

# June 2017 Quarterly Report

Monday 31st July, 2017

# **Highlights:**

- Rare earth industry recovery continues on the back of continued supply side reform in China, and strengthening demand outlook
  - Demand growth is being driven by the electrification of transport systems (electric vehicles, train systems) and, new and clean technologies, many of which are closely linked to government policies worldwide
  - Strong demand outlook for the markets for permanent magnets (Nd, Pr, Tb, Dy) and catalysts (particularly La)
  - Kvanefjeld one of the very few advanced projects globally owing to extensive process development, successful pilot plant operations, integration with downstream processor
- Solid progress in closing out Environmental studies for Kvanefjeld Project
  - Recent meetings held in Copenhagen with representatives of Greenland's Environmental Agency for Mineral Resource Activities (EAMRA), and Danish Centre for the Environment (DCE) to work through outstanding gaps; agreement reached on many areas of feasibility design
- IAEA Director General visits Kvanefjeld Project, joining a delegation that included Greenland's Premier Kim Kielsen, the Mayor of Southern Greenland, and the Deputy Minister for Industry Trade and Labour
  - The site visit was an opportunity to gain greater understanding of development strategy and key infrastructure. Kvanefjeld is projected to produce approximate 1M pounds of U₃O<sub>8</sub> per annum, as one of a series of by-products to rare earth production
- Technical work programs progressing with strategic partner Shenghe Resources Holding
   Co Ltd:
  - Work programs looking to enhance operational and processing efficiency in both the concentrator and refining circuits, and improve overall Project cost-structure

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PERTH: Unit 6, 100 Railway Road, Subiaco Western Australia 6008 POSTAL: PO Box 2006, Subiaco WA 6904

Telephone: +61 8 9382 2322 Facsimile: +61 8 9382 2788 **GREENLAND**: PO Box 156, Narsaq, Greenland 3921

WEB: <u>www.ggg.gl</u> EMAIL: <u>info@ggg.gl</u> ABN: 85 118 463 004



## **June 2017 Quarterly Activities**

The recovery of rare earth prices has continued through the second quarter of 2017 as the impacts of supply side reforms in China filter through the sector. This comes at a time when the demand outlook is increasingly strong, driven by the electrification of transport systems (electric vehicles, train systems) along with new and clean technologies, many of which are closely linked to government policies worldwide. The timing of the industry recovery is extremely favourable for Greenland Minerals and Energy Ltd's ('GMEL' or 'the Company') 100% owned Kvanefjeld Project (the Project).

Kvanefjeld remains one of the few advanced rare earth projects globally, as a result of steady and committed progress through what has been a multi-year period of supply side restructure. As the world's largest code-compliant rare earth mineral resource (>1 billion tonnes), that is enriched across all key rare earth elements (neodymium, praseodymium, terbium, dysprosium), Kvanefjeld is well-positioned to play an important role. The project is backed by an ore reserve estimate of 108 Mt @1.43% rare earth oxide, 362ppm U<sub>3</sub>O<sub>8</sub>, and 0.26% zinc (JORC-code 2012, SRK Consulting), sufficient to sustain an initial mine-life of 37 years.

Large-scale pilot plant operations, conducted as part of the European Union backed EURARE program, have de-risked the Kvanefjeld processing route, and demonstrated the clear advantage and effectiveness of the simple, atmospheric leach circuit. In late May, GMEL participated in the **2**<sup>nd</sup> **Conference on European Rare Earth Resources**, supported in part by the EURARE program (<a href="http://kuleuven.sim2.be/eres-2017-six-lessons-learned/">http://kuleuven.sim2.be/eres-2017-six-lessons-learned/</a>), to update on the status of Kvanefjeld.

GMEL is working closely with Shenghe Resources Holding Co Ltd, to further enhance the Project coststructure and ensure Kvanefjeld is technically aligned with Shenghe's downstream processing capacity. Shenghe is a leading supplier of rare earth products to a growing international customer base.

Important progress was also made during Q2 on Project permitting, with meetings held with Greenland's EAMRA, and its main advisory group the Danish Centre for Environment (DCE). The meetings aimed to firm up the strategies and work programs to address any outstanding areas after detailed technical reviews of the Kvanefjeld Environmental Impact Assessment in 2016.

In May GMEL was honoured to have assisted the Greenland Government in hosting the Director General of the International Atomic Energy Agency (IAEA), Mr Yukiya Amano, to southern Greenland and the Kvanefjeld Project in the week of May 8<sup>th</sup>. The visiting delegation was headed by Greenland's Premier Kim Kielsen, and included Director General Amano, the Danish Ambassador to Austria (the IAEA is headquartered in Vienna) the Mayor of southern Greenland. The visit provided an excellent opportunity for GMEL to update the participants on the Kvanfjeld development strategy.



## **IAEA Director General and Greenland Premier Visit Kvanefjeld**

In May GMEL assisted the Greenland Government in hosting the Director General of the International Atomic Energy Agency (IAEA), Mr Yukiya Amano, to southern Greenland and the Kvanefjeld Project.

The delegation was headed by Greenland's Premier Kim Kielsen, and included Director General Amano, and the Danish Ambassador to Austria (the IAEA is headquartered in Vienna). The delegation was joined by the Mayor of Southern Greenland, and GMEL's Managing Director, Dr John Mair, and was able to visit the Kvanefjeld project area, learn more about the development strategy and the plans for key infrastructure including mine site, processing facilities, tailings storage, and port for direct shipping access.



**Figure 1.** Delegation members at the base of the Narsaq valley, following a visit to the Kvanefjeld Project area. From left: Jakob Rohmann Hard (Chief of Protocol, Foreign Department, Greenland), Liselotte Plesner (Danish Ambassador, Vienna), Nuka Møller (Greenland Business), Jørn Skov Nielsen (Deputy Minister, Industry Trade and Labour, Greenland), Kim Kielsen (Greenland Premier), John Mair (Managing Director, GMEL), Yukiya Amano (Director General, IAEA).

Mr Amano also visited Copenhagen, where he met with the Danish Minister for Foreign Affairs, Mr Anders Samuelsen, with whom he discussed cooperation between the IAEA, Denmark and Greenland in relation to the Kvanefjeld Project, as well as wider international issues. Mr Amano also met with



members of the Danish Parliament's Foreign Affairs Committee, and officials from the Danish Emergency Management Agency and Danish Health Authority.

Significantly, Director General Amano's visit to Kvanefjeld followed the completion of an extensive program of work by both the Greenland and Danish governments to establish and implement the necessary regulatory framework to manage the production of uranium in accordance with international best practice and safety conventions. Kvanefjeld is the only project in Greenland that is projected to produce uranium, and, therefore, the undertakings at a government level to prepare the regulatory system demonstrate the level of committed effort and support for the Project

#### **Environmental Impact Assessment Update**

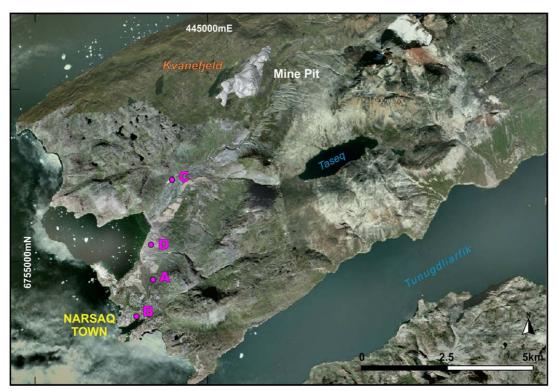
Through 2017, GMEL has been updating the Environmental Impact Assessment (EIA) for the Kvanefjeld Project ('Project'), following detailed reviews conducted by the Government of Greenland (GoG), and its advisory groups in 2016. Independent consultants and regulatory bodies from Canada have also been involved in the review process. This detailed review phase (also referred to as the guidance phase) is the first step in the processing of a mining license application. Based on recommendations, the impact assessments are then updated prior to public consultation.

No major environmental risks have been identified for the project, and much of the feasibility design has been accepted as appropriate and suitable for Greenlandic conditions. In order to address feedback from advisory groups, GMEL personnel have conducted a number of meetings with GoG representatives through 2017.

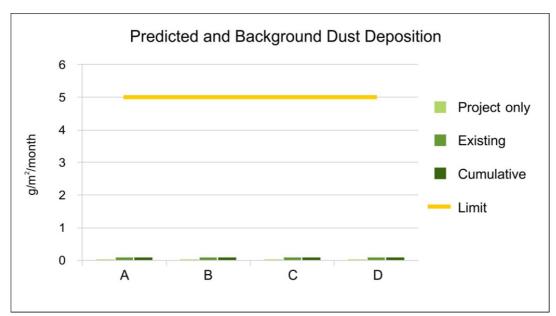
In early June, representatives from Greenland's EAMRA, and the DCE met with GMEL representatives in Copenhagen to address outstanding issues. The additional work programs to expand some datasets are underway, and are expected to be concluded over the next couple of months. The results will then be incorporated into the updated studies.

Additional work is being undertaken to provide further chemical and structural information on the waste-rock dumps. Sample material from Greenland has been shipped to laboratories for chemical analyses and SRK Consulting has been engaged to increase the design detail of the dumps. SRK is also looking to incorporate into the design the ability to capture run-off water for use in processing facilities. This will decrease the amount of water sourced from the Narsaq River thereby decreasing the environmental impact; a strategy that aligns with GMEL's agenda of continuously looking for opportunities to improve the efficiency of the Project and reduce the environmental footprint.



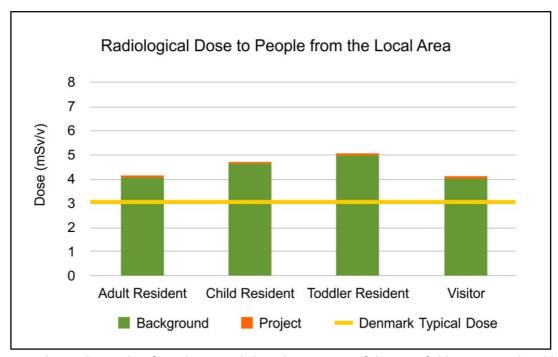


**Figure 2.** Overview of the Narsaq Peninsula and the Kvanefjeld Project area. Baseline dust collection measurements and weather data are utilised to model predicted dust deposition at a number of locations (marked A,B,C and D). The methodology has been approved by the Danish Centre for the Environment. See Figure 3, for the results.



**Figure 3.** The results of baseline dust measurements and predicted dust deposition as a result of the proposed mining operation. The Project stands to have a limited impact on the baseline dust deposition, and combined, the dust levels are well below the recommended limit set by European Union regulations.





**Figure 4.** Radiation dosage data from the EIA Radiological Assessment of the Kvanefjeld Project, produced by the independent consultant Arcadis. The dosage calculations (in millisieverts) draw on extensive baseline data, and are compliant with the methods of the International Commission on Radiological Protection (ICRP). The project will have little impact relative to the baseline (natural background) radiation levels. Also shown is the typical dosage for people in Denmark. The baseline levels are influenced by the local geology of the region, pose no safety concerns, and are well below recommended safety limits.

As the majority of waste rock is made up of common rock types such as basalt (often used as aggregate in construction, and road base), no issues are expected. Clays, that can present issues in relation to structural integrity, are scare in the area owing to recent glaciation, so structural issues are expected to be negligible.

Some additional work is also being undertaken to expand radiation baseline studies. Work conducted to date indicates that the Project will have little impact on the natural (baseline) radon gas emission levels, however, as this is an area of stakeholder interest, it is important to provide a detailed level of understanding to support stakeholder confidence (Figure 4). Minor additional work is also underway to address some outstanding queries in regards to dust modelling.

Shared Resources, a consultancy that specialises in the management of social and environmental impacts, is providing additional guidance to GMEL to ensure that the material for public consultation meets the highest possible standards. Shared Resources also has significant experience with project financing, particularly in developing world countries. This experience will inform updates to the EIA, as well as the Social Impact Assessment (SIA), and support the Company's efforts to meet the international standards required of mining project proponents by financiers.



#### **Social Impact Assessment**

Following reviews in 2016, the Social Impact Assessment for the Kvanefjeld Project is now advanced with all contributing data complete. The focus is largely on updating documents and figures, and working under guidance from Shared Resources to align the SIA with international standards that become important for project finance. Shared Resources extensive experience in working with the International Finance Corporation (IFC) is particularly beneficial in this area.

### **Rare Earth Prices Rise as Sector Outlook Improves**

After a long period of consolidation through 2016 RE prices have been on the increase since the start of 2017. For the magnet metals (especially neodymium, praseodymium and terbium) and lanthanum (catalyst) the price increases have been significant (Figure 5).

Using January 1 2016 as a base, the price of terbium oxide is up over **55%**, the prices of lanthanum oxide is up nearly **30%** and for praseodymium and neodymium oxide up around **30%**. It has taken until the end of 2016 for the improved market dynamics to be reflected in RE prices because of the level of stock of intermediate RE products that had built up in the supply chain since 2012. The sharp fall in demand after the price spike in 2011 was not matched by a cutback in production and significant stocks of intermediate products developed as a consequence, particularly through illegal supply networks.

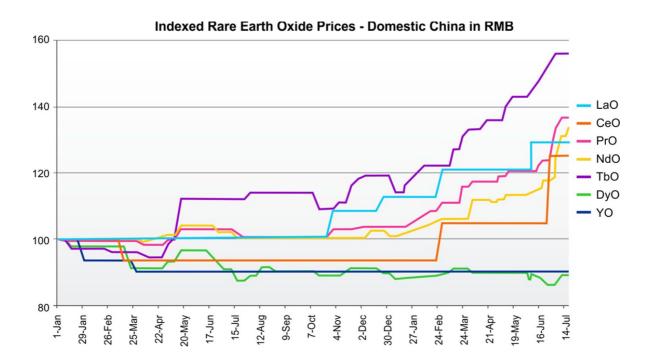
Prices have not moved in response to a short term stimulus to the market, rather prices are moving to reflect underlying changes to the supply and demand dynamics for rare earths. Demand is increasing and China's Rare Earth Industry Development Plan for 2016 – 2020 will see continuing tightening of rare earth supply.

The key objectives of the 2016-2020 Plan are to:

- \* Limit RE mine production to no more than 140,000 tpa
- \* Reduce separation plant capacity by a third
- \* Ensure that 90% of RE operations are in compliance with increasingly stringent environmental regulations, and
- Ensure that the proportion of REs exported as raw materials is significantly reduced

Once implemented the Plan will restrict rare earth production from domestic raw materials and will further restrict RE raw mineral exports. The Plan will create the circumstances whereby a select few ex-China mines (primary supply) will be integrated with leading Chinese processors to ensure that sufficient RE products are available to end-user industries.





**Figure 5.** Relative movement in rare earth prices since January 2016 (indexed prices). Notable price increases have been achieved for neodymium, praseodymium and terbium oxides (magnet materials), along with lanthanum and cerium oxides (catalyst components). Source: Association of China Rare Earth Industry (ACREI).

### **Demand - Looking Forward**

Commentators on the RE market are forecasting significant long term growth for the RE market. Forecasts typically suggest compound annual growth of around 5% for the long term.

The most significant growth is expected for those REs with application in the markets for magnets and catalysts [Nd, Pr, La]. Significantly, it is becoming increasingly the case that global RE demand is inextricably linked to government policies and regulations. In particular policies and regulations that are related to:

- Production of clean energy
- Electric mobility
- Energy efficiency
- Emission controls



The link between forecast demand and Government policies adds confidence to expectations for demand growth over time.

On the supply side, with the Government of China planning to cap mine production of REs, it is clear that the development of RE mines outside of China will be required to meet expected demand. It is unlikely that mine development can occur sufficiently rapidly to meet growing demand, particularly for key REs required for the manufacture of magnets and catalysts, and scarcity of key inputs will help to push price higher.

### **Greenland's Role in New RE Supply Chains**

GMEL is at the vanguard of this strategic evolution in rare earth supply. Prior to establishing a strategic relationship with leading rare earth company Shenghe in 2016, the Company had been actively engaging the Chinese rare earth industry for a number of years; a process which provided strong insight into how the industry was reshaping.

Kvanefjeld has a number of key attributes that, when integrated with Shenghe's downstream processing technology and capacity, can provide the potential to play an important role in new supply networks. These include:

- ✓ Scale largest code-compliant rare earth resource, ore reserve for initial 37 year mine life
- ✓ Multiple by-product revenue streams to strengthen project economics (U<sub>3</sub>O<sub>8</sub>, zinc, fluorspar)
- ✓ Composition ideal production profile across key rare earths Nd, Pr, Tb, Dy
- ✓ Yttrium enrichment is highly beneficial for latest RE separation technology
- ✓ Advantageous processing that has been extensively pilot plant tested
- ✓ Favourable country and project location with direct shipping access, airport nearby
- Regulatory framework implemented to manage project operation and export controls

-ENDS-



# **About Shenghe Resources Holding Ltd**

Shenghe Resources Holding Co. Ltd (SSE 600392), (Shenghe) is a public company exclusively focused on mining and processing rare earth ores, and producing high purity rare earth oxides, metals and alloys along with a range of rare earth products. Shenghe is listed on Shanghai Stock Exchange (since 2012) and, as at 28 July, 2017 had 1.35 billion shares on issue and a market capitalization of approximately RMB 24.8 billion or AUD 4.6 billion.

Shenghe has a diversified background of its major shareholders. As at 25 February, 2017, the Institute of Multipurpose Utilization of Mineral Resources (IMUMR), a state owned scientific research institute specializing in mineral resources, holds 14.9%, Mr Quangen Wang, former engineer of IMUMR holds 7.27% and the Sichuan Giastar Enterprise Group, a private company involved in the agricultural industry holds 5.86%.

Shenghe is headquartered in Chengdu, Sichuan Province and is a single industry company with mining and processing activities in a number of Chinese centres, and has commenced the strategy of extending business outside China to increase the focus on overseas resources and international markets. Shenghe is involved at all levels of the rare earth industry, from mining through processing to the production of end products. Significantly, Shenghe also holds Chinese production quotas for the mining and separation/refining of rare earths.

For Shenghe, investment in GMEL is aimed to secure access to rare earth resources outside of China which are capable of supporting a range of rare earth businesses, facilitating long term growth opportunities.

## **About the Kvanefjeld Project**

GMEL's primary focus is centred on the northern Ilimaussaq Intrusive Complex in southern Greenland. The project includes several large scale multi-element resources including Kvanefjeld, Sørensen and Zone 3. Global mineral resources now stand at **1.01** billion tonnes (JORC-code 2012 compliant).

The deposits are characterised by thick, persistent mineralisation hosted within sub-horizontal lenses that can exceed 200m in true thickness. Highest grades generally occur in the uppermost portions of deposits, with overall low waste-ore ratios.

Less than 20% of the prospective area has been evaluated, with billions of tonnes of lujavrite (host-rock to defined resources) awaiting resource definition.

While the resources are extensive, a key advantage to the Kvanefjeld project is the unique rare earth and uranium-bearing minerals. These minerals can be effectively beneficiated into a low-mass, high value concentrate, then leached with conventional acidic solutions under atmospheric conditions to achieve particularly high extraction levels of both heavy rare earths and uranium. This contrasts to the highly refractory minerals that are common in many rare earth deposits that require technically challenging and costly processing. The rigorously developed process route for Kvanefjeld has been the subject of several successful pilot plant campaigns.



The Kvanefjeld project area is located adjacent to deep-water fjords that allow for shipping access directly to the project area, year round. An international airport is located 35km away, and a nearby lake system has been positively evaluated for hydroelectric power.

Kvanefjeld is slated to produce a significant output of critical rare earths (Nd, Pr, Eu, Dy, Tb), with by-production of uranium, zinc, and bulk light rare earths (La, Ce). Low incremental cost of recovering by-products complements the simple metallurgy to deliver a highly competitive cost structure.

Rare earth elements (REEs) are used in a wide variety of applications. Most notably, rare earth elements make the world's strongest permanent magnets. The magnet industry continues to be a major growth area, owing to the essential requirement of high-powered magnets in many electrical applications.

Magnetism is the force that converts electricity to motion, and vice-versa in the case of renewable energy such as wind power. In recent years growth in rare earth demand has been limited by end-user concerns over pricing instability and surety of supply; however, demand has returned and the outlook continues to strengthen.

Kvanefjeld provides an excellent opportunity to introduce a large, stable supplier at prices that are readily sustainable to end-users. In addition rare earths from Kvanefjeld will be produced in an environmentally sustainable manner further differentiating it as a preferred supplier of rare earth products to end-users globally. These factors serve to enhance demand growth.

Uranium forms an important part of the global base-load energy supply, with demand set to grow in coming years as developing nations expand their energy capacity.



# **Tenure, Permitting and Project Location**

#### Tenure

Greenland Minerals and Energy Ltd (ABN 85 118 463 004) is a company listed on the Australian Securities Exchange. The Company has conduct extensive exploration and evaluation of license EL2010/02. The Company controls 100% of EL2010/02 through its Greenlandic subsidiary.

The tenement is classified as being for the exploration of minerals. The project hosts significant uranium, rare earth element, and zinc mineral resources (JORC-code compliant) within the northern Ilimaussaq Intrusive Complex.

Historically the Kvanefjeld deposit, which comprises just a small portion of the Ilimaussaq Complex, was investigated by the Danish Authorities. GMEL has since identified a resource base of greater than 1 billion tonnes, including the identification and delineation of two additional deposits. The Company has conducted extensive metallurgical and process development studies, including large scale pilot plant operations.

#### Permitting

Greenland Minerals and Energy Limited is permitted to conduct all exploration activities and feasibility studies for the Kvanefjeld REE-uranium project. The company's exploration license is inclusive of all economic components including uranium and REEs.

A pre-feasibility study was completed in 2012, and a comprehensive feasibility study completed in 2015. A mining license application was handed over to the Greenland Government in December 2015, which addresses an initial development strategy. The project offers further development opportunities owing to the extensive mineral resources.

#### Location

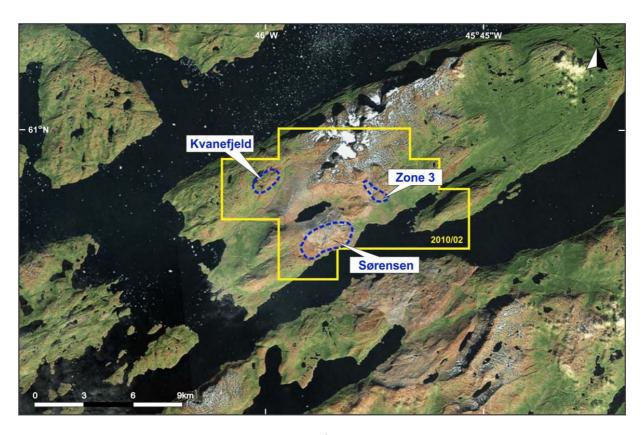
The exploration lease covers an area of 80km<sup>2</sup> in Nakkaalaaq North on the southwest coast of Greenland. The project is located around 46° 00′W and 60 55′N.

The town of Narsaq is located approximately 8 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 processing, and exploration and environmental activities are managed.

Access to the Kvanefjeld plateau (at approximately 500m asl) is generally gained by helicopter assistance from the operations base located on the edge of the town of Narsaq. It is possible to access the base of the plateau by vehicle and then up to the plateau by a track.





Overview of GMEL's 100% controlled license EL2010/02. A mining license application has been lodged.

<b>Exploration License</b>	Location	Ownership
EL 2010/02		Held by Greenland Minerals and Energy (Trading)
		A/S, a fully owned subsidiary of GMEL.

Capital Structure – As at 30 <sup>th</sup> June, 2017									
Total Ordinary shares	1,004,772,726								
Quoted options exercisable at \$0.08 on or before 30 September 2018	187,775,047								
Unquoted options exercisable at \$0.20 on or before 24 February 2018	7,500,000								
Unquoted options exercisable at \$0.25 on or before 24 February 2018	7,500,000								

Please visit the company's website at <a href="www.ggg.gl">www.ggg.gl</a> where recent news articles, commentary, and company reports can be viewed.

Statement of Identified Mineral Resources, Kvanefjeld Project, Independently Prepared By SRK Consulting (February, 2015)

Multi-Element Resources Classification, Tonnage and Grade											Contained Metal					
Cut-off	Classification	M tonnes	TREO <sup>2</sup>	U <sub>3</sub> O <sub>8</sub>	LREO	HREO	REO	$Y_2O_3$	Zn	TREO	HREO	$Y_2O_3$	$U_3O_8$	Zn		
$(U_3O_8 ppm)^1$		Mt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Mt	Mt	Mt	M lbs	Mt		
Kvanefjeld - Fe	bruary 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		

Statement of Identified Mineral Resources, Kvanefjeld Project, Independently Prepared By SRK Consulting (February, 2015)

<b>Cut-off</b>	Classification	M tonnes	TREO <sup>2</sup>	U₃O <sub>8</sub>	LREO	HREO	REO	Y <sub>2</sub> O <sub>3</sub>	Zn	TREO	HREO	$Y_2O_3$	$U_3O_8$	Zn
$(U_3O_8 ppm)^1$		Mt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Mt	Mt	Mt	M lbs	Mt
Sørensen - Mai	rch 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 2	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 – C	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	<b>Grand Total</b>	1010	11,000	266	9,700	399	10,100	893	2,397	11.14	0.40	0.90	592.84	2.42

<sup>&</sup>lt;sup>1</sup>There is greater coverage of assays for uranium than other elements owing to historic spectral assays. U<sub>3</sub>O<sub>8</sub> has therefore been used to define the cutoff grades to maximise the confidence in the resource calculations.

Note: Figures quoted may not sum due to rounding.

## -ENDS-

<sup>&</sup>lt;sup>2</sup>Total Rare Earth Oxide (TREO) refers to the rare earth elements in the lanthanide series plus yttrium.

#### ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy Ltd (ASX: GGG) is an exploration and development company focused on developing highquality mineral projects in Greenland. The Company's flagship project is the Kvanefjeld multi-element deposit (rare earth elements, uranium, zinc). A pre-feasibility study was finalised in 2012, and a comprehensive feasibility study was completed in May, 2015. The studies demonstrate the potential for a large-scale, long-life, cost-competitive, multi-element mining operation. An exploitation (mining) license application for the initial development strategy was completed in 2015.

In 2017, GMEL is focussed on working closely with Greenland's regulatory bodies on the processing of the mining license application, and maintaining regular stakeholder updates. The Company will be undertaking technical work programs with Shenghe Resources Holding Co Ltd that aim to further enhance the Kvanefjeld Project, and ensure it is aligned with downstream processing. In addition, the Company will look to further value add initiatives including the recovery of additional by-products from the leach solution.

Dr John Mair David Tasker Christian Olesen

Managing Director Professional PR Rostra Communication
+61 8 9382 2322 +61 8 9388 0944 +45 3336 0429

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.

### Competent Person Statement - Mineral Resources and Ore Reserves

The information in this report that relates to Mineral Resources is based on information compiled by Mr 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 information in the statement 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 Mr 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.

The mineral resource estimate for the Kvanefjeld Project was updated and released in a Company Announcement on February 12<sup>th</sup>, 2015. The ore reserve estimate was released in a Company Announcement on June 3<sup>rd</sup>, 2015. There have been no material changes to the resource estimate, or ore reserve since the release of these announcements.