



magnetic resources<sup>NL</sup>

## QUARTERLY REPORT for the Quarter Ended 30 September 2014

### HIGHLIGHTS

**Magnetic Resources NL**  
ABN 34 121 370 232

**ASX Codes:** MAU and MAUCA

Ground Floor, 22 Delhi Street, West  
Perth WA 6005

T +61 8 9226 1777

F +61 8 9485 2840

E [info@magres.com.au](mailto:info@magres.com.au)

PO Box 1388

West Perth WA 6872

**Issued Capital:**

**Shares - Quoted:**

97,817,758 fully paid ordinary  
shares.

20,418,862 partly paid shares (\$0.20  
unpaid).

**Options - Unquoted**

- 500,000 options exercisable  
at \$0.20 by 3 October 2014

- 4,045,000 options exercisable at  
\$0.2709 by 23 December 2014

- 2,145,000 options exercisable at  
\$0.4607 by 21 December 2015

- 12,757,143 options exercisable at  
\$0.1499 by 27 December 2016

- 4,000,000 options exercisable

at \$0.17 on or by 31 December 2017

- 150,000 options exercisable at

\$0.18 on or by 31 December 2017

**Cash:** \$1.6m

**Directors:**

**Gavin Fletcher**

Managing Director

**Eric Lim**

Non-Executive Director

**John Blanning**

Non-Executive Director

**Company Secretary**

Ben Donovan

**Ragged Rock Project:**

- Based on positive exploration results from Target 1, an additional four ground magnetic surveys were carried out for a total of 144.4 line kilometres over Targets T3 and T4 and identified BIF having potential for a size similar if not greater to Target 1.
- Discussions and negotiations have been entered into with several land holders over selected targets at T3 and T4 to reach an end agreement that aims to see future drilling of selected targets T3 and T4.

**Kauring Project:**

- Further test work was carried out on the weathered portion of BIF. Testwork to date has obtained varied results with some sections achieving good quality concentrates at high yields and other sections not achieving acceptable concentrate grades. Further investigation needs to be undertaken on grind size and liberation of high quality iron particles.
- A diamond drill hole is to commence in October 2014 which aims to audit prior RC drill hole, 13KRC4 and prepare for engineering/metallurgical test work.

## RAGGED ROCK (Magnetic 100%)

The Ragged Rock project area is located south of Northam, Western Australia, close to rail, road and port infrastructure. Refer to Figure 1 for location.

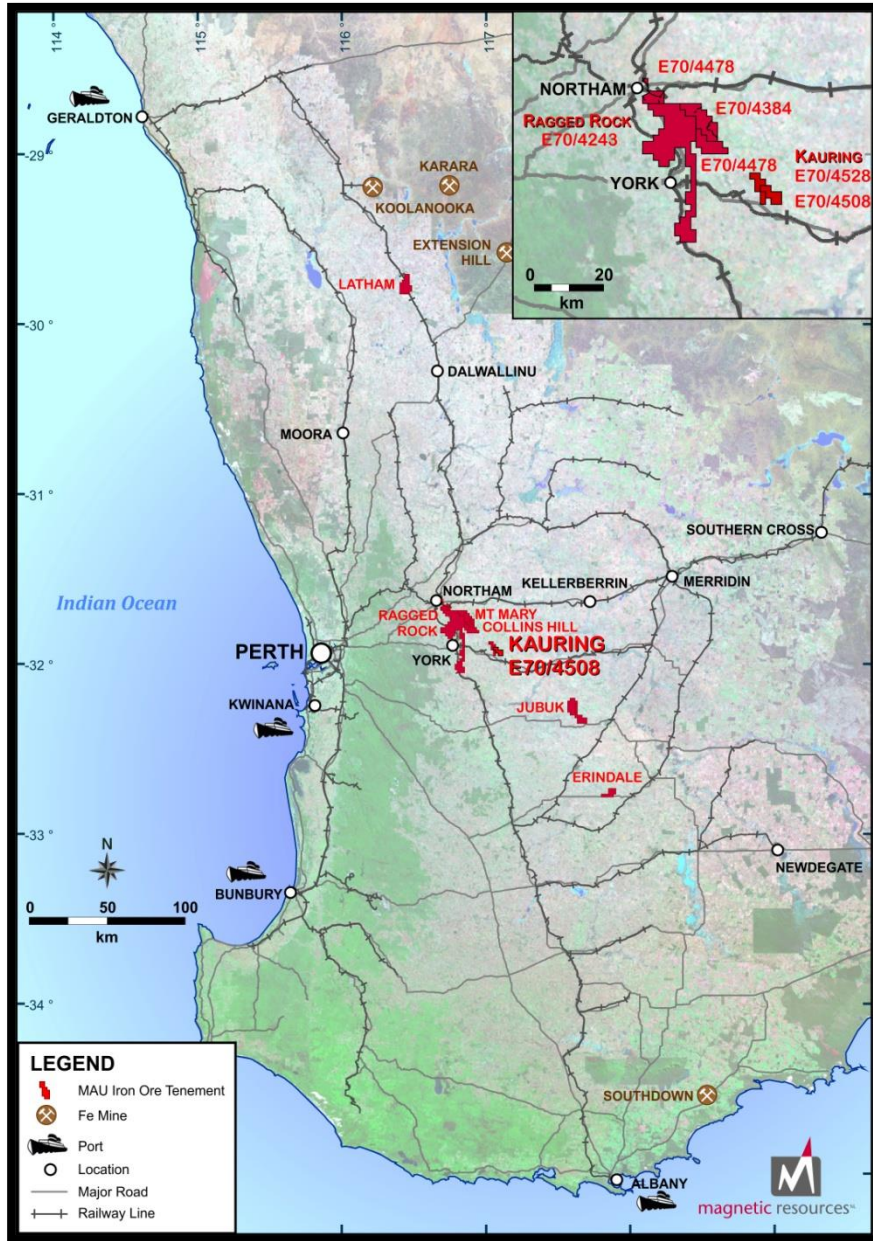


Figure 1  
Location Map

### **Targets T3 and T4 further Explored by Geophysics:**

During the quarter the Company embarked on field visits to review other target areas. From mapping and geophysical interpretation two additional areas Targets 3 and 4 have been outlined for attention (Fig 2).

In order to facilitate exploration further down the track an end agreement is being sought with private land holders to warrant exploration expenditure and provide sovereign rights to mine particularly where minerals to owner title is encountered.

In the interim ground geophysics and geological mapping has been carried out to provide a much greater understanding of the potential of these new targets.

### **Ground Magnetic Surveying:**

A total of 144.4 line kilometres of ground magnetic survey at 100m line spacing has been carried out over Targets 3 and 4. Refer to Figures 3 and 4 which outline the extent of ground magnetic survey and the interpreted geophysical responses.

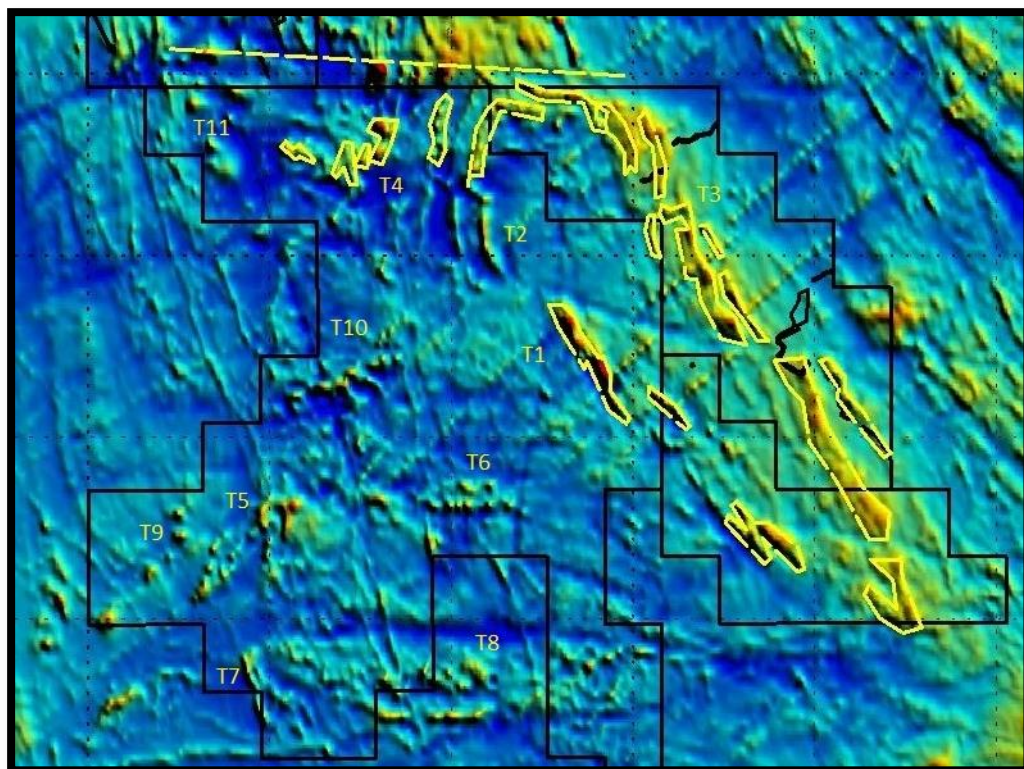


Figure 2  
**Ragged Rock Aeromagnetic Image Showing Targets**

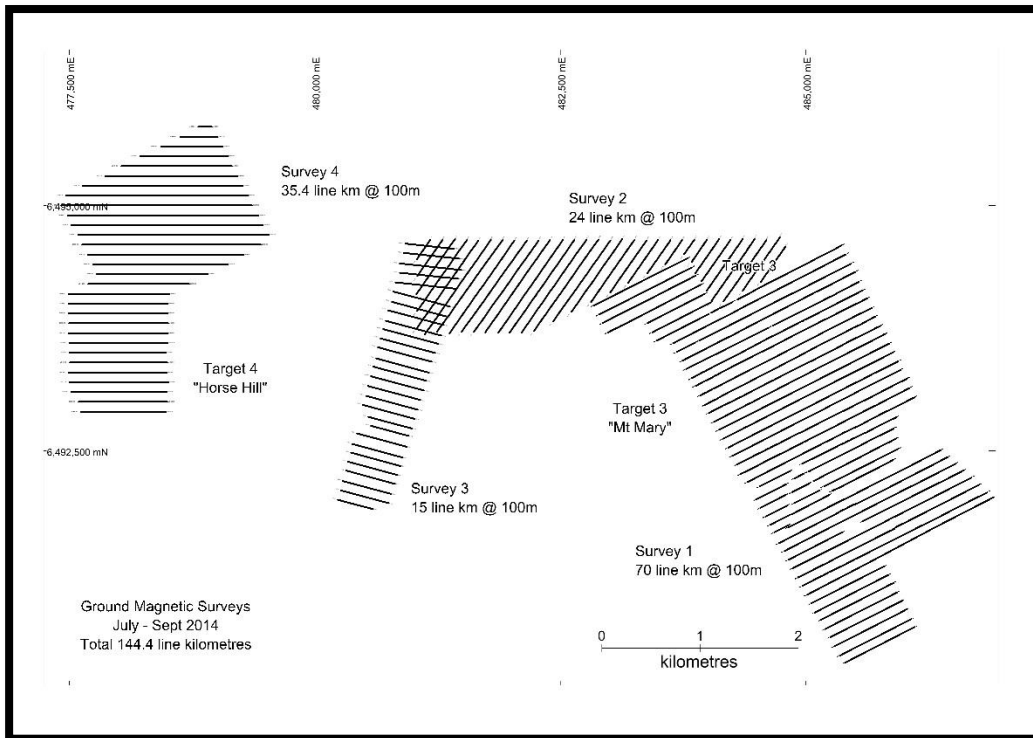


Figure 3  
Ground magnetic surveys 1-4

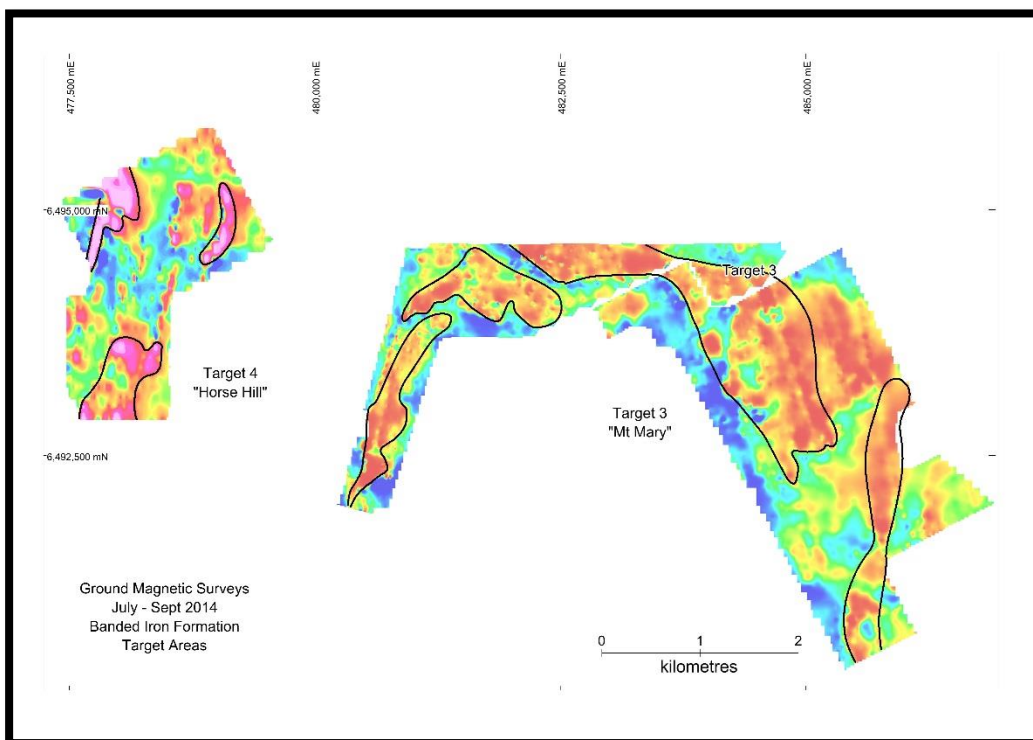


Figure 4  
Ground magnetic Image outlining identified targets

## KAURING (Magnetic 100%)

The Kauring Project is located 30 km SE of the Company's Ragged Rock magnetite Project area. Refer Figures 1 and 5.

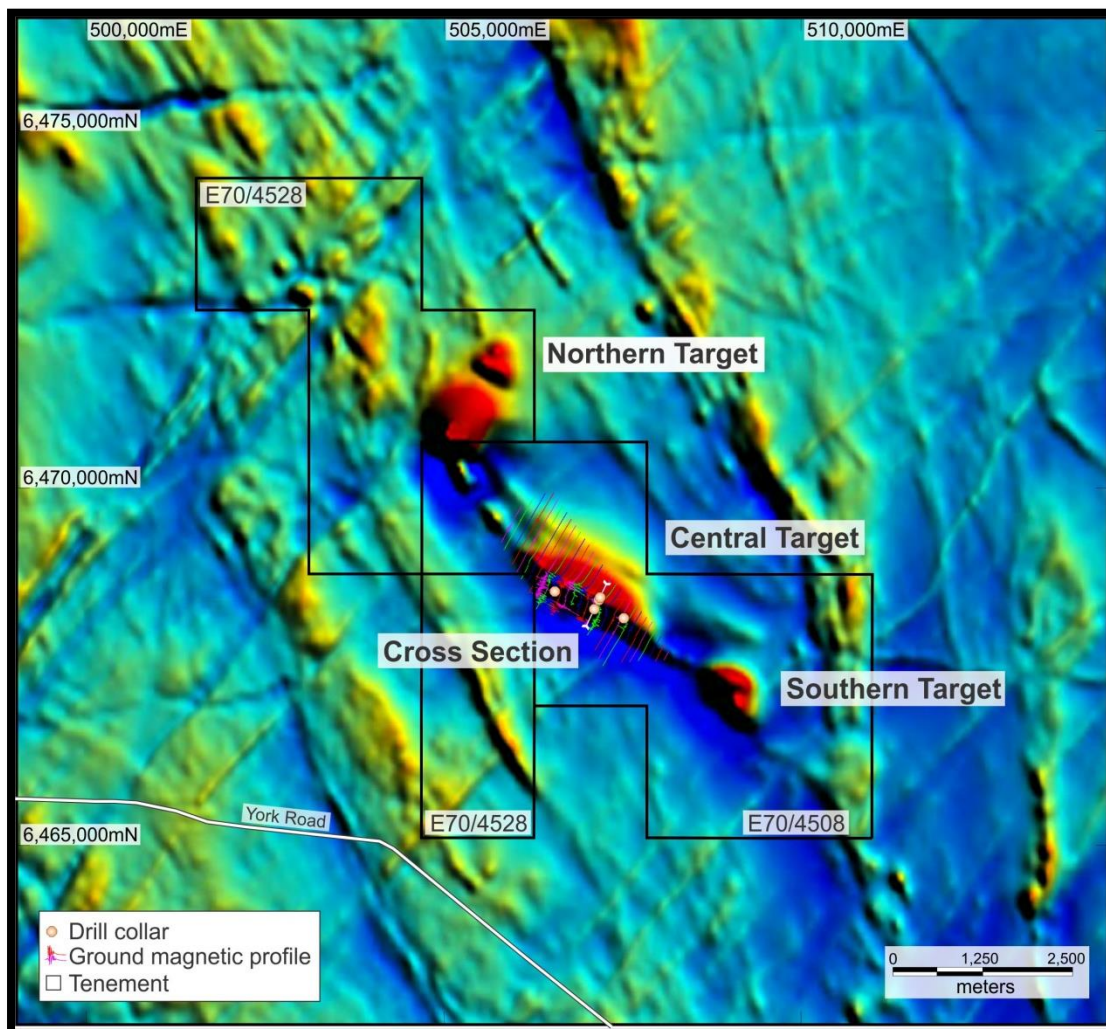


Figure 5  
Kauring Aeromagnetic Image Showing Targets and Drilling

### Weathered BIF:

Weathered BIF overlies reported drilled BIF (fresh BIF with a mass yield of 44.8% over 50m of consistent magnetite grade from an underlying fresh BIF zone with 66%Fe quality at a coarse 100 micron grind in drill-hole 13KRC4 (ASX releases 07 April 2014 and 30 April 2014). Refer to Figure 6.

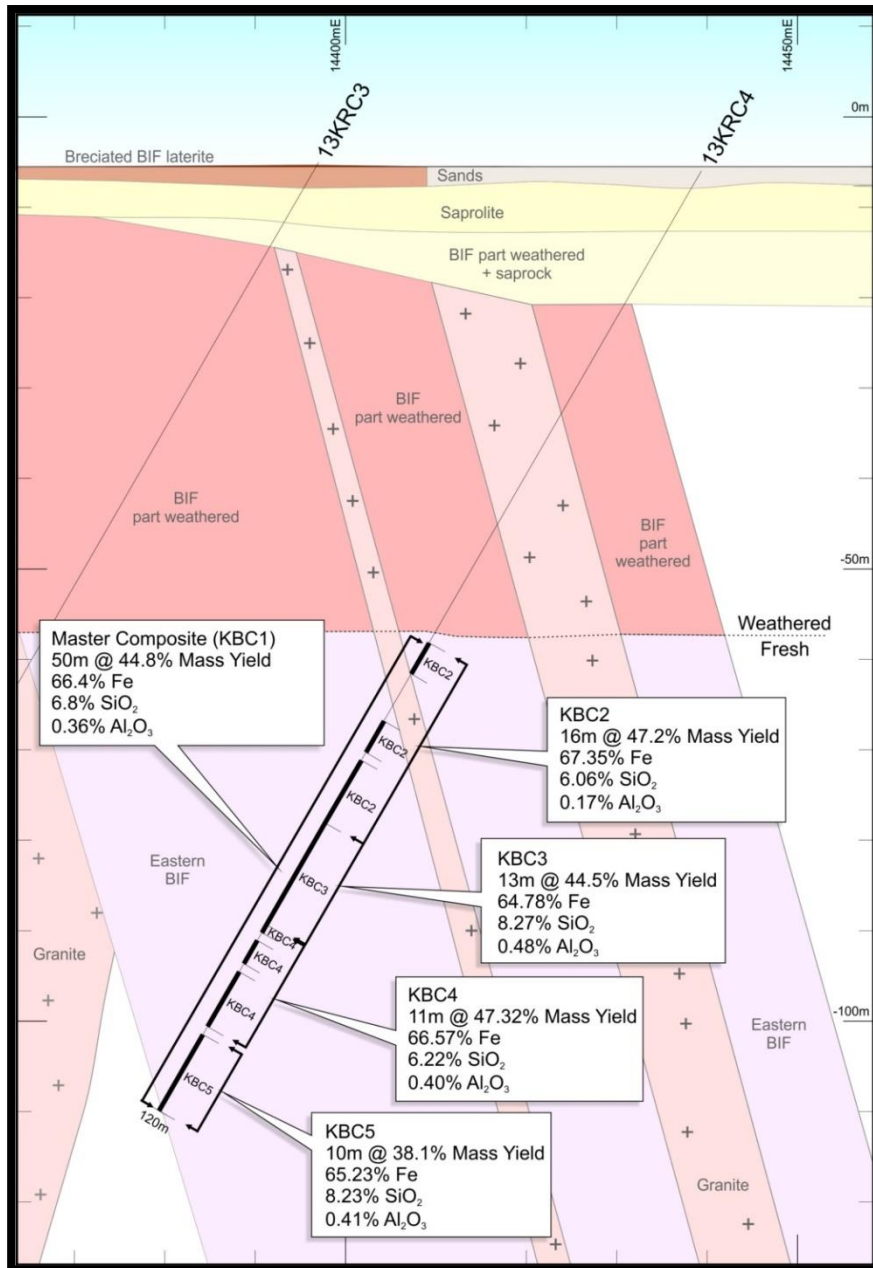


Figure 6  
 Kauring Project showing DH 13KRC 4 - DTR  
 of fresh BIF with 20% Fe bottom cut off.

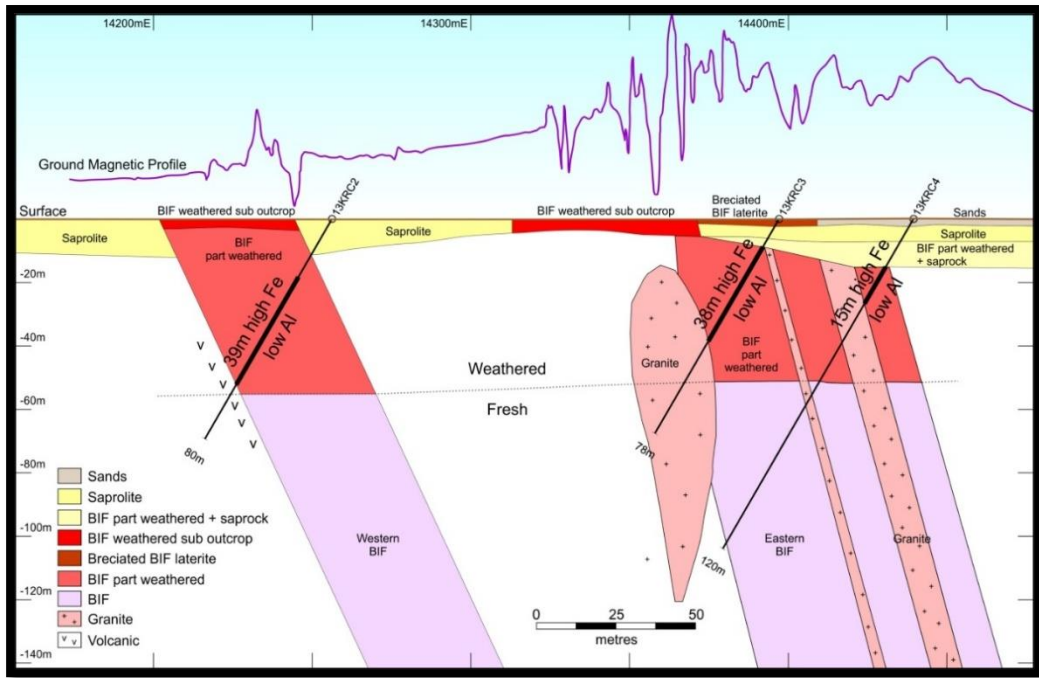


Figure 7  
**Kauring Project showing DTR DH's 13KRC2-4 with ground magnetic profile and weathered BIF relationship Central Target Section**

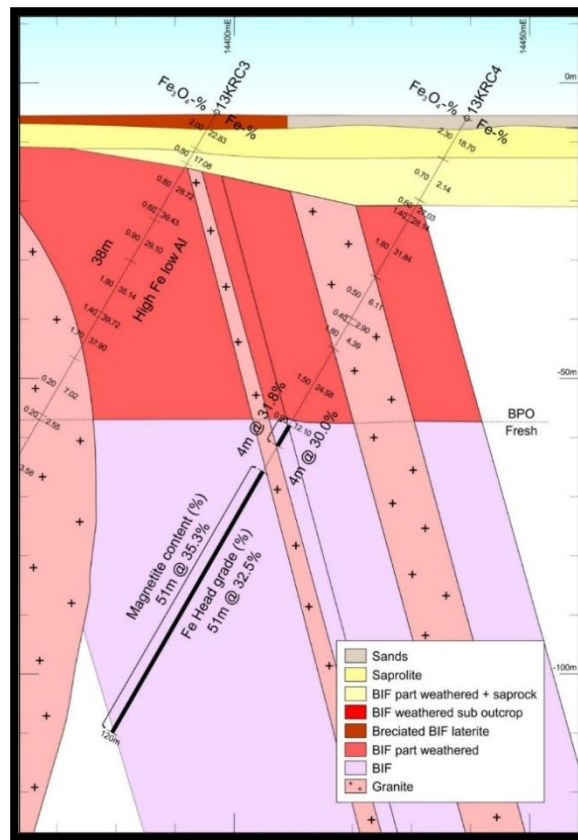


Figure 8  
**Kauring Project showing DH's 13KRC3-4 with weathered BIF relationship over magnetite at 13KRC4 Central Target Section**

## Future Considerations for Weathered BIF:

The upper weathered portion of the two BIF systems comprises mostly of weathered BIF comprising alteration to goethite – hematite – martite – magnetite quartzite BIF. Refer to Figure 7.

At this stage the two styles of BIF is not considered to alter the magnetite potential as assay data supports a similar head assay chemistry in both weathered BIF, one drill-hole at 13KRC4 intersecting a coarse grained crystalline quartzite-BIF. Refer to Figures 6 and 8.

The BIF zone within drill hole 13KRC4 is very consistent in grade and magnetite content which is amenable to a future mining operation. The average magnetite content (as measured by Satmagan) is high with 35% average over 55m of BIF, including zones as high as 58.2% magnetite.

A Program of Works for additional drill holes already exists and a recent EIS grant will require further POW to be submitted.

Initial testwork was undertaken on a number of composite samples from the weathered cap of Kauring. Methods used included Low Intensity Magnetic Separation (1000 gauss), Medium Intensity Magnetic Separation (4000 gauss) and simple gravity table testwork. The results were mixed. Two of the samples returned promising mass yield and grade for LIMS, all samples returned high mass yield, but low concentrate quality for MIMS testwork, and all samples displayed low mass yield but promising concentrate quality for the gravity tabling testwork. These tests were initially conducted at 150 micron and results (especially MIMS) suggest that a finer grind size may be required and also further teswork to better understand the mineralogy of each composite sample. Refer to Table 1 and Table 2 for results.

Table 1: Composite Samples Weathered BIF - Kauring

Drill Hole	Comp ID	From	To	From	To	From	To
13KRC2	KBC001	13	19	20	26		
13KRC2	KBC002	26	35				
13KRC2	KBC003	35	39	40	59	60	65
13KRC3	KBC004	10	19	21	39	40	48
13KRC4	KBC005	16	19	20	31		
13KRC4	KBC006	45	59				

Table 2: Weathered Cap initial testwork

Composite	Weathered Cap - recoveries at P80 - 150 micron					
	LIMS recovery (1000 gauss)		MIMS recovery (4000 gauss)		Gravity table recovery	
	Yield(%)	Fe(%)	Yield(%)	Fe(%)	Yield(%)	Fe(%)
KBC001	19.5%	36.68	24.3%	51.55	7.1%	59.97
KBC002	35.3%	50.2	32.4%	33.12	6.9%	61.78
KBC003	23.3%	57.05	40.1%	30.03	4.5%	55.81
KBC004	6.0%	34.58	42.5%	37.19	3.4%	55.01
KBC005	14.3%	40.03	54.5%	35.26	5.2%	58.38
KBC006	22.6%	40.87	30.3%	37.21	2.8%	48.61



## Future Diamond Drilling:

It is planned to twin the RC drillhole 13KRC4 with a diamond drillhole. This will be beneficial in auditing the accuracy of the RC drilling and also be used to conduct initial engineering and further metallurgical testwork.

## JUBUK (Magnetic 100%)

Application for retention and extension status has been made for the Jubuk coarse grained magnetite deposit near Corrigin. This will allow Magnetic to focus on evaluating its Ragged Rock and Kauring projects.

## OTHER TENEMENTS

Magnetic has rationalised its tenement holdings in order to focus on its Ragged Rock and Kauring projects. As a result of this focus, no exploration was carried out on Magnetic's other tenements during the quarter.

## CORPORATE

The latest Investor presentation was released on 30/5/2014 and can be viewed at [www.magres.com.au](http://www.magres.com.au)

The Company completed a placement for 7,205,000 new shares to sophisticated investors at \$0.20 per share to raise approximately \$1.4m.

On 26 August 2014, the Company also announced it had received a R&D tax refund.

## TENEMENT SCHEDULE

Tenement Schedule in accordance with ASX Listing Rule 5.3.3  
Tenements held at the end of the Quarter

Location	Tenement	Nature of Interest	Project	Equity (%) held at start of Quarter	Equity (%) held at end of Quarter
WA	E70/3536	Granted	JUBUK	100%	100%
WA	E70/3716	Granted	LOMOS	100%	100%
WA	E70/4243	Granted	RAGGED ROCK	100%	100%
WA	E70/4384	Granted	MT MARY	100%	100%
WA	E70/4478	Granted	COLLINS HILL	100%	100%
WA	E70/4508	Granted	KAURING	100%	100%
WA	E70/4528	Granted	KAURING	100%	100%
WA	E70/4598	Application	LATHAM ROCK	-	100% pending grant
WA	E77/2035	Granted	LAKE SEABROOK	Gold Rights Only	Gold Rights Only

Mining Tenements acquired during the Quarter

WA	nil				
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Mining Tenements disposed during the Quarter

WA	nil				
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## **Competent Person's Statement**

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Cyril Geach BSc (Hons), a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Cyril Geach has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Cyril Geach consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

## **About Magnetite**

Magnetite is a major source of iron and accounts for about 30% of global iron furnace feed for steel production. The largest producer of iron ore and iron is China and its main iron ore source is magnetite. North America is the sixth largest producer and is also mostly a magnetite producer.

Magnetite ( $\text{Fe}_3\text{O}_4$ ) is a magnetic mineral, an important property in aiding discovery using magnetic surveys and in ore processing. Ore can be crushed, passed over a magnet and the magnetite extracted to produce a clean, high grade iron product.

Magnetite ore grades are usually lower than commercially exploited hematite ores but after processing, a product with much higher iron grades and much lower costly impurities is derived.

**JORC Code, 2012 Edition – Table 1 report template**

<b>Section 1 Sampling Techniques and Data</b>	
(Criteria in this section apply to all succeeding sections)	<b>Magnetic Resources Kauring Report Release 19 December 2013 update with Magnetic Resources Kauring Report Release 19 February 2014 update with Magnetic Resources Kauring Report Release 04 &amp; 20 March 2014 update with Magnetic Resources Kauring Report Release 07 April 2014 update with Magnetic Resources Quarterly Report to 30 June 2014 Release</b>
Sampling techniques	Reverse Circulation Drilling collected at 1m interval and sub sample split through a cyclone rotary splitter
	Duplicates taken using a 75:25 riffle splitter at every 20m and standards introduced at every 30m
	Susceptibility readings taken at each 1m from larger sample collected using a Georadus K10 magnetic susceptibility meter x10-3SI
	Hand held Delta Dynamic XRF Model DP-4000-C Serial No 510246 used to test every 5-7 metres of collected sample for early recognition of Fe content. Error 5-10%Fe to assay expected.
Drilling techniques	Reverse Circulation Drill Rig owned by Orbit Drilling Pty Ltd Hydco 350 using a 140mm drill bit, pre-collar to 6m
Drill sample recovery	Visual observation and noted where water occurs - water was minimal and 99% of sample recovery water free
	Orbit Drilling ensures the efficiency is acceptable and audit of machine efficiency through Duplicates
	It is assumed minimal bias to sample recovery and grade and if so expect at the 1m interface between geological horizons bias to occur backed up where susceptibility and duplicates are a measure of down hole consistency. Duplicate results indicate in a number of samples that future improved recovery at the rig is required, but as this is an exploratory drill program results are deemed acceptable at this initial level, but would need to improve QA/QC consistency for JORC purposes at MR level when testing the weathered horizon in particular.
Logging	Logging at 1m intervals to assess the geological interpretation
	RC sampling at 1m interval is quantitative using Hand Held XRF and will become qualitative after assaying is carried out. Assay results previously reported in ASX release February 2014 and March 2014 are firm data.
	Total length of intersections logged 446 metres as 100% of the drilling at Kauring
Sub-sampling techniques and sample preparation	RC sampling at 1m interval is quantitative using Hand Held XRF and became qualitative after assaying data released in March 2014. Refer to part release of assay results in ASX release February 2014 and composite samples 04 & 20 March 2014.
	Rotary Split at rig at 1m intervals into Calico for 0.5-2.0kg sub samples and riffle split at 75:25 for duplicates >3Kg
	Dry samples into calico bags for assay vary with size of collected sample between 0.5-2.0kg weight - expect the sample to be homogenous over the 1m collected
	Cyclone cleaned regularly at every 5m to prevent cross contamination or cleansed more if clayey or damp conditions prevailed however minimal <10%
	Duplicate at every 20m to measure continuity of the drill rig and sample recovery. Duplicate results indicate in a number of samples that future improved recovery at the rig is required, but as this is an exploratory drill program results are deemed acceptable at this initial level, but would need to improve QA/QC consistency for JORC purposes at MR level when testing the weathered horizon in particular.
	Grain size mostly fine powdery in weathered zone and fresh zone
Quality of assay data	Total digest and XRF methods employed for Fe suite elements when assaying to be employed. Hand Held XRF used as quantitative tool not qualitative

and laboratory tests	
	Hand held XRF self-calibrating specific for Fe and limited to testing a portion of the calico sub sample. Susceptibility readings an average reading across a 1m sample not all the sample able to be read. Hand held XRF tested against known standards to determine any start, middle and end bias. So far accuracy extremely good for Fe% and within tolerable ranges of 2S for Al, P, S.
	Quality control methods using 3 x Geostats CRM standards and duplicates. Duplicates to be tested at 2 laboratories for umpire testing in later rounds of drilling. No blanks used. Internal checks and standards satisfy control of lab methods Fire Assay Fe suite XRF / ICP /MS methods by certified laboratory Bureau Veritas
Verification of sampling and assaying	At this juncture no independent verification of geology apart from personnel involved in recovery of samples and log chip tray observation by third parties
	No twinned holes to date but one planned at Kauring for December 2014 quarter
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols carried out
	Discuss any adjustment to assay data not carried out. Weighted assays for composite samples.
Location of data points	No surveys or verification of drill holes apart from GPS located
	GPS grid system to date
	GPS topographic control and located data from GSWA airborne survey
Data spacing and distribution	Data spacing for reporting of Exploration Results and Exploration Target are conceptual and not relevant at this juncture leading to a MR which may or may not be determined.
	Data spacing not appropriate for Mineral Resource use at present requires further drilling to ascertain a MR.
	Sample compositing so far has been applied to parts of the drill column (February and March 2014 data to ASX) and at 1m spacing for duplicates, standards and zones of BIF of interest such as fresh BIF at Kauring.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type undetermined at present. Further drilling will assist in determining any bias.
	Mineralised structures and sample bias - too early to understand this affect
Sample security	Samples personally delivered to the laboratory and also stored on site for repeat sampling if necessary
Audits or reviews	No sample audits at this stage apart from duplicate and standards taken.
<b>Section 2 Reporting of Exploration Results</b>	
(Criteria listed in the preceding section also apply to this section.)	
Criteria	JORC Code explanation
Mineral tenement and land tenure	E70/4508 granted 100% to Magnetic Resources no third party arrangement apart from standard Department of Mines and Energy requirement access agreements with farm owners, no Native Title or extricated land apart from the Avon Valley water catchment.

status	Land ownership is private used as farm land. Future end agreements will have to be entered into with farmers and discussions begun with a select few.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area is subject to a Program of Work approval by DMP and granted for reconnaissance drill holes over Minerals to Crown land. Remnant bush may require a DEC survey in the future for flora and fauna. Minerals to Owner title exists requiring agreements separate to DMP requirement.
Exploration done by other parties	No search for Fe by other parties known at Ragged Rock and Kauring.
Geology	Outcropping Banded Iron Formation (BIF) comprising weathered BIF and fresher BIF at depth within a gneissic strati-form layered succession steeply dipping NE including orthopyroxenite – hornblendite in western BIF that differs from the eastern BIF which is a quartzite BIF at Kauring. Weathered BIF is partial weathered to goethite, hematite, martite after magnetite at Kauring. Minor sulphide noticed in volcanics and testing to see if sulphide in fresh BIF in the eastern BIF can be separated by DTR analysis at Kauring. Work is ongoing with regard to understanding the relationship of weathered (hematite and martite) alteration over magnetite BIF at Kauring. Layered peridotite / pyroxenite / gabbro footwall to western BIF supports an EIS grant of \$141,323 for 20xRC and 1xDDH in June 2014 quarter.
Drill hole Information	Data summary forms part of an ASX release dated 19 December 2013 and 19 February 2014 and ASX quarterly reports for December 2013, March 2014.
	o easting and northing of the drill hole collar provided
	o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar estimated not outlined
	o dip and azimuth of the hole provided
	o down hole length and interception depth provided
	o hole length provided
	azimuths are not submitted until further accurate data can be submitted but not critical at such an early stage of reporting of ER or ET
Data aggregation methods	The use of Hand Held XRF data taken at 5-7m intervals is purely quantitative with expected errors of <1%Fe against known standards and Si / Al not reported until assay data is available and further reported
	Susceptibility readings taken at each 1m RC drill sample from larger sample collected using a Georadus K10 magnetic susceptibility meter x10-3SI vary across a wide and reported only an average until assay results are posted which will project a better understanding of the Fe% and susceptibility measured at 1m intervals or as composited samples that are yet to be determined.
	The assumptions used for any reporting of metal equivalent values should be clearly stated not undertaken or represented.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results as outlined in the ASX release dated about 19 December 2013 by MAU. Fresh BIF sampled at 1m intervals whilst weathered BIF sampled at various composite levels of several metres results on composites released in March 2014. Incompatible elements in head grade by XRF on fresh BIF further determined using Davis Tube Recovery to see if they are removed results now issued in March 2014. Sulphur was an element that showed normal and above normal levels down-hole but considered to be workable in context of the very low Al, P incompatible elements and high Fe% at a coarse grind at 100 micron at Kauring. Petrology work on parts of weathered BIF carried out, results given in March 2014 for Kauring.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported and is outlined in Figures 6-8 at Kauring.
	If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known') reported prior.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be

	included are reported in Figures 1-8 and Tables 1 (September 2014 Quarterly Report release) and prior Quarterly Reports December 2013-June 2014 respectively.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable – prior reported and as detailed in Notes to the Exploration Target in December 2013, February 2014 and March 2014 ASX releases about Ragged Rock and Kauring.
Other substantive exploration data	Little exploration data know about the physical - chemical nature of the reported logged drill intercepts at this point. Metallurgy will be an increasing determination. We know that a BIF sequence of rocks with 2 zones of BIF a western and eastern zone as reported up to March 2014 occurs at Kauring. Overburden of 50m of weathered BIF reported at Kauring. Mapped weathered BIF at Targets T3 and T4 encountered.
Further work	Further work will require broader ground magnetic survey, infill ground magnetics, further drilling to improve the geological model being reported.
	Figure 2 outlines the new target areas T3 and T4 at Ragged Rock and also with Kauring Central is subject to further access agreements over the north and south targets and future negotiations with farmers to determine a JORC MR.