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GreenRoc Mining PLC
13 June 2022

*To view the RNS with illustrative diagrams and maps, please use the following link:*
*http://www.rns-pdf.londonstockexchange.com/rns/5597O_1-2022-6-12.pdf*

GreenRoc Mining Plc / EPIC: GROC / Market: AIM / Sector: Mining

13 June 2022

**GreenRoc Mining plc**

("GreenRoc" or the "Company")

**Amitsoq Graphite Project Update**

**Significant Tonnage Upgrade to Kalaaq Exploration Target**

GreenRoc Mining plc (AIM: GROC), a company focused on the development of critical mineral projects in Greenland, is pleased to announce a significant increase to its Exploration Target at the Kalaaq prospect, part of the Amitsoq Graphite Project in southern Greenland ("Amitsoq" or the "Project"), one of the highest-grade graphite deposits in the world.

**Highlights**

- Following additional channel and field sampling along with field mapping as part of the 2021 field season, the Exploration Target for Kalaaq has now been updated.
- The Exploration Target[1] has increased from a tonnage range of 4Mt-7Mt at a grade range of 23-29% Graphitic Carbon ('Cg') (as announced by Alba Mineral Resources plc on 7 May 2021) to a tonnage range of 6 Mt-10 Mt at a grade range of 17-33% Cg.
- Results confirm significant resource potential of this as yet undrilled deposit, which is open along strike (predominantly to the south) and down dip.
- Kalaaq is one of two key deposits identified at Amitsoq, the other being the Amitsoq Island Deposit, which has a combined Indicated and Inferred JORC Resource of 8.28 Mt at an average grade of 19.75% Cg, giving a total graphite content of 1.63 Mt, and an Exploration Target of 5-15 Mt at a grade range of 18-22% Cg.
- Drilling is due to resume at Amitsoq Island later this month, targeting resource expansion to support a feasibility study, with Kalaaq to be drilled next year.
- Graphite is a core component of EV batteries, which is driving demand and prices; the high quality and flake size of Amitsoq's product is ideal for the manufacture of battery grade spherical graphite required for the anode of lithium-ion batteries, thus well positioned to capitalise on the Net Zero transition.
- Demand for graphite is forecast to soar 10-fold; UBS estimates a natural graphite deficit of 3.7Mt by 2030, representing circa 37% of the market.

**GreenRoc's Interim CEO, Lars Brünner, commented:**

*"The Amitsoq Project, comprising the Amitsoq Island and Kalaaq deposits, is one of the highest-grade graphite deposits globally. Our focus is to continue building resource tonnage to a level that will support a detailed feasibility study, as part of our strategy to fast-forward this Project into commercial production. This Kalaaq Exploration Target, coupled with the current maiden resource at Amitsoq Island of 8.28Mt at an average grade of 19.75% Cg, underpins the significant*

*resource and, in turn, the enormous value potential of Amitsoq. Additionally, we have designed a clear development strategy to ensure GreenRoc delivers on this.*

*"Recent corporate investment activity in Greenland's strategic minerals space tells us that the time is now to advance exploration at our flagship projects. We intend to drill Kalaaq in 2023 in order to convert a substantial portion of the Exploration Target there to a compliant resource. Meanwhile, preparations for Phase 2 drilling at the Amitsoq Island deposit are well underway, and we expect to commence drilling this month as we target a higher-tonnage, higher-category resource which will support the development of a mine plan and feasibility studies. We look forward to sharing further updates on our activities at Amitsoq in the weeks and months ahead."*

**Figure 1. Amitsoq Graphite Project in southern Greenland, showing Amitsoq Island graphite deposit to the north (site of the former graphite mine) and Kalaaq deposit to the south**

## Details

Alba Mineral Resources plc, which previously owned the Amitsoq project before spinning out its entire Greenland portfolio to GreenRoc in September 2021, commissioned Dr John Arthur (CGeol FGS) to prepare an Exploration Target for the Kalaaq deposit in southern Greenland. Dr Arthur is a Chartered Geologist and qualifies as a Competent Person/Qualified Person (as defined by CRIRSCO and the majority of National Reporting Organisations). The Exploration Target subsequently announced on 7 May 2021 had a tonnage range of 4 Mt-7 Mt ) (assuming a density of 2.63t/m3) and a grade range of 23-29% Graphitic Carbon ('Cg').

Following the conclusion of the 2021 field season at Kalaaq, Dr Arthur was commissioned by GreenRoc to update his Exploration Target. Following a detailed assessment of all pertinent data sets, Dr Arthur has concluded that the volume and grade ranges for the Kalaaq Exploration Target are between 6 and 10 million tonnes (assuming a density of 2.63t/m3) with a grade range of between 17-33% Graphitic Carbon, for between 1 Mt and 3.3 Mt of contained graphite.

In accordance with the JORC Code (2012), the potential quantity and grade of the above Exploration Targets is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

The data used for the revised Exploration Target includes all surface channel sampling and field mapping carried out during the 2021 field season as well as information validated from previous surface mapping and investigations.

The revised Exploration Target incorporates additional areas along strike to the south (inland) from the previous reported Exploration Target as well as the newly discovered bodies in the south-east and south-west. Based on the apparent continuity seen from the extended field mapping, the Competent Person considers an appropriate range for the Exploration Target tonnage to be between 6-10Mt and the range of grade (at a cut-off of 0.0% Cg%) to be between 17-33%.

In addition to the sampling, geophysical (beep mat) surveys and detailed structural mapping carried out previously, the updated Exploration Target for Kalaaq draws on additional field work carried out in 2021, namely additional mapping carried out further inland to the south, south-east and south-west and an additional 11 sample sites, seven of which were targeted channel samples for detailed sampling of the exposed mineralisation.

**Figure 2. Exploration at Kalaaq showing the updated sample locations and results of updated field mapping after the 2021 field season.**

Geological domain modelling was carried out to model the results of the field exploration data using the Seequent Leapfrog Geo® software. Continuity appears to be justifiable along strike as evidenced from the exposure on surface and identifiable topographic and structural features from surface mapping and structural analysis. A high degree of confidence in the geological continuity of the deposit structure is thus interpreted, at least in the vicinity of the sampling and mapping programmes.

**Peer Group Comparison**

The Amitsoq project is among the very highest-grade graphite projects in the world, with, to the Company's knowledge, only Talga's Vittangi project having higher average grades amongst all advanced (ie at least to Resource definition stage) projects globally.

If the revised Exploration Targets for each of the Amitsoq Island deposit and Kalaaq are successfully converted into defined Resources following the planned further drilling, this would maintain Amitsoq's position as one of the highest-grade projects globally with total Resource tonnage comparable to that of Vittangi (see Table 1).

**Table 1. Comparison between GreenRoc and Talga flagship graphite projects**

| Company | Market Cap | Project | Reserves (Mt) | Resources (Mt) | ET (Mt) | Grade (%) | Contained Ore (Mt) | Combined Contained Ore (Mt) | Stage |
|---|---|---|---|---|---|---|---|---|---|
| **Talga Group** | A$385.5m (ASX: TLG) | Vittangi (Sweden) | 2.26 | | | 24 | 0.5447 | **7.74** | Feasibility |
| | | | | 30.1 | | 24.1 | 7.2 | | |
| **GreenRoc Mining** | £6.7m (AIM: GROC) | **Amitsoq Island (Greenland)** | | 8.28 | | 19.75 | 1.63 | **2.53-4.93 (midpoint 3.73)** | Resource and ET |
| | | | | | 5-15 | 18-22 | 0.9-3.3 | | |
| | | **Kalaaq (Greenland)** | | | 6-10 | 17-33 | 1.0-3.3 | **1.0-3.3 (midpoint 2.15)** | ET |

**Amitsoq Drilling Update**

Further to our RNS of 6 June 2022, preparations on site for the phase 2 drilling programme at the Amitsoq Island deposit are well advanced, and drilling is expected to commence this month (see Figure 3 below).

**Figure 3. Installation of base camp at Amitsoq in readiness for start of phase 2 drilling (June 2022).**

***This announcement contains inside information for the purposes of the UK Market Abuse Regulation and the Directors of the Company are responsible for the release of this announcement.***

**Glossary**

| | |
|---|---|
| **Cg%** | Contained graphite as a percentage of the total rock. |
| **cut-off** | Applicable to Resources only. The minimum grade required for a mineral or metal to be economically mined (or processed). Material found to be above this grade is considered to be ore, while material below this grade is considered to be waste. |
| **Exploration Results** | Exploration Results include data and information generated by mineral exploration programmes that might be of use to investors but which do not form part of a declaration of Mineral Resources or Ore Reserves. |
| | |

| | |
|---|---|
| **Exploration Target** | An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource. |
| **graphitic** | of, relating to, resembling, or having the structure of graphite. |
| **graphitic carbon** | Carbon may be present in rocks in various forms including organic carbon, carbonates or graphitic carbon. Carbon in rocks may be reported as fixed or total carbon (i.e. organic carbon + carbon in carbonate minerals + carbon as graphite) or as graphitic carbon (i.e. total carbon - (organic + carbonate carbon)). |
| **Indicated Resource** | Indicated Resources are economic mineral occurrences that have been sampled (from locations such as outcrops, trenches, pits and drill holes) to a point where an estimate has been made, at a reasonable level of confidence, of their contained metal, grade, tonnage, shape, densities, physical characteristics. |
| **Inferred Resource** | An Inferred Resource means that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. |
| **JORC** | The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code') is a professional code of practice that sets minimum standards for Public Reporting of minerals Exploration Results, Mineral Resources and Ore Reserves. |
| **Maiden Resource** | The first Mineral Resource estimate to be completed on a project. |
| **Mineral Resource** | A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. |
| **Ore Reserves** | The economically mineable part of a Measured or Indicated Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed, mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction can reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves. |
| **strike** | The direction and length of a geological feature (for example, a vein or rock formation) measured on a horizontal surface. |

**Forward Looking Statements**

This announcement contains forward-looking statements relating to expected or anticipated future events and anticipated results that are forward-looking in nature and, as a result, are subject to certain risks and uncertainties, such as general economic, market and business conditions, competition for qualified staff, the regulatory process and actions, technical issues, new legislation, uncertainties resulting from potential delays or changes in plans, uncertainties resulting from working in a new political jurisdiction, uncertainties regarding the results of exploration, uncertainties regarding the timing and granting of prospecting rights, uncertainties regarding the timing and granting of regulatory and other third party consents and approvals, uncertainties regarding the Company's or any third party's ability to execute and implement future plans, and the occurrence of unexpected events. Actual results achieved may vary from the information provided herein as a result of numerous known and unknown risks and uncertainties and other factors.

**Competent Person Declaration**

The information in this release that relates to Exploration Results and Mineral Resources has been reviewed by Dr John Arthur. Dr Arthur is a Fellow of The Geological Society of London and a Chartered Geologist (FGS CGeol no. 1005744) and 28 years' experience in the minerals and mining industry.

Dr Arthur has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the ''Australasian Code for Reporting of Exploration targets, Exploration Results, Mineral Resources and Ore Reserves'', also known as the JORC Code. The JORC code is a national reporting organisation that is aligned with CRIRSCO. Dr Arthur consents to the inclusion in the announcement of the matters based on his information in the form and context in which they appear.

****ENDS****


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**About GreenRoc**

GreenRoc Mining Plc is an AIM-quoted company, which is developing mining projects in Greenland in high-demand and high-value critical minerals.

Led by a group of highly experienced mining industry professionals, GreenRoc has a portfolio of 100% owned projects:

- Amitsoq Graphite, one of the highest-grade graphite deposits in the world with a combined Indicated and Inferred JORC Resource of 8.28 million tonnes (Mt) at an average grade of 19.75% giving a total graphite content of 1.63 Mt.
- Thule Black Sands Ilmenite ('TBS'), which has an initial Mineral Resource of 19Mt@ 43.6% Total Heavy Minerals with an in-situ ilmenite grade of 8.9%.

- Melville Bay Iron, which has a Mineral Resource Estimate of 67Mt at 31.4% iron and has been proven to be processable to a high-grade, 70% concentrate with low impurities.
- Inglefield Multi-Element, which has the potential to host a range of mineralisation styles, including iron oxide-copper-gold.

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[1] In accordance with the JORC Code (2012), the potential quantity and grade of this Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

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