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## **YANGIBANA PROJECT RESOURCES ESTIMATE METHODOLOGY**

Hastings Rare Metals Limited (ASX: HAS) (the Company or Hastings) wish to supplement the following information as appended to JORC Code, 2012 Edition, Table 1, Sections 1-3 of the 10th November 2014 announcement.

As announced on 10th November, a new JORC estimate by independent consultants CoxsRocks Pty Limited has established resources at eight separate prospects within the Yangibana Project, with total resources shown in Table 1.

This resource represents a 230% increase from the previous resource estimate of August 2014 that was based on the Yangibana North prospect only.

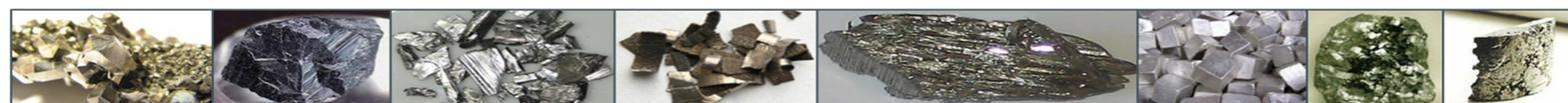
### **Geology and geological interpretation**

The initial target for rare earths mineralisation at the Yangibana Project is hosted by ironstone lenses that are part of an extensive rare earths-mineralised system associated with the Gifford Creek Carbonatite Complex. These ironstone lenses were previously explored for base metals, manganese, uranium, diamonds and rare earths. Twelve targets for rare earths were identified in the 1980s as shown in Figure 1.

The ironstones comprise variable contents of iron oxides and hydroxides. Near surface manganese oxides reduce with depth and are replaced by primary carbonate minerals. The rare earths content is largely hosted by monazite.

The ironstone lenses pinch and swell along strike and with depth, ranging from one to eight metres in width. The ironstone lenses are surrounded by fenitised host rocks that locally carry lower grade rare earths content. Barren quartz veins are also locally associated with the ironstones.

The lenses dip at angles ranging from 15-30° at Yangibana North and Bald Hill South to around 60° at Kane's Gossan and Frasers.



Resource Classification	Tonnes (mt)	% TREO	ppm Nd <sub>2</sub> O <sub>3</sub>	ppm Pr <sub>2</sub> O <sub>3</sub>	ppm Dy <sub>2</sub> O <sub>3</sub>	ppm Eu <sub>2</sub> O <sub>3</sub>	ppm Nd <sub>2</sub> O <sub>3</sub> -Eq
Indicated	3.96	1.59	3,737	1,015	58	100	7,370
Inferred	2.83	1.43	3,189	916	47	81	6,309
TOTAL	6.79	1.52	3,509	974	53	92	6,925

Table 1 – Yangibana Project, Total Resources November 2014 (CoxsRocks Pty Limited)

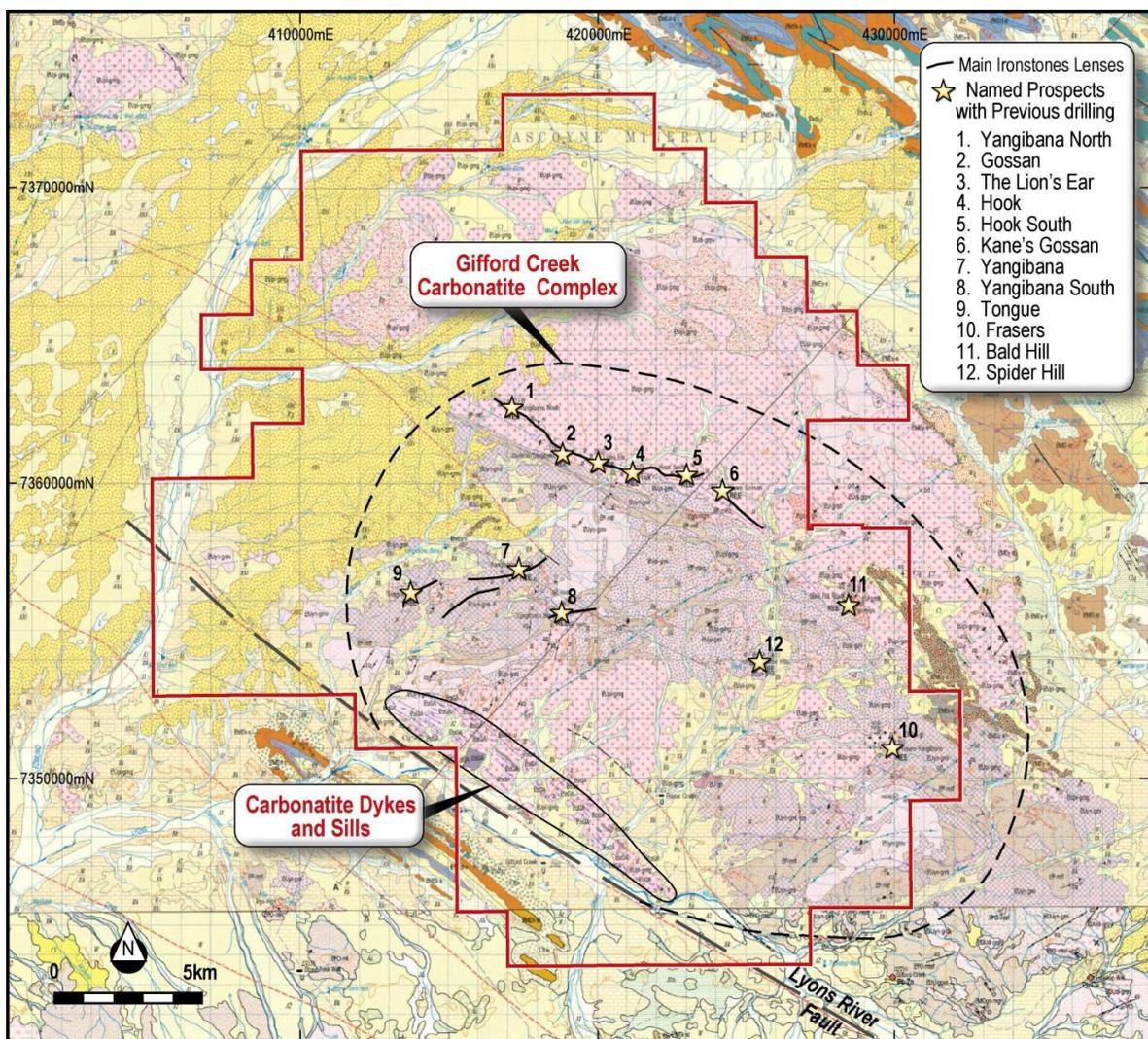


Figure 1 – Yangibana Project, Ironstone Prospects



Most drilling to date has intersected mineralisation within 100m of surface and there is no indication of any decrease in the quality of mineralisation with depth. This indicates that the new JORC resource could be increased with future extension drilling to a greater depth beyond 100m.

Of the twelve targets identified in the 1980s, Hastings has now undertaken drilling at Yangibana North, Gossan, Lion's Ear, Hook and Kane's Gossan prospects that occur along a discontinuously outcropping lens at least 12km length. In addition, Hastings has drilled at the Bald Hill (North and South) and Frasers prospects. JORC resources have been estimated for each of these drilled prospects.

The ironstones are considered by the Geological Survey of Western Australia to be coeval with the numerous carbonatite sills that occur within Hastings' tenements, or to be a part of the same magmatic/hydrothermal system.

### **Drilling, sampling and sub-sampling techniques**

The new JORC resources are based on the results from reverse circulation (RC) programmes carried out at Yangibana North in April 2014 (44 holes for 1,836m) and at seven new targets plus Yangibana North in the period August to October 2014 (122 holes for 6,500m).

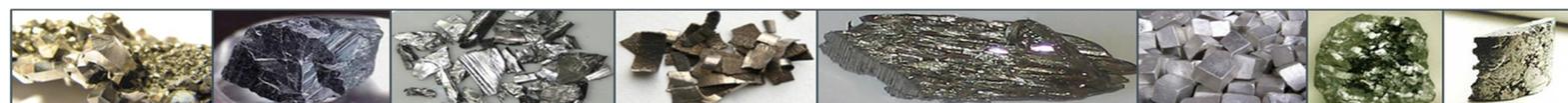
Nine diamond drill holes were drilled during the second programme with assays still awaited.

RC drilling provided rock chip samples from one-metre intervals from which a 2-4kg sample was collected for laboratory analysis for rare earths, rare metals, uranium and thorium.

Samples from each metre were collected in a cyclone and split using a 3 level riffle splitter. Field duplicates and reference standards were inserted at a rate of approximately 1 in 40.

### **Sample analysis method**

Genalysis (Perth) conducted the analysis work carried out on the RC samples. The laboratory technique FP6/MS was used for all samples and is appropriate for the style of mineralisation defined at the Yangibana Project. Fusion digestion technique FP6/digest was used to ensure the complete dissolution of the sample.



### **Classification of Mineral Resources**

The Mineral Resource has been classified by the Competent Person as either Indicated or Inferred based on the drilling spacing. The confidence in the interpretation of mineralisation at each prospect is excellent with surface exposure providing strike control and drill hole intersections indicating good correlation of the mineralised structure at depth.

A recently-flown, high quality topographic survey provides accurate elevations for hole collars.

Measurements of bulk density/specific gravity that are being carried out on the diamond core will confirm a figure for the mineralisation.

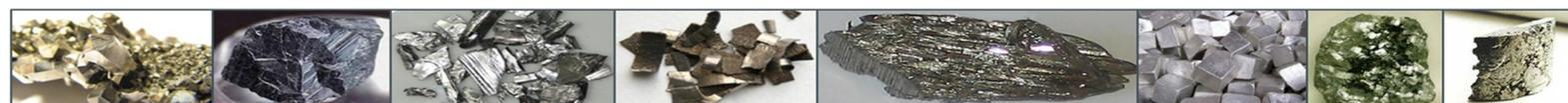
### **Estimation methodology**

The geological control to the rare earths mineralisation was established based on the interpretation of surface exposure and drill hole information. A three dimensional block model of each deposit was established by developing a wire-frame model based on the interpretations on each drilled section. This enabled the volume of mineralisation at each prospect to be established, and the tonnage.

Grade estimation for all the Indicated Resources was undertaken using Inverse Distance Squared (ID2) methodology, applied to the relevant block model. One Wireframe was used to sub-set and constrain the data points used in the interpolation and only individual grades from individual wireframes were used.

All of the Inferred Resources estimates were based on the mean grade of the various elements lying within a validated wire-framed solid.

The block model was constructed using a 5m X 5m x 2m block size, constrained by individual wireframes. One interpolation pass was made, with a 140m by 80m by 4m search orientated parallel to the azimuth and dip of the mineralised zone (no plunge component assumed) to ensure all portions of the wireframe were filled.



### **Cut-off grades**

The geological interpretation of the mineralisation at the Yangibana prospects is well defined. The ironstone host has generally clean contacts with the surrounding rocks and although halo mineralisation does occur it is of minor interest. Incorporating a lower cut-off grade of 5,000ppm (0.5%) TREO defines the host unit and this cut-off is reasonable to produce resources with potential economic viability. There are no high grade outliers and hence no upper cut-off grade has been applied.

The same cut-off was used consistently in the estimation of resources.

### **Mining and metallurgical methods and parameters**

Mining and metallurgical studies are currently under way to determine the optimum route for the potential development of the Yangibana Project.

The outcropping nature and shallow dip of the bulk of the current resources (Yangibana North and Bald Hill South) indicate that standard open pit mining methods will be applicable to these areas. Preliminary pit optimisation studies are being carried out on these two prospects. Large portions of the current resources at the other prospects would also likely be amenable to open pit extraction, but further drilling is required before optimisation can be considered.

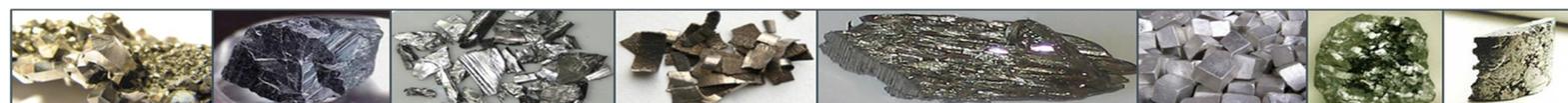
Preliminary metallurgical test work has commenced on samples from the Yangibana North prospect and initial results will be reported in the near future. It is expected that the monazite mineralisation will be amenable to beneficiation prior to hydrometallurgical processing and extraction of the target rare earths oxides.

\* **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).

**CREO** is the sum of the oxides of neodymium (Nd), europium (Eu), terbium (Tb), dysprosium (Dy), and yttrium (Y) that were classified by the US Department of Energy in 2011 to be in critical short supply in the foreseeable future.

**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 JORC compliant rare earths projects in Western Australia.
- The Hastings deposit contains JORC Indicated and Inferred Resources totalling 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>.
- The Yangibana deposit contains JORC Indicated and Inferred Resources totalling 6.79 million tonnes at 1.52% TREO, including 6,925ppm Nd<sub>2</sub>O<sub>3</sub>-Eq) (comprising 3.96 million tonnes at 1.59% TREO in Indicated Resources and 2.83 million tonnes at 1.43% TREO in Inferred Resources).
- 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 Yangibana deposits host significant amounts of the critical rare earths used in the high value, and growing permanent magnets sector.
- 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 critical rare earths created by expanding new technologies.

**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.*

