

Company Announcement, Wednesday 16<sup>th</sup> October, 2013

# Greenland Minerals Progress Environmental and Social Impact Assessments on the Kvanefjeld Project

Greenland Minerals and Energy Limited ("GMEL" or "the Company") recently concluded a number of work programs in Greenland that contribute to feasibility studies and environmental and social impact assessments on the Kvanefjeld project (rare earth elements, uranium, zinc). Work programs included:

- Another round of environmental baseline monitoring, building on data gathered in previous years,
- Further background radiation monitoring,
- Geological and geotechnical mapping in potential infrastructure locations,
- Ongoing stakeholder engagement that included presentations to the smaller settlements outside the main townships of south Greenland,
- Workshops with representatives from Greenland's Bureau of Minerals and Petroleum (BMP)
   to review the requirements and scope of an exploitation license application

## **Environmental Baseline Studies**

GMEL has been conducting extensive environmental baseline studies in the Kvanefjeld project area for several years, as a basis to evaluate the potential environmental impacts of a mining operation. The baseline studies provide an indication of the natural chemistry of the broader project area, and the background concentrations of many chemical elements in soil, water, dust and biological matter. The Ilimaussaq Alkaline Complex is the geological entity that hosts defined mineral resources, and is renowned for its unusual minerals and chemistry. Rocks of the Ilimaussaq Complex are actively eroded into the Narsaq valley and surrounding areas, resulting in naturally elevated levels of a number of trace elements (Figure 1).

The environmental baseline studies have been conducted in conjunction with Orbicon, GMEL's primary environmental consultant. This year a botanical survey was completed and marine biota along the fjord at the base of the Narsaq valley were sampled for analysis of ecotoxicological and radioactivate components. Freshwater and stream sediment sampling stations were revisited to build on data gathered in previous years, with samples also to be analysed for ecotoxicology and radioactivity. Terrestrial sampling stations were also revisited with samples of both soils and lichens collected.





#### **Background Radiation Monitoring**

Comprehensive background radiation monitoring was also undertaken in the broader project area along with the town of Narsaq, and builds on data gathered over several years.

Short term (several days) passive monitoring of radon and thoron was conducted and long term (three month) monitoring devices will be collected sequentially over the coming months. Water and soil samples were also collected for radionuclide analyses. High volume air samplers have recently been installed for the purpose of dust and air monitoring.

A gamma radiation survey was also conducted to repeat the surveys carried out in previous years. New additional points in the Narsaq valley were included to provide more detailed coverage from the town of Narsaq to where ore material outcrops on the Kvanefjeld plateau.



**Figure 1.** An overview of the Narsaq Peninsula, south Greenland, and the broader Kvanefjeld project area. Infrastructure to support the proposed mining operation would mostly be located within the Narsaq valley. The Ilimaussaq Complex is comprised of extremely alkaline and unusual rock types that have been actively eroded into the surrounding environment. JORC-code compliant mineral resources have been established at Kvanefjeld, Sørensen and Zone 3. Mining is proposed to commence at the Kvanefjeld deposit which is conducive to simple open-pit mining methods.

#### **Geotechnical Mapping**

Geological and geotechnical mapping programs were undertaken in areas that are currently being investigated as potential infrastructure sites. These programs set out to assess foundation conditions including rock and soil types, as well as identifying potential geohazards and areas that require further geotechnical drilling. The outcomes provide important information to support the selection of infrastructure locations.

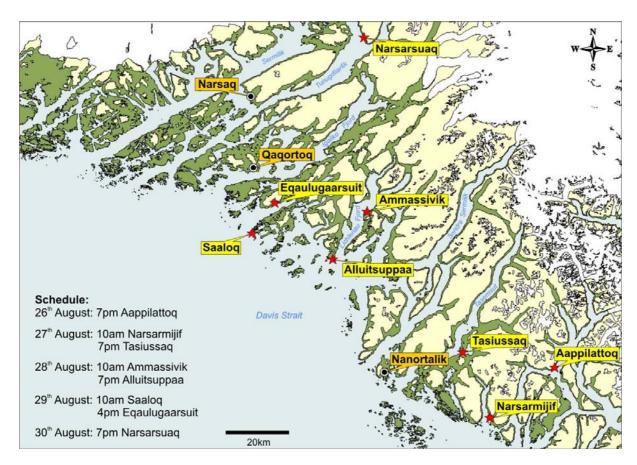
### **Stakeholder Engagement Program**

GMEL has maintained an active stakeholder engagement program in relation to the Kvanefjeld project since 2008. This has primarily focussed on participating in community hall meetings in the main townships of south Greenland, which includes Narsaq, Qaqortoq, and Nanortalik. The aim of these meetings is to provide updates on the Kvanefjeld project and potential development scenarios, and importantly to identify the key areas of interest from the local populace. These forums provide the opportunity for local stakeholders to put forward questions, voice concerns and identify areas where they would like further information.

In south Greenland, the majority of the populace live in the three major towns, however, a considerable proportion lives in settlements outside of these townships. GMEL personnel recently undertook a tour of these regional settlements to present overviews of the Kvanefjeld project, and to provide a forum in which people could put forward questions. The settlement tour was aimed to ensure that all local stakeholders in south Greenland are included in the ongoing dialogue surrounding the potential development of the Kvanefjeld project.

Eight settlements were visited where presentations were made and followed by informal discussions (Figure 2). The presentations focussed on the potential development scenarios for the Kvanefjeld project, and the work programs involved in the environmental and social impact assessments. The meetings were all well attended, with the most frequently asked questions focussed on employment opportunities, and the environmental and social impacts.

In early 2014, GMEL is aiming to finalise the configuration of the Kvanefjeld project with input from Greenland stakeholders and regulatory bodies. The Company will then look to finalise an exploitation license application for the Kvanefjeld project. Continued stakeholder engagement initiatives will be carried out through this important period.



**Figure 2.** An overview of southern Greenland highlighting the three major towns of Qaqortoq, Narsaq and Nanortalik, and the communities visited on GMEL's recent settlement tour. The Kvanefjeld project is located approximately 10km to the northeast of Narsaq. The exercise represented an important part of the Company's broader stakeholder engagement program, and ensures that efforts have been made to provide forums to discuss the Kvanefjeld project with the majority of the south Greenland populace.

Yours faithfully,

Roderick McIllree

Managing Director

Greenland Minerals and Energy Ltd

#### 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 100% owned Kvanefjeld multi-element deposit (Rare Earth Elements, Uranium, Zinc), that is rapidly emerging as a premier specialty metals project. A comprehensive pre-feasibility study has demonstrated the potential for a large-scale, cost-competitive, multi-element mining operation. For further information on Greenland Minerals and Energy visit <a href="http://www.ggg.gl">http://www.ggg.gl</a> or contact:

Roderick Mcillree Managing Director +61 8 9382 2322

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.

The information in this report that relates to exploration targets, exploration results, geological interpretations, appropriateness of cut-off grades, and reasonable expectation of potential viability of quoted rare earth element, uranium, and zinc resources is based on information compiled by Mr Jeremy Whybrow. Mr Whybrow is a director of the Company and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Whybrow has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Whybrow consents to the reporting of this information in the form and context in which it appears.

The geological model and geostatistical estimation for the Kvanefjeld and Zone 2 deposits were prepared by Robin Simpson of SRK Consulting. Mr Simpson is a Member of the Australian Institute of Geoscientists (AIG), and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Simpson consents to the reporting of information relating to the geological model and geostatistical estimation in the form and context in which it appears.