

MACARTHUR MINERALS RECEIVES PRELIMINARY ECONOMIC ASSESSMENT ON THE ULARRING HEMATITE PROJECT

VANCOUVER, BRITISH COLUMBIA – (Marketwire – November 21, 2011), Macarthur Minerals Limited (TSX: MMS, OTCQX: MMSDF) (“the Company” or “Macarthur”) is pleased to announce the receipt of the Ularring Hematite Project Preliminary Economic Assessment (“PEA”) undertaken by Engenium Pty Ltd (“Engenium”) in respect of the hematite deposits located within the Company’s tenements in the Yilgarn region of Western Australia. The Snark, Drabble Downs, Central and Banjo/Lost World hematite deposits comprise the newly named Ularring Hematite Project (“Project”).

The September 21, 2011 news release reported that the Mineral Resource estimate was in support of a Preliminary Feasibility Study (“PFS”). Although some of the analysis in the PEA has been carried out at a PFS level there was insufficient resource definition to support a PFS level study, compounded by the fact that preliminary metallurgical test work returned encouraging results which warrant further investigation. Rather than delay the PFS the Company has decided to release preliminary analysis as a PEA in accordance with the original PFS proposed timeline.

An updated National Instrument (“NI”) 43-101 Technical Report, which includes the results of the NI 43-101 dated November 4, 2011 Hematite Mineral Resource, will be filed on SEDAR within 45 days of this news release.

PEA Highlights

- Project pre-tax NPV of AUD 227 million, at 10% real discount rate, and AUD 248 million at 8%, based on a discounted cash flow model with:
 - a project life of 5 years; and
 - no terminal value added to the NPV, which assumes no extension to the plant and/or mine life.
- The Project is potentially highly profitable with payback (based on NPV) in 3 years.
- Operating costs estimated at AUD 67/t (rounded)
- Total direct costs estimated at AUD 94 million (rounded)
- Total Project costs (direct & indirect, including contingency of AUD 23 million) are estimated at AUD 134 million (rounded)

Resource Base

The PEA utilises the combined mineral resources of Snark, Drabble Downs, Central, Banjo and Lost World deposits, being indicated resources of 8.6 million tonnes (“Mt”) at 54.9% Fe and inferred resources of 15.8 Mt at 55.3% Fe as detailed in Table 1 (press release dated September 21, 2011), above a 50% Fe cut-off. The inferred hematite resource of 600,000 tonnes at the Moonshine deposit has been excluded from the PEA.

Table 1 – Hematite (Potential DSO) – Mineral Resource Estimate

Category	Deposit	Tonnes	Fe %	P %	SiO ₂ %	Al ₂ O ₃ %	S%	LOI %
Indicated	Snark	7,320,000	55.1	0.07	8.4	4.4	0.15	7.7
	Drabble Downs	1,310,000	53.5	0.06	8.1	5.4	0.36	9.0
	Total	8,630,000	54.8	0.07	8.3	4.6	0.19	7.9
Inferred	Snark	4,110,000	55.1	0.07	8.7	4.2	0.12	7.6
	Drabble Downs	1,380,000	55.9	0.06	5.9	4.6	0.36	8.7
	Banjo – Lost World	5,500,000	55.7	0.07	8.1	4.7	0.15	7.1
	Central	4,800,000	55.2	0.06	8.2	4.5	0.14	8.0
	Total	15,800,000	55.4	0.07	8.1	4.5	0.16	7.6

Notes:

- *Figures contained within Table 1 have been rounded.*
- *Block models were constructed using three dimensional geological wireframes.*
- *Densities for Snark and Drabble Downs were 2.9t/m³ for all mineralised zones. Densities for Central, Banjo and Lost World were based upon an algorithm whereby the density for a block in the resource model was calculated from the estimated Fe% grade.*
- *The CSA Global Pty Ltd Mineral Resources were estimated using constraining wire framed solids based on a lower limit cut-off grade of 50% Fe. The resource was quoted from blocks above 50%.*
- *Table 1 excludes the Moonshine hematite inferred resources of 600,000 tonnes.*

Financial Highlights and Project Life

The financial highlights for the PEA are summarised as follows:

Table 2 – Financial Highlights

PEA financial model	7 Years
PEA estimate accuracy	± 30% to 35%
Saleable product per annum	2Mtpa
Operating cost (FOB)	A\$67.3/t
Capital direct cost	A\$93.5 M
Pre-tax NPV at 8% real discount rate	A\$248 M
Pre-tax NPV at 10% real discount rate	A\$227 M
IRR	62%

PEA Participants

Areas of responsibility in the preparation of this study:

- Engenium Pty Ltd covered all areas of study management, metallurgy, processing, port and logistics, infrastructure, marketing, estimates, financial analysis, risk and forward work.
- Runge Ltd covered mining.
- CSA Global Pty Ltd covered geology and Mineral Resource estimates.
- Strategen Environmental Consultants Pty Ltd covered environmental impacts and management, project approvals and land access and native title.

Macarthur Minerals Strategy

To date Macarthur has delineated indicated hematite resource, at a 50% cut off, of 8.6 Mt at 54.8% Fe and inferred hematite resources of 15.8 Mt at 55.4% Fe, exclusive of the Moonshine inferred hematite resource of 600,000 tonnes (press release dated September 21, 2011), and an inferred mineral resource of 1.3 billion tonnes ("Bt") at 30.1% Fe (press release dated December 15, 2010) of magnetite mineralisation at a 15% cut off (the Macarthur Magnetite Project).

The PEA reveals the importance of the availability and access to port capacity to support development of the Ularring Hematite Project.

The Company's strategy is to advance the development of the Project for export of hematite product by late 2013/early 2014. The hematite export program will act as the foundation for the expansion and advancement of the Macarthur Magnetite Project, to follow. The location of the Project in proximity to rail and port infrastructure as well as access to contract mining services and access to human resources assists in supporting the commerciality of the Project.

Mining and Processing

Mining of the Ularring Hematite Project would be conducted by conventional drill, blast, load and haul mining methods. Potential ore would then be hauled to the Run of Mine ("ROM") pad for crushing and screening. Drilling and blasting bench heights would be optimised to suit the drill rig and single pass drilling.

Anticipated minable pit tonnages are:

Table 3 – Minal Tonnages and Grades

Area	Mineable Quantity (Mt)	Grade (% Fe)	Calcined Grade (% CaFe)	Waste (Mt)	Strip Ratio (t:t)
Snark	5.8	55.9	60.5	16.7	2.9:1
Banjo	2.6	56.1	60.3	6.0	2.3:1
Central	2.1	55.7	60.6	7.1	3.4:1
Total	10.5	55.9	60.5	29.8	2.8:1

At mine operation commencement, production rates, nominally 2 Mtpa of fines product, would be achieved utilising contracted mining and an owner operated mobile crushing and screening plant to feed the potential Direct Shipping Ore ("DSO") road train loading bin, with provision for emergency load out via a mobile stacker to an emergency product stockpile.

The key components including the crushers and screens would typically be skid, track or trailer mounted to allow haulage to site via low loaders for setting onto prepared concrete footings, where required, and to allow moving the plant to a secondary site as the mining operation develops.

Port and Logistics

The selected haul road route utilises the existing Evanston Menzies Rd to Menzies, bypassing the township of Menzies using the existing Intermin Resources haul road, and then travels south on the Goldfields Highway to the proposed rail siding. The overall length of the haulage road from Snark Mining Operations Centre (“MOC”) to the rail siding is 121.1 km and from Central MOC to the rail siding is 136.6 km. The road haulage route would be suitable for up to 120t payload road trains.

The proposed rail siding is located approximately 8.5 km south of Menzies. The haul distance between the rail siding and the Port of Esperance (“Port”) is 510 km.

The preferred port for the Ularring Hematite Project is the Port of Esperance. It is an existing port, and currently exports 9 Mtpa of iron ore. The Port of Esperance is the deepest port in southern Western Australia, capable of handling Cape Class vessels up to 200,000 tonnes and fully loaded Panamax class vessels up to 75,000 tonnes.

On December 16, 2010 the Company announced that it entered a Multi User Iron Ore Facility Access Deed with Esperance Port Authority under which it had a secured commitment to a 2 Mtpa allocation as part of the proposed expansion of the Port to provide a Multi User Iron Ore Facility. The Company has aligned its proposed mining commencement date with the Port’s capacity expansion potentially due for completion in late 2013/early 2014, subject to development.

On August 4, 2011 the Company announced that the Esperance Port’s expansion was approved in principle by the Western Australian Minister for Transport. The Western Australian Department of Transport has engaged Deloitte to undertake a Multi User Iron Ore Facility Demand Survey in relation to future port capacity requirements for both Esperance Port Authority and Fremantle Port Authority. Recent representations from emerging Yilgarn iron ore companies to the Western Australia Department of Transport indicate that larger port capacity is required to support this emerging iron ore region.

The Company has participated in this Demand Survey and will use its “foundation customer” status to cooperate with the nominated developer.

Metallurgy

The PEA is based solely on using the grade tonnage curve to determine commercially saleable potential DSO material. During the course of the preparation of the study, the Company commissioned beneficiation test work on a single representative sample of Snark potential DSO material, to gauge the potential impact of beneficiation on product grade, the reduction of deleterious materials and the efficient utilisation of the Project’s hematite mineralisation.

Whilst these results are preliminary and therefore not factored into the PEA, the beneficiation test work did demonstrate that conventional gravity beneficiation using simple jig and spirals processes, and possible magnetic separation, could result in the production of high grade iron products. In this initial testing the Company used a sample grading 56.6% Fe hematite, with the test work demonstrating that a relatively straight forward gravity separation process could upgrade the Fe content by 3.1% absolute (5.4% relative improvement), resulting in an un-optimised mass yield of 63.3% Fe.

It is believed that beneficiation would provide a more robust operation with a more efficient use of the resource inventory. The initial test work demonstrated that good grade consistency along with an appreciable reduction in impurities could be achieved.

The PEA indicates that a majority of the operating cost is attributable to transport: thus beneficiation of the ore to higher grade products should have a positive impact on FOB price and a positive impact on reducing the effective transport cost for a unit of Fe by reducing the contribution to cost of transporting waste material in the potential DSO sale product.

The beneficiation test results warrant detailed evaluation before any final decision as to the preferred approach for the exploitation of the identified mineral resource is decided. The impact of beneficiation will be reported in future study program releases.

Approvals

The environmental approvals process is a critical path for the project. Environmental baseline studies are well under way with many of the seasonal surveys due for completion by the end of 2011. Referral of the Project to the Environmental Protection Authority ("EPA") is planned for Q2 2012 and submission of the Mining Proposal to the Department of Mines and Petroleum ("DMP") is planned for Q4 2012.

Initial surveys undertaken by the Company have not discovered any declared rare flora species or threatened ecological communities within the proposed disturbance areas. Only one fauna species of interest has been identified within the proposed disturbance area, Malleefowl (*Leipoa ocellata*), however the Project is not considered to significantly impact this species. Ongoing surveys are planned throughout 2012 to continue the collection of environmental data so the Company can develop a greater understanding of the potential environmental impacts of the Project.

Furthermore, there are currently no registered native title claims over the Project or any of the granted mining leases.

Summary

The technical and financial evaluation in the PEA has concluded that further project development is justified based on information currently available. The Company cautions that the PEA is preliminary in nature, and it includes Indicated and Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Accordingly, there can be no certainty that the results estimated in the PEA will be realised.

The following key activities were recommended to be undertaken throughout the next stage of the Ularring Hematite Project:

- further drilling and geological studies to improve the Mineral Resource estimate;
- establishing sources of water for production and dust suppression purposes;
- further investigation into beneficiation potential;
- development of mine and infrastructure design; and
- refinement of capital and operating cost estimates (\pm 20-25%).

Quality Assurance and Quality Control (QA/QC)

Intersections reported have been verified by the Company's QA/QC protocols. All samples from the drill holes are prepared by Ultra Trace and Amdel Laboratories and pulverised to 90% passing 75 microns then analysed for the iron suite using XRF.

QUALIFIED PERSONS

Mr David Williams, BSc (Hons), a member of the Australian Institute of Geoscientists, who is a full-time employee of CSA Global Pty Ltd and is an Independent Qualified Person, has reviewed and approved the above technical information relating to Mineral Resource estimates contained in this release, in the form and context in which it appears.

Mr Neville Dowson B App Sc (Extractive Metallurgy), a fellow of AusIMM, who is a full-time employee of Engenium Pty Ltd and is an Independent Qualified Person, has reviewed and approved the above technical information relating to metallurgical analysis and assessment of the project.

Mr Alan Dickson, BSc (Eng), a fellow of AusIMM, who is a full-time employee of Alan Dickson & Associates Pty Ltd and is an Independent Qualified Person, has reviewed and approved the above technical information relating to the mining, technical and financial review of the PEA.

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

ABOUT ENGENIUM PROPRIETARY LIMITED

Engenium is a Project Delivery company servicing the resource and infrastructure sectors of Australia. Engenium's service offering includes all aspects of project development from early metallurgical testwork programs, scoping/feasibility studies, engineering design and construction management. Founded in 2003, Engenium assisted numerous junior, mid-tier and major companies in the Australian mining sector with the development of their iron ore projects. Clients include Atlas Iron, BC Iron, BHPBilliton, Brockman Resources, Cazaly Mining, Golden West Resources, Polaris Metals, Reed Resources, Rio Tinto, Sherwin Iron and Warwick Resources. Over the past 8 years Engenium has built up a significant database of knowledge with resource projects, and in particular hematite and magnetite operations. For further information regarding Engenium, please view the company website www.engenium.com.au.

ABOUT RUNGE LIMITED

Runge is a leader in the provision of technology products, consulting services and training courses to the global mining industry, delivering solutions and services across a range of commodities. With expertise across a range of mining disciplines, Runge's approach to the business of mining is strongly grounded in economic principles and delivering mine planning solutions that are tightly coupled with technological support and training. Runge currently operates 20 offices in 12 countries throughout the world. Companies operating under the Runge name include Pincock Allen & Holt, Minarco-MineConsult, MRM Mining Services Pty Ltd, GeoGAS Pty Ltd and Correlate Capital Pty Ltd. For further information regarding Runge Ltd, please view the company website www.runge.com.

ABOUT CSA GLOBAL PROPRIETARY LIMITED

CSA Global Pty Ltd is a leading geological, mining and management consulting company whose staff include geologists, mining engineers, project managers, data management professionals and technical personnel. CSA has been operating from Perth, Western Australia since 1986. They are an independent company, with origins dating back to 1984 as part of CSA Group founded in Ireland. CSA now has offices in the UK, Indonesia, Darwin and Brisbane. CSA Global has a high level of technical expertise in most mineral commodities gained from over twenty years' experience within the exploration and mining industry at an international level. They have experience in all stages of the mining cycle from project generation to production. For further information regarding CSA Global, please refer to the company website at www.csaglobal.com.

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

Macarthur Minerals Limited is an Australian based resource development company currently focussed 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 with direct access to the Port of Esperance, Western Australia.

The Ularring Hematite Project has an indicated hematite resource of 8.6 Mt at 54.9% Fe and an inferred resource of 15.8 Mt at 55.3% Fe (press release dated September 21, 2011), and the Macarthur Magnetite Project has an inferred resource of 1.3 billion tonnes ("Bt") at 30.1% Fe (press release dated December 15, 2010) that has been reported in accordance with National Instrument 43-101.

On behalf of the Board of Directors,
MACARTHUR MINERALS LIMITED

"Alan Phillips"

Alan Phillips, President, Chairman & CEO



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