Labrador Iron Mines Holdings Limited

PRESS RELEASE

LIM Reports Third Quarter Results and Outlook for First Year of Production

For Immediate Release

Toronto, Ontario. February 15, 2011**. Labrador Iron Mines Holdings Limited** (TSX: LIM) reports that it has filed its unaudited financial statements and MD&A for the third quarter and nine months ended December 31, 2010. The documents are available under the Company's profile at www.sedar.com and on LIM's website at www.labradorironmines.ca.

During the quarter and nine months ended December 31, 2010, the Company invested $5,040,338 and $8,334,887 respectively in its mineral property interests, compared to $1,607,373 and $5,911,071 respectively in the prior year, the increase relating to significant mine development activities in anticipation of the commencement of production in 2011. For the same periods, the Company also saw increased investment in property, plant and equipment of $5,022,643 and $15,227,374, compared to $2,598,817 and $4,209,769 in the prior year, due to the significant investment in processing plant equipment, rail spur line and related construction costs.

The Company reported a loss of $995,200 or $0.02 per share in the quarter ended December 31, 2010, compared to net income of $2,356,601 or earnings of $0.06 per share for the same quarter in the prior year in which an income tax recovery had been recognized.

At December 31, 2010, LIM had cash and cash equivalents of $27,949,904 and no debt. The Company had 43,927,514 common shares outstanding at December 31, 2010. Subsequent to the end of the quarter, the Company granted additional stock options on 132,500 shares to new employees exercisable at $11.65 per share for a period of five years vesting over a two-year period.

Project Update and Outlook

Mining Activities Underway

Waste stripping at the James North deposit commenced in January 2011 and by the second week of February about 300,000 tonnes of material had been moved. Most of the James North pit area has now been stripped of overburden and the orebody is exposed along the first production bench.

Development of the first mining bench in the north end of the James pit has begun to prepare a mining face in the higher grade blue ore, which will be the first ore to be mined, and some of which may be directly shipped with only minimal crushing and without further processing. The waste rock has proved to be free digging and mine development is currently ahead of schedule.

The ore haul road from the James Mine to the Silver Yards processing site has been completed and is operational. The various ore and waste rock stockpile areas have been prepared, as have the temporary and permanent ore storage pads. Ore mined from the initial development, together with the stockpiles of ore from previous bulk sampling programs, will be delivered to the plant ahead of the primary crusher ready for processing.

The first James mine settling pond has been constructed to collect water pumped from the pit. Two additional dewatering wells will be drilled to supplement the wells drilled in 2009. Pump and piping installation and dewatering of the James pit is to commence in the spring of 2011. Site clearing and grubbing at the James South pit is also being completed during the winter months.

Full scale mining operations are planned to commence in April 2011, and will continue for eight months until November, at an anticipated initial mining rate starting at 6,000 tonnes of ore per day, increasing to over 10,000 tonnes of ore per day, using conventional open-pit mining methods and eventually employing standard drilling and blasting operations as required.

Plant Commissioning on track for April 2011

The beneficiation plant and associated facilities were structurally complete at the end of 2010. The remaining fabrication, piping, electrical and other mechanical installation will be completed in the next few weeks. Conveyor belts will then be run in readiness for commissioning. Once installation of the plant is completed, dry run stockpiled ore will be fed to the plant to allow commissioning to take place, which, subject to weather conditions, is scheduled to begin in April 2011.

The accommodation camp at Bean Lake consisting of 72 units has been completed and will be ready for occupation by the end of February.

Plant Upgrades and Expansion

The Silver Yards plant as currently installed has a design capacity to process 10,000 tonnes per day and the equipment to crush, wash and screen to recover about 65% of the contained iron in the blue ore, which will produce two products, the first a coarse lump ore and the second a sinter feed. It is expected that initially the lump ore will represent about one third of the product.

Once the basic processing plant is commissioned, a series of plant upgrades and expansions will be undertaken. The Company plans to install a fines recovery system during 2011. This will include installation of a hydrosizer and pan filter. This system will be installed during the summer months and is expected to be operational by September 2011. The installation of this system is expected to increase overall recoveries to about 75% and the plant output by approximately 13% by the production of a third product – sinter extra fines, which can be sold separately or blended with the coarse sinter fines product.

As well an additional process to beneficiate the lower grade and -100 μm ore is being considered for installation in the fall of 2011 towards commissioning in the spring of 2012 to produce a fourth ultra-fine product which would be sold as pellet feed. Installation of that additional equipment would improve the grade of the lump and coarse sinter feed products, while at the same time improving recoveries to over 80% and increasing the capacity of the plant by approximately 6%.

The ore which contains the higher levels of silica will not be processed in the first year of operations but will be stockpiled for treatment later when the plant is expanded with the addition of a further processing line. Subject to a planned metallurgical test program, this is expected to have an approximate recovery of ~67% of high silica ore and will increase the total Silver Yards plant treatment capacity by an additional 1 million tonnes per year to over 3 million tonnes per year. This expansion line is expected to be in operation for the 2012 operating season.

2010 Exploration Program

The 2010 exploration program completed 4,500 metres of drilling and 1,400 metres of trenching at the Denault, Ruth 8, and Houston properties.

Exploration drilling at Houston during 2010 has significantly increased the size of the resources to 19.49 million tonnes of measured and indicated resources which represents a significant increase over previous estimates. The Houston deposits remain open along strike particularly to the southeast and further drilling is planned on Houston 3 during 2011. (See LIM press release of February 11, 2011.)

As a result of this significant increase, the Houston deposits are now of sufficient tonnage that merits evaluation of a stand-alone operation. The Company intends to evaluate the development of a new separate South Central Zone, as Stage 2 of its Schefferville Area Projects, possibly with its own dedicated processing plant which, subject to environmental assessment, permitting and detailed engineering, could be brought into production in 2013 at a rate of 2 to 3 million tonnes of iron ore per year.

Drilling at Denault has indicated some extensions to that deposit which will be incorporated into revised resource estimates for the Denault deposit when the results have been analysed.

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. Several of the new targets identified will be tested in 2011 using reverse circulation or diamond drilling.

Rail Transportation

LIM is in advanced negotiations with each of the railroad companies that will transport LIM's ore to port with regard to the transportation of its iron ore products in 2011 and future years. These consist of Tshiuetin Rail Transportation (TSH) for haulage over the 130 mile main line track between Schefferville and Emeril Junction; the Iron Ore Company of Canada's Quebec North Shore and Labrador Railroad ("QNS&L") for the remaining approximately 225 miles to Sept-Iles; and Wabush Mines-owned Arnaud Railway (Chemin de fer Arnaud (CFA)) for the approximately 21 miles around the Sept-Iles bay to the terminal at Pointe-Noire. To date the Company has not yet concluded agreements with the relevant rail companies for the transportation and handling of its planned production of iron ore.

The Company plans to lease rotary gondola ore cars each with a capacity of 100 tonnes with a car body suitable for a gross rail load of about 130 tonnes (286,000 lbs). Three car sets, each consisting of 120 railcars, are estimated to be required to transport LIM's iron ore tonnage for the eight month period in calendar 2011. The total LIM railcar fleet will range from approximately 360 to 400 railcars. The total railcar cycle time from the Silver Yards site to Pointe-Noire for the loaded movement and empty return of a train is expected to be approximately 68 hours.

The locomotives between the Silver Yards and Emeril Junction will be shared with TSH in a run through operation. These trains will be powered by two SD40 locomotives equipped with Locotrol and proximity detection devices, which locomotives will also be leased by LIM.

The Company has not yet concluded leasing agreements with the equipment leasing companies for the leasing of railcars or locomotives.

Port – Shipping Facilities

In February 2010 LIM signed an agreement with the Sept-Iles Port Authority for the use of the Pointe-Noire facilities at the Port to ship LIM's iron ore products. LIM agreed to a base fee schedule with the Port Authority regarding wharfage fees for iron ore loading for LIM's shipping operations.

The Company is evaluating a number of different options for its Sept-Îles operations including use of the facilities of Wabush Mines or other facilities of the Sept-Îles Port Authority. The Company is in negotiations with Wabush Mines and with the Sept-Iles Port Authority, and with other port operators, with regard to transportation, storage, handling and loading of LIM's iron ore products at Pointe-Noire.

The Company has not yet concluded agreements with the relevant rail companies or port operators for the transportation and handling of the Company's planned production of iron ore.

Marketing – iron ore markets

Marketing discussions have continued with potential customers, both in Europe and in Asia. Chinese consumers, in particular, are showing a growing interest in seeking iron ore from Canada, driven by continued strong demand and a desire to diversify from their traditional sources of supply.

The Company continues to review its options for marketing its planned iron ore production and is evaluating the optimum route to achieve these sales, while still maintaining maximum flexibility and independence. In particular the Company has had detailed discussions with a number of internationally recognized commodity traders with specialist knowledge of the iron and steel industry and expects to finalize marketing arrangements with one of these for the sales of its initial 2011 ore production in the near term. To date, LIM has not yet concluded any agreements for the sale of iron ore. It is expected that iron ore products produced in 2011 will be sold into the spot market on a "FOB Sept-Iles" basis.

As the Company nears commencement of production in the next quarter, the global iron ore market remains very positive with recent prices for 62% Fe sinter fines approaching $US190 per tonne CFR China. Despite efforts by the Chinese government to slow down some aspects of growth of the Chinese economy, demand for iron continues to grow. This demand, coupled with some interruptions in supply from Australia and Brazil, has driven iron ore prices to an all-time high.

The current increases in iron ore costs will inevitably lead to increases in steel prices, which may lead to reduced levels in steel demand in subsequent periods. In the short to medium term, demand is expected to remain strong and prices are forecast to retract only marginally. In the longer term, as major new production capacity comes online in Brazil and Australia, the balance between supply and the continuing increasing demand is likely to remain close. The consensus of current forecasts is that iron ore supply and demand will remain generally in balance until around 2015, with prices only dropping 10-15% in that period, followed by a supply surplus with prices declining somewhat thereafter. The Company is of the opinion that iron ore prices will remain strong for both calendar 2011 and calendar 2012.

Outlook

The Company believes it is on track to conclude the required rail transportation and port related commercial agreements in the near term and to commence mining and processing activities in April 2011, followed shortly thereafter by sales into a robust iron ore market. It is also actively working on finalizing IBA agreements with the Innu Community of Matimekush-Lac John (Schefferville) and with the Innu of Uashat (Sept-Iles), the two remaining First Nations groups in which it does not already have IBA agreements.

LIM currently expects to mine in excess of 2 million tonnes of ore in 2011, which is partially a construction/start-up year. Assuming satisfactory plant commissioning and smooth start-up, and based on projected recoveries (expected to start initially at about 65% and increasing to about 75% with the installation of the fines recovery equipment), and assuming an operating season of about 210 days, (subject to weather conditions) this is expected to yield shipments of about 1.5 million tonnes of iron ore, prior to seasonal shutdown of operations at the end of November 2011.

With the high level of iron ore prices currently prevailing, the progress made to date in constructing the mine and beneficiation plant, and with mine operations expected to commence in April 2011, the outlook for the Company is positive. There are still a number of commercial agreements to be concluded, including final rail and port arrangements. Provided these remaining agreements are resolved in a timely and satisfactory manner, the Company can look forward to achieving commercial production around the middle of calendar 2011.

Qualified Person

Information of a scientific or technical nature contained in this release has been prepared by or under the supervision of D.W. Hooley, President of the Corporation and a Qualified Person within the meaning of National Instrument 43-101 of the Canadian Securities Administrators.

About Labrador Iron Mines Holdings Limited (LIM)

LIM's Schefferville Project involves the development of twenty direct shipping iron ore deposits in western Labrador and north-eastern Quebec near Schefferville, Quebec. The 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, 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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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.