

**NEWS RELEASE**

September 21, 2011

**Symbol: TSXV: MMS****OTCQX: MMSDF**

For Immediate Dissemination

**MACARTHUR MINERALS INCREASES ITS SNARK and DRABBLE DOWNS DIRECT SHIPPING HEMATITE MINERAL RESOURCE BY 46% TO 14 MILLION TONNES. THE TOTAL RESOURCE NOW STANDS AT 25 MILLION TONNES.**

**VANCOUVER, BRITISH COLUMBIA – (Marketwire – September 21, 2011), Macarthur Minerals Limited (TSXV: MMS, OTCQX: MMSDF) (“the Company”)** is pleased to advise of a 46% increase in the Hematite Goethite Mineral Resource estimate for its Snark & Drabble Downs potential DSO (“potential direct shipping ore”) Mineral Resource located at its Macarthur Iron Ore project in Western Australia.

The Company is undertaking a comprehensive “drillout” of the Snark, Drabble Downs and Snark North areas. Of the 414 RC holes assayed to date, 294 holes have intercepted mineralisation and have been incorporated into this interim Mineral Resource statement. An additional 248 drilled RC holes are awaiting assay results and are not included in this interim Mineral Resource statement.

**Pre-Feasibility Study**

MMS has been awaiting these results in order to provide an appropriate Mineral Resource inventory for the completion of the Company’s pre-feasibility study.

The Mineral Resource referred to in this release has been estimated by independent mining consultancy group CSA Global Pty Ltd (“CSA”) based on the Company’s geological interpretations.

**2011 Potential DSO RC Drilling Update**

This year 595 RC holes have been completed at the Snark, Drabble Downs and Snark North prospects. This programme has increased the total Mineral Resource inventory and elevated some 8.630 Mt from the Inferred to the Indicated category. The ongoing program is expected to continue to increase the size and confidence level of the Mineral Resource inventory.

Further results from the remainder of the 2011 programme will be incorporated into the Mineral Resource as part of future Mineral Resource updates. Table 1 presents the total potential DSO Mineral Resource for the Macarthur Iron Ore project.

The remainder of the year will see a continuation of resource definition drilling in the Snark, Drabble Downs and Snark North areas. RC drilling has also commenced at the Company’s Central area with a view to identifying further potential DSO Hematite resources.

**Table 1 - Goethite/Hematite (Potential DSO) – Indicated and Inferred Mineral Resource Estimate**

Category	Deposit	Tonnes	Fe%	P%	SiO2%	Al2O3%	LOI %
Indicated	Snark	7,320,000	55.1	0.07	8.4	4.4	7.5
	Drabble Downs	1,310,000	53.5	0.06	8.1	5.4	9.0
	Total	8,630,000	54.9	0.07	8.3	4.6	7.9
Inferred	Snark	4,110,000	55.1	0.07	8.7	4.2	7.6
	Drabble Downs	1,380,000	55.9	0.06	5.9	4.6	8.6
	Banjo – Lost World	5,500,000	55.7	0.07	8.1	4.7	7.1
	Moonshine	600,000	52.8	0.06	13.3	3.9	5.8
	Central	4,800,000	55.2	0.06	8.2	4.5	8.0
	Total	16,390,000	55.3	0.07	8.3	4.6	7.6

**Notes:**

- Figures contained within Table 1 have been rounded.
- A block model was constructed using three dimensional geological wireframes.
- Part of the June 2011 Mineral Resource has been upgraded to indicated due to the determination of densities of the mineralisation, both from diamond core wet immersion techniques and geophysical probing of selected holes. CSA has used an assigned density of 2.9t/m<sup>3</sup> for all mineralised zones.
- The CSA 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% Fe.

**Table 2 – Mineral Resource Comparisons, Snark and Drabble Downs (CSA Global)**

Date	Category	Tonnes (Mt)	Fe %	P%	SiO2%	Al2O3%	LOI%
September 2011	Indicated	8,630,000	54.9	0.07	8.3	4.6	7.9
	Inferred	5,490,000	55.3	0.072	7.95	4.30	7.8
June 2011	Inferred	9,650,000	55.0	0.075	8.87	4.33	7.6
December 2010	Inferred	7,070,000	55.9	0.071	7.78	4.23	7.59

Table 2 above provides a history of the Mineral Resource estimates for the Snark prospect and stands to demonstrate the growing level of consistency and confidence in the geological investigation of this area.

The mineral resource was classified as Indicated and Inferred according to the reporting guidelines of NI43-101. The classification level is based upon an assessment of geological and mineralisation continually, quality control results and an analysis of available density information.

Macarthur Minerals President and CEO, Mr Alan Phillips commented “The increase in the resource inventory provides the Company with the confidence and the opportunity to commence Stage 1 mine planning at Snark. In parallel with this task we will continue to focus on delineating additional tonnages to further extend mine life at the planned initial production rate of 2 mtpa. Towards the end of Q3/Q4 a Pre-Feasibility Study is expected to be released and will link with the comprehensive environmental and impact assessment studies that have already been completed in over the Snark region.

## **Quality Assurance and Quality Control (QAQC):**

Intersections reported have been verified by the Company's QAQC protocols. All samples from 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 PERSON**

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.

Further information on Macarthur Minerals Limited and technical reports on the Macarthur Iron Ore project can be found on the company's website [www.macarthurminerals.com](http://www.macarthurminerals.com) or [www.sedar.com](http://www.sedar.com)

## **ABOUT MACARTHUR MINERALS LIMITED (TSX-V:MMS, OTCQX:MMSDF)**

Macarthur Minerals Limited is an Australian based resource development company (listed on the TSX-V and OTCQX) focused on developing its potential Macarthur Iron Ore Project, located in the Yilgarn region of Western Australia. A standard gauge railway is in place to the Port of Esperance and its use will involve upgrades including construction of unloading facilities at the Menzies railhead, which is 110 km from the Company's potential Iron Ore Project. The railway is administered and operated by WestNet Rail on behalf of the Government of Western Australia. The Company has entered into discussions with WestNet Rail and is considering further study work. The project has an inferred mineral resource of 1.3 billion tonnes of magnetite at 30.1% Fe (press release dated December 15, 2010) that has been reported in accordance with National Instrument 43-101 and inferred & indicated mineral resources of 25.021 million tonnes at 55% Fe (this press release dated September 21, 2011) of goethite/hematite. The Company has completed a positive scoping study on the magnetite and a prefeasibility study for the hematite is well advanced.

On behalf of the Board of Directors,  
**MACARTHUR MINERALS LIMITED**

*"Alan Phillips"*

Alan Phillips, President, Chairman & CEO

### **Corporate Relations**

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