

NEWS RELEASE

January 14, 2014

Symbol: MMS: TSX, OTCQX: MMSDF

For Immediate Dissemination

UPDATE ON MACARTHUR MINERALS' IRON ORE PROJECTS

Macarthur Minerals Limited (TSX: MMS, OTCQX: MMSDF) (the "Company" or "Macarthur") is pleased to provide an update on the Company's iron ore projects and plans for 2014.

Major Achievements during 2013

Ularring Hematite Project

The Company's immediate focus remains to bring the Ularring Hematite Project ("Project") in Western Australia into production by Q3/Q4 2015.

- **METALLURGICAL TEST WORK IDENTIFIES DISTINCT ZONES FOR SELECTIVE MINING**

Further metallurgical testing and iron ore characterisation work was undertaken during 2013.

There are a number of zones within the ore body, including zones of predominantly haematitic ores and zones of predominantly goethitic ores. The response to grinding, gravity separation and magnetic separation depends on the specific mineral assemblage, with some ore types possibly beneficiable using a simplified process flow sheet.

If confirmed by test work presently under way, this may provide for an opportunity to approach the development of the ore body in stages, with selective mining providing readily beneficiable ore to a simplified beneficiation plant in the first stage to be followed by mining and processing of the remainder of the resource utilising a more complex beneficiation plant at a later date.

Such an approach, if technically feasible, could have a positive impact on reducing the Project's initial capex and opex costs. The relevant metallurgical test work is under way and evaluation of this approach is the current focus of the Company's metallurgical consulting team.

- **OPTIMISATION OF THE 2012 PRELIMINARY FEASIBILITY STUDY OPEX & CAPEX**

Throughout 2013, the Company optimised the inputs to the Project's Preliminary Feasibility Study ("PFS") that was published in September 2012 (news release dated August 16, 2012, NI43-101 Technical Report dated September 27, 2012). This follows a successful Expression of Interest Program ("EOI") for contractors offering core mining, processing and beneficiation, road and rail transport services, and also by revising mining transport infrastructure costs and rail charges. The Company has received written quotes from a number of major Australian mining, mining service and transport groups for the provision of these services. Due to the general slowdown in the Western Australian mining sector, the quotes received are more competitive and commercial than when the PFS was published in 2012.

- **ULARRING PROJECT RECEIVED ENVIRONMENTAL APPROVAL**

Approval for the development of the Project was granted by the Western Australian Minister for Environment; Heritage (news release October 25, 2013).

- **A SUCCESSFUL WATER RESOURCE DRILLING PROGRAM WAS COMPLETED**

Nine reverse circulation holes were drilled for a total of 1,320 metres with a view to adding to the water resources announced in the PFS. The holes were drilled over a strike length of three kilometres with seven of the nine holes returning airlift flow rates of between 1 litre per second to 2.5 litres per second. Long term pump rate testing produced a flow rate of two to three litres per second. In addition to this, Macarthur has

applied for three water leases over three paleochannel tributaries and further water exploration is required to confirm the capacity of those systems.

Macarthur is confident that it has identified sufficient water sources for road construction, dust suppression and the initial mining and process as outlined in the PFS.

Port of Esperance MUIOF Expansion

- **ESPERANCE PORT CONFIRMS PROPOSALS FOR EXPANSION RECEIVED**

In June 2013 the Esperance Port Authority (“EPSL”) announced that two consortia had been short listed to participate in a Request for Proposal process to design, finance, build and operate a new multi-user iron ore facility (“MUIOF”) at the Port of Esperance (“Port”). In December 2013, EPSL acknowledged that proposals had been received from the two short listed parties and EPSL is expecting to select a preferred party in the first quarter of 2014. The construction time frames for the MUIOF have not been fully disclosed but it is expected that initial capacity will be available in 2015.

Review of Macarthur’s 2013 Program

(refer to Project Update news release issued January 22, 2013)

Q1 – Q2 2013

- *Advance the Company’s infrastructure development timeframe for the construction of the MUIOF at the Port.*

This program was completed and it is now apparent that the short listed consortia have given active consideration to some of Macarthur’s preliminary design concepts.

- *Negotiate conditions for the Assessment on Proponents Information assessment by the Environmental Protection Agency.*

This program was completed and environmental approval was granted with normal environmental monitoring conditions.

- *Development of a Mining Proposal for lodgement with the Western Australian Department of Mines and Petroleum (“DMP”) for final Mining Approval.*

This document has been completed and lodgement can proceed once the final feasibility is available. Statutory approval time for this is generally less than six weeks.

- *2,500 metre water resource drilling program to explore for water on the Company’s tenements in the vicinity of the Snark deposit.*

As mentioned earlier, this program resulted in 1,320 metres being drilled adding to the Project’s available water resources.

- *Further definition of the Magnetite Mineral Resource for the Moonshine Magnetite Project.*

This work was undertaken but due to the focus on the Ularring Hematite Project, the resource modelling has not yet been completed.

- *Completion of a bulk sampling program to support pilot process plant trials with one tonne of material processed.*

The results of this work triggered a process flow sheet review and detailed ore body characterisation modelling has now been completed and is being interpreted by independent consultants. It is anticipated that the results of this will be ready for release in Q1 2014.

- *Preliminary evaluation of the nickel and gold potential of the Macarthur tenements.*

This review was completed and numerous highly prospective nickel targets were identified.

A detailed update on this review is provided later in this announcement.

The completed review of the historical nickel and gold data combined with positive recent observations will be used to seek a joint venture party to continue an exploration program.

Q3 – Q4 2013

- *Lodgement of the Ularring Hematite Project Mining Proposal for review by the DMP.*

This proposal has been drafted subject to the completion of a feasibility study.

- *Finalisation of transport and logistics studies for the road and rail components of the Ularring Hematite Project.*

This work is complete with the results indicating substantial benefits from the incorporation of a private haul route from the Central deposit through to the Yundaga rail siding site, south of the township of Menzies. A Miscellaneous Lease was granted for the haul road route, and an application for a Miscellaneous Lease for the Yundaga rail siding site has been submitted.

- *Identification of parties for the contracting of mining, processing and beneficiation, transport and logistics activities, and onsite infrastructure such as camp and power generating facilities.*

The successful EOI program mentioned above resulted in a range of submissions that are currently under review. In aggregate the mining, processing and road transport contract value of the Ularring Hematite Project is estimated to exceed \$1billion over the life of mine, which has attracted the interest of a number of major groups seeking to build their mining and logistics contracting business books in the context of a slowdown in the mining industry in Australia.

- *The identification of a 'farm in' partner for the Company's Moonshine Magnetite Project.*

Due to the market's prevailing pessimistic view throughout 2012 – 2013 about the long term iron ore price and the requirements for significant capital to develop this iron resource the search for the right strategic partner continues. This project remains well documented and can be made available when interest returns to the magnetite sector.

- *Secure financing for the construction of the Ularring Hematite Project, following clarity on Port access.*

The Ularring Haematite Project has been a core focus for the Company during 2013. Project financing has been hindered to date by:

- a. the prevailing long term iron ore forecast by resource analysts;
- b. lack of clarity around the Government's ability to attract private sector interest to design, build and operate a new MUIOF at the Port; and
- c. higher operational costs for the Ularring Hematite Project based on the 2012 PFS.

All of these hindrances are diminishing with:

- a. spot prices for iron ore remaining above previous forecasts, circa above US\$130 per tonne;
- b. as mentioned earlier, EPSL has nearly completed its procurement process for the MUIOF;
- c. the Company has actively addressed the operational and capital cost assumptions of the 2012 PFS with a comprehensive review of ore body characterisation, process flow sheet design as well as the EOI program to re-quote all the core mining, transport and infrastructure contracts; and
- d. a falling Australian dollar exchange rate, circa below 90 cents USD, positively impacts on the Project.

Macarthur's President, Chairman and CEO, Alan Phillips commented that, "2013 was a tough year, in fact, one of the hardest in my 50 years of mining experience. It is good to see a returning optimism in the sector and a real commitment by major contractors to focusing on delivering a commercial price for their services. We have been active during the year to continue to evolve and de-risk the Project. This has occurred with a watchful eye on resources within the Company. Whilst we did reduce our workforce substantially in 2013, this has allowed the Company, through its strong and capable Board and professional management to manage our way through a difficult period for global resources".

The Year Ahead

In 2014 Macarthur aims to continue the path toward development of the Ularring Hematite Project. A revision of the Ularring Hematite Project's PFS opex and capex is being prepared for release in Q1, 2014. In addition to this, an announcement about the successful consortium for the development of the MUIOF at the Port is expected in Q1 2014.

2014 brings a changing outlook in the iron ore market and the first signs of renewed interest from the Canadian equity markets. A new optimism for long term iron ore pricing is reflected in re-rating of iron ore price forecasts by most of the resource analysts.

Nickel Exploration Developments

Prior to acquisition of the projects there were two previous periods of limited exploration activity for nickel over parts of the present tenement package.

The tenements were briefly explored for nickel during the late 1960s nickel boom and was then further explored by several companies for gold in the mid 1990s with only very limited shallow reconnaissance drilling undertaken by these explorers.

Combined with available historical data, new geological, geophysical and geochemical data obtained in the course of Macarthur's extensive geological investigation of the Banded Iron Formation ("BIF") between 2007 and 2013, indicates that there is potential for nickel sulphide and gold mineralisation within the extensive ultramafic rock package hosting the BIFs.

By way of example, in January 2013 Macarthur drilled diamond hole LGDD_054, to test high grade magnetite. This hole was collared in ultramafic and was seen to contain unusual textures and veins of a black mineral thought to be after sulphide. Assaying of the core returned from 4.5m to 28.0m (23.5m) 0.85% Ni and this included 1.03% Ni over an 11.5 meter interval from 10.5m to 22.0m at an estimated true width of around 8m. The intersection also shows very low Ca and high Mg and Cr. The rock is highly weathered and is therefore not conclusive evidence for presence of nickel sulphides, but is encouraging.

The location of LGDD_054 is given in the table below. Analysis of core samples was completed at ALS Perth Laboratory with Ni (interval 0 – 33.4m) analysed using method PGM-ICP23 (Inductively Coupled Plasma - Atomic Emission Spectrometry).

Hole ID	Type of Hole	Target Type	Prospect	Tenement	Purpose	GDA* Easting (Metres)	GDA* Northing (Metres)	Dip (Degree)	E.O.H Depth (Metres)
LGDD_054	Diamond Core	Magnetite	Moonshine North	M30/228	Target high grade magnetite at depth	788,083	6,674,746	-90	370

*GDA is the Geocentric Datum of Australia

During February 2013, four reverse circulation holes for a total of 1,050 m were drilled for nickel in areas identified as showing elevated nickel values in historic soil sampling. The nickel holes are planned to be used for Electro Magnetic downhole surveys in four strategic areas. No further drilling has been performed.

The review and evaluation of geochemical and geophysical data has identified significant exploration targets for nickel. These targets include some fifteen areas considered prospective for discovery of sulphide style nickel within the belt of ultramafic rocks. The targets are associated with potentially significant anomalous highly magnetic ultramafic footwall 'bulges', which may represent a thickening and embayment of the komatiite flow into the footwall stratigraphy.

Much of the Macarthur's historical nickel exploration data together with recent observations suggest a favourable environment for the occurrence of nickel sulphide deposits.

Macarthur is seeking a partner to continue the gold and nickel exploration.

QUALIFIED PERSONS

Mr Ian S Cooper, B.Sc., A.R.S.M., F.G.S. FAusIMM, a Fellow of the Australasian Institute of Mining and Metallurgy (membership number 107348, is a part time employee of Macarthur and is a Qualified Person as defined in National Instrument 43-101. Mr Cooper is in charge of Macarthur's exploration programs and has reviewed and approved the technical information contained in this news release.

ABOUT MACARTHUR MINERALS LIMITED (TSX: MMS, OTCQX: MMSDF)

Macarthur Minerals Limited is an Australian based resource development company currently focused on developing its Ularring Hematite Project, located in the Yilgarn iron ore district in Western Australia. The Ularring Hematite Project is located 110 km from rail infrastructure with a direct connection to the iron ore exporting Port of Esperance, Western Australia.

The Ularring Hematite Project has an indicated Mineral Resource of 54.46 Mt at 47.2% Fe and an inferred Mineral Resource of 25.99 Mt at 45.4% Fe (press release dated June 14, 2012; NI43-101 Technical Report dated June 29, 2012). In addition, Macarthur's Moonshine Magnetite Project has an inferred Mineral Resource of 1.3 Bt at 30.1% Fe (press release dated December 15, 2010; NI43-101 Technical Report dated March 25, 2011).

A Positive Preliminary Feasibility Study was released to the market on the Ularring Hematite Project in August 2012, which included a probable Mineral Reserve of 42.95 Mt at 47% Fe (press release dated August 16, 2012; Technical Report dated September 27, 2012). A Positive Preliminary Economic Assessment on the Moonshine Magnetite Project was released in February 2011 (press release dated February 7, 2011, Technical Report dated March 25, 2011).

Macarthur currently has 44,820,630 shares, 3,185,000 options and 250,000 warrants on issue. As reported in the Company's Interim Financial Statements for Quarter Ended 30 September 2013, Macarthur has \$6.2 million in cash.

On behalf of the Board of Directors,
MACARTHUR MINERALS LIMITED

"Alan Phillips"
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