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# Hastings Advances Yangibana and Hastings projects towards drilling in Q2 2014

# Highlights:

- Systematic sampling of recently identified targets at Hastings Levon and Haig completed
- Scintillometer results confirm potential dimensions of both targets
- Samples collected for petrology/mineralogy
- Native Title Site Clearance at Yangibana North clears way for drilling

# HASTINGS PROJECT

The Company has completed systematic sampling and scintillometer-based surveys of the two relatively recently identified radiometric anomalies within its Prospecting Licences at Hastings. A total of 52 samples were collected from the Levon Prospect, with 50 being collected during a scintillometer-based programme that returned values as shown in Figure 1.

The 52 samples have been despatched to Genalysis in Perth for analysis of rare earths and rare metals. Of interest, the elevated scintillometer readings are associated with tuffaceous units that appear to be coarser-grained than those associated with the mineralisation at the defined resources within the Niobium Tuff unit. Seven samples have been sent for petrology/mineralogy.

The scintillometer survey confirms the potential for a zone of anomalous rare earths- and rare metals-mineralised volcanoclastics with dimensions as previously estimated (ASX release, 1<sup>st</sup> July 2013). Readings exceeding 200 counts per second (cps) provided a precise definition of the limits to the mineralised zone within the Niobium Tuff resources and the limited previous rock chip sampling carried out by the Company at Levon provided encouragement that this correlation holds at Levon.



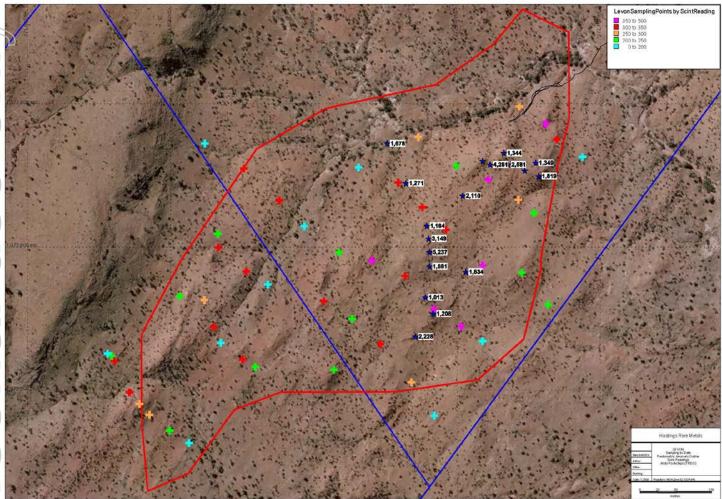


Figure 1 – Levon Prospect. Scintillometer readings April 2014, with previous rock chip sample assays and airborne radiometric (thorium) anomaly

A total of 25 samples were collected from the Haig prospect during a scintillometer-based survey that returned results as shown in Figure 2. These have been despatched to Genalysis in Perth for analysis of rare earths and rare metals.

The Haig radiometric anomaly is related to a steeply-sided intrusive trachytic flow dome. Three samples have been sent for petrology/mineralogy. This prospect is unusual in that it is the only one of twelve such flow domes identified by historical mapping that appears to be rare earths- and rare metals-anomalous. Again, previous estimates of the potential dimensions of the anomalous zone were confirmed by the scintillometer survey.





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Hastings is awaiting the results of the analyses and will then decide on targets to be drilled in a reverse circulation programme that is planned to commence in June. This programme will include six holes at the previously defined Southern Extension to the current JORC resources within the Niobium Tuff unit.

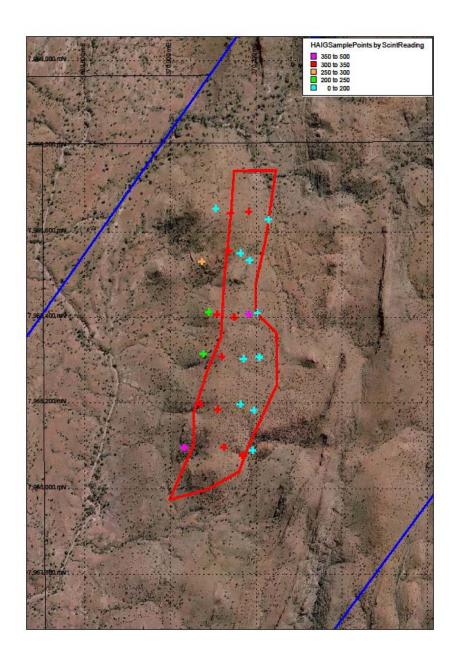


Figure 2 - Haig Prospect. Scintillometer readings April 2014, with airborne radiometric (thorium) anomaly





# **YANGIBANA PROJECT**

The Company has successfully completed the Native Title Site Clearance for its proposed drilling at Yangibana North and has signed a contract with McKay Drilling to undertake the reverse circulation drilling programme in early May.

The planned programme involves drilling on nine sections spaced at 50m along the main outcrop of the Yangibana North prospect. Up to five holes will be drilled on each section as shown in Figure 3. Approximately 350m of drilling is required on each of the nine sections, totalling 3,150m.

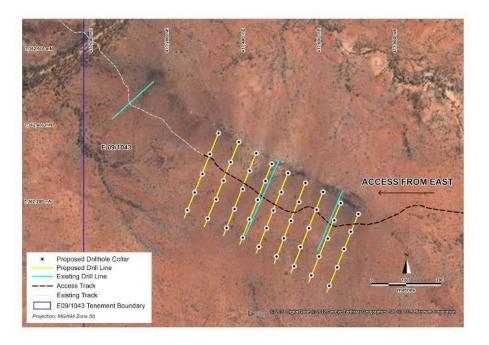


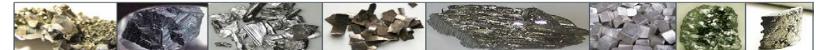
Figure 3 - Aerial view of proposed drill sections

Drilling carried out in the 1980s indicates that mineralisation at Yangibana North has a shallow (20°-30°) dip to the south. The planned drilling is to confirm historical results that indicated average grades of around 1.6% TREO\* including 4000ppm Nd<sub>2</sub>O<sub>3</sub> from this zone above the water table, and to test the primary mineralisation at greater depth.

\* **TREO** is the sum of the oxides of the heavy rare earth elements (HREO) and the light rare earth elements (LREO).

**HREO** is the sum of the oxides of the heavy rare earth elements europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu), and yttrium (Y)

**LREO** is the sum of the oxides of the light rare earth elements lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), and samarium (Sm).



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# **About Hastings Rare Metals**

- Hastings Rare Metals is a leading Australian rare earths company, with two rare earths projects in Western Australia.
- The Hastings deposit contains JORC Indicated and Inferred Resources totaling 36.2 million tonnes (comprising 27.1mt Indicated Resources and 9.1mt Inferred Resources) at 0.21% TREO, including 0.18% HREO, plus 0.89% ZrO<sub>2</sub> and 0.35% Nb<sub>2</sub>O<sub>5</sub>.
- Rare earths are critical to a wide variety of current and new technologies, including smart phones, hybrid cars, wind turbines and energy efficient light bulbs.
- The Hastings deposit contains predominantly heavy rare earths (85%), such as dysprosium and yttrium, which are substantially more valuable than the more common light rare earths.
- The Company aims to capitalise on the strong demand for heavy rare earths created by expanding new technologies. It has recently validated the extensive historical work and completed a Scoping Study to confirm the economics of the Project.

# **Competent Person's Statement**

The information in this report that relates to Resources is based on information compiled by Simon Coxhell. Simon Coxhell is a consultant to the Company and a member of the Australasian Institute of Mining and Metallurgy. The information in this report that relates to Exploration Results is based on information compiled by Andy Border, an employee of the Company and a member of the Australasian Institute of Mining and Metallurgy.

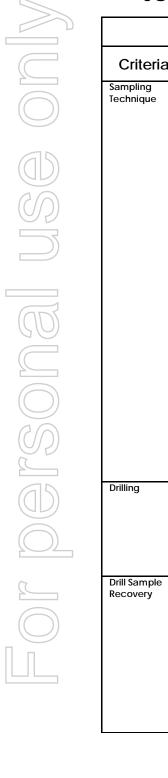
Each has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code"). Each consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.





# JORC 2012 disclosures on sampling techniques and data

	Section 1: Sampling Techniques and Data			
Criteria	JORC Code Explanation	Commentary		
Sampling Technique	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling	Recent exploration at the Hastings Project has comprised systematic rock chip sampling at spot locations over the Levon and Haig radiometric anomalies. A total of 52 samples on a nominal 100 m X 50 m grid spacing have been collected at Levon. A total of 25 samples on a nominal 100 m X 50 m grid spacing have been collected at Haig. Approximately 2 kg of sample from each outcropping rock location was collected for analysis.		
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report.	A hand held scintillometer was used to assist with sample location with a variety of rock chips collected ranging from high anomalous readings to low readings (80 cps to 520 cps). The sample locations are recorded by handheld GPS survey with ar accuracy of +/- 5 metres. Samples were logged for lithology, alteration, weathering and mineralisation.		
	In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Approximately 2 kg of rock chip sample/sample was submitted to Interdek/Genalysis in Perth where they will be crushed, dried and pulverised to produce a sub sample for rare earth analysis. The following elements will be analysed via ICP following sodiur peroxide fusion digest.   La Gd Yb   Ce Tb Lu   Pr Dy Nb   Nd Ho Ta   Sm Er Zr   Eu Tm <i>ICP-MS</i>		
Drilling	Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).	NA		
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	NA		
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	In any particular sample location outcropping rock chips were collected across the outcrop and not focused on any specific small area.		
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Insufficient data is available at the present stage to evaluate potential sample bias.		







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Logging	Whether core and chip samples have been geologically and geotechnical logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Geological logging of rock chips has taken place recording the scintillometer count per second, lithology and any other relevant features
	Whether logging is qualitative or quantitative in nature. Core (or costean/Trench, channel, etc) photography.	Rock chip logging is a qualitative activity with pertinent relevant features recorded: lithology, mineralogy, mineralisation, structural, weathering, alteration, colour and other features of the samples.
	The total length and percentage of the relevant intersections logged.	All samples were logged.
Sub-Sampling Technique and Sample Preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	NA
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	N/A
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation for all samples follows industry best practice and will be undertaken by Interdek/Genalysis in Perth where they will be crushed, dried and pulverised to produce a sub sample for analysis. Sample preparation involving oven drying, coarse crushing, followed by total pulverization in LM2 grinding mills to a grind size of 85% passing 75 microns.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	QC for sub sampling follows Interdek procedures.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	No field duplicates have been taken.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered to be appropriate to correctly represent the style of mineralisation and preliminary nature of the sampling.
Quality of Assay Data and Laboratory Tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The laboratory uses a sodium peroxide fusion to enable analysis of the rare earth suite of elements. This method is useful for samples in which the elements of interest are hosted in minerals that may resist acid digestions. Sample preparation checks for fineness were carried out by the laboratory as part of their internal procedures to ensure the grind size of 85% passing 75 micron was being attained.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools were used to determine any element concentrations at this stage.





	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Laboratory QA/QC involves the use of internal lab standards using certified reference material, blanks, splits and duplicates as part of the in house procedures. Repeat or duplicate analysis for samples shows that the precision of samples is within acceptable limits.
Verification of Sampling and Assaying	The verification of significant intersections by either independent or alternative company personnel.	The Company's General Manager of Exploration has visually reviewed the samples collected.
	The use of twinned holes.	NA
	The verification of significant intersections by either independent or alternative company personnel.	NA
	Discuss any adjustment to assay data	No adjustments or calibrations were made to any assay data used in this report.
Location of Data points	Accuracy and quality of surveys used to locate drill holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	All samples have been located by GPS in UTM grid WGS84 Zone 52 (S).
	Specification of the grid system used	The grid system is WGS 84 Z 52(S).
	Quality and adequacy of topographic control	Topographic control is based on a detailed survey over the sample area (+/- 2 metres)
Data Spacing and Distribution	Data spacing for reporting of Exploration Results	All samples were collected on a nominal 100 m X 50 m grid pattern aligned along the long axis of the radiometric anomalies
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The work completed is early stage exploration, however the results are expected to provide broad dimensions of the rare earth anomalous outcrops over the target areas.
	Whether sample compositing has been applied	NA
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.	At this early stage the orientation is considered appropriate for the sampling completed.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	NA





Sample Security	The measures taken to ensure sample security	Chain of custody is managed by the Company. Samples are transported to the laboratory via registered couriers with samples safely consigned to Interdek for preparation and analysis. Whilst in storage, they are kept in a locked yard. Tracking sheets are used track the progress of batches of samples
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No review of the data management system has been carried out.

