



## Operational Update March 2014

Beowulf (AIM: BEM; Aktietorget: BEO), the mineral exploration and development company principally focused on the Group's Kallak North and Kallak South iron ore deposits in northern Sweden, announces an operational update in respect of both its Kallak and Ballek projects.

### Highlights:

- Encouraging results received, ahead of schedule, from the Geological Survey of Finland ("GTK") in relation to its pilot scale test work on material from the test mining sampling programme conducted on a defined area of the Kallak North deposit, and transported to GTK's facility in Finland, late last year. The grade and recovery levels from the magnetite beneficiation circuit tested were excellent with further test work by GTK currently scheduled for May/June 2014.
- The Group's drilling campaigns on both the Kallak North and Kallak South deposits have now recommenced.
- Recently granted Ågåsjiægge nr2 exploration permit has further extended the Group's licenced area in the Kallak region.
- Ongoing Ballek drill campaign continues to make good progress with operations currently underway on the sixth hole of the planned eight hole programme with 1,540m of drilling completed to date. Core samples from the ongoing drilling are being sent to the ALS laboratory in Öjebyn for analysis with initial results currently expected to be received in Q2 2014.

Clive Sinclair-Poulton, Executive Chairman of Beowulf, commented: *"I am delighted to report the recommencement of our extensive drilling campaigns at both Kallak North and Kallak South and promising initial pilot scale test work results for Kallak North."*

*"Drilling at Ballek continues to progress well, with more than half of our planned, up to 3,000m, drill programme now completed, and good relations being maintained with the local Sami community."*

*"We are also pleased that the Ågåsjiægge nr2 exploration permit has now been officially granted. The permit area is favourably located adjacent to our existing Kallak project area and we firmly believe that there is a strong likelihood that the geological structures hosting the iron mineralisation at Kallak are repeated in the Ågåsjiægge area."*

*"I am confident that Beowulf has a strong team in place, as we continue our work towards securing the award of a mining licence for Kallak North."*

### Kallak North drill campaign

The Company's wholly owned subsidiary, Jokkmokk Iron Mines AB ("JIMAB") recommenced its Kallak North drill programme on 8 March 2014 following the expiry of the local Sami community's eight week



suspension entitlement under the terms of our work plan. Accordingly, no further disruptions to the infill drilling programme are currently envisaged.

The existing work plan, for up to a total of approximately 11,000m of drilling, remains valid until 31 October 2015. The initial phase of the campaign, comprising 1,546m over nine holes, was completed in August 2013. To date, approximately a further 925m of drilling across three holes has been completed on the second phase.

### **Initial pilot scale test work results for Kallak North**

In late 2013, approximately 500 tonnes of ore from the test mining sampling programme completed on a defined area of the Kallak North deposit was transported to a test facility in Outokumpu city, owned by the Geological Survey of Finland (“GTK”). The main portion of the material was a general composite bulk sample, representing all of the test mined sections at Kallak North in proportion to their respective occurrence.

Pilot scale test work seeks to demonstrate, by replicating production scale conditions and using large, representative batches of test material, that marketable products can be produced at sufficient recovery levels. In addition, a pilot operation enables batches of products to be produced for additional downstream test work by, for example, potential clients.

GTK’s initial report in respect of its test work has now been received. Approximately 60 tonnes of the general composite bulk sample was tested during a two-week pilot campaign at GTK’s facility in December 2013, primarily focusing on establishing recovery and product quality parameters for the magnetite content. Average iron (Fe) content for the sample was 29.5 per cent. The proportion of magnetite to hematite in the sample was established to be approximately 3.4:1.

The magnetite beneficiation circuit was conventional and straightforward, consisting of rod milling with rougher-scavenger cobbing LIMS (Laboratory Information Management System) pre-concentration, followed by ball mill re-grinding together with six cleaner LIMS stages to achieve the final magnetite product. The grade and recovery levels were excellent. The amount of dry magnetite concentrate produced for downstream test work was approximately 2.7 tonnes, grading at 69.4 per cent. Fe at a magnetite recovery of approximately 95 per cent. Average silica content in the final product was 4.2 per cent. and the levels of sulphur and phosphorous were insignificant, being below 0.01 per cent. The end product fineness was 80 per cent. passing 25 microns.

The secondary objective, to produce a concentrate of the hematite content, was successful in respect of the quality aspect. A 0.36 tonne sample of dry hematite iron concentrate was produced, at an average grade of 66.6 per cent. Fe, containing 3.3 per cent. silica, 0.03 per cent. phosphorous and less than 0.02 per cent. sulphur. The fineness was 80 per cent. passing 170 to 175 microns. Several different flow sheet options were tested in order to maximise the hematite recovery, without fully reaching the desired levels. The best beneficiation result was achieved using a combination of spiral separators, supported by SLon HGIMS (High-Gradient Magnetic Separator). Recovery remained at below 30 per



cent. The short test work period did not enable optimisation of the hematite beneficiation section. Process mineralogy studies proved that the hematite losses were mostly occurring in the very fine particle sizes.

Based on the successful results achieved to date, JIMAB has commissioned GTK to proceed with the second stage of pilot testing, focusing on the different ore comminution options and enhancement of the hematite recovery. This additional test work is currently scheduled to be performed during May/June 2014.

### **Kallak South drill campaign**

JIMAB recommenced its Kallak South drill programme on 12 March 2014 further to renewing the requisite drilling work permit. The existing work plan, for up to a total of approximately 18,000m of drilling, remains valid until 31 December 2015. Approximately 4,124m of drilling over 16 holes was completed to the end of October 2013 under the previous work plan and a further 101m has been drilled on a further hole since the campaign recommenced.

The areas drilled to date cover approximately 30 per cent. of the Kallak South anomaly and the remaining 70 per cent. undrilled areas are the subject of the current work plan. The plan envisages a drilling density of approximately 100m (north-south) between profiles and there is approximately a 100m (east-west) interval between the holes along each of the profiles. Approximately three to four holes are planned in each profile, with some holes located in wet areas thereby requiring drilling in the winter season, whilst other holes situated in drier terrain can be drilled all year round.

Oriented drilling will be used for the 2014 programme in order to obtain a more detailed understanding of the structural control within the mineralisation.

To assist with the management of the ongoing Kallak drilling campaigns, the Group has recently recruited two field geologists and a field technician.

### **Ågåsjegge nr2 Exploration Permit**

Further to the recent grant of the Ågåsjegge nr2 exploration permit, the Group is currently preparing a 2014/2015 work plan. The licence area covers 6,836 hectares and the Geological Survey of Sweden ("SGU") has historically estimated that the area may contain 74-75 million tonnes of magnetite iron ore. To date, no JORC compliant or equivalent international standard of resource estimate has been established.

This area is believed to have considerable potential. Historical cores from the SGU's drilling work have already been logged and a review of the previous geophysical work undertaken. The work plan currently being prepared will enable further exploration work to take place.

Further to the grant of this latest permit, the Group now holds the following licence interests in the Kallak area:



<i>Permit name</i>	<i>Area (hectares)</i>
Ågåsjegge nr2	6,835.77
Kallak nr1	500.00
Kallak nr2	2,218.75
Kallak nr3	556.37
Nautijaur nr1	10,619.42
Parkijaure nr2	285.25
Parkijaure nr3	417.11
Parkijaure nr4	1,571.56
Parkijaure nr5	1,297.50
<b>Total:</b>	<b>24,301.73</b>

The Company notes that the local Sami community has recently lodged an appeal against the Group's award of the Agåsjegge nr2 exploration permit and a further announcement will be made in due course as appropriate.

### **Ballek copper-gold joint venture project**

The permits in respect of the Group's Ballek joint venture project, where we act as operator, are now held by our Swedish subsidiary, Wayland Sweden AB ("Wayland"). The current drill programme will comprise up to 3,000m over eight holes under the existing work plan which remains valid until 30 April 2014. The contractor is utilising a single rig and is currently working on the sixth drill hole with more than 1,540m drilled to date. Weather conditions have been severe but drilling continues to progress.

Visible copper sulphides have been encountered in all drillholes and selected core samples have been sent to the ALS laboratory in Öjebyn for multi-element assays including copper and gold with initial results expected to be received in Q2 2014.

The Group is now interested in 58 per cent. of Wayland further to the terms of its joint venture agreement with Energy Ventures Limited, since it has sole funded the current drilling campaign.

### **Kallak North Exploitation Concession Application**

A meeting took place last week between representatives from the Company and the Norrbotten County authorities to discuss the environmental aspects of the Group's exploitation concession application for the Kallak North deposit. Further to this constructive meeting, a revised and expanded application is currently intended to be made to the Swedish Mining Inspectorate in early April 2014.

In addition, a meeting was held on 11 March 2014 between the Company's representatives and the governor of Norrbotten County and his staff in order to provide an update on the Group's progress at Kallak and its future plans.



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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För ytterligare information

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