

Company Announcement, 20 January 2020

Progress Toward Finalising Kvanefjeld EIA

- **Productive series of meetings held through late-2019 with Greenland’s Environmental Agency for Mineral Resource Activities (EAMRA) and their advisors**
 - **Meetings reviewed the status of key EIA (Type 1) issues, and additional work to address these issues**
 - **Independent specialist groups engaged to conduct additional studies, with all work programs initiated in December 2019**
 - **Additional work programs and updated EIA expected to be finalised by late March 2020**
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Managing Director Dr John Mair commented:

“We’re appreciative of a series of well-structured meetings with Greenland’s EAMRA through late-2019 that has provided a clear understanding of where additional work can provide further rigour and confidence to the EIA for Kvanefjeld. Additional work by independent specialist consultants is progressing well, and on schedule for completion in Q1, 2020. Guidance from EAMRA will help to ensure that key areas within the EIA have been addressed to a level that will provide a high degree of confidence to Greenland stakeholders.”

Greenland Minerals Ltd (‘GML’ or ‘the Company’) is pleased to update on progress toward finalising the Environmental Impact Assessment (EIA) for the Kvanefjeld Rare Earth Project. The EIA for Kvanefjeld was reviewed through August – September 2019, with structured feedback received from Greenland’s Environmental Agency for Mineral Resource Activities (EAMRA) in October.

In the review feedback EAMRA separated outstanding environmental issues into two categories: Type 1; those where EAMRA require more information before the EIA can be accepted for public consultation; and Type 2; which can be answered after the process of formal public consultation has been completed and finalised before exploitation plans are approved.

GML has since conducted a series of constructive meetings through November and early December via phone conference with EAMRA and their advisors, to discuss Type 1 issues and the approach to finalising the EIA for public consultation. Scopes of work for additional studies were reviewed, and additional work programs have since been commissioned. GML is confident that Type 1 issues can all be effectively addressed.

Most of the additional work is related to tailings storage facilities: more detailed modelling of scenarios for embankment failure; more detailed review of seismic conditions to validate long term stability of tailings structures; and a request to investigate the viability of an alternative “dry closure” option for the planned tailings facility.

Independent specialist consultant Klohn Crippen Berger (KCB) have been engaged to perform the additional tailings studies. Work by KCB will build on existing tailings studies conducted by AMEC Foster Wheeler (now Wood Group). KCB are a new consultant to contribute to the project and will provide an external assessment of existing environmental designs. Their work on the tailings related Type 1 issues is expected to be completed by February 2020.

Arcadis, who have conducted several studies on the Kvanefjeld Project pertaining to radiation, have been retained by GML to conduct some additional work and further clarify the outcomes of existing studies.

The additional studies will add further detail to the EIA and will be another important step in developing the EIA to the highest standards possible. Through this rigorous approach GML is looking to provide confidence to Greenland stakeholders that the environmental impact of the Kvanefjeld Project has been investigated vigorously. The new studies are building upon previous assessments and not addressing any gap or a new environmentally critical issue.

All additional studies are scheduled to be completed in Q1, 2020, and the Company anticipates that an updated EIA incorporating the additional studies will be available for the Greenland Government late March.

Background – Supplementary Studies

Klohn Crippen Berger (KCB) are a specialist independent consulting group with an international presence. KCB has extensive experience in developing tailings facilities and environmental assessments and have participated in permitting and tailings management design in cold climate areas relevant to Greenland.

KCB are performing the following studies to provide further technical support to the EIA:

- a. Detailed investigation on dry closure. Greenland’s EAMRA has requested that a Feasibility Design for closing the tailings facilities in dry form rather than the incumbent wet form is conducted to ensure the most appropriate method is selected based on a high level of detail. This will require a more detailed design for a tailings option which was previously not selected on the basis of a preliminary assessment and concept study level designs. KCB has recently performed studies to examine ‘Best Available Technology’ for tailings facilities in cold climate regions. Of relevance is a study to review the tailings management methods for Seabridge Gold’s KSM project in Canada.
- b. A hypothetical scenario will be examined where the tailings embankment wall fails, and a mixture of solids and liquid are released into the environment in an uncontrolled manner. Based on the conservative design of the tailings facilities this scenario is extremely unlikely.

Best available industry methods to examine such a failure include three-dimensional modelling of the inundation zone and incorporation of specific flow characteristics.

- c. More detailed seismic analysis will be performed to determine the largest possible earthquake that could be experienced at the project site. This information will then be used to check that the tailings dam design will be stable. Southern Greenland is seismically quiet and previous seismic studies have shown the design to be stable under all seismic conditions. KCB will engage world experts and use the latest seismic information to provide a comprehensive assessment of the seismic conditions.

Arcadis are an international independent consultant with extensive experience with mining and radiation. Arcadis has played a key role in the environmental and health assessment for the Kvanefjeld Project by determining the effects of radiation. Arcadis produced a report which examines all the different pathways for radiation exposure to people, flora and fauna. The report concluded that the incremental radiation dose related to the project was negligible compared to the baseline conditions. Arcadis has also evaluated radon release and radiation effects of tailings facility failures. Arcadis will be updating their reports which assess the radon releases, total radiation dose and the tailings failure assessment.

This release was authorised by Dr John Mair, Managing Director of Greenland Minerals Ltd.

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ABOUT GREENLAND MINERALS LTD.

Greenland Minerals Ltd (ASX: GGG) is an exploration and development company focused on developing high-quality mineral projects in Greenland. The Company's flagship project is the Kvanefjeld Rare Earth Project. A pre-feasibility study was finalised in 2012, and a comprehensive feasibility study was completed in 2015 and updated following pilot plant operations in 2016. The studies demonstrated the unique and highly advantageous strengths of the Kvanefjeld Project and outlined the potential for Kvanefjeld to be developed as a long-life, low cost, and large-scale producer of rare earth elements; key enablers to the electrification of transport systems.

GML is working closely with major shareholder and strategic partner Shenghe Resources Holding Co Ltd to develop Kvanefjeld as a cornerstone of future rare earth supply. An exploitation (mining) license application for the initial development strategy was reviewed by the Greenland Government through 2016 -19 and was updated in 2019 following addition supporting studies.

In 2017-18, GML undertook technical work programs with Shenghe Resources Holding Co Ltd that improved the metallurgical performance and simplified the development strategy and infrastructure footprint in Greenland, with optimised Feasibility Study outcomes announced in mid-2019. This defined a significantly enhanced project cost-structure and a direct alignment with downstream processing. In addition, the Company continues its focus on working closely with Greenland's regulatory bodies on the processing of the mining license application and maintaining regular stakeholder updates.

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Greenland Minerals Ltd will continue to advance the Kvanefjeld project in a manner that is in accord with both Greenlandic Government and local community expectations and looks forward to being part of continued stakeholder discussions on the social and economic benefits associated with the development of the Kvanefjeld Project.

Competent Person Statement – Mineral Resources Ore Reserves and Metallurgy

The information in this report that relates to Mineral Resources is based on information compiled by Mr Robin Simpson, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Simpson is employed by SRK Consulting (UK) Ltd ("SRK") and was engaged by Greenland Minerals Ltd on the basis of SRK's normal professional daily rates. SRK has no beneficial interest in the outcome of the technical assessment being capable of affecting its independence. Mr Simpson 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 Results, Mineral Resources and Ore Reserves'. Robin Simpson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in the statement that relates to the Ore Reserves Estimate is based on work completed or accepted by Mr Damien Krebs of Greenland Minerals Ltd and Mr Scott McEwing of SRK Consulting (Australasia) Pty Ltd. The information in this report that relates to metallurgy is based on information compiled by Damien Krebs.

Damien Krebs is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the type of metallurgy and scale of project under consideration, and to the activity he is undertaking, to qualify as Competent Persons in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). The Competent Persons consent to the inclusion of such information in this report in the form and context in which it appears.

Scott McEwing is a Fellow and Chartered Professional of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as Competent Persons in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). The Competent Persons consent to the inclusion of such information in this report in the form and context in which it appears.

The mineral resource estimate for the Kvanefjeld Project was updated and released in a Company Announcement on February 12th, 2015. The ore reserve estimate was released in a Company Announcement on June 3rd, 2015. There have been no material changes to the resource estimate, or ore reserve since the release of these announcements.