

Labrador Iron Mines Commences 2012 Exploration Program

Drill programs designed to expand and extend resources

Toronto, Ontario, June 13, 2012. **Labrador Iron Mines Holdings Limited** ("LIM" or the "Company") (TSX: LIM) is pleased to announce that our exploration field crew has been mobilized at properties in Labrador and Quebec to launch the 2012 exploration program.

Exploration Program Highlights

- An exploration budget of **\$8.6 million** has been approved for 2012, comprising **11,280 metres (m) of drilling and 3,600 m of trenching, supported by geophysics, in 12 target areas**. This represents the **largest exploration effort ever undertaken by the Company**.
- The main objectives of the 2012 exploration program are to:
 - » **convert historic resources to National Instrument (NI) 43-101 compliant mineral resources**, which includes drilling at Houston (currently 22.9 million tonnes of Measured and Indicated mineral resources – see press release dated May 31, 2012), Gill, Malcolm and other nearby deposits, selected on a priority basis to support strategic planning.
 - » **acquire geological information** to support ongoing geotechnical, metallurgical and hydrogeological interpretations required for detailed mine planning.
 - » **delineate historic crushed stockpiles** as part of its evaluation as potential process feed sources for the Silver Yards plant.
 - » **drill test taconite targets identified in 2011**: an initial diamond drill program (2,400 m) will target taconite iron mineralization in both Quebec and Labrador.
 - » **evaluate historical manganese deposits**, which will include exploration work and metallurgical testing.

Commenting on the 2012 exploration program, Rod Cooper, LIM's President and COO, said, "We are extremely excited with this year's exploration program, which is significantly larger than any previous program executed by LIM and is designed to contribute to the strategic objectives of our Company. Our team has years of experience successfully completing fieldwork programs in the Schefferville area and under the leadership of our recently appointed Vice President of Exploration, Michel Cormier, we look forward to a year of milestone results."

2012 Exploration Work Program Details

Overview

The Company has signed agreements with three drilling contractors for 2012: two contractors will carry out diamond drill work and the third will focus on reverse circulation (RC) drilling. In previous years, LIM has used RC drilling almost exclusively. The 2012 exploration program will focus on generating core samples through the use of traditional diamond drilling and/or of other proven core recovery techniques.

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The capacity of the mine site sample preparation facility will be increased to allow for better turnaround time in the receipt of assays from off-site laboratories. Actlabs Laboratories Ltd. (Actlabs) will remain as independent managers of the site preparation laboratory and all reduced and pulverized exploration samples will be airfreighted to its analytical laboratory in Ancaster, Ontario for multi-element X-ray fluorescent (XRF) assays including Actlabs internal Quality Assurance / Quality Control (QA/QC) procedures.

A summary table of the 2012 exploration program is shown below. Refer to Figure 1 in the appendix for the location of these properties.

Province	Property	Diamond Drilling	RC Drilling	Total Drilling	Trenching	Geophysics: Gravity/Mag
		(m)	(m)	(m)	(m)	Line-metres
Newfoundland & Labrador (NL)	James Mine	400	—	400	—	—
	Houston 1-2-3	2,700	—	2,700	600	—
	Redmond 2B & 5	600	—	600	—	—
	Gill Mine	500	1,200	1,700	300	—
	NL Stockpiles	—	160	160	—	—
	Elizabeth Taconite	1,200	—	1,200	1,350	6,500
	Howse	—	—	—	—	8,100
	Ryan – Manganese	160	—	160	—	—
Quebec (QC)	Malcolm 1	700	1,200	1,900	900	—
	Denault	700	—	700	—	—
	Gagnon Taconite	1,200	—	1,200	450	6,900
	QC Stockpiles	—	560	560	—	—
	TOTAL	8,160	3,120	11,280	3,600	21,500

Details of the Work Program

The 2012 work program is designed to optimize the efficiency of the short drilling season (June to December), yielding geological, geotechnical, hydrogeological and metallurgical information from the same core samples. Assessment of geotechnical and metallurgical parameters, through logging, mapping and testing, will provide data for mineral resource estimation, mine design, pit wall stability assessment, process plant flow sheet design, geological and hydrogeological interpretation and modelling.

Diamond Drilling

Drilling is planned at the James Mine, Houston, Redmond and Denault deposits (all NI 43-101 compliant), as well as at Gill and Malcolm. These holes will add to or complete our geological databases and contribute data for ongoing technical planning.

Taconite Targets: A number of taconite deposits identified in the Schefferville / Menihek area are being explored on neighbouring claims by other exploration companies. These deposits, which usually show an average grade of about 30% iron (Fe), can often be very significant in size. An initial diamond drill program (2,400 m) is planned on two of the four taconite targets on LIM's mineral claims identified by geophysical and prospecting techniques in 2011. These targets are known as Gagnon in Quebec and Elizabeth, Redmond and Houston in Labrador. Drilling is expected to start in mid-July.

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Manganiferous deposits: Exploration work aimed at evaluating historical manganese mineral resources will also be carried out. This drilling will acquire metallurgical information on the Ryan target, which is strategically located between the Gill Mine and Ruth Lake deposit (see Figure 1) in Labrador. The information will be used to outline various process flow sheet options including compatibility with the existing Silver Yards' processing plant flow sheet.

Reverse Circulation Drilling

Stockpiles: Following positive preliminary shallow pit sampling completed in 2011, a mineral resource definition and bulk sampling program of historic stockpiles, all located adjacent to former producing mines within 10 kilometres (km) of the Silver Yards processing plant, will be initiated with a view to providing supplemental plant feed.

Other deposits: Mineral resource definition drilling programs, principally at Houston, Gill and Malcolm, (in combination with diamond drilling), will focus on generating further mineral resources and technical information required for detailed mine planning.

Ground Geophysical Surveys

A Quebec-based geophysical consulting firm has been selected to carry out a series of ground magnetometer and gravity surveys, totalling 21.5 line-kilometres, over several main targets including Gagnon, Elizabeth, Redmond and Houston taconites and over the Howse direct shipping (DSO) iron ore deposit (28.2 million tonne historic resource). This will allow better planning for a future mineral resource delineation and technical drilling program.

Experienced Technical Team

The exploration program has been designed and will be implemented by LIM's experienced geological team led by Chief Project Geologist Howard Vatcher, supported by Senior Resource Geologist Erick Chavez, Senior Field Geologist Tara Schrama, Project Geologist Adewara Odewande, and Field Geologists Jim Orth and Shawn Duquet, all under executive supervision of Michel Cormier.

Historical Resources

The historical resources referred to in this press release are based on work completed and estimates prepared by the Iron Ore Company of Canada (IOC) prior to 1983 and were not prepared in accordance with NI 43-101. The Company is not treating any historical resource estimate as a defined current resource verified by a Qualified Person and the historical resource estimates should not be relied upon. However, the historical resource estimates are still considered relevant.

Qualified Person

This release has been prepared under the supervision of Terence N. McKillen, Executive Vice President and a Director of the Company and a Qualified Person within the meaning of NI 43-101.

Quality Assurance / Quality Control (QA / QC)

From the beginning of the 2008 RC drilling and trenching programs, LIM initiated a QA/QC protocol. This includes the systematic addition of in-house blanks, in-house reference standards, field duplicates, and preparation laboratory duplicates to approximately each 25 sample batch sent for analysis at Actlabs facilities.

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About Labrador Iron Mines Holdings Limited (LIM)

Labrador Iron Mines (LIM) is Canada's newest iron ore producer. We own a portfolio of direct shipping (DSO) iron ore operations and projects located in the prolific Labrador Trough. Initial production commenced at our 100%-owned James Mine in June 2011 and we recorded the sale of 400,000 tonnes of iron ore in our first start-up season. The first full production season commenced on April 2, 2012, with a sales target of 2 million tonnes of iron ore for the 2012 year.

LIM is focused on a strategic and robust growth plan arising from our portfolio of 20 iron ore deposits in Labrador and Quebec, all within 50 kilometres of the town of Schefferville. The James Mine is connected by a direct rail link to the Port of Sept-Îles, Québec. The area also benefits from established infrastructure including the town, airport hydro power and railway service. Starting with the James Mine and leading to the development of the expanding Houston flagship project, our objective is to provide shareholders with long-term value as we ramp up production and sales towards 5 million tonnes per year by 2015.

We are currently the only independently-owned Canadian iron ore producer listed on the Toronto Stock Exchange and trade under the symbol LIM.

For further information, please visit LIM's website at www.labradorironmines.ca or contact:

Keren Yun

Vice President, Investor Relations & Communications

Tel: (647) 725-0795

Cautionary Statements:

Some of the statements contained herein may be forward-looking statements which involve known and unknown risks and uncertainties. Without limitation, statements regarding potential mineralization and resources, exploration results, and future plans and objectives of the Company are forward looking statements that involve various degrees of risk. The following are important factors that could cause the Company's actual results to differ materially from those expressed or implied by such forward looking statements: changes in the world wide price of iron ore and steel, general market conditions, the uncertainty of future profitability and access to additional capital, risks inherent in mineral exploration and risks associated with development, construction and mining operations, delays in obtaining or failures to reach agreements with any potentially impacted aboriginal groups or to obtain required governmental, environmental or other project approvals. There can be no assurance that the Company will be successful in reaching any agreement with any First Nations groups who may assert aboriginal rights or may have a claim which affects the Company's properties or may be impacted by the Schefferville Area project. Caution should be exercised on placing undue reliance on forward looking information.

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Figure 1: Location Map for 2012 Exploration Program

