

Company Announcement, December 2<sup>nd</sup>, 2015

## **Kvanefjeld Update: Mining License Application Guidance Phase to Commence**

- **Documentation for Kvanefjeld Mining (exploitation) License Application complete, following extensive consultant and internal reviews**
- **Application includes Feasibility Study, Environmental and Social Impact Assessments**
- **Pre-hearing approvals complete; Company now progressing into permitting phase**
- **Request for guidance has been received and acknowledged by the Government of Greenland**
- **Application documents have now been made available to Greenland regulatory bodies to commence guidance**
- **Following guidance phase, commencement of application processing set for early 2016**

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### **Background**

Greenland Minerals and Energy Limited ('GMEL' or 'the Company') is pleased to advise that it has completed the documents for a mining (exploitation) license application for the Kvanefjeld Project. The Company is now well-placed to initiate the application for a mining licence, for EL 2010/02, the key exploration license that covers the northern Ilimaussaq Complex and contained mineral resources.

The completion of a mining license application represents the culmination of rigorous technical studies, onsite surveys and community consultation conducted since 2007. The Kvanefjeld Feasibility Study was completed in May, 2015, allowing the Company to then move to finalise the impact assessments. On August 11<sup>th</sup>, 2015, GMEL updated on the extensive background work conducted since 2007 that has contributed to the environmental and social studies.

The impact assessments have been through extensive internal and consultant reviews during October. All application components are now ready for guidance from the Greenland government. This phase is designed to ensure the application covers all necessary requirements, and to determine which components are to be translated for the public hearing process.



GMEL is confident that the studies are thorough and comprehensive, drawing on input from leading international consultancies. The Company has conducted extensive engagement with a cross section of stakeholders in Greenland to identify a development strategy that meets the requirements of the Greenland's Mineral Resources Act, and the expectations of the local community/municipality. The development strategy was taken through a public-prehearing process, in association with establishing the Terms of Reference.

GMEL announced on 25<sup>th</sup> November, 2015 that the Greenland Government has approved the public pre-hearing 'White Paper' and 'Terms of Reference'. These approvals clear the path for the Company to commence application guidance, and progress into the permitting phase.

### **Environmental Impact Assessment**

The EIA report ensures the project complies with the provisions of the Mineral Resources Act on environmental protection, nature conservation and climate protection. The EIA has identified areas of potential risk and mitigated these risks by providing environmental solutions. The entire project lifecycle is covered from construction, operations, closure and post closure.

The information contained in the report is the culmination of several years of studying the natural environment around the project area, technical studies and public consultation. Refer to the company announcement dated 11<sup>th</sup> of August 2015 for more information on the extensive environmental baseline studies. The EIA was written and compiled by the independent Danish consultant Orbicon. Specialist technical contributions were also performed by the following independent consultants: Arcadis, Danish Hydraulic Institute, Pacific Environment and the Technical University of Denmark.

### **Social Impact Assessment**

The SIA activities and reporting was completed by the Danish independent consultant NIRAS. The studies have been performed to meet Greenland guidelines based on best international practice and earlier experiences from stakeholder processes. The report documents baseline data before the project is initiated and analyses the impact of the project. Actions to reduce negative impacts and enhance positive impacts are analysed. Relevant stakeholders were involved throughout the process to gain necessary feedback. The inclusion of Greenlandic labour and opportunities for local enterprises from the project are identified and discussed.

### **Guidance Period**

The next stage of the application process is to submit the Mining Licence Application documents, for guidance. During this time the Government of Greenland and it's advisors (examples include Danish Centre for Environment and Energy and the Greenland Institute of Natural Resources) will review the reports for content adequacy and compliance. Feedback will be incorporated into the reports prior to public review.

The Company has specifically designed the project to meet the requirements of the Government of Greenland. This includes value adding in Greenland to produce advanced rare earth products and final uranium products. This can only be achieved by establishing a mine, concentrator and

specifically a refinery to treat the rare earth- and uranium-rich mineral concentrate in Greenland. This provides the most social benefits to Greenland in the forms of jobs and taxation revenue.

The process design has carefully considered the environmental impact of the project during the construction, operations, closure and post-closure phases. Treatment and abatement have been applied to all emissions to meet Greenland and European standards. The design of tailings dams has carefully considered what is best for the local environment and nature of the tailings, as well as preserving opportunities to extract further value from the tailings.

GMEL would like to acknowledge the professionalism and efforts of the following independent consultants who contributed to the mining license application.

**Key Consultants:**



NIRAS is an international, multidisciplinary consultancy company with over 1400 employees located in offices in Europe, Asia and Africa. NIRAS provides impartial consultancy in a variety of fields such as construction, infrastructure, utilities, environmental and natural resources. They acted as the lead consultant for the Social Impact Assessment:



Orbicon is a well-respected Danish Consulting group with extensive experience in preparing Environmental Impact Assessments for Greenlandic mining projects. Orbicon acted as the lead independent consultant for the Environmental Impact Assessment:



Arcadis is a specialist radiation, environmental and civil engineering consultant who provided technical reporting for the aspects of the project that involve radiation. Arcadis is based in Canada with extensive experience in providing technical support to rare earth and uranium mining projects.



The Danish Hydraulic Institute is a global leader in water science and engineering. DHI are headquartered in Denmark, however, solve water problems around the world. DHI performed an evaluation of the impact of the project on the local fjords.



Pacific Environment is an internationally-recognised consultancy with specific scientific expertise in environmental emission assessments. They provided predictive management of the dust emissions from the project.



The Technical University of Denmark evaluated the impact of radiation on plant workers and reviewed radiation baseline studies. They are well recognised as Danish leaders in radiation assessments and technical consulting.



Blue Water Shipping are Danish based shipping company with extensive experience in providing shipping services within Danish and Greenlandic waters. Their experience and practical knowledge was applied to the Maritime Safety Study where they acted as lead independent consultants.



Tetra Tech Proteus was the main contributing independent consultant for the Feasibility Study. Tetra Tech are a global engineering company based in North America. They have extensive experience in developing mining and infrastructure projects in cold climate environments.



Ramboll are the largest consulting company in Denmark with extensive experience in a variety of infrastructure projects. They were engaged to perform the Feasibility Study design of the new port facilities. The construction of the new port facilities is an area where Danish industry can competitively supply construction & design services.

#### **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, multi-element mining operation. 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.

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#### **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 12<sup>th</sup>, 2015. The ore reserve estimate was released in a Company Announcement on June 3<sup>rd</sup>, 2015. There have been no material changes to the resource estimate, or ore reserve since the release of these announcements.