



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.

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March 2009 Quarterly Report

ASX Company Announcement
29 April 2009

Highlights

- *Pre-feasibility study on Kvanefjeld multi-element project continued*
- *Final assays received for 2008 season*
- *Updated resource model to come in second quarter*
- *Resource exploration at the Kvanefjeld ore body completed*
- *2009 season exploration to concentrate on obtaining geotechnical and metallurgical samples as part of the pre-feasibility study.*
- *Regional targets may also be assessed*
- *All executive directors and employees have salaries reduced by 10%*



ACN 85 118 463 004



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Tenure and Location of the Project

Tenure

Greenland Minerals and Energy Ltd (the “Company” ABN 85 118 463 004) is a company listed on the Australian Stock Exchange. The Company is conducting exploration of EL2005/28 in accordance with a joint venture agreement. The Company currently controls 61% of the license and is the operator.

The tenement is classified as being for the exploration of minerals. The project hosts significant multi-element mineralisation within the Ilimaussaq intrusion.

Historically the Kvanefjeld Deposit and mine was operated by Greenlandic and Danish Authorities. The project has had significant exploration in the form of an exploratory adit, drilling, geophysics, geochemistry, and numerous and varying test work and technical papers.

Location

The lease covers an area of 80km² in Nakkaalaaq North on the southwest coast of Greenland. The project is located around 46° 00’W and 60 55’N.

The town of Narsaq is located approximately 5 kilometres to the south west of the license area. Narsaq is connected to Narsarsuaq International Airport by commercial helicopter flights operated by Air Greenland. Local transport between settlements is either by boat or by helicopter.

The Company has office facilities in Narsaq where storage, maintenance, core preparation, and exploration activities are managed. This office supports the operational camp located on the Kvanefjeld Plateau above the town where the operational staff is housed.

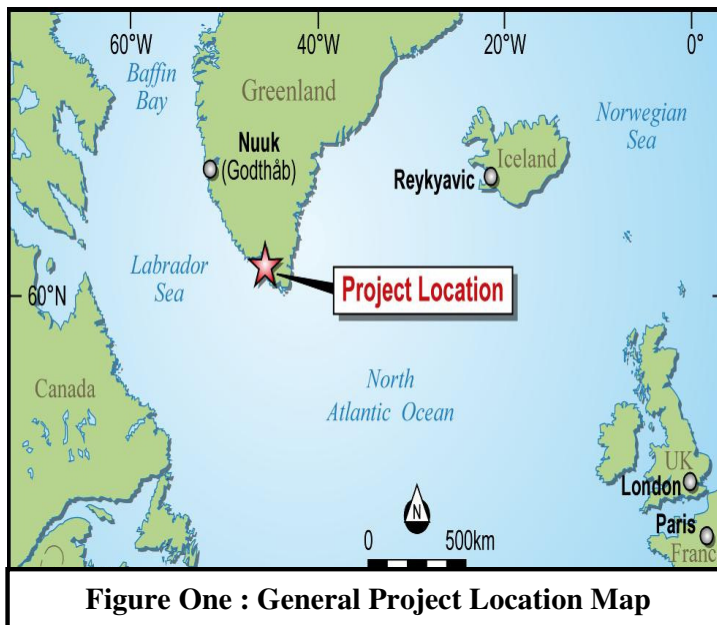


Figure One : General Project Location Map

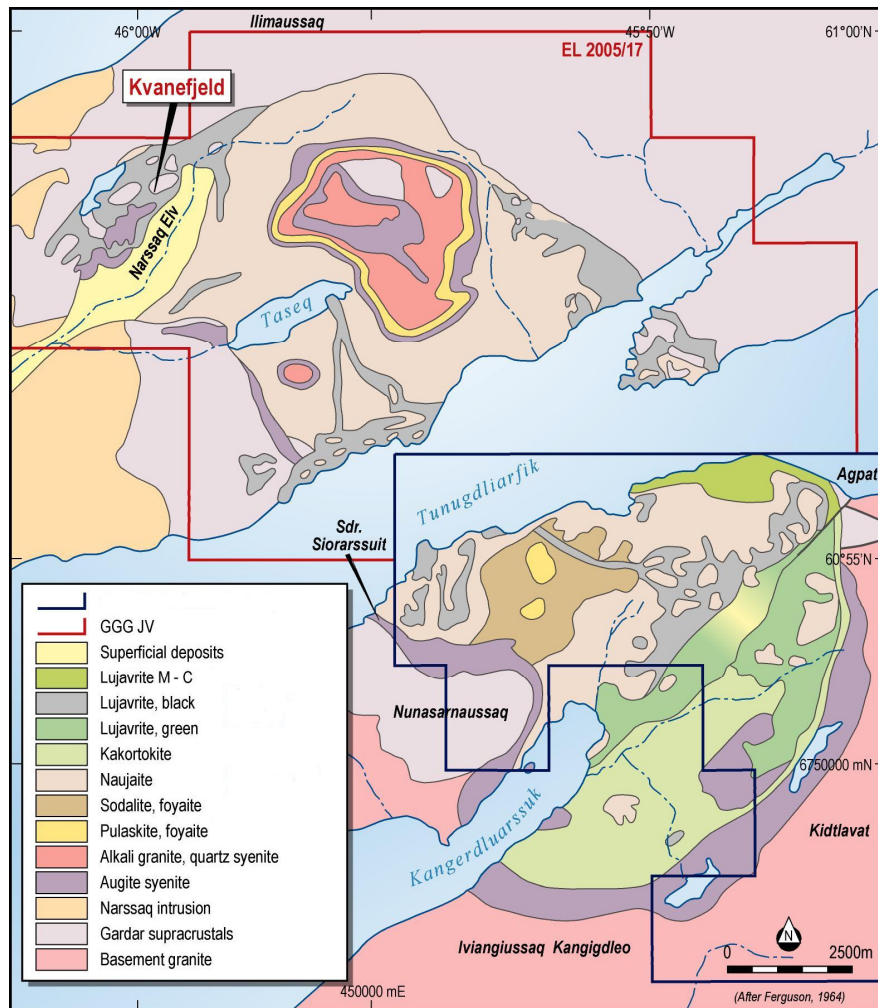


Figure 2 : Project location map with tenement extents

Access to the Kvanefjeld plateau (at approximately 600m asl) where the Kvanefjeld deposit is located is generally gained by helicopter assistance from the office facility in Narsaq. It is possible to access the base of the plateau by car and then up to the mine adit by a track. To get to the operational camp from the adit a walking track is used.

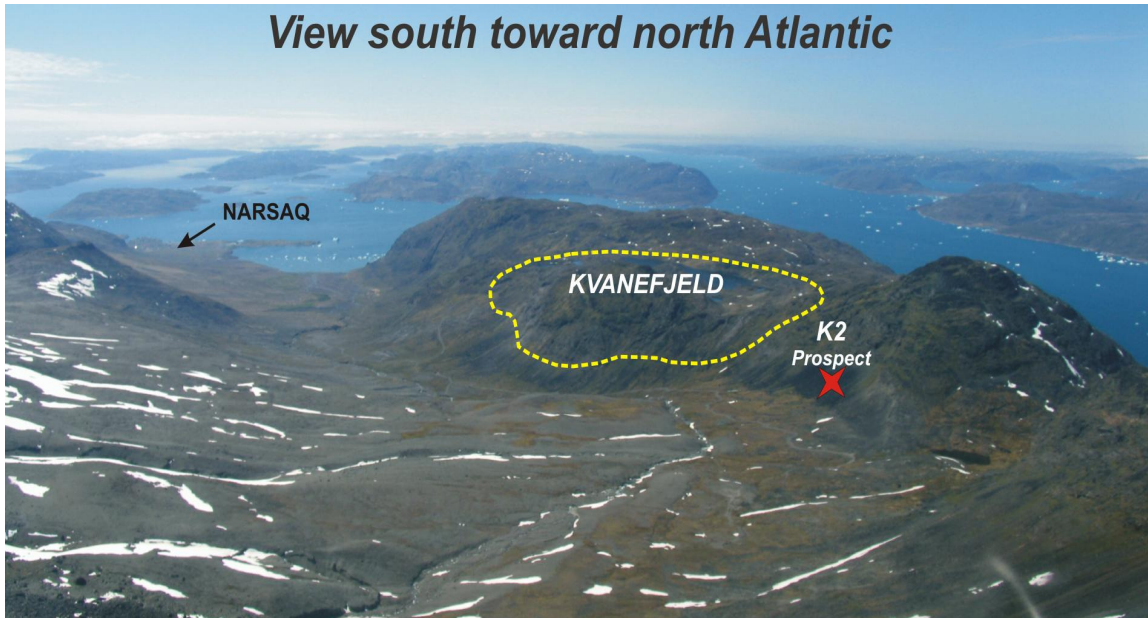


Figure 3 : Project view with town of Narsaq in the background

March Quarter activities

Introduction

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 (aka RISO) identified a viable way to extract uranium. However, given the emerging economic and strategic significance of specialty metals, such as rare earths, 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 secured the services of 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 former 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, which included the plant location and identified potential 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. Despite the extensive studies and significant technical advances made, work on the project ceased in the early 1980's. We were informed that the cessation was due to a change in the political sentiment toward nuclear energy that emerged globally.

Given the extensive and successful research program and pilot plant operation conducted by RISO on the Kvanefjeld project Greenland Minerals strategy is to build on this knowledge and to use this as the basis of its prefeasibility study. With this in mind the company has recently engaged Jorgen Jensen, the former project manager of the Kvanefjeld project for RISO through the late 1970's and early 1980's. Mr Jensen will 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.

Company representatives have recently concluded a series of successful technical review meetings in Copenhagen with a number of the research scientists and explorers who have worked previously on the project. The level of in-depth knowledge and experience gained from these meetings has added enormous value to the mineralogical and metallurgical understanding of the ore body. The quantity and quality of technical data that is available from this period of intensive research, which ran for many years and culminated in a large scale pilot plant, is quite extraordinary and would be difficult and prohibitively expensive to try and replicate in today's economic climate. This information is currently being collated, ready for interrogation by Greenland Minerals and Energy's expert consultants, GRD Minproc.

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 metallurgically tested at a bench scale level, to ensure that the optimal process route is confirmed and that variations in ore type are fully accounted for. During previous studies, variations in the ore body were not sufficiently understood nor accurately mapped as there was no multi-element geochemical coverage. This was essentially due to a lack of geochemical data as the drill core was only analysed spectrally during that phase of the study carried out by RISO. Greenland Minerals now has a more complete geochemical coverage of the deposit allowing ore types to be clearly identified and mapped in three dimensions.

Metallurgical Testwork

As part of the ongoing metallurgical development program the Company engaged Perth based SGS Lakefield Oretest to carry out a third stage of testwork, following on from the initial T1 and T2 research programs conducted at Amdel, in South Australia. The so called T3 program was completed in January. The key findings from the most recent work are:

- The use of water washing of feed ore is successful in removing NaF from flotation feed

- Beneficiation by froth flotation is successful for pre-concentration of contained phosphate minerals. Based on a modest mass recovery the recovery of U and RE to a flotation concentrate equates to over 70% and 90% respectively.
- Testwork on Low F and High F ore types has shown that the sulphation digestion of flotation concentrate at relatively high temperatures and acid dosage rates resulted in high leach extractions, particular with respect to the rare earths.
- Neutralisation of leach solutions show that there is some potential for selective precipitation of rare earths at pH 2-3.

Given the positive beneficiation achieved by flotation a further stage of testwork (T4) was initiated in February. The objective of the T4 program is to further evaluate and optimise process parameters for the recovery of U and RE via the two main processing options, namely:

- Flotation/Sulphation Roast/Water Leaching (looking to improve selectivity/minimize acid consumption)
- Pressure carbonate leaching (CPL) based on the process flow sheet developed by RISO during 1983 Pre-feasibility Study.

Project background

Resources

When Greenland Minerals and Energy acquired the project in August 2007 the company was aware of the significant resource of uranium previously reported by the Danish Authorities, as part of the feasibility study completed in 1983. The data used to create this model, and the model itself, was in a format unsuitable for use by the Company as it was only available as a hard copy and unable to be audited or dissected. Rare earths were known to be present throughout the project area, however at that time they did not have the economic significance they have to day and consequently had not been sampled nor modelled.

The Company was of the opinion that the rare earths, together with other potentially economic minerals, would add significant value to the overall resource. Thus the focus of the Company's exploration activities was not only to confirm and extend the known uranium resources but as importantly to quantify the rare earth resource and identify other economic targets and commodities.

After the first season of drilling, completed in 2007, two resource models were developed. The first resource model was produced in late April 2008, and covered the initial uranium, rare earths and sodium fluoride resources. The extent of the model was limited to these elements as only a small proportion of the total chemical assays planned were available at that stage.

The initial resource model developed contained an estimated total of 334mt @ 0.03%U₃O₈, 90mt @ 1.09%REO and 79mt@1.69% NaF.

An updated resource model, based on additional assay data, was completed in August 2008 and this contained an estimated resource of 334Mt @ 0.03% U₃O₈, inclusive of 215Mt @ 1.21% REO, and 201 million tonnes @ 1.11% NaF. The REO component of this model was still affected by a shortage of sample assay data. The next resource upgrade, due in April 2009, will contain a complete suite of sample assays. At this stage other elements, such as Tin, Beryllium and Niobium, have not been modelled, as these are not considered to be present in commercial quantities.

Based on the updated resource estimate, produced in August 2008, the metal content of the ore body is :

- 2.59 million tonnes of REO
- 2.21 million tonnes of NaF
- 100,960 tonnes of U₃O₈.

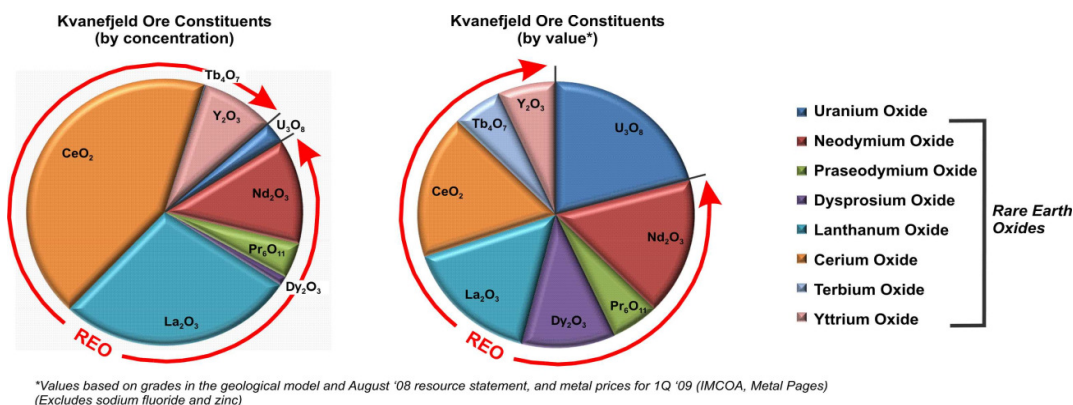


Figure 3. Kvanefjeld Ore: Main constituents by concentration and relative value.

Exploration programs

In May 2008, the company released its first JORC-compliant resource estimate for 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 as a premier specialty metals project. There is potentially significant upside, 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 2008 Quarterly Report, available on the Company's website (www.ggg.gl), under 'Investor Information'.

Occupation Health and Safety

The occupational health and safety of our employees, and our contractors' employees, is of prime importance to us.

From the very start, planning for the exploration program has taken into account two fundamental health and safety related issues, relevant to exploration at Kvanefjeld. These are firstly the need to measure and monitor the effects of exposure to the low level radiation emitted by the radioactive elements of the resource and, secondly, to also ensure that exposure to the sodium fluoride present in the deposit is minimised and controlled.

All safety plans have been submitted to The Bureau of Minerals and Petroleum (BMP) in Greenland.

Radiation monitoring

The basic principle of worker protection in an exploration programme where there is known uranium enrichment is to minimise the worker radiation dose by following the

'as low as reasonably achievable' principle, with economic and social conditions taken into account. This is known as the ALARA principle. This principle requires sufficient monitoring of all work practices, suitable protective clothing and proper and sufficient education for all workers involved with a possible radiation exposure.

The Company has had a comprehensive radiation management plan prepared and overseen by experts from Australia for both field seasons. We assess exposure of all staff that regularly visit the exploration camp and also have taken steps to ensure that the camp is located in a radioactive low.

This plan was developed in conjunction with Western Radiation Services and Radiation Technical Services of Perth and details the measures taken by the company to ensure the safety of its workers.

Sodium fluoride

Sodium fluoride was recognised by the Company as being a potential hazard to people working at Kvanefjeld. Sodium fluoride can be poisonous in concentrated amounts and all core recovery, handling and core splitting work has been completed to the highest industry standard protocols to ensure limited exposure.

Exploration footprint

Our focused exploration program results in a very small surface footprint. For example all drill movements are helicopter assisted so we do not have to carry out road works. Post drilling clean up of all exploration sites is carried out carefully and routinely, as part of the Company's standard operating procedures.

Political Developments in Greenland

On 25 November, 2008 a referendum was held in Greenland to address self government 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, and as reported in the media 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 development of new industries to grow the Gross Domestic Product (GDP) of the country. Greenland has immense mineral and hydrocarbon potential, and the government is reported to be pushing for the development of large natural resource projects to boost employment and grow its GDP. Importantly, if the transfer of mineral rights is achieved, Greenland will have full legislative and administrative power over

their natural resources. For mineral explorers and mine developers, this is hugely advantageous as Greenland is prioritizing mine development, and prospectively will have 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 allowed, 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 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 emphasizes that specialty metal mines are likely to be one of 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 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.

Environmental Activities

Over the past two field seasons base-line environmental monitoring has been undertaken, with the assistance of a Danish consulting group, Orbicon. Further work is planned for the coming 2009 field season.

The Company has commenced a detailed and critical review of the environmental activities completed and planned for the Kvanefjeld Project. The Danish authorities completed a number of environmental studies during the 1970s and early 1980s, as part of the Kvanefjeld Uranium Project Pre-feasibility study 1983.

Greenland Minerals and Energy has appointed Coffey Natural Systems, an Australian based environmental consultancy group, to assist the company with formulating a strategy and management plan for dealing with all environmental related matters. This work is progressing and as part of their scope, Coffey Natural Systems have commenced reviewing the historical data and planning for further site based activities.

Capital Structure

<i>Quoted</i> Ordinary Shares:	126,508,543
Restricted Ordinary shares:	67,000,000
Total Ordinary shares:	193,508,543
<i>Quoted</i> options exercisable 20c:	144,332,059
Unquoted options exercisable 10c:	750,000
Unquoted options exercisable 20c:	24,300,000
Unquoted options exercisable 50c:	1,500,000
Unquoted options exercisable 1.00:	1,500,000
Unquoted options exercisable 1.50:	2,388,840

Rare Earths Market

Introduction

We include this section on the rare earths to provide brief background detail on these unusual metals. More detail is available on the website. The comments in this section derive from IMCOA, our consultant on rare earths.

The rare earths are a group of 15 similar elements with unique chemical, magnetic and fluorescent properties. They are essential materials in the components of many items of modern day living such as lap-tops, hybrids, energy efficient lights and cell phones.

They make up an essential part of our resource in both potential value and content, refer our resources section above.

Essential factors of the market

Total demand: 124,000t REO pa (2008)

Average price: US\$9-11/kg REO

Total value: US\$1¼ billion pa

Most production and utilization of rare earths is Chinese

Constraints on Chinese exports are creating opportunities for non-Chinese projects

Our opportunity

We have the ability to produce rare earths as a co product with uranium.

The Kvanefjeld project will also be a non Chinese source of rare earths which increase supply to non Chinese users of rare earths.

Because the rare earths are a co product we have the potential to slowly develop our rare earths market and products range, for example initially producing carbonate mixes and slowly moving to the higher value separated oxides.

The scale of our potential production may mean that new market opportunities for rare earth usage can be created. This process of new market creation and increasing use of rare earths has been a feature of the last 25 years.

Global Rare Earths Demand in 2008 & 2014 (t REO)

Source IMCOA.

<u>Application</u>	<u>Consumption tpa REO</u>		<u>Market Growth</u>
	<u>2008f</u>	<u>2014f</u>	<u>2011-14</u> <u>%pa</u>
Catalysts	23,000	28-30,000	6-8%
Glass	12,500	12-13,000	negligible
Polishing	15,000	19-21,000	6-8%
Metal Alloys	22,500	43-47,000	15-20%
Magnets	26,500	39-43,000	10-15%
Phosphors	9,000	11-13,000	7-10%
& Pigments			
Ceramics	7,000	8-10,000	7-9%
Other	8,500	10-12,000	7-9%
Total/Range	124,000	170-190,000	8-11%

Work Programs and 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 expansion 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.

Second quarter, 2009

During Q2 2009, much of the Company's focus will continue to be on the pre-feasibility study. Based on historic metallurgical research, and the metallurgical testwork program carried out by Greenland Minerals to date, it is recognised that there are alternative viable processing routes that could be commercially applied to extract rare earth elements and uranium from the Kvanefjeld ore. A further phase of research will be undertaken to determine the optimal, economic flowsheet and to test the effect of variability within the orebody.

A resource update, previously expected at the end of Q1, will be finalised soon as all of the assays from the 2008 field season have been completed. The results of the 2008 regional exploration program should also be finalised.

Preliminary mine planning will commence based on the updated resource model. The work, to be conducted by Coffey Mining will result in an initial mine design and production schedule. This will form the basis of the ore specification and plant design capacity, thus allowing plant design to advance to a pre-feasibility study level. Based on the historical Danish research, and the metallurgical programs carried out or planned by the Company, GRD Minproc will be able to commence plant design work towards the end of this quarter.

The 2009 field program has been planned around the requirements of a planned feasibility study, which is likely to commence towards the end of 2009. In particular drilling will be focused on gathering geotechnical data, compiling metallurgical test samples, including those that will be required for pilot plant tests. 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, is also proposed.

Finally, in recognition of the current financial constraints all executive directors and employees have accepted across the board 10% pay reductions.

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

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ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy (ASX – GGG) is an exploration and development company focused 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:

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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.

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