

### **ASX Release**

31 January 2014

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#### **Issued Capital:**

241.75 million shares

ASX Symbol: HAR

# DECEMBER 2013 QUARTERLY ACTIVITIES REPORT

Haranga Resources Limited ("the Company") is pleased to report on its activities for December 2013 Quarter. Important progresses were made over the quarter on the development of the Company's flagship Selenge iron ore project ("the Project").

# **HIGHLIGHTS**

- ➤ The Company's 80% owned Mongolian subsidiary Haranga Huder LLC, which holds the Mineral Exploration License ("MEL") for the Project, was successfully awarded a Pre-Mining Agreement with the Mineral Resource Authority of Mongolia.
- Under this agreement the Company is allowed to construct a mine after completion and submittal of a Feasibility Study together with a Mine Design.
- The Company is in the final stage of scrutinising the scope of the pilot scale metallurgical test. An independent expert is hired to ensure a successful completion of the test.
- As part of the Project Feasibility Study, the pilot scale metallurgical test will be commenced in coming weeks after the samples are delivered in Western Australia.
- ➤ The Environmental Baseline Study of the Project has been successfully reviewed by the Ministry of Environment and Green Development ("MEGD") of Mongolia. Based on this, MEGD approved the Company further to complete a Detailed Environmental Impact Assessment. This is also the important step towards obtaining a Mining License.

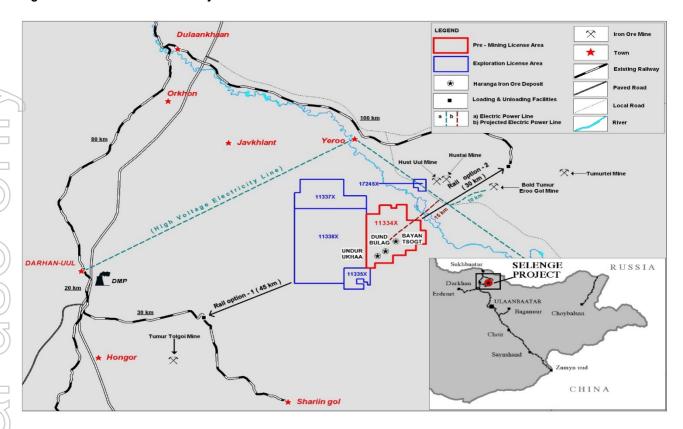
# **DEVELOPMENT ACTIVITIES**

The Company's flagship Selenge iron ore project is transitioning into its Development stage after the completion of the successful Exploration phase.

The project is ideally located in the heart of Mongolia's premier iron ore development region with excellent access to the main trans-Mongolian rail line and nearby rail spurs. The Company has signed an MOU with both the Mongolian Railway Authority and the Ministry for Transportation requesting up to 5Mtpa of rail capacity from 2015 onwards.



Figure 1: The Location of the Project



## **JORC Code Compliant Resource**

The Mineral Resource estimates for the Project (comprising the Dund Bulag, Bayantsogt and Undur Ukhaa deposits) were completed in May 2013 and have been compiled in accordance with the guidelines of the JORC Code (2004 edition)\*. Nearly all (99.7%) of the Selenge combined resource were delineated in the Measured or Indicated category. These are the categories sufficient to use as a basis for estimating Proven/Probable Ore Reserves and undertaking a Feasibility Study (refer to Table 3)\*\*.

## Metallurgical pilot test

A pilot scale metallurgical test was one of the priority works in this quarter.

ALS Technical Centre in W.A. was selected to carry out the pilot scale metallurgical test for the Company. An independent expert was assigned to work on this task as a Contractor to ensure that the test is completed successfully.

Samples were reviewed to represent the actual four main ore domains at Selenge iron ore deposits: (i) banded magnetite skarn (BMS about 40%-52%), (ii) magnetite skarn (25%-39%), (iii) magnetite garnet skarn (13%-18%), and (iv) garnet phyrrotite skarn (5%-8%). The sample collections for the test are shown below:

Table 1: Selected samples of Dundbulag deposit

		Ora damain	Proposed composite for pilot test						
Nº	Dundbulag deposit	Ore domain (%)	Fe %	Log results (%)	Samples (pc)	Total (m)	Total (kg)		
1	Banded magnetite skarn	40,0	13,8	39,6	28,0	28,5	227,6		
2	Magnetite skarn	39,0	16,0	36,7	27,0	26,4	202,8		
3	Magnetite garnet skarn	13,0	19,0	23,8	17	17,1	138,7		
4	Garnet phyrrotite skarn	8,0							
	TOTAL	100,0	15,8	100,0	72,0	72,0	569,1		



Table 2: Selected samples of Bayantsogt deposit

		Ore		Propose	d composite for pil	ot test	
Nº	Dundbulag deposit	domain (%)	Fe %	Log results (%)	Samples (pc)	Total (m)	Total (kg)
1	Banded magnetite skarn	52,0	24,4	54,5	32,0	32,5	280,1
2	Magnetite skarn	25,0	23,0	27,3	16,0	16,3	126,2
3	Magnetite garnet, phyrrotite skarn	18,0	26,5	18,1	11,0	10,8	96,9
4	Garnet phyrrotite skarn	5,0					
	TOTAL	100,0	24,4	100,0	59,0	59,6	503,2

These samples will be analyzed first at laboratory scale to define ore beneficiation characteristics of Bayantsogt and Dundbulag deposits as well as to determine and establish a design flowsheet to complete metallurgical test further at pilot scale.

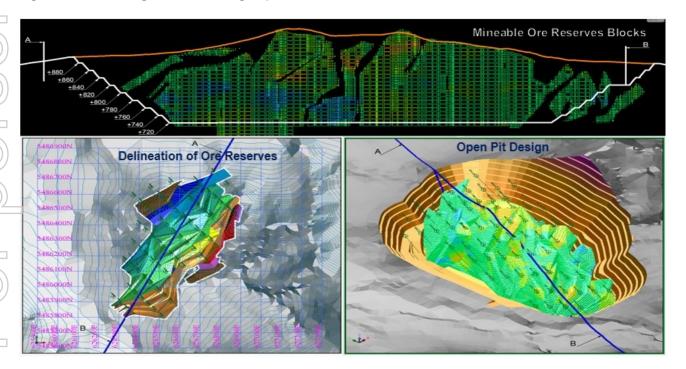
Actual throughput, energy and water consumption, nominal and design flowsheets for the potential processing plant will be estimated as a result of this metallurgical test.

#### **Pre-Mining Agreement**

The Company's 80% owned Mongolian subsidiary Haranga Huder LLC, which holds the MEL, signed Pre-Mining Agreement ("PMA") with The Mineral Resources Authority ("MRAM") of Mongolia on 20 December 2013. This PMA covers the entire license area (MEL#11334X, shown as in figure 1) where the JORC resource was estimated.

Under this PMA, the Company is allowed to build a mine and processing plant after completion and submittal of the Feasibility Study together with a Mine Design. An open pit preliminary design work is currently underway. As an example, Dundbulag deposit's mineable ore reserve blocks, delineation of ore reserve, open pit design are shown by figure 2.

Figure 2: Mine Design of Dundbulag deposit



#### **Environmental Impact Assessment**

As a part of the Mining License ("ML") application process, the Company has successfully passed the review of the Environmental Baseline Study of the Project by the Department of Environment and Natural Resources of MEGD of Mongolia. Following this, it was approved for the Company to proceed and conduct the Detailed Environmental Impact Assessment.



#### Other Activities

It is the Company's intention to update an independent techno-economic (TE) assessment of the Project based on the final results of the pilot scale metallurgical test work. This TE assessment will then use a valuation model OREX, which is the next stage of ORVAL. (Table 4 shows the summary result of ORVAL study)\*\*\*.

In addition, the Company is working to assess and study in depth a smaller scale (0.5Mtpa) production capacity scenario to achieve an earlier production and positive cash flow. The results of the previous ORVAL study of this scenario demonstrated an exceptionally high IRR of 148.5% generating the average annual revenue of AU\$65.1M and NPV of AU\$40.2M during the initial 5 years of operation. The Company is now working towards improving the economics of this scenario based on additional adjusted input data including but not limited to; Initial mine blocks that are being optimized by the Whittle model and a grid line for power supply instead of diesel electricity generation, etc.

# Erdene Tsengelbayar Managing Director Haranga Resources Limited

\* The technical information contained in this announcement in relation to the JORC Code (2004) Compliant Resource for the Selenge Project Deposits has been reviewed by Mr Peter Ball of DataGeo Ltd, who is a member of the Australasian Institute of Mining and Metallurgy. Mr Ball has sufficient experience relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves'. Mr Ball consents to the inclusion in this report of the matters based on his information, and information presented to him, in the form and context in which it appears. Refer to the HAR ASX announcement dated 7 May 2013 for further details.

\*\* Table 3: JORC Resource Estimates Split by Deposit (Cutoff = 12.5% Fe)

	Meas	ured	Indic	ated	Infe	rred	TO	TAL
Deposit	Mt	Fe Grade	Mt	Fe Grade	Mt	Fe Grade	Mt	Fe Grade
Dund Bulag	96.4	16.6	103.5	16.1			199.9	16.4
Bayantsogt	20.7	23.0	15.0	22.8	0.55	16.6	36.3	22.8
Undur Ukhaa	9.3	15.8	8.9	15.1			18.2	15.4
TOTAL	126.4	17.6	127.4	16.8	0.55	16.7	254.4	17.2

<sup>\*</sup> Table 4: The Summary Results from Independent Techno-Economic Assessment

(12.5% Discount Rate, US\$131.5/t Price for concentrate)

JORC Compliant Resource	Tonnage (Million tons)	Mine Life (LOM, years)	Annual Concentrate Production (Mtpa)	CAPEX (AU\$MIn)	Cash Cost (AU\$ per ton conc.)	NPV (AU\$MIn)	IRR (%, After tax)
Indicated and Measured	253.8	16	3.0	562.4	64.0	457.8	47.6

<sup>\*\*\*</sup> The information in this release is based on the Options Study Report prepared by GHD. This report was prepared on the basis of information provided by Mr. Kerry Griffin, the former Technical Director of Haranga Resources Limited. GHD consented to the inclusion in this release of the matters based on the Option Study Report and information presented to it, in the context in which it appears. Mr. Kerry Griffin consented to the inclusion in this release of the matters based on his information, in the context in which it appears.

The information in this release, which relates to Mineral Resources and exploration results was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.



# Appendix 1 – Interests in mining tenements held

# Tenement table

Project	Location	Tenement	Interest (%) at beginning of quarter	Interest (%) at end of quarter	Acquired during the quarter	Disposed of during the quarter
Selenge	Mongolia	11334X 11335X 17245X 11337X 11338X	80	80	-	-
Selenge	Mongolia	11336X	100	-	-	100
Khundlun	Mongolia	13867X	100	-	-	100

# **Summary of Expenditure Incurred per Project**

Project	Quarter Cash Spe		
	\$A'000		
Selenge	330		
Total	330		