



Company Announcement, February 28th, 2013

Kvanefjeld Feasibility Studies Well Advanced: Implementation Strategy Set to Reduce Project Risk

In May, 2012 Greenland Minerals and Energy Ltd ("GMEL" or "the Company") released a prefeasibility study on the Kvanefjeld rare earth element – uranium project, located in southern Greenland. The prefeasibility study (PFS) draws upon substantial test work and technical studies, and involved a rigorous flow-sheet selection process to determine the optimal means of treating Kvanefjeld ores. The PFS outcomes indicate the clear potential for Kvanefjeld to be developed as a long-life, cost-competitive producer of rare earth concentrates and uranium oxide.

Since releasing the Kvanefjeld PFS, further technical advances were made that serve to improve the study outcomes significantly. A PFS update was released in August 2012 outlining simplifications to the proposed processing circuit that result in a reduction in capital costs, and a 27% increase in the output of rare earth concentrate. The substantial increase in rare earth recovery and output has driven the Company to evaluate a smaller start-up capacity for Kvanefjeld than the 7.2 Mt capacity evaluated in the PFS. A reduction in the initial rare earth production capacity reduces the market risk brought about by the material improvements in rare earth recovery, and also serves to significantly reduce the capital costs of project development.

The process flow sheet that has been developed for Kvanefjeld involves two main stages; firstly a beneficiation circuit, utilising froth flotation that concentrates the REE-U rich minerals into a low-mass high-grade mineral concentrate; and secondly a refining circuit to extract REEs and uranium from the mineral concentrates and produce marketable products. The concentrator by necessity is required to be located in close proximity to the mine; however, owing to the Company's success in delivering a high ore-to-concentrate upgrade ratio via a simple beneficiation circuit, there is considerably greater flexibility in regard to the location of the refinery.

In the 2012 PFS study GMEL considered establishing the refinery in southern Greenland, in close proximity to the mine and concentrator. However, the Company has since conducted trade-off studies to investigate the potential of establishing the refinery outside of Greenland. These studies take into account economic and logistical considerations, stakeholder input, and social and environmental impacts.

The concentrator circuit has relatively simple infrastructure requirements whereas the refining stage requires the more complex infrastructure including acid production facilities. Offshore locations with well-established industrial infrastructure, readily available reagents and power, a skilled labour force and a regulatory framework to effectively manage radioactive materials are all key points of focus in establishing a refining location. The costs of shipping mineral concentrate from Greenland to an offshore refinery will be offset by removing the requirement of shipping reagents into Greenland and operating in a location where both reagent and power costs will be cheaper.



Importantly, the mine and concentrator have always presented a much greater proportion of job opportunities for the Greenlandic populace than the refinery, which requires a higher proportion of specialised skills.

The establishment of a refinery overseas will mean a smaller project footprint in Greenland, which is anticipated to:

- reduce social and environmental impact;
- reduce approvals risk;
- reduce project risk;
- reduce capital costs; and
- increase financial returns.

On the basis of developments outlined above, GMEL has focussed the implementation strategy for Kvanefjeld to an initial mine throughput of 3 Mtpa with an expansion to 6 Mtpa, with the refining stage of the project to be conducted off-shore. The Company is finalising a study for the establishment of a 3Mtpa Mine and Mineral Concentrator in Greenland and expects to complete the studies for an Off-Shore Refinery during 2013. Outcomes of the Mine and Mineral Concentrator study will be released in March 2013.

Test work for both the concentrator and refining stage are well advanced. Pilot plant operations of the concentrator circuit are complete, technically de-risking this aspect of the project. Continuous test-work programs on the refining stage have been completed confirming a highly favourable conventional atmospheric acid leach; with patent applications lodged in November 2012 under the Patent Cooperation Treaty.

The Company has initiated a detailed independent study into refinery locations and has additionally commenced discussions with a number of industry participants in relation to their potential involvement in the development of an offshore refinery.

GMEL is confident that Kvanefjeld will continue to present a very robust economic proposition at a lower initial mine throughput. The results achieved in the recent pilot plant operation of the concentrator circuit delivered improved REO and uranium grades (and upgrade ratio) over those used previously in the design criteria, and confirm the amenability of the ore to a readily scalable, conventional beneficiation/atmospheric leach process. A lower throughput will diminish market risk associated with high initial volumes of rare earth output, and will additionally serve to de-risk financing Kvanefjeld's development through the significant reduction of capital costs. Once Kvanefjeld's market position is consolidated, expansions will allow Kvanefjeld's maximum potential to be realised via a low-risk implementation strategy.

The Company continues to position Kvanefjeld to be an important new large-scale producer of heavy and light REO's in concentrate with a dominant position at the low end of the production cost curve. Kvanefjeld is increasingly well positioned to achieve this goal with a highly accessible world-class REE-U resource, rigorously-developed simple and efficient concentrator and refinery circuits, and a

multi-element production base that stands to generate significant revenues from uranium and zinc by-products.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'R. McIlree', is positioned above the printed name.

Roderick McIlree

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 <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.

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.