

Company Announcement, September 18th, 2018

International Engineering Team Conducts Site Visit to Optimise Civil Design Strategies and Project Construction

HIGHLIGHTS

- **Engineering studies conducted onsite as part of broader optimisation program**
- **Work programs designed to reduce civil works, and maximise site-specific advantages**
- **Engineers from four companies participated; Nuna Logistics, PND Engineers, Tetra Tech, China Communications Construction Co (C-CCC),**
- **Multi-disciplinary cross-section of leading international expertise and capacities**
- **Effective strategies developed to simplify the project construction, minimise civil earth works and reduce associated capital costs**

Greenland Minerals Ltd ('GML' or 'the Company') is pleased to report on engineering studies recently conducted onsite in Greenland to fine tune civil design and construction strategies for the Kvanefjeld Project. Kvanefjeld, 100% owned by GML, is an advanced, globally-significant rare earth project that is well-positioned to become a key supplier of all rare earth elements, including key magnet metals neodymium, praseodymium, dysprosium and terbium.

In parallel to project permitting, the Company has been completing an optimisation program to simplify the project, improve processing efficiency, and reduce capital and operating costs. Metallurgical studies to improve efficiency and integrate Kvanefjeld into downstream processing continue to be guided by leading rare earth company Shenghe Resources Holding Co Ltd (Shenghe) with great effect.

To address civil design and project construction GML assembled a team of international engineering groups.

- **PND Engineers (USA)** - provided two experienced port design engineers for the site visit. PND are specialists at cold climate port design and are tasked with designing the off-shore port facilities. Direct shipping access is a key advantage for the Kvanefjeld Project, and efficient port facilities are important for year-round materials handling and transfer.
- **Nuna Logistics (Canada)** bring extensive cold climate experience and are working on optimisation of civil and plant layouts. Nuna provided two experienced engineers for the site

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visit to assess practical aspects of civil works and port construction. They are a 51% First Nations owned company which places great emphasis on leaving a positive legacy at each of its project sites. They have excellent experience in operating in cold climate environment and providing jobs/training for local communities.

- **Tetra Tech** have been major contributors to the Kvanefjeld feasibility program and continue to work on optimising civil and process plant layouts. A civil designer and cold-climate geotechnical engineer attended the site visit.
- **China Communications Construction Co Ltd (C-CCC)** are China's largest engineering and construction company and are ranked in the Fortune 500. C-CCC provided four participants for the site visit, including personnel with extensive experience in onshore port facilities. The visit provided an excellent opportunity for C-CCC to work alongside Arctic specialist groups and consider broader aspects of the Kvanefjeld project for further involvement.

Following onsite investigations of the project area (including sites for the proposed mine, processing plant, tailings storage, port and roads) the multi-disciplinary engineering groups confirmed that the construction of the Kvanefjeld Project has no major impediments and is relatively straight forward owing to a number of site-specific advantages which include:

1. Located near an existing town (Narsaq), with infrastructure benefits including port and fuel storage that greatly assists the pioneering (early) phase of project development.
2. Local labour is available that can be trained and utilised effectively from the early construction phase and onward into mine development.
3. There is a massive amount of high-quality construction suitable rock material on-site, which can be used for roads, culverts, plant site preparation and port construction.
4. Year-round shipping access for fuels, construction material and labour.
5. Being located near the southern tip of Greenland and on the coastal fringe, winters are not exceptionally cold, with the weather relatively mild allowing for year-round construction.

Follow Up

Information gathered and strategies developed by the engineering groups will feed into the broader optimisation program that will see design revisions to civil construction and port and plant sites to reduce the amount of construction effort required. This will substantially reduce cut and fill (civil earth works) and amounts of imported construction materials. Reports are now being prepared that will update designs and capital costs for specific areas of the project.

Significant improvements in processing efficiency generated by metallurgical work will also feed into the design updates. The Company looks forward to providing further updates on the cost reductions in the coming months.



GML personnel with representatives from PNG Engineering, Nuna Logistics, Tetra Tech and C-CCC onsite at the Kvanefjeld Project.



Left: Damien Krebs (GML) and Steven Dong (C-CCC), discuss geotechnical aspects of the Taseq Basin, and tailings storage strategy.

Below: PND bring extensive arctic experience to the multi-disciplinary engineering group.



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 (rare earth elements, uranium, zinc). 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 highlight the potential to develop Kvanefjeld 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 has been undergoing review by the Greenland Government through the latter part of 2016 and through 2017.

In 2017-18, GML continues to undertake technical work programs with Shenghe Resources Holding Co Ltd that aim to improve the metallurgical performance, simplify the development strategy and infrastructure footprint in Greenland, enhance the cost-structure, and ensure that Kvanefjeld is aligned 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.