

## June 2019 Quarterly Report

Wednesday 31<sup>st</sup> July 2019

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### Highlights:

- **Optimised Feasibility Study sees major reductions to capital and operating costs**
  - Capital costs reduced by 40% to US\$505M, inclusive of refinery circuit
  - Operating costs reduced by 40% to <\$4/kg REO
  - Confirms Kvanefjeld's status as one of the most significant emerging RE projects globally with large projected output of **Nd, Pr, Dy, Tb** over initial 37-year mine life
  
- **All components of a mining license application lodged with the Greenland**
  - Updated impact assessments lodged in Greenlandic, Danish, English
  - Company notified of formal application lodgement by government
  - Stakeholder meetings held in south Greenland; impact assessments presented
  
- **Productive meetings held with senior Shenghe representatives in Perth**
  - Meetings held to review exceptional outcomes of optimisation program
  - Focus shifts to commercial strategy and path to market
  
- **Company participates in collaborative research program with USGS**
  - Collaborative research programs underway in Kvanefjeld Project area and broader south Greenland rare earth province
  - Meeting held with US Ambassador to Denmark in May, who subsequently visited project area following USGS field work

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## June 2019 Quarterly Activities

Greenland Minerals Ltd ('GML', or 'the Company') continued a productive start to 2019 through the June Quarter. Key developments included the completion of project optimisation that had been underway through 2017-18. The combined outcomes of metallurgical and engineering studies saw major reductions to both capital and operating costs and reveal the true potential of the Kvanefjeld Project as a globally significant, long-life, low-cost producer of critical rare earths.

In late-June, the Company lodged updated environmental and social impact assessments with Greenland's Minerals License and Safety Authority. The impact assessments, along with the navigational safety study, were lodged in Greenlandic, Danish, and English, as is required for a formal mining license application. The Project Feasibility Study and JORC-code compliant ore reserve statement, which are also part of an application, had been previously submitted. Company representatives accompanied by a lead consultant then conducted a series of meetings in southern Greenland with the municipal council, business association, and community.

In May, the Company participated in the Future Greenland conference, where GML's Managing Director Dr John Mair presented in the mining session. During this period Dr Mair had the opportunity to meet with the US Ambassador to Denmark Carla Sands to discuss Greenland's emerging mining sector, the rare earth industry, and the status and outlook of the Kvanefjeld Project.

Through early July, GML participated in a joint research program conducted by Greenland's Department of Geology and the US Geological Survey that aims to produce updated geological and geophysical data over southern Greenland's rare metal province. As part of this initiative, the research team spent several days studying the geology of the Kvanefjeld Project area through visiting outcropping ore zones and examining drill cores at the Company's operations base in Narsaq. Datasets along with study outcomes are to be made freely available and aim to continue to build the profile of one of Greenland's most significant mineral provinces. Following the USGS field work, Ambassador Sands visited southern Greenland and GML's operations base in Narsaq. Further international research groups are scheduled to visit site through August.

The Kvanefjeld Project, 100% owned by GML, is underpinned by a JORC-code compliant resource of >1 billion tonnes, and an ore reserve estimate of 108 million tonnes to sustain an initial 37-year mine life. It is projected to be one of the largest global producers of key magnet metals including **neodymium, praseodymium, dysprosium** and **terbium**, along with by-production of uranium and zinc. Kvanefjeld offers a new, simpler path to rare earth production than traditional refractory sources.

The Kvanefjeld Project is located near the southern tip of Greenland near existing infrastructure, including an international airport, and has year-round direct shipping access to the project area.

Shenghe Resources Holding Co Ltd (Shenghe), GML's largest shareholder, is a leader in RE processing technology, and one of the largest RE producers globally. Both companies are working to optimise Kvanefjeld, and develop the project as a low-cost, long-life cornerstone to future rare earth supply.

### **Kvanefjeld Project – Optimised Feasibility Outcomes**

Through 2017 and 2018, GML has been conducting optimisation of the Kvanefjeld Project with a focus on metallurgical performance and civil design and engineering. These studies built on the 2016 Kvanefjeld Feasibility Study, following the commencement of cooperation with Shenghe. The outcomes of these studies were finalised during Q2, 2019. The reduction in the capital cost estimate is the result of optimisation studies covering all elements of the Project from the flowsheet to civil construction. The results of individual optimisation studies have been the subject of progressive updates to the market since 2016.

#### **Key Outcomes:**

- Capital cost reduced by **40%** to **US\$505M**
- Operating costs reduced by **40%**, resulting in unit costs of **<US\$4/kg of REO**
- Project has a smaller footprint and lower impacts, while producing more rare earths
- Reduced reagent consumption, and reduced power requirements

Improvements to the flowsheet include a major enhancement to flotation performance (the production of smaller volumes of higher-grade concentrate) and the development of a simpler, more efficient leaching (refinery) circuit. These improvements have been developed under the guidance of Shenghe's experience and expertise in rare earth processing. In combination, these developments significantly reduce the scale of the refinery circuit resulting in substantial cost reductions.

The flowsheet improvements have also resulted in improved rare earth recoveries with the projected output of commercially important rare earths increased to:

- **Neodymium oxide**                      **4266 tpa** (metric tonnes per annum)
- **Praseodymium oxide**                **1426 tpa**
- **Dysprosium oxide**                    **270 tpa**
- **Terbium oxide**                         **44 tpa**

Average annual by-product output includes:

- **Uranium oxide**                        **451 tpa**
- **Zinc concentrate**                    **6060 tpa**
- **Fluorspar**                                **12,417 tpa**

(prices assumed for by-product credits include: U<sub>3</sub>O<sub>8</sub> US\$40/lb, zinc concentrate US\$1000/t, fluorspar US\$400/t)

Civil engineering design and construction costs were also a major focus of optimisation studies. A multi-disciplinary team of specialist engineering firms including **Nuna Logistics, Tetra Tech, PND Engineers** and **China Communications Construction Co**, has contributed to an updated civil design with construction costs reduced substantially (Company announcement March 26, 2019).

The revised civil costs are now estimated to be US\$175M including indirect costs and contingency. This is an overall capital cost reduction of US\$138M (-44%) of the previous 2016 Feasibility Study. Cost reductions were primarily achieved through substantial reductions in civil earth works for site preparation (company announcement October 22<sup>nd</sup>, 2018), updated port design by specialist groups, and greater use of local materials.

**The updated capital cost estimate of US\$505M is transformational for the Project which now has the lowest capital intensity of emerging ASX-listed rare earth projects. In addition, the improved metallurgical performance and increased recoveries have Kvanefjeld well-positioned with the lowest projected unit costs of rare earth production.**

## **Permitting Update**

In late June, the Company lodged with the Government of Greenland (GoG) an application for an exploitation (mining) license for the Project (the Application). Confirmation was then received of a formal application lodgement from Greenland's Mineral License and Safety Authority.

In accordance with requirements set down by the GoG, the following supporting documents were included with the Application:

**An environmental impact assessment (EIA) for the Project**

**A social impact assessment (SIA) for the Project, and**

**A navigational safety investigation study (MSS) for the Project**

As required, these supporting documents were prepared and lodged with Greenland's Mineral License and Safety Authority (MLSA) in Greenlandic, Danish and English. Collectively, these documents comprise a mining license application and the Company has received confirmation from the MLSA that an application has been received.

In addition to the formal requirements for an application for an exploitation license, the Company has previously provided the MLSA with a copy of the Project's Feasibility Study and financial model and a copy of the Project's JORC-code compliant ore reserves statement and report.

The MSS, the EIA and the SIA were prepared for the Company by independent expert consultants. The scopes of the both the EIA and the SIA were framed by terms of reference (ToR) that were approved by the Greenland Government in late 2015 after a comprehensive process of public consultation. The assessments, which incorporate contributions from a range of internationally recognised expert groups, have been progressively updated during an extensive period of guidance and review by the GoG over the last three years.

The next step in the permitting process is a period of public consultation in respect of the Application. Over 8 to 12 weeks, interested stakeholders have the opportunity, either directly to the GoG or in public forums, to provide feedback on the Application, which, as appropriate, will be incorporated in the EIA and SIA. The Company looks forward to updating further on the timing of subsequent steps in the licensing process. Senior Company representatives will be travelling to Greenland in the coming weeks to discuss the outlook and next steps in the licensing process.

### **Strengthening Ties with the Local Community**

Subsequent to lodging the Application, Company representatives, accompanied by our lead SIA consultant, conducted a series of meetings in Kommune Kujalleq (the Kommune), the municipal authority for the region of southern Greenland which includes Narsaq and the Project. Key findings of the EIA and SIA were presented to the Mayor of southern Greenland and members of the Kommune. A meeting was also held with the Kujalleq Business Council. Community meetings were also conducted in the towns of Qaqortoq and Narsaq.

In March, GML signed a Memorandum of Understanding (the MoU) with the Kommune and the Kujalleq Business Council that aims to establish a participation agreement for community capacity development for Kommune workers and businesses.

The SIA forms the basis for the development of the Project's Impact Benefit Agreement (IBA). The IBA is an agreement between the Company, the Kommune and the GoG the purpose of which is to ensure that Greenlandic interests are protected during the life of the Project. Negotiation of the IBA is expected to commence after the completion of public consultation and will build on March's MoU.

### **Strategy Meetings Conducted with Shenghe**

In late May, coinciding with the Company's Annual General Meeting, a delegation of senior representatives from Shenghe visited Perth for a series of meetings. The delegation was headed by Shenghe Chairman Mr Hu Zesong. The visit provided the opportunity to review the outcomes of the feasibility optimisation work, and update on the project status in Greenland.

With the main phase of optimisation work completed, the visit provided the opportunity to commence planning the next steps of cooperation between both companies, with a focus on establishing a path to market and the accompanying commercial development strategy.

The outlook for the rare earth sector continues to strengthen, which creates an optimal window for the establishment of new internationally focused, integrated rare earth supply networks. Kvanefjeld is ideally placed to play a key role in future rare earth supply.

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

GML is at the forefront of a strategic evolution in rare earth supply. Major changes are coming to global RE supply, with China looking to cap primary production in 2020, as a point when demand is set to surge. 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 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**
- ✓ **Simple mining with 1:1 strip ratio over 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**
- ✓ **RE minerals that allow for simple processing, which will be maximised by technical optimisation underway with Shenghe**
- ✓ **Strong economic metrics, - low capital intensity and operating costs**
- ✓ **Favourable country and project location with direct shipping access, international airport nearby**
- ✓ **Regulatory framework implemented to manage project operation and export controls**

**-ENDS-**

## **About Shenghe Resources Holding Co. 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 1.76 billion shares on issue and a market capitalization of approximately RMB 16 billion or AUD 3.2 billion.

Shenghe has a diversified background of its major shareholders. As at 20 June, 2017, the Institute of Multipurpose Utilization of Mineral Resources (IMUMR), a state owned scientific research institute specializing in mineral resources, holds 14.04%, Mr Wang Quangen, former engineer of IMUMR holds 6.85% and the Sichuan Giastar Enterprise Group, a private company involved in the agricultural industry holds 5.52%.

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 GML 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 internationally-focused growth opportunities.

## **About the Kvanefjeld Project**

The Kvanefjeld Project 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 rare earths. 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. Uranium and zinc will be recovered as by-products at low incremental costs.



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.

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 electric cars, renewable energy sources such as wind turbine, along with many common place 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.

## **Tenure, Permitting and Project Location**

### ***Tenure***

Greenland Minerals Ltd (ABN 85 118 463 004) is a company listed on the Australian Securities Exchange. The Company has conducted 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. GML 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 Limited is permitted to conduct all exploration activities and feasibility studies for the Kvanefjeld. The company's exploration license is inclusive of all economic components including both REEs and uranium.

A pre-feasibility study was completed in 2012, and a comprehensive feasibility study completed in 2016. 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.

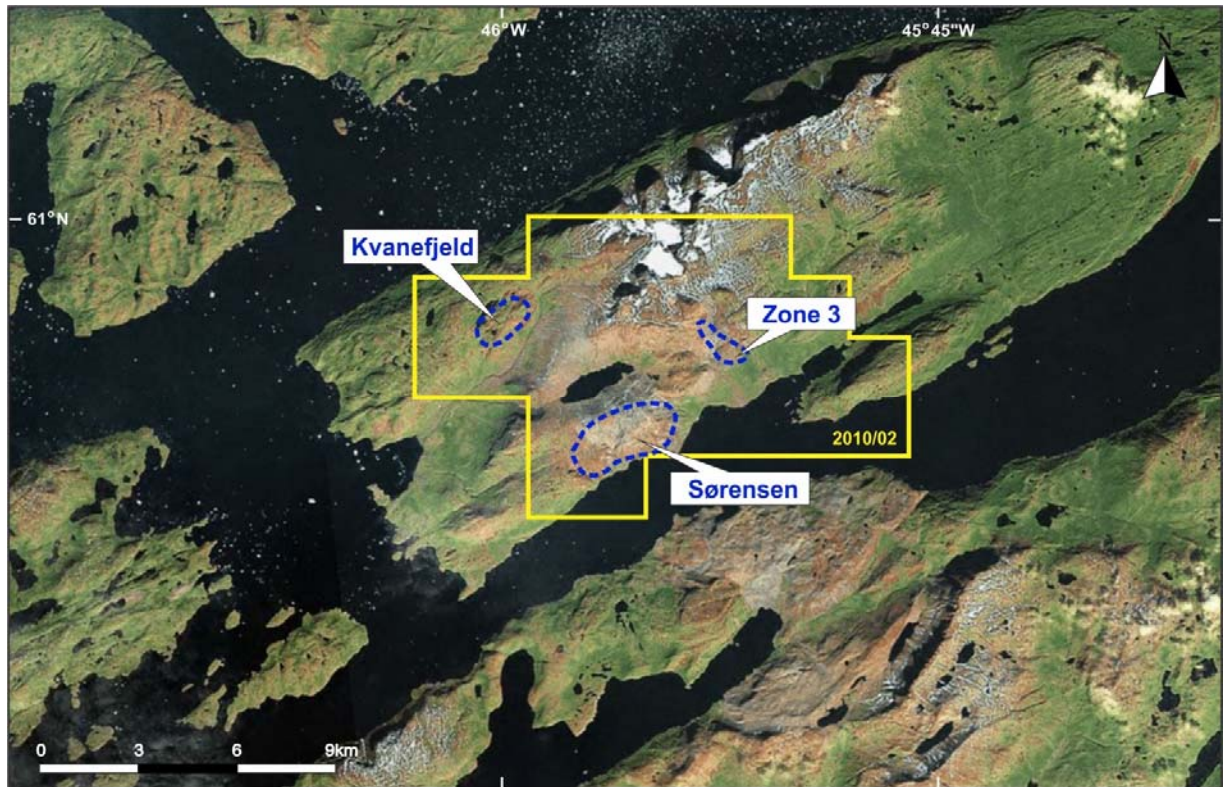
### ***Location***

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

Exploration License	Location	Ownership
EL 2010/02	Southern Greenland	Held by Greenland Minerals (Trading) A/S, a fully owned subsidiary of GML.
<b>Capital Structure – As at 30 June 2019</b>		
Total Ordinary shares		1,132,649,196
Unquoted options exercisable at \$0.15 on or before 31 March 2021		4,000,000
Employee performance rights (subject to vesting hurdles – refer announcement 22 Dec 2016)		6,000,000

Please visit the company's website at [www.ggg.gl](http://www.ggg.gl) 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)

Cut-off (U <sub>3</sub> O <sub>8</sub> ppm) <sup>1</sup>	Classification	Multi-Element Resources Classification, Tonnage and Grade								Contained Metal				
		M tonnes Mt	TREO <sup>2</sup> ppm	U <sub>3</sub> O <sub>8</sub> ppm	LREO ppm	HREO ppm	REO ppm	Y <sub>2</sub> O <sub>3</sub> ppm	Zn ppm	TREO Mt	HREO Mt	Y <sub>2</sub> O <sub>3</sub> Mt	U <sub>3</sub> O <sub>8</sub> M lbs	Zn Mt
<b><i>Kvanefjeld - February 2015</i></b>														
150	<b>Measured</b>	143	12,100	303	10,700	432	11,100	978	2,370	<b>1.72</b>	0.06	0.14	<b>95.21</b>	0.34
150	<b>Indicated</b>	308	11,100	253	9,800	411	10,200	899	2,290	<b>3.42</b>	0.13	0.28	<b>171.97</b>	0.71
150	<b>Inferred</b>	222	10,000	205	8,800	365	9,200	793	2,180	<b>2.22</b>	0.08	0.18	<b>100.45</b>	0.48
150	<b>Total</b>	673	10,900	248	9,600	400	10,000	881	2,270	<b>7.34</b>	0.27	0.59	<b>368.02</b>	1.53
200	<b>Measured</b>	111	12,900	341	11,400	454	11,800	1,048	2,460	<b>1.43</b>	0.05	0.12	<b>83.19</b>	0.27
200	<b>Indicated</b>	172	12,300	318	10,900	416	11,300	970	2,510	<b>2.11</b>	0.07	0.17	<b>120.44</b>	0.43
200	<b>Inferred</b>	86	10,900	256	9,700	339	10,000	804	2,500	<b>0.94</b>	0.03	0.07	<b>48.55</b>	0.22
200	<b>Total</b>	368	12,100	310	10,700	409	11,200	955	2,490	<b>4.46</b>	0.15	0.35	<b>251.83</b>	0.92
250	<b>Measured</b>	93	13,300	363	11,800	474	12,200	1,105	2,480	<b>1.24</b>	0.04	0.10	<b>74.56</b>	0.23
250	<b>Indicated</b>	134	12,800	345	11,300	437	11,700	1,027	2,520	<b>1.72</b>	0.06	0.14	<b>101.92</b>	0.34
250	<b>Inferred</b>	34	12,000	306	10,800	356	11,100	869	2,650	<b>0.41</b>	0.01	0.03	<b>22.91</b>	0.09
250	<b>Total</b>	261	12,900	346	11,400	440	11,800	1,034	2,520	<b>3.37</b>	0.11	0.27	<b>199.18</b>	0.66
300	<b>Measured</b>	78	13,700	379	12,000	493	12,500	1,153	2,500	<b>1.07</b>	0.04	0.09	<b>65.39</b>	0.20
300	<b>Indicated</b>	100	13,300	368	11,700	465	12,200	1,095	2,540	<b>1.34</b>	0.05	0.11	<b>81.52</b>	0.26
300	<b>Inferred</b>	15	13,200	353	11,800	391	12,200	955	2,620	<b>0.20</b>	0.01	0.01	<b>11.96</b>	0.04
300	<b>Total</b>	194	13,400	371	11,900	471	12,300	1,107	2,530	<b>2.60</b>	0.09	0.21	<b>158.77</b>	0.49
350	<b>Measured</b>	54	14,100	403	12,400	518	12,900	1,219	2,550	<b>0.76</b>	0.03	0.07	<b>47.59</b>	0.14
350	<b>Indicated</b>	63	13,900	394	12,200	505	12,700	1,191	2,580	<b>0.87</b>	0.03	0.07	<b>54.30</b>	0.16
350	<b>Inferred</b>	6	13,900	392	12,500	424	12,900	1,037	2,650	<b>0.09</b>	0.00	0.01	<b>5.51</b>	0.02
350	<b>Total</b>	122	14,000	398	12,300	506	12,800	1,195	2,570	<b>1.71</b>	0.06	0.15	<b>107.45</b>	0.31

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Cut-off (U <sub>3</sub> O <sub>8</sub> ppm) <sup>1</sup>	Classification	Multi-Element Resources Classification, Tonnage and Grade								Contained Metal				
		M tonnes Mt	TREO <sup>2</sup> ppm	U <sub>3</sub> O <sub>8</sub> ppm	LREO ppm	HREO ppm	REO ppm	Y <sub>2</sub> O <sub>3</sub> ppm	Zn ppm	TREO Mt	HREO Mt	Y <sub>2</sub> O <sub>3</sub> Mt	U <sub>3</sub> O <sub>8</sub> M lbs	Zn Mt
<b>Sørensen - March 2012</b>														
150	Inferred	242	11,000	304	9,700	398	10,100	895	2,602	<b>2.67</b>	0.10	0.22	<b>162.18</b>	0.63
200	Inferred	186	11,600	344	10,200	399	10,600	932	2,802	<b>2.15</b>	0.07	0.17	<b>141.28</b>	0.52
250	Inferred	148	11,800	375	10,500	407	10,900	961	2,932	<b>1.75</b>	0.06	0.14	<b>122.55</b>	0.43
300	Inferred	119	12,100	400	10,700	414	11,100	983	3,023	<b>1.44</b>	0.05	0.12	<b>105.23</b>	0.36
350	Inferred	92	12,400	422	11,000	422	11,400	1,004	3,080	<b>1.14</b>	0.04	0.09	<b>85.48</b>	0.28
<b>Zone 3 - May 2012</b>														
150	Inferred	95	11,600	300	10,200	396	10,600	971	2,768	<b>1.11</b>	0.04	0.09	<b>63.00</b>	0.26
200	Inferred	89	11,700	310	10,300	400	10,700	989	2,806	<b>1.03</b>	0.04	0.09	<b>60.00</b>	0.25
250	Inferred	71	11,900	330	10,500	410	10,900	1,026	2,902	<b>0.84</b>	0.03	0.07	<b>51.00</b>	0.20
300	Inferred	47	12,400	358	10,900	433	11,300	1,087	3,008	<b>0.58</b>	0.02	0.05	<b>37.00</b>	0.14
350	Inferred	24	13,000	392	11,400	471	11,900	1,184	3,043	<b>0.31</b>	0.01	0.03	<b>21.00</b>	0.07
<b>All Deposits – Grand Total</b>														
150	Measured	143	12,100	303	10,700	432	11,100	978	2,370	<b>1.72</b>	0.06	0.14	<b>95.21</b>	0.34
150	Indicated	308	11,100	253	9,800	411	10,200	899	2,290	<b>3.42</b>	0.13	0.28	<b>171.97</b>	0.71
150	Inferred	559	10,700	264	9,400	384	9,800	867	2,463	<b>6.00</b>	0.22	0.49	<b>325.66</b>	1.38
150	<b>Grand Total</b>	<b>1010</b>	<b>11,000</b>	<b>266</b>	<b>9,700</b>	<b>399</b>	<b>10,100</b>	<b>893</b>	<b>2,397</b>	<b>11.14</b>	<b>0.40</b>	<b>0.90</b>	<b>592.84</b>	<b>2.42</b>

<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.

<sup>2</sup>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.

**Kvanefjeld Ore Reserves Estimate – April 2015**

Class	Inventory (Mt)	TREO (ppm)	LREO (ppm)	HREO (ppm)	Y <sub>2</sub> O <sub>3</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (ppm)	Zn (ppm)
Proven	43	14,700	13,000	500	1,113	352	2,700
Probable	64	14,000	12,500	490	1,122	368	2,500
<b>Total</b>	<b>108</b>	<b>14,300</b>	<b>12,700</b>	<b>495</b>	<b>1,118</b>	<b>362</b>	<b>2,600</b>

## **ABOUT GREENLAND MINERALS LTD.**

Greenland Minerals 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 Rare Earth Project (rare earth elements, uranium, zinc). A pre-feasibility study was finalised in 2012, and a comprehensive feasibility study was completed in 2015 and updated following pilot plant operations in 2016. The studies highlight the potential to develop Kvanefjeld as a long-life, low cost, and large-scale producer of rare earth elements; key enablers to the electrification of transport systems.

GML is working closely with major shareholder and strategic partner Shenghe Resources Holding Co Ltd to develop Kvanefjeld as a cornerstone of future rare earth supply. An exploitation (mining) license application for the initial development strategy has been undergoing review by the Greenland Government through the latter part of 2016 and through 2017.

In 2017-18, GML continues to undertake technical work programs with Shenghe Resources Holding Co Ltd that aim to improve the metallurgical performance, simplify the development strategy and infrastructure footprint in Greenland, enhance the cost-structure, and ensure that Kvanefjeld is aligned with downstream processing. In addition, the Company continues its focus on working closely with Greenland's regulatory bodies on the processing of the mining license application and maintaining regular stakeholder updates.

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Greenland Minerals 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.

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### **Competent Person Statement – Mineral Resources Ore Reserves and Metallurgy**

*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 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 Ltd and Mr Scott McEwing of SRK Consulting (Australasia) Pty Ltd. The information in this report that relates to metallurgy is based on information compiled by Damien Krebs.*

*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