

## **JUNE 2015 QUARTERLY ACTIVITIES REPORT**

### **HIGHLIGHTS**

- **Pre-Feasibility Study advancing positively and on schedule and budget**
- **Major drilling programme commences to infill and expand 100%-held deposits at Bald Hill South, Fraser's and Yangibana West**
- **Initial results from Bald Hill South RC drilling extremely encouraging; large resource increase predicted**
- **Water sources identified in abundance and suitable for mining and minerals processing**
- **Processing test work continues to enhance potential of the Project**
- **First stage environmental fieldwork completed**

### **Introduction**

Hastings Rare Metals Limited (**ASX:HAS**) has continued work on its Pre-Feasibility Study (PFS) for the Yangibana Rare Earths Project in the Gascoyne Region of Western Australia. A major drilling programme commenced to test deposits within tenements held 100% by the Company, with encouraging early results from Bald Hill South and a newly discovered southern extension. Consultancy groups have progressed mining, processing and environmental elements of the PFS in line with schedules and budgets.

### **Drilling**

Reverse circulation (RC) drilling commenced at Bald Hill South (Hastings 100%), successfully extending the JORC resources for some 325m to the north over a shallow, flat-lying zone up to 300m wide (Figure 1). Assay results received to date confirm the tenor of the mineralisation both within the JORC resource area and the northern extension. Hole data, assay results and best intersections were released in the ASX announcement of 27 July 2015.

A new deposit some 700m to the south of Bald Hill South, also within ground held 100% by Hastings, was identified and drilled with results as released in the ASX announcement of 14 July 2015.

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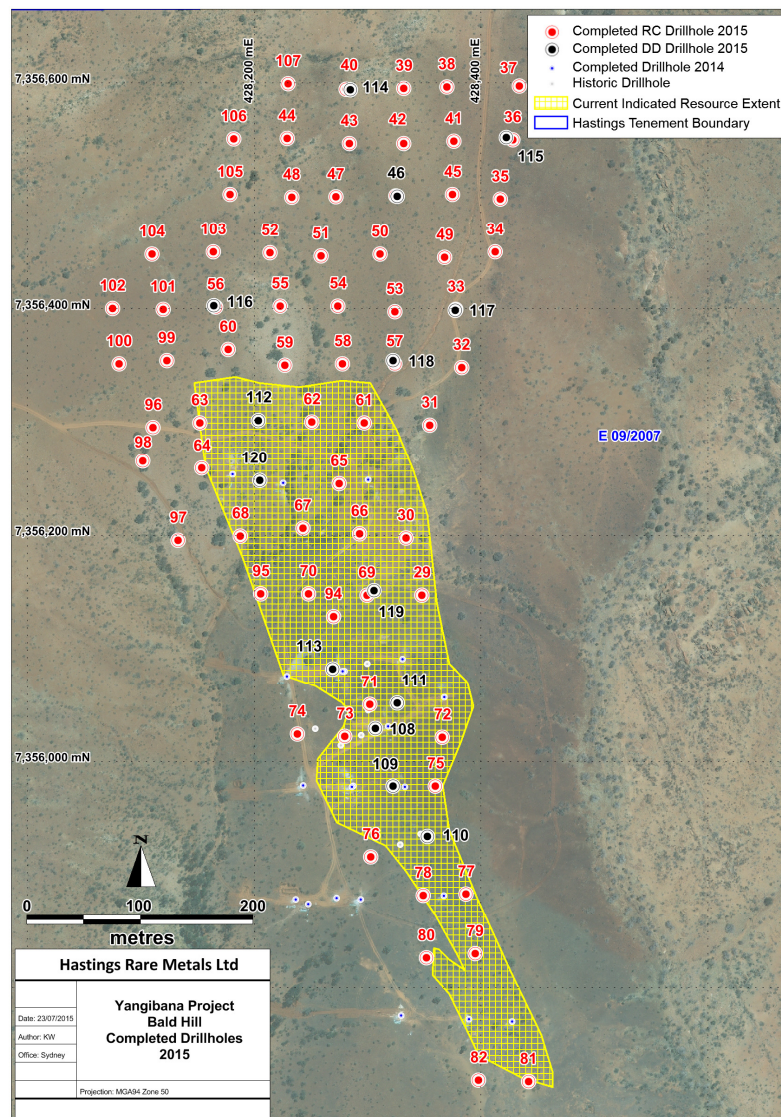
#### **Board**

Charles Lew (Chairman)  
Anthony Ho (Non-Exec Director)  
Malcolm Mason (Non-Exec Director)

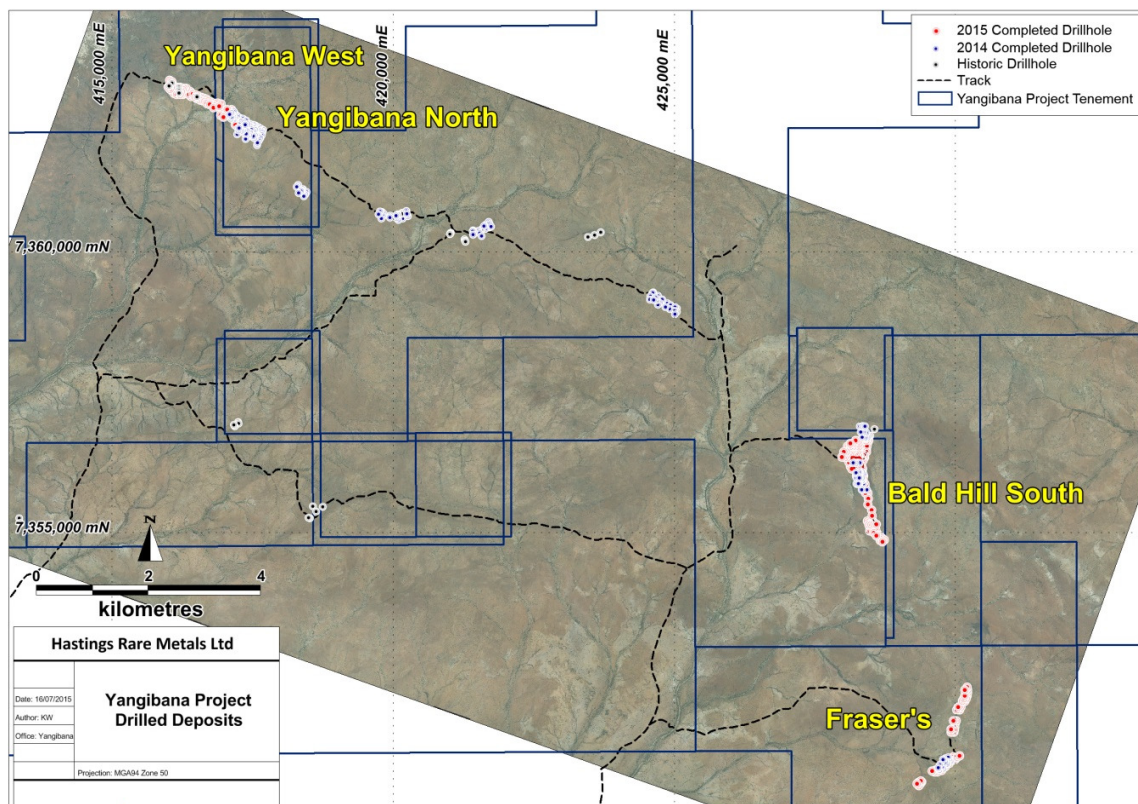
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Diamond drilling in the vicinity of the current JORC resources at Bald Hill South (Figure 1) has confirmed the interpretation of mineralisation in this more complex area. The hanging wall units intersected in this drilling are weathered saprolite and clay, and are softer material.

RC drilling was also undertaken at Yangibana West (Hastings 100%) and Fraser's (Hastings 100%) deposits (Figure 2) with assay results awaited.



**Figure 1 - Yangibana Project, Bald Hill South 2015 First Pass Drilling**



**Figure 2 – Yangibana Project – 2015 Drilling Programme**

## Water

During the period under review, consultant ATC Williams carried out a regional investigation of existing water bores, analysis of water samples from Hastings bore holes YGBW1 at Yangibana North and BHRC081 at Bald Hill South, and preliminary pump testing and collection of data to determine permeability and porosity of host rocks at the two sites. Results were reported in the ASX announcement of 23 July 2015.

Calculations based on reasonable assumptions indicate that either of the discovered aquifers could supply the water requirements of the proposed processing plant, probably for in excess of 15 years. Similar aquifers are likely to be found elsewhere within the Yangibana Project over a 15 km strike length.

Water resources are considered assured and are not a significant risk factor for the proposed mining operation.

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**Metallurgical Test Work**

Metallurgical test work continued with beneficiation tests at Kyspymet in Adelaide and hydrometallurgical tests at Core in Brisbane. Results continue to achieve positive results and an announcement will be made summarising this progress in the near future.

**Environmental Studies**

The Phase 1 Flora, Vegetation and Fauna Field Survey was completed by consultants Ecoscape Australia in May. No flora or fauna issues of particular interest were identified. A second field survey is planned for September.

**Potential effect of these activities on the Project**

Drilling results are being received progressively. Based on data received and reported to date, the Company has sufficient resources that will be defined on 100%-held ground for at least the first 3-4 years of a 1 million tonne per annum operation.

The intersection of softer weathered saprolitic host rock in the diamond drilling in the vicinity of the current JORC resources at Bald Hill South would be expected to reduce the mining costs associated with removal of overburden at this site.

The discovery of sufficient water resources within the Yangibana tenements to meet the proposed operating requirements is a huge success, reducing the expected expenditure required to establish a bore field.

Ongoing metallurgical successes are expected to lead to further reductions in capital and operating costs for the Project.

**Economic evaluation**

Hastings is currently concentrating its efforts on the recovery of four important rare earths – neodymium, praseodymium, dysprosium and europium. To portray the grade of the mineralisation Hastings has established neodymium-equivalent figures where:-

Nd<sub>2</sub>O<sub>3</sub> equivalent (Nd<sub>2</sub>O<sub>3</sub>-Eq) values are calculated based on the following rare earths prices:

These prices have been established by independent consultants Adamas Intelligence and are being used by Hastings in the evaluation of the project.

- Nd<sub>2</sub>O<sub>3</sub> - US\$85/kg
- Pr<sub>2</sub>O<sub>3</sub> – US\$95/kg
- Dy<sub>2</sub>O<sub>3</sub> - US\$550/kg and
- Eu<sub>2</sub>O<sub>3</sub> - US\$635/kg

Where  $\text{Nd}_2\text{O}_3\text{-Eq} =$

$$((\text{Nd}_2\text{O}_3\text{grade} + ((\text{Pr}_2\text{O}_3\text{grade} * (\text{Pr}_2\text{O}_3\text{price} / \text{Nd}_2\text{O}_3\text{price})) + (\text{Dy}_2\text{O}_3\text{grade} * (\text{Dy}_2\text{O}_3\text{price} / \text{Nd}_2\text{O}_3\text{price})) + (\text{Eu}_2\text{O}_3\text{grade} * (\text{Eu}_2\text{O}_3\text{price} / \text{Nd}_2\text{O}_3\text{price}))))$$

Such that  $\text{Nd}_2\text{O}_3 \text{ Eq} = \text{Nd}_2\text{O}_3 + (1.1176 \times \text{Pr}_2\text{O}_3) + (6.4706 \times \text{Dy}_2\text{O}_3) + (7.4706 \times \text{Eu}_2\text{O}_3)$

These commodity prices were updated from those used previously ( $\text{Nd}_2\text{O}_3$  at US\$59.5/kg;  $\text{Pr}_2\text{O}_3$  at US\$119.5/kg;  $\text{Dy}_2\text{O}_3$  at US\$340/kg; and  $\text{Eu}_2\text{O}_3$  at US\$725/kg). Positive changes are for neodymium (+43%) and dysprosium (+62%), with a decrease in praseodymium (-21%) and europium (-12%).

These changes affect the calculation of  $\text{Nd}_2\text{O}_3\text{-Eq}$  figures and the in-ground value of the mineralisation. Based on the updated prices, the JORC resources at Bald Hill South of 1.23 million tonnes at 1.22% TREO now contain 0.65%  $\text{Nd}_2\text{O}_3\text{-Eq}$  as compared to 0.77%  $\text{Nd}_2\text{O}_3\text{-Eq}$  as previously calculated. Because of the higher  $\text{Nd}_2\text{O}_3$  price, the value of the in-ground mineralisation has increased significantly from US\$456/tonne to US\$646/tonne (+42%).

### About Hastings Rare Metals

- Hastings Rare Metals is a leading Australian rare earths company, with two rare earths projects in Western Australia.
- The Yangibana deposit is at an advanced stage of evaluation and contains JORC Indicated and Inferred Resources totalling 6.79 million tonnes at 1.52% TREO, including 0.69%  $\text{Nd}_2\text{O}_3\text{-Eq}$  (comprising 3.96 million tonnes at 1.59% TREO Indicated Resources and 2.83 million tonnes at 1.43% TREO in Inferred Resources).
- The Brockman project contains JORC Indicated and Inferred Resources totalling 36.2 million tonnes at 0.21% TREO, including 0.18% HREO, plus 0.89%  $\text{ZrO}_2$  and 0.35%  $\text{Nb}_2\text{O}_5$ .
- 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 (HREO) (85%), such as dysprosium and yttrium which are substantially more valuable than the more common light rare earths (LREO).
- The company aims to capitalise on the strong demand for heavy rare earths created by expanding new technologies. It is currently validating the extensive historical work and undertaking further scoping study to confirm economics.

### For further information please contact:

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Guy Robertson, Company Secretary +61 2 8268 8689

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**Competent Persons' 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.

**TENEMENT SCHEDULE as at 30 June 2015 (All tenements are in Western Australia)**

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| <b>YANGIBANA PROJECT</b><br><br>Hastings Rare Metals Limited<br><br><div> <div>E09/2084</div> <div>100%</div> </div> <div> <div>E09/2086</div> <div>100%</div> </div> <div> <div>E09/2095</div> <div>100%</div> </div> <div> <div>P09/480-482</div> <div>100%</div> </div> <div> <div>MLA09/157</div> <div>100%</div> </div> <div> <div>ELA09/2129</div> <div>100%</div> </div><br>Gascoyne Metals Pty Limited (100% subsidiary)<br><br><div> <div>E09/1989</div> <div>100%</div> </div> <div> <div>E09/2007</div> <div>100%</div> </div> <div> <div>E09/1043</div> <div>70%</div> </div> <div> <div>E09/1049</div> <div>70%</div> </div> <div> <div>E09/1703-1706</div> <div>70%</div> </div> <div> <div>MLA09/159</div> <div>70%</div> </div> | <b>BROCKMAN PROJECT</b><br><br>Hastings Project Holdings Pty Limited (100% subsidiary)<br><br><div> <div>P09/1626-1635</div> <div>100%</div> </div> <div> <div>E09/4555</div> <div>100%</div> </div><br><b>YANGIBANA PROJECT (Cont.)</b><br><br>Karramindie Resources Pty Limited (100% subsidiary)<br><br><div> <div>E09/1700</div> <div>100%</div> </div> <div> <div>E09/1943-1944</div> <div>100%</div> </div> <div> <div>E09/2018</div> <div>100%</div> </div> <div> <div>P09/467</div> <div>100%</div> </div> <div> <div>MLA09/158</div> <div>100%</div> </div> <div> <div>MLA09/160</div> <div>100%</div> </div> |
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