

NEWS RELEASE

May 11, 2010

Symbol: MMS-TSXV
For Immediate Dissemination**HIGH GRADE IRON ORE MINERALISATION DISCOVERED AT
LAKE GILES**

VANCOUVER, BRITISH COLUMBIA – (Marketwire – May 11, 2010), Macarthur Minerals Limited (MMS – TSXV) (“the Company”) is pleased to advise that RC drilling has discovered potential direct shipping ore grade (DSO) mineralisation at its Lake Giles project. Metallurgical test work is underway to determine processing techniques to further upgrade the ore prior to export.

Key highlights:

- Hematite/Goethite iron mineralisation discovered at Banjo, Moonshine North and Central projects.
- Results of 40 holes drilled for a total of 2,581 metres completed.
- Six (6) new areas identified for Hematite/Goethite mineralisation.
- Additional 80 RC drill holes to be drilled over next 5 weeks.
- A 2,500m diamond drilling programme to commence in June.
- Diamond core to facilitate a comprehensive Metallurgical testwork programme.

The drilling was carried out over the outcropping hematite zones that the Company mapped and sampled late last year (refer news release dated December 8, 2009). Since drilling commenced on February 18, a total of 40 holes have been drilled for an advance of 2,581 metres over the Banjo, Moonshine North and Central projects. A full listing of results is detailed in Tables 1, 2 and 3 (down-hole lengths reported - true widths will be determined).

Macarthur Minerals, President, Mr Alan Phillips stated “The results are of similar head grades to the hematite iron ores mined in this region of Western Australia. If a mineral resource can be delineated then Lake Giles has the potential to deliver DSO and fast track the company to producer status. Work for the resource estimation inputs has commenced and we are expecting to have an inaugural resource by midyear”. Mr Phillips also added “The discovery is a very pleasing result and reflects the significant work carried out over the past 12 months by its consultants and employees”

A summary of the RC drilling results is provided below.

Banjo

A total of 22 RC holes (LGRC240 to 252, LGRC227 to 235) for an advance of 1421 metres have been drilled at Banjo. Twenty of the 22 holes drilled, have intersected Hematite/Goethite mineralisation. All intersections remain open at depth and along strike. The deepest intersection is LGRC251 where 8m at 61.7% Fe from 45m depth has been recorded (refer Table 1). Significant intersections include:

24m @ 53.5%Fe from 7m depth
13m @ 58.4%Fe from 18m depth

31m @ 57.5%Fe from 9m depth
26m @ 53.7%Fe from 0m depth
8m @ 61.7% Fe from 45m depth
12m @ 57.1% Fe from 35m depth

Mapping and drilling have extended Banjo to over 2km in length with multiple zones identified by drilling. This strike length is a significant increase; Banjo was previously reported (refer news release dated January 18, 2010) as being 700m in length.

Moonshine North

A total of 8 holes for an advance of 662 metres has been drilled at Moonshine. Hematite/Goethite mineralisation has been intersected in all holes (refer table 2), over the full 500m strike length of outcropping hematite. Significant intersections include:

15m @ 59.4%Fe from 3m depth
11m @ 54.9%Fe from 0m depth
13m @ 54.3%Fe from 2m depth

The hematite occurrence is located directly opposite to a parallel BIF unit that is host to a high grade magnetite that was encountered in RC drill hole LGRC203 drilled last year. LGRC203 intersected 92m of magnetite BIF which averaged 33.4% Fe from 62m depth, however it included 10m of high grade magnetite which averaged 55.1% Fe from 130m depth. The high grade magnetite was accompanied by low impurity levels of 0.09% P and 10.7% SiO₂. Further work is required to determine the potential occurrence of DSO Magnetite and its spatial relationship to the hematite occurrence as DSO Magnetite is considered a premium iron product, given the low impurities.

Central Area

The central area has been mapped over a 7km strike length. A total of 7 holes for 330 metres have been drilled (refer Table 3). Five holes have returned significant assays. Significant intersections include:

11m @ 56.4%Fe from 11m depth
5m @ 60.8%Fe from 18m depth
9m @ 54.1%Fe from 4m depth

Table 1 – Banjo RC Intersections

Hole ID	From	To	Length (m)	Fe %	SiO ₂ %	Al ₂ O ₃ %	P%	S%	LOI%
LGRC_228	7	31	24	53.5	11.4	4.4	0.06	0.25	6.7
including	15	16	2	60.2	4.4	3.3	0.08	0.42	5.8
including	28	30	2	63.8	2.8	1.3	0.04	0.10	4.6
LGRC_231	13	26	13	51.4	13.0	5.4	0.08	0.47	7.2
including	12	15	3	59.6	4.6	3.0	0.04	0.07	6.8
LGRC_240	5	16	11	50.9	11.2	7.6	0.05	0.15	7.8
and	18	31	13	58.4	3.7	3.7	0.09	0.06	8.6
LGRC_241	38	52	14	55.2	8.3	5.3	0.10	0.01	6.9
including	40	43	3	60.2	4.8	3.4	0.08	0.01	5.3
including	46	48	2	60.0	5.4	3.5	0.09	0.01	5.0
LGRC_242	4	23	19	55.2	9.0	4.9	0.06	0.26	6.6

including	14	18	4	59.6	5.0	3.4	0.05	0.32	5.9
LGRC_244	9	40	31	57.5	5.8	3.8	0.05	0.20	7.7
including	16	20	4	61.3	3.8	2.1	0.06	0.15	6.1
including	21	25	4	61.4	2.7	2.0	0.06	0.12	7.2
including	26	34	8	60.9	3.5	1.9	0.05	0.14	7.0
including	35	38	3	60.0	1.9	1.9	0.03	0.18	9.9
LGRC_246	12	21	9	51.1	10.4	6.8	0.04	0.49	9.3
LGRC_248	2	17	15	52.8	13.0	4.5	0.08	0.10	6.6
including	5	7	2	59.5	4.6	3.4	0.09	0.12	6.6
including	12	14	2	58.4	7.0	2.7	0.09	0.07	6.5
LGRC_249	4	26	22	53.7	10.9	5.0	0.06	0.08	7.0
including	11	14	3	61.5	3.0	2.2	0.04	0.06	6.9
LGRC_250	0	26	26	53.7	9.0	5.9	0.06	0.30	7.3
including	12	15	3	58.7	6.3	3.3	0.10	0.04	5.7
including	20	24	4	60.7	3.6	3.5	0.06	0.22	5.7
and	9	21	12	56.5	5.8	5.5	0.08	0.33	7.3
including	9	11	2	58.6	3.0	4.2	0.06	0.58	8.4
including	16	18	2	61.8	2.5	2.4	0.08	0.31	5.8
and	33	56	23	55.0	12.0	3.6	0.07	0.03	5.2
including	34	40	6	61.2	4.2	2.9	0.07	0.05	5.1
including	45	53	8	61.7	4.4	2.1	0.08	0.02	4.9
LGRC_252	4	18	14	55.0	8.3	5.0	0.10	0.37	7.6
including	14	16	2	61.1	3.9	2.3	0.14	0.10	5.8
and	35	47	12	57.1	8.6	2.5	0.07	0.07	7.0
including	36	44	8	60.7	3.7	2.3	0.07	0.08	7.0

Table 2 – Moonshine RC Intersections

Hole ID	From	To	Length (m)	Fe %	SiO2%	Al2O3%	P%	S%	LOI%
LGRC_221	2	15	13	54.3	10.3	4.9	0.00	0.10	6.4
including	8	13	5	59.1	4.9	3.1	0.10	0.00	6.4
LGRC_223	3	17	15	59.4	4.7	3.1	0.10	0.20	6.7
and	50	54	4	53.6	15.2	2.4	0.10	0.00	4.4
and	56	59	3	52.8	13.5	3.9	0.00	0.00	5.1
and	42	46	4	50.2	22.5	1.0	0.08	0.02	4.4
LGRC_239	0	11	11	54.9	11.6	3.8	0.07	0.05	5.6
including	7	9	2	61.8	5.0	1.9	0.07	0.05	4.6

Table 3 – Central RC Intersections

Hole ID	From	To	Length (m)	Fe %	SiO2%	Al2O3%	P%	S%	LOI%
LGRC_253	11	22	11	56.9	5.9	4.2	0.06	0.16	7.8
including	13	17	4	60.2	4.0	2.4	0.05	0.17	7.0
including	19	22	3	60.6	3.6	2.7	0.09	0.11	6.5
and	37	43	6	52.3	12.9	4.4	0.08	0.05	6.6
LGRC_254	4	10	6	53.7	8.7	7.1	0.02	0.16	6.7

including	7	9	2	62.2	3.4	2.7	0.02	0.13	4.9
and	13	33	20	51.7	7.4	6.2	0.05	0.27	11.4
and	34	46	12	52.7	8.3	4.8	0.07	0.17	10.4
LGRC_258	0	25	25	54.3	7.4	4.8	0.05	0.39	9.3
including	18	23	5	60.8	2.6	2.3	0.06	0.12	7.9
LGRC_259	4	13	9	54.1	8.1	3.9	0.07	0.10	9.6

Notes for tables 1, 2 and 3:

- All analysis by X-Ray Fluorescence Spectrometry (XRF) at SGS Laboratory in Perth, Western Australian.
- RC Samples collected over 1 metre intervals using a industry standard 3 tier riffle splitter.
- Minimum intersection width 2 metres with internal waste of no more than 2 metres.
- Downhole lengths reported as true width is unknown.
- Azimuths are referenced to local grid.
- No top cut has been applied and intersections are reported >40% Fe.
- Fe intersections grade rounded to 1 decimal figure.

Diamond Drilling and Metallurgical Testwork

A diamond drilling programme is planned to commence in June 2010 to provide suitable material for a comprehensive metallurgical test work programme. The metallurgical test work will focus on the iron mineralogy and the processing needed to produce a commercial DSO product. It is likely that this stage of work will be a trigger for the commencement of a pre-feasibility study.

Exploration Update

The company has mapped 70% of its tenements to investigate the 25 geophysical hematite/goethite targets and because of this activity a further 6 new targets have been identified. The following table (Table 4) details the new hematite/goethite outcrops, their surface dimensions and the additional 80 holes planned to be RC drilled over the next month. Currently a comprehensive rock chipping program is underway to better understand the iron distribution.

Table 4 – Planned RC drilling

Project	Mapped Strike Length (km)*	Planned No. Holes
Banjo	2	25
South Central	1	4
Central	6	11
North Central	2	10
Snark	2	15
Woodcutters	0.5	1
Lost World	0.5	4
Moonshine North	0.5	8
Sandalwood	0.5	2
Total	15	80

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 SGS Laboratory and pulverised to 90% passing 75 microns then analysed for the iron suite using XRF.

QUALIFIED PERSON

Mr. Andrew Spinks B.App.Sc, Grad.Dip (Mining), a member of AusIMM, and a consultant geologist, is a Qualified Person as defined in National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101"), in charge of the exploration on the Lake Giles project.

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

On behalf of the Board of Directors,
MACARTHUR MINERALS LIMITED

"Alan Phillips"

Alan Phillips, President, Chairman & CEO

Corporate Relations

David Taylor

Tel: (604) 687 0775, Email: macarthurminerals@capitalstreetgroup.com

Australia: Alan Phillips, Tel: +61 418 726 230

Email: strategiccapi@bigpond.com

NEITHER TSX VENTURE EXCHANGE NOR ITS REGULATION SERVICES PROVIDER (AS THAT TERM IS DEFINED IN THE POLICIES OF THE TSX VENTURE EXCHANGE) ACCEPTS RESPONSIBILITY FOR THE ADEQUACY OR ACCURACY OF THIS RELEASE

THIS NEWS RELEASE IS NOT FOR DISTRIBUTION TO UNITED STATES SERVICES OR FOR DISSEMINATION IN THE UNITED STATES