



magnetic resources<sup>NL</sup>

---

**ASX Release  
20 March 2014**

**ASX code: MAU**

22 Delhi Street  
West Perth WA 6005  
PO Box 1388  
West Perth WA 6872  
Telephone 08 9226 1777  
Facsimile 08 9485 2840  
info@magres.com.au  
www.magres.com.au

ABN 34 121 370 232

---

**DAVIS TUBE TESTWORK CONFIRMS HIGH YIELDING  
COARSE GRAINED MAGNETITE BIF AT KAURING**

---

**HIGHLIGHTS:**

**Davis Tube Recovery (DTR) results are very encouraging for a number of key reasons:**

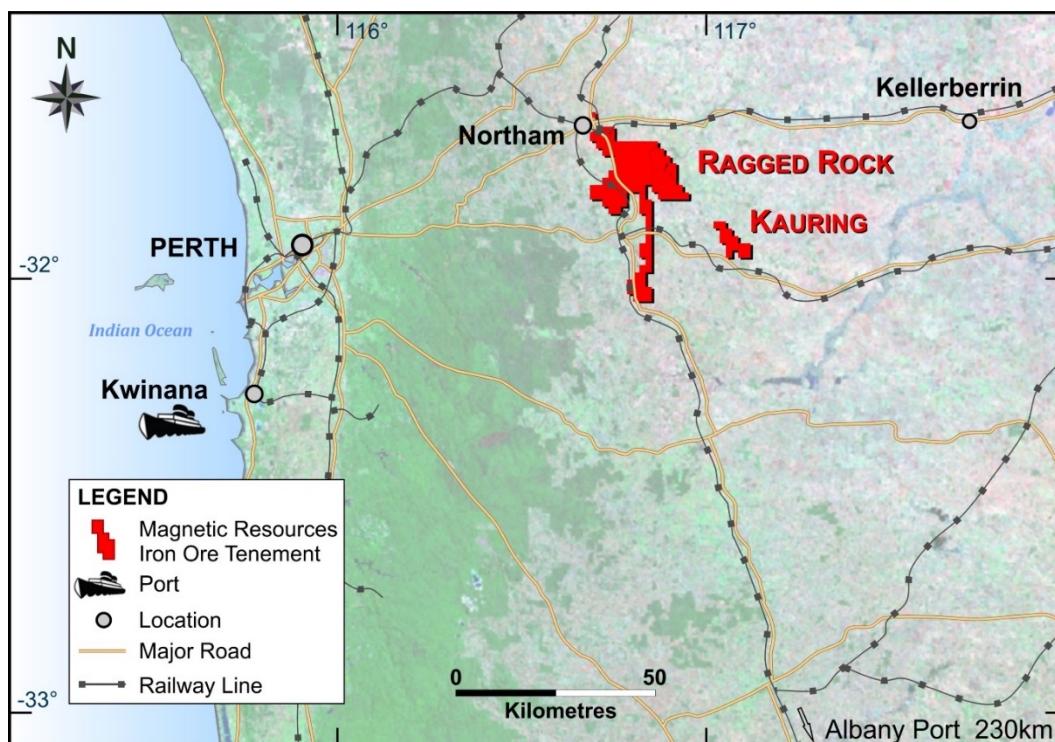
- **Davis Tube Recovery (DTR) test work confirms very high mass yield of 44.8% over 50m magnetite BIF zone. This compares very favourably to the majority of magnetite projects which have yields typically of 20-30%.**
- **Grinding test work demonstrates a product of over 66% Fe can be achieved at a coarse grind size of 100 micron. This compares very favourably to the majority of magnetite projects that typically require a grind size of 30-45 micron to achieve the same quality.**
- **DTR concentrates demonstrate very low levels of Alumina, Phosphorous and Titanium which is considered very positive for any future marketability of a product.**
- **Excellent concentrate quality is achieved at a coarse grind size suitable for sale into the sinter market (DSO). Finer grinding would achieve a world class concentrate of over 69% Fe at 65 micron grind size.**

**INTRODUCTION:**

Magnetic Resource NL (**Magnetic or the Company**) is pleased to announce additional results of DTR test work on a 50m section of fresh BIF from drill-hole 13KRC4 in addition to the preliminary assay results from a first phase of an initial reverse circulation drilling program at its 100% owned Kauring Project (**Kauring**) announced on 19 December 2013 and 19 February 2014.

Previously, assaying and Satmagan testing has confirmed the presence of extensive thicknesses of fresh magnetite iron ore mineralization from drill-hole 13KRC4 with an upper weathered BIF alteration which is associated with a broad geophysical anomaly.

The Kauring Project is located 30 km SE of the Company's Ragged Rock magnetite Project area. Refer to Figures 1 and 2 for location and geophysical targets with drilling.



**Figure 1: Location Map Kauring Project**

Davis Tube Recovery test work over a 50m fresh BIF intercept using a 20% Fe bottom cut off has been conducted by taking a master sample of the 50m intercept (KBC1) and four (4) composite sub sets of the fresh BIF (KBC2-5) of RC drill-hole 13KRC4.

This ASX release tables the results of the work carried out and reported analysis.

Tables 1 and 2 outline the Master Composite DTR analysis using a 20% Fe bottom cut off. Table's 3-5 outline DTR results from weighted data of the four sub sampled composites. Table 6 provides drill collar detail. Figure 2 outlines the DTR results of KBC1-5 down-hole. Figure 3 is the geophysical relationship to drilling at Kauring. Figures 4 to 5 are cross sections across the western and eastern BIF reinterpreted.

**RESULTS OF DTR WORK:**

**Master Composite of 13KRC4:**

A Master composite sample was collected from 50m of fresh BIF (between 60-120m with breaks at 20% Fe bottom cut off) representing previously reported fresh BIF in drill hole 13KRC4. The head grade of the Master Composite is outlined in Table 1.

Table 1: Head Grade - Master Composite Sample KBC1

Head Grade KBC1				
Fe	SiO2	Al2O3	P	S
33.86%	46.36%	1.18%	0.022%	0.283%

The Master Composite sample, which represents the overall mineralised zone, was subjected to a number of DTR tests at a variety of grind sizes with the intention of choosing an appropriate grind size

that would result in a high grade product at a coarse grind size considered suitable for marketing the product as sinter feed.

Table 2: DTR Concentrate Grade of the Master Composite Sample at various grind sizes

DTR Sample	Actual P80 (µm)	Mass Yield	Fe	SiO2	Al2O3	P	S
		%	%	%	%	%	%
		P98 =1000	161	48.3	61.9	12.27	0.44
P98 =300	129	46.7	65.26	8.08	0.38	0.007	0.21
<b>P98 =212</b>	<b>108</b>	<b>44.8</b>	<b>66.4</b>	<b>6.81</b>	<b>0.36</b>	<b>0.005</b>	<b>0.223</b>
P98 =150	81	42.8	68.44	4.17	0.33	0.004	0.23
P98 =106	65	42.6	69.59	3.03	0.32	0.003	0.204

The results obtained and shown in Table 2 demonstrate a very high quality concentrate and a high mass yield can be achieved across a wide range of grind sizes. The mass yield is a measure of concentrate produced as a percentage of the fee material.

A grind size of 100 microns (P80) was selected for subsequent testing of four sub-composites.

It is worthwhile noting that the company still has the ability to make a world class magnetite concentrate (approx. 70% Fe) at grind sizes much coarser than most magnetite projects.

The Master Composite sample at a 100 micron grind size produced above average results outlined below

Mass Yield	Concentrate Quality				
	Fe	SiO2	Al2O3	P	S
44.8%	66.4%	6.8%	0.36%	0.005%	0.223%

Very low Al2O3 and Phosphorus (P) are major positives for the future marketing of this product. Sulphur levels are moderate, but not considered negative given the absence of most other impurities.

#### Sub Composite Sampling of 13KRC4

Four sub composites KBC2-5 were selected to test the sinter quality at various levels to represent down-hole geology as well as test the variability of sulphur levels. The selection of sub composite samples is outlined in Table 3.

Table 3: Composite Samples 1-5 representing 50m of fresh BIF

DTR Head Grades	13KRC4	From	To	Width
Weighted from 1m assay				metres
KBC1		KBC2	KBC5	50
Sub composite KBC2		60-64+70-74+75-83		16
Sub composite KBC3		83	96	13
Sub composite KBC4		96-97+98-101+102-109		11
Sub composite KBC5		110	120	10

The head grade of the four Sub Composites is outlined in Table 4. The concentrate grade of the four Sub Composites is outlined in Table 5.

Table 4: DTR Head Grade for Sub Composites KBC2-5

Sub Composite	Fe	SiO2	Al2O3	P	S
Head Grade	%	%	%	%	%
KBC2	35.1	45.81	0.83	0.022	0.086
KBC3	34.33	45.37	0.85	0.02	0.223
KBC4	36.02	43.89	1.04	0.022	0.61
KBC5	28.7	52.16	2.43	0.019	0.356

Table 5: DTR Concentrate Grade for Sub Composites KBC2-5

Sub Composite	Yield	Fe	SiO2	Al2O3	P	S
Concentrate	%	%	%	%	%	%
KBC2	47.2	67.35	6.06	0.17	0.003	0.017
KBC3	44.5	64.78	8.27	0.48	0.006	0.163
KBC4	47.3	66.57	6.22	0.4	0.005	0.497
KBC5	38.1	65.23	8.23	0.41	0.005	0.331

The results in Tables 3, 4 and 5 show varying sulphur level in the head grade and resulting concentrate grade. The upper 29m of the hole (KBC2 and KBC3) show lower sulphur grades in the head sample and correspondingly low sulphur grades in the concentrate. The lower 21m (KBC4 and KBC5) shows a higher sulphur content in head grade and corresponding concentrate grades. If these relationships hold true for future test work, it will be quite simple to control the blend and keep sulphur at acceptable levels.

Weighted averages for the upper and lower zones are outlined below:

29m zone (between 60-96m at 20%Fe bottom cut off)

Concentrate Quality					
Mass Yield	Fe	SiO2	Al2O3	P	S
46%	66.20%	7.05%	0.31%	0.004%	0.08%

21m zone (between 96-120m at 20%Fe bottom cut off)

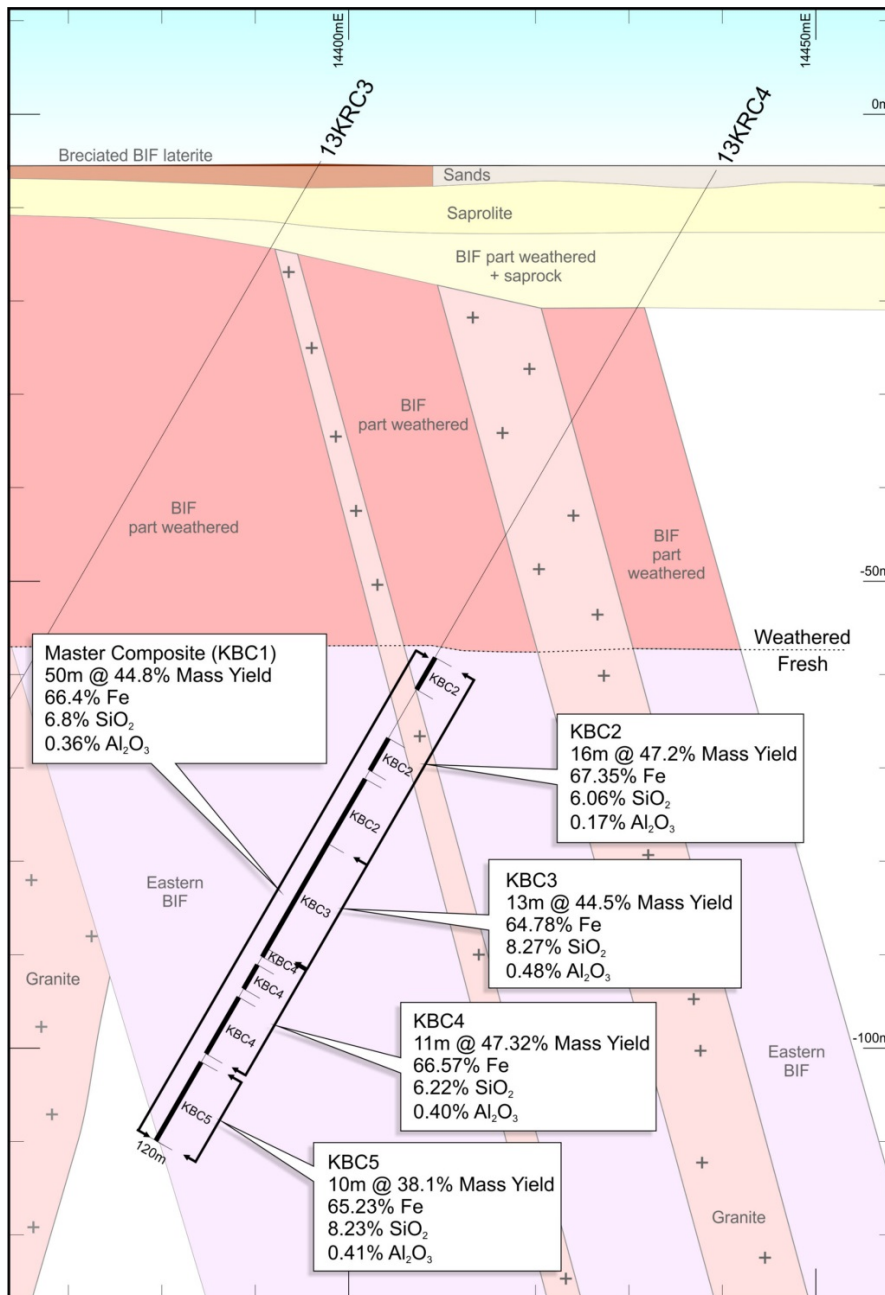
Concentrate Quality					
Mass Yield	Fe	SiO2	Al2O3	P	S
42.9%	65.93%	7.18%	0.40%	0.005%	0.42%

Tables 4 and 5 shows sub samples KBC2-3 as lower in sulphur than KBC4-5 and indicates the variability of sulphur down hole whilst Al2O3 and P remain consistently very low.

The down-hole relationship of the DTR analysis for KBC1-5 is shown in Figure 2.

#### **GENERAL FINDINGS:**

- The Master composite sample was tested at various grind sizes to determine the optimum grind size to achieve a high quality sinter feed at a coarse sizing.
- A coarse grind size of 100 micron was chosen as the target grind in order to obtain a high Fe, low contaminant product and to achieve a high quality sinter feed at a coarse sizing. This grind size was then used on sub samples KBC2-5 in order to better understand the contribution of sulphur in the final concentrate. Refer to Tables 4 and 5.
- The assaying carried out at Bureau Veritas Laboratories, Perth using an XRF HF acid digest (Method XRF 202) show very low levels of Al, P, Ti and other metals is seen as very favourable for a magnetite concentrate.
- The relationship of granite down hole adjacent to BIF is thought to contribute to higher sulphide on a localised basis as a contact halo. Further drilling along strike is expected to create a lower sulphide content at the contact zone with BIF where granite is not mapped. Future drilling will determine if this is the case.
- DTR test work has only been carried out on the eastern BIF and in one drill hole (DH13KRC4). Drilling on the western BIF (DH13KRC2) intersected weathered BIF which is expected to overly fresh magnetite BIF below the weathering zone. Future drilling will test this fresh BIF and DTR test work will be carried out in the future.
- The eastern BIF has indicated extensions of BIF further east and further drilling will determine the full extent of additional BIF associated with the eastern BIF with further drilling in the future.



**Figure 2: Kauring Project showing DH 13KRC 4 - DTR of fresh BIF with 20% Fe bottom cut off.**

Table 6: Drill Hole collar detail

Drill Hole	Easting MGA94	Northing MGA94	Azimuth	Dip	Depth
13KRC1	507548	6468176	210	060	84
13KRC2	507134	6468303	210	060	80
13KRC3	507198	6468429	210	060	78
13KRC4	507217	6468467	210	060	120
13KRC5	506586	6468550	210	060	84

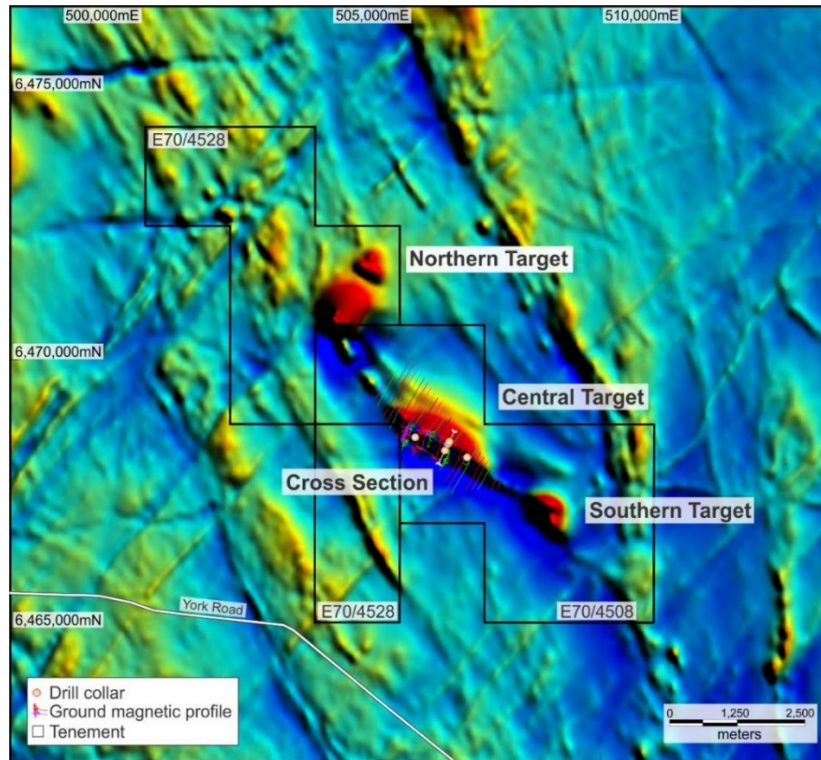
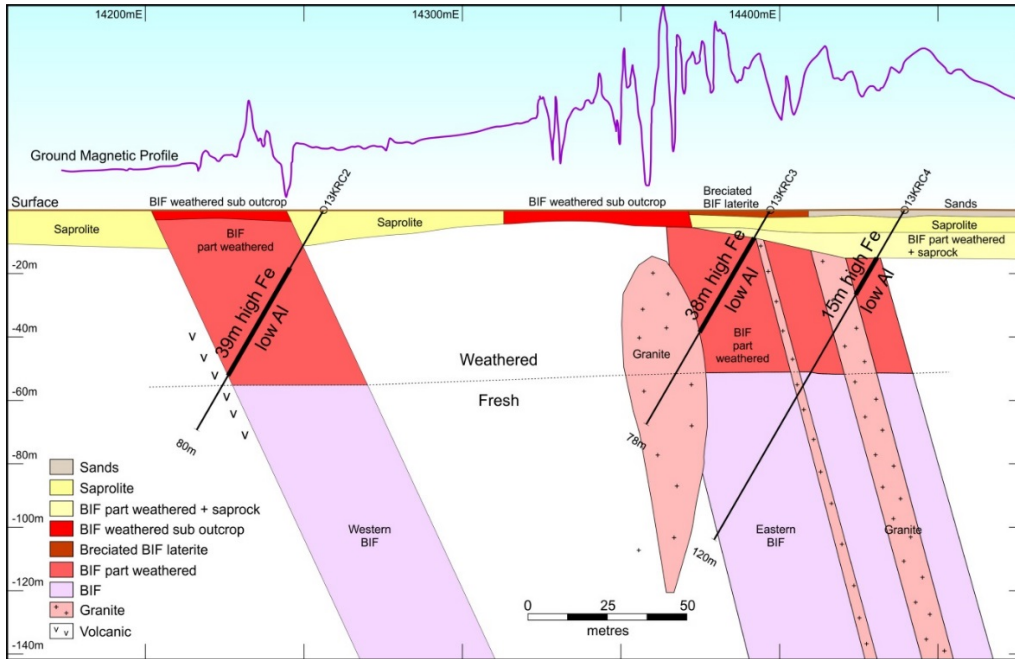
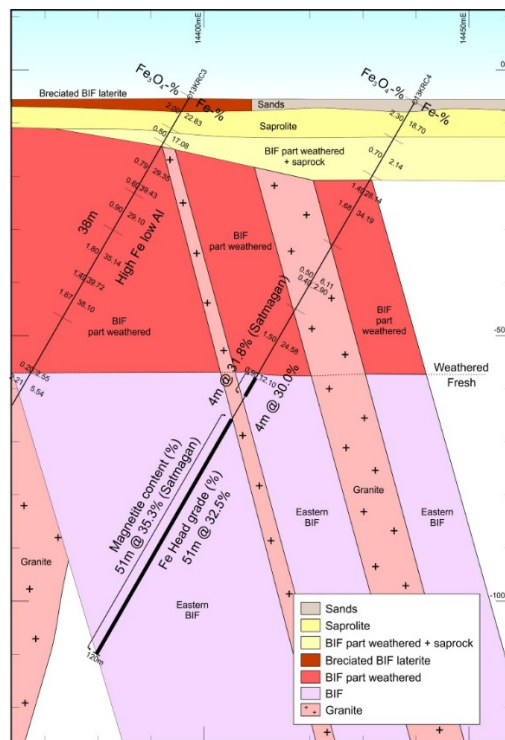


Figure 3: Kauring Project showing three targets and Central Target Drilling Section





**Figure 4: Kauring Project showing Central Target Drilling Section DHs 13KRC2, 3, 4 and weathered BIF relationship.**



**Figure 5: Kauring Project showing Central Target Drilling Section DHs 13KRC 3 and 4 and weathered and fresh BIF relationship**



The Company has embarked on testing magnetite deposits that are supported by high amplitude regional magnetic anomalies, near surface coarse grained BIF of high quality, a real dimension for potential commercial exploitation, logistics and infrastructure available, such as the nearby Ragged Rock project.

The Kauring Project also exhibits these principal requirements of selectivity to explore its potential by carrying out metallurgical testing and intentionally to add as iron inventory, further offering scope for greater flexibility and development.

DSO type deposits not observed at Ragged Rock Project, offer easier mining and early cash flow alternatives and would run parallel with Ragged Rock if proven to commercially exist at Kauring.

Results for the weathered BIF at Kauring have been received and will be reported in the near future.

For more information on the company visit [www.magres.com.au](http://www.magres.com.au)

George Sakalidis  
Managing Director  
Phone (08) 9226 1777  
Mobile 0411 640 337  
Email [george@magres.com.au](mailto:george@magres.com.au)

### **Competent Person's Statement**

The information in this report that relates to exploration results is based on information compiled or reviewed by Mr George Sakalidis BSc (Hons) who is a member of the Australasian Institute of Mining and Metallurgy and Mr Cyril Geach BSc (Hons-Geology) who is a member of the Australian Institute of Geoscientists. George Sakalidis is a director of Magnetic Resources NL. George Sakalidis 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 for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. George Sakalidis consents to the inclusion of this information in the form and context in which it appears in this report.

Cyril Geach is an independent consultant with his own business, Cyril Geach - Geologist and 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 for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Cyril Geach consents to the inclusion of this information in the form and context in which it appears in this report.

**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</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
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 (this release).
	Total length of intersections logged 446 metres as 100% of the drilling
Sub-sampling techniques and sample preparation	RC sampling at 1m interval is quantitative using Hand Held XRF and will become qualitative after assaying is carried out. Refer to part release of assay results in ASX release February 2014 and composite samples March 2014 (this release).
	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
	Grain size mostly fine powdery in weathered zone and fresh zone
Quality of assay data and laboratory tests	Total digest and XRF methods employed for Fe suite elements when assaying to be employed. Hand Held XRF used as quantitative tool not qualitative
	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
	Quality control methods using 3 x Geostats CRM standards and duplicates. Duplicates to be tested at 2 laboratories for umpire testing. 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
	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.
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 status	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. Land ownership is private used as farm land. Future agreements will have to be entered into with farmers.
	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. Remnant bush may require a DEC survey in the future for flora and fauna.
Exploration done by other parties	No search for Fe by other parties known.
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. Weathered BIF is partial weathered to goethite, hematite, martite after magnetite. Minor sulphide noticed in volcanics and testing to see if sulphide in fresh BIF in the eastern BIF can be separated by DTR analysis (results pending).
Drill hole Information	Data summary forms part of an ASX release dated 19 December 2013 and 19 February 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 5-10%Fe and Si / Al not reported until assay data is available and further reported
	Susceptibility readings taken at each 1m 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 to be further determined using Davis Tube Recovery on 50m of DH13KRC4 showed 29m of low sulphide and 21m of higher sulphide otherwise incompatibles very low – attractive to blending in lower 21m. No DTR on western BIF awaits drilling to test fresh rock. Petrology work on parts of weathered BIF carried out, results given in March 2014.
	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 3 and 4 interpretation.
	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') stated in Figure 3.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included are reported in Figures 1-5 and Tables 1-5
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable - tabulated in tables 1, 2, 3 and as detailed in Notes to the Exploration Target in December 2013, February 2014 and March 2014 ASX releases.
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 but at present unknown.
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 three target areas reporting on the Central target and is subject to further access agreements over the north and south targets and future negotiations with farmers to determine a JORC MR.