Greenland Minerals and Energy Limited: Kvanefjeld Feasibility Study

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Greenland Positioned to Become a Critical Rare Earth Producer of International Significance

Study Highlights

- The Kvanefjeld resource (>1 billion tonnes, JORC-code 2012) will support an initial mine life of 37 years and provide scope to both expand production and extend the life of the mine significantly.
- The Project will produce rare earth products, uranium oxide, zinc concentrate and fluorspar.
- The capital cost of the Project is $1,361M, comprising $1,121 M of project costs (plant, utilities, indirect costs and contingency) and US$240 M of associated infrastructure costs (power, port, village).
- The cost of producing the primary product, a critical rare earth concentrate, is US$8.56/kg REO (after by-product credits) making Kvanefjeld one of the world's lowest cost rare earth producers.
- The Project has an after tax net present value of US$1.4 Billion (at a discount rate of 8%) and an internal rate of return of 21.8%.
- The forecast basket price for the Company's critical rare earth concentrate is US$78.6/kg REO producing an operating margin of approximately US$70/kg.
- The incremental cost of recovering the uranium from the high-grade mineral concentrate is less than US$6/lb U_3O_8, which will place Kvanefjeld into the bottom quartile of the cost curve for current uranium production

PERTH, May 25, 2015 - Greenland Minerals and Energy Ltd. ('GMEL' or 'the Company') (ASX:GGG) (OTC PINK:GDLNF) (FRANKFURT:G7P) is pleased to announce the completion of a Feasibility Study (the Study) into the development of the Kvanefjeld rare earth - uranium Project (the Project). The Project, located in southern Greenland, comprises several large multi-element deposits rich in rare earth elements, uranium and zinc. Collectively, these deposits represent one of the world's largest identified mineral resources of rare earths and uranium.

Background

The Kvanefjeld Feasibility Study incorporates extensive technical, environmental and social studies conducted and commissioned by GMEL over the past seven years. The Study Base-Case evaluates the development of a mine, mineral concentrator, refinery and supporting infrastructure located in the south west of Greenland treating 3.0 million tonnes per annum of ore.

The Project is located near existing infrastructure and townships in southern Greenland, with direct shipping access year round, and an international airport only 35 km away.

The Project's primary product will be a critical mixed rare earth oxide concentrate. Critical rare earths are those rare earths, particularly important for green technologies, which are forecast to be in short supply over time (neodymium, praseodymium, europium, dysprosium, terbium, and yttrium).

Kvanefjeld will also produce uranium oxide, lanthanum and cerium products, zinc concentrate and fluorspar. The project economics are relatively insensitive to the pricing of these by-products.

Favourable Metallurgy

A key strength of the Project is its attractive metallurgy. The Project's unique rare earth and uranium bearing minerals can be concentrated into less than 10% of the original ore mass utilising froth flotation. The minerals are also non-refractory and can be effectively treated using an atmospheric sulphuric acid leach.

There is no requirement for complex mineral "cracking". The process flow sheet has been rigorously developed by GMEL, and has been the subject of extensive test work, including three pilot plant campaigns.

Rare Earth Business Strategy

GMEL continues to advance its dialogue with China Non-Ferrous Metal Industry's Foreign Engineering and Construction Co. Ltd. (NFC) under the terms of a 'Memorandum of Understanding'. NFC and GMEL are working to cooperate on the separation of the critical rare earth concentrates from Kvanefjeld into high-purity individual rare earth oxides, and the subsequent product marketing to end-users globally. NFC is a leader in rare earth separation technology and is also a highly-reputed engineering, procurement, construction (EPC) contractor. NFC was involved in the preparation of the Feasibility Study and completed the capital cost estimate based on detailed engineering design conducted by Tetra Tech Proteus.

Changes from Previous Kvanefjeld Study

The capital cost of the Project has increased since GMEL released the results of its 'Mine and Concentrator Study' in 2013. The increase reflects the fact that, in order to comply with Greenland's Mining Act, which requires that as much downstream processing as feasibly possible be conducted in Greenland, the Project's refinery has been relocated to Greenland. The Mine and Concentrator Study had considered the establishment of a dedicated rare earth refinery outside of Greenland in an industrial environment served by appropriate infrastructure. In addition to this change, lanthanum and cerium separation has been introduced to the refining circuit. Despite the increase in capital cost, the NPV generated by both studies is similar, largely due to improved processing efficiency and product recoveries.

Conclusion

The Kvanefjeld Feasibility Study represents a major Project milestone, and, along with environmental and social impact assessments, is a key component of an application for an exploitation (mining) license. GMEL is aiming to complete the environmental and social impact assessments in Q3, 2015, and will subsequently lodge an exploitation license application with the Greenland government.

Dr John Mair, the Managing Director of GMEL, said:

"The Feasibility Study presents a very compelling case for the development of Kvanefjeld, and emphasizes the project's standing as a globally-unique mining opportunity. Our aim was to deliver a study conducted with a lot of rigour that draws on conservative assumptions and is still able to return strong economic metrics.

"The development strategy takes on board technical, regulatory and market considerations. The strategy to develop Kvanefjeld as a dominant long-term producer of critical rare earths, at the low end of the cost-curve is very much on track.

"We look forward to completing the impact assessments in order to finalise an exploitation license application and commence the permitting process later this year."

To see the full ASX announcement go to
http://www.ggg.gl/docs/ASX-announcements/Kvanefjeld-Feasibility.pdf.

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 comprehensive pre-feasibility study was finalised in 2012, and the feasibility study will be completed in 2015. The studies demonstrate the potential for a large-scale, 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.

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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