



Company Announcement, September 23<sup>rd</sup>, 2016

## **Leading Rare Earth Company Shenghe Resources Holding to Acquire 12.5% Interest in Greenland Minerals and Energy Ltd, and Commence Strategic Working Relationship**

### **Highlights:**

- **Shenghe Resources Holding Ltd (Shenghe) has agreed, through a 99.99% owned subsidiary, to subscribe for 125 million ordinary shares in GMEL to take a 12.5% holding, subject to shareholder and Foreign Investment Review Board (FIRB) approval being obtained prior to November 30<sup>th</sup>, 2016**
- **Shenghe is:**
  - **a leading rare earth company with experience in all parts of the rare earth (RE) industrial chain, including mining, beneficiation, metallurgy, separation and downstream processing, and marketing with extensive financial investment background and solid capital strength**
  - **listed on the Shanghai Stock Exchange, with a market capitalisation of approximately AUD \$3 billion, and is solely focussed on the rare earth sector**
- **Shenghe has an extensive international customer base, and has downstream processing facilities of substantial capacity**
- **Both parties are looking to commence a strategic relationship that aims to initially enhance the Kvanefjeld Project and integrate with downstream processing and then jointly develop the project**
- **Initial technical discussions have identified areas where significant cost-savings can be achieved through Shenghe's leading processing technology, particularly in the area of project infrastructure that accounts for a substantial proportion of overall capital costs**
- **Potential has also been identified to recover further products from the unique Kvanefjeld polymetallic ore-type**
- **Both parties have conducted extensive due diligence across all relevant jurisdictions (Greenland, Denmark, China, Australia), prior to entering a binding agreement**
- **Shenghe has anti-dilution rights with respect to all capital issues, and has the right to nominate a non-executive director to the board of Greenland Minerals and Energy Ltd**
- **GMEL board strongly recommends the investment by Shenghe and the commencement of a strategic working relationship**

**Greenland Minerals and Energy Ltd** (“GMEL” or ‘the Company’) is pleased to announce that it has entered into a subscription agreement (SA) with leading rare company Shenghe Resources Holding Ltd, and its 99.99% subsidiary Le Shan Shenghe Rare Earth Co., Ltd (Leshan Shenghe). Leshan Shenghe is focussed on rare earth downstream processing.

The SA provides for the investment of Leshan Shenghe of \$4.625 million (AUD) for 125 million ordinary shares in GMEL at 3.7 cents/share, subject to shareholder and FIRB approvals, which are to be sought prior to November 30<sup>th</sup>, 2016. The price of 3.7 cents per share represents a 5% discount to the 60-day volume weighted average price (VWAP) as of September 19<sup>th</sup>, 2016.

Shenghe unconditionally and irrevocably guarantees the obligations of Leshan Shenghe under the SA.

Once the SA becomes unconditional Shenghe will have the right to nominate a non-executive director to the board of GMEL, and will have anti-dilution rights to maintain a 12.5% position in GMEL.

The fundamental objective of both parties is to develop the Kvanefjeld Project (‘Project’) as a cornerstone to new supply networks. With the permitting process underway, the partnership with Shenghe will help to ensure that the Project is optimised to integrate with downstream processing, and that customer networks are established. Shenghe’s leading technical expertise, processing capacity, and strong international customer base make Shenghe an ideal strategic partner for the Project.

The two parties commenced a dialogue in late-2015, and recognised a strong alignment of strategy, and complementary strengths at different ends of the rare earth value chain. Shenghe’s experience and skills provide the means to maximise the core strengths of the Kvanefjeld Project, which include scale, processing advantage, and direct shipping access. Nowhere else in the world does such a confluence of attributes occur.

GMEL will continue to work toward establishing off-take agreements across projected by-products (uranium, zinc, and fluorspar) from the Kvanefjeld Project, and looks forward to updating the market on further commercial developments.

**Dr John Mair, Managing Director of GMEL commented:**

*“The commencement of a strategic relationship with Shenghe represents a major landmark for both Greenland Minerals and Energy, and future rare earth supply. It is widely known that Shenghe has been assessing rare earth projects globally for a number of years, so their participation is a very strong endorsement of the Kvanefjeld Project and our company strategy.*

*“Shenghe were quick to recognise the processing advantages offered by the unique Kvanefjeld ore-type, and the potential for Kvanefjeld to be an important cornerstone to future rare earth supply.*

*“We have been looking to identify the right strategic partner for a number of years, and with Shenghe, we rapidly identified not just complementary assets and skillsets, but a fundamental alignment of strategy and timing. Shenghe has a strong international customer base, and is looking to continue to grow this area of their business.*

*“Together we aim to integrate Kvanefjeld’s rare earth output with existing and new downstream rare earth processing capacity, to generate an extremely cost-competitive and highly scalable rare earth business.”*

*“On behalf of the Board, I would like to thank staff, Greenlandic stakeholders, and company shareholders. This stands to be a transformative event for the company, and of genuine significance to Greenland’s emerging minerals industry.”*

## **Background**

GMEL and Shenghe commenced a dialogue in 2015 that aimed to explore synergies and potential co-operation with respect to integrating Kvanefjeld’s rare earth output with Shenghe’s substantial rare earth processing capacity and international marketing network. Following a series of meetings conducted through the first half of 2016, the two parties entered into a non-binding Letter of Intent (LoI) on July 11<sup>th</sup>, 2016, in order to commence an extensive due diligence process to meet the regulatory requirements of both the Shanghai and Australian securities exchanges.

Between executing the LoI and the binding subscription agreement, GMEL share price has undergone notable appreciation. In response to an ASX price and volume query (August 23<sup>rd</sup>, 2016), GMEL was required to disclose to the ASX that the Company was conducting a comprehensive due diligence process in relation to a potential transaction with an industrial entity (August 25<sup>th</sup>, 2016).

As a result of the increase in GMEL’s share price during the due diligence period, Shenghe agreed to increase the placement price by 20% to 3.7 cents, from what was originally considered in the LoI. This price is above the last two capital raisings conducted by the company, and represents a 5% discount to the 60 day VWAP, as of September 19<sup>th</sup>, 2016.

Once the subscription agreement becomes unconditional, both parties will jointly commence technical work programs to further improve the cost-structure of the Kvanefjeld Project, ensure the Project is optimised with respect to downstream rare earth processing, and identify further value add opportunities, including the recovery of additional products. This will be conducted in parallel to GMEL working through the permitting steps for Kvanefjeld that are currently underway in Greenland.

GMEL will look to update the market in the coming days on the timing of a General Meeting.

## **About Shenghe Resources Holding**

**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 has been listed on Shanghai Stock Exchange since

2012 and, as at 20 September, 2016 had 941M shares on issue and a market capitalization of approximately RMB14.3 billion or AUD \$3 billion.

Shenghe has three major shareholders. The Institute of Multipurpose Utilization of Mineral Resources (IMUMR), a state owned scientific research institute specializing in mineral resources, holds just over 20%, Mr Quangen Wang, former engineer of IMUMR holds ~10% and the Sichuan Giastar Enterprise Group, a private company involved in natural resources holds ~8%.

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 international markets. Shenghe is involved at all levels of the rare earth industry, from mining through processing to the production of end products.

The Shenghe group;

- **controls domestic sources of rare earth ores and concentrates**
- **controls significant rare earth separation capacity in China**
- **produces rare earth metals and alloys to the highest purities**
- **produces “end use” rare earth products – polishing powders, catalysts, molecular sieves**
- **has an established international customer base for its products**

Significantly, Shenghe also holds Chinese production quotas for the mining and separation/refining of rare earths.

### **International Strategy**

Shenghe has also commenced the path of international orientation since 2013. In 2013 Shenghe established Sheng Kang Ning Mining Investment (SKN) as the platform for overseas investments in rare earths and rare and precious metals. In 2015 Shenghe established Shenghe Resources (Singapore) PTE.LTD as the platform for trade and investment. In 2016 Shenghe announced the agreement with a Japanese company of acquiring 100% equity in a rare earth metal and separation plant in Vietnam.

Shenghe/SKN has been actively involved in an extensive international search for suitable opportunities to secure supplies of rare earths outside of China. This has involved an assessment of many of the world’s emerging rare earth projects. Shenghe’s investment in GMEL is its first investment on an equity level of an overseas listed company since that international search commenced.

For Shenghe, investment in the Kvanefjeld Project secures access to rare earth intermediate products outside of China which are capable of supporting a range of downstream rare earth businesses for the long term, 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. The rigorously developed process route 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 projected to produce a significant output of critical rare earths (Nd, Pr, Eu, Dy, Tb, Y), 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 windpower. In recent years growth in rare earth demand has been limited by end-user concerns over pricing instability and surety of supply.

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 nuclear energy capacity.

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

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 (U <sub>3</sub> O <sub>8</sub> ppm) <sup>1</sup>	Classification	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.

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## **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). 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 2016, GMEL is focussed on working closely with Greenland's regulatory bodies on the processing of the mining license application, and maintaining regular stakeholder updates. A greater emphasis will also be placed on commercial development and progressing the dialogue with strategic partners. In addition, the Company will look to further value add initiatives afforded by the extensive resource inventory and prospective license holding.

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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.

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### **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.