Iron Ore - The Labrador Trough

Existing and new infrastructure plans set to unlock the Labrador Trough and transform the Canadian iron ore industry into a major force in the iron ore sector

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Following a brief period of volatility in 2012, the iron ore market has staged an incredible turnaround from the lows of Sep’12 that saw the spot iron ore reference price fall below $90/t. The iron ore price has rebounded +80% in four months and the sector is booming once again as developers race to get their projects financed and into construction. While going forward we do expect small periods of volatility in the iron ore price as Chinese steel mills go through their annual destocking process, but with a change in leadership in China and a renewed focus on growth the iron ore market is back with a vengeance and set to prosper over the coming years.

Significant barriers to entry currently exist within the iron ore industry. As iron ore is a bulk commodity vast amounts of capital are required to bring new projects into production. In Australia the inability to access the infrastructure owned and operated by major iron ore producers (BHP Billiton, Rio Tinto, and Fortescue Metals Group) constrains the junior iron ore players from developing their respective projects. The potential of West Africa as a new source of iron ore supply has been well documented; however the lack of existing infrastructure in some African nations and the large capital requirements to develop new infrastructure makes it challenging for projects in Africa to be advanced. The key theme for new iron ore projects to be advanced is the ability to have access to infrastructure. The Labrador Trough in Eastern Canada is currently flying under the radar with production representing ~3-4% of the global seaborne iron ore trade. With huge resources and new planned infrastructure developments supporting growth we recently visited the Labrador Trough to see the projects and meet with the management of a number of the iron ore juniors. We believe the Labrador Trough is set to transform in to a major force in the iron ore sector and summarised below are key factors and current developments driving the Labrador Trough iron ore story:

- **Huge resources supporting long term production.** We have calculated that there is currently 788Bt of defined resources within the Labrador Trough.

- **Common carrier railways make it possible for new mining projects to be developed.** Currently common carrier railways run through the heartland of the Labrador Trough with operators obliged to receive, carry and deliver traffic.

- **New rail developments under study to lift capacity further.** The Québec Government’s ‘Plan Nord’ anticipates $80Bn of investment on the development of northern Québec.

- **Multi-user port expansions underway with long term plans to accommodate future iron ore production.** The Port of Sept-Îles is currently undertaking a $220m 50Mtpa expansion and has plans for future expansions.

- **Availability of cheap hydro-electric power.** Churchill Falls is the ninth largest hydro-electric plant in the world providing cheap power to the mining companies within the Labrador Trough enabling the cost efficient processing of lower grade deposits.

- **Canada is one of the most stable mining jurisdictions.** With iron ore developments requiring large amounts of capital, operating in a stable jurisdiction is a key to being able to raise finance.

In this report we have analysed 14 iron ore operations/projects in the Labrador Trough and outlined the key infrastructure developments which are set to make iron ore mining prosper in the Trough.
Investment Idea’s

After analysing 14 mining operations/projects within the Labrador Trough, and the current and future infrastructure plans we believe the Labrador Trough has the potential to become one of the major producing iron ore regions in the world.

Many factors contribute towards an iron ore project becoming a successful revenue generating operation. These include the size and metallurgy of the deposit, the location of the deposit, the infrastructure available to a project, the capital required to develop the project, and the expected operating costs of a project which ultimately have a direct impact on the operating margins and profitability of an iron ore operation. After taking all these factors into consideration we highlight Champion Iron Mines Ltd as our preferred development story and Mamba Minerals Ltd as our preferred exploration story.

Overall pick

Champion’s Consolidated Fire Lake North Project has an extensive resource base of over 2.6Bt within the confines of the Consolidated Fire Lake North Project (‘FLN’) and with its exceptional metallurgy enabling the production of a high quality sinter concentrate. The FLN project is located approximately 7km north of ArcelorMittal’s Fire Lake Mine. Champion initially analysed an 8.7Mtpa concentrate production scenario in a Preliminary Economic Assessment (‘PEA’) in 2011-12. Given the recent increase in the Company’s resource base Champion is now working towards defining a larger measured and indicated resource base to support a 20-year mine plan and 20Mt annual concentrate production in the Fire Lake North Feasibility Study which is expected to be completed in Jul’13.

Champion is a member of the investing consortium (along with five other mining companies) in the CN/Caisse Rail Feasibility Study. The CN/Caisse Rail Feasibility Study is analysing the development of a new railway which would connect Pointe-Noire at the Port of Sept-Îles to new mining developments within the Labrador Trough. With Champion’s resource base of over 2.6Bt within FLN and over 5Bt in the Fermont Iron Ore District (‘FIOD’) the Company believes the project might ultimately support a 30-40Mtpa operation. In 2012 Champion completed its own rail feasibility study in association with Rail Cantech Inc; Champion’s large resource base and potential production capabilities could potentially support an independent rail solution. Champion has excellent growth prospects, secured port access, and high quality deposits which we believe will create significant value for the Company as it approaches development.

Exploration Potential

Mamba Minerals Ltd (‘Mamba’) is one of the newest players within the Labrador Trough. The Company’s flagship project is the Snelgrove Lake Project, a prominent iron formation with a strike length of 33km by approximately 200m wide. The Snelgrove Lake Project is located 55km southeast of Schefferville and Mamba acquired an option over it from Altius Resources Inc (‘Altius’) in 2012. Altius will receive an effective 20% equity position and a 3% royalty post Mamba’s initial $6.5m exploration spend on the project.

Mamba will spend C$6.5M on exploration in 2013 thereby completing 100% of the acquisition of the Snelgrove Lake Project from Altius. All permits are now in place and drilling is expected to begin on 7th Feb’13. The initial drill programme will provide the market with an indication of the potential size of the deposit which we believe is likely to be significant.
Mamba Minerals Ltd

Overview

Mamba Minerals Limited (‘Mamba’ or the ‘Company’) is an ASX listed (ASX:MAB) iron ore exploration company focussed on its flagship project, Snelgrove Lake, which is located 55km southeast of Schefferville and 200km north of the town of Labrador City. Mamba has acquired an option over the Snelgrove Lake Project from Altius Resources Inc (‘Altius’) in 2012. Altius will receive an effective 20% equity position and a 3% royalty; post Mamba’s initial $6.5m exploration spend on the project. Shareholders of CIP Magnetite will receive 32 million performance shares for a total of 5 project development based milestones.

Snelgrove Lake Project

The Snelgrove Lake Project is a prominent iron formation with a strike length of 33km by approximately 200m wide. The project is predominantly taconite style mineralisation (30% to 35% Fe), with a number of targets in the southern areas outlined by gravity and magnetite data which have favourable responses for higher grade hematite direct shipping ore.

Altius has a proven track record of sourcing Labrador iron ore projects including Alderon Iron Ore Corp’s (Mkt cap C$264m) Kami Iron Ore Project, and Century Iron Mines Corporation’s (Mkt Cap C$66m) Astray, Grenville, Menihek and Schefferville Iron Ore Projects

Historical Exploration

Altius undertook an airborne magnetic and radiometric survey and acquired IKONOS imagery in 2008. The IKONOS satellite imagery showed that much of the iron formation is exposed on high, moderately barren hill-tops making the high resolution images ideal for mapping rock units and structures. The airborne magnetic surveys effectively outlined the extent of the iron formation throughout the property area and were used as a base for geologic mapping to help with refining the contacts of the iron formation and to aid with the interpretation of the structural geology.

The airborne magnetic and radiometric survey was followed by a field program of geological mapping, prospecting and rock sampling in June of 2009. A total of 129 rock samples were collected with 117 taken from the iron formation. The median Fe grade for all samples was 32% Fe. The sampling program in 2009 also highlighted zones of enrichment where Fe assays returned between 55% and 64% Fe. Further field exploration continued in 2010 and 2011. In October 2011 a 1,919km high-sensitivity aeromagnetic airborne gravity and magnetic survey were conducted over the whole Snelgrove Lake Project. The objective of the magnetic and gravity survey was to identify potential target areas and types of iron mineralisation. In total, 47 targets were identified and classified as either taconite or Direct Shipping Ore (‘DSO’).

The southern part of the Snelgrove Lake license is adjacent to the Sawyer Lake Deposit that is currently owned by Labrador Iron Mines. Sawyer Lake has an historical resource calculated by the Iron Ore Company of Canada in 1983, with an estimated 12Mt @ 61.8% and 11.4% SiO₂. DSO targets identified at Mamba’s Snelgrove Lake Project lie adjacent to the Sawyer Lake Deposit adding significant potential for high grade hematite mineralisation.

16th January 2013

| Market Cap | ~A$20m |
| Listing:Ticker | ASX:MAB |
| Share Price | A$0.395 |
| Shares o/s | ~49.8m |
| 52 week High/Low | A$0.40 / A$0.15 |
| Net Cash/(Debt) | $2.4m |
| EV | ~$18.3m |
| Total Resources | - |
| EV/Resource (Fe) | - |

Iron Ore Resources

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<tr>
<th>Measured</th>
<th>Indicated</th>
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<td>Snelgrove Lake</td>
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<td>TOTAL</td>
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Source: Bloomberg

Source:Mamba Minerals Ltd

Directors / Senior Management

Greg Burns (Non-Executive Chairman)
Neville Basset (Non-Executive Director)
Robert Hyndes (Non-Executive Director)
Exhibit 42: Airborne magnetic survey image outlining the extent of the iron formation over the Snelgrove Lake Project

Exhibit 43: Interpretation of magnetic and gravity surveys to identify different target zones

Source: Mamba Minerals Ltd
Source: Altius Resources Inc

As part of Altius’s metallurgical test work, six representative taconite samples from the northern part of the Snelgrove Lake Project were sent to SGS Lakefield for Davis Tube Recovery analysis. Four of the samples which were magnetite rich yielded acceptable weight recoveries of between 30-53% and Fe grades in the magnetic concentrate of 64-69.5% Fe. The two hematite rich samples were sent for Heavy Liquid Separation (‘HLS’) where it was proved that a good weight recovery of hematite is also possible.

Mamba’s Exploration Plan

Mamba will spend C$6.5M on exploration in 2013 thereby completing 100% of the acquisition of Snelgrove from Altius. All permits are now in place and drilling is expected to begin on 7th Feb’13.

Mamba has planned a drilling campaign initially targeting the taconite potential of prospects in the north identified to have the thickest mineralisation through interpretation of the aeromagnetic survey. The initial program will utilise 1 drill rig and have 6 primary drill holes each for a target 350m depth. The 350m depth should take the drill to basement on all holes giving valuable information in terms of geology and contact structure, plus any variability or vertical exaggeration along strike from potential faulting. Assay testing will be on a continuous basis and first results are expected at the end of February. Full analysis of the drill results will occur in April and May which will determine the location of drill holes for the much larger second stage of drilling to start in June which will target both DSO and taconite.

One of the priority DSO targets for Mamba is the area near the Stewart Lake prospect in the south. Previous work by Retty in 1944 highlighted high grade hematite and samples from a test pit by the Iron Ore Company of Canada (‘IOC’).
yielded 50-65% Fe. Interpretation of the airborne geophysics confirmed the DSO potential of the Stewart Lake prospect. Mamba will initially drill two holes near the Stewart Lake prospect in 2013.

Exhibit 44: Stewart Lake DSO prospect

Source: Ocean Equities Research

Exhibit 45: Snelgrove Lake taconite outcrops

Source: Mamba Minerals Ltd

**Infrastructure**

The Snelgrove Lake Project is located approximately 55km southeast of Schefferville and 200km north of Labrador City. The Schefferville area is connected by 565km of railway to the Port of Sept-Îles/Pointe-Noire on the Saint Lawrence River in Québec. The railway is a common carrier railway with two key sections: the northern 217km section of the railway, which is owned by Tshiuetin Rail Transportation Inc, and the southern section (356km) of the railway, the Québec North Shore & Labrador (’QNS&L’) railway, which is owned by IOC. There is a small 34km section of railway at the Port of Sept Iles that connects the QNS&L railway to Pointe-Noire. Mamba would be required to negotiate and form agreements with all three parties to deliver iron ore to Pointe-Noire. Iron ore operations in Schefferville currently utilising the railway are Labrador Iron Mines, and New Millennium/TATA are currently stockpiling ore in anticipation of transporting it by rail in 2013. The Snelgrove Lake Project is located approximately 50km east of the Tshiuetin railway. Currently there is no direct road access to Schefferville with entry to the town by rail or air. An airport services the town with daily flights by commercial airlines.

Exhibit 46: Schefferville Airport

Source: Ocean Equities Research

Exhibit 47: Tshiuetin Railway

Source: Ocean Equities Research

The common carrier railway lines are connected to the Port of Sept-Îles/Pointe-Noire which is currently expanding to facilitate an additional 50Mtpa of capacity. The Port of Sept-Îles is the second largest natural deep water port in North America. The 50Mtpa $220m expansion is being funded by the Port Authority and Federal Government who are each contributing $55m, and the remaining $110m is being funded by a consortium of mining companies (Alderon, Champion Iron
Mines, Labrador Iron Mines, New Millennium and Tata). The expansion is the first of planned future expansions as the Port Authority seeks to facilitate all of the new iron ore production forecast to come online.

The nearest power supply to the Snelgrove Lake Project is the transmission line from the Menihek Hydropower station to Schefferville which is located approximately 45km southwest of the project. The plant has one 12MW and two 5MW generators. A 69kV transmission line runs from Menihek to Schefferville. Further work needs to be conducted by Mamba to determine if excess capacity is available from the Menihek Hydropower station to deliver power to the Snelgrove Lake Project. Additional hydropower capacity is potentially available at the Upper Churchill Fall hydro-electric generating station which is located approximately 150km southeast of the project.

Exhibit 48: IOC’s port facilities at Sept-Îles
Exhibit 49: Menihek Hydropower station

Source: Ocean Equities Research
Source: Mamba Minerals Ltd

Ocean Comment

We believe Mamba’s Snelgrove Lake Project has excellent potential to delineate a sizeable ore body. Based on the geophysical interpretation of a 33km strike length with a width of 200m, a high level estimate assuming mineralization to a depth of 100m provides a conceptual resource target of approximately 2Bt of iron mineralisation. The upcoming drill program will provide a clearer indication of the potential size of the project and further metallurgical test work will define the potential product specification from ore mined at Snelgrove Lake.

Mamba represents one of the earlier stage exploration plays in the Labrador Trough. With drill results, metallurgical test work, maiden resources and ultimately studies to evaluate project economics, we believe there is plenty of value to be derived at Mamba, as the Company proves up the Snelgrove Lake Project potential.