Company Announcement, 7th October 2020

Advanced Flotation Test Work Delivers Exceptional Results Increasing Overall Rare Earth Recoveries

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- **Advanced process development on Kvanefjeld Project has continued through 2020**
- **Locked cycle flotation test work producing rare earth mineral concentrate of >23% rare earth oxide (REO)**
- **Rare earth recoveries in mineral concentrate increased to 85% (previously 80%):**
  - **Light REO recovery 87%, heavy REO recovery 68%**
- **Upgrade ratio of >15, into 5.4% of starting mass**
- **Increased recoveries will increase Project output and profitability**
- **Increased fluorine removal will further reduce environmental impacts**

Managing Director Dr John Mair commented:

"Technical work programs on Kvanefjeld have delivered strong progress through 2020, with a focus on continued development of the flotation circuit, and impurity removal in the refinery circuit.

The results of advanced locked cycle flotation test work confirm the efficiency and effectiveness of the optimised circuit with a high upgrade ratio and further increases in both light and heavy rare earth recoveries.

Kvanefjeld's unique and favourable metallurgy, combined with large, low-cost output of all critical magnet rare earths (Nd, Pr, Tb, Dy) has Greenland well positioned to be an important new supplier to meet the looming surge in rare earth demand."

Greenland Minerals Ltd ('GML' or 'the Company') is pleased to update on continued development of the optimised flotation process for the Kvanefjeld Rare Earth Project. Locked cycle flotation test work has been underway at the BTMR laboratories in China through 2020, overseen by rare earth specialists Shenghe Resources Holding Co Ltd (Shenghe).

Locked cycle test work closely represents the performance of a commercial circuit and builds on extensive single batch flotation and initial locked cycle tests (Company announcement January 10, 2019). The results have been validated with check assays undertaken at SGS Laboratories in Perth,

Australia and an independent Chinese assay laboratory. The process development has progressed to the extent where conditions comparable to that of a commercial plant are to be tested.

The latest locked cycle test work completed multiple cycles of tests using the planned commercial circuit. Critically the test included recycling of process water to determine the impact of residual reagents in solution on flotation performance.

This is a significantly closer representation of the commercial flowsheet than previous test work and further de-risks the process.

The optimised test utilised 8 full flowsheet cycles to ensure a steady state was achieved. Samples were taken over the whole flowsheet during the 8th cycle to provide a 'snapshot' of the circuit performance. The results show that 87% of the light rare earths and 68% of the heavy rare earths were amassed into a mineral concentrate which assays 23.3% rare earth oxide.

Key Parameters of Locked Cycle Flotation Test Work:

- **Rare earth feed grade = 1.5% rare earth oxide (REO)**
- **Flotation concentrate grade = 23.3% REO**
- **% Mass reporting to concentrate = 5.4%**
- **Light REO recovery = 87%**
- **Heavy REO recovery = 68%**
- **Total REO recovery = 85% (previously 80%)**

The results confirm the outstanding performance of the optimised flotation circuit, with the ability to concentrate the rare earths into a much smaller mass than that of the original ore, allowing for a small refinery circuit for hydrometallurgical treatment. The unique rare earth minerals can be effectively processed in a single stage atmospheric acid leach circuit in which all impurities can be managed, allowing for the production and export of a clean intermediate rare earth product.

Continued development of the flotation circuit has also involved further investigation of the removal of excess fluoride ions in the process water. The fluoride comes from the soluble mineral villiaumite which is present in the ore. Configuration changes to the flotation circuit allow for greater fluoride removal prior to the main rare earth flotation stage. The fluoride will be recovered as fluorspar (metspar). Significantly, this results in lower flotation reagent consumption, and a substantial reduction of fluoride in tailings which mitigates environmental impacts and benefits environmental management. Further enhancements in fluoride removal are expected with ongoing process development.

About the Kvanefjeld Project

The Kvanefjeld Rare Earth Project is one of the most significant and advanced emerging rare earth projects globally. The Project is unique with respect to its favourable metallurgy and forecast production profile across all commercially important rare earths. Kvanefjeld is located near existing infrastructure in southern Greenland with year-round direct shipping access to the project area.

Rare earth elements are critical to the electric vehicle revolution, as well as many other energy efficient applications. The Kvanefjeld Project is forecast to be a globally significant producer of all commercially important rare earth elements including **neodymium**, **praseodymium**, **terbium** and **dysprosium**, over an initial **37**-year mine life. These rare earths are used to make high powered permanent magnets that are utilised in electric vehicles, along with many other applications. Kvanefjeld is well-placed to meet the major surge in rare earth demand that will be generated by the transition to electric vehicles, along with growth in renewable energy.

Greenland Minerals Ltd has an internationally diverse shareholder base. The largest shareholder (10.5%) is Shenghe Resources Holding Co Ltd, a leading international rare earth company that supplies end-user industries globally with high purity rare earth metals and oxides. Shenghe have also played a key role in the successful restart of the Mountain Pass rare earth mine in the United States. Shenghe bring full rare earth value chain proficiency to the Kvanefjeld Project.

Authorised by:
Dr John Mair
Managing Director

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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. 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 demonstrated the unique and highly advantageous strengths of the Kvanefjeld Project and outlined the potential for Kvanefjeld to be developed 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 was reviewed by the Greenland Government through 2016 -19 and was updated in 2019 following addition supporting studies.

In 2017-18, GML undertook technical work programs with Shenghe Resources Holding Co Ltd that improved the metallurgical performance and simplified the development strategy and infrastructure footprint in Greenland, with optimised Feasibility Study outcomes announced in mid-2019. This defined a significantly enhanced project cost-structure and a direct alignment 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.

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 12th, 2015. The ore reserve estimate was released in a Company Announcement on June 3rd, 2015. There have been no material changes to the resource estimate, or ore reserve since the release of these announcements.

Appendix 1. Kvanefjeld Project, JORC 2012 Table 1.

The following section is provided to ensure compliance with the JORC (2012) requirements for the reporting of exploration results

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	*Nature and quality of sampling (e.g. 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.*	The rock material used for the test work was stockpiled rock extracted from an exploratory adit that runs through the Kvanefjeld mineral resource for approximately 950m. Rock extracted from the adit is stored in series of stockpiles below the adit entrance. Three stockpiles were selected as being representative based on detailed geochemical evaluation, and a 34 tonne bulk sample was collected. A 100 kg sub-sample from the bulk sample was used for this specific test work program.
Sampling Techniques Continued	*Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	The geochemistry and metallurgical behaviour of the bulk sample used is well understood. The bulk sample material has been used for both laboratory bench-scale test work and pilot plant work performed between 2012 and 2020. The metallurgical behaviour of the bulk sample is consistent with that sourced from drill cores.
	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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	The samples were produced with small scale mining, from a horizontal adit. The horizontal adit was undertaken to produce mine like large rock samples. These samples are logged with horizontal extent and have all been sampled for chemical assay. The location and geochemistry of the adit samples were correlated with the geochemistry from exploration and metallurgical drill cores to ensure representivity.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).*	No drilling performed specific to this work.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	No drilling performed specific to this work.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	No drilling performed specific to this work.

	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.	No drilling performed specific to this work.
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.*	No drilling performed specific to this work.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	No drilling performed specific to this work.
	The total length and percentage of the relevant intersections logged.	No drilling performed specific to this work.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	No drilling performed specific to this work.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Dry crushed and rotary split suing a mechanical splitter.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	No drilling performed specific to this work.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All samples were crushed to minus 3 mm before being split out with a rotary sampling device. No grab samples or large rock samples were taken.
	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.	Previous metallurgical test work has been performed on the ore samples to demonstrate their behaviour was representative.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The grain size of the target value mineral is 75 micometers on average. The ore provides was all crushed to minus 3 mm prior to sub-sampling using a mechanical splitter to produce the delivered sample.
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.*	The main test work was performed by BaoTou MengRong Fine Material Co Ltd (BTMR). They are based in Baotou City, Inner Mongolia. BTMR have significant experience in the beneficiation of rare earth ores. Batch test work and locked cycle flotation work were performed as part of their services.

		Check assays were performed by the independent laboratory SGS Minerals Metallurgy located in Malga, Perth, Western Australia. SGS Mineral Metallurgy has extensive experience in froth flotation testwork. Chemical assaying is performed by the SGS Minerals Metallurgical laboratory. The test work results are total and represent locked cycle test work and not a single batch flotation test. An elemental mass balance was performed around the locked cycle results. The back calculated head grade from the test work products was calculated to be close to 100% indicating good assay accuracy.
	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.	No site geophysical tools used.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	SGS Mineral Metallurgy Quality Control systems were used to ensure the accuracy of the chemical assays performed for the Australian based work. Chemical analysis for the BTMR test work was performed by the China Metrology Accreditation (CMA) to ensure quality control procedures and suitable standards were used.
Verification of Sampling and Assaying	*The verification of significant intersections by either independent or alternative company personnel.*	No drilling performed specific to this work.
	The use of twinned holes.	No drilling performed specific to this work.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	No drilling performed specific to this work.
	Discuss any adjustment to assay data.	No drilling performed specific to this work.
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.*	No drilling performed specific to this work.
	Specification of the grid system used.	No drilling performed specific to this work.
	Quality and adequacy of topographic control.	No drilling performed specific to this work.

Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	No drilling performed specific to this work.
	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.	No drilling performed specific to this work.
	Whether sample compositing has been applied.	No drilling performed specific to this work.
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.*	No drilling performed specific to this work.
	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.	No drilling performed specific to this work.
Sample Security	*The measures taken to ensure sample security.*	The chain of custody of the samples was managed by GML. A whole of journey courier with tracking was used to transport the samples from Australia to China. Once in China a customs agent was used to facilitate their transport to the registered laboratories (BTMR). Assay samples sent from Chinas to SGS employed a whole of journey courier with tracking. SGS Metallurgy is a competent laboratory which has secured storage for test work samples.
Audits or Reviews	*The results of ay audits or reviews of sampling techniques and data.*	No additional audits were completed other than the routine quality control tests with assaying standards at the laboratory.