Schefferville Area Iron Ore Mine Western Labrador **ENVIRONMENTAL IMPACT STATEMENT** August 2009

REPORT TO **Labrador Iron Mines Limited**

220 Bay Street Suite 700

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Schefferville Area Iron Ore Mine FOR

(Western Labrador)

Revised Environmental Impact Statement ON

August 2009

EXECUTIVE SUMMARY

Introduction

This Environmental Impact Statement (EIS) has been prepared for the proposed Schefferville Area Iron Ore Mine (Western Labrador) (the Project) in accordance with the *Newfoundland and Labrador Environment Protection Act, Environmental Assessment Regulations* and the final *EIS Guidelines* issued on December 9, 2008. This EIS presents information about the Project and the results of its environmental assessment. It was submitted to government in December 2008 and in response to review comments issued by the Minister of Environment and Conservation, received in March 2009, has been revised and resubmitted.

The Project to be developed by Labrador Iron Mines Limited (LIM) will involve the reactivation of two iron ore deposits located in Labrador near Schefferville, Québec. Open pit mines will be developed at James North, James South, Redmond 2B and Redmond 5 deposits. The Project will operate under current regulations, environmental protection standards, and industry best practices and will be smaller than the previous IOC operation (1954 to 1982).

The EIS identifies and addresses the potential environmental effects on communities, economy and business, caribou, and fish and fish habitat. The assessment process also considers Project feasibility, the Project's water budget, and potential effects to air quality.

The EIS has been prepared in accordance with Guidelines issued by the Minister of Environment and Conservation (December 9, 2008) to fulfill provincial environmental assessment requirements and will be used by the Minister of Environment and Conservation, in consultation with Cabinet, to determine whether the Project's environmental effects are acceptable and the Project is to proceed.

Highlights of the Project include:

- the mining of 'direct shipping' iron ore deposits in western Labrador in an area of previous iron ore mining;
- mining will be carried out using conventional open pit mining methods, employing drilling and blasting operations;
- additional small excavations that may be required will include borrow pits, quarries and side-hill cuts associated with the construction and maintenance of access roads, mine haulage roads, sumps and settling ponds, and railway spur line construction;
- ore will be beneficiated by crushing, washing and screening at the Silver Yard in Labrador. No chemicals will be used in the beneficiation;
- the beneficiation building will house a primary crusher, tumbling scrubber, secondary crusher, primary screening equipment, secondary screening equipment, filtration equipment, a crane and various chutes, conveyors, and pumps;
- the Project is planned to operate an average of 7 to 8 months per year;
- the beneficiation building and contents will be semi-mobile and modular to fit with the Project's longterm plans;
- other buildings at the Silver Yard include: mine dry, site offices, laboratory, maintenance shed, warehouse facilities, and a camp nearby;

- subsequent to washing and screening, the reject fines will be deposited in Ruth Pit, which will become a settling pond to remove suspended solids;
- a 4.0 km rail spur line, previously operated and abandoned, will be restored, and a siding track will be laid at the Silver Yard;
- the use of a commute work system and seasonal camp accommodations for most Project workers;
- standard and proven environmental protection procedures will be employed throughout construction, operation, and rehabilitation and closure;
- water management will include: sourcing beneficiation water from pit water and groundwater; depositing resulting washwater in Ruth Pit; diverting clean drainage away from active mine areas; and maintaining flow to fish habitat using clean groundwater
- an environmental management plan regarding the potential disturbance to avifauna nest sites during construction will be submitted to Environment Canada;
- a Development Plan and Rehabilitation and Closure Plan will be submitted to Mines Branch prior to Project initiation;
- the site specific Environmental Protection Plan (EPP) will be submitted to the Minister of Environment and Conservation for approval before any construction on the Project begins
- a Benefits Policy and associated Benefits Plan;
- an Impact and Benefits Agreement with the Innu of Labrador has been signed;
- a Women's Employment Plan has been developed; and,
- operation Plans will be prepared and submitted annually.

Local and Regional benefits include:

- approximately 40 jobs created during construction and approximately 109 during operation:
- 5 years duration of employment;
- between \$30 million and \$60 million per year in total operating costs, much of which will be accrued
 to the Province of Newfoundland and Labrador;
- close working with the Innu of Labrador involving them in provision of labour, goods, and services;
- maximum use of qualified mining contractors and other services based elsewhere in the region, such as Labrador City, Wabush and Happy Valley-Goose Bay; and
- LIM is committed to the creation and implementation of employment equity practices to promote recruitment, training, and advancement of qualified visible minorities and women.

Issues Scoping

LIM conducted an extensive issues scoping process in relation to the Project, which included consultation with appropriate regulatory agencies, the public, and Aboriginal groups, in order to identify the potential environmental issues associated with it. The EIS includes consideration of the environmental effects of the proposed Project, including the potential effects of each of its components/phases and any of these predicted environmental effects is also evaluated. Mitigation measures which are technically and economically feasible have been incorporated into Project design and planning and additional VEC-specific mitigation has also been identified and proposed as required and appropriate.

Valued Environmental Components

Valued Environmental Components identified in the Guidelines and discussed in the EIS include Employment and Business, Communities, Fish and Fish Habitat, and Caribou.

Fish and Fish Habitat

The potential effects to fish and fish habitat have been considered and, with diligent application of mitigative and environmental protection measures, the residual and cumulative environmental effects are expected to be not significant under definitions for environmental assessment. LIM will adhere to the following mitigation measures to reduce or eliminate adverse effects on fish and fish habitat:

- vegetated buffer zones;
- sediment and erosion control measures;
- proper wastewater management measures;
- proper solid and liquid waste management measures;
- proper handling of petroleum products (oils, grease, diesel, hydraulic and transmission fluids), which will be stored a minimum of 100 m from any bodies of water and on level terrain and in accordance with applicable regulations;
- implementation of emergency response equipment and training to respond to spills and other unplanned events;
- blasting, when conducted, will be in accordance with applicable provincial and federal regulations to protect surface water features; and
- a no-fishing policy for workers will be implemented to protect local fisheries resources.

Follow-up and monitoring measures that will be applied to ensure compliance with provincial and federal regulations and to verify the impact predictions include:

- water quality monitoring under provincial and federal approvals and regulations;
- Environmental Effects Monitoring (EEM) under provincial and federal approvals and regulations.

Caribou

The Project may affect caribou, which occasionally migrate and/or occupy this area, through changes in habitat availability or effectiveness, changes in movement patterns, and increased mortality through influences affecting predation/poaching/hunting and vehicle collisions. To further document the status of caribou in the Project area, LIM undertook an aerial caribou survey with representatives of the Department of Environment and Conservation Wildlife Division in May 2009, including the documentation of potential caribou habitat, the presence of any caribou or other wildlife within a 50 km radius of the Project area, the collaring of one female caribou, collection of tissue for DNA analysis and ecotype affiliation, if possible, and a collection of measurements. A copy of the supporting document has been submitted to, and reviewed by, the Department of Environment and Conservation Wildlife Division.

In order to mitigate potential effects of the Project on caribou, activities during all phases of the Project will be planned with three main considerations:

 The recently completed caribou survey (May 2009) is considered inconclusive regarding the determination of the ecotype of caribou which were present in the project area. As such, LIM will undertake a caribou mitigation strategy which protects all caribou, including the potential for sedentary caribou to exist, although their presence/absence in the project area is currently unconfirmed. Additional associated survey data, such as outstanding DNA analyses, satellite collar data, and ongoing monitoring are anticipated to be of assistance in the near future in the determination of caribou type. LIM proposes that the mitigation strategy and supporting data be reassessed at the end of Year 1 of operation for appropriateness and effectiveness including clarification of caribou ecotype;

- In the event that caribou are observed within the Assessment Area or in the vicinity of Project activities, a set of procedures will be incorporated to reduce or eliminate disturbance and encounters with caribou; and
- Any activity that may potentially affect caribou habitat or mortality in some manner will be implemented with appropriate mitigation regardless of whether caribou are actually present.

Specific mitigation measures have been developed for both the woodland and migratory caribou ecotypes, and these mitigation strategies will be implemented in close collaboration with the Provincial Wildlife Division. Details for both mitigation strategies are provided in Section 7.2.5.

Applying the mitigation measures outlined for each caribou ecotype will reduce adverse environmental effects. Thus, residual and cumulative environmental effects on caribou, whether from a migratory herd or a possible woodland herd, are determined to be "not significant".

Employment and Business

Employment and Business was chosen as a VEC based on public concern that economic benefits accrue to local communities, Labrador and the Province as a whole. This includes benefits to the population and economy as a whole, and to under-represented groups.

It has been determined that the Project will make a contribution to the further economic development of the Province and, in particular, Labrador, by:

- Providing full and fair opportunity and first consideration for the people, employment, businesses and companies of the Province to participate in and benefit from the Project;
- providing local employment and incomes during construction and operation;
- providing local business during construction and operation;
- increasing the capacity and skills of local labour force and businesses; and
- facilitating further mining development by putting in place these new labour and business capabilities and new transportation infrastructure, thereby making existing and new Labrador projects more competitive globally.

These net positive effects will be particularly valued given the recent economic downturn in Labrador West.

No significant adverse residual or cumulative effects are expected on Employment and Business.

LIM will monitor Project employment and expenditures, including the proportions of work going to Labrador, the Innu of Labrador, women and the Province as a whole. This information will be compiled on an annual basis and made available to government upon request. Provisions respecting the employment of women have been specified in the Women's Employment Plan.

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Communities

Communities are another aspect of the socio-economic environment that may be affected by the Project. The communities most likely to be affected are the primary places of residence of the Project labour force: Labrador West, Upper Lake Melville, Schefferville, and Kawawachikamach. The construction, operation, and decommissioning phases of the Project will have negligible adverse short-term direct effects on the communities of Labrador West, Upper Lake Melville, Schefferville, and Kawawachikamach.

The monitoring of demands on community services and infrastructure is the responsibility of the relevant government departments and agencies, as part of their normal planning processes. LIM will assist by liaising with them, as requested, and through the timely provision of information about Project activity and plans.

Conclusion

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

The Project will result in considerable socio-economic benefits accruing to the Province of Newfoundland and in particular Labrador. It will create considerable direct and indirect employment and business opportunities, and contribute substantially to the economy of the local area of Labrador, as well as that of the Province of Newfoundland and Labrador as a whole. LIM is committed to providing full and fair opportunity and first consideration for the people, employment, businesses and companies of the Province to participate in and benefit from the Project.

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1.0 INTRODUCTION

1.1 Project Overview

The Schefferville Area Iron Ore Mine (Western Labrador) (the Project) is being developed by Labrador Iron Mines Limited ("LIM"), which is a wholly owned subsidiary of Labrador Iron Mines Holdings Limited, a public company listed on the Toronto Stock Exchange.

LIM has identified eight separate ore grade deposits located across a 100 km strike length, all in Labrador. The four central deposits are located within 10 km of the location of Silver Yard, Labrador, which is some three km west of Schefferville, Québec.

The Project involves development and mining of 'direct shipping' iron ore deposits in the northwest of western Labrador in an area of previous iron ore mining. High grade hematite iron ore will be mined from a number of identified deposits on sites where similar mining has taken place in the past. Mining will be carried out in a sequential manner using conventional open pit mining methods. When mined, the rock will be beneficiated at a single location in Labrador. The resultant products will include lump ore and sinter fines for direct rail transport to port and shipping to end users in Europe and possibly Asia.

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

The Project benefits from and relies upon the significant level of pre-existing infrastructure (open pits, roads, rail beds, etc.) put in place for previous mining operations that were subsequently closed during the 1980s. The existence of these infrastructure facilities, the majority of which are still in sound operational conditions, will ensure that new build facilities, including the camp and semi-portable mobile buildings, will be kept to a minimum with the ensuing reduction in the level of surface and ground water disturbance typically associated with this type of mining operation.

One of the key items of current operational infrastructure is the existing 200 km railroad line between Emeril Junction, Labrador and the town of Schefferville, which has been in continuous use since 1954, carrying iron ore until 1982 and passenger and freight since that time. Only the 4.0 km of track connecting the Silver Yard to the existing rail line requires having track re- laid on an existing bed. As and when required, LIM will be closely involved with others in any necessary upgrade of this track to ensure that the railroad has the capacity and the operational capability to handle all the expected volume of both outbound iron ore as well as inbound freight to meet all end users expectations.

LIM recognizes its responsibilities to a large number of stakeholders particularly those within the Province of Newfoundland and Labrador. Whilst the proximity of the Project location to other parts of Canada outside of the Province will influence aspects of the operational characteristics of the Project, LIM is committed to maximizing the benefits of the Project to the Province and to its peoples consistent with maintaining the financial viability of the Project. LIM also commits to minimizing the impacts of the Project on both the physical and the social environments and will at all times act within or surpass the

requirements of the various regulations and guidelines covering these matters. LIM also commits to maintaining an open dialogue with all stakeholders on these matters.

A major component of LIM's commitment will be to ensure that the largest proportion possible of jobs and services are sourced from the communities of Newfoundland and Labrador. LIM has signed an Impact Benefits Agreement (IBA) with the Innu Nation of Labrador. In addition, Memoranda of Understanding have been signed with the Innu Nation of Matimekush-Lac John and the Naskapi Nation of Kawawachikamach and extensive community consultation has been conducted with the nearby communities, as well as communities in western and central Labrador (Labrador City, Wabush, Happy Valley-Goose Bay). These consultations and agreements will ensure a close working relationship with the Innu of Labrador with respect to their involvement in the provision of labour, goods, and services. LIM is also aware of the impacts of the current world-wide economic downturn on communities within the Province, particularly those associated with the resource industries in Labrador West and, in developing the Project, LIM seeks to encourage economic development in this area of Labrador and will provide a full and fair opportunity and first consideration for the people, employment, businesses and companies of the Province to participate in and benefit from the Project.

It is LIM's intention to mine and beneficiate two of the four central deposits, James and Redmond initially. Therefore these two deposits are the subject of this Project and the Environmental Impact Statement (EIS). LIM expects to submit further applications in future years to next develop the Houston and Knob deposits (also part of the central cluster), and then subsequently the more distant deposits.

LIM has selected this phased approach to permit early commencement of production to bring forward the economic benefits of the Project to the Company and to the Province. Secondly, this approach allows LIM to use both the additional knowledge and the financial benefits of the initial phase to permit a thoroughly considered and economically feasible approach to the development of the additional deposits in which LIM holds interests.

Reasoned analysis suggests that attempting to bring all eight deposits located over a 100 km strike distance under a single application would significantly extend the baseline analysis and detailed engineering necessary, with a subsequent increase in the time-frame required, and that in itself would then render the progression to this study phase and hence to a production decision as highly unlikely. LIM considers that this phased approach is consistent with sound economics and good industry practice and is the only viable course of action likely to ensure these deposits are developed for the benefit of all stakeholders.

1.2 The Proponent

The parent company (Labrador Iron Mines Holdings Limited) of the Proponent, Labrador Iron Mines Limited, is an Ontario registered company trading on the TSX Exchange under the symbol of "LIM" and "LIM.WT" and can be contacted at:

Proponent:

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1.3 Regulatory Framework

1.3.1 Provincial Environmental Assessment Process

The Project is subject to an environmental assessment that meets the requirements of the Government of Newfoundland and Labrador as outlined under the *Environmental Protection Act*. Following release from the environmental assessment process, the Project will be subject to various environmental approvals and other regulatory requirements.

The Project was registered pursuant to Section 3 of the Newfoundland and Labrador Regulations 54/03, Environmental Assessment Regulations, 2003, under the *Environmental Protection Act*, SNL 2002 Ce-14.2, on May 5, 2008. Following both government and public review, the Minister of Environment and Conservation determined on August 13, 2008 that further environmental assessment (an Environmental Impact Statement (EIS)) was required for the proposed Project. Consistent with Part 10 Environmental Assessment of the *Environmental Protection Act*, the Minister appointed an Environmental Assessment Committee with representation from all relevant provincial and federal government departments and agencies to provide advice on scientific and technical matters related to the proposed undertaking. The Environmental Assessment Committee includes representation from:

- Environmental Assessment Division, Department of Environment and Conservation;
- Water Resources Management Division, Department of Environment and Conservation;
- Pollution Prevention Division, Department of Environment and Conservation;
- Wildlife Division, Department Environment and Conservation;

- Policy Planning and Evaluation Branch, Department of Human Resources, Labour and Employment;
- Strategic Planning Policy Coordination, Department of Natural Resources;
- Policy and Planning, Department of Labrador and Aboriginal Affairs;
- Environmental Protection Branch, Environment Canada; and
- Oceans and Habitat Management Branch, Fisheries and Oceans Canada.

As per Section 53 of the *Environmental Protection Act*, the Environmental Assessment Committee prepared guidelines for the EIS for the Project. These guidelines were also subject to a 40-day public review period, as per Subsection 59(1) of the *Environmental Protection Act*. Public meetings were conducted during this 40 days review period in the communities of Happy Valley-Goose Bay, Labrador City-Wabush and Schefferville. After approval from the Minister of Environment, the guidelines were provided to LIM on December 10, 2008. These guidelines, provided in Appendix A, established the framework for preparing the EIS by outlining the format and information requirements. The EIS was initially submitted to government in December 2008. Regulatory agencies subsequently reviewed the EIS and the Minister of Environment and Conservation requested additional information and clarifications from LIM in March 2009. In response to these comments and requests, this EIS has been revised and resubmitted to government. A Table of Concordance is also provided in Appendix A.

1.3.2 Environmental Authorizations

Following release from the provincial environmental process, the Project will require a number of approvals, permits and authorizations prior to Project initiation. In addition, throughout Project construction and operation, compliance with various standards contained in federal and provincial legislation, regulations and guidelines will be required. LIM will also be required to comply with any other terms and conditions associated with the EIS release. Potential environmental authorizations as they relate specifically to the Project description are discussed in detail in Section 2.4.

1.4 Environmental Impact Statement Purpose

The EIS presents information about the Project and the results of the environmental assessment conducted for the Project. This environmental assessment addresses the potential environmental effects on communities, economy, business, fish and fish habitat, and caribou. The assessment process also considers Project feasibility, the Project's water budget, and potential effects to air quality.

The EIS fulfills provincial environmental assessment requirements and will be used by the Minister of Environment and Conservation, in consultation with Cabinet, to determine whether the Project's environmental effects are acceptable.

1.5 Document Organization

Information on the study team and brief descriptions of each team member's expertise and experience are provided in Appendix B.

The document is organized as follows:

Executive Summary Identifies the Proponent, and provides a synopsis of the Project description, predicted environmental effects, mitigation measures, residual and cumulative environmental effects, and proposed monitoring and follow-up programs. The summary provides an overview of the EIS conclusions and allows the reader to focus immediately on important subjects. Tables of Concordance with the EIS Guidelines and requirements are provided in Appendix A to aid reviewers in ensuring that all requirements have been fulfilled.

Chapter 1 Identifies the Proponent, describes the purpose of the EIS, outlines the regulatory framework for the environmental assessment, and describes the EIS organization.

Chapter 2 Describes all components of the Project including: the Project location and study area; the site history; the purpose of the Project, including rationale and feasibility; alternatives for carrying out the Project; permits, and approvals and authorizations that may be required.

Chapter 3 Includes physical features of the Project; schedule for construction and implementation; details on operation and maintenance; and decommissioning information. The chapter concludes with a discussion of environmental management planning for the Project.

Chapter 4 Describes the existing environment of the Project area including: physical, biological, and socioeconomic. Data availability and gaps, and predicted future environmental conditions in the absence of the Project are also discussed.

Chapter 5 Describes the scope of the assessment, including details on the issue scoping process and the issues and concerns raised during public consultation sessions and other scoping activities. The Valued Environmental Components (VECs), as determined from the EIS Guidelines and the issues scoping exercise, are identified.

Chapter 6 Describes the Aboriginal Consultation that has been conducted to date by LIM, including a listing of issues identified, and where Impact Benefits Agreements or other agreements, such as Memoranda of Understanding have been reached.

Chapter 7 Discusses environmental effects assessment for each VEC, including fish and fish habitat, caribou, employment and business, and communities, and addresses accidental events that could occur.

Chapter 8 Provides information on environmental protection including issues such as VEC-specific mitigation, emergency response/contingency plans, environmental monitoring and follow-up programs, and rehabilitation and environmental protection plans.

Chapter 9 Presents concluding statements regarding the anticipated environmental effects that may result from the Project, a summary of specific mitigation measures and monitoring and follow-up commitments.

Chapter 10 References and personal communications cited in the EIS are provided.

Appendices Supporting materials are provided in the appendices.

1.5.1 Other Related Documentation

A number of documents have been prepared in relation to the Project and previous projects in the area. A bibliography listing of these documents is provided in Appendix C. These documents have either been previously submitted to the Department of Environment and Conservation in relation to previous environmental assessments for the Project, or are available from LIM.

2.0 PROPOSED UNDERTAKING

2.1 The Project

2.1.1 Project Location

The Project is within the Labrador Trough Iron Range. The Project includes the re-activation and development of James North and South, and Redmond 2B and 5 mineral deposits which are located in Western Labrador (Figure 2.1). The James deposits are located approximately one km south of the Silver Yard area. The Redmond deposits are approximately 8 km south of the James deposit. The single beneficiation area, where rock will be crushed and washed will be situated at the Silver Yard area in Labrador. A temporary camp to accommodate workers will be constructed nearby.

The Project has an estimated five-year operational life and is located within an area that has been previously mined and disturbed. The deposits are accessible by existing gravel roads. The James property straddles an existing road to the Redmond property to the south, and continues to the Menihek hydro electric dam, where the road is terminated.

2.1.1.1 Natural Environment

The Project area is situated at the southern edge of the forest tundra (Waterway et al. 1984; Hare 1950; Hustich 1949). The James and Redmond properties contain varied land classes from exposed tundra and exposed bedrock with lichen and scattered trees and shrubs, to low wetland areas (including bogs and fens). Intermediate land classes consist of varied forest types with spruce-moss and spruce-lichen predominating; merchantable timber is not known to occur in the area. Extensive surface disturbance exists on these properties as a result of previous mining. In such areas, alder and other vegetation associated with disturbed areas can occur.

The terrain is comprised of parallel ridges and valleys trending northwest to southeast, with bare rock exposures and barrens. At the James North and James South deposits, approximately 50 percent of the surface area has been disturbed as a result of previous mining activities. The Redmond sites are located to the south of the James' property and extensive past surface disturbance (approximately 90 percent) has occurred, including the presence of flooded abandoned mine pits, a former rail bed, turning yards and stockpiles of mine waste rock and uneconomical ore materials.

2.1.1.2 Existing Site Features

A historical mining pit, the Ruth Pit, will be utilized as a reject fines disposal area for the washwater that originates from the Silver Yard beneficiation area.

There is an existing transmission line that was established during the former operations, and it transmits power from the Menihek Generating Station, now owned by Newfoundland and Labrador Hydro. The regional grid crosses the Redmond property and is located less than 2 km away from the James property along existing roadways.

Existing roads and rail services will be used to access the Project and to transport equipment and materials.

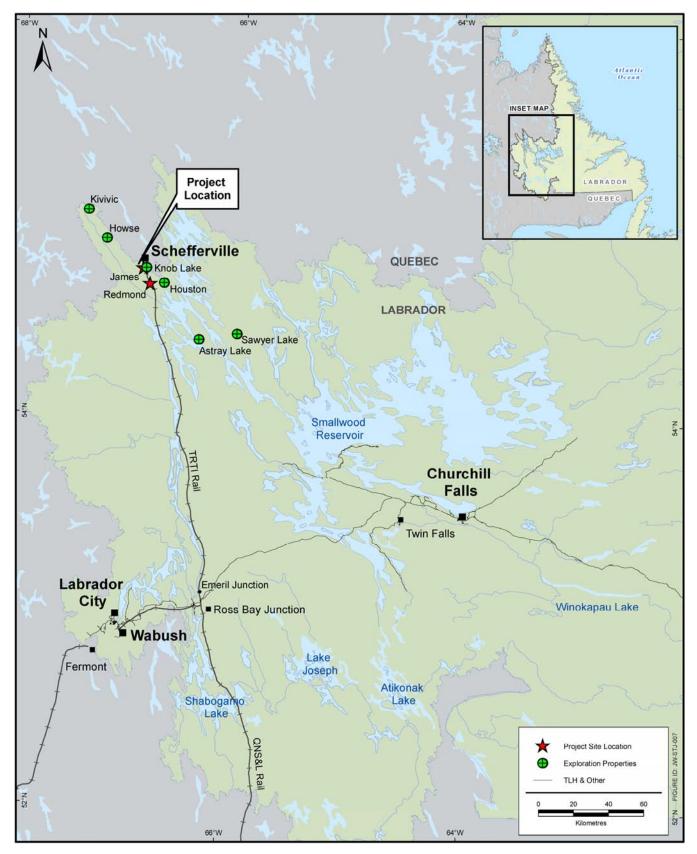


Figure 2.1 Project Location

2.1.2 Site History

Written references to mineral occurrences of the Schefferville area (originally known as Knob Lake) were first included in the diaries of missionary Louis Babel in 1854. Using those references, Albert Peter Low (A.P. Low) of the Canadian Geological Survey (CGS) began detailed mapping of the area in 1892 and continued the work in 1895/96. During that period, Low published a report which highlighted the existence of large iron ore deposits in the area.

Guided by Low's report, the Labrador Mining and Exploration (LME) Company began exploration in the area sometime around 1936. LME was subsequently taken over by Hollinger North Shore Exploration Company (Hollinger), which was later joined by M.A. Hanna Company (M.A. Hanna).

Under the direction of Hollinger and M.A. Hanna, an intensive exploration program was undertaken in the Schefferville area between 1945 and 1949. With the involvement of those two companies and a number of other entities, the Iron Ore Company of Canada (IOC) was officially incorporated in 1949.

During the period between 1950 and 1954, IOC constructed the 568 km rail transportation system between Schefferville and the shipping and receiving port of Sept Iles, Québec, as well as the iron ore processing and maintenance support facilities at the mine site and a power station at Menihek.

Mine workers were originally accommodated in the near-by temporary town of Burnt Creek. Permanent housing and office accommodations were subsequently constructed in the town of Schefferville, following the start of ore production activities. The population of Schefferville subsequently grew to a total of about 4500 persons during the peak mining years. Schefferville mining operations were terminated in November of 1982.

Between 1954 and 1982, mines in the Schefferville area produced in excess of 150 million tons of iron ore for world markets. At the time of closure, an additional resource of approximately 200 million tons of iron ore remained in individual deposits in Labrador, located in proximity to the previously operated mines. These include the James and Redmond deposits on which initial mining or development activities had been undertaken by IOC.

2.1.3 Project Purpose and Rationale

The Project will see the reactivation of two historical mine areas, the James and Redmond properties (the Project), located in Labrador near the Silver Yard area. Although the mine operations will involve the extraction of iron ore, the Project will be smaller than the one that was active from 1954 to 1982 and will operate under current regulations and environmental protection standards and industry best practices.

The purpose of the Project is to satisfy market demand for high-grade direct shipping iron ore products.

The successful start up of LIM's direct shipping iron ore Project will provide positive economic stimulus to the economy of Western and Central Labrador and contribute to long-term economic stability in the area.

In the construction phase, the Project could generate up to 40 jobs, with that number increasing to approximately 109 on an ongoing production basis during operations. The economic impact of such employment and contracting business on the surrounding communities would be positive and lead to the development of other support and service sector jobs in Western and Central Labrador.

Local and regional benefits include:

- construction and operation phase jobs;
- between \$30 million and \$60 million per year in total operating costs, much of which will be incurred within the Province of Newfoundland and Labrador;
- close working relationship with the Innu of Labrador involving the provision of labour, goods, and services;
- maximum use of qualified mining contractors and other services based elsewhere in the region, such as Labrador City, Wabush and Happy Valley-Goose Bay; and
- commitment by LIM to the creation and implementation of employment equity practices to promote recruitment, training, and advancement of qualified visible minorities and women.

In terms of world-wide mining operations, the Project is modest in size when compared to historical iron ore mining operations in the area, as well as to other existing iron ore mining operations in Labrador. The impact of the Project on these other operations will therefore be equally small. Certainly with the distances involved between LIM's Project and these other mining operations, there will be no direct physical impact.

The most obvious indirect impact will be in the area of availability and employment of suitable personnel. However again, the LIM Project is relatively small and the call on the available pool of skills will be quite limited. In consideration of the current and projected downturn in the economic climate, employment into the LIM Project from throughout Labrador will go some way to mitigating the difficulties being felt in these areas and particularly in Western Labrador.

It is LIM's intention to use contractors to carry out the majority of both the construction and operational aspects of the Project and to source these contractors from within the Province and particularly from within Labrador whenever possible. At present, there appears to be sufficient contracting capacity to meet LIM's requirements without prejudicing the operations of any of the current mining companies. Again the small size of LIM's operations compared to these other operations is a key determinant in this analysis. Additionally, by choosing to use contractors with their noted capability to speedily reduce and expand the size of their operations as circumstances change, LIM is likely to have an even more minimal impact on the future operations of these other companies.

The general supply of services and consumables will also be very limited given both the small size and relative simplicity of the mining and beneficiation processes to be used. Again, it is considered that the addition of the services and consumables into the supply train will have a negligible indirect impact on other end users.

It is therefore concluded that the introduction of the LIM Project will have only a very minor indirect impact on these other operations and will have no impact on their future viability.

As the Project develops, it is expected that LIM will seek and then be granted a number of Mines Leases and Crown Titles on which to carry out the Project. It will be LIM's fundamental intention to develop the mineral resources located within these leases. In those areas wherein the existing Mineral Licenses over which the requested Crown Titles are held by others, it is understood that the mineral license holders' rights retain precedence and, as such, LIM will respect these inherent rights and applicable legislation.

It is possible that some surface use leases will be located over land currently held by others under Mineral Rights Licences. The extent of these surface rights will be limited to the areas required for the efficient operation of the Project and such an arrangement is normal within the Province. Based on a review of regional and local geology, it is not considered that any of these potential areas will be the subject of future exploration and this, in combination with LIM's respect of the rights of Mineral License holders, will therefore not create any direct or indirect impact on the viability of exploration and development activities by other parties.

There will be some direct impact of the Project on the operations of the various railroad facilities that exist in Western Labrador and Québec. Again given the small size of the Project, these are expected to be minimal. This Project, as envisaged within this Study, is expected to generate a maximum of 1.5 million tonnes per annum of iron ore traffic. This compares to some 45 million tonnes per annum that is forecast to be handled through the Port of Sept-Îles, assuming that all announced expansions and new developments do eventually materialize. There appears to be a general measure of knowledge that the capacity of the lower section of this rail transport corridor from Emeril Junction to Sept Isles has a current capacity in the region of 60 million tonnes or as much as 15 million tonnes in excess of this predicted expanded production. The addition of LIM's 1.5 million tonnes per annum into this total production scenario is therefore to be considered as minimal.

The capacity of the upper section of this rail corridor, entirely within the Province, was demonstrated during periods of previous operations, to be in excess of 10 million tons per annum. Currently, there is no iron ore movement on this section and reviews carried out for LIM indicate that the haulage of the forecast Project capacity on this section of the railroad can be readily achieved. It will be necessary to carry out some ongoing upgrades to the rail track to maintain this capacity and these are being addressed with the operators. It is possible that other new mining operations will also wish to use this section of track for iron ore transport. To the best of LIM's knowledge, the confirmation of intent, timing and loadings for these additional operations have not yet been reached. If and when these timings and loadings are confirmed then a review of upgrade work required will be made. Nevertheless, it is predicted that the total volume to be potentially carried on this upper section will be less than that achieved by the previous mining operations in the period 1954 to 1982.

LIM has been holding discussions with railroad and port operators for an extensive period. To date these have resulted in a number of confidential Memoranda of Understanding regarding the supply of such services.

During 2008, LIM reached agreement with the railroad operators TRH and QNSLR, and with port and stevedoring companies, regarding the transport, unloading and storage of its bulk sample products over the railroad lines and port facilities and during 2008 these bulk sample tonnages were transported from the Silver Yard site to port. LIM expects that, subject to completing ongoing commercial negotiations, these arrangements will be extended to cover the periods covered by the Project production scenario.

LIM does note that each of the railroads over which its iron ore products will need to be transported are covered by the application and provisions of the *Canada Transportation Act* 1996, and accordingly the operators are required under the terms of that *Act* to provide a level of service.

LIM continues to be in discussion regarding ongoing port facilities under various Memoranda of Understanding, and expects to conclude successful negotiations with various port operators to provide a sufficient level of stevedoring service in the general Port of Sept-Îles area well before the

commencement of commercial production. LIM also expects to extend these agreements to cover the expected life of this Project.

2.2 Environmental Management and Corporate Responsibility Policies

2.2.1 Health & Safety Policy

LIM and its management are committed to conducting operations in a professional manner in pursuit of excellence in business practices and in compliance with all applicable health and safety legislation. LIM has adopted a Health and Safety Policy to express its commitment to its own personnel and its contractor workforce. LIM is further committed to conducting its operations in a manner that delivers maximum health and safety protection of workers as well as the general public.

In support of excellent business practices, LIM will provide positive avenues for dialogue, communication and training and will work in cooperation with employee representatives from health and safety committees, supervisory personnel, workers and contractors to ensure proper understanding and competency to safely and efficiently perform the work. LIM will work in cooperation with government representatives and regulatory agencies on all matters related to health and safety compliance.

Routine monitoring and reporting of health and safety performance will form a key part of LIM stewardship and management systems. Where appropriate and necessary LIM will take proactive corrective action to ensure health and safety objectives are attained in support of the overall corporate plan and related regulatory obligations. LIM will include health and safety performance as an important factor of its management and employee review process and will provide training, resources and staffing so that all employees, contractors and suppliers understand, and are able to conduct their work, in accordance with this Health and Safety Policy.

All LIM executives and their employees and contractors will fulfill their duties and exercise their individual and collective responsibilities in a manner that supports defined health and safety goals and clearly demonstrates compliance with LIM policies, procedures, applicable laws, regulations and industry standards.

2.2.2 Environmental and Social Responsibility Policy

LIM and its management are committed to conducting operations in an environmentally and socially responsible manner. LIM has adopted an Environmental and Social Responsibility Policy to express its commitment to the environment and the local communities in which it works. This commitment to sustainable development is achieved through the undertaking of its programs in a manner which balances environmental, economic, technical, and social issues.

To implement this policy and its commitment to such principles and practices, LIM will apply appropriate pollution prevention principles and environmental risk management practices throughout its activities on its mineral properties.

LIM and its contractors will conduct their work and operate the facilities in compliance with all applicable laws and regulations. In the absence of legislation, LIM will apply professional best management practices to support environmental protection at all sites, minimize risks to human health and the environment, and achieve environmental protection to levels at or above industry standards or best

practices. To support the development of responsible environmental laws, policies and regulations, LIM will work cooperatively with the local communities, industry and regulators.

LIM will develop and implement a Rehabilitation and Closure Plan in accordance with the Newfoundland and Labrador Mining Act that will advance long-term environmental recovery and provide suitable post-closure land-use incorporating consideration of the long-term vision of local communities. Where possible LIM will encourage economic and educational development in the communities, during Project assessment, development, operation and post-closure and will support initiatives to design and implement operating practices which advance the efficient sourcing and use of materials and energy.

LIM will include environmental performance as an important factor of its management and employee review process and will provide training, resources and staffing so that all employees, contractors and suppliers understand, and are able to conduct their work, in accordance with the Environmental Policy and Social Responsibility. To encourage continual improvement, LIM will conduct routine assessments of the Project to identify areas of non-compliance with the Environmental and Social Responsibility Policy, and create and implement corrective action.

LIM commits to the establishment of effective communications with employees, regulators, stakeholders and communities to address environmental and social concerns in a timely and effective manner.

2.2.3 Benefits Policy

LIM has established a Labrador Iron Mines Limited Newfoundland and Labrador Benefits Policy that will apply to LIM and to all Project contractors and subcontractors, and has developed a Benefits Plan (Appendix D) to implement the Benefits Policy. Labrador Iron Mines understands the importance of the Project to the Province of Newfoundland and Labrador and in line with the principles described in this policy will provide full and fair opportunity and first consideration for the people, businesses and companies of the Province to secure employment and to participate in and benefit from the business opportunities associated with the Project.

Specifically, LIM is committed to:

- the delivery of associated benefits, including employment, education, training and business and economic development to the Province and in particular to Labrador on a full and fair opportunity and first consideration basis;
- the encouragement and assistance of residents of the Province, and in particular of Labrador, to receive the education and training necessary to maximize their opportunities for employment, retention and advancement on the Project;
- the procurement of goods and services from within the Province and, in particular from Labrador, and provincial suppliers will be provided full and fair opportunity and first consideration for the supply of goods and commercial services to the Project on a competitive basis;
- the implementation of policies and practices in connection with the procurement of goods and services for the project that enhance economic and business opportunities in Labrador, including the identification and support of industry businesses that would generate long-term economic benefits to Labrador; and

• the provision of timely Project-related information to encourage the participation of all potential employees, businesses and contractors in the economic opportunities of the Project.

In addition LIM will also comply with the undertakings, commitments and obligations of the Impact Benefits Agreement (IBA) entered into with the Innu Nation of Labrador, and with the provisions of LIM's Women's Employment Plan (Appendix D).

2.3 Alternatives

The Project is located in a previously disturbed area and was conceived based on the use of infrastructure developed during the historical IOC operations. As these considerations formed the basis for the Project initiation and design, it is recognized that there is no preferred alternative to the overall Project and therefore there will be no detailed alternatives analysis. However, within the Project, one aspect for which alternatives were available and evaluated was for the reject fines storage options.

2.3.1 Reject Fines Storage Area

The mined ore will be taken to the Silver Yard area for beneficiation, which involves the crushing, screening and washing of the rock, and which does not involve the use of any chemicals. The resulting washwater consists of water and fine rock material (reject fines) and, mineralogically, this material is the same as the surrounding rocks. As presented in LIM's Registration Document, dated April 28th, 2008, the reject fines will be produced at an estimated rate of 21 percent of feed. As presented in the Registration document, the preferred option involved the deposition of these reject fines into nearby historically mined pits until such time as the new mine pits are decommissioned. The four original options previously presented in the registration document included:

- an open pit at the Ruth site;
- an open pit at the Wishart Site;
- a small on-land facility to the north of the James North area in a previously excavated valley; and
- open pits at the Redmond site.

Since the Registration document was submitted, LIM undertook additional environmental and engineering studies, including the gill netting of the identified historical pits to assess for the presence or absence of fish and fish habitat. These studies were undertaken further in consideration of extensive communications with DFO. Upon completion of this work and preparation and submission of the resulting reports, DFO reviewed this information and, in an e-mail dated September 25, 2008 stated "Based upon the results, Habitat Management has determined that the historic pits, specifically Redmond Pit 1, Redmond Pit 2, Wishart Pit, and Ruth Pit, do not constitute productive fish habitat that supports, or potentially supports, a commercial, recreational or aboriginal fishery" (Appendix E).

Although preliminary consideration was given for the deposition of the reject fines to the potential use of an on land v-shaped valley, located to the north of the James North deposit, this option was discontinued based on the:

- potentially higher risk posed by the requirement for a dam on the open side of the valley;
- position of this valley at an up gradient location relative to where workers would be mining at the James North pit; and

requirement for additional water management in an on land area.

Hydrological studies conducted by WESA of the Project area, including Ruth Pit (Section 4.1.4), confirm that Ruth Pit has the capacity to meet the water demands required for the reject fines deposition for the life of the mine operation. Based on this information, in combination with the determination from DFO, and in consideration that the Ruth Pit is an existing man-made feature, LIM concluded that the deposition of the reject fines at this location presented the least potential for environmental impacts.

2.4 Regulatory Approval Requirements

Following release from the provincial environmental assessment processes, the Project can be expected to require a number of approvals, permits and authorizations prior to Project initiation. In addition, throughout Project construction and operation, compliance with various standards contained in federal and provincial legislation, regulations and guidelines will be required. The Project will also be required to comply with any other terms and conditions associated with the EIS release.

A list of potential regulatory approvals and compliance standards that may be required for the Project is provided in Table 2.1. All appropriate permits, authorizations and approvals will be obtained for the Project. Where appropriate, authorizations will be obtained by individual contractors.

Table 2.1 Environmental Authorizations that May be Required for the Schefferville Area Iron Ore Mine

	Permit, Approval or Authorization			
	Activity	Issuing Agency		
Federal (under review)				
•	Authorization for Works Affecting Fish Habitat, or	Fisheries and Oceans Canada		
•	Letter of Advice regarding Protection of Fish Habitat			
Provincial				
•	Release from environment assessment process	DOEC – Environmental Assessment		
•	Approval under Rail Service Act Govt. of NL	Division		
•	Permit to Occupy Crown Land	DOEC - Crown Lands Division		
•	Certificate of Environmental Approval to Alter a Body of	DOEC – Water Resources Management		
	Water	Division		
	- Culvert Installation			
	- Fording			
	 Pipe Crossing/Water Intake (reject fines deposition) Stream Modification or Diversion 			
	- Other works within 15 m of a body of water (site			
	drainage, dewater pits, settling ponds)			
	Certificate of Approval for Water Supply System			
	Water Use License			
	- Beneficiation wash water			
•	Certificate of Approval for Construction and Operation	DOEC – Pollution Prevention Division		
•	Industrial Processing Works			
•	Approval of MMER Emergency Response Plan			
•	Approval of Waste Management Plan			
•	Approval of Environmental Contingency Plan (Emergency			
	Spill Response)			
•	Approval of Environmental Protection Plan			
•	Permit to Control Nuisance Animals	DOEC – Wildlife Division		
•	Pesticide Operators License	DOEC – Pesticides Control Section		

Permit, Approval or Authorization Activity	Issuing Agency	
Blasters Safety Certificate Magazine License Certificate of Approval for a Sewage/Septic System Approval for Storage & Handling Gasoline and Associated Products Temporary Fuel Cache Fuel Tank Registration Approval for Used Oil Storage Tank System (Oil/Water Separator) Fire, Life and Safety Program Certificate of Approval for a Waste Management System Food Establishment License	Government Service Centre (GSC)	
 Approval of Development Plan, Closure Plan, and Financial Security Mining Lease Surface Rights Lease Quarry Development Permit Operating Permit to Carry out an Industrial Operation 	DNR – Mineral Lands Division DNR – Forest Resources	
During Forest Fire Season on Crown Land Permit to Cut Crown Timber Permit to Burn Approval for Operation of Lunchroom/Washroom Facilities	DH – Public Health Inspector	