

Advancing Kvanefjeld, the world's premier specialty metals project, toward development

Kvanefjeld is favorably located near the southern tip of Greenland

334 Mt JORC compliant multi-element resource (REE, U, NaF) with huge upside potential

Environmental studies well advanced

Greenland Minerals and Energy Ltd is an mineral exploration and development company focused on unlocking the mineral riches of southern Greenland. The company is listed on the Australian Securities Exchange.

ASX Code: GGG, GGGO

Website: www.ggg.gl

Contact Details:

First Floor
33 Colin Street
West Perth
Western Australia, 6005

Tel: +61 8 9226 1100
Fax: +61 8 9226 2299

Enquiries: info@ggg.gl

December 2008 Quarterly Report

Friday, 30th January 2009
ASX Company Announcement

Highlights

- *Greenland votes for independence in referendum, will gain total control of the rights to its natural resources (currently shared with Denmark), and voices intent to establish resource based economy*
- *Parliamentary debate in Greenland demonstrates strong support for by-product uranium production, which would allow specialty metals projects to advance*
- *Appointment of Mr Michael Hutchinson as Non-Executive Chairman; Dr Hans Kristian Schønwandt moves to Non-Executive Director*
- *Pre-Feasibility Study on Kvanefjeld multi-element project launched*
- *Coffey Mining and GRD Minproc engaged as key consultants*



ACN 85 118 463 004

PERTH: First Floor, 33 Colin Street, West Perth, Western Australia 6005. Postal: PO Box 1304, West Leederville WA 6901
Telephone: +61 8 9226 1100 Facsimile: +61 8 9226 2299 Website: www.ggg.gl
LONDON: 47 Charles Street, Mayfair, London W1J 5EL GREENLAND: PO Box 156, Narsaq, Greenland 392



Introduction

The December quarter proved to be another significant period in the rapid evolution of Greenland Minerals and Energy (“Greenland Minerals” or “the Company”), despite the continued global economic downturn. A number of important events took place that helped in building a solid foundation for substantial growth in 2009. Whilst the near- to mid-term outlook for base metals is unfavourable, the outlook for rare earth elements and uranium remain robust. In 2009 Greenland Minerals is poised to reach several key milestones, and is well funded to carry out all the necessary work programs.

In May 2008, the company released a first JORC-compliant resource estimate on the Kvanefjeld rare earth element, uranium and sodium fluoride deposit. This resource estimate was subsequently updated in August, and provides a clear indication of Kvanefjeld’s potential to become the world’s premier specialty metals project. Particularly given that the current resource estimates are yet to incorporate any results from the 2008 field program in which a further 19,300m of core were drilled. Details of the 2008 field program are summarized in the September Quarterly Report, available on the Company’s website (www.ggg.gl), under ‘Investor Information’.

In this report, updates on political developments in Greenland are outlined, along with the positive results from the parliamentary debate on the mining of uranium-bearing polymetallic ores in Greenland, which directly impacts the future of the Kvanefjeld project. Also during the December quarter, the Company appointed a new Non-Executive Chairman, Mr Michael Hutchinson, who brings a wealth of experience and credibility to the company. On the basis of the 2008 resource estimates, the robust outlook for rare earth metals and uranium, and the positive outcome of the Greenland parliamentary debate on by-product uranium production, the Company has launched a pre-feasibility study on the Kvanefjeld project. Coffey Mining and GRD Minproc have been engaged as the main consultants for the pre-feasibility study.

Political Developments in Greenland

On 25 November, 2008 a referendum was held in Greenland to address independence from Denmark. An estimated 71% of the population voted, with approximately 75% of voters in favour of increased autonomy from Denmark. This will see a shift from the current status of “home rule” to “self rule”, with the Greenlandic national day of June 21st (2009) slated as the date that self rule will commence. At that point, the Greenlandic government can request the transfer of certain government departments to their control. The transfer of mineral rights has been stated in Greenlandic newspapers as one of their highest priorities, in recognition that increased independence will require new industries to drive the economy that has heavily relied on Danish subsidies for so long. Greenland has immense mineral and hydrocarbon potential, and is now pushing for the development

of large natural resource projects to boost employment and form a basis for Greenland's future economy. Importantly, after the transfer of mineral rights Greenland will have full legislative and administrative power over their natural resources, rather than sharing it with Denmark. For mineral explorers and mine developers, this is hugely advantageous as Greenland is prioritizing mine development, and it will become one political system managing the natural resource sector rather than the existing and inherently complex shared structure with Denmark.

Greenland's stance on uranium mining was also debated by Greenland's parliament during November 2008, with a strong majority of politicians agreeing that *by-product production of uranium* should be included on exploration licenses, which would give the green light to the development of multi-element, or polymetallic ore bodies that contain uranium. The debate took place in recognition that if the government did not address the issue in the short term, mineral exploration and development groups would be discouraged from advancing projects. Importantly, southern Greenland is one of the world's most significant specialty metal provinces, with resources that could arguably underpin the most competitive mining operations of their kind. With uranium present in most specialty metal occurrences (in relatively low concentrations), the current stance prohibits the development of what could be one of Greenland's most important and robust industries.

The outlook for specialty metal demand, specifically rare earth elements, remains robust due to their essential requirement in many emerging technologies. In contrast, the outlook for base metals is increasingly pessimistic as the world's developing economies slow dramatically. This emphasises that specialty metal mines are likely to be Greenland's most viable mining operations for the foreseeable future. If it can be demonstrated that uranium can also be extracted from specialty metal ores with minimal environmental and health and safety risks, then it would serve to improve the economic viability of relevant specialty metals projects, such as Kvanefjeld, and produce further revenues for Greenland.

The Company will be engaging in ongoing community consultation programs to ensure that all interested parties have a clear understanding of the facts involved in all aspects of a mining operation at Kvanefjeld.

Appointment of New Non-Executive Chairman

In November 2008, the Company announced the appointment of Mr Michael Hutchinson as Non-Executive Chairman. Mr Hutchinson is also the Non-Executive Chairman of RBS Sempra Commodities, and is a longstanding director of the London Metal Exchange, the world's largest market in options and futures contracts on base and other metals. Mr Hutchinson brings a wealth of experience to the board, and his visibility in global financial markets will benefit the Company immensely as it advances the Kvanefjeld project. The appointment of a chairman of Mr Hutchinson's calibre is testament to both

the quality and potential of the Kvanefjeld project, as well as the Company's management, strategy and progress to date.

Former Chairman, Dr Hans Kristian Schønwandt is moving to the position of Non-Executive Director, and will continue to play an integral role for the Company, particularly in regard to strengthening relationships in Greenland, and continued technical input into the Kvanefjeld project. Dr Schønwandt has been critical in guiding the company through its rapid evolution to date.

Overview of Pre-Feasibility Study

Following the two highly successful exploration campaigns and rapid resource growth, the Company has launched a pre-feasibility study on the Kvanefjeld multi-element project. This was further justified by the strong show of support from Greenland's parliament in late 2008, with the positive debate outcome on by-product uranium production. The pre-feasibility study is scheduled for completion by late in Q3 to early Q4 2009. The study will encompass several key milestones, including the development of a process flow sheet that will map out the processing route to extract the commodities of interest from the Kvanefjeld ore. Previous work by the Danish Atomic Energy Agency (now RISO) identified a viable way to extract uranium. However, given the emerging economic and strategic significance of specialty metals the Company is taking a multi-element approach with other process routes being evaluated to maximise specialty metal recoveries and the economic viability of the project.

Owing to the increasing profile of the Kvanefjeld project, the Company has successfully engaged some of the most highly regarded consulting groups in the minerals industry. **Coffey Mining Pty Ltd** has been engaged to carry out mine studies and develop mine plans. **Coffey Natural Systems** will be managing environmental studies, which are already well advanced. **GRD Minproc** has been engaged to drive process development and plant design. Key personnel from the studies undertaken by RISO on the Kvanefjeld project in the late 1970's and early 1980's, including the project manager, have also been engaged.

Review of Historic Work

During the 1970's and early 1980's the Danish government, through RISO and the Geological Survey of Greenland, commissioned a series of high quality studies to assess the viability of Kvanefjeld as a potential uranium resource. Their work included exploration and resource definition, detailed environmental studies, socio-economic impact studies, infrastructure studies that included investigations into hydro-electric power. Mine plans were established and included plant location and identification of appropriate sites for tailings disposal. A series of metallurgical programs were run to identify a viable route to extract uranium. This culminated in the development of a pilot plant to test high pressure carbonate leaching on bulk samples extracted from Kvanefjeld.

In the early 1980's, despite the extensive studies and significant advances, work on the project ceased due to a change in the political sentiment toward nuclear energy that emerged globally.

Greenland Minerals has recently engaged Jergen Jensen, who managed the Kvanefjeld project for RISO through the late 1970's and early 1980's, to contribute to the Company's metallurgical studies, and ensure that the results of all the previous test work are incorporated into the current metallurgical program.

Mineralogical Studies and Ore-Type Classification

As part of the pre-feasibility study, the Company is undertaking a detailed mineralogical and geochemical study of the Kvanefjeld ore body. This will enable ore types to be classified on the basis of mineralogy and geochemistry. The various ore types will then be tested at bench scale with a number of processing routes to ensure that the optimal process route is identified, and that orebody variation is fully accounted for. During previous studies, the ore body was never sufficiently mapped as there was no multi-element geochemical coverage. This is because the core was only analysed spectrally during the phase of work carried out by RISO. Greenland Minerals now has full geochemical coverage of the deposit allowing ore types to be clearly identified and mapped in three dimensions.

Outlook for 2009

While the global economic outlook for 2009 is bleak as the impact of the financial crisis permeates through economies worldwide, and the economic growth rate of developing nations slows, Greenland Minerals and Energy is well positioned to achieve several milestones that should see significant value added to its market capitalisation. This is due to the Company's strong cash position, a substantial resource that contains commodities with robust demand forecasts, and work programs that will continue to increase the value of the resource base.

The board and management will be continuing to build the Company's profile in global markets. With the rapid expanse of the resource base at Kvanefjeld, the strong outlook for specialty metals and uranium, and Greenland championing the development of large mining operations, it is now critically important for the market, as well as major mining houses, to be fully aware of the company's rapid evolution and ongoing developments.

First Quarter, 2009

During Q1 2009, much of the Company's focus will be on the pre-feasibility study. Based on historic metallurgical testwork, and testwork carried out by Greenland Minerals to date, it is recognised that there are a number of potential process routes that can be applied to extract rare earth elements and uranium from the Kvanefjeld ore. A further

phase of testwork will be undertaken that will constrain the parameters that allow the most viable process route to be finalised.

Plans for the 2009 field program will also be established during Q1. This will largely involve geotechnical and metallurgical sampling at Kvanefjeld, as well as a small drill program to further evaluate the regional multi-element prospects, which will give a clearer indication of the potential resource scale that the project offers.

A resource update will be finalised toward the end of Q1, following the completion of the final assays from the 2008 field season. The results of the 2008 regional exploration program should also be finalised. Please visit the company's website at www.ggg.gl where recent news articles, commentary, and company reports can be viewed.

Yours faithfully,



Roderick McIlree
Managing Director
Greenland Minerals and Energy Ltd

ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy (ASX – GGG) is an exploration and development company focussed on unlocking the mineral riches of southern Greenland. The company's flagship project is the Kvanefjeld multi-element deposit (Rare Earth Elements, Sodium Fluoride, Uranium), that is rapidly emerging as the world's premier specialty metals project. Kvanefjeld has now entered the pre-feasibility phase that will ultimately map out the path to development and timeline to production. For further information on Greenland Minerals and Energy visit <http://www.ggg.gl> or contact:

Roderick McIlree, Managing Director
+61 8 92261100

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Jeremy Whybrow, who is a Member or Fellow of The Australasian Institute of Mining and Metallurgy or the Australian Institute of Geoscientists or a 'Recognised Overseas Professional Organisation' ('ROPO') included in a list promulgated by the ASX from time to time.

Jeremy Whybrow is a director of the company.

Jeremy Whybrow has sufficient experience which is 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 in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Jeremy Whybrow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

