



The information contained within this announcement is deemed to constitute inside information as stipulated under the Market Abuse Regulations ("MAR") (EU) No. 596/2014. Upon the publication of this announcement, this inside information is now considered to be in the public domain.

For the purposes of MAR and Article 2 of Commission Implementing Regulation (EU) 2016/1055, this announcement is being made on behalf of Kurt Budge, Chief Executive Officer.

13 August 2018

Beowulf Mining plc
(“Beowulf” or the “Company”)

Aitolampi Maiden Mineral Resource Estimate

Beowulf (AIM: BEM; Spotlight: BEO), the mineral exploration and development company, focused on the Kallak magnetite iron ore project and the Ätvidaberg polymetallic exploration licence in Sweden, and its graphite portfolio in Finland, is pleased to announce a Maiden Mineral Resource Estimate (“MRE”) for its Aitolampi graphite project in Finland. Aitolampi is part of the Company’s 100 per cent owned Exploration Permit, Pitkäjärvi 1.

Highlights:

- A global Indicated and Inferred Mineral Resource (reported in accordance with the JORC Code¹) of 19.3 million tonnes (Mt) at 4.5% Total Graphitic Carbon (“TGC”) for 878,000 tonnes (“t”) of contained graphite, reported from all material within the eastern and western lenses which are interpreted above a nominal 3% TGC cut-off grade.
- A higher-grade Western Zone with an Indicated and Inferred Mineral Resource of 9.8 Mt at 5% TGC for 490,000 t of contained graphite.
- An Eastern Zone with an Indicated and Inferred Mineral Resource of 9.5 Mt at 4.1% TGC for 388,000 t of contained graphite.
- Reporting above a 4% TGC cut-off grade based on the grade-tonnage curve for Aitolampi, gives an Indicated and Inferred Mineral Resource of 12.8 Mt at 5% TGC for 639,000 t.
- The Mineral Resource was estimated by CSA Global PTY Ltd (“CSA Global”) of Australia.
- To date, the Company has invested over Euros 760,000 in Aitolampi and approximately Euros 1.4 million across its graphite portfolio.

Kurt Budge, CEO, commented:

“It’s great news for our exploration team to achieve the milestone of a Maiden Mineral Resource Estimate for Aitolampi. It is another building block, to add to the metallurgical testwork results

¹ Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

that we have achieved, and highlights the potential of the project to serve the developing battery manufacturing market in Finland and Sweden.

“Tonnes are not in short supply at Aitolampi, as evidenced by the maiden 19.3 Mt resource, but it’s pleasing to see a higher-grade five percent TGC Western Zone, that could be the focus for initial production.

“Aitolampi is benefited by its location in Finland, a stable political, fiscal, legal and permitting jurisdiction, its access to cheap power, reliable transport infrastructure (roads and ports), a highly skilled workforce, and by Finland’s desire to become a world-class platform for battery manufacturing.

“In terms of next steps, we are in the process of tendering a Scoping Study, which will provide a preliminary technical and economic assessment of the project, the output of which we will use to support our discussions with local stakeholders.

“In the first half of September, I will be in Finland to support our Finnish team, meeting key decision makers, in Heinävesi and the region, to discuss the Aitolampi project in more detail, and present the Company’s approach to developing a modern and sustainable mining operation in partnership with the community.

“We look forward to updating shareholders on our progress in due course.”

Aitolampi - Background

Aitolampi is in eastern Finland, approximately 13 kilometres north northwest of the town of Heinävesi, and 40 kilometres southwest of the well-established mining town of Outokumpu. Infrastructure in the area is excellent, with road access and good availability of high voltage power.

Extract from MRE report prepared by CSA Global

The results of the MRE for Aitolampi are shown in the table below:

Table 1 Mineral Resource estimate for Aitolampi as at 20 June 2018

Zone	Classification	Million Tonnes	TGC%	S%	Contained Graphite ('000s t)
Western Lens	Indicated	5.5	4.9	5.1	273
	Inferred	4.3	5.1	5.2	217
	Indicated + Inferred	9.8	5.0	5.1	490
Eastern Lens	Indicated	1.8	4.1	4.4	74
	Inferred	7.7	4.1	4.5	314
	Indicated + Inferred	9.5	4.1	4.5	388
Total	Indicated	7.3	4.7	4.9	347
	Inferred	12.0	4.4	4.8	532
	Indicated + Inferred	19.3	4.5	4.8	878

Note: The Mineral Resource was estimated within constraining wireframe solids defined within the logged graphitic schist host unit and nominally above a 3% TGC cut-off. The Mineral Resource is reported from all blocks within these wireframe solids. Differences may occur due to rounding.

Graphite mineralisation occurs disseminated in moderately-dipping and probably folded layers of graphite schist within quartzo-felspathic gneiss. Samples were obtained from diamond core drilling (“DD”).

The quality of drilling/sampling and analysis, as assessed by CSA Global, is of an acceptable standard for use in a publicly reportable MRE (as per the JORC Code).

Graphitic carbon was analysed using a standard induction furnace infrared absorption method by ALS' laboratories in Finland.

Grade estimation was completed using Ordinary Kriging and checked using an inverse distance weighting to the power of two estimate. The Mineral Resource was estimated within constraining wireframe solids interpreted using the logged graphite schist intersections and with reference to a nominal 3% TGC cut-off. The Mineral Resource is quoted from all classified blocks within these wireframe solids.

The estimate was classified as Indicated and Inferred based on surface mapping, geophysical information, drill hole sample analytical results, drill hole logging, and assigned density values based on density measurements. Roughly 25% of the interpreted mineralisation is extrapolated away from the drilling data.

The likelihood of eventual economic extraction was considered in terms of possible open pit mining, likely product specifications, possible product marketability and potentially favourable logistics and it is concluded that Aitolampi is an Industrial Mineral Resource in terms of Clause 49 of the JORC Code.

Metallurgical testwork results support the Mineral Resource classification. The flotation testwork on three diamond drill core composites demonstrated that approximately 10-20% of the liberated flakes are larger than 180 µm (100 mesh), approximately 30% are in the range 106-180 micron and approximately 50-60% are smaller than 106 micron and that final overall concentrate grades are in the range of approximately 96-98% carbon. Recoveries are in the range of 78-92%.

Sample 17001 from lower and higher-grade intersections in the east domain returned the lowest amount of fine flake <106 micron, which suggests that concentrate quality may vary according to grade domains.

The conventional flotation process produced flake graphite concentrates of good quality, potentially for markets such as brake lining pads, lubrication, refractories and batteries. The available process testwork in conjunction with drill sample observations from the remainder of the deposit supports the classification of the Aitolampi deposit as an Industrial Mineral Resource in terms of Clause 49 of the JORC Code.

CSA Global has concluded that the work at the Aitolampi Project has generally been completed to a high standard and has demonstrated that the Mineral Resource at the deposit has reasonable prospects for eventual economic extraction.

Drilling

During 2017 and 2018, a total of 2,770.7 metres ("m") was drilled, comprising 18 diamond drill holes.

Drilling shows that mineralisation has a strike length of at least 350m along the Eastern Zone (the Eastern electro-magnetic ("EM") anomaly extends for 700m) and a strike length of at least 150m along the Western Zone (the Western conductive zone extends for at least 300m).

Mineralisation for all zones remains open along strike and at depth.

Within the Company's Pitkäjärvi licence area, several extensive EM conductors, associated

with graphite observed in surface outcrops, have yet to be drilled, are prospective for graphite mineralisation, and offer potential upside.

Marketing Assessment

In late 2017, ProGraphite GmbH (“ProGraphite”), based in Germany, completed advanced metallurgical testwork and market assessment for the Company, to determine the suitability of Aitolampi concentrates for different market applications. ProGraphite specialises in the processing and evaluation of graphite materials.

The following tests were undertaken:

- Concentrate Product Characterisation (LOI/Fixed carbon on concentrate and mesh fractions, bulk densities, Specific Surfaces Analysis (SSA), Thermogravimetric Analysis (TGA), Inductively Coupled Plasma (“ICP”) analysis, and X-ray Diffraction (“XRD”) analysis;
- Purification Processing (Acid purification, Alkaline purification, and ICP analysis on purified graphite); and
- Production of Expandable Graphite.

The following results were achieved:

- Results show that both acid and alkaline purification methods can produce a very clean concentrate of greater than 99.41% Total Carbon (“C(t)”).
- The alkaline method, using standard formulation, produced the highest grades, 99.82% C(t) for the -100-mesh concentrate, and 99.86% C(t) for the +100-mesh concentrate.
- Results obtained from acid purification reached 99.6% C(t) for the +100-mesh fraction.
- The alkaline and acid purification results indicate that, with some process optimisation, Aitolampi concentrates may meet the purity specification of 99.95% C(t) required for the lithium ion battery market.
- There is also a good market for the -100 mesh and greater than 95% C(t) concentrate.
- Carbon content in all fractions, including the fines, is very high and ranges from 96.25 to 97.61% C(t). The demand is significant for fine graphite with high carbon, across various applications.
- Aitolampi graphite shows high crystallinity, with the degree of graphitisation measuring approximately 98%, which is almost perfect crystallinity, and an important consideration for battery manufacturers seeking high energy density in cells.
- Volatiles are low which is an attractive product attribute, and often a pre-condition, in many applications, including refractories, lubricants, crucibles, and foundries.
- SSA is comparable to that of high quality flake graphite from China.
- Oxidation behaviour, tested with TGA analysis, is comparable with Chinese graphite of the same flake size, used for refractories, and other high temperature applications.
- ICP analysis, for elemental impurities in the alkaline purified concentrate, showed that

impurities could be reduced to significantly lower levels by intensifying purification, optimising the amount of chemicals used and process parameters, such as reaction time and temperature.

Project Development

Pöyry Finland Oy ("Pöyry") has completed an Environmental and Social Impact Assessment ("ESIA") Roadmap, a detailed plan for undertaking a comprehensive ESIA study. The Company selected Pöyry for the roadmap, as it is one of the leading environmental consultants in the Finnish mining sector, participating in most mining projects being undertaken in Finland.

In Spring 2018, the Company initiated baseline environmental surveys for endangered animals, birdlife and vegetation and is planning to start baseline water quality monitoring.

The Company is also in the process of tendering a Scoping Study contract for Aitolampi. The Study will provide a preliminary assessment of the technical and economic feasibility of developing a mining operation at Aitolampi.

Finnish Battery Manufacturing Initiatives

On 25 April 2018, the Company announced its involvement in a Cooperation Network of existing and new entrant raw materials suppliers to the emerging battery manufacturing industry in Finland.

The Cooperation Network includes the cities of Vaasa and Kokkola; Freeport Cobalt, the world's largest cobalt refinery and producer of battery chemicals; Nornickel, the producer of world-class nickel metals and nickel chemicals in Harjavalta; Terrafame Group, the parent company of Terrafame, producing nickel, zinc, cobalt and copper in Sotkamo; Keliber, which is preparing to start lithium production in Kaustinen and Kokkola; as well as Beowulf, the 100 per cent owner of the Aitolampi graphite deposit.

The official announcement regarding the Cooperation Network, dated 24 April 2018, and titled "The battery industry has enormous potential to become Finland's new success story. The Vaasa battery factory project has brought together a large nationwide network of cooperation partners" can be viewed at:

<https://www.gigafactory.fi/press-20180424-en>

In addition, Fennoscandian was granted Euros 161,000 by Business Finland for a research project entitled "Green Minerals - Graphite, Exploration to Products". The project runs from 1 January 2018 to 31 December 2019 and has a total budget of Euros 323,750. The Company will contribute the balance of the funding.

Competent Person Review

The in situ 2018 Mineral Resource for the Aitolampi Graphite Project is based on information compiled by Mr Grant Louw, under the direction and supervision of Dr Andrew Scogings, who are both full time employees of CSA Global Pty Ltd. Dr Scogings takes overall responsibility for the report.

Dr Scogings PhD Geology, MAIG, MAusIMM, RPGeo (Industrial Minerals) is a Member of both the Australian Institute of Geoscientists and Australasian Institute of Mining and Metallurgy, and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and

Ore Reserves' (JORC Code 2012). Dr Scogings consents to the inclusion of such information in this announcement in the form and context in which it appears.

Dr Andrew Scogings approves the disclosure of technical information in the form and context in which it appears in this announcement, in his capacity as a Competent Person ("CP"), as required under the AIM rules.

Dr Scogings is a geologist with more than 25 years' experience in industrial minerals exploration, product development and sales management. Andrew has published papers on reporting requirements of the JORC Code 2012, with specific reference to Table 1 and Clauses 18 and 19 (industrial mineral Exploration Results) and Clause 49 (industrial mineral specifications). He has published numerous articles on industrial minerals, addressing aspects of QA/QC, bulk density methods and petrography for industrial minerals exploration. He was recently senior author of two significant reviews: *Natural Graphite Report - strategic outlook to 2020* and *Drilling grade barite - Supply, Demand & Markets* published in 2015 by Industrial Minerals Research (UK), and has co-authored several papers ranking global graphite exploration projects. Andrew is a Registered Professional Geoscientist (RP Geo. Industrial Minerals) with the Australian Institute of Geoscientists.

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Cautionary Statement

Statements and assumptions made in this document with respect to the Company's current plans, estimates, strategies and beliefs, and other statements that are not historical facts, are forward-looking statements about the future performance of Beowulf. Forward-looking statements include, but are not limited to, those using words such as "may", "might", "seeks", "expects", "anticipates", "estimates", "believes", "projects", "plans", "strategy", "forecast" and similar expressions. These statements reflect management's expectations and assumptions in light of currently available information. They are subject to a number of risks and uncertainties, including, but not limited to, (i) changes in the economic, regulatory and political environments in the countries where Beowulf operates; (ii) changes relating to the geological information available in respect of the various projects undertaken; (iii) Beowulf's continued ability to secure enough financing to carry on its operations as a going concern; (iv) the success of its potential joint ventures and alliances, if any; (v) metal prices, particularly as regards iron ore. In the light of the many risks and uncertainties surrounding any mineral project at an early stage of its development, the actual results could differ materially from those presented and forecast in this document. Beowulf assumes no unconditional obligation to immediately update any such statements and/or forecasts.

Glossary:

Micron - a unit of length equal to one millionth of a metre.

Mesh size - the number of openings in a one US inch of screen is the mesh size e.g. a 4-mesh screen means there are four squares across one linear inch of screen. A 100-mesh screen has 100 openings, and so on. As the number describing the mesh size increases, the size of the particles passing through the mesh decreases. Higher numbers equal finer material. Mesh size is not a precise measurement of particle size. If minus (-) and plus (+) plus signs are shown when describing mesh sizes, this is best explained with an example: -200-mesh would mean that all particles smaller than 200-mesh would pass through. +200 mesh means that all the particles 200-mesh or larger are retained.