NEWS RELEASE **Symbol: MMS: TSX, OTCQX: MMSDF**
1 June, 2012 For Immediate Dissemination

MACARTHUR MINERALS' POSITIVE METALLURGICAL TEST WORK BOLSTERS PROJECT POTENTIAL

Macarthur Minerals Limited (TSX: MMS, OTCQX: MMSDF) (the "Company" or "Macarthur") is pleased to announce the results of two metallurgical test work programs designed to test the amenability of hematite from the Ularring Hematite Project, to beneficiation. These test programs were undertaken as part of the Company's on-going examination of a number of alternative approaches to optimising the potential of the Ularring Hematite Project resources.

Macarthur commissioned a phase one initial metallurgical test work program in the last quarter of 2011 based on 200 kilograms of sample composited from diamond drill core obtained from the Snark location in order to characterise the response of this material to both conventional gravity beneficiation processes and to magnetic separation processes.

The results of this work were encouraging and indicated that it was technically possible to recover materials with a gradeof more than 60% Fe and with a recovery of over 63% using conventional gravity beneficiation techniques (press release dated November 21, 2011; NI43-101 Technical Report released January 4, 2012).The outcome of a single test using magnetic fractionation was also encouraging, warranting follow-up of magnetic fractionation as an alternative to, or adjunct to, conventional gravity processing.

A follow-up metallurgical test work program (phase two) was commissioned by Macarthur in February 2012. The primary focus of this program was to confirm that beneficiation could be applied to the full range of hematite material types found at the Ularring Hematite Project over a range of Fe grades and to provide indicative design information for a robust beneficiation process capable of handling all material types.

METHODOLOGY

The metallurgical test work undertaken in this phase two program was based on Reverse Circulation ("RC")drill chip samples obtained during the 2011-12 resource definitive drilling program. A comprehensive suite of metallurgical tests were conducted on 15 samples which were chosen to represent the extremes of lithology and ranged in Fe grade from as low as 37% Fe and as high as62% Fe. These samples were obtained from the three areas comprising the hematite resource. This test work had the objective of determining the variability of response to beneficiation of the Ularring Hematite/goethite Project material as a function of prospect area, location, depth and grade.

RC chip samples were considered adequate for the purpose of gaining an insight into the variability (if any) of the range of the Ularring Hematite Project's materials notwithstanding that RC chip samples tend to be over-pulverised as compared to crushing of diamond core with a consequent over-representation of fine and very fine material in the sample. Both conventional gravity separation and magnetite separation routes were tested.

All testing of the collected samples was undertaken by Valdrew Nominees Pty Ltd trading as Nagrom ("Nagrom") in Perth, Western Australia. Nagrom is independent of Macarthur, and is accredited with ISO 9001:2008.Process solids were assayed by Nagrom using fused bead/XRF methods where applicable otherwise acid/fusion dilution followed by ICP-MS methods was used. Nagrom assayed process solutions using ICP-OES and ICP-MS techniques. Ultra Trace Laboratories (Perth) was used to augment Nagrom's services and provide external reference. Information in the report relating to the metallurgical interpretation, analysis, mineral distribution and recommendations was compiled and checked by the Senior Metallurgist of Nagrom.

FINDINGS

The key findings of this variability test work phase confirmed that:

1. All samples could be readily beneficiated.
2. End products grading over 60% Fe with low levels of deleterious elements were produced from 13 of the 15 samples at good recoveries using either conventional gravity separation and/or magnetic separation. Two other samples were successfully beneficiated but failed to meet the 60% Fe product benchmark.
3. Both conventional gravity beneficiated and magnetic separation successfully upgraded all samples. Magnetic separation appeared to out-perform gravity separation for the medium to high grade starting materials and with very fine materials whereas gravity appeared to perform better for lower-grade starting materials.
4. Magnetic separation yielded high grade (+60% Fe products) at good recovery of iron to product:
    a. Nine of the fifteen samples produced products with an average Fe grade in excess of 62% Fe, 3.4% S_1O_2 and 1.85% $A1_2O_3$ at an average iron-to-product recovery in excess of 85%; and
    b. Four samples produced above 60% Fe products with iron recovery ranging between 42 to 56%. Two low grade samples were successfully beneficiated but failed to meet the 60% Fe benchmark iron product level.
5. Wet tabling of the coarse (-1.41+0.355 mm) size fraction in most cases yielded products at or near benchmark grade with Fe recoveries in the range of 64.1% to 81.1% for eight of eleven samples and poorer recoveries for the other three samples (between 33.0% and 41.1%).
6. Wet tabling of the fine fraction (-0.355+0.035 mm) in all cases yielded products grading in excess of benchmark grade with Fe recoveries in the range of 61.4% to 80.9% for six of eleven samples and recoveries ranging between 40.0% and 53.8% in the other five samples.
7. Magnetic fractionation of a composite fine (-0.106+0.075 mm) and very fine (-0.075+0.038 mm) sample demonstrated that in both size fractions it was possible to recover over 95% of the Fe into a product grading in excess of 61% Fe, 4.7% S_1O_2 and 1.8% $A1_2O_3$ with rejection of a high proportion of the S_1O_2 and $A1_2O_3$ in a non-magnetic tailings with the loss of only a low proportion of Fe.

Based on the findings of the phase one and phase two metallurgical test work programs, a conceptual process flow sheethas been developed to accommodate changing feed material characteristics over time. A feature of the process design philosophy is minimal size reduction and the recovery of a marketable product and a rejectable tail at each successive stage of processing. This conceptual process flow sheet is presented in Attachment 1.

Macarthur has now commenced the third and final phase of metallurgical test work to validate the conceptual flow sheet and to produce detailed engineering design and economic performance parameters. This test work is based on two 500 kilogram samples (derived from diamond core) with:

1. sample “A” reflecting a blend of high, intermediate and low grade Fe zones averaging ≈ 47% Fe; and
2. sample “B” to reflect the low end of the expected range of technically and economically viable feed grades.

Macarthur is confident that this testing will be definitive and that adequate design information will be generated to be included in the Pre-feasibility Study being produced by the Company. The process flow sheet validation is anticipated to be complete by the end of June 2012.The focus of the 2012 campaign is to complete the mineral resource drill out program in the second quarter and the beneficiation test work. Both of these activities are drawing to an end as this release demonstrates.

Macarthur’s President, Chairman and CEO, Alan Phillips commented that, “*Macarthur commenced an exploration program in 2007 that focused on the Moonshine Magnetite Project and until late 2009 limited*

attention was given to the regolith goethite/hematite material.

In 2009 regional geophysics identified 49 potential hematite targets which the Company has been progressively reviewing. The Company's original goal was to identify an initial 10 million tonne of potential direct shipping hematite material. The 2011 exploration and technical review campaigns had the resource increase to 13.01 million tonnes[1] in the indicated category and 16.95 million tonnes[2] in the inferred category, well ahead of the initial goals.

The beneficiation test work has shown potential to reduce the head grade cut-off to below 50% Fe which has potential to have a significant impact on the total Ularring Hematite Project's mineral resource inventory and associated mine life extension. By adopting beneficiation, the cut-off grade is solely determined by the technical limitations of the processing ability of the material and associated commercial parameters. Macarthur is now working through the implications of beneficiation on the Ularring Hematite Project's resource inventory."

QUALIFIED PERSON

Mr Jon Starink, BSc (Hons1), BChemE (Hons1), MApplSc is a Fellow of the Australasian Institute of Mining and Metallurgy, a Fellow of the Institution of Engineers, Australia, a Fellow of the Institution of Chemical Engineers, a Member of the Royal Australian Chemical Institute and a Member of The Metallurgical Society. He is a Chartered Professional Engineer, a Chartered Scientist and Chartered Chemist. He is a Non-executive Director of Macarthur Minerals Limited and consultant to Macarthur Minerals Limited. He is a Qualified Person who has reviewed and approved the above technical information and disclosure contained in this release, in the form and context in which it appears.

Mr Starink is satisfied that the processes used by Nagrom are standard industry operating procedures and methodologies. He has verified the results from Nagrom and data disclosed in this release, including sampling, analytical, and test data underlying the information or opinions contained in the release.

Further information on Macarthur Minerals Limited and technical reports on the Ularring Hematite Project and the Moonshine Magnetite Project can be found on the company's website www.macarthurminerals.com or www.sedar.com

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 and the Moonshine Magnetite Project are 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 resource of 13.01 Mt at 55.2% Fe and an inferred resource of 16.95 Mt at 55.6% Fe (press release dated January 24, 2012; NI43-101 Technical Report filed on March 9, 2012). In addition, Macarthur's Moonshine Magnetite Project has an inferred resource of 1.3 Bt at 30.1% Fe (press release dated December 15, 2010;NI43-101 Technical Report filed on March 25, 2011).

Positive Preliminary Economic Assessments were released to the market on the Ularring Hematite Project in November 2011 (press release dated November 21, 2011) and the Moonshine Magnetite Project in February 2011 (press release dated February 7, 2011).

On behalf of the Board of Directors,

MACARTHUR MINERALS LIMITED

"*Alan Phillips*"
Alan Phillips, President, Chairman & CEO

[1] at 55.2% Fe (press release dated January 24, 2012; NI43-101 Technical Report filed March 9, 2012

[2] at 55.6% Fe (press release dated January 24, 2012; NI43-101 Technical Report filed March 9, 2012)

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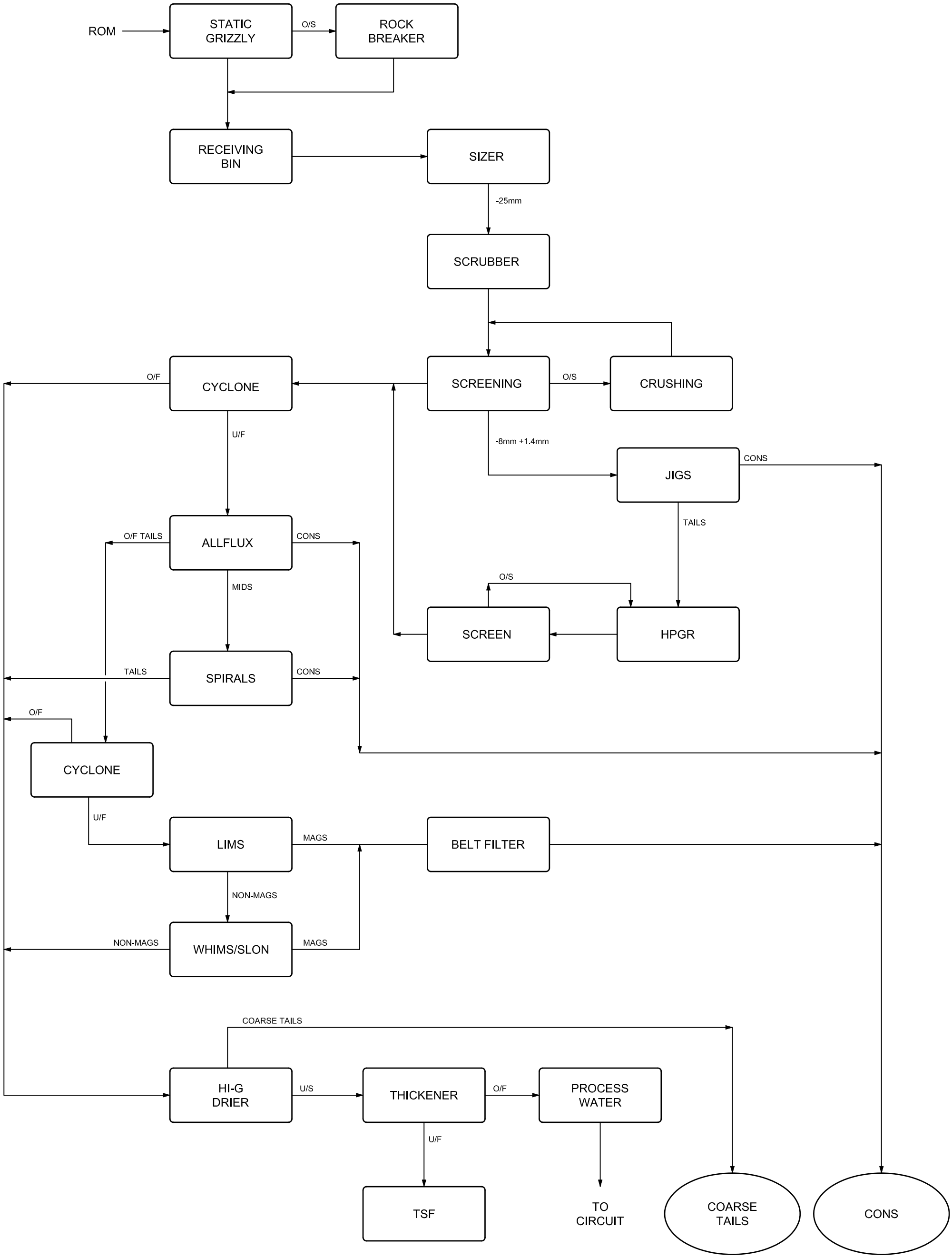
Certain of the statements made and information contained in this press release may constitute forward-looking information and forward-looking statements (collectively, "forward-looking statements") within the meaning of applicable securities laws. Such forward looking statements include our belief as to the extent and timing of exploration programs and various studies, the results of the preliminary economic assessments of the Company, the potential tonnage, grade and cut-offof deposits, mineral resource estimates, results of beneficiation and the viability of the Company's Projects.

The forward-looking statements in this press release reflect the current expectations, assumptions or beliefs of the Company based upon information currently available to the Company. With respect to forward-looking statements contained in this press release, assumptions have been made regarding, among other things, the reliability of information prepared and/or published by third parties that are referenced in this press release or was otherwise relied upon by the Company in preparing this press release. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include unforeseen technology changes that results in a reduction in iron or magnetite demand or substitution by other metals or materials, the discovery of new large low cost deposits of iron magnetite and the general level of global economic activity. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. The forward-looking statements contained in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not assume any obligation to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.


ROM
STATIC GRIZZLY
O/S
ROCK BREAKER
RECEIVING BIN
SIZER
-25mm
SCRUBBER
SCREENING
O/S
CRUSHING
O/F
CYCLONE
U/F
-8mm +1.4mm
JIGS
CONS
TAILS
O/F TAILS
ALLFLUX
CONS
MIDS
O/S
SCREEN
HPGR
TAILS
SPIRALS
CONS
O/F
CYCLONE
U/F
LIMS
MAGS
BELT FILTER
NON-MAGS
NON-MAGS
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MAGS
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U/S
THICKENER
O/F
PROCESS WATER
U/F
TSF
TO CIRCUIT
COARSE TAILS
CONS