



LIM announces new Denault Resource Estimate of 6.4 Million Tonnes

Drill Program continues to increase historical resources

For Immediate Release

Toronto, Ontario. March 4, 2011. Labrador Iron Mines Holdings Limited (TSX: LIM) is pleased to report a new resource estimate for its Denault deposit, located in Quebec, about 6 km northwest of the town of Schefferville.

The new measured and indicated resource estimate of 6.4 million tonnes is a significant increase over the previous historical estimate of 3.7 million tonnes and includes a new mineralized zone discovered during the 2010 exploration program.

Commenting on the resource estimate at the Denault deposit, **John F. Kearney, Chairman and CEO** of Labrador Iron Mines said, *“This is a particularly encouraging result from Denault which is one of the properties in Quebec that was acquired by LIM in 2009. Our exploration programs have confirmed not only the reliability of the historical resource estimates but have identified previously unknown mineralization that has significantly increased the total resource at Denault.”*

Denault is part of a Mining Lease covering 2,816 hectares in the Province of Quebec in which LIM holds a 100% exclusive operating interest through its wholly-owned subsidiary Schefferville Mines Inc. (“SMI”). SMI also holds 257 Mining Titles covering 10,613 hectares in the Province of Quebec.

The Denault deposit is located about 10 km from LIM’s new Silver Yards beneficiation plant and, subject to permitting, will be included in Stage One of LIM’s planned DSO iron ore operations.

The new estimate, prepared in accordance with NI 43-101, has almost doubled the historical resource (not NI 43-101 compliant) previously estimated by the Iron Ore Company of Canada (IOC) prior to 1982. The Denault deposit includes a total measured and indicated resource of 6.38Mt @ 54.8% Fe and 8% SiO₂. The new resource also includes manganese iron ore resources with Mn grades >3.5% totaling 1.7Mt @ 52.1% Fe, 6.8% Mn and 5.3% SiO₂ in the measured and indicated categories.

A comparison of the new resource estimate with historical resources is shown in Table 1 and a summary in Table 2.

Table 1 – Comparison LIM NI 43-101 / Historical resources

Classification	43-101 (February 2011)				Historical 1982				
	Tonnes	Fe	Mn	SiO ₂	Tonnes	Fe	Mn	SiO ₂	
	x 1000	%	%	%	x 1000	%	%	%	
Fe Ore	Measured	3,242	56.6	0.7	7.4	2,731	49.1	-	7.7
	Indicated	1,412	55.4	0.7	9.0				
	Inferred	237	54.6	0.5	11.6	-	-	-	-
Mn Ore	Measured	1,213	52.2	6.8	5.2	929	45.2	5.4	6.2
	Indicated	516	52.1	6.8	5.6				
	Inferred	132	52.8	6.6	5.4	-	-	-	-
TOTAL	M+IND	6,384	54.8	2.3	8.0	3,660	48.8	-	7.6
	INF	369	53.9	2.7	9.4	-	-	-	-

Table 2 – Summary of Denault Resource Estimation (NI 43-101)

Classification	Ore Type	SG	Tonnes x1000	Fe%	Mn%	SiO2%
M+IND	LNB-NB	3.4	4,263	56.2	0.7	7.9
	HiSiO2	3.3	392	51.6	0.1	20.3
	LMN-HMN	3.3	1,729	52.1	6.8	5.3
	Total	3.4	6,384	54.8	2.3	8.0
INF	LNB-NB	3.4	208	55.0	0.6	10.4
	HiSiO2	3.3	30	51.4	0.1	20.1
	LMN-HMN	3.3	132	52.8	6.6	5.4
	Total	3.4	369	53.9	2.7	9.4

Ore Types	Ore Colours	T_Fe%	T_Mn%	SiO2%	Al2O3%
NB (Non-bessemer)	Blue, Red, Yellow	>=55	<3.5	<10	<5
LNB (Lean non-bessemer)	Blue, Red, Yellow	>=50	<3.5	<18	<5
HiSiO2 (High Silica)	Blue	>=50	<3.5	18-30	<5
HMN (High Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50	>=6	<18	<5
LMN (Low Manganiferous)	Blue, Red, Yellow	(Fe+Mn) >=50	3.5-6	<18	<5

- LIM resource definitions includes Hi-SiO2 ores (>=50% Fe <=30% SiO₂ dry basis)
- The original IOC ore definition was: >=50% Fe, <=18% SiO₂ dry basis.
- A variable specific gravity (density) was used for the modeled ore blocks using the following equation previously calculated by LIM based upon 229 specific gravity tests: $SG = (2.3388 + Fe \times 0.0258) \times 0.9$
- 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.
- 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.
- 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.

Drilling

The updated resource estimate for the Denault deposit is based on 1,688 metres of RC drilling in 26 holes and 588 samples carried out by LIM in 2010. The deposit remains open along strike to the northwest and to the southeast. Further drilling is planned during 2011.

Block Modeling

LIM used Gemcom GEMS 6.4.2.1 software for the resource estimation. The ordinary kriging interpolation method was used to estimate the resources by block modeling with block sizes of 5x5x5 metres and block rotation of 45.6° which matches with the general strike of the deposit. LIM used the geological and ore models interpreted in plane and in sections. LIM used different search ellipses derived from 3D semi-variogram analyses for the classification of the resources.

Analyses

Analyses for all of the samples from the 2010 Denault drilling program were carried out by Activation Laboratories. The analytical method used was borate fusion whole rock X-Ray Fluorescence.

Qualified Person

The resource estimates and information of a scientific or technical nature contained in this release has been prepared by or under the supervision of Terence McKillen, P.Geo., Executive Vice President of the Corporation and a Qualified Person within the meaning of National Instrument 43-101 of the Canadian Securities Administrators. A Technical Report will be filed on SEDAR within the required timeframe.

New Chief Geologist Appointed

LIM is pleased to report that it has appointed Bertrand Brassard, P.Geo., M.Sc. as the Company's Chief Geologist. Bertrand has over 25 years experience managing exploration programs for advanced stage projects particularly in Quebec and is a Qualified Person under NI 43-101.

Mr. Brassard holds a B.Sc. degree in geology and a M.Sc. degree from the l'Université du Québec à Montréal and was previously employed as Senior Exploration Geologist for Canadian Royalties, where he was responsible for the Raglan South Nickel Project, and as Exploration Manager for Niogold Mining Corporation primarily focused on gold in the Val d'Or region of Quebec.

Bertrand will take charge of all of LIM's on-going exploration programs in Labrador and Quebec, where an extensive drilling program is planned for the 2011 exploration season.

About Labrador Iron Mines Holdings Limited (LIM)

LIM's Schefferville Area project involves the development of twenty direct shipping iron ore deposits in western Labrador and north-eastern Quebec near Schefferville, Quebec. The Company's properties are part of the historic Schefferville area iron ore district where mining of adjacent deposits was previously carried out by the Iron Ore Company of Canada from 1954 to 1982.

Labrador Iron Mines contemplates mining in stages, the first phase of Stage 1 comprising the James and Redmond deposits, which are located in close proximity to existing infrastructure and where construction is being completed and mine start-up is planned to commence in April 2011.

For further information, please view the Company's website at www.labradorironmines.ca or contact:

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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.