



## **Update re Kallak Iron Ore Project August 2013**

***Assay results received for the first six drillholes at Kallak South with encouraging average iron grades encountered over long intercepts Kallak North drill campaign and test mining programme progressing as planned***

Beowulf (AIM: BEM; Aktietorget: BEO), the mineral exploration company focused on developing the group's Kallak North and Kallak South iron ore deposits in northern Sweden, today provides an operational update for its subsidiary's, Jokkmokk Iron Mines AB ("JIMAB"), wholly owned Kallak iron ore project located within the municipality of Jokkmokk in the Norrbotten County in northern Sweden.

### **Highlights:**

- Initial winter/spring phase of the 2013 Kallak South drill programme completed in early June comprising 16 holes for a total of approximately 3,994m. Planned summer/autumn phase currently targeting the completion of up to approximately a further 1,500m of drilling prior to the scheduled expiry of the current work plan at the end of October 2013.
- Promising assay results received for the first six holes from the initial phase with over 2,000m of drill core from a further 10 holes currently being logged and sections selected for analysis.
- Significant results include one inclined drill hole with a long intercept of 89.46m at approximately 32.1 per cent. iron. A further 1.1m section in the same hole returned the highest ever recorded iron content for a drill core section from the Kallak South deposit to date of 55.9 per cent. iron. The bedrock of the mineralised sections appears to be of a similar composition to that found at Kallak North.
- Kallak North drill campaign progressing; two rigs currently in operation and approximately 1,166m drilled to date covering six holes.
- Further metallurgical studies commissioned to evaluate the relationship between the previously identified magnetite and hematite occurrence on the Kallak North deposit.
- Test mining programme on a defined area of the Kallak North deposit ongoing with blasting due to commence shortly. The field work programme is currently expected to be completed by the end of Q3 2013.

### ***Clive Sinclair-Poulton, Executive Chairman of Beowulf, commented:***

*"The initial assay results from our ongoing drill programme at Kallak South are most promising and include the highest average grade of iron mineralisation ever recorded for a section of analysed drill core from the Kallak South deposit to date. We expect to receive the next set of assay results in Q4 2013 and are endeavoring to complete as much of our planned further drilling as practicable prior to the scheduled expiry of the current work plan."*

*Our additional drill campaign on Kallak North is progressing well with six holes completed to date. We anticipate commencing shortly the blasting stage of our test mining programme at Kallak North with*



*field work currently intended to be completed, as planned, by the end of Q3 2013 and look forward to reporting the results in due course."*

### ***Kallak South drill programme***

The 2013 drill programme on the Kallak South deposit is being conducted by the contractors, Dala Prospektering AB and Ludvika Borrteknik AB, each utilising one rig. The present campaign is principally targeting a maiden JORC Code compliant resource estimate for this deposit as well as seeking to confirm whether the Kallak South and Kallak North deposits are geologically connected. The Kallak South deposit is located approximately 500m south of the southern end of the Kallak North deposit.

Detailed ground geophysical survey data, magnetic and gravity 3D modelling conducted previously by the group, has indicated that the Kallak South deposit extends for more than 2,000m in length in a N-S direction with an E-W width of up to 300 metres. Based on such geophysical indications, the deposit is interpreted by Beowulf's management to be considerably larger than the Kallak North deposit.

Due to the local boggy conditions and lightly forested terrain, winter frozen ground conditions are more amenable in order to minimise the environmental impact from deployment of the drill rigs on to the selected drill sites. The initial winter/spring phase, completed in early June 2013, comprised approximately 3,994m of drilling covering 16 holes. JIMAB is currently targeting, subject to conducive ground conditions, the completion of up to approximately a further 1,500m of drilling prior to the scheduled expiry of the current work plan at the end of October 2013, as approved previously by the Swedish Mining Inspectorate (Bergsstaten). The planned summer/autumn phase is focused on the northern section of the deposit at individual drill hole sites located in forested terrain with drier ground conditions.

Drilling is being conducted on a grid formation along E-W profiles across the full width of the deposit as identified by ground geophysical data. In general, there is approximately a 100m interval between drillholes along each of the profiles and three holes per section through the deposit. There is also approximately a 100m interval between each profile. The drill holes are inclined at either 45 or 60 degrees and are generally directed towards the west at varying lengths of up to approximately 350m.

### ***Assay results***

Assay results have now been received for the first six holes completed during the initial phase of the drill programme. Over 2,000m of drillcore from a further ten holes is currently being logged and sections selected for analysis with results currently expected to be received for these further holes in Q4 2013.

Details of the 16 holes completed during the initial phase and the assay results received to date are set out in the table below.



Hole No.	Total hole length (m)	Drilling conducted in 2013 (m)	Sections analysed with significant grades (m)			Assay results Fe (%)
			from	to	Total	
KAL 13 055	220.50	220.50	2.60	112.00	109.40	25.5
<i>includes</i>			22.46	52.26	29.80	39.0
KAL 13 056	246.20	246.20	146.30	201.88	55.58	20.0
KAL 13 057	349.00	349.00	187.80	272.44	84.64	20.1
<i>includes</i>			232.79	262.32	29.53	26.0
<i>includes</i>			187.80	190.00	2.20	40.8
KAL 13 058	216.50	216.50	103.88	193.88	90.00	25.2
KAL 13 059	250.40	250.40	<i>Selection and analysis pending</i>			
KAL 13 060	158.50	158.50	<i>Selection and analysis pending</i>			
KAL 13 061 <sup>^</sup>	295.70	295.70	119.30	131.70	12.40	28.6
<i>includes</i>			147.85	237.31	89.46	32.1
<i>includes</i>			171.40	212.50	41.10	39.1
<i>includes</i>			198.55	199.65	1.10	55.9
KAL 13 062 <sup>^</sup>	211.19	211.19	<i>Selection and analysis pending</i>			
KAL 13 063 <sup>^</sup>	210.53	210.53	<i>Selection and analysis pending</i>			
KAL 13 064 <sup>^</sup>	403.09	403.09	208.55	227.50	18.95	31.1
KAL 13 065 <sup>^</sup>	198.94	198.94	<i>Selection and analysis pending</i>			
KAL 13 066 <sup>^*</sup>	150.00	150.00	<i>Selection and analysis pending</i>			
KAL 13 067	337.80	337.80	<i>Selection and analysis pending</i>			
KAL 13 068	289.30	289.30	<i>Selection and analysis pending</i>			
KAL 13 069	283.52	283.52	<i>Selection and analysis pending</i>			
KAL 10 039B <sup>**</sup>	262.40	172.50	<i>Selection and analysis pending</i>			
<b>Total:</b>		<b>3,993.67</b>				

Notes:

<sup>^</sup> - inclined by 60 degrees. Remaining holes inclined by 45 degrees.

<sup>\*</sup> - azimuth of 90 degrees. All other holes have an azimuth of 270 degrees.

<sup>\*\*</sup> - the letter suffix/label is for internal management reporting purposes only. Pre-existing drill hole number remains unchanged.

Drillholes KAL 13 055 and KAL 13 056, inclined at 45 degrees, are located on section 7413 100N, which is the most northerly section drilled in this current campaign. A long intersection of 109.4m at an average grade of 25.5 per cent. Fe is noted in drillhole KAL 13 055 including a high grade interval of 29.8m at an average grade of 39 per cent. Fe. This drillhole encountered only 2m of glacial overburden before reaching mineralised bedrock. Approximately 100m west on the same drill profile, hole KAL 13 056 returned an average grade of 20 per cent. Fe for a 55.58m section from 146.3m to 201.88m. The weaker grade can be attributed to certain barren narrow sections of pegmatites and granitic rocks intersecting the mineralisation. The iron mineralisation in KAL 13 055 is preliminarily interpreted to be separate but extending parallel to that of KAL 13 056. Thus, two parallel mineralised zones of iron have been encountered at this drill section, with a barren, mainly pegmatitic zone, in between. Similar features have been noted previously within drillhole sections at Kallak North. Since 7413 100N is the most northerly drilled section, it is important to note the strong possibility of a further extension of



the easterly mineralised body towards the north due to the significant thickness and grades encountered in hole KAL 13 055. This is expected to be evident in forthcoming drilling on profile 7413 200N.

The results returned for hole KAL 13 061 are also of significance. This hole intersected a mineralised zone of 12.40m at an average grade of 28.6 per cent. Fe from 119.3m to 131.7m followed by a barren pegmatitic zone and then encountered an almost 90m long interval with an average grade of 32.1 per cent. Fe from 147.85m to 237.31m. This interval included a significant 41.1m long section at an average grade of 39.1 per cent. Fe and a 1.1m section at an average grade of 55.9 per cent. Fe. This currently represents the highest ever recorded iron content for a drillcore section from the Kallak South deposit. Hole KAL 13 061 is the most easterly situated on profile 7412 900N and located 200m south of the abovementioned hole KAL 13 055. Analysis is pending for the remaining holes located further to the west of hole KAL 13 061, however it is already apparent from the initial assay results that the iron mineralisation present at Kallak South is of significant thickness and grades and extends in a N-S direction in the eastern part of the deposit.

The mineralised sections observed in the drillcores from the Kallak South deposit to date mostly comprise fine grained magnetite within a quartz banded gneissic bedrock type similar in appearance to that encountered on the Kallak North deposit. Some fine grained hematite, mostly located in bodies closely associated with magnetite sections, are also noted. In some drillholes the mineralised sections are intersected by abundant barren intrusions of coarse grained pegmatites and some granitic material.

JIMAB currently envisages commissioning a maiden independent JORC Code compliant resource estimate for the northern part of the Kallak South deposit following completion of the summer/autumn phase of drilling.

### ***Kallak North drill programme***

As announced previously, an additional infill drilling programme of up to 11,000m commenced on the Kallak North deposit in late May 2013. This drill programme is seeking to further define the extent of this deposit, particularly at depth and towards the south, and to further upgrade the existing JORC Code compliant resource estimate. To date, six drillholes have been completed comprising a total of approximately 1,166m of drilling and two rigs are currently operating on-site. Geological logging of the drill cores in the field at the time of drilling, has identified broad mineralised intercepts of iron mineralisation in all six drillholes. Initial assay results will be reported in due course.

### ***Additional metallurgical studies on material from Kallak North***

Additional metallurgical studies, both at a bench scale and a pilot scale, have been commissioned by JIMAB in order to better evaluate the relationship between the previously noted occurrence of hematite and magnetite on the Kallak North deposit. The studies are being conducted by the commercial laboratory Labtium Oy at Rovaniemi, Finland. Approximately two hundred separate drillcore samples (coarse grained rejects from previously assayed drill core samples extracted from six separate sections across the Kallak North deposit as part of the test work performed by MINPRO AB in



2012) have been submitted to the laboratory for analysis. The historic MINPRO AB tests used composite samples, whereas the current studies will analyse individual samples for specific sections of drillcore and types of iron mineralisation. Guided by advice from independent technical consultants at Micon International Co. Limited and GeoVista AB, these drillcore sections have been more precisely geologically defined in relation to differentiation in the iron mineralisation. The new geological and technical logging, coupled with a review of previous assay results, has resulted in seven separate types of iron mineralisation being identified.

These latest studies will utilise the SATMAGAN (SATuration MAGnetisation ANalyser) technique to measure the concentration of magnetite in individual samples. The hematite iron (ferrous) content is to be determined via HCl acid digestion and subsequent ICP-OES/AAS techniques. The SATMAGAN technique has been selected rather than the previously adopted Davis Tube Recovery (DTR) technique as it is deemed to be more cost effective and efficient. The initial results are expected to assist with the selection and collection of material from the test pits in the ongoing test mining sampling programme and will be announced in due course.

### ***Test mining sampling programme at Kallak North***

As previously announced, the objective of the test mining programme is to obtain approximately 400 tonnes of mineralised material from a defined area of the Kallak North deposit. Five trenches crossing the deposit in a E-W direction have been completed, totaling 300m in length to expose extensive iron mineralised bedrock as anticipated. Blasting of the sixteen test pits is expected to commence shortly following which the test material will be transported to a pilot plant in Finland as planned.

The precise location and type of iron ore material to be selected from the pits will represent the aforementioned seven different types of iron mineralisation as defined via the geological and analytical control of previous drill programmes from inclined drillholes intersecting the mineralisation underneath the trenches. The test mining field work and transportation of material to the laboratory in Finland is expected to be completed by the end of Q3 2013. The mineralised material collected will be used for further metallurgical test work to guide and facilitate the design of future mineral processing procedures and facilities, as well as generating final product samples for testing by potential future customers.

A further update on the test mining programme will be announced once the ongoing fieldwork has been completed.

Dr Jan Ola Larsson (Fil. Kand, PhD, DIC), has reviewed and approved the technical information contained within this announcement in his capacity as a qualified person, as required under the AIM rules. Dr Larsson is Technical Director of the Company and has over 40 years relevant experience within the natural resources sector.

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**Notes to Editors:**

All drill cores are being scanned in the field at the drill sites by a highly sensitive hand held magnetic susceptibility meter, with automatic average registrations over the separate core lengths, before being transported to the ALS laboratory at Öjebyn, Sweden, for geological logging and analytical preparation. Iron content plus a further 23 chemical elements including sulphur, phosphorous and manganese, is being determined at the ALS laboratory in Perth through the use of XRF techniques (total iron) and ferrous iron by H<sub>2</sub>SO<sub>4</sub>/HF acid digestion and titrimetric finish.

The measurement of saturation magnetisation (SATMAGAN; method 891G) at the Labtium Oy laboratory, Rovaniemi, Finland provides the concentration of magnetite (and other ferromagnetic minerals if present). Measuring the total magnetic moment of a sample in a saturating magnetic field is a quick, accurate and reliable method of measuring the magnetic material content of the sample. It is considerably faster than chemical methods and more accurate than measurements based on the susceptibility of the material. Analysis can be achieved in as little as a minute and accuracies are as good as 0.2 per cent. The principle behind the technique is to measure the force acting on the sample in a magnetic field with a spatial gradient. The magnetic field is strong enough to saturate the magnetic component in the sample.