

ASX ANNOUNCEMENT: 19 October 2011**Beneficiation Breakthrough and
Outlook**

Open Briefing with CEO Rod McIlree



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Greenland Minerals and Energy Limited (ASX: GGG) is an exploration and development company focused on the Kvanefjeld (100%) multi-element deposit (Rare Earth Elements, Uranium and Zinc) project in Southern Greenland.

Market Capitalisation: \$238 million

In this Open Briefing®, Chief Executive Officer Rod McIlree discusses:

- **Technical beneficiation breakthrough**
- **Project development studies**
- **Project & funding outlook**

Open Briefing interview:

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Greenland Minerals and Energy Limited (ASX: GGG) has announced a technical breakthrough in the beneficiation of the rare earth element and uranium (REE-U) minerals proposed to be mined at Kvanefjeld. In a 15-hour pilot test GGG has successfully produced a higher-grade mineral concentrate using a simple flotation process. How much more testing is required to determine whether this method is applicable and scalable for the tonnages proposed?

CEO Rod McIlree

The breakthrough in beneficiation came about when we identified an effective means of isolating the key economic mineral group at Kvanefjeld with bench-scale work. We've now scaled that up to the next level in a pilot test, and have achieved a highly successful outcome. Flotation is a proven technique across the minerals sector, and there's nothing to indicate that further up-scaling will be problematic. As a result, we're confident the beneficiation circuit will be suited to the ore we're looking to process, and to the scale at which we want to mine.

Beneficiation was always going to bring about major improvements in overall efficiency as well as reductions in capital and operating costs. Whilst there's more optimisation work to do, several of the main technical developments have now been achieved with the rest to be announced in the coming months. It is rare to find projects that offer the potential to effectively increase the ore grades by more than 10 times through a simple beneficiation step. This is a very important development in the evolution of the Kvanefjeld project.

The piloting has also been important in that it has generated bulk mineral concentrate which we can use to conduct downstream leaching studies, enabling us to identify the most effective leaching method. We anticipate having technical updates on the leach studies through the coming months.

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If successful on a larger scale, how will the beneficiation process affect your current feasibility studies, including forecast production and earnings, and what changes will it mean for your current estimates of the resource base?

CEO Rod McIlree

The resource base at Kvanefjeld is already very large, and initial resource calculations are due out for two new satellite deposits in early 2012. Given the advantage of having a very large resource base, our focus has been on establishing the most efficient and cost-effective way to process the material. We've also been conscious of identifying a development scenario with the least market risk.

The breakthrough in beneficiation provides a clear path to a more efficient operation, and also brings about greater flexibility: treating a higher-grade, lower-mass mineral concentrate opens up more leaching options than were previously available. We're aiming for a primary leach stage that effectively leaches uranium and heavy REEs, and we've identified a number of solution chemistries to do this. Under this scenario light REEs remain with the mineral residue, but in an easily leachable form. This would see Kvanefjeld developed as a uranium-heavy REE project that also produces a very large light REE-rich stockpile. The stockpile can then be processed independently of the uranium-heavy REE leach circuit. Importantly, this removes the market risk of being dependant on producing, and having to sell a vast volume of light REEs, but leaves us the option of cheaply producing large volumes of light REE product according to demand.

This fits with our view that light REEs won't retain their current high prices over the mid to long term, but heavy REEs will remain high-value materials of great strategic importance for many years to come. We aim to be a dominant supplier of heavy REEs and a large-scale producer of uranium oxide while retaining the option of cheaply producing a light REE product depending on market demand.

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Would implementation of the beneficiation process require significant additional cost in the engineering, planning and construction of the proposed plant?

CEO Rod McIlree

The beneficiation circuit will require additional investment, but that will be more than offset by the substantial cost saving associated with the significant downsizing of the hydro-metallurgical leach circuits, which currently account for a large proportion of overall capital costs. From a metallurgical perspective, it will mean the leach stage of Kvanefjeld doesn't have to be a large, high-capital-cost processing plant, as we're now looking to treat less than 20% of the original mass at much higher grades.

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Test work on the beneficiation process is currently being fast tracked by GGG and the outcome evaluated against the previous pre-feasibility study. What is the time line for this testing and evaluation and when do expect to deliver a definitive feasibility study (DFS)?

CEO Rod McIlree

At the start of 2010 we released an initial development scenario for Kvanefjeld that we consider as the base case for the project. The base case is a large-scale operation with a lot of strong technical work underpinning it, and the economic metrics look very robust. However since then, our research and development program has identified technical opportunities for alternate development scenarios based around a highly efficient beneficiation circuit. There are obvious advantages to this and following recent developments, the team is on track to deliver an alternate development scenario by the start of 2012.

The piloting success will allow us to fast track the leach studies to firm up the downstream end of the flowsheet. The sooner we lock this in the better. We'll then be looking to compare the base case study and a new alternate scenario through trade-off studies, and lock in our final go-forward flowsheet late in Q1 2012. This is in accordance with a broader development timetable, so we're right on track.

Following that decision, we'll be moving straight into detailed engineering design, with the aim of establishing a pilot plant through the later half of 2012. Our environmental and social impact assessments are on track to be completed by late in 2012, and we should be drawing the DFS process to a close in late Q2 2013.

It's a very exciting time for our company. Over the course of the next few months our technical news flow will clarify the true potential of the Kvanefjeld project, and the way it is now shaping up is extremely compelling. Kvanefjeld has always been a unique project with vast potential. We're getting very close now to unveiling that extraordinary potential.

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What is the estimated cost of the DFS for Kvanefjeld? Is GGG currently funded sufficiently to deliver the DFS? What method of funding is most likely for the project and is it your intention to bring in a joint venture partner or seek a substantial off-take agreement in the development phase?

CEO Rod McIlree

We cannot offer any comment on the funding issue at this stage, apart from the fact that for some time, the company has been conducting detailed discussions under confidentiality agreements with several international consortiums regarding development scenarios and we expect to make announcements in this regard in the first half of next year. Any developments of these discussions will inevitably factor into how we fund the DFS as well as the Kvanefjeld Project's development.

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Thank you Rod.

For more information on Greenland Minerals and Energy, visit www.ggg.gl or call Rod McIlree on +61 8 9382 2322.

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