Technical Report:
Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador and North Eastern Quebec, Canada
For
Labrador Iron Mines Holdings Limited

Prepared By:
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Respectfully submitted to:
Labrador Iron Mines Holdings Limited

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1. Summary

SGS Canada Inc. ("SGS Geostat") was given a mandate to update the March 31, 2012 NI 43-101 compliant Houston mineral deposit resource and to include the Malcolm 1 deposit resource on behalf of the client in order to support the Annual Information Form as of March 31st, 2013.

This report supports the Houston and Malcolm 1 mineral resources and is compliant with the requirements of National Instrument 43-101.

Labrador Iron Mines Limited ("LIM") and Schefferville Mines Incorporated ("SMI"), are wholly owned subsidiaries of Labrador Iron Mines Holdings Limited ("LIMHL"). LIM holds the mineral claims on which the Houston iron deposits are located and SMI holds the claims where the Malcolm 1 deposit is located.

Mr. Maxime Dupéré P. Geo., the primary author of this report, is independent of Labrador Iron Mines Holdings Limited as described in section 1.5 of NI 43-101.

Mr. Justin Taylor P. Eng., the secondary author of this report, is also independent of Labrador Iron Mines Holdings Limited. as described in section 1.5 of NI 43-101

Mr. Maxime Dupéré P. Geo. and Mr. Justin Taylor, P. Eng. are "qualified persons" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.

1.1 The Houston Deposits

The Houston Property is approximately 14 km southeast of LIM's currently producing James Mine. Historic work by The Iron Ore Company of Canada Limited ("IOC") occurred in several phases between 1950 and 1982. The area was extensively trenched and drilled and was in a stage of advanced exploration work at the time of closure of IOC's mines in 1982.

LIM commenced its work here with a diamond drill program in 2006. In 2008 a more extensive reverse circulation program began. LIM has worked continuously in this project area since 2008.

Historically referred to as (from NW to SE) Houston 2, Houston 1 and Houston 3, the deposit is a continuous band of iron ("Fe") enrichment. The ore strikes NW/SE and dips NE 60-70 degrees. The focus of LIM's work has been on the Houston 1 & 2 areas. Work is continuing on the Houston 3 area which is still open to the SE. Total strike length of the Houston target is currently 5km with a width of up to 170m.

The current measured and indicated resource estimate for the Houston property is 30.1 million tonnes at an average grade of 57.7%Fe and 13.4% SiO_2. In addition, a measured and indicated manganiferous Fe resource is estimated to be 1.2 million tonnes at 53.6% Fe, 10.3% SiO_2 and 5.1% Mn.

1.2 The Malcolm 1 Deposit

Malcolm 1 lies on gently westward sloping land and, is approximately 12 km southeast from Schefferville (Figure 4-4) in the Quebec side of the Labrador trough and is believed to be the northwest extension of the Houston deposit. Work by IOC in the 1960's and 1970's delineated a zone of enrichment that was 1000 m long by up to 90 m wide, had a northwest/southeast trend and dipped at 60 to 70 degrees to the northeast. At this point, drill holes at Malcolm 1 have been drilled as deep as 112 m and iron enrichment appears to continue at depth. A second smaller area of iron enrichment measuring 70 m by 160 m occurs to the southeast along strike from the former.

Malcolm 1 was mapped, sampled and drilled by IOC in several phases from the 1960's to 1982. A historical resources estimate was done at the time for Malcolm 1 by IOC. SMI has a partial database of historical IOC fieldwork including a geological map showing geology and the surface location of the occurrence.

SMI commenced work on Malcolm 1 in 2011 and in two seasons, 2011 and 2012, 31 reverse circulation drill holes were completed for a total of 2978-m of drilling. In addition, 21 chip samples for 61 m have been taken from the contact of ore with the footwall. One historic drill hole has been located in the field for which SMI has assay results. All of this data has been compiled together to calculate the current resource.

The current resource estimate for the Malcolm 1 property is 9.2 million tonnes at an average grade of 57.8 %Fe in the measured and indicated categories.

1.3 Property Description and Location

As of March 31st, 2013, the Houston property comprises 1 Mineral Rights License issued by the Department of Natural Resources for the, Province of Newfoundland and Labrador, which represents 112 mineral claims located in western Labrador covering approximately 2,800 hectares. The Malcolm 1 property includes 36 additional claims covering approximately 1,172 hectares in Québec.

LIM holds a 100% interest in the title to the Mineral Rights in Newfoundland and Labrador subject to a Royalty equal to 3% of the selling price freight on board (FOB) port of iron ore produced and shipped from the properties, subject to such royalty being not greater than $1.50 per tonne.

SMI holds a 100% right to the Malcolm 1 claims in Québec, subject to a royalty of $2 per tonne.

The Houston project is located in the Province of Newfoundland and Labrador and is the western central part of the Labrador Trough Iron Range about 1,140 km northeast of Montreal and about 14 km southeast of the town of Schefferville Quebec. The Houston deposits comprise a number of separate deposits historically identified as Houston 1, 2 and 3.

The Malcolm 1 project is located in the Province of Quebec contiguous to the northwest of the Houston deposit and mineral licenses. The Malcolm 1 mineral occurrence is believed to be the NW extension of the Houston deposit.

While both Houston and Malcolm 1 can be reached by all-weather exploration roads from the town of Schefferville there are no roads connecting the area to southern Labrador or elsewhere in Canada. Access to the area is by rail from Sept-Îles to Schefferville and by air from Montreal and Quebec City via Sept-Îles and Wabush.

IOC had previous mining activities close to the Houston/Malcolm 1 properties during the period of operations from 1954 to 1982 when part of the Houston deposit formed part of the IOC resource base.

1.4 Geology

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

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

The Labrador Trough contains four main types of iron deposits:

- Soft iron mineralization 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 which are also commonly called magnetite iron formation;
- More intensely metamorphosed, coarser-grained iron formations, termed metataconites which contain specular hematite and subordinate amounts of magnetite as the dominant iron minerals;

- Minor occurrences of hard high-grade hematite ore occur southeast of Schefferville at Sawyer Lake, Astray Lake and in some of the Houston deposits.

Secondary 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 mineralization developed in the deposits are directly related to the original mineral facies. The predominant blue granular mineralization was formed from the oxide facies of the middle iron formation. The yellowish-brown mineralization, composed of limonite-goethite, formed from the carbonate-silicate facies, and the red painty hematite ore originated from mixed facies in the argillaceous slaty members.

Only the soft iron mineralization is considered amenable to beneficiation to produce lump and sinter fines and forms part of the resources for LIMHL's DSO Projects.

1.5 Exploration

Most historic exploration on the Schefferville area iron ore properties was carried out by IOC until the closure of its operation in the 1980s. A considerable amount of data used in the evaluation of the resource and reserve estimates is provided in the documents, sections and maps produced by IOC or their consultants. More recent exploration has been carried out by LIMHL during the period 2006 to 2012 and includes tricone reverse circulation and diamond drilling, trenching, bulk sampling and data collection and verification.

The majority of the additional resource outlined in the 2012 program has resulted from the drilling of a not well defined area between Houston 1 & 2 deposits, as well as infill drilling. Additional bulk sampling for metallurgical testing may also be necessary to prepare the final process flow sheet for treatment of the iron and manganiferous ore resources.

1.6 Drilling and Sampling

Diamond drilling of the Schefferville area iron deposits has proven to be a challenge historically as the alternating hard and soft mineralized zones tend to preclude good core recovery. Traditionally IOC used a combination of reverse circulation drilling, diamond drilling and trenching to generate data for reserve and resource calculation. A large quantity of original IOC data has been recovered, reviewed and digitized by LIMHL.

For the most recent calculations of the resources for the Houston deposits, data from 4,418 m- of drilling in 86 historical reverse circulation drill holes comprising 1,496 samples has been used. The systematic drilling had been carried out on sections 100 feet (30 m) apart.

IOC also sampled targets by trenching and test pits in addition to drilling. The test pits and trenches were to determine lithologies, ore body limits and quality of ore on surface. A total of 8,001 m-in 236 trenches and test pits with 2,106 samples from historical records were considered in this report. Samples were usually collected over 10 feet (3.0 m) intervals.

In order to update historical data, LIM carried out several exploration programs at Houston since 2006 with the purpose of verifying the historical resources and evaluating its extensions, with the addition of diamond drilling in 2012. This included 15,072 m in 199 RC and diamond drill holes, 1,105 m in 13 trenches and 135 samples. Most of the drilling completed was using tricone reverse circulation.

Additionally, SMI carried out drilling activities at the Malcolm 1 deposit for the first time in 2011 to compare with historical information. A total of 18 RC drill holes were completed with a total depth of 1,379 and 480 samples were sent for chemical analysis. During 2012 an additional 14 reverse circulation drill holes (1,599 m) were completed. Total drilling at Malcolm 1 is 2,978 m in 32 drill holes, all reverse circulation type. There were also 21 chip samples collected from the contact between ore and the footwall of the deposit.

The geological sections originally prepared by IOC have been updated with the information obtained through LIMHL's exploration work. All of this data has been used for the purpose of the current Resource Study.

1.7 Sample Preparation, Security and Data Verification

The precise sampling procedures used by IOC are not known but it is believed that LIM has followed procedures that are similar to those used in the past. Sampling, as well as sample preparation, was carried out under supervision of LIM personnel in 2012 by experienced geologists and technicians following well-established procedures. The samples were reduced to representative, smaller size samples by a riffle splitter for RC, and split core for diamond drilling, which were all sent to ACTLABS laboratory for analysis and testing.

1.8 Metallurgical Testing

The results of the metallurgical tests done on Houston bulk trench samples have indicated the amenability of the deposit to be processed using conventional iron ore processing methods.

The +1mm size fraction of HU1, HU2 and DRO is generally of marketable grade, hence the objective of the concentration process for Houston deposit will be mainly to upgrade the -1mm portion using either wet high intensity magnetic separation (WHIMS) or a hydrosizer. The settling test results on the -1mm products of the trench samples generally have shown good settling rates even without flocculent addition, therefore implying the use of conventional thickener. The vacuum filtration of the -300micron is one of the areas that need to be investigated further, though initial tests have produced 15-16% cake moisture.

Confirmatory tests were completed in the fourth quarter of 2012 involving drill core samples to establish more confidence to the beneficiation process on a wider plant feed variation and also to further refine the fine fraction processing of the Houston deposit. A confirmatory test program will be composed of similar set of tests as the bulk trench samples and will also include a deeper investigation on fines and ultra-fines dewatering (e.g. sedimentation and filtration) methods. It is expected that the output of the upcoming tests will fine tune the preliminary flow sheet established by DRA and LIM.

Iron resources are estimated and tabulated separately from manganiferous resources. The beneficiation process developed for the project is appropriate only for the iron resources.

1.9 Mineral Resources and Mineral Reserves

Table 1-1 summarizes an updated resource estimate for the Houston deposits, and Table 1-2 summarizes the estimated resources of the Malcolm 1 property, both as of April 16, 2013 on both iron and manganiferous iron resources, which have been carried out in compliance with NI 43-101. No mineral reserves are reported in this Technical Report.

Table 1-1: Summary of the Houston Estimated Resources

Area	Ore Type	Classification	Tonnes	Fe(%)	P(%)	Mn(%)	SiO_2(%)	Al_2O_3(%)
Houston	Fe Ore	Measured (M)	24,385,000	57.90	0.064	0.77	13.10	0.75
		Indicated(I)	5,736,000	56.84	0.061	0.76	14.83	0.69
		Total M+I	**30,121,000**	**57.70**	**0.063**	**0.77**	**13.43**	**0.74**
		Inferred	2,707,000	57.47	0.065	0.85	13.69	0.74
	Mn Ore	Measured (M)	1,099,000	53.66	0.077	5.17	10.13	1.17
		Indicated(I)	106,000	53.39	0.079	4.64	11.74	0.94
		Total M+I	**1,205,000**	**53.64**	**0.077**	**5.12**	**10.27**	**1.15**
		Inferred	455,000	53.42	0.107	4.85	11.21	1.09

Dated April 16th, 2013.
Resources Rounded to the nearest thousand tonnes
Mineral resources are not Mineral reserves and do not have demonstrated economic viability.

The Houston deposit remains open to the northwest and southeast and to depth.

Table 1-2: Summary of the Malcolm 1 Estimated Resources

Area	Ore Type	Classification	Tonnes	Fe(%)	P(%)	Mn(%)	SiO_2(%)	Al_2O_3(%)
Malcolm 1	Fe Ore	Measured (M)	2,374,000	60.21	0.047	0.77	9.78	0.51
		Indicated(I)	6,686,000	57.10	0.065	0.76	12.25	0.53
		Total M+I	**9,060,000**	**57.91**	**0.060**	**0.76**	**11.61**	**0.52**
		Inferred	520,000	56.41	0.060	0.80	12.94	0.44
	Mn Ore	Measured (M)	13,000	58.35	0.043	4.25	7.65	0.47
		Indicated(I)	149,000	54.14	0.064	4.56	11.93	0.47
		Total M+I	**162,000**	**54.49**	**0.062**	**4.53**	**11.58**	**0.47**
		Inferred	-	50.53	0.062	3.87	17.73	0.86

Dated April 24th, 2013.

Resources Rounded to the nearest thousand tonnes

Mineral resources are not Mineral reserves and do not have demonstrated economic viability.

1.10 Block Modelling

In March 2013, SGS was mandated to update the March 2012 resource estimation for the Houston and Malcolm 1 properties. SGS identified certain differences and updated the Houston resource using the same parameters as in March 2012.

SGS used its own software called Genesis for the resource estimation. The SGS set of geostatistical software programs are reliable and validated and constantly improved by SGS experienced software and geostatistical team. The ordinary kriging interpolation method was used to estimate the resources by block modeling with block sizes of 5x5x5 m-and block rotation of 45.6° which corresponds to the general strike of the deposit. SGS used LIM's geological and ore models interpreted in the Gemcom software. The mineralised envelope prepared by LIM is considered reliable and current.

1.10.1 Analyses

Analyses for all of the samples from the 2012 drilling and trenching programs were carried out by Activation Laboratories. The analytical method used was borate fusion whole rock X-Ray Fluorescence.

1.10.2 Density

A variable specific gravity, Fe dependent, was used for the resource estimation which was calculated using the formula: **SG (in situ) = [(0.0371 * Fe) + 1.877] * 0.85.** This equation was updated using the latest core density measurements done during the 2012 diamond drilling campaign. The data used was restricted to valid Houston and Malcolm 1 area mineralized core. According to and in relation to findings on the *in-situ* density on James deposit from reconciliation, it was decided to apply 15% porosity (0.85 in the equation) for added security.

1.11 Interpretation and Conclusions

The authors have reviewed all of the technical data in the possession of LIMHL relating to the Houston and Malcolm 1 deposits and have detailed personal knowledge of LIM's projects since 2008.

LIM's exploration work programs and technical evaluation programs carried out in 2008 were conducted under the supervision of the first named author. SGS – Geostat reviewed the different field, laboratory and QA/QC protocols and procedures. The 2009 to 2012 exploration work programs and technical evaluation programs follow the same methods and protocols (updated and improved) and although the author did not do a site visit in 2010, the information in this report according to the first author's knowledge does not appear to be misleading. The first named author visited the site from August 23rd to 24th, 2012, as part of the reconnaissance visit of the all the properties of the Schefferville area for the 2012 RC and Diamond drilling and trenching campaign. The second named author visited LIMs operations many times during 2011 and 2012.

The geological interpretation of the Houston and Malcolm 1 deposits are restricted to the zones considered of reasonable economic extraction potential. Geological interpretations were 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 IOC ore type parameters of Non-Bessemer (NB), lean non-Bessemer (LNB), high silica ($HiSiO_2$), high manganiferous (HMN) and low manganiferous (LMN) were considered for the resource estimation.

The geological modeling of both deposits was performed using standard sectional modeling of 30-metre spacing. Geological interpretation and modeling of the mineral deposits on paper sections and plans from IOC were digitized and updated with new information acquired during the recent field work seasons. SGS used LIM's geological information and LIM's 3D solids of ore models interpreted in their Gemcom software. The mineralised envelope prepared by LIM is considered reliable and current.

SGS used its own proprietary software called Genesis© for the resource estimation. The geostatistical software is reliable, validated and constantly improved by SGS experienced software and geostatistical team. The ordinary kriging interpolation method was used to estimate the Houston resources by block modeling with block sizes of 5x5x5 m and block rotation of 45.6° which corresponds to the general strike of the deposit. The inverse distance squared (ID2) interpolation method was used to estimate the Malcolm 1 resources by block modeling with block sizes of 5x5x5 m and block rotation of 47°(counter Clockwise) which corresponds to the general strike (313°) of the deposit.

The results of LIM's work to date on the Houston deposits have shown that there is sufficient merit to continue with the development of the Houston 1 & 2 deposits and to carry out further exploration work to confirm and expand the resource potential of the Houston 3 deposit, as well as to conduct preliminary evaluation of the potential for lower grade taconite deposits along the eastern flank of the Houston DSO resource zones.

The results of SMI's work to date on the Malcolm 1 deposit has shown that there is sufficient merit to continue with the development of the deposit and to carry out further exploration work to confirm and expand the resource potential.

The results of the 2012 data verification indicated that the diamond drill hole Houston check sampling had very good correlation and no significant errors were detected. The RC method has dramatically improved since the last field season and errors with the method decreased significantly over the 2012 field season No obvious bias was observed on Malcolm 1 check sampling 2012 data. The sign test identified a bias while the student T test did not show any errors. Additionally, the difference between means for iron and silica was considered negligible. In the first author's opinion, the information in this section appears to be consistent and not misleading.

1.12 Recommendations

SGS Geostat recommends LIMHL to continue its ongoing QA/QC program.

SGS Geostat 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.

SGS recommends the continued use of diamond drilling in order to obtain core from all of 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 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, and Vacuum filtration (assuming vacuum disc filter).

SGS understands that the Houston 3 is at an earlier stage of development than the Houston 1 & 2 sectors but suggest carrying the metallurgical tests and diamond drilling as well. Houston 3 remains open to the southeast and this extension should be tested with more drilling.

Infill core drilling in Malcolm 1 is recommended. The possible northern extension enrichment in Malcolm 1 should be tested with further drilling and, in addition, exploration work between Houston 2 and Malcolm 1 should be carried out in order to determine the continuity of mineral enrichment between these two deposits.

The following budgetary recommendations below are purely conceptual. The metallurgical tests costs estimates are purely conceptual and LIM should inquire on the update of a formal proposal for such tests. These assay costs should be used only as a reference. The access, logistics, camp, meals and equipment rental costs are not included in this budget recommendation.

Table 1-3: Recommended Work

Description	Number	Units	$/Unit	Total
Diamond Drilling, Malcolm 1	3000	m	$400	$1,200,000
Metallurgical Testing Malcolm 1 (PEA-PFS stage)	1			$200,000
Reporting Resource Update Malcolm 1	1			$150,000
Diamond Drilling, Houston 3	2000	m	$400	$800,000
Metallurgical Testing Houston 3 (PEA-PFS stage)	1			$200,000
Reporting Resource Update Houston 3	1			$150,000
Exploration between Houston2 and Malcolm 1	1			$100,000
Assays (all above areas)	2500		$40	$100,000
Sub Total				$2,900,000
Contingency & Miscellaneous (25%)				$725,000
Total				**$3,625,000**

2. Introduction

SGS–Geostat Ltd. was retained to prepare an NI 43-101 compliant resource estimation and Technical Report of the Houston and Malcolm mineral deposits, near Schefferville, Quebec on behalf of the Client, LIMHL, in order to confirm their resources.

The present report describes the Houston iron ore deposits located in western Labrador and the adjacent Malcolm property located in Quebec and presents updated resource estimates compliant with the requirements of NI 43-101.

The first named author Maxime Dupéré is a geologist employed by SGS-Geostat Ltd and is a "qualified person" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators and is independent of LIMHL. He has personal knowledge of the Houston deposits and the other nearby iron deposits held by LIMHL in western Labrador and directed exploration of the properties in 2009/2010/2011/2012.

The second named author Justin Taylor has personal knowledge of the James Mine and Silver Yards processing plant and visited the project site on numerous occasions during 2011 and 2012, employed by DRA Americas who designed and operated that plant on behalf of LIM.

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) .

In March 2011 LIMHL engaged SGS-Geostat to prepare a resource estimation of the Houston property. "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

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

"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

Technical Report Mineral Resource Update of the Houston Property, Labrador West Area, Newfoundland and Labrador, Canada dated March 31, 2012 and filed on SEDAR in June 2012.

LIMHL has carried out significant geological exploration programs on the Houston and other Labrador properties held by LIMHL during the 2006, and 2008 to 2012 summer seasons.

The first named author first visited the sites from May 26th to May 28th 2008 as part of the site visit and reconnaissance visit of the all the properties of the Schefferville area. SGS –Geostat participated in the summer-fall 2008 RC drilling campaign for the supervision of the sampling and preparation before dispatch to the analytical laboratories. The first named author assisted and instructed LIMHL on RC drilling and sampling procedures for the Houston mineral deposits as well as other targets during this campaign. SGS –Geostat implemented a QA/QC procedure as part of the standard RC drilling and sampling program.

The first named author 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. Maxime Dupéré met on a regular basis with LIMHL management and relevant personnel by phone and in the SGS office located in Montréal, Quebec.

This report was written in accordance with the National Instrument 43-101 Policy guidelines. This report was requested by LIMHL for the update of the resource estimation of the Houston property including the Malcolm deposit.

The Houston Project, including the Malcolm property, does not have any demonstrated mineral reserves and a feasibility study has not been conducted on the Houston Project. The Company's decision to advance the Houston Project towards development has not been based upon a feasibility study on mineral reserves demonstrating economic and technical viability. The Houston Project is not considered an "advanced property" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and the additional requirements for advanced properties required by Item 15 to 22 of Form 43-101F1 have not been included in this Technical Report.

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 process plant was carried out by DRA Americas and this has been extended to initial design for the potential Houston Beneficiation plant.

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

In this report, the authors did not rely on any other experts.

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

4.1 Houston

The Houston property is located in Labrador in the western central part of the Labrador Trough iron range and about 1,140 km northeast of Montreal and 20 km southeast of the town of Schefferville, Quebec Figure 4-1.

There are no roads connecting this area to western Labrador or elsewhere in Quebec. Access to the area is by rail from Sept-Îles to Schefferville or by air from Montreal and Sept-Îles.

With respect to the Houston property, LIM holds the title to 1 Mineral Rights License (as of March 31, 2013) issued by the Department of Natural Resources, Province of Newfoundland and Labrador, representing 112 mineral claims located in northwest Labrador covering approximately 2,800 hectares (Table 4-1 and Figure 4-2).

Under the terms of an Option and Joint Venture Agreement dated September 15, 2005 between Fonteneau Resources Limited ("Fonteneau") and Energold, as amended, and subsequently assigned to LIMHL, a royalty in the amount 3% of the selling price FOB port per tonne of iron ore produced and shipped from any of the properties shall be payable to Fonteneau. This royalty will be capped at US$1.50 per tonne on the Houston property.

On October 22, 2009, LIMHL announced that it had entered into an agreement with 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. As part of the Agreement, NML transferred to LIMHL 125 hectares in five mineral licenses in Labrador that adjoin or form part of LIM's Houston deposit.

Table 4-1: License Comprising the Houston Project (As of March 31, 2013)

LicNo	Location	Claims	Issued	License Renewal*
020433M	Houston	112	12/04/2004	12/04/2014

*In 2012, previous licenses were grouped into one

Figure 4-1 Project Location Map

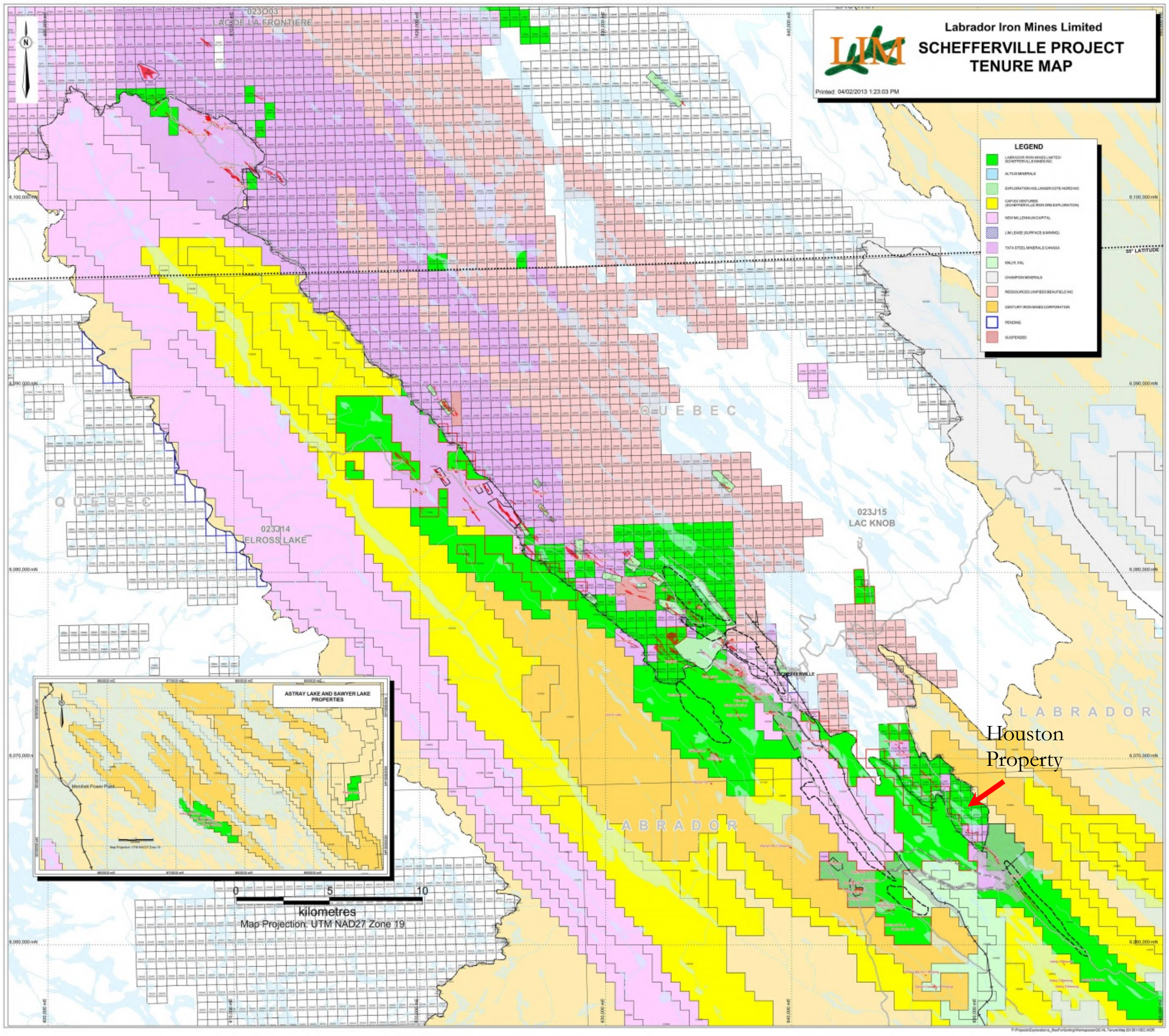

Figure 4-2 Map of LIMHL Mining Leases (as of March 2013)

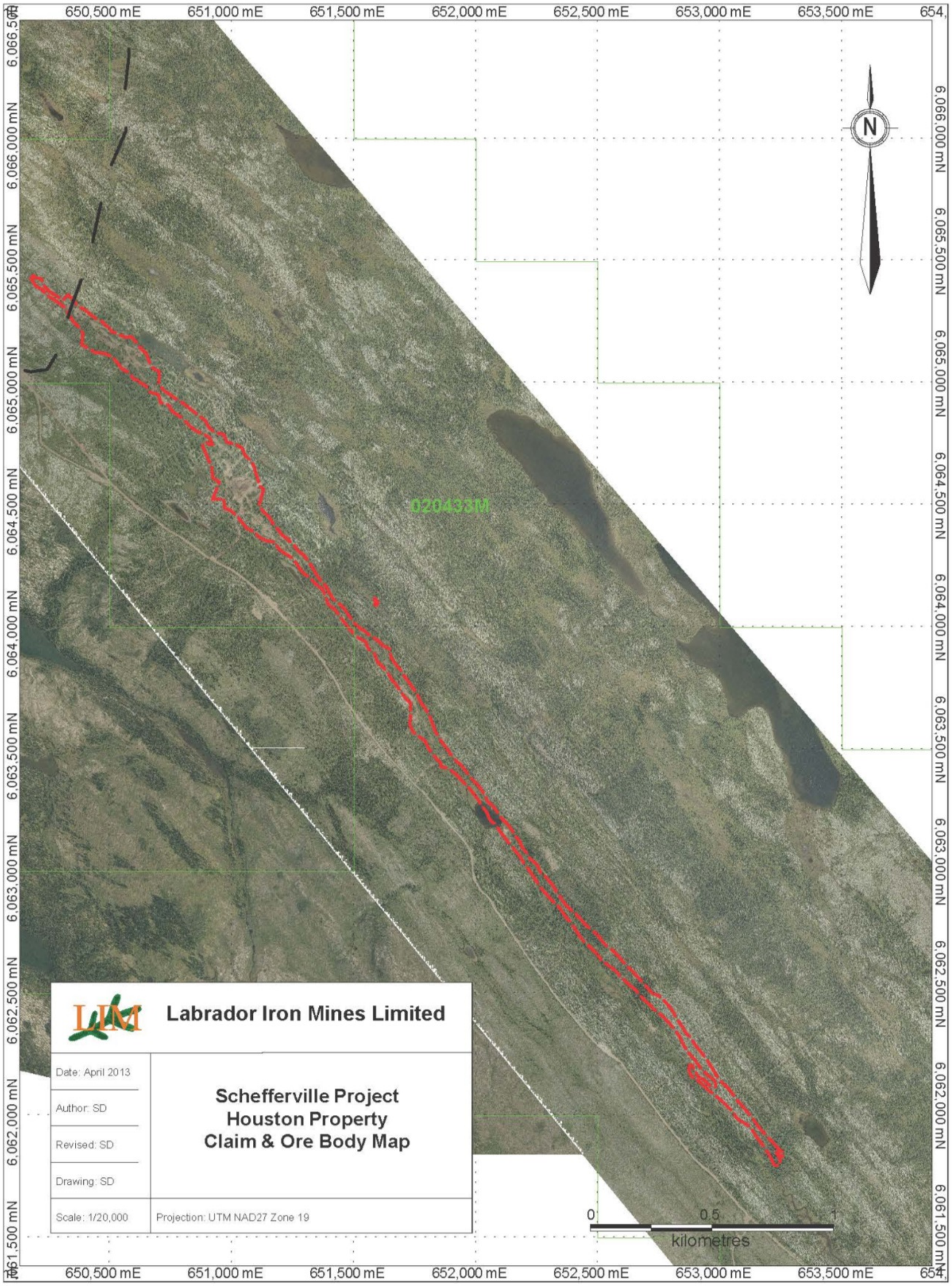

Figure 4-3: Claim Map showing Houston Mineral Licenses (as of March 2013)

4.2 Malcolm 1

Malcolm 1 lies in Quebec on gently westward sloping land, is approximately 12 km southeast from Schefferville (Figure 4-4). Work by IOC in the 1960's and 1970's delineated a zone of enrichment that was 1000 m long by up to 90 m wide which had a northwest/southeast trend and dipped at 60 to 70 degrees to the northeast. At this point drill holes at Malcolm 1 have been drilled as deep as 112 m and iron enrichment appears to continue to depth. A second smaller area of iron enrichment measuring 70 m by 160 m occurs to the southeast along strike from the former.

The enrichment appears to occur mainly within the Ruth member and Lower iron Formation ("LIF") of the Sokoman Iron Formation and would be similar to the enrichment encountered at the Houston showing which is 5 km to the southeast and occurs in the same band of iron formation.

SMI holds a 100% right to the Malcolm 1 claims in Québec, subject to a royalty of $2 per tonne.

Malcolm 1 was mapped, sampled and drilled by IOC in several phases from the 1960's to 1982. A 1982 resource for Malcolm 1 is listed in IOC records as being 2,879,000 tonnes at 56.2% Fe and 6.14% SiO_2. A manganiferous component of the resource is 422,000 tonnes grading 51.4% Fe, 4.9% SiO_2 and 5.80% Mn. SMI has a partial database of historical IOC fieldwork including a geological map showing geology and the surface location of the occurrence. The historical estimate was prepared according to the standards used by IOC and, while still considered relevant, is not compliant with NI 43-101.

The Malcolm 1 property includes 36 mineral claims (1,171.59 ha) issued by the Quebec government. Table 4-2 below summaries the list of Quebec claims for the Malcolm 1 property.

Table 4-2: List of Malcolm 1 Claims to March 2013

Malcolm 1 Claims as of March 2013			
Title No.	**Sheet**	**Status**	**Area (ha.)**
CDC-2317779	23J10	Active	49.79
CDC-2298709	23J15	Active	49.75
CDC-2233268	23J10	Active	49.79
CDC-2233270	23J10	Active	49.78
CDC-2188826	23J10	Active	49.77
CDC-2298708	23J15	Active	37.3
CDC-2317787	23J15	Active	0.67
CDC-2317784	23J10	Active	39.44
CDC-2375174	23J15	Active	7.77
CDC-2298704	23J10	Active	10.88
CDC-2298707	23J15	Active	11.62
CDC-2183174	23J15	Active	49.74
CDC-2375170	23J15	Active	8.54

CDC-2375173	23J15	Active	34.28
CDC-2375171	23J15	Active	45.41
CDC-2233266	23J10	Active	10.28
CDC-2375172	23J15	Active	36.57
CDC-2233267	23J10	Active	48.76
CDC-58048	23J10	Active	47.86
CDC-2298706	23J10	Active	36.79
CDC-2233269	23J10	Active	37.6
CDC-2298705	23J10	Active	1.7
CDC-2317786	23J15	Active	3.61
CDC-2317782	23J10	Active	28.74
CDC-2279509	23J15	Active	48.55
CDC-2317781	23J10	Active	49.78
CDC-2259638	23J10	Active	49.77
CDC-2317785	23J10	Active	21.59
CDC-2298702	23J10	Active	17.22
CDC-2233265	23J10	Active	11.63
CDC-2317783	23J10	Active	4.01
CDC-2183173	23J15	Active	49.74
CDC-2317780	23J10	Active	32.37
CDC-2298703	23J10	Active	40.99
CDC-58045	23J15	Active	49.76
CDC-2298710	23J15	Active	49.74

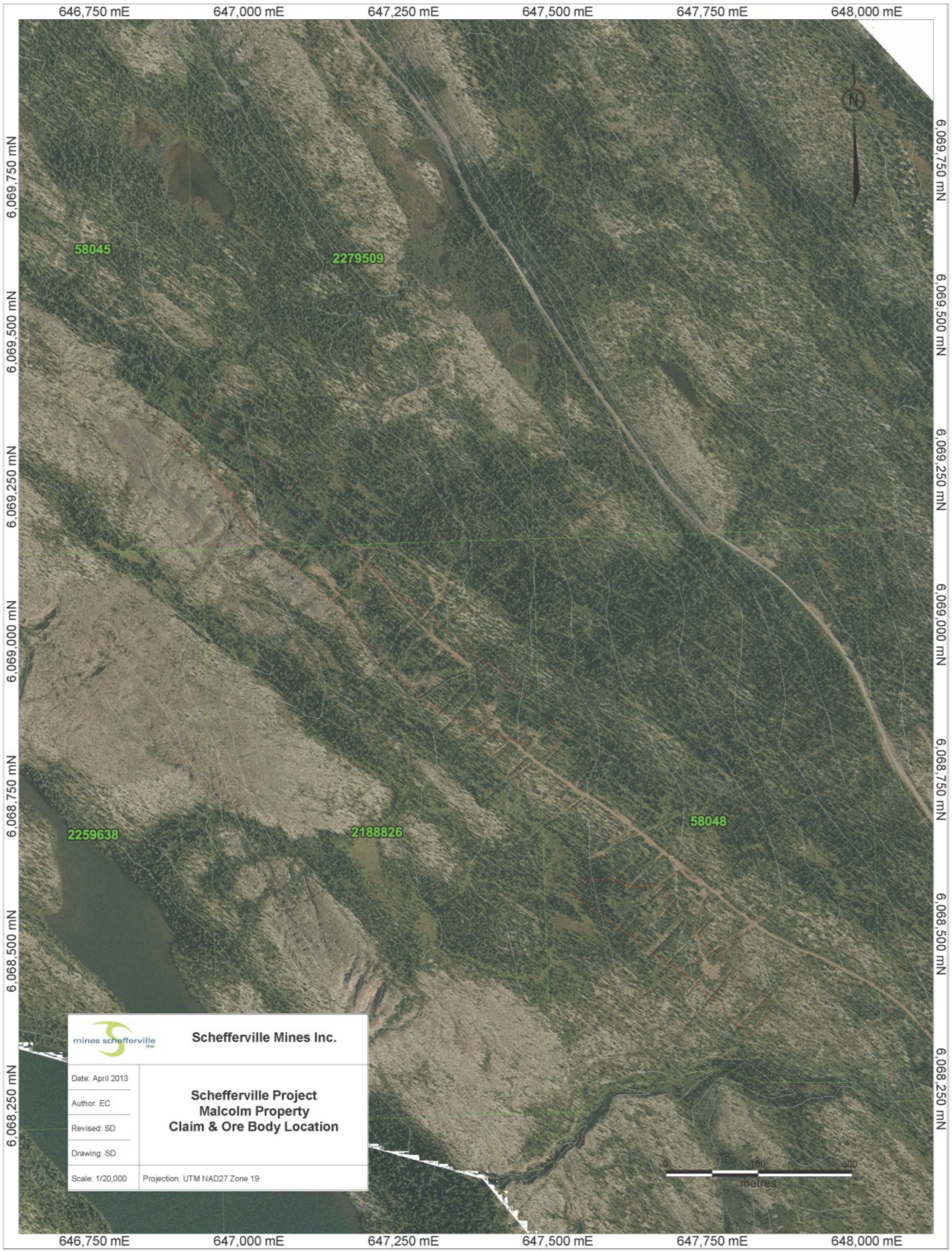

Figure 4-4 Malcolm 1 Property Claim Map (Projection: UTM NAD83 zone 19)

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

5.1 Accessibility

The Houston property is located in the west central part of the Labrador Trough iron range. The mineral properties are located about 1,140 km northeast of Montreal and adjacent to or within 20 km of the town of Schefferville (Quebec).

There are no roads connecting the area to southern Labrador or southern Quebec. Access from the southern areas of the province to the Project area is either by rail from Sept Îles to Schefferville or by air from Montreal, Sept Îles, Goose Bay, St. John's or Wabush.

The Houston deposits and the Malcolm 1 deposit are located within reach of existing infrastructure approximately 20 km southeast of Schefferville and can be reached by existing gravel roads, although LIM plans to construct a new 10km all-weather access road to directly connect Houston with Silver Yards and the Redmond mine site.

A haul road is required to connect the Houston 1 & 2 Project to the existing road to the James and Redmond mines. The road will be approximately 7.3 kilometers in length and 11.5 meters in width.

A rail siding will be constructed along the TSH main line to facilitate loading of product onto rail cars. The proposed rail siding is expected to measure approximately 5.9 kilometers in length and is expected to be located within the existing rail right-of-way.

5.2 Climate

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

Exploration work in the area can typically be carried out year-round, however RC drilling and trenching programs are typically preferred during the months of May to November.

Mine development operations can be carried out year-round as well. Operations during extreme cold conditions can stop intermittently. Production and shipping were historically limited to the months of May until November.

5.3 Local Resources

It is assumed that the majority of the workforce will come from the province of Newfoundland Labrador and employees will also be recruited from the Quebec communities close to the project site.

5.4 Infrastructure

The Houston property is located approximately 20 km southeast of Schefferville and approximately 10 km from LIM's Redmond deposit which, together with the James Mine, currently forms part of LIM's first phase mine development.

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

A modern airport includes a 2,000 metre paved runway and navigational aids for passenger jet aircraft. Regular air service is provided to and from Wabush, Labrador, and to Montreal and Quebec City, via Sept-Îles.

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

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

5.5 The Railroad

Schefferville is accessible by train from Sept-Îles.

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 (235 km) between Emeril Junction and Schefferville to Tshiuetin Rail Transportation Inc. ("TSH") (Figure 5-1). 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"). TSH operates passenger and light freight service between Schefferville and Sept-Îles twice per week.

TSH runs passengers, iron ore and freight from Schefferville to Emeril/Ross Bay Junction; QNS&L hauls iron concentrates and pellets from Labrador City/Wabush area via Ross Bay Junction to Sept-Îles; Bloom Lake Railway hauls ore from the Cliffs Bloom Lake mine to Wabush; and Arnaud Railways hauls iron ore for Wabush Mines 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.

LIM has constructed a 6 km rail spur line that connects the TSH railroad to LIM's Silver Yards. It is anticipated that iron ore products from the Houston and Malcolm 1 project areas will be delivered by highway-style haulage trucks to stockpiles located adjacent to a new railway siding to be constructed on the TSH railroad. The siding will consist of nearly 6 km of track, configured into one main siding and several side tracks required to manipulate train sets during loading operations.

Iron ore from the James Mine is currently transported by rail from the Silver Yards plant site, via the Company's six km spur line, the TSH railway and the QNS&L railway, to the Port of Sept-Îles, where the ore is unloaded and stockpiled for shipping.

It is anticipated that Houston ore will be transported to the Port of Sept-Îles under LIM's existing agreements with the railways. LIM has not concluded any arrangements for the port handling or sale of any iron ore beyond 2014.

Under LIM's 2011 rail services agreement with Western Labrador Rail Services ("WLRS") WLRS, operates and maintains up to five SD 40-3 locomotives which are used to haul LIM's iron ore from Silver Yards, over the TSH Railway, to Emeril Junction. WLRS also operates LIM's six km rail spur which connects LIM's Silver Yards processing facility to the main TSH Schefferville to Emeril Junction rail line.

LIM's June 2012 agreement with TSH provides for approximately $25 million in contributions over the next four to five years towards the costs of the TSH rail line upgrade program. LIM also paid TSH a refundable capacity reservation deposit of $1.5 million and has committed to minimum annual tonnages over its eight month annual operating season.

Under LIM's confidential rail transportation contract signed with QNS&L in 2011 LIM is committed to minimum tonnages per month over the anticipated eight month annual operating season. QNS&L provides the locomotives and operating personnel for LIM's ore haulage on the QNS&L railway.

LIM owns 544 railcars configured in four trains sets each consisting of 124 cars. These are re-conditioned coal cars intended for short-term use. In the longer term LIM plans to lease rotary gondola ore cars with a capacity of 100 tonnes. LIM also owns the Centre Ferro maintenance and repair facility in Sept-Îles which is used to maintain the Company's fleet of rail cars.

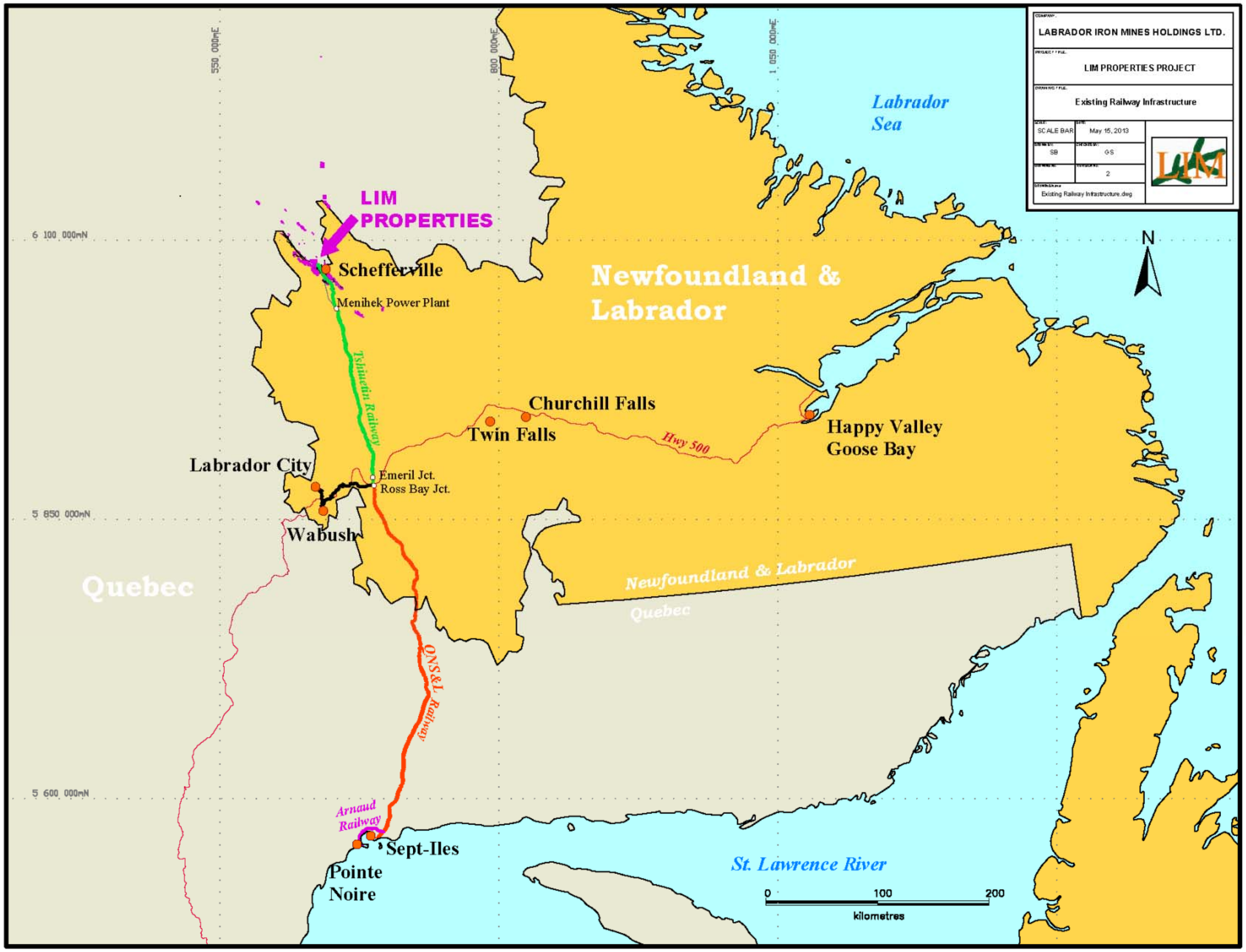

Figure 5-1: Existing Rail Infrastructure

5.6 Physiography

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

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

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

The thin veneer of till in the area is composed of both glacial and glacial fluvial sediments. Tills deposited during the early phases of glaciations were strongly affected by later sub glacial melt waters during glacial retreat. Commonly, the composition of till is sandy gravel with lesser silty clay, mostly preserved in topographic lows. Glacial melt water channels are preserved in the sides of ridges both north and south of Schefferville. Glacial ice flow in the area has been recorded as an early major NW to SE flow and a later less pronounced SW to NE flow. The early phase was along strike with the major geological features and the final episode was against the topography. The later NE flow becomes more pronounced towards the southern end of the district near Astray Lake or Dyke Lake.

6. History

The following information was provided by LIMHL

The Quebec-Labrador Iron Range has a tradition of mining since the early 1950's and is one of the largest iron producing regions in the world. The former direct shipping iron ore operations at Schefferville operated by IOC produced in excess of 150 million tonnes of lump and sinter fine ores over the period 1954-1982. The properties comprising LIMHL's Schefferville area projects were part of the original IOC Schefferville operations and formed part of the 250 million tonnes of reserves and resources identified by IOC but were not part of IOC's producing properties. This is a historic estimate made in compliance with the standards used by IOC.

There are currently four major iron ore producers in the Labrador City-Wabush region to the south, IOC, Arcelor Mittal, Cliffs Natural Resources Bloom Lake Mine and Wabush Mines. Tata Steel is currently constructing a Direct Shipping Ore project 30 kms north of Schefferville. A number of other projects in the Labrador area are in the exploration and review process.

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

Mining and shipping from the Schefferville area began in 1954 under the management of the IOC, a company specifically formed to exploit the Schefferville area iron deposits.

In 1954, IOC started to operate open pit mines in Schefferville containing 56-58% natural iron (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 Houston-Malcolm 1 Project were part of the original IOC Schefferville area operations.

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.

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. In 1982, the IOC closed its operations in the Schefferville area. From 1954 to 1982, a total of some 150 million tonnes of ore was produced from the area.

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

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

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

In December 2009, LIMHL, through a wholly-owned subsidiary, acquired control over an additional 50 million tonnes of historical direct shipping iron ore in the Province of Quebec, together with a large package of mineral claims in Quebec in the Schefferville area which are considered prospective for exploration for iron ore and which also host a number of small high grade manganese deposits.

During the period from September 2005 to 2012, LIMHL conducted exploration, development and other work in the Schefferville area. Such work consisted of geological evaluation, sampling, geophysical surveys, trenching, drilling, bulk sampling, resource verification, assaying, metallurgical test work, mine planning, community consultation, transportation studies and other work.

In 2011, LIM commenced mining operations at its James Mine and constructed a processing plant at Silver Yards. To the end of 2012 LIM had produced and sold 2 million tonnes of iron ore from the James Mine.

7. Geological Setting & Mineralization

7.1 Regional Geology

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

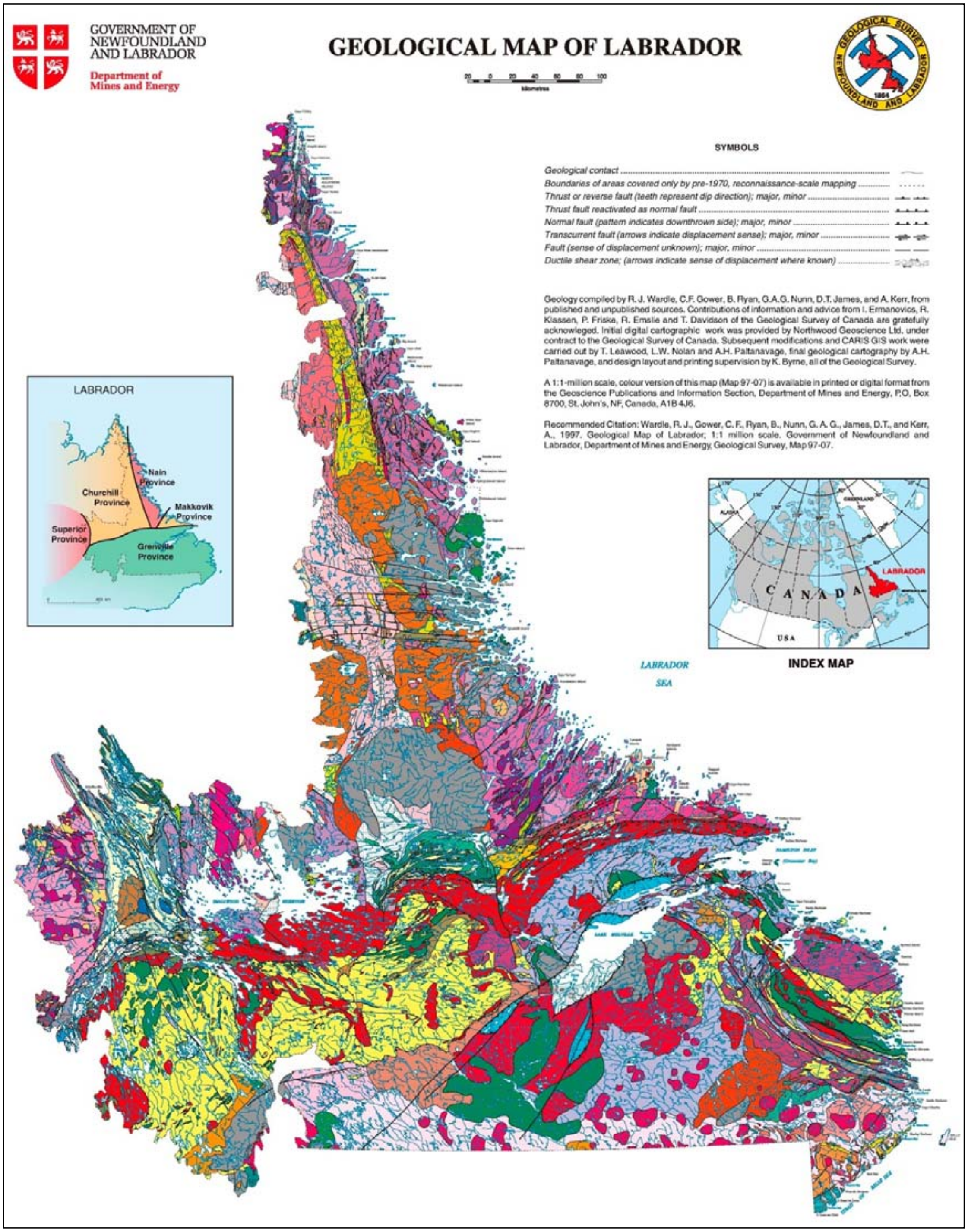

Figure 7-1 Geological Map of Labrador

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 (2-3 mm), fine grained (0.02 to 0.05 mm), grayish green, dark grey to black, or reddish grey. Calcareous or arenaceous lenses as much as 30 cm in thickness occur locally interbedded with the argillite and slate, and lenses of chert are common. The formation grades upwards into Denault dolomite, or into Wishart quartzite in area where dolomite is absent. Beds are intricately drag-folded, and cleavage is well developed parallel with axial planes, perpendicular to axial lines of folds and parallel with bedding planes.

***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

Schefferville Ore Types (From IOC)					
TYPE	**ORE COLOURS**	**T_Fe%**	**T_Mn%**	**SiO_2%**	**Al_2O_3%**
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 tonnes. Based on the original ore definition of IOC (+50% Fe <18% SiO_2 dry basis), approximately 250 million tonnes of iron resources remain in the Schefferville area, exclusive of magnetite taconite. LIM has acquired 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 LIMHL.

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 that occurs 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 Deposits

The Labrador Trough contains four main types of iron deposits:

1. 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).
2. Taconites, the fine-grained, weakly metamorphosed iron formations with above average magnetite content and which are also commonly called magnetite iron formation.
3. More intensely metamorphosed, coarser-grained iron formations, termed metataconites; which contain specular hematite and subordinate amounts of magnetite as the dominant iron minerals.
4. 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.

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.

8.1.1 Houston and Malcolm 1

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

The Houston and Malcolm 1 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 & 2 mineralizations have 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 mineralization believed to be extending to the southeast of the main deposit of Houston 1 and east of Houston 3.

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.

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.

8.2.1 Houston Deposit

The manganese mineralization in the Houston deposits is present in relatively low concentrations (~1% average) with sporadic concentrations of up to 24% apparently structurally controlled by folding and faulting along the western block of the east dipping reverse fault system.

9. Exploration

9.1 Past Exploration

In 1929, a party led by J.E. Gill and W.F. James explored the geology around 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."

In 1946 and 1947, geological mapping of the southeast area of the Wishart-Knob Lake area towards Astray Lake carried out by LM&E noted a number of areas with potential economic mineralization that led the discovery of the Houston 1 & 2 deposits in 1950.

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

9.2 LIMHL Exploration from 2005 - 2012

9.2.1 2005 Program

Initial exploration was conducted over LIM's Labrador area properties during the summer of 2005, including the Houston project. The work consisted of surveying old workings (trenches, pits and drill holes), prospecting, mapping and collecting rock samples.

9.2.2 2006 Program

A diamond drill program totalled 605 m in 11 holes during the summer season of 2006 on the Houston as well as the James, Knob Lake No.1, 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 75 m of trenching for bulk sampling at the Houston deposit.

A summary of the drilling program is given in Section 10. A summary of the bulk sampling and trench sampling of 2006 is shown in Table 9-1 for the Houston Deposit.

Table 9-1 Trench Sample Results (2006) – Houston 1 Deposit

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

9.2.3 2007 Program

The exploration program for 2007 comprised prospecting and trenching.

9.2.4 2008 Program

In addition to a drilling program, LIMHL contracted Eagle Mapping Ltd of Port Coquitlam, BC to carry out an aerial topographic survey flown over its properties in the Schefferville Area, including the Houston property. The survey covered an area of 16,230 ha and 233,825 ha at map scale of 1:1,000 and 1:5,000 respectively. Using a differential GPS (with an accuracy within 40 cm), LIM surveyed the 2008 RC drill holes, as well as the trenches and a total of 90 old IOC RC drill hole collars that were still visible and could be located.

A bulk sampling program was carried out with material from the Houston as well as the James, Redmond and Knob Lake deposits. A total of 2,000 tonnes of blue ore was excavated from the Houston deposit as well as 1,400 tonnes of blue ore from the James South deposit, 1,500 tonnes of blue ore from the Redmond 5 deposit and 1,100 tonnes of red ore from the Knob Lake deposit.

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

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

Representative samples of 200 kg of each raw ore type were collected and sent to SGS Lakefield laboratories for metallurgical test work and assays. Representative samples of 2 kg of each product were collected and sent to SGS Lakefield laboratories for assays. Other samples were collected for additional screening tests. Five train cars were used for the transport of the samples to Sept-Îles.

9.2.5 2009 Program

In addition to a drilling program, LIMHL completed a survey the 2009 RC drill holes, trenches as well as any historical IOC RC drill holes using a differential GPS.

The 2009 Houston trenching program was focused on the Houston 3 deposit, completing 479 m in 9 trenches.

The exploration programs were intended to confirm and validate historic resources reported by IOC and to bring them into compliance with NI-43-101. Appendix I list drill holes and trenches completed by LIMHL between 2006 and 2012.

9.2.6 2010 Program

The 2010 program in Houston consisted of reverse circulation drilling. Drilling was targeted to test the presence of mineralization between cross sections 330 and 340 and as infill drilling in Houston 1 and Houston 2S. In 2010, 26 RC drill holes were completed at Houston for a total of 1,804 m.

During the 2010 exploration season an airborne gravity and magnetic survey was flown over four claim blocks of LIM's Schefferville area properties centered on the Howse, Houston/Redmond, Astray and Sawyer Lake areas. High gravity anomalies associated with lower magnetism are considered prospective for DSO deposits. In total 1895.7 line kms was flown for the gravity and magnetic surveys. A total of 473.6 line kms were surveyed over the Howse area, 851.8 kms over Houston/Redmond areas, 354.6 kms over Astray and 215.7 line kms over the Sawyer Lake area.

An interim interpretation and evaluation of the processed and plotted airborne gravity gradiometer and magnetic data has confirmed the utility of the survey in detecting and outlining iron deposits and identified a number of new drill targets with the potential to expand currently known resources.

9.2.7 2011 Program

The 2011 exploration program consisted of reverse circulation drilling in Houston and Malcolm 1, with additional trenching and bulk sampling in Houston. Drilling was conducted to infill the Houston deposits and upgrade areas within Houston's inferred resources as defined with SGS report dated March 2011. See Section 10 for all current drilling data.

Trenching was used to confirm the limits of the Houston deposit and to collect samples from *Plant Feed* and DRO quality from both the hanging wall and foot wall of the Houston deposit.

Bulk sampling was conducted to collect *Plant Feed* and DRO quality samples for metallurgical testing on the Houston deposit. The results are described in section 13.

9.2.8 2012 Program

For the 2012 exploration program, LIMHL conducted a reverse circulation drill program at Houston and at Malcolm 1 with Cabo Drilling out of Kirkland Lake, Ontario. In addition, LIMHL re-instituted a diamond drill program with Major Drilling from Val d'Or, QC. New techniques were used that rectified past historical recovery problems associated with diamond drilling with these types of deposits. Section 10 presents all the relevant data, and drilling results are summarized in Table 10-1 and Table 10-2.

10. Drilling

Diamond drilling of the Schefferville iron deposits has been historically challenging in that the alternating hard and soft ore zones tend to preclude good core recovery. Traditionally IOC used a combination of reverse circulation (RC) drilling, diamond drilling and trenching to generate data for reserve and resource calculation. A large number of original IOC data have been recovered and reviewed by LIMHL and are included in the data base that is used for the estimation of resources. However in 2012, diamond drilling was re-introduced by LIM into the program as newer techniques rectified past historical challenges.

LIMHL carried out exploration drilling programs in the 2006 and 2008 to 2012 summer-fall seasons. The drill holes location maps and chart of the Houston mineral deposit are available in Appendix I. The drill holes location map and relevant best intercepts of Malcolm 1 mineral deposit are available in Appendix II.

10.1 Houston

In 2006, 5 diamond drill holes of BQ size were drilled totalling 253 m on the Houston property using Cartwright Drilling Inc. of Goose Bay, of which only 1 drill-hole was successfully completed.

Between 2008 and 2012, LIM used Acker RC tricone drill rigs from Cabo Drilling using 75mm ($2^{7/8}$inch) diameter rods. The drill rigs were mounted on Flex Trac Nodwell carriers or skids and outfitted with sample cyclones. In 2012, LIM started using HQ (3.5 inch) diameter diamond drilling from Major Drilling out of Val D'Or, QC. All diamond drill rigs were skid mounted.

In 2008, 11 RC drill holes were drilled in Houston for a total of 791 m.

In 2009, 46 RC drill holes were completed at Houston for a total of 3,136 m.

In 2010, 26 RC drill holes were completed at Houston for a total of 1,804 m.

In 2011, 44 RC drill holes were completes at Houston for a total of 3,118 m.

In 2012, 24 RC drill holes were completed at Houston for a total of 1,468.0 m. 42 diamond drill holes were completed for a total of 4,502 m, which include 15 geotechnical holes (1,386.20 m) and 19 metallurgical holes (1,865.0 m), which were conducted under the supervision of Piteau geotechnical consulting.

Table 10-1 below summarizes LIM's drilling programs at Houston to date and maps in Appendix I show all activity locations on the Houston property:

Table 10-1: Houston RC Drill Programs

		Drill Holes				
		DD	**RC**	**Metres**	**Samples**	**Assays**
Historical	IOC	-	86	4,418	1,496	1,496
LIM	2006	5	-	253	-	-
	2007	-	-	-	-	-
	2008	-	12	791	304	304
	2009	-	46	3,136	1,098	1,092
	2010	-	26	1,804	627	625
	2011	-	44	3,118	1,064	1,064
	2012	42	24	5,970	2,523	2,523
TOTAL		**47**	**238**	**19,490**	**7,112**	**7,104**

10.2 Malcolm 1 Deposit

In 2011, the RC drill program consisted of 18 drill holes for 1,387 m. Drilling began on August 19, 2011 and concluded on October 14, 2011.

During the summer-fall program of 2012, 14 RC drill holes were completed for a total of 1,599 m.

The geological interpretation of the Malcolm 1 deposit was done in 2012 and is further described in section. Table 10-2 details the RC drill holes locations of the entire drilling campaign done by SMI over Malcolm 1. Appendix II details the RC drill location map and list the RC drill holes locations of Malcolm 1.

Table 10-2 Malcolm 1 RC Drill Programs

		Drill Holes				
		DD	**RC**	**Metres**	**Samples**	**Assays**
Historical	IOC	-	1	71	25	25
LIM	2006	-	-	-	-	-
	2007	-	-	-	-	-
	2008	-	-	-	-	-
	2009	-	-	-	-	-
	2010	-	-	-	-	-
	2011	-	18	1,379	480	480
	2012	-	14	1,599	563	563
TOTAL			**33**	**3049**	**1068**	**1068**

Total saleable product will be the aggregate of the Wet Plant Product as above and dry screening product. In peak years dry screening will produce about 1.5mtpa being the difference between tonnes of ore mined and tonnes treated in the wet plant. Overall production will therefore expected to be about 3mtpa made up of 1.5mtpa of dry screened product at 100% recovery and 1.5mtpa of wet plant product.

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 set up 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 three 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 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 geotech 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.

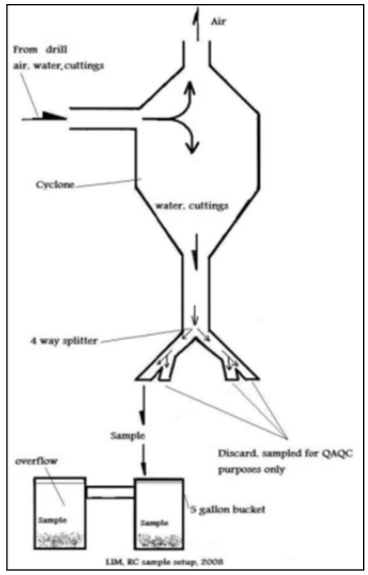

Figure 11-1: RC Size Reduction and Sampling (Method used in the 2008 drilling Program)

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 Micro Pore bags which allowed water to slowly drain through while capturing very fine sample material (Figure 11-2).

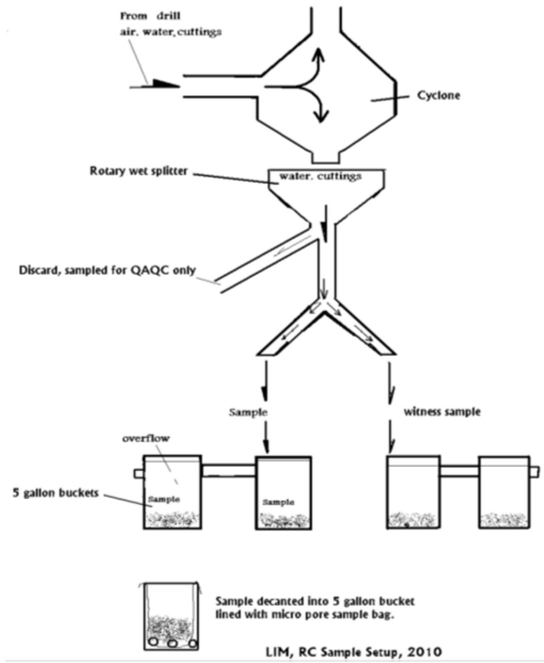

Figure 11-2: 2010 & 2011 Reverse Circulation Sampling Setup Diagram

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 half core.

RC drill cuttings and diamond drill core followed previously established procedures from following years. All samples 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 (Table 11-1), 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)

11.5 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.

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

Table 11-2: Borate Fusion Whole Rock XRF Reporting Limits

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

11.6 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 Table 11-3 below:

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

11.7 Sample Preparation at ACTLABS

During the 2009 to 201 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. In 2012, all exploration samples were sent to the Silver Yard mine lab for preparation to reduce the samples to pulps and then sent to ActLabs in Ancaster, Ontario.

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 (Table 11-4) 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 (Table 11-5) 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

11.8 Sample Analysis and security at ACTLABS

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

11.8.1 X-Ray Fluorescence Analysis Code: 4C

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

Elements Analyzed:

SiO_2, Al_203, 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 (Table 11-6) 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

The 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 fails 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).

11.9 Sample Security and Control

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

11.10 Field Duplicates

11.10.1 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.

11.10.2 DDH Duplicates

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

11.11 Preparation Lab Duplicates

11.11.1 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 201 exploration programs with modifications mentioned above.

11.11.2 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.

11.11.3 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% SiO_2 was noted for the entire batch of 60 blank samples. For SGS-Lakefield, an average of 5.37% Fe and 61.40% SiO_2 was noted. For ALS-Chemex, an average of 4.22% Fe and 62.60% SiO_2 was reported. For COREM, an average of 4.34% Fe and 62.25% SiO_2 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 (1) 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 (1) for every 20 samples sent to the laboratory.

11.12 Reference Material (Standard)

LIMHL introduced in-house reference material ("standards") with high grade James Mineralized material 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 mineralized 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 (Table 11-7) 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.

11.12.1 2008 Exploration Program

The data verification of the iron (Fe), Phosphorus (P), Manganese (Mn), silica (SiO_2) 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.

11.12.2 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 (2) outliers, which could be a result of contamination while processing or taking the sample.

11.12.3 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.

11.12.4 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 ±3σ line, however, all of the blanks are under 5% iron grade. SGS - 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.

11.12.5 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.

11.12.6 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 1 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 11.11.3). 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.

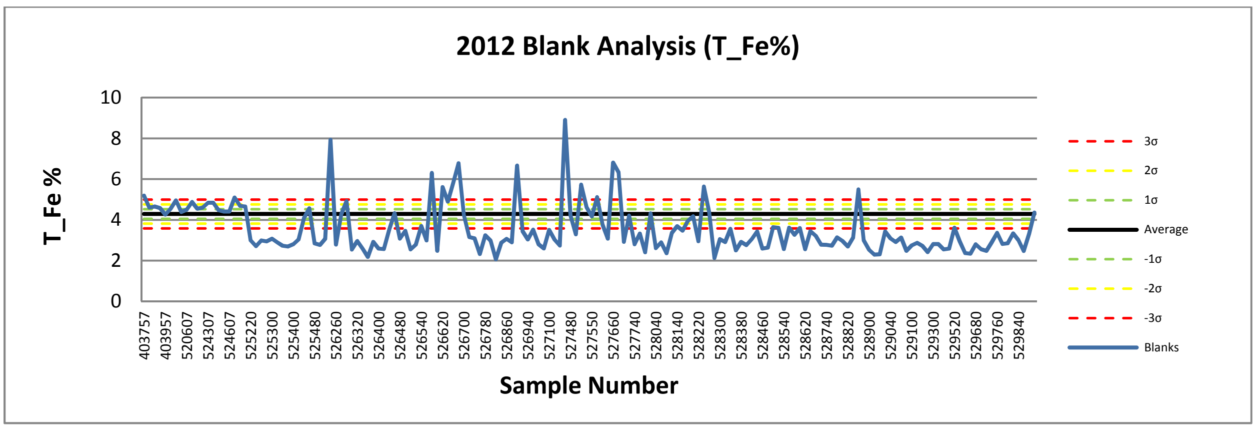

Figure 11-3: 2012 T_Fe% Blanks Comparison

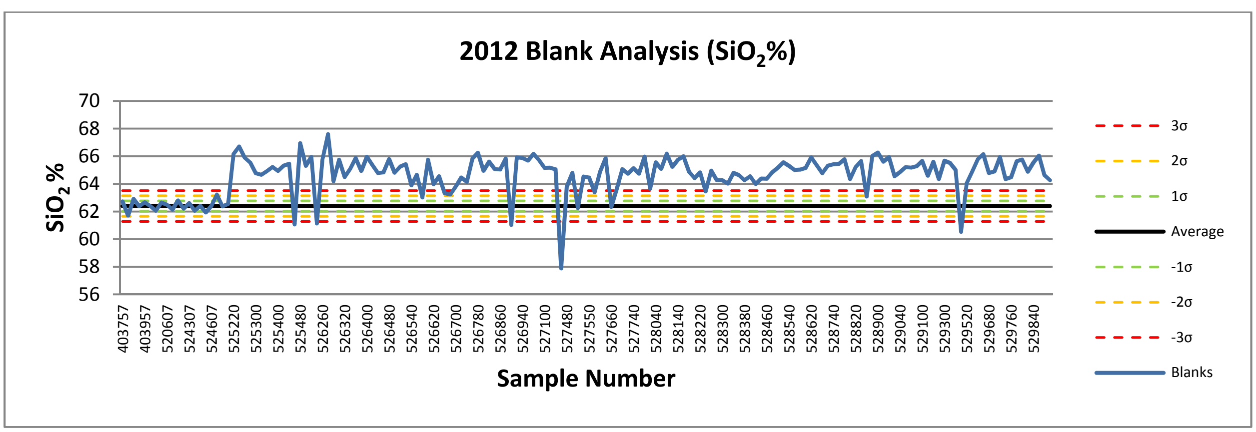

Figure 11-4: 2012 SiO2% Blanks Comparison

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.

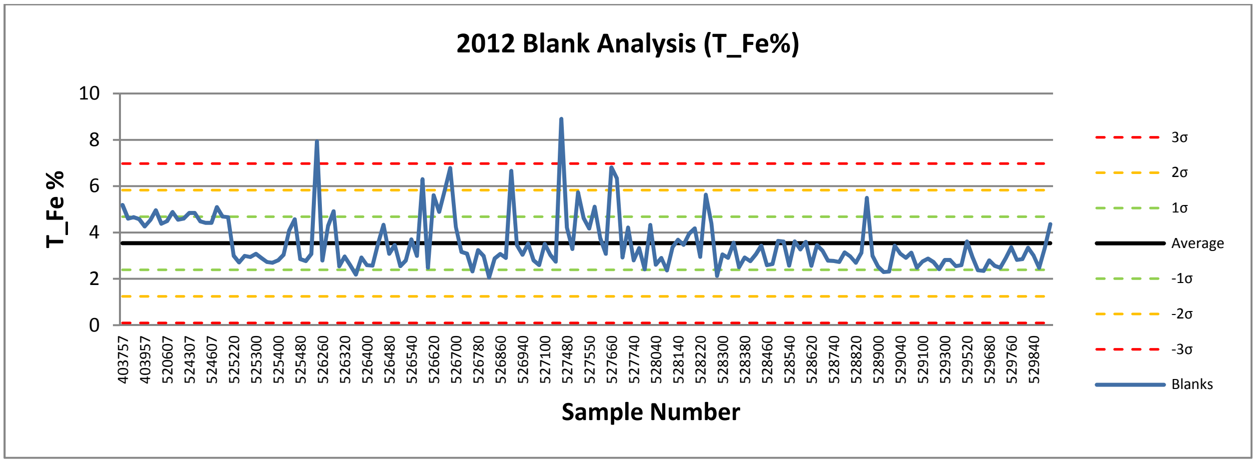

Figure 11-5: 2012 Fe% Blanks Comparison

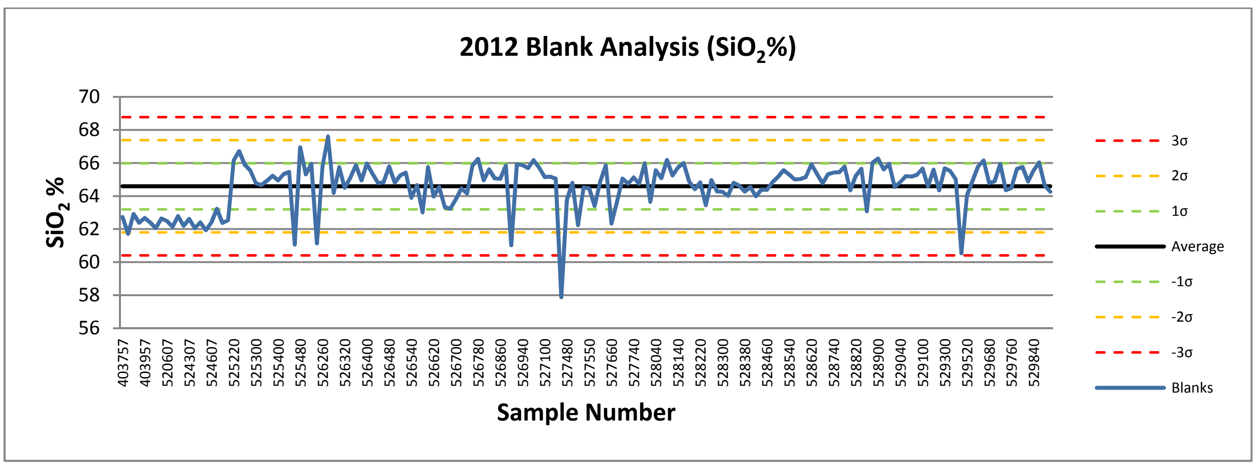

Figure 11-6: 2012 SiO2% Blanks Comparison

To quantify the number of standards between each standard deviation (performance gate) the following table (Table 11-8) 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 SiO_2 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.

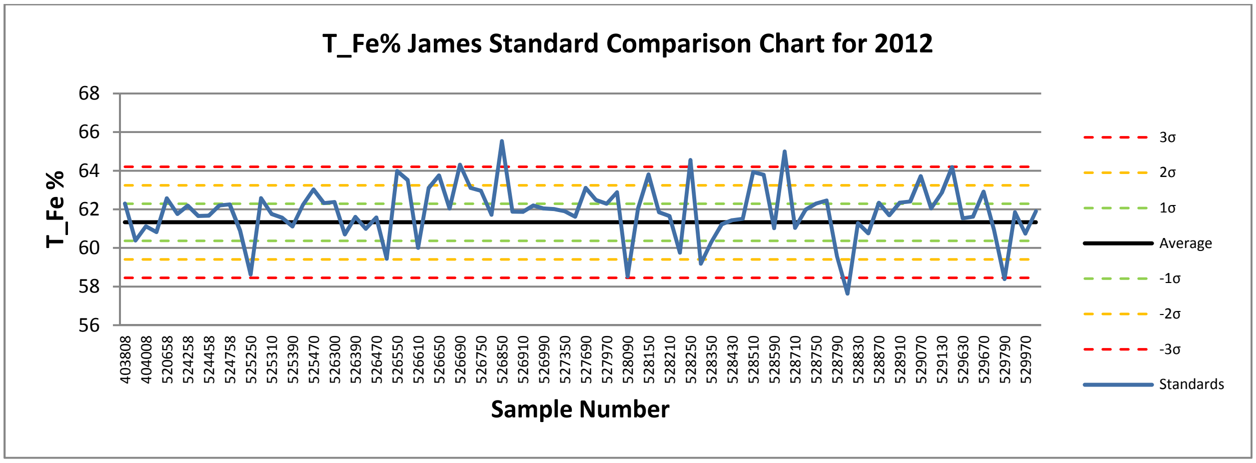

Figure 11-7: Fe High Grade JM-STD Standards in 2012

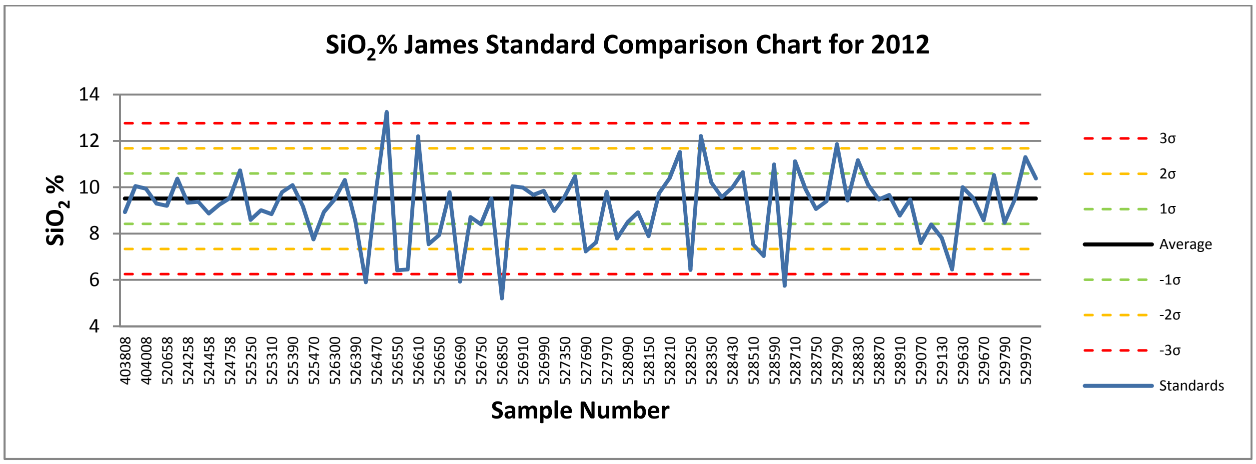

Figure 11-8: SiO2 Grades JM-STD Standards in 2012

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% SiO_2). 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.

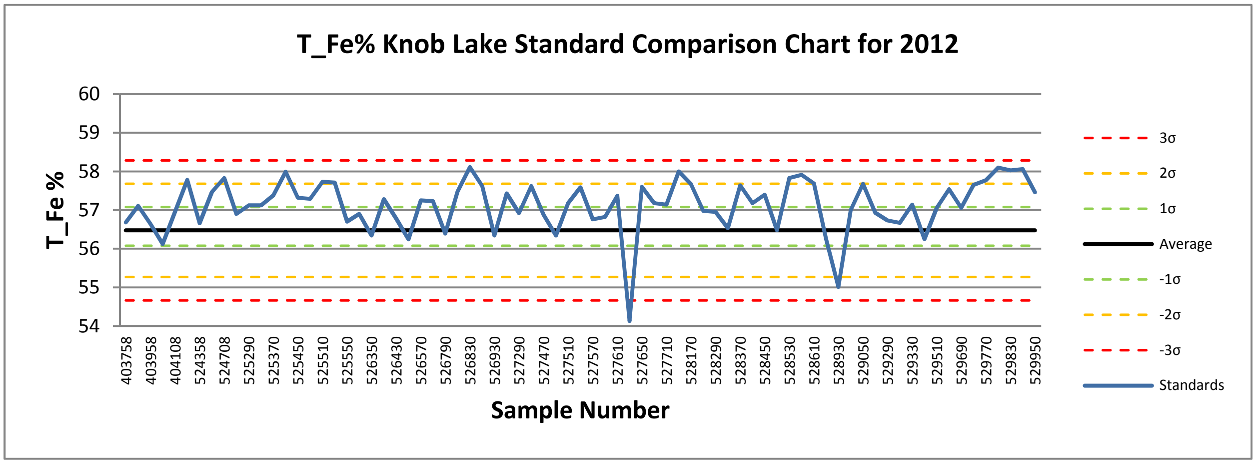

Figure 11-9: Fe High Grade KL-STD Standards in 2012

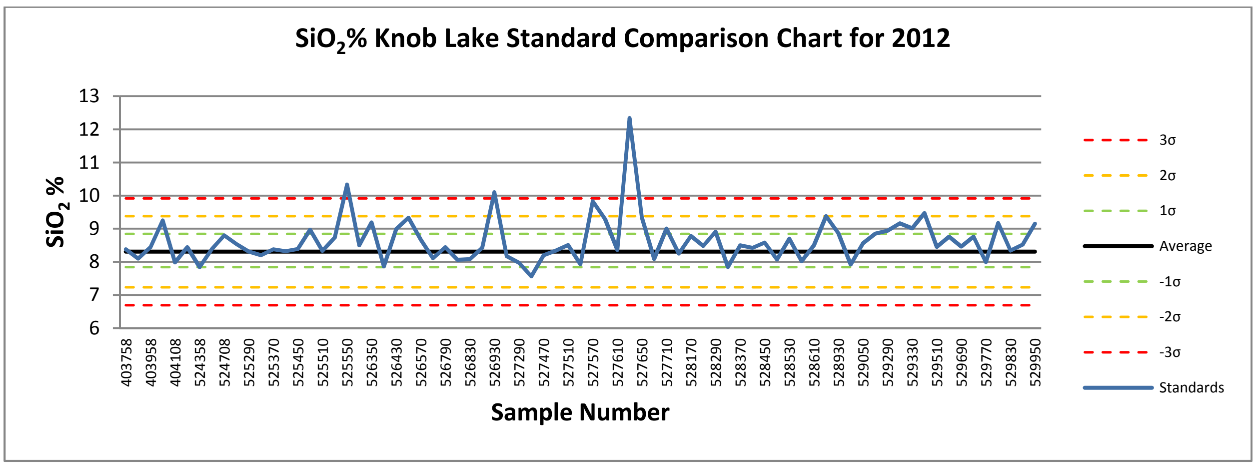

Figure 11-10: SiO2 Grades KL-STD Standards in 2012

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 (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.

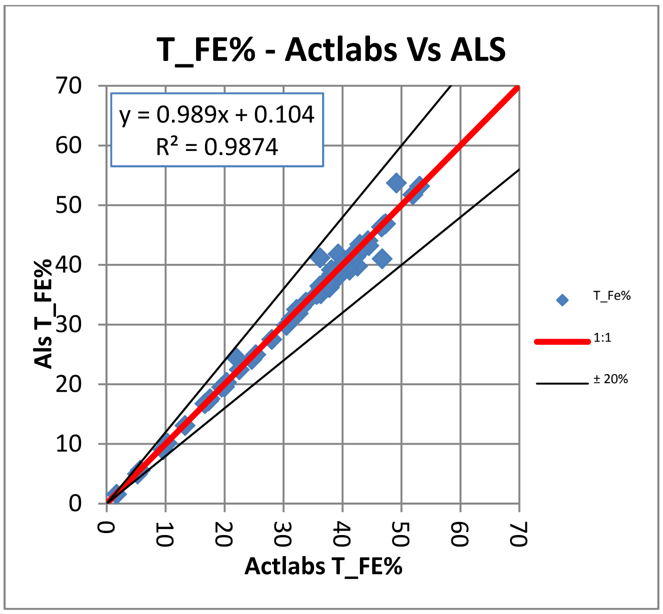

Figure 11-11: Duplicate Comparison of T_Fe% from ALS Chemex vs. ActLabs

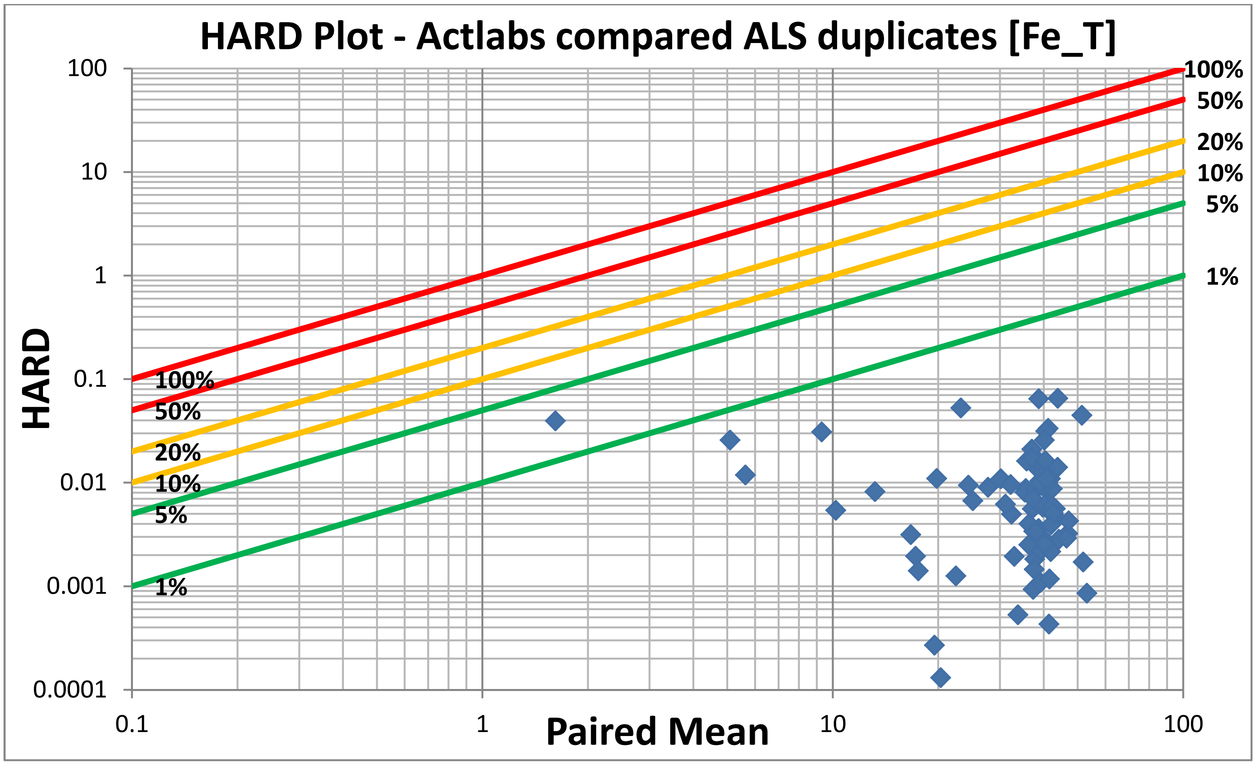

Figure 11-12: Pair Mean vs. HARD of Duplicate Comparison of T_Fe% from ALS Chemex vs. ActLabs

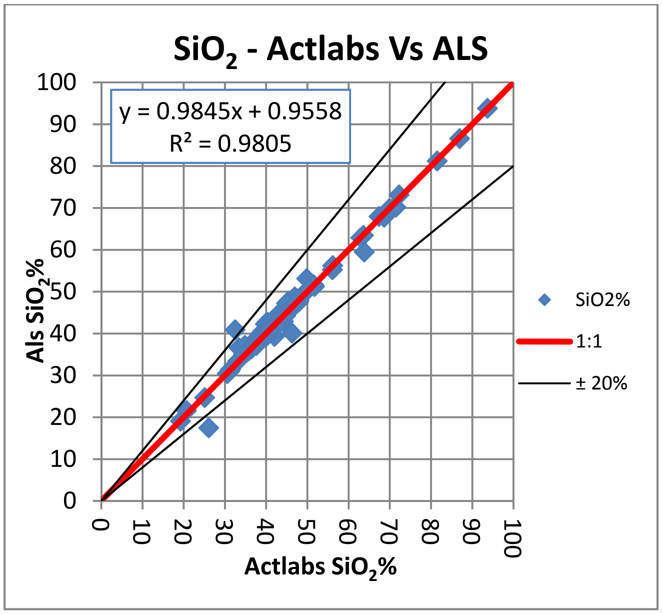

Figure 11-13: Duplicate Comparison of SiO_2% from ALS Chemex vs. ActLabs

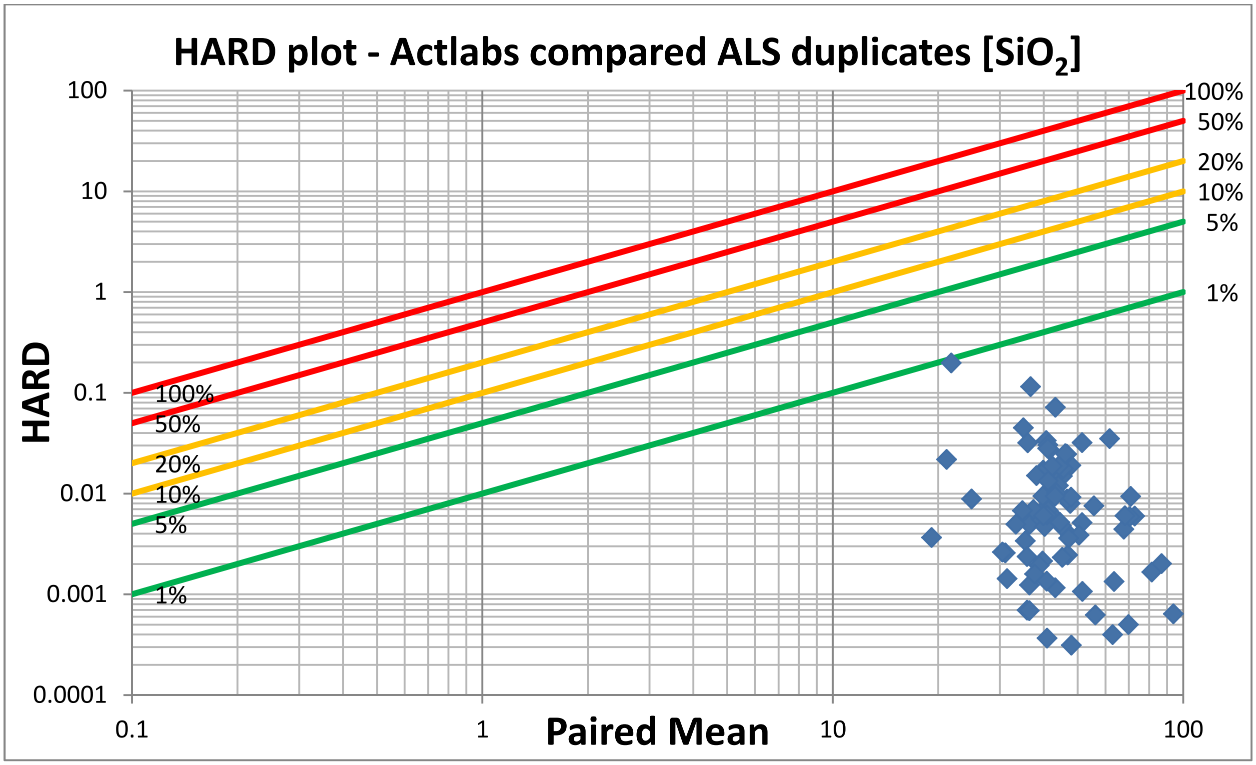

Figure 11-14: Pair Mean vs. HARD of Duplicate Comparison of SiO_2% from ALS Chemex vs. ActLabs

11.14.1 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.

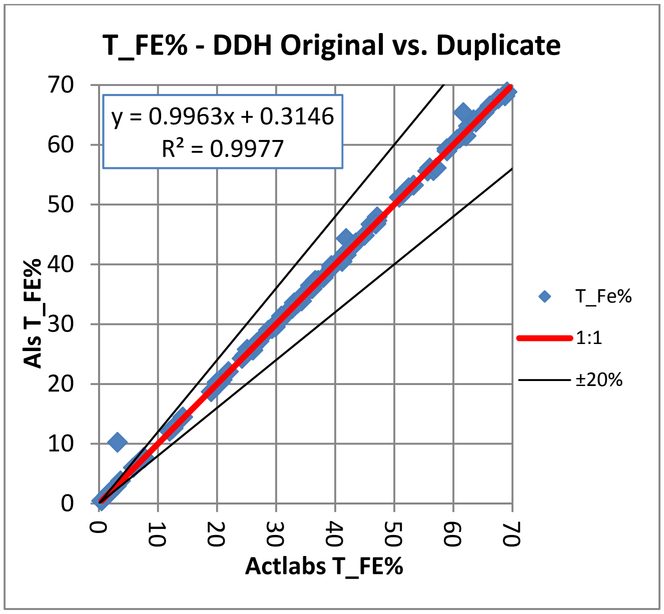

Figure 11-15: T_Fe% of Original Samples vs. Duplicate Results from Diamond Drill Holes

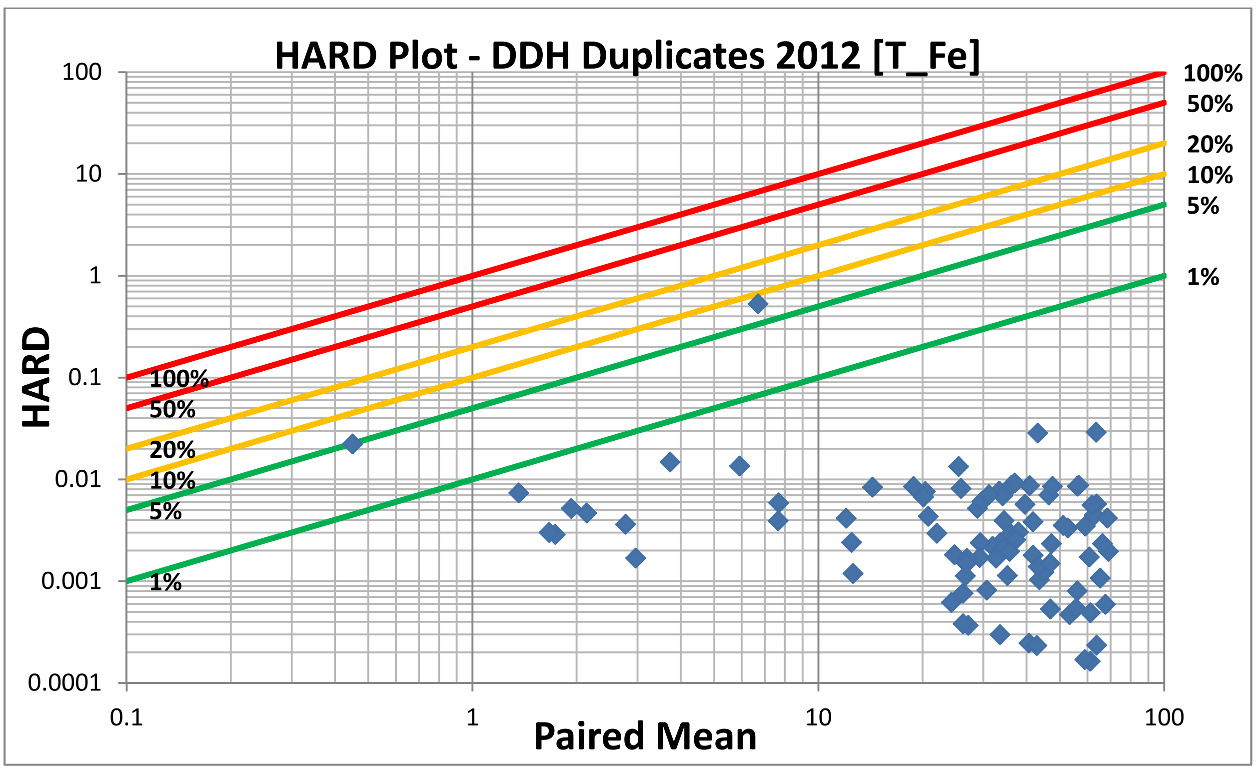

Figure 11-16: Pair Mean vs. HARD of T_Fe% of Original Samples vs. Duplicate Results from Diamond Drill Holes

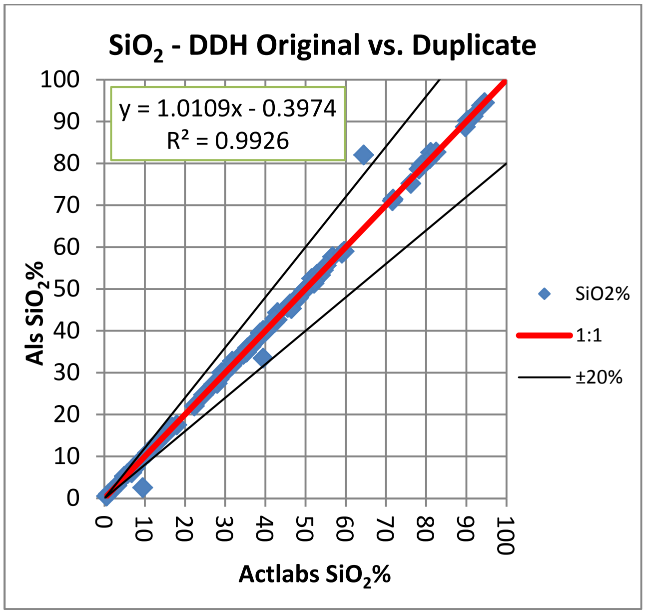

Figure 11-17: SiO2% of Original Samples vs. Duplicate Results from Diamond Drill Holes

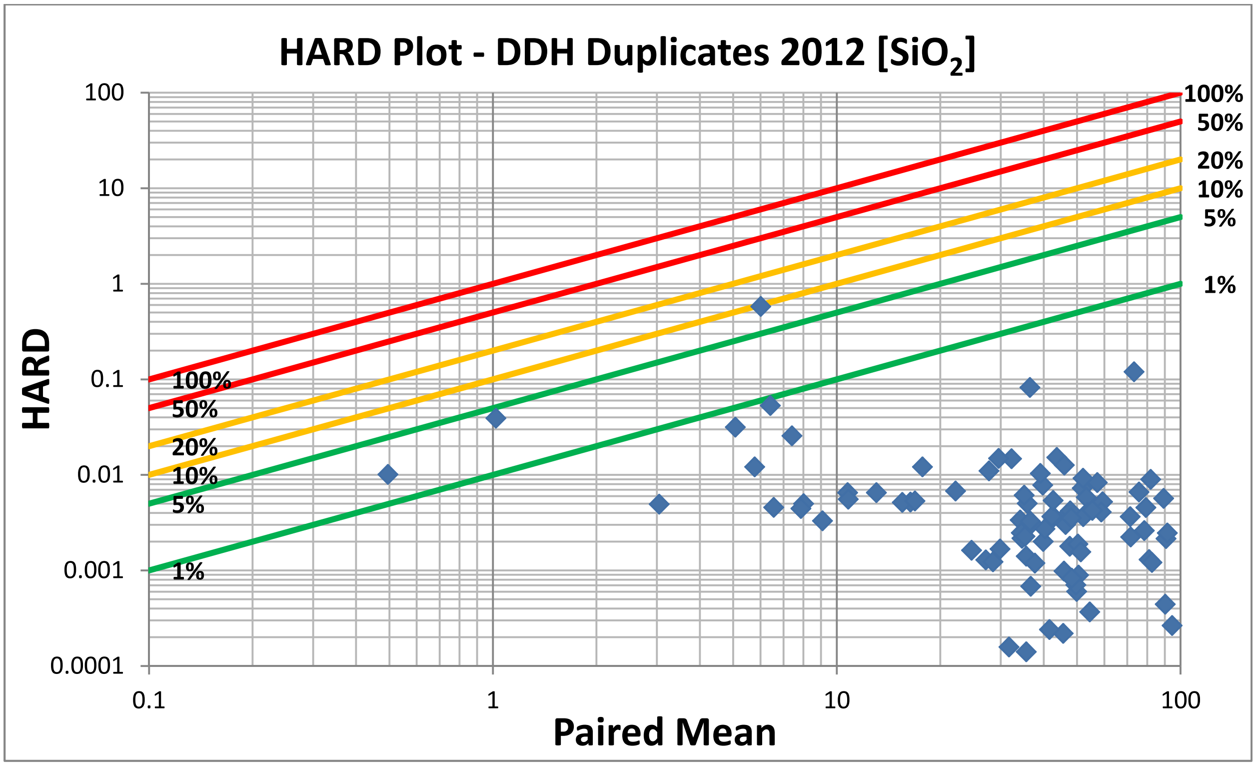

Figure 11-18: Pair Mean vs. HARD of SiO_2% of Original Samples vs. Duplicate Results from Diamond Drill Holes

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

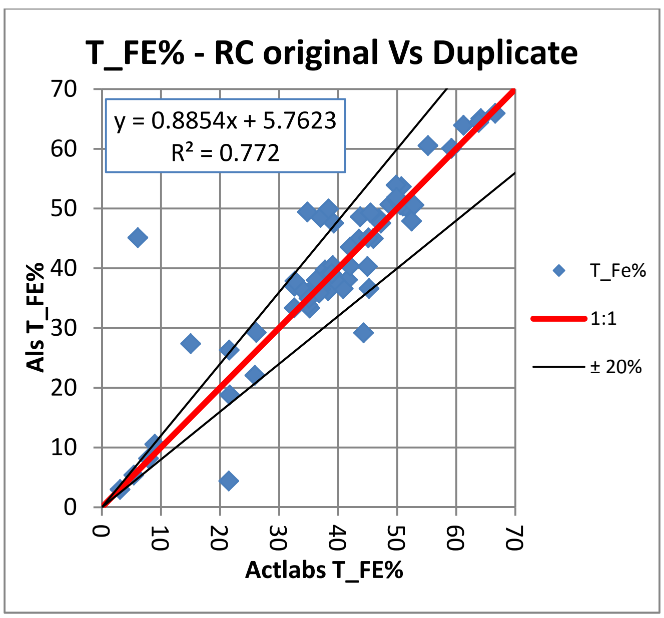

Figure 11-19: T_Fe% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

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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.

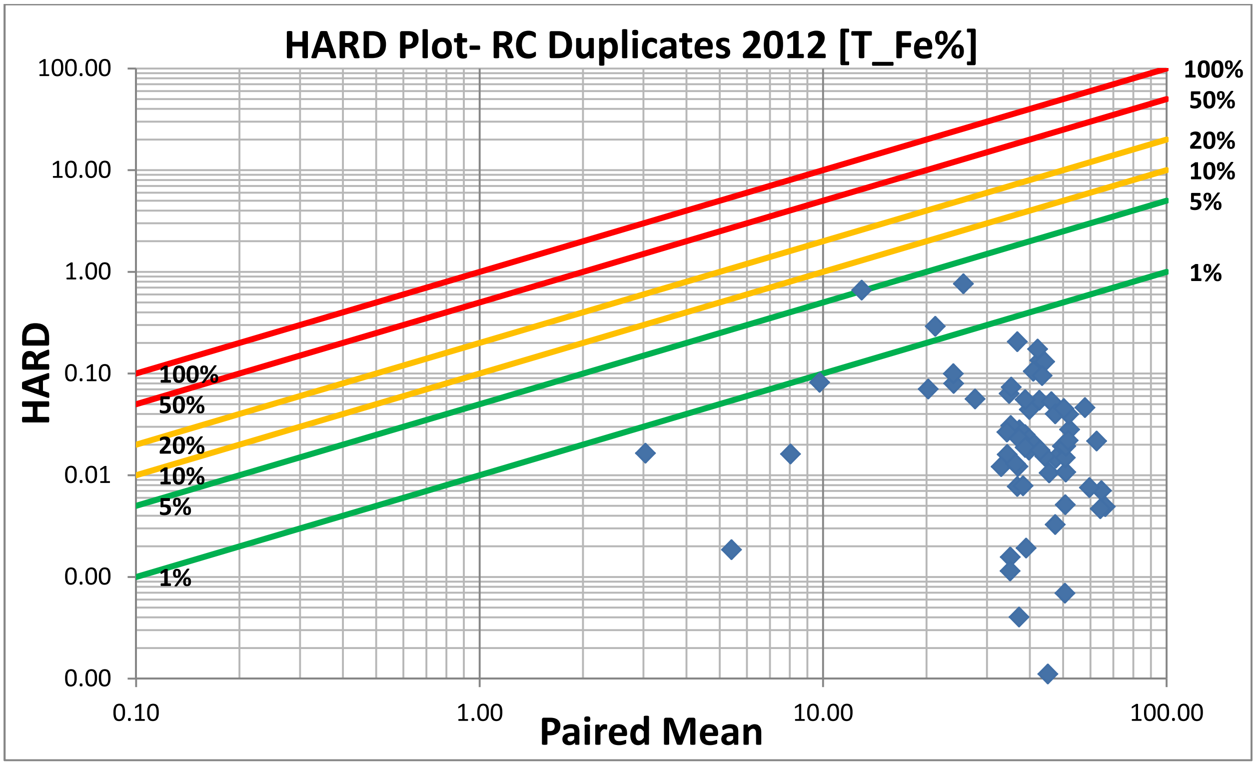


Figure 11-20: Pair Mean vs. HARD of T_Fe% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

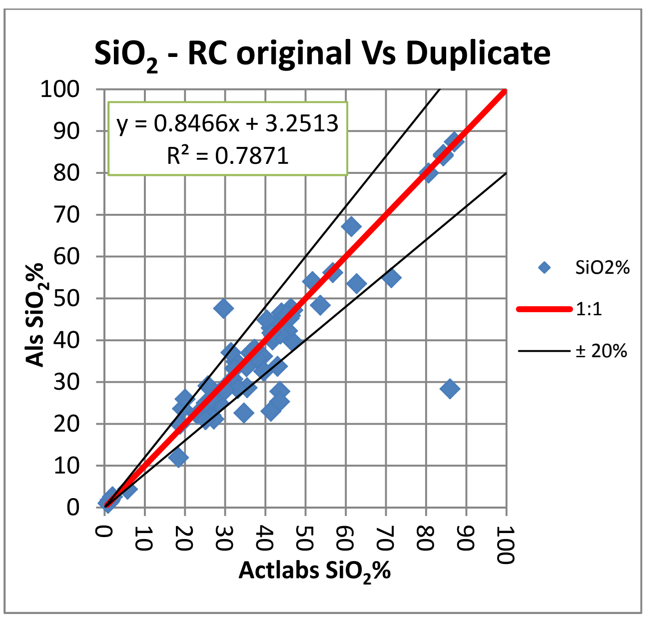


Figure 11-21: SiO2% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

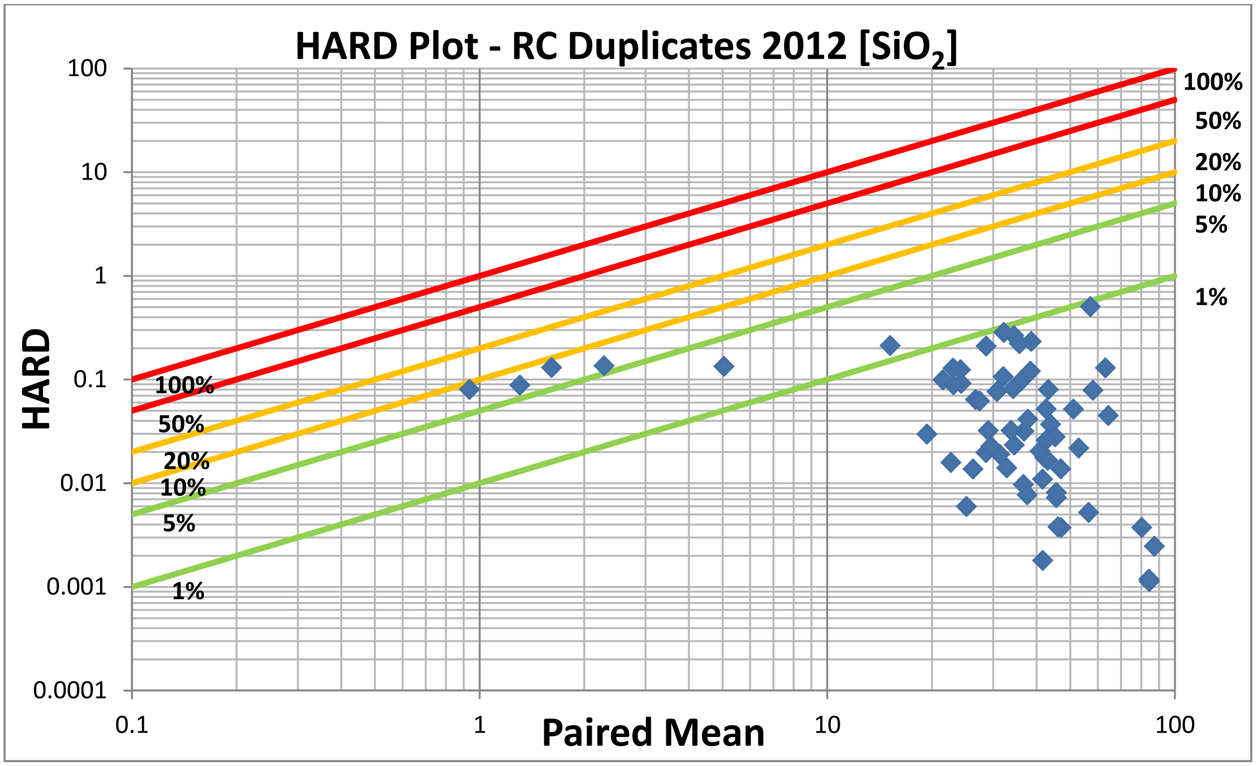


Figure 11-22: Pair Mean vs. HARD of SiO_2% Comparison of Original Samples vs. Duplicate Results of RC Field Samples

11.14.3 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 differences 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.

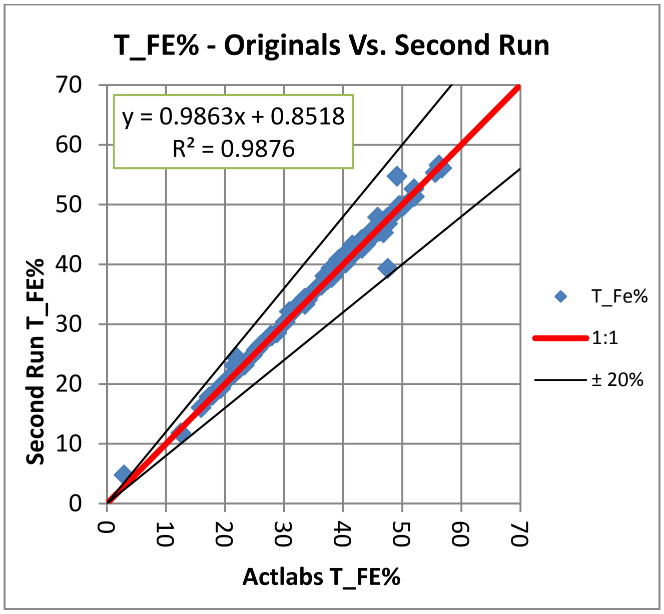


Figure 11-23: Comparison of T_Fe% of Original Sample vs. Second Duplicate Results

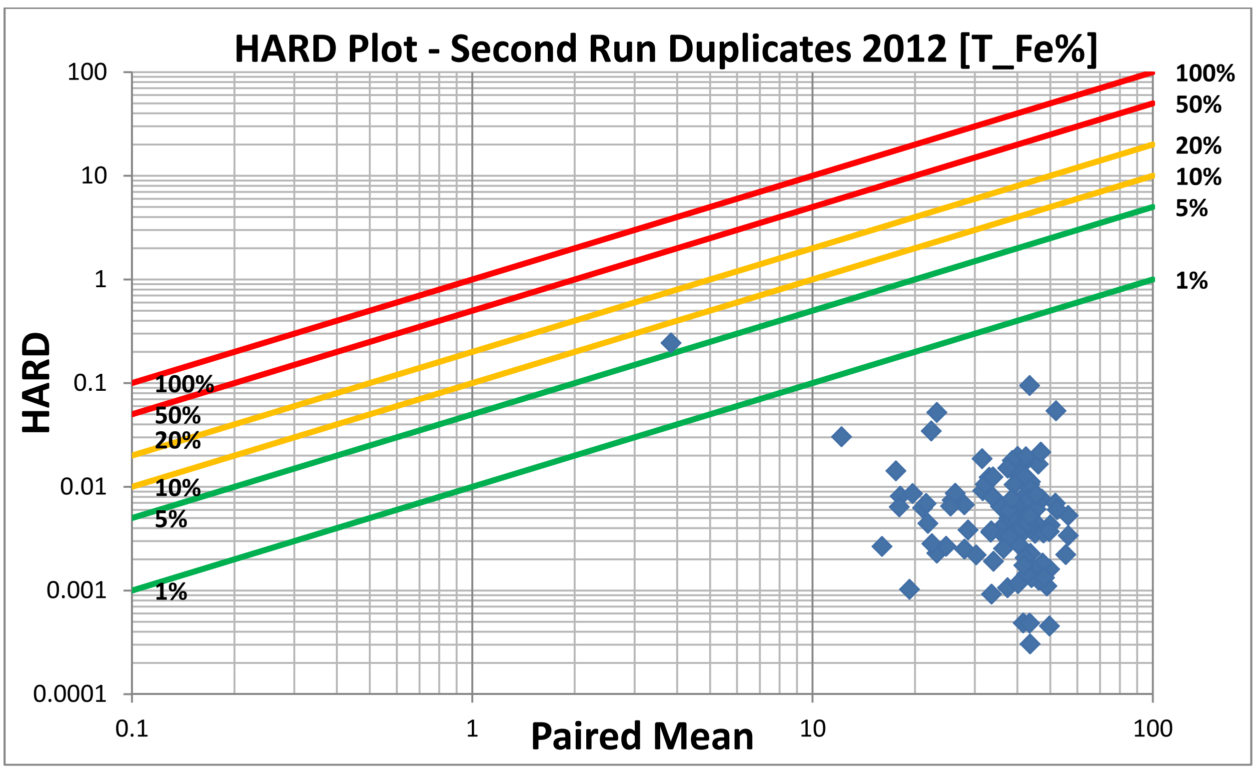


Figure 11-24: Pair Mean vs. HARD of Comparison of T_Fe% of Original Sample vs. Second Duplicate Results

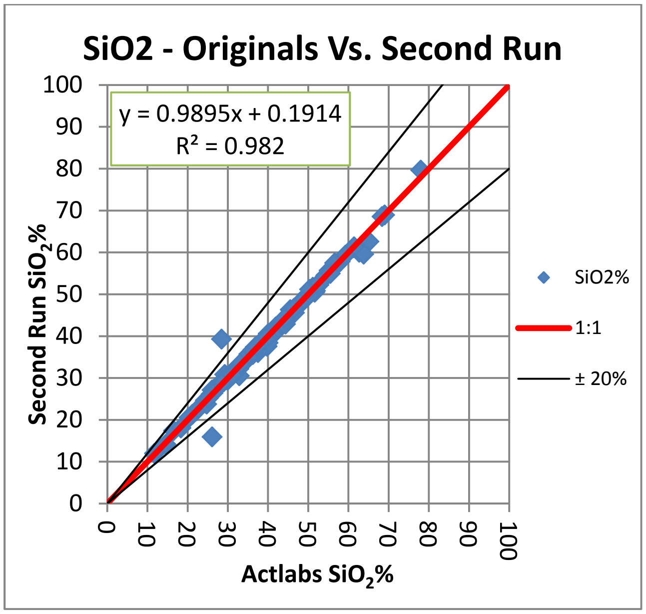


Figure 11-25: Comparison of SiO2% of Original Sample vs. Second Duplicate Results

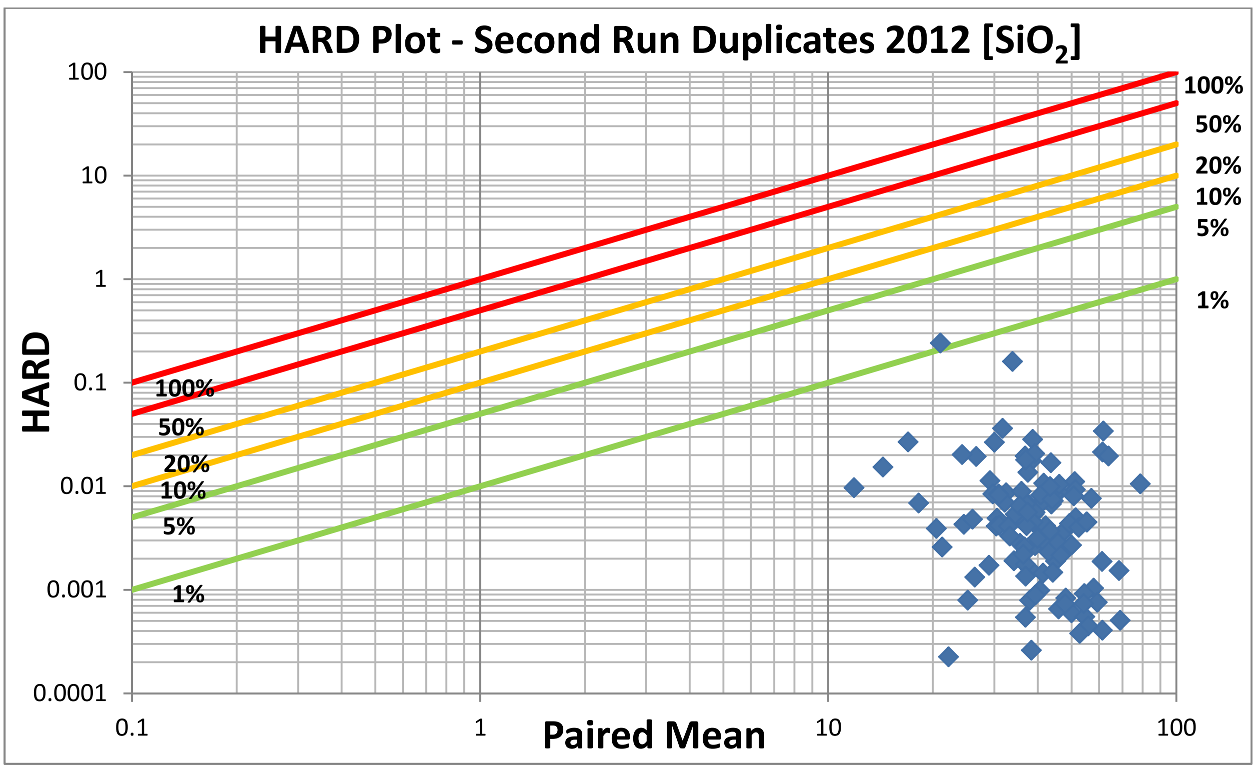


Figure 11-26: Pair Mean vs. HARD of Comparison of Comparison of SiO_2% of Original Sample vs. Second Duplicate Results

11.15 Assay Correlation of Twinned Holes

The data verification was done on the iron (Fe) and silica (SiO_2) 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).

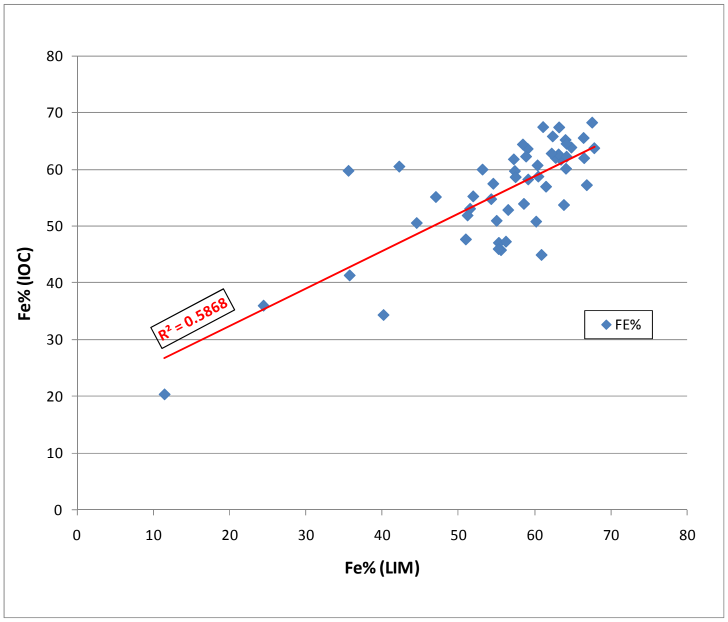


Figure 11-27: Graphic of Fe Assay Correlation of Twinned Holes

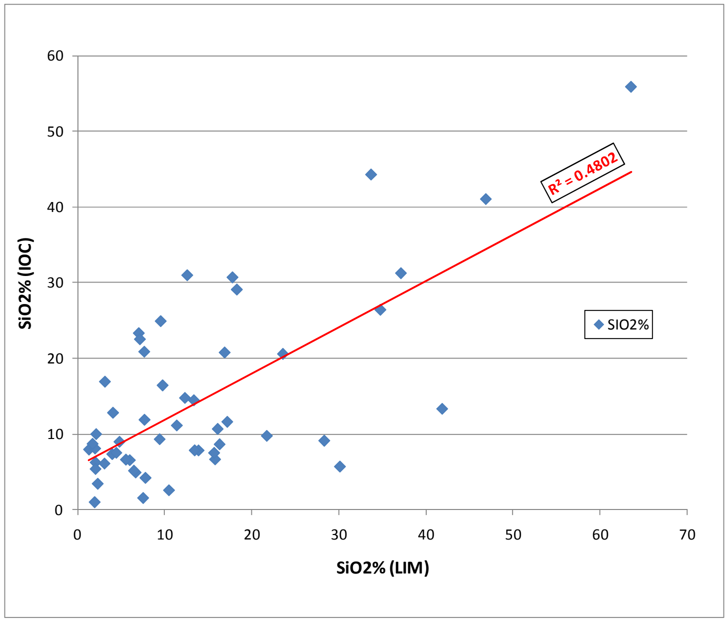


Figure 11-28: Graphic of SiO2 Assay of Twined Holes

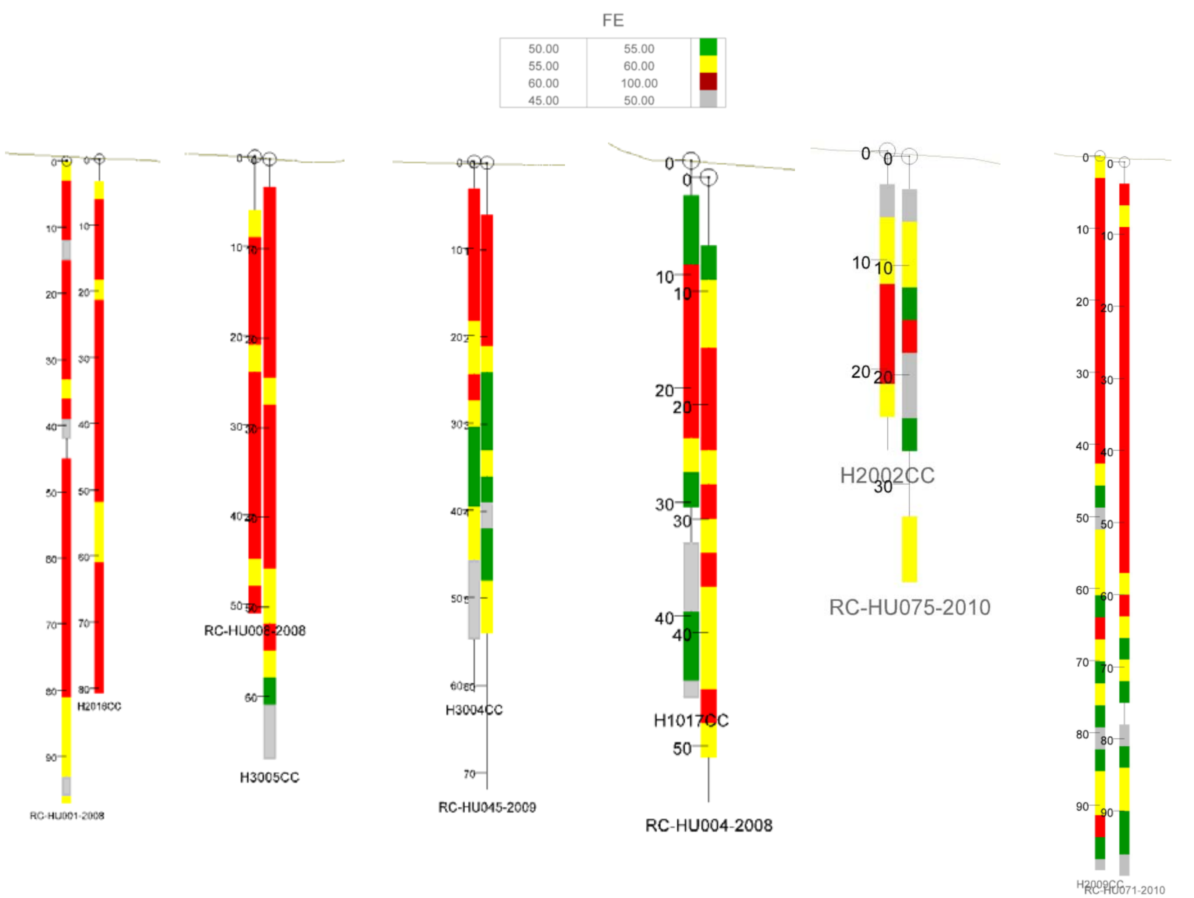


Figure 11-29: Visual Comparison of Fe Grades of 6 pairs of Holes

12. Data verification

The digital Houston 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.

The Malcolm 1 drill holes database was not verified by SGS until 2012. SMI followed the sampling and RC drilling procedures described above. The digital Malcolm 1 deposits drill holes 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.

The final drill holes database includes historical and all LIM's Houston and Malcolm 1 RC, DDH, and trenches until fall of 2012. The database cut-off date is March 12th, 2013 for Malcolm 1 and April 05th, 2013 for Houston. Table 12-1 summarises the data contained in the final drill holes database used for the mineral resource estimate in Appendix I. The and SGS Geostat are of the opinion that the final drill hole database is adequate to support a mineral resource estimate.

Table 12-1: Exploration Data Summary

		Drill Holes					Trenches			
		DD	RC	Metres	Samples	Assays	Trenches	Metres	Samples	Assays
Historical		-	86	4,418	1,496	1,496	236	8,001	2,106	2,106
LIM	2006	5	0	253	-	-	1	75	15	15
	2007	-	-	-	-	-	-	-	-	-
	2008	-	12	791	304	304	-	-	-	-
	2009	-	46	3,138	1,098	1,092	9	479	120	120
	2010	-	26	1,804	627	625	-	-	-	-
	2011	-	44	3,112	1,064	1,064	3	551	-	-
	2012	42	22	5954	2188	2188	-	-	-	-
TOTAL		**47**	**150**	**14,799**	**5,281**	**5,273**	**3**	**551**	**120**	**120**

12.1 SGS Data Validation Prior to 2012

The data verification of the iron (Fe), Phosphorus (P), Manganese (Mn), silica (SiO_2) and alumina (Al_2O_3) values were 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.

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 few outliers, which could be a result of contamination while processing or taking the sample.

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.

The assay results of the 2010 SGS check sampling campaign allowed confirming the presence and the iron and SiO_2 content of the selected samples, as well as the integrity of the sample results used in the 2010 Houston resource estimation. With the exception of a limited number of assay results with a significant difference, we found the results to be adequate. A series of tests was performed considering the small amount of samples: Sign test, and Student normal test.

In March 2011, SGS Geostat sent a total of 51 samples for analysis from 4 drill holes: RC-HU-053-2010, RC-HU-061-2010, RC-HU-064-2010 and RC-HU-074-2010. The samples were sent to the SGS-Lakefield Laboratory in Lakefield, Ontario analysis following the sample preparation and analytical procedures described in Section 11.4.

Overall it shows good assay correlation. The Mn and Al_2O_3 and P sign tests and student normal T tests were inconclusive. However, the average difference LIM and SGS sample results were low for the Mn (1%). The difference of the average grades of the P (16%) and Mn (13%) appear high. SGS recommends the continuation of the QA/QC procedures in order to verify more precisely these differences.

During the site visit conducted from August 1st to 5th, 2011 by the author, Maxime Dupéré, P.Geo., a total of 78 mineralized field duplicates from the Houston deposit were collected from holesRC-HU091-2011, RC-HU094-2011, RC-HU095-2011, RC-HU077-2011, RC-HU104A-2011, RC-HU106-2011 and RC-HU081-2011 under supervision of the author and submitted for whole rock analysis at SGS Minerals laboratory in Lakefield, Ontario, Canada. The duplicate samples were processed using the assay procedures described in Section 0.

A statistical analysis of the selected 2011 original and duplicate analytical values involving a series of tests (Sign test, Student logarithmic test, Student normal test) shows a potential bias as 72% of the original values returned greater than the duplicate values for Fe (%).

There was a poor correlation (R^2=0.4 for T_Fe and R^2=0.3 for SiO_2) between check and original assays both for iron and silica in 2011. Taking out the high Fe (Fe_2O_3) values from the graph, the correlations are better. The mean averages of the check and original samples assays do not differ significantly.

12.2 2012 Exploration

Since LIMHL decided to start drilling DDH holes during the 2012 field season, SGS decided to do independent sampling to test the validity of the diamond drill results. Furthermore SGS did independent sampling of the RC witness samples, for the Malcolm 1 deposit since it was not independently analyzed in previous years. During the field season of 2012 Matthew Halliday under the supervision of Maxime Dupéré selected 31 mineralized witness samples from the Malcolm 1 RC program and submitted them to SGS Minerals laboratory in Lakefield, Ontario for duplicate analysis. There were 5 samples from each hole RC-M-20-2012, RC-M-21-2012, RC-M-23-2012, RC-M-25-2012, RC-M-27-2012 and 6 samples from RC-M-28-2012. Additionally, during the site visit conducted from November 6th to 9th, 2012 by Matthew Halliday, under the supervision of Maxime Dupéré a total of 30 mineralized field duplicates from the Houston deposit were collected from holes DD-HU-138-2012 and DD-HU-143-2012 and submitted for whole rock analysis at SGS Minerals laboratory in Lakefield, Ontario, Canada. The duplicate samples were processed using the assay procedures described in Section 11.2 Figure 12-1 and Figure 12-2 show the correlation plots for the duplicate data versus the original data. A summary of the statistical analysis conducted on the data is shown in Table 12-1.

12.2.1 DDH Independent Validation - Houston

A statistical analysis of the selected 2012 original and duplicate analytical values involving a series of tests (Sign test, Student normal test) show no potential bias. It appears that the SGS values reported are larger 67% of the time, for iron and only 33% of the time for silica. The mean grade of iron for independent testing is slightly higher, indicating that LIMHL may be slightly conservative.

Table 12-2 summarized the univariate statistics for both the original and duplicate values; there is not a significant difference between the means however that is a large difference for the minimum value for iron and the maximum value for silica. There is the possibility of a sample mix-up. Through inspection of the duplicate paired plots Figure 12-1 and Figure 12-2 it appears that there is an outlier.

Table 12-2: Summary Statistics - Houston Independent Sampling

	SiO_2% SGS	SiO_2% ACTLABS	|Diff|	R Diff
Mean	11.67	13.11	1.43	-10.9%
Standard Deviation	5.65	8.77	3.13	-35.6%
Sample Variance	31.87	76.94	45.07	-58.6%
Range	22.46	44.86	22.40	-49.9%
Minimum	3.24	4.78	1.54	-32.2%
Maximum	25.7	49.64	23.94	-48.2%
Count	30	30	0.00	0.0%
	Fe_T % SGS	**Fe_T % ACTLABS**	**|Diff|**	**R Diff**
Mean	61.05	59.89	1.15	1.9%
Standard Deviation	4.11	6.22	2.11	-33.9%
Sample Variance	16.89	38.70	21.81	-56.4%
Range	16.58	31.75	15.18	-47.8%
Minimum	50.64	34.41	16.23	47.2%
Maximum	67.22	66.17	1.05	1.6%
Count	30	30	0.00	0.0%

The following figures Figure 12-1 and Figure 12-2 show a poor correlation (R^2=0.40 for T_Fe and R^2=0.40 for SiO_2) between check and original assays both for iron and silica. Taking out one high Fe value sample# 31828 from the graphs, the correlations are better R^2=0.73 for T_Fe and R^2=0.73 for SiO_2).

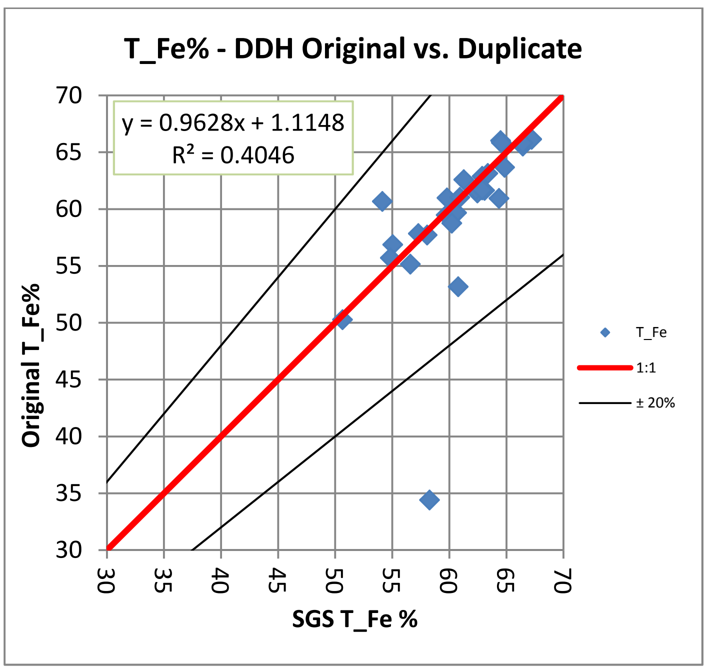


Figure 12-1: DDH original values vs. duplicate values for T_Fe

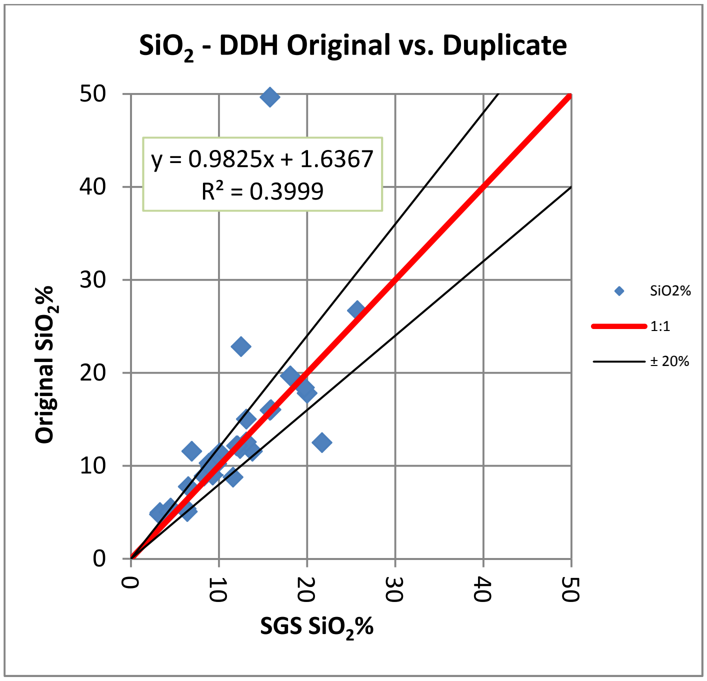


Figure 12-2: DDH original values vs. duplicate values for SiO_2

The mean averages of the check and original samples assays do not differ significantly, except the minimum value for silica is 32% difference increasing the mean difference slightly. The mean difference between iron values is approximately 1.9%.

There is likely a sample mix up when the spurious value is remove the population correlated reasonably well. It is recommended to reanalyze sample 31828 to confirm if further investigation is warranted.

12.2.2 RC Independent Validation – Malcolm 1

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. The Sign tests show a potential bias high for the SGS samples of the original, however there is no obvious bias with the Student normal test. The sign test bias is slightly outside the predefined criteria for both, and indicates the 72% of the time the SGS samples contain higher iron and silica. The mean grades are similar for both populations and have low relative differences ≤1% of iron and silica, indicating that LIMHL may be slightly conservative.

Table 12-3 summarized the univariate statistics for both the original and duplicate values, the populations are very similar, all of the relative differences are less than 3%, the relative difference in the mean is approximately 1% and the min/max range is similar. Through inspection of the duplicate paired plots Figure 12-3 and Figure 12-4 it appears that the samples 524612 and 524713 have been mixed up at the laboratory. Otherwise there is excellent repeatability between labs for the Malcolm 1 samples, and the values are fit for purpose.

Table 12-3: Summary Statistics - Malcolm 1 Independent Sampling

	SiO_2% SGS	SiO_2% ACTLABS	|Diff|	R Diff
Mean	43.92	43.47	0.45	-1.0%
Standard Deviation	10.51	10.45	0.06	-0.6%
Sample Variance	110.46	109.24	1.22	-1.1%
Range	55.51	54.08	1.43	-2.6%
Minimum	6.19	6.1	0.09	-1.5%
Maximum	61.7	60.18	1.52	-2.5%
Count	29	29	0.00	0.0%
	T_Fe % SGS	**T_Fe % ACTLABS**	**|Diff|**	**R Diff**
Mean	35.38	35.12	0.27	-0.8%
Standard Deviation	9.98	9.84	0.14	-1.5%
Sample Variance	99.58	96.73	2.85	-3.0%
Range	51.27	50.33	0.94	-1.9%
Minimum	9.58	9.51	0.07	-0.7%
Maximum	60.85	59.85	1.01	-1.7%
Count	29	29	0.00	0.0%

The following Figure 12-3 and Figure 12-4 show good correlation (R^2=0.96 for T_Fe and R^2=0.88 for SiO_2) between check and original assays both for iron and silica. These are very good values considering the nature of RC sampling and there was higher repeatability in this study than the RC duplicates taken by LIM. Potentially indicating that the witness sample provides a better duplicate than the reject however, it could also indicate that the samples are not a representative as the bulk 3rd sample.

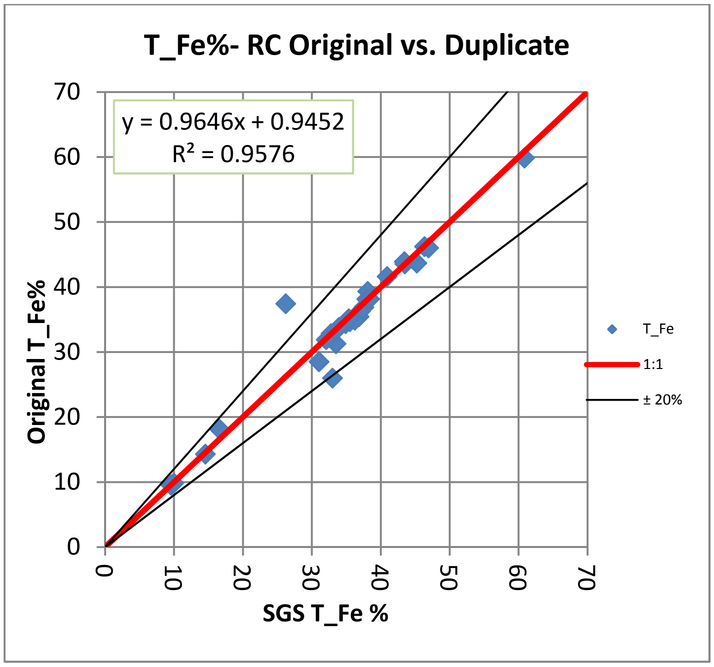


Figure 12-3: RC original values vs. duplicate values for T_Fe%

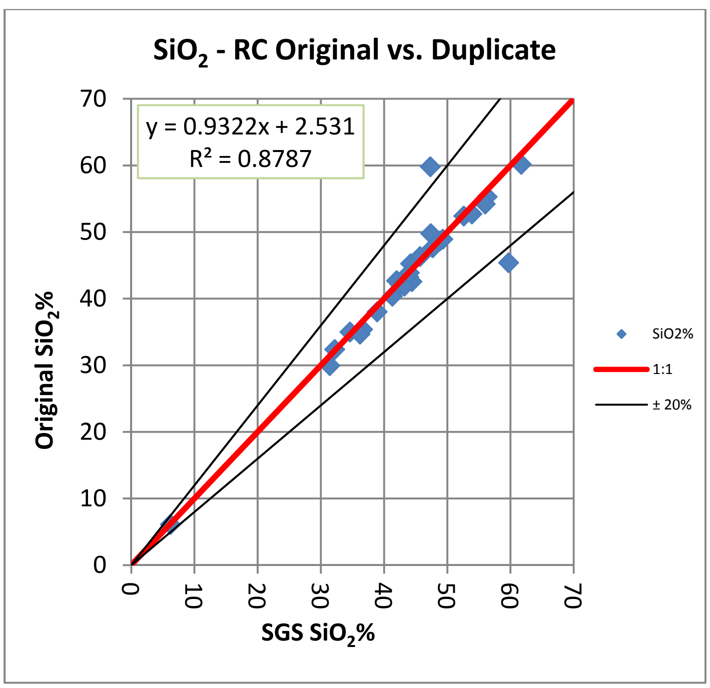


Figure 12-4: RC original values vs. duplicate values for SiO_2

It is believed that the RC samples at Malcolm 1 are suitable for resource estimation.

12.3 Data Verification Conclusions and Recommendations

12.3.1 2012

The results of the 2012 data verification indicate that the RC drilling has very good correlation and no significant errors were detected.

The RC method has dramatically improved since the last field season and errors with the method decreased significantly over the 2011 field season.

A resample of DDH 31828 should be conducted to determine if there was an error in sampling or in the laboratory, the same for RC samples 524612 and 524713 to determine if the mix-up happened in the field or laboratory.

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

13. Mineral Processing and Metallurgical Testing

The information below was provided by LIMHL.

No mineral processing and metallurgical testing was done on the Malcolm 1 deposit. Although it lies in line with the Houston deposits, it is recommended to do additional tests on the Malcolm 1 deposit in order to corroborate the following information.

13.1 Metallurgical Test Programs

13.1.1 Midrex Test Program

In 1989 Midrex Technologies Inc. ("Midrex"), an international iron and steel making technology company based in Charlotte, North Carolina, sampled and tested lump ore sample # 625 from the Houston 1 deposit for standard raw material evaluation purposes. The sample analyses are presented in Table 13-1.

Table 13-1: Midrex Lump Ore Samples Analyses

Sample #	Dry Wt% Yield at +6.7 mm	Fe %	S %	P %
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.

13.1.2 2006 Bulk sampling by LIM

Bulk samples from trenches at the Houston deposit were collected during the summer of 2006 from two trenches 113 m and 78 m long respectively. Three 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 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 have been and will continue to be used in the calculation of resource and reserve volumes while the chemical test results will be used to compare them with the historical IOC data from neighbouring drill holes. Table 13-2 shows the summary of the results of the tests on the 2006 bulk samples for the various ore types.

Table 13-2: 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	-	-	-

13.1.3 SGS Lakefield Program

A Bulk Sample program was undertaken during the summer of 2008. Two thousand tonnes of samples were excavated with a CAT-330 type excavator from the Houston 1 deposit. The excavated material was hauled to the Silver Yard area for crushing and screening. The raw material was screened at approximately 6 mm into two products – a lump product (-50 mm+6 mm) and a sinter fine product (-6 mm). The material excavated from each deposit and the products produced from each deposit were kept separate from the others.

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

Preliminary scrubber tests were performed. 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 13-3 and Table 13-4.

Table 13-3: Calculated Grades from 2008 Bulk Samples (SGS-Lakefield)

Deposit	Houston
Ore Type	Blue Ore
Fe[1]	66.1
SiO_2	2.22
P[1]	0.07
Al_2O_3	0.30
LOI	1.33

[1] Calculated from WRA oxides

Table 13-4: 2008 Bulk Samples Test Results (SGS-Lakefield)

Houston	(Blue Ore)	Assays %					Distribution
		Fe	SiO_2	Al_2O_3	P	LOI	
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

The material collected from the 2008 bulk samples at both Houston and the James deposits was sent to a number of other laboratories for additional test work, including Derrick Corporation for screening tests, Outotec.

13.1.4 Derrick Corporation (2008)

Eight - 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 13-5: Derrick Screen Tests Results

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

13.2 Trench Samples Metallurgical Test Program

Presented in this section is a description of the metallurgical test works done by third party testing facilities on Houston trench samples. In the fourth quarter of 2011, LIM collected bulk trench samples from Houston ore and they were classified as Hanging Wall (HU1), Foot Wall (HU2) and DRO. These samples were sent to the following laboratories for the following designated tests (Table 13-6):

Table 13-6: Testing Facilities That Conducted Metallurgical Tests on the Trench Samples

Laboratory	Type of Test
SGS Mineral Services, Lakefield	Mineralogical (QEMSCAN) Density Separation Test Settling Test
Met-Solve Laboratories, Inc.	Mineralogical Scrubbing Test Settling Test
RPC Science and Engineering	Mineralogical WHIMS Scrubbing Test Jigging Test
MBE Coal Minerals Technology	WHIMS Jigging Test
Outotec (USA)	Density Separation Test
WestTech Engineering Inc.	Settling Test Vacuum Filtration Test

LIM furnished the results and engineering reports of these investigations to DRA, which became the reference for most of the criteria used in the design of the Houston iron beneficiation plant.

13.2.1 Mineralogical Tests and Head Assay

Reports of the laboratories that performed mineralogical testing on the trench samples have indicated that the main iron bearing minerals for all three types are hematite (Fe_2O_3) and goethite (FeO(OH)). Gangue is predominated by quartz (SiO_2), with minor amounts of kaolinite and relatively lower levels of other impurities such as Al_2O_3, MgO, P_2O_5, CaO, etc. RPC noted that the Fe oxides are present as liberated grains, as binary grains of hematite and goethite or as complex particles with quartz. In the silicon deportment analysis done by SGS on all three samples, it is shown that most of the Si exists as quartz, Fe-silicates and micas/clays.

Based on the reported values of three testing facilities, the average head assays of HU1, HU2 and DRO are 63% and, 55.47% and 60.67% Fe, respectively.

Table 13-7: Head Assays of the Trench Samples

Sample	ID	% Fe			
		SGS	Met-Solve	RPC	Ave
Hanging Wall	HU1	63.00	63.30	62.70	63.00
Footwall	HU2	53.70	54.20	58.50	55.47
DSO	DRO	60.30	60.20	61.50	60.67

13.2.2 Physical properties

Determination of the material flow characteristics of the trench samples were mostly done by SGS. The following Table 13-8 summarizes some of the physical characteristics of the samples as reported by SGS and RPC.

Table 13-8: Physical Characteristics of HU1, HU2 and DRO (SGS and RPC)

Sample	SG	Angle of Repose	Bulk Density kg/L	Moisture %H2O		
				SGS	RPC	Ave.
Hanging Wall (HU1)	4.29	37	2.3	7.48	7.41	7.45
Footwall (HU2)		37	2.2	9.11	10.61	9.86
DRO (DRO)		41	2.0	9.61	10.11	9.86

13.2.3 Density Separation Test

Outotec performed a series of tests to determine how well the trench samples would respond to Floatex Density Separator and also to determine what set of conditions will result to highest silica rejection in the final product. Materials of particle size -8mesh (-2.38mm) were screened out from the three samples and were subjected to density separation tests. The parameters that were varied in the study were Floatex "set point" and teeter water. Outotec reported recoveries of 80.8%, 85% and 80.3% for HU1, HU2 and DRO respectively, using the best set of conditions from this set of tests. Generally, highest iron recoveries were achieved at lower "set point" and lower teeter water settings. Outotec noted that in the size fraction tested, for all three samples, iron minerals are insufficiently liberated from silica as indicated by the nearness of the iron recovery to weight recovery. The following is a table (Table 13-9) showing the best recoveries achieved by Outotec on the trench samples, including the set of conditions used.

Table 13-9: Floatex Density Separation Test Results (Outotec)

(Hanging Wall) HU1						
Conditions	Product	Wt%	Fe_2O_3	Fe	SiO_2	Fe Rec
Test 1	Feed	100	75.5	52.85	22.0	100.0
Set Point 40	O/F	20	80.3	56.21	16.9	19.2
GPM 1.0	U/F	80	84.4	58.08	13.6	80.8

(Footwall)HU2						
Conditions	Product	Wt%	Fe_2O_3	Fe	SiO_2	Fe Rec
Test 1	Feed	100.0	61.9	43.33	27.7	100.0
Set Point 40	O/F	15.8	64.6	45.22	21.4	15.0
GPM 1.0	U/F	84.2	68.9	48.23	22.9	85.0

DRO						
Conditions	Product	Wt%	Fe_2O_3	Fe	SiO_2	Fe Rec
Test 1	Feed	100.0	77.7	54.39	13.7	100.0
Set Point 85	O/F	23.9	65.6	45.92	21.9	19.7
GPM 1.5	U/F	76.1	84.0	58.8	6.0	80.3

As part of the density separation studies on the trench samples, MBE carried out jigging tests on the lump ore (+8mm-30mm) and sinter fines (+1mm-30mm) portion of HU1 and HU2 using a pilot scale BATAC 0510. In their report, MBE described some basic features of the BATAC jig including the parameters that were varied in the tests such as the number of strokes per minute, the stroke diagram, working air pressure and the amount of hutch water. Significant amount of ultra-fine materials (-15micron) was observed on surfaces of the lump and sinter fines BATAC feed for both ore types. Further investigation on the chemical characteristics of the ultra-fines fraction revealed that an increase of 1-3%Fe could be attained on the feed material grade just by separating this size range from the coarse fractions. Excluding the positive effect of ultra-fines removal, a set of performance curves was generated by MBE on the jigging performance of the BATAC jig for HU1 and HU2. From these curves, it can be concluded that the beneficiation of the HU1 lump ore and sinter fines using BATAC is impractical because both fractions are already marketable in grade and that only minimal upgrading is achieved in jigging these fractions. The performance curves of HU2 however show that the jigging the lump ore and sinter fines portion yields 98% and 51% of concentrate at 60% Fe grade.

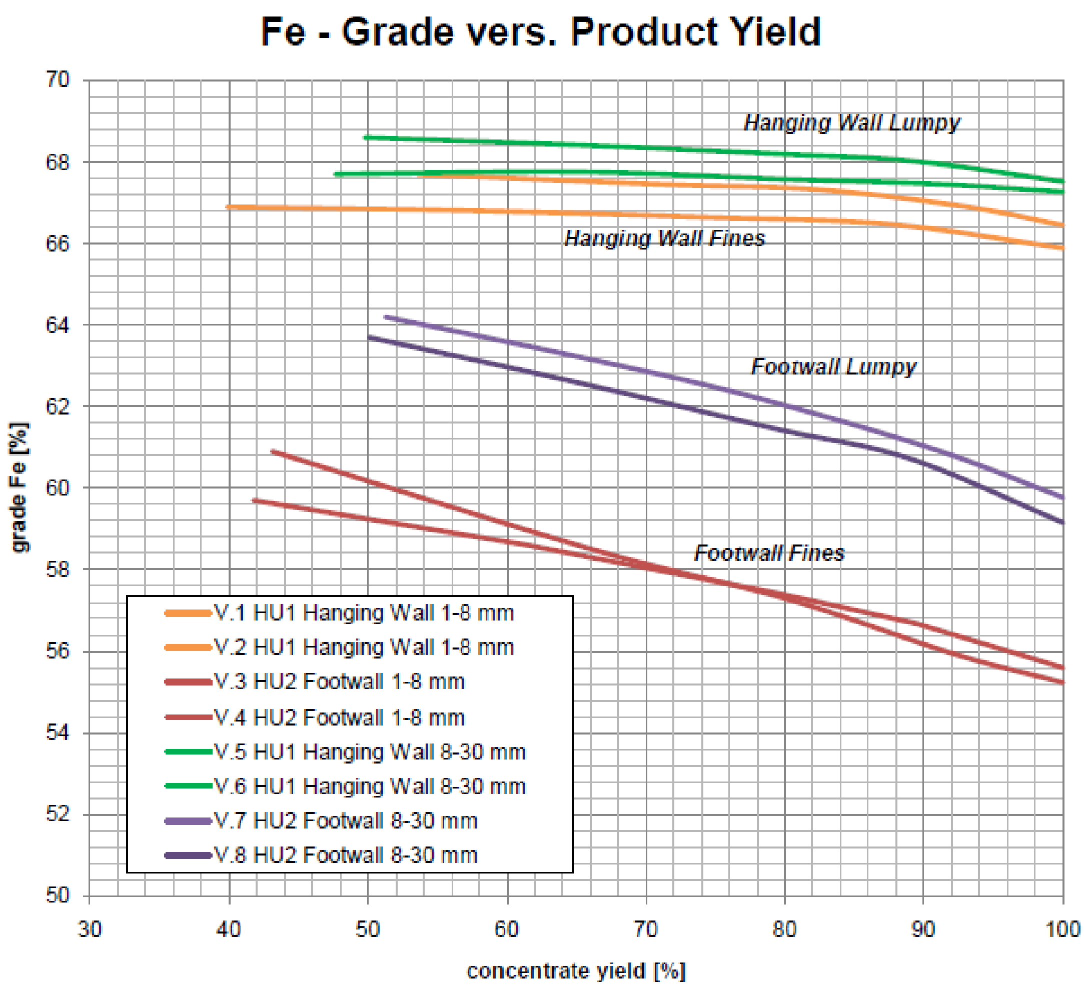


Figure 13-1: BATAC Performance Curve on the Trench Samples (MBE)

LIM also instructed RPC to conduct jigging tests on the scrubbed lump ore (+8mm-25mm) and the sinter fines (+1mm -8mm) products of HU1, HU2 and DRO. Mineralogical tests done by RPC revealed, however, that the scrubbed products for testing contain relatively high percentage of hematite and low amount of gangue in the trench samples. With this, RPC thought of initially doing a heavy media separation (HMS) tests to determine the theoretical ratio of float and sink minerals, which were agreed upon by LIM. The HMS results utilizing tetrabromoethane (SG 2.97) and Methylene iodide (SG 3.31) as media, have resulted to very low amount of "float" materials for the size fractions tested for all ore types. RPC concluded that most of the silica or gangue materials had already been removed from the lump ore and sinter fines in the scrubbing test thus leaving them with very small amount of low SG impurities. Gravity concentration methods including jigging are therefore impractical for the coarse fractions of the trench samples.

13.3 Scrubber Test

Due to the expected high amount of mica/clay on the Houston deposit, having a material scrubbing stage could be very critical and advantageous in the beneficiation process. LIM recognized the need to investigate the importance of a pre-washing step and have instructed Met-Solve and RPC to conduct scrubber tests on the trench samples.

13.3.1 Process Parameter

Scrubber tests conducted by Met-Solve were geared towards defining the basic process parameters for the pre-washing stage specifically the determination of the optimum rate of agglomerate disintegration as a function of time and the pulp density, as well as defining the level at which the rocks can be freed from fines and clay adherence. Scrubber tests were performed at 50%, 60% and 65% solids on each of the iron ore samples (HU1, HU2 and DRO). Thirty seconds scrubbing period intervals were planned with a visual inspection to be done after the end of each period to assess the need to extend the washing process. Based on the report of Met-Solve, "near complete scrubbing" was achieved on the first period for all the trench samples even at the highest pulp density tested (65% solids).

Table 13-10: Summary of Scrubber Test Results (Met-Solve)

Sample	Pulp Density	Scrub Time	Result	Remaining Agglomerate
	(% solids)	(sec)		
Hanging Wall (HU1)	50	30	Complete Scrubbing	One (2.7g)
Hanging Wall (HU1)	60	30	Complete Scrubbing	None
Hanging Wall(HU1)	65	30	Complete Scrubbing	None
Footwall (HU2)	50	30	Complete Scrubbing	None
Footwall (HU2)	60	30	Complete Scrubbing	None
Footwall (HU2)	65	30	Complete Scrubbing	None
DRO	50	30	Complete Scrubbing	None
DRO	60	30	Complete Scrubbing	None
DRO	65	30	Complete Scrubbing	None

Met-Solve also conducted size analysis on the scrubbed products and has determined significant amounts of -37 microns material in the HU1, HU2 and DRO at 16.30%, 9.71% and 19.35% by weight, respectively.

Table 13-11: Size Analysis of Scrubbed Products (Met-Solve)

Sieve Size		Weight Distribution %		
US Mesh	Micron	Footwall (HU1)	Hanging Wall (HU2)	DRO
	32,000	22.68	5.60	3.14
	19,000	12.16	12.49	6.80
	13,200	6.78	9.14	6.32
	9,520	6.61	9.73	8.13
3	6,700	4.78	7.24	8.09
5	4,000	5.14	8.37	10.41
6	3,350	1.46	2.14	2.82
7	2,800	1.08	2.21	3.27
8	2,360	0.85	2.50	3.47
10	2,000	1.06	1.08	1.78
12	1,700	0.48	1.03	1.67
14	1,400	0.67	1.32	2.11
16	1,180	0.52	1.11	1.74
20	850	0.62	1.45	2.18
30	600	1.91	2.20	1.32
40	425	2.71	3.60	2.56
50	300	2.37	3.33	2.58
70	212	2.01	2.97	2.18
100	150	2.10	3.01	2.01
140	106	1.92	2.64	2.11
200	75	2.08	2.54	1.72
270	53	2.05	2.36	2.18
400	37	1.47	2.23	2.07
Undersize	-37	16.30	9.71	19.35

13.3.2 Fe Distribution Relative to Size Fraction

Further to the study conducted by Met-Solve, RPC also did scrubber tests on the trench samples and performed whole rock chemical analysis of the scrubber products. After carrying out material scrubbing, the washed product was screened using sieve sizes 25mm, 8mm and 1mm thereby producing four products - bulk lumps (+25mm), lump ore (+8mm-25mm), sinter fines (+1mm - 8mm), and fines (-1mm). The weight of each fraction was determined and sent for assaying. The summary of the significant information from the chemical analysis is shown in Table 13-12.

Table 13-12: Scrubber Product Rock Chemical Analysis (RPC)

Sample	Fraction	Mass (%)	%Fe	$\%SiO_2$
Hanging Wall (HU1)	+25	14.2	67.06	2.88
	+8mm, -25mm	27.3	66.49	3.19
	+1mm ,-8mm	24.1	66.06	2.70
	-1mm	34.3	52.72	21.81
Footwall (HU2)	+25	19.5	63.89	5.91
	+8mm, -25mm	29.1	62.91	5.40
	+1mm ,-8mm	19.5	60.99	5.44
	-1mm	31.9	48.21	20.92
DRO	+25	7.1	64.83	1.28
	+8mm, -25mm	26.4	63.91	1.79
	+1mm ,-8mm	32.1	61.58	4.18
	-1mm	34.4	55.95	10.86

RPC reported that for all the trench samples, the fractions of scrubbed product that is larger than 1mm, which includes bulk lump, lump ore and sinter fines, contain more than 60% iron and less than 5% silica and are therefore could be generally sold directly to smelters. The significant weight fraction and the high silica content of the fraction less than 1mm has dictated the need of a concentration stage to upgrade its %Fe.

13.4 Magnetic Separation Test

MBE and RPC tested the possibility of upgrading the -1mm and +0.425mm size fraction of the trench samples by Wet High Intensity Magnetic Separation (WHIMS). In order to come up with sufficient amount of material for testing, the two laboratories crushed and screened the as-received trench samples to achieve the target sizes. Process parameters affecting WHIMS separation efficiency were varied to determine the most effective operating conditions.

MBE tested HU1 and HU2 samples using a Jones P40 WHIM, which was operated at 2.5mm gap groove plate setting and with wash and scouring water flow rate equivalent to 115m3/h (@6 bar) and 58m3/h (@3 bar) for a Jones DP317 that is 240times larger in capacity than P40 model. Magnetic field intensity and feed solid concentration were the two test parameters varied. The test were conducted at magnetic field intensities of 8,000, 9,000 and 11,000 Gauss and at solid concentrations of 500 and 550g/L. WHIMS test results show that the -1mm portion of the trench samples was upgradable by a concentration ratio of 1.3 using the optimum test conditions for these sets of test. The table below (Table 13-13) shows that highest Fe recoveries for combined mags and "mid" on HU1 and HU2 were achieved using magnetic field setting of 11,000 Gauss at 500g/L feed solid concentration for both samples. Significant silica rejection in the concentrate is observed on all parameter combinations.

Table 13-13: WHIMS Feed (MBE)

Sample	%Fe	Al_2O_3	$\%SiO_2$	Mn
Hanging Wall (HU1)	51.5	0.58	25.0	0.19
Footwall (HU2)	44.0	3.16	29.4	0.41

Table 13-14: Hanging Wall (HU1) WHIMS Test Results (MBE)

Gauss	500g/L				550g/L			
	%Fe	Fe Rec	$\%SiO_2$	SiO_2 Rec	%Fe	Fe Rec	$\%SiO_2$	SiO_2 Rec
9000	64.17	29.23	6.92	6.67	63.69	30.61	7.72	7.89
10000	64.49	32.26	6.84	7.13	64.17	34.68	7.22	7.87
11000	64.20	48.04	6.49	9.88	64.20	43.93	6.78	8.90

Table 13-15: Foot Wall (HU2) WHIMS test results (MBE)

Gauss	500g/L				550g/L			
	%Fe	Fe Rec	$\%SiO_2$	SiO_2 Rec	%Fe	Fe Rec	$\%SiO_2$	SiO_2 Rec
9000	58.53	19.37	11.67	07.67	57.44	25.98	12.30	11.33
10000	57.92	24.98	11.77	10.74	57.96	28.42	11.70	12.20
11000	58.3	34.25	11.08	12.29	58.04	30.70	11.48	12.25

RPC conducted WHIMS tests on the three as-received samples of HU1, HU2 and DRO as well as on scrubber lump ore and sinter fines products that were crushed to pass 0.425mm screen. The WHIMS magnetic (mags) and non-magnetic (non-mags) products produced on all tests were sent for chemical analysis. RPC came up with a conclusion that WHIMS mags product generally has higher iron content compared to non-mags on all samples tested. MBE concluded in their test program that the fine fractions (-1mm+0.015mm) can upgrade easily to a high grade product of Fe 64%+, but at an unfavorable mass recovery. MBE suggested that introducing a secondary magnetic separation stage will considerably improve the mass recovery to at least 70% and proposed further testing to confirm this assumption.

For the purposes of the flow sheet and material balance calculations LIM assumed that the 70% mass recovery on the final WHIMS product can be achieved and used this assumption in the calculations of the material balance

13.5 Settling Test

Met-Solve screened out the -150micron portion of the product from the 60% scrubber tests to be subjected to settling tests. Because LIM's instruction was not to use flocculent in the tests, the trench samples were then examined at low (27-33%) and high (44-51%) feed pulp densities. Settling curves of the HU2 and DRO at the two levels of pulp densities were shown by Met-Solve in the table below. Though the study concluded that all three samples settled fairly quickly reaching the inflection points in less than 2 hours, a settling curve was not plotted for HU1 because there was no noticeable interface from the settling material at the top of the cylinder. Met-Solve has reported that majority of the HU2 feed material settled very fast but its supernatant was very cloudy and never cleared up even after a month of settling period. The supernatant of HU2 was then found to contain 0.013% solids.

Table 13-16: Settling Test Results (Met-Solve)

	Low Pulp Density (27-33%)			High Pulp Density (44-51%)		
	HU2	HU1	DRO	HU2	HU1	DRO
Settling Distance						
10 min	15	NA	9	7	NA	1
30 min	45	NA	27	30	NA	3
60 min	69	82	44	45	77	14
2 hrs.	73	82	61	57	75	31
5 hrs.	79	82	68	62	75	44
Time for						
25% Settled (minutes)	17	NA	29	37	NA	92
50% Settled (minutes)	34	NA	56	67	NA	640
Est. Inflection Point (min)	50	30	70	76	30	115
Supernatant Clarity	Cloudy	Very Cloudy	Clear	Semi-Clear	Very Cloudy	Semi-Clear
Limiting % Settled	79	89	74	63	74	58
Final % Pulp Density	66	79	66	72	76	71

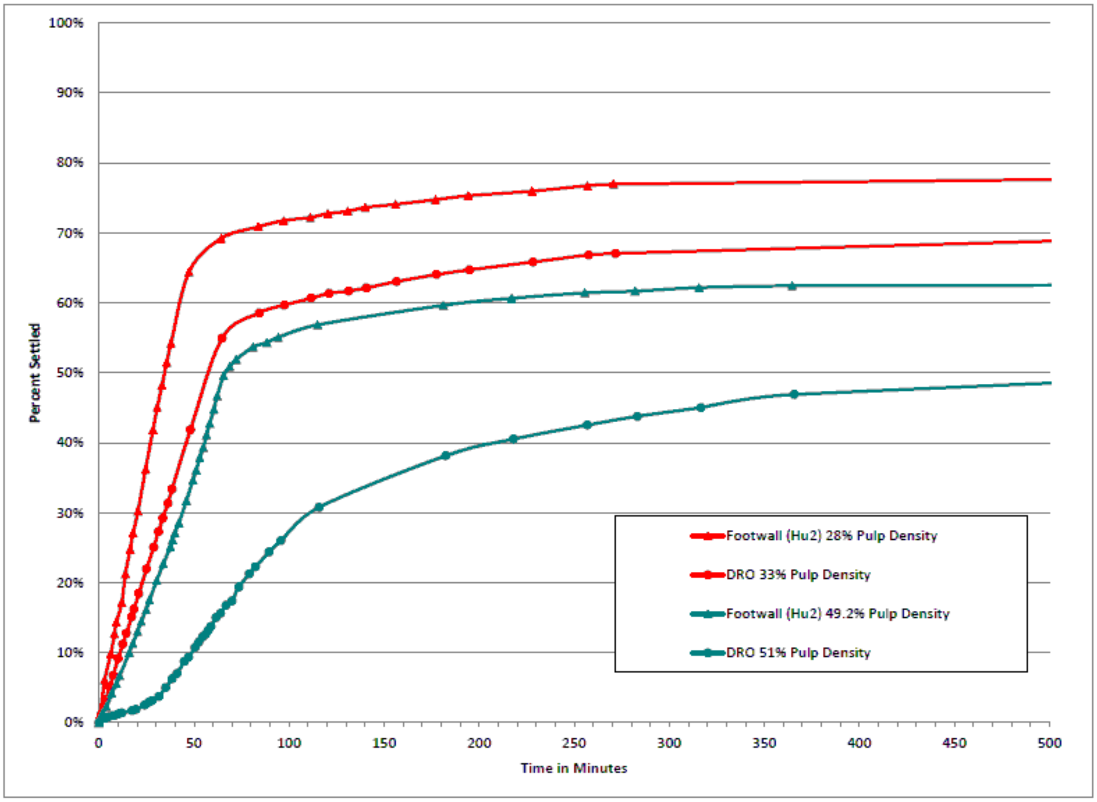


Figure 13-2: Settling Curve of HU1 and DRO (Met-Solve)

Though the use of flocculent was not favoured by LIM, WesTech also conducted sedimentation tests with the addition of flocculants to determine its effect on the settling rates. Different flocculants were utilized and assessed on the trench samples in terms of required dosage, flocculent structure, settling characteristics, effluent clarity, mixing requirements. WesTech concluded that at 35wt% feed, all the samples settled well but took a longer period of time with no polymer addition, compared to when polymer was used in the sedimentation process. WesTech also determined that 17g/t of Ciba Magnafloc 10 anionic polymer at an internal feed dilution of 18wt% achieved the best sedimentation performance on the trench samples.

Based on WesTech test results an oversized thickener was assumed for the purposes of the Capital cost estimating. In addition LIM will be ready to introduce the use of a polymer if required. The potential usage of a polymer was not included in estimating of the operating costs as the dosages and the costs for it are considered negligible.

Table 13-17: Settling Test Results (Westech)

Sample Name	DRO	Footwall	Hanging Wall	DRO
Feed Solids Concentration-wt%	35	35	35	35
Polymer Dose (g/tonne)	-	-	-	25.6
Supernatant TSS-mg/L (15min)	10	38.3	118	25
Full-Scale Rise Rate-gpm/ft2	0.07	0.06	0.12	0.21
Full-Scale Unit Area, ft/stpd	1.75	1.25	0.7	0.5
Full Scale Underflow Solids wt%	70	70	70	70

In the draft result summary of the no-flocculent settling tests conducted by SGS on the -150micron fraction of the Footwall (HU2) sample, it was discussed that the overflow was visually clear for most of the tests with TSS values between 0-15ppm. The predicted underflow density of 70% solids, however, was not achieved even after 95 min of thickening time but only went within the range of 58wt% at the best conditions produced.

13.6 Filtration Test

A series of vacuum filtration tests were conducted by WesTech on the thickened DRO samples with an initial pulp density of 71wt% solids. Regardless whether flocculent was used in the thickening of the feed, the moisture content of the filter cake was in the range of 15-16%. The total suspended solids (TSS), however is relatively high for the vacuum filtration of the thickened DRO with polymer treatment at 1,850mg/L compared to when no polymer was used (1,600mg/L).

Table 13-18: Vacuum Filtration Test Results (Westech)

Sample ~71wt% Feed	Thickened No Polymer	Thickened With Polymer
Polymer Dose (lbs/ton)	0	0
Vacuum-in HG	20	20
Cake Thick - in	0.3	0.3
Form Time -min	1.88	0.9
Dry - min.	2.12	1.02
Cycle Tim - min	4.7	2.26
Filtration Rate - lbs/hr-ft2	56.6	112.6
Cake Solids - wt%	~85%	~84%
Cake moisture - wt%	~15%	~16%
Filtrate TSS - mg/L	1600	1,850

13.7 Conclusions and Future Works

The results of the metallurgical tests done on Houston bulk trench samples have indicated the amenability of the deposit to be processed using conventional iron ore processing methods.
The +1mm size fraction of HU1, HU2 and DRO is generally of marketable grade hence the objective of the concentration process for Houston deposit will be mainly to upgrade the -1mm portion using either wet high intensity magnetic separation (WHIMS) or a hydrosizer. The settling test results on the -1mm products of the trench samples generally have shown good settling rates even without flocculent addition therefore implying the use of conventional thickener. The vacuum filtration of the -300micron is one of the areas that need to be investigated further though initial tests have produced 15-16% cake moisture. DRA recommends exploring other filtration technologies such as plate filters.

Confirmatory tests were completed in the fourth quarter of 2012 involving drill core samples to establish more confidence to the beneficiation process on a wider plant feed variation and also to further refine the fine fraction processing of the Houston deposit. The confirmatory test program will be composed of similar set of tests as the bulk trench samples and will also include a deeper investigation on fines and ultra-fines dewatering (e.g. sedimentation and filtration) methods. It is expected that the output of the upcoming tests will fine tune the preliminary flow sheet established by DRA and LIM.

Table 13-19: Calculated Grades from 2008 Bulk Samples (SGS-Lakefield)

Deposit	Houston
Ore Type	Blue Ore
Fe[1]	66.1
SiO_2	2.22
P[1]	0.07
Al_2O_3	0.30
LOI	1.33

[1] Calculated from WRA oxides

Table 13-20: 2008 Bulk Samples Test Results (SGS-Lakefield)

Houston	(Blue Ore)	Assays %					Distribution
		Fe	SiO_2	Al_2O_3	P	LOI	
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

The material collected from the 2008 bulk samples at both Houston and the James deposits was sent to a number of other laboratories for additional test work, including Derrick Corporation for screening tests, Outotec.

14. Mineral Resource Estimation

14.1 Introduction

This section reports the results of the mineral resource estimate for the Houston and Malcolm 1 mineral deposits based on new analytical data sampled from the drilling completed since the last mineral resource estimate of Houston , effective March, 6th, 2012.

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, including 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 present mineral resources were estimated and are disclosed according to the IOC Classification of *Ore* described in Table 14-1.

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 which was calculated using the formula below.

SG (in situ) = [(0.0371 * Fe) + 1.877] * 0.85

The *in-situ* specific gravity (or density) was defined using the equation stated hereafter: ((Fe)*0.0371) +1.877)*0.85. This equation was updated using the latest core density measurements done during the 2012 diamond drilling campaign. The data used was restricted to valid Houston and Malcolm 1 area mineralized core. According to and in relation to findings on the *in-situ* density on James deposit from reconciliation, it was decided to apply 15% porosity (0.85 in the equation) for added security.

14.3 Houston Property

14.3.1 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.

A total of 47 Diamond drill holes (LIM), 65 test pits, 237 RC (86 IOC & 151 LIM) drill holes and 9153 assays (all) were used for the resource estimation. The database cut-off date is March 3rd, 2013.

Table 14-2: Drill holes summary

Description	All		LIM		IOC	
Type	Count	Length (m)	Count	Length (m)	Count	Length (m)
DD	**47**	**4751.65**	47	4751.65	-	-
PIT	**64**	**200.07**	-	-	64	200.07
RC	**237**	**14842.93**	151	10333.4	86	4509.53
TR	**180**	**7835.99**	12	1029.57	168	6806.42

14.3.2 Geological Interpretation and Modeling

This information was provided by LIM. The geological interpretation of the Houston deposit was entirely constructed by LIM according to available data of the area. The mineral resource estimate was completed using a 3D modeling and block model interpolation methodology. The Houston Deposit 3D solid was created form the topographic survey and interpreted bottom contact from RC. The 2 solids (The main one and the small one to the SE) were validated by SGS Geostat.

The Houston Deposit geological 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 IOC 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. The geological interpretation cut-off date is April 4th, 2013.

The geological modeling of Houston was divided in 3 area, Houston 1, Houston 2 (2N and 2S) and Houston 3 was done using 130 vertical cross sections with 3 different directions of 314.4°, spaced approximately 30 m apart (100 feet). Fifty two (52) available historical paper cross sections from IOC were digitized and used for the geological interpretation and modeling. The original geological and ore interpretations were updated with information obtained during recent exploration programs. The solids were created from the sectional wireframes combining geological and mineralization interpretation.

The study area report covers an extension of 4.7 km long x 450 m wide and 160 m vertical. Further infill drilling will be required to better define mineralization in some areas within the ore body subject of this report.

14.3.3 Block Modeling

The Houston 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.

The block model covers a maximum strike length of 3.5 km, a maximum of 150 m wide and a maximum vertical depth of 150 m below surface. The block model was defined by block sizes of 5x5x5 m with an orientation of 314.4°. The total of blocks is 108,998. The block centers are within the DSO envelope interpreted by LIM geologists. The parameters of the Block Model were done using the following parameters. The interpolation was done by Ordinary Kriging. A set of 5,235 (3m) composites were used all within the Houston mineralized solid. No capping was used. A variogram according to the composites was built for the elements Fe, Mn, and P, as well as SiO_2 and Al2O3.

Table 14-3: Parameters of Block Model

Number of Blocks	
Columns	201
Rows	1374
Levels	47
Origin and Orientation	
X	652400
Y	6062550
Z	630
Orientation* (Counter clockwise)	45.6°
Block Size (m)	
Columns Size	5
Rows Size	5
Levels Size	5

* Orientation Origin Based on Block Centroid

14.3.4 Composites Used for Estimation

The Composites were built from assay intervals along sub-horizontal trenches and vertical RC holes. Spacing between holes and trenches varies along the 3.5km strike length but at the best, we have trenches and RC holes on cross-sections at 30m distance along the N314.4 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 topographical surface) and they need have a minimum length of 1.5 m. Altogether, there are 5,235 composites with at least a %Fe and a $\%SiO_2$ grades within the DSO envelope.
Table 14-4Table 14-4 summarises the statistics of the composite data. Figure 14-1 shows the histogram of the composites.

Table 14-4: Statistics of Composite Data Used in the Interpolation of Resource Blocks

Statistics	*Fe*	*P*	*MN*	*SIO_2*	*AL_2O_3*
Mean	54.01	0.06	1.00	17.91	0.92
Standard Error	0.15	0.0005	0.03	0.20	0.02
Median	56.02	0.06	0.23	14.21	0.47
Standard Deviation	10.61	0.04	2.01	14.15	1.59
Sample Variance	112.49	0.00	4.03	200.34	2.53
Kurtosis	1.40	11.30	21.96	0.73	41.35
Skewness	-1.03	2.38	4.10	0.97	5.54
Range	67.39	0.46	22.72	88.05	22.21
Minimum	2.00	0.01	0	0.20	0.01
Maximum	69.39	0.47	22.72	88.25	22.22
Count	5235	5235	5211	5235	5011

14.3.5 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 14-4.Table 14-4 Histograms are on Figure 14-1. Some correlation plots appear on Figure 14-2.

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 14-2). Distribution of alumina and manganese are heavily skewed with a long tail of high values. By comparison, the skewness of phosphorus is moderate. Besides that of %Fe and %SiO_2, all other correlations between variables are weak.

14.3.6 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 14-3).

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 14-3)
- vertical holes only with the same short 3m lag (in light green on Figure 14-3)
- horizontal trenches only with the same 3m lag (in dark green on Figure 14-3)

- average N134.4 horizontal strike with a lag of 35m corresponding to the spacing between sections (in red on Figure 14-3: Variogram of Houston 3m-composites
- average dip of 60° to the N44.4 with a lag of 45m between holes and trenches on sections (in blue on Figure 14-3)
- average cross dip and strike with a dip of 30° to the N234 with the same lag of 45m between holes and trenches on sections (in brown on Figure 14-3)

The correlograms of %Fe show (1) a moderate nugget effect of 15% (2) ranges between 50 and 100m (3) the same long range of about 100m in both dip and strike (the two experimental correlograms are at the same place) (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 %SiO_2 in composites, the correlograms of %SiO_2 are basically the same as those of %Fe (Figure 14-2).

The correlograms of two minor elements (%Al_2O_3, %Mn) show a higher relative nugget effect of 25%. For %Al_2O_3, the anisotropy pattern looks the same as with %Fe and %SiO_2 (best in strike and dip) but ranges are shorter (30 m for short and 60 m for long). For %Mn, the range along strike is longer (90 m) than the range along dip (60 m). For %P, the nugget effect is around 20% and range along strike looks even longer (135 m) while that along dip is about 75m and the short range is 45m.

All experimental variograms are modelled with the sum of a nugget effect and an exponential function.

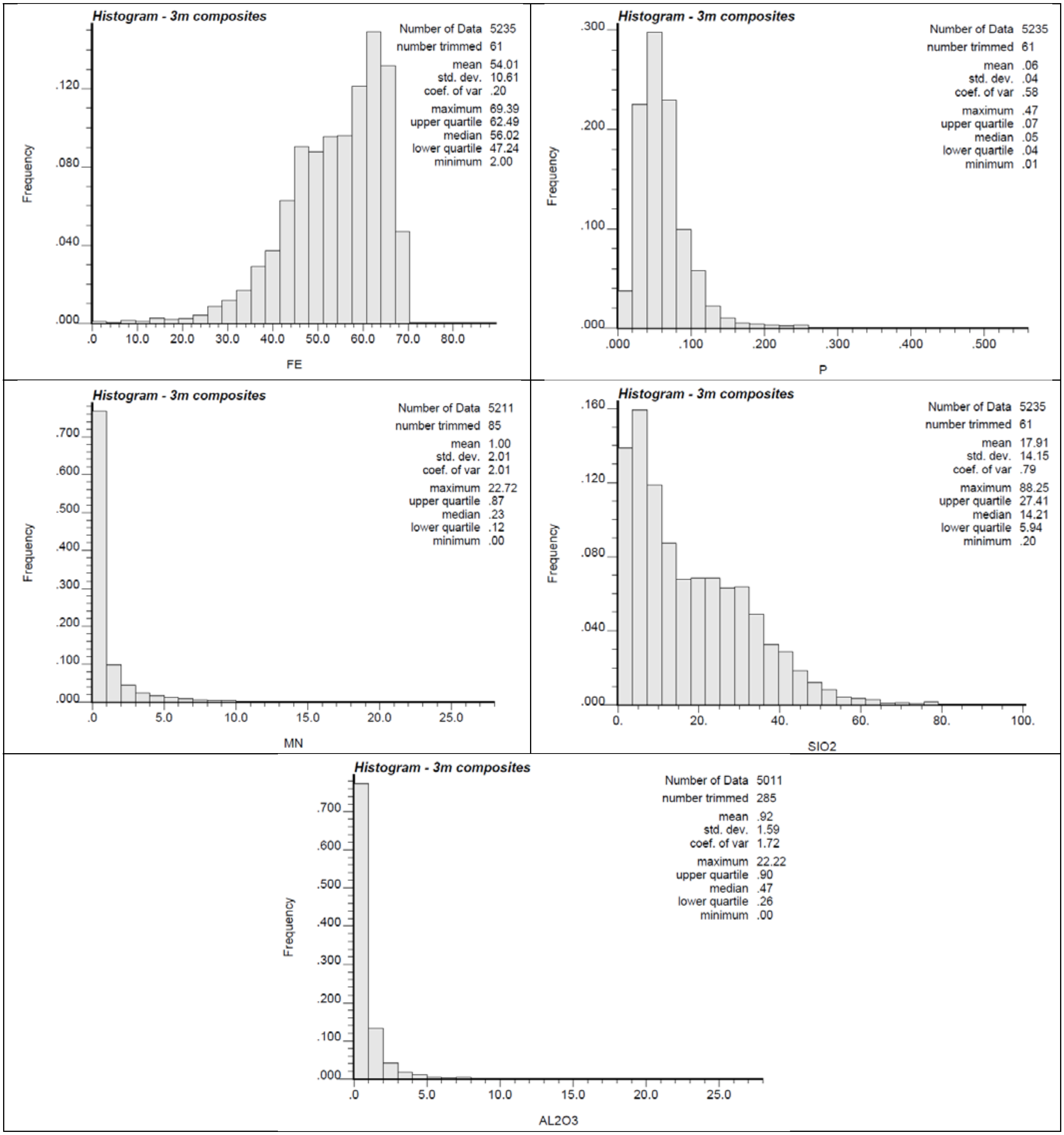


Figure 14-1: Histograms of DSO Composite Data

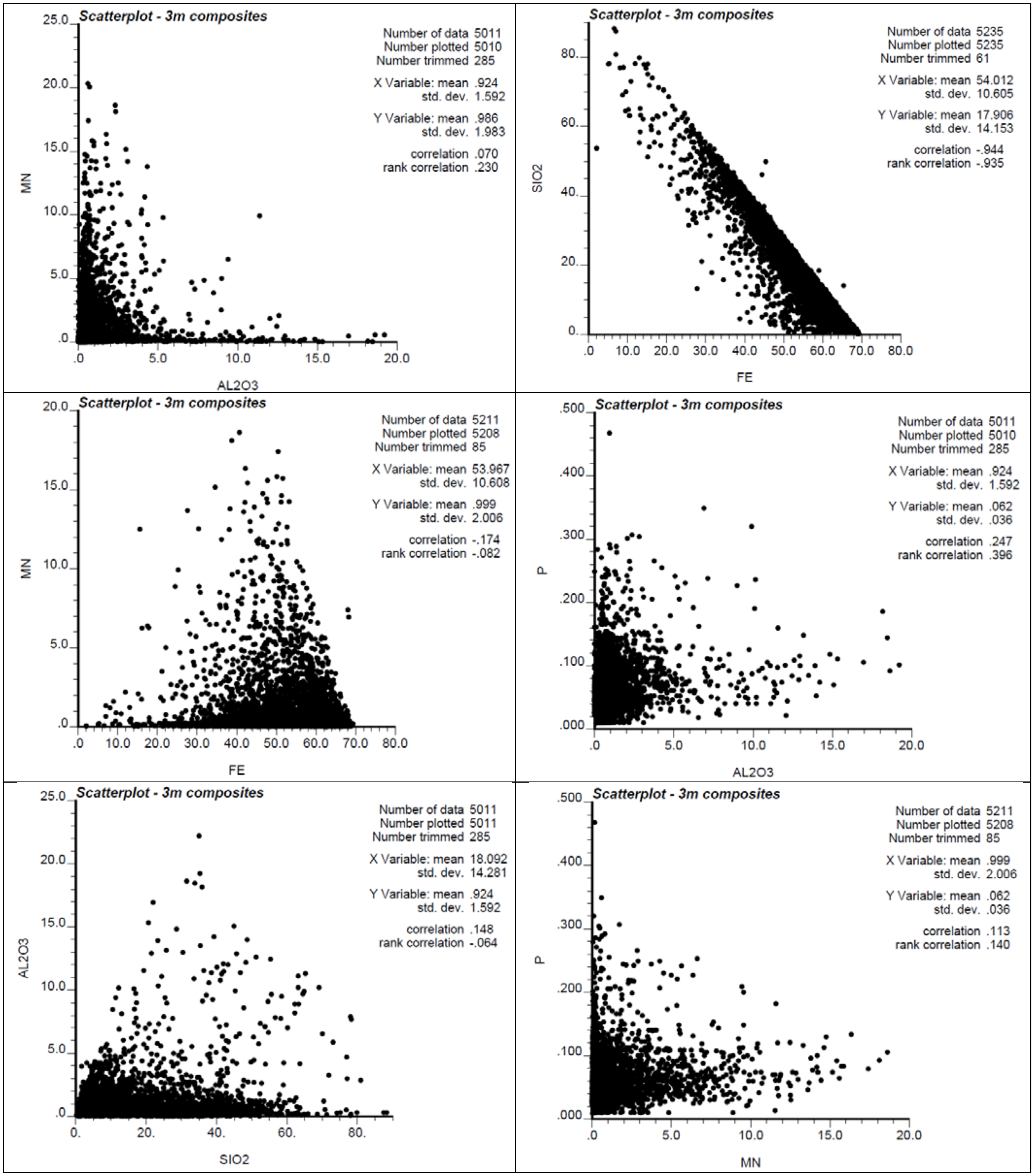


Figure 14-2: Some Correlation Plots of DSO Composite Grade Data (2012)

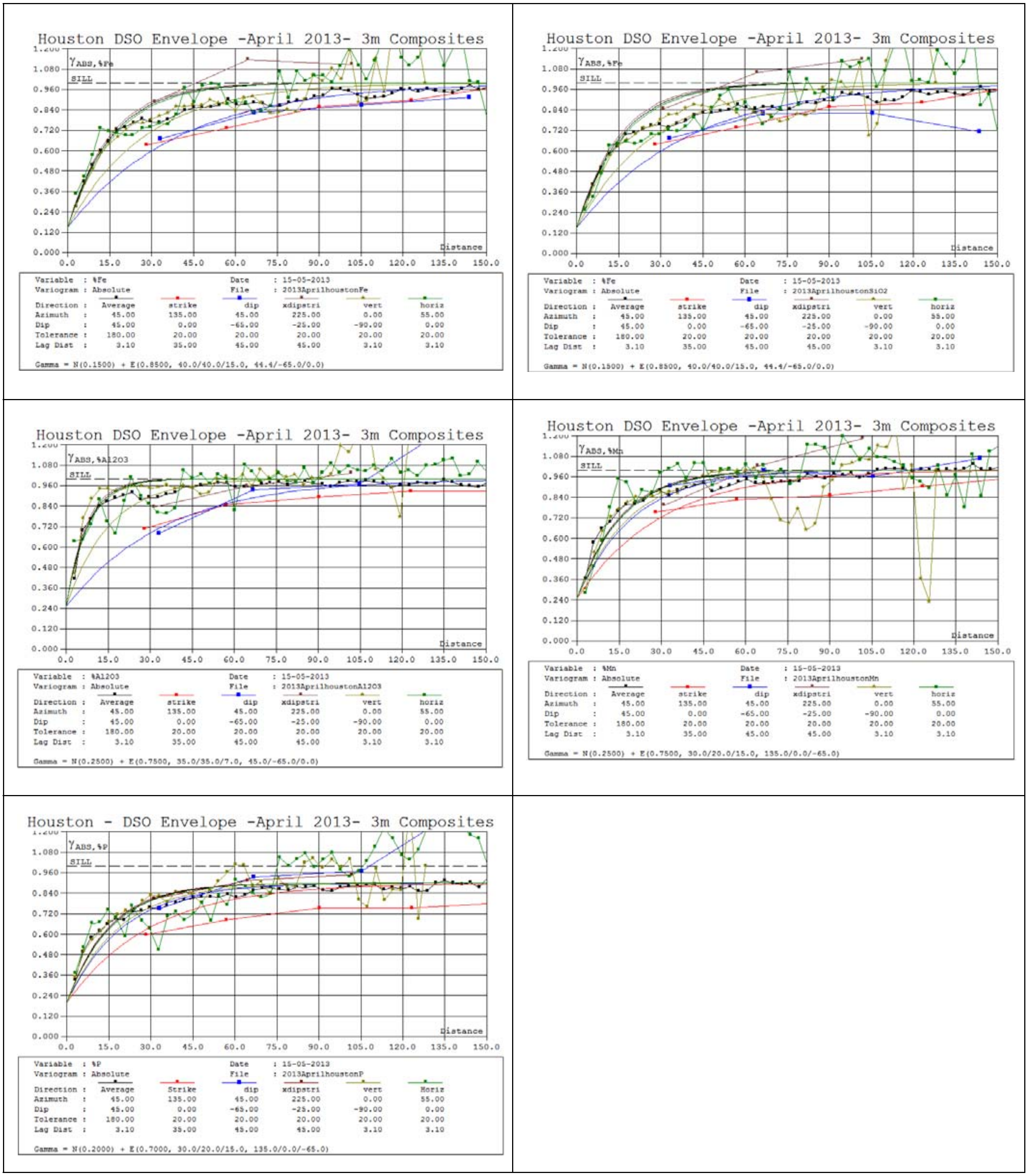


Figure 14-3: Variogram of Houston 3m-composites

14.3.7 Block grades interpolation

The %Fe, %SiO_2, %Al_2O_3, %Mn and %P grades of each of the 108,998 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. The grade interpolation for %Fe, %SiO_2, %P and %Mn used the same variogram model for the Houston 1, 2 and 3. The whole of the Houston property was interpolated by using a single block model with a single set of composites. A combined variographic analysis was used to establish the formulas for the kriging of the grades within the blocks. However, due to the slight curvature of the mineralized structure, we elected to use three separate search ellipses that better respect the geological trends. The restriction Solids were Houston 2, Houston 1 and Houston 3 (see Figure 14-8).

The interpolation was done in successive runs (Passes) with minimum search conditions (ellipsoids) relaxed from one run to the next until all blocks are interpolated. Each Houston area blocks (1, 2, and 3) were estimated separately Ellipsoids were created for each deposit area: Houston 1, Houston 2 and Houston 3 using the following parameters of Table 14-5:

Table 14-5: Houston Block Model Search Ellipse Summary

Area	Pass	Azimuth	Dip	X (m)	Y (m)	Z (m)
Houston 1	1	134.4	-65	50	50	25
	2	134.4	-65	100	100	50
	3	134.4	-65	200	200	100
Houston 2 (2N and 2S)	1	137	-65	50	50	25
	2	137	-65	100	100	50
	3	137	-65	200	200	100
Houston 3	1	140	-78	50	50	25
	2	140	-78	100	100	50
	3	140	-78	200	200	100

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 summarized on Table 14-6.

Table 14-6: Houston block model statistics obtained after estimation

Statistics	*Fe*	*P*	*MN*	*SIO_2*	*AL_2O_3*
Mean	54.33	0.06	1.00	17.62	0.83
Standard Error	0.02	0.0001	0.004	0.03	0.002
Median	55.07	0.06	0.55	16.14	0.63
Standard Deviation	6.77	0.02	1.19	9.36	0.77
Sample Variance	45.84	0.00	1.42	87.57	0.59
Kurtosis	0.15	3.41	8.86	-0.08	25.96
Skewness	-0.58	1.34	2.61	0.65	3.81
Range	57.75	0.25	12.87	70.00	14.86
Minimum	10.74	0.01	0.02	1.16	0.03
Maximum	68.49	0.26	12.89	71.16	14.89
Count	108998	108998	108998	108998	108998

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 (see Table 14-7).

Table 14-7: Houston Block Statistics per Estimation Pass

Pass	Blocks (count)	Blocks (%)
Pass1	84873	77.9
Pass2	21208	19.4
Pass3	2917	2.7
Total	108998	100

14.3.8 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.

14.3.9 Resources Classification

The current classified resources of the Houston Deposit reported below are compliant with standards as outlined in the National Instrument 43-101. SGS used the kriging variance as a factor of classification. The kriging variance is a statistical method of describing the quality of the estimation on each block and ranges 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. The author also discovered that almost the same classification could be done according to the average distances of composites used for the block Fe estimation. Distances less than 50 m could easily be considered in the measured category.

Blocks having a kriging variance from 0 to 0.7 were taken into account for the measured category solid construction. Blocks having a kriging variance from 0.7 to 0.8 were taken into account for the indicated category solid construction. Blocks having a kriging variance from 0.8 and up were taken into account for the indicated category selection (Figure 14-9, Figure 14-10). The drilling grid of 30m and the presence of trenches on most of the cross sections helped acknowledge the kriging variance and classification boundary as a preferred tool for classification.

14.3.10 Houston Mineral Resources Estimation Conclusion

The current resource estimates for the Houston deposit are of 31.3 million tonnes including LMN, HMN and $HiSiO_2$ at a grade of 57.55% Fe in the Measured and Indicated categories. 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 Houston deposit remains open to the northwest and southeast and at depth. The results of the resource estimates for the Houston deposit are shown in Table 14-8. 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 14-8: Houston Deposit 43-101 Compliant Iron Resources

Area	Ore Type	Classification	Tonnage	Fe(%)	P(%)	MN(%)	SiO_2(%)	Al_2O_3(%)
Houston	Fe Ore	Measured (M)	24,385,000	57.90	0.064	0.77	13.10	0.75
		Indicated(I)	5,736,000	56.84	0.061	0.76	14.83	0.69
		Total M+I	**30,121,000**	**57.70**	**0.063**	**0.77**	**13.43**	**0.74**
		Inferred	2,707,000	57.47	0.065	0.85	13.69	0.74
	Mn Ore	Measured (M)	1,099,000	53.66	0.077	5.17	10.13	1.17
		Indicated(I)	106,000	53.39	0.079	4.64	11.74	0.94
		Total M+I	**1,205,000**	**53.64**	**0.077**	**5.12**	**10.27**	**1.15**
		Inferred	455,000	53.42	0.107	4.85	11.21	1.09

Resources are rounded to the nearest 1,000 tonnes.
Houston deposit dated to April 16th, 2013
CIM Definitions were followed for mineral resources
Mineral resources which are not mineral reserves do not have demonstrated economic viability

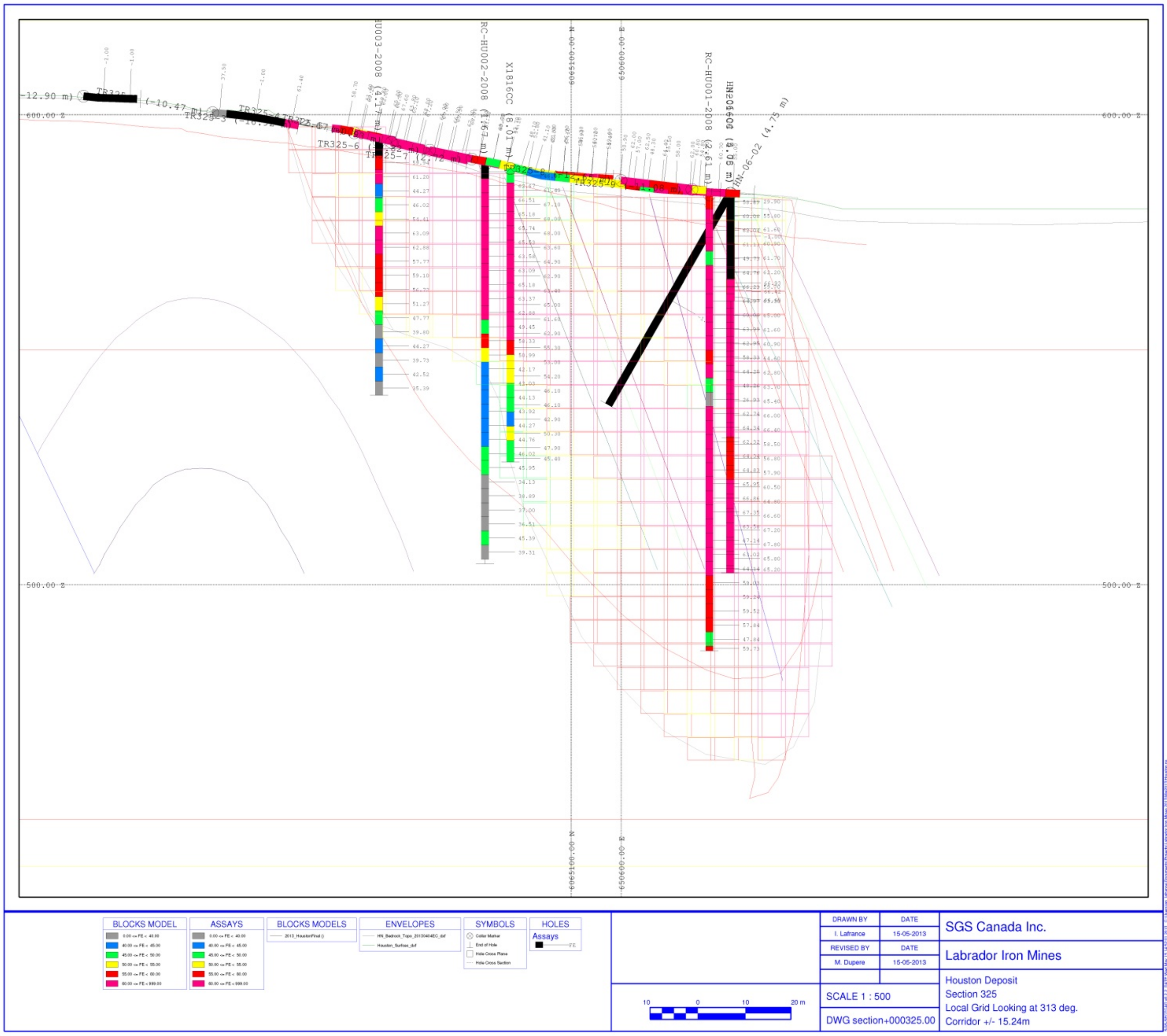


Figure 14-4: Section 325

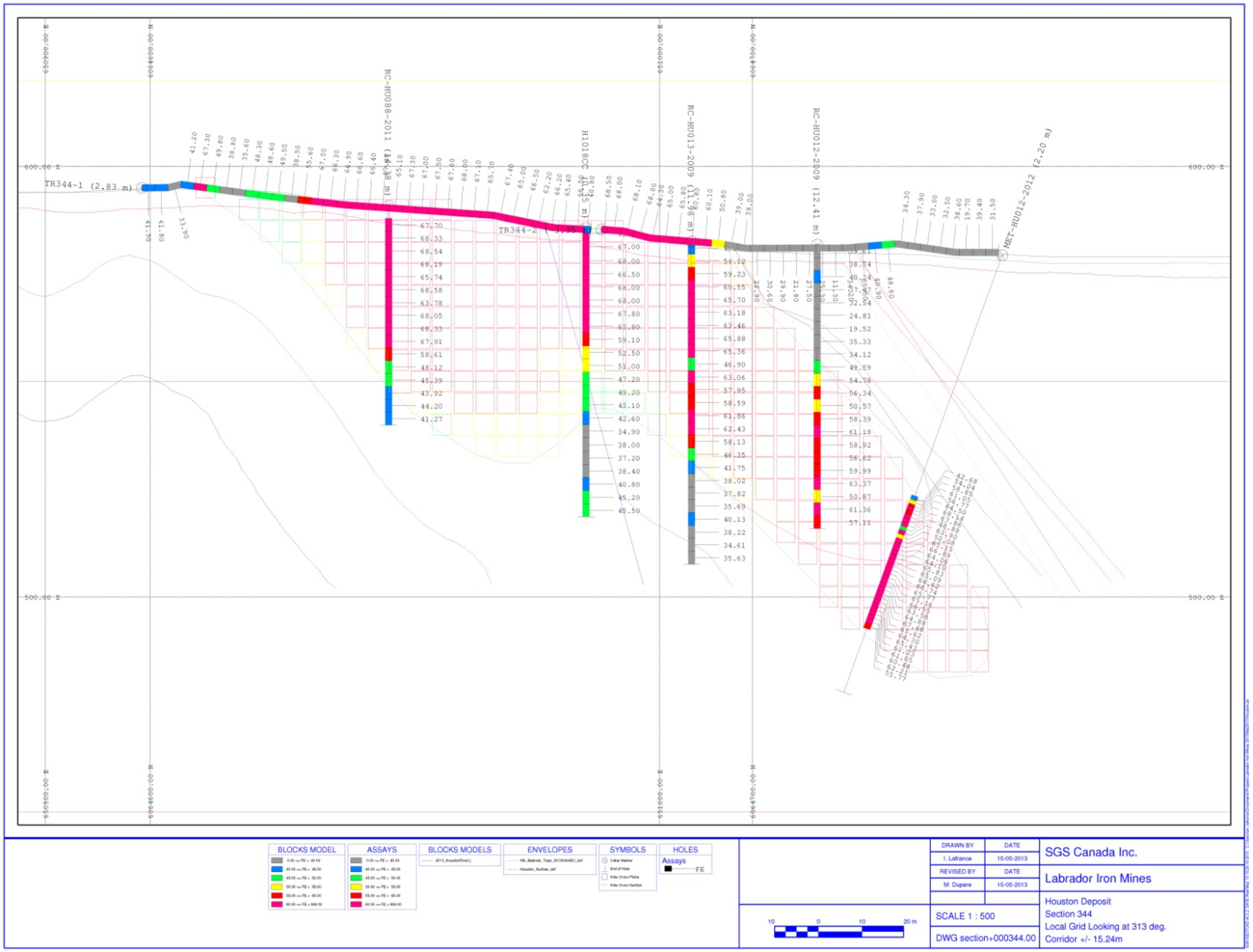


Figure 14-5: Section 344

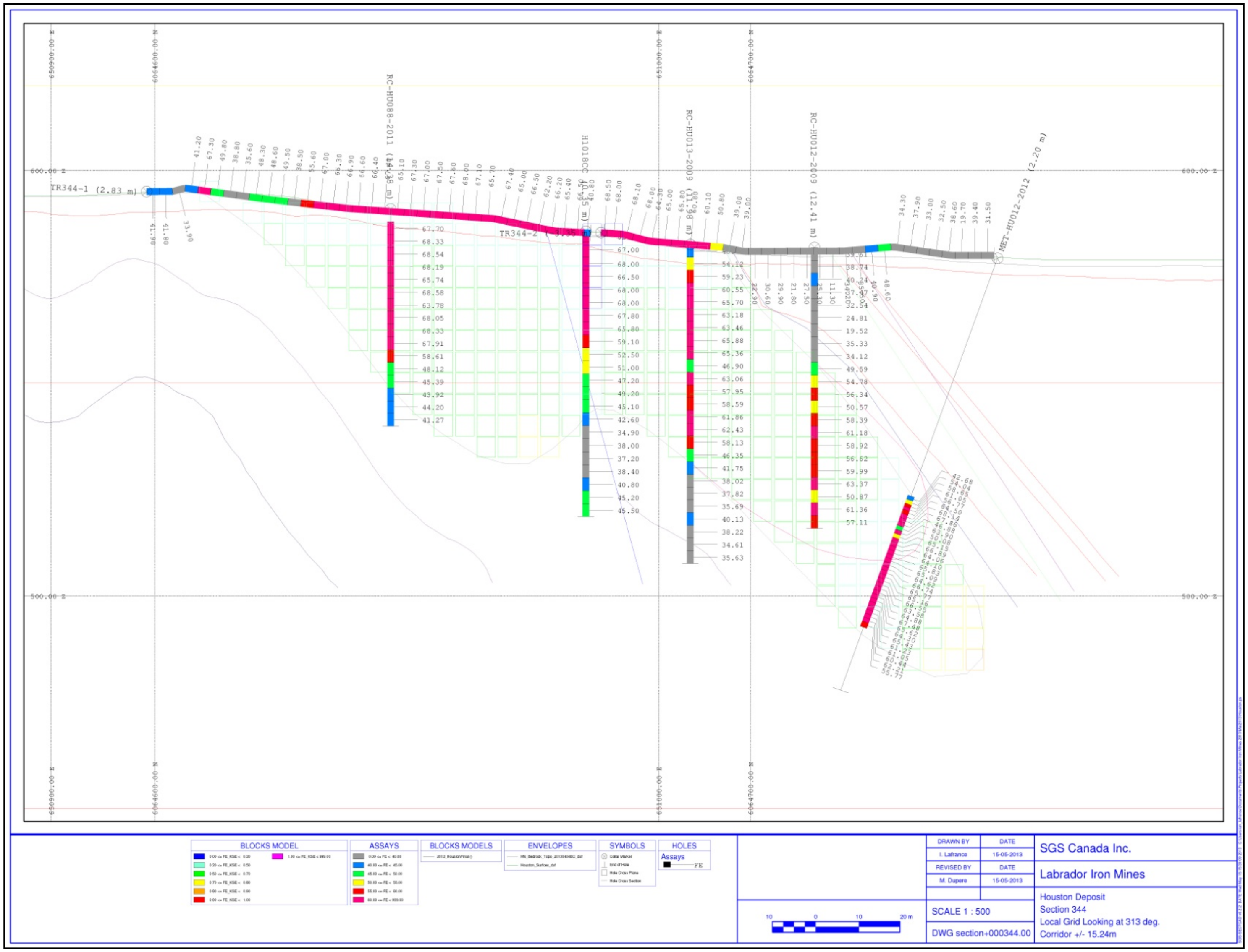


Figure 14-6: Section 344 (Block Classification by Kriging Variance)

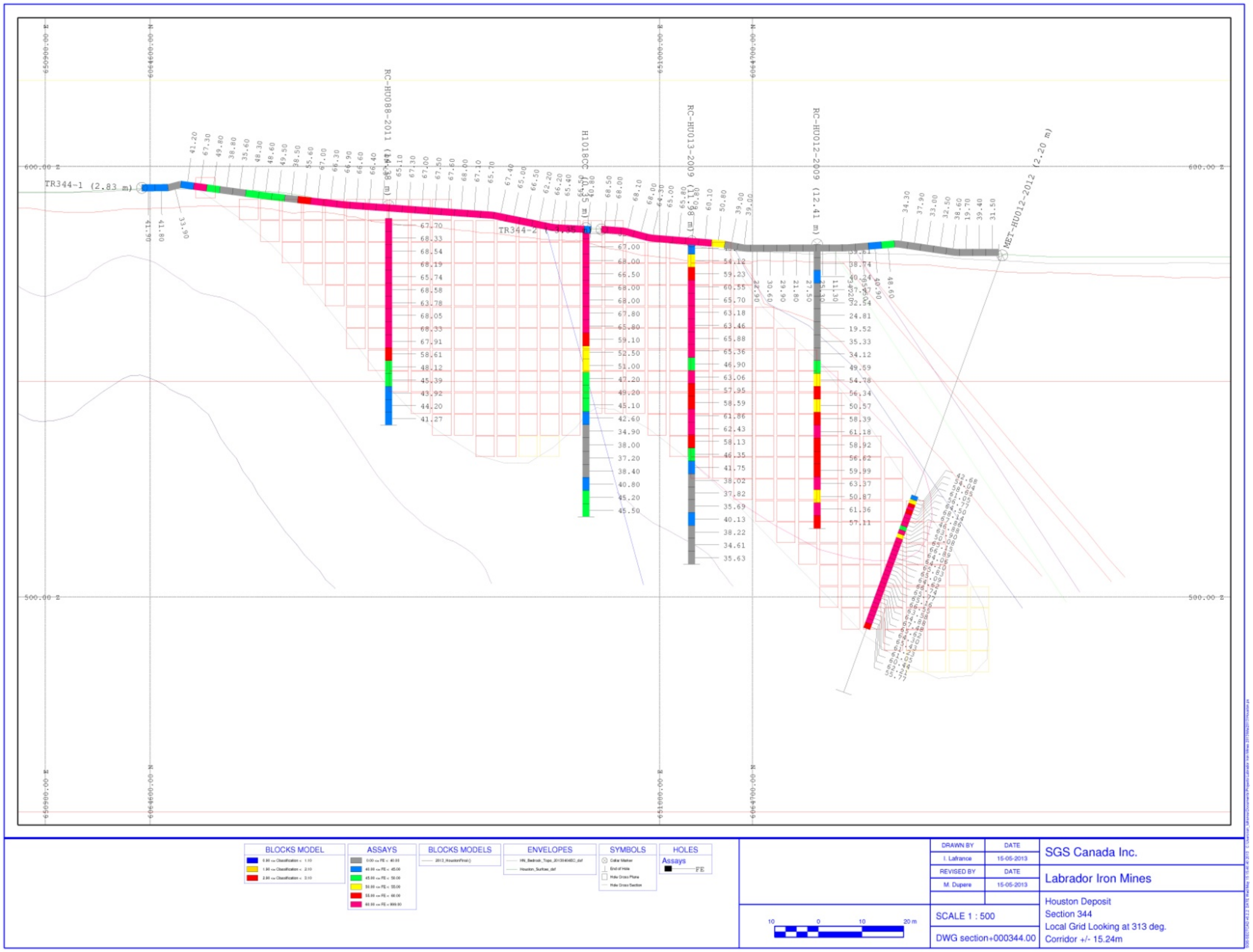


Figure 14-7: Section 344 Final Block Classification

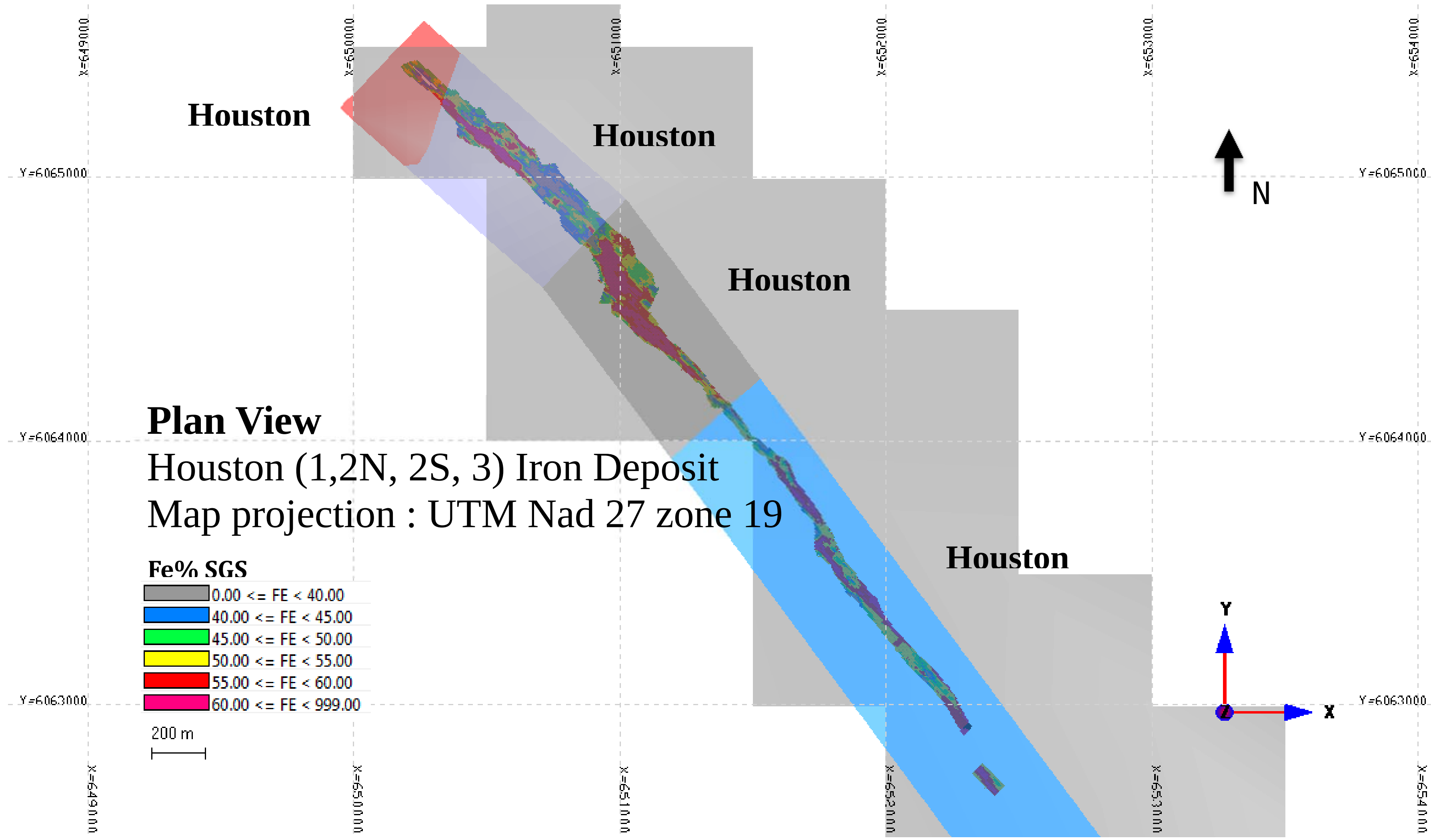


Figure 14-8: Plan View of Houston Block Model (Fe%)

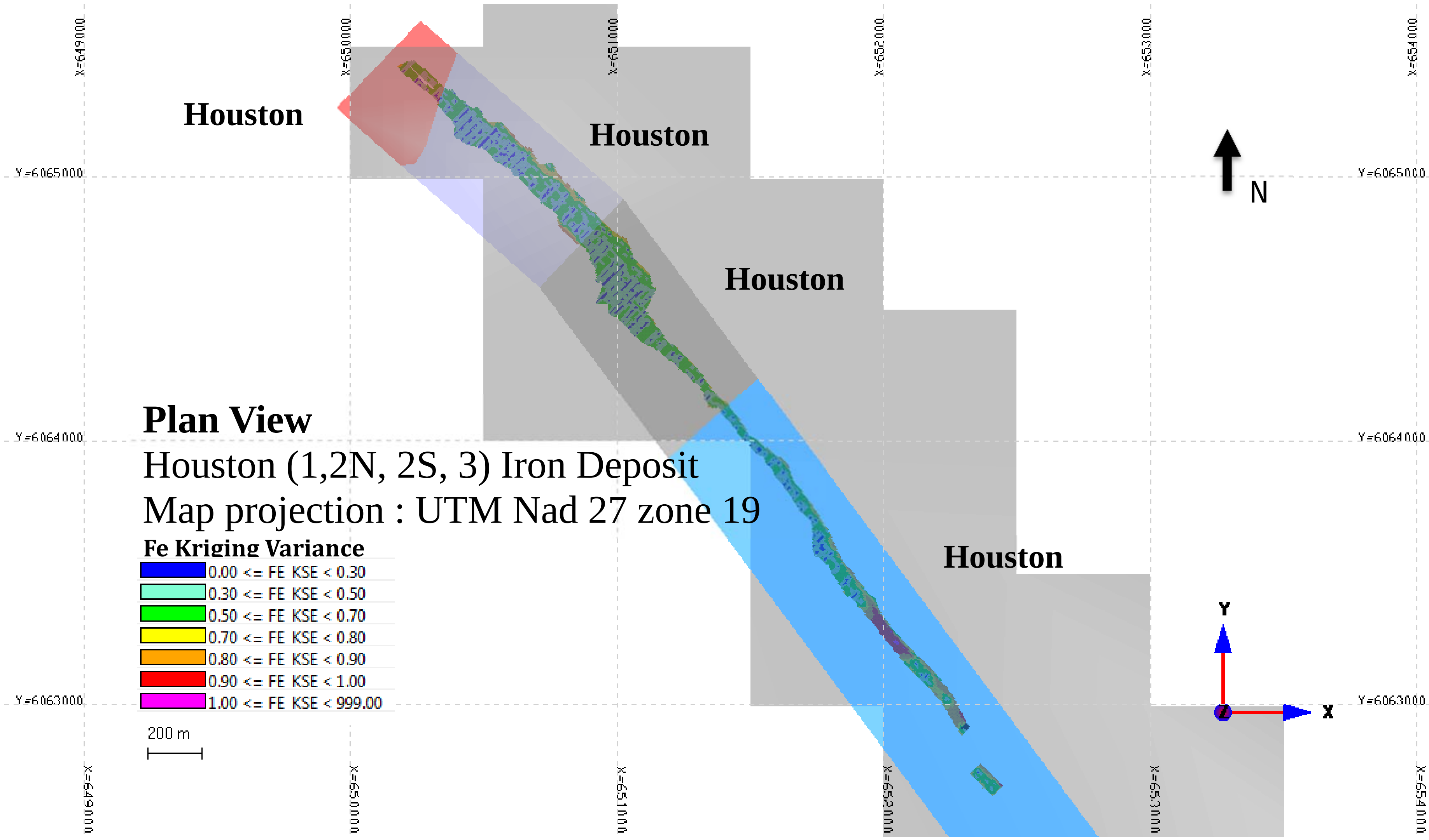


Figure 14-9: Plan View of Houston Block Model (Fe Interpolation Kriging Error)

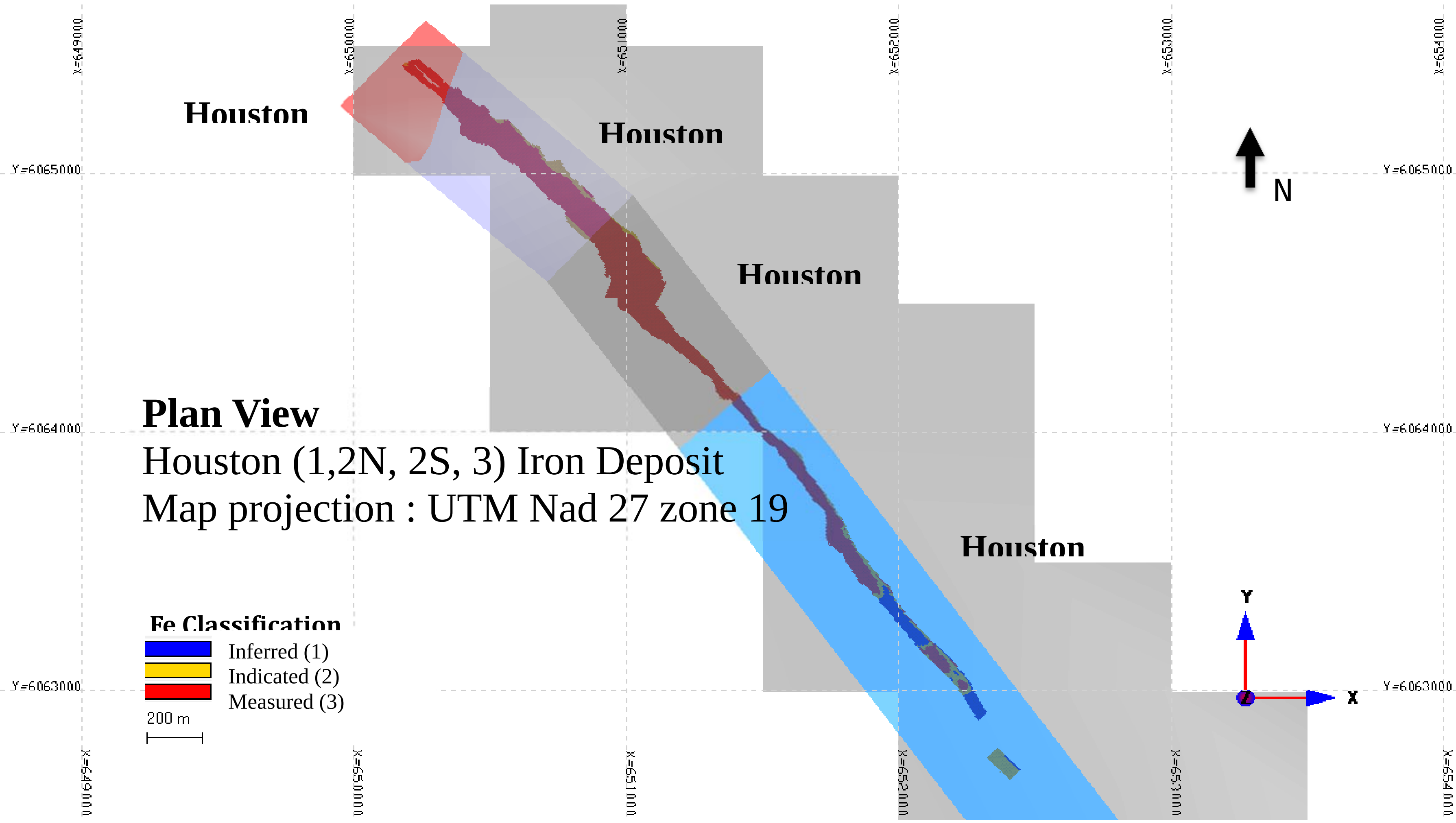


Figure 14-10 Plan View of Houston Block Model (Classification)

14.4 Malcolm 1 Property

14.4.1 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.

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 Malcolm 1 ("Malcolm 1") database contains a total of 3,058.63 m of RC drilling in 33 RC drill holes and 60 m of trenches for a total of 1,006 assays. In this summary, it includes 1 historical RC drill holes from IOCC (M1012CC, 71.63m, 25 assay results). The database cut-off date is February 14^{th}, 2013.

Geological Interpolation and Modeling

This information was provided by LIM. The geological interpretation of the Malcolm 1 deposit was entirely constructed by LIM according to available data of the area.

The Malcolm 1 Deposit geological 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 IOC ore type parameters of Non-Bessemer (NB), lean non-Bessemer (LNB), high silica ($HiSiO_2$), high manganiferous (HMN) and low manganiferous (LMN) were considered for the resource estimation.

The Malcolm 1 Deposit envelope was created by LIM using the validated geological information from surface and from RC drilling data. It comprise of 2 volumes (The main one and a small one to the SE). Both volumes were validated by SGS. Some errors of snapping were encountered but do not affect significantly the mineral resources. A total of 1 RC (IOC) and 32 RC (LIM) drill holes and 1006 assays (all) were used for the resource estimation. The geological interpretation cut-off date is April 12^{th}, 2013.

The geological modeling was done using 45 vertical cross sections with average direction of 313°, spaced approximately 30 m-apart (100 feet). The solids were created from the sectional wireframes combining geological and mineralization interpretation.

The study area of the Malcolm 1 deposit included in this report covers an extension of 1.3 km long x 60 m wide and 120 m below the surface. Further infill drilling will be required to better define mineralization in some areas within the ore body subject of this report.

14.4.2 Block Modeling

The Malcolm 1 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.

The block model covers a maximum strike length of 1.3 km, a maximum of 60 m wide and a maximum vertical depth of 120 m below surface. The block model was defined by block sizes of 5x5x5 m with an orientation of 313° totaling 30,826 blocks. The interpolation was done by inverse distance squared (ID2). A set of 1006 (3m) composites were used according to the mineralized solid. No capping was used. A variogram according to the composites was built for reference and did not outline with much accuracy any specific spatial continuity or distribution of grade. However, it seemed that the strike and dip were the ones with the best continuity. The elements Fe, Mn, and P, as well as SiO_2 and Al_2O_3, were estimated.

The mineralized solid provided by the client was validated and met both SGS and LIM geological interpretation parameters. This equation was updated using the latest core density measurements done during the 2012 diamond drilling campaign on the nearby Houston deposit. The data used was restricted to valid Houston area mineralised core. According to and in relation to findings on the in-situ density on James deposit from reconciliation, SGS decided to apply 15% porosity (0.85 in the equation) for added security.

Table 14-9: Parameters of Block Model

Number of Blocks	
Columns	179
Rows	309
Levels	81
Origin and Orientation	
X	647610
Y	6068060
Z	600
Orientation* (Counterclockwise)	47°
Block Size (m)	
Columns Size	5
Rows Size	5
Levels Size	5

* Orientation Origin Based on Block Centroid

14.4.3 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 the Malcolm 1 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 381 composites was generated relevant to Malcolm 1. The modeled 3D wireframe of the mineralized envelope was used to constrain 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 1.4 km strike length but at the best, we have trenches and RC holes on cross-sections at 30 m distance along the N313 strike and the spacing between holes on the section is the same 30 m. In practice a significant amount of 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 topographical surface) and they need have a minimum 1.5 m documented length. All together there are 381 composites with at least a %Fe and a %SiO2 grade within the DSO envelope

14.4.4 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 14-10. Histograms are on Figure 14-11. Some correlation plots appear on Figure 14-12.

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 14-12). Distribution of alumina and manganese are heavily skewed with a long tail of high values. By comparison, the skewness of phosphorus is moderate Besides that of %Fe and %SiO_2, all other correlations between variables are weak (best with R around 0.25 are between %SiO_2 and %Al_2O_3 (positive), %Mn and %Fe (negative) and %Al_2O_3 and %P (positive).

Table 14-10: Statistics of Composite Data Used in the Interpolation of Resource Blocks Statistics

Statistics	Fe	P	Mn	SiO_2	Al_2O_3
Mean	55.25	0.06	1.10	14.64	0.64
Standard Error	0.47	0.001	0.10	0.62	0.09
Median	57.42	0.05	0.29	11.21	0.35
Standard Deviation	9.25	0.03	2.02	12.11	1.72
Sample Variance	85.57	0.00	4.07	146.62	2.96
Kurtosis	0.80	2.11	22.79	0.88	101.93
Skewness	-0.98	1.46	3.98	1.07	9.71
Range	46.48	0.19	17.69	58.09	20.82
Minimum	22.72	0.01	0.01	0.60	0.01
Maximum	69.20	0.20	17.70	58.69	20.83
Count	381.00	381.00	381.00	381.00	381.00

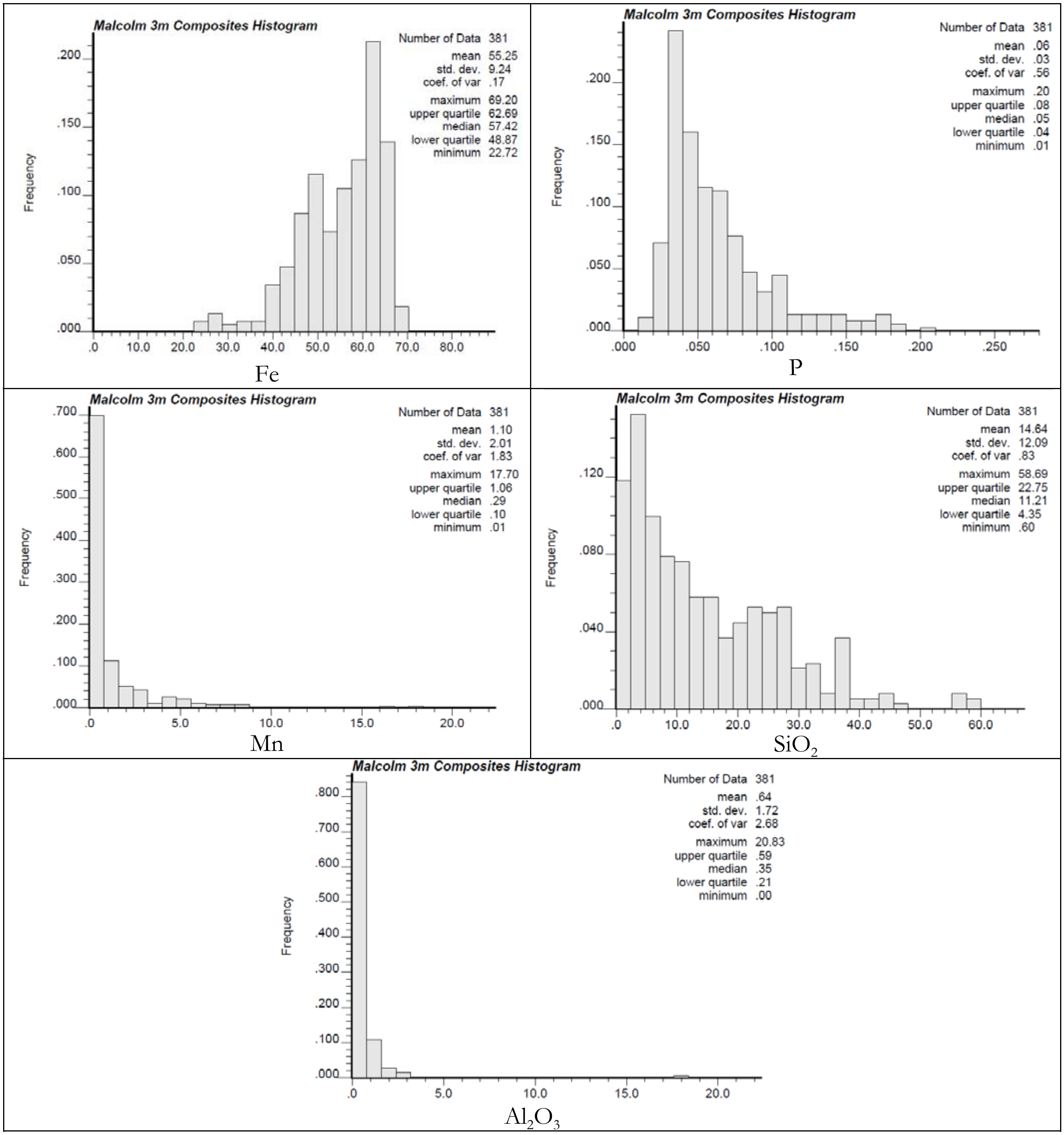


Figure 14-11: Histograms of DSO Composite Data of Malcolm 1

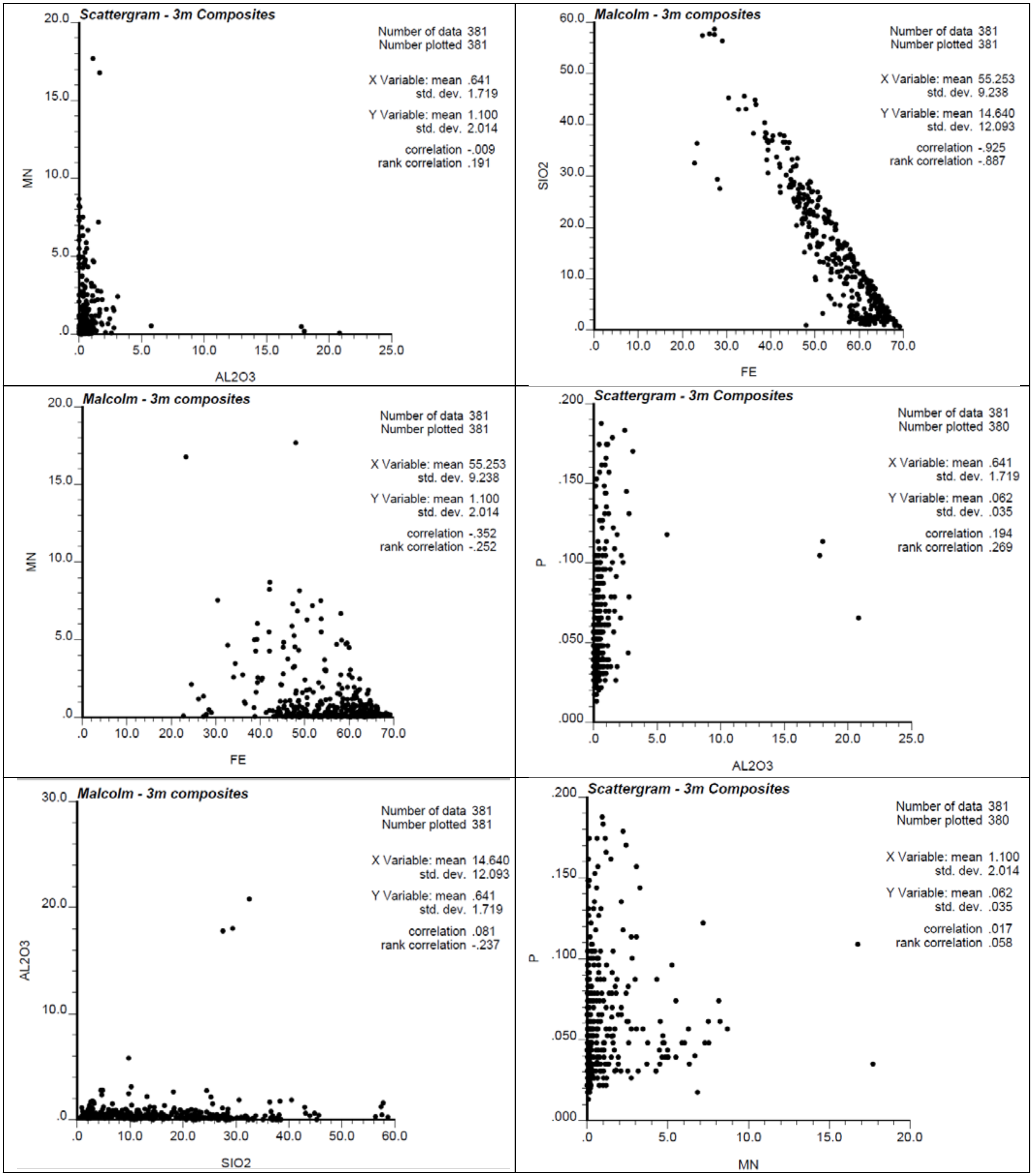


Figure 14-12: Some Correlation Plots of DSO Composite Grade Data of Malcolm 1

14.4.5 Block grades interpolation

The %Fe, %SiO_2, %Al_2O_3, %Mn and %P grades of each of the 30,795 blocks 5 x 5 x 5 m within the DSO envelope were interpolated from the grades of nearby composites through the Inverse Distance Squared (ID2) method of estimation.

The interpolation was done in 2 successive runs (passes) 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 60° to the N47. Two ellipsoids with the following parameters were used. The first pass was done with an ellipsoid of 50 m by 50 m by 25 m. Those dimensions are simply doubled in the second interpolation run (Table 14-11).

Table 14-11: Malcolm 1 Block Model Search Ellipse Summary

Area	Pass	Azimuth	Dip	X (m)	Y (m)	Z (m)
Malcolm 1	1	313	-60	50	50	25
	2	313	-60	100	100	50

The maximum number of composites kept in the search ellipsoid is 10 with a maximum of 2 composites from the same hole or trench for pass 1. The same conditions were used for the second run with exception of a maximum of 2 composites from the same hole or trench for pass 2. . The minimum number of composites required in order to proceed is 3 (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 14-12. 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.

Table 14-12: Malcolm 1 block model statistics obtained after estimation

Statistics	*Fe*	*P*	*Mn*	*SiO_2*	*Al_2O_3*
Mean	54.94	0.06	1.10	14.90	0.66
Standard Error	0.04	0.0001	0.01	0.04	0.01
Median	55.83	0.06	0.67	13.70	0.38
Standard Deviation	6.17	0.02	1.33	7.87	1.11
Sample Variance	38.02	0.001	1.77	61.99	1.23
Kurtosis	-0.20	2.58	8.83	0.18	52.42
Skewness	-0.54	1.28	2.61	0.68	6.34
Range	40.44	0.16	10.49	54.51	16.13
Minimum	27.25	0.02	0.03	1.14	0.01
Maximum	67.69	0.18	10.52	55.65	16.14
Count	30795	30795	30795	30795	30795

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 (see Table 14-13).

Table 14-13: Malcolm 1 Block Statistics per Estimation Pass

Pass	Blocks (count)	Blocks (%)
Pass1	25,856	84
Pass2	4,939	16

14.4.6 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. The estimated block model is showed on Figure 14-13.

14.4.7 Resources Classification

Classification was done by a process of automatic classification that selects around each composite falling inside a specific block, 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 70 m by 70 m by 20 m ellipsoid (direction, dip and thickness) with a minimum of 9 composites in at least 3 different holes. All blocks within the research ellipse are then categorized as measured to a maximum of 60 % of its maximum radius. The classification step of indicated resources uses a larger search ellipse (150 m by 150 m by 40 m), a minimum of 6 composites in at least 3 different holes 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. The Figure 14-14 presents the classification results.

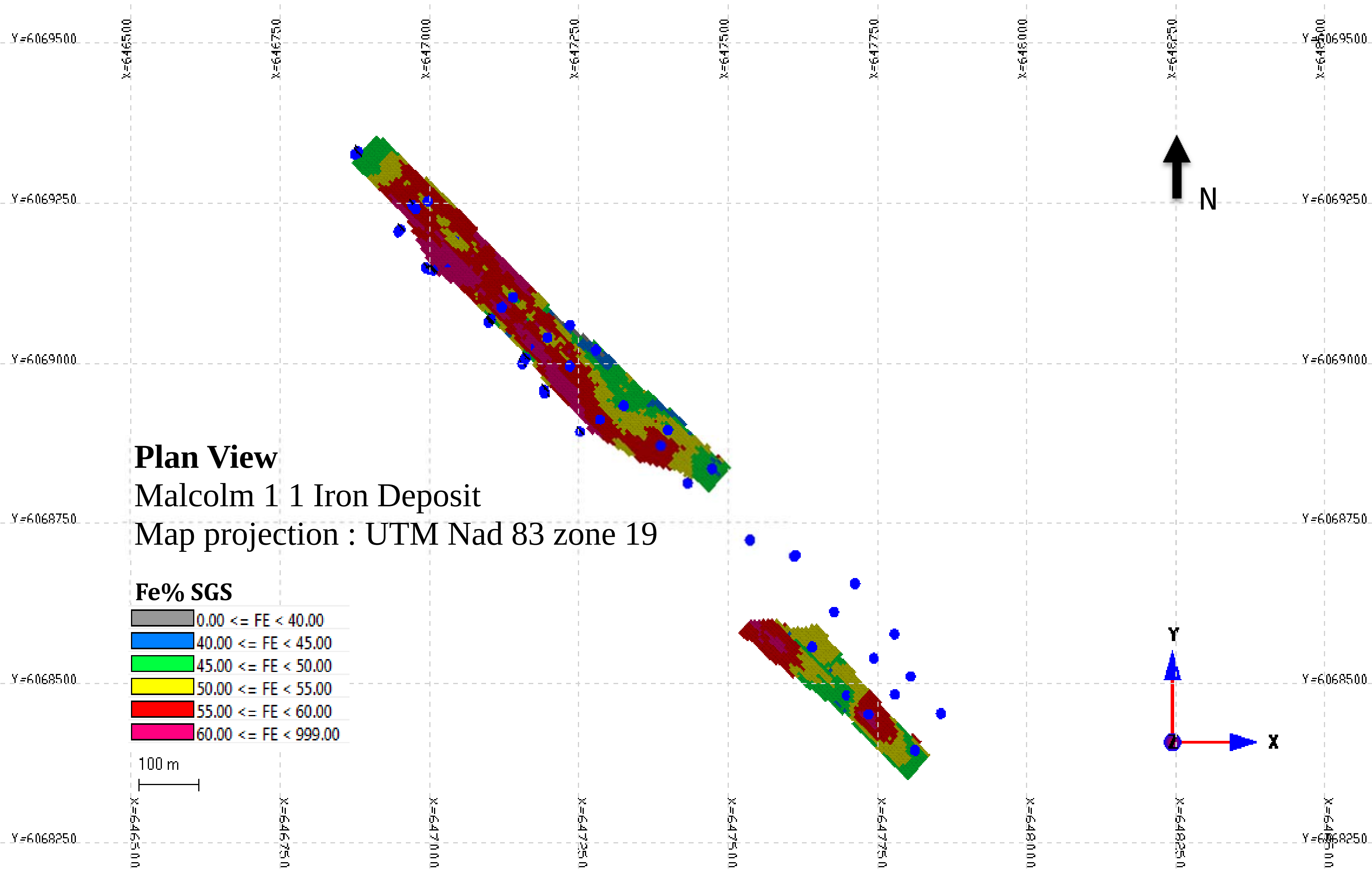


Figure 14-13: Plan View of block model Fe% estimation (By SGS)

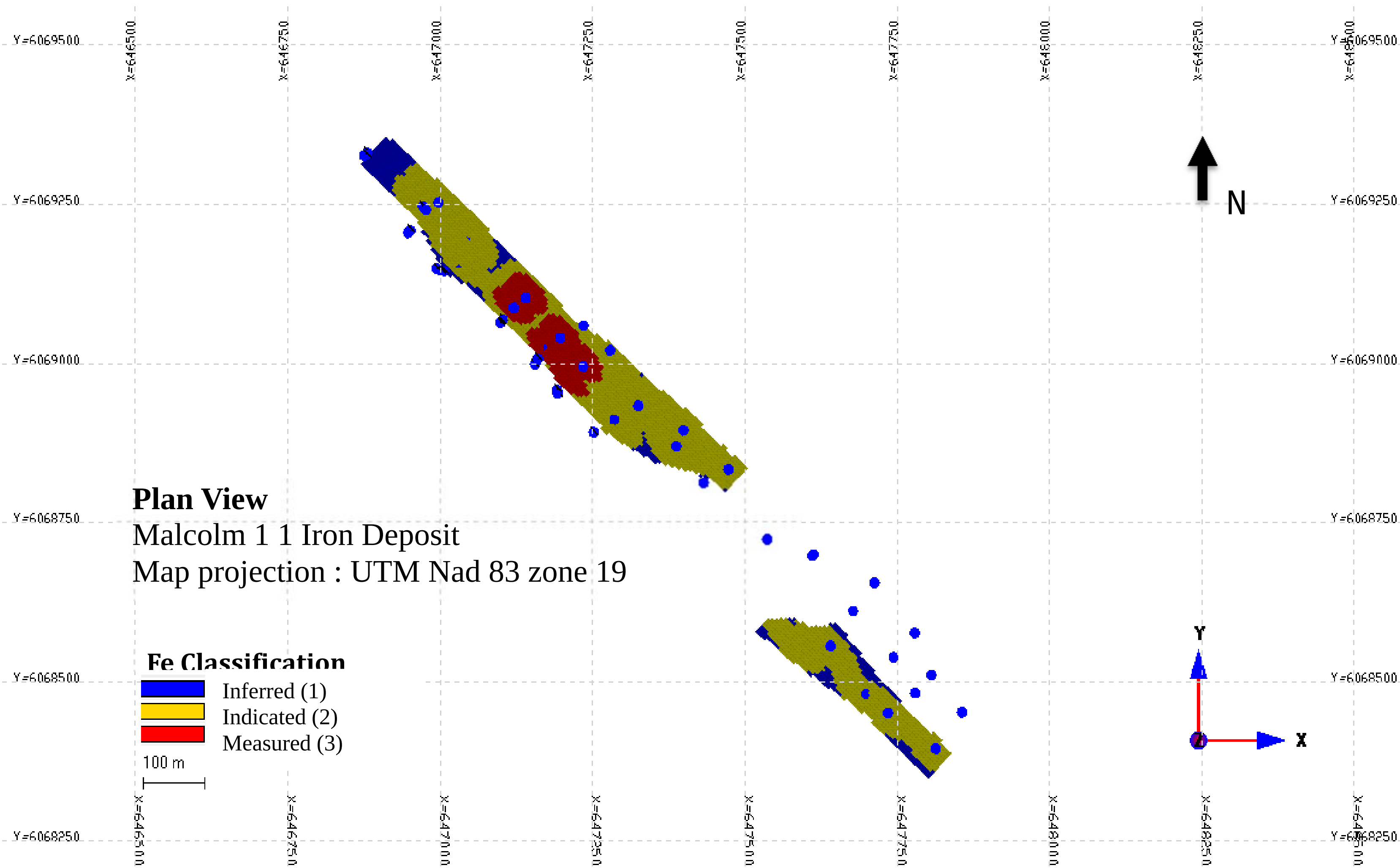


Figure 14-14: Plan View of block model Classification (By SGS)

14.4.8 Malcolm 1 Mineral Resources Estimation Conclusion

The current resource estimates for the Malcolm 1 deposit are of 9.22 million tonnes (including LMN and HMN) at a grade of 57.85% Fe in the Measured and Indicated categories based on IOCC Ore type's category. 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 results of the resource estimates for the Malcolm 1 deposit are shown in Table 14-14. The mineral resources were classified using the IOCC Ore type's category. See Section 14.1:

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: Mineral resource estimates of Malcolm 1 property

Area	Ore Type	Classification	Tonnage	Fe(%)	P(%)	Mn(%)	SiO_2(%)	Al_2O_3(%)
Malcolm 1	Fe Ore	Measured (M)	2,374,000	60.21	0.047	0.77	9.78	0.51
		Indicated(I)	6,686,000	57.10	0.065	0.76	12.25	0.53
		Total M+I	**9,060,000**	**57.91**	**0.060**	**0.76**	**11.61**	**0.52**
		Inferred	520,000	56.41	0.060	0.80	12.94	0.44
	Mn Ore	Measured (M)	13,000	58.35	0.043	4.25	7.65	0.47
		Indicated(I)	149,000	54.14	0.064	4.56	11.93	0.47
		Total M+I	**162,000**	**54.49**	**0.062**	**4.53**	**11.58**	**0.47**
		Inferred	-	50.53	0.062	3.87	17.73	0.86

Resources are rounded to the nearest 1,000 tonnes.
Malcolm 1 deposit dated to April 24th, 2013
CIM Definitions were followed for mineral resources
Mineral resources which are not mineral reserves do not have demonstrated economic viability

15. (Item 23) Adjacent Properties

Adjacent to the Houston property are several other iron ore deposits and claims owned by LIMHL subsidiaries in Labrador and Quebec, some of which formed part of the former DSO operations of IOC during the period 1954-1982.

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.

As at March 31, 2013, LIM has confirmed a total of approximately 59.5 million tonnes at an average grade of 56.7% Fe of NI 43-101 compliant, measured and indicated mineral resources on the Schefferville Projects, including, the Houston and Malcolm property. Of this total, approximately 36.9 million tonnes are measured mineral resources and approximately 22.5 million tonnes are indicated resources. LIM has also confirmed a total of approximately 4.7 million tonnes of inferred resources at an average grade of 55.8% Fe.

In addition to the foregoing LIM holds previously mined historical stockpiles, with a NI 43-101 compliant, indicated resource of approximately 3.5 million tonnes at an average grade of 49.1% Fe and an inferred resource of approximately 2.9 million tonnes at an average grade of 48.8% Fe. These previously-mined stockpiles are located within 15 km of the Silver Yards plant.

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 mining operations at the James Mine.

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 andGill 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 LIM's decision to undertake commercial production from the James deposit and ongoing exploration and development of the Houston deposits have 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 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.

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.

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,

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

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 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 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 Mellenium to contain 64.1 million tonnes of Proven and Probable Mineral Reserves at an average grade of 58.8% Fe.

A Feasibility Study is also been carried out for a joint venture between NML and Tata Steel Minerals Holdings on a taconite iron deposit known as the LabMag Property in the Howells River area of Labrador located some 30 km northwest of Schefferville. 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.

Century Iron Mines Corporation has filed a Project Description and Registration Document with the Government of Newfoundland and Labrador, for its proposed Joyce Lake Direct Shipping Iron Ore Project. The Joyce Lake Project is situated in Labrador, approximately 25 km east of LIM's Houston deposits, and 20 km northeast of the town of Schefferville, Québec. The Joyce Lake property is reported by Century Iron Mines to contain 7.55 million tonnes of measured and indicated resources at an average grade of 61.62% Fe. The Project Description and Registration document for the Joyce Lake Project outlines a target production estimate of 4 million tonnes of ore annually. The first three years of operation would focus on production of direct shipping ore, which has a high iron content (~60% iron), with stockpiling of lower grade ore (< 60% iron) that would be beneficiated to bring it up to the desired commercial grade.

The authors of this report have not reviewed or audited the above resource and reserve estimates of New Millenium or Century Iron Mines.

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 Bloom Lake (formerly Consolidated Thompson) and by Arcelor-Mittal at Mont-Wright.

16. (Item 24) Other Relevant Data and Information

16.1 Introduction

The Houston Project is not considered an "advanced property" within the meaning of National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and the additional requirements for advanced properties required by Item 15 to 22 of Form 43-101F1 have not been included in this Technical Report.

The Houston Project, including the Malcolm property, does not have any demonstrated mineral reserves and a feasibility study has not been conducted on the Houston Project. LIM's decision to advance the Houston Project towards development has not been based upon a feasibility study on mineral reserves demonstrating economic and technical viability.

The additional information included in this section was provided by Labrador Iron Mines based largely on the project descriptions contained in the Project Registration documents filed with the Government of Newfoundland and Labrador for the Houston 1 and 2 Deposits Mining Project and the Houston Beneficiation Plant Project, and was reviewed by Mr. Justin Taylor, P.Eng who is the responsible author for this section of the Technical Report.

16.2 Governmental Approvals

In December of 2011, LIM submitted a project registration to the Government of Newfoundland and Labrador, outlining the development of a series of open pit mining operations on Houston #1 and Houston #2, to be supported by an access road and a railway siding.

In March 2012, the Minister of Environment and Conservation the Government of Newfoundland and Labrador informed the Company that, in accordance with the Environmental Protection Act, the Houston 1 and 2 Deposits Mining Project, including the haul road and railway siding, was released from further environmental assessment, subject to a number of conditions.

In February 2013, the Company filed registration documents with the Government of Newfoundland and Labrador and with the Federal Canadian Environmental Assessment Agency ("CEAA") for the second phase of development of the Houston 1 and 2 deposits, which includes the construction of a wet process beneficiation plant incorporating crushing, screening, washing and magnetic separation. This plant will be capable of upgrading lower grade ore (50% to 59% Fe) into saleable sinter and lump products.

In April 2013, CEAA notified LIM that a Federal Environmental Assessment was not required and in May 2013, the Minister of Environment and Conservation released this second phase of the Houston Project from the provincial environmental assessment process, subject to conditions.

Environmental release of the various phases of the Houston Project allow the Company to complete the applications for permits and regulatory approvals required for the construction of the haul road and rail siding, development of the Houston 1 and 2 deposits and construction of the wet processing plant for the Houston Project.

The mining and surface leases have been issued and the closure and reclamation plan has been approved by the Government of Newfoundland and Labrador. The road construction permit is in place and approval for the rail siding construction permit is anticipated in mid-2013.

16.3 Overview

Labrador Iron Mines, a wholly owned subsidiary of Labrador Iron Mines Holdings Limited, is proposing to develop iron ore deposits on their Houston 1 and 2 properties located in an historical iron ore mining district in the western central part of the Labrador Trough Iron Range, in the province of Newfoundland and Labrador. The Houston Project is located approximately 15 km from LIM's existing James Mine and Silver Yards Plant currently in operation.

The Houston and Malcolm deposits contain a total NI-43-101 Indicated resource estimate of 39.3 million tonnes of iron ore of potential direct shipping quality with an anticipated 10-15 year mine life.

This Houston Project, Phase 1, involves the development and mining of 'direct shipping' iron ore from the Houston 1 and 2 deposits, the construction of a mining haul road that will connect the Houston area to LIM's existing James Mine area and the construction of a 5 km long rail siding near the intersection of the proposed haul road and existing TSH main rail

Phase 2 of the Houston Project will involve the construction of a wet process beneficiation plant capable of upgrading lower grade ore (50% to 59% Fe) into saleable sinter fine and lump ore products.

It is expected that initial mine development at the Houston deposit, will include construction of the haulage road and railway siding, mine infrastructure and related facilities, with initial production of Houston ore coming from in-pit dry crushing and screening to produce direct rail ore.

Mining will be conducted in a sequential manner using conventional open pit mining methods.

It is expected that mining will commence with three pits to maximize access to the ore. The production will initially start with mining one pit in Houston 1 area and two pits in Houston 2 area, pending more detailed engineering studies.

Direct rail ore (DRO) that does not require any beneficiation will be hauled to a loading area located near the proposed location of the rail siding, to be located within the existing right-of-way, and loaded on to rail cars for transport south to the Port of Sept Iles.

Lower grade ores will be hauled to a proposed new beneficiation plant site under consideration near the Houston mine pit area, where crushing, washing, screening, and gravity separation will take place, prior to loading onto rail cars. Prior to the construction of the new Houston beneficiation plant some lower grade ores may be hauled to LIM's existing processing plant at Silver Yards from where the processed ore would be loaded directly onto trains at Silver Yards.

As with LIM's nearby existing James Mine, the final products to be produced from the Houston 1 and 2 deposits will include lump and sinter fine ores for direct shipping to end users in Europe and/or Asia. As the Houston deposit is a high-grade iron ore, no further processing will be conducted other than the proposed crushing and washing to be conducted in Labrador.

The Houston project will benefit from the presence of existing infrastructure, such as the railway line between Schefferville and Sept-Îles, roads, and infrastructure constructed as part of LIM's James Mine.

No major improvements of the local roads or rail are anticipated. Minimal additional infrastructure to be developed is expected to include dewatering wells, water management features (e.g., sediment control ponds, ditches), a haul road, a rail siding, and internal mine roads. It is anticipated that power requirements for the Houston Mine site will be supplied by diesel generators.

Figure 16-1: Project Location

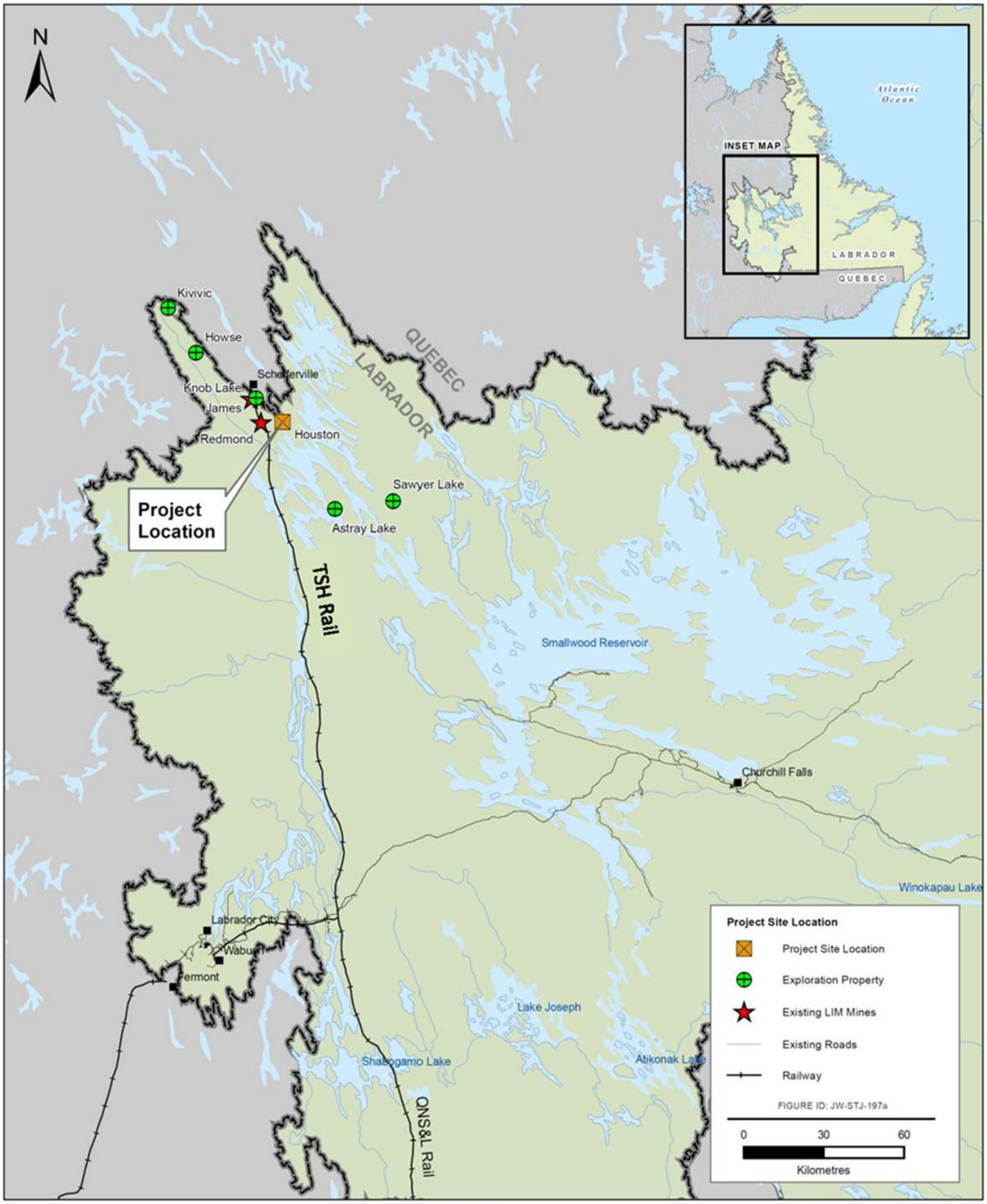
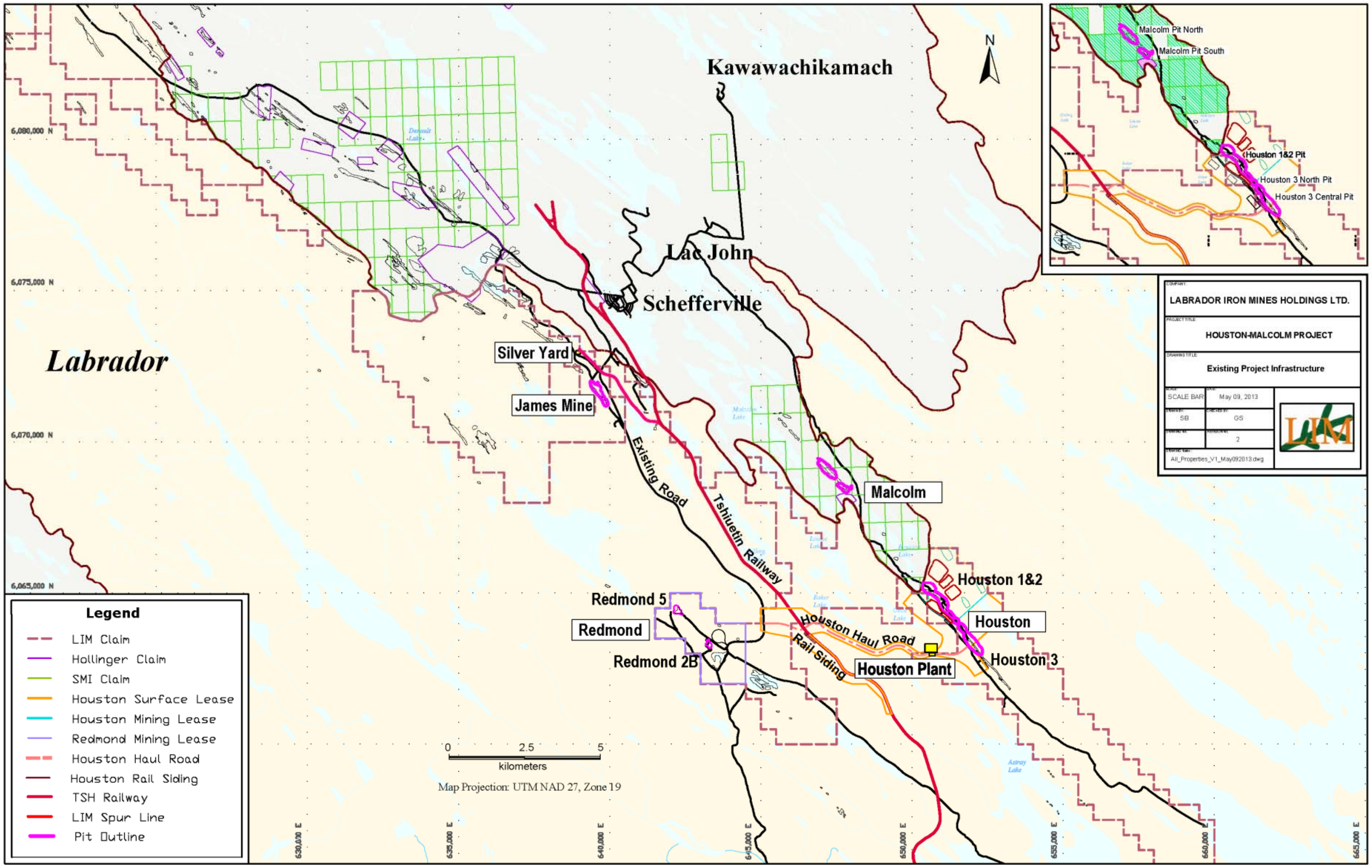


Figure 16-2: Plan View of Houston 1, 2 & 3 and Malcolm 1 Project Area



16.4 Houston Project Description

LIM proposes to advance the Houston Project in a number of Phases. Phase 1 will involve the development and mining of 'direct shipping' iron ore from the Houston 1 and 2 deposits, with in pit dry crushing and screening.

Phase 2 of the Houston Project will involve the construction of a wet process beneficiation plant capable of upgrading lower grade ore (50% to 59% Fe) into saleable sinter fine and lump ore products.

The Houston 1 and 2 deposit development will follow the James Mine and will benefit from much of the existing infrastructure developed for that project. It is expected that the first phase will involve the development and production from the Houston 1 and 2 deposits with initial production of Houston ore coming from in-pit dry crushing and screening to produce direct rail ore.

Overburden stripping material, waste rock material, and low grade ore material will be temporarily stockpiled in strategic locations near the open pits and away from any nearby watercourses. The overburden stockpiles would be used for future reclamation purposes. Waste rock piles may be placed back into the pits once mining is completed.

As with the James Mine, minimal blasting is anticipated and no new explosives storage areas will be established as part of this project. Blasting materials will be accessed from the explosive storage area currently in use for the existing nearby James Mine.

Development of the Houston 1 and 2 deposits will require construction of an approximately 8 km haul road from the Houston area to connect with the Silver Yards-Redmond road as well as the establishment of a 5 km rail siding within the existing right of way along the existing TSH main line to facilitate loading of ore. The haul road will require a crossing at the existing TSH main rail line.

Temporary ore pile areas will be located near the intersection of the rail siding and the haul road in order to facilitate loading and transport.

Major features of the Houston 1 and 2 Project include:

- All development will be located within Labrador in a region of historical IOC activity;
- Nearby existing and permitted infrastructure, including the Silver Yard laboratory, beneficiation area, maintenance shed and warehouse facilities, Menihek road, and the Bean Lake accommodation camp will be used to service the Houston Mine Project, as required;
- Mining will be carried out using conventional open truck and shovel pit mining methods, employing drilling and blasting operations, as required;
- Additional small excavations that may be required may include side-hill cuts associated with the construction and maintenance of access roads, mine haulage roads, sumps and settling ponds;

- Where required, borrow materials will be accessed either from existing quarries in the area, from benign waste rock sourced from the Redmond Mine area, or sourced from waste rock generated from the Houston area;
- As demonstrated at the James mine, minimal explosives use is expected and, as such, no new explosives storage areas are planned for the Houston project. Instead, the Houston project will access any required explosives from the storage areas used by the James mine;
- A 8 km haul road to be constructed between the Houston and Redmond areas which will require the placement of a clear-span-type bridge above Gillings River and smaller bottomless-type culverts across the smaller watercourse crossings.
- The establishment of an approximately 5 km long rail siding along the existing TSH main line, near its intersection with the proposed haul road. Temporary ore stockpiles will be established at this location to facilitate ore loading.

16.4.1 Construction

The Houston 1 and 2 mine development will benefit from the presence of extensive infrastructure in the area.

Primary access to the Houston 1 and 2 deposits will be by a new haul road to be developed between Houston 1 and 2 and the Redmond area. The proposed Houston-Redmond haul road is approximately 8 km long. Although there are existing roads from the community of Schefferville to the Houston area, these roads will be avoided for ore transport to reduce potential impacts on the local community.

The primary construction activity for the development of the open-pit mines at Houston will include:

- Clearing the area of trees and brush;
- Grubbing the footprints of the open pits, haul roads, service roads, waste disposal areas, stockpile areas, laydown areas, and water management features, and stockpiling overburden material;
- Excavation and construction for the water management features (example ditches and sediment control ponds); and
- Construction of the haul road, internal mine service roads and rail siding.

The construction period is expected to be relatively short, probably within a period of three months.

16.4.2 Houston-Redmond Haul Road and Rail Siding

The construction of the Houston-Redmond haul road is required to connect the Houston 1 and 2 deposits to the existing Redmond Road, which is connected to the James Mine, Silver Yards plant and Bean Lake accommodation camp. The planned access road is 8 km of 8.5m wide. This road will be configured for access to the Houston 1 and 2 deposits from the Redmond property which is connected by existing road to LIM's Silver Yards and James mine properties.

Extensive environmental baseline data was collected from the road and rail siding areas, including water course crossings, and this information, in combination with community consultation and incorporation of traditional environmental knowledge, was used to evaluate the preferred road option.

The haul road will require the placement of a clear span-type bridge across the Gilling River. The maximum length of this bridge will be less than 30 metres and the maximum width will be less than 20 metres. The clear-span bridge would be constructed outside of the high-water mark and will be constructed without having to do any in-stream work andwith sufficient clearance to provide access to canoes and small boats.

The proposed bridge will have a double layer of timber deck with geotextile sandwiched in between to reduce the potential for debris falling from the bridge into the river. Conceptual cross-sections are presented in Figure 16-4 and Figure 16-5.

Minimal other water crossings will be required for the development of access routes and, where water crossings are required they can be constructed without placement of materials below the high water mark and with adequate clearance to provide appropriate clearance for canoes and small boats). Smaller water crossings are expected to consist of open-bottom culverts with supports located above the high-water mark.

Where required, borrow materials will be accessed either from existing quarries in the area, from benign waste rock sourced from the Redmond Mine area, or sourced from waste rock generated from the Houston area.

The haul road will be designed and built to permit the safe travel of all of the vehicles in regular service. Internal mine roads will be engineered and built to permit the safe travel of all vehicles and in accordance with provincial regulations. These roads will be limited to only mine personnel within the pits.

A rail siding will be constructed along the main Tshiuetin rail line connecting Schefferville to Emeril Junction west of Labrador City. This siding will be 5.0 km long and allow for loading of rail cars at that location. Ore will initially be trucked along the new road to this siding where it will be loaded into rail cars for shipment south to the port of Sept Iles.

Figure 16-3: Houston Rail Siding

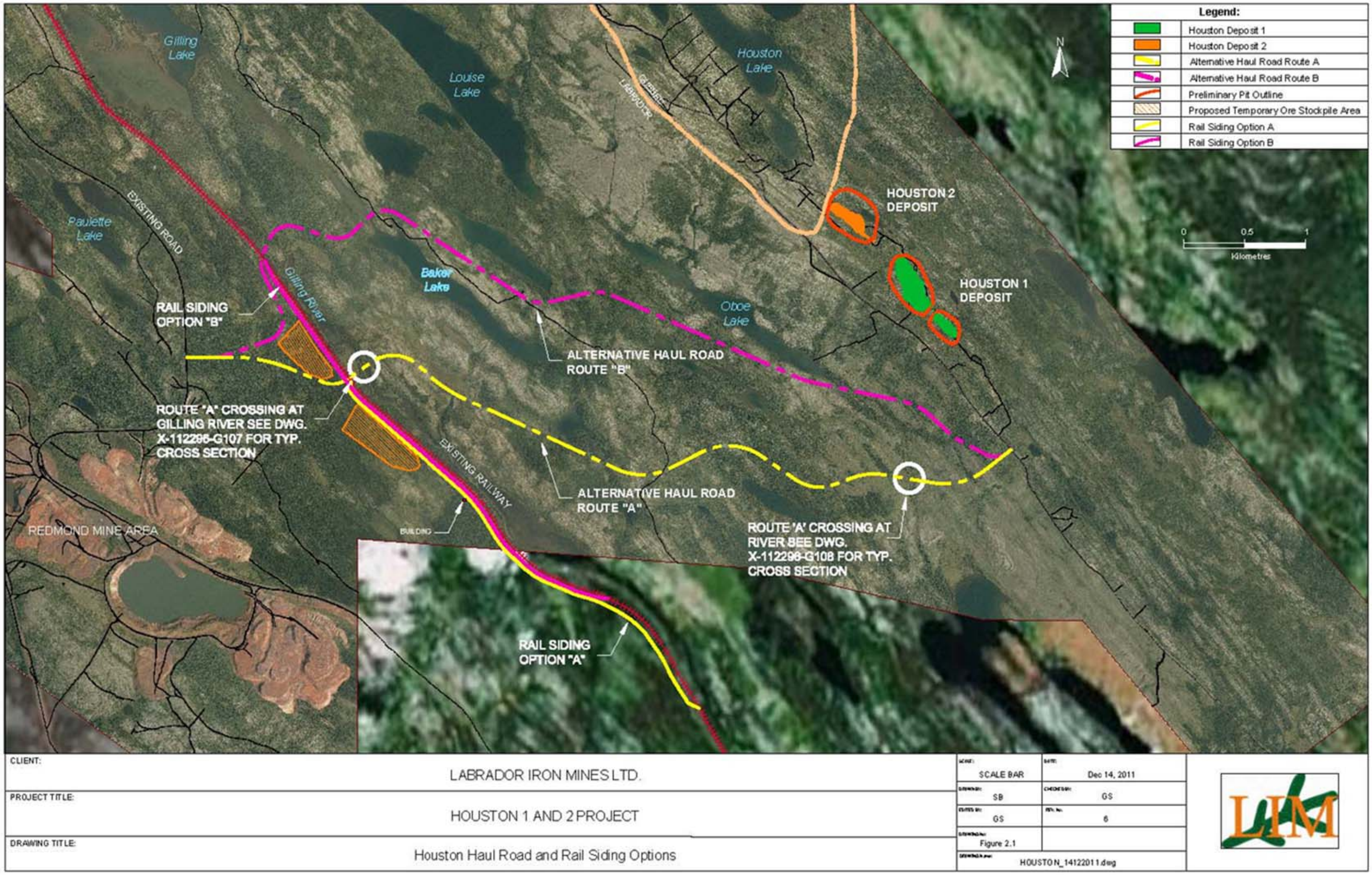


Figure 16-4: Houston Haul Road Conceptual Water Crossing - Gilling River Bridge Cross Section

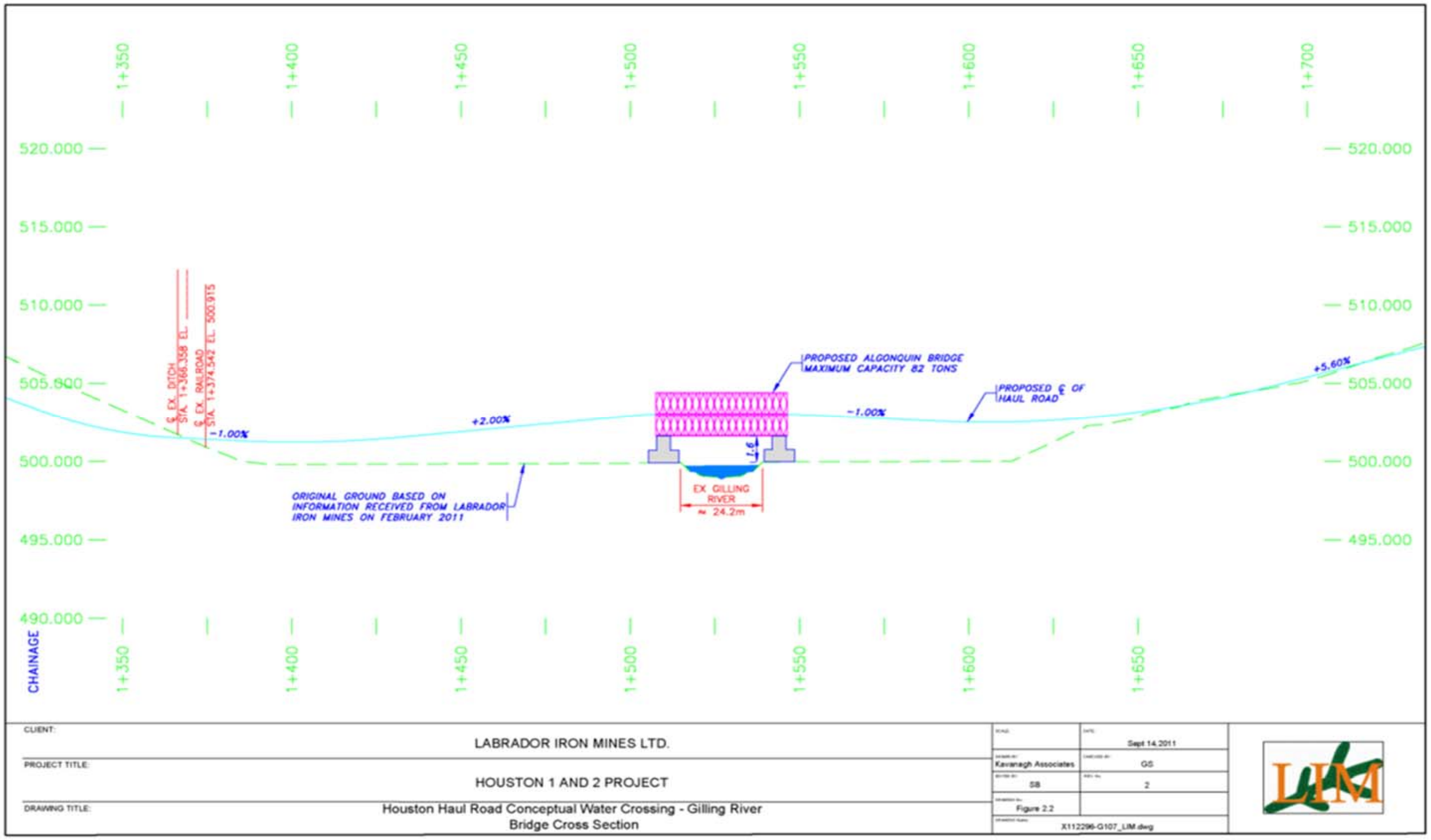


Figure 16-5: Houston Haul Road Conceptual Water Crossing -Small Stream Water Crossings Cross Section

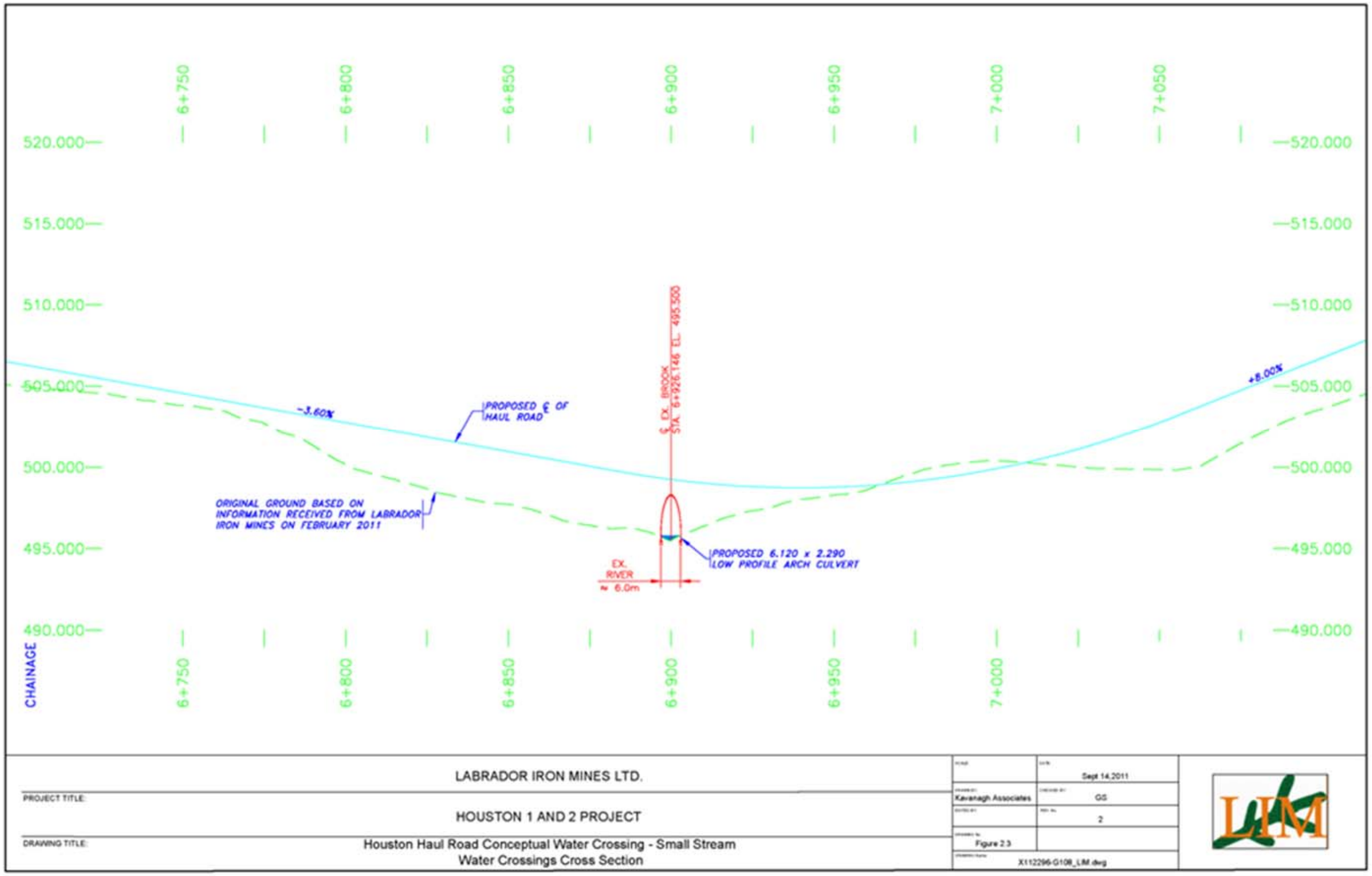
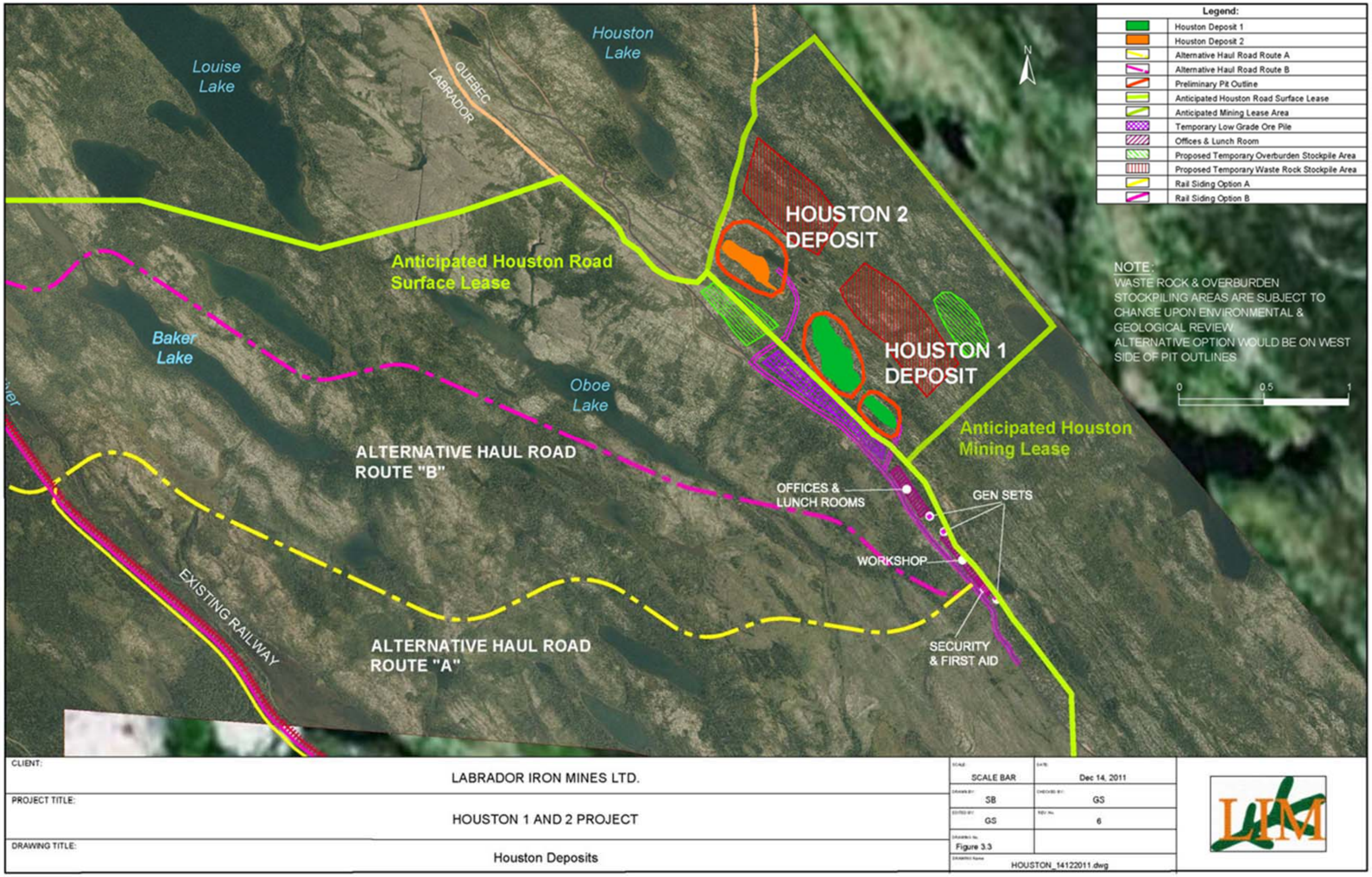


Figure 16-6: Houston Deposits



16.4.3 Site Supporting Infrastructure

It is not anticipated that any permanent structures will be erected for the mining operations at the Houston site. A workshop and warehouse may be established, as well as a portable office which will include services such as washrooms and a first aid room. All of the buildings are expected to be pre-fabricated modular units, i.e. trailers, and will be removed upon completion of operations. General services and infrastructures will be shared with the contractor.

The existing LIM laboratory at the Silver Yards area will be used for the Houston Project.

The existing camp accommodations at LIM's Bean Lake site will be used for accommodation.

It is anticipated that power requirement for the Houston Mine site will be supplied by diesel generators.

16.5 Mining Operations

All mining operations will be by conventional open pit mining methods.

Longitudinal and transverse conceptual pit cross-sections for Houston 1 and 2 are shown in Figure 16-7 and Figure 16-8. The anticipated surface required for the Houston Project is shown in Figure 16-9.

Figure 16-7: Conceptual Pit Cross-Section – Longitudinal

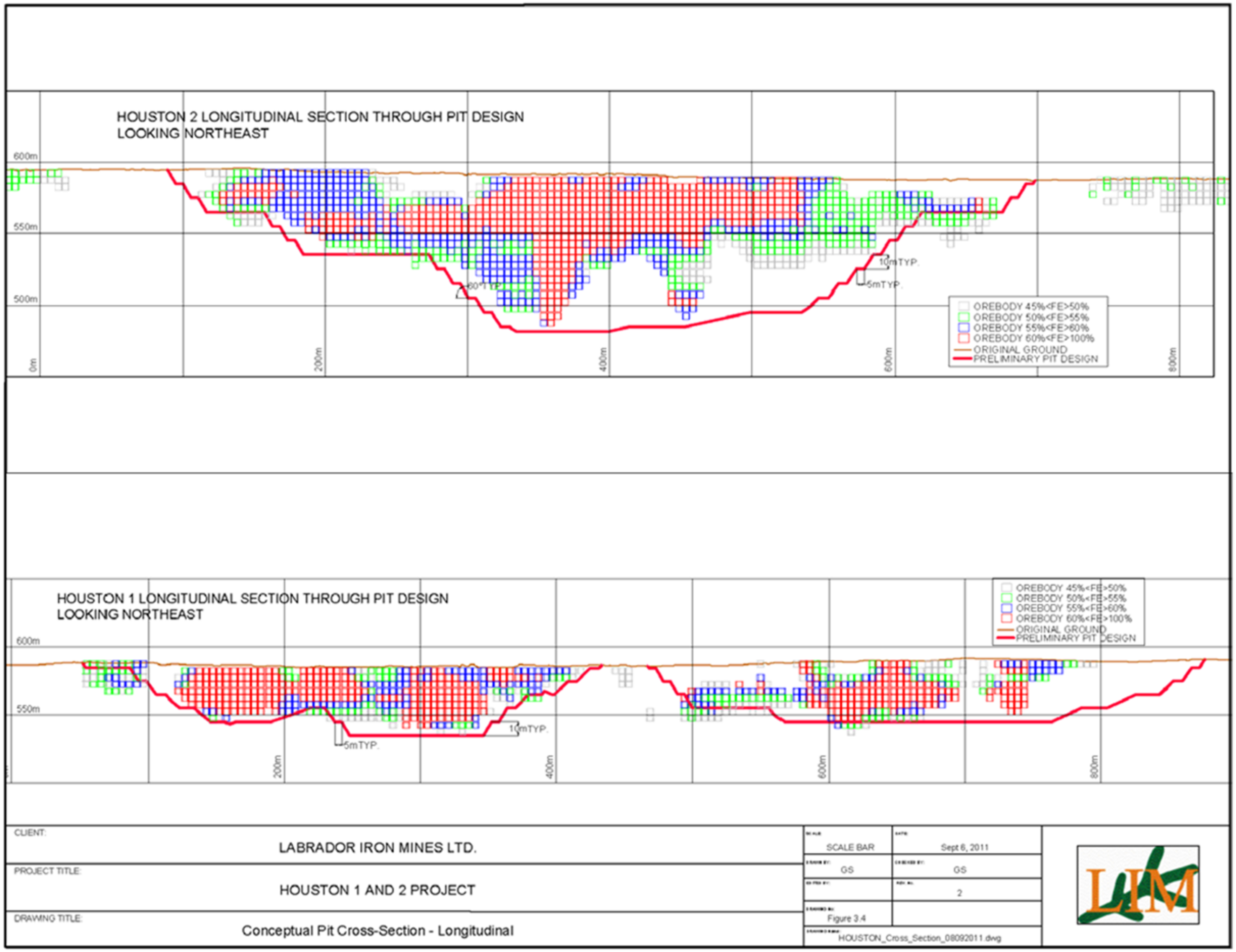


Figure 16-8: Conceptual Pit Cross-Section – Transverse

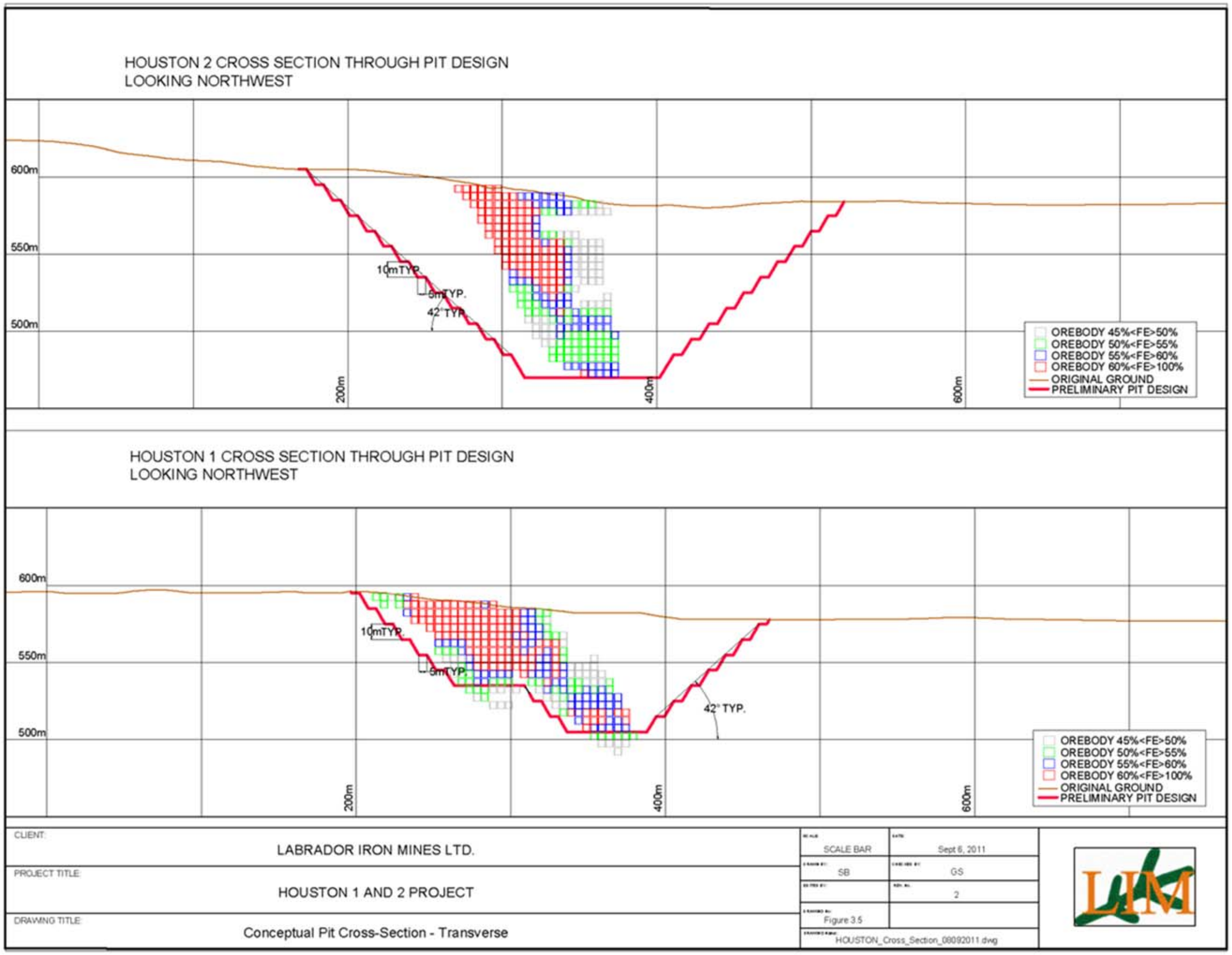
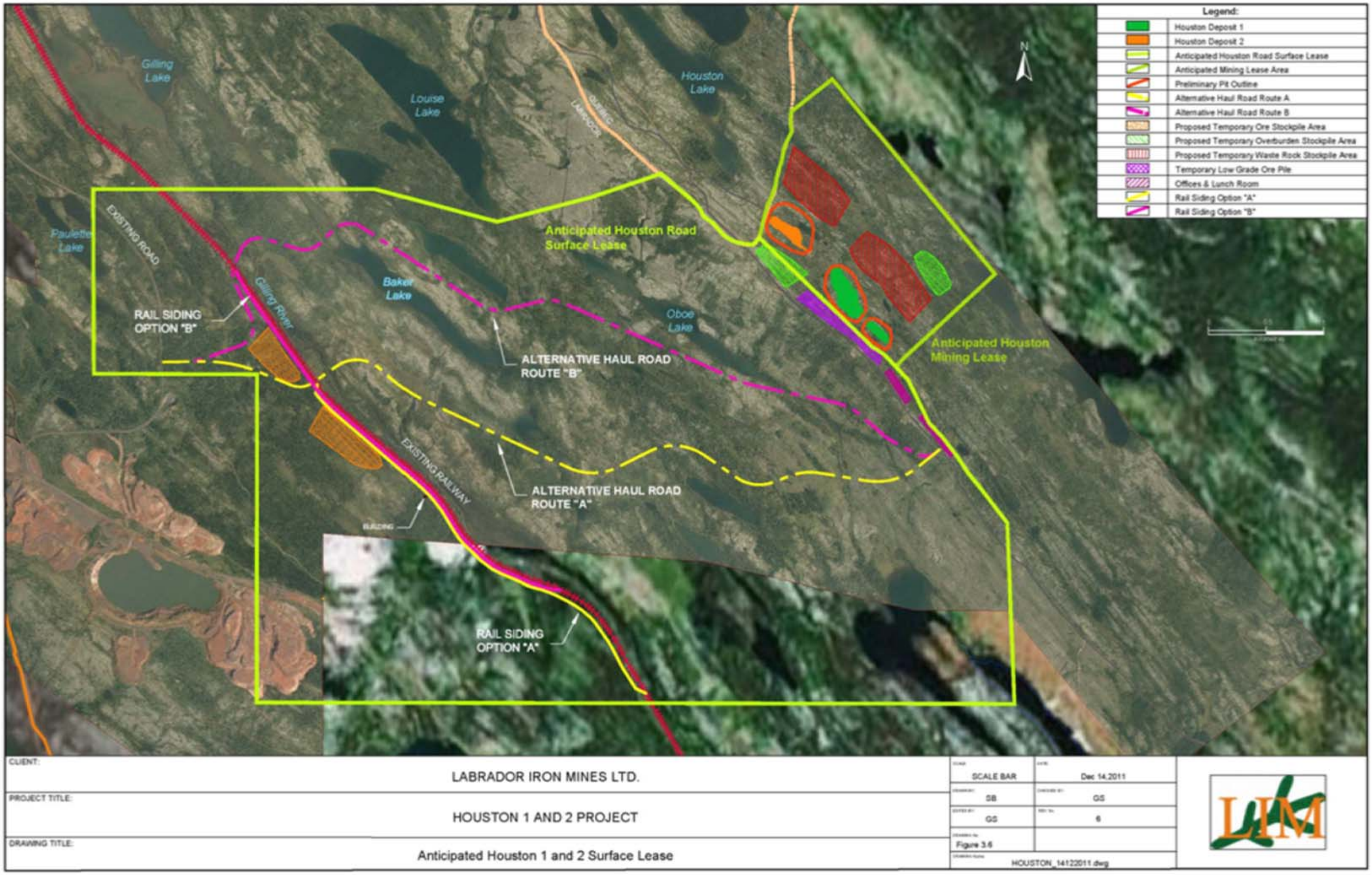


Figure 16-9: Anticipated Houston 1 and 2 Surface Lease



Mining will be conducted year-round and beneficiation will be conducted seasonally, from approximately April to November each year.

LIM will drill, blast, load and haul ore, waste rock and topsoil to the designated locations. The waste will be hauled to the specific waste dump sites. Upon completion of mining, temporary waste stockpiles may be placed back into the pits from which they originated. Temporary ore stockpiles will also be placed near the rail siding to facilitate loading. Some waste rock may be used for construction of the proposed haul road.

It is anticipated mining will be conducted by LIM with leased equipment. LIM will operate a fleet of new leased equipment, which will be used initially to construct the site, and to break, load and haul ore, waste rock and top soils to the designated locations. The in pit trucks will haul the ore from the Houston Pits to the beneficiation plant ore stockpiles. From the Malcolm 1 property, tractor-trailer units will be used to haul the ore to the processing site. Vehicle maintenance will be conducted at the existing LIM facilities, developed as part of the James Mine.

LIM is planning to carry out the direct production and service operations including: tree removal, overburden stripping, mine construction, waste stripping from the open pit, ore mining, beneficiation plant operation and pit production.

LIM will implement the mine plan and will perform all mine planning and will carry out all resource/grade control, layout, surveying, measuring and reconciliation functions. The mine office will be located at the Houston plant where technical, administrative and operational personnel will be based. LIM will perform all strategic mine planning and will conduct resource/grade control.

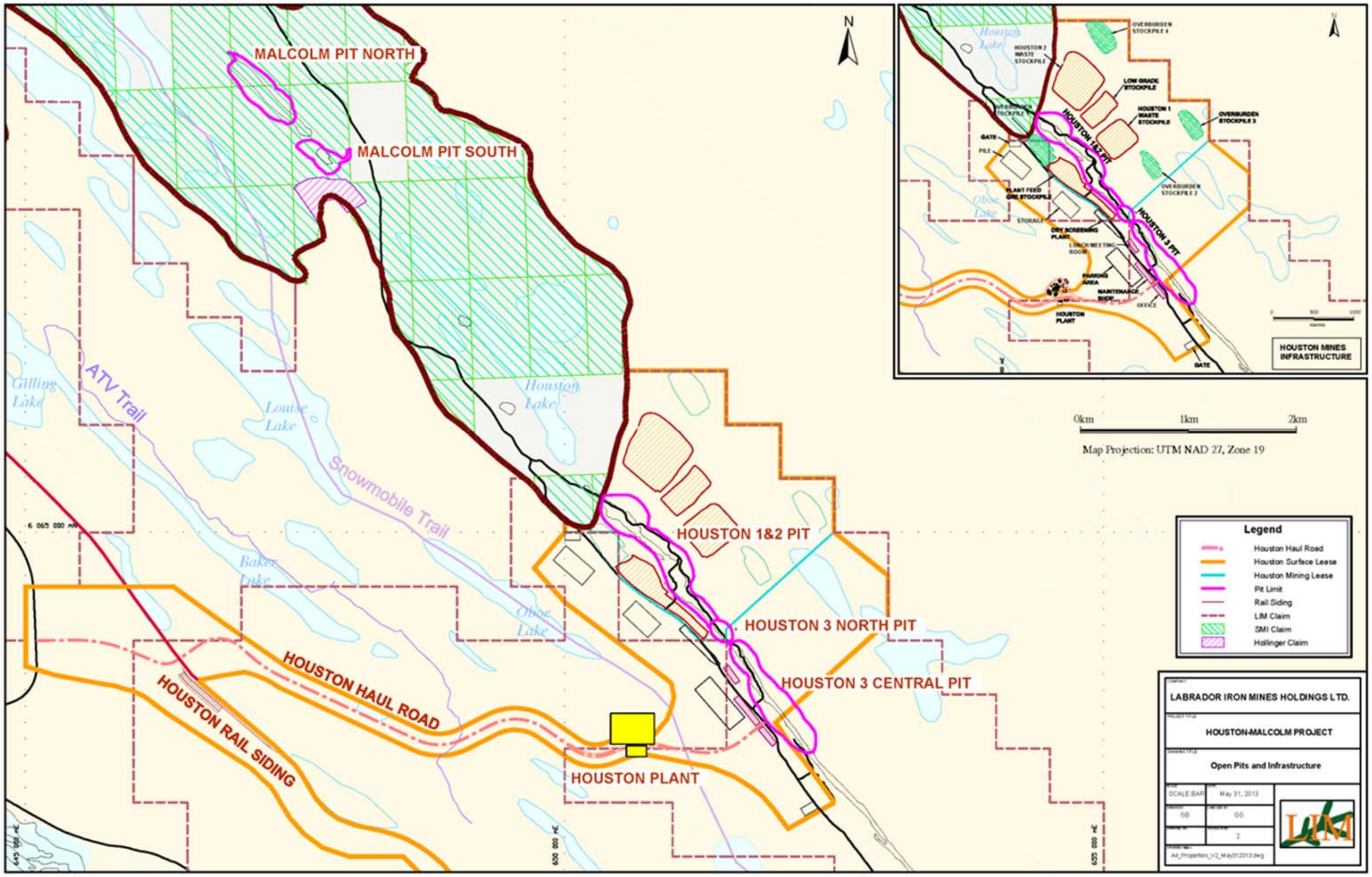
Mining will be conducted in a sequential manner using conventional open pit mining methods. Mechanical methods will be used, where possible, to break up the rock but this may also require the use of explosives. No new explosives storage facilities are planned for the Houston project. It is currently planned that the existing explosives storage at the James Mine area will be used to source any blasting materials. Some blasting will be required even though some of the ore and waste is free digging.

The Houston-Malcolm 1 Open Pit Mines will have overall pit wall angles ranging from 34 degrees in overburden to 45 degrees in competent rock. The face angles range from 40 degrees in overburden to 60 degrees in competent rock. These angles are based on dewatered/depressurized pit walls and controlled blasting techniques. The excavations will be mined in 10 meter benches with double benching before establishing 8 meters wide berm. LIM's experience at the operating James pit indicates that the pit slope and bench height assumptions are practical.

The proposed locations of the overburden stockpile area and temporary waste rock stockpiles as well as the preliminary pit outlines at the Houston 1 and 2 mine area are shown in Figure 16-10

The waste will be hauled to the specific waste dump sites. The waste rock dumps and overburden stockpiles are designed for Houston 1 & 2 project are located immediately to the east of the pit.

Figure 16-10: Proposed locations of the overburden and temporary waste rock stockpiles and pit outlines at Houston 1 and 2



Once mined, the ore will be hauled by truck approximately 1.5 km to the proposed beneficiation plant to be located adjacent to the Houston Haul Road. LIM plans to start mining the Houston deposits and initially process the DSO using a portable dry screening and crushing plant where the ore will be crushed to allow for downstream handling requirements and dry screened into Lump ore (6mm to 37.5 mm size), coarse sinter (2mm to 6mm size), and fines (less than 2mm size). Pending construction of the Beneficiation Plant, the ore will be processed through the dry plant. Lower grade or off-grade material will be stockpiled and stored until the wet beneficiation plant is in operation.

Environmental monitoring will be conducted during all phases of the work program from construction to closure.

LIM's nearby James Mine currently has an approved Environmental Protection Plan (EPP), including emergency spill response and contingency programs, in place and it is expected that this Plan will be updated for use at the Houston 1 and 2 Mine.

The Houston 1 & 2 Development, Rehabilitation and Closure plan has been submitted to the government of Newfoundland and Labrador for approval in April 2013.

LIM plans to conduct all of the mining operations for the Houston Project – pre-stripping, stockpiling of overburden rock and low-grade ore. LIM currently plans to contract out all transportation services including ore haulage, waste haulage, including service and maintenance of transportation equipment. LIM estimates that approximately 32 full-time direct or sub-contract positions will be created when the mine is in operation. The number of positions may change based on the equipment size selected for mining.

Production is preliminary scheduled to commence in the last quarter of Year 2 (Table 16-6). The estimated production schedule based on both dry screening and the wet plant predicts production for the first seven years is shown in Table 16-6.

Table 16-1: Houston 1 and 2 Production Schedule

Year	Waste Tonnes	Ore Tonnes	Total Tonnes
2	750,000	500,000	1,250,000
3	4,525,000	1,500,000	6,025,000
4	5,500,000	3,500,000	9,000,000
5	5,500,000	3,500,000	9,000,000
6	5,500,000	3,500,000	9,000,000
7	5,500,000	3,500,000	9,000,000
8	1,000,000	750,000	1,750,000
Total	28,275,000	16,750,000	45,025,000

16.6 Houston Beneficiation Plant

The proposed Houston Beneficiation Plant will be constructed 2-3 years following the initial development of the Houston 1 and 2 Deposits and will process ore from those deposits initially and potentially from the Malcolm and Houston 3 deposits at a later date. LIM anticipates that some ore from the Houston Project may be beneficiated at the Silver Yard facility at James Mine pending the construction of the proposed Houston plant.

As with LIM's existing Silver Yard facility, the proposed Houston Beneficiation process will involve the crushing, screening, washing and magnetic separation of the rock. No chemicals will be added as water is the only constituent used in the beneficiation process. The resulting wash water consists of water and fine rock material (reject fines). As at LIM's nearby existing James Mine project, the final products to be produced from the Houston 1 and 2 deposits will include lump and sinter fine ores for direct shipping to end users in Europe and/or Asia.

The throughput of the proposed Houston plant is designed for 600 tonnes per hour with an average daily production of 12,000 tonnes during peak operation. The processed ore will then be hauled approximately 6 km to the Houston Rail Siding where it will be loaded onto rail cars for transport south to the port of Sept-Iles.

The operation of the Houston Beneficiation Plant will benefit from the presence of existing or planned infrastructure including the Houston Haul Road and the Rail Siding which are part of the Houston Project, as well as the Redmond Pit.

A unique feature of the proposed Houston Beneficiation Plant project is that there is no discharge to the environment. Process water will be extracted from a previously flooded pit (Redmond Pit) which does not have an outlet and the plant rejects water will be discharged back into the Pit, i.e., a closed loop system.

16.6.1 Plant Location

LIM retained DRA Americas to conduct a comprehensive trade-off study of the alternative locations for the beneficiation plant. The objective of the study was to select a plant location and configuration that optimized the capital and operating cost of the plant, maximized the resource use of the area, while minimizing the adverse effects to the surrounding environment. The study focused on two major components, water management and plant location. Given the interdependencies between the options, several configurations were considered and compared using both qualitative and quantitative analysis that took into consideration a variety of factors including environmental effects, risk, costs, technical factors and logistics.

The Redmond Pit will be the reject water disposal location. Water will be withdrawn from Redmond Pit, piped to the beneficiation plant, used in the process cycle and piped back to the pit.

The selected location for the Beneficiation Plant is a site 1.5 km from the Houston 1 and 2 mine site. Reducing the distance for the transportation of unprocessed ore was a major consideration in the selection of the plant location. Approximately 20-25% of the unprocessed ore is removed as reject material during processing. By locating the plant near the mine site, the haulage distance of the unprocessed ore is 1.5 km.

This results in an overall reduction of truck haulage by 20 – 25% and a coinciding reduction in exhaust emissions.

The primary construction activities for the development of the Houston Beneficiation plant will include:

- Site preparation (clearing of vegetation, grading and excavation);
- Transporting equipment, construction materials and related supplies to site;
- Construction and erection of the plant;
- Construction / installation of the maintenance shop, and other buildings (e.g., office and washroom); and
- Environmental monitoring.

During construction, the requirement for temporary facilities (e.g., office, lunchroom, septic, potable water, power supply) will be satisfied through the use of existing infrastructure at the James Mine, and / or the Houston mine site. Once the beneficiation plant and all associated infrastructure have been constructed, all portable infrastructure from the Houston Project will be transported to the beneficiation plant location and utilized accordingly.

Approximately 750 m of new site access/haul roads, ranging in width from 7 m to 30 m will be constructed at the plant site and will connect into the Houston Haul Road (Figure 16-12).

Below is a list of infrastructure associated with the Beneficiation Plant area. Refer to Figure 16-11 and Figure 16-12 for infrastructure location and site layout.

- Site Roads;
- Beneficiation Plant;
- Truck Shop, Warehouse and Workshop;
- Administration Offices and Lunchroom;
- Change House & Washrooms;
- Fuel Storage and Dispensing Facility;
- Oil Storage;
- Diesel Generators;
- Sewage Treatment System;
- Water Supply (potable and fire);
- Stockpiles (Lump Ore, Sinter, Fines, Ultra Fines and Plant Feed); and
- Reject and Process Water Pipelines.

Figure 16-11: Houston Beneficiation Plant Detail View

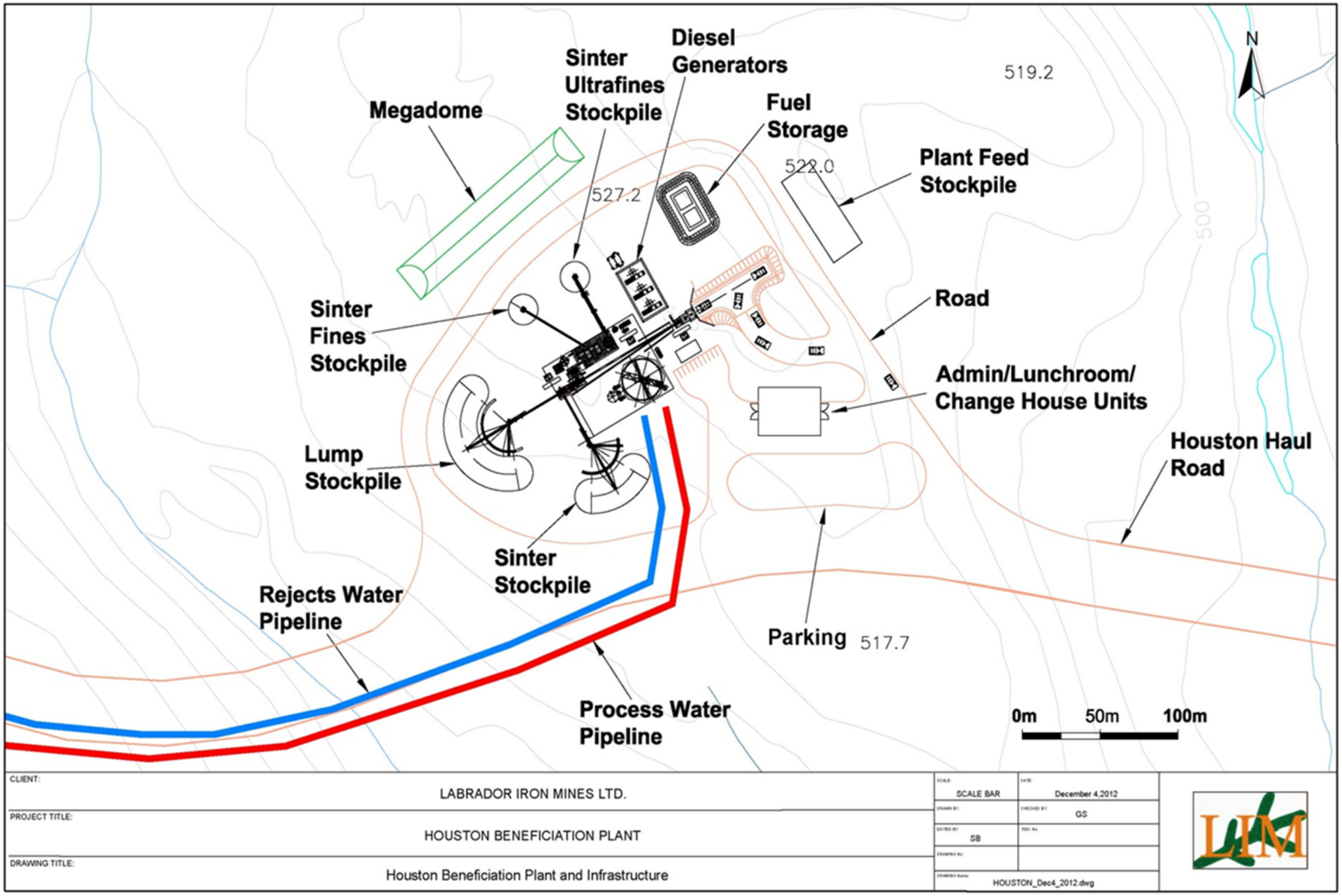
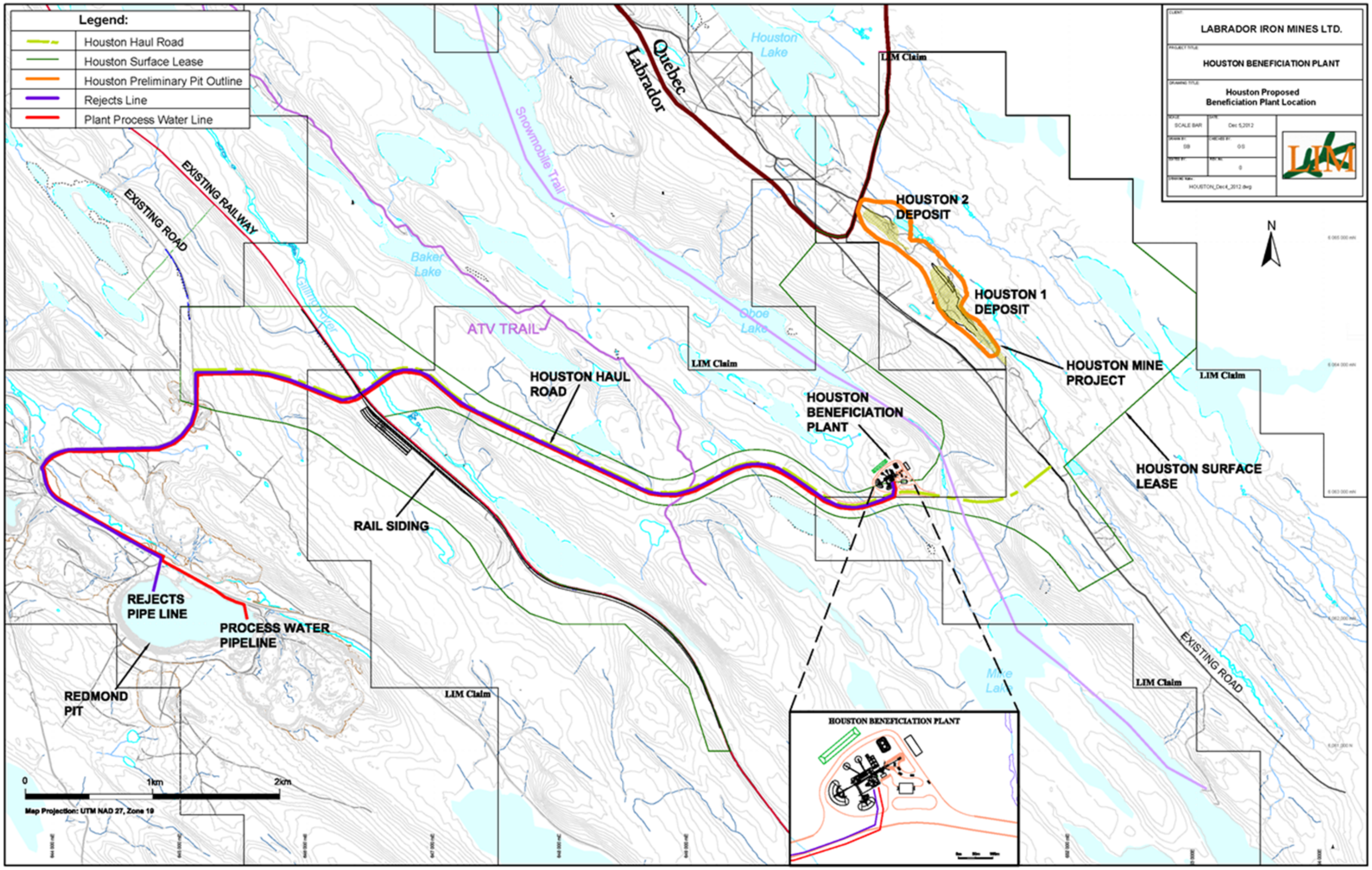


Figure 16-12: Plant Location and General Site Layout



16.6.2 Beneficiation Plant Operations

The Beneficiation plant will occupy a footprint of approximately 20,660 m^2 and will consist primarily of crushing, screening, washing equipment, magnetic separators and conveyors.

The Beneficiation plant design is outdoors and due to the harsh winter climates in the Schefferville area is scheduled to operate for six months per year (May through October). An option to extend the plant's operation for a longer period of time may be considered in the future, which would involve enclosing the plant within a building. Such an option would allow the wet plant to operate longer per year, leading to higher volume of processed product per year and, as a result, a reduction in mine life.

16.6.3 Process Description

The beneficiation process is outlined in Figure 16-13. The plant is designed for a nominal operating rate of 600 tph to a maximum of 720 tph and an overall ore recovery estimated to be 75%. The following are the major components of the plant, which are described below:

- Plant Feed Area (Primary Tip and Crushing);
- Scrubbing and Secondary Crushing;
- WHIMS Thickening and Filtration;
- Rejects Pumping;
- Plant Water; and
- Services.

16.6.3.1 *Plant Feed (Primary Tip and Crushing)*

The plant feed area includes the ramp for the haul truck, static grizzly, inload bin, grizzly feeder, primary (jaw) crusher, sacrificial conveyor and plant feed conveyor (Figure 16-13).

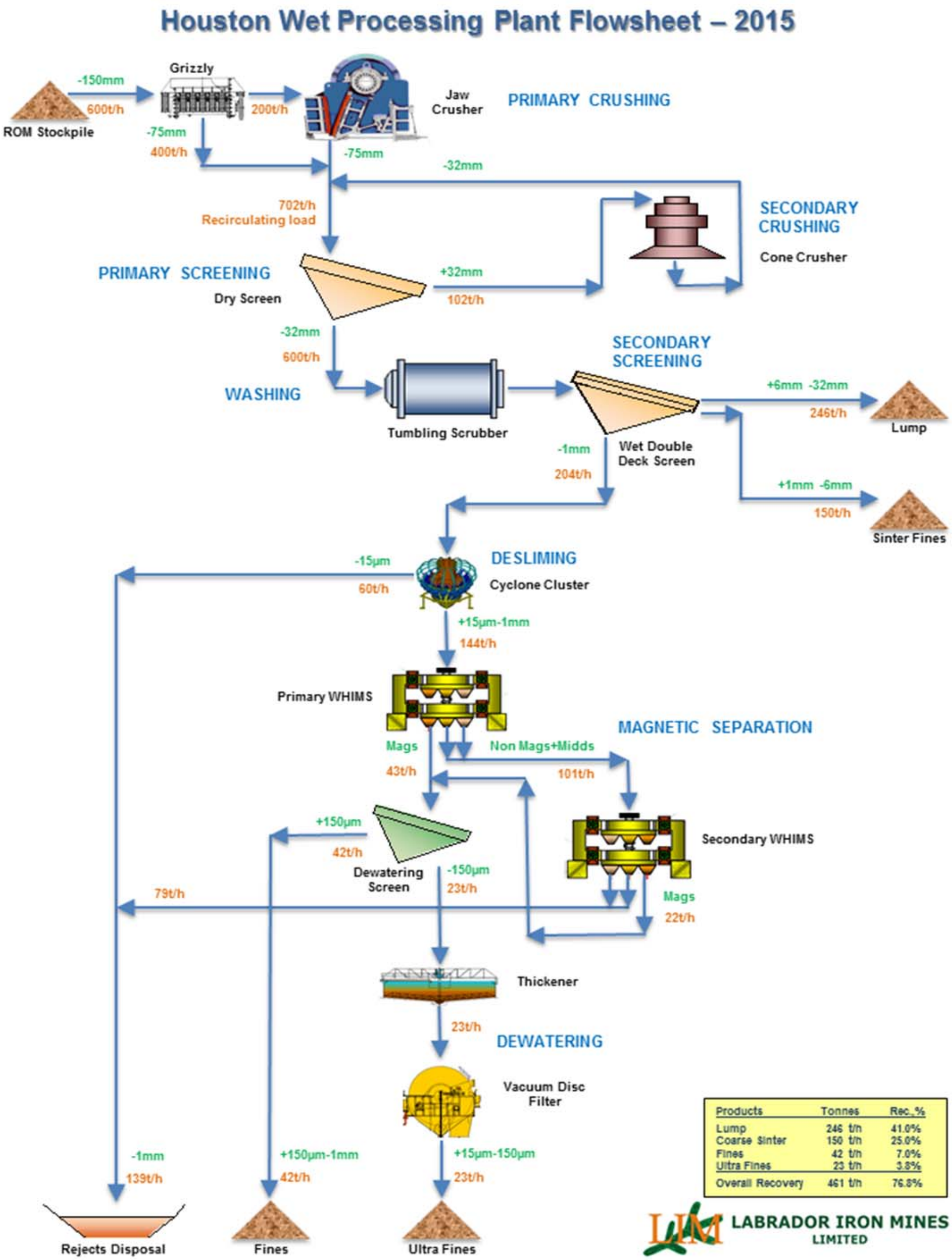
Run-of-mine ore will be dumped directly by trucks into the 250 tonne in-load bin fitted with static grizzly set at 300 mm bar spacing for feed top size control. A vibrating grizzly feeder set at 75 mm will draw ore from the in-load bin. The grizzly feeder oversize will be fed to the jaw crusher set at 75 mm to produce a 125 mm lump size. The product of the primary crushing station will be transported by a series of conveyors to the primary screen. A metal detector will be installed on the plant feed conveyor to prevent tramp iron from damaging subsequent equipment, particularly the secondary crusher. The under-crusher conveyor will be fitted with a programmable hammer sampler for automatic sampling.

This area includes the primary screen, scrubber, secondary crusher, secondary screen and several conveyors. The plant has been designed as a single line process, thus eliminating several machines, conveyors and lessening the footprint of the plant.

Primary screening will be carried out by a horizontal vibrating screen with aperture size of 32 mm which will be operated in closed circuit with the secondary crushing circuit. The screen oversize with particle sizes +26 mm will be conveyed to a 40 t secondary surge bin while the undersize -32 mm particle size, will gravitate to the ore scrubber. A pan feeder will reclaim material from the surge bin feeding it to the cone crusher which will be fitted with a coarse profile cavity set at 45 mm producing 70 mm lump size material. The secondary crusher product will be transported back to primary screening.

A short length belt conveyor will be used to aid the feeding of material to the ore scrubber to minimize clogging issues in the feed chute. Ore scrubbing will be accomplished for 30 sec at 65% solid concentration to disintegrate agglomerated fines from rocks. Process water will be added in the scrubber feed at controlled flows relative to the plant feed rate to maintain the operating pulp density.

Figure 16-13: Houston Wet Processing Plant Flow Diagram



16.6.3.2 *Screening, Scrubbing and Secondary Crushing*

The discharge of the ore scrubber will gravity flow to a double deck secondary multi-sloped vibrating screen equipped with water sprays. The top and bottom deck of the secondary screen will be fitted with 6 mm and 1 mm opening panels, respectively. Materials retained on the top deck (-32 mm, +6 mm) and on the bottom deck (-6 mm, +1 mm) will be transported to the lump ore and sinter fines stockpile, respectively, via transfer conveyors and stackers. Materials passing the bottom deck (-1 mm) will be pumped to the cyclone cluster.

Hammer samplers will be installed on the transfer conveyors of lump ore and sinter fines for product quality control and accounting.

16.6.3.3 *WHIMS, Thickening and Filtration*

This area consists of the cyclone cluster, primary and secondary WHIMS, dewatering screen, thickener, disc filter and a conveyor.

Seven out of the nine 10" hydro-cyclones will be operated at any one time to de-slime the secondary screen undersize removing particles finer than 15 microns. The overflow of the cyclone, where majority of the fine particles will be reporting is then pumped to the rejects tank while the underflow will be fed to the primary Wet High Intensity Magnetic Separator (WHIMS).

The non-magnetic materials from the primary WHIMS will be reprocessed in the secondary WHIMS to maximize recovery. The combined magnetic products of primary and secondary WHIMS will be pumped to the 5-deck Derrick Screen Stacksizer fitted with 300 micron aperture panels.

The Derrick screen oversize (-1 mm, +0.3 mm) at 12% moisture will be conveyed to the fines stockpile while the undersize (-0.3 mm, +0.015 mm) will be pumped to the thickener. Thickener underflow at 75% solid concentration will be pumped to a vacuum disk filter as final dewatering step. The filter cake, with moisture content of 15%, will be conveyed to the ultra-fines stockpile.

At regular frequency, the cloth of the disk filter will be washed to reduce blinding, thus restoring filtration efficiency. The cloth wash water will be pumped back to the thickener feed well for pulp dilution.

16.6.3.4 *Rejects Pumping*

Three process streams will handle the plant rejects which include the cyclone cluster overflow, secondary WHIMS non-magnetic materials and thickener overflow. The plant rejects will be pumped to Redmond pit by three pumps operating in series. Each pump will be operated with full flow flush seal gland water that will be supplied by a dedicated positive displacement pump.

16.6.3.5 *Plant Water*

Redmond pit water will be the sole source of water for the process plant as well as for emergency supply. Raw water from the pit will be pumped by diesel-driven pumps to the 140 m^3 process water and 10 m^3 gland water tanks. Water from the vacuum filter drain will be recycled back to the plant though the process water tank while the filtrate will be pumped to the thickener for dilution.

16.6.3.6 *Services*

High pressure compressed air for servicing instruments and operating pneumatic tools will be supplied by an air compressor installed with an air dryer and air receiver.

16.6.3.7 *Truck Shop, Warehouse and Workshop*

The truck shop, warehouse and workshop will be housed within a Megadome measuring approximately 137 m x 24 m x 13 m. This will allow sufficient space for the maintenance and storage of heavy equipment (i.e., haul trucks) and spare parts as well as a mechanical and electrical workshop.

The floor in the truck shop portion will be concrete and poured prior to the erection of the structure while the remainder of the flooring will be precast concrete slabs for lining only.

16.6.3.8 *Administration Offices and Lunchroom*

The administration offices and lunch room will be modular trailer units. There will be a total of eight (8) units, each occupying a footprint of approximately 36 m^2.

16.6.3.9 *Change House/Washrooms/Camp*

The change house/washrooms (male and female) will be a modular unit occupying a footprint of approximately 30 m^2. The camp and kitchen located at James Mine (Bean Lake Camp) will be used for both the construction and operation phases of the Houston project.

16.6.3.10 *Fuel Storage and Dispensing Facility*

The fuel storage system will consist of two bladders with a combined capacity of 227 m^3. The bladders will be equipped with liners for secondary containment, an oil water separator, fill pump and associated hoses and valves. The fuel will be distributed via two separate fuel dispensing systems.

The bladders will be used to supply fuel for the plant generators and mobile equipment and will be filled by a certified contractor, via mobile supply vehicles.

There will be containment berms located around the bladders and the oil water separator. Following construction of the berms, the liners will be installed and then the bladders will be placed into position.

16.6.3.11 *Generators*

The expected peak demand load from the beneficiation process is currently estimated at 3,517.70 kW and total connected load is 6,068.55 kW. Electrical power will be generated by up to four (three on duty, one on standby) mobile diesel generators each running at 1825 kW. The generators will be self-contained units in weatherproof enclosures placed on concrete pads, with all the proper protection, controls and synchronizations in place.

A standby/emergency generator will supply power to emergency systems including the fire suppression system and other necessary items (e.g., lighting, pumps, air compressors).

16.6.3.12 *Stockpiles*

There will be five stockpiles located at the plant location: four product stockpiles: lump, sinter, fines, ultra fines, as well as a plant feed stockpile.

16.6.3.13 *Pipelines*

Two pipelines are required for the wet plant as detailed below. Both pipelines will be above-ground and placed along the shoulder of the Houston Haul Road.

To support the pipelines, a 2 m wide by 0.75 m high support berm has been proposed for the approximate 9-10 km distance from the plant to Redmond Pit, with concrete blocks placed every 200 m for additional support.

Reject Water Pipeline

A 40 cm high density polyethylene (HDPE) pipe will carry the plant reject water to the discharge location at Redmond Pit. At the Gilling River bridge, the pipe will be encapsulated in an outer protective rigid pipeline for addition protection against accidental rupture or breakage.

Process Water Pipeline

A 50 cm HDPE pipe, paralleling the rejects pipeline, will transport process water to the plant from Redmond Pit.

16.6.4 Plant Production Schedule

The estimated production schedule is based on 600 tonnes per hour (12,000 tonnes per day) capacity with maximum of 720 tonnes per hour. Based on the 12,000 tonnes per day capacity and the expected overall recovery of 75%, it is estimated that a total of 1.5 million tonnes of product will be recovered from 2.0 million tonnes of feed per year over the 12 year life of mine (Table 16-2).

Table 16-2: Proposed Houston Plant Production Schedule

	Ore (Tonnes)	
Plant Year	**Feed**	**Recovered**
1	1,000,000	750,000
2	2,000,000	1,500,000
3	2,000,000	1,500,000
4	2,000,000	1,500,000
5	2,000,000	1,500,000
6	2,000,000	1,500,000
7	2,000,000	1,500,000
8	2,000,000	1,500,000
9	2,000,000	1,500,000
10	2,000,000	1,500,000
11	2,000,000	1,500,000
12	2,000,000	1,500,000
TOTAL	23,000,000	17,250,000

16.7 Environmental

16.7.1 Environmental Assessments

Dating back to 2005, LIM initiated ongoing environmental baseline data collection programs in the Schefferville project area, including programs in traditional environmental knowledge, heritage and archaeological resources, wildlife, avifauna, fish and fish habitat, air quality, noise and vibration, acid rock drainage (ARD) potential, surface and groundwater quality and geochemistry. This information formed the basis of the Schefferville Area Iron Ore Mine Project (also known as the Schefferville Area Iron Ore Mines), formally submitted to the Newfoundland and Labrador Department of Environment and Conservation (NL DOEC) by LIM in April 2008, as well as the revised Environmental Impact Statement (EIS) submitted to NL DOEC in August, 2009.

In November 2009, LIM was advised by the NL Minister of Environment and Conservation that the EIS complied with the Environmental Protection Act and required no further work under the Provincial environmental assessment process. On February 12, 2010, LIM was informed that, under authority of Section 67(3)(a) of the Environmental Protection Act, the Lieutenant Governor in Council released the Schefferville Area Iron Ore Mine Project (James and Redmond deposits and Silver Yards processing site) from further environmental assessment. Newfoundland and Labrador Environmental Assessment Process

In December of 2011, LIM submitted a project registration document to the Government of Newfoundland and Labrador, outlining the development of a series of open pit mining operations on Houston #1 and Houston #2, to be supported by an access road and a railway siding.

In March 2012, the Minister of Environment and Conservation the Government of Newfoundland and Labrador informed the Company that, in accordance with the Environmental Protection Act, the Houston 1 and 2 Deposits Mining Project, including the haul road and railway siding, was released from further environmental assessment, subject to a number of conditions.

In February 2013, LIM filed registration documents with the Government of Newfoundland and Labrador and with the Federal Canadian Environmental Assessment Agency (“CEAA”) for the second phase of development of the Houston 1 and 2 deposits, which includes the construction of a wet process beneficiation plant incorporating crushing, screening, washing and magnetic separation.

The Houston Beneficiation Plant is subject to an environmental assessment pursuant to Part III of the Newfoundland and Labrador Regulations 54/03, *Environmental Assessment Regulations, 2003*, under the *Environmental Protection Act*, SNL 2002 Ce-14.2. Government of Canada Environmental Assessment Process

Federal environmental assessment (EA) is regulated under the *Canadian Environmental Assessment Act (CEAA), 2012*. Under CEAA 2012, only projects that are included within the *Regulations Designating Physical Activities* require federal EA.

The Houston Beneficiation Plant is considered a *Designated Project* pursuant to Section 15(b) of the Regulations as it involves the construction, operation, decommissioning and abandonment of a metal mill with an ore input capacity of 4000 t/d or more. This plant will be capable of upgrading lower grade ore (50% to 59% Fe) into saleable sinter and lump products. The ore beneficiation target for the Houston Beneficiation Plant is up to 1.5 MT/yr, which is based on a 12,000 t/d projection.

In April 2013, CEAA notified LIM that a Federal Environmental Assessment was not required and in May 2013, the Minister of Environment and Conservation the Government of Newfoundland and Labrador released this second phase of the Houston Project from the provincial environmental assessment process, subject to conditions.

Environmental release of the various phases of the Houston Project allows the Company to complete the applications for permits and regulatory approvals required for the construction of the haul road and rail siding, development of the Houston 1 and 2 deposits and construction of the wet processing plant for the Houston Project.

16.7.2 Environmental Setting

A large body of knowledge exists as a result of the numerous baseline surveys conducted in the region and the extensive literature reviews undertaken in support of these environmental assessments. A detailed and thorough analysis can be found within these documents while a brief summary is provided below. No additional regional environmental studies have been undertaken.

16.7.2.1 *Rare Plants*

Rare plants are categorized as those species listed in Schedule 1 of the federal *Species at Risk Act* (SARA) and designated endangered or threatened under the Newfoundland and Labrador *Endangered Species Act* (NLESA). No listed plant species, protected federally under Schedule 1 of SARA or provincially pursuant to the NLESA, have been identified or are suspected to occur in the Houston Project area.

16.7.2.2 *Aquatic*

There are no water bodies within the proposed footprint of the Beneficiation Plant. The Gilling River and an unnamed tributary (Tributary 1) will be crossed by the process water and reject water pipelines, however the crossings will be along the Houston Haul Road. The only other water body within the project footprint is Redmond Pit.

16.7.2.3 *Gilling River*

The Gilling River is a larger system that originates from several lakes west of Schefferville and generally flows in a NW to a SE direction. The proposed corridor crossing is situated between Gilling Lake to the north and Astray Lake to the south. The Gilling River is a coldwater system providing habitat for species such as brook trout. Brook trout were angled by a first nation assistant during the field investigation (AECOM 2011).

16.7.2.4 *Wildlife*

Various field surveys have been undertaken to identify the presence of wildlife species in the vicinity of the Houston Project area. These include wildlife and vegetation surveys conducted on the Houston Property in August 2009 (Stassinu Stantec 2010), two caribou surveys conducted in May 2009 (D'Astous and Trimper 2009) and May 2010 (D'Astous and Trimper 2010), and additional surveys conducted by AECOM during the summer 2011.

Caribou surveys conducted in May 2009 and May 2010 showed no use of the area by caribou at this time.

16.7.2.5 *Species at Risk*

No terrestrial wildlife species at risk were identified within the Project area during the field surveys conducted for the Houston Project.

16.7.2.6 *Historic Resources*

No archaeological or cultural sites are known or registered in the Houston Project area. In 2011, an archaeological assessment was conducted of the proposed Houston road by Stantec (formerly Jacques Whitford) on behalf of LIM. Based on the review of available information, including published and unpublished literature, archaeological reports, the Archaeological Site Record Inventory at the PAO and aerial photography, it was determined that given the nature and extent of ground disturbances that have occurred in the area from past mining activities as well as the prevalent topographic and hydrographic features, the majority of locations researched have Low historic resources potential (Labrador Iron Mines 2011).

16.7.2.7 *ARD Sampling and Testing Program*

A phased ARD sampling and testing program has been initiated to investigate and confirm the ARD potential for all geological materials (ore and waste) to be exposed at the Houston 1 and 2 Project area. Based on the static ARD test results available to date, it is not anticipated that any of the ore or waste materials for this Project will be acid generating

16.7.2.8 *Environmental Protection*

In addition to the Schefferville Area Iron Ore Project Emergency Response Plan (ERP), LIM also has an approved Waste Management Plan (WMP) and an approved Environmental Protection Plan (EPP) in place for the Houston Project. The WMP provides direction on waste handling, storage, transport and treatment of various waste produced. The EPP outlines practical procedures required for all personnel, contractors or suppliers to reduce or eliminate potential adverse environmental effects associated with the project. These documents will be updated, as necessary, to reflect any required changes and enforced for the duration of the project. Prior to commencing operations all workers will be properly trained in the WMP, ERP and EPP procedures and responsibilities.

16.7.2.9 *Rehabilitation and Closure*

A Rehabilitation and Closure Plan for the Houston Beneficiation Plant will be prepared and submitted for approval to the Newfoundland and Labrador Department of Natural Resources, as required under the *Newfoundland and Labrador Mining Act*, Chapter M-15.1. In accordance with the Act, the Plan will detail the rehabilitation processes to be implemented at each stage of the project up to and including closure.

LIM intends to employ and promote strategies and methods that will minimize adverse effects on the environment throughout the construction and operational phases of the Project which will aid in the overall rehabilitation process. Such mitigating strategies include:

- Terrain, soil and vegetation disturbances will be limited to that which is absolutely necessary to complete the work within the defined project boundaries;

- Wherever possible, organic soils, glacial till, and excavated rock will be stockpiled separately and protected for later rehabilitation work;
- Surface disturbances will be stabilized to limit erosion and promote natural re-vegetation;
- Natural re-vegetation of surface disturbances will be encouraged.
- LIM will incorporate environmental measures in the contract documents.

As such, contract documents will reflect the conditions specified for the construction and operation of the project. Contractors will thus be contractually bound to comply with the environmental protection standards set by LIM and in effect, ensure compliance with the applicable federal and provincial regulatory requirements.

16.7.2.10 *Closure*

Approximately one year prior to the cessation of operations the rehabilitation and closure plan will be reviewed and updated in consultation with the Mines Branch, Department of Natural Resources. This final review will define the detailed closure rehabilitation design and procedures to fully reclaim the Houston Beneficiation Plant area.

Closure rehabilitation within the LIM development footprint will generally include the following activities:

- Clean-up, removal and proper disposal of potentially hazardous materials;
- Dismantling and off-site removal of buildings and structures (e.g., beneficiation buildings, conveyors, crushing plant, laydown areas, fuel storage areas);
- Removal of process water, reject water, and sewage water pipelines;
- Replacing overburden and re-vegetation of disturbed area; and
- Re-establishment of site drainage patterns, as near practical, to natural, pre-development conditions.

16.7.2.11 *Post Closure Monitoring*

As required, a post-closure monitoring program will be designed and implemented in consultation with appropriate regulatory agencies. Once physical and chemical stability of the site has been achieved, the land will be relinquished to the Crown.

In the fall of 2012, LIM commissioned a study to collect information on current land use activities in the region by individuals from the communities of Matimekush-Lac John and Kawawachikamach. Land use activities identified include hunting, gathering, fishing, trapping, recreational and cultural / spiritual activities. The information collected will be used by LIM to plan construction and operation activities such that interactions between current and future mining and land users will be minimized. Therefore, there will be no change to land use as a result of carrying out the Project.

16.7.3 Permitting

Environmental release of the various phases of the Houston Project allows the Company to complete the applications for permits and regulatory approvals required for the construction of the haul road and rail siding, development of the Houston 1 and 2 deposits and construction of the wet processing plant for the Houston Project.

Table 16-3 summarizes anticipated permits, approvals and authorizations that may be issued by the province of Newfoundland and Labrador for the Houston Project. There are no Federal permits, approvals or authorizations anticipated to be required for the Project.

Table 16-3: Anticipated Permits, Approvals and Authorizations

Permit, Approval or Authorization Activity	Issuing Agency
▪ Release from environment assessment process	Department of Environment and Conservation (DOEC) – Environmental Assessment Division
▪ Permit to Construct a Non-Domestic Well ▪ Certificate of Approval (C of A) to Alter a Body of Water, Schedule H: Other works within 15 m of a body of water	DOEC – Water Resources Management Division
▪ C of A for Construction and Operation ▪ C of A for Generators ▪ Approval of Environmental Contingency Plan (Emergency Spill Response) ▪ Approval of Environmental Protection Plan	DOEC – Pollution Prevention Division
▪ Permit to Control Nuisance Animals	DOEC – Wildlife Division
▪ Blasters Safety Certificate ▪ Approval for Storage & Handling Gasoline and Associated Products ▪ Fuel Tank Registration ▪ Life and Safety ▪ Permit to Construct a Potable Water System ▪ Permit to Construct a Sewage Treatment System	Government Service Centre (GSC)
▪ Approval of Development Plan, Rehabilitation and Closure Plan, and Financial Security	Department of Natural Resources (DNR) – Mineral Development Division
▪ Surface Rights Lease (Amendment)	Department of Natural Resources (DNR) – Mineral Lands Division
▪ Operating Permit to Carry out an Industrial Operation During Forest Fire Season ▪ Permit to Cut ▪ Permit to Burn	DNR – Forest Resources

16.7.4 Socio-Economic and Aboriginal

The closest community to the Houston Project is Schefferville, Quebec which is located 20 km north of the Houston Project, less than 2 km from the border with Labrador. Schefferville was established by the Iron Ore Company of Canada in 1954 to support mining operations in the area.

Iron ore mining at Schefferville ceased in 1982 and many of the 4,000 non-Aboriginal occupants left at that time, leaving a primarily Aboriginal community comprised of people who had settled there in the preceding 30 years. Some houses and public facilities have been demolished since this time, but some new homes have been built. The median age is 39.2 years, with approximately 60 families residing within the community.

LIM's James Mine went into full production in 2011, marking the first mining and production of iron ore from this historic mining area in over 30 years. This development has brought many positive and direct benefits and the continued development of the Houston 1 and 2 Deposits and the construction of the beneficiation plant will build on this work. Direct and indirect economic benefits for various communities and stakeholders are expected from the proposed development. 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, education and training, and consistent and planned development and growth.

The Houston Project will add an additional economic stimulus to the Schefferville area as well as to the provinces of Newfoundland and Labrador and Quebec.

The EIS (LIM 2009) and the Houston 1 and 2 Project Registration (LIM 2012) both concluded that there are no significant adverse effects on communities or human health anticipated to occur as a result of either Project. No changes to communities or human health will occur as a result of carrying out the Houston Project.

16.7.5 Consultations

Since early exploration activities in 2005, LIM has been in continual contact with the communities located near the development area and with the Innu Nation of Labrador and other Aboriginal/First Nation communities having a stated interest or historic connection to the area. LIM has initiated communications with occupants of cabins identified within the region and will continue communications with them as the Project develops.

As well, LIM maintains contact with the civic administration of the towns of Labrador City, Wabush, Happy Valley-Goose Bay and the town of Schefferville. In these communities stakeholder consultation activities have included frequent meetings with Band Councils, Mayors and Councils, local businesses, local political representatives, local interest groups, provincial and federal regulators, educators and a wide variety of consultants that are involved with stakeholders.

LIM has opened community relations offices at the existing Schefferville Area Iron Ore Mine – Silver Yards, and in Labrador City. LIM is dedicated to providing early and clear information to the community and working with all communities towards the common goal of positive, respectful and sustainable development in the area.

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

LIM has engaged in substantial community and public consultation activities including aboriginal consultation in both Labrador and Quebec (in the Schefferville area) and surrounding areas since 2008 and will continue to do so during the construction and operation of the plant.

LIM also conducted extensive consultations on the Houston 1 and 2 Deposits Mining Project.

16.7.6 Aboriginal Consultation

Consultation is a central objective of the environmental assessment process to identify and address issues and concerns related to the Project.

The Quebec-Labrador Peninsula area probably has one of the most complicated patterns of aboriginal settlement in eastern Canada with six or possibly seven Aboriginal or First Nation peoples claiming traditional and native rights to all or part of the area underlain by LIM's Iron Ore Project. Several of the communities have conflicting territorial or land claims. This regional complication of Aboriginal/First Nation issues has prompted the Government of Canada to establish an Overlapping Commission on November 2010. This Commission will provide a forum for addressing the issues of jurisdictional overlap for the territories and the sharing of economic development initiatives as a result of mining and hydro-electric development in the region.

The Aboriginal groups of the Quebec-Labrador Peninsula most directly affected by the Houston Project are the Innu Nation of Labrador, the Naskapi Nation of Kawawachikamach, the Innu Nation of Matimekush-Lac John, the Innu Nation of Takuaikan Uashat Mak Mani-Utenam (ITUM) and NunatuKavut (formerly the Labrador Métis Nation). (Figure 16-14). These groups may have overlapping land claims issues or traditional claims covering western Labrador. The Naskapi Nation is the only group with a finalized comprehensive land claim agreement; the others are in various stages of negotiation with the federal and provincial governments. However, the land claims of Quebec Aboriginal groups in Labrador have not been accepted for negotiation by the Government of Newfoundland and Labrador.

LIM has pursued an extensive and proactive engagement with all of the aboriginal communities living close to the project location or having traditional claims to the surrounding territory and commenced such consultations respecting the Schefferville Area Iron Ore Mine (Western Labrador) Project.

These consultations have resulted in the signing of IBA agreements with the Innu Nation of Labrador (July 2008), the Naskapi Nation of Kawawachikamach (September 2010), Uashat mak

Mani-Utinem First Nation (June 2011) and the Matimekush – Lac John First Nation (February 2012).

The respective agreements relate to the establishment of a positive ongoing relationship between LIM and the Aboriginal/First Nation relating to the development and operation of the Project and to the economic benefits that will accrue to the aboriginal communities. Specifically the agreements make provisions for employment, education and training, contract opportunities, social and financial benefits, environment and cultural protection measures.

The agreements include processes for the respective communities to directly participate and/or be actively consulted through:

- Implementation committee;
- Community collaboration committee;
- Training and education committee;
- Establishing employment and workplace conditions;
- Business and contracting opportunities;
- Environmental monitoring committee;
- Traditional knowledge collection;
- Heritage resource and cultural protection; and
- Economic benefits.

The Implementation Committee is made up of representatives from each of the Aboriginal communities and LIM senior management. The agenda of these quarterly meetings include: a Project Safety report, updates on operations, environmental performance, upcoming contracts, human resources, employment and training and upcoming activities and projects.

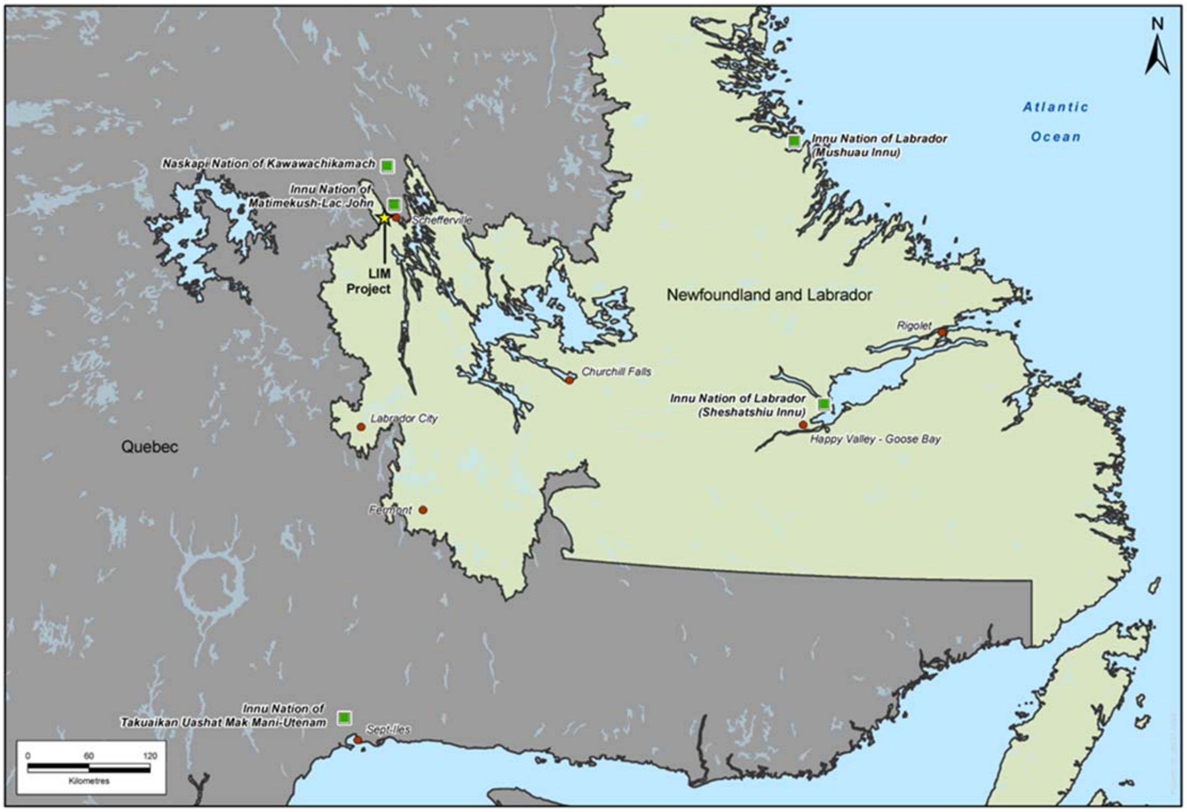


Figure 16-14: Aboriginal Communities

16.7.7 Aboriginal Communities

LIM has consulted with the four Aboriginal communities on all phases of the Schefferville Area Mine Project as well as the Houston Project and has obtained concurrence on the permits required for construction and operation activities.

16.7.8 Employment, Occupations and Economic Benefits

As demonstrated at the existing James Mine, LIM is committed to the creation and implementation of employment equity practices to help achieve maximum employment and training benefits for the region, including the recruitment, training, and advancement of qualified visible minorities and women, and, as such, is fully prepared to implement a Women's Employment Plan in association with the development and operation of the Project. LIM is also committed to ensuring maximum benefit to Newfoundlanders and Labradorians who reside nearest the resources.

LIM currently has an approved Benefits Plan and a Women's Employment Plan in place, which will be implemented during the construction and operation of beneficiation plant.

16.7.9 Employment

Approximately 112 employees will be required during the construction phase of the Beneficiation Plant. Certain management positions will be required throughout construction and may overlap with positions at LIM's existing operating mines at the James Mine.

Approximately 23 full-time direct or contract employees will be required during the operation phase of the Plant. The operating schedule is based on two 12 hour shifts per day on a continuous basis from May through to November annually.

16.8 Capital and Operating Cost Estimates

The information included in this section was provided by Labrador Iron Mines and reviewed by DRA. Mr. Justin Taylor, P.Eng. is responsible for the contents of this section.

The Houston & Malcolm 1 Project have been planned as a multi-phase mining operation which is expected to have a mine life of more than 14 years.

16.8.1 Construction

Capital costs for the Houston Phase One project for road, rail siding and Houston 1 and 2 mine site development is estimated at $60 million. Out of this total, $37 million, excluding any contingency, is budgeted in Year 1.

The capital cost summary for Phase 1 is included in the following Table 16-4:

Table 16-4: Capital Cost Summary

Houston 1 and 2 Phase 1 Capital Cost Summary			
	Year 1	**Year 2**	**TOTAL**
Mine Engineering and Mine Development	$1,933,225	$5,000,000	$6,933,225
Road Construction	$21,330,848	$0	$21,330,848
Bridge and Culvert Construction	$2,563,070	$0	$2,563,070
Siding Construction	$7,192,584	$0	$7,192,584
Other Civil and Facilities	$2,755,504.57	$5,376,650	$8,132,155
Metallurgy and Process Design	$995,671	$0	$995,671
Dry Crushing and Screening Plant	$258,000	$10,120,000	$10,378,000
TOTAL	**$37,028,903**	**$20,496,650**	**$57,525,553**

Mine engineering and mine development costs in Year One include mine design, site design, acquiring all required permits, and construction costs for haul road. In Year Two, this cost includes mine pre-stripping including tree clearing, topsoil removal and storage for later reclamation use, and waste pre-stripping.

The construction costs for the haul road will cover construction of a 8 km of 8.5m to 11.5 m wide access road. This road will be configured for access to the Houston 1 & 2 deposits as well as Houston 3 and Malcolm 1 from the Redmond property which is connected by existing road to LIM's Silver Yards processing facility and operating James Open Pit mine. The construction cost includes a steel long span panel bridge across the Gilling River that will allow for canoes and small watercraft to pass under and does not impact the high water mark of the watercourse.

It is assumed Houston rail siding construction will occur in Year One but, depending on season and time of year, maybe deferred to Year Two. The rail siding will be constructed along the main Tshiuetin rail line connecting Schefferville to Emeril Junction west of Labrador City. This siding will be 5km long and allow for loading of rail cars at that location.

Other civil and facilities costs include dewatering planned for Year One, engineering and construction supervision costs, and minor facilities needed for the operation such as temporary security buildings, offices, and maintenance facilities.

Other civil and facilities planned for Year Two include dewatering, engineering and construction supervision costs, and minor facilities needed for the operation such as temporary security buildings, offices, and maintenance facilities.

Metallurgy and process design costs in Year One refer to metallurgical testing and design, and in Year 2 represent the costs are for procurement and installation of dry crushing and screening equipment.

The estimating accuracy for the capital costs contained in this report are considered to be +/- 20%, level of estimating accuracy. Certain elements in the capital cost related to haul road and railway siding are at a detailed design level. Firm contractor quotations have been obtained for some of the Phase 1 work.

An independent desktop evaluation was undertaken by DRA using the capital line items provided by Labrador Iron Mines and the capital numbers were arrived at independently was in the order of $60 million including a 13% overall contingency comprised of a weighted contingency per line item. Based on this evaluation, the DRA numbers are within 4% of the projected capital costs estimated by LIM. This is within the estimating accuracy of a typical desktop study of +/- 30%, and therefore DRA believes these costs to be a reasonable estimate of the overall capital costs for the Houston 1 and 2 project as described above.

16.8.2 Houston Phase 2: Wet Plant Capital Cost Estimate

For Phase 2 of the Houston Project, the Beneficiation Plantit is estimated that , subject to detailed engineering and design, an additional investment of $65 to $70 million will be required, anticipated in Year 3 of the Houston Project, for the construction of the Houston wet beneficiation plant. As at March 31, 2013 LIM had invested $74 million on its Silver Yards Beneficiation Plant for the James Mine. The Silver Yards Plant is generally of a similar size and design to the proposed Houston plant, and represents a reasonable comparative estimate of the capital costs of the Houston Plant.

16.8.3 Houston Operating Costs

Mine operating costs for Houston Phase 1, with dry crushing and screening only, are estimated initially at $60 per tonne. With the introduction of the wet processing plant in Phase 2, there will be additional operating costs but with the efficiencies associated with increased production, it is expected that operating costs for Phase 2 will remain in the range of $65 per tonne.

As the projected Houston operating costs are generally based on existing mining experience at LIM's James Mine and LIM's existing agreements for railway and port facilities the projected Houston operating costs are considered to be at an accuracy of +/-10%.

Operating costs include all mining, processing, site general and administrative costs, and all rail transportation costs, including unloading at the Port of Sept-Îles. Houston mining and processing costs are estimated on the basis of owner-operator, rather than contract services.

Estimated Houston Operating Costs

	Average ($/dmt shipped)
Mining & Hauling	**$12**
Processing	**$11**
Transportation & Port	**$32**
General and Site Operations	**$10**
Total per tonne product	**$65**

16.8.4 Preliminary Production Schedule

The Houston and Malcolm deposits contain a total estimate of 39.3 million tonnes of NI-43-101 indicated resource iron ore of potential direct shipping quality with an anticipated 10-15 year mine life.

Construction of Houston Phase 1 can commence immediately after securing financing, and will ensure initial access and development, with processing higher grade ores through a dry crushing and screening process.

Mobilization to the site and set-up of basic site services and access can commence once the required permits are in place. Site preparation, infrastructure construction and full start-up (ready for production) are anticipated to take at least three months. Subject to regulatory approvals, construction is assumed to start at the Houston 1 and 2 deposits and on the Houston haul road in Year 1 and first ore on train can potentially be delivered within one year of construction start, depending in part on seasonal constraints.

Production is preliminary scheduled to commence in the last quarter of Year 1 (Table 16-6) with the introduction of the beneficiation wet plant in Year 4.

The estimated production schedule for the Houston wet process beneficiation plant is based on 600 tonnes per hour (12,000 tonnes per day) capacity with maximum of 720 tonnes per hour. Based on the 12,000 tonnes per day capacity and the expected overall recovery of 75%, it is estimated that a total of 1.5 million tonnes of product will be recovered from 2.0 million tonnes of feed per year over the 12 year life of mine, which is assumed to include Malcolm and Houston 3 (Table 16-26).

Table 16-5: Houston Plant Conceptual Production Schedule

	Ore (Tonnes)	
Plant Year	**Feed**	**Recovered**
1	1,000,000	750,000
2	2,000,000	1,500,000
3	2,000,000	1,500,000
4	2,000,000	1,500,000
5	2,000,000	1,500,000
6	2,000,000	1,500,000
7	2,000,000	1,500,000
8	2,000,000	1,500,000
9	2,000,000	1,500,000
10	2,000,000	1,500,000
11	2,000,000	1,500,000
12	2,000,000	1,500,000
TOTAL	23,000,000	17,250,000

The projected production schedule based on both dry screening and the wet plant production for the first ten years of the Houston project is shown in Table 16-6.

Table 16-6: Houston Conceptual Production Schedule

Year	Waste Tonnes	Ore Tonnes	Total Tonnes
1	750,000	500,000	1,250,000
2	4,525,000	1,500,000	6,025,000
3	5,500,000	3,500,000	9,000,000
4	5,500,000	3,500,000	9,000,000
5	5,500,000	3,500,000	9,000,000
6	5,500,000	3,500,000	9,000,000
7	5,500,000	3,500,000	9,000,000
8	5,500,000	3,500,000	9,000,000
9	5,500,000	3,500,000	9,000,000
10	1,000,000	750,000	1,750,000
Total	44,775,000	27,250,000	72,025,000

16.9 Malcolm and Houston 3

16.9.1 Malcolm 1 Project

The Malcolm 1 project is located 6 kilometers north-west of the Houston projects and is located in the province of Quebec. The existing access road will be upgraded to accommodate ore haulage and equipment movement.

It is anticipated that the Malcolm 1 project would use all major infrastructure built for the Houston projects. A separate dry crushing and screening facility will be required for the project. Products produced from dry crushing and screening will be hauled to the Houston haulage road and onward to the railway siding for loading. Low grade ore will be hauled to the Houston phase 2 wet facility for processing.

Malcolm 1 proposed open pit mines designs are not yet finalized as these properties are still in the early stage of planning.

Figure 16-1 and Figure 16-3 show the location of the Malcolm 1 project.

16.9.2 Houston 3 Project

The Houston 3 project is located to the south of the Houston 1 & 2 project and will utilize the same infrastructure. The Houston 3 project will utilize the Houston haul road to deliver the ore to the plant for processing and the products to rail siding.

Figure 16-2 show the location of the Houston 3 project.

17. (Item 25) Interpretation and Conclusions

There are no mineral reserves reported in this document. The resources reported in this document are compliant with current standards as outlined in NI 43-101.

All of the classified resource estimates given in this report are within LIMHL's minerals licences boundaries for the property.

The summary of the Houston deposit resource estimate can be seen in Table 17-1 below. The complete description of the Houston deposit resource estimate is available in Table 14-8.

Table 17-1: Summary of the Houston Estimated Resources

Area	Ore Type	Classification	Tonnage	Fe(%)	P(%)	Mn(%)	SiO_2(%)	Al_2O_3(%)
Houston	Fe Ore	Measured (M)	24,385,000	57.90	0.064	0.77	13.10	0.75
		Indicated(I)	5,736,000	56.84	0.061	0.76	14.83	0.69
		Total M+I	**30,121,000**	**57.70**	**0.063**	**0.77**	**13.43**	**0.74**
		Inferred	2,707,000	57.47	0.065	0.85	13.69	0.74
	Mn Ore	Measured (M)	1,099,000	53.66	0.077	5.17	10.13	1.17
		Indicated(I)	106,000	53.39	0.079	4.64	11.74	0.94
		Total M+I	**1,205,000**	**53.64**	**0.077**	**5.12**	**10.27**	**1.15**
		Inferred	455,000	53.42	0.107	4.85	11.21	1.09

Dated April 16th, 2013.
Resources Rounded to the nearest 1,000 tonnes
Mineral resources are not Mineral reserves and do not have demonstrated economic viability.

The summary of the Malcolm 1 deposit resource estimate can be seen in Table 17-2 below. The complete description of the Malcolm 1 deposit resource estimate is available in Table 14-14.

Table 17-2: Summary of the Malcolm 1 Estimated Resources

Area	Ore Type	Classification	Tonnage	Fe(%)	P(%)	Mn(%)	SiO_2(%)	Al_2O_3(%)
Malcolm 1	Fe Ore	Measured (M)	2,374,000	60.21	0.047	0.77	9.78	0.51
		Indicated(I)	6,686,000	57.10	0.065	0.76	12.25	0.53
		Total M+I	**9,060,000**	**57.91**	**0.060**	**0.76**	**11.61**	**0.52**
		Inferred	520,000	56.41	0.060	0.80	12.94	0.44
	Mn Ore	Measured (M)	13,000	58.35	0.043	4.25	7.65	0.47
		Indicated(I)	149,000	54.14	0.064	4.56	11.93	0.47
		Total M+I	**162,000**	**54.49**	**0.062**	**4.53**	**11.58**	**0.47**
		Inferred	-	50.53	0.062	3.87	17.73	0.86

Dated April 24th, 2013.
Resources Rounded to the nearest thousand.
Mineral resources are not Mineral reserves and do not have demonstrated economic viability.

The results of LIMHL's work to date on the Houston deposits has shown that there is sufficient merit to continue with the development of the Houston 1 & 2 deposits and to carry out further exploration work to confirm and expand the resource potential of the Houston 3 deposit, as well as to conduct preliminary evaluation of the potential for lower grade taconite deposits along the eastern flank of the Houston DSO resource zones.

The results of LIMHL's work to date on the Malcolm 1 deposit has shown that there is sufficient merit to continue with the development of the deposit and to carry out further exploration work to confirm and expand the resource potential.

The results of the 2012 data verification indicated that the DDH Houston check sampling had very good correlation and no significant errors were detected. The RC method has dramatically improved since the last field season and errors with the method decreased significantly over the 2012 field season No obvious bias was observed on Malcolm 1 check sampling 2012 data. The sign test identified a bias while the student T test did not show any errors. Additionally, the difference between means for iron and silica was considered negligible.

18. (Item 26) Recommendations

SGS Geostat recommends LIMHL to continue its continuous QA/QC program.

SGS Geostat 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.

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) masking 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 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).

SGS understands that the Houston 3 deposit is at a lesser stage of development than the Houston 1 & 2 but suggests carrying the metallurgical tests and rotary and vibrating drilling as well.

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.

- 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%

SGS understands that the Houston 3 sector is at a lesser stage of development than the Houston 1 & 2 sectors but suggest continuing the metallurgical tests and diamond drilling as well. Houston 3 remains open to the southeast and this extension should be tested with more drilling.

Infill core drilling in Malcolm 1 is recommended. The possible northern extension enrichment in Malcolm 1 should be tested with further drilling and in addition exploration work between Houston 2 and Malcolm 1 should be carried out in order to determine the continuity of mineral enrichment between these two deposits.

The following budgetary recommendations below are purely conceptual. The metallurgical tests costs estimates are purely conceptual and LIM should inquire on the update of a formal proposal for such tests, assay costs only as a reference. The access, logistics, camp, meals and equipment rental costs are not included in this recommended work.

Table 18-1: Recommended Work

Description	Number	Units	$/Unit	Total
Diamond Drilling, Malcolm 1	3000	m	$400	$1,200,000
Reporting, Metallurgical Testing Malcolm 1 (PEA-PFS stage)	1			$200,000
Reporting Resource Update Malcolm 1	1			$150,000
Diamond Drilling, Houston 3	2000	m	$400	$800,000
Reporting, Metallurgical Testing Houston 3 (PEA-PFS stage)	1			$200,000
Reporting Resource Update Houston 3	1			$150,000
Exploration between Houston2 and Malcolm 1	1			$100,000
Assays (all above areas)	2500		$40	$100,000
Sub Total				$2,900,000
Contingency & Miscellaneous (25%)				$725,000
Total				**$3,625,000**

19. (Item 27) References

The following documents are in LIM's files and have been reviewed by the authors:

"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 1st, 1983.

"Overview Report on Hollinger Knob Lake Iron Deposits". Fenton Scott. November 2000.

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

"Report on Summer-Fall 2008 Exploration Program". Labrador Iron Mines Limited. February 2009.

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20. Date and Signature Page

To accompany the Report entitled**: "Technical Report: Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador, Canada For Labrador Iron Mines Holdings Limited"** dated April 24th, 2013 was prepared and signed by the authors.

1. Signed in Blainville, Québec, Canada on June 21st, 2013

(signed) "Maxime Dupéré"

Maxime Dupéré P. Geo
Geologist
SGS Canada Inc.

2. Signed in Toronto, Ontario, Canada on June 21st, 2013

(signed) "Justin Taylor"

Justin Taylor, P. Eng.

21. Certificate of Qualification

Certificate of Maxime Dupéré, P.Geo.

To accompany the Report entitled**: "Technical Report: Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador, Canada For Labrador Iron Mines Holdings Limited"** dated April 24th, 2013.

I, Maxime Dupéré, P. Geo, do hereby certify that:

1. I reside 9660, Rue de la Chouette, Mirabel, Québec, Canada, J7N 0C9.
2. I am a graduate from the Université de Montréal, Quebec in 1999 with a B.Sc. in geology and I have practiced my profession continuously since 2001.
3. I am a registered member of the Ordre des Géologues du Québec (#501), and I am currently employed as a geologist by SGS – Geostat since May 2006.
4. I have 11 years of experience in mining exploration in diamonds, gold, silver, base metals, and Iron Ore. I worked on several resources estimation technical reports and I have prepared and made several mineral resource calculations for different exploration projects at different stages of exploration. I am aware of the different methods of calculation and the geostatistics applied to metallic and non-metallic projects as well as industrial mineral projects.
5. I am responsible, jointly or entirely, for the preparation of all sections 13 and 16 inclusively in this report entitled**: "Technical Report: Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador, Canada For Labrador Iron Mines Holdings Limited" dated April 24th, 2013.**
6. I visited the site from August 23rd to August 24th, 2012, and on several occasions since 2008. I helped to supervise the sampling and QA/QC procedures during the 2008 RC Drilling Program.
7. Neither I, nor any affiliated entity of mine, is at present, under an agreement, arrangement or understanding or expects to become, an insider, associate, affiliated entity or employee of Labrador Iron Mines Limited, or any associated or affiliated entities. I am an independent qualified person as described in section 1.5 of NI-43-101.
8. I am an independent qualified person as described in section 1.5 of NI-43-101. Neither I, nor any affiliated entity of mine, own directly or indirectly, nor expect to receive, any interest in the properties or securities of Labrador Iron Mines Limited, or any associated or affiliated companies.
9. I have read NI 43-101 and Form 43-101F1 and have prepared this report entitled: **"Technical Report: Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador, Canada For Labrador Iron Mines Holdings Limited" dated April 24th, 2013** in compliance with NI 43-101 and Form 43-101F1.
   To the best of my knowledge, information and belief, and, as of the date of this certificate, the parts of the Technical Report for which I am responsible which contains all scientific and technical information that is required to be disclosed to make this report of the technical not misleading.

Signed and sealed in Blainville, Québec, Canada on June 21st, 2013

(signed) "Maxime Dupéré"

Maxime Dupéré P. Geo
Geologist
SGS Canada Inc.

Certificate of Justin Taylor P. Eng. PMP

To accompany this report entitled: **"Technical Report: Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador, Canada For Labrador Iron Mines Holdings Limited"** dated April 24th, 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 "**Technical Report: Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador, Canada For Labrador Iron Mines Holdings Limited" dated April 24th, 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 sections 13 and 16 inclusively of this Mineral Resource **"Technical Report: Mineral Resource Update of the Houston and Malcolm 1 Property, Labrador West Area, Newfoundland and Labrador, Canada For Labrador Iron Mines Holdings Limited" dated April 24th, 2013.**
9. I have visited the project site on numerous occasions most recently from May 15 to May 24, 2012 to evaluate the progress of the construction activities
10. 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 presently I am completing this report as a subcontractor to DRA Americas.
11. I am independent of either Labrador Mines Limited or Labrador Iron Mines Holdings Limited or Schefferville Mines 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. To the best of my knowledge, information and belief, and, as of the date of this certificate, the parts of the Technical Report for which I am responsible which contains all scientific and technical information that is required to be disclosed to make this report of the technical not misleading.

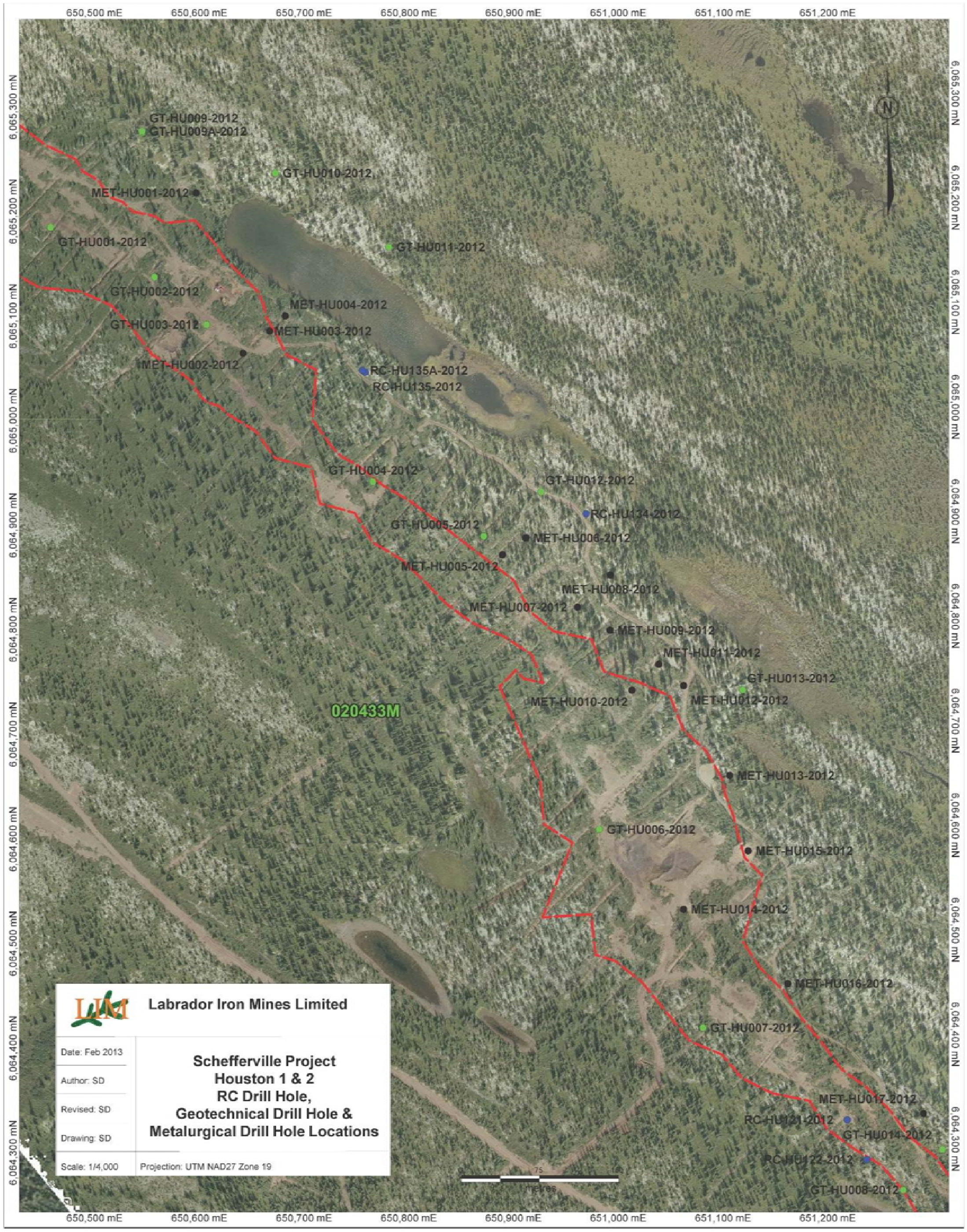
Signed in Toronto, Ontario, Canada on June 21st, 2013

(signed) "Justin Taylor"

Justin Taylor, P. Eng.

22. Appendix I

Map and List of drill holes, trenches and test pits in the Houston Mineral Deposit
Completed by Historical and LIM
Coordinates are based on UTM NAD27 Canada Zone 19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N
GT-HU009-2012
GT-HU009A-2012
GT-HU010-2012
MET-HU001-2012
GT-HU001-2012
GT-HU011-2012
GT-HU002-2012
MET-HU004-2012
GT-HU003-2012
MET-HU003-2012
MET-HU002-2012
RC-HU135A-2012
RC-HU135-2012
GT-HU004-2012
GT-HU012-2012
RC-HU134-2012
GT-HU005-2012
MET-HU006-2012
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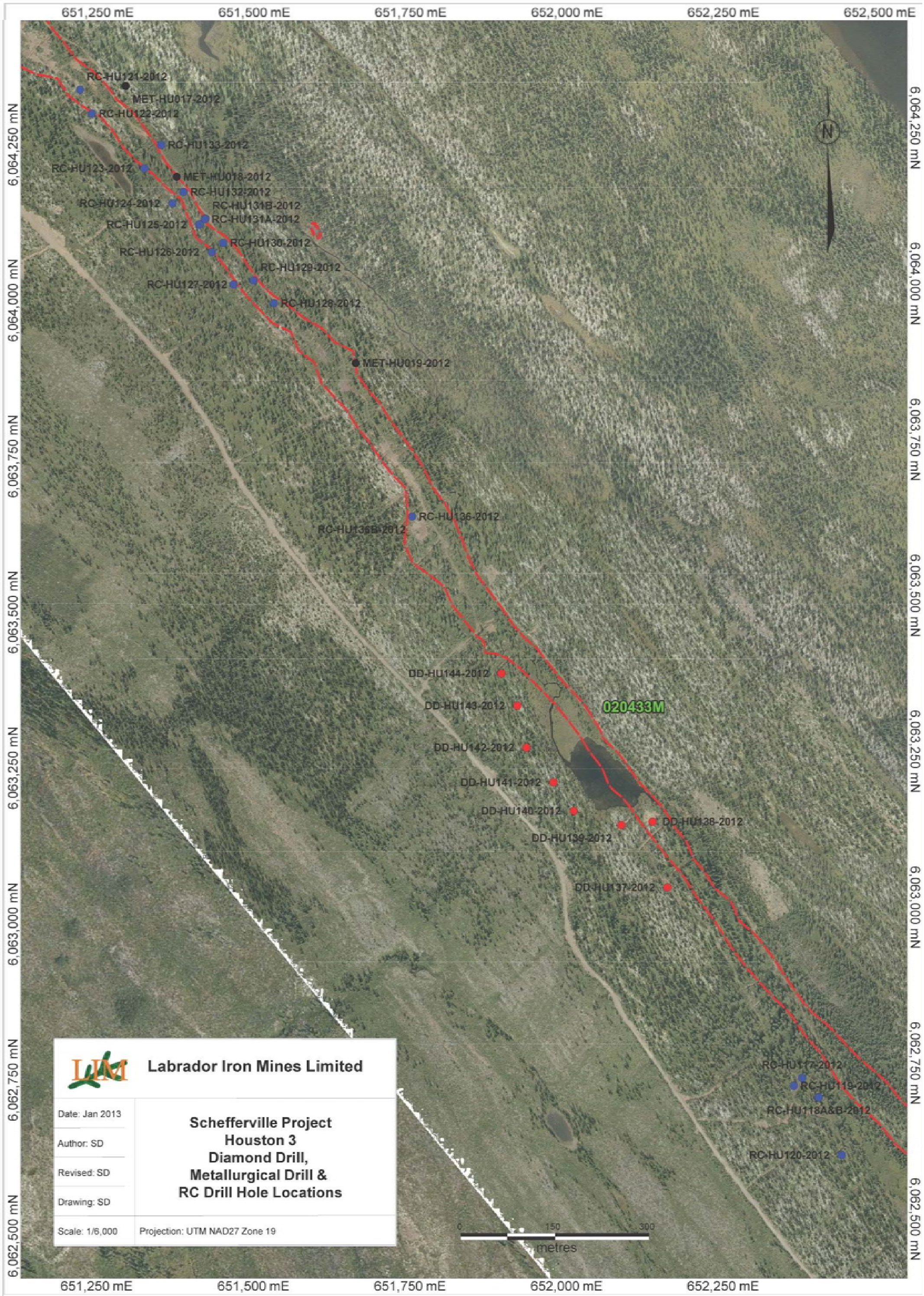
MET-HU013-2012
GT-HU006-2012
MET-HU015-2012
MET-HU014-2012
MET-HU016-2012
GT-HU007-2012
MET-HU017-2012
RC-HU121-2012
GT-HU014-2012
RC-HU122-2012
GT-HU008-2012
Labrador Iron Mines Limited
Date: Feb 2013
Author: SD
Revised: SD
Drawing: SD
Scale: 1/4,000
Schefferville Project
Houston 1 & 2
RC Drill Hole,
Geotechnical Drill Hole &
Metalurgical Drill Hole Locations
Projection: UTM NAD27 Zone 19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RC-HU121-2012
MET-HU017-2012
RC-HU122-2012
RC-HU133-2012
RC-HU123-2012
MET-HU018-2012
RC-HU132-2012
RC-HU124-2012
RC-HU131B-2012
RC-HU131A-2012
RC-HU125-2012
RC-HU130-2012
RC-HU126-2012
RC-HU129-2012
RC-HU127-2012
RC-HU128-2012
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RC-HU136-2012
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DD-HU143-2012
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DD-HU140-2012
DD-HU138-2012
DD-HU139-2012
DD-HU137-2012
RC-HU117-2012
RC-HU119-2012
RC-HU118A&B-2012
RC-HU120-2012
Labrador Iron Mines Limited
Date: Jan 2013
Author: SD
Revised: SD
Drawing: SD
Scale: 1/6,000
Schefferville Project
Houston 3
Diamond Drill,
Metallurgical Drill &
RC Drill Hole Locations
Projection: UTM NAD27 Zone 19
0
150
300
metres

Table 22-1: Houston RC drill hole information

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
HN-06-01	650617.40	6065073.40	586.39	32.00	DD	0.00	-90.00	Cancelled	3-Aug-06	3-Aug-06
HN-06-02	650619.63	6065120.83	583.25	52.00	DD	230.00	-60.00	Cancelled	17-Aug-06	17-Aug-06
HN-06-03	651022.40	6064534.40	589.50	72.00	DD	0.00	-90.00	Completed	23-Jul-06	2-Aug-06
HN-06-04	650619.96	6065120.69	583.25	52.00	DD	0.00	-90.00	Cancelled	18-Aug-06	19-Aug-06
HN-06-05	651644.05	6063846.30	574.19	45.00	DD	0.00	-90.00	Abandoned	20-Aug-06	20-Aug-06
DD-HU137-2012	652151.13	6063045.97	564.77	148.00	DD	45.00	-50.00	Completed	5-Oct-12	8-Oct-12
DD-HU138-2012	652127.38	6063151.18	564.50	75.00	DD	225.00	-75.00	Completed	8-Oct-12	10-Oct-12
DD-HU139-2012	652077.26	6063145.88	564.51	126.00	DD	45.00	-50.00	Completed	10-Oct-12	12-Oct-12
DD-HU140-2012	652001.30	6063168.48	566.26	225.00	DD	45.00	-50.00	Completed	12-Oct-12	17-Oct-12
DD-HU141-2012	651968.87	6063214.38	567.54	199.50	DD	45.00	-50.00	Completed	17-Oct-12	21-Oct-12
DD-HU142-2012	651926.05	6063269.90	567.88	199.50	DD	45.00	-50.00	Completed	21-Oct-12	25-Oct-12
DD-HU143-2012	651911.55	6063337.24	566.17	139.50	DD	45.00	-50.00	Completed	25-Oct-12	28-Oct-12
DD-HU144-2012	651885.85	6063388.71	566.93	154.50	DD	45.00	-50.00	Completed	28-Oct-12	31-Oct-12
GT-HU001-2012	650453.18	6065178.10	594.08	121.50	DD	237.00	-70.00	Completed	31-Jul-12	3-Aug-12
GT-HU002-2012	650552.09	6065130.68	589.42	140.30	DD	219.00	-70.00	Completed	27-Jul-12	31-Jul-12
GT-HU003-2012	650601.91	6065085.10	586.11	115.70	DD	201.00	-70.00	Completed	3-Aug-12	6-Aug-12
GT-HU004-2012	650760.68	6064934.91	586.15	70.00	DD	219.00	-70.00	Completed	13-Aug-12	15-Aug-12
GT-HU005-2012	650866.46	6064882.89	583.35	89.70	DD	232.00	-70.00	Completed	15-Aug-12	17-Aug-12
GT-HU006-2012	650976.83	6064602.52	590.61	65.00	DD	249.00	-70.00	Completed	19-Aug-12	21-Aug-12
GT-HU007-2012	651075.77	6064412.85	594.12	60.00	DD	219.00	-70.00	Completed	22-Aug-12	23-Aug-12
GT-HU008-2012	651266.93	6064257.84	590.59	67.50	DD	225.00	-70.00	Completed	23-Aug-12	24-Aug-12
GT-HU009-2012	650540.23	6065268.63	584.75	84.00	DD	177.00	-70.00	Completed	6-Aug-12	9-Aug-12
GT-HU009A-2012	650540.15	6065270.03	584.98	130.00	DD	177.00	-70.00	Completed	9-Aug-12	11-Aug-12
GT-HU010-2012	650667.49	6065230.06	582.91	127.00	DD	217.00	-70.00	Completed	11-Aug-12	13-Aug-12
GT-HU011-2012	650775.86	6065159.34	579.64	115.50	DD	261.00	-70.00	Completed	26-Aug-12	28-Aug-12
GT-HU012-2012	650921.30	6064925.19	580.74	90.00	DD	232.00	-70.00	Completed	17-Aug-12	19-Aug-12
GT-HU013-2012	651113.63	6064736.02	578.40	65.90	DD	227.00	-70.00	Completed	19-Aug-12	20-Aug-12
GT-HU014-2012	651304.41	6064296.63	584.38	45.00	DD	225.00	-70.00	Completed	24-Aug-12	25-Aug-12
MET-HU001-2012	650592.07	6065211.14	582.11	118.50	DD	221.00	-70.00	Completed	29-Aug-12	31-Aug-12
MET-HU002-2012	650636.62	6065057.75	583.58	90.00	DD	225.00	-60.00	Completed	31-Aug-12	2-Sep-12
MET-HU003-2012	650662.09	6065079.01	582.51	100.50	DD	225.00	-70.00	Completed	2-Sep-12	4-Sep-12
MET-HU004-2012	650676.99	6065093.37	581.18	116.50	DD	225.00	-70.00	Completed	4-Sep-12	6-Sep-12

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
MET-HU005-2012	650884.50	6064865.11	584.35	79.50	DD	225.00	-70.00	Completed	8-Sep-12	11-Sep-12
MET-HU006-2012	650906.56	6064881.06	581.98	90.00	DD	225.00	-70.00	Completed	6-Sep-12	8-Sep-12
MET-HU007-2012	650956.03	6064815.01	582.47	127.00	DD	221.00	-70.00	Completed	13-Sep-12	16-Sep-12
MET-HU008-2012	650987.52	6064845.80	579.27	66.00	DD	221.00	-70.00	Completed	11-Sep-12	13-Sep-11
MET-HU009-2012	650986.99	6064792.89	579.94	130.50	DD	221.00	-70.00	Completed	16-Sep-12	18-Sep-12
MET-HU010-2012	651008.02	6064735.65	580.09	90.00	DD	221.00	-70.00	Completed	19-Sep-12	20-Sep-12
MET-HU011-2012	651033.58	6064760.45	579.22	90.00	DD	221.00	-70.00	Completed	20-Sep-12	21-Sep-12
MET-HU012-2012	651057.37	6064739.95	579.38	108.00	DD	221.00	-70.00	Completed	21-Sep-12	23-Sep-12
MET-HU013-2012	651101.30	6064654.17	581.28	130.50	DD	221.00	-70.00	Completed	23-Sep-12	25-Sep-12
MET-HU014-2012	651057.27	6064526.08	586.75	90.00	DD	221.00	-70.00	Completed	27-Sep-12	28-Sep-12
MET-HU015-2012	651118.86	6064582.01	582.90	90.00	DD	221.00	-70.00	Completed	26-Sep-12	27-Sep-12
MET-HU016-2012	651156.91	6064454.95	585.79	90.00	DD	221.00	-70.00	Completed	28-Sep-12	30-Sep-12
MET-HU017-2012	651286.37	6064330.97	585.13	90.00	DD	221.00	-70.00	Completed	30-Sep-12	1-Oct-12
MET-HU018-2012	651367.75	6064185.11	583.90	61.50	DD	221.00	-70.00	Completed	1-Oct-12	2-Oct-12
MET-HU019-2012	651653.31	6063886.63	573.87	90.00	DD	243.00	-70.00	Completed	2-Oct-12	5-Oct-12
P306-1	650131.75	6065440.22	596.43	3.05	PIT	41.93	0.00	Completed		
P306-2	650143.89	6065450.40	595.39	3.35	PIT	37.14	0.00	Completed		
P306-3	650154.32	6065461.40	594.00	3.05	PIT	40.48	0.00	Completed		
P307-1	650122.40	6065390.07	603.14	3.05	PIT	44.99	0.00	Completed		
P307-2	650130.34	6065399.24	600.68	3.05	PIT	44.99	0.00	Completed		
P307-3	650139.84	6065407.96	598.44	3.05	PIT	41.14	0.00	Completed		
P312-1	650241.58	6065322.96	598.76	3.05	PIT	42.97	0.00	Completed		
P312-2	650252.53	6065333.31	597.49	3.05	PIT	44.98	0.00	Completed		
P312-3	650275.53	6065355.59	594.88	2.44	PIT	46.12	0.00	Completed		
P312-4	650286.12	6065365.51	594.26	2.44	PIT	46.17	0.00	Completed		
P312-5	650296.53	6065375.73	593.94	3.05	PIT	45.09	0.00	Completed		
P312-6	650307.31	6065386.44	593.99	3.05	PIT	45.76	0.00	Completed		
P312-7	650317.95	6065397.22	594.08	3.05	PIT	48.33	0.00	Completed		
P314-1	650136.80	6065117.60	614.64	3.05	PIT	43.90	0.00	Completed		
P314-10	650276.79	6065259.01	600.77	3.05	PIT	41.90	0.00	Completed		
P314-11	650288.54	6065270.90	599.50	3.05	PIT	40.71	0.00	Completed		
P314-12	650299.87	6065280.72	597.98	3.05	PIT	45.01	0.00	Completed		
P314-2	650148.58	6065129.70	612.90	3.05	PIT	45.60	0.00	Completed		
P314-3	650158.36	6065139.34	611.12	3.05	PIT	41.19	0.00	Completed		
P314-4	650179.68	6065161.10	610.00	3.05	PIT	40.95	0.00	Completed		
P314-5	650190.51	6065172.03	609.76	3.05	PIT	43.42	0.00	Completed		
P314-6	650200.54	6065183.19	609.34	2.74	PIT	43.98	0.00	Completed		
P314-7	650213.24	6065194.69	608.56	3.05	PIT	45.50	0.00	Completed		
P314-8	650233.22	6065215.68	606.51	3.05	PIT	44.07	0.00	Completed		

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
P314-9	650243.77	6065226.31	606.16	3.05	PIT	43.69	0.00	Completed		
P320-1	650338.85	6065055.50	608.85	3.05	PIT	44.07	0.00	Completed		
P320-2	650348.34	6065065.24	606.88	3.05	PIT	43.34	0.00	Completed		
P320-3	650359.07	6065076.15	605.96	3.05	PIT	44.42	0.00	Completed		
P320-4	650369.91	6065088.87	605.83	3.05	PIT	44.18	0.00	Completed		
P320-5	650378.37	6065095.76	605.85	3.05	PIT	43.36	0.00	Completed		
P320-6	650517.24	6065244.15	587.03	3.05	PIT	41.78	0.00	Completed		
P320-7	650530.11	6065255.12	585.27	3.05	PIT	42.50	0.00	Completed		
P320-8	650539.75	6065265.00	584.25	3.05	PIT	42.26	0.00	Completed		
P320-9	650550.57	6065275.93	583.93	3.05	PIT	42.52	0.00	Completed		
P322-1	650551.14	6065197.22	583.75	3.05	PIT	38.08	0.00	Completed		
P322-2	650559.26	6065200.11	582.97	3.05	PIT	36.41	0.00	Completed		
P322-3	650558.75	6065193.41	583.32	3.05	PIT	45.71	0.00	Completed		
P322-4	650569.51	6065200.37	582.13	3.05	PIT	41.76	0.00	Completed		
P325-1	650498.30	6065028.53	604.36	3.05	PIT	43.24	0.00	Completed		
P325-2	650612.06	6065142.43	582.19	3.05	PIT	44.08	0.00	Completed		
P327-1	650596.41	6065016.68	597.40	3.05	PIT	43.58	0.00	Completed		
P327-2	650679.79	6065089.31	581.05	3.05	PIT	53.94	0.00	Completed		
P328-1	650699.09	6065074.62	581.29	3.05	PIT	42.87	0.00	Completed		
P328-2	650708.16	6065088.40	580.09	3.66	PIT	41.91	0.00	Completed		
P337-1	650835.94	6064833.40	590.36	3.05	PIT	47.94	0.00	Completed		
P346-1	650861.60	6064456.96	595.97	3.05	PIT	46.56	0.00	Completed		
P346-2	650870.81	6064469.62	595.90	3.05	PIT	40.11	0.00	Completed		
P346-3	650881.25	6064480.31	595.02	3.05	PIT	46.71	0.00	Completed		
P346-4	650890.72	6064490.14	595.00	3.05	PIT	43.49	0.00	Completed		
P351-1	650984.15	6064365.44	594.49	3.05	PIT	46.37	0.00	Completed		
P351-2	650994.09	6064375.58	593.64	3.05	PIT	44.97	0.00	Completed		
P351-3	651004.55	6064385.83	593.02	3.05	PIT	42.24	0.00	Completed		
P351-4	651015.00	6064396.19	593.00	3.05	PIT	44.99	0.00	Completed		
P354-1	651071.27	6064321.11	593.01	3.05	PIT	44.45	0.00	Completed		
P354-2	651083.48	6064333.89	592.02	3.05	PIT	44.30	0.00	Completed		
P359-1	651273.86	6064315.00	586.04	3.05	PIT	43.49	0.00	Completed		
P386-1	651717.09	6063566.95	577.98	3.05	PIT	46.61	0.00	Completed		
P386-2	651720.81	6063582.07	577.42	3.05	PIT	41.78	0.00	Completed		
P387-1	651768.79	6063604.01	571.43	3.05	PIT	46.47	0.00	Completed		
P387-2	651780.07	6063615.77	568.89	3.05	PIT	45.08	0.00	Completed		
P387-3	651793.27	6063604.25	567.68	3.05	PIT	94.40	0.00	Completed		
P387-4	651795.91	6063607.61	567.41	3.05	PIT	128.38	0.00	Completed		
P388-1	651814.68	6063583.69	566.14	5.18	PIT	42.76	0.00	Completed		

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
P388-2	651804.09	6063583.98	566.70	6.10	PIT	44.23	0.00	Completed		
H1001CC	651118.93	6064444.79	590.60	46.02	RC		-90.00	Completed		
H1002CC	651310.00	6064258.50	584.00	53.34	RC		-90.00	Completed		
H1003CC	651245.00	6064322.00	587.84	51.82	RC		-90.00	Completed		
H1004CC	651162.53	6064371.26	593.31	76.20	RC		-90.00	Completed		
H1005CC	651156.29	6064408.72	590.10	57.91	RC		-90.00	Completed		
H1006CC	651093.13	6064430.24	592.32	30.48	RC		-90.00	Completed		
H1007CC	651115.32	6064447.70	590.50	50.90	RC		-90.00	Completed		
H1008CC	651076.87	6064501.74	587.70	128.02	RC	222.00	-55.00	Completed		
H1009CC	651111.92	6064537.46	586.61	25.91	RC		-90.00	Completed		
H1010CC	651041.22	6064553.26	587.20	19.81	RC		-90.00	Completed		
H1011CC	651024.25	6064540.58	589.10	33.53	RC		-90.00	Completed		
H1012CC	650993.04	6064588.55	590.00	52.73	RC		-90.00	Completed		
H1013CC	650948.46	6064674.27	589.90	48.77	RC		-90.00	Completed		
H1014CC	650989.50	6064718.68	582.33	39.62	RC		-90.00	Completed		
H1015CC	650945.08	6064759.51	585.96	51.82	RC		-90.00	Completed		
H1016CC	650993.28	6064632.08	588.34	60.96	RC		-90.00	Completed		
H1017CC	651085.45	6064595.92	585.00	47.24	RC	222.00	-55.00	Completed		
H1018CC	650988.28	6064672.13	585.71	67.06	RC		-90.00	Completed		
H1019CC	650994.07	6064502.40	593.93	44.20	RC		-90.00	Completed		
H1020CC	651028.95	6064451.01	593.50	30.48	RC		-90.00	Completed		
H1021CC	651044.85	6064467.35	592.61	79.25	RC		-90.00	Completed		
H1022CC	651131.92	6064383.37	593.00	54.86	RC		-90.00	Completed		
H1023CC	651095.85	6064565.57	585.50	53.34	RC		-90.00	Completed		
H1024CC	651035.37	6064601.87	587.03	54.86	RC		-90.00	Completed		
H1025CC	651022.87	6064575.63	586.00	62.48	RC		-90.00	Completed		
H1026CC	651097.27	6064522.80	587.00	41.15	RC		-90.00	Completed		
H1027CC	651351.60	6064208.50	583.50	39.62	RC	225.00	-55.00	Completed		
H1028CC	651211.38	6064334.78	592.50	56.39	RC		-90.00	Completed		
H2001CC	650728.95	6064925.71	591.93	21.34	RC		-90.00	Completed		
H2002CC	650690.96	6064973.19	589.75	27.43	RC		-90.00	Completed		
H2003CC	650648.26	6065012.88	589.50	15.24	RC		-90.00	Completed		
H2004CC	650608.34	6065062.17	589.04	76.20	RC		-90.00	Completed		
H2005CC	650587.54	6065134.33	585.12	35.05	RC		-90.00	Completed		
H2006CC	650551.84	6065178.72	584.70	18.59	RC		-90.00	Completed		
H2007CC	650521.04	6065149.90	591.20	94.49	RC		-90.00	Completed		
H2008CC	650493.85	6065170.02	591.05	118.57	RC		-90.00	Completed		
H2009CC	650467.57	6065185.29	591.79	99.06	RC		-90.00	Completed		

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
H2010CC	650493.65	6065205.94	588.60	44.20	RC		-90.00	Completed		
H2011CC	650376.09	6065265.70	593.00	57.91	RC		-90.00	Completed		
H2012CC	650327.46	6065300.84	595.65	35.05	RC		-90.00	Completed		
H2013CC	650265.17	6065371.34	594.74	15.24	RC		-90.00	Completed		
H2014CC	650579.29	6065125.55	586.43	103.63	RC		-90.00	Completed		
H2015CC	650667.19	6064992.38	589.29	54.86	RC		-90.00	Completed		
H2016CC	650619.63	6065120.83	583.25	80.77	RC		-90.00	Completed		
H2017CC	650530.79	6065162.82	588.97	62.48	RC		-90.00	Completed		
H2018CC	650478.14	6065197.97	589.44	56.39	RC		-90.00	Completed		
H2019CC	650624.63	6065075.81	585.27	54.86	RC		-90.00	Completed		
H2020CC	650656.72	6065066.01	583.64	39.93	RC		-90.00	Completed		
H3001CC	651833.73	6063525.69	566.28	105.46	RC		-90.00	Completed		
H3002CC	651806.33	6063584.54	566.61	64.31	RC		-90.00	Completed		
H3003CC	651863.52	6063477.05	566.10	30.48	RC		-90.00	Completed		
H3004CC	651747.84	6063697.53	569.49	60.96	RC		-90.00	Completed		
H3005CC	651712.98	6063751.94	570.70	67.06	RC		-90.00	Completed		
H3006CC	651677.82	6063803.52	572.30	67.06	RC		-90.00	Completed		
H3007CC	651640.51	6063850.37	574.31	57.91	RC		-90.00	Completed		
H3008CC	651438.91	6064085.72	583.20	44.20	RC		-90.00	Completed		
H3009CC	651523.02	6063993.75	579.38	35.05	RC	228.00	-55.00	Completed		
H3010CC	651621.49	6063921.08	575.80	61.87	RC	228.00	-53.00	Completed		
H3011CC	651723.19	6063805.33	571.00	54.86	RC	227.00	-56.00	Completed		
H3012CC	651766.93	6063628.91	570.71	49.38	RC	227.00	-53.00	Completed		
H3013CC	651798.00	6063662.33	568.96	42.67	RC	227.00	-55.00	Completed		
H3014CC	651855.48	6063546.64	567.19	53.04	RC	227.00	-64.00	Completed		
H3015CC	651881.58	6063485.84	566.00	19.51	RC	228.00	-55.00	Completed		
H3016CC	651888.87	6063437.56	565.91	61.26	RC	228.00	-57.00	Completed		
RC-HU001-2008	650615.01	6065119.17	582.92	97.00	RC	0.00	-90.00	Completed	28-Aug-08	1-Sep-08
RC-HU002-2008	650580.90	6065085.73	589.39	85.00	RC	0.00	-90.00	Completed	2-Sep-08	4-Sep-08
RC-HU003-2008	650566.88	6065067.87	594.30	54.00	RC	0.00	-90.00	Completed	4-Sep-08	6-Sep-08
RC-HU004-2008	651086.93	6064596.34	583.54	55.00	RC	0.00	-90.00	Completed	4-Sep-08	6-Sep-08
RC-HU005-2008	651077.26	6064565.33	584.94	33.00	RC	0.00	-90.00	Abandoned	1-Sep-08	3-Sep-08
RC-HU005A-2008	651079.79	6064565.64	584.94	87.00	RC	0.00	-90.00	Completed	1-Sep-08	3-Sep-08
RC-HU006-2008	651029.29	6064510.14	590.30	66.00	RC	0.00	-90.00	Completed	30-Aug-08	1-Sep-08
RC-HU007-2008	651723.25	6063803.73	570.03	45.00	RC	0.00	-90.00	Completed	7-Sep-08	8-Sep-08
RC-HU008-2008	651711.85	6063753.08	570.99	51.00	RC	0.00	-90.00	Completed	8-Sep-08	10-Sep-08
RC-HU009-2008	652125.40	6063153.65	565.10	93.00	RC	0.00	-90.00	Completed	9-Oct-08	11-Oct-08
RC-HU010-2008	652176.27	6063082.93	561.34	53.00	RC	0.00	-90.00	Completed	12-Oct-08	13-Oct-08
RC-HU011-2008	652143.98	6063064.82	564.68	72.00	RC	0.00	-90.00	Completed	13-Oct-08	15-Oct-08

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
RC-HU012-2009	651034.53	6064702.07	581.91	66.00	RC	0.00	-90.00	Completed	14-Aug-09	15-Aug-09
RC-HU013-2009	651013.77	6064681.52	582.62	75.00	RC	0.00	-90.00	Completed	15-Aug-09	17-Aug-09
RC-HU014-2009	651065.65	6064654.85	581.92	90.00	RC	0.00	-90.00	Completed	20-Aug-09	22-Aug-09
RC-HU015-2009	651044.72	6064626.52	584.40	69.00	RC	0.00	-90.00	Completed	22-Aug-09	23-Aug-09
RC-HU016-2009	651025.41	6064605.70	586.05	72.00	RC	0.00	-90.00	Completed	23-Aug-09	24-Aug-09
RC-HU017-2009	651085.67	6064624.06	581.32	79.00	RC	0.00	-90.00	Completed	24-Aug-09	27-Aug-09
RC-HU018-2009	651012.85	6064546.67	589.14	28.00	RC	0.00	-90.00	Completed	17-Aug-09	18-Aug-09
RC-HU018A-2009	651014.91	6064543.49	589.08	9.00	RC	0.00	-90.00	Completed	18-Aug-09	18-Aug-09
RC-HU019-2009	651087.05	6064537.19	585.70	69.00	RC	0.00	-90.00	Completed	27-Aug-09	28-Aug-09
RC-HU020-2009	651063.29	6064513.78	587.52	15.00	RC	0.00	-90.00	Abandoned	18-Aug-09	18-Aug-09
RC-HU020A-2009	651064.29	6064514.78	587.52	73.00	RC	0.00	-90.00	Completed	18-Aug-09	20-Aug-09
RC-HU021-2009	650538.35	6065192.22	584.71	30.00	RC	0.00	-90.00	Completed	29-Jul-09	29-Jul-09
RC-HU022-2009	650585.54	6065159.29	580.85	111.00	RC	0.00	-90.00	Completed	30-Aug-09	1-Sep-09
RC-HU023-2009	650556.83	6065133.10	588.80	99.00	RC	0.00	-90.00	Completed	2-Aug-09	4-Aug-09
RC-HU024-2009	650547.38	6065116.65	590.48	69.00	RC	0.00	-90.00	Completed	31-Jul-09	2-Aug-09
RC-HU025-2009	650603.19	6065134.29	583.40	126.00	RC	0.00	-90.00	Completed	28-Aug-09	30-Aug-09
RC-HU026-2009	650564.24	6065104.99	588.55	99.00	RC	0.00	-90.00	Completed	29-Jul-09	31-Jul-09
RC-HU027-2009	650646.78	6065092.64	580.83	120.00	RC	0.00	-90.00	Completed	4-Aug-09	6-Aug-09
RC-HU028-2009	650587.57	6065032.26	596.11	67.00	RC	0.00	-90.00	Completed	10-Aug-09	12-Aug-09
RC-HU029-2009	650661.25	6065054.94	583.41	93.00	RC	0.00	-90.00	Completed	6-Aug-09	8-Aug-09
RC-HU030-2009	650635.61	6065029.32	589.13	63.00	RC	0.00	-90.00	Completed	12-Aug-09	13-Aug-09
RC-HU031-2009	650616.92	6065011.73	594.01	33.00	RC	0.00	-90.00	Completed	13-Aug-09	14-Aug-09
RC-HU032-2009	650697.89	6065033.58	582.63	97.00	RC	0.00	-90.00	Completed	8-Aug-09	10-Aug-09
RC-HU033-2009	650560.18	6065174.57	584.00	90.00	RC	0.00	-90.00	Completed	1-Sep-09	2-Sep-09
RC-HU034-2009	651543.33	6064009.05	579.04	9.00	RC	0.00	-90.00	Completed	3-Sep-09	5-Sep-09
RC-HU034A-2009	651543.33	6064009.05	579.04	117.00	RC	0.00	-90.00	Completed	3-Sep-09	5-Sep-09
RC-HU035-2009	651558.81	6063977.04	577.68	82.00	RC	0.00	-90.00	Completed	5-Sep-09	6-Sep-09
RC-HU036-2009	651603.91	6063970.95	576.98	78.00	RC	0.00	-90.00	Completed	6-Sep-09	7-Sep-09
RC-HU037-2009	651666.29	6063867.81	572.60	81.00	RC	0.00	-90.00	Completed	7-Sep-09	8-Sep-09
RC-HU038-2009	651671.85	6063820.89	571.69	102.00	RC	0.00	-90.00	Completed	8-Sep-09	9-Sep-09
RC-HU039-2009	651633.81	6063880.08	574.17	96.00	RC	0.00	-90.00	Completed	9-Sep-09	11-Sep-09
RC-HU040-2009	651606.91	6063941.34	576.31	78.00	RC	0.00	-90.00	Completed	11-Sep-09	12-Sep-09
RC-HU041-2009	651538.89	6063962.01	579.85	72.00	RC	0.00	-90.00	Completed	12-Sep-09	14-Sep-09
RC-HU042-2009	651530.91	6063940.05	585.39	39.00	RC	0.00	-90.00	Completed	14-Sep-09	15-Sep-09
RC-HU043-2009	651624.32	6063834.54	578.42	42.00	RC	0.00	-90.00	Completed	15-Sep-09	16-Sep-09
RC-HU044-2009	651588.61	6063924.63	579.46	90.00	RC	0.00	-90.00	Completed	16-Sep-09	17-Sep-09
RC-HU045-2009	651749.96	6063697.55	569.35	72.00	RC	0.00	-90.00	Abandoned	17-Sep-09	18-Sep-09
RC-HU046-2009	651752.73	6063583.10	574.44	60.00	RC	0.00	-90.00	Completed	18-Sep-09	20-Sep-09
RC-HU047-2009	651774.34	6063613.61	570.02	66.00	RC	0.00	-90.00	Completed	20-Sep-09	21-Sep-09

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
RC-HU048-2009	651768.67	6063651.63	569.40	69.00	RC	0.00	-90.00	Completed	21-Sep-09	23-Sep-09
RC-HU049-2009	651711.30	6063792.70	570.82	72.00	RC	0.00	-90.00	Completed	23-Sep-09	25-Sep-09
RC-HU050-2009	651821.54	6063540.09	566.72	36.00	RC	0.00	-90.00	Abandoned	26-Sep-09	27-Sep-09
RC-HU050A-2009	651815.15	6063553.65	566.77	51.00	RC	0.00	-90.00	Abandoned	27-Sep-09	28-Sep-09
RC-HU051-2009	652147.12	6063114.87	564.03	9.00	RC	0.00	-90.00	Abandoned	29-Sep-09	29-Sep-09
RC-HU051A-2009	652147.12	6063114.87	564.03	6.00	RC	0.00	-90.00	Abandoned	29-Sep-09	29-Sep-09
RC-HU051B-2009	652147.12	6063114.87	564.03	69.00	RC	0.00	-90.00	Abandoned	29-Sep-09	1-Oct-09
RC-HU052-2010	650755.91	6064940.05	586.61	93.00	RC	0.00	-90.00	Completed	5-Oct-10	7-Oct-10
RC-HU053-2010	650864.94	6064889.77	583.32	93.00	RC	0.00	-90.00	Completed	7-Oct-10	8-Oct-10
RC-HU054-2010	650837.66	6064855.09	588.06	84.00	RC	0.00	-90.00	Completed	8-Oct-10	10-Oct-10
RC-HU055-2010	650805.02	6064825.88	591.90	60.00	RC	0.00	-90.00	Completed	10-Oct-10	11-Oct-10
RC-HU056-2010	650913.40	6064856.47	583.63	99.00	RC	0.00	-90.00	Completed	11-Oct-10	13-Oct-10
RC-HU057-2010	651115.75	6064487.26	585.18	60.00	RC	0.00	-90.00	Completed	13-Oct-10	14-Oct-10
RC-HU058-2010	651145.76	6064457.99	586.51	46.00	RC	0.00	-90.00	Completed	14-Oct-10	14-Oct-10
RC-HU059-2010	651178.68	6064411.60	585.74	54.00	RC	0.00	-90.00	Completed	14-Oct-10	15-Oct-10
RC-HU060-2010	651210.30	6064359.88	588.82	67.00	RC	0.00	-90.00	Completed	15-Oct-10	16-Oct-10
RC-HU061-2010	650881.48	6064821.71	588.86	87.00	RC	0.00	-90.00	Completed	16-Oct-10	17-Oct-10
RC-HU062-2010	650270.68	6065362.63	595.57	32.00	RC	0.00	-90.00	Completed	17-Oct-10	24-Oct-10
RC-HU063-2010	650856.20	6064795.01	590.13	72.00	RC	0.00	-90.00	Completed	18-Oct-10	19-Oct-10
RC-HU064-2010	650807.90	6064908.13	586.39	105.00	RC	0.00	-90.00	Completed	19-Oct-10	22-Oct-10
RC-HU065-2010	650883.46	6064907.84	581.71	64.00	RC	0.00	-90.00	Completed	22-Oct-10	24-Oct-10
RC-HU066-2010	650370.77	6065283.14	593.63	66.00	RC	0.00	-90.00	Completed	24-Oct-10	26-Oct-10
RC-HU067-2010	650786.36	6064970.58	580.52	48.00	RC	0.00	-90.00	Completed	24-Oct-10	25-Oct-10
RC-HU068-2010	650734.55	6064912.17	590.72	67.00	RC	0.00	-90.00	Completed	25-Oct-10	26-Oct-10
RC-HU069-2010	650383.21	6065258.26	592.63	69.00	RC	0.00	-90.00	Completed	26-Oct-10	27-Oct-10
RC-HU070-2010	650783.97	6064887.50	589.76	66.00	RC	0.00	-90.00	Completed	26-Oct-10	27-Oct-10
RC-HU071-2010	650470.72	6065184.06	590.93	99.00	RC	0.00	-90.00	Completed	27-Oct-10	29-Oct-10
RC-HU072-2010	650443.97	6065245.06	590.37	73.00	RC	0.00	-90.00	Completed	27-Oct-10	29-Oct-10
RC-HU073-2010	650465.99	6065222.50	589.57	58.00	RC	0.00	-90.00	Abandoned	29-Oct-10	30-Oct-10
RC-HU073A-2010	650463.59	6065223.36	589.22	52.00	RC	0.00	-90.00	Abandoned	30-Oct-10	31-Oct-10
RC-HU074-2010	650813.12	6064931.81	581.70	105.00	RC	0.00	-90.00	Completed	29-Oct-10	31-Oct-10
RC-HU075-2010	650692.39	6064974.64	589.24	39.00	RC	0.00	-90.00	Completed	31-Oct-10	1-Nov-10
RC-HU076-2010	650927.81	6064785.12	585.95	46.00	RC	0.00	-90.00	Completed	1-Nov-10	2-Nov-10
RC-HU077-2011	650493.21	6065249.35	590.71	90.00	RC	0.00	-90.00	Completed	23-Jun-11	25-Jun-11
RC-HU078-2011	650441.10	6065275.17	591.81	96.00	RC	0.00	-90.00	Completed	25-Jun-11	29-Jun-11
RC-HU079-2011	650393.36	6065319.23	593.07	66.00	RC	0.00	-90.00	Completed	29-Jun-11	1-Jul-11
RC-HU080-2011	650684.90	6065005.57	589.64	111.00	RC	0.00	-90.00	Completed	1-Jul-11	4-Jul-11
RC-HU081-2011	650739.68	6064974.54	588.22	76.00	RC	0.00	-90.00	Completed	4-Jul-11	6-Jul-11
RC-HU082-2011	650757.20	6064986.88	585.83	96.00	RC	0.00	-90.00	Completed	6-Jul-11	8-Jul-11

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
RC-HU083-2011	650721.68	6065002.74	587.39	33.00	RC	0.00	-90.00	Completed	8-Jul-11	10-Jul-11
RC-HU083A-2011	650721.11	6065003.54	588.04	54.00	RC	0.00	-90.00	Completed	13-Aug-11	15-Aug-11
RC-HU084-2011	650710.55	6064942.92	595.17	90.00	RC	0.00	-90.00	Completed	10-Jul-11	12-Jul-11
RC-HU085-2011	650767.48	6064911.90	591.45	15.00	RC	0.00	-90.00	Abandoned	12-Jul-11	13-Jul-11
RC-HU085B-2011	650763.42	6064903.48	592.68	3.00	RC	0.00	-90.00	Abandoned	13-Jul-11	13-Jul-11
RC-HU085C-2011	650763.42	6064903.48	592.68	75.00	RC	0.00	-90.00	Completed	11-Aug-11	12-Aug-11
RC-HU086-2011	651021.35	6064512.38	592.67	75.00	RC	0.00	-90.00	Completed	13-Jul-11	14-Jul-11
RC-HU087-2011	650982.86	6064556.51	595.33	54.00	RC	0.00	-90.00	Completed	14-Jul-11	15-Jul-11
RC-HU088-2011	650966.16	6064629.54	592.06	51.00	RC	0.00	-90.00	Completed	15-Jul-11	16-Jul-11
RC-HU089-2011	651023.45	6064640.94	588.17	71.00	RC	0.00	-90.00	Completed	16-Jul-11	17-Jul-11
RC-HU090-2011	650862.79	6064930.49	582.02	106.00	RC	0.00	-90.00	Completed	17-Jul-11	21-Jul-11
RC-HU091-2011	651061.45	6064693.54	584.16	114.00	RC	0.00	-90.00	Completed	17-Jul-11	19-Jul-11
RC-HU092-2011	651117.66	6064616.96	585.07	84.00	RC	0.00	-90.00	Completed	19-Jul-11	25-Jul-11
RC-HU093-2011	650906.84	6064880.99	585.24	84.00	RC	0.00	-90.00	Completed	21-Jul-11	25-Jul-11
RC-HU094-2011	651145.45	6064565.54	585.69	87.00	RC	0.00	-90.00	Completed	25-Jul-11	27-Jul-11
RC-HU095-2011	651015.60	6064793.71	582.31	87.00	RC	0.00	-90.00	Completed	25-Jul-11	27-Jul-11
RC-HU096-2011	650920.26	6064720.39	592.91	33.00	RC	0.00	-90.00	Completed	27-Jul-11	28-Jul-11
RC-HU097-2011	651165.12	6064494.61	590.30	86.00	RC	0.00	-90.00	Completed	27-Jul-11	29-Jul-11
RC-HU098-2011	650905.64	6064748.56	592.99	93.00	RC	0.00	-90.00	Completed	28-Jul-11	30-Jul-11
RC-HU099-2011	651202.96	6064439.18	587.41	45.00	RC	0.00	-90.00	Completed	29-Jul-11	30-Jul-11
RC-HU100-2011	651201.28	6064532.58	585.56	13.00	RC	0.00	-90.00	Abandoned	30-Jul-11	30-Jul-11
RC-HU101-2011	650845.69	6064823.58	593.54	91.00	RC	0.00	-90.00	Completed	30-Jul-11	31-Jul-11
RC-HU102-2011	650936.23	6064826.18	587.65	87.00	RC	0.00	-90.00	Completed	30-Jul-11	1-Aug-11
RC-HU103-2011	650811.84	6064859.04	593.62	87.00	RC	0.00	-90.00	Completed	31-Jul-11	2-Aug-11
RC-HU104-2 011	650956.81	6064797.86	586.19	99.00	RC	0.00	-90.00	Abandoned	1-Aug-11	4-Aug-11
RC-HU104A-2011	650954.81	6064795.86	586.19	99.00	RC	0.00	-90.00	Completed	1-Aug-11	4-Aug-11
RC-HU105-2011	650833.75	6064882.51	589.78	12.00	RC	0.00	-90.00	Abandoned	2-Aug-11	3-Aug-11
RC-HU105A-2011	650831.75	6064881.51	589.78	94.00	RC	0.00	-90.00	Completed	3-Aug-11	6-Aug-11
RC-HU106-2011	650871.10	6064761.51	594.27	72.00	RC	0.00	-90.00	Completed	4-Aug-11	6-Aug-11
RC-HU107-2011	650972.59	6064698.88	588.43	82.00	RC	0.00	-90.00	Completed	6-Aug-11	7-Aug-11
RC-HU108-2011	650891.98	6064789.66	593.71	58.00	RC	0.00	-90.00	Completed	7-Aug-11	8-Aug-11
RC-HU109-2011	651236.42	6064390.69	587.95	13.00	RC	0.00	-90.00	Completed	8-Aug-11	8-Aug-11
RC-HU110-2011	650790.65	6064944.29	586.29	105.00	RC	0.00	-90.00	Completed	9-Aug-11	11-Aug-11
RC-HU111-2011	651194.07	6064531.19	585.99	57.00	RC	0.00	-90.00	Completed	9-Aug-11	10-Aug-11
RC-HU112-2011	651866.51	6063460.63	568.30	67.00	RC	0.00	-90.00	Completed	10-Aug-11	11-Aug-11
RC-HU113-2011	651903.22	6063418.42	567.98	105.00	RC	0.00	-90.00	Completed	11-Aug-11	13-Aug-11
RC-HU114-2011	652246.51	6062940.01	560.87	30.00	RC	0.00	-90.00	Completed	14-Aug-11	14-Aug-11
RC-HU115-2011	652306.47	6062864.13	555.84	66.00	RC	0.00	-90.00	Completed	15-Aug-11	16-Aug-11
RC-HU116-2011	650882.21	6064851.47	589.37	99.00	RC	0.00	-90.00	Completed	15-Aug-11	18-Aug-11

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
RC-HU117-2012	652365.74	6062740.23	550.01	36.00	RC	0.00	-90.00	Abandoned	15-Jun-12	16-Jun-12
RC-HU118A-2012	652391.85	6062708.94	546.74	6.00	RC	0.00	-90.00	Abandoned	16-Jun-12	16-Jun-12
RC-HU118B-2012	652392.52	6062708.92	547.29	75.00	RC	0.00	-90.00	Completed	16-Jun-12	18-Jun-12
RC-HU119-2012	652352.52	6062727.64	550.51	28.00	RC	0.00	-90.00	Completed	18-Jun-12	18-Jun-12
RC-HU120-2012	652429.58	6062616.65	547.28	52.00	RC	0.00	-90.00	Completed	18-Jun-12	19-Jun-12
RC-HU121-2012	651213.62	6064324.86	592.62	102.00	RC	0.00	-90.00	Completed	19-Jun-12	22-Jun-12
RC-HU122-2012	651232.41	6064286.69	593.21	72.00	RC	0.00	-90.00	Completed	22-Jun-12	24-Jun-12
RC-HU123-2012	651316.11	6064198.66	588.63	53.00	RC	0.00	-90.00	Completed	24-Jun-12	25-Jun-12
RC-HU124-2012	651360.80	6064142.62	590.14	60.00	RC	0.00	-90.00	Completed	25-Jun-12	28-Jun-12
RC-HU125-2012	651403.65	6064108.62	587.19	57.00	RC	0.00	-90.00	Completed	28-Jun-12	30-Jun-12
RC-HU126-2012	651423.94	6064064.55	587.10	36.00	RC	0.00	-90.00	Completed	30-Jun-12	1-Jul-12
RC-HU127-2012	651458.25	6064012.60	586.76	33.00	RC	0.00	-90.00	Completed	1-Jul-12	7-Jul-12
RC-HU128-2012	651522.88	6063982.43	579.52	78.00	RC	0.00	-90.00	Completed	7-Jul-12	8-Jul-12
RC-HU129-2012	651490.28	6064019.04	580.58	75.00	RC	0.00	-90.00	Completed	8-Jul-12	9-Jul-12
RC-HU130-2012	651441.79	6064079.46	582.07	102.00	RC	0.00	-90.00	Completed	9-Jul-12	11-Jul-12
RC-HU131A-2012	651412.66	6064117.25	583.01	3.00	RC	0.00	-90.00	Abandoned	11-Jul-12	11-Jul-12
RC-HU131B-2012	651413.66	6064118.25	583.01	99.00	RC	0.00	-90.00	Abandoned	11-Jul-12	14-Jul-12
RC-HU132-2012	651378.65	6064160.96	584.55	84.00	RC	0.00	-90.00	Completed	14-Jul-12	15-Jul-12
RC-HU133-2012	651342.67	6064236.41	583.27	66.00	RC	0.00	-90.00	Completed	15-Jul-12	16-Jul-12
RC-HU134-2012	650964.15	6064904.26	580.08	141.00	RC	0.00	-90.00	Completed	16-Jul-12	21-Jul-12
RC-HU135-2012	650753.26	6065039.65	580.86	57.00	RC	0.00	-90.00	Completed	21-Jul-12	23-Jul-12
RC-HU135A-2012	650750.72	6065041.45	580.94	108.00	RC	0.00	-90.00	Completed	23-Jul-12	27-Jul-12
RC-HU136-2012	651743.61	6063640.42	574.01	36.00	RC	0.00	-90.00	Completed	27-Jul-12	28-Jul-12
RC-HU136B-2012	651743.61	6063640.42	574.01	9.00	RC	0.00	-90.00	Completed	28-Jul-12	28-Jul-12
X1806CC	652359.86	6062745.96	549.27		RC	0.00	-90.00	Completed		
X1807CC	651772.45	6063641.64	569.43		RC	0.00	-90.00	Completed		
X1808CC	651206.22	6064366.31	588.90	56.08	RC	225.00	-57.50	Completed		
X1809CC	651293.46	6064283.94	584.40	56.39	RC	224.50	-60.00	Completed		
X1810CC	651066.08	6064569.87	587.00	43.89	RC	227.00	-55.00	Completed		
X1811CC	650987.58	6064630.96	588.60	43.89	RC	227.00	-55.00	Completed		
X1812CC	651033.08	6064677.04	582.00	60.05	RC	227.00	-55.00	Completed		
X1813CC	650968.61	6064736.50	584.52	37.80	RC		-90.00	Completed		
X1814CC	650931.45	6064695.78	590.10	44.20	RC	0.00	-90.00	Completed		
X1815CC	650745.07	6064940.37	587.60	27.43	RC	227.00	-55.00	Completed		
X1816CC	650589.20	6065085.14	588.54	62.48	RC		-90.00	Completed		
X1817CC	650575.83	6065207.91	582.20	52.43	RC	227.00	-55.00	Completed		
X1818CC	650447.95	6065244.38	590.92	62.18	RC	227.00	-55.00	Completed		
X1842CC	652036.64	6063305.87	565.31	30.48	RC	305.00	-55.00	Completed	30-Aug-78	30-Aug-78
X1843CC	652311.96	6062911.43	554.86	57.00	RC	218.70	-57.00	Completed	31-Aug-78	31-Aug-78

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
X1844CC	652433.17	6062707.03	546.00	49.68	RC	224.60	-56.00	Completed	31-Aug-78	2-Sep-78
X1845CC	652244.73	6063024.99	559.16	49.68	RC	215.30	-56.00	Completed	2-Sep-78	4-Sep-78
X1846CC	652411.86	6062685.13	546.10	32.92	RC	224.50	-54.00	Completed	4-Sep-78	6-Sep-78
X1847CC	652704.86	6062347.13	544.00	54.86	RC	234.20	-57.00	Completed	6-Sep-78	7-Sep-78
X1848CC	653150.72	6061814.39	532.00	57.91	RC	234.20	-57.00	Completed	7-Sep-78	8-Sep-78
X1849CC	652164.69	6063165.45	565.30	28.35	RC	228.00	-56.00	Completed	8-Sep-78	9-Sep-78
X1850CC	652134.58	6063165.47	563.84	64.92	RC	228.00	-55.00	Completed	11-Sep-78	12-Sep-78
HN-TR-01-06	651005.59	6064569.37	587.00	75.00	TR	41.00	-2.00	Completed	22-Aug-06	23-Aug-06
TR306-1	650164.73	6065472.26	593.04	48.77	TR	41.19	0.00	Completed		
TR309-1	650188.55	6065386.57	597.97	94.49	TR	42.72	0.00	Completed		
TR311-1	650231.51	6065335.00	599.07	18.29	TR	39.81	0.00	Completed		
TR311-2	650240.03	6065352.05	598.07	89.92	TR	44.20	0.00	Completed		
TR312-1	650262.35	6065343.66	595.74	7.62	TR	44.63	0.00	Completed		
TR313-1	650253.19	6065293.73	599.11	59.44	TR	43.79	0.00	Completed		
TR313-2	650304.24	6065346.85	594.77	27.43	TR	44.58	0.00	Completed		
TR314-1	650161.89	6065142.30	610.93	24.38	TR	44.09	0.00	Completed		
TR314-2	650217.60	6065198.82	608.11	10.67	TR	44.09	0.00	Completed		
TR314-3	650255.61	6065238.57	606.46	15.24	TR	44.65	0.00	Completed		
TR314-4	650266.23	6065247.94	603.05	13.72	TR	43.47	0.00	Completed		
TR314-5	650299.33	6065281.23	597.92	15.24	TR	43.79	0.00	Completed		
TR314-6	650307.87	6065292.21	596.93	73.15	TR	43.55	0.00	Completed		
TR314-7	650359.95	6065339.74	592.84	9.14	TR	43.74	0.00	Completed		
TR315-1	650311.27	6065266.90	598.49	51.82	TR	44.99	0.00	Completed		
TR315-2	650358.22	6065310.66	594.13	4.57	TR	45.66	0.00	Completed		
TR316-1	650337.55	6065226.45	599.75	59.44	TR	42.42	0.00	Completed		
TR316-2	650389.22	6065278.97	592.51	18.29	TR	45.61	0.00	Completed		
TR318-1	650359.65	6065170.30	603.06	57.91	TR	44.45	0.00	Completed		
TR318-2	650398.16	6065209.66	596.24	88.39	TR	44.33	0.00	Completed		
TR319-1	650385.06	6065150.68	603.67	103.63	TR	45.96	0.00	Completed		
TR319-2	650478.95	6065231.23	588.85	22.86	TR	40.24	0.00	Completed		
TR319-3	650392.89	6065159.76	601.70	100.58	TR	43.40	0.00	Completed		
TR319-4	650460.53	6065233.46	590.20	53.34	TR	46.58	0.00	Completed		
TR320-1	650392.74	6065111.62	605.69	96.01	TR	46.20	0.00	Completed		
TR320-2	650455.57	6065181.16	592.97	57.91	TR	44.44	0.00	Completed		
TR320-3	650498.37	6065218.14	588.11	12.19	TR	44.02	0.00	Completed		
TR321-1	650433.33	6065112.51	602.60	140.21	TR	44.40	0.00	Completed		
TR322-1	650499.24	6065116.30	596.47	45.72	TR	35.50	0.00	Completed		
TR322-2	650534.78	6065166.81	588.55	28.96	TR	36.60	0.00	Completed		
TR322-3	650484.95	6065115.01	598.22	51.82	TR	46.04	0.00	Completed		

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
TR322-4	650529.67	6065161.30	588.97	27.43	TR	44.87	0.00	Completed		
TR322-5	650562.87	6065214.11	582.77	33.53	TR	19.55	0.00	Completed		
TR323-1	650447.87	6065034.57	605.00	140.21	TR	45.31	0.00	Completed		
TR323-2	650499.09	6065091.99	599.27	21.34	TR	35.82	0.00	Completed		
TR323-3	650536.60	6065146.51	589.82	18.29	TR	40.26	0.00	Completed		
TR323-4	650543.48	6065133.28	589.84	45.72	TR	47.32	0.00	Completed		
TR323-5	650564.67	6065183.39	583.13	6.10	TR	35.75	0.00	Completed		
TR323-6	650582.37	6065180.62	581.68	9.14	TR	43.39	0.00	Completed		
TR325-1	650510.64	6065034.90	603.94	12.19	TR	49.01	0.00	Completed		
TR325-2	650531.61	6065052.82	600.43	18.29	TR	56.21	0.00	Completed		
TR325-3	650542.19	6065072.81	597.47	18.29	TR	69.90	0.00	Completed		
TR325-4	650551.17	6065075.90	596.15	15.24	TR	44.33	0.00	Completed		
TR325-5	650565.08	6065073.32	594.13	16.76	TR	40.17	0.00	Completed		
TR325-6	650564.43	6065085.35	592.45	39.62	TR	44.74	0.00	Completed		
TR325-7	650579.67	6065082.98	590.55	60.96	TR	46.62	0.00	Completed		
TR325-8	650590.95	6065116.44	586.00	18.29	TR	41.35	0.00	Completed		
TR325-9	650602.63	6065126.11	584.07	6.10	TR	44.24	0.00	Completed		
TR326-1	650565.92	6065033.17	599.31	112.78	TR	44.63	0.00	Completed		
TR327-1	650607.32	6065027.42	594.51	42.67	TR	46.28	0.00	Completed		
TR327-2	650636.20	6065057.55	585.22	25.91	TR	45.32	0.00	Completed		
TR327-3	650624.11	6065046.50	588.97	42.67	TR	44.33	0.00	Completed		
TR327-4	650657.72	6065074.62	583.27	33.53	TR	43.87	0.00	Completed		
TR328-1	650613.24	6064986.71	597.70	112.78	TR	43.34	0.00	Completed		
TR328-2	650668.28	6065043.20	584.25	12.19	TR	45.27	0.00	Completed		
TR330-1	650671.68	6064953.58	594.82	45.72	TR	40.90	0.00	Completed		
TR332-1	650709.01	6064904.43	593.82	36.58	TR	45.66	0.00	Completed		
TR332-2	650730.54	6064934.00	590.43	27.43	TR	46.23	0.00	Completed		
TR332-3	650754.24	6064948.09	586.19	56.39	TR	45.02	0.00	Completed		
TR334-1	650762.90	6064875.16	591.81	51.82	TR	44.33	0.00	Completed		
TR334-2	650799.37	6064915.48	585.67	51.82	TR	38.30	0.00	Completed		
TR334-3	650839.07	6064950.25	581.01	15.24	TR	44.02	0.00	Completed		
TR336-1	650800.61	6064831.99	591.79	76.20	TR	44.54	0.00	Completed		
TR337-1	650828.35	6064807.29	591.33	27.43	TR	44.36	0.00	Completed		
TR337-2	650878.19	6064856.48	586.20	38.10	TR	41.87	0.00	Completed		
TR338-1	650840.16	6064786.38	592.25	79.25	TR	44.61	0.00	Completed		
TR339-1	650869.31	6064764.93	591.74	30.48	TR	45.14	0.00	Completed		
TR339-2	650890.32	6064788.00	590.97	24.38	TR	45.19	0.00	Completed		
TR340-1	650882.27	6064734.13	592.02	27.43	TR	45.55	0.00	Completed		
TR340-2	650897.92	6064758.67	590.34	94.49	TR	45.05	0.00	Completed		

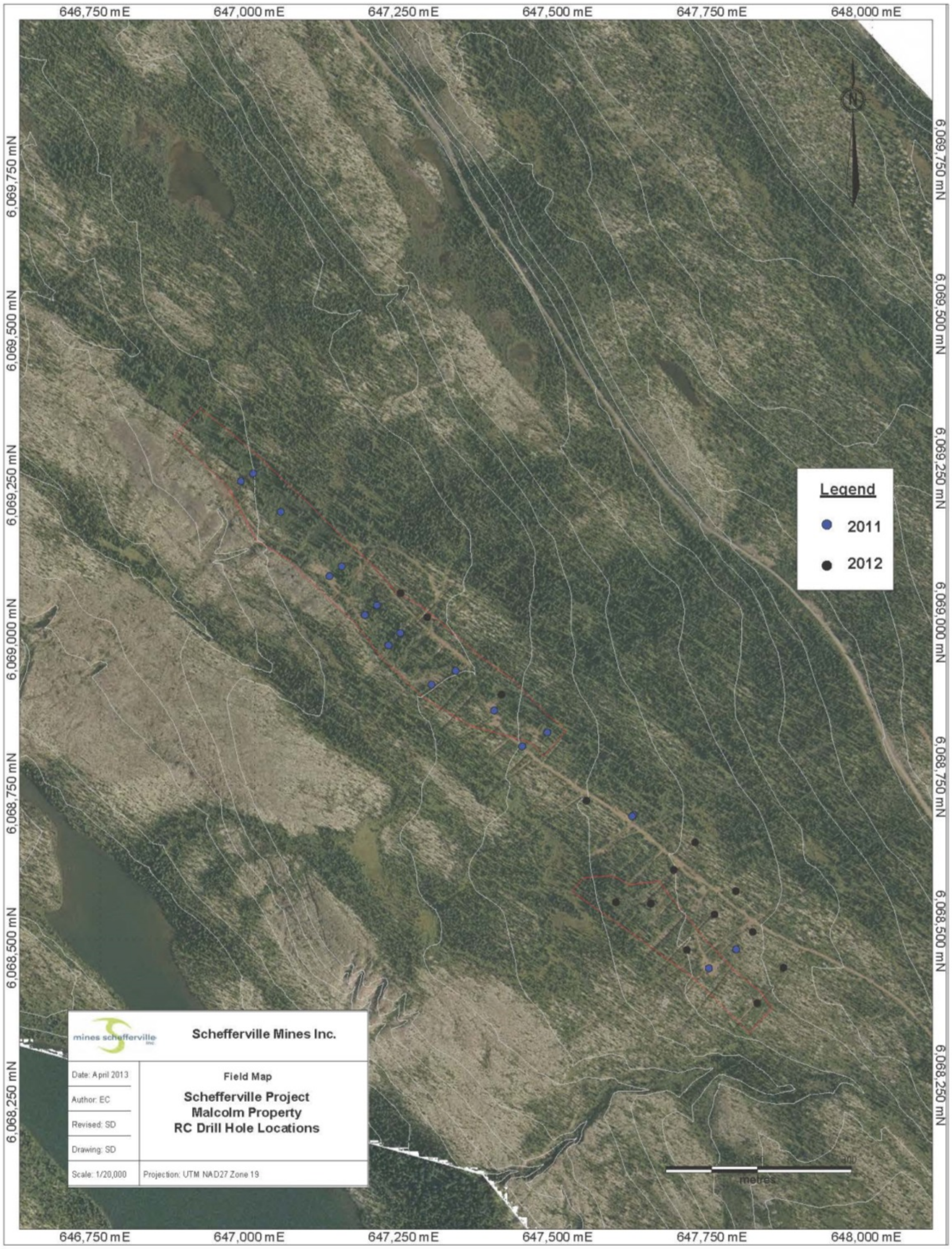
Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
TR341-1	650899.56	6064705.91	592.53	146.30	TR	44.66	0.00	Completed		
TR342-1	650880.00	6064653.60	594.69	36.58	TR	43.87	0.00	Completed		
TR342-2	650910.01	6064676.12	593.18	121.92	TR	54.24	0.00	Completed		
TR343-1	650909.26	6064655.02	594.04	18.29	TR	57.92	0.00	Completed		
TR344-1	650917.74	6064596.66	595.01	105.16	TR	44.72	0.00	Completed		
TR344-2	650988.14	6064677.27	585.41	92.96	TR	44.60	0.00	Completed		
TR345-1	650949.20	6064587.82	594.51	140.21	TR	45.28	0.00	Completed		
TR345-2	651047.11	6064684.52	582.00	3.05	TR	36.91	0.00	Completed		
TR346-1	650901.78	6064500.94	595.31	94.49	TR	42.02	0.00	Completed		
TR346-2	650945.29	6064537.60	596.00	109.73	TR	44.64	0.00	Completed		
TR346-3	651014.80	6064621.48	586.18	82.30	TR	44.99	0.00	Completed		
TR347-1	650960.01	6064514.83	595.38	76.20	TR	44.86	0.00	Completed		
TR347-2	651016.56	6064567.40	587.66	117.35	TR	44.77	0.00	Completed		
TR348-1	650970.70	6064480.68	595.35	92.96	TR	45.38	0.00	Completed		
TR348-2	651034.00	6064548.88	588.14	82.30	TR	47.52	0.00	Completed		
TR348-3	651092.82	6064606.43	583.44	21.34	TR	44.32	0.00	Completed		
TR350-1	651012.83	6064440.08	594.00	96.01	TR	41.64	0.00	Completed		
TR350-2	651085.28	6064515.95	587.00	10.67	TR	45.38	0.00	Completed		
TR350-3	651097.60	6064518.85	587.00	70.10	TR	46.20	0.00	Completed		
TR351-1	651029.43	6064407.06	593.54	42.67	TR	43.91	0.00	Completed		
TR351-2	651060.47	6064437.86	595.00	27.43	TR	48.11	0.00	Completed		
TR351-3	651077.69	6064456.99	591.89	44.20	TR	43.98	0.00	Completed		
TR351-4	651106.42	6064490.45	587.01	106.38	TR	42.43	0.00	Completed		
TR352-1	651044.65	6064380.01	593.00	121.92	TR	48.11	0.00	Completed		
TR354-1	651105.02	6064358.11	592.78	64.01	TR	43.17	0.00	Completed		
TR354-2	651156.45	6064399.86	591.56	30.48	TR	39.64	0.00	Completed		
TR354-3	651176.69	6064423.77	585.97	13.72	TR	43.27	0.00	Completed		
TR354-4	651227.57	6064476.42	585.40	57.91	TR	43.83	0.00	Completed		
TR355-1	651147.14	6064332.34	591.78	57.91	TR	40.21	0.00	Completed		
TR357-1	651184.90	6064305.21	590.87	36.58	TR	46.96	0.00	Completed		
TR357-2	651211.14	6064337.47	591.89	9.14	TR	141.56	0.00	Completed		
TR358-1	651214.83	6064285.18	590.98	59.44	TR	41.89	0.00	Completed		
TR359-1	651256.26	6064299.61	588.36	9.14	TR	45.02	0.00	Completed		
TR360-1	651256.99	6064249.97	590.11	21.34	TR	44.01	0.00	Completed		
TR360-2	651282.70	6064276.57	586.29	6.10	TR	38.26	0.00	Completed		
TR361-1	651270.51	6064231.69	590.00	19.81	TR	51.62	0.00	Completed		
TR361-2	651284.30	6064247.96	590.79	7.62	TR	52.33	0.00	Completed		
TR362-1	651290.54	6064196.25	589.46	27.43	TR	42.74	0.00	Completed		
TR362-2	651304.59	6064217.85	589.26	36.58	TR	69.21	0.00	Completed		

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
TR364-1	651314.32	6064156.24	589.99	30.48	TR	51.50	0.00	Completed		
TR364-2	651340.05	6064176.94	589.53	15.24	TR	62.47	0.00	Completed		
TR364-3	651332.38	6064144.13	590.73	39.62	TR	43.14	0.00	Completed		
TR364-4	651366.67	6064171.95	586.21	9.14	TR	40.23	0.00	Completed		
TR365-1	651376.26	6064125.15	589.49	15.24	TR	41.84	0.00	Completed		
TR365-2	651397.18	6064146.61	584.60	6.10	TR	39.94	0.00	Completed		
TR366-1	651382.30	6064109.62	588.68	42.67	TR	47.14	0.00	Completed		
TR367-1	651389.20	6064090.42	588.93	36.58	TR	45.48	0.00	Completed		
TR368-1	651415.97	6064063.98	587.65	21.34	TR	43.45	0.00	Completed		
TR368-2	651436.75	6064075.54	585.67	18.29	TR	37.14	0.00	Completed		
TR369-1	651442.69	6064039.40	587.17	12.19	TR	44.32	0.00	Completed		
TR369-2	651453.13	6064047.08	586.31	3.05	TR	42.27	0.00	Completed		
TR369-3	651459.99	6064058.04	582.81	12.19	TR	46.84	0.00	Completed		
TR371-1	651468.69	6063982.48	586.00	15.24	TR	42.73	0.00	Completed		
TR371-2	651479.13	6063993.95	585.64	3.05	TR	42.39	0.00	Completed		
TR371-3	651479.13	6063997.94	585.42	36.58	TR	38.55	0.00	Completed		
TR372-1	651494.39	6063969.31	586.00	22.86	TR	44.81	0.00	Completed		
TR372-2	651516.11	6063983.26	581.26	9.14	TR	42.49	0.00	Completed		
TR373-1	651533.05	6063959.78	581.96	15.24	TR	56.22	0.00	Completed		
TR373-2	651542.92	6063970.75	579.43	6.10	TR	45.05	0.00	Completed		
TR373-3	651505.36	6063936.62	586.00	67.06	TR	44.47	0.00	Completed		
TR374-1	651550.01	6063938.50	582.71	30.48	TR	43.68	0.00	Completed		
TR376-1	651605.19	6063908.70	578.05	36.58	TR	43.90	0.00	Completed		
TR377-1	651583.80	6063843.76	584.58	16.76	TR	49.53	0.00	Completed		
TR377-2	651602.08	6063852.18	581.81	39.62	TR	44.01	0.00	Completed		
TR377-3	651626.02	6063883.66	576.28	27.43	TR	43.07	0.00	Completed		
TR378-1	651641.31	6063846.42	574.64	17.07	TR	45.25	0.00	Completed		
TR378-2	651662.36	6063863.05	573.49	3.05	TR	48.11	0.00	Completed		
TR379-1	651639.76	6063810.19	578.89	30.48	TR	52.47	0.00	Completed		
TR380-1	651649.42	6063768.88	581.30	24.38	TR	44.40	0.00	Completed		
TR380-2	651666.83	6063788.57	574.95	20.42	TR	48.87	0.00	Completed		
TR380-3	651685.28	6063805.45	571.88	3.05	TR	50.60	0.00	Completed		
TR382-1	651676.78	6063714.79	580.20	45.72	TR	41.80	0.00	Completed		
TR384-1	651690.82	6063638.33	578.00	47.24	TR	44.53	0.00	Completed		
TR384-2	651724.65	6063670.59	576.61	12.19	TR	60.80	0.00	Completed		
TR384-3	651731.72	6063678.97	574.85	15.24	TR	43.37	0.00	Completed		
TR384-4	651742.10	6063695.84	570.39	12.19	TR	43.59	0.00	Completed		
TR385-1	651711.57	6063609.17	577.30	67.06	TR	46.08	0.00	Completed		
TR386-1	651728.73	6063581.83	576.76	18.29	TR	43.41	0.00	Completed		

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
TR386-2	651737.61	6063598.99	575.89	57.91	TR	44.25	0.00	Completed		
TR387-1	651747.68	6063558.67	575.14	60.96	TR	45.23	0.00	Completed		
TR388-1	651763.34	6063526.68	575.14	74.68	TR	43.76	0.00	Completed		
TR390-1	651784.23	6063467.02	575.22	60.05	TR	44.59	0.00	Completed		
TR390-2	651827.82	6063511.52	567.57	5.18	TR	43.88	0.00	Completed		
TR392-1	651820.03	6063425.08	574.09	64.01	TR	44.43	0.00	Completed		
TR392-2	651862.94	6063471.89	566.09	19.81	TR	75.89	0.00	Completed		
TR394-1	651879.97	6063397.58	567.02	45.72	TR	42.89	0.00	Completed		
TR395-1	651911.22	6063385.44	565.19	3.96	TR	63.45	0.00	Completed		
TR395-2	651917.69	6063389.32	565.01	3.66	TR	74.16	0.00	Completed		
TR395-3	651923.46	6063392.80	565.00	4.27	TR	44.02	0.00	Completed		
TR-HU1001-2011	650884.77	6064528.00	594.00	201.00	TR	56.40	4.60	Completed		
TR-HU1002-2011	650961.53	6064456.84	593.50	195.00	TR	54.60	0.20	Completed		
TR-HU2-001-2009	650555.00	6065168.00	585.00	3.50	TR	30.00	0.00	Completed	25-Aug-09	25-Aug-09
TR-HU2001-2011	650454.20	6065075.00	604.40	155.00	TR	40.68	-7.36	Completed		
TR-HU3-001-2009	651516.86	6063932.40	584.19	76.00	TR	34.73	-1.20	Completed	30-Aug-09	31-Aug-09
TR-HU3-002-2009	651560.61	6063896.22	583.97	84.67	TR	51.91	-8.67	Completed	1-Sep-09	1-Sep-09
TR-HU3-003-2009	651615.48	6063814.04	582.76	63.40	TR	42.11	-10.73	Completed	2-Sep-09	2-Sep-09
TR-HU3-004-2009	651668.13	6063737.85	578.86	49.00	TR	48.78	-5.11	Completed	2-Sep-09	2-Sep-09
TR-HU3-005-2009	651715.66	6063696.62	575.00	31.00	TR	35.07	-20.00	Completed	2-Sep-09	2-Sep-09
TR-HU3-006-2009	651748.32	6063572.90	575.12	48.00	TR	41.11	-6.58	Completed	3-Sep-09	3-Sep-09
TR-HU3-007-2009	651770.57	6063507.54	575.35	57.00	TR	58.44	-24.20	Completed	3-Sep-09	3-Sep-09
TR-HU3-008-2009	652123.71	6063073.30	563.88	66.00	TR	48.92	-3.97	Completed	8-Sep-09	8-Sep-09

24. Appendix II

Map and List of drill holes, trenches and test pits in the Malcolm 1 Deposit
Completed by Historical and LIM
Coordinates are based on UTM NAD27 Canada Zone 19


646,750 mE
647,000 mE
647,250 mE
647,500 mE
647,750 mE
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Legend
2011
2012
metres
mines schefferville
Schefferville Mines Inc.
Date: April 2013
Author: EC
Revised: SD
Drawing: SD
Scale: 1/20,000
Field Map
Schefferville Project
Malcolm Property
RC Drill Hole Locations
Projection: UTM NAD27 Zone 19

Malcolm 1 RC Drill Hole Best Intercepts

Hole_ID	Easting	Northing	Elev	Length	Type	Az	Incline	Status	Start	Finish
M1012CC	647121.09	6069089.50	547.94	71.63	RC	0.00	-90.00	Completed		
M-RS-001-2011	647252.00	6068894.06	556.55	1.50	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-002-2011	647191.46	6068960.43	553.88	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-003-2011	647192.32	6068954.97	553.18	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-004-2011	647160.35	6069009.29	554.05	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-005-2011	647156.77	6069003.49	553.87	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-006-2011	647155.28	6069001.18	553.89	1.50	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-007-2011	647102.66	6069070.55	551.15	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-008-2011	647100.58	6069068.12	551.28	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-009-2011	647098.49	6069065.70	551.31	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-010-2011	647031.57	6069172.43	545.14	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-011-2011	647034.91	6069161.46	547.18	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-012-2011	647029.84	6069160.46	546.16	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-013-2011	647005.97	6069147.38	547.01	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-014-2011	647001.22	6069148.04	547.34	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-015-2011	646993.79	6069151.05	545.80	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-016-2011	646970.91	6069249.17	545.03	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-017-2011	646951.03	6069210.80	544.13	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-018-2011	646947.58	6069207.00	543.96	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-019-2011	646880.05	6069333.16	544.57	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-020-2011	646878.35	6069330.12	545.15	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
M-RS-021-2011	646875.27	6069328.20	544.78	3.00	TR	45.00	0.00	Completed	1-Jul-11	1-Jul-11
RC-M001-2011	647779.13	6068484.44	577.75	99.00	RC	0.00	-90.00	Completed	19-Aug-11	21-Aug-11
RC-M002-2011	647734.83	6068453.62	573.54	87.00	RC	0.00	-90.00	Completed	21-Aug-11	23-Aug-11
RC-M003-2011	647613.01	6068701.97	569.19	36.00	RC	0.00	-90.00	Abandoned	23-Aug-11	25-Aug-11
RC-M003A-2011	647610.58	6068700.04	569.37	90.00	RC	0.00	-90.00	Completed	25-Aug-11	27-Aug-11
RC-M004-2011	647472.89	6068835.78	562.87	93.00	RC	0.00	-90.00	Completed	28-Aug-11	29-Aug-11
RC-M005-2011	647387.20	6068871.43	559.38	91.00	RC	0.00	-90.00	Completed	29-Aug-11	1-Sep-11
RC-M006-2011	647432.40	6068813.24	562.29	78.00	RC	0.00	-90.00	Completed	1-Sep-11	3-Sep-11
RC-M007-2011	647285.54	6068913.50	555.41	60.00	RC	0.00	-90.00	Completed	3-Sep-11	5-Sep-11
RC-M008-2011	647324.67	6068935.74	556.06	105.00	RC	0.00	-90.00	Completed	5-Sep-11	8-Sep-11
RC-M009-2011	647215.80	6068977.15	552.00	36.00	RC	0.00	-90.00	Completed	8-Sep-11	9-Sep-11
RC-M010-2011	647177.63	6069026.13	550.01	36.00	RC	0.00	-90.00	Completed	9-Sep-11	15-Sep-11
RC-M011-2011	647120.32	6069089.21	547.65	63.00	RC	0.00	-90.00	Completed	15-Sep-11	17-Sep-11
RC-M012-2011	647140.05	6069104.71	546.64	108.00	RC	0.00	-90.00	Completed	17-Sep-11	21-Sep-11
RC-M013-2011	647197.10	6069041.92	550.39	99.00	RC	0.00	-90.00	Completed	21-Sep-11	25-Sep-11
RC-M014-2011	647235.05	6068997.22	552.49	76.00	RC	0.00	-90.00	Completed	25-Sep-11	27-Sep-11

RC-M015-2011	**647041.24**	**6069193.17**	**543.96**	**96.00**	**RC**	**0.00**	**-90.00**	**Completed**	**27-Sep-11**	**30-Sep-11**
RC-M016-2011	**646976.79**	**6069242.97**	**544.59**	**69.00**	**RC**	**0.00**	**-90.00**	**Completed**	**8-Oct-11**	**9-Oct-11**
RC-M017-2011	**646996.81**	**6069255.31**	**543.35**	**57.00**	**RC**	**0.00**	**-90.00**	**Completed**	**9-Oct-11**	**14-Oct-11**
RC-M018-2012	**647584.21**	**6068560.68**	**566.70**	**90.00**	**RC**	**0.00**	**-90.00**	**Completed**	**28-Jul-12**	**30-Jul-12**
RC-M019-2012	**647640.68**	**6068558.49**	**568.84**	**99.00**	**RC**	**0.00**	**-90.00**	**Completed**	**30-Jul-12**	**1-Aug-12**
RC-M020-2012	**647677.71**	**6068613.29**	**571.06**	**108.00**	**RC**	**0.00**	**-90.00**	**Completed**	**1-Aug-12**	**3-Aug-12**
RC-M021-2012	**647712.73**	**6068657.58**	**572.79**	**123.00**	**RC**	**0.00**	**-90.00**	**Completed**	**3-Aug-12**	**6-Aug-12**
RC-M022-2012	**647778.53**	**6068578.84**	**577.38**	**114.00**	**RC**	**0.00**	**-90.00**	**Completed**	**6-Aug-12**	**9-Aug-12**
RC-M023-2012	**647743.99**	**6068540.68**	**577.01**	**105.00**	**RC**	**0.00**	**-90.00**	**Completed**	**9-Aug-12**	**12-Aug-12**
RC-M024-2012	**647699.03**	**6068483.31**	**570.45**	**129.00**	**RC**	**0.00**	**-90.00**	**Completed**	**12-Aug-12**	**15-Aug-12**
RC-M025-2012	**647805.84**	**6068512.56**	**580.53**	**105.00**	**RC**	**0.00**	**-90.00**	**Completed**	**15-Aug-12**	**17-Aug-12**
RC-M026-2012	**647813.12**	**6068397.24**	**576.37**	**99.00**	**RC**	**0.00**	**-90.00**	**Completed**	**17-Aug-12**	**19-Aug-12**
RC-M027-2012	**647856.03**	**6068454.70**	**582.64**	**120.00**	**RC**	**0.00**	**-90.00**	**Completed**	**19-Aug-12**	**21-Aug-12**
RC-M028-2012	**647536.48**	**6068724.91**	**566.94**	**90.00**	**RC**	**0.00**	**-90.00**	**Completed**	**21-Aug-12**	**23-Aug-12**
RC-M029-2012	**647399.01**	**6068897.03**	**558.03**	**129.00**	**RC**	**0.00**	**-90.00**	**Completed**	**23-Aug-12**	**26-Aug-12**
RC-M030-2012	**647278.75**	**6069022.49**	**555.54**	**123.00**	**RC**	**0.00**	**-90.00**	**Completed**	**26-Aug-12**	**30-Aug-12**
RC-M031-2012	**647235.32**	**6069061.57**	**553.13**	**165.00**	**RC**	**0.00**	**-90.00**	**Completed**	**30-Aug-12**	**3-Sep-12**