or trenches). That minimum is simply lifted in the third run in order to interpolate the very few un-interpolated blocks at that stage. Those conditions are set to insure that a block grade is truly interpolated from samples in several holes and trenches (on different sides of the block) and not extrapolated from a few samples in the same drill hole or trench.

Statistics of block grade estimates from the different runs are on Table 14-13. As a general rule, the variability of estimates (difference max.-min., %CV) decreases from first run to second run. A large majority of blocks is interpolated in the first run while just a few blocks are interpolated in the third and last run.

Figure 14-9 and Figure 14-9 represent typical sections of the KL1 deposit showing the geological interpretations and resource block models:

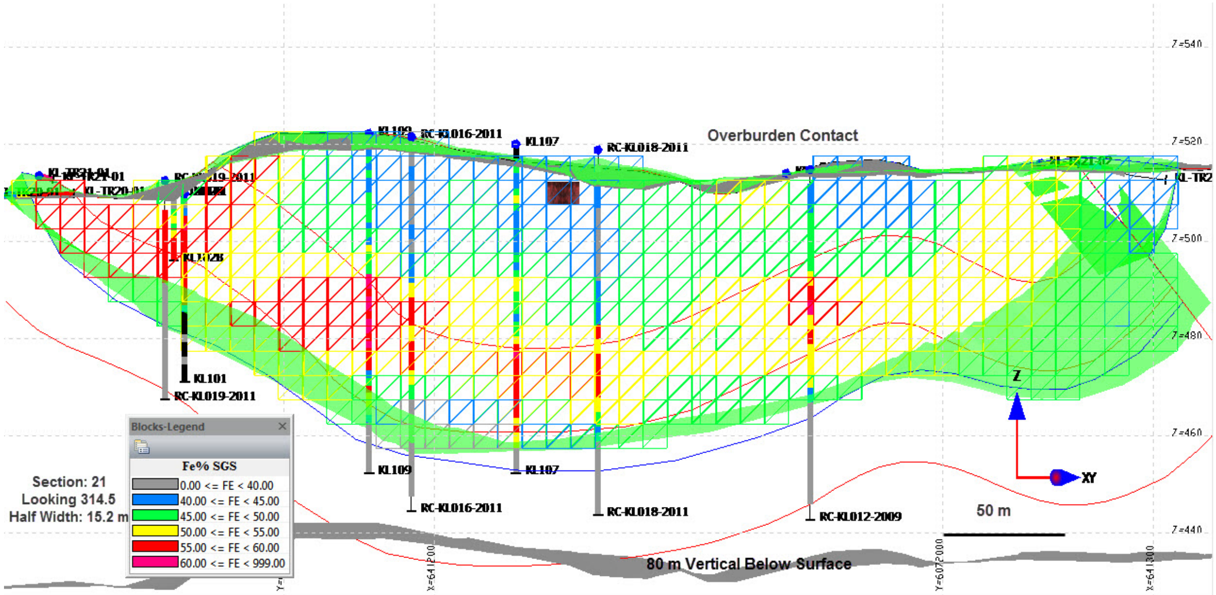


Figure 14-9: Knob Lake 1 Section 21 – Geological Interpretation

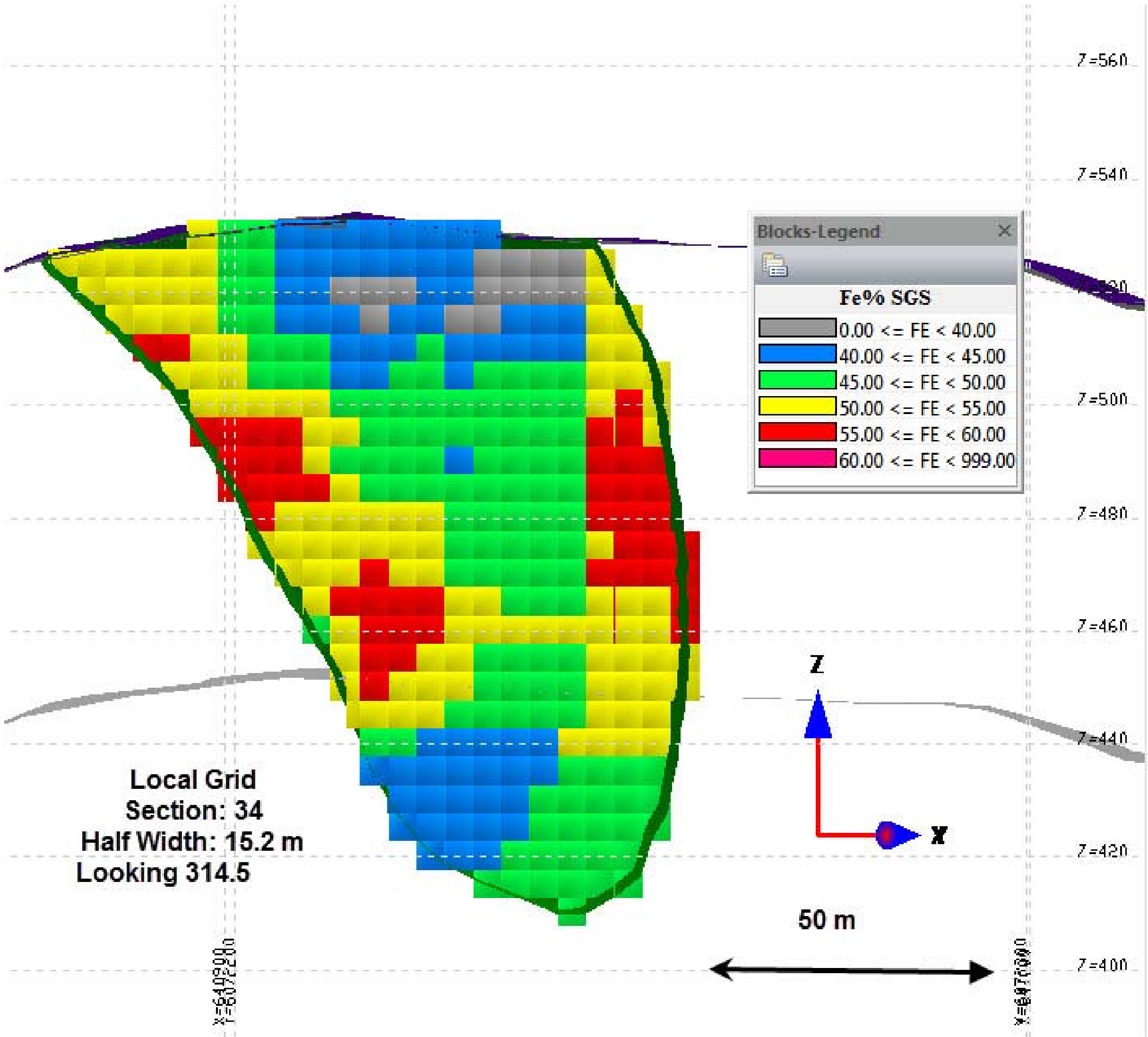


Figure 14-10: Knob Lake 1 Section 34 – Geological Interpretation

14.7.4 Block Grade Validation

Block grade validation was done revolving around the idea that grade estimates of blocks close to samples should reflect the grades of those samples (which is not necessarily the case when variograms show a high nugget effect). The sections and benches were checked with blocks and composites, using the same color scale for grade and making sure that they visually match. SGS considers the validation as adequate and current.

14.7.5 Resources Classification

The estimated resources were classified in accordance with the specifications of the NI 43-101 Policy, namely in measured, indicated, and inferred resources.

SGS used the kriging variance (standard krigging error) as a factor of classification. The kriging variance is a statistical method of describing the quality of the estimation on each block and ranged from 0 to 1.1.This could also be considered as semi qualitative. The kriging variance on the Fe grade was retained. Kriging variance of each block was shown bench by bench and a manual selection by contouring was done in order to construct two solids of Measured and Indicated category.

Blocks having a kriging variance from 0 to 0.8 were taken into account for the measured category solid construction. Blocks having a kriging variance from 0.8 to 1.0 were taken into account for the indicated category solid construction. Blocks having a kriging variance from 1.0 and up were taken into account for the indicated category selection. The drilling grid of 30m and the presence of trenches on most of some cross sections helped acknowledge the kriging variance and classification boundary as a preferred tool for classification. A second step was done on the classification contour to apply a smoothing in order to avoid the spotted dog effect.

14.7.6 Mineral Resources Estimation Conclusion

The current resource estimates for the Knob Lake No.1 deposit are of 5.7 million tonnes including the LNB, NB, HiSiO2, LMN and HMN Ore types (Table 14-14) in the Measured and Indicated categories at a grade of 54.2% Fe and 870,000 tonnes in the inferred category at a grade of 52% Fe. The resources presented in this section are all inside the Property boundary. The block model was cut by the topography. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Knob Lake No.1 resources are dated as of March 31st 2012.

The block model was cut by the topography and to a maximum depth of 80 m. The block percentage had to be at least 50%inside the mineralised solid in order to be considered in the resource estimation.

The Knob Lake No.1 deposit remains open to the northwest and southeast. The results of the resource estimates for the Knob Lake No.1 deposit are shown in Table 14-14: Knob Lake 1 – Resource Estimates. The Mineral resources were classified using the following parameters:

There are no known factors or issues related to environment, permitting, legal, mineral title, taxation, marketing, socio-economic or political settings that could materially affect the mineral resource estimate.

Table 14-14: Knob Lake 1 – Resource Estimates

Area	Ore Type	Classification	Tonnage	Fe (%)	P (%)	Mn (%)	SiO2 (%)	Al2O3 (%)
Knob Lake No.1	Fe Ore	Measured (M)	2,836,000	55.01	0.07	1.00	10.22	0.48
		Indicated(I)	2,266,000	54.33	0.06	1.08	11.19	0.46
		Total M+I	**5,102,000**	**54.71**	**0.07**	**1.03**	**10.65**	**0.47**
		Inferred	655,000	51.76	0.09	1.22	13.54	0.45
Knob Lake No.1	Mn Ore	Measured (M)	377,000	50.56	0.09	5.60	8.41	0.68
		Indicated(I)	214,000	49.57	0.08	4.86	9.58	0.79
		Total M+I	**591,000**	**50.20**	**0.08**	**5.34**	**8.84**	**0.72**
		Inferred	138,000	49.12	0.05	4.82	9.85	0.40

Updated June 06 2012

14.8 Denault Mineral Resource Estimation

This section reports the results of the mineral resource estimate for the Denault mineral deposit based on analytical data sampled from RC drilling by LIM effective December 8th, 2011.

The mineral resources presented herein are reported in accordance with the National Instrument43-101 and have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve. These resources were reported using the IOC Classification of Ore described in the Table 14-1.

LIM published an initial NI 43-101 compliant mineral resource estimate (MRE) for Denault in March 2011 of 4.46 million tonnes in the Measured category at an average grade of 55.1% iron; 1.93 million tonnes in the Indicated category at an average grade of 54.2% iron and 369,000 tonnes in the Inferred category at an average grade of 53.9% iron. The MRE stated above was disclosed by LIM from internal resource estimation work done by LIM senior geologists.

On December 17, 2012, LIM mandated SGS to review the Denault MRE. SGS Geostat conducted the current MRE using historical and recent RC drill holes data compiled from the 2010 to December 2011 exploration programs conducted on Denault. The database used contains a total of 5,142.68 m of RC drilling in 109 RC drill holes for a total of 1,753 assays. The database cut-off date is December 8th, 2011. The Data Verification section provides a summary of the database.

The current resource estimates for the Denault deposit are now of 5.86 million tonnes including LNB, NB, HiSiO2, LMN and HMN ore types as described in Table 14-1 in the Measured category at a grade of 54.2% Fe, 934,000 tonnes in the indicated category at a grade of 52.61% Fe. The resources presented in this section are all inside the property boundary. The block model was cut by the topography. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Denault resources are dated as of February 12th, 2013.

The data used for the estimation of current mineral resources was initially compiled and validated by LIM using MapInfo Professional software in combination with Encom Discover and Microsoft Office Access. Data was then imported into Gemcom GEMS Software Version 6.2.4.1., which was used to perform the final validation of the Knob Lake No.1 database, to construct solids, to build composites, to run geostatistical analyses, to build the block model, to run grades interpolation and to estimate mineral resources.

No significant inconsistencies were observed. LIM entered the historical data was entered from IOC's data bank listing print outs of drill holes, trenching and surface analyses. All of the data entering was done by LIM. SGS did a Limited validation of that data.

14.8.1 Geological Interpretation and Modeling

This information was provided by LIM. The geological interpretation of the Denault deposit was entirely constructed by LIM according to available data of the area.

The Denault geological and ore model interpretation was completed considering a cut-off grade of 45% Fe; however the resources reported are based on a cut-off grade of 50% Fe for iron ore and 50% Fe+Mn for manganiferous iron ore. The IOCC ore type parameters of Non-Bessemer (NB), lean non-Bessemer (LNB), high silica (HiSiO2), high manganiferous (HMN) and low manganiferous (LMN) were considered for the resource estimation. Historically, Mn zones were modeled separately according to the analyses results and geological interpretations of the IOCC geologists from RC chips. LIM geologists relied instead on interpolations of analysis results when estimating the model blocks. This could involve a larger tonnage lower grade. This method was taken considering that LIM has only a total volume that is made from a geological interpretation and 45% Fe.

SGS and the second author's experience with Mn Ore are in relation to the field and resource estimation work with LIM.

The Denault geological modeling was done by LIM using 25 vertical cross sections with a direction of 43° spaced approximately 30 m apart (100 feet). The cross section configuration is the same as the one used by IOCC. SGS used the information obtained during recent exploration programs. The solids were created from the sectional wireframes combining geological and mineralization interpretation.

The study area of Denault included in this report covers an extension of 425 m long by a maximum of 125 m wide and a maximum of 100m vertical. Further infill drilling will be required to better define mineralization in some areas within the deposit subject of this report.

14.8.2 Blocks Modeling

The DSO resources are estimated through the construction of a resource block model with small blocks on a regular grid filling an interpreted mineralized envelope and with grades interpolated from measured grades of composites drill hole or trench samples around the blocks and within the same envelope. Blocks are then categorized according to average proximity to samples.

Blocks are 5x5x5m on a grid within a rotated local coordinate system with a long axis along the N312. Maximum number of columns (along the N43°) is 200 and maximum number of rows (along the N313° is 360. Vertically, the maximum number of 5m benches is 40. The total of blocks is 20,855. The block centers are within the DSO envelope interpreted by LIM geologists. The following Block Model parameters were used. The coordinates of the origin of the block Model and all blocks are given as block centres.

Table 14-15: Parameters of Block Model

Number of Blocks	
Columns	200
Rows	360
Levels	40
Origin (UTM NAD 27)	
X	635849.8766
Y	6078203.533
Z	547.5
*Orientation(°)	-47
Column Size (m)	5
Rows Size (m)	5
Levels Size (m)	-5

*(-) = Counter clockwise Orientation

14.8.3 Composites Used for Estimation

Block model grade interpolation is conducted on composited assay data. A composite length of 3 m has been selected to reflect the 3 m RC sampling intervals used on Denault deposit. Compositing was done on the entire RC drill holes and trenches. A minimum length of 1.5 m was set. No capping was necessary.

At total of 808 composites were generated. The modeled 3D wireframe of the mineralized envelope was used to constrain the composites summarises the statistics of the composite data. Figure 14-11: Histograms of Denault Composite Data shows the histogram of the composites.

The Composites were built from assay intervals along vertical RC holes. Spacing between holes and trenches varies along the 425 m strike length but at the best, we have trenches and RC holes on cross-sections at 30m distance along the N313° strike and the spacing between holes on the section is the same 30m. Only composites with a center within the same mineralized envelope as blocks are kept. All together we have 1047 composites with at least a %Fe and a %SiO2 grade within the DSO envelope.

14.8.4 Distribution of Composite Grades

Data to be populated in blocks around composites are the %Fe, %SiO2, %Al2O3, %Mn and %P grades. Statistics of composite grades for those elements are on Figure 14-12. Histograms are on Figure 14-12. Some correlation plots appear on Figure 14-13.

As expected the distribution of the %Fe of composites is negatively skewed (tail of low values) while the distribution of the %SiO2 is almost its mirror image (positively skewed with a tail of high values). This can be explained by the high negative correlation (0.7) of %Fe and %SiO_2 (Figure 14-7). Additionally, correlation between %Fe + %Mn vs SiO_2 is strong (0.9). Distribution of alumina and manganese and phosphorous are moderately to heavily skewed with a long tail of high values. All other correlations between variables are weak around 0.3.

Table 14-16: Statistics of Composite Data Used in the Interpolation of Denault Resource Blocks

Statistics	*Fe (%)*	*P (%)*	*Mn (%)*	*SIO2 (%)*	*Al2O3 (%)*
Mean	52.41	0.07	2.13	12.02	1.14
Standard Error	0.23	0.00	0.14	0.36	0.04
Median	53.82	0.07	0.20	7.64	0.92
Mode	58.75	0.07	0.10	2.83	1.10
Standard Deviation	6.51	0.03	3.84	10.18	1.08
Sample Variance	42.35	0.00	14.73	103.60	1.18
Kurtosis	0.49	1.15	5.23	0.35	37.53
Skewness	-0.82	0.57	2.31	1.08	4.87
Range	39.00	0.24	20.59	49.47	14.06
Minimum	25.00	0.01	0.01	0.89	0.06
Maximum	64.00	0.25	20.60	50.36	14.12
Count	808.00	808.00	805.00	808.00	789.00

14.8.5 Variograms of Composite Grades

The spatial continuity of the grades of composites is assessed through experimental correlograms computed along specific directions. A correlogram looks at the decrease of the correlation between samples as the distance between samples is increasing. It is presented like a variogram with a sill of 1 by graphing the function 1- correlogram (Figure 14-13).

Correlograms have been computed along the following directions:

- vertical holes and horizontal trenches at the same time i.e.an average of all directions with a short 3m (3.1m) lag to get the nugget effect and average range
- vertical holes only with the same short 3m (3.1m) lag
- horizontal trenches only with the same 3m (3.1m) lag
- average N313 horizontal strike with a lag of 30m corresponding to the spacing between sections (in red on Figure 13.4)

The correlograms of %Fe show:

- an estimated moderate nugget effect of 30%;
- ranges between 50 and 90m;
- a long range of about 90m in strike, a medium range of about 70m along dip direction; and
- a small range of about 50m across thickness.

As it could be expected from the strong negative correlation between %Fe and %SiO2 in composites, the correlograms of %SiO2 are basically the same as those of %Fe (Figure 14-13). However, the nugget effect for SiO_2 was lowered down to 20%. It may be due to the presence of historical data. Investigations are recommended.

The correlograms of all three minor elements (%Al2O3, %Mn and %P) show a similar relative nugget effect of 20%. For %Al2O3, the anisotropy pattern looks the same as with %Fe and %SiO2 (best in strike) but ranges are shorter (60m for short and long axis) and an added component. For %P, the range along strike is longer (220m) than the range along dip (115m). All experimental variograms are modelled with the sum of a nugget effect and a spherical function.

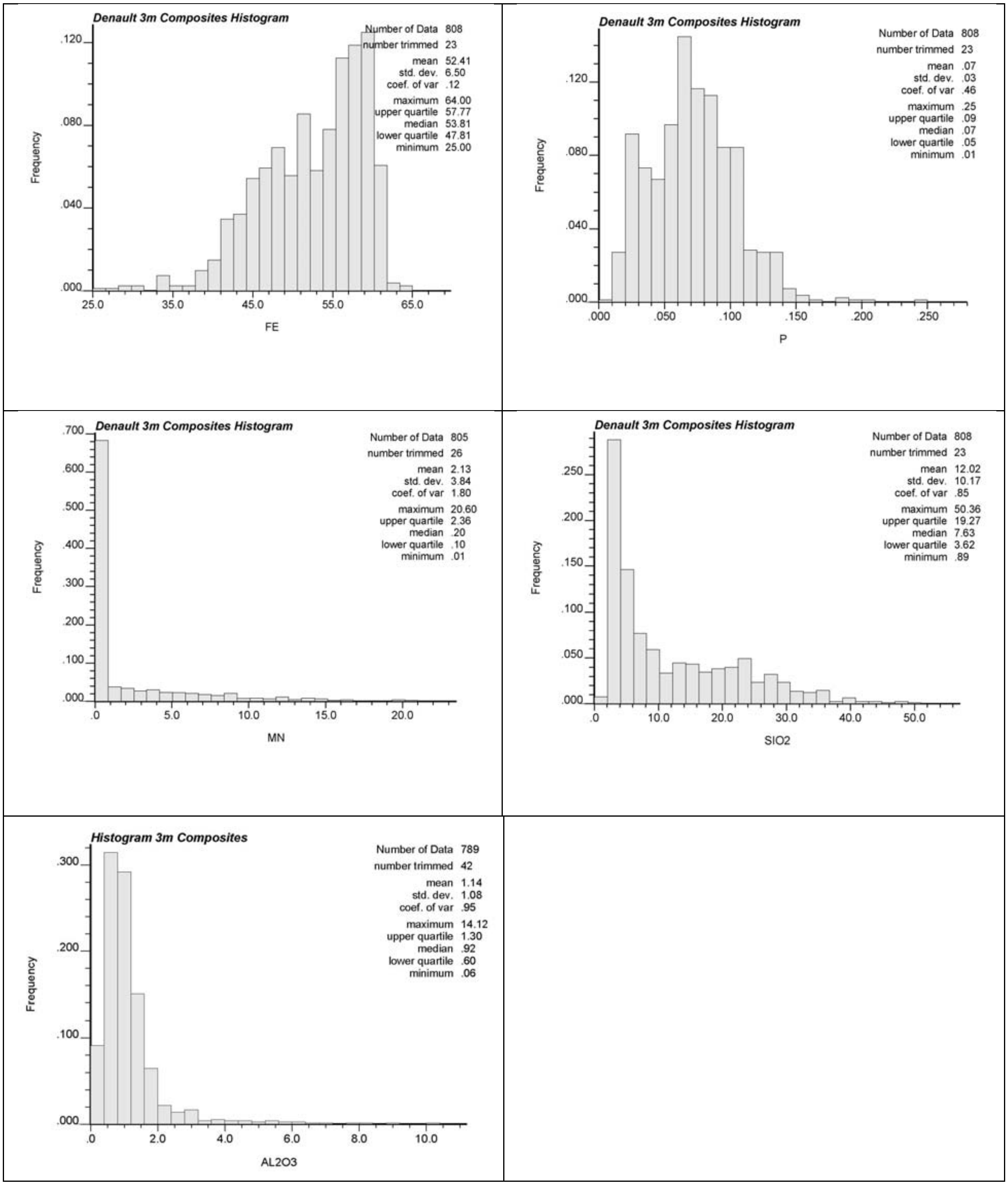


Figure 14-11: Histograms of Denault Composite Data

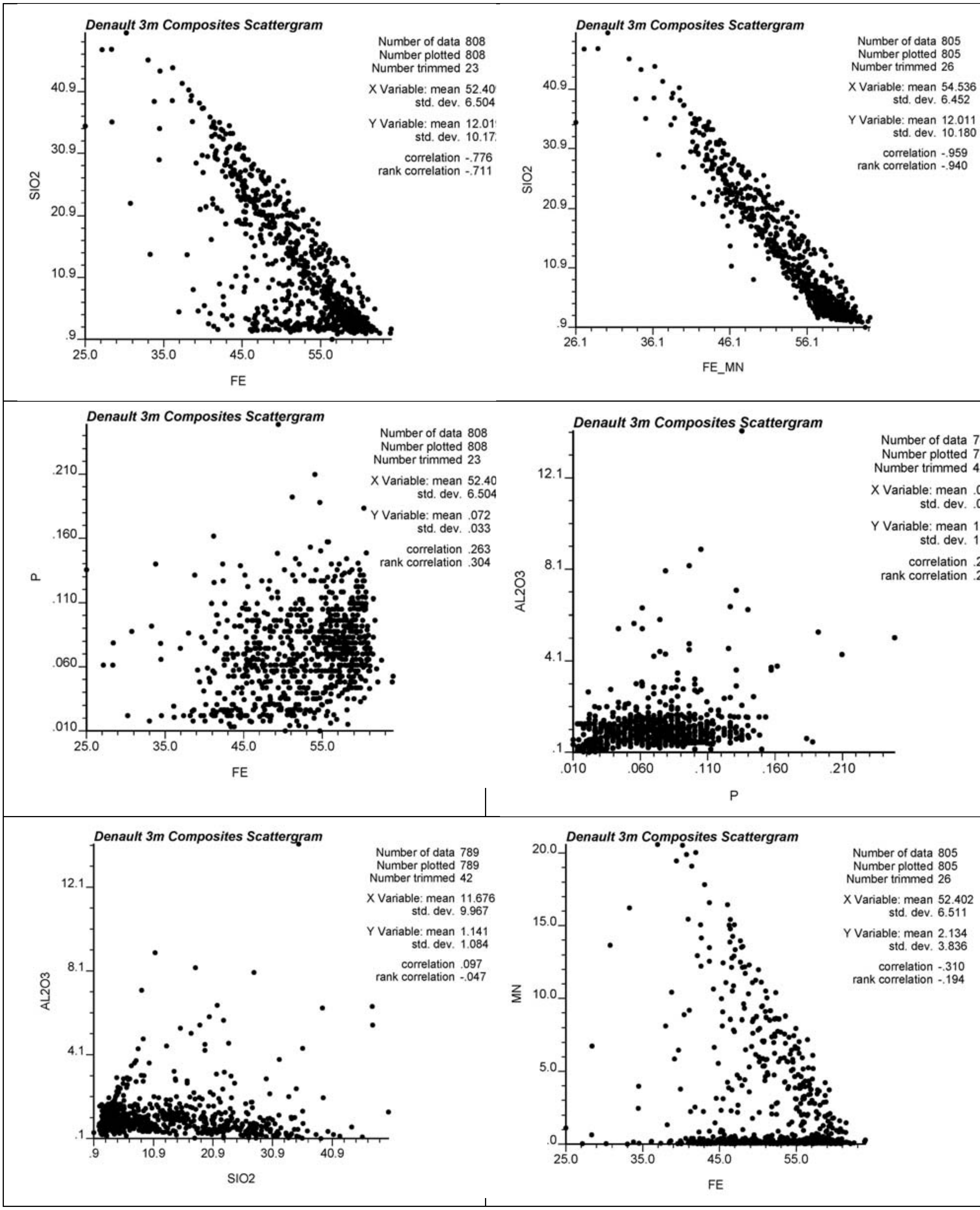


Figure 14-12: Some Correlation Plots of DSO Composite Grade Data (2011)

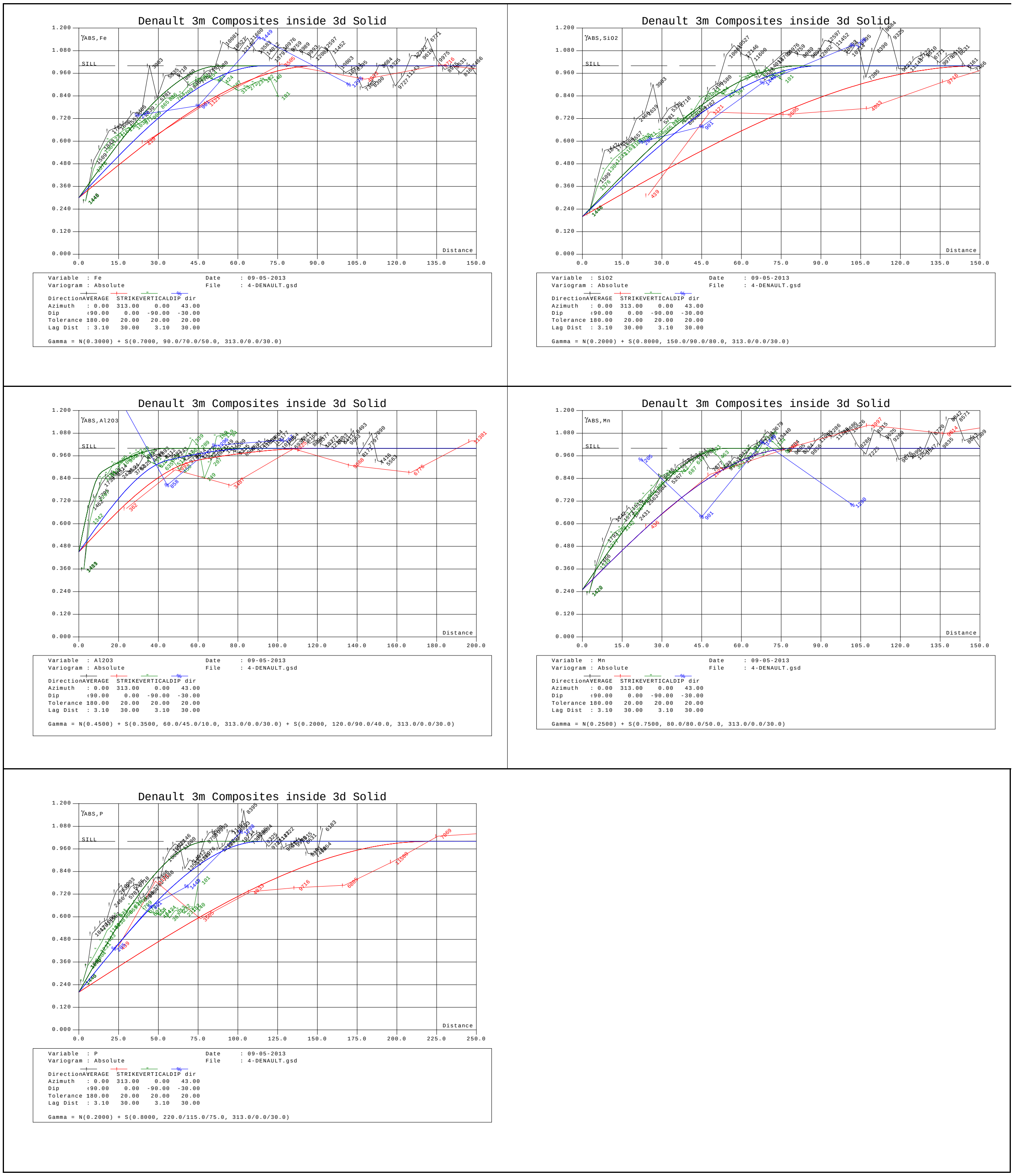


Figure 14-13: Variograms of DSO Composite Grade Data

14.8.6 Block Grades Interpolation

The %Fe, %SiO2, %Al2O3, %Mn and %P grades of each of the 20,855 blocks 5x5x5m within the DSO 3d Solid (envelope) are interpolated from the grades of nearby composites through the ordinary kriging method which fully uses the characteristics of variograms of each variable.

The interpolation was done in 2 successive runs with minimum search conditions relaxed from one run to the next until all blocks are interpolated.

The basic search ellipsoid (to collect the nearby composites around a block to interpolate) is oriented according to the anisotropy of variogram i.e. its long radius is along the horizontal N313° strike, its intermediate radius is along the average dip of 30º to the N43 and its short radius is along the perpendicular to the average strike+dip i.e. a dip of 60º to the N223. For all variables the long radius is set to either, 100m (%P), 40m (%Al2O3) or 50m (all others) in order to catch samples on at least two adjacent sections. In the case of %Fe, %SiO2 and Mn, the intermediate radius is the same 50m and the short radius is 25m. In the case of %Al2O3, the intermediate radius is 40m and the short radius is 25m. In the case of %P, the intermediate radius is 50m and the short radius is 40m. Those dimensions are simply doubled in the second interpolation run. Please see Table 14-17.

Table 14-17: Denault Block Model Search Ellipse Summary

Analyte	Search Ellipse	Azimuth (°)	Dip (°)	Spin (°)	Major Axis (m)	Medium Axis (m)	Manor Axis (m)	Max. Nb of samples	Min. Nb of Samples	Max. Nb of samples per hole
Fe, Mn, SiO2	Pass 1	313	0	30	50	50	25	30	7	3
	Pass 2	313	0	30	100	100	50	30	7	3
Al2O3	Pass 1	313	0	30	50	40	25	30	7	3
	Pass 2	313	0	30	100	80	25	30	7	3
P	Pass 1	313	0	30	100	50	40	30	7	3
	Pass 2	313	0	30	200	100	80	30	7	3

The maximum number of composites kept in the search ellipsoid is 30 with a maximum of 3 composites from the same hole or trench. The minimum number of composites required in order to the interpolation to proceed is 7 (i.e. in a minimum of 3 different holes or trenches). Those conditions are set to insure that a block grade is truly interpolated from samples in several holes and trenches (on different sides of the block) and not extrapolated from a few samples in the same drill hole or trench. Please see Table 14-17. Statistics of block grade estimates from the different runs are on Table 14-18

.

Table 14-18: Denault Block Statistics from Estimation

statistics	*FE*	*P*	*MN*	*SIO2*	*AL2O3*
Mean	52.45	0.07	2.01	12.25	1.06
Standard Error	0.03	0.00	0.02	0.05	0.00
Median	52.83	0.08	0.52	10.45	0.93
Mode	52.08	0.08	0.10	3.37	0.70
Standard Deviation	3.93	0.02	2.67	7.84	0.60
Sample Variance	15.48	0.00	7.13	61.51	0.35
Kurtosis	-0.47	-0.59	2.14	-0.18	13.95
Skewness	-0.38	-0.41	1.64	0.81	3.11
Range	23.58	0.12	14.84	40.09	6.08
Minimum	37.44	0.02	0.05	2.24	0.17
Maximum	61.02	0.14	14.89	42.33	6.25
Count	20,855	20,855	20,855	20,855	20,855

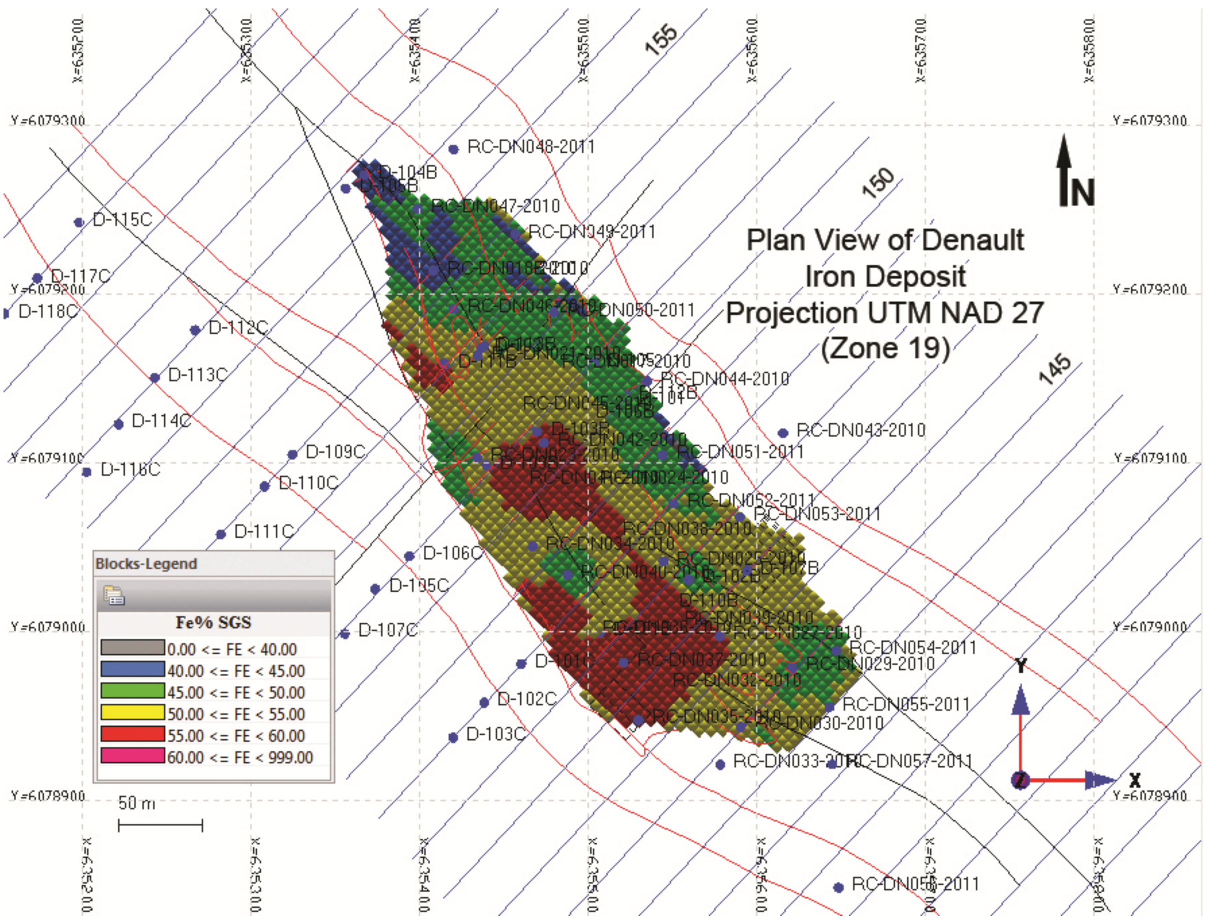


Figure 14-14: Denault Plan View of Block Model

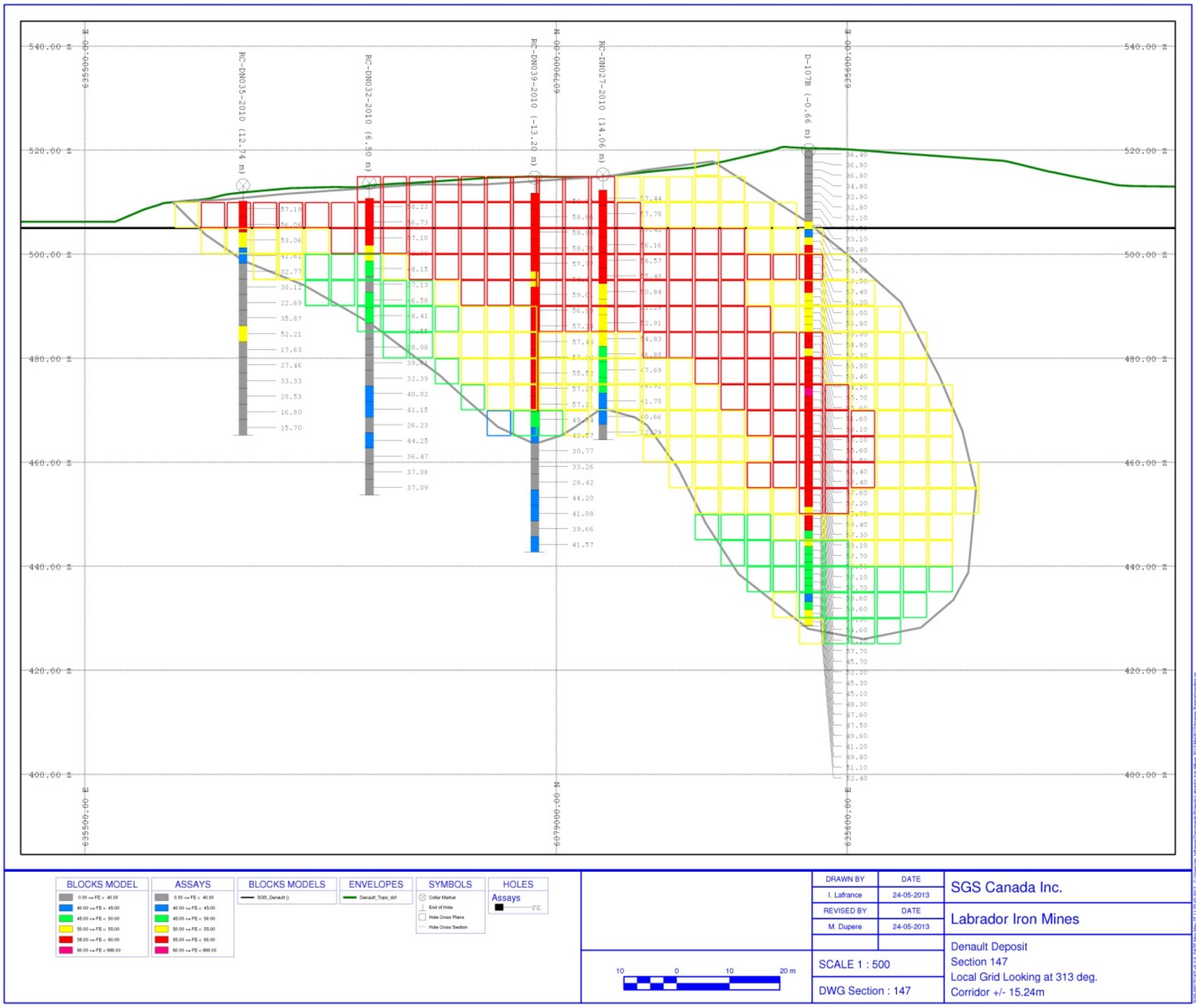


Figure 14-15: Denault Section 147

As a general rule, the variability of estimates (difference max.-min., %CV) decreases from first pass to second pass. A large majority of blocks is interpolated in the first pass while just a few blocks are interpolated in the second and last pass. Statistics of block grade estimates from the different runs are on Table 14-19

Table 14-19: Interpolated Blocks Pass Number Summary

ZONE	Pass 1		Pass 2		Total	
	Blocks	Percent	Blocks	Percent	Blocks	Percent
Fe	19401	93.0%	1454	7.0%	20855	100%
P	20811	99.8%	44	0.2%	20855	100%
Mn	19401	93.0%	1454	7.0%	20855	100%
SiO2	19401	93.0%	1454	7.0%	20855	100%
Al2O3	18053	86.6%	2802	13.4%	20855	100%

14.8.7 Block Grade Validation

Block grade validation was done revolving around the idea that grade estimates of blocks close to samples should reflect the grades of those samples (which is not necessarily the case when variograms show a high nugget effect). The sections and benches were checked with blocks and composites, using the same color scale for grade and making sure that they visually match. SGS considers the validation as adequate and current.

14.8.8 Resources Classification

The estimated resources were classified in accordance with the specifications of the NI 43-101 Policy, namely in measured, indicated, and inferred resources.

Classification was done by a process of automatic classification that selects around each composite a minimum number of composites nearby, from a minimum number of holes inside a research ellipsoid of a given orientation and size. For the Measured category, a first phase of research was carried out with a 50 m by 50 m 25 m ellipsoid (direction, dip and thickness) with a minimum of 7 composites in at least 4 different holes. All blocks within the research ellipse are then categorized as measured to a maximum of 50 % of its maximum radius. The classification of indicated resources step uses the same parameters with a larger research ellipse (twice the size) and a fill to a maximum of 45% of the ellipse radius. The classification of inferred resources corresponds to the remaining part of the non-classified blocks during the first two stages of classification.

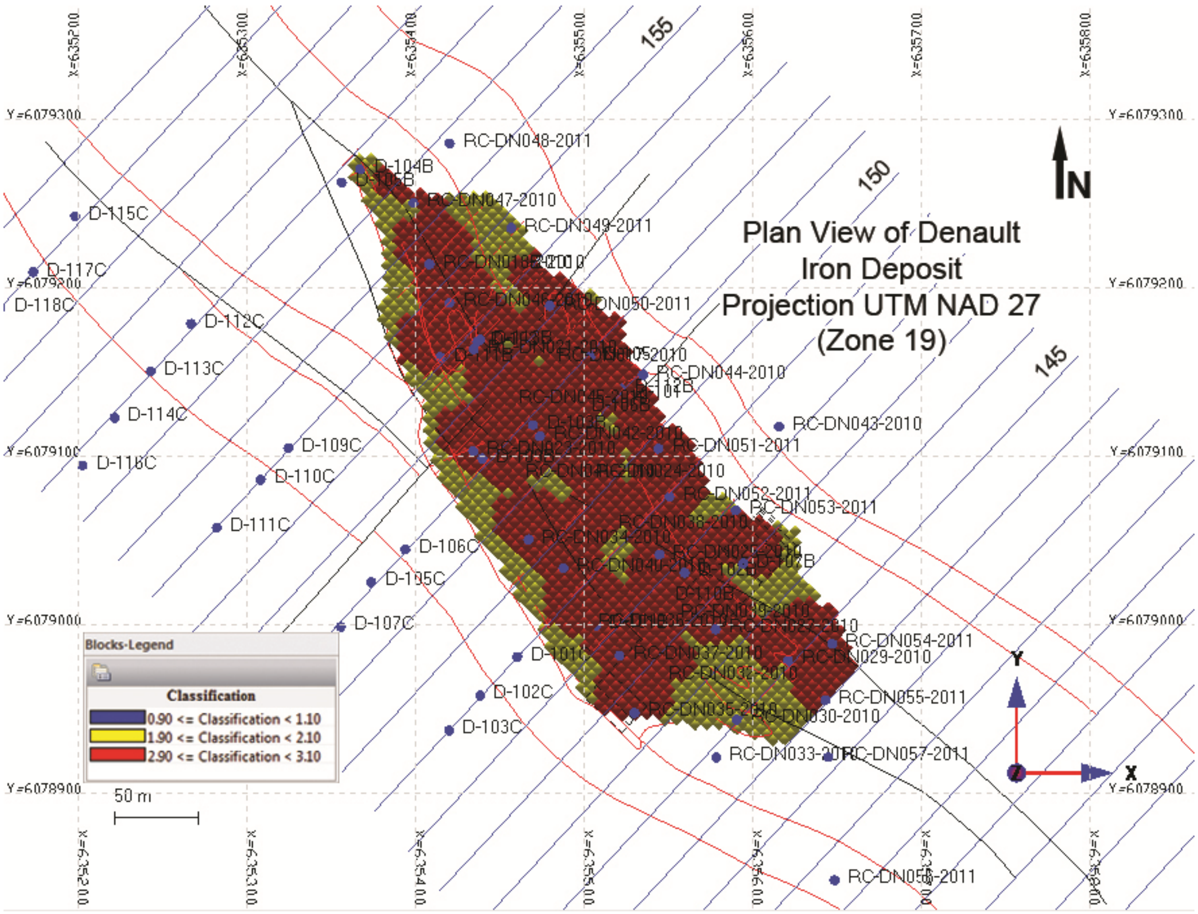


Figure 14-16: Denault Plan View of Block Model

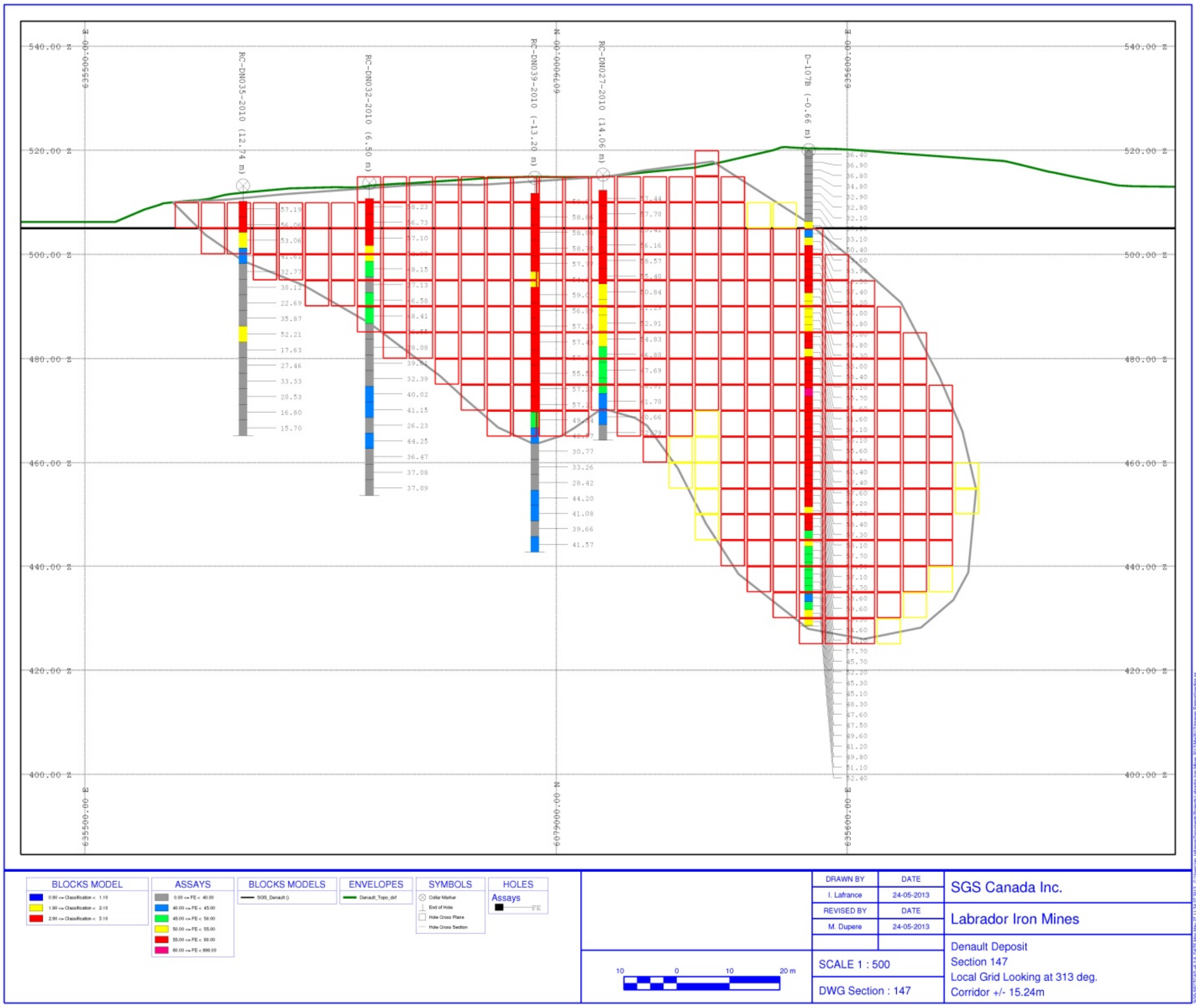


Figure 14-17: Denault Section 147

14.8.9 Mineral Resources Estimation Conclusion

The Denault current resource estimates (MRE) are of 6.8 million tonnes including the LNB, NB, HiSiO2, LMN and HMN Ore types (Table 14-1) in the Measured and Indicated categories at a grade of 53.97% Fe. The resources presented in this section are all inside the Property boundary. The block model was cut by the topography. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Denault MRE is dated as of February 12th, 2013.

There is a possibility of added resources to the northwest extension of the deposit. The results of the Denault MRE are shown in Table 14-20. A comparison from previous estimates done by LIM on Denault is present in Table 14-21. There are no known factors or issues related to environment, permitting, legal, mineral title, taxation, marketing, socio-economic or political settings that could materially affect the mineral resource estimate.

Table 14-20: Denault – Resource Estimates

Area	Ore Type	Classification	Tonnage	Fe(%)	P(%)	Mn(%)	SiO2 (%)	Al2O3 (%)
Denault	Fe Ore	Measured (M)	4,417,000	54.89	0.075	0.84	9.78	1.11
		Indicated(I)	572,000	53.16	0.077	0.86	11.96	0.95
		Total M+I	**4,989,000**	**54.69**	**0.075**	**0.84**	**10.03**	**1.09**
		Inferred	-	-	-	-	-	-
	Mn Ore	Measured (M)	1,448,000	52.06	0.078	6.35	6.01	1.09
		Indicated(I)	362,000	51.73	0.071	6.48	6.60	0.97
		Total M+I	**1,810,000**	**51.99**	**0.077**	**6.38**	**6.12**	**1.07**
		Inferred	-	-	-	-	-	-

Table 14-21: Comparison from Previous Estimates

		SGS 43-101 (February 2013)				LIM 43-101 February 2011)			
	Classification	Tonnage x 1000	Fe %	Mn %	SiO2 %	Tonnage x 1000	Fe %	Mn %	SiO2 %
Fe Ore	**Total M+I**	4,989	54.69	0.84	10.03	4,655	55.80	0.70	8.90
	Inferred	-	-	-	-	237	54.6	0.5	11.6
Mn Ore	**Total M+I**	1,810	51.99	6.38	6.12	1,729	52.10	6.80	5.30
	Inferred	-	-	-	-	132	52.8	6.6	5.4

Dated February 12th, 2013.
Mineral resources are not Mineral reserves and do not have demonstrated economic viability
.

14.9 Ferriman Mineral Resource Estimation

The mineral resources estimates (MRE) presented herein are reported in accordance with the National Instrument 43-101 and have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve. The MRE are reported using a cut-off grade (COG) of 45% Fe.

On December 17, 2012, LIM mandated SGS to conduct the Ferriman MRE. SGS Geostat conducted the current MRE using RC drill holes and test pits data compiled during 2012. The Ferriman area database given by LIM contains a total of 783 m of RC drilling in 23 RC drill holes for a total of 217 assays. Also, 122, 1m length, Test Pits (122 assays) are included in the database. No significant inconsistencies were observed. All of the data entry was done by LIM. SGS did a Limited validation of the data. Additional information is provided in section 12. Most collar coordinate locations of drill holes were obtained using a Trimble DGPS with accuracies under 30cms. The estimated accuracy of the digitized data is approximately 5 m. The database cut-off date is February 11th, 2013. The Data verification section provides a more detailed summary of the database.

Table 14-22: Database Summary

Hole Type	Number	Length (m)	Assay
RC	23	783	217
TP	122	122	122

14.9.1 Mineral Resources Statement

Key assumptions are made in order to state the resources. Preliminary tests done by LIM tend to have a general iron recovery of 50% on selected low-grade Stockpiles only by screen (Treat-Rock – Sieve and Triple Decking Screen Analysis Report of October 16, 2012, E. Roul & M. Snow). We presume blending of the Ferriman Stockpile Resources with other LIM resources (Houston & Schefferville Area technical reports) will be done. A different cut-off grade (COG) is applied since the rock is already available for treatment to the upgrading plant. In QP's opinion, in these conditions with the information available, we consider that a COG of 45% as the base case and is believed to be adequate for resources estimates disclosure.

Using a COG of 45% Fe, the current Ferriman stockpile MRE are 2.39 million tonnes in the Indicated category at a grade of 49.34% Fe and 1.62 million tonnes in the inferred category at a grade of 49.30% Fe. The resources presented in this section are all inside the property boundary. The block model was built inside the 3D solid provided by LIM. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Ferriman MRE are dated as of March 27, 2013.

14.9.2 Geological Interpretation and Modeling

This information was provided by LIM. The geological interpretation of Ferriman was entirely constructed by LIM according to available data of the area.

The Ferriman model was completed considering the entire modelled stockpile volume.

The geological modeling was done by LIM using the updated topographic surface from collar locations and a LIDAR surface. SGS built also a bottom surface from RC drilling information on the stockpiles. The solids were created in Gemcom.

The study area included covers a cumulated length of 1,150m long by 550 m wide and an average of 30m vertical (Figure 14-18).

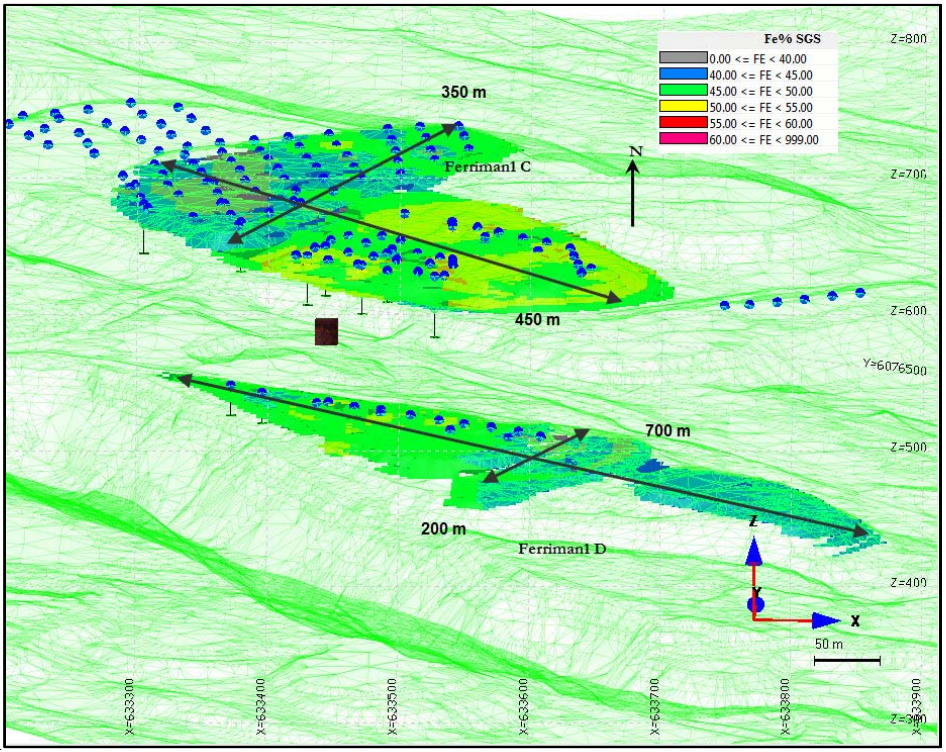


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Figure 14-18: Ferriman Oblique View

14.9.3 Blocks Modeling

SGS built the block model using blocks of 5 x 5 x 5 m on a UTM NAD 27 regular grid. No rotation was applied. Maximum number of columns is 161 and maximum number of rows is 281. Vertically, the maximum number of 5 m benches is 21. The total of blocks is 21,272. The block centers are within the 3d solid modeled by LIM geologists. The parameters of the Block Model were done using the following parameters. The coordinates of the origin of the block Model and all blocks are given as block centres.

Table 14-23: Parameters of Block Model

Number of Blocks	
Columns	161
Rows	281
Levels	21
Origin (UTM NAD 27)	
X	633200
Y	6075500
Z	700
*Orientation(°)	No Rotation
Column Size (m)	5
Rows Size (m)	5
Levels Size (m)	-5

14.9.4 Composites Used for Estimation

Block model grade interpolation is conducted on composited assay data. A composite length of 3 m has been selected to reflect the 3 m RC sampling intervals used on Ferriman. Compositing was done on the entire RC drill holes. A minimum length of 1.5 m was set. No capping was necessary.

The presence of 809 test pits of 1m length in the database (Ferriman South A, South B and to the north) was also taken into account for compositing. Since test pits average length is less than 3m compared to RC assay intervals, SGS decided to use the actual original lengths of test pits as composites. Both RC 3m composites and Test pit 1m Composites were used for resource estimation.

Basically, all test pits are on the top of the Ferriman stockpiles (South A & South B). SGS isolated the top RC composites from 0-6m and compared their mean values with the test pits mean results. There is a difference between test pits average %Fe (48.36% Fe) and RC at surface (0-6 m) average %Fe (49.01 %Fe). No significant difference was noted other than the RC samples tended to be higher (around 1%) than the RC composite values. This difference was taken into account during resource estimation.

808 of the 1276 composites (both RC and test pits) were retained for resource estimation. The modeled 3D wireframe of the mineralized envelope was used to constrain the composites.

Table 14-24 summarises the statistics of the composite data. Figure 14-19 shows the histogram of the composites.

14.9.5 Distribution of Composite Grades

Data to be populated in blocks around composites are the %Fe, %SiO_2, %Al_2O_3, %Mn and %P grades. Statistics of composite grades for those elements are on Table 14-13. Histograms are on Figure 14-6. Some correlation plots appear on Figure 14-20.

As expected the distribution of the %Fe of composites is negatively skewed (tail of low values) while the distribution of the %SiO_2 is almost its mirror image (positively skewed with a tail of high values). This can be explained by the high negative correlation of %Fe and %SiO_2 (Figure 14-20). Distribution of alumina and manganese and phosphorous are moderately to heavily skewed with a long tail of high values. All other correlations between variables are weak around 0.3.

Since this is a stockpile, SGS expected that there is very poor correlation/high variability in grade continuity.

Table 14-24: Statistics of Composite Data Used in the Interpolation of Ferriman South A and B solids Resource Blocks

Ferriman1 C Solid Composites					
Statistics	***FE***	***P***	***MN***	***SIO2***	***AL2O3***
Mean	46.90	0.07	1.11	24.63	1.36
Standard Error	0.42	0.00	0.07	0.57	0.09
Median	47.45	0.04	0.94	23.13	0.88
Mode	50.83	0.03	0.10	17.25	0.48
Standard Deviation	5.86	0.05	0.90	7.81	1.20
Sample Variance	34.29	0.00	0.82	60.95	1.43
Kurtosis	0.85	-0.74	0.73	0.97	2.16
Skewness	-0.95	0.82	1.03	0.98	1.42
Range	28.36	0.18	4.09	41.23	6.42
Minimum	27.84	0.01	0.02	8.11	0.10
Maximum	56.20	0.19	4.11	49.34	6.52
Count	190	190	190	190	190

Ferriman1 D Solid Composites					
Statistics	**FE**	**P**	**MN**	**SIO2**	**AL2O3**
Mean	47.17	0.06	1.74	24.73	1.01
Standard Error	0.87	0.01	0.26	1.07	0.17
Median	48.51	0.05	1.92	23.15	0.61
Mode	#N/A	0.03	#N/A	#N/A	0.32
Standard Deviation	4.37	0.04	1.29	5.33	0.83
Sample Variance	19.12	0.00	1.65	28.45	0.69
Kurtosis	0.75	1.78	-0.84	0.03	1.01
Skewness	-1.15	1.51	0.21	0.30	1.35
Range	16.51	0.16	4.27	21.44	3.00
Minimum	35.81	0.01	0.03	14.41	0.15
Maximum	52.32	0.17	4.30	35.85	3.15
Count	25	25	25	25	25

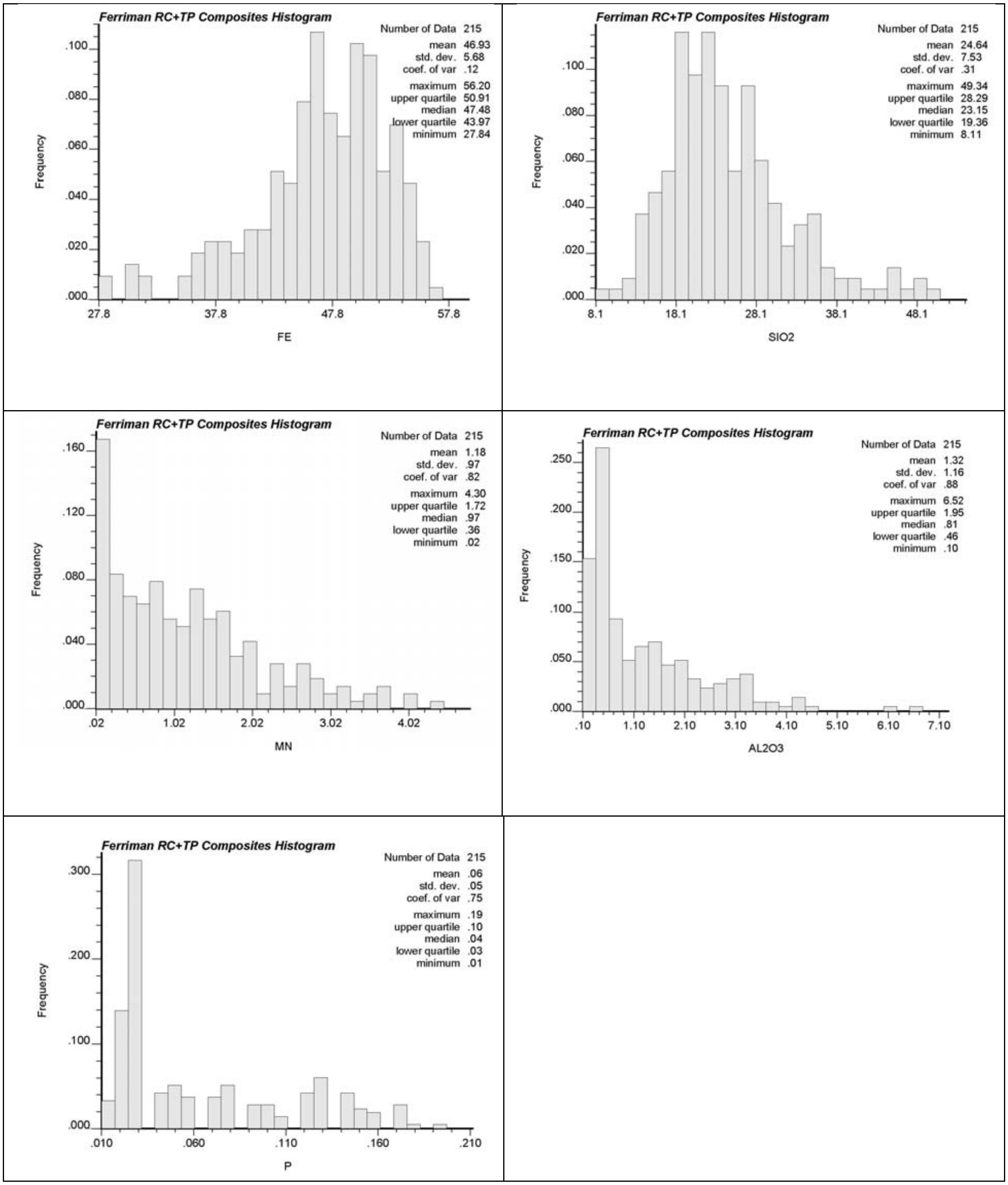

Figure 14-19: Histograms of Ferriman Composite Data

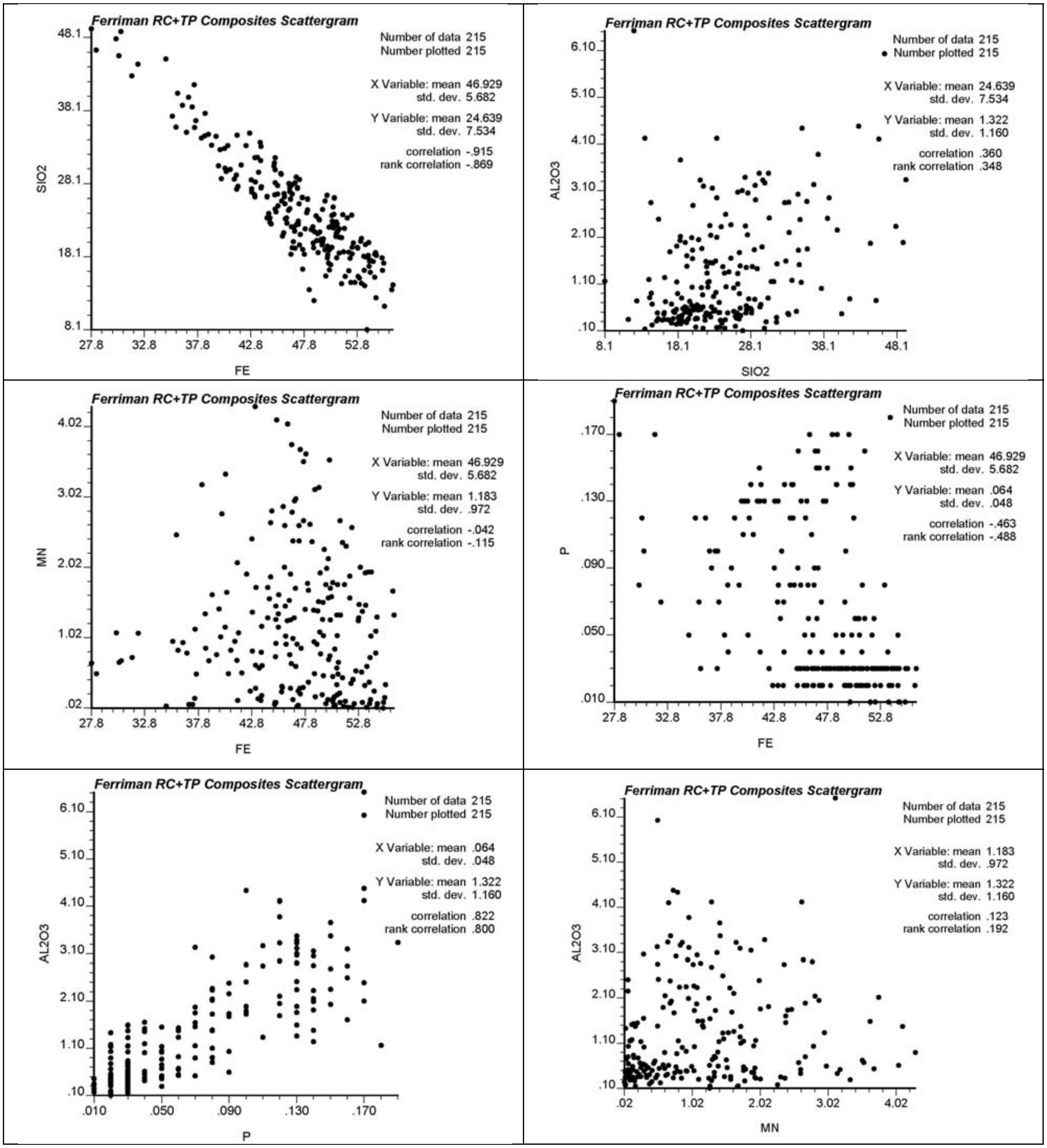

Figure 14-20: Some Correlation Plots of Ferriman Composite Grade Data

14.9.6 Block Grades Interpolation

The %Fe, %SiO_2, %Al_2O_3, %Mn and %P grades of each of the 21,272 blocks 5x5x5m within the 3d Solid (Ferriman1 C & D envelopes) are interpolated from the grades of nearby composites through the inverse distance squared method of interpolation. SGS made assumptions that it is expected to have within the stockpile, very poor correlation/high variability in grade spatial continuity.

The interpolation was done in 2 successive runs with minimum search conditions relaxed from one run to the next until all blocks are interpolated.

The average lateral distance between test pits and RC drill holes is 30m. In order to take into account the difference between top and bottom Composite grades and spatial composite location, SGS decided to use a thin disk shaped search ellipsoid for resource estimation. The search ellipsoid is flat (horizontal). Its long and medium radii are similar and its short radius is perpendicular (vertical). For all variables the long and medium radii are set to 40m in order to catch sufficient composites. The short radius (vertical) was set to 10m. The dimensions were doubled during the second interpolation run. Please Table 14-17.

The maximum number of composites kept in the search ellipsoid was 10 with a maximum of 3 composites from the same hole or trench. The minimum number of composites required in order to the interpolation to proceed is 3. The conditions were set to ensure that no excessive smoothing was incorporated during estimation.

Table 14-25: Estimation and Search Ellipsoids Setting

Search Ellipse	Azimuth (°)	Dip (°)	Spin (°)	Major Axis (m)	Medium Axis (m)	Manor Axis (m)	Max. Nb of samples	Min. Nb of Samples	Max. Nb of samples per hole
Pass 1	0	0	0	40	40	10	10	3	3
Pass 2	0	0	0	80	80	20	10	1	3
Pass 3	0	0	0	360	360	90	10	1	N/A

Considering the availability of composite data on the Ferriman1 C & D stockpiles, approximately half of blocks 56% is interpolated in the first pass while a third (33%) is interpolated in the second pass. The remaining 1% of blocks is interpolated in the third and last run.

More precisely, on the Ferriman1 C Block model containing 16,188 blocks, (66%) is interpolated in the first pass while a third (33%) is interpolated in the second pass. The remaining 0.8% of blocks is interpolated in the third and last run. As for the Ferriman1 D Block model containing 5,084 blocks, 27% is interpolated in the first pass while a third (35%) is interpolated in the second pass. The remaining 38% of blocks is interpolated in the third and last run. Figure 14-21 and Figure 14-22represent typical views of the Ferriman stockpile showing the resource block models:

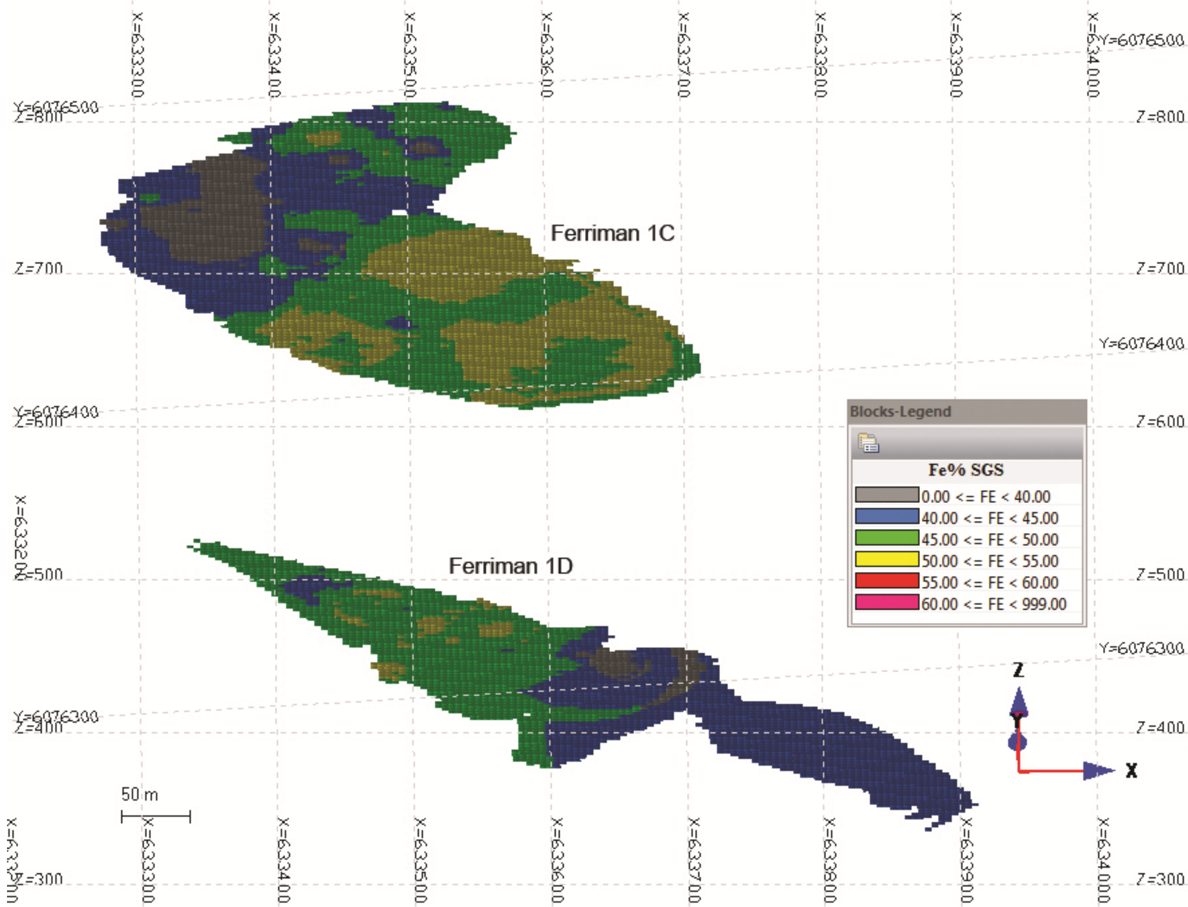

Figure 14-21: Ferriman Oblique View of Block Model

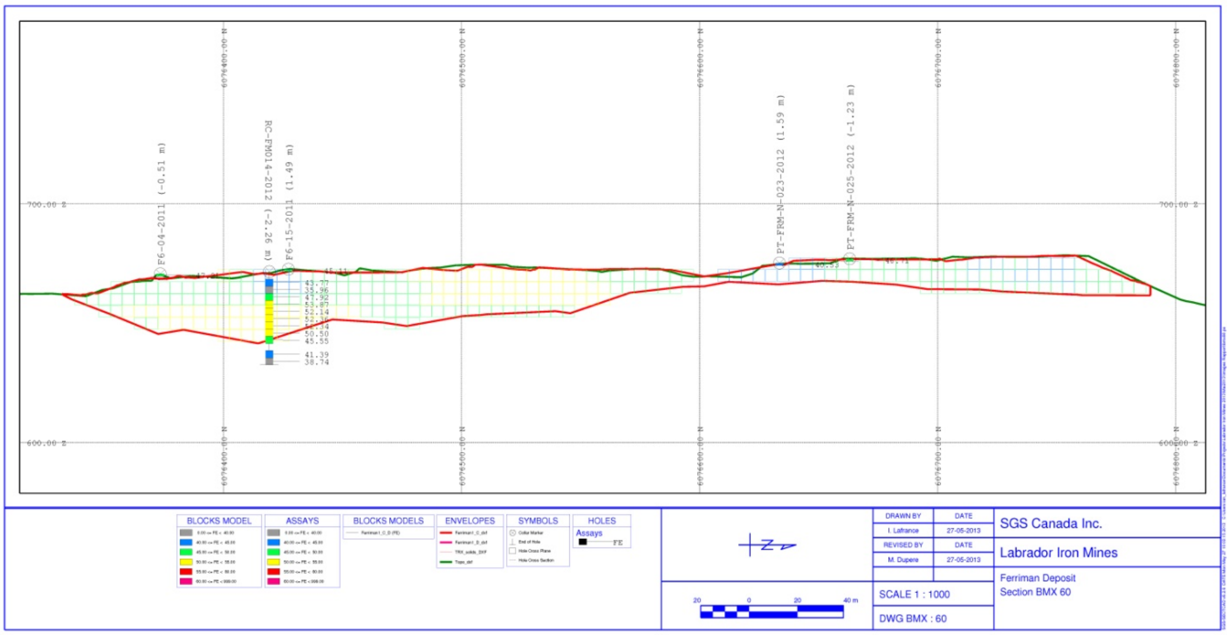

Figure 14-22: Ferriman1 C Block Section X 60

14.9.7 Block Grade Validation

Block grade validation was done revolving around the idea that grade estimates of blocks close to samples should reflect the grades of those samples. The sections and benches were checked with blocks and composites, using the same color scale for grade and making sure that they visually match. SGS considers the validation as adequate and current.

14.9.8 Resources Classification

The estimated resources were classified in accordance with the specifications of the NI 43-101 Policy, namely in measured, indicated, and inferred resources.

There are currently no measured resources in Ferriman. The quantity of available data, the expected grade variability and spatial distributions of material were all considered for the classification.

The Classification was done by a process of automatic classification that selects around each composite a minimum number of composites nearby, from a minimum number of holes inside a research ellipsoid of a given orientation and size. For the Indicated category, a first phase of research was carried out with a 20 m by 20 m 10 m disk shape horizontal ellipsoid (direction, dip and thickness) with a minimum of 3 composites in at least 3 different holes. All blocks within the research ellipse are then categorized as indicated to a maximum of 75 % of its maximum radius. The classification of inferred resources step uses the same parameters with a larger research ellipse (twice the size) and a fill to a maximum of 70% of the ellipse radius. 100% of the blocks were classified using this automatic method.

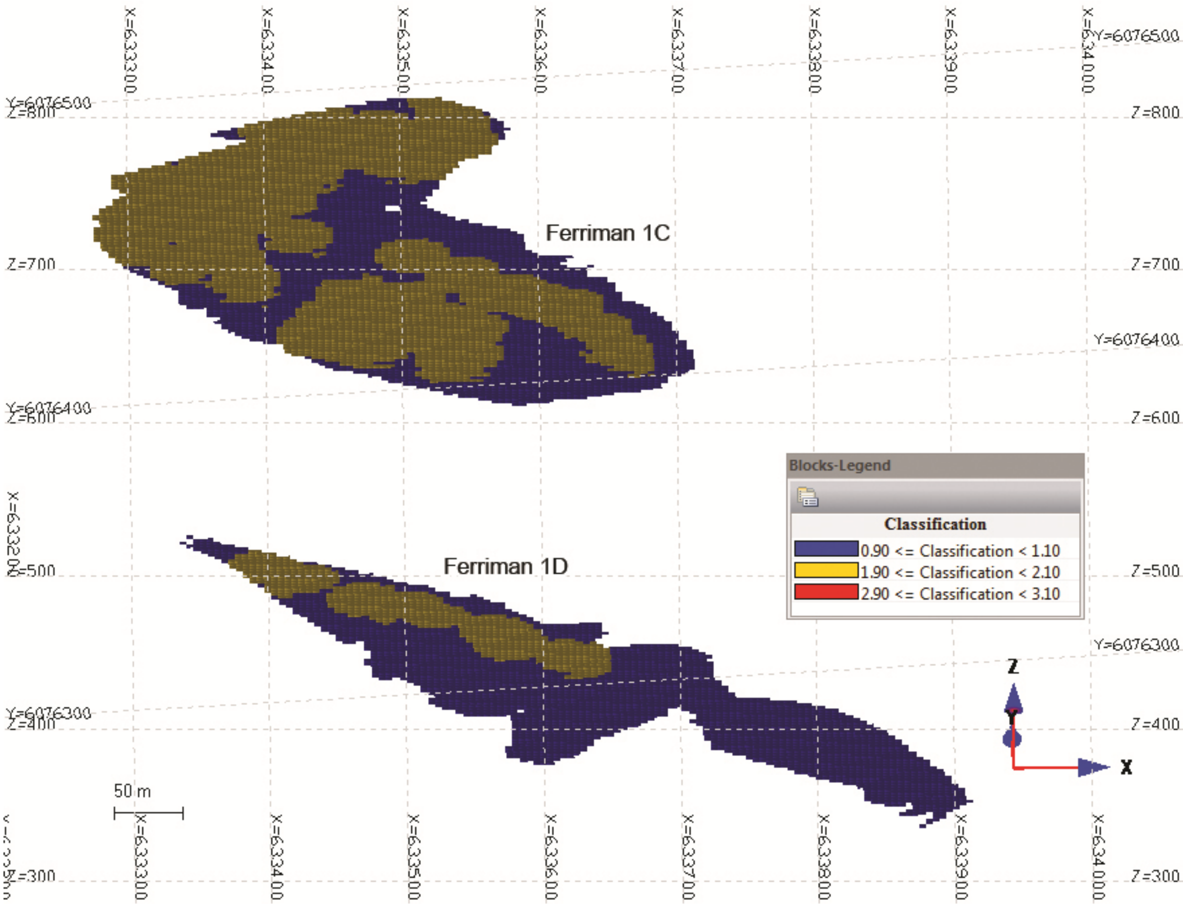

Figure 14-23: Ferriman Oblique View of Block Model

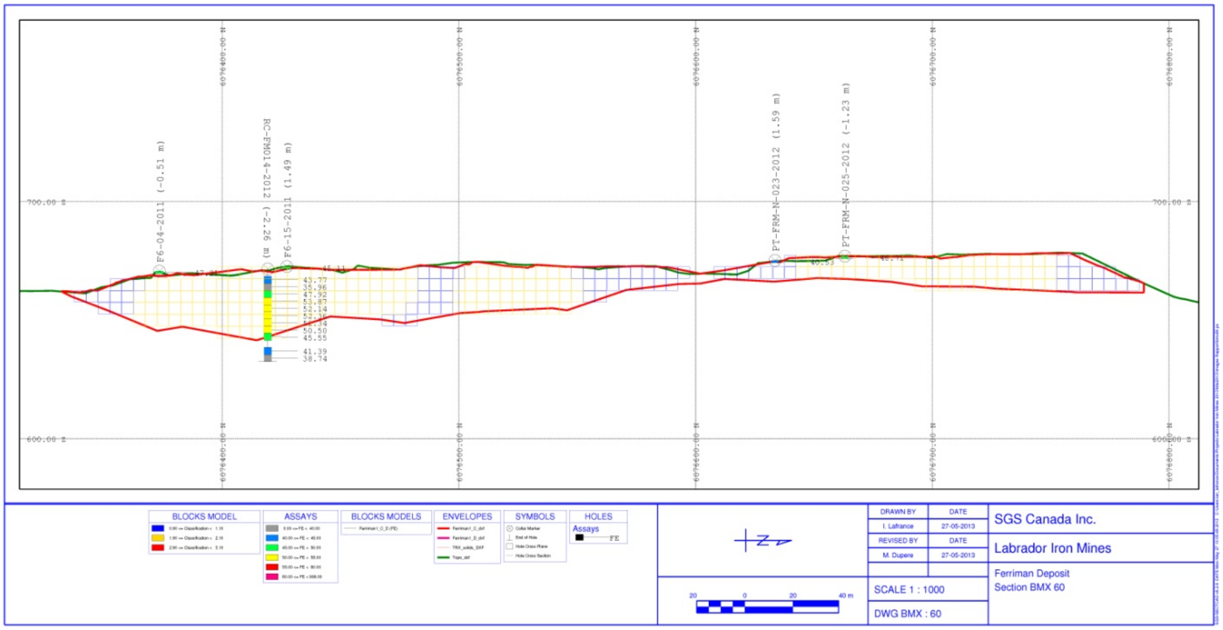

Figure 14-24: Ferriman1 C Block Section X 60

14.9.9 Mineral Resources Estimation Conclusion

The Ferriman stockpile current MRE are 2,394,000 tonnes at 49.34% Fe in the Indicated Category and 1,616,000 tonnes at 49.30% Fe in the Inferred Category, using a cut-off grade (COG) of 45%Fe. The resources presented in this section are all inside the Property boundary. The block model was cut by the topography. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Ferriman Stockpile resources are dated as of March 27th, 2013.

The Ferriman stockpile is constrained by its shape and by regional topography. The results of the resource estimates are shown in Table 14-26.

There are no known factors or issues related to environment, permitting, legal, mineral title, taxation, marketing, socio-economic or political settings that could materially affect the mineral resource estimate.

Table 14-26: Ferriman – Resource Estimates

Area	COG	Classification	Tonnage	Fe(%)	P(%)	Mn(%)	SiO_2(%)	Al_2O_3(%)
Ferriman 1 (C&D) Stockpile	**>45% Fe (Base Case)**	**Indicated**	**2,394,000**	**49.34**	**0.05**	**1.21**	**21.63**	**1.01**
		Inferred	**1,616,000**	**49.30**	**0.05**	**1.17**	**22.06**	**0.87**
	>0% Fe	Indicated	3,454,000	46.83	0.07	1.22	24.50	1.40
		Inferred	2,396,000	47.41	0.05	1.55	23.83	1.02
	<45%Fe	Indicated	1,059,000	41.18	0.10	1.25	31.01	2.30
		Inferred	778,000	43.47	0.07	2.32	27.50	1.34

14.10 Wishart Mineral Resource Estimation

The mineral resources estimates (MRE) presented herein are reported in accordance with the National Instrument43-101 and have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve. The MRE are reported using a cut-off grade (COG) of 45% Fe.

On December 17, 2012, LIM mandated SGS to conduct the Wishart MRE. SGS Geostat conducted the current MRE using RC drill holes and test pits data compiled during 2012. The Wishart area database given by LIM contains a total of 1,547 m of RC drilling in 55 RC drill holes for a total of 467 assays. Also, 789.5 m Test pits (averaging 1-1.5m depth) and 768 assays are included in the database. No significant inconsistencies were observed. All of the data entry was done by LIM. SGS did a Limited validation of the data. Most collar coordinate locations of drill holes were obtained using a Trimble DGPS with accuracies under 30cms. The estimated accuracy of the digitized data is approximately 5 m. The database cut-off date is February 11th, 2013. The Data verification section provides a more detailed summary of the database.

Table 14-27: Database Summary

Hole Type	Number	Length (m)	Assay
RC	55	1,547	467
TP	809	789.5	768

14.10.1 Mineral Resources Statement

Key assumptions are made in order to state the resources. Preliminary tests done by LIM tend to have a general iron recovery of 50% on selected low-grade Stockpiles only by screen (Treat-Rock – Sieve and Triple Decking Screen Analysis Report of October 16, 2012, E. Roul & M. Snow). We presume blending of the Wishart Stockpile Resources with other LIM resources (Houston & Schefferville Area technical reports) will be done. A different cut-off grade (COG) is applied since the rock is already available for treatment to the upgrading plant. In QP's opinion, in these conditions with the information available, we consider that a COG of 45% as the base case and is believed to be adequate for resources estimates disclosure.

Using a COG of 45% Fe, the current Wishart stockpile MRE are 1.15 million tonnes the Indicated category at a grade of 48.57% Fem and 1.28 million tonnes in the inferred category at a grade of 48.24% Fe. The resources presented in this section are all inside the property boundary. The block model was built inside the 3D solid provided by LIM. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Wishart MRE are dated as of March 22, 2013.

14.10.2 Geological Interpretation and Modeling

This information was provided by LIM. The geological interpretation of Wishart was entirely constructed by LIM according to available data of the area.

The Wishart model was completed considering the entire modelled stockpile volume.

The geological modeling was done by LIM using the updated topographic surface from collar locations and a Lidar surface. SGS built also a bottom surface from RC drilling information on the stockpiles. The solids were created in Gemcom.

The study area included covers an extension of 900 m long by a maximum of 225 m wide and a maximum of 30m vertical. See figure below.

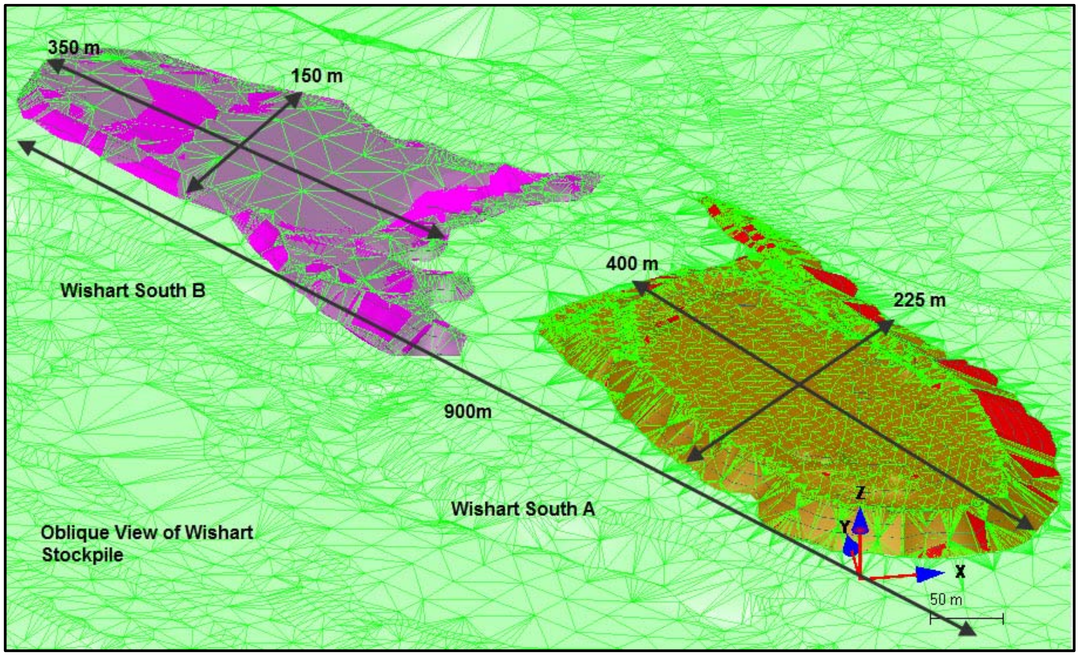

Figure 14-25: Wishart Oblique View

14.10.3 Blocks Modeling

SGS built the block model using blocks of 5x5x5m on a UTM NAD 27 regular grid. No rotation was applied. Maximum number of columns is 401 and maximum number of rows is 351. Vertically, the maximum number of 5m benches is 41. The total of blocks is 13,262. The block centers are within the 3d solid modeled by LIM geologists. The parameters of the Block Model were done using the following parameters. The coordinates of the origin of the block Model and all blocks are given as block centres.

Table 14-28: Parameters of Block Model

Number of Blocks	
Columns	401
Rows	351
Levels	41
Origin (UTM NAD 27)	
X	635000
Y	6069000
Z	750
*Orientation(°)	No Rotation
Column Size (m)	5
Rows Size (m)	5
Levels Size (m)	-5

14.10.4 Composites Used for Estimation

Block model grade interpolation is conducted on composited assay data. A composite length of 3 m has been selected to reflect the 3 m RC sampling intervals used on Wishart. Compositing was done on the entire RC drill holes.. A minimum length of 1.5 m was set. No capping was necessary.

The presence of 809 test pits of 1m length in the database (Wishart South A, South B and to the north) was also taken into account for compositing. Since test pits average length is less than 3m compared to RC assay intervals, SGS decided to use the actual original lengths of test pits as composites. Both RC 3m composites and Test pit 1m Composites were used for resource estimation.

Basically, all test pits are on the top of the Wishart stockpiles (South A & South B). SGS isolated the top RC composites from 0-6m and compared their mean values with the test pits mean results. There is a difference between test pits average %Fe (48.36% Fe) and RC at surface (0-6m) average %Fe (49.01 %Fe). No significant difference was noted other than the RC samples tended to be higher (around 1%) than the RC composite values. This difference was taken into account during resource estimation.

808 of the 1276 composites (both RC and test pits) were retained for resource estimation. The modeled 3D wireframe of the mineralized envelope was used to constrain the composites.

14.10.5 Distribution of Composite Grades

Data to be populated in blocks around composites are the %Fe, %SiO_2, %Al_2O_3, %Mn and %P grades. Table 14-29 summarizes the statistics of the composite data. Figure 14-26 shows the histogram of the composites. Some correlation plots appear on Figure 14-27.

As expected the distribution of the %Fe of composites is negatively skewed (tail of low values) while the distribution of the %SiO_2 is almost its mirror image (positively skewed with a tail of high values). This can be explained by the high negative correlation of %Fe and %SiO_2 (Figure 14-27). Distribution of alumina and manganese and phosphorous are moderately to heavily skewed with a long tail of high values. All other correlations between variables are weak around 0.3.

Since this is a stockpile, SGS expected that there is very poor correlation/high variability in grade continuity. SGS noted

Table 14-29: Statistics of Composite Data Used in the Interpolation of Wishart South A and B solids Resource Blocks

Wishart South A Solid Composites					
Statistics	*Fe*	*P*	*Mn*	*SiO2*	*Al2O3*
Mean	46.28	0.03	0.06	30.28	0.52
Standard Error	0.53	0.00	0.01	0.73	0.08
Median	47.51	0.03	0.04	28.35	0.22
Mode	51.69	0.03	0.04	29.91	0.17
Standard Deviation	6.31	0.01	0.09	8.68	0.92
Sample Variance	39.84	0.00	0.01	75.29	0.84
Kurtosis	2.39	13.49	47.91	2.63	26.62
Skewness	-1.18	2.40	6.18	1.29	4.73
Range	39.80	0.10	0.83	54.46	6.98
Minimum	19.97	0.02	0.00	13.46	0.01
Maximum	59.77	0.12	0.83	67.92	6.99
Count	140	140	140	140	138

Wishart South B Solid Composites					
Statistics	*Fe*	*P*	*Mn*	*SiO2*	*Al2O3*
Mean	47.40	0.04	0.09	28.59	0.62
Standard Error	0.19	0.00	0.00	0.25	0.04
Median	48.12	0.04	0.07	28.10	0.37
Mode	45.38	0.04	0.05	27.20	0.19
Standard Deviation	5.08	0.01	0.09	6.51	1.02
Sample Variance	25.82	0.00	0.01	42.40	1.05
Kurtosis	4.88	2.56	31.12	1.71	84.28
Skewness	-1.45	0.67	4.67	0.79	7.44
Range	42.80	0.11	1.06	44.88	15.94
Minimum	17.05	0.01	0.00	11.90	0.00
Maximum	59.85	0.12	1.06	56.78	15.94
Count	681	681	681	681	680

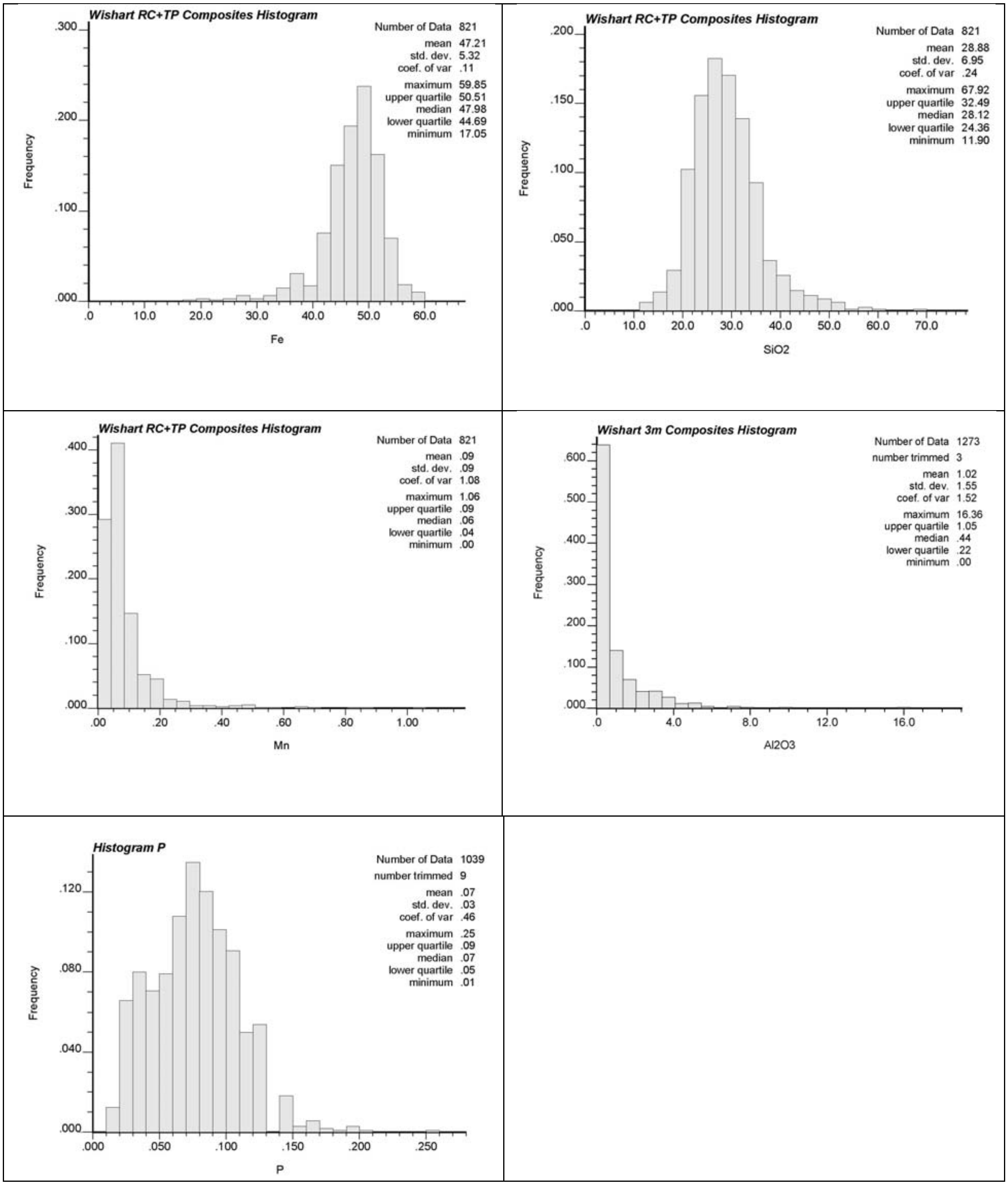

Figure 14-26: Histograms of Withart South A and South B Composite Data

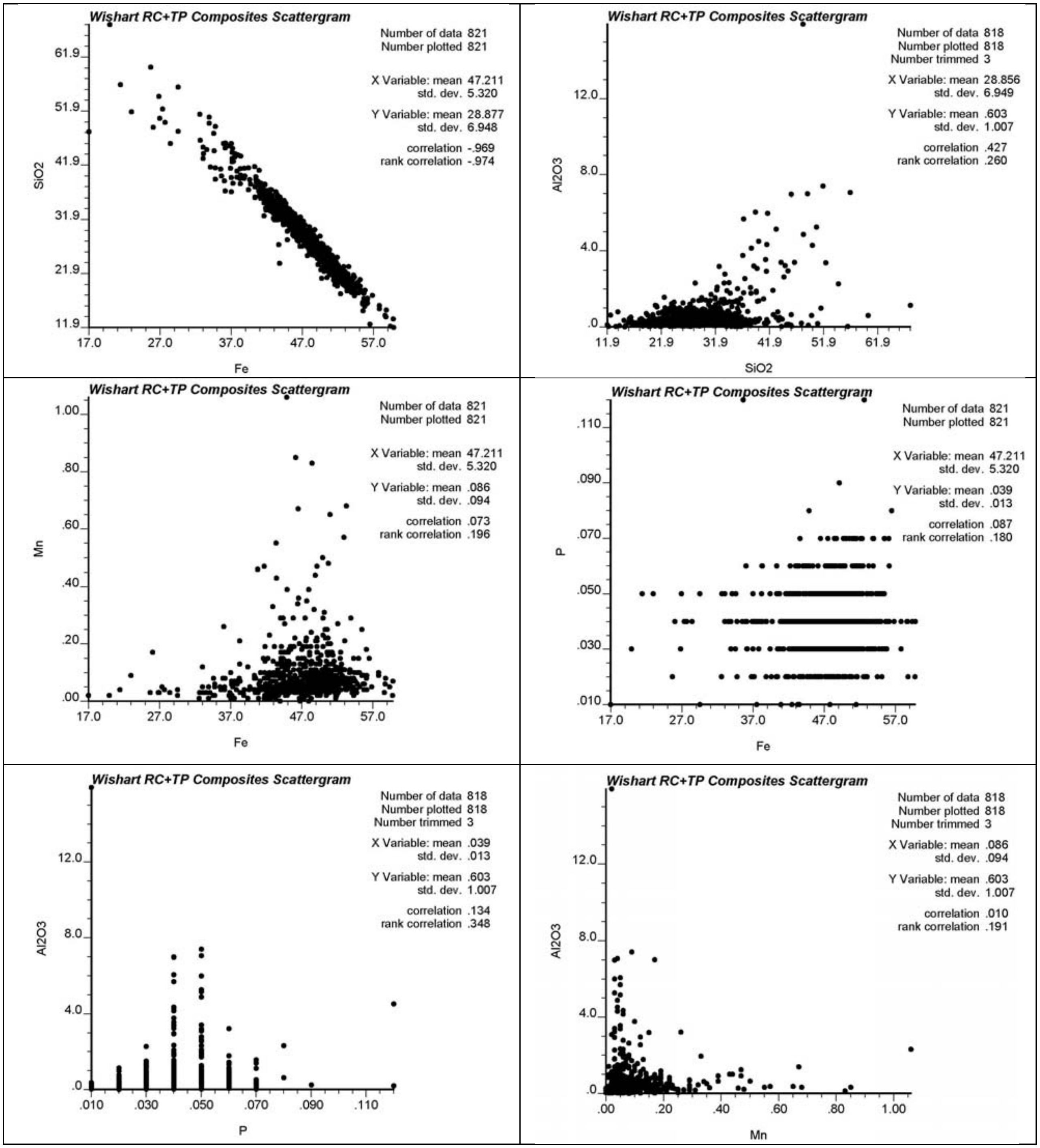

Figure 14-27: Some Correlation Plots of DSO Composite Grade Data (2012)

14.10.6 Block Grades Interpolation

The %Fe, %SiO_2, %Al_2O_3, %Mn and %P grades of each of the 13,262 blocks 5 x 5 x 5 m within the 3d Solid (Wishart South A & B envelopes) are interpolated from the grades of nearby composites through the inverse distance squared method of interpolation. SGS made assumptions that it is expected to have within the stockpile, very poor correlation/high variability in grade spatial continuity.

The interpolation was done in 2 successive runs with minimum search conditions relaxed from one run to the next until all blocks are interpolated.

The average lateral distance between test pits is 10m. The average lateral distance between RC drill holes is 40m. In order to take into account the difference between top and bottom Composite grades and spatial composite location, SGS decided to use a thin disk shaped search ellipsoid for resource estimation. The search ellipsoid is flat (horizontal). Its long and medium radii are similar and its short radius is perpendicular (vertical). For all variables the long and medium radii are set to 40m in order to catch sufficient composites. The short radius (vertical) was set to 10m. The dimensions were doubled during the second interpolation run. Please Table 14-30.

The maximum number of composites kept in the search ellipsoid was 10 with a maximum of 3 composites from the same hole or trench. The minimum number of composites required in order to the interpolation to proceed is 3. The conditions were set to ensure that no excessive smoothing was incorporated during estimation.

Table 14-30: Estimation and Search Ellipsoids Setting

Search Ellipse	Azimuth (°)	Dip (°)	Spin (°)	Major Axis (m)	Medium Axis (m)	Manor Axis (m)	Max. Nb of samples	Min. Nb of Samples	Max. Nb of samples per hole
Pass 1	0	0	0	40	40	10	10	3	3
Pass 2	0	0	0	80	80	20	10	1	NA

A large majority of blocks (over 90%) is interpolated in the first pass while just a few blocks are interpolated in the second and last pass. Figure 14-28 and Figure 14-29 represent typical sections of the Wishart deposit showing the resource block models:

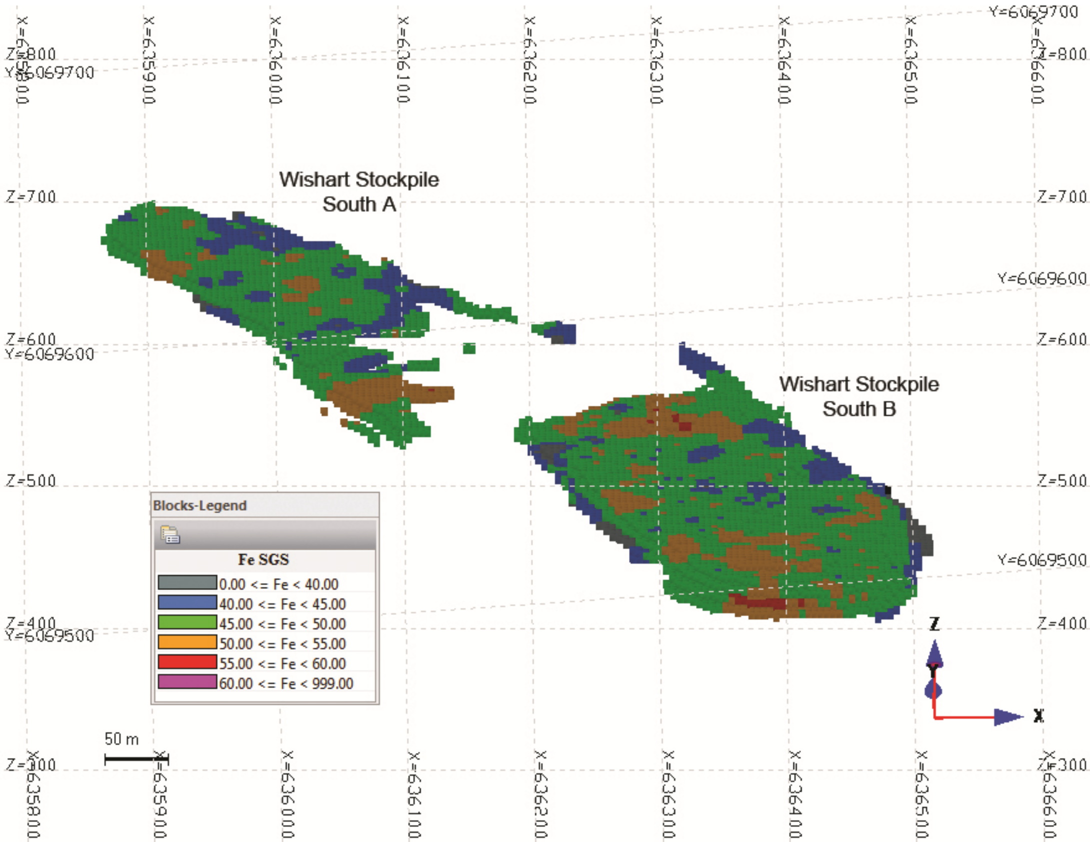

Figure 14-28: Wishart Oblique View of Block Model

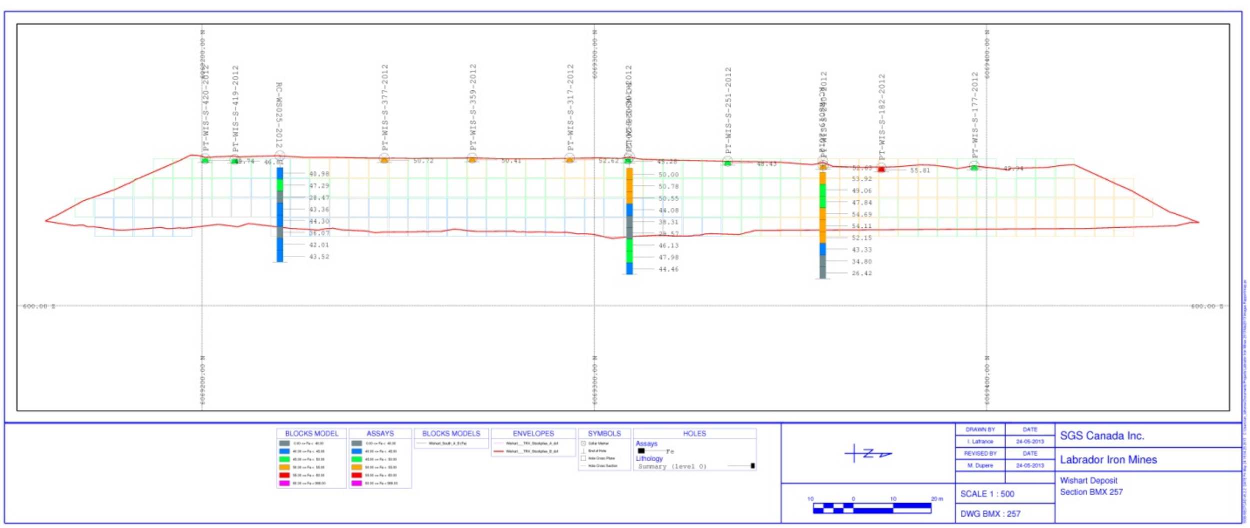

Figure 14-29: Wishart Block Section X 257, %Fe Estimates

14.10.7 Block Grade Validation

Block grade validation was done revolving around the idea that grade estimates of blocks close to samples should reflect the grades of those samples. The sections and benches were checked with blocks and composites, using the same color scale for grade and making sure that they visually match. SGS considers the validation as adequate and current.

14.10.8 Resources Classification

The estimated resources were classified in accordance with the specifications of the NI 43-101 Policy, namely in measured, indicated, and inferred resources.

Classification was done by a process of automatic classification that selects around each composite a minimum number of composites nearby, from a minimum number of holes inside a research ellipsoid of a given orientation and size. For the indicated category, a first phase of research was carried out with a 20 m by 20 m 10 m disk shape horizontal ellipsoid (direction, dip and thickness) with a minimum of 3 composites in at least 3 different holes. All blocks within the research ellipse are then categorized as indicated to a maximum of 75 % of its maximum radius. The classification of inferred resources step uses the same parameters with a larger research ellipse (twice the size) and a fill to a maximum of 70% of the ellipse radius. 100% of the blocks were classified using this automatic method.

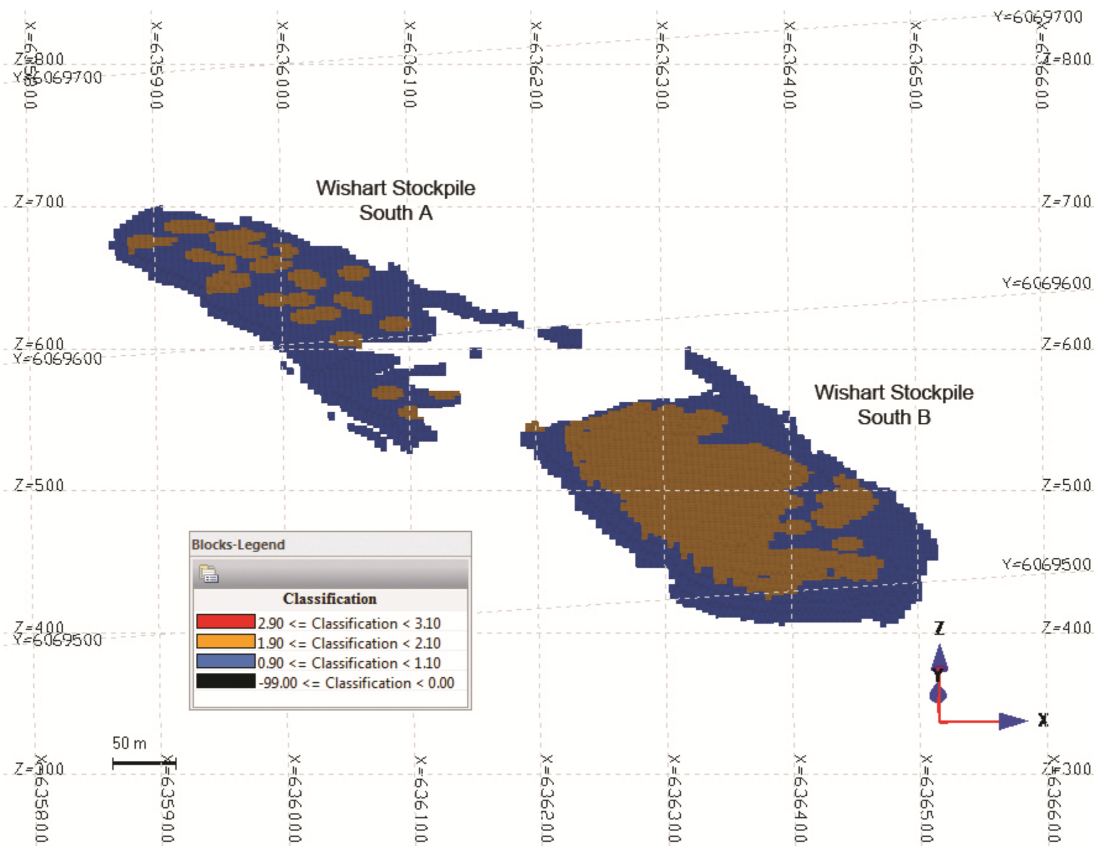

Figure 14-30: Wishart Oblique View of Classified Block Model

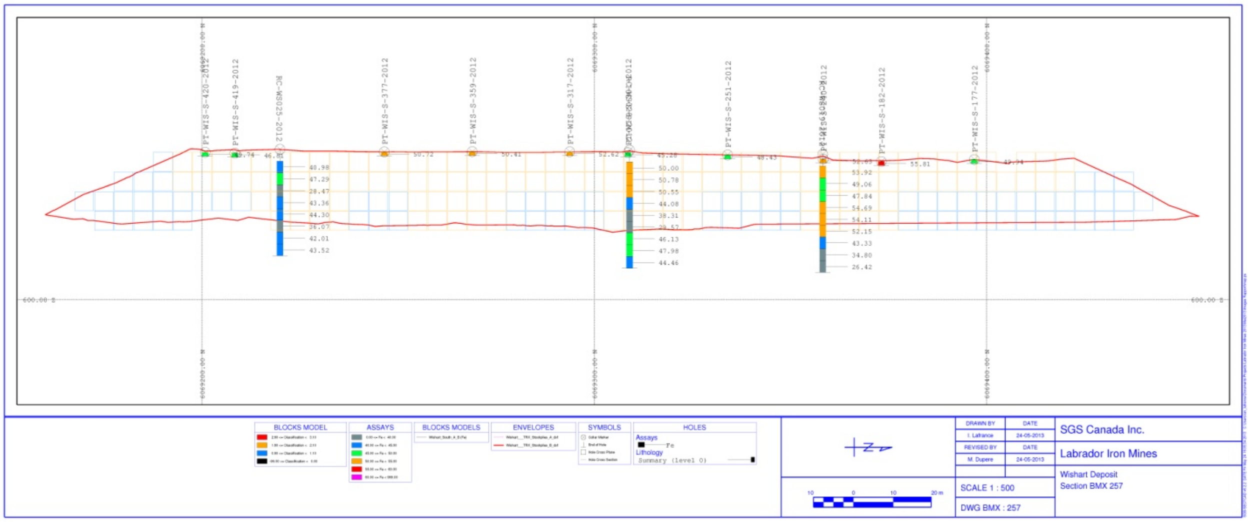

Figure 14-31: Wishart Block Section X 257 Classification

14.10.9 Mineral Resources Estimation Conclusion

The Wishart stockpile current MRE are 1,511,000 tonnes at 48.57% Fe in the Indicated Category and 1,280,000 tonnes at 48.24% Fe in the Inferred Category, using a cut-off grade (COG) of 45%Fe. The resources presented in this section are all inside the Property boundary. The block model was cut by the topography. The block percentage had to be at least 50% inside the mineralised solid in order to be considered in the resource estimation. The Wishart Stockpile resources are dated as of March 22nd 2013.

The Wishart stockpile is constrained by its shape and by regional topography. The results of the resource estimates are shown in Table 14-31.

There are no known factors or issues related to environment, permitting, legal, mineral title, taxation, marketing, socio-economic or political settings that could materially affect the mineral resource estimate.

Table 14-31: Wishart – Resource Estimates

Area	COG	Classification	Tonnage	SG	Fe (%)	P (%)	Mn(%)	SiO_2(%)	Al_2O_3(%)
Wishart Stockpile	**>45% Fe (Base Case)**	**Indicated**	**1,151,000**	**2.20**	**48.57**	**0.04**	**0.09**	**27.14**	**0.50**
		Inferred	**1,280,000**	**2.20**	**48.24**	**0.04**	**0.08**	**27.54**	**0.50**
	>0% Fe	Indicated	1,512,000	2.20	47.07	0.04	0.09	28.97	0.67
		Inferred	2,134,000	2.20	45.72	0.04	0.09	30.64	0.78
	<45%Fe	Indicated	338,000	2.20	41.77	0.04	0.08	35.49	1.24
		Inferred	837,000	2.20	41.78	0.04	0.09	35.42	1.21

Dated March 22, 2013
Mineral resources which are not mineral reserves do not have demonstrated economic viability

15. Mineral Reserve Estimates

There are no mineral reserves reported in this Technical Report.

A feasibility study has not been conducted on any of LIM's Schefferville Projects and LIM's decision to undertake commercial production from the James and ongoing exploration and development of the other Stage 1 deposits have not been based upon a feasibility study of mineral reserves demonstrating economic and technical viability.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource reported in this Technical Report will be converted into mineral reserves.

16. Mining Methods

The James Mine is a conventional open pit truck and shovel operation and began pre-commercial operation in June 2011. The pit operates seasonally from April through November. This period is not fixed and is weather dependent. Commercial operations began in April 2012.

Mining is conducted by a contractor, Innu Municipal LP, a partnership between a subsidiary of the Municipal Group of Companies and Innu Development Corp. Most ore and waste is free digging, so blasting is only required occasionally. The waste rock dump is located immediately to the northwest of the pit.

The Company considers the 2011 operating season as having been a short, start-up and testing year during which the Schefferville Projects had not yet reached commercial production. No mining activities, other than waste stripping, took place during the quarter ended March 31, 2012.

	Fiscal Year Ended March 31, 2013		Fiscal Year Ended March 31, 2012	
(all tonnes are dry metric tonnes)	Tonnes	Grade (% Fe)	Tonnes	Grade (% Fe)
Total Ore Mined	1,828,398	61.3%	1,205,609	60.7%
Waste Mined	3,215,985	--	3,004,355	--
Ore Processed and Screened	954,813	58.2%	572,052	58.4%
Lump Ore Produced	98,693	61.2%	79,407	63.6%
Sinter Fines Produced	693,173	61.4%	152,735	65.0%
Total Product Railed	1,492,960	62.3%	563,569	64.9%
Tonnes Product Sold	1,559,620	62.5%	385,898	64.9%
Port Product Inventory	111,009	60.9%	177,669	64.9%
Site Product Inventory	3,551	58.4%	69,983	65.3%
Site Run-of-Mine Ore inventory	446,975	56.2%	195,117	59.0%

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, to production rail-track extension and mine laboratory construction and training. James pit is currently in its second year of commercial production.

The mining contractor implements the mine plan and carries out layout, surveying and month end measuring and production tracking. The mine office is located at Silver Yards where technical, administrative and operational personnel are based. LIM performs all strategic mine planning, resource/grade control and reconciliation functions.

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 haul the ore short distance from the James Pit to the beneficiation plant ore stockpiles. From the

Redmond property, on highway units will be used to haul the ore to the processing site. The waste is hauled to the specific waste dump sites.

During the historic 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 has upgraded the Silver Yards beneficiation plant to process the high silica, lower grade, and yellow ores to produce saleable products.

The James Mine has overall pit wall angles ranging from 34 degrees in overburden to 45 in competent rock. The face angles range from 40 degrees in overburden to 70^o in competent rock. These angles are based on dewatered/depressurized pit walls and controlled blasting techniques. The excavations are 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 James deposit.

Long term mining plans are prepared for Redmond 2B & 5, historical IOC Stockpiles and Denault in order to provide the feed for Silver Yard Plant once James mine is exhausted which is anticipated by mid 2014.

16.1 Mining Method Summary

Excavation and transport from the James mine to the beneficiation area is done using conventional excavator and truck methods. For deposits that are further from Silver Yard plan it is planned to haul the ore with highway type of tractor/trailer trucks.

16.2 Pit Design and Production Scheduling

Based on a current in pit resources James mine is planned to be mined out by mid 2014. James mine plans are shown on the Figures 16-1 and 16-2 projected to the end of 2013 production year and the end of the mine pit design/plan respectively. Typical James cross section is shown on Figure 16-6.

16.2.1 James Mine

The overall strip ratio for the James Mine is approximately 1.78 tonnes of waste per tonne of ore. The James Mine is the only operating mine and contains 2,227,000 tonnes of in pit resource containing the following average grades:

- Fe: 56.40%
- Mn: 0.69%
- Al_2O_3: 0.39%
- P: 0.022%
- SiO^2: 16.09%

16.2.2 Redmond 2B Mine

The overall strip ratio for the Redmond 2B Mine is approximately 1.1 tonnes of waste per tonne of ore. Redmond 2B approved mine contains 700,000 tonnes of in pit resources containing the following average grades:

- Fe: 59.8%
- Mn: 039%

- $Al_2 O_3$: 2.21%
- P: 0.12%
- SiO_2: 4.95%

16.2.3 Redmond 5 Mine

The overall strip ratio for the Redmond 5 Mine is approximately 0.79 tonnes of waste per tonne of ore. Redmond 2B mine contains 1,633,000 tonnes of in pit resources containing following average grades:

- Fe: 54.91%
- Mn: 1.17%
- $Al_2 O_3$: 0.74%
- P: 0.04%
- SiO_2: 11.26%

16.2.4 Stockpiles

LIM has conducted an extensive exploration campaign during 2012 in order to define volumes, tonnages and grade of the stockpiles left after the IOC operation stopped in the Schefferville area. Refer to Figure 18-8 for locations.

The Ferriman 1 stockpiles (C+D) contain 2,394,000 tonnes of low grade ore with the following average grades:

- Fe: 49.34%
- Mn: 1.21%
- $Al_2 O_3$: 1.01%
- P: 0.05%
- SiO_2: 21.6%

The Whishart stockpiles (South A&B) contain 1,151,000 dry tonnes of low grade ore with the following average grades:

- Fe: 48.57%
- Mn: 0.09%
- $Al_2 O_3$: 0.5%
- P: 0.04%
- SiO_2: 27.14%

16.2.5 Denault

The overall strip ratio for the Denault Mine is approximately 0.9 tonnes of waste per tonne of ore. Denault pit is offset on average 40 meters from the Denault Lake and contains 2,653,000 dry tonnes of inpit resources with the following average grades:

- Fe: 54.23%
- Mn: 0.38%
- $Al_2 O_3$: 0.5%
- P: 0.07%
- SiO_2: 11.61%

16.2.6 Optimal Pit Design

The open pit designs are derived from the indicated mineral resources and 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 maximizes the net present value of the resources according to the economic parameters that were used. LIM used actual costs from James mine to conduct those analyses.

16.2.7 Model Preparation

The geological modeling procedures used are described earlier in this report. The geological modeling of the mineral deposits was completed 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.

16.3 Pit Optimization

Pit Optimization was undertaken using the Gemcom Whittle Strategic Mine Planning Software, version 4.4. The pit optimization was carried out by a Whittle implementation of the well-known Lerchs Grossmann algorithm. Actual costs from current operating experience were used in the optimization.

16.4 Pit Analysis

The results of the optimization process yield a number of pit shells generated at various revenue factors. The pit shell yielding the largest net present value was selected as the outline for designing the pits.

16.5 James 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 6.4 from Gemcom. As the optimization software did not have a constraint for minimum mining widths some deviation was made to accommodate a minimum mining width of 30 meters. The benches were designed on a 10 meter height with 8 meter safety berms on every second bench. The cut-off for defining the inpit resource estimate was 50% Fe. The resource contained within the design pit is 2,227,000 tonnes at 56.4% Fe.

The James Open Pit Mine Dimensions are:

- maximum length at end of mine life 1,000 meters;
- maximum width at end of mine life 260 meters;
- maximum depth at end of mine life 100 meters;
- bench height 10meters with double benching 20 meters;

16.5.1 Ramp Design

Both ore and waste rock are hauled on the ramp. This ramp is located on the east wall. This ramp branches out in two segments at 490-elevation to provide access to James North and James South. Minimizing haul distance to the waste dump and 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 two-way 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. 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 meters.

16.5.2 Slope Angles

Open pit designs are based on geotechnical recommendations provided by Piteau Geotechnical Consulting. Geotechnical drilling was done during the summer and fall of 2012. The geotechnical study for the James pit is currently being finalized. Once results are available, the final pit design will be updated to reflect changes if applicable.

The current pit slope design criteria were compared to historical IOC criteria. This IOC design criteria indicates overall pit wall angles were steeper than the design criteria used for the James open pit.

The pit slope angles used for pit design are summarized in a Table 16-1 as follows:

Table 16-1: Open Pit Slope Design Criteria

Type of Rock	Bench Height (m)	Berm Width (m)	Overall Pit Slope Angle	Batter Angle
Hanging wall	20	8	45.6°	60°
Foot wall	20	8	42.3°	55°

16.5.3 Mine Plan

Five mm 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. Mining is conducted at 10 m high benches. Mining is conducted at following rates:

- average 25,000 tonnes per day;
- maximum 32,000 tonnes per day;
- currently defined in pit resources at James Mine are adequate to support a mine life of less than two years;

16.6 Redmond 2B & Redmond 5 Pit Design

Optimized Whittle shells were used as a guide for the pit limit, and the details of the pit design were completed using GEMS software version 6.4 from Gemcom. As the optimization software did not have a constraint for minimum mining widths some deviation was made to accommodate a minimum mining width of 30meters. The benches were designed at a height of 10 m with 8 meter safety berms on every second bench. The cut-off grade for defining the in-pit resource estimate was 50% Fe. In-pit resources within an optimized pit shell for Redmond 2 were estimated at 0.7 million tonnes at a grade of 60.07 % Fe and Redmond 5 at 1.63 million tonnes at a grade of 54.9 % Fe.

The Redmond 2B Open Pit Mine Dimensions are:

- maximum length at end of mine life 290 m with the access ramp;
- maximum width at end of mine life 170 m;
- maximum depth at end of mine life 30 m;
- bench height of 20 m;

The Redmond 5 Open Pit Mine Dimensions are:

- maximum length at end of mine life 320 m with the access ramp;
- maximum width at end of mine life 200 m;
- maximum depth at end of mine life 70 m;
- bench height of 20 m;

16.6.1 Ramp Design

For Redmond 2B Open Pit a final ramp will be used for both ore and waste rock haulage, starting south of the existing access road that connects to Menihek road on the east and Redmond 5 on the west. The start-up ramp would be cut as mining progresses and would be replaced by a ramp that exits on the south-east side of deposit and leads to the low grade stockpile and waste dump. This ramp switches back at 540 elevation and stays on the east wall.

The Redmond 5 pit ore and waste rock will be hauled by a single ramp that enters the pit at the south-east end corner at 600-elevation and continues through to the south and west walls of the pit.

Both ramps were designed at an 8% grade with a width of 25 m. The ramps were designed at 3.5 times the width (for two-way traffic) of the widest vehicle operating on the road.

The widest vehicle accounted for would be a haul truck that is 5.4 m wide. Similarly to James design, overall haul road design width also accommodates an adequate shoulder barrier and ditch. Refer to Section 16.6.1 for details on ditches, berms and shoulder barrier.

16.6.2 Slope Angles

The Redmond 2B and 5 Open Pit design is based on geotechnical recommendations provided by Piteau Geotechnical Consulting for the James Open Pit Mine. Geotechnical parameters, which are summarized in Table 16-1, were used for pit design, except for the west and east walls which were designed at the same bench batter/face angle of 60 degrees, as the pits are very shallow.

16.6.3 Mine Plan

The Redmond 2B and 5 open pits will be mined at a bench height of 10 m with double benching established in the final walls. It is anticipated that mining would be conducted at the following rates:

- average 25,000 tonnes per day;
- maximum 32,000 tonnes per day;
- currently defined in pit resources at Redmond 2B and 5 are adequate to support a mine life of less than two years;

16.7 Denault Pit Design

Proximity to Denault Lake was a critical design criterion for the Denault open pit. The pit is offset 40 m from the lake to minimize interaction of the excavation with the lake. The lake is very shallow with depths of 4 to 8 m. Details are illustrated in Figure 16-5design of the Denault open pit was prepared using GEMS software version 6.4 from Gemcom and the optimal pit shell as a guide for the pit limit. The benches were designed at a height of 10 m with 8 meter safety berms on every second bench. Final design incorporates double benching and 8 meter wide benches. In-pit resources within an optimized pit shell (offset from the lake) were estimated at 2.6 million tonnes at an average grade of 54.02% Fe.

The Denault Land Open Pit Mine Dimensions are:

- maximum length at end of mine life 380 m;
- maximum width at end of mine life 200 m;
- maximum depth at end of mine life 70 m;
- bench height 20 m;

16.7.1 Ramp Design

A final ramp is planned for the haulage of both ore and waste rock. This single ramp is located on the east wall. This ramp switches back at 490 elevation and stays on the east wall. The minimizing of haul distances to the proposed waste dump and to the crusher was considered when determining the exit point of the ramp from the pits. A grade of 10% has been used in the design of the ramp.

The haul roads have been designed and will be constructed with a running surface width of 3.5 times (for two-way traffic) the widest vehicle operating on the road. The ramp is designed with a width of 25 m for the first three benches. A single lane ramp is then required for the next three benches. In order to recover all of the ore within the optimized pit shell, design details for shoulder barrier and ditch are discussed in section 16.6.1.

16.7.2 Slope Angles

A geotechnical investigation has not been completed for the Denault deposit since mining is not planned until 2016. The current open pit design is based on geotechnical recommendations provided by Piteau Geotechnical Consulting for the James open pit mine. Overall geotechnical parameters are summarized in Table 16-1 and were used for pit design, with the exception of the west and east walls that were designed at the same bench batter/face angle of 60 degrees.

16.7.3 Mine Plan

Mining will be conducted on 10 meter high benches. It is anticipated that mining would be conducted at following rates:

- average 25,000 tonnes per day;
- maximum 32,000 tonnes per day;
- currently defined in pit resources at Denault Mine are adequate to support a mine life of less than two years;

Based on the current in- pit resources, the pit is planned to be mined out by mid-2017.The ultimate pit is shown on Figure 16-5.

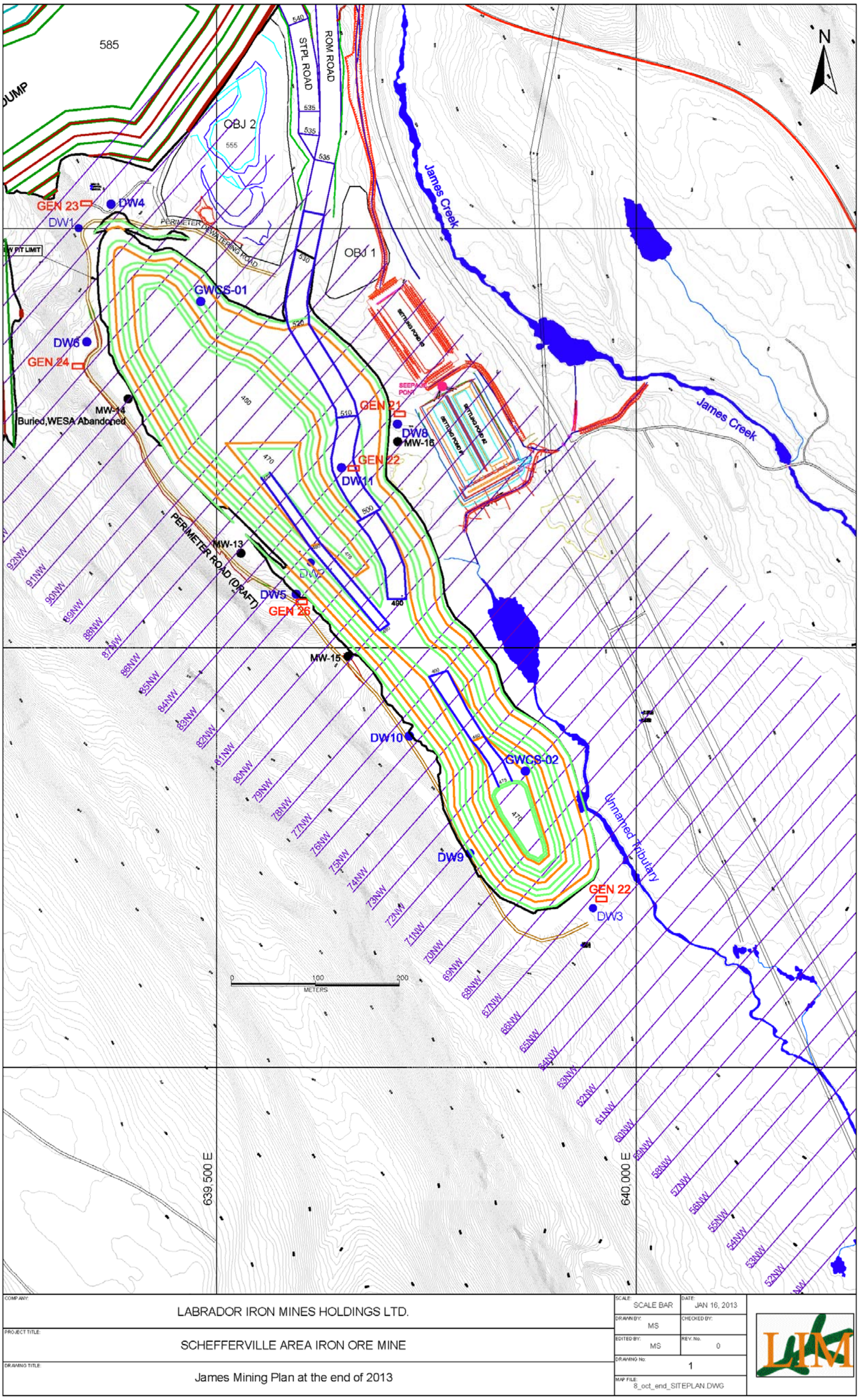

Figure 16-1: Year 3 (2013) Mine Plan for James

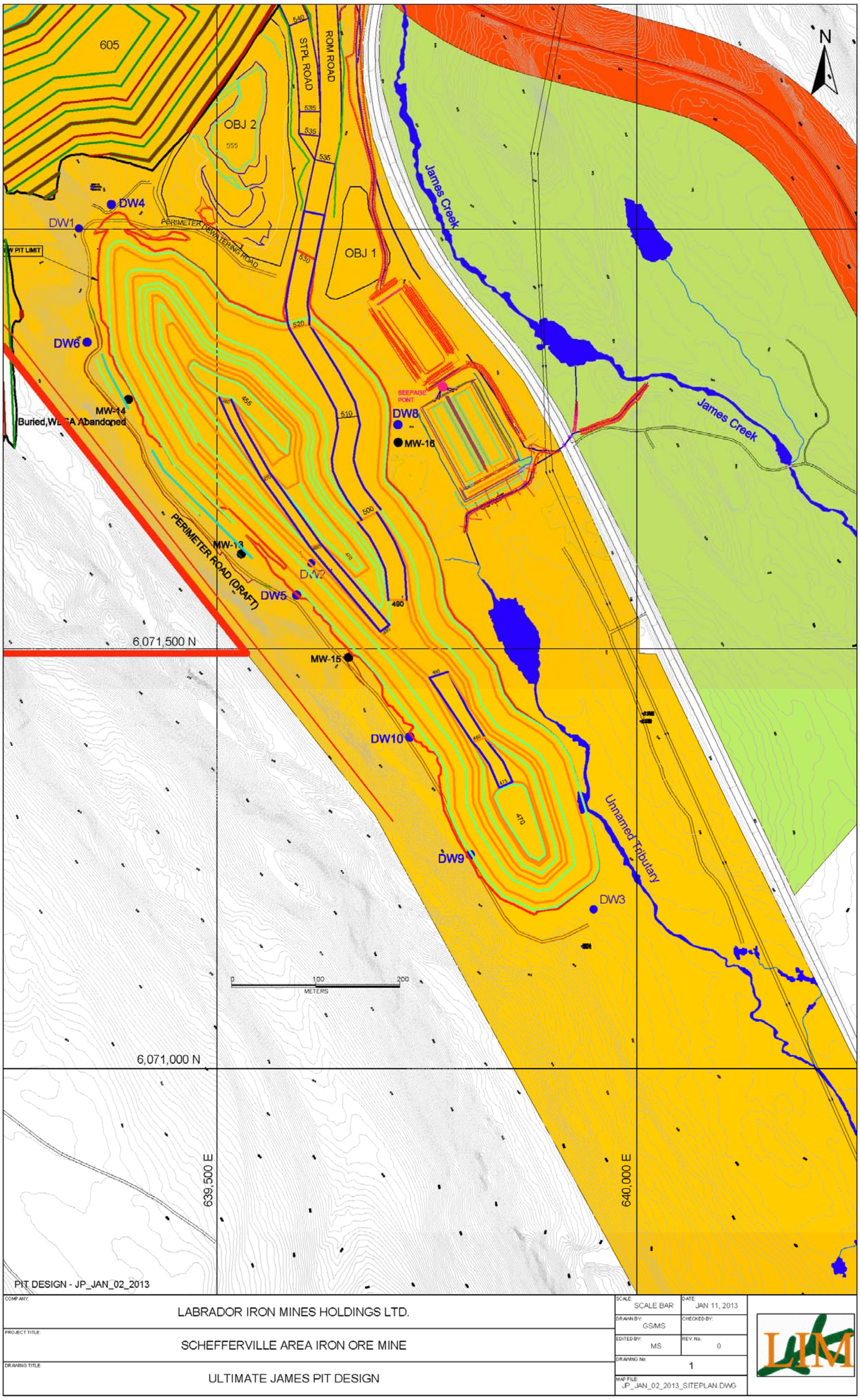

Figure 16-2: Mine Plan for James- End of the Mine Life (2014)

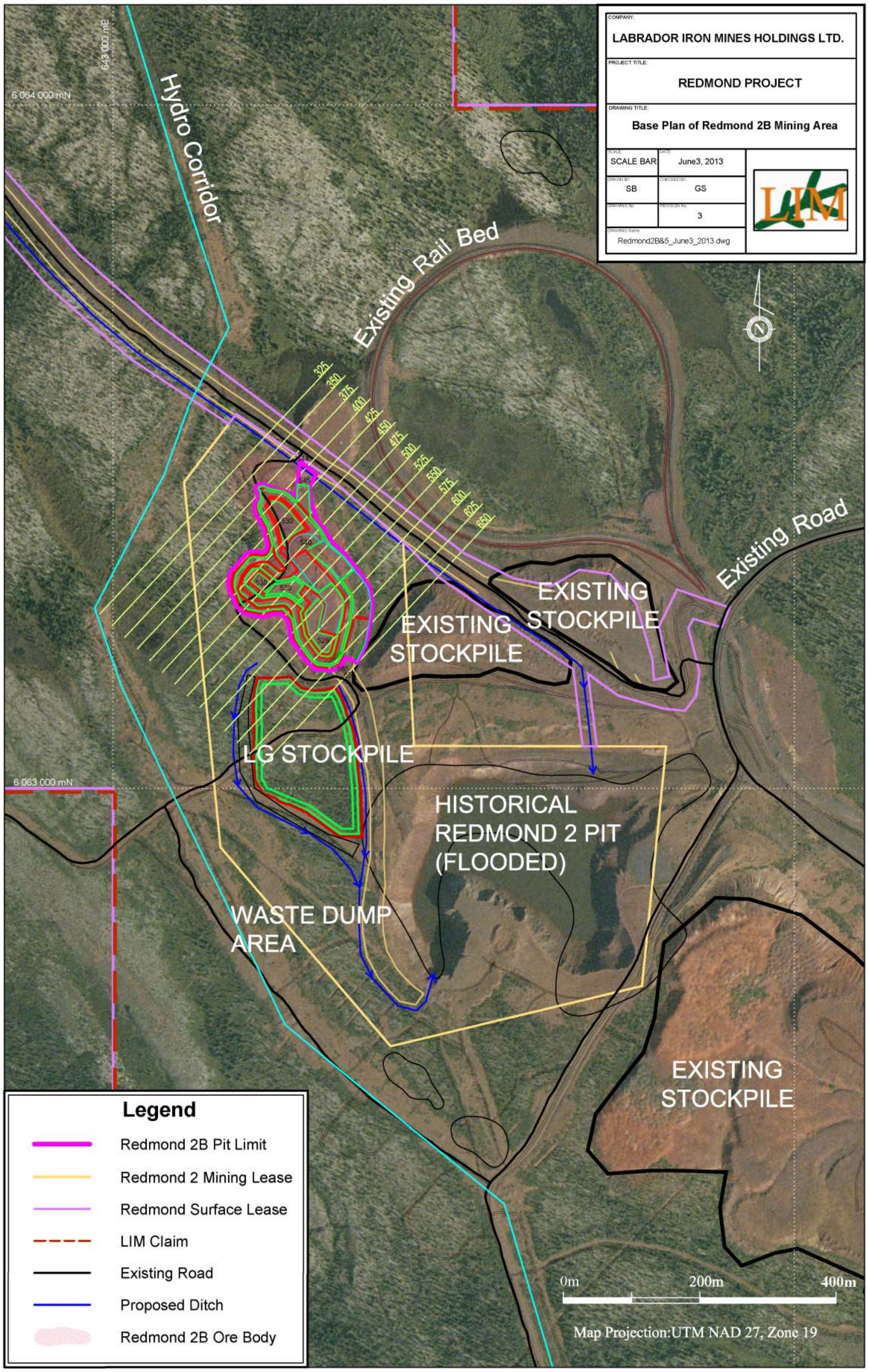

Figure 16-3: Mine Design for Redmond 2B

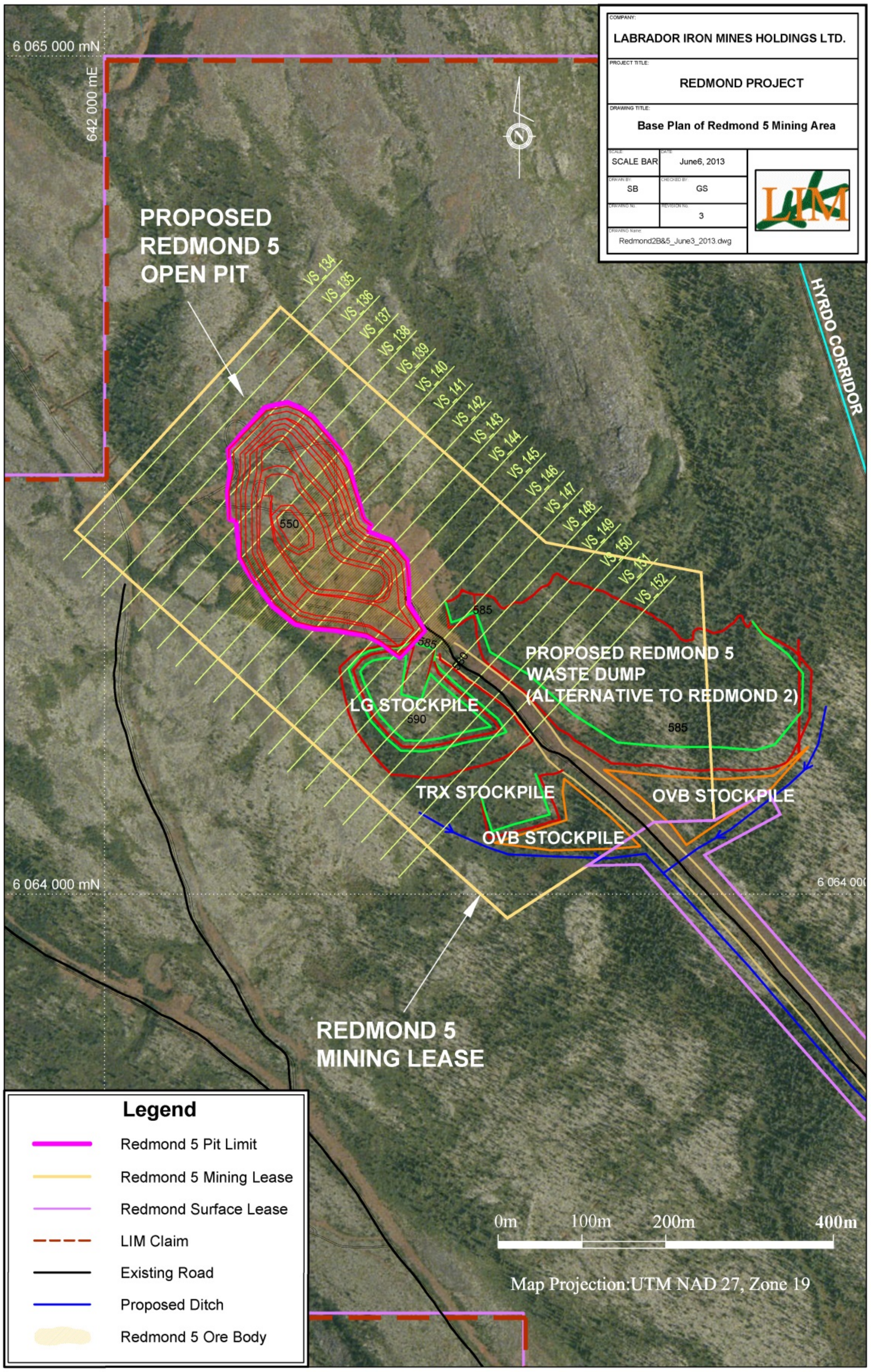

Figure 16-4: Mine Design for Redmond 5

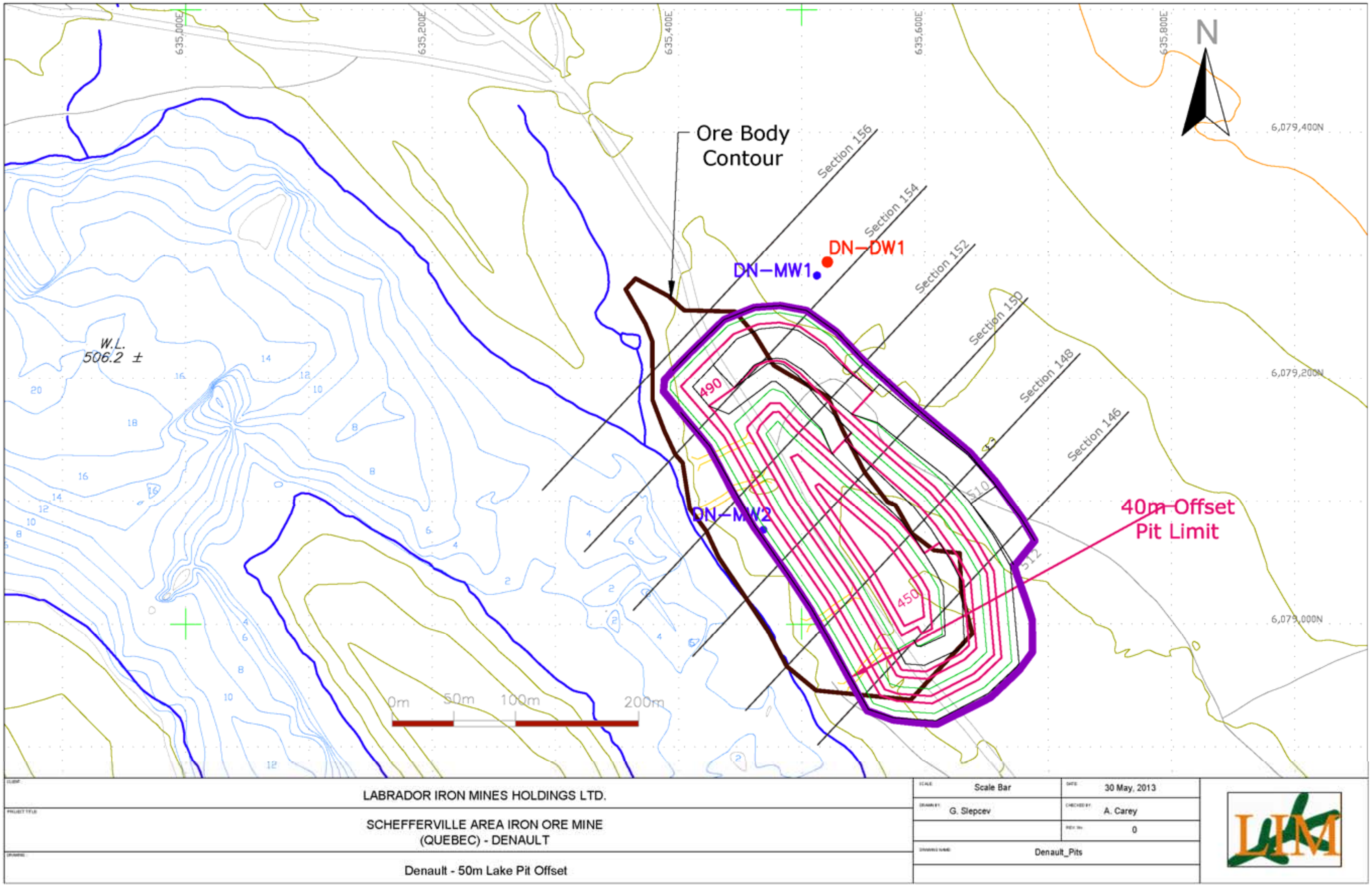

Figure 16-5: Mine Design for Denault Land

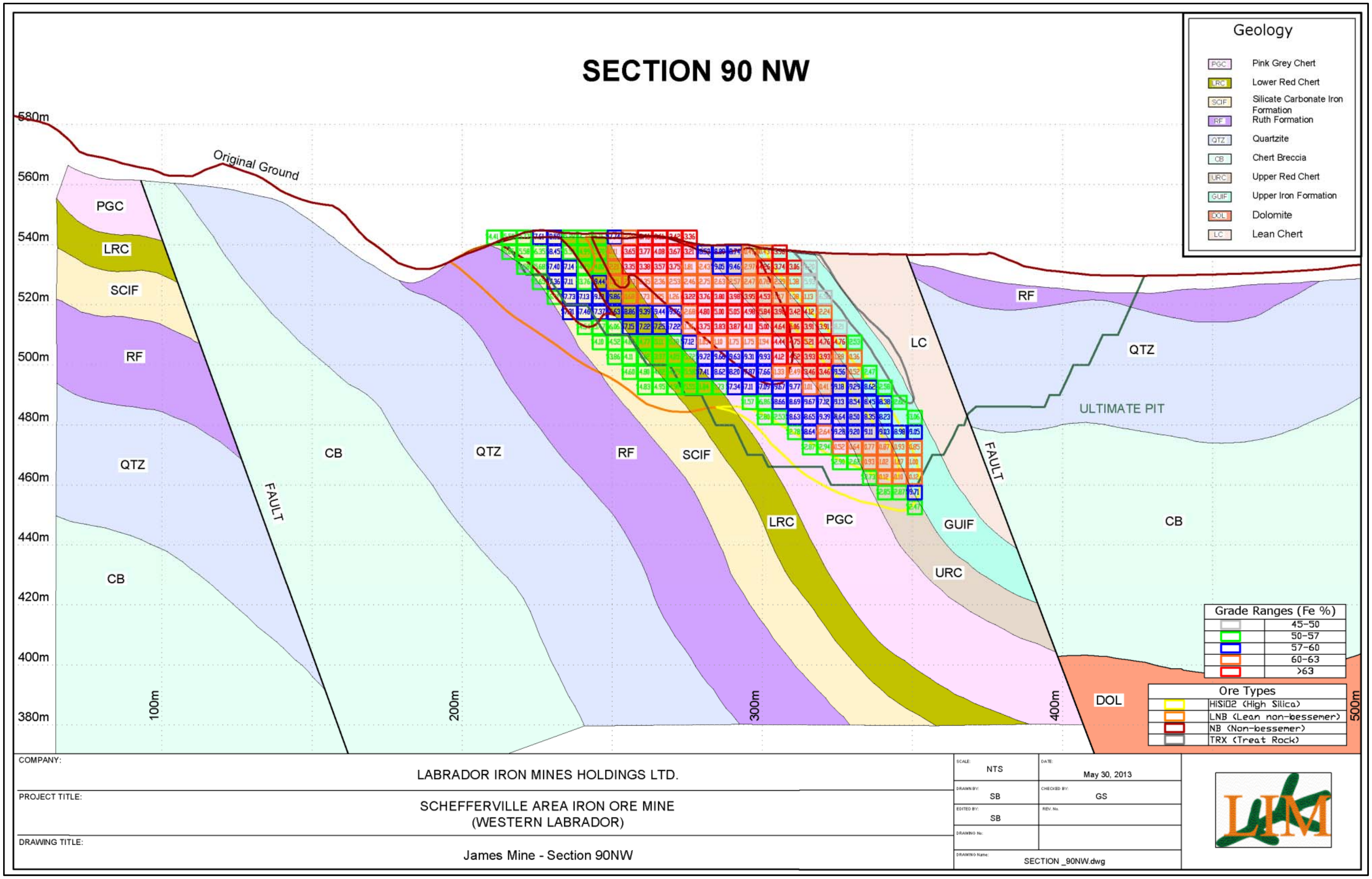

Figure 16-6: James Mine Cross-Section

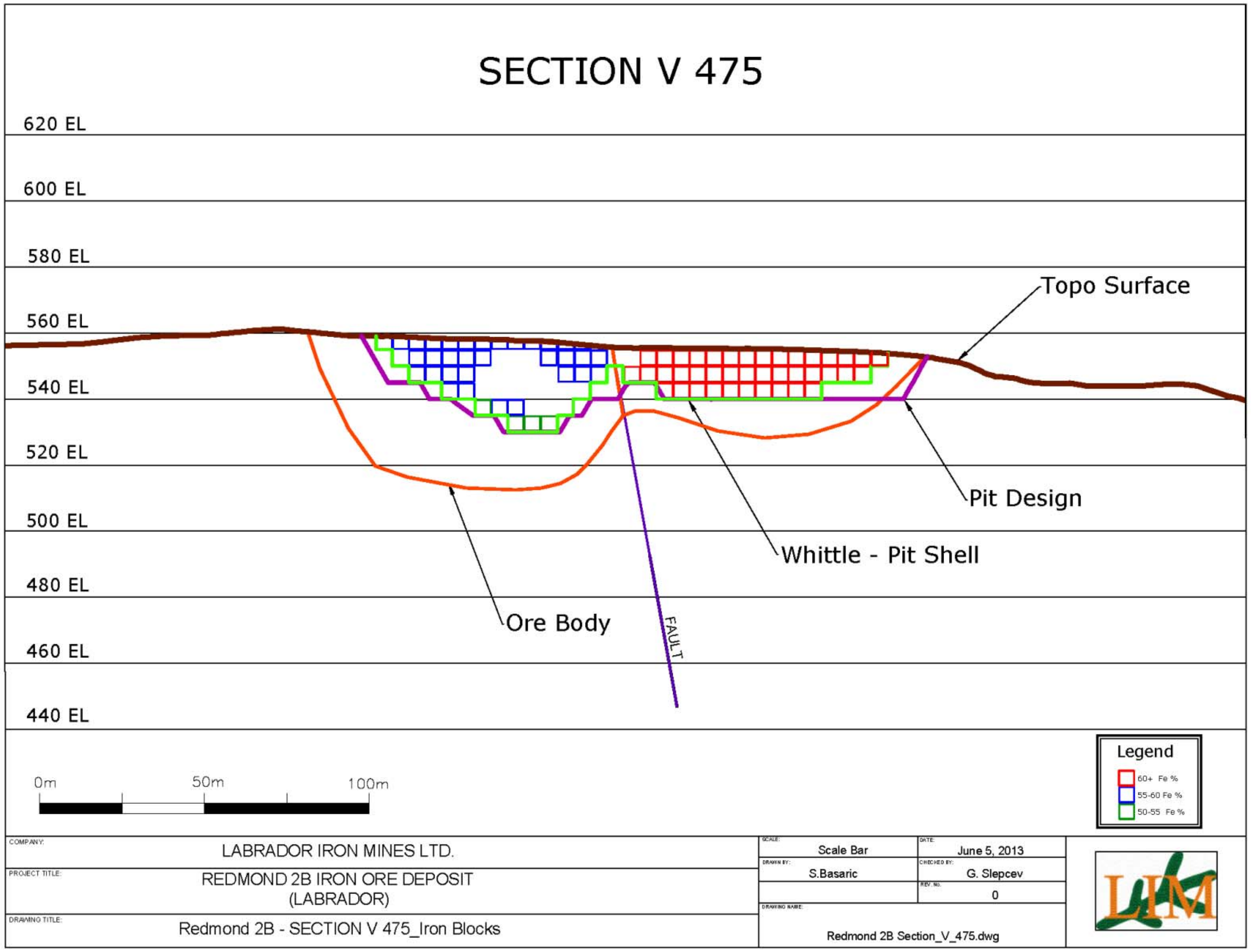

Figure 16-7: Redmond 2B Mine Cross-Section

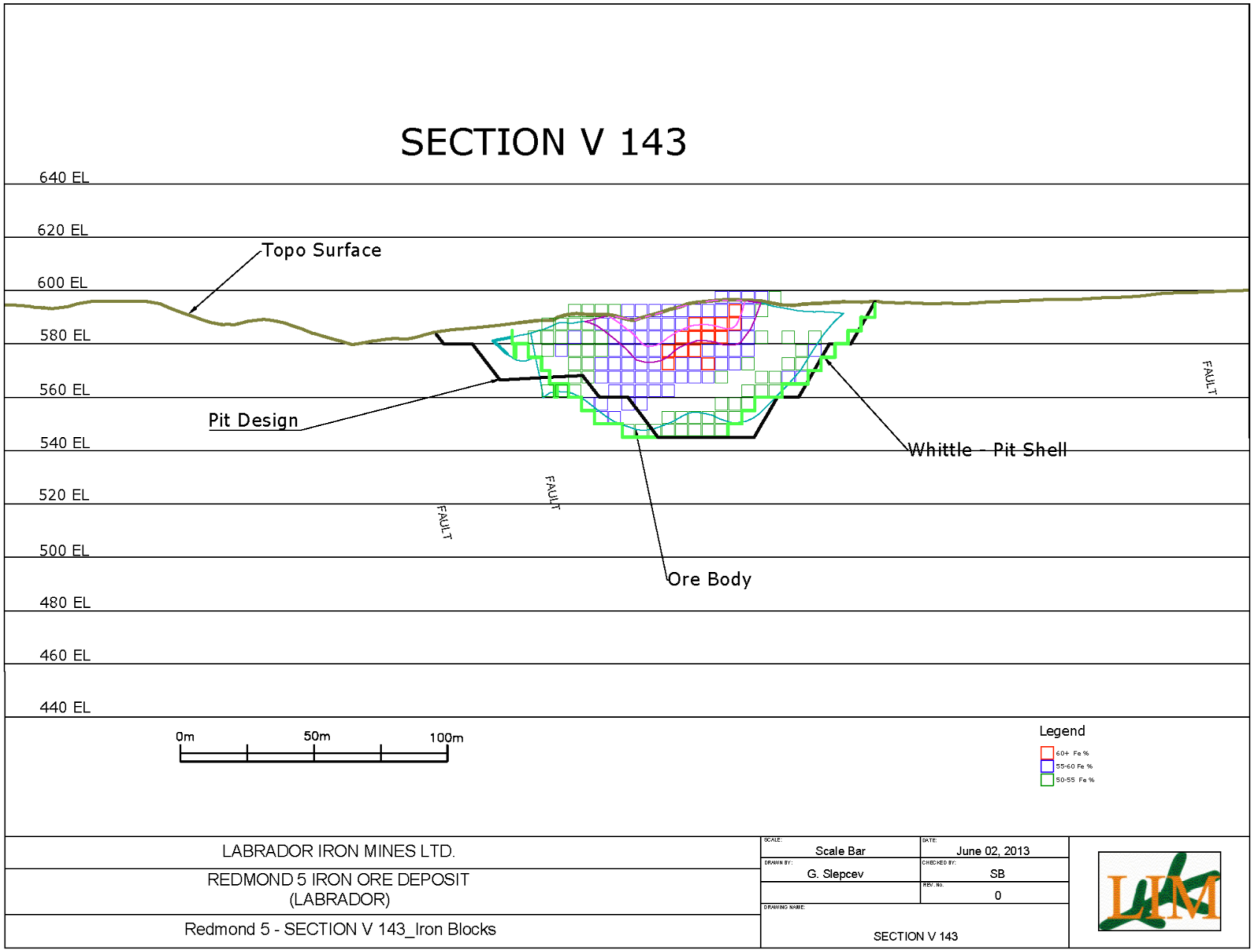

Figure 16-8: Redmond 5 Cross Section

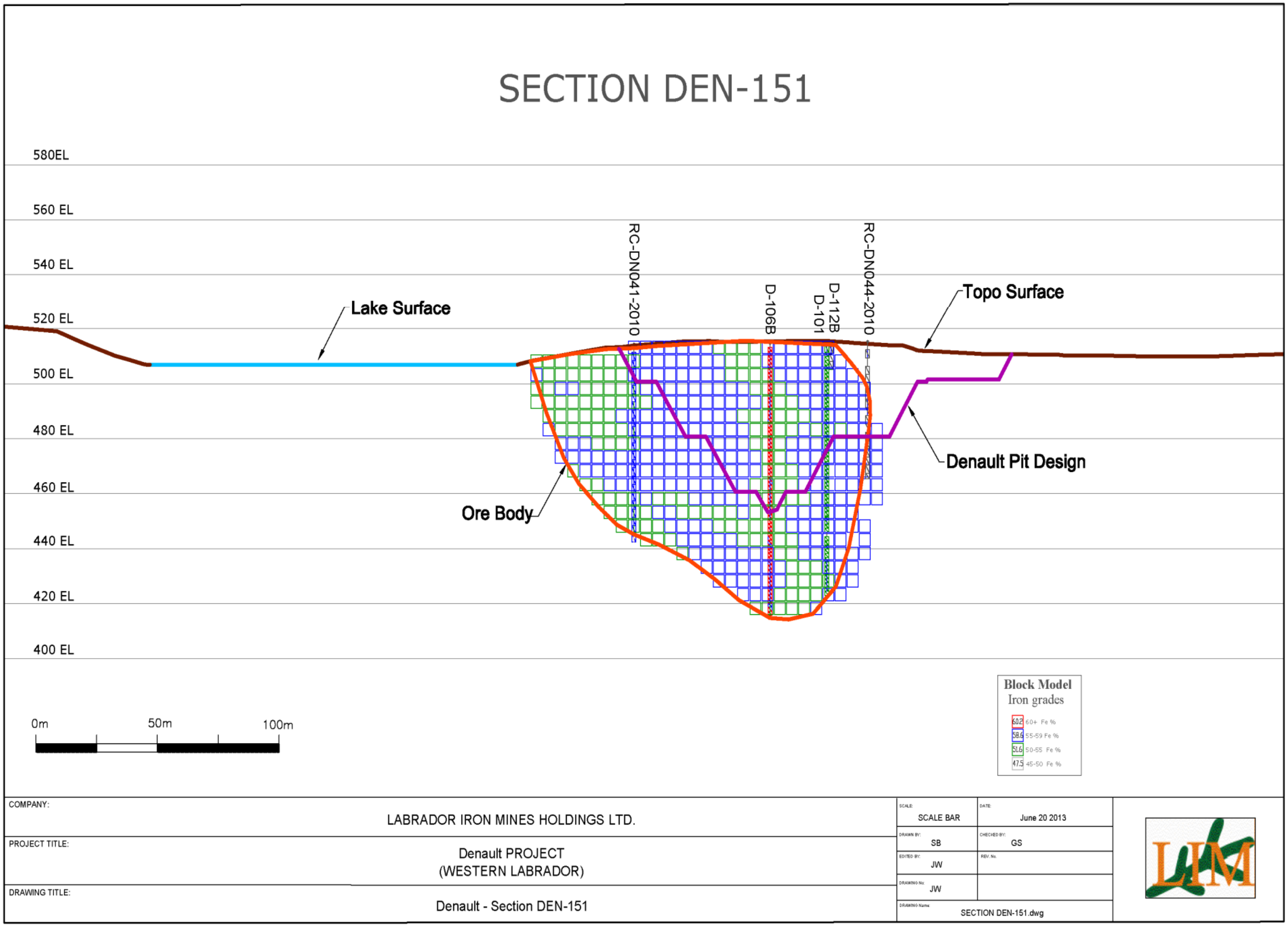

Figure 16-9: Denault Cross-Section

16.8 Waste Rock Management

At James mine waste rock is 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 daily operations may result in run-off water containing suspended solids. As a result, stockpile construction and mine design includes prevention and mitigation strategies for control and treatment of the suspended solids, as required (e.g., ditch blocks, filter cloths, flocculation, etc.).

For the Redmond 2B & 5 projects detailed waste plans and dump design are complete and approved. For the Denault dump design, the plan is not finalized yet as the project is not planned for production until 2016.

16.9 Mining Equipment

The mobile equipment selected for the James mine was based on the required production rate and the open pit geometry. The fleet size is based on the 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 and the equipment fleet used during 2012 production season is listed in Table 16-2.

Table 16-2: Equipment Fleet

Equipment Type	Number of Units
	2012
Excavator	4
Wheel Loader	5
Mine Truck (Off-highway)	10
Track Dozer	1
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

Table 16-3: Equipment Specifications

Equipment	#	Brand	Size
Excavators	1	Komatsu PC 1250	9.25 cubic yard
	1	CAT 390	6.5 cubic yard
Haul Trucks	8	CAT 773	50 Tonne
Water Trucks	1	CAT 773	15,000 gallon
Dozer	2	CAT D8	
Plant/Screener/Rail Loading			
Excavator	1	Komatsu PC 450	2 cubic yard
Loaders	3	CAT 988	8 – 10 cubic yard
	2	CAT 980	8 cubic yard
Grader	1	CAT 16M	

Table 16-4: Mining Equipment Required for the Life of the Project

Equipment Type	Number of Units						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Mine Truck 773G	8	2	3	2	2	-	-
Mine Shovels 390D	2	1	1	2	2	-	-
Haulage Truck - CT660	-	3	7	6	7	4	3
Front End Loader	5	5	5	5	5	5	5
Excavator _Small	1	2	2	2	2	2	2
Track Dozer	2	5	5	5	5	5	5
Motor Grader	1	2	2	2	2	2	2
Float	1	1	1	1	1	1	1
Boom Truck	2	1	1	1	1	1	1
Explosive Truck	1	1	1	1	1	1	1
Pick Up Trucks	10	10	10	10	10	10	10
Fuel/Lube Truck	1	2	2	2	2	2	2
Drill Rig	1	2	2	2	2	2	2
Water Truck	1	2	2	2	2	2	2
Total	36	39	44	43	44	37	36

16.10 Production

16.10.1 Excavation

Excavation is conducted with the types of mobile equipment listed in Table 16-3: Equipment Specifications. Equipment requirements during project life are listed in Table 16-4.

The production schedule for the Silver Yards Processing plant extends to 2019 and is shown in Table 17-2. After depletion of the James mine Redmond 2 and Redmond 5 would be developed. As Redmond 5 starts to decrease production LIM stockpiles would be hauled and processed at Silver Yards, blended with ore from Denault.

16.10.2 Haulage

James ore and waste is hauled with Caterpillar 773 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 highway trucks type CT660 or similar (currently 45T) for haulage to Silver Yard beneficiation area or the rail siding.

Mining at Denault and the Stockpiles would utilize similar equipment as is currently in use at the James mine. Denault and Stockpile ore is planned to be hauled with leased highway trucks. Haulage distances are in the range of 8 to 15 km.

16.10.3 Drilling and Blasting

Drilling is carried for both ore grade/quality control and for blasting purposes when required. The drill pattern size for blasting is usually a 7.5 – 9 m square pattern. Blasting at James is episodic as the deposit is soft in nature. Experience at the James pit indicates much of this ore body is free digging. Any hard areas are being handled by the larger break-out-force excavators. Provision for blasting is available. Blasting is done if necessary with packaged/cartridge type explosives.

16.11 Mine Services

16.11.1 Maintenance Activities

A maintenance/workshop shed and maintenance yard have been provided to conduct routine maintenance and non-major repairs for the mine and beneficiation operations. The yard is equipped with the necessary tools and equipment to maintain the mobile fleet. The workshop is 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.

16.11.2 Road Maintenance

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

16.11.3 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 other 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.

16.12 Pit Dewatering

16.12.1 James Property

The water drawn from the dewatering wells around the James pit is discharged at a rate ranging from 30 to 60 m3/min. A small controlled quantity of water is discharged to the unnamed tributary to maintain flow in the tributary, and the remaining majority of water is discharged to Bean Lake, and/or via James Creek. LIM has received approval to remove 650m of the unnamed tributary in order to expand the pit to the east. Water from dewatering wells is transported by 12" pipeline to an energy dissipation pad and then released south of the James pit to maintain the flow to the creek. This work was completed in April of 2013. Refer to the Figure 16-10 James Unnamed Tributary Relocation Map for the location.

Red water from the James Pit is pumped to the Ruth Pit, where it is treated prior to discharge into the Ruth Pit.

16.12.2 Redmond

The 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, overflow can be prevented.

16.12.3 Stockpiles

Dewatering is not required for stockpiles, but storm water will be managed during excavation, under a surface water management plan.

16.12.4 Denault

The Denault deposit is located in close proximity to Denault Lake. A water management plan will be put in place with pit perimeter dewatering wells and surface water collection systems. One dewatering and 6 monitoring wells (two clusters of three) were drilled in the summer of 2011 to collect hydrogeological information. Pumping tests indicated a rate of about 100 US gpm for 72 hours. Refer to Figure 16-5: Mine Design for Denault locations of the dewatering wells.

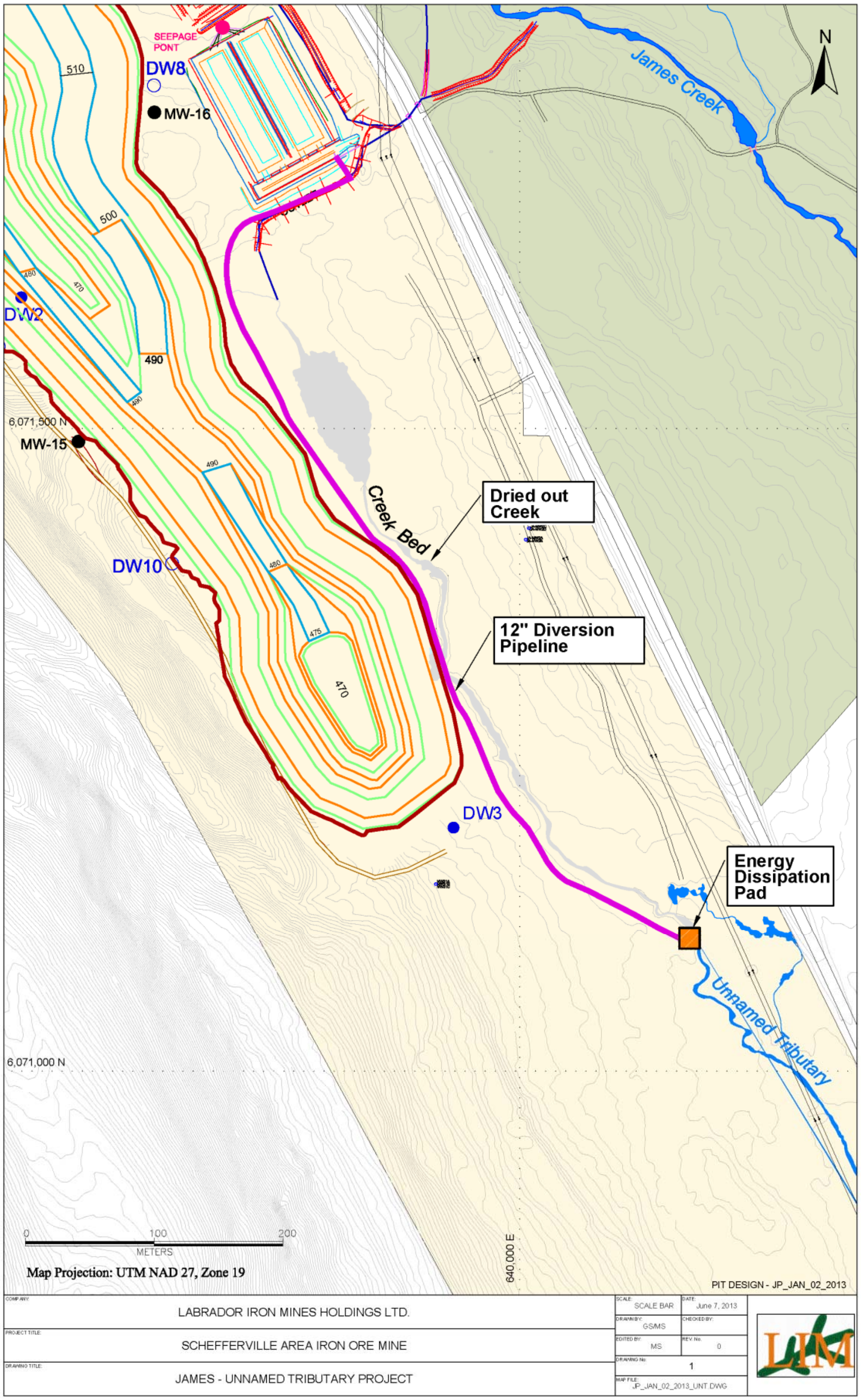

Figure 16-10 James Unnamed Tributary Relocation Map

16.13 Technical Services

16.13.1 Grade Control

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

16.13.2 Mine Engineering

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

16.13.3 Geotechnical Monitoring

Pit slopes are monitored with simple surveying techniques and with extensometers as required. A geotechnical consultant is engaged to visit the mine regularly. Geology and survey staff will monitor and map as required. A detailed independent geotechnical assessment of the open pit was conducted in 2012 after the successful completion of a core drilling program in August. No significant geotechnical events have occurred since the start of mining operations in June 2011.

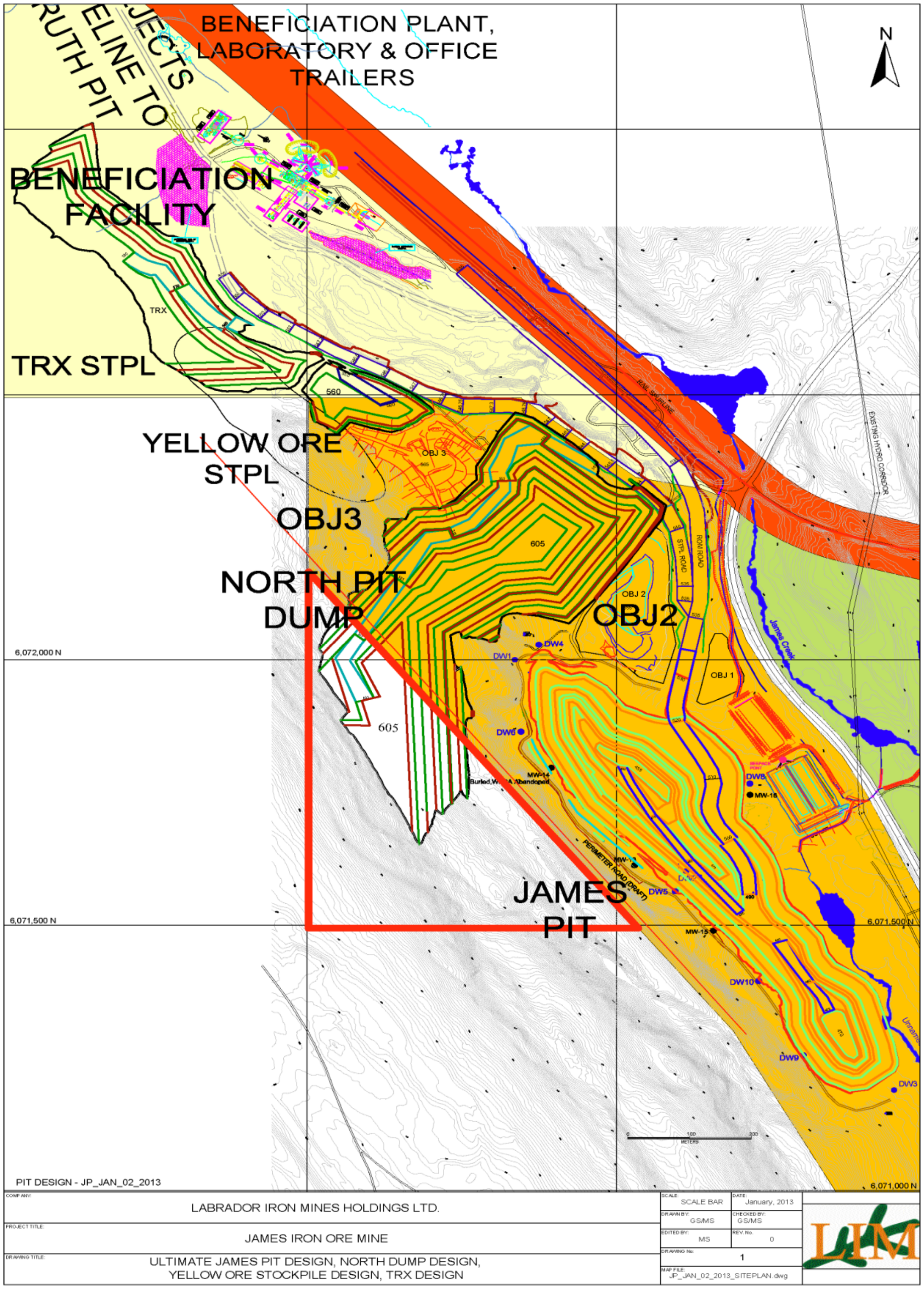

Figure 16-11: Mining Methods – James Open Pit Plan

17. Recovery Methods

17.1 Process Design

The process design is based on mineralogy and equipment testing performed as described in Section 13. The Silver Yards plant is installed at the former Silver Yards marshalling area, just north of the James North deposit. See Figure 17-1: Silver Yards Processing Plant Plan for the flow-sheet.

LIM currently employs two separate process streams for mined ore depending on the FE head grade of the ore mined. There is a dry and a wet process stream. See Figure 17-2: Flow Sheet.

The dry crushing and screening process is used to classify higher grade ores (>58% Fe, avg. 62% Fe). The wet process (crushing, scrubbing, screening, hydrosizing, magnetic separation, filtration) is use to upgrade lower grade ores (< 58% Fe) into products that are over 62% Fe in content.

The dry process operates from April through November. The wet process plant operates from May through October. The seasonal operation is dictated by the freezing of finer iron ore products. No chemicals are used in the processes. Laboratory testing and flowsheet development was completed by SGS Lakefield prior to design installation and operation of the wet plant.

The 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.

17.1.1 Silver Yards Plant

The wet 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 was to only wash and screen the higher grade blue ore material, while higher silica blue and the yellow ore was stockpiled for later treatment. See Figure 17-3: Process Flowsheet for the process flowsheet.

Commissioning of the Wet Plant commenced in April 2011 and production started in June 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 overall downtime time of the Plant during the short summer season 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.

The Silver Yards Plant is being upgraded and expanded in Phases to improve recoveries, treat lower grade and higher silica ores and increase throughput and output.

Phase II consisted of the installation of a fines recovery system, including a Floatex Density Separator on the (-600μm +150μm) fraction and a FLSmidth Pan Filter to dry the product to a moisture of <8%. This installation was completed during the summer of 2011.

Phase III of Silver Yards Plant involves the installation of an additional parallel process stream similar to the 2 existing lines which will increase the plant throughput capacity. Additionally a Wet High Intensity Magnetic Separator on the slimes fraction to produce ultra-fines, which will be combined with the final sinter fines product. This will improve the overall concentrate recovery. 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. See Figure 17-5: Silver Yards Process Flowsheet – Phase III.

This work was carried out during 2012. Completion of the Phase III expansion was deferred in late 2012 but it has resumed again in April 2013 and is commissioned in June 2013.

The process nameplate through-put for combined phases I and II is 400 tonnes per hour. Mechanical availability is approximately 85%, yielding an operating rate of approximately 8,000 tpd. Mass yield for phases I and II combined is approximately 60% – 63%, producing lump and sinter fines. Ultra fines are added back into the sinter fines for final shipment.

The process nameplate through-put for combined phases I, II and III is 600 tonnes per hour. Mechanical availability is expected to be approximately 85%, which will yield an operating rate of 12,000 tpd. Mass yield for the combined three phases is expected to be approximately 75% to 80%, producing lump and sinter fines. Ultra fines will be added back into the sinter fines for final shipment.

The through-put capacity of the dry classifying system with two lines in operation is 1,000 tonnes per hour or approximately 20,000 tonnes per day at mechanical availability of approximately 85%. One line provides crushing and screening, while the other line is used for screening only. Mass yield of higher grade ores (>58% Fe) is approximately 100% while mass yield for lower grade ores (<58% Fe) is approximately 65%. The rejects from the dry process can be processed in the wet plant for secondary recovery.

17.2 Products Specification

Product specifications for the James ore body are described in Table 16-1: Silver Yard Product Mix and Specifications.

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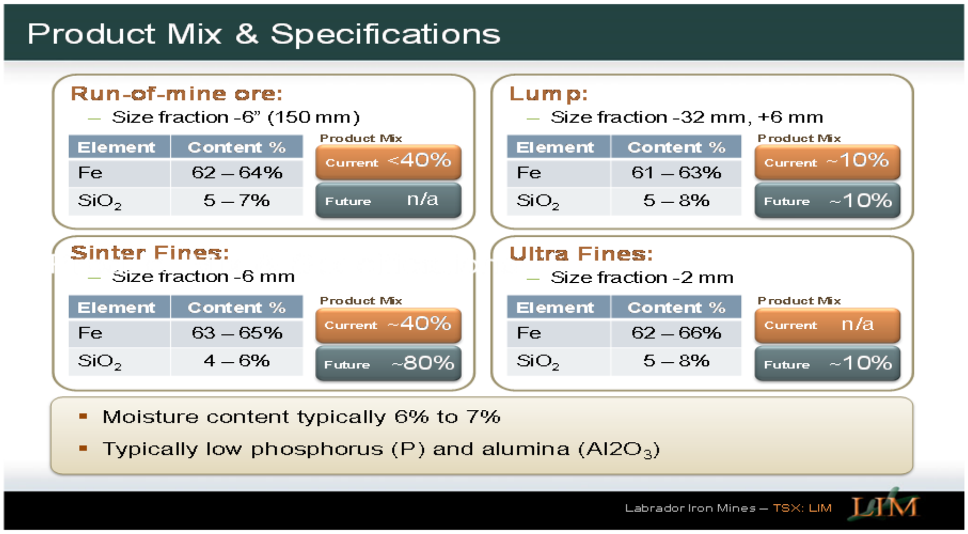
Table 17-1: Silver Yard Product Mix and Specifications



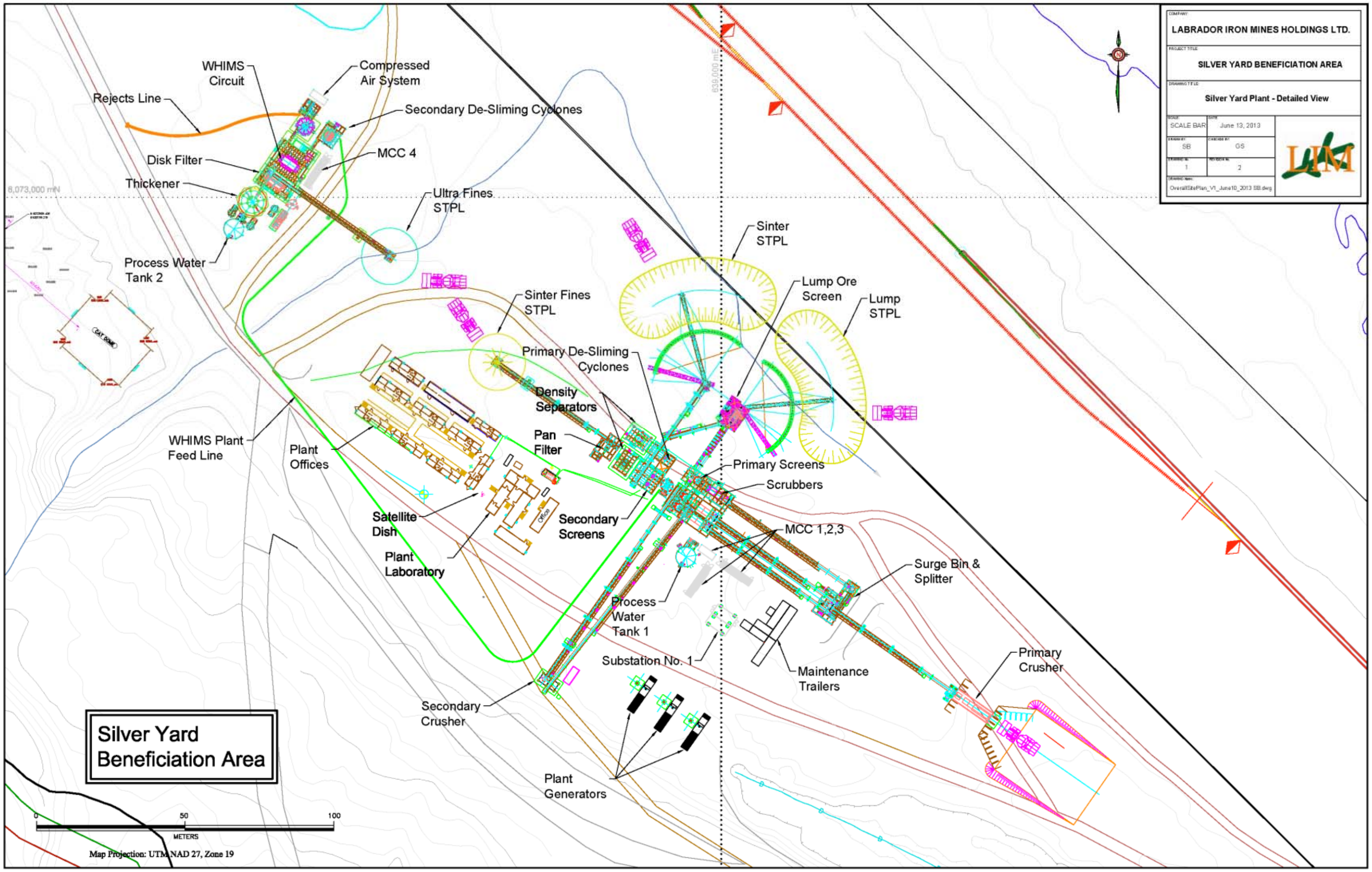


Figure 17-1: Silver Yards Processing Plant Plan

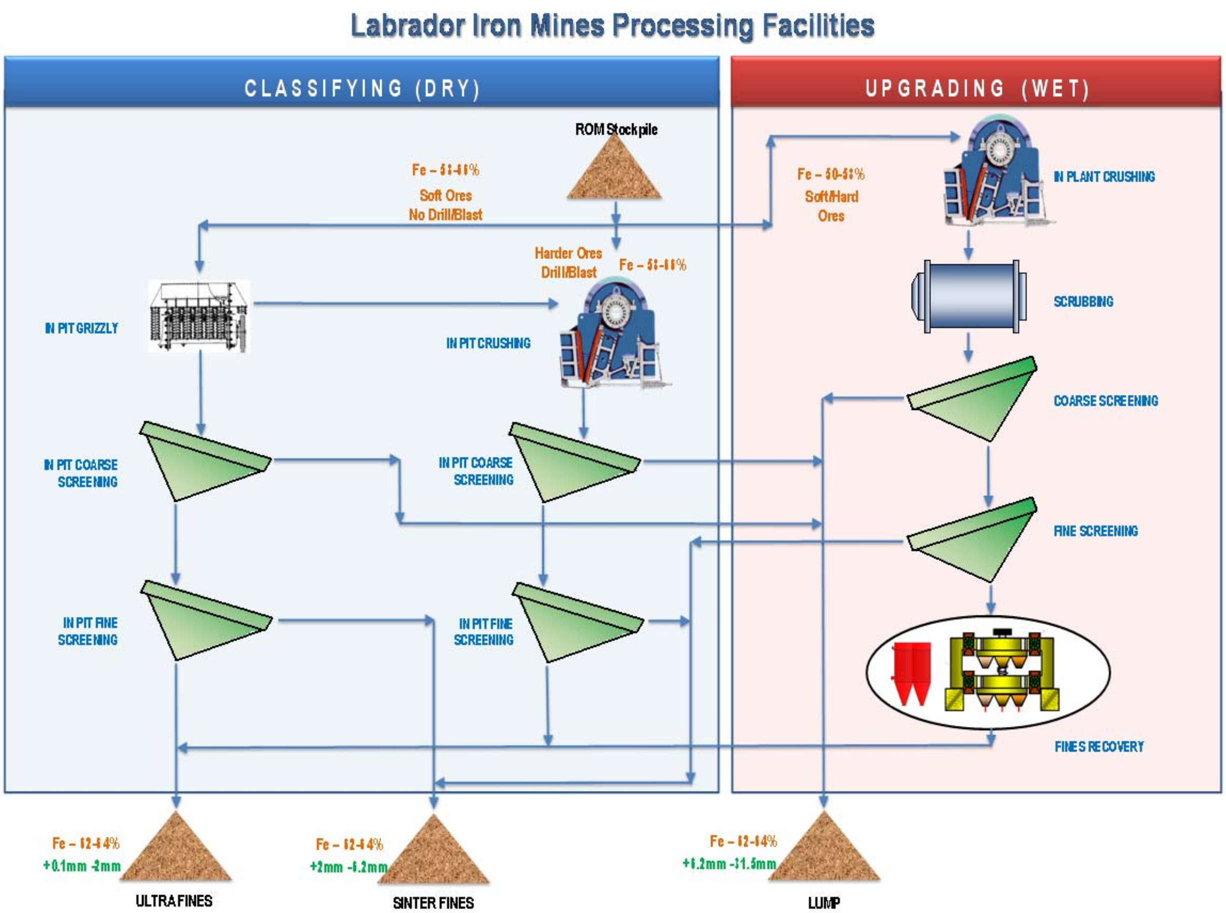


Figure 17-2: Flow Sheet

17.3 Process Description and Flowsheet – Wet Plant – Phase I and II

The process flowsheet consists of the following areas: See Figures Figure 17-3: Process Flowsheet and Figure 17-4: Silver Yards Processing Plant Flowsheet – Phase II.

17.3.1 Primary Crushing Area

The ROM ore from the pits is 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 has a top size of 600 mm. Approximately 50% of the feed bypass the primary crushing as it is already be minus 100 mm. The primary crushing plant is not enclosed.

17.3.2 Tumbling Scrubbers Area

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

17.3.3 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, -25 mm) is conveyed to the Lump Ore screening area, while the (-1 mm) from the bottom deck is sent to the Secondary Screening circuit.

17.3.4 Lump Ore Screening Area

The oversize of the second deck from the Primary Screens (+1 mm, -25 mm) is 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) is stockpiled via a stacking conveyor as a final Lump product. The screen undersize (+1 mm, -8 mm) along with the oversize of the Secondary Screens is transported via a stacking conveyor to a stockpile as a final Sinter Fines product.

17.3.5 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 is re-circulated back to the primary screening circuit.

17.3.6 Secondary Screening Area

The undersize (-1 mm) from the primary screening circuit is pumped to the secondary screening circuit. It consists of two four deck and one five 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 screens is conveyed to the Sinter Fines Stockpile.

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

17.3.7 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 two twin 6' x 6' Floatex Density Separators model LPF-1830 HM and the secondary cyclones underflow along with the Density Separator overflows reporting to the WHIMS. The undersize material (-100 μm) from the Floatex Separators is dewatered in a 4,000 mm dia., 10m2 filtering area FLSmidth Dorr-Oliver Heavy Duty Horizontal Pan Filter type HPF 10m2 to a moisture of approximately8% and then stockpiled as a Sinter Fines product. The water from the filter is pumped to the reject rock disposal area.

17.3.8 WHIMS Area - Wet Plant Expansion and Upgrade – Phase III

LIM has expanded and upgraded the Silver Yards Plant by the installation of additional equipment and a new processing line in 2011 and 2012. The additional line consists of a Tumbling Scrubber, Primary and Secondary Screening, Wet High Intensity Magnetic Separator (WHIMS), De-sliming Cyclones, Hydrosizer, and Vacuum Disc Filter to produce Sinter Fines and Ultra Fines products.

A Wet High Intensity Magnetic Separator (WHIMS) will be commissioned in June 2013 to further process the (-150 μm, +20 μm) overflow of the Floatex Separator and the underflow of the Secondary De-sliming Cyclone to produce a third product – Ultra Fines. The product will be subsequently dewatered in a Vacuum Disc Filter See Figure 17-5: Silver Yards Process Flowsheet – Phase III

17.3.9 Product Storage

The iron ore products from the beneficiation process are conveyed from the plant to the respective radial stackers. The lump ore product and the sinter fines products are stockpiled separately. An area of approximately 4,300 m2 is available for clean ore storage providing total capacity of approximately 20,000 tonnes. Drainage from the ore stockpiles is managed through site grading and ditching.

17.3.10 Rejects Disposal Area

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

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

- The reject fines slurry is 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.

17.3.11 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 are fusion (lithium metaborate) followed by XRF spectrometry.

17.3.12 Rail Loadout Area

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

17.4 Process Recoveries – Silver Yard Plant

17.4.1 Silver Yard Plant

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

Lump	15.0%
Sinter Fines	30.0%
Total Recovery 45.0%	

17.4.2 Phase II – Additional Equipment

The inclusion of the density separation and the filtering process is planned 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. Experience in 2011 and 2012 indicates these recoveries are practical.

Lump	15.0%
Sinter Fines	48.0%
Total Recovery	63.0%

17.4.3 Phase III – Expansion

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 75% to 80%, based on tests of the blue ore only.

Lump	15%
Sinter Fines	48%
Ultra Fines	17%
Total Recovery	80%

The current process parameters are estimated based on of the equipment test results and operating experience for the blue ore and assume the high silica ores will be more difficult to process compared to the standard blue ore.

17.5 Recovery Methods – Silver Yards Wet Plant (Upgrading)

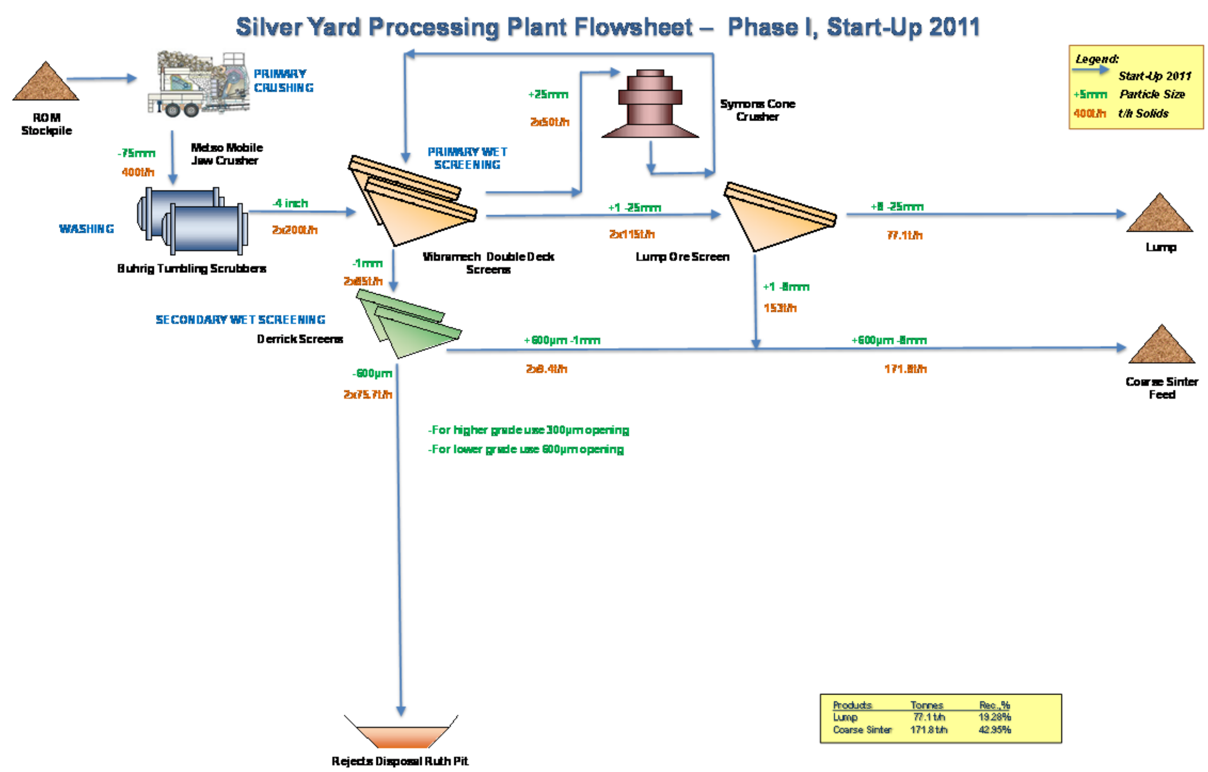


Figure 17-3: Process Flowsheet

17.6 Recovery Methods – Silver Yards Wet Plant (Upgrading)

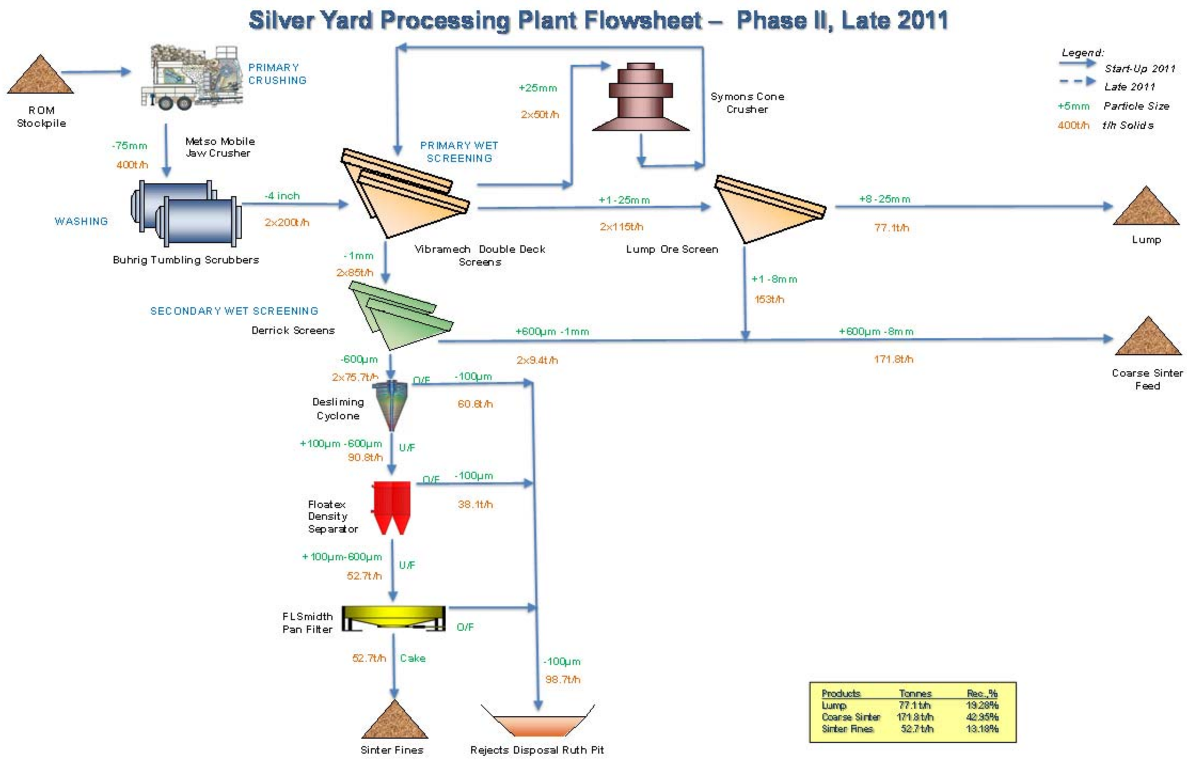


Figure 17-4: Silver Yards Processing Plant Flowsheet – Phase II

17.7 Recovery Methods – Silver Yards Wet Plant (Upgrading)

The third phase of the plant has been commissioned in June 2013.

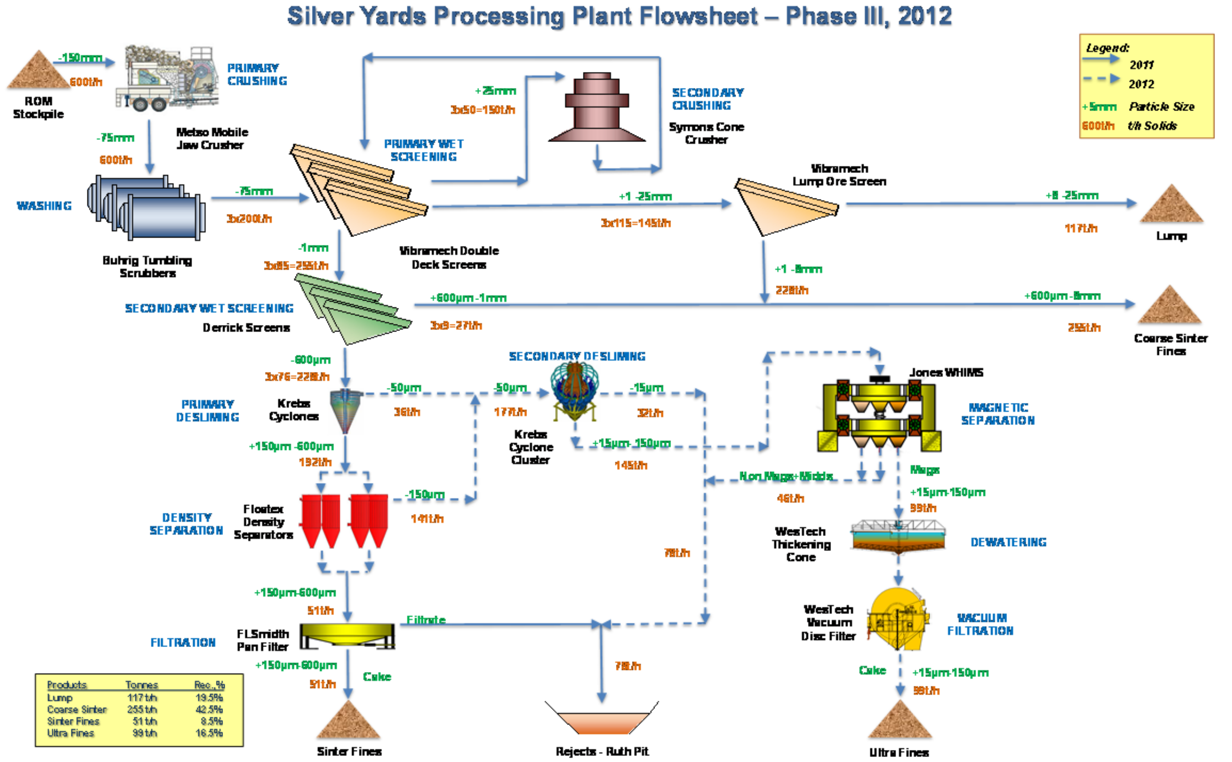


Figure 17-5: Silver Yards Process Flowsheet – Phase III

17.8 Recovery Methods – Silver Yards Wet Plant (Upgrading)

Process through-put is 9,600 tonnes per day (nameplate) for combined phases I and II. Mechanical availability is approximately 85%, yielding an operating rate of approximately 8,000 tpd. Mass yield for phases I and II combined is approximately 60%, producing lump and sinter fines. Ultra fines are added back into the sinter fines for final shipment. Process through-put is 14400 tonnes per day (nameplate) for combined phases I, II and III. Mechanical availability is approximately 85%, yielding an operating rate of 12,000 tpd. Mass yield for the combined three phases is approximately 75% to 80%, producing lump and sinter fines. Ultra fines are added back into the sinter fines for final shipment. Rejects from the wet process are disposed of in the Ruth Pit to the north.

17.9 Recovery Methods – Silver Yards Dry Plant (Classifying)

Process through-put is 20,000 tonnes per day, with two lines in operation. One line provides crushing and screening, while the other line is for screening only. Higher grade ores (>58% Fe) have a mass yield of approximately 100%. Lower grade ores (<58% Fe) have a mass yield of approximately 65%. The rejects can then be processed in the wet plant for secondary recovery.

17.10 Recovery Methods – Silver Yards Dry Plant (Classifying)

Scheduled annual lump and sinter sale numbers are shown in Figure 17-6 below.

Figure 17-6 : Scheduled Lump and Sinter Product Output at Silver Yard Plant

Table 17-2: Production Schedule

DESCRIPTION		TOTAL	2013	2014	2015	2016	2017	2018	2019
	Process feed	10,234,841	1,381,104	1,651,320	1,651,320	1,651,320	1,651,320	1,651,320	597,137
	Silver Yard	9,722,765	1,912,600	607,747	1,651,320	1,651,320	1,651,320	1,651,320	597,138
	Number of months		4	5.5	5.5	5.5	5.5	5.5	2.0
	Number of days		138	165	165	165	165	165	60
	Production capacity		83%	83%	83%	83%	83%	83%	83%
	Plant capacity - Daily		12,000	12,000	12,000	12,000	12,000	12,000	12,000
	Plant Feed (effective) - Daily		10,008	10,008	10,008	10,008	10,008	10,008	10,008
	Plant feed - Yearly		1,381,104	1,651,320	1,651,320	1,651,320	1,651,320	1,651,320	597,137
	Plant feed - Yearly		0	0	0	0	0	0	0
	ROM	**10,444,141**	**2,186,825**	**946,072**	**1,760,146**	**1,651,320**	**1,651,320**	**1,651,320**	**597,138**
	Low Grade - WET Process Feed	**9,722,765**	**1,912,600**	**607,747**	**1,651,320**	**1,651,320**	**1,651,320**	**1,651,320**	**597,138**
	High Grade - DRY Process Feed	**721,376**	**274,225**	**338,325**	**108,826**	**0**	**0**	**0**	**0**
	TOTAL RESOURCE		2,186,825	946,072	1,760,146	1,651,320	1,651,320	1,651,320	597,138
	CENTRAL ZONE	9,722,765	1,912,600	607,747	1,651,320	1,651,320	1,651,320	1,651,320	597,138
		721,376	274,225	338,325	108,826	0	0	0	0
PF	Denault 1 Land	2,653,217			321,119	1,651,320	680,778	0	0
DRO		0							
Waste		*2,384,743*	*0*	*0*	*288,626*	*1,484,226*	*611,891*	*0*	*0*
PF	LIM Stock Piles QC	2,068,000						1,470,862	597,138
DRO		0							
Waste		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
PF	James Mine	1,914,750	1,912,600	2,150	0				
DRO		312,550	274,225	38,325					
Waste		*3,968,261*	*3,896,149*	*72,112*	*0*	*0*	*0*	*0*	*0*
PF	LIM Stock Piles NL	1,151,000					970,542	180,458	0
DRO		0							
Waste		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	TOTAL WASTE	5,595,030	3,138,175	72,112	288,626	1,484,226	611,891	-	-
SOUTH-CENTRAL ZONE									
	Redmond 2B+5	1,935,798		605,597	1,330,201	0	0	0	0
		408,826		300,000	108,826	0	0	0	0
		3,600,826	*0*	*1,390,798*	*2,210,028*	*0*	*0*	*0*	*0*
	TOTAL WASTE	3,600,826	-	1,390,798	2,210,028	-	-	-	-
	PRODUCT SHIPPED - SOLD	**8,898,794**	**1,944,000**	**1,576,815**	**1,331,260**	**1,155,924**	**1,204,451**	**1,238,490**	**447,853**
	Lump	489,552	262,000	155,601	71,951	0	0	0	0
	Sinter	8,409,241	1,682,000	1,421,214	1,259,309	1,155,924	1,204,451	1,238,490	447,853

Legend: **Infrastructure** Full year

Environmental and Infrastructure Full year

Production Begins

18. Project Infrastructure

The James Mine, together with a number of smaller satellite deposits and some historical stockpiles within an appropriate 15km radius of those Labrador deposits closest to the current Silver Yards infrastructure, are planned to be brought into production as the first of a series of contemporaneous direct shipping ore projects. Refer to the Table 17-2 for detailed schedule.

Beneficiation takes place at the plant at the Silver Yards area. A rail spur has been re-established along a pre-existing rail-bed to connect Silver Yards to the main TSH railway. Construction activities were completed in March 2011, with commissioning in April 2011. Commercial production commenced in April 2012. Figure 17-1 displays mayor features of the project.

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 carried out using conventional open pit mining methods, employing drilling and blasting operations if required;
- ore 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 wet plant with a primary crusher, tumbling scrubber, secondary crusher, primary screening equipment, secondary screening equipment, magnetic separation, filtration equipment, and various chutes, conveyors, and pumps;
- the beneficiation plant also includes a dry process with crushing and screening systems installed;
- other buildings at the Silver Yards include: site offices, laboratory, maintenance shed, and warehouse facilities;
- subsequent to the washing and screening process, reject fines are pumped via pipeline to be deposited in Ruth Pit, a flooded historical open pit, which acts as a settling pond to remove suspended solids; and
- a rail spur line previously operated and abandoned has been reconstructed, and a siding track laid at the Silver Yards area.
- high voltage project with a goal of connecting Silver Yard to the electrical grid is under the way and is expected to be finished by July 2013.

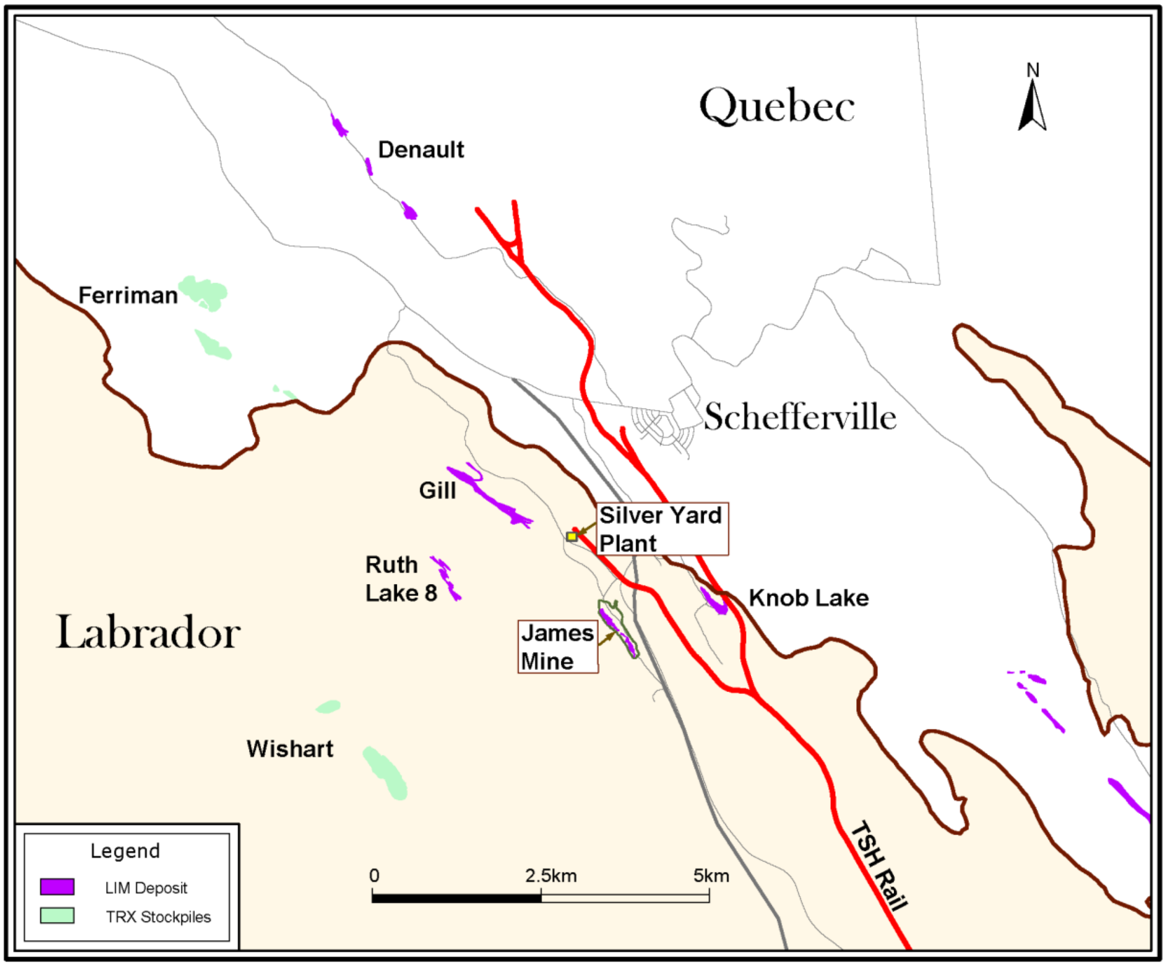


Figure 18-1: Project Features

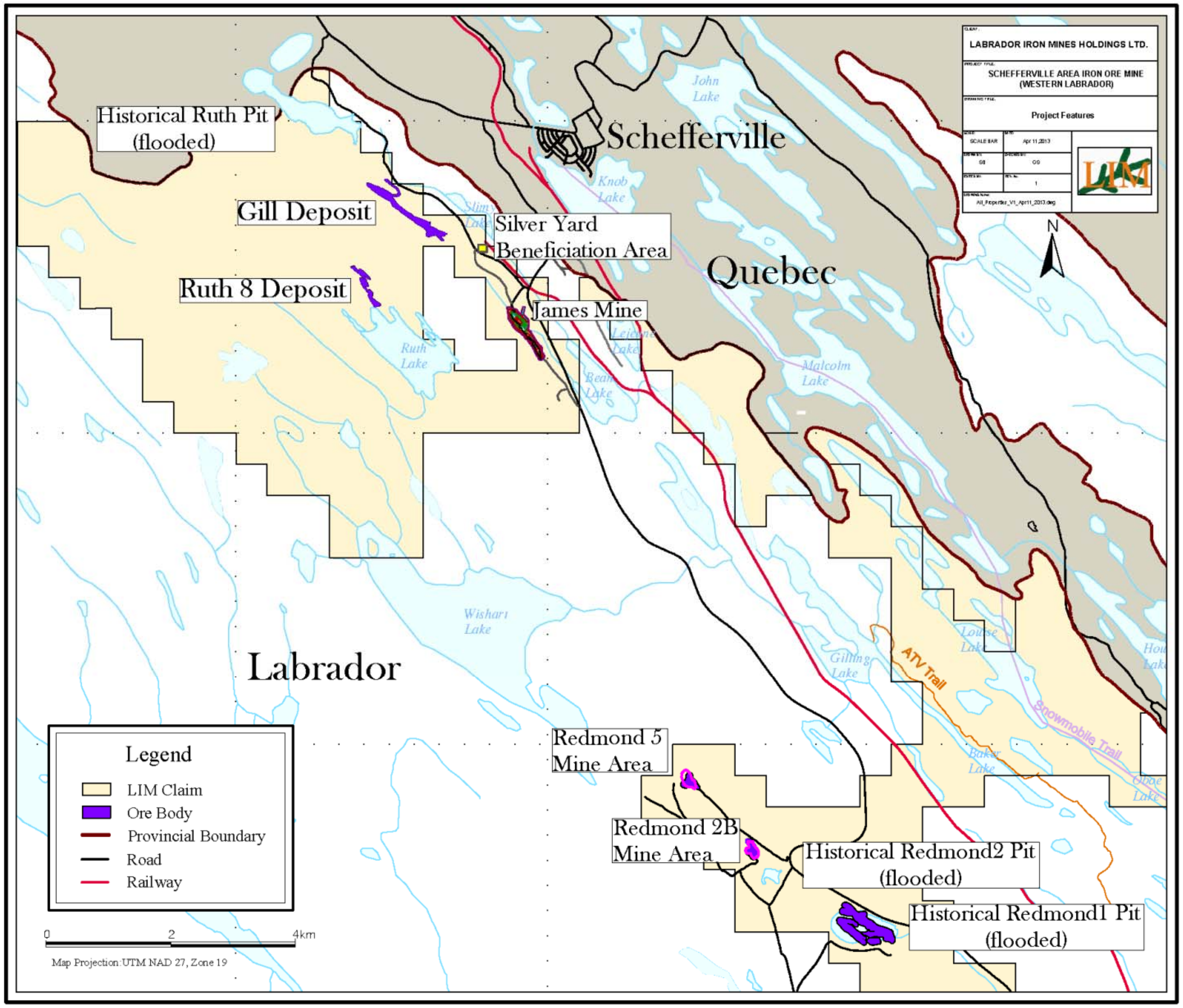


Figure 18-2: Silver Yards Project Infrastructure

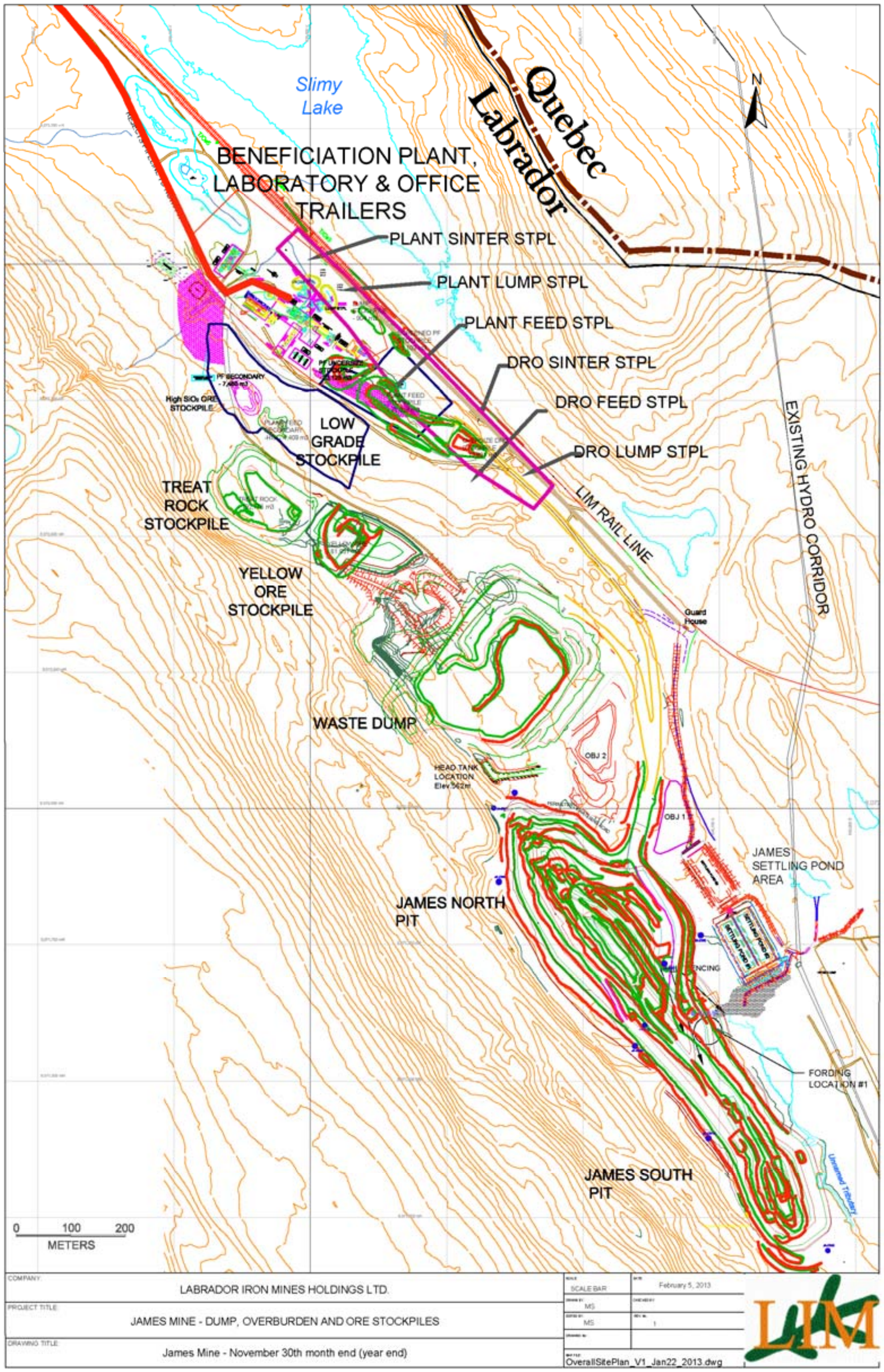


Figure 18-3: James Pit and Silver Yards Infrastructure

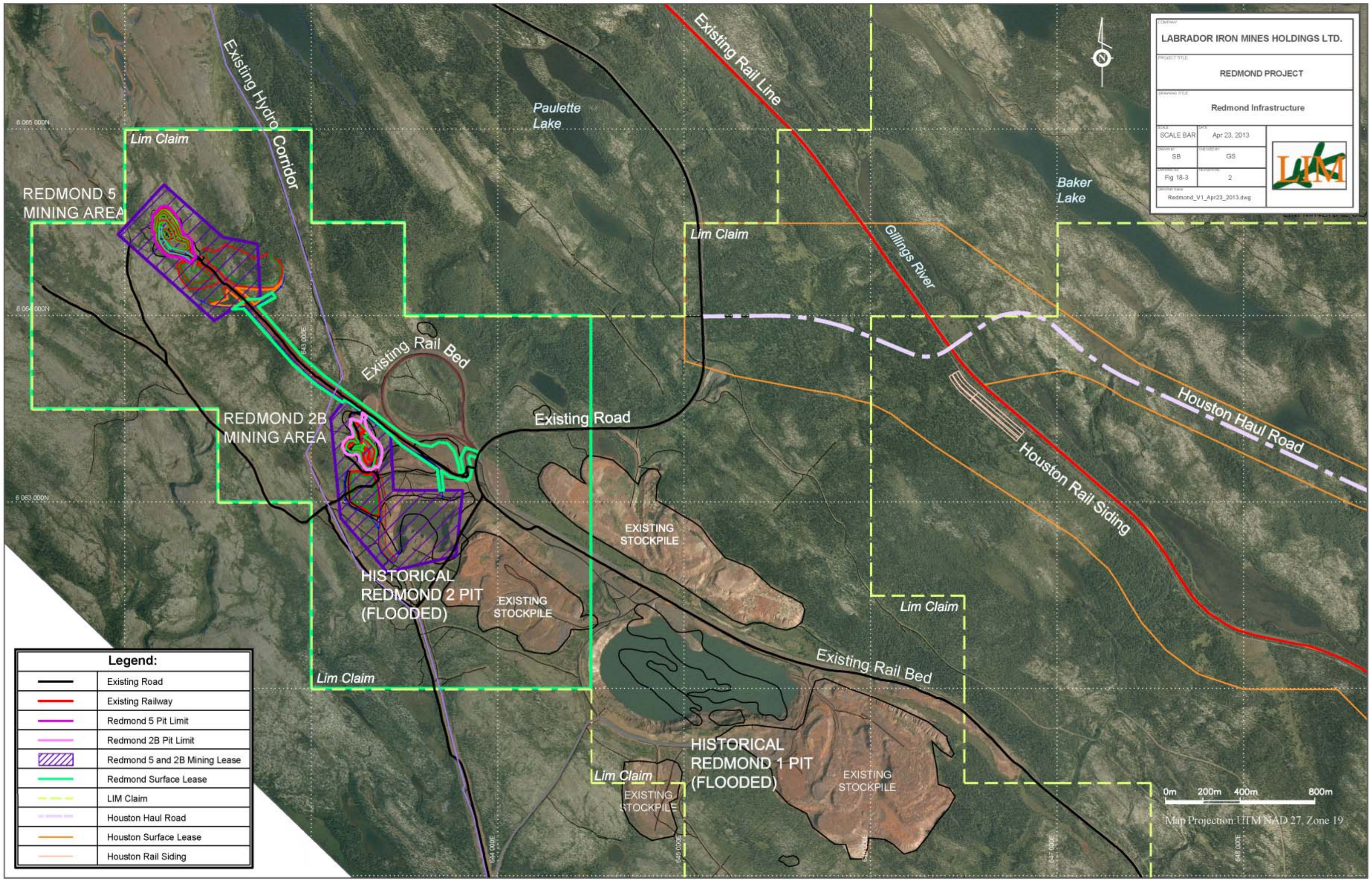


Figure 18-4: Redmond Infrastructure

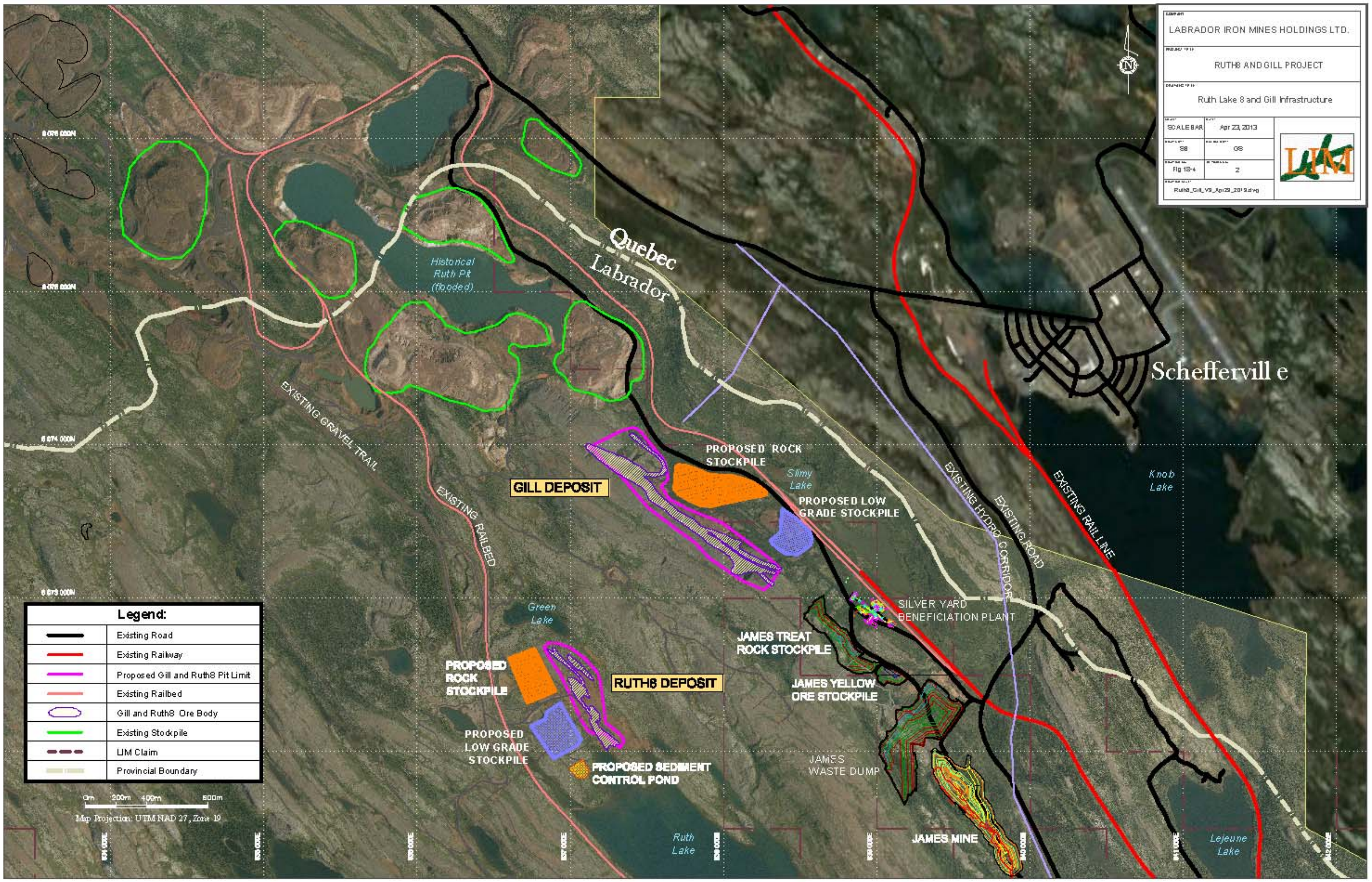


Figure 18-5: Ruth Lake 8 and Gill Infrastructure

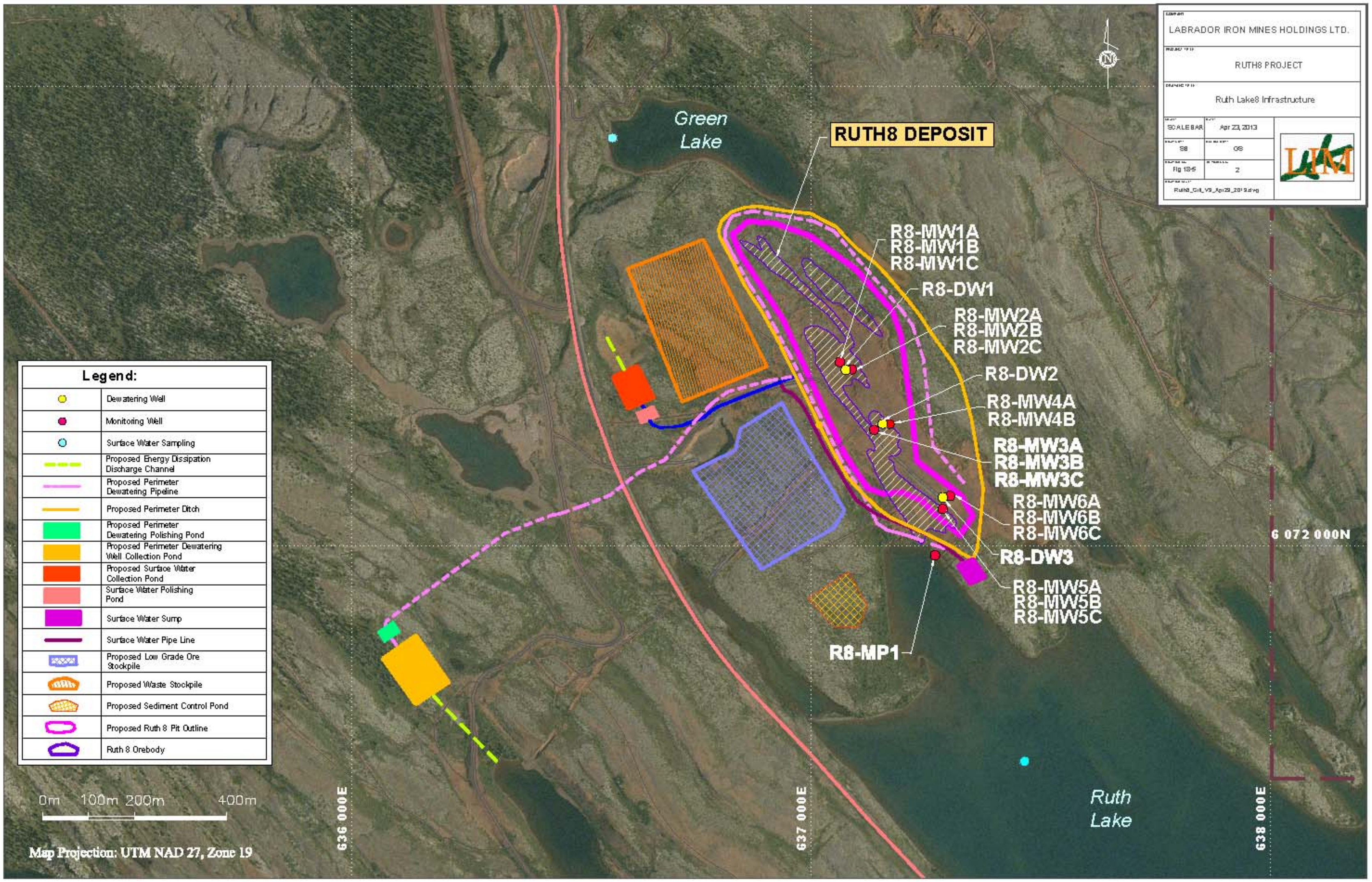


Figure 18-6: -Ruth Lake 8 Infrastructure

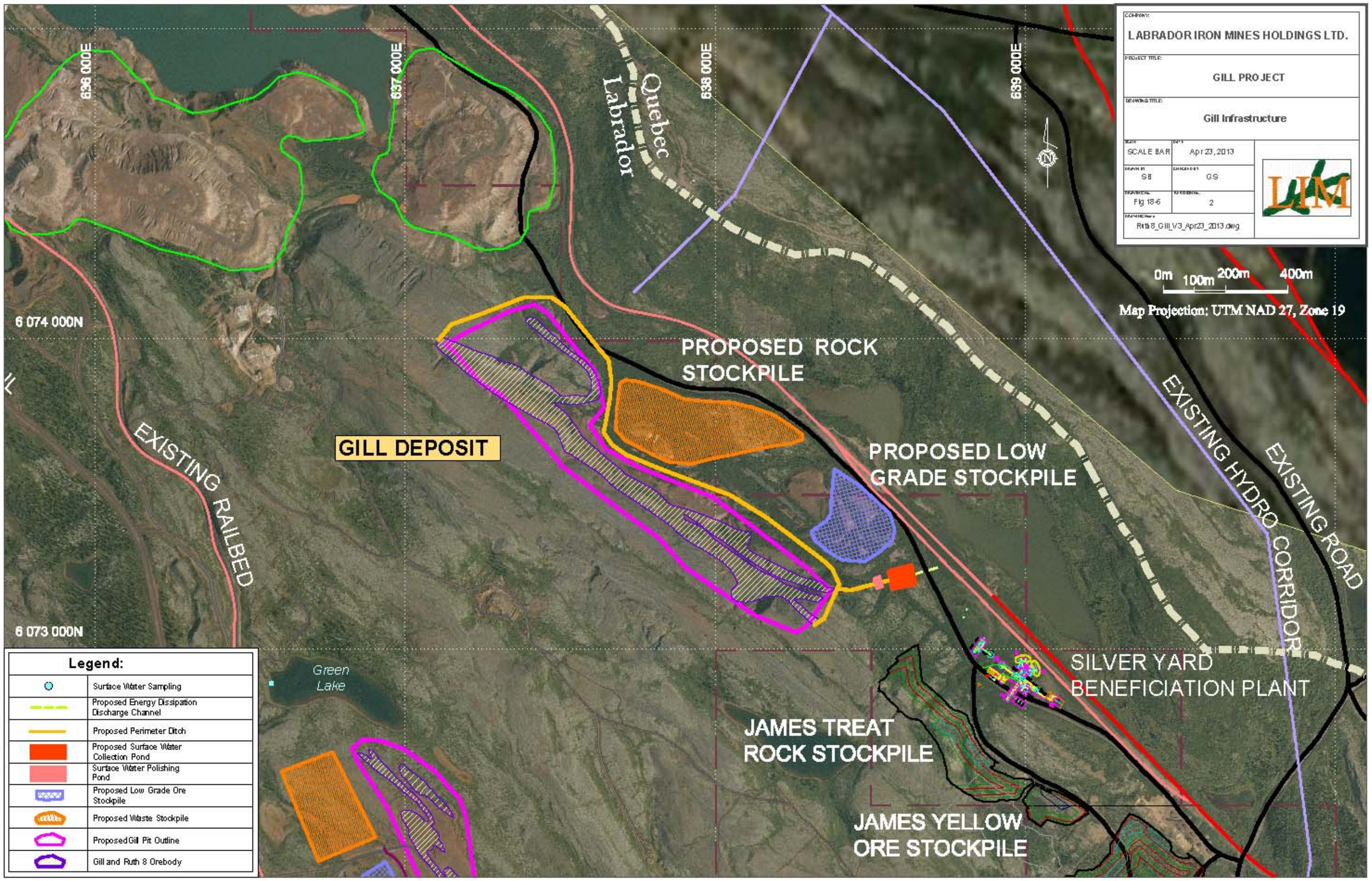


Figure 18-7: Gill Infrastructure

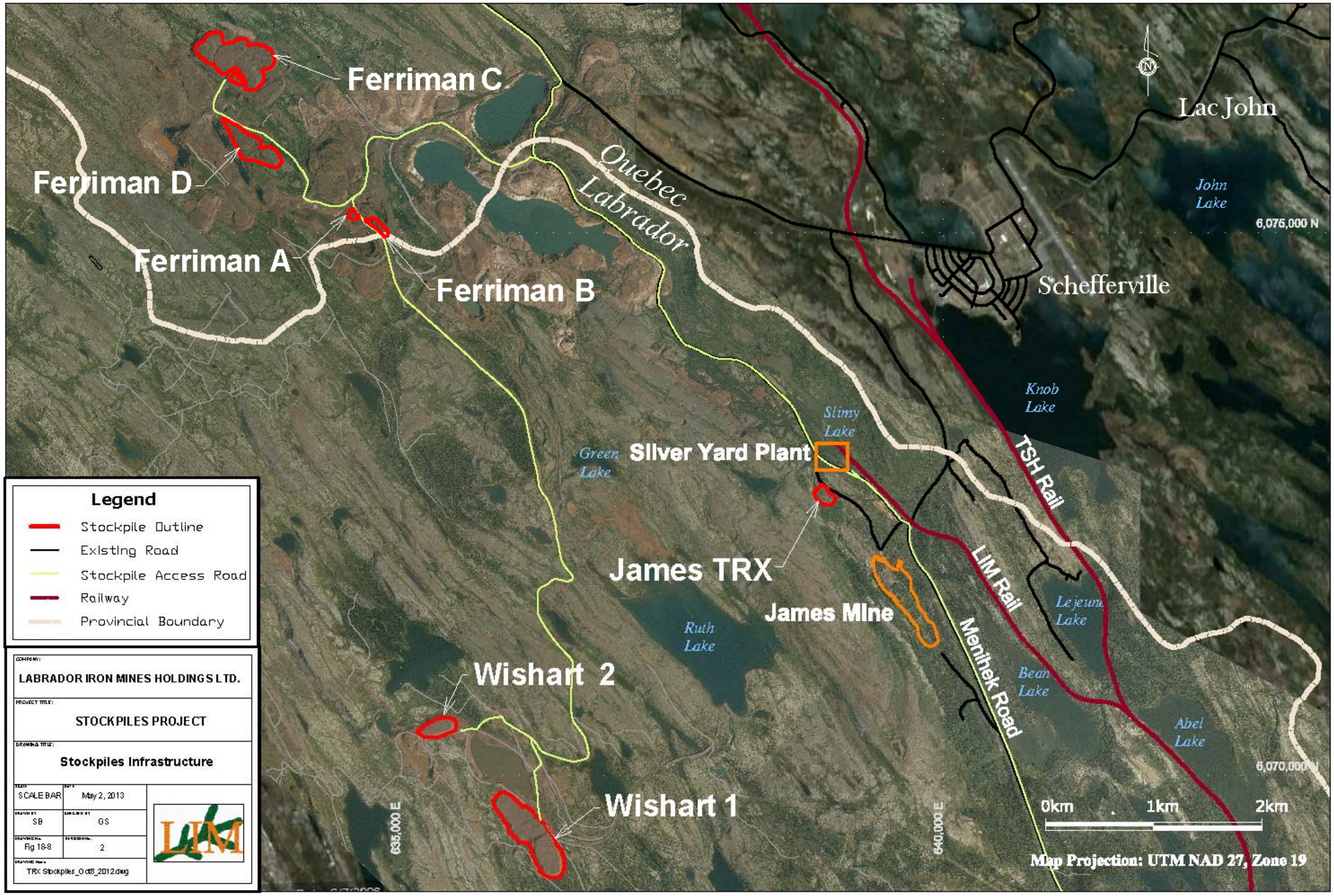


Figure 18-8: LIM Stockpiles Infrastructure

18.1 Site Development

Figures Figure 18-3 to Figure 18-8 present the surface site plans including end-of-mining pits, ore stockpiles, settling ponds and waste rock areas, as well as the infrastructure that could be developed at the Silver Yards area. Refer to Figure 18-9 for Silver Yard project schedule.

18.1.1 Main Access and Site Roads

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.

Vehicles utilize existing historical mine access roads. Public roads extend from the nearby communities of Schefferville and Kawawachikamach, Quebec.

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.

18.1.2 Silver Yards Infrastructure

All iron ore production from the James Mine is beneficiated at the Silver Yards Area. Figure 18-2: Silver Yards Project Infrastructure illustrates the infrastructure at Silver Yards:

Beneficiation area, which includes the beneficiation towers, primary crushing plant, secondary crushing plant, scrubbers, screens, 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;

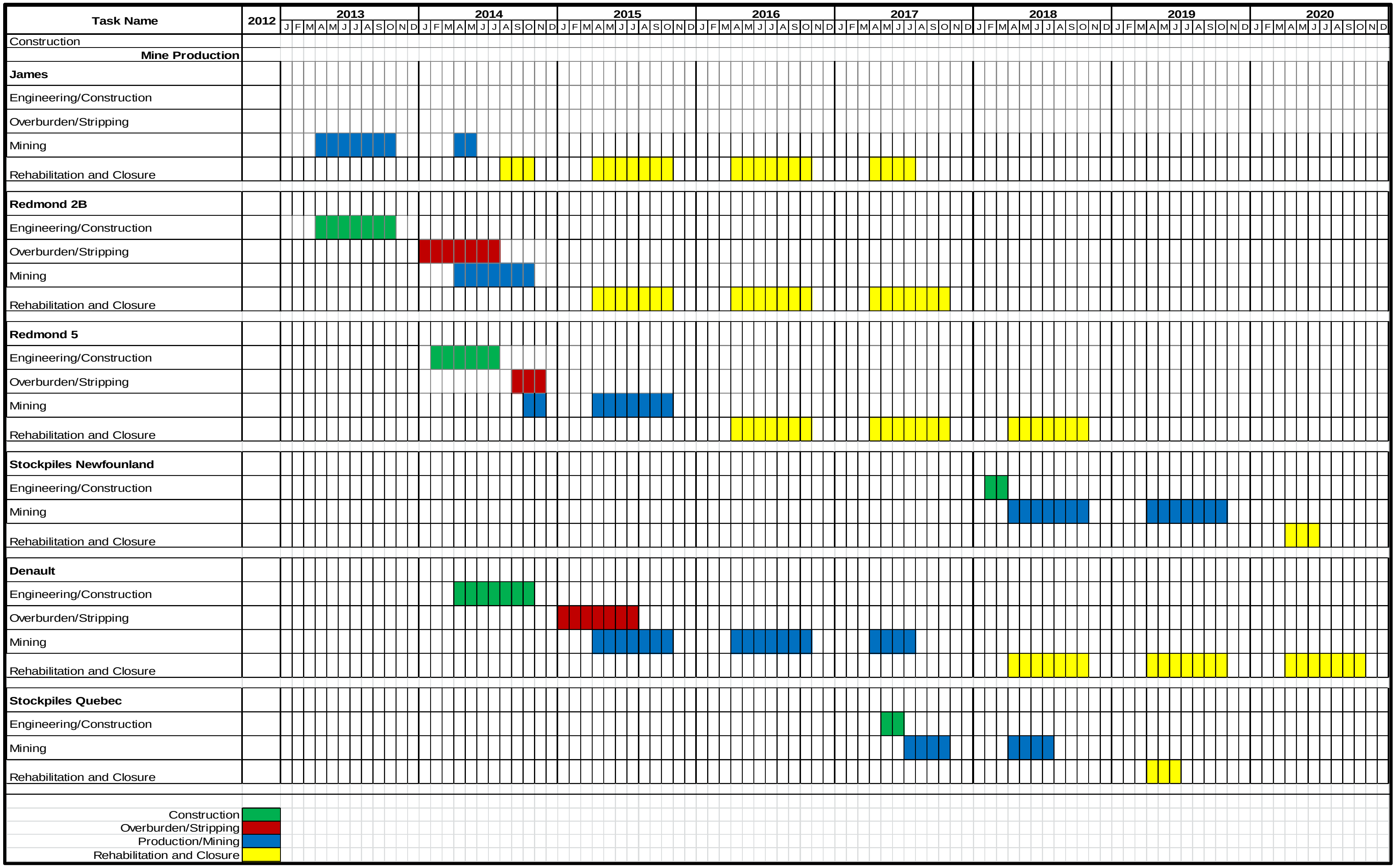


Figure 18-9: Project Schedule for Silver Yard Properties

- ROM ore stockpile area;
- Stockyard and railcar loading area;
- Reject fines disposal pipeline;
- Security checkpoint, fencing and signage.

The infrastructure at the James Mining Area includes the following and is illustrated in Figure 18-3: James Pit and Silver Yards Infrastructure:

- 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;

The infrastructure at the Redmond Mining Area includes the following and is illustrated in

- Figure 18-4: Redmond Infrastructure
- Redmond 2B Pit and associated haulage roads; and
- Redmond 5 Pit and associated haulage roads.

18.1.3 Ore, Waste and Overburden Stockpiles

The locations for the existing and proposed waste rock storage and low-grade ore stockpiles are indicated on the drawings (Figure 18-3: James Pit and Silver Yards Infrastructure and Figure 18-4: Redmond Infrastructure).

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 60 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.

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.

Detailed dump and overburden designs and mine plans for Denault deposit are not done at this point as it is in an early stage of planning. Preliminary economic assessment and pit design is completed for Denault property.

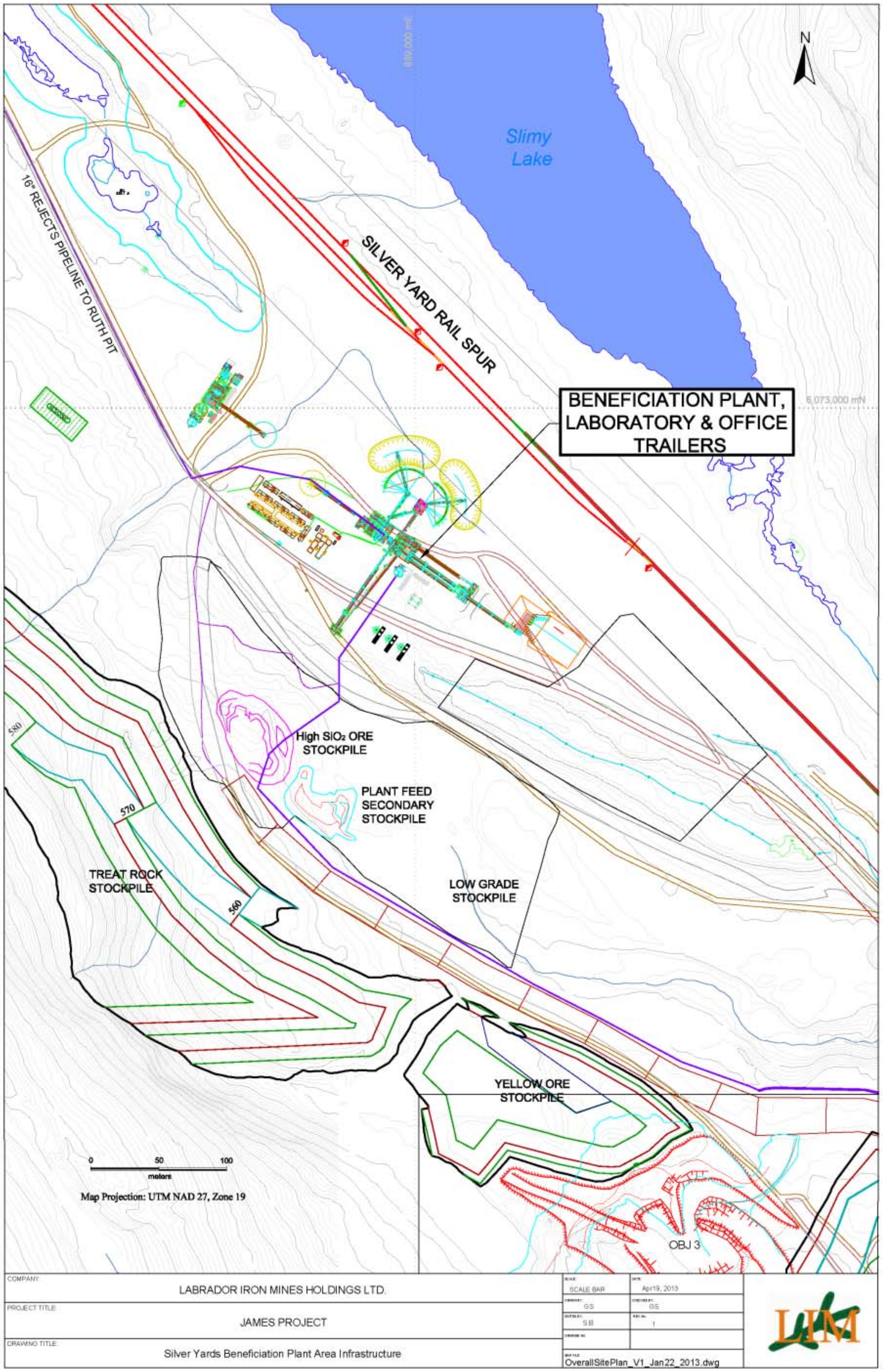


Figure 18-10: Silver Yards Beneficiation Area Infrastructure-Plan

18.2 Site Building and Infrastructure

18.2.1 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.

18.2.2 Workshop

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

18.2.3 Fuel Storage

Diesel generators have "day-tanks" that are refueled by tanker truck from supplier tanks located near Schefferville Quebec.

18.2.4 Explosives Storage and Mixing Facilities

The Mining Contractor is responsible for the transport, storage and use of all explosives. Magazines, vehicles and use and charging procedures comply with the required permit and/or approvals under the Natural Resources Canada Explosive Regulatory Division. The Contractor ensures that blasting follows all provincial regulations, including the Occupational Health and Safety Regulation with experienced/licensed blasters.

18.2.5 Camp

The mine camp was originally designed to accommodate 72 persons, but in 2012 was expanded to accommodate 144 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. Additionally, there are self-contained accommodation units with 24 person capacity. 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 is used as a recreation centre. Camp structures consist of semi-mobile pre-fabricated modular units linked together forming a two storey complex. The camp was constructed by a specialized camp management company and is in full operation since March 2011. Bean Lake Camp is shown on figure 18-10.

The dormitories are comprised of single en-suite 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.

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

18.3 Potable Water System

The potable water system currently supplies approximately 40 m3/day of water to the camp, dormitories, sleepers and kitchen. The pumping system includes two pressurized water tanks to insure constant supply. Water is treated by a particulate filter and UV light.

18.4 Waste Water Treatment System

The waste water at the camp is treated by an Ecoprocess Membrane Bio-Reactor (MBR) system. This system includes five filtration tanks designed to treat 47,000 L per day. This flow rate equates to a capacity of 250 residents plus 50 additional people eating meals (camp person capacity is currently 164 total persons). Within each tank, a fine bubble aeration system provides the oxygen needed to biodegrade oxidizable pollutants that are converted into activated sludge. Ultrafiltration occurs through submerged membranes which act as a barrier to the pathogenic organisms and suspended solids. Waste water from the kitchen is routed through a grease trap and all waste water passes through a primary decanter and equalization tank prior to treatment in the MBR.

18.5 Power Supply

Currently, all energy for LIM's Silver Yard beneficiation plant and camp is provided by diesel generators. As part of the Wet Plant expansion projects, LIM is also executing a project to connect to Hydro power and be able to operate the plant, the camp and all the infrastructure apart from the pit dewatering on electrical power provided by the Menihek hydro-electric generating plant owned by Newfoundland and Labrador Hydro (Nalcor) on an as-available basis. The project is currently well under way and it is anticipated to be completed in July-2013.

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.

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.

The expected peak demand load from the beneficiation process is currently estimated at 6,600 kW. This will be partially met by hydro power as per availability and the rest will still be provided by a diesel power generation.

Currently power is generated by up to three mobile diesel generators located at Silver Yards. These generators are continuous duty, 1,825kW, 60 Hz, and 600 V placed within containers. Up to five additional 250kW to 450kW mobile generators are located nearby the dewatering wells at the James site. An aerial transmission line at 4160V distributes the power to each pump at the James Site. Local starters control each individual pump.

18.6 Water Use

18.6.1 Process / Wash Water

Water for use in the beneficiation process is sourced from the Ruth pit within the Project area. The overall water balance requires pumping of 711 cubic meters per hour under full operating conditions for all three phases of the plant operation.

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

18.6.2 Potable Water

Potable water required at the beneficiation building, various site office trailers at Silver Yards, is sourced and treated groundwater.

18.6.3 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.

18.7 Sewage Treatment and Disposal

Wastewater and sewage collection and treatment required at Silver Yards includes a Biodisk unit utilizing biological processing and ultraviolet light to treat waste water.

18.8 Waste Management

The objectives of waste management are to prevent, minimize, and mitigate the impact of the waste materials on the environment. Where and when possible, a Reduction, Reuse and Recycling policy is implemented to minimize waste generation.

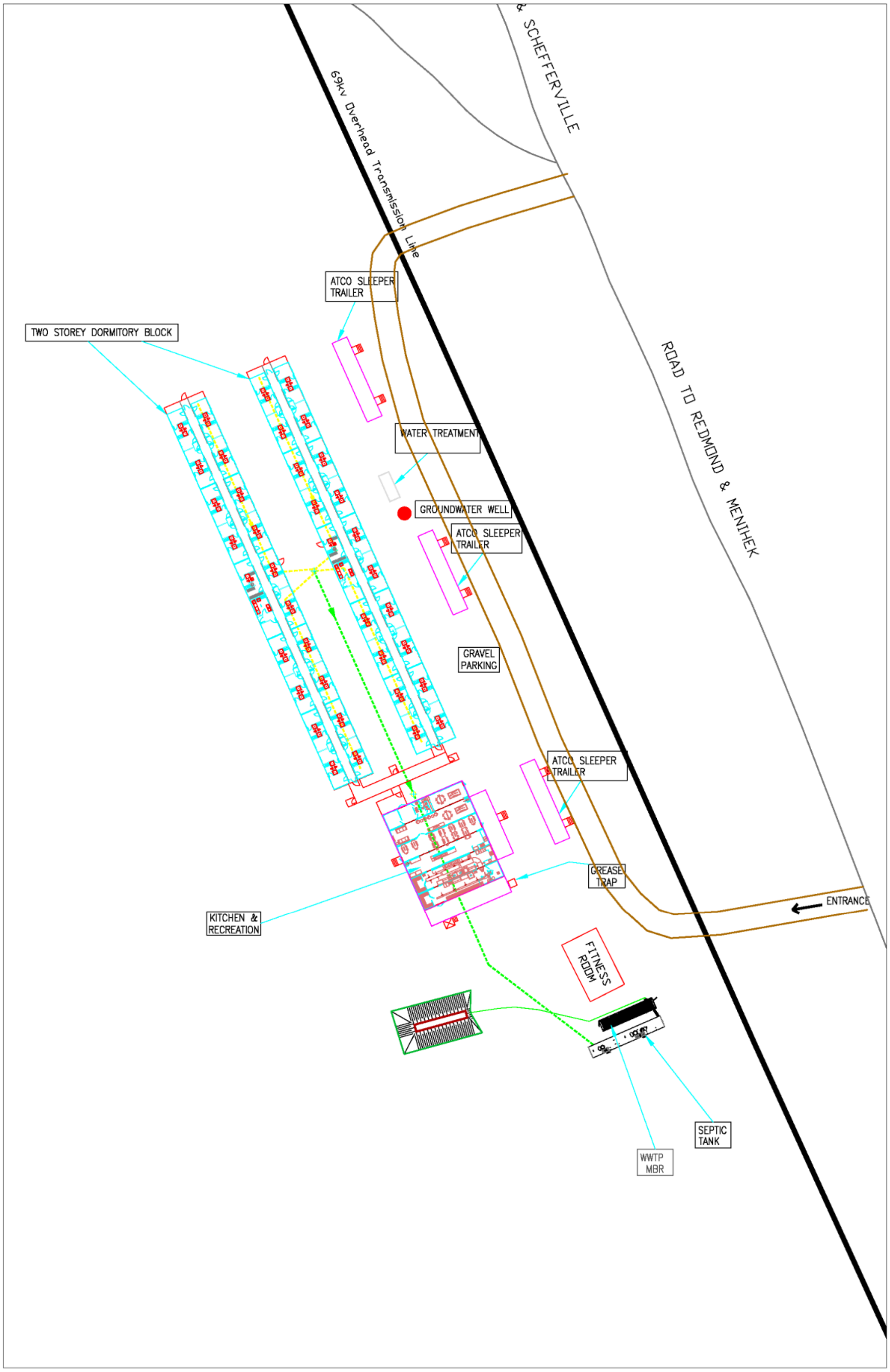


Figure 18-11: Bean Lake Camp

18.9 Railway Infrastructure

The iron ore products from the sinter fine and the lump ore stockpiles at Silver Yards are reclaimed with front end loaders and delivered to rail cars on the re-laid Silver Yards spur line. See Figure 18-10: Silver Yards Beneficiation Area Infrastructure-Plan and Figure 18-12 Existing Railway Infrastructure with Inset of Silver Yards Area for area details.

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 between Emeril Junction and Schefferville to TSH. See Figure 18.11.

TSH now 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"). In addition to the transport of iron ore TSH 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.

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 for the calendar year 2011. That Agreement acknowledged that it is in the best interests of both parties that the TSH Railway be rehabilitated as soon as possible 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. During 2011, TSH carried out some upgrade work on its Menihek rail line following a cash investment by LIM of $3.5 million and a similar investment by Tata Steel Canada.

In June 2012, LIM completed a life-of-mine agreement with TSH railway, replacing its previous annual agreement. Pursuant to this long-term confidential rail transportation contract with TSH, LIM has agreed to make approximately $25 million in contributions (inclusive of the $8.5 million in upgrade contributions already made of which $3.5 million was made in 2011, $2.5 million was made in April 2012 and a further $2.5 million in July 2012), over the next four to five years towards the costs of the TSH rail line upgrade program. Future contributions will be repaid to LIM over an expected period of about four years commencing in 2017, subject to LIM maintaining normal annual transportation operations on the TSH railway. LIM has also paid TSH a refundable capacity reservation deposit of $1.5 million of which $750,000 was paid in 2011 and $750,000 in April 2012 and has committed to minimum annual tonnages over its eight month annual operating season. The 2012 rehabilitation program was the second year of an estimated ten year rehabilitation program to be carried out by TSH.

LIM provides the locomotives required to move trains from Silver Yards to the TSH connection with QNS&L at Emeril Junction. Those locomotives as well as the crews that provide switching in the yard during the loading process are provided through an operating agreement with Western Labrador Rail Services (a division of Genesee and Wyoming).

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 Cliffs Resources respectively. QNS&L provides its own locomotives and operators for the haulage of LIM's iron ore on the QNS&L rail line.

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-Îles. This confidential agreement provides for a confidential tariff, with various capacity and volume commitments on the part of each of QNS&L and LIM. This confidential contract required advance payments totalling $25 million for capital improvements to the QNS&L system and the acquisition of additional locomotives to accommodate the LIM traffic. $10 million was paid in 2011 and $5 million was paid in August 2012. The remaining $10 million was due to be paid in instalments of $5 million each on September 1, 2012 and October 1, 2012, but were deferred and will be paid when additional locomotives are required to handle increased volumes. These advance payments are recoverable by LIM from QNS&L by means of a special credit of $3.50 per wet metric tonne hauled.

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 of Sept-Îles to the Port terminal at Pointe-Noire.

18.9.1 Rolling Stock

LIM signed a rail services agreement with Western Labrador Rail Services (WLRS), a wholly owned subsidiary of Genesee & Wyoming Inc. (GWI) to provide services and five EMD SD-40 class locomotives. GWI owns and operates short line and regional freight railroads in the United States, Canada, Australia and the Netherlands. WLRS is part of GWI's Canada Region and provides rail service to mining companies operating in Labrador and the Quebec North Shore, including the operation of the Bloom Lake railway in western Labrador, which carries iron ore from Cliffs Resources Bloom Lake Mine.

Currently LIM owns 544 railcars configured in 4 train sets, each consisting of 124 cars. These reconditioned coal cars are intended for short term use and are restricted to a Gross Rail Load (GRL) of 263,000 lb. In the longer term LIM plans to lease rotary gondola ore cars each with a GRL of 286,000 lb. It is anticipated that three train sets will be required to transport LIM's iron ore tonnage in an eight month period in each year. A fleet of approximately 800 cars will be required; each train set will be 240 cars in length and require three SD-70 class locomotives.

On arrival at Emeril Junction, the WLRS locomotives and TSH crews are replaced by QNS&L locomotives and crews for the operations between Emeril Jct. and Sept-Iles.

18.9.2 Centre Ferro Rail Car Maintenance Facility – Sept-Îles

LIM owns and operates the Centre Ferro rail car maintenance shop in Sept-Îles. This facility is staffed by LIM employees, primarily certified car-men and welders, who maintain LIM's rail car fleet. The shop is unionized. The facility has track storage for cars and includes a laydown yard for materials. Rail cars are moved to and from the maintenance shop by QNS&L crews and locomotives. See Figure 18-16: *Layout Of Centre Ferro Rail Car Maintenance Facility* – Sept-Iles.

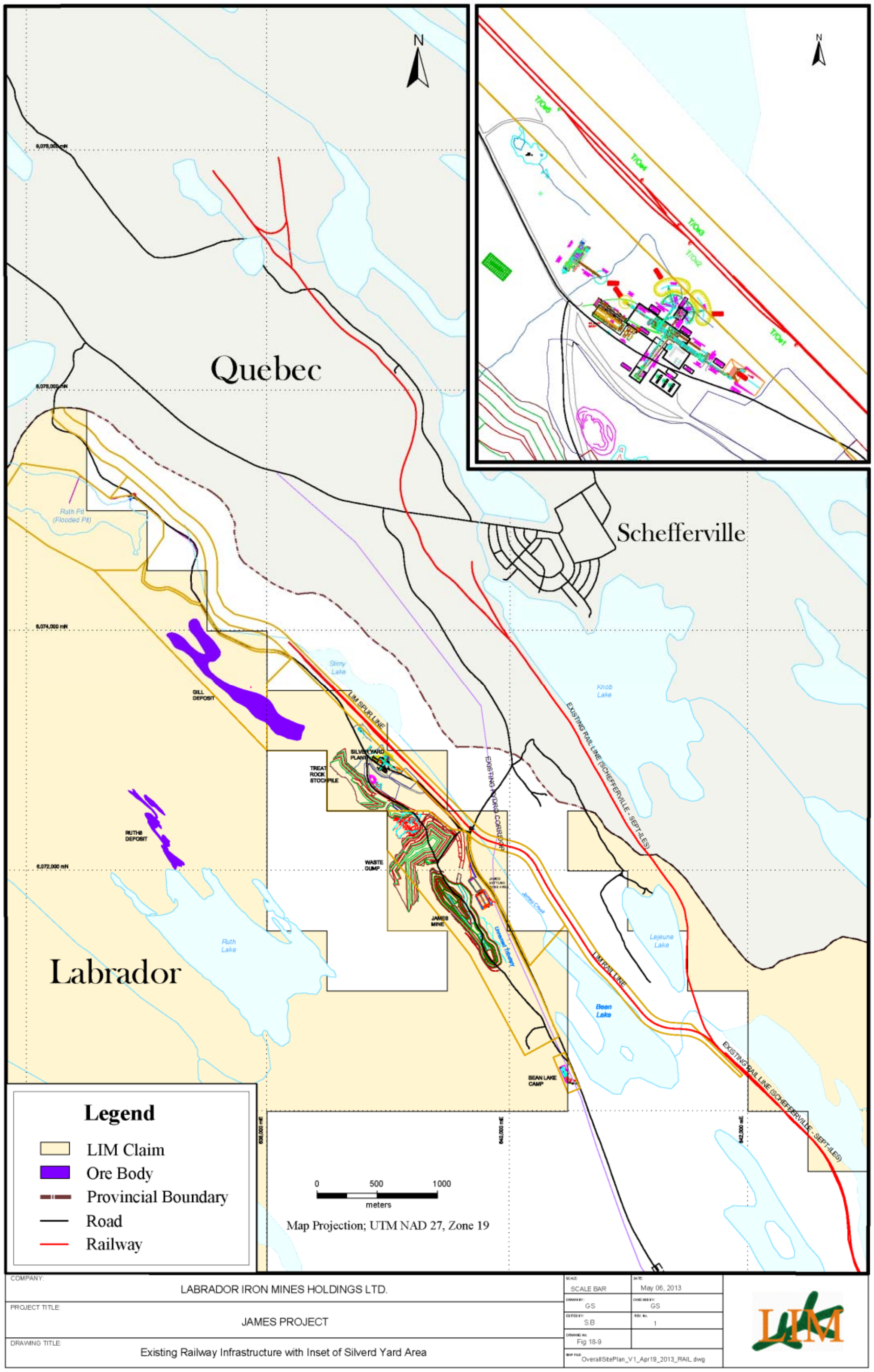


Figure 18-12 Existing Railway Infrastructure with Inset of Silver Yards Area

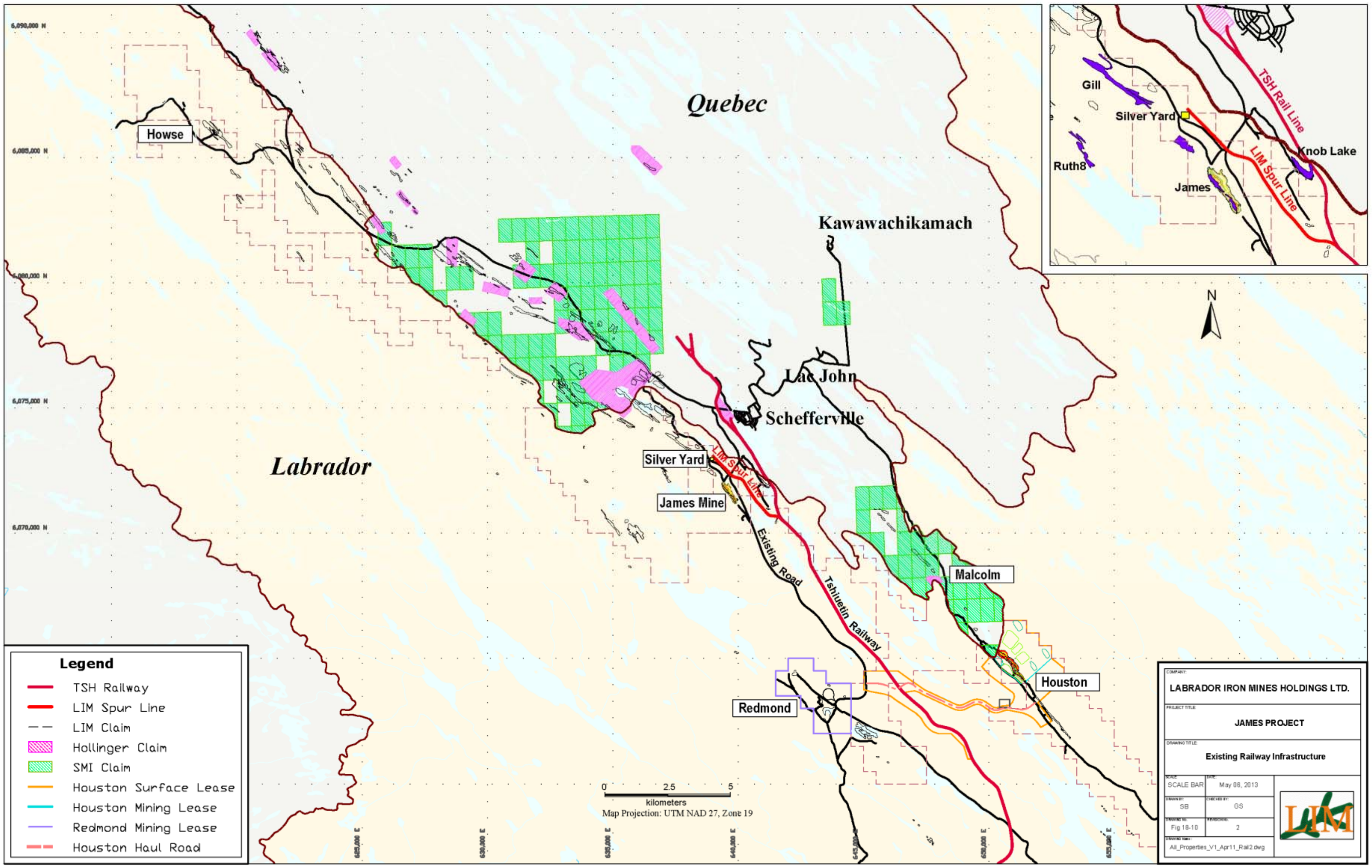


Figure 18-13 Existing Railway Infrastructure of Project Silver Yards Area

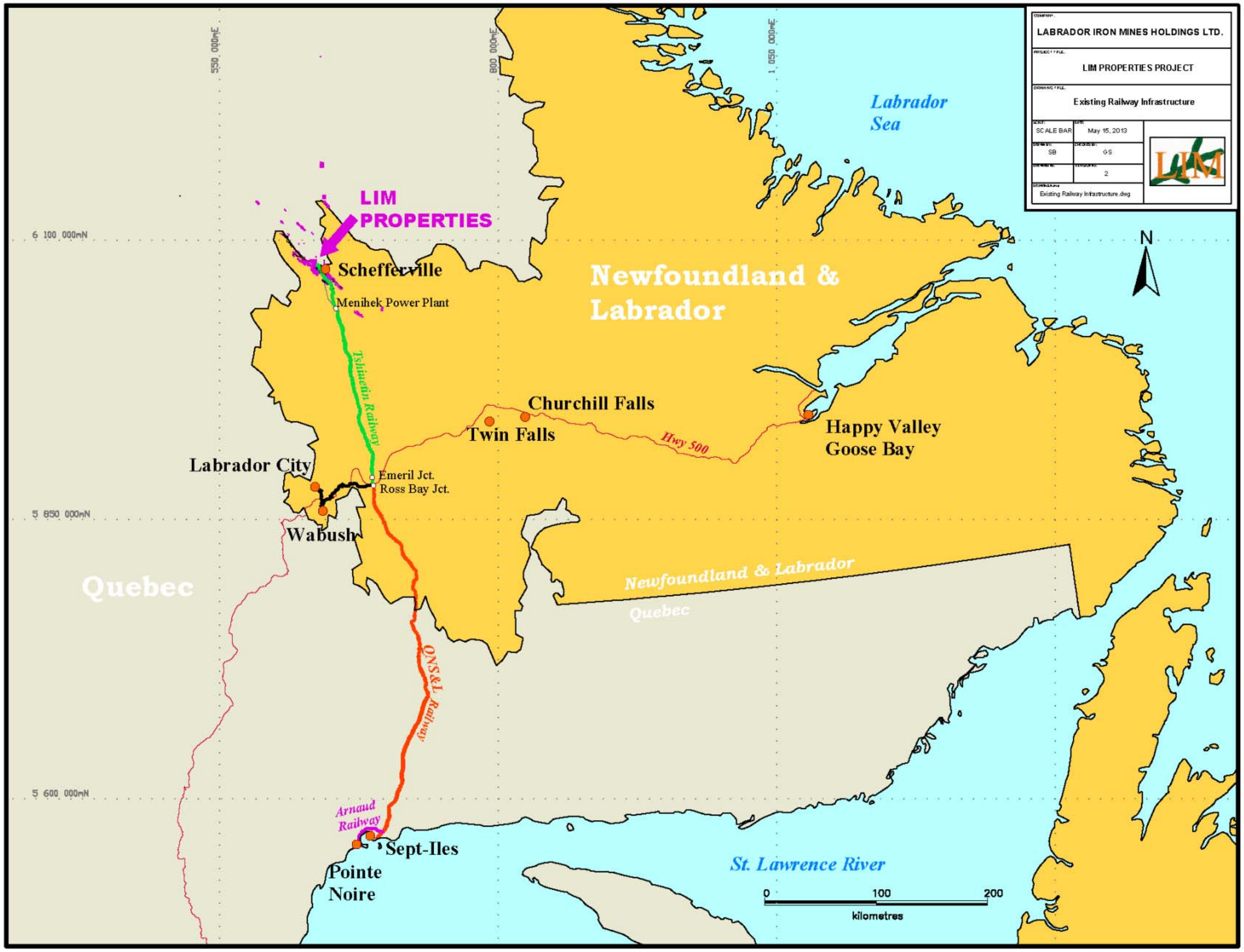


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Figure 18-14 Figure of Existing Regional Rail Infrastructure

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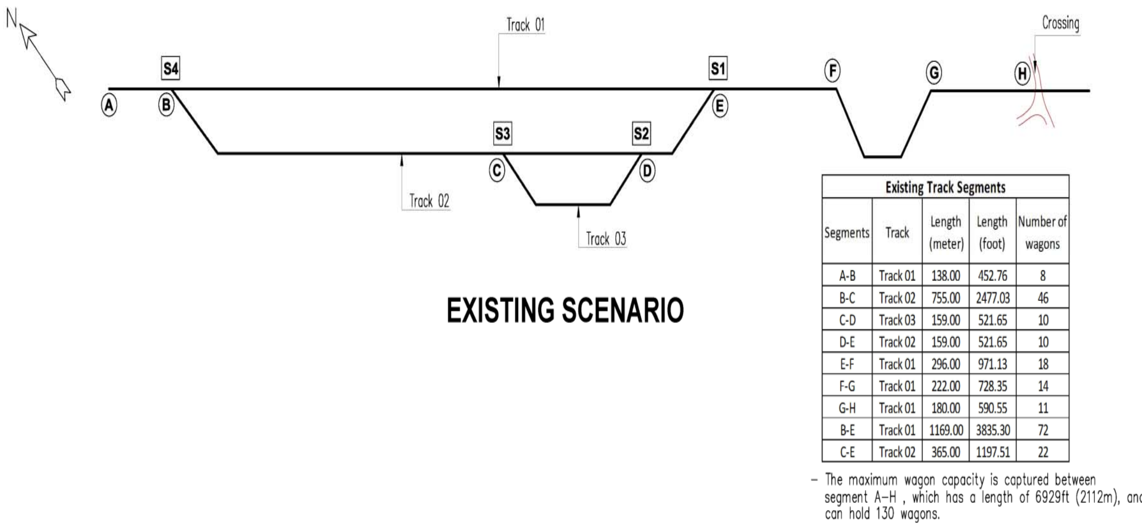

Existing Track Segments

Segments	Track	Length (meter)	Length (foot)	Number of wagons
A-B	Track 01	138.00	452.76	8
B-C	Track 02	755.00	2477.03	46
C-D	Track 03	159.00	521.65	10
D-E	Track 02	159.00	521.65	10
E-F	Track 01	296.00	971.13	18
F-G	Track 01	222.00	728.35	14
G-H	Track 01	180.00	590.55	11
B-E	Track 01	1169.00	3835.30	72
C-E	Track 02	365.00	1197.51	22

Figure 18-15: Silver Yards Rail Spur and Track Layout

18.10 Rail Car Fleet

Location	Number of Cars	Make	Year Manufactured	Capacity
On site	399	FMC	1979	263,000 lbs
Florida	70	Ortner	1980	263,000 lbs
West Virginia	73	Darby	1973	263,000 lbs

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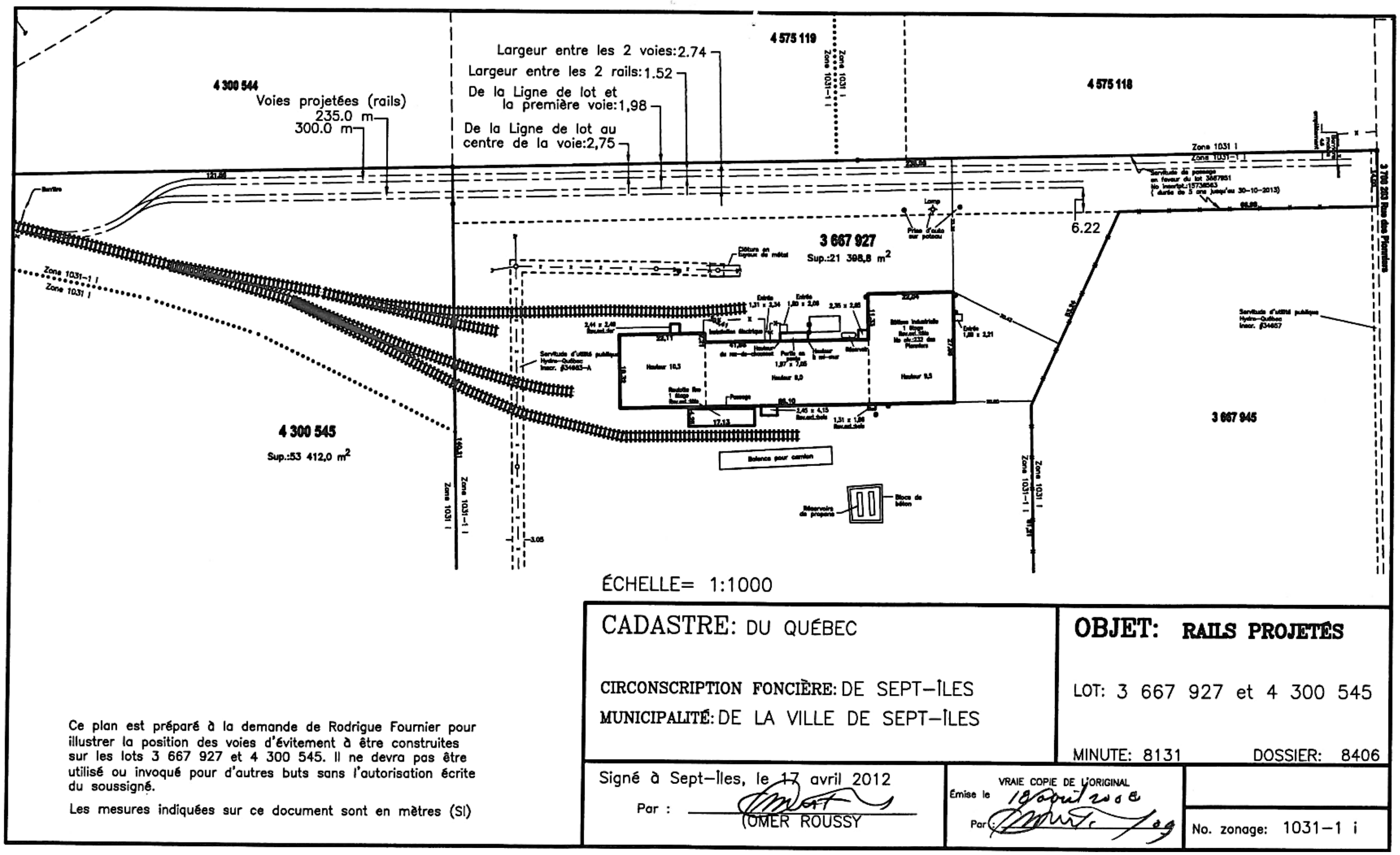


Figure 18-16: Layout Of Centre Ferro Rail Car Maintenance Facility – Sept-Iles

18.11 Port Facilities

18.11.1 Existing Port Facilities

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 m 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.

All LIM iron ore products railed to Sept Iles the port in 2011 and 2012 was were sold to the Iron Ore Company of Canada under separate annual agreements.

At the Port of Sept-Îles, IOC owns established storage and ore handling facilities, including its ship dock capable of taking ocean going vessels up to 240,000 (dwt) tonnes. LIM has no requirement to install and operate port facilities for its own use during 2013 and 2014 2012 and did not operate any such port facilities in 2011 or 2012. The port handling arrangements for the shipment of LIM's iron ore production for 2013 and 2014 are currently in place with IOC has been signed with IOC. In 2016, LIM plans to use an independent port terminal, capable of handling 10 mtpa, including 1 million tonnes of stockpile capacity, at the Pointe Noire area in the Port.

18.11.2 New Multi-User Berth – Federal Port Authority

The new multi-user dock in the Pointe-Noire area of the Port is a $220 million project comprising two berths equipped with two ship loaders as well as two conveyer lines, with an annual capacity of 50 million tonnes per year. Construction commenced with dredging operations in the summer of 2012 and the Port expects the facility to be completed by March 31, 2014.

The new multi-user facility will allow users to directly load large cape size vessels. In February 2012, the Government of Canada announced that it would invest up to $55 million and would contribute to the construction of the new multi-user deep water dock in the Port of Sept-Îles. LIM has reserved capacity of 5 mtpa. An advance tariff of $6.4 million was paid in July 2012, with an additional $6.4 million installment required in July 2013.

18.11.3 Pointe Noire Multi-User Port Terminal Project Overview & Objectives

Mines Schefferville Inc. (SMI) a wholly-owned subsidiary of Labrador Iron Mines (LIM) , together with TSMC and other mining companies, is proposing to build, and operate a 10 Mtpa material handling facility on Pointe Noire, Quebec and connect this facility via a covered overland conveyor to the Port of Sept-Iles' multi-user berth for loading ocean-going vessels at Pointe Noire. The ore would be delivered to the facility via the Tshuetin Railway (TSH) Quebec North Shore and Labrador (QNS&L) and Chemin de Fer Arnaud (CFA) railroads from the LIM and Tata Steel Minerals Canada mining operations in Labrador.

19. Market Studies and Contracts

All market analysis is used with permission.

19.1 Historical Iron Ore Price Environment

Robust steel production and iron ore demand from emerging economies have underpinned the rise in iron ore prices over the past seven years. In addition, supply constraints, such as falling ore grades at major mines and increasing capital expenditures to build new capacity, have resulted in iron ore production consistently falling short of market expectations.

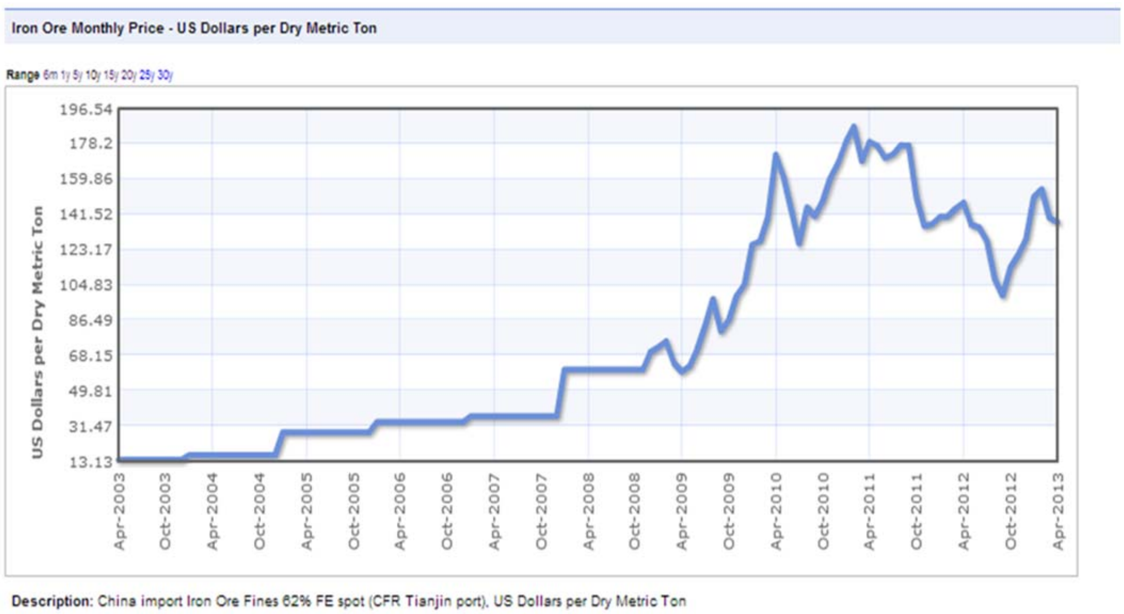


Figure 19-1: Historical Benchmark Iron Ore Price

Growth in iron ore demand has been dominated by China, whose steel production and consumption (rate of steel usage per capita) has been steadily increasing over the past decade. The country's rapidly increasing steel intensity (steel usage per capita) has been driven by rapid economic growth and continued urbanization, leading to significant increases in the rate of residential construction, durable goods production and public infrastructure development.

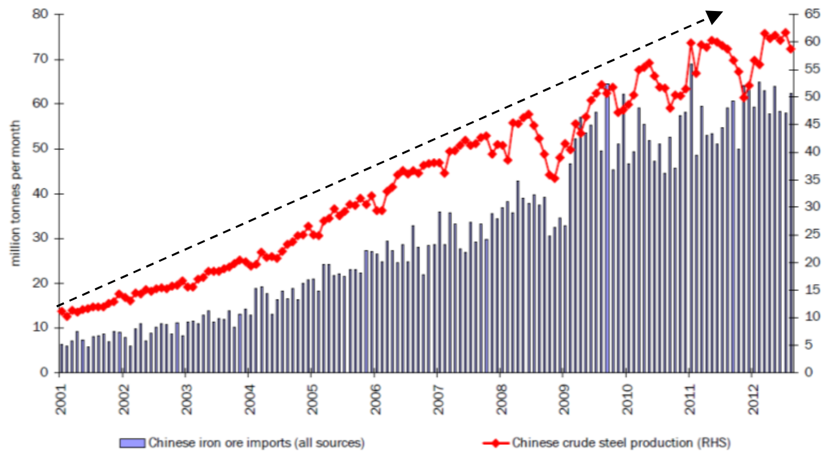


Figure 19-2: Chinese Steel Production

Source: World Steel Association, TEX Report

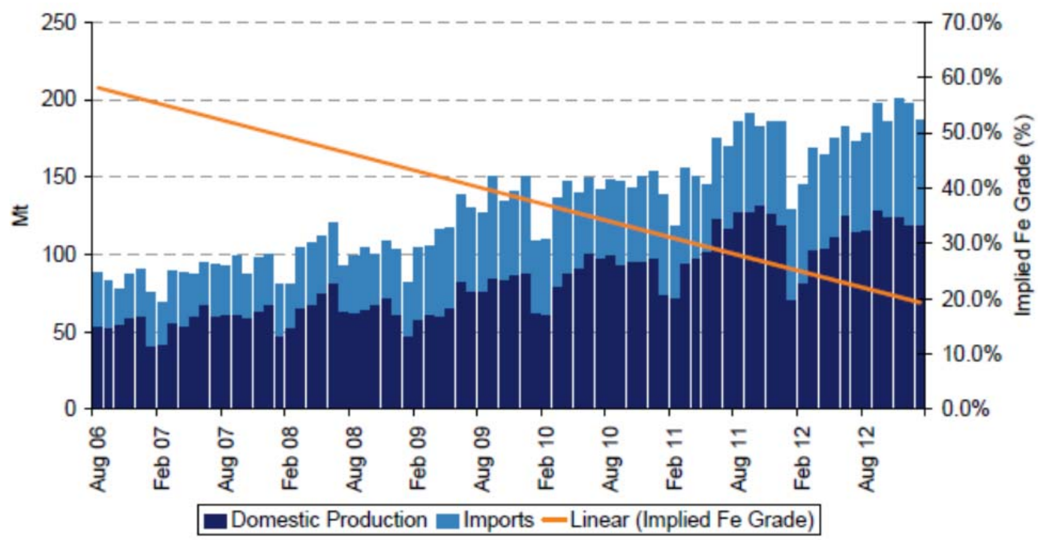


Figure 19-3: Chinese Domestic Iron Ore Production, Iron Ore Imports and Average ROM Fe Grade

In late 2008 and the beginning of 2009, Chinese steel production and iron ore imports experienced a brief but large decline as a result of the global financial crisis and a deceleration in the rate of Chinese economic growth that led to overheating of commodity markets in 2007. In March and April 2009, iron ore prices declined to under US$60/tonne. The slowdown in China was viewed by many as being temporary and a result of tighter credit policies introduced a year earlier to address inflation. In response, the Chinese government loosened credit controls and introduced a massive fiscal stimulus package, which had the effect of minimizing the adverse impact of the global financial crisis on the Chinese economy.

Following the recession, most iron ore supply contracts shifted from annual pricing (which has been the norm since the 1960s) to more flexible quarterly or even monthly pricing. In the spring of 2010, the iron ore market moved towards benchmark prices based on the spot market for import iron ore fines in China.

The shift to shorter pricing methods resulted in a shift of pricing leverage from iron ore producers to the Chinese steel mills. After two years of extraordinary growth in 2010 and 2011 which saw the benchmark Chinese import iron ore spot price rise from under US$120/tonne in July 2010 to over US$190/tonne in February 2011, iron ore prices began to ease in the first half of 2012 due to global macroeconomic uncertainty stemming from the Eurozone debt crisis and concerns over a slowdown in economic growth in China.

In the third quarter of 2012, iron ore prices declined to three-year lows to under US$90/tonne due to a number of factors that include historically high port inventories, de-stocking of plant inventories by Chinese steel mills and traders withdrawing from the spot market. Iron ore prices rebounded since September 2012 to a year-to-date high of US$159/tonne in mid-February before retreating to current price levels of approximately US$130 to US$140 per tonne. Prices began to fall after steel inventories began to rise in China in addition to stringent curbs implemented by the Chinese government on the real estate market to prevent market speculation.

A number of key factors point to sustainability in the recent iron ore price strength in the near-term:

- Declining iron ore inventories at Chinese ports and lower than typical inventory levels at Chinese steel mills
- Healthy steel margins in China despite rising iron ore price due to lower met coal prices and rising steel prices;
- China's harshest winter in nearly three decades has constrained domestic iron ore output during a seasonally strong period for Chinese steel production. Given additional transportation challenges in China during the winter months and the return of the relative price of seaborne versus domestic iron ore to equilibrium, Chinese steel mills are not expected to shift demand from seaborne supply in favour of domestic supply as was the case when iron ore prices collapsed in September 2012
- Weather-related supply disruptions from major iron ore producing regions in Australia and Brazil
- The decline in Chinese supply from India due to export restrictions
- Chinese government policies should support increased steel and iron ore demand over the near and medium-term. In September 2012, the National Development and Reform Commission ("NDRC") of China approved 25 urban rail projects to inland cities at a total investment of approximately ¥840 billion, three road projects spanning over 2,000 km (which can potentially cost ¥200 billion) and seven port projects

Brazil, Australia and India Iron Ore Supply

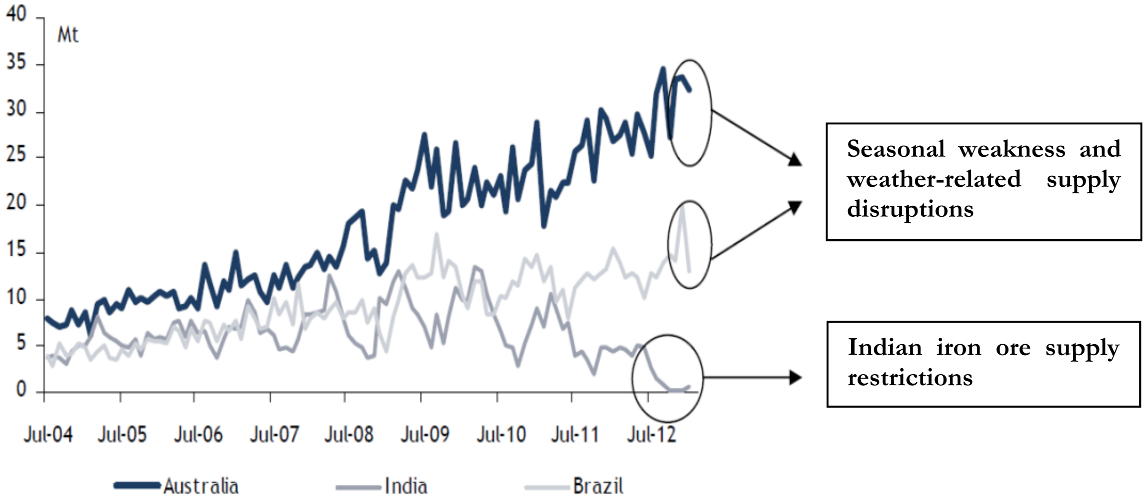


Figure 19-4: Brazil, Australia and India Iron Ore Supply

Source: World Steel Association, CRU, Steel Business Briefing, RBC Capital Markets Estimates

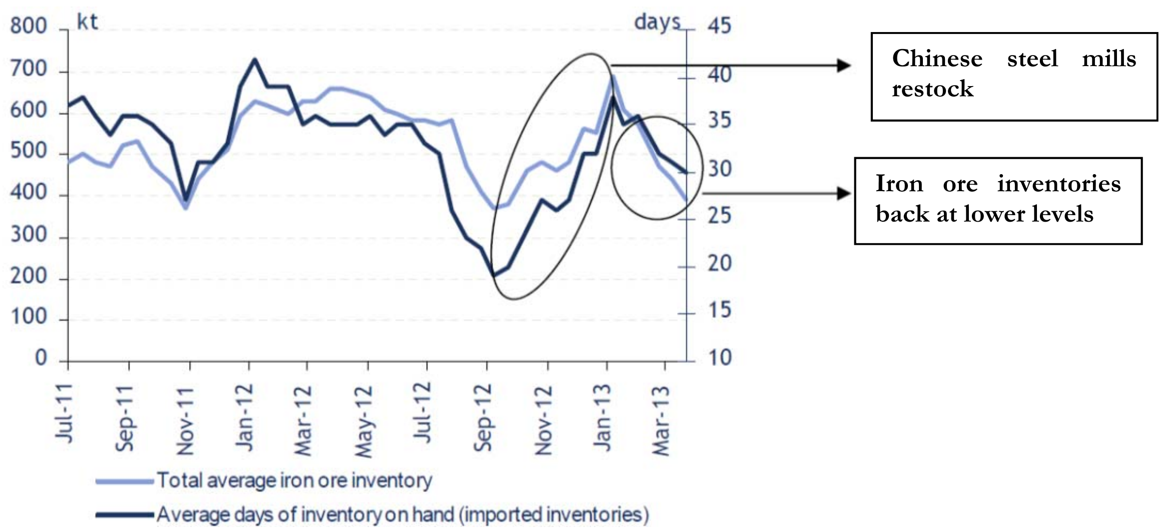


Figure 19-5: Chinese Steel Mill Iron Ore Inventory Levels

Source: World Steel Association, CRU, Steel Business Briefing, RBC Capital Markets Estimates

19.2 Contracts

19.2.1 IOC Sales Agreement

In May 2013, LIM announced a new iron ore sales agreement with the Iron Ore Company of Canada ("IOC") for the sale of all of LIM's iron ore production for the next two calendar years 2013 and 2014.

At the same time, LIM also announced an off-take financing agreement with RB Metalloyd Limited ("RBM"), a leading international commodity trading house, under which LIM received an advance payment of US$35 million to be credited against future sales of a minimum of 3.5 million tonnes of iron ore during 2013 and 2014.

Over the past two years, LIM has sold 13 Capesize shipments of iron ore to IOC, for a total of approximately 2 million tonnes, all of which was resold in China, with the price calculated based on the daily China spot price, subject to varying selling discounts, and where the sale of LIM's iron ore experienced unpredictable variations based on prevailing market conditions.

Under LIM's new sales agreement, IOC will pay for the iron ore progressively, as the ore is resold, with the price calculation based on the monthly average of the market index, which should decrease LIM's exposure to market volatility experienced in the past two years. IOC payments will be later reconciled based on IOC's net actual aggregate resale price, adjusted for any product quality specification premiums or penalties, after ocean freight and IOC's price participation.

Under the terms of the financing agreement with RB Metalloyd, RBM has advanced a pre-payment of US$35 million to LIM, which will repaid over a period of two years, credited against the proceeds of LIM's sales of iron ore shipments between July 2013 and December 2014.

RBM has entered into an iron ore off-take agreement with IOC under which RBM has agreed to buy the LIM iron ore from IOC on an FOB Sept-Îles basis.

19.2.2 Strategic Arrangement with Tata Steel

In March 2013, LIM entered into a framework arrangement with Tata Steel Minerals Canada ("TSMC"), a subsidiary of Tata Steel Limited, to establish a strategic relationship between LIM and TSMC whereby the two companies have agreed to co-operate with each other in various aspects of their respective iron ore operations in the Labrador Trough and enter into definitive agreements to formalize this arrangement in due course.

Both LIM and TSMC operate adjacent DSO iron ore projects in the Province of Newfoundland and Labrador and in the Province of Quebec, near Menehik, Labrador and Schefferville Quebec, and both utilize and intend to utilize the same rail and port infrastructure.

The strategic relationship will include multi-part co-operation agreements in areas of logistics; property rationalization and various ancillary mutual support and potential off-take arrangements. As part of the logistics agreements, the companies shall formalize arrangements for development of the rebuilt rail line that will pass through LIM's Silver Yards facilities from TSMC's new Timmins Area processing plant to the TSH main rail line.

The companies also agreed to continue their co-operation on the upgrade of the TSH rail line that connects Silver Yards/Timmins spur line to the QNS&L line and on other areas of future logistics operations such as camp accommodations, the sharing of ore cars, flat bed freight cars and rail car repair facilities.

The co-operation agreement shall also include respective participation in developing infrastructure at the Port of Sept-Îles with the objective of establishing the access and terminal facilities for both companies to the Port's new deep sea multi-user dock.

20. Environmental Studies, Permitting and Social or Community Impact

20.1 Environmental Studies and Permitting

In April 2008 LIM submitted a Project Registration Application for the first phase of development of the Schefferville Projects to the Department of Environment and Conservation in the Province of Newfoundland and Labrador and to the Canadian Environmental Assessment Agency. Filing of the Application followed extensive studies carried out over the prior three years by LIM's engineering and environmental teams.

In August 2008 the Minister of Environment and Conservation requested an Environmental Impact Statement ("EIS") as part of the Application process. In October 2008 the Minister published for public consultation the draft guidelines for the preparation of the EIS. Following this period of public consultation, during which LIM conducted three public meetings in Labrador and in Schefferville, the Final Guidelines were issued by the Minister in December 2008. In conjunction with its consultants, LIM carried out an extensive program to prepare the EIS based initially on the draft guidelines and then amended based on the Final Guidelines and using the extensive environmental data and studies that had been collected and undertaken by LIM over the previous three years. The EIS was submitted to the Minister and registered in December 2008.

In March 2009 the Minister requested some additional information to supplement the EIS, following which LIM submitted a revised EIS in August 2009.

On July 28, 2010, LIM received Certificates of Approval for the construction of its mining facilities from the Government of Newfoundland and Labrador.

On November 5, 2009, the Minister of Environment and Conservation of the Province of Newfoundland and Labrador announced that the review of LIM's Environmental Impact Statement ("EIS") for the first phase of Stage 1, comprising the James and Redmond deposits, had been completed. The Minister confirmed that the EIS complies with the *Environmental Protection Act* and required no further work under the Provincial environmental assessment process.

In February 2010 the Minister informed LIM that under the authority of Section 67(3)(a) of the *Environmental Protection Act*, the Government had released the Schefferville Area Iron Ore Mine from environmental assessment, subject to a number of terms and conditions.

LIM subsequently submitted all the necessary applications and the various required Plans for the necessary operating permits, licenses and regulatory approvals.

The Mining Leases for the James and Redmond properties were issued by the Province of Newfoundland and Labrador. In addition LIM received Surface Use Leases for all those additional areas required for the construction and operation of the James deposits, including the Silver Yards beneficiation area and the Rail Spur Line.

An Environmental Protection Plan ("EPP") was submitted to the Minister of Environment and Conservation and the Minister's approval of the EPP was received. The EPP addressed process effluent treatment and monitoring procedures, settling pond design and operation for storm water and pit dewatering discharges, as well as caribou monitoring and mitigation in the vicinity of the Schefferville Projects.

A Memorandum of Understanding was agreed with the Department of Environment and Conservation of the Province of Newfoundland and Labrador for the installation of a real time water quality/quantity monitoring network to monitor water quality and quantity.

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 20-1: Permit Listing.

Table 20-1: Permit Listing

No.	Permit & Purpose	Date Approved	Expiry Date	Issuing Agency
1	Acceptance of Development Plan for Schefferville Area Iron Ore Mine	July 15, 2010	Not Applicable	Department of Natural Resources
2	Acceptance of revised EIS for Schefferville Area Iron Ore Mine	Nov 5, 2009	Not Applicable	Department of Environment and Conservation
3	Acceptance of Rehab/Closure Plan & Financial Assurance Letter for Schefferville Area Iron Ore Project	August 6, 2010	Not Applicable	Department of Natural Resources
4	Approval of Development and R&C Plan for 4.4 Km Silver Yard Spur Line	March 24, 2010	Not Applicable	Department of Natural Resources
5	Approval of Development and R&C Plan for Camp	July 27, 2010	Not Applicable	Department of Natural Resources
6	Certificate of Approval (C of A) for Schefferville Area Iron Ore Project Construction Activities to include Phase III expansion	July 21, 2010	• Now under Operations (approval obtained December 3,2012) • Expires September 8, 2015	Department of Environment and Conservation, Pollution Prevention Division
7	C of A for Operations for Open Pit Mining	September 8, 2010	September 8, 2015	Department of Environment and Conservation, Pollution Prevention Division
8	C of A for Diesel Generators (Silver Yards, James Claim & Camp	July 21, 2010 Amended Aug 10, 2012	July 21, 2015	Department of Environment and Conservation, Pollution Prevention Division

9	C of A for Collection, Storage, Handling of Used Oils for 6 1000L bulk containers	Jan 18, 2011 & Feb 1, 2011	December 31, 2015	Department of Government Services
10	Permit to Alter Body of Water – install 2 culverts at James Creek – Ruth Pit Outlet	November 23, 2010	Culverts Installed (no expiry date)	Department of Environment and Conservation, Water Resource Management Division
11	Permit to Alter Body of Water for James Creek, Bean Lake, Unnamed Tributary – Settling Pond	August 24, 2010	Approval to by-pass the settling ponds was granted on July 12, 2012	Department of Environment and Conservation, Water Resource Management Division
12	Water Use License (Industrial) Camp Well – supply water to camp & lunchroom Silver Yard Well - process water for washing ore and the offices Dewatering Wells (DW1, DW2 & DW3) - process water for washing ore and lowering groundwater near the open pit	July 23/26, 2010	December 31, 2015	Department of Environment and Conservation, Water Resource Management Division
13	Water use License (industrial) – DW4 & DW5 DW4 - Process water for washing ore and lowering groundwater near the open pit DW5 – lowering groundwater table near open pits	September 21, 2010	December 31, 2015	Department of Environment and Conservation, Water Resource Management Division
14	Registration of Fabric Fuel Storage Tanks – 2- 113,500 L tanks	2010/2011	Not Applicable	Department of Government Services
15	Registration of 18,927 L Fuel Tank (main plant)	October 12, 2010	Not Applicable	Department of Government Services
16	Registration of 1,900 L Fuel Storage Tank (camp)	October 12, 2012	Not Applicable	Department of Government Services
17	Surface Lease # 119 – James Discharge Area & Surface Lease # 120 James Creek Culvert	January 17, 2011	25 yrs – 2036	Department of Natural Resources

18	Surface Lease # 109 – Spur Line, Surface Lease #113 –Pipeline, Surface Lease 114 – Redmond Haul Road	April 5, 2010	25 yrs – 2035	Department of Natural Resources
19	Surface Lease # 110 – Bath Lake (Silver Yard) Surface Lease #112 – Ruth Pit Tailings	April 5, 2010	25 yrs – 2035	Department of Natural Resources
20	Surface Lease # 111 – Bean Lake Camp and Surface Lease #115 – Bean Lake Camp Extension	April/July 2010	25 yrs – 2035	Department of Natural Resources
21	Mining Lease # 200 (James Area), 201 (Wishart Lake, Redmond 5 Area), and # 202 (Wishart Lake Redmond 2 Area)	#200 – Apr 09/ April 10 #201 – Aug 10/ April 10 #202 – Aug 10/April 10	5/25 yrs – 2014/2035 5/25 yrs – 2015/2035 5/25 yrs – 2015/2035	Department of Natural Resources
22	Water Resource Real-Time Monitoring (MOU) Development and Implementation	March 31, 2013	March 31, 2016	Department of Environment and Conservation
23	DFO Letter of Advice & Monitoring Plan for Unnamed Tributary	May 31, 2010	Not Applicable	Department of Fisheries and Oceans
24	Construction Permit under Rail Services Act Gov. of NL & Operations Permit for Railway	May 3, 2010	Not Applicable	Department of Transportation and Works
25	Food Establishment and Kitchen Inspection	April 14, 2011	Not Applicable -	Department of Government Services
26	Fire and Life Safety & Accessibility Plans –Dormitory Buildings 1 & 2	Sept 23, 2010	Not Applicable	Department of Government Services
27	Fire and Life Safety & Accessibility Plans – Cafeteria Recreation Building	Jan 28, 2011	Not Applicable	Department of Government Services
28	Fire and Life Safety & Accessibility Plans – Silver Yard Administration Offices (6)	Dec. 6, 2010	Not Applicable	Department of Government Services
29	Fire and Life Safety & Accessibility Plans – Maintenance Workshop	Sept 23, 2010	Not Applicable	Department of Government Services
30	Fire and Life Safety & Accessibility Plans – Laboratory	Sept 27, 2010	Not Applicable	Department of Government Services
31	Fire and Life Safety & Accessibility Plans – Silver Yard Beneficiation Building	Oct 5, 2010	Not Applicable	Department of Government Services

32	Permit to Construct Biodisk Wastewater Treatment System – Camp (A) and Silver Yard (B)	December 16, 2010 (Camp) December 20, 2010 (SY)	Installation Complete. No expiry date for operation	Department of Government Services
33	Approval for EPP for Railway Spur Line	April 23, 2010	Not Applicable	Department of Environment and Conservation
34	Approval for EPP for Construction and Operation Activities	June 29, 2010	Not Applicable	Department of Environment and Conservation
35	Women's Employment Plan	August 29, 2009	Not Applicable	
36	Permit to Construct a Potable Water System (Approval to Operate a Camp Water Distribution System)	February 21, 2011	Installation Complete. No expiry date for operation	Department of Government Services
37	Waste Management Plan	March 4, 2011	Not Applicable	Department of Environment and Conservation
38	MMER Emergency Response Plan	April 27, 2011	Not Applicable	Department of Environment and Conservation
39	Environmental Contingency Plan	November 18, 2010	Not Applicable	Department of Environment and Conservation
40	National Pollutant Release Inventory (NPRI)		Not Applicable	Environment Canada
41	Woodland Caribou & George River Herd Mitigation Strategy			
42	Exploration Approval	April 25, 2013	December 31, 2013	Department of Natural Resources
43	Gagnon Pit – Surface lease for Limited Material Extraction	August 31, 2011	August 31, 2016.	Department of Natural Resources
44	SY – Description of Modifications and Application for Mill License	August 30, 2011	September 29, 2016	Department of Natural Resources
45	Water Use License (Industrial) James Property - 13 wells James Mine – 5 dewatering and 8 monitoring wells	May 11, 2011	December 31, 2015	Department of Environment and Conservation, Water Resource Management
46	Surface Lease # 120 – James Creek Area	Jan 17, 2011	January 17, 2036	Department of Natural Resources, Mineral Lands Division

47	MMER	Sept 26, 2011	Not Applicable	Environment Canada
48				
49	Fire & Life Safety & Building Accessibility - Guard House	July 12, 2011	Not Applicable	Department of Government Services
50	Second Floor Addition to Dormitory Buildings 1 and 2	April 27 & 30, 2012	Not Applicable	Department of Government Services
51	Permit to Replace Camp Biodisk with MBR	June 6, 2012	June 6, 2014	Department of Government Services
52	Temporary Trailer Accommodations – 3 Trailers	June 14, 2012	Not Applicable	Department of Government Services
53	Dining Room & Kitchen Extension	July 27, 2012	Not Applicable	Department of Government Services
54	Fisheries Act Authorization – removal of a portion of Unnamed Tributary and compensation work at Redmond Creek	April 5, 2013	September 30, 2013 - physical work has to be completed. On-going monitoring will follow.	Department of Fisheries and Oceans
55	Permit to Alter a body of water (stream diversion and modification) - removal of a portion of Unnamed Tributary and compensation work at Redmond Creek	March 7, 2013	March 7, 2015	Department of Environment and Conservation
56	Experimental Fish Licence – relocate fish within Unnamed Tributary	April 26, 2013	September 15, 2013	Department of Fisheries and Oceans
57	Permit to Cut – Unnamed Tributary and Redmond Creek (required to allow removal of Unnamed Tributary and compensation work at Redmond Creek)	March 5, 2013	December 31, 2013	Department of Natural Resources Forestry Division

20.1.1 Environmental Impact

The size of the operation for the Schefferville 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.

20.2 Surface Water

20.2.1 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 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.

20.2.2 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.

20.2.3 Silver Yards

The surface drainage water from the catchment area of the beneficiation plant will be pimped to a flotation system located at Ruth Pit and be disposed of concurrently with the plant rejects before release into the environment. The reject fines disposal pipeline and beneficiation plant emergency drainage are also located at that pond.

20.2.4 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.

20.2.5 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.

20.2.6 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.

20.3 Ground Water

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.

20.3.1 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.

20.3.2 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 ha (hydraulic loading of 0.001 cm/min).

20.3.3 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.

20.3.4 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.

20.3.5 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.

20.4 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.

20.5 Waste Management

20.5.1 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).

20.5.2 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 environmental 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.

20.6 Mine Rehabilitation and Closure

Environmental monitoring programs are conducted as part of the mine development and operations and this data is 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 for the Phase I (James Redmond) of the Schefferville Area Iron Ore Project are forecast at $3 million and a bond for the purpose has been provided to the Provincial Government. LIM maintains a closure bond backed by restricted cash to meet the requirements of the closure and reclamation plan filed and accepted by the Government of Newfoundland and Labrador. Restricted deposits were $2,966,270 as of June 30, 2012. The total undiscounted amount expected to be required is $2,940,067, expected to be incurred between 2013 and 2031.

20.7 Environmental and Social Responsibility Policy

LIM has a policy of full compliance with the various local, provincial and federal environmental regulations that govern the mining industry in the Province of Newfoundland and Labrador and the Province of Québec.

LIM also has a policy of respecting and cooperating with the local communities, including the various First Nations peoples, who live in the areas in the vicinity of the Schefferville Projects.

LIM and its management are committed to conducting operations in an environmentally and socially responsible manner. LIM has adopted an Environmental and Social Responsibility Policy to express its commitment to the environment and the local communities in which it works. This commitment to sustainable development is achieved through the undertaking of its programs in a manner which balances environmental, economic, technical, and social issues.

To implement this policy and its commitment to such principles and practices, LIM applies appropriate pollution prevention principles and environmental risk management practices throughout its activities on its mineral properties.

LIM and its contractors conduct their work and operate the facilities in compliance with all applicable laws and regulations. In the absence of legislation, LIM applies professional best management practices to support environmental protection at all sites, minimize risks to human health and the environment, and achieve environmental protection to levels at or above industry standards or best practices. To support the development of responsible environmental laws, policies and regulations, LIM works cooperatively with the local communities, industry and regulators. LIM has developed closure and reclamation plans that will advance long-term environmental recovery and provide suitable post-closure land-use incorporating consideration of the long-term vision of local communities. LIM encourages economic and educational development in the communities, during project assessment, development, operation and post-closure and supports initiatives to design and implement operating practices which advance the efficient sourcing and use of materials and energy.

LIM includes environmental performance as an important factor of its management and employee review process and provides training, resources and staffing so that all employees, contractors and suppliers understand, and are able to conduct their work, in accordance with the Environmental Policy and Social Responsibility. To encourage continual improvement, LIM conducts routine assessments of projects to identify areas of non-compliance with the Environmental and Social Responsibility Policy, and implements corrective action.

LIM has committed to the establishment of effective communications relating to environmental and social issues with employees, regulators, stakeholders and communities and to addressing environmental and social concerns in a timely and effective manner.

20.7.1 Aboriginal Engagement Policy

LIM conducts its operations in western Labrador in the Province of Newfoundland and Labrador and in north-eastern Québec, which areas are subject to conflicting First Nations land claims. There are a number of First Nations peoples living in the Québec-Labrador peninsula with overlapping claims to asserted Aboriginal land rights.

Under Impact and Benefits Agreements signed with four Aboriginal communities, LIM has committed to the development of the Schefferville Projects in an environmentally and socially responsible manner, and to address and mitigate any environmental, cultural, economic and spiritual concerns of the local Aboriginal communities. These agreements form an important part of ongoing operations and significant collaborative effort is expended to ensure ongoing positive relations with each of these First Nations. As part of the agreements, Labrador Iron Mines holds Quarterly IBA

Implementation meetings on the mine site with all four First Nations. This provides for a time to have a quality exchange of information and understandings and to visit the operation.

LIM has agreed to the equitable participation of the Aboriginal communities in the Schefferville Projects through employment, training, contract opportunities and financial benefits, including certain community infrastructure projects.

LIM has undertaken to make best efforts to employ community members in the Project workforce and to engage Aboriginal businesses for Project contracts. LIM has also agreed to provide support for education, training and social programs.

LIM has agreed to take certain social and environmental protection measures to mitigate the impact of LIM's Projects on the Aboriginal communities, families, and traditional activities. LIM has agreed to make annual contributions to Aboriginal traditional activities funds for the benefit of the traditional Aboriginal activities of members of relevant First Nations. It is intended that the funds shall be used for the purposes of traditional, cultural and subsistence activities and the protection and preservation of Aboriginal values and shall contribute to the aim of protecting the rights, interests and traditional activities of aboriginals.

20.7.2 Impact Benefit Agreements

There are a number of Innu groups based in Québec (including Schefferville, and Sept-Îles) who assert aboriginal rights in Québec and Labrador. The Labrador Innu, as represented by the Innu Nation, is the only aboriginal party with a land claim that has been accepted by the Government of Newfoundland and Labrador. The Innu of Québec, located at Matimekush-Lac Jean near Schefferville, and at the communities of Uashat Takuaikan mak Mani-Utenam, near Sept-Îles, asserts aboriginal rights to traditional lands which include parts of Québec and Labrador. These claim areas include the areas of the Schefferville Projects and the Québec Innu may be regarded as having overlapping credible land claims in the Schefferville Projects area.

In July 2008, LIM and Innu Nation of Labrador, representing the Sheshatshiu Innu First Nation and the Mushuau Innu First Nation, respectively, living in the communities of Sheshatshiu and Natuashish, Labrador, signed an IBA, committing to an ongoing relationship between the Innu Nation of Labrador and LIM with respect to the development of LIM's iron ore project located in western Labrador. The IBA is a life of mine agreement that establishes the processes and sharing of benefits that will ensure an ongoing positive relationship between LIM and the Innu Nation of Labrador. In return for their consent and support of the project, the Innu Nation of Labrador and its members will benefit through training, employment, business opportunities and financial participation in the project.

In September 2010, an agreement was reached with the Innu Nation of Matimekush-Lac John to remove the barriers that had restricted normal access from the town of Schefferville to adjacent mining properties in Labrador from June, 2010 and to enter into negotiations towards an IBA. Under that agreement, LIM and another adjacent mining company committed to jointly support a number of local social activities, including some education, training, health and youth programs and, with Government participation, improvements to the community arena facility in Schefferville.

On September 9, 2010, LIM signed an Impact Benefits Agreement with the Naskapi Nation of Kawawachikamach under which LIM committed to the development of the Schefferville Project in an environmentally and socially responsible manner, and to address and mitigate any environmental, cultural, economic and spiritual concerns of the Naskapi Nation. LIM has undertaken to make best efforts to employ Naskapi members in the Project workforce and to engage Naskapi aboriginal businesses for Project contracts. LIM has also agreed to provide some support for education, training and social programs.

On June 6, 2011, LIM signed an Impact Benefits Agreement with the Innu Nation of Matimekush-Lac John under which LIM has agreed to the equitable participation of the Innu Matimekush-Lac John ("MLJ") in the Schefferville Projects through employment, training, contract opportunities and financial benefits, including some community infrastructure projects, and has agreed to take certain social and environmental protection measures to mitigate the impact of the Schefferville Projects on MLJ families and traditional activities. Under the Agreement, the Matimekush-Lac John consented to LIM's Schefferville Projects proceeding in accordance with the Agreement and agreed to provide LIM continuing and unobstructed access to and equitable enjoyment of the iron ore projects and its properties.

In February 2012 LIM entered into Impact Benefits Agreements ("IBAs") with Innu Takuaikan Uashat Mak Mani-Utenam (Sept-Îles) ITUM with respect to LIM's operations. The life-of-mine agreement, which follows the earlier Agreement in Principle signed in December 2010, was approved by resolution of the Innu Takuaikan Uashat Mak Mani-Utenam and signed by the Chief and Band Council. This new agreement recognizes that LIM and ITUM wish to work together to establish a long-term, mutually beneficial, cooperative and respectful positive relationship based on confidence, trust and certainty.

Under the IBA Agreement, LIM has agreed to the equitable participation of the Uashaunnuat in its Projects through employment, training, contract opportunities, social, and financial benefits, including environmental protection measures in the Papateu (Howell River) and Kautaitnat (Irony Mountain) areas to mitigate any impact of the Projects on Uashaunnuat families and traditional activities. In consideration of benefits associated with the IBA, ITUM has given its consent to LIM's iron ore Projects on the conditions expressed in the Agreement.

LIM and ITUM have agreed to implement training programs with a view to encouraging and assisting ITUM members to receive the education and training required to maximize their opportunities for employment, retention and advancement on LIM's iron ore projects.

LIM has also agreed to make annual contributions to an Aboriginal Traditional Activities Fund to be created for the benefit of the traditional activities of the Uashaunnuat and other Innu, including the Uashaunnuat families. The Fund may also be used for the benefit of the traditional activities of members of other First Nations in the vicinity of Schefferville. It is intended that the Fund shall be used for the purposes of traditional, cultural and subsistence activities and the protection and preservation of aboriginal values and shall contribute to the aim of protecting the rights and interests of the Uashaunnuat, their lifestyle, their relationship with the land and their traditional activities.

In December 2012, the Company entered into an Economic Partnership Agreement with the NunatuKavut Community Council representing the Southern Inuit of Labrador, who also assert claims for traditional aboriginal rights in Labrador. This agreement, which sets out the basic understandings and positions of each party and addresses such matters as environmental and cultural protection, employment, training, aboriginal contracting and other financial aspects with respect to the Schefferville Projects, replaces the memorandum of understanding between the parties entered into in February, 2012.

20.7.3 Women's Employment Plan

LIM has established overall goals for women's employment during construction and operations of the Project, consistent with the approach adopted in the Energy Plan of the Province of Newfoundland and Labrador. Project goals have been established based on occupational and industry data, adjusted to reflect the nature of the Project. These goals are communicated to all potential and selected contractors.

LIM has adopted a Women's Employment Plan which covers the construction and operations phases of the Schefferville Projects. It describes how LIM ensures that the employment of women on the Project is fully promoted and supported throughout the Project. The encouragement of women in the workplace is an important goal of LIM.

LIM and each of its main contractors identify actions for achieving the goal levels of employment for women. When new main contractors are identified, they are asked, as part of the tendering process, to provide information concerning their programs to promote employment equity for women.

LIM has a policy with respect to all employees to ensure zero tolerance for discrimination on the basis of race ethnicity, gender, sexual orientation or origin. LIM's Women's Employment Plan requires the involvement of LIM and its Project contractors. The Plan describes the involvements and responsibilities of contractors; equity goals and initiatives; and, monitoring and reporting.

20.7.4 Newfoundland and Labrador Benefits Plan

LIM has established a Labrador Iron Mines Limited Newfoundland and Labrador Benefits Policy (Benefits Policy) that applies to LIM and to all Project contractors and subcontractors and has developed its Newfoundland and Labrador Benefits Plan to implement the Benefits Policy.

LIM understands the importance of the Schefferville Area Iron Ore Mine Project in Western Labrador to the people of the Province of Newfoundland and Labrador. LIM is committed to the maximization of associated benefits including employment, procurement, education, training and economic development to the Province, and, in particular to Labrador, and is committed to providing full and fair opportunity and giving first consideration to residents and businesses of the Province to participate in, and benefit from, the Project.

LIM has committed to project employment targets and goods and services procurement targets within the Newfoundland and Labrador Benefits Plan. The targets represent minimum levels of participation by residents of the Province in project employment and for business opportunities for Newfoundland and Labrador companies in project activity and LIM commits to achieve or exceed these targets.

20.7.5 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.

In 2012, LIM successfully implemented a series of quarterly meetings with Aboriginal groups and community leaders. A quarterly bilingual newsletter was also established as a communication channel to the employees, contractors and communities.

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).

Project design and implementation includes 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 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.

21. Capital and Operating Costs

21.1 Capital Costs

As at March 31, 2013 LIM had incurred approximately $117 million in capital expenditures on the property, plant and equipment on its Schefferville Area iron ore project, including approximately $74 million in construction of the Silver Yards beneficiation plant and equipment, approximately $32 million in transportation infrastructure and equipment, approximately $10 million in service buildings and an accommodation camp and approximately $3 million in environmental reclamation and bonding. This does not include expenditures on exploration and mine development.

Table 21-1: Silver Yards Property, Plant and Equipment

Cost at:	Buildings and mine camp	Office equipment	Transportation infrastructure and equipment	Beneficiation plant and equipment	Total
March 31, 2011	$ 4,978,137	$ 202,098	$ 6,407,669	$ 19,120,580	$ 30,708,484
Additions	954,686	352,868	22,533,487	31,587,325	55,428,366
March 31, 2012	5,932,823	554,966	28,941,156	50,707,905	86,136,850
Additions	4,441,337	607,794	3,433,515	23,537,085	32,019,731
March 31, 2013	10,374,160	1,162,760	32,374,671	74,244,990	118,156,581

The Phase III 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 underway. The capital investment required for the Phase III plant upgrade and expansion is $32 million total, of which $25 million had been expended at the end of fiscal year 2013 and $6 million remained to be spent as at March 31, 2013. Connection of the Silver Yard Plant to the Menehik hydroelectric power supply commenced in 2012 with overall cost of $8.5 million, and remainder of $3.2 million left to be completed in 2013.

The detailed capital and operating costs in this report include the James Silver Yards Project, which is the first phase of Stage 1 of LIM's overall Schefferville area iron ore project. Ongoing development costs of the Phase I satellite deposits or historical stockpiles are estimated at about $30 million of capital expenditure, mostly for road refurbishing/upgrade and dewatering requirements.

The capital and operating costs reflect all costs expected to be incurred after March 31, 2013, 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.

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.

21.1.1 Capital Cost Estimates

Table 21-2 Capital Cost Estimates for the Silver Yards Project FY-2014

Fiscal Year:	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	TOT
2014	2013	2013	2013	2013	2013	2013	2013	2013	2013	2014	2014	2014	
SILVER YARDS													
SILVER YARDS PHASE III	$520,469	$1,626,796	$1,597,943	$1,353,909	$1,158,000	$0	$0	$0	$0	$0	$0	$0	$6,257,116
SILVER YARDS HV PROJECT	$0	$0	$0	$27,175	$546,471	$974,056	$890,254	$386,212	$364,465	$0	$0	$0	$3,188,632
PLANT BULK SAMPLING	$270,000	$0	$0	$0	$150,000	$150,000	$100,000	$0	$0	$0	$0	$0	$670,000
HYDROGEOLOGICAL BUDGET	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200,000
CAMP REQUIREMENTS	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$300,000
MAINTENANCE FACILITY	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000
EQUIPMENT	$760,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$760,000
SLUDGE COMPOSTER	$0	$0	$0	$30,000	$30,000	$40,000	$0	$0	$0	$0	$0	$0	$100,000
DEWATERING	$250,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$250,000
SILVER YARDS IT BANDWIDTH EXPANSION	$450,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$450,000
Total Silver Yards	$2,850,469	$1,626,796	$1,597,943	$1,411,083	$1,884,471	$1,164,056	$990,254	$386,212	$364,465	$0	$0	$0	$12,275,748

Capital costs planned for 2013 at Silver Yards are primarily for completion of Phase 3 for the wet process plant (magnetic separation circuit) and connection to grid power. See Table 21-2 for details. Most of the costs for these two projects had been incurred in 2012 when they were deferred for completion in 2013.

Sustaining capital is approximately $1 million per year, primarily for light vehicles and utility services such as water wells.

No significant additional capital expenditure is expected to be required on the processing plant for the treatment of these deposits.

21.1.2 Operating Costs

Life of mine operating costs for products delivered and unloaded at the Port of Sept-Iles are estimated to average $60 per dry metric tonne sold over the remaining seven year mine life of LIM's Stage 1 project. This operating cost is approximately 10 percent lower than current forecasted operating costs for the fiscal year 2014 due to the planned future exploitation of previously mined stockpiles, to the potential savings by doubling of production to approximately 4 mtpa through the development of the Houston / Malcolm projects, and to the move to the new Pointe Noire multi-user terminal in 2016. Longer trains and the use of a rotary car dumper will also contribute to lower costs in 2016 and beyond.

Silver Yards and James Mine Operating Costs Summary Fiscal Year 2014 (CY 2013):

- Estimated total cost of sales products delivered and unloaded at the Port of Sept-Îles is $60 to $65 per tonne (dry metric tonne sold in Canadian dollars); Costs are based on actual experience together with management assessment of cost-containment initiatives currently underway;
- Schefferville Area Site Costs are approximately 50% of total costs; and
- Transportation Costs are approximately 50% of total costs.

Table 21-3 shows average operating costs per tonne of product shipped in the last two years and outlook for FY 2014.

Silver Yards Operating Costs:

- Approximately $12/dmt is mining related for contract mining, fuel, equipment maintenance and mine service costs, for the movement of ore and waste;
- Approximately $11/dmt is process recovery related, for dry crushing and screening and for wet processing, including fuel, laboratory and rejects disposal;
- Approximately $32/dmt is related to rail transportation, including TSH and QNS&L railway tariffs, leasing of locomotives and locomotive fuel, operation of the Centre Ferro shop, un-fullfilled take-or-pay obligations, rental of some rail cars, train loading and train unloading; and
- Approximately $10/dmt is related to general site operations, camp and catering, aviation and crew rotation, security, waste management, road maintenance.

Table 21-3 Estimated Operating Costs for the Silver Yards Project

	Average 2011 - 2014 ($/dmt shipped)
Mining & Hauling	**$12**
Processing	**$11**
Transportation & Port	**$32**
General and Site Operations	**$10**
Total per tonne product	**$65**

Given that Redmond, Gill Knob Lake 1 and Denault satellite 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 mine.

21.1.3 Mining and Hauling Costs

The mine operating costs are based on contracting the mining services to a contractor who supplies mobile equipment and labour required for the operation and maintenance. The operating costs approximate LIM's 2011 and 2012 operating experience.

Other key assumptions include:

- The mobile equipment operating costs include the hourly cost and operation based on mining contractor's rates;
- 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;
- Mining costs also include the following items:
  - Equipment mobilization costs (per year);
  - Equipment operating costs;
  - Equipment fuel costs;
  - Blasting and accessories;
  - Operations Labour;
  - General and Safety consumables, office supplies;
  - Allowance for Consultant/service personnel; and
  - Allowance for training.

21.1.4 Processing Costs

The processing costs include the following items:

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

21.1.5 Transportation and Port Costs

Transportation costs include:

- Loading of trains at Silver Yards siding and spur;
- TSH Railway tariffs for ore trains;
- TSH Railway charges for freight;
- Leasing of locomotives;
- Locomotive fuel;
- QNS&L Railway tariff for ore trains;
- QNS&L Railway rail car rentals;
- All railway penalties, take-or-pay charges as applicable;
- TSH Maintenance facility usage in Schefferville;
- LIM Centre Ferro rail car maintenance facility in Sept-Îles;
- Unloading of trains at Sept-Îles port facility;

21.1.6 General and Site Operating Costs

These cost estimates include general site operating and support infrastructure. The support infrastructure 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.

21.2 Environmental Rehabilitation Cost Estimate

Progressive environmental rehabilitation costs over the life of the Silver Yards Project (Phase 1) have been estimated to be approximately $3,400,000.

21.3 Taxes, Royalties and Other Payments

The following fiscal considerations apply to the 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; and
- 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 (subject to change) 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 operation is subject to a royalty in the amount of 3% of the selling price (FOB Port) of iron ore shipped and sold, subject to such royalty being no greater than US$1.50 per tonne. Revenue sharing contribution to aboriginal communities is approximately equal to the royalty in this paragraph.

21.4 Sales Costs and Ocean Freight Costs

- Port and ocean freight costs are anticipated to range from $40 to $45 per dry metric tonne of product sold. The higher end of the range will apply in 2013 through 2015. The lower end of the range is anticipated to apply after 2015 with the use of the new Pointe Noire multi-user berth facility.
- This cost is additional to the $60 to $65 per tonne total operating costs;
- All ocean freight costs are for the route from Sept-Iles to northern China;
- IOC Participation includes haulage of products to the stacker-reclaimer system at the Port, use of the stacker-reclaimer and ship loader and use of the cape-sized dock.

22. (Item 23) Adjacent Properties

LIM's Schefferville Projects comprise 20 different iron ore deposits, which were part of the original IOC direct shipping operations conducted from 1954 to 1982

Through its wholly-owned subsidiary Labrador Iron Mines Limited, LIMHL holds 3 Mining Leases and 55 Mining Rights Licenses (including 13 Licenses covering the Houston Property), issued by the Department of Natural Resources, Province of Newfoundland and Labrador, covering approximately 16,475 hectares.

Through its wholly-owned subsidiary, SMI, LIMHL holds interests in 277 Title Claims issued by the Ministry of Natural Resources, Province of Quebec, covering approximately 11,131 hectares in the Schefferville area. SMI also holds an exclusive operating license covering 23 parcels totalling about 2,036 hectares.

LIM's plans for its Schefferville Projects envision the development and mining of the various deposits in stages. Stage 1, which is being undertaken in phases, comprises the deposits closest to existing infrastructure located at Silver Yards in an area identified as the Central Zone. The first phase of Stage 1 involves mining of the James deposits in Labrador.

Stage 2, which will also be undertaken in phases, will involve, the exploration, development and mining of the Houston, Malcolm and adjacent deposits.

It is intended that during the mining of the Stage 1 and and development of Stage 2 deposits, planning will be undertaken for the future development of the other deposits in subsequent stages.

Stage 3 comprising the Howse (Labrador) and Barney (Quebec) deposits located approximately 25 km northwest of Schefferville (North Central Zone) and relatively close to existing infrastructure. The Howse deposit, located about 25 km north of the James Mine and Silver Yards processing plant, has a historical resource of 28 million tonnes. In March 2013 LIM entered into a framework arrangement with Tata Steel Minerals Canada Limited ("TSMC"), as part of which LIM and TSMC have agreed to enter into a transaction for the joint development of the Howse deposit, whereby LIM will sell a 51% interest in Howse to TSMC. In the future, TSMC may increase its interest to 70%. It is hoped that the agreement with TSMC will expedite the development of the Howse deposit and that significant cost savings and synergies can be achieved by processing Howse ore through TSMC's adjacent Timmins Area plant.

Tata Steel Minerals Canada (TSMC) a Joint Venture between Tata Steel Minerals Canada, (80%) (a member of the Tata Group, the world's sixth largest steel producer) and New Millennium Corporation. NML (20%) is developing an adjacent DSO project on 22 deposits, some of which are situated in Labrador and the remaining situated in Québec to the northwest of the town of Schefferville, approximately 25 km from LIM's James Mine and Silver Yards plant,

The TSMC Feasibility Study dated April 10, 2010 amended as of February 16, 2011 is based on mining ten deposits and blending the ore to provide consistent feed to the TSMC Timmins area process plant. The current schedule provides a ten-year mine life. The mining and processing operations will be carried out on a year round basis. The Timmins area plant will process 5.0 million natural tonnes per year to produce 4.0 million dry tonnes of sinter fines and super fines. The mining method selected is conventional open-pit mining with a front-end loader/truck operation. The rock will be drilled, blasted and loaded into haul trucks that will deliver run-of-mine ore to the primary mineral sizer, located at the Timmins Site. The TSMC DSO Project is currently under construction and reported by New Millennium to contain 64.1 million tonnes of Proven and Probable Mineral Reserves at an average grade of 58.8% Fe.

A Feasibility Study has also been carried out for a joint venture between NML and Tata Steel Minerals Canada on a taconite iron deposit known as the LabMag Property in the Howells River area of Labrador located some 30 km northwest of Schefferville, and a Pre-Feasibility study has been carried out on the adjacent KéMag taconite Property in Quebec.

LabMag is reported by New Millennium Corp to contain 3.5 billion tonnes of Proven and Probable reserves at a grade of 29.6% Fe plus 1.0 billion tonnes of Measured and Indicated resources at an average grade of 29.5% Fe and 1.2 billion tonnes of Inferred resources at an average grade of 29.3% Fe. KéMag is reported by New Millennium Corp to contain 2.1 billion tonnes of Proven and Probable reserves at an average grade of 31.3% Fe, 0.3 billion tonnes of Measured and Indicated resources at an average grade of 31.3 % Fe and 1.0 billion tonnes of Inferred resources at an average grade of 31.2% Fe.

The authors of this Technical Report have not reviewed or audited the above New Millennium resource and reserve estimates.

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.

23. (Item 24) Other Relevant Data and Information

There is no other relevant data and information included in this Technical Report.

24. (Item 25) Interpretations and Conclusions

The updated mineral resources for the Schefferville Direct Shipping Iron Ore Projects involving the James, Redmond 2B, Redmond 5, Knob Lake No.1 and the Denault deposits are reported in Table 24-1. The mineral resources of the Wishart and Ferriman stockpiles are reported in Table 24-2.

Table 24-1: Updated Mineral Resources for James, Redmond 2B, Redmond 5, Knob Lake No.1 and Denault Deposits

Deposit	Ore Type	Classification	Tonnes	% Fe	% P	% Mn	% SiO_2	% Al_2O_3
Schefferville Area mineral deposits **James, Redmond 2B, Redmond 5, Knob Lake No.1, Denault**	**NB-LNB**	Measured (M)	6,738,000	55.22	0.075	0.94	9.17	0.88
		Indicated(I)	7,409,000	56.40	0.057	0.96	10.29	0.77
		Total M+I	**14,147,000**	**55.84**	**0.066**	**0.95**	**9.76**	**0.82**
		Inferred	638,000	52.52	0.094	1.40	11.36	0.71
	HiSiO2	Measured (M)	516,000	51.18	0.041	0.35	20.13	0.65
		Indicated(I)	1,839,000	52.36	0.023	0.51	21.53	0.40
		Total M+I	**2,355,000**	**52.10**	**0.027**	**0.47**	**21.22**	**0.45**
		Inferred	209,000	51.15	0.042	0.42	20.46	0.39
	HMN-LMN	Measured (M)	1,825,000	51.75	0.080	6.20	6.50	1.00
		Indicated(I)	576,000	50.93	0.073	5.88	7.71	0.91
		Total M+I	**2,401,000**	**51.55**	**0.078**	**6.12**	**6.79**	**0.98**
		Inferred	138,000	49.12	0.047	4.82	9.85	0.40
	Fe Ore (NB-LNB and HiSiO2)	Measured (M)	7,253,000	54.94	0.073	0.90	9.95	0.86
		Indicated(I)	9,251,000	55.60	0.050	0.87	12.53	0.70
		Total (M+I)	**16,504,000**	**55.31**	**0.060**	**0.88**	**11.40**	**0.77**
		Inferred	846,000	52.18	0.081	1.16	13.60	0.63
	Mn Ore (HMN-LMN)	Measured (M)	1,825,000	51.75	0.080	6.20	6.50	1.00
		Indicated(I)	576,000	50.93	0.073	5.88	7.71	0.91
		Total (M+I)	**2,401,000**	**51.55**	**0.078**	**6.12**	**6.79**	**0.98**
		Inferred	138,000	49.12	0.047	4.82	9.85	0.40

Resources are rounded to the nearest 10,000 tonnes
James Deposit Resources updated to April 12th, 2012
Knob Lake No.1 Deposit Resources updated to April 12th, 2013
Redmond 2B Deposit Resources restated to April 12th, 2013
Redmond 5 Deposit Resources restated to April 12th, 2013
Denault Deposit Resources Updated to May 09th, 2013
CIM Definitions were followed for mineral resources
Mineral resources which are not mineral reserves do not have demonstrated economic viability

Table 24-2: Mineral Resources of the Wishart and Ferriman Stockpiles

Area	COG	Classification	Tonnes	%Fe	%P	%Mn	$\%SiO_2$	$\%Al_2O_3$
All Stockpiles	**>45% Fe (Base Case)**	**Indicated**	**3,545,000**	**49.09**	**0.05**	**0.84**	**23.42**	**0.84**
		Inferred	**2,896,000**	**48.83**	**0.04**	**0.69**	**24.48**	**0.71**
	>0% Fe	Indicated	4,966,000	46.90	0.06	0.88	25.86	1.18
		Inferred	4,530,000	46.61	0.05	0.86	27.04	0.91
	<45%Fe	Indicated	1,397,000	41.32	0.09	0.97	32.09	2.05
		Inferred	1,615,000	42.60	0.05	1.16	31.60	1.27

Wishart Stockpile Resources dated to March 22nd, 2013
Ferriman Stockpile Resources dated to March 27st, 2013
CIM Definitions were followed for mineral resources
Mineral resources which are not mineral reserves do not have demonstrated economic viability

There are no known factors or issues related to environment, permitting, legal, mineral title, taxation, marketing, socio-economic or political settings that could materially affect the mineral resource estimate.

Of the total 2012 RC drilling campaign, (82 RC field duplicates), the student-T test did not highlight any bias. The sign test and student-T tests highlighted a small bias. Only 22% of all the 2011 original samples (ActLabs) returned values higher for iron than field duplicates (ALS). The opposite was observed for SiO_2. The correlation remains high and the absolute difference between samples is low. Furthermore almost all of the data fall within 20% difference.

LIMHL considers the difference to be acceptable. SGS Geostat considers the difference as acceptable as well and suitable for resource estimation but strongly suggests identifying the bias and addressing this matter in a proper timeframe.

The results from the check sampling done on the 2012 RC cuttings and core by SGS-Geostat indicate a small bias. The results indicate that there is sufficient reproducibility between laboratories and that the data has demonstrated validity.

25. (Item 26) Recommendations

Recommendations here are taken from the previous Technical Report titled "Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada" Revised dated October 24st, 2012 with minor updates.

Following the review of all relevant data and the interpretation and conclusions of this review, it is recommended that exploration on the Redmond 2B, Redmond 5, Denault, Gill, Star Creek, and Ruth Lake 8 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 for Gill and Ruth Lake 8 occurrence in order to continue the ongoing program to confirm historical resource (not NI 43-101 compliant). The additional drilling of about 35 drill holes is recommended:

- A total of 17 drill holes for a total of 1,700 m are proposed for the Gill occurrence. All holes are located to define historical resources.
- A total of 6 drill holes for a total of 600 m are proposed for Redmond 2B and 5 to define further extensions.
- A total of 7 drill holes for a total of 700 m are proposed for Denault occurrence to define further extensions.

Estimated budget for the additional exploration:

Table 25-1: Budgetary Recommendations

Description	Number	Units	$/Number	Total $
Assays (RC)	1,250	Unit	40	50,000
RC Infill Drilling	1,800	m.	350	63,000
Vibration-Rotation Drilling	1,000	m.	350	35,000
Reporting, Mineral Resource Updates	1		65,000	65,000
Sub-Total				213,000
Contingency & Miscellaneous (25%)				53,250
			Total	266,250

Exploration programs are recommended to be carried out for all those remaining deposits 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 occurrences 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 Redmond 2B, Redmond 5, Gill, Ruth Lake 8, Denault and Star Creek targets:

- 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;
- Hydrology investigations should be completed to determine groundwater movement and to determine the amount of pit dewatering that will be required on all properties.

SGS recommends the continued use of diamond drilling in order to obtain core from all of its work areas. Recent 2012 DDH drilling campaign demonstrated a good recovery of core (over 85% recovery) making assay results, lithological and physical information more accessible with an almost constant volume in order to better define the in situ Specific Gravity and to gather material at depth for metallurgical tests and possibly geotechnical tests. The tests would include general mineralogy, QEMSCAN, grindability and Bond Work Index, scrubbing tests, size analysis and assays from before and after scrubbing, density separation, jigging tests, WHIMS tests, settling tests without using flocculants, Vacuum filtration (assuming vacuum disc filter).

SGS suggest inserting real blanks and certified materials as well as regular field, prep coarse rejects pulp duplicates and the use of a second laboratory for checks.

LIM currently uses the IOC *Ore Type* categories for resources statements and disclosures of its mineral deposits and projects. This classification system permits the reader to compare historical resources and reserves with current LIMHL estimates. All of the mineral resources present in this report are current and are in accordance with NI-43-101 regulations. LIMHL has adopted new *Ore Type* classification system to reflect the James deposit currently in production (See bullets below). This classification system is based on marketable material and LIMHL beneficiation capabilities at the moment. SGS recommends the disclosure of all of the mineral deposits using the updated LIMHL *Ore Type* classification system in order to retain continuity in reporting of their mineral resources estimates.

The following is a description of LIMHL's classification system:

- DRO is the direct railing ore with %Fe> 60% (Z>530m) or %Fe>58% (Z<530m) and %P<0.05%;
- PF is the plant feed ore with 50%<%Fe<60% or 58% and %P<0.05%;
- Yellow is a silicate carbonate iron formation with %Fe > 50% and %P>0.05%; and
- TRX is the treat rock material with 45 %< %Fe < 50%.

26. (Item 27) References

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

"Geology of Iron Deposits in Canada". Volume I. General Geology and Evaluation on Iron Deposits. G.A. Gross. Department of Mines and Technical Surveys Canada. 1965;

"Reserve and Stripping Estimate". Iron Ore Company of Canada, January 1983;

"Overview Report on Hollinger Knob Lake Iron Deposits". Fenton Scott. November 2000;

"Assessment of an Investment Proposal for the Hollinger Iron Ore Development Project. Final Report". SOQUEM Inc. February 2002;

"Feasibility Study for the Labrador Iron Ore Project. Province of Newfoundland & Labrador, Canada. Volume I. Labrador Iron Mines Ltd. September 28, 2006;

"Technical Report of an Iron Project in Northwest Labrador, Province of Newfoundland and Labrador". 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;

"An Investigation into Direct Shipping Iron Ore from Labrador Iron Mine prepared for SNC-Lavalin Inc. on behalf Labrador Iron Mines Ltd. Project 12010-001 – Final Report", SGS Lakefield Research Ltd., February 2009;

"Report on Chemical, physical and metallurgical properties of James South Lump ore", Studien-GesellschaftfürEisenerz-Aufbereitung, May 2009;

"Report on Chemical, physical and metallurgical properties of Knob Lake 1 Lump ore", Studien-GesellschaftfürEisenerz-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-GesellschaftfürEisenerz-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;

"Report on 2010 Exploration Program". Labrador Iron Mines Limited. January, 2011;

"Report on 2011 Exploration Program". Labrador Iron Mines Limited. February, 2012;

"Report on 2012 Exploration Program". Labrador Iron Mines Limited. March, 2013;

"Technical Report on an Iron Project in Northern Quebec. Province of Quebec". A.S. Kroon. March 10th, 2010;

"Revised Technical Report on an Iron Ore Project in Western Labrador. Province of Newfoundland and Labrador". A. Kroon, SGS Canada Inc. March 18th, 2010;

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

"Technical Report Mineral Resource Estimation of the Houston Property minerals deposit for Labrador Iron Mines Limited" SGS Canada Inc. Dated March 25, 2011;

"Technical Report, Direct Shipping Iron Ore Projects in Western Labrador and North Eastern Quebec, Canada." Dated April 15th, 2011.

"Abitibi Geophysics, 2013, Borehole gravity survey (Gravilog). James South Extension and Houston properties. Schefferville Area, Quebec, Canada. Logistics and Interpretation Report". 37p

LIM, 2012a, 2012 James Mine Reconciliation Year End Report , 29p.

SGS, 2009, Technical Report. Resource Estimation of the James, Redmond 2B and Redmond 5 Mineral Deposits located in Labrador, Canada for Labrador Iron Mines Limited, 133p.

LIM, 2012b, 2012 Grade Reconciliation Procedure, 22p.

"Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada" SGS-Geostat. October 24st, 2012.

27. Date and Signature Page

This report "**Technical Report: Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada For Labrador Iron Mines Holdings Limited**" dated April 12th, 2013 was prepared and signed by the authors.

1. Signed in Blainville, Québec, Canada on June 20th, 2013

SIGNED & SEALED

Maxime Dupéré, P.Geo.
Geologist
SGS Canada Inc.

2. Signed in Toronto, Ontario, Canada on June 20, 2013, 2013

SIGNED & SEALED

Justin Taylor, P. Eng.
Project Manager
DRA Americas

3. Signed in Blainville, Québec, Canada on June 20th, 2013

SIGNED & SEALED

Michel Dagbert, Eng..
Senior Geostatistician
SGS Canada Inc.

Qualifications Certificate
Certificate of Maxime Dupéré, P.Geo.

This certificate regards the technical report entitled "**Technical Report: Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada For Labrador Iron Mines Holdings Limited" dated April 12, 2013**. ("Technical Report");

I, Maxime Dupéré, P. Geo, Québec, do hereby certify that:

1. I am a geologist with SGS Canada Inc., - Geostat with an office at 10 Boul. de la Seigneurie Est, Suite 203, Blainville Quebec Canada, J7C 3V5;
2. I am a graduate from the Université de Montréal, Quebec in 1999 with a B.Sc. in geology and I have practiced my profession continuously since 2001.
3. I am a member in good standing of the Ordre des Géologues du Québec (#501), I have 11 years of experience in mining exploration in diamonds, gold, silver, base metals, and Iron Ore. I have prepared and made several mineral resource estimations for different exploration projects at different stages of exploration. I am aware of the different methods of estimation and the geostatistics applied to metallic, non-metallic and industrial mineral projects.
4. I am a qualified person for the purposes of the National Instrument 43-101 (the "Instrument");
5. I am jointly responsible with the other authors for the preparation of sections 1, 24, 25 and 26. I am entirely responsible for the preparation of sections 2 to 12, 14, and 22, with exception of 14.7 of the Technical Report;
6. I visited the site from August 23rd to 24th, 2012;
7. I am independent of Labrador Iron Mines Holdings Limited ("Company") as defined by Section 1.5 of the Instrument;
8. My prior involvements with the Company are for the resource estimation and respective technical reports in respect of the Houston Property and the Schefferville Areas DSO Projects since 2008.
9. I have read the Instrument and the sections of the Technical Report that I am responsible for which have been prepared in compliance with the Instrument;
10. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the parts of the Technical Report that I am responsible for, contain all scientific and technical information that is required to be disclosed to make this section of the technical not misleading.

Signed and dated this 20th day of June 2013 at Blainville, Quebec, Canada.

(*Signed*) Maxime Dupéré
Maxime Dupéré P.Geo.
Geologist

SGS Canada Inc. – Geostat

Qualifications Certificate
Certificate of Michel Dagbert

This certificate regards the technical report entitled **"Technical Report: Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada For Labrador Iron Mines Holdings Limited" dated April 12, 2013.** ("Technical Report");

I, Michel Dagbert, Eng., Québec, do hereby certify that:

1. I am a senior geostatistician with SGS Canada Inc., - Geostat with an office at 10 Boul. de la Seigneurie Est, Suite 203, Blainville Quebec Canada, J7C 3V5;
2. I am a graduate from Paris School of Mines in 1971 and McGill University in 1972;
3. I have worked as a geostatistician continuously since my graduation from university;
4. I am responsible for the preparation of section 14.7 of the Technical Report;
5. I did not visit the site;
6. I am independent of Labrador Iron Mines Holdings Limited ("Company") as defined by Section 1.5 of the Instrument;
7. I have had no prior involvement with the property that is the subject of the Technical Report.
8. I have read the Instrument and the sections of the Technical Report that I am responsible for which have been prepared in compliance with the Instrument;
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the parts of the Technical Report that I am responsible for, contain all scientific and technical information that is required to be disclosed to make this section of the technical not misleading.

Signed and dated this 20th day of June 2013 at Blainville, Quebec, Canada.

(Signed) "Michel Dagbert"

Michel Dagbert, Eng.,
Senior Geostatistician
SGS Canada Inc. - Geostat

Certificate of Justin Taylor P. Eng. PMP

To accompany this report entitled**: "'Technical Report: Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada For Labrador Iron Mines Holdings Limited" dated April 12, 2013**.

I, Justin Taylor P. Eng., do hereby certify that:

1. I am a mechanical engineer residing at 84 Furrow Lane, Etobicoke, ON, M8Z 0A3, Canada.
2. I am a co-author of the report entitled "Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada For Labrador Iron Mines Holdings Limited" dated April 12, 2013.
3. I graduated from the University of Pretoria South Africa with Bachelor of Engineering degree in Mechanical Engineering 1999; Maintenance Engineering (Hons)2002; Diploma Business Management 2003.
4. I am a registered member in good standing of the Professional Engineers of Ontario, Professional Engineers and Geoscientists Newfoundland and Labrador, Canada.
5. I am a registered member in good standing of the Engineering Council of South Africa.
6. I have worked as a mechanical engineer involved with minerals processing, materials handling in the mining and minerals industry for 14 years since my graduation from university.
7. 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.
8. I am responsible for section 13 and sections 16 to 21 incl. of this "Technical Report: Schefferville Area Direct Shipping Iron Ore Projects Resource Update in Western Labrador and North Eastern Quebec, Canada For Labrador Iron Mines Holdings Limited".
9. I have visited the project site on numerous occasions most recently from May 15 to May 24, 2012.
10. I am independent of either Labrador Mines Limited or Labrador Iron Mines Holdings Limited or Schefferville Mines Inc.
11. I am the past project manager employed by DRA Americas Inc. responsible for the past and present design of the Beneficiation Plant in Silver Yard and I am completing this report as a subcontractor to DRA Americas Inc.
12. 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).
13. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the parts of the Technical Report that I am responsible for, contain all scientific and technical information that is required to be disclosed to make this section of the technical not misleading.

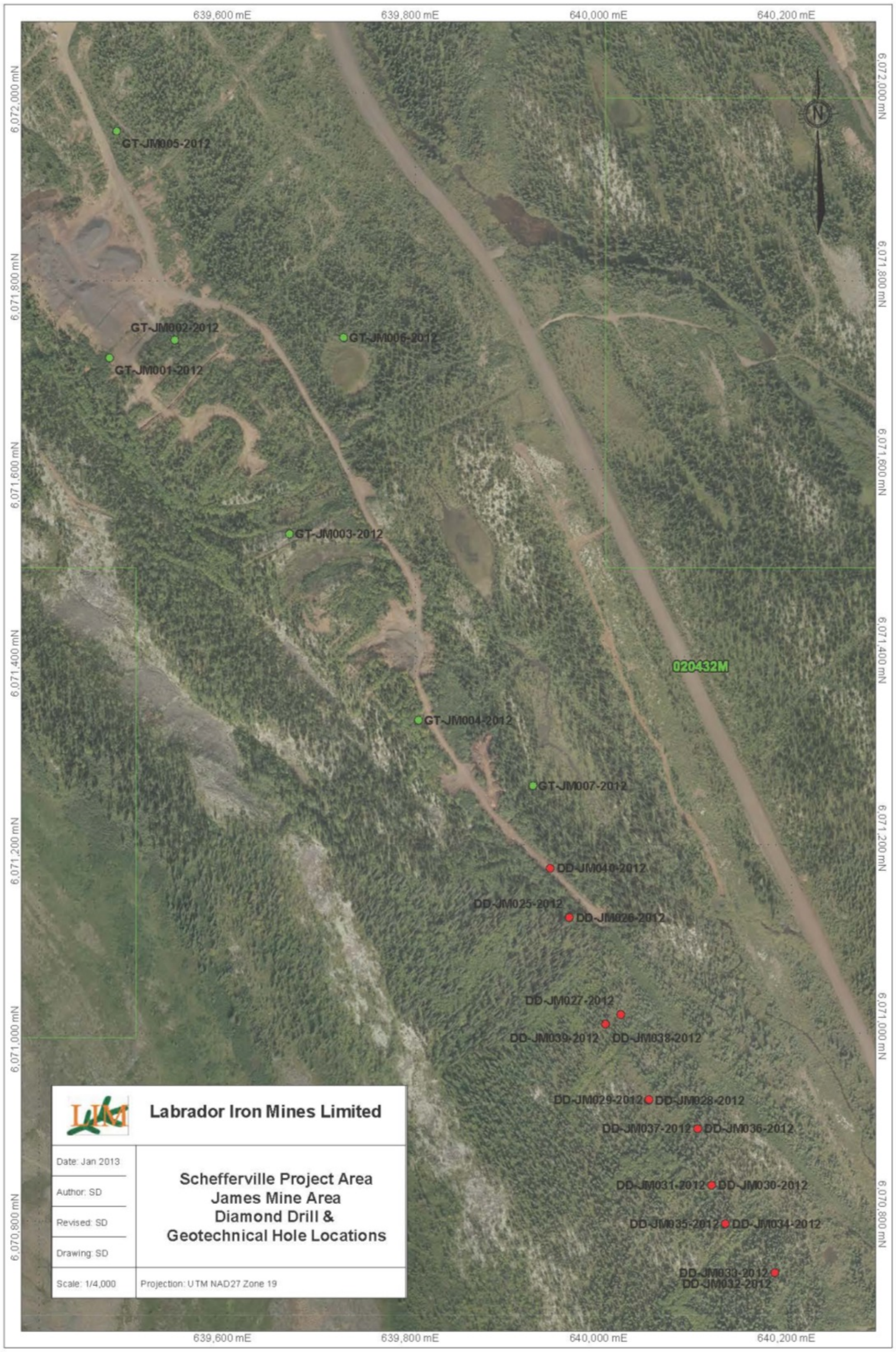
Signed and sealed in Toronto, Ontario, Canada on June 20th, 2013

Justin Taylor, P. Eng

28. Illustrations

The following plans are attached as illustrations of the exploration drilling and testpit sampling programs carried out LIMHL during 2012 to date.

List of Plans
1. James 2012 Drilling Locations
2. Wishart Stockpile 2012 & Testpitting Drilling Locations
3. Ferriman Stockpile 2012 Drilling & Testpitting Locations


Labrador Iron Mines Limited
Date: Jan 2013
Author: SD
Revised: SD
Drawing: SD
Scale: 1/4,000
Schefferville Project Area
James Mine Area
Diamond Drill &
Geotechnical Hole Locations
Projection: UTM NAD27 Zone 19
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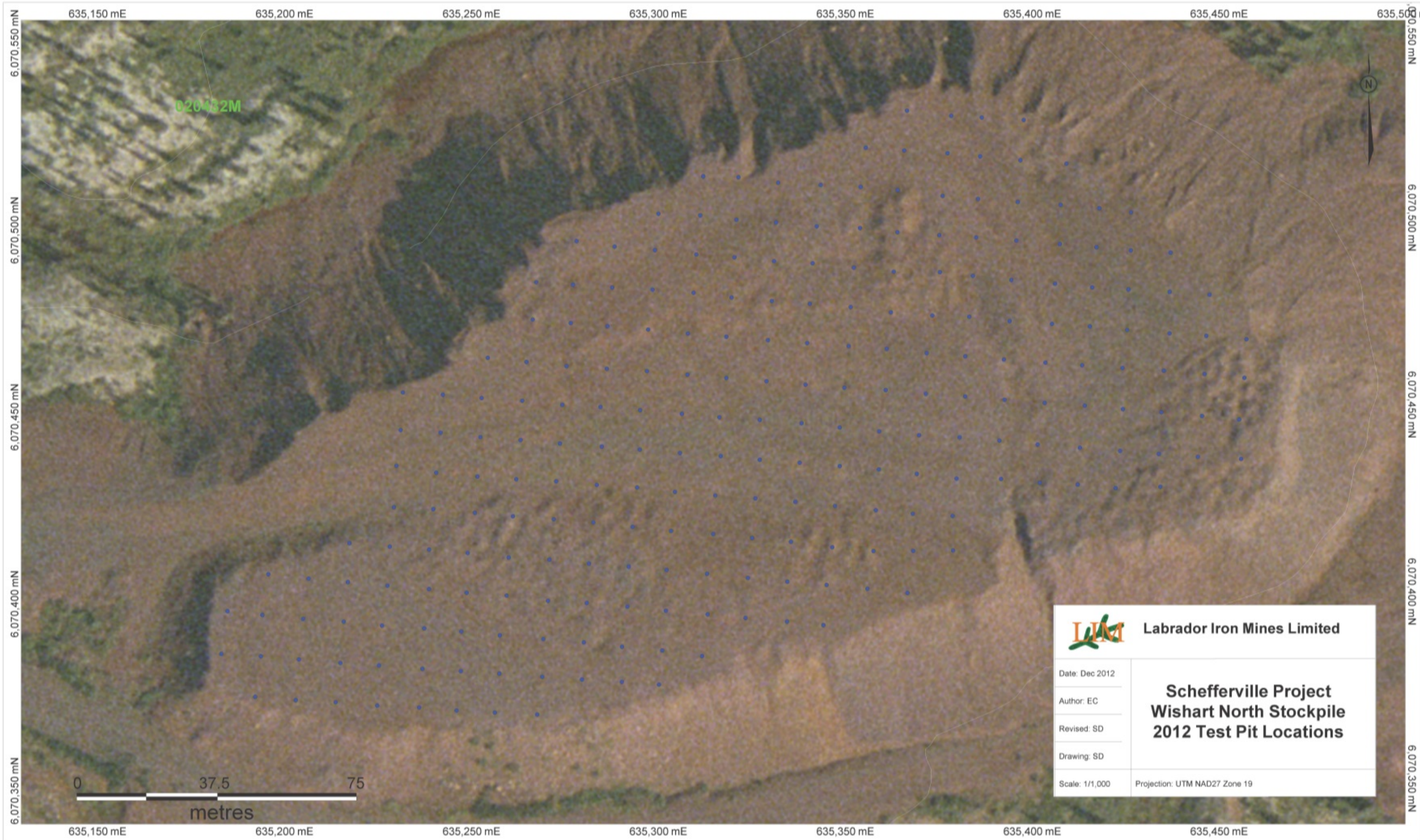
639,800 mE
640,000 mE
640,200 mE
020432M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6,070,400 mN
6,070,350 mN
0
37.5
75
metres
Labrador Iron Mines Limited
Date: Dec 2012
Author: EC
Revised: SD
Drawing: SD
Scale: 1/1,000
Schefferville Project
Wishart North Stockpile
2012 Test Pit Locations
Projection: UTM NAD27 Zone 19


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Labrador Iron Mines Limited
Date: Dec 2012
Author: EC
Revised: SD
Drawing: SD
Scale: 1/2,500
Schefferville Project
Wishart South Stockpile
2012 Test Pit Locations
Projection: UTM NAD27 Zone 19
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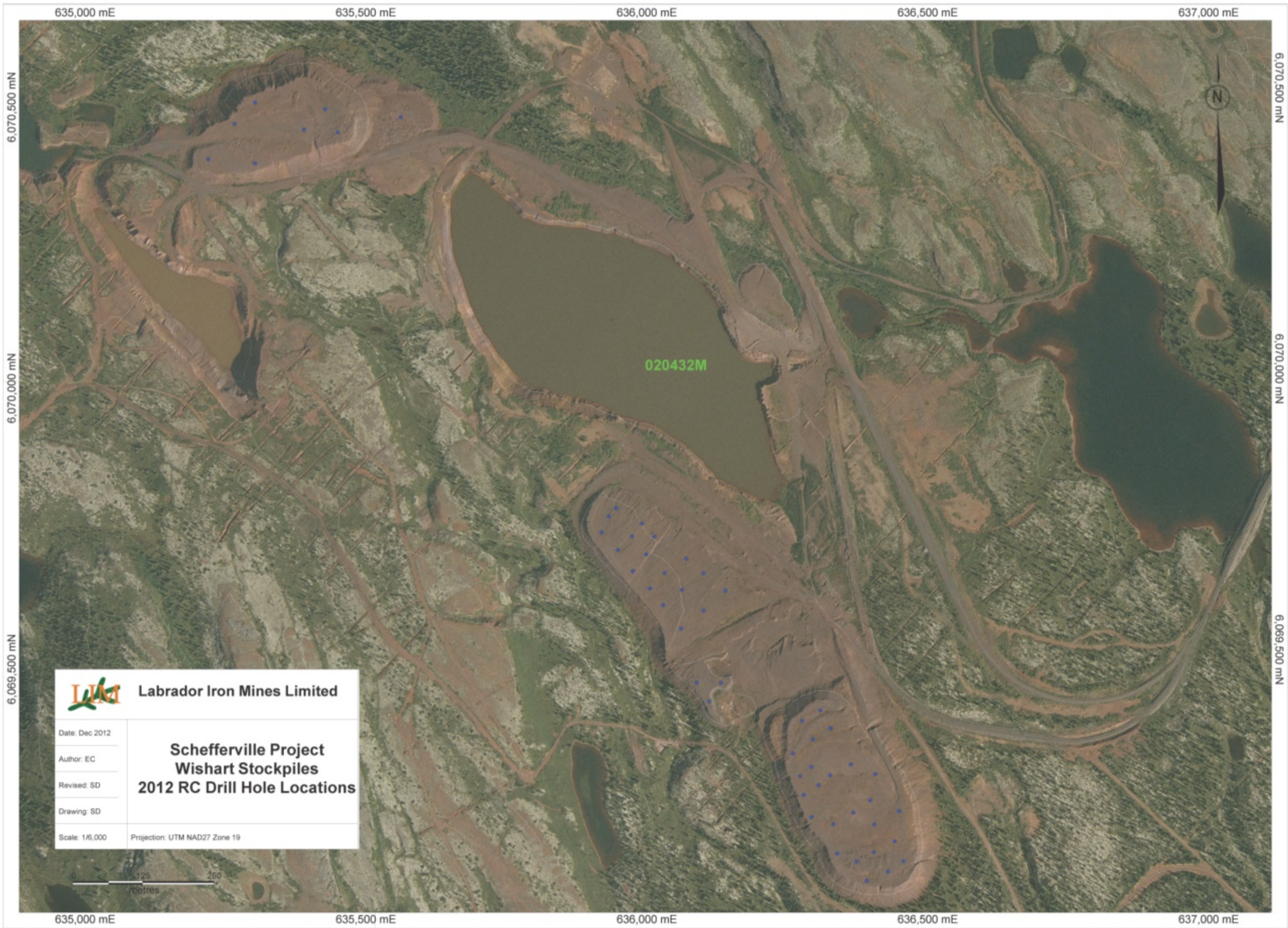
150
metres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635,500 mE
636,000 mE
636,500 mE
637,000 mE
6,070,500 mN
6,070,000 mN
6,069,500 mN
020432M
N
Labrador Iron Mines Limited
Date: Dec 2012
Author: EC
Revised: SD
Drawing: SD
Scale: 1/6,000
Schefferville Project
Wishart Stockpiles
2012 RC Drill Hole Locations
Projection: UTM NAD27 Zone 19


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6,075,000 mN
Legend:
Test Pit
RC Drill Hole
mines schefferville inc
Schefferville Mines Inc. & Exploration Hollinger Cote-Nord Inc.
Date: Jan 2013
Author: EC
Revised: SD
Drawing: SD
Scale: 1/100,000
Schefferville Project Area
Quebec Claim Locations
Projection: UTM NAD83 Zone 19