Company Announcement, June 3rd, 2015

Maiden Ore Reserves of 108 Million Tonnes for Kvanefjeld Rare Earth – Uranium Project

Greenland Minerals and Energy Ltd ('GMEL' or 'the Company') is pleased to announce the maiden Ore Reserves estimate for the Kvanefjeld Project. The reserve estimation has been produced by SRK Consulting (Australasia) Pty Ltd, who conducted an updated Mining Study as part of the Kvanefjeld Feasibility Study (May, 2015). The Mining Study is supported by the Mineral Resource estimate, which was released in February 2015.

The Ore Reserves estimate has been developed to JORC 2012 standards as summarised in Table 1.

Table 1. Kvanefjeld Ore Reserves Estimate – May 2015

Class	Inventory (Mt)	U_3O_8 (ppm)	Zn (ppm)	LREO (ppm)	HREO (ppm)	Y_2O_3 (ppm)	TREO (ppm)
Proven	43	352	2,700	13,000	500	1,113	14,700
Probable	64	368	2,500	12,500	490	1,122	14,000
Total	**108**	**362**	**2,600**	**12,700**	**495**	**1,118**	**14,300**

The Ore Reserves are situated in the upper part of the Kvanefjeld Deposit, the largest of three defined mineral resources within the broader Kvanefjeld Project area. At the projected production rate of 3 million tonnes per annum, the initial reserves are sufficient to sustain 37 years of operation, inclusive of ramp-up.

Dr John Mair, GMEL Managing Director commented:

'An initial ore reserve of 108 million tonnes is an outstanding result, and is another really important project milestone. It takes a lot of work across numerous disciplines to achieve this level of confidence. The Ore Reserves reinforce Kvanefjeld's status as one of the most advanced and significant emerging projects in the rare earth and uranium sectors globally.'

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 a full feasibility study was completed in May, 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. For further information on Greenland Minerals and Energy visit http://www.ggg.gl or contact:

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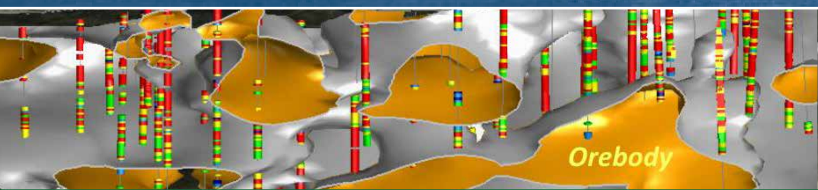
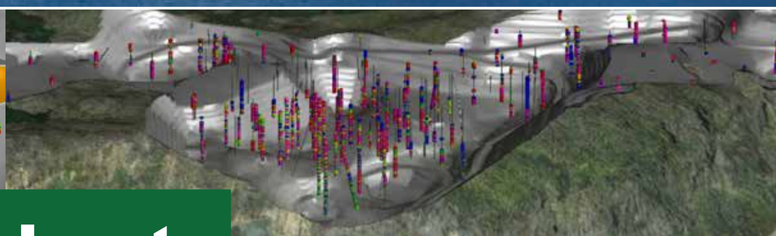
Greenland Minerals and Energy Ltd will continue to advance the Kvanefjeld project in a manner that is in accord with both Greenlandic Government and local community expectations, and looks forward to being part of continued stakeholder discussions on the social and economic benefits associated with the development of the Kvanefjeld Project.

GREENLAND
MINERALS AND ENERGY LTD





Kvanefjeld Project

Ore Reserve Statement

"Positioned to become a critical rare earth producer of international significance."

May 2015

1. INTRODUCTION

The Kvanefjeld Rare Earth – Uranium Project (the Project) is located in southern Greenland, and is underpinned by several large multi-element deposits rich in rare earth elements, uranium and zinc (Figure 1). Collectively, these represent one of the world's largest identified mineral resources of rare earths and uranium. The Project is operated by Greenland Minerals and Energy Limited ('GMEL' or 'the Company', ASX: GGG). This Ore Reserve Statement draws on extensive investigations into mineral resources, and a comprehensive, multi-year feasibility program.

The Kvanefjeld Project area is centred on the northern Illimaussaq Intrusive Complex, a layered peralkaline intrusive body measuring approximately 8x15 km. The complex features highly unusual rock-types and minerals, and locally is strongly enriched in a variety of rare elements.

Three large rare earth – uranium deposits have been established in the project area, and are named Kvanefjeld, Sørensen and Zone 3 (Figure 2). **Collectively, these deposits account for a global resource base of 1.01 billion tonnes containing 11.14 million tonnes of rare earth oxide, and 573 million pounds of U_3O_8.** The Kvanefjeld deposit is the best constrained with 'measured' category resources established, and is the start point of proposed operations.

Mineralisation is hosted by an unusual rock-type called lujavrite; an agpaitic nepheline syenite. Rare earth – uranium – zinc mineralisation is best described as orthomagmatic, forming large, bulk tonnage resources within the upper sections of the lujavrite. Rare earth elements and uranium are primarily hosted in an unusual phospho-silicate mineral called steenstrupine.

Metallurgical studies have investigated the most effective means to recover value components from the poly-metallic resources. GMEL has rigorously developed an effective process flow sheet that firstly features a flotation circuit. This recovers a zinc concentrate, and a mineral concentrate (steenstrupine) rich in REEs and uranium. A fluorspar product is also recovered from the flotation circuit. The REE-uranium rich mineral concentrate is then leached in a refining circuit to recover a critical mixed rare earth product, along with uranium oxide, and lanthanum and cerium by-products.

A Prefeasibility Study on a multi-element mining operation was completed in 2012, a follow-up 'Mine and Concentrator Study completed in 2013, and a comprehensive Feasibility Study has recently been completed (May, 2015). The main product stream to be produced from Kvanefjeld is a mixed critical rare earth concentrate (neodymium, praseodymium, europium, dysprosium, terbium, yttrium), with by-production of U_3O_8, lanthanum and cerium products, zinc concentrate and fluorspar. The Kvanefjeld Project has the clear potential to become one of the world's lowest cost producers of critical rare earths, with low incremental costs of recovering uranium and lanthanum and cerium by-products.

GMEL plans to locate the mine at Kvanefjeld on the Illimaussaq Intrusive Complex, with processing facilities positioned adjacent to the Complex. Mining will be from an open cut pit. The mine will have a low strip ratio with the highest grades present near-surface. A standard drill-blast-truck-shovel operation is planned, due to low operating risk in terms of cost and productivity. With a crusher feed target of 3.0 Mtpa and an average waste to ore strip ratio of 1:1, the average total material movement from the mine is 5.9 Mtpa. The mining fleet will include six 100-tonne mining trucks and one excavator. Mining will be performed by a mining contractor who is expected to employ 66 employees.

1. INTRODUCTION (continued)

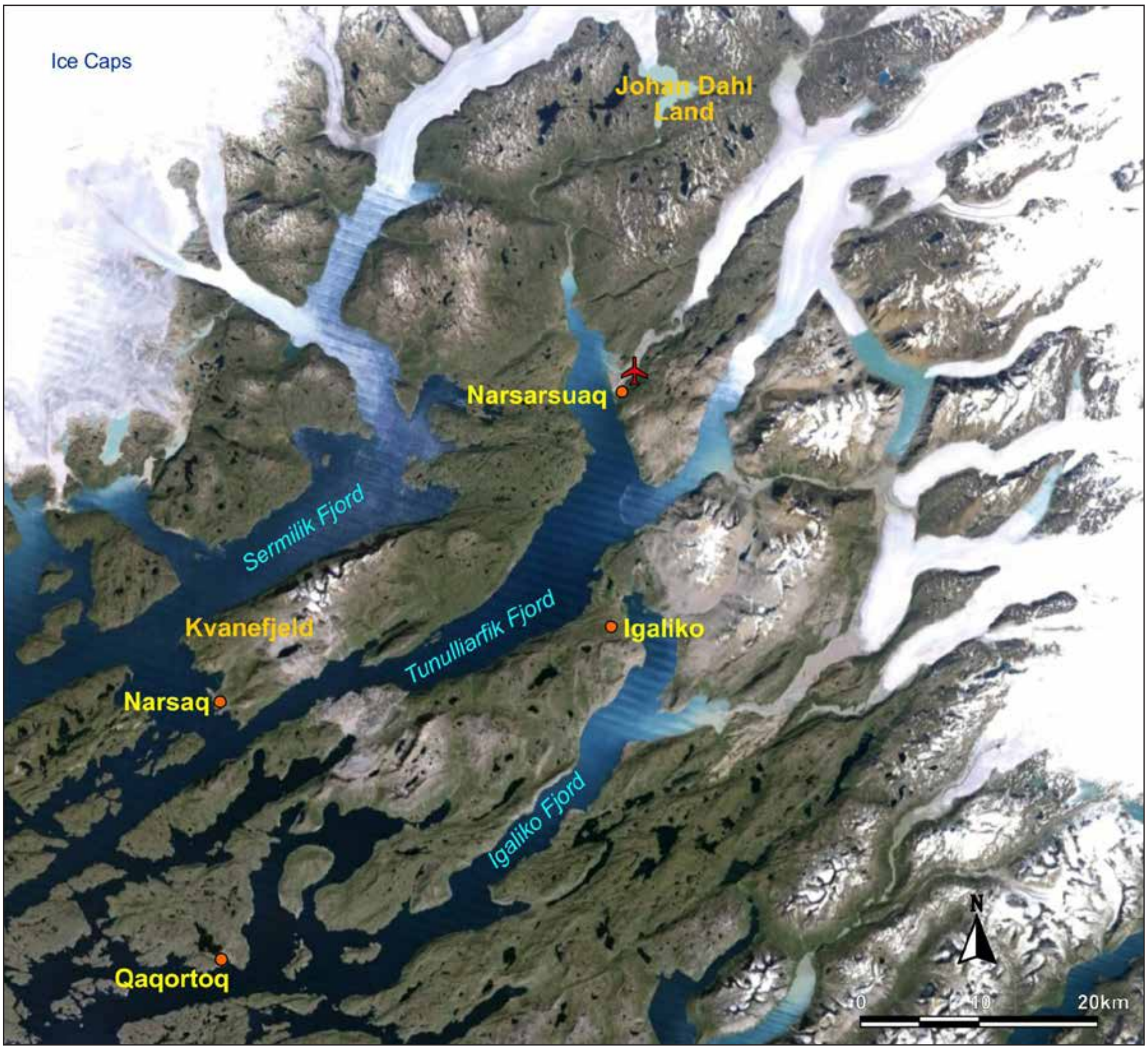


Figure 1 . An overview of southern Greenland highlighting the main towns and the location of the Kvanefjeld Project. The project area is readily accessable with direct shipping access year-round and an international airport is located nearby at Narsarsuaq.

1. INTRODUCTION (continued)

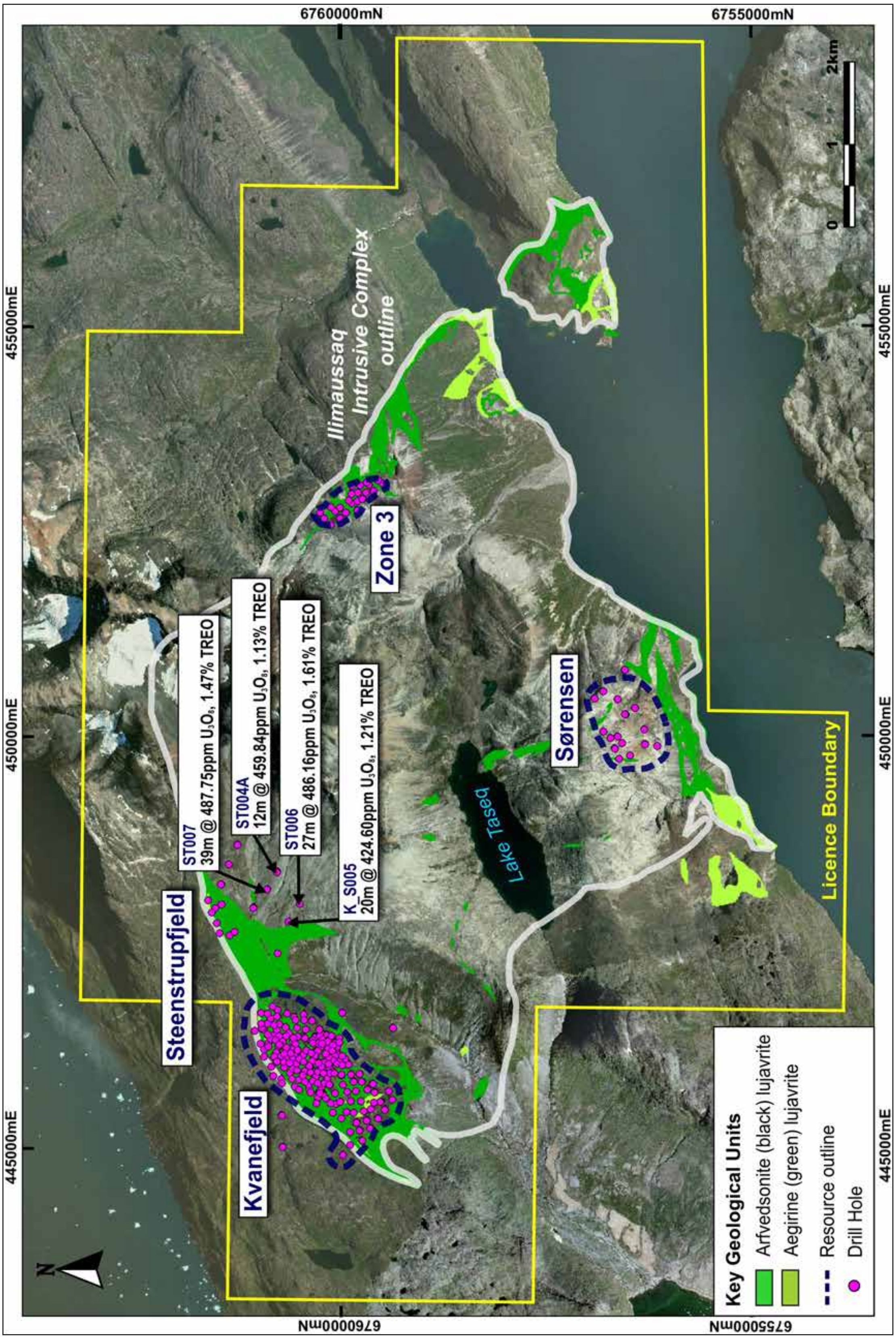


Figure 2 . Overview of the northern Ilimaussaq Complex showing the location of Kvanefjeld, Sørensen and Zone 3 Deposits, as well as notable drill intercepts from outside the constrained resources. Lujavrite forms an internal panel throughout much of the complex, and locally outcrops.

1. INTRODUCTION (continued)

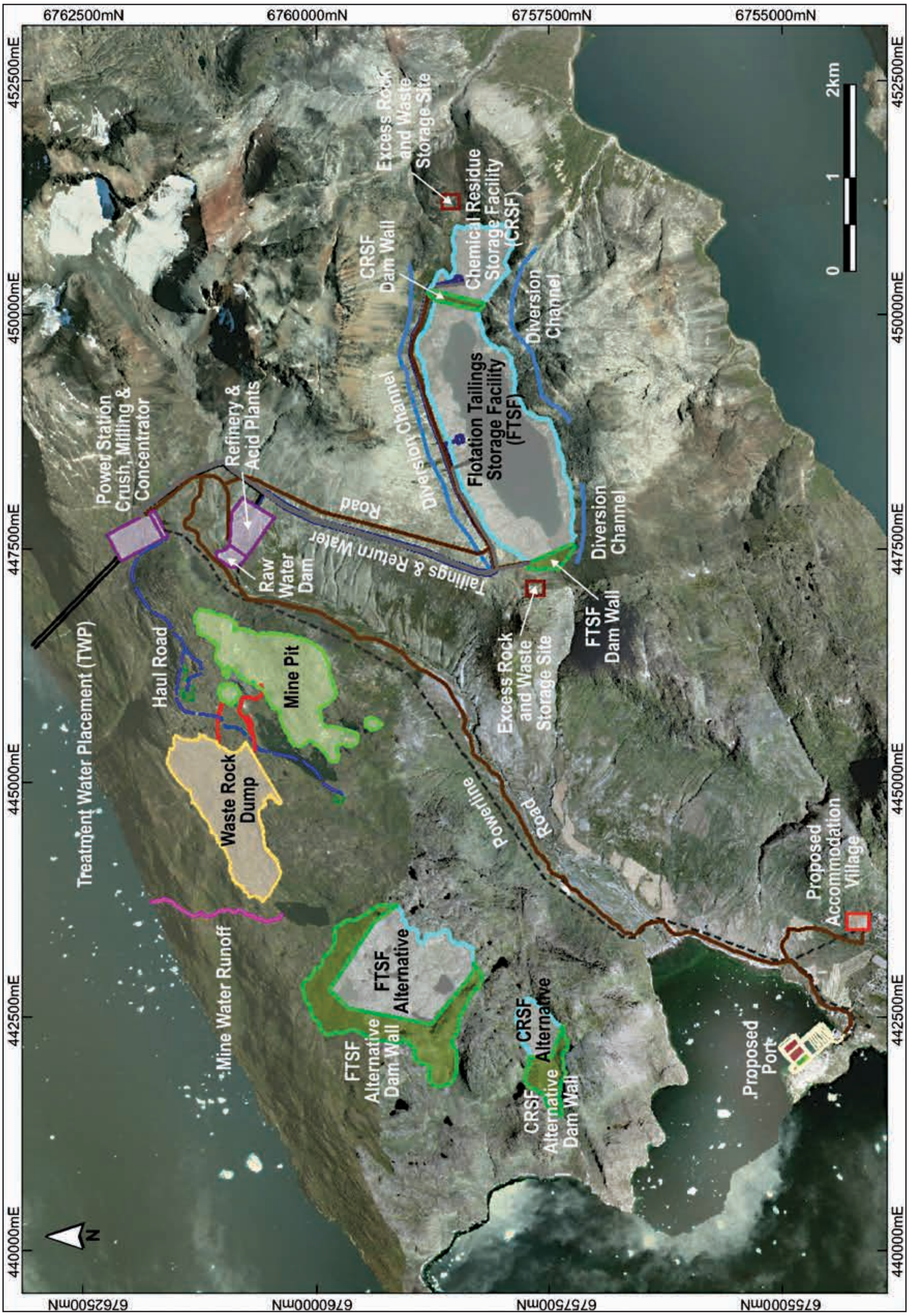


Figure 3 . Planned layout of the infrastructure for the Kvanefjeld Project. The mine pit is located on the Kvanefjeld deposit where Ore Reserves have now been established. New port facilities are proposed to be located near the edge of the town of Narsaq.

2. PROCESSING PLANT

There are two processing plant sites located at the upper end of the Narsaq Valley. The purpose of the processing plants is to concentrate value minerals and extract rare earth elements and uranium from these unique minerals.

The two different processing plants are as follows:

- **Concentrator** – uses physical methods to separate the rare earth elements and uranium minerals from the surrounding rock.
- **Refinery** – uses chemical methods to separate the rare earths elements from uranium and other contaminants.

Ore mined from the open pit is trucked to the concentrator where beneficiation is performed. The ore is crushed and ground to a much smaller particle size (80% passing 75 microns). The ground ore is mixed with water to achieve a slurry product. Zinc is then removed from this slurry using a froth flotation circuit to produce a high-grade zinc sulphide concentrate for sale. The next flotation stage produces a phosphate mineral concentrate. Approximately 80% of the rare earth elements are recovered into the rare earth phosphate (REP) mineral concentrate. This typically produces 250,000 tonnes of REP mineral concentrate which is sent to the refinery for further processing.

The gangue materials left behind after flotation will be dewatered and stored in the tailings facility. The recovered water will be recycled back to the concentrator, where it will be treated to remove fluoride as fluorspar (CaF_2), which can be sold, along with the zinc sulphide concentrate, to international customers.

A small quantity of excess water will be produced that cannot be recycled to the concentrator. This water, once treated to remove fluoride, will be returned to the environment at a discharge point adjacent to the concentrator (Treated Water Placement) in the Ikersuaq Bredefjord (Bredefjord segment).

Figure 4 . Image of the proposed refinery (foreground) and concentrator facilities. The facilities are to be located at the upper end of the Narsaq valley, near the Kvanefjeld deposit.

2. PROCESSING PLANT (continued)

REP concentrate from the concentrator is pumped via a pipeline to the refinery which is located approximately 1 km away, where the concentrate is leached atmospherically in a counter-current sulphuric acid leaching circuit. The solution produced by the atmospheric leaching is sent to the uranium circuit for recovery. After conditioning with caustic, the leach solids are re-leached in hydrochloric acid at cool atmospheric conditions to produce rare earth chloride solution.

At this stage, four rare earth products are produced from the rare earth chloride solution using solvent extraction. These are a lanthanum oxide, a cerium hydroxide, a mixed lanthanum and cerium oxide, and a mixed critical rare earth oxide.

The mixed critical rare earth oxide will require further processing to separate the rare earths into their individual oxides. GMEL is in discussion with China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. (NFC) to conduct the separation of critical rare earth concentrates from Kvanefjeld at their new facilities, which are currently under construction, located in Xinfeng, southern China (see Company announcements March 24th, 2014, and April 7th, 2015).

A uranium by-product is generated from the solution produced from sulphuric atmospheric leaching. Another solvent extraction process is used to recover the uranium selectively from the sulphate solution. Two stages of precipitation are then performed on the uranium solution to further purify the uranium. The final product is uranium peroxide (UO_4) which is directly saleable to power utilities.

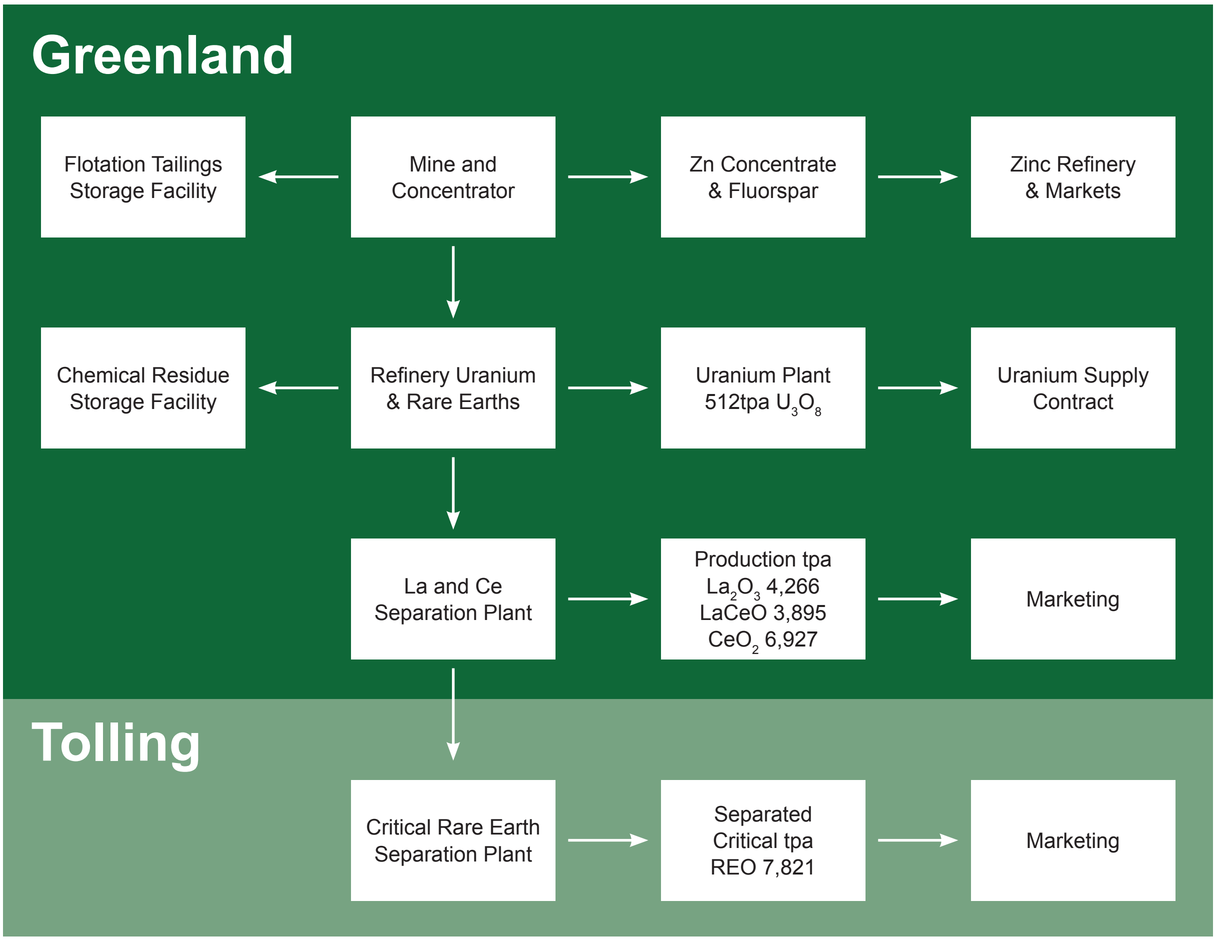


Figure 5. The main processing steps involved in the Kvanefjeld Project.

3. ORE RESERVES ESTIMATION

3.1. Methodology

- The Ore Reserves estimation followed completion of the main Feasibility Study sections. The mine planning component of the study was integral to estimation of the Ore Reserves.
- The following methodology was used in the mine planning to support the Ore Reserves estimation:
  - Review of prior work, particularly the 2011 Coffey Mining Study report
  - Review and incorporation of project updates, including the 2014 Mineral Resource Model
  - Open pit optimisation to identify ultimate pit shells and production sequence options
  - Development of staging logic and mine design
  - Development of mine production schedule
  - Compilation of report for inclusion in the Feasibility Study
  - Report on results and Ore Reserves.

3.2. Mine planning study

- Open pit optimisation was conducted using both GMEL- and SRK-derived inputs, including:
  - 3 Mtpa processing rate
  - Leased mine production fleet with first principles-derived mining unit rates
  - GMEL-supplied process recovery and processing costs factors
  - GMEL-supplied market prices
  - An optimisation pit shell was selected for the basis of the final mine design. The shell selection was supported by the optimisation shells offering an ore inventory in excess of 90 Mt
  - A mine production schedule was developed to incorporate pioneering, pre-strip and mine production in the mine design. The schedule outlined 37 years of operations, including three years of ore production ramp-up
  - Sensitivity work was conducted and demonstrated that the project is robust and insensitive to mining costs and product pricing, but sensitive to processing costs and process recovery.

3.3. Basis of Design

- A Basis of Design (BoD) document was compiled to outline and communicate the key inputs for the optimisation, design and subsequent Ore Reserves estimate.

3.4. Key Inputs

Operating costs – mine

- Mining operating costs were developed using first principles cost estimation. The mine plans were subsequently reviewed by mining contractors and contractor costs were provided. The Contractor costs were carried forward in the financial model. Sensitivities have been run using the higher first principles cost estimation.

Operating costs – other

- Other project costs include the following areas which contribute towards demonstrating project profitability:
  - Mineral processing
  - Refining
  - Rare earth separation costs
  - Logistics
  - Administration.

4. Ore Reserves Statement

A summary of the Ore Reserves estimate is presented in Table 1. The JORC Code (2012) Table 1 Report is presented in Appendix 1.

In preparing this statement, the following constraints were applied to the Ore Reserves:

- Ore loss
- Dilution
- Ore identification
- Confidence category.

Kvanefjeld Ore Reserves Statement – April 2015					
Class	**Inventory (Mt)**	**U_3O_8 (ppm)**	**Zn (ppm)**	**LREO (ppm)**	**HREO (ppm)**
Proven	43	352	2,700	13,000	500
Probable	64	368	2,500	12,500	490
Total	**108**	**362**	**2,600**	**12,700**	**495**

Table 1.

The information in the statement presented in Appendix 1, JORC-Code Reporting Table 1, that relates to the Ore Reserves estimate is based on work completed or accepted by Mr Damien Krebs of Greenland Minerals and Energy Ltd and Scott McEwing of SRK Consulting (Australasia) Pty Ltd.

Damien Krebs is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the type of metallurgy and scale of project under consideration, and to the activity he is undertaking, to qualify as Competent Persons in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). The Competent Persons consent to the inclusion of such information in this report in the form and context in which it appears.

Scott McEwing is a Fellow and Chartered Professional of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as Competent Persons in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). The Competent Persons consent to the inclusion of such information in this report in the form and context in which it appears.

Mineral Resources

Competent Person Statement

The information in this report that relates to Mineral Resources is based on information compiled by Robin Simpson, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Simpson is employed by SRK Consulting (UK) Ltd ("SRK"), and was engaged by Greenland Minerals and Energy Ltd on the basis of SRK's normal professional daily rates. SRK has no beneficial interest in the outcome of the technical assessment being capable of affecting its independence. Mr Simpson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Robin Simpson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The mineral resource estimate for the Kvanefjeld Project was updated and released in a Company Announcement on February 12th, 2015. There have been no material changes to the resource estimate since this announcement.

Statement of Identified Mineral Resources, Kvanefjeld Project, independently prepared by SRK Consulting

Multi-Element Resources Classification, Tonnage and Grade										Contained Metal				
Cut-off (U_3O_8 ppm)[1]	Classification	M tonnes Mt	TREO[2] ppm	U_3O_8 ppm	LREO ppm	HREO ppm	REO ppm	Y_2O_3 ppm	Zn ppm	TREO Mt	HREO Mt	Y_2O_3 Mt	U_3O_8 M lbs	Zn Mt
Kvanefjeld – February 2015														
150	Measured	143	12,100	303	10,700	432	11,100	978	2,370	**1.72**	0.06	0.14	**95.21**	0.34
150	Indicated	308	11,100	253	9,800	411	10,200	899	2,290	**3.42**	0.13	0.28	**171.97**	0.71
150	Inferred	222	10,000	205	8,800	365	9,200	793	2,180	**2.22**	0.08	0.18	**100.45**	0.48
150	Total	673	10,900	248	9,600	400	10,000	881	2,270	**7.34**	0.27	0.59	**368.02**	1.53
200	Measured	111	12,900	341	11,400	454	11,800	1,048	2,460	**1.43**	0.05	0.12	**83.19**	0.27
200	Indicated	172	12,300	318	10,900	416	11,300	970	2,510	**2.11**	0.07	0.17	**120.44**	0.43
200	Inferred	86	10,900	256	9,700	339	10,000	804	2,500	**0.94**	0.03	0.07	**48.55**	0.22
200	Total	368	12,100	310	10,700	409	11,200	955	2,490	**4.46**	0.15	0.35	**251.83**	0.92
250	Measured	93	13,300	363	11,800	474	12,200	1,105	2,480	**1.24**	0.04	0.10	**74.56**	0.23
250	Indicated	134	12,800	345	11,300	437	11,700	1,027	2,520	**1.72**	0.06	0.14	**101.92**	0.34
250	Inferred	34	12,000	306	10,800	356	11,100	869	2,650	**0.41**	0.01	0.03	**22.91**	0.09
250	Total	261	12,900	346	11,400	440	11,800	1,034	2,520	**3.37**	0.11	0.27	**199.18**	0.66
300	Measured	78	13,700	379	12,000	493	12,500	1,153	2,500	**1.07**	0.04	0.09	**65.39**	0.20
300	Indicated	100	13,300	368	11,700	465	12,200	1,095	2,540	**1.34**	0.05	0.11	**81.52**	0.26
300	Inferred	15	13,200	353	11,800	391	12,200	955	2,620	**0.20**	0.01	0.01	**11.96**	0.04
300	Total	194	13,400	371	11,900	471	12,300	1,107	2,530	**2.60**	0.09	0.21	**158.77**	0.49
350	Measured	54	14,100	403	12,400	518	12,900	1,219	2,550	**0.76**	0.03	0.07	**47.59**	0.14
350	Indicated	63	13,900	394	12,200	505	12,700	1,191	2,580	**0.87**	0.03	0.07	**54.30**	0.16
350	Inferred	6	13,900	392	12,500	424	12,900	1,037	2,650	**0.09**	0.00	0.01	**5.51**	0.02
350	Total	122	14,000	398	12,300	506	12,800	1,195	2,570	**1.71**	0.06	0.15	**107.45**	0.31

[1] There is greater coverage of assays for uranium than other elements owing to historic spectral assays. U_3O_8 has therefore been used to define the cutoff grades to maximise the confidence in the resource calculations.

[2] Total Rare Earth Oxide (TREO) refers to the rare earth elements in the lanthanide series plus yttrium.

Note: Figures quoted may not sum due to rounding.

Statement of Identified Mineral Resources, Kvanefjeld Project, independently prepared by SRK Consulting

Multi-Element Resources Classification, Tonnage and Grade										Contained Metal				
Cut-off (U_3O_8 ppm)[1]	**Classification**	**M tonnes** Mt	**TREO**[2] ppm	**U_3O_8** ppm	**LREO** ppm	**HREO** ppm	**REO** ppm	**Y_2O_3** ppm	**Zn** ppm	**TREO** Mt	**HREO** Mt	**Y_2O_3** Mt	**U_3O_8** M lbs	**Zn** Mt
Sørensen – March 2012														
150	Inferred	242	11,000	304	9,700	398	10,100	895	2,602	**2.67**	0.10	0.22	**162.18**	0.63
200	Inferred	186	11,600	344	10,200	399	10,600	932	2,802	**2.15**	0.07	0.17	**141.28**	0.52
250	Inferred	148	11,800	375	10,500	407	10,900	961	2,932	**1.75**	0.06	0.14	**122.55**	0.43
300	Inferred	119	12,100	400	10,700	414	11,100	983	3,023	**1.44**	0.05	0.12	**105.23**	0.36
350	Inferred	92	12,400	422	11,000	422	11,400	1,004	3,080	**1.14**	0.04	0.09	**85.48**	0.28
Zone 3 – May 2012														
150	Inferred	95	11,600	300	10,200	396	10,600	971	2,768	**1.11**	0.04	0.09	**63.00**	0.26
200	Inferred	89	11,700	310	10,300	400	10,700	989	2,806	**1.03**	0.04	0.09	**60.00**	0.25
250	Inferred	71	11,900	330	10,500	410	10,900	1,026	2,902	**0.84**	0.03	0.07	**51.00**	0.20
300	Inferred	47	12,400	358	10,900	433	11,300	1,087	3,008	**0.58**	0.02	0.05	**37.00**	0.14
350	Inferred	24	13,000	392	11,400	471	11,900	1,184	3,043	**0.31**	0.01	0.03	**21.00**	0.07
All Deposits – Grand Total														
150	Measured	143	12,100	303	10,700	432	11,100	978	2,370	**1.72**	0.06	0.14	**95.21**	0.34
150	Indicated	308	11,100	253	9,800	411	10,200	899	2,290	**3.42**	0.13	0.28	**171.97**	0.71
150	Inferred	559	10,700	264	9,400	384	9,800	867	2,463	**6.00**	0.22	0.49	**325.66**	1.38
150	**Grand Total**	**1,010**	**11,000**	**266**	**9,700**	**399**	**10,100**	**893**	**2,397**	**11.14**	**0.40**	**0.90**	**592.84**	**2.42**

[1] There is greater coverage of assays for uranium than other elements owing to historic spectral assays. U_3O_8 has therefore been used to define the cutoff grades to maximise the confidence in the resource calculations.

[2] Total Rare Earth Oxide (TREO) refers to the rare earth elements in the lanthanide series plus yttrium.

Note: Figures quoted may not sum due to rounding.

5. JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The Kvanefjeld deposit has been sampled by diamond drilling. Since 2007, Greenland Minerals and Energy Ltd ("GMEL") has drilled approximately 37,000m of core. Over 31,000m of this total is from holes designed specifically for resource definition. The remainder includes holes primarily intended for geotechnical assessment, metallurgical sampling and sterilization. In addition to GMEL's drill holes, the Kvanefjeld drill hole database includes approximately 10,000m of historical diamond drilling (1977 and earlier). Much of the historical core was preserved and available to GMEL for re-sampling. • Kvanefjeld drill hole spacing is variable, but is approximately 70m by 70m across most of the northeast part of the deposit, and 140m by 140m in the southwest. The drill holes are generally vertical or close to vertical, and most are between 200m and 300m deep. The deepest hole (K174) extends 500m from surface. • From the approximately 21,000m of Kvanefjeld core logged as the key lujavrite mineralized rock type, 85% has been half-core sampled by GMEL and sent to Genalysis Laboratory Services Pty Ltd ("Genalysis") or Ultra Trace Pty Ltd ("Ultra Trace"), both in Perth, Australia, for analysis of a suite of elements and oxides, including U_3O_8, rare earth oxides ("REO"), Y_2O_3 and Zn. For 8% of the lujavrite, no chemical sampling is available, but U_3O_8 values derived from historical gamma-ray spectrometry are stored in the database. Approximately 7% of the core logged as lujavrite has not been sampled. • For Sørensen, GMEL has drilled 23 diamond core holes, from 2008 to 2011, for approximately 10,000m of core. Almost 5,000m of this core was selected for sampling. • For Zone 3, GMEL has drilled 28 diamond core holes, in 2008 and 2011, for approximately 6,500m of core. Approximately 4,500m of this core was selected for sampling.

Appendix1.

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The resource definition diamond drilling done by GMEL was mostly at BQ size, maintaining a 41mm core diameter and a 56mm hole diameter. NQ size was used for sterilization and geotechnical drilling, and HQ was employed for collecting metallurgical core. Most holes were designed to be vertical and therefore are not oriented; the only core oriented is the core from the 12 Kvanefjeld geotechnical drill holes. Orientation was by means of a REFLEX™ ACT instrument.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• The lujavrite host rock for mineralisation, and the surrounding waste rocks are fresh, competent igneous rock types, and excellent core recoveries should be expected from the Northern Ilimaussaq deposits. From viewing core photos and personal inspection of the core on site, it is apparent that recoveries are generally 100% or close to 100%. Sample bias due to poor recovery is not considered to be a significant risk for the Northern Ilimaussaq deposits.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• The core samples have been geologically and geotechnically logged in sufficient detail to support Mineral Resource estimation, mining studies and metallurgical studies. • The core is routinely photographed, and both qualitative and quantitative logging fields are used. • The full lengths of all holes drilled by GMEL have been logged. In addition, GMEL has been able to obtain about 50% of the historical Kvanefjeld drill core and GMEL geologists have re-logged this. For the portion of the historical core GMEL could not recover, the historical logging is used in the database.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/ second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• For both GMEL and historical drill holes, the core was selectively sampled, to target intersections identified by the geologists as potentially hosting U and rare earth element ("REE") mineralisation. • Half core was taken by longitudinal splitting using rotary hand splitters. The reason for not using a core saw or any other wet method of core cutting was to limit the loss of water soluble fluoride minerals. • The usual sample preparation applied to the GMEL samples was: crush to <3mm, rotary split to 1kg, pulverize to <75µm, then scoop a 150g subsample. • GMEL's quality control procedures include taking duplicate samples, from both the coarse residual before the 1kg split, and from the pulverized material. These duplicates were submitted blind to the primary laboratory for analysis. • Robin Simpson, of SRK Consulting (UK) Ltd ("SRK"), and the Competent Person responsible for preparing the Kvanefjeld Mineral Resource estimation, carried out an inspection of the Genalysis' laboratory in Perth, during processing of samples from GMEL's 2010 field season. • The sample preparation technique is appropriate, given the grain size, mineralisation style and grade of the elements of interest.

Appendix1 (continued).

Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• For most samples, dissolution was achieved by four acid digest – a near-total technique. Mineralogical studies by Genalysis for GMEL have shown that that the key minerals hosting Kvanefjeld REE and U mineralisation are non-refractory, therefore four acid digest is an appropriate laboratory procedure. • Analysis was by both inductively coupled plasma mass spectrometry (ICP-MS, for U, REE and Y); and inductively coupled plasma optical emission spectrometry (ICP-OES, for Zn and other elements). • GMEL's quality control procedures included regular use of off-the-shelf certified reference materials, purchased from Ore Research Pty Ltd in Australia. GMEL also used Ultra Trace and Genalysis laboratories and umpire laboratories to check on each other's results; a selection of pulps from one laboratory would be resubmitted to the other laboratory. • The results from the quality control samples imply that the Northern Ilimaussaq assay have suitable levels of accuracy and precision to support Mineral Resource estimation. • The minor component of gamma-ray spectrometry results in the Kvanefjeld database came from analyses done by the Danish Atomic Energy Commission in the 1970s on samples prepared from 1m drill core lengths. The 3-4cm diameter core was passed through two opposing NaI (Tl) detectors at speeds ranging from one to several metres per hour. Resulting gamma ray spectra, as recorded with a multi-channel analyser, were computer processed and furnished as scale diagrams showing individual U and Th content of the core. • The overall quality of data from spectrometry have been verified by GMEL, based on the resampling and chemical analyses undertaken by GMEL on the available portion of historical core, and by down hole radiometric surveys which GMEL has been able carry out on most historical drill holes.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The nature of the mineralisation style in the North Ilimaussaq deposits means that the Mineral Resource estimates are not strongly dependent on a few high grade intersections. • GMEL has not drilled twin holes to verify the historical Kvanefjeld drilling; instead verification has occurred via an extensive program of resampling historical core. • Mineralised intersections have been verified by both independent and alternative company personnel. • GMEL have in place rigorous data handling and storage protocols, which have been reviewed by several external consultants, and tested over the course of five phases of Mineral Resource estimation since 2007. • No chemical assay data required adjustment.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The grid system used for the project is UTM, Projection WGS84, Zone 23N. • ASIAQ, a Greenland-based survey company, visited site in 2008 and 2011, established control points, and surveyed the collars of GMEL resource development holes using real time kinematic differential GPS, with an expected accuracy of a few centimetres. Other GMEL drilling collars were located in the field using a Garmin GPS 60CSx, with an expected accuracy of about ±2m. • GMEL surveyed the collars of most historical holes using real time kinematic differential GPS, with an expected accuracy of a few centimetres. • The GMEL resource development holes were generally drilled as vertical holes. The majority of GMEL holes from 2007 and 2008, and seven of the historical holes, were down-hole surveyed.by an Auslog slim line Model A698, S/N T178 Deviation Tool. The 51 GMEL holes that have not been down hole surveyed (including most of the 2010 drilling program) are stored in the database with their design (that is, vertical) orientation. Using these design orientations in the resource estimation is unlikely to be a significant source of uncertainty (relative to the drill hole spacing and estimation block size), because the holes that do have downhole measurements show little deviation from design. • The downhole surveys for historical holes are based either on assuming the designed (vertical) orientation, or single shot Eastman camera surveys from the end of hole. • The most recent digital surface model for the Northern Ilimaussaq project area was supplied by Geoimage Pty Ltd in December 2011. The topography surface used for the Mineral Resource estimation is based on Geoimage's 1m gridded DSM. • The vertical differences between the topographic surface and the surveyed drill hole collar elevations are mostly less than 3m, which is not significant compared to the block dimensions used for resource estimation.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drill hole spacing over the Kvanefjeld deposit generally ranges from 70 x 70m to 140 x 140m. The down hole sampling length is 1m. • Drill hole spacing over the Sørensen deposit is approximately 200 x 200m. The down hole sampling length is 1m. • Drill hole spacing over the Zone 3 deposit is approximately 100 x 100m. The down hole sampling length is 1m. • These sample spacings are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation procedures and classifications applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The generally vertical or steeply dipping drill holes are expected be close to optimum orientation for unbiased sampling, given that for the Northern Ilimaussaq deposits the primary geological controls and the orientation of mineralisation continuity are flat or shallow dipping.
Sample security	• *The measures taken to ensure sample security.*	• Core is delivered by helicopter from the drill site to GMEL's office complex in Narsaq, a journey of about 10km. • The half core samples bagged in calico; the calico bags are grouped in plastic bags; the plastic bags are packaged in 100L watertight plastic barrels with a sample manifest in each barrel; the barrels are strapped to pallets; the pallets are stored in sea containers for shipping from Narsaq to the laboratories in Perth, Australia. • The Competent Person has visited the Kvanefjeld drilling site, visited GMEL's facilities in Narsaq, and also viewed unloading of samples at the primary laboratory in Perth, and is satisfied that sample security is not a significant risk.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The drilling, sampling, sample preparation and analysis, quality control, logging and other data collection and handling methods have been reviewed by SRK, and found to be appropriate.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• All drilling has been completed within exploration license 2010/02 in accordance with the license terms outlined by Greenland's Mineral Licence and Safety Authority (MLSA). The tenement is classified as being for the exploration of minerals. The Holder is Greenland Minerals and Energy A/S a wholly owned subsidiary of Greenland Minerals and Energy Ltd. • The tenure is in good standing with no impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Kvanefjeld deposit was discovered in 1956 during a systematic radiometric reconnaissance survey of the entire Ilimaussaq complex. • From 1958 to 1977 the Danish Atomic Energy Commission (AEK) undertook several diamond drilling campaigns, and drilled 70 holes for almost 10,000m of core. For these campaigns, U was the main element of economic interest. • This historical work is reasonably well documented, and GMEL has been able to further verify the quality of the historical data, from identifying and resurveying the original collars, carrying out down hole radiometric logging of the AEK holes, and relogging and resampling the AEK core. • The databases for the Sørensen and Zone 3 deposits do not include any historical (pre-2007) drilling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Ilimaussaq intrusive complex is a large layered alkaline intrusion, and Mesoproterozoic in age. The complex is the type locality of agpaitic nepheline syenite and hosts a variety of rock and mineral types that are unique or almost unique to this intrusion.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• The purpose of this report is to support a statement of Mineral Resources rather than to present Exploration Results. The Mineral Resource estimations are based on the results from 227 drill holes (Kvanefjeld); 23 drill holes (Sørensen); and 28 drill holes (Zone 3). Tabulating detailed information for each hole is not considered Material to reporting the Mineral Resources.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• As noted above, the purpose of this report is to support a statement of Mineral Resources rather than to present Exploration Results. Significant intersections are not listed; therefore, a discussion of data aggregation methods is not applicable. • Metal equivalent values are not used in this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• The Northern Ilimaussaq drilling is mostly close to perpendicular to the geometry of mineralisation; therefore, downhole intersection lengths should be close to true thicknesses.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Appropriate maps and sections are included with this report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• As noted above, the purpose of this report is to support a statement of Mineral Resources rather than to present Exploration Results; tabulating detailed information for each hole is not considered Material to reporting the Mineral Resources.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• In 2009 GMEL drilled 12 geotechnical holes and 14 metallurgical holes into the Kvanefjeld deposit. The implications of these holes have been considered as part of the Mineral Resource estimation (Section 3); the results from this drilling are not considered material for reporting Exploration Results.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The current Kvanefjeld drill holes appear to define the lateral extents of the main body of mineralisation. No further exploration work is planned for the main Kvanefjeld deposit. • The southeast part of Sørensen is exposed in the steep northwestern wall of the Tunugdliarfik Fjord. The deposit is not closed off to the northwest, in the direction of the main Kvanefjeld lujavrite body some 6km away. • Zone 3 remains open laterally and at depth.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data are imported, managed, stored and validated in DataShed software from Maxwell Geoservices. Built in to the database are validation workflows for quality control. If a batch of new data is rejected by the import criteria, then these data are quarantined until all problems have been identified and resolved. An audit trail function automatically records all additions and modifications to the database.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Mr Robin Simpson of SRK, the Competent Person responsible for the Mineral Resource estimation, visited site in August 2010. During this visit Mr Simpson inspected the drill sites on the Kvanefjeld deposit; lujavrite at other locations on the Northern Ilimaussaq deposit; stockpiles of mineralized material from exploration adits cut by the Danish Atomic Energy Commission in the 1970s; GMEL's core handling and storage facilities in Narsaq; and GMEL's offices in Narsaq. In December 2010 Mr Simpson also visited GMEL's primary assay laboratory in Perth (Genalysis) during processing of Kvanefjeld samples.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The Competent Person has high confidence in the geological interpretation of the deposit, due to: − 100% exposure of fresh rocks at surface, with a clear visual contrast between the mineralized black lujavrite, and the barren white naujaite; − Drill hole spacing that is usually well within the scale significant geological variability; and − Thorough and systematic logging, backed up chemical analyses that frequently provide sample grades for 40 elements. • The geological models used to constrain the Mineral Resource estimations are based on interpretation from a combination of multi-element geochemical assays and categorical logging data. • The interpretation of the geological domains, in particular the lujavrite contacts for Kvanefjeld, has been revised several times by different consultants since GMEL reported its first Kvanefjeld Mineral Resource estimate, in 2007. The overall mean estimated grades for REO and U within the Kvanefjeld lujavrite have not changed substantially between the various models. A change that occurred for the previous (2011) Kvanefjeld Mineral Resource estimation was splitting the lujavrite into sub-domains, and creating a model that had greater differences between the higher and lower grade zones of the deposit. For the 2015 Kvanefjeld Mineral Resource estimation, the geological model was again reworked, to take into account new data since 2011. Globally, the differences between the 2015 and 2011 Kvanefjeld Mineral Resource estimations are small for both tonnes and grade.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources
(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Geological interpretation (Continued)		• Geological domains were modeled using Leapfrog™ software. The overall mineralized domain was based on the logged intervals of lujavrite. For Kvanefjeld, his domain was subdivided into five units based on the ratio of Hf to Yb. This geochemical ratio was found to be a useful marker that defined coherent volumes with distinct statistical distributions for REO and U. • For Sørensen, the lujavrite domain was divided into upper and lower subdomains, based on similar marker, of the Hf to Yb ratio, as was recognized for Kvanefjeld. • The Ilimaussaq complex is a layered intrusive complex; layering on the scale of tens of metres thick is the main control on continuity of grade and geology.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The main body of lujavrite that hosts mineralisation at Kvanefjeld is a stack of sub-horizontal lenses, widely in contact with each other, with a total thickness ranging from tens of metres to over 200m in thickness. The lateral extents of the Kvanefjeld lujavrite body are about 2200m SW-NE and 1000m NW-SE. • At Sørensen, the area covered by drilling is about 1000m SW-NE and 500m NW-SE. The shallow-dipping lujavrite is exposed in the wall of the Tunugdliarfik Fjord. For drill holes collared from the top of the plateau above the fjord, there is about 100m to 300m of unmineralised material above the lujavrite. The mineralized lujavrite is open at depth, although (as for Kvanefjeld) the higher grade U and REE mineralisation appears to be concentrated in the upper 100m of the lujavrite. Mineralisation is open laterally in all directions. • At Zone 3, the area covered by drilling is about 800m NW-SE and 200m NE-SW. Most drill holes are 250m to 300m deep. Mineralised lujavrite is exposed at surface, open at depth, and open laterally in all directions. Similar to Kvanefjeld, the highest grade U and REE mineralisation is concentrated in the zone from surface to 150m deep.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources
(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• The variables reported in the Mineral Resource statement are: – LREO (light rare earth oxides, the sum of the oxides of La, Ce, Pr, Nd, Sm); – HREO (heavy rare earth oxides, the sum of the oxides of Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu); – REO (sum of LREO and HREO); – TREO (total sum of REO and Y_2O_3); – U_3O_8; and – Zn • For Kvanefjeld, the variables estimated were the individual REO, Y_2O_3, U_3O_8 and Zn. • For Sørensen and Zone 3, instead of estimating individual REO, LREO and HREO were estimated directly. • The geological wireframes to constrain estimation were constructed using Zaparo Leapfrog and Geovia Surpac™ software. The geostatistical estimation was prepared in Geovariances Isatis® software. • The raw sample data were composited to 5m for statistical analysis and estimation. • No grade cutting or capping was applied: for all domains and variables, distributions are closer to normal than lognormal, the very highest and lowest values are not far removed from the mean, and the coefficients of variation (ratio of standard deviation to mean) for the composites are typically in the range 0.3 to 0.5.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Estimation and modelling techniques (continued)		• Grades for the variables of interest were estimated into block models. – The Kvanefjeld model has lateral block dimensions of 35m x 35m, and a block height of 10m. The framework of the Kvanefjeld block model was rotated 40° clockwise to align with the drilling grid. The lateral block dimensions are equivalent to about half the drill hole spacing in the more densely drill parts of the deposit. – For Sørensen, the block dimensions are 80m x 80m x 10m, with no rotation. – For Zone 3, the block dimensions are 50m x 50m x 10m, with no rotation. • Kvanefjeld block grades were estimated by co-kriging each variable with U_3O_8. Sørensen and Zone 3 block grades were estimated by ordinary kriging. • U_3O_8 is the most completely informed variable in the Kvanefjeld sampling database, and has a moderate to strong correlation with the other variables estimates. These correlations were appropriately accounted for during modeling of the cross-variograms required for co-kriging. • The lujavrite contacts, and the various subdomain boundaries defined on the basis of Hf to Yb ratios, were used as hard boundaries to constrain the interpolation. • Blocks grades were estimated in two passes. For Kvanefjeld, the axes of the ellipsoid search neighbourhood for the first were 250m x 250m x 50m, with a minimum of 10 composites required and a maximum of 32 composites. Approximately 90% of eligible blocks were populated with grades from the first pass estimate. The remaining blocks were populated with grades from a 500m x 500m x 150m search ellipsoid, selecting a maximum 32 composites.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Estimation and modelling techniques (continued)		• Sørensen and Zone 3 were estimated using similar neighbourhoods to Kvanefjeld. • The estimation methods used do not require a selective mining unit to be defined. • The block model estimation was validated by visual and statistical checks again the composites and raw samples, and (in the case of Kvanefjeld) by comparison against the block model from the previous (2011) Mineral Resource estimation. • No reconciliation data are available.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnages are reported on a dry basis. The fresh, crystalline, and low porosity nature of the main rock types in the Ilimaussaq Complex means that the difference between wet and dry bulk densities are typically <1%.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The range of cut-off grades presented is considered to be reasonable given the geostatistical variability of lujavrite-hosted REE and U mineralisation of the Ilimaussaq complex. For this range of cut-off grades, detailed metallurgical studies have been conducted, a process flow sheet has been developed, and economic evaluations have returned positive project metrics, based on independent pricing forecasts.
Mining factors or assump-tions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• As part of a 2011 update to the Kvanefjeld pre-feasibility study, GMEL commissioned a mining study from Coffey Mining Pty Ltd ("Coffey"). This mining study was based on the 2011 Kvanefjeld Mineral Resource estimation. The crusher feed target for the study was 7.2Mtpa, with a waste to ore strip ratio of 1.1 to 1. Coffey's assessment was that the base case mining method for the prefeasibility study should be a standard drill, blast, truck shovel open pit operation. • The methods, assumptions and parameters used for preparing the 2015 Kvanefjeld Mineral Resource estimation were guided by this base case of a standard open pit operation. The choice of a 5m block height and composite length for the block model estimation was influenced by the provisional 5m bench height given in the Coffey report.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• GMEL and their consultants have undertaken extensive metallurgical studies on the lujavrite hosted REE and U mineralisation, and a process flowsheet has been rigorously developed. The process flow sheet involves a concentrator circuit that utilises froth flotation to generate a mineral concentrate rich in REEs and U, as well as a sphalerite concentrate rich in zinc. The REE-U rich mineral concentrate is then leached in sulphuric acid under atmospheric conditions to produce a critical mixed rare earth product (containing Nd, Pr, Eu, Dy, Tb and Y), with by-products of uranium, lanthanum and cerium. The flow sheet has been the basis for a number of studies including a prefeasibility study, and a full Feasibility Study (May, 2015).
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The focal points for environmental studies have been the management of fluorine that occurs naturally in the orebody, and of residual radioactive minerals. • The fluorine goes into solution during the flotation stage, and is complexed with Ca to form fluorspar, for which there is an industrial market. • Tailings from the leach circuit, approximately 8% of the ore mined, will contain chemically treated minerals and residual thorium. Storage of such residues will follow industry-standard and established methodologies. This material will mainly be comprised of common silicate minerals such as amphibole and feldspar, with some residual U- and Th-bearing minerals. The U and Th will remain locked within these stable mineral structures. • Tailings from the leach circuit, approximately 8% of the ore mined, will contain chemically treated minerals and residual thorium. Storage of such residues will follow industry-standard and established methodologies. • An environmental impact assessment for the Kvanefjeld project is scheduled to be completed in Q3 2015.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources
(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• For Kvanefjeld, a dry bulk density value of 2.75t/m³ was applied to all mineralized and waste domains to convert volumes to tonnages. This assigned value was also used for the previous Mineral Resource estimations, and is based on 4,212 bulk density measurements, taken by GMEL on core samples, using the water immersion method. • For Sørensen, a dry bulk density value of 2.8t/m³ was used, based on 484 core measurements. • No bulk density measurements specific to Zone 3 were taken; the Kvanefjeld dry bulk density factor was applied to this deposit. • The low porosity of the rocks of the Ilimaussaq complex means that the relative difference between dry and wet bulk densities is likely to be less than 1%.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Most of the Kvanefjeld Mineral Resource is classified as Indicated. In the zone of closer-spaced drilling (70 x 70m), a portion of the Mineral Resource is classified as Measured. • Mineralisation outside the main Kvanefjeld lujavrite body, and on the edges of the Kvanefjeld drilling pattern, is classified as Inferred. • The Competent Person has a high level of confidence in the quality of the input data, the geological interpretation underlying the modeling, and the appropriateness of the bulk density factor, therefore data spacing (relative to the geological and geostatistical variability) is the key determinant of classification category.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The Mineral Resources estimates reported here have not yet been reviewed externally to GMEL and SRK.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Measured, Indicated and Inferred classifications applied to separate parts of the Mineral Resource estimate are considered sufficient to represent the relative accuracy and confidence. No quantitative study of confidence limits has been undertaken. • The Ilimaussaq deposits have not yet been mined, so no production data are available.

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• A Mineral Resource estimate developed to JORC 2012 Standards by Mr Robin Simpson of SRK Consulting (March 2015) was used as the basis for the Ore Reserves estimation. • The Mineral Resource estimate is an update of prior resource reporting. • The Mineral Resources are inclusive of the Ore Reserves.	
Site visits	• A site visit to the Kvanefjeld Project site was undertaken by Mr Damien Krebs in August 2011. He was accompanied by an independent and multi-disciplinary team to view mining areas, plant site locations, infrastructure, tailings disposal locations and the local community.	
Study status	• The project has been subject to a number of prior studies; the most recent mining study was completed in April 2015 (Kvanefjeld Project Mining Study, SRK Consulting). This study supports the Ore Reserves reporting under the JORC 2012 Code. • The mine planning study forms part of the GMEL Kvanefjeld Feasibility Study, released May, 2015. • The project is at Feasibility Study level with this report providing the Maiden Ore Reserves estimate.	
Mining factors or assump-tions	The following logic and assumptions were used in the prior mining Feasibility Study to convert the Mineral Resource to an Ore Reserve: • Dilution and ore loss parameters were reviewed in the mining study. As the mineralisation is gradational with ore grade mineralisation encompassed by lower grade and lower confidence mineralisation, dilution and ore loss was considered to be represented by the regularised resource model block size. • Conventional truck and excavator mining was reviewed and selected as the most appropriate mining method. The scale of the selected mining equipment is small- to mid-sized to align with the Project's production rates. • Access and pre-strip Project requirements have been defined in the study. • The infrastructure requirements of the Project are well understood. • The mineralisation is relatively shallow and the Project is largely insensitive to pit wall angles. Geotechnical studies have been undertaken. The recommendation in prior geotechnical report for overall wall angles and bench and berm configurations has been applied. • No inferred or unclassified mineralisation reported to the Ore Reserves.	

Appendix1 (continued).

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• The metallurgical processing consists of a concentrator and a refinery. • The concentrator uses crushing and grinding to prepare a slurry for froth flotation. Flotation is used to separate a zinc by-product concentrate and a rare earth phosphate mineral concentrate. A fluorspar by-product is also produced from water treatment in the concentrator. • The refinery treats the mineral concentrate to produce uranium and rare earth products. • The refinery consists of an atmospheric counter-current sulphuric acid leach, which extracts the uranium from the concentrate into solution. The uranium is then recovered from the sulphate solution using solvent extraction. After stripping, a double precipitation step is used to produce uranium oxide as a saleable product. • The rare earth elements are not extracted during the leaching process, and report to the solids. The leached solids are conditioned with caustic solids to render the contained rare earths leachable. An atmospheric hydrochloric acid leach is then performed on the conditioned solids to extract the rare earths into solution. • Once in solution, the rare earths are recovered using solvent extraction. This process produces a separated lanthanum, cerium and mixed lanthanum and cerium product. The rest of the rare earths are produced as a mixed rare earth oxide intermediate product which requires further refining to separate into the individual rare earths. • The mineralogy of the deposit is unique; therefore a customised process has been developed for its treatment. • A range of different ore types has been identified from geochemical analysis. Samples from each of the identified ore types has been laboratory tested for concentrator and refinery metallurgy. • Three concentrator pilot plant operations have been performed, treating 40 tonnes of ore. Continuous refinery testwork has been performed, including a continuous 100-hour leach test. • A high purity mixed rare earth carbonate, which is essentially free of uranium and thorium contaminants, has been produced.	
Environ-mental	• An environmental baseline study, which will be used to determine the environmental impact, has been completed. • Dust, noise and water modelling has been performed, which shows a negligible impact on the environment. • An Environmental Impact Assessment is currently being finalised by independent consultants, Orbicon (Denmark); this will be used to support an application for a mining licence in Greenland. • All waste rocks and tailings have been characterised for chemical stability and physical properties. • Placement of the treated water into the fjord is being evaluated by independent consultants, DHI, who has built a calibrated model of the fjord system showing the environmental impact. Preliminary results show the impact is negligible as the treated water has a similar composition to that of the fjord water. • GMEL will be applying for a mining licence in Greenland during the second half of 2015. The extensive environmental studies are essential contributions to the application.	

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Infrastructure		• Infrastructure requirements have been defined and outlined in the supporting studies. Limited infrastructure is currently in place to support the small town of Narsaq (population 1,500). • Narsaq has a harbour, community facilities and an international airport; it is a 50-minute boat ride away. GMEL has used local accommodation and businesses in Narsaq during development phases. • A new port facility will be required for the importation of reagents and export of products. The port will be suitable for berthing panamax-size vessels. • A major road upgrade will be performed to allow 24-hour safe transport of materials to and from the port/ process sites. • A power plant will be established at the concentrator site to provide 38 MW of power to the operations. Hydropower as a development alternative capable of providing the full 38 MW requirement, was also evaluated. • An accommodation village will be established on the outskirts of Narsaq to provide accommodation during the construction and operations phases. • Shipping will be performed using a dedicated vessel which will travel between the new port and mainland Europe. All products will be delivered to mainland Europe for sales or freight forwarding. Reagents and materials will be supplied to mainland Europe and then transported to the new Narsaq port on the back-loading leg. This shipping strategy was developed by Blue Water Shipping of Denmark after performing a number of trade-off studies.
Costs		• Mining operating costs were developed using first principles cost estimation. The mine plans were subsequently reviewed by Mining Contractors and the Contractor costs were carried forward in the financial model. Sensitivities have been run using the higher first principles cost estimation. • Processing costs were developed from first principles. A detailed mass and energy balance using the best available process modelling software was used to determine the reagent and heat requirements. Multiple budget quotes for the supply of reagents were received. • Labour costs were estimated by developing an organogram and determining local/ imported labour rates. • Power costs were determined based on the importation of heavy fuel oil. • Maintenance costs were factored from feasibility-level equipment list costs. • Transportation and accommodation costs were calculated from budget quotes. • Rare earth separation plant costs were taken from an independent report on tolling costs for individual rare earth oxides. • Project capital costs are estimated in United States dollars as at Q1 2015 and are based on current foreign exchange rates. The total capital cost estimate is judged to have an accuracy of ± 15% to 25%, and can be classified as an American Association of Cost Engineers' (AACE) Cost Estimate Classification Class 3 estimate.
Revenue factors		• The Project revenue is supported by GMEL market analysis data. Sensitivities using spot prices and current exchange rates have been run. • Open pit optimisation analysis was completed as part of the Ore Reserves estimate. • Revenue factor = 0.6 was selected to support the final pit design on the basis of maximising net present value over a 30-year/ 90 Mt operation. • Optimisation sensitivity work demonstrated that the Ore Reserves are not sensitive to product pricing.

Appendix1 (continued).

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Market assessment	• Future market pricing of rare earths was provided by independent consultants, Adamas Intelligence. For the purposes of the mine reserve, current 2015 forecast prices were applied. Prices were also provided for by-products such as uranium, zinc and fluorspar. • Adamas has indicated that: − The demand for rare earths is growing strongly at ~5% per year due to the use of electronic devices and emission-free energy. With the drive to miniaturise devices, the requirement for rare earths is likely to continue. Energy efficiency is another growth area which will require the use of more, rather than less, rare earth elements. − China still dominates world supply of rare earths including both legal production and grey market exports. The supply situation for rare earths is dependent on Chinese policy regarding grey market exports and preserving China's rare earth resources. Consolidation in the Chinese rare earths industry has commenced, with smaller producers closing down or being forced to merge with large state-owned enterprises. Aspiring Western world production from Lynas and Molycorp has failed to live up to expectations as each continues to ramp up their complex operations to design rates. It is expected that Chinese production will gradually decline from current output and that additional sources of non-Chinese rare earths are needed to maintain supply. The Kvanefjeld Project can supply rare earths cost effectively to China, replacing grey market exports and unsustainable Chinese supply.	
Economic	• The financial model has been developed and tested for sensitivities against different processing solutions and mining costs, including conservative analysis. In all cases, positive economic results have been reported. • Product price sensitivity was also performed, with the uranium price evaluated at current spot prices and long-term forecast pricing. The project still produced a positive return at low current spot prices for the main products.	
Social	• A social baseline study has been performed by independent consultant, Grontmij of Denmark. Grontmij is currently finalising the Social Impact Assessment which will form part of the mining licence application in the second half of 2015. • The Project development has the support of the local community, municipality of southern Greenland and the Government of Greenland.	
Other	• Danish authorities are working closely with the Government of Greenland to finalise regulations for the export of uranium from Greenland. • GMEL has had its exploration licence, which includes the addition of radioactive elements, renewed. • In October 2013, the Government of Greenland lifted the ban on uranium mining in Greenland. This ban was called the 'Zero Tolerance' policy. Recent elections in Greenland have instituted a mining-friendly government which has upheld the lifting of the uranium mining ban. The Government of Greenland is now waiting to evaluate the mining licence application for the Kvanefjeld Project. • It is expected that the Government of Greenland approvals will be in place for the Project to go into construction in 2017.	
Classification	• The Ore Reserve appropriately reflects the Project. No Probable Ore Reserves have been derived from Measured resources. No Inferred resources are included in the Ore Reserves estimate. No additional modifying factors have been required or applied to downgrade the in situ Mineral Resource classification on conversion to Ore Reserves.	

Appendix1 (continued).

5. JORC Code, 2012 Edition – Table 1 (continued)

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Audits or reviews	• The current Ore Reserves estimation and supporting processes have been peer reviewed. • Independent reviews on the capital and operating costs estimates have been performed. The capital cost reviews showed the cost estimates are conservative and there is considerable scope to optimise costs in the future.	
Discussion of relative accuracy/ confidence	• The relative confidence in the global Ore Reserves estimation is high, due to the following: – Sensitivity to mining costs and product revenue is low. – Reserve is supported by open pit optimisation work using a net present value approach. This has identified the higher value ore rather than maximising the quantity of economic ore with present value economics. – The study is well advanced.	

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