

## ASX Release

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### Issued Capital:

241.75 million shares

ASX Symbol: HAR

# JUNE 2013 QUARTERLY ACTIVITIES REPORT

## Highlights

- The Company defined a significantly increased JORC Code compliant resource covering three clustered deposits within the Company's flagship 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.
- The Selenge project now holds the largest internationally recognized JORC compliant Iron Ore Resource in Mongolia.
- The Selenge project is now transitioning into its Development stage after the completion of the successful Exploration phase.
- The Mining License application process is nearing completion. The Company expects that it will be granted a mining license in the latter half of 2013.
- The hydrogeological study will commence immediately after obtaining the relevant permit from the Environmental and Green Development Ministry of Mongolia.
- The Drilling programme for 2013 is currently being optimized. In addition to testing a number of new targets, the programme will also focus on hydrogeological and geotechnical drilling over the known resource areas.
- A Scoping Study for an early start up small scale operation has commenced.
- A tender process to select a suitable engineering group to undertake the Full Bankable Feasibility Study for the development of the Selenge Project is underway.
- The Company has commenced initial discussions with a number of potential off take partners.

## EXPLORATION ACTIVITY

### 1. Selenge Project (Haranga Resources: 80%)

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 combined 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 cut-off grade, of which 99.7% is in the Measured and Indicated categories.

The Company has completed approximately 47,900m of diamond drilling at the Selenge Project during 2011 and 2012 exploration seasons. As a result of this extensive exploration work the Company was able to delineate this new Resource that is now the largest internationally recognized JORC compliant Iron Ore Resource in Mongolia with significant exploration upside.

#### **JORC Code Compliant Resource Estimate**

The Mineral Resource estimates for the Selenge 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 are 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.

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

Deposit	Measured		Indicated		Inferred		TOTAL	
	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
<b>TOTAL</b>	<b>126.4</b>	<b>17.6</b>	<b>127.4</b>	<b>16.8</b>	<b>0.55</b>	<b>16.7</b>	<b>254.4</b>	<b>17.2</b>

#### **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.

Drill holes 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: Selenge Resource Model - Block Sizes by Deposit**

	North	East	Elevation
<b>Dund Bulag:</b>			
Block Size	50	25	5
Sub Block Size	6.25	3.125	1.25
<b>Bayantsogt:</b>			
Block Size	25	12.5	5
Sub Block Size	6.25	3.125	1.25
<b>Undur Ukhaa:</b>			
Block Size	25	12.5	5
Sub Block Size	6.25	3.125	1.25

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.

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

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

### **Classification**

Resource classification was assigned using confidence levels of the geological interpretation and grade continuity combined with geo-statistical 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.

## **2. Further Exploration and Extension Drilling Targets**

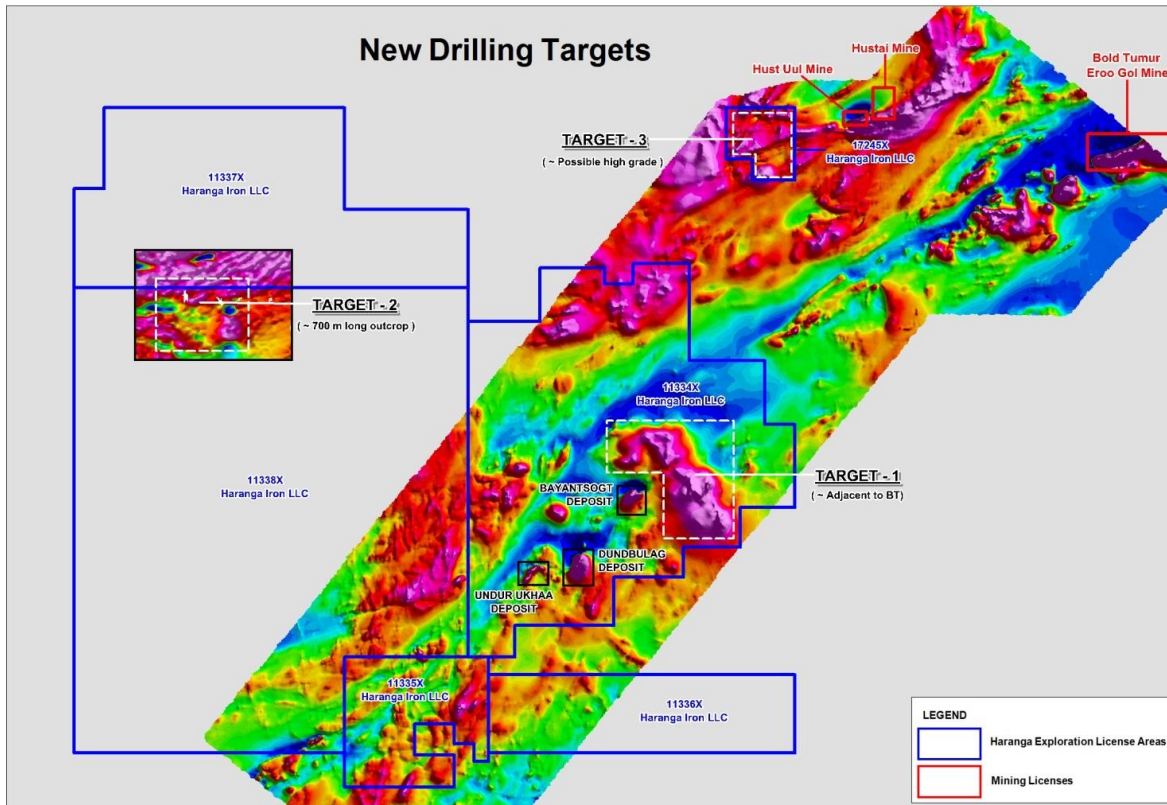
### **Exploration Targets**

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 a defined structural corridor that contains the major iron ore deposits in the region. There are a number of other promising magnetic anomalies, some containing visible magnetite skarn mineralisation at surface, yet to be drill tested at Selenge. An estimated additional **Exploration Target\* of 50-100Mt** exists on these new drilling targets.

- **Target 1** is associated with the Bayantsogt magnetite skarn hills and lies within the structural corridor that contains the major iron ore deposits in the region. In addition, this target is located on exploration license #11334X where the JORC Resources are delineated.
- **Target 2** is an outcrop that extends to 700m at the ground surface and suggests significant mineralisation. This drilling target is located within the exploration license #11338X licenses #11338X and #11337X.

- **Target 3** neighbors the existing producing mine of Hust Uul and has the potential for higher Fe grade ore. This target is located within the exploration license #17245X.

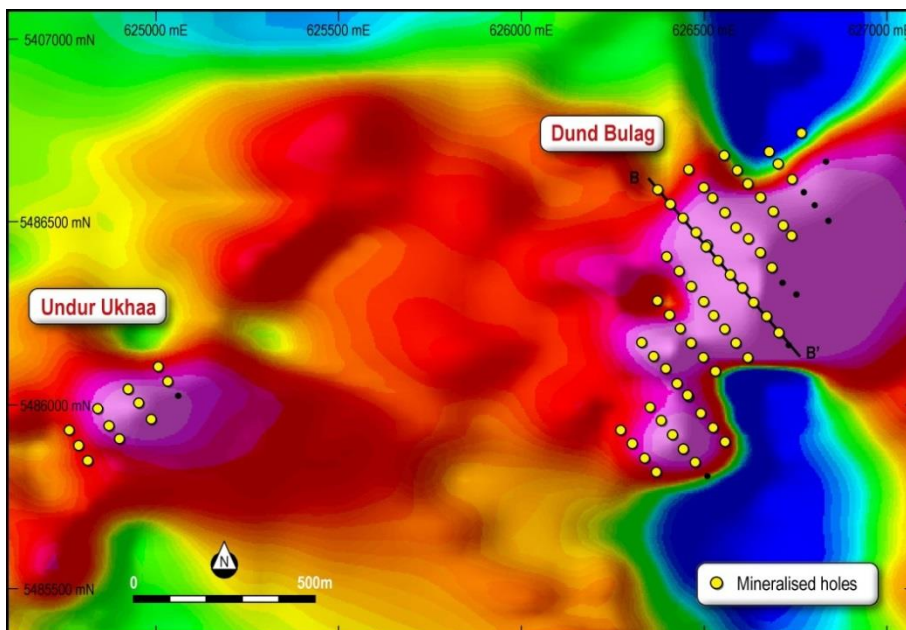
**Figure 1: Location of Additional Drilling Targets at Selenge Project**



**Extension or In-Fill Line Targets**

The maiden mineral resource estimate at the **Dund Bulag Deposit** is based upon the results of 70 diamond core drill holes for approximately 24,600 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 2,800 metres that were completed in 2012. See Figure 3 for drill-hole locations.

**Figure 2: Dund Bulag and Undur Ukhaa Drill Plans shown over Magnetic Map**



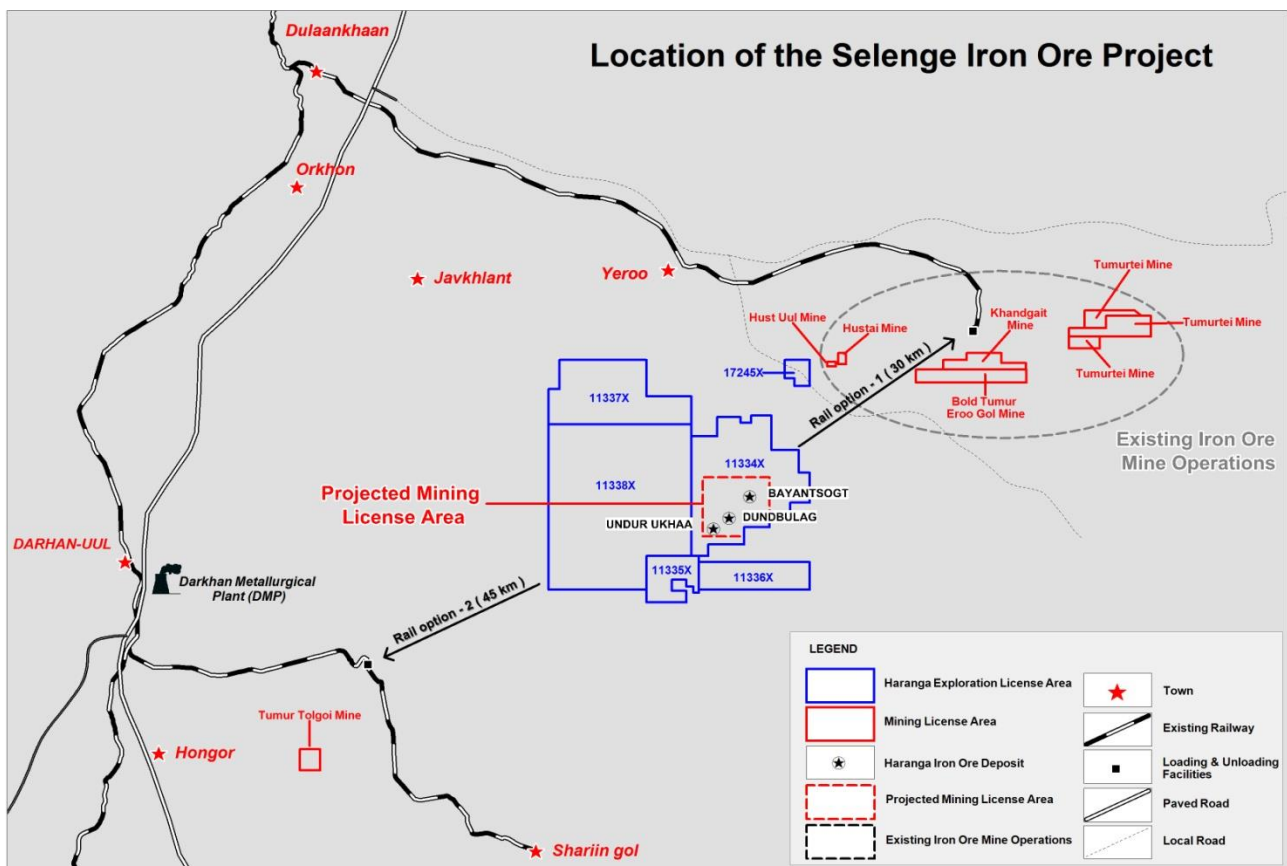
## DEVELOPMENT ACTIVITIES

The Company's Selenge 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 nearby Eruu Gol mine, Mongolia's largest magnetite concentrate rail export operation, exported approximately 4 million tonnes of dry magnetite concentrate in 2012, shipping the product via a newly constructed 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). There are two new wet magnetic concentrators that are currently planned for the Selenge region.

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.

**Figure 3: Location of the Selenge Iron Ore Project**



### Metallurgical and Process Design Study

As part of the feasibility study, the Company has commenced a metallurgical and process design study using independent technical experts with specific experience in beneficiating low grade material to produce +65% Fe concentrate.

### Previous Metallurgical Test Work Program and Results

Initial Davis Tube Recovery (DTR) results indicate that a high quality 66% Fe concentrate is attainable from Selenge grades.

**Table 4: Summary of all 2012/2013 DTR Results:**

**Average Concentrate Quality - (75µm grind, 10% yield cutoff)**

Deposit	Average Mass Yield	Fe (%)	SiO <sub>2</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	S (%)	P (%)
Dund Bulag	16.80	<b>66.58</b>	3.76	0.92	0.16	0.003
Bayantsogt	26.02	<b>66.11</b>	3.16	0.93	1.10	0.018
Undur Ukhaa	15.17	<b>66.49</b>	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.

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

Mass Yield Cut Off	Average Mass Yield (%)	Average Raw Assay Fe (%)	Concentrate Quality - Average Assay Results												
			Al <sub>2</sub> O <sub>3</sub> (%)	CaO (%)	Cr <sub>2</sub> O <sub>3</sub> (%)	Fe (%)	K <sub>2</sub> O (%)	MgO (%)	MnO (%)	Na <sub>2</sub> O (%)	P (%)	TiO <sub>2</sub> (%)	SiO <sub>2</sub> (%)	S (%)	Zn (%)
6%	14.15	17.44	0.99	1.12	0.05	<b>66.22</b>	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	<b>66.36</b>	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	<b>66.58</b>	0.06	0.35	0.00	0.36	0.00	0.10	3.76	0.16	0.01

**Table 6: Bayantsogt Deposit – Summary of DTR Results\*\* (100% passing 75µm)**

Mass Yield Cut Off	Average Mass Yield (%)	Average Raw Assay Fe (%)	Concentrate Quality - Average Assay Results												
			Al <sub>2</sub> O <sub>3</sub> (%)	CaO (%)	Cr <sub>2</sub> O <sub>3</sub> (%)	Fe (%)	K <sub>2</sub> O (%)	MgO (%)	MnO (%)	Na <sub>2</sub> O (%)	P (%)	TiO <sub>2</sub> (%)	SiO <sub>2</sub> (%)	S (%)	Zn (%)
6%	21.88	26.00	0.97	1.41	0.02	<b>65.68</b>	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	<b>65.97</b>	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	<b>66.11</b>	0.08	0.38	0.05	0.10	0.02	0.32	3.16	1.10	0.01

**Table 7: Undur Ukhaa – Summary of DTR Results\*\* (100% passing 75µm)**

Mass Yield Cut Off	Average Mass Yield (%)	Average Raw Assay Fe (%)	Concentrate Quality - Average Assay Results												
			Al <sub>2</sub> O <sub>3</sub> (%)	CaO (%)	Cr <sub>2</sub> O <sub>3</sub> (%)	Fe (%)	K <sub>2</sub> O (%)	MgO (%)	MnO (%)	Na <sub>2</sub> O (%)	P (%)	TiO <sub>2</sub> (%)	SiO <sub>2</sub> (%)	S (%)	Zn (%)
6%	12.10	16.74	0.99	1.36	0.05	<b>65.71</b>	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	<b>66.19</b>	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	<b>66.49</b>	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 feasibility study.

### ***Mining License Application***

The first and most important stage of the mining license application process has been completed. This stage involved the production of a Reserves Report together with the Pre-Feasibility Study according to Mongolian standards and subsequent registration of the Resources and Reserves defined in that study with the Minerals Council of Mongolia. The Company now expects to finalise and submit the mining license application to the Minerals Authority of Mongolia in Q3 2013.

### ***Early Start-up Mining***

The Company is also assessing the ability to develop a smaller scale production scenario, the aim of which is to achieve early production and cash flow.

The Company is working towards defining a mineable Reserve as a result of which initial mine blocks are being delineated using a Whittle optimization model. The grade and tonnage curve is being analysed for a selection of different cut offs.

Work commenced on a Scoping Study during the quarter for an early start up/small scale mining operation. The Company is aiming to produce approximately 500,000 tonnes of concentrate per annum, commencing in 2014. P.E.A.T Asia is managing the study and has proven track record having successfully built eighteen similar plants throughout Asia.

The Company believes that the Mineral Resource at Selenge will support a wet magnetic concentrator with a standalone infrastructure solution to deliver magnetite concentrate onto the nearby rail spurs for domestic and export consumption. Nearby infrastructure and an anticipated low average strip ratio, particularly at Dund Bulag, should greatly assist the project. An updated techno-economic assessment is underway in order to confirm project economics.

### ***Bankable Feasibility Study***

The tender process for the Bankable Feasibility Study for the full scale mine and processing plant is now underway with several high profile engineering firms expressing interest in managing the study.

The Company has designed a drilling programme for the next 12 months that includes components required for the Bankable Feasibility Study such as Hydro-geological, Geotechnical and Metallurgical drilling as well as extensional and exploration drilling to enhance the resource base.

### ***Hydro-geological Study***

The Hydro-geological study will start upon obtaining the relevant permit from the Environmental and Green Development Ministry of Mongolia. The hydro-geological study includes drilling to investigate water supply for future mine and wet magnetite separation plant operations as well as water characterisation drilling over the known resource areas.

During this Quarter all the required paperwork was completed and submitted to the relevant government agency. The Company anticipates that this will be achieved in August 2013.

## CORPORATE ACTIVITY

The Company has commenced initial discussions with a number of potential off take partners for iron ore concentrate derived from the Selenge Iron Ore Project. It is planned to shortlist and visit a number of these potential partners in September 2013.

### Board Changes

Following the resignation of Dr Robert Wrixon, Mr Erdene Tsengelbayar was appointed as Managing Director of the Company.

Erdene Tsengelbayar  
**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 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 Compliant Resource for the Selenge Project 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.*