

# **ASX Release**

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HARANGA RESOURCES LIMITED ACN 141 128 841

Level 1 33 Richardson Street West Perth WA Australia

Tel: +61 8 9200 4415 Fax: +61 8 9200 4469

Contact:

Dr Robert Wrixon Managing Director

E-mail: admin@haranga.com

### Directors:

Matthew Wood Robert Wrixon Erdene Tsengelbayar Kerry Griffin Timothy Flavel Bat-Ochir Sukhbaatar Marshall Cooper Daniel Crennan

Issued Capital: 241.75 million shares

ASX Symbol: HAR

# 675% Increase in Resources at the Selenge Iron Ore Project

- A significantly increased JORC Code compliant resource has been defined covering three clustered deposits within the Company's Selenge iron ore project area in Mongolia.
- The new total resource is 254Mt of iron ore at an average in situ grade of 17.2% Fe (for 44Mt of contained iron metal) based on a 12.5% Fe cutoff grade, of which 99.8% is in the Measured and Indicated categories.

JORC Code (2004) Resource Summary for Selenge Project
(Cutoff - 12.5% Ee)

(Cuton = 12.5% Fe)												
	Measured/	Indicated	Infe	rred	TOTAL							
Deposit	Mt	Fe Grade	Mt	Fe Grade	Mt	Fe Grade						
Dund Bulag	199.9	16.4			199.9	16.4						
Bayantsogt	35.7	22.9	0.55	16.7	36.3	22.8						
Undur Ukhaa	18.2	15.4			18.2	15.4						
TOTAL	253.8	17.2	0.55	16.7	254.4	17.2						

- It is expected that further drilling at Selenge will expand the Dund Bulag and Undur Ukhaa resources and confirm further iron targets within the project area.
- Initial Davis Tube Recovery (DTR) results indicate that a high quality 66% Fe concentrate is attainable from Selenge grades.

# Summary of all 2012/2013 DTR\*\* Results: Average Concentrate Quality (75µm grind, 10% yield cutoff)

	Average	Fe	SiO2	Al2O3 S		Р
Deposit	Mass Yield	(%)	(%)	(%)	(%)	(%)
Dund Bulag	16.80	66.58	3.76	0.92	0.16	0.003
Bayantsogt	26.02	66.11	3.16	0.93	1.10	0.018
Undur Ukhaa	15.17	66.49	4.37	0.91	0.05	0.003

- Progressive grind tests are underway to determine optimal metal recovery conditions and potentially further enhance the results of this initial baseline DTR study.
- The Mining Licence application process is also underway, based on the updated resource and metallurgical test results.
- Selenge is ideally located, with two nearby rail spur options and just 15km from the 5Mtpa Eruu Gol mine, Mongolia's largest magnetite concentrate rail export operation.



## The Selenge Iron Ore Project

The Company's flagship Selenge iron ore project is 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.

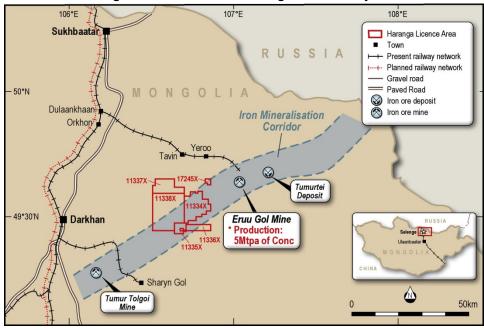


Figure 1: Location of the Selenge Iron Ore Project

The Company's **Bayantsogt, Dund Bulag and Undur Ukhaa iron ore deposits** lie within 3km of each other and are associated with large magnetite skarn hills with wide mineralised lodes from surface. All are located within the structural corridor that contains the major iron ore deposits in the region. The nearby Eruu Gol mine exported approximately five million tonnes of magnetite concentrate in 2012, shipping the product to China via dedicated rail spur to the main trans-Mongolian rail line. (The 300Mt **Eruu Gol deposit was valued at US\$2Bn** based on a 2009 investment by the China Investment Corporation). Drilling by the Company in 2011 and 2012 defined a combined JORC Code compliant resource of 254Mt at 17.2% Fe for these three deposits at Selenge and drilled additional iron mineralisation at the nearby Huiten Gol Prospect. An additional **Exploration Target\* of 50-100Mt** exists on these four drilled targets.

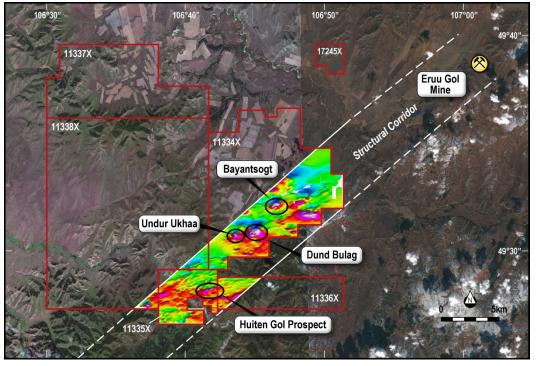


Figure 2: Location of the Iron Ore Deposits at Selenge Project (within the Iron Mineralisation Corridor)



### JORC Code Compliant Resource for Selenge

The Mineral Resource estimates for the Selenge Project (comprising the Dund Bulag, Bayantsogt and Undur Ukhaa deposits) have been compiled in accordance with the guidelines of the JORC Code (2004 edition). 99.8% of the Selenge combined resource is in either 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.

	Meas	ured	Indic	ated	Infe	rred	TOTAL		
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	

#### Table 1: Selenge Resource Estimates Split by Deposit (Cutoff = 12.5% Fe)

#### Methodology:

All drilling at the Selenge Project was completed using diamond core methods. The drill core was geologically logged in detail and analysed in the field using Olympus hand held XRF machines. Mineralised intervals were identified, halved and sampled in one meter (2011) and two meter (2012) intervals.

Drillholes were downhole surveyed using the non-magnetic Maxibore system. Collar positions were surveyed using a total station instrument giving accuracy of <20mm.

Standards and blanks were inserted into the sampling stream in the field and made up approximately 8% of the total sample number. Results show a slight under-reporting of %Fe but it is not considered material for the purposes of resource estimation. Analysis was undertaken at ALS laboratories in Ulaanbaatar. Analysis methods were ICP-MS in 2011 and XRF in 2012.

All drill data was collated by Geobase in Perth and entered into their AzevaX database system. From here it is exported in MS-Access format and attached to Gemcom's Surpac Geological Modelling system. Wireframes representing all geological units were created and mineralised wireframes based around geology and the natural break in Fe mineralisation at approximately 10% Fe.

Three separate block models were created for each of the deposits. All were rotated to 050 degrees which is the strike of mineralisation. Block sizes for each deposit are presented in the table below:

Table 2. Seletige Resource Model - Block Sizes by Deposit												
	North	East	Elevation									
Dund Bulag:												
Block Size	50	25	5									
Sub Block Size	6.25	3.125	1.25									
Bayantsogt:												
Block Size	25	12.5	5									
Sub Block Size	6.25	3.125	1.25									
Undur Ukhaa:												
Block Size	25	12.5	5									
Sub Block Size	6.25	3.125	1.25									

#### Table 2: Selenge Resource Model - Block Sizes by Deposit

The block models were coded into separate lodes and by the dyke wireframes to allow a more accurate tonnage estimate. All assays were composited into 2m composites. Intervals of less than 1.5m (75% of composite length) were ignored. Inverse Distance Squared was used to interpolate grade into the blocks



coded ore within the models. A search ellipse of 160m by 160m with an isotropy of 1.5 was applied. Minimum samples for each block was set at 2 with the maximum set at 15.

A total of 460 specific gravity samples were taken during drilling. SG and %Fe for these samples were measured at ALS laboratories in Ulaanbaatar. A strong relationship between SG and Fe grade exists with an  $R^2$  value of 0.97. This relationship was utilised to assign SG into the block model. The grade ranges and assigned SG are presented in the table below.

Fe% from:	Fe% to:	SG
0	10	2.9
10	20	3.3
20	30	3.4
30	40	3.7
40	50	4.1
50	100	4.5

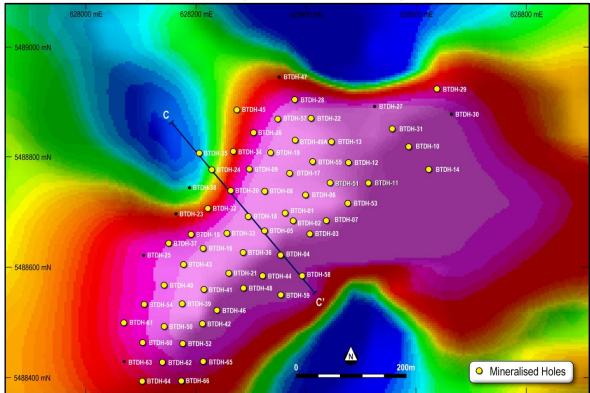
#### Table 3: Selenge Resource Model - Assigned Specific Gravity Values by Fe Grade Range

#### Classification:

Resource classification was assigned using confidence levels of the geological interpretation and grade continuity combined with geostatistical techniques. Blocks with an average distance of contributing composites of less than 40m were assigned to Measured. Blocks with an average distance of contributing composites of greater than 40m were assigned to Indicated. Blocks with only one drill hole were assigned to Inferred.

#### Bayantsogt Deposit Information

The updated mineral resource estimate at the Bayantsogt Deposit is based upon the results of 65 diamond core drill holes for approximately 18,000 metres that were completed in 2011 and 2012, see Figure 3.

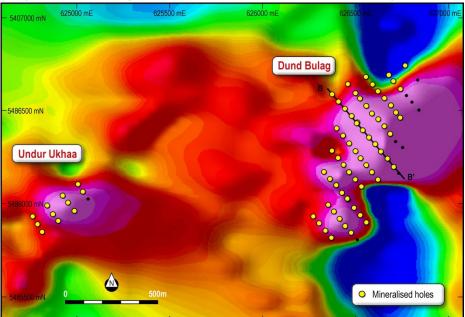


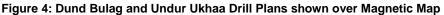
#### Figure 3: Bayantsogt Drill Plan shown over Magnetic Map



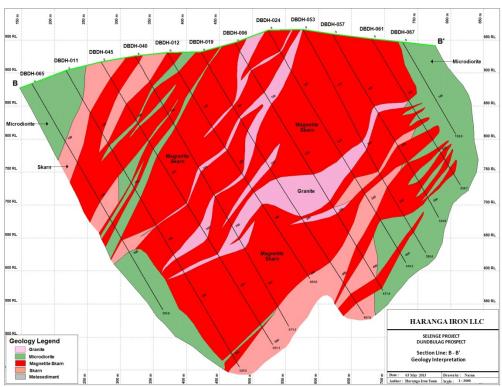
### Dund Bulag and Undur Ukhaa Deposit Information

The maiden mineral resource estimate at the Dund Bulag Deposit is based upon the results of 70 diamond core drill holes for approximately 23,000 metres that were completed in 2011 and 2012. The maiden mineral resource estimate at the nearby Undur Ukhaa Deposit is based upon the results of 12 diamond core drill holes for approximately 2,500 metres that were completed in 2012. See Figure 4 for drill hole locations.





The Dund Bulag deposit is the largest of the three deposits, contributing approximately 78% of the total combined resource at Selenge. As can be observed in the sample cross section in Figure 5, wide lodes from surface should ensure very low strip ratios to allow lower mining costs. The main lodes of magnetite skarn at Dund Bulag are between 40 to 150m in width.



#### Figure 5: Simplified Dund Bulag Interpreted Cross Section B-B'



#### **Metallurgical Test Work Program and Results**

At the commencement of the metallurgical test work program preliminary DTR tests were conducted by ALS Ammtec in Perth along with a detailed suite of mineralogical tests, including QEMSCAN, to ascertain basic properties of the minerals in the ore such as mineralogy, particle and grain size distribution, mineral associations and liberation characteristics.

The preliminary metallurgical test work suggested a coarse grind of (80% passing) 125 to 75 micron (µm) for optimal mass yields and concentrate properties. 100% passing 75µm was used in order to generate a conservative and consistent baseline study. The full suite of DTR testing at 75µm grind (i.e. 100% passing 75µm) was conducted by ALS Alex Stewart Laboratories in Ulaanbaatar, Mongolia.

The DTR tests were conducted on 5m and 6m composite samples of the mineralised core at each of the three deposit/prospects. In total, 3,264 samples, each comprising either 5m or 6m composites from the mineralised zones, were submitted for DTR analysis. The sample distribution by location was: Dund Bulag: 2,171 samples, Bayantsogt: 856 samples, Undur Ukhaa: 237 samples.

#### Table 4: Dund Bulag Deposit – Summary of DTR Results\*\* (100% passing 75µm)

	Average	Average		Concentrate Quality - Average Assay Results											
Mass Yield	Mass	Raw Assay	Al <sub>2</sub> O <sub>3</sub>	CaO	Cr <sub>2</sub> O <sub>3</sub>	Fe	K₂O	MgO	MnO	Na₂O	Р	TiO₂	SiO₂	s	Zn
Cut Off	Yield (%)	Fe (%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
6%	14.15	17.44	0.99	1.12	0.05	66.22	0.06	0.37	0.00	0.37	0.00	0.11	4.00	0.15	0.01
8%	15.37	18.09	0.97	1.06	0.05	66.36	0.06	0.37	0.00	0.37	0.00	0.11	3.90	0.15	0.01
10%	16.80	18.83	0.92	1.00	0.05	66.58	0.06	0.35	0.00	0.36	0.00	0.10	3.76	0.16	0.01

#### Table 5: Bayantsogt Deposit – Summary of DTR Results\*\* (100% passing 75µm)

	Average	Average		Concentrate Quality - Average Assay Results											
Mass Yield	Mass	Raw Assay	Al₂O₃	CaO	Cr <sub>2</sub> O <sub>3</sub>	Fe	K₂O	MgO	MnO	Na₂O	Р	TiO₂	SiO₂	S	Zn
Cut Off	Yield (%)	Fe (%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
6%	21.88	26.00	0.97	1.41	0.02	65.68	0.08	0.41	0.05	0.10	0.02	0.33	3.46	1.10	0.01
8%	24.25	27.40	0.94	1.36	0.02	65.97	0.08	0.39	0.05	0.10	0.02	0.32	3.27	1.10	0.01
10%	26.02	28.44	0.93	1.32	0.02	66.11	0.08	0.38	0.05	0.10	0.02	0.32	3.16	1.10	0.01

#### Table 6: Undur Ukhaa – Summary of DTR Results\*\* (100% passing 75µm)

	Average	Average		Concentrate Quality - Average Assay Results											
Mass Yield	Mass	Raw Assay	Al <sub>2</sub> O <sub>3</sub>	CaO	Cr₂O₃	Fe	K₂O	MgO	MnO	Na₂O	Р	TiO₂	SiO2	S	Zn
Cut Off	Yield (%)	Fe (%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
6%	12.10	16.74	0.99	1.36	0.05	65.71	0.06	0.44	0.00	0.11	0.00	0.10	5.01	0.05	0.01
8%	13.80	17.53	0.94	1.22	0.05	66.19	0.06	0.39	0.00	0.11	0.00	0.10	4.65	0.04	0.01
10%	15.17	18.56	0.91	1.16	0.05	66.49	0.06	0.36	0.00	0.11	0.00	0.09	4.37	0.05	0.01

The results indicate that the banded magnetite found at Selenge can achieve a high quality concentrate despite the lower in situ ore grades. The test work at all three Selenge locations produced a remarkably **consistent magnetite concentrate with an iron grade that averaged around 66% Fe**. Contaminant levels are very low, the one exception being the sulphur content in the Bayantsogt concentrate. 1% sulphur will typically result in an approximately 5% price penalty on magnetite concentrates in the domestic Chinese market, so this product remains highly saleable, but the sulphur content will be lowered considerably when blended with the other, lower sulphur, deposits nearby.

The Company is now undertaking further progressive grind tests to optimise the metal recoveries achieved. Once the grind characteristics are optimised, it is intended to generate a yield based resource estimate for use in preliminary scoping studies and a full feasibility study.



#### Selenge Project Summary

The Company has completed approximately 47,900m of diamond drilling at the Selenge Project. Three separate but clustered deposits have been defined for a **combined total resource of 254Mt at an average in situ grade of 17.2% Fe**, already one of Mongolia's largest iron ore Mineral Resources, with significant exploration upside. Initial DTR testing indicates that the Selenge ore can achieve a **high quality 66% Fe concentrate**. A fourth prospect, Huiten Gol, has also been drill tested and found to contain significant magnetite intersections from surface. An estimated **additional Exploration Target\* of 50-100Mt** exists on these four drilled targets alone. There are a number of other promising magnetic anomalies, some containing visible magnetite skarn mineralisation at surface, yet to be drill tested at Selenge.

Iron ore prices in China remain strong and **inland domestic magnetite concentrate continues to be priced at a significant premium to the seaborne import iron ore marker price** (for 62% Fe hematite ore). The difference in price is due to grade differential, lower impurities, higher value-in-use, high transport costs for seaborne ore attempting to access the inland regions and the lack of availability of this high quality product in inland China as domestic Chinese magnetite production suffers from declining grade and output.

In August 2012, the Company signed an MOU with both the Mongolian Railway Authority and the Ministry for Transportation requesting **up to 5Mtpa of rail** capacity from 2015 onwards.

Initial test work suggests that the Selenge mineralisation can achieve a premium magnetite concentrate and it is the Company's belief that the Mineral Resource at Selenge will support a wet magnetic concentrator with a standalone infrastructure solution to deliver around 4Mtpa of magnetite concentrate onto the nearby rail spurs for domestic and export consumption. Two other wet magnetic concentrators are currently planned for the Selenge region, one at the nearby Eruu Gol mine. Nearby infrastructure and an anticipated low average strip ratio, particularly at Dund Bulag, should greatly assist the project. An updated techno-economic assessment is planned in order to confirm project economics. The Company is in the process applying for a Mining Licence and then progressing to full feasibility study. Further drilling is planned in 2013 in order to a) fulfil various feasibility study requirements, b) extend the known resources and c) test some of the remaining undrilled iron ore targets within the project area.

### Dr Robert Wrixon Managing Director Haranga Resources Limited

\* Exploration Targets are conceptual in nature and should not be construed as indicating the existence of a JORC Code compliant mineral resource. There is insufficient information to establish whether further exploration will result in the determination of a mineral resource within the meaning of the JORC Code.

\*\* Davis Tube Recovery (DTR) tests give theoretical yield results which need to be verified by pilot plant scale testing using bulk samples, the results of which may differ from the results presented here.

The information in this report that relates to Exploration Results and Mineral Resource Estimation is based on information compiled by Mr Kerry Griffin, who is a Member of the Australian Institute of Geoscientists. Mr Griffin 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Griffin is the Technical Director of Haranga Resources Limited and 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.

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 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 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.