



Company Announcement, August 11th, 2015

Kvanefjeld - Mining Licence Application Update

Greenland Minerals and Energy Ltd ('GMEL' or 'the Company') is nearing completion of the Environmental and Social Impact Assessments for the Kvanefjeld Project. All technical studies that support the impact assessments are now complete, with documentation of the results to be concluded by October 2015.

The impact assessments and feasibility study (May, 2015) collectively comprise an exploitation (mining) licence application, in accordance with guidelines set by the Government of Greenland. GMEL will hand over the exploitation license application to the Greenland government for review, upon completion of the impact assessments.

Key components of the impact assessments and the contributing independent consultants are outlined below:

- **The Environmental Impact Assessment is being compiled by Danish environmental consultants Orbicon, who have extensive experience in environmental studies in Greenland and the regulatory system**
- **The Social Impact Assessment is being consolidated and reported by NIRAS of Denmark, who also have extensive Greenland experience**
- **Air quality studies have been completed by the experienced mining industry consultants Pacific Environment, based in Australia**
- **Water management studies on the fjord system have been evaluated by the world leading Danish Hydraulic Institute (DHI)**
- **Radiological studies have been completed by ARCADIS/SENES of Canada**
- **The radiation impact on workers has been completed by the Danish Technical University (DTU)**
- **Noise studies, hydrocarbon spill and local use studies were completed by Orbicon**



The completion of an exploitation license application for Kvanefjeld represents a major project milestone, and the culmination of technical studies addressing mineral resources, mining, processing and engineering studies, environmental baseline studies, and stakeholder engagement conducted since 2007.

The Company will look to update on time line and schedule for the permitting process, based on feedback from the Greenland Government.

GMEL is looking to develop Kvanefjeld as a globally significant producer of high-value critical rare earth concentrates, in the lowest cost quartile. The project will additionally produce a series of by-products that include uranium oxide, zinc concentrate, lanthanum and cerium products, and fluorspar.

Dr John Mair, Managing Director commented,

“Completing a mining license application and commencing the permitting process will be a major step in the path to project development. In parallel to the processing of the application, we will place increased focus on commercial aspects including off-take agreements, development partners and project finance. Project optimisation is underway, and we should see some significant reductions in capital costs as a result. We look forward to updating on these fronts as we continue to progress.”

Kvanefjeld – The Path to an Exploitation (Mining) License Application

Baseline Data for Environmental and Social Impact Assessments

The Kvanefjeld Project has a protracted history that commenced in the 1950's. Research and development on the project was first conducted by the Danish government backed group RISO (Denmark's National Laboratory). A high quality Pre-Feasibility Study was completed in 1983 that solely focussed on the production of uranium. An accompanying environmental impact assessment (EIA) was performed by RISO in 1990. This EIA incorporated years of baseline studies on the natural environment, which are valuable datasets for GMEL's development of Kvanefjeld. Investigations into Kvanefjeld by RISO ceased in 1990 due to a lack of continued government support.

GMEL commenced work on the Kvanefjeld Project in 2007, pursuing a polymetallic development strategy that included rare earth elements and zinc, in addition to the historically-investigated uranium. Meetings with local stakeholders and environmental impact studies on the project were initiated in 2007 during GMEL's first drilling season.



Figure 1. Much of the Narsaq Peninsula is an active erosional area, therefore understanding chemical dispersion by natural processes and the ‘baseline’ is all-important. GMEL has been monitoring water, sediment, soil, flora and fauna systematically as part of baseline surveys.

A steady dialogue has since been maintained with key departments of the central Greenlandic Government, the workers union (SIK), and the employees association (GA). The dialogue with the cross section of stakeholders has been of fundamental importance in determining the preferred development strategy.

Orbicon was engaged in 2007 to manage the baseline surveys and compile a report on the sampling. The environmental studies were performed on flora, fauna and water quality to establish baseline conditions before mining commences. In 2008 additional baseline surveys were completed by Orbicon, with the input from the Greenlandic authorities.



Figure 2. A Narsaq community information session held in April 2010. GMEL has looked to engage local and government stakeholders as work on Kvanefjeld has progressed toward finalising a mining license application.



Figure 3. Narsaq Open Day, held August 2010, which aimed to provide an overview of the mining life cycle, with an emphasis on the feasibility process, and environmental and social impact assessments.

Following further baseline studies in 2009 an environmental scoping document was prepared by the independent consultant Coffey Natural Systems. This was the first step in preparing an environmental impact assessment. Archaeological, radiological and dust surveys were added to the baseline surveys completed.



Figure 4. Scenes from the Open Day at Qaqortoq, the largest town in southern Greenland, in May 2011.

In 2010 further baseline surveys were completed at the project site to further build the datasets on existing conditions at the project site. A stakeholder ‘open day’ was held in Narsaq in August 2010 to provide information to the local community about mining, the feasibility process, and opportunities for the local populace.



Figure 5. Numerous weather stations have been installed and continue to collect baseline environmental data.

In March 2011, Danish consultants Orbicon and Grontmij were engaged to prepare a Project Brief document as part of the Scoping Phase for the project. This document was shared with the

Greenlandic authorities to set the path towards agreeing the 'Terms of Reference' for an exploitation license application.



Figure 6. Environmental monitoring in the Narsaq Valley, 2012.

Large scale stakeholder meetings were formally held (with approval from the Greenlandic authorities) in Qaqortoq (capital of the Municipality of Southern Greenland), Narsaq (nearest town to the project area) and Nuuk (capital of Greenland) during 2011 to provide information on the mining project. Feedback from Greenlandic authorities, Danish technical experts and the local community was incorporated into the Terms of Reference, approved in August 2011. This effectively approved all planned work programs needed to determine the social and environment impact of the project.

In 2012 baseline monitoring continued with the introduction of high volume dust sampling and further radiation surveys. This work culminated in Orbicon compiling a detailed description of the existing environment, which included assessments of potential tailings dam locations.

Baseline site survey work continued in 2013 with the studies compiled by Orbicon. Samples of process plant tailings were also laboratory tested to determine their chemical stability for long term dam storage. This work was performed by the independent Laboratory SGS Oretest in Perth, Australia.

In 2014 further baseline studies were performed with a high resolution radiation baseline survey completed by the expert consultant SENES (now ARCARIS).

Through the latter half of 2013, and early 2014, GMEL conducted a number of constructive and informative workshops with representatives of Greenland's Mining Licence and Safety Authority (MLSA), the Ministry of Industry & Mineral Resources, the Environmental Agency for the Mineral Resources Area (EAMRA) and the Kommune Kujalleq (southern municipality), to discuss the various development options available.

On the basis of these workshops, and in order to meet the requirements of Greenland's Mining Act that necessitates maximum possible in-country processing, GMEL set the preferred development strategy in mid-2014, with both the concentrator and refining stages to be conducted in Greenland.

Owing to modifications to Greenland's Mining Act, minor changes to the project scope, and a push for greater public involvement in mining projects, GMEL agreed with recommendations of the Greenland Government to hold a public hearing in late 2014 on the Kvanefjeld development strategy and Terms of Reference. This was an opportunity to increase public awareness and involvement, prior to finalising an exploitation license application and commencing the permitting process. As part of this hearing, the company presented to a public forum in Nuuk on the development strategy, and responded to questions.



Figure 7. GMEL Managing Director, Dr John Mair presenting in a public meeting in Nuuk in late 2014 (photo – Sermitsiaq).

GMEL has since incorporated the feedback from the Terms of Reference public hearing, and along with the Greenland Government, have compiled responses into a 'white book'. This has been completed and is currently in translation.

In May 2015 GMEL completed the Feasibility Study which will form part of the application for an exploitation licence. Further stakeholder meetings are planned in September 2015 as part of the SIA preparation. The EIA and SIA are both expected to be completed in October 2015 and submitted to the Greenlandic authorities to review prior to official acceptance, in accordance with standard process.



Figure 8. Key independent consultants that have contributed to the impact assessments for the Kvanefjeld exploitation license application.

Mining Licence Application Studies

The Government of Greenland requires a Feasibility Study (FS), Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) as the key inputs to an application for an exploitation licence. GMEL completed a Feasibility Study in May 2015 which outlines the capacity and configuration for the project.

Work on the EIA and SIA are now being finalised with the technical input studies complete, based on years of extensive baseline surveys completed by GMEL in conjunction with leading international consultancies.

The full exploitation licence application is expected to be completed in October 2015. GMEL is grateful for the expertise and experience of the independent consultants who have contributed to the EIA and SIA.

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ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy 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 multi-element deposit (rare earth elements, uranium, zinc), that stands to be the world's premier specialty metals project. A pre-feasibility study was finalised in 2012, and a comprehensive feasibility study was completed in May, 2015. The studies demonstrate the potential for a large-scale, long-life, cost-competitive production of high-value critical rare earths. Through 2015, GMEL is focussed on completing a mining license application in order to commence project permitting, in parallel to advancing commercial discussions with development partners. For further information on Greenland Minerals and Energy visit <http://www.ggg.gl> or contact:

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Greenland Minerals and Energy 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 and Ore Reserves

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 and Energy 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 and Energy Ltd and Mr Scott McEwing of SRK Consulting (Australasia) Pty Ltd.

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.