Company Announcement, May 25th, 2015

Kvanefjeld Feasibility Study Completed

Study Highlights

- **The Kvanefjeld resource (>1 billion tonnes, JORC-code 2012) will support an initial mine life of 37 years and provide scope to both expand production and extend the life of the mine significantly.**
- **The Project will produce rare earth products, uranium oxide, zinc concentrate and fluorspar.**
- **The total capital cost of the Project is $1,361M, comprising $1,121 M of project costs (plant, utilities, indirect costs and contingency) and US$240 M of associated infrastructure costs (power, port, village).**
- **The cost of producing the primary product, a critical rare earth concentrate, is US$8.56/kg REO (after by-product credits) making Kvanefjeld one of the world's lowest cost rare earth producers.**
- **The Project has an after-tax net present value of US$1.4 Billion (at a discount rate of 8%) and an internal rate of return of 21.8%**
- **The forecast basket price for the Company's critical rare earth concentrate is US$78.6/kg REO producing an operating margin of approximately US$70/kg.**
- **The incremental cost of recovering the uranium from the high-grade mineral concentrate is less than US$6/lb U_3O_8, which will place Kvanefjeld into the bottom quartile of the cost curve for current uranium production**

Greenland Minerals and Energy Positioned to Become a Critical Rare Earth Producer of International Significance

Greenland Minerals and Energy Limited ('GMEL' or 'the Company') is pleased to announce the completion of a Feasibility Study (the Study) into the development of the Kvanefjeld rare earth - uranium Project (the Project). The Project, located in southern Greenland, comprises several large multi-element deposits rich in rare earth elements, uranium and zinc. Collectively, these deposits represent one of the world's largest identified mineral resources of rare earths and uranium.

Background

The Kvanefjeld Feasibility Study incorporates extensive technical, environmental and social studies conducted and commissioned by GMEL over the past seven years. The Study Base-Case evaluates the development of a mine, mineral concentrator, refinery and supporting infrastructure located in the south west of Greenland treating 3.0 million tonnes per annum of ore.

The Project is located near existing infrastructure and townships in southern Greenland, with direct shipping access year round, and an international airport only 35 km away.

The Project's primary product will be a critical mixed rare earth oxide concentrate. Critical rare earths are those rare earths, particularly important for green technologies, which are forecast to be in short supply over time (neodymium, praseodymium, europium, dysprosium, terbium, and yttrium).

Kvanefjeld will also produce uranium oxide, lanthanum and cerium products, zinc concentrate and fluorspar. The project economics are relatively insensitive to the pricing of these by-products.

Favourable Metallurgy

A key strength of the Project is its attractive metallurgy. The Project's unique rare earth and uranium bearing minerals can be concentrated into less than 10% of the original ore mass utilising froth flotation. The minerals are also non-refractory and can be effectively treated using an atmospheric sulphuric acid leach. There is no requirement for complex mineral "cracking". The process flow sheet has been rigorously developed by GMEL, and has been the subject of extensive test work, including three pilot plant campaigns.

Rare Earth Business Strategy

GMEL continues to advance its dialogue with China Non-Ferrous Metal Industry's Foreign Engineering and Construction Co. Ltd. (NFC) under the terms of a 'Memorandum of Understanding'. NFC and GMEL are working to cooperate on the separation of the critical rare earth concentrates from Kvanefjeld into high-purity individual rare earth oxides, and the subsequent product marketing to end-users globally. NFC is a leader in rare earth separation technology and is also a highly-reputed engineering, procurement, construction (EPC) contractor. NFC was involved in the preparation of the Feasibility Study and completed the capital cost estimate based on detailed engineering design conducted by Tetra Tech Proteus.

Changes from Previous Kvanefjeld Study

The capital cost of the Project has increased since GMEL released the results of its 'Mine and Concentrator Study' in 2013. The increase reflects the fact that, in order to comply with Greenland's Mining Act, which requires that as much downstream processing as feasibly possible be conducted in Greenland, the Project's refinery has been relocated to Greenland. The Mine and Concentrator Study had considered the establishment of a dedicated rare earth refinery outside of Greenland in an industrial environment served by appropriate infrastructure. In addition to this change, lanthanum and cerium separation has been introduced to the refining circuit. Despite the increase in capital cost, the NPV generated by both studies is similar, largely due to improved processing efficiency and product recoveries.

Conclusion

The Kvanefjeld Feasibility Study represents a major Project milestone, and, along with environmental and social impact assessments, is a key component of an application for an exploitation (mining) license. GMEL is aiming to complete the environmental and social impact assessments in Q3, 2015, and will subsequently lodge an exploitation license application with the Greenland government.

Dr John Mair, the Managing Director of GMEL, said:

"The Feasibility Study presents a very compelling case for the development of Kvanefjeld, and emphasizes the project's standing as a globally-unique mining opportunity. Our aim was to deliver a study conducted with a lot of rigour that draws on conservative assumptions and is still able to return strong economic metrics.

The development strategy takes on board technical, regulatory and market considerations. The strategy to develop Kvanefjeld as a dominant long-term producer of critical rare earths, at the low end of the cost-curve, is very much on track.

We look forward to completing the impact assessments in order to finalise an exploitation license application and commence the permitting process later this year"

-ENDS-

ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy Ltd (ASX: GGG) is an exploration and development company focused on developing high-quality mineral projects in Greenland. The Company's flagship project is the Kvanefjeld multi-element deposit (Rare Earth Elements, Uranium, Zinc), that stands to be the world's premier specialty metals project. A comprehensive pre-feasibility study was finalised in 2012, and the feasibility study will be completed in 2015. The studies demonstrate the potential for a large-scale, cost-competitive, multi-element mining operation. Through 2015, GMEL is focussed on completing a mining license application in order to commence project permitting, in parallel to advancing commercial discussions with development partners. For further information on Greenland Minerals and Energy visit http://www.ggg.gl or contact:

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

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

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

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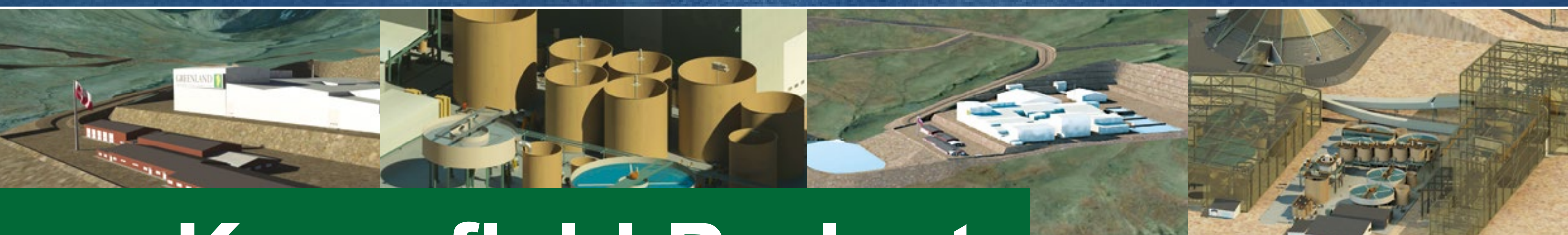

Kvanefjeld Project

Feasibility Study – Executive Summary

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

May 2015

The Kvanefjeld Rare Earth – Uranium Project (the Project) is located in southern Greenland, and is underpinned by several large multi-element deposits rich in rare earth elements, uranium and zinc. Collectively, these represent one of the world's largest identified mineral resources of rare earths and uranium.

This Feasibility Study incorporates the extensive technical studies conducted and commissioned by Greenland Minerals and Energy ('GMEL' or 'the Company') over the past seven years. The Study 'Base Case' evaluates the development of a mine, mineral concentrator, refinery and supporting infrastructure located in Greenland treating 3.0 million tonnes per annum of ore.

The Kvanefjeld Project will produce a primary product stream of critical rare earth concentrate, with by-production of uranium oxide, lanthanum and cerium products, zinc concentrate and fluorspar. Critical rare earths are those important for green technologies that are forecast to be in short supply (neodymium, praseodymium, europium, dysprosium, terbium, and yttrium). The Study confirms the importance of Kvanefjeld as a future source of raw materials that are essential to clean energy production and energy efficient technologies.

Key Outcomes

World-class resource base

- Kvanefjeld will be a very long life, cost-competitive, large producer of rare earths and uranium
- Total resource base of 1.01 billion tonnes containing 593 million pounds U_3O_8 and 11.14 million tonnes of total rare earth oxide (TREO)
- Measured resources of 143 million tonnes
- Initial mine-life of 37 years
- Resource scale to support multiple future expansions
- Large outcropping ore bodies, conducive to simple open-cut mining, with a 1:1 strip ratio

Unique ore minerals, favourable low-risk metallurgy

- Ore beneficiation via flotation produces a high grade REE-uranium mineral concentrate, a zinc concentrate, and a fluorspar by-product
- High upgrade ratio (10 times total rare earth oxide) converts extensive resources to low-mass, high-grade mineral concentrate, creating downstream efficiency in the refining stage
- REE-uranium rich mineral concentrate treated with conventional atmospheric acid leach, solvent extraction and precipitation to separate the rare earths and uranium oxide
- Production of lanthanum and cerium, U_3O_8, zinc concentrate and fluorspar in Greenland with critical rare earths produced as a high purity intermediate product.

Key Outcomes (continued)

Very low operating costs, robust financial metrics

- Unit costs of production for critical rare earth oxides are low; at US$8.56/kg REO (after by-product credits) which will make Kvanefjeld one of the lowest cost rare earth producers worldwide.
- The incremental cost of recovering the uranium from the high-grade mineral concentrate is less than US$5.77/lb U_3O_8, which places the Project into the bottom quartile of the cost curve for current uranium production.
- Forecast long term price for the basket of all rare earths produced is US$31.23/kg REO and uranium US$70/lb U_3O_8. The forecast basket price for the Critical Mixed Rare Earths is US$78.6/kg REO which provides a high margin to the net unit operating cost of US$8.56 per kilogram of Critical Rare Earths. Pricing assumptions for lanthanum and cerium are US$6.50 and $5.00 respectively;
- Capital costs

Capital Cost Summary

Project Area	Capital Cost (million US$)
Plant and utilities – direct	$804.8
Indirect costs	$154.1
Contingency – 17%	$161.4
Total plant costs	**$1,120.3**
Infrastructure (port, power, village)	$240.7
Total project cost	**$1,361.1**

- The scope of the Project includes the following facilities:
  - Mine
  - Concentrator
  - Uranium and Rare Earth Refinery
  - Rare Earth Separation Plant (lanthanum and cerium separation)
  - Sulphuric and Hydrochloric Acid Plants
  - Power Plant
  - New Port Facilities
  - Accommodation Village
  - Roads and logistics
  - Water supply and utilities
- The Company is looking to work with third parties to fund and operate the power, port and village (support infrastructure). For the purpose of this financial evaluation, GMEL has used the total project capital cost.

At a discount rate of 8% the Project generates a pre-tax, ungeared NPV of US$1.97 billion. On a post-tax, geared financing basis the NPV is US$1.40 billion with an IRR of 21.8%.

Key Outcomes (continued)

Multiple product streams and revenue drivers to balance market risk

- Main revenue driver – critical rare earths, by-products include uranium oxide, lanthanum and cerium products, zinc concentrate

Production Profile

Product	Tonnes/Annum
Critical mixed rare earth oxide (CMREO)	7,900
Uranium Oxide (U_3O_8 equivalent)	512
Lanthanum oxide	4,300
Mixed lanthanum/cerium oxide	3,900
Cerium hydroxide	6,900
Zinc concentrate (sphalerite)	15,000
Calcium chloride (fluorspar)	16,000
Sodium hypochlorite solution (at 12% volume)	17,000

GMEL is advancing the dialogue under a 'Memorandum of Understanding' with China Non-Ferrous Metal Industry's Foreign Engineering and Construction Co. Ltd. (NFC), on the separation of critical rare earth concentrates into high-purity individual rare earth oxides. NFC is a leader in rare earth separation technology.

Positive outlook for critical rare earth and uranium markets

- Rare earths are widely recognised around the world as strategically important materials for industrial and technological applications in the future. Furthermore, the predicted reduction of REO supply from the Chinese market, together with strong demand growth will support high REO prices over the longer term.
- Demand for uranium is set to rise over the next 20 years as nuclear power expands to replace fossil fuels in many countries. A higher uranium price is required to induce new supply into the uranium market, where existing production must be supplemented by new higher cost resources to meet a forecast supply deficit.

Greenland is a politically stable democracy looking to develop quality mining projects

- Greenland is seen as an emerging mineral province, politically stable and seeking to become increasingly financially independent from Denmark. The Company is in full legal compliance for all of its current development activities and exploration work programs, and has been actively working with the Greenland Government to finalise its Exploitation License application in 2015.
- Community support is critically important to the successful future development of the Project and the Company is mindful of its need to respect the land, the environment and the wishes of the local people. The Company has completed environmental baseline studies and is well advanced in social impact studies. The Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) will be submitted to the Government of Greenland as part of its application for a mining licence in the second half of 2015.

Contents

1. INTRODUCTION

Greenland Minerals and Energy Limited has completed a Feasibility Study (the Study) for the development of the Kvanefjeld Multi-Element Project (the Project). The Study 'Base Case' evaluates the development of a mine, mineral concentrator, a refinery and supporting infrastructure located in Greenland treating 3.0 Mt/annum of ore to extract rare earth elements (REEs), uranium and zinc.

The work builds upon previous studies commissioned by the Company, which have been carried out by internationally recognised independent consulting firms covering all aspects of the Kvanefjeld Project.

The Project area is located near the southwest tip of Greenland, on the Erik Aappalaartup Nunaa peninsula within the municipality of Kujalleq (Figure 1). The town of Narsaq is located at the western end of the peninsula, and is the closest of several towns in the region (approximately 8 km).

The towns of southern Greenland are serviced by air and ship, with an international airport at Narsarsuaq, located approximately 45 km to the east of Narsaq (35 km from the project area).

The South Greenland Municipal Council is based in the town of Qaqortoq, located 20 km to the south of Narsaq. The town of Narsaq has a deep water port facility, currently used by local fishermen and also for importing goods. The average temperature in Narsaq across the summer months is approximately 7˚C, and minus 6˚C through winter.

Feasibility Study Contributors

Area	Contributor
Geology and Resource Evaluation	SRK Consulting
Mine Design	SRK Consulting
Metallurgy	SGS laboratories, ALS Ammtec, ANSTO
Process Plant Design and Utilities	Tetra Tech Proteus
Infrastructure	Ramboll, Istak, Verkis
Environment	AMEC Foster Wheeler, Orbicon, Danish Hydraulic Institute
Capital Cost	Non Ferrous China, Macmahon, Tetra Tech
Market Analysis	Adamas Intelligence

Table 1.

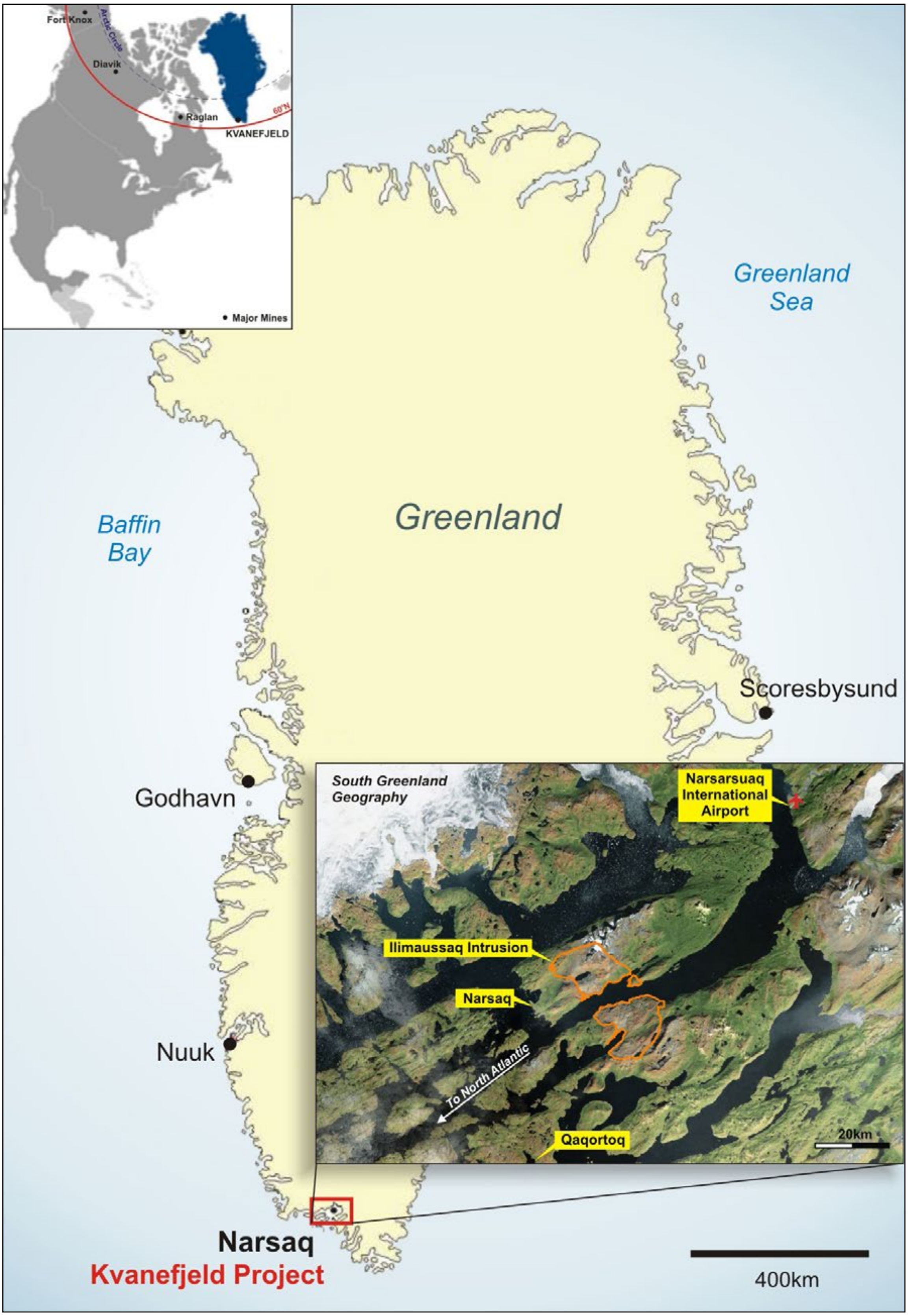

Figure 1 . The Kvanefjeld Project is ideally located in southern Greenland, near existing infrastructure. Mineral resources are hosted within the northern Ilimaussaq Intrusive Complex. The fjords provide direct shipping access to the project area.

2. GEOLOGY AND MINERAL RESOURCES

The Ilimaussaq Intrusive Complex is one of the most unique geological environments on earth and is host to the extensive rare earth – uranium resources. It is the global type-locality for a number of rare alkaline minerals and rock types. Measuring 17 x 8 km, the Complex extends from the Narsaq Peninsula southward across two other peninsulas to straddle the Tunulliarfik and Kangerluarssuk fjords. The Complex is estimated to have been emplaced approximately 1.6 billion years ago.

At a broad scale, the complex features distinct layers that are attributed to successive pulses of evolving magma. The first pulses produced augite syenite and peralkaline granite that are preserved along the margins of the Complex. The later magma pulses formed the bulk of the intrusion, and include an extremely unusual rock-type called lujavrite. Lujavrites are agpaitic to hyper-agpaitic nepheline syenites that contain major minerals including arfvedsonite or aegerine, feldspars and feldspathoids. They are extremely enriched in incompatible elements such as rare earth elements, lithium, beryllium, and uranium.

The lujavrite series within the Ilimaussaq Complex is at least 500 m thick and are generally fine-grained and laminated but there are locally some medium to coarse-grained pegmatoidal varieties. Black (arfvedsonite-bearing) lujavrite is the rock type that hosts REE, uranium, and zinc multi-element mineralisation. Economic REE and uranium grades occur in the uppermost sections of the lujavrites, and are associated with distinct ore minerals. Mineralisation is predominantly orthomagmatic, with metal enrichment a function of differentiation of the lujavrite magma.

Steenstrupine is the most important host to both REEs and uranium in the lujavrite-hosted deposits. It is a complex sodic phospho-silicate mineral. Mineralogical studies suggest that steenstrupine commonly contains between 0.2% and 1% U_3O_8, and greater than 15% total rare earth oxide. Steenstrupine is the dominant host to both uranium and REEs. The phosphorous in the mineral structure makes steenstrupine amenable to concentration by conventional flotation techniques.

The grain size of the steenstrupine commonly ranges from 75 µm to over 500 µm. Other minerals that are important hosts to REEs include the phosphate mineral vitusite and, to a lesser extent, britholite, lovozerite group minerals and rare monazite. Aside from steenstrupine, uranium is also hosted in zirconium silicate minerals of the lovozerite group. In these silicates a portion of the zirconium is substituted by several hundred ppm each of uranium, yttrium, REEs and tin. Zinc is hosted in the sulphide mineral sphalerite, which is the dominant sulphide, disseminated throughout the deposits.

In the upper, higher grade portions of Kvanefjeld (>300 ppm U_3O_8) phosphate bearing minerals (e.g. steenstrupine) are the dominant hosts to REEs and uranium, with the zirconium silicates being of secondary importance. However, at greater depth, the zirconium silicates become increasingly important hosts to uranium. The mine schedule is focussed on greater than 300 ppm U_3O_8 resource material that dominates the upper level of the Kvanefjeld deposit.

2.1. Multi-Element REE-Uranium-Zinc Deposits

Several substantial deposits of multi-element mineralisation (REEs, uranium, zinc) are hosted in the lujavrites of the northern Ilimaussaq Complex. A world-class multi-element resource has been established at Kvanefjeld, and substantial new satellite deposits have recently been confirmed at Sørensen and Zone 3. Geological evidence suggests that Sørensen and Zone 3 represent outcropping, or near-surface expressions of a mineralised system that extends over several kilometres from Kvanefjeld, and is interconnected at depth. This is endorsed by exploratory drill holes that demonstrate that mineralisation is widespread outside the defined mineral resources.

The Kvanefjeld deposit occurs at the northern end of the Complex where lujavrite outcrops extensively (Figure 2). The Sørensen and Zone 3 deposits occur as sills within the naujaites at a high level within the Complex. Kvanefjeld has been the subject of extensive drilling, mapping, mineralogical, geochemical and metallurgical studies since the 1960's. Active participants have included the Greenland and Danish geological surveys, university researchers from the broader European community, and GMEL. Sørensen and Zone 3 are recent discoveries with drilling undertaken by GMEL since 2008.

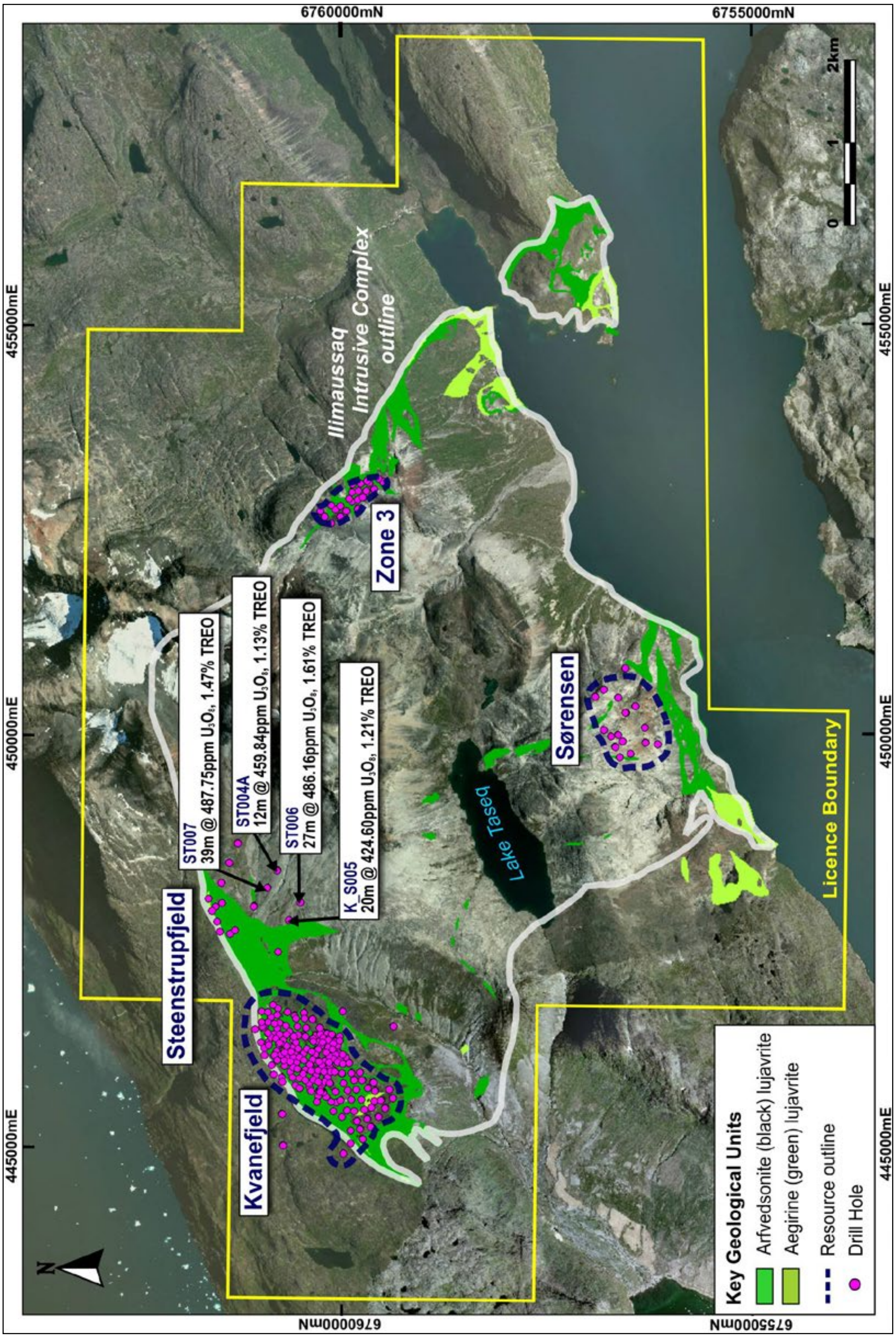

Figure 2. Overview of the northern Ilimaussaq Complex showing the location of Kvanefjeld, Sørensen and Zone 3 Deposits, as well as notable drill intercepts from outside the constrained resources. Lujavrite forms an internal panel throughout much of the complex, and locally outcrops.

2.2. Mineral Resources

SRK were engaged by GMEL in 2014 to prepare an updated resource estimate which is consistent with the JORC code, 2012.

The Kvanefjeld deposit has received most of the historical and modern drilling as mineralisation is outcropping with good access. The other two satellite deposits (Sørensen and Zone 3) are less developed. The maiden Sørensen and Zone 3 estimates were publicly released in March and June of 2012 respectively, and were based on drilling completed to the end of the 2011 field season.

Global Resources – Across all three deposits:

- 1.01 billion tonnes of ore containing 593 Mlbs U_3O_8 and 11.13 Mt TREO.

The Kvanefjeld deposit has a total resource of 673 Mt, and is characterised by thick, mostly sub-horizontal units of lujavrite. The highest grades occur near surface, with grades of REEs, uranium and zinc decreasing with depth. Features of the Kvanefjeld resource include:

Kvanefjeld Deposit

- Resources of 673 million tonnes containing 368 Mlbs U_3O_8, 7.4 Mt TREO
- Measured resources of 143 million tonnes @ 303 ppm U_3O_8, 1.2% TREO and 0.24% Zn
  - Including 54 million tonnes @ 403 ppm U_3O_8 and 1.4% TREO and 0.24% Zn.

Of the global resources 240 Mt of inferred resources have been established at Sørensen, with another 95 Mt at Zone 3. Sørensen features many similarities to the Kvanefjeld deposit, including a higher grade upper section.

Sørensen Deposit – higher grade upper lens:

- 119 million tonnes @ 400 ppm U_3O_8, 1.2% TREO, 0.3% Zn.

Zone 3 – higher grade upper lens:

- 47 million tonnes @ 358 ppm U_3O_8, 1.2% TREO, 0.3% Zn.

3. MINING

3.1. Mine Study

The mine study is based on the 2015 mineral resource estimate developed by SRK. Mining will be medium scale, open pit operation with a life of mine strip ratio of 1:1.

3.2. Geotechnical Analysis

Geotechnical drilling has been conducted with the analysis performed by Coffey Mining which shows the rock characteristics are favourable for open pit mining. The mining area and rocks contain virtually no soil or clay components. The rock strength is well above the stress levels expected during excavation at deep pit depths.

Based on a geotechnical assessment the following pit design and characteristics were assumed.

- 70° bench face angle in average
- 6.5m spill berm width
- 10m bench heights
- 42° overall pit slope angles to account for ramps in the pit walls.

3.3. Mining Fleet

Mining operations will be open pit (open cast) using a standard drill/blast/truck/shovel operation. This has been selected as the lowest operating risk mining method, both in terms of cost and productivity.

For the purposes of mine scheduling SRK Consulting were engaged to perform equipment selection for an operating cost estimate. Equipment selection has determined that 3-6 x 100t mining trucks and one 200t excavator would be required for the project. As the pit gets deeper the haul distance increases, which will then require additional trucks. The haul distance is 1.5 km to the concentrator which will be made by the mine trucks.

3.4. Pit Optimisation

In higher grade portions of Kvanefjeld (>300 ppm U_3O_8) the phosphate bearing minerals (e.g. steenstrupine) are the dominant hosts to REEs and uranium. They occur throughout the upper part of the deposits. Mine development is planned with ore scheduled from greater than 300 ppm U_3O_8 resource material that dominates the upper level of the Kvanefjeld deposit.

Open pit optimisation was conducted using inputs from GMEL and SRK which included:

- 3 Mtpa processing rate
- Leased mine production fleet with first principle derived mining unit rates
- GMEL supplied process recovery and processing cost factors
- Forecast market prices from independent market consultants.

A mine design was developed supported by optimisation of the ore inventory. The fact that Kvanefjeld is essentially a plateau, with the orebody outcropping at surface and the highest grade material occurring in the upper zones, means that the waste material moved per tonne of ore (strip ratio) is low. The strip ratio is only 1 tonne waste per 1 tonne ore over the first 37 years of operation, and as a consequence the mining costs are favourable.

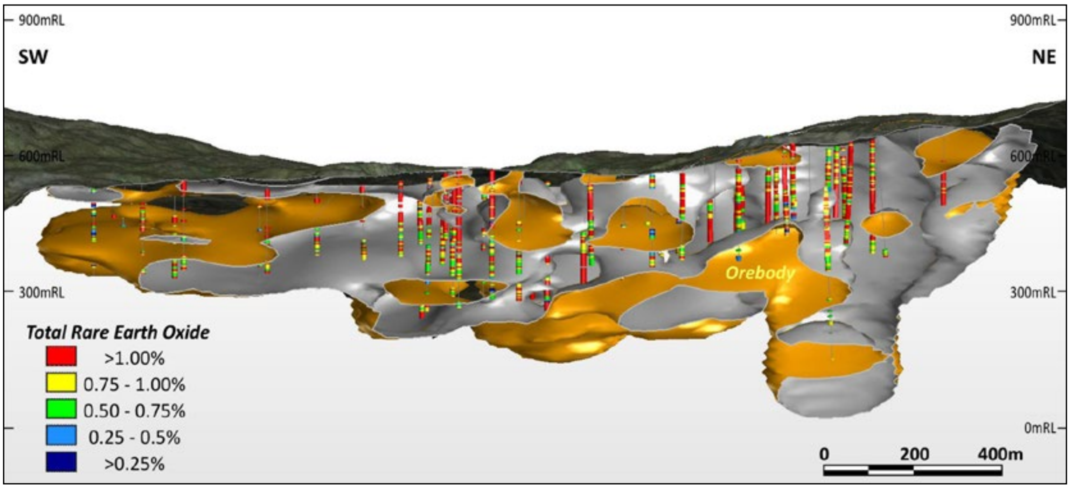

Figure 3. Long Section through the Kvanefjeld resource, with drill strings coloured by Total Rare Earth Oxide grade. The resource model generally follows the lujavrite contact. The northern half features zones of black lujavrite over 200 m thick that outcrop at surface. To the south, the lujavrite forms a series of thinner lenses. Highest REO, uranium and zinc grades occur together in the upper parts of the deposit. Grades begin to decrease below 200 m from ground surface. The strip ratio is estimated at an average of 1:1 over the first 37 years of mining.

3.5. Mine Design

A mine production schedule was developed to incorporate pioneering, pre-strip and mine production to the mine design. The schedule outlined 37 years of operations including 3 years of production ramp up. Sensitivity work demonstrated the Project is robust and insensitive to mining costs and product pricing. This due to mining costs making up only a minor part of the overall operating cost, per tonne of ore. Subsequently the mine schedule design is sensitive to processing costs and process recovery.

The mine layout and mining facilities required for the mining operations were identified. They were designed with a layout of the mine area shown in Figure 4. The mine pit outline is at the end of 37 years of mining and pre-strip. The pit finishes in ore so there is clear potential to increase the mine life. Capital costs were estimated for these facilities and site preparation is included in the total project capital cost estimate.

3.6. Contract Mining

Commercial enquiry documents were prepared by GMEL and provided to a range of suitable civil earthmoving and mining contractors for cost estimation. The 2015 SRK mine design was included in the enquiry to receive Feasibility Level cost estimates for contract mining and civil earth works. The contract mining company scope would include:

- Project civil earthworks
- Tailings Dam construction
- Pre-strip
- On-going mining operations for a 5 year contract term.

Compliant replies were received from 2 Canadian and 1 Australian based mining contractors. The Australian based mining and civil contractor (Macmahon) cost estimates were selected for use in the Feasibility Study.

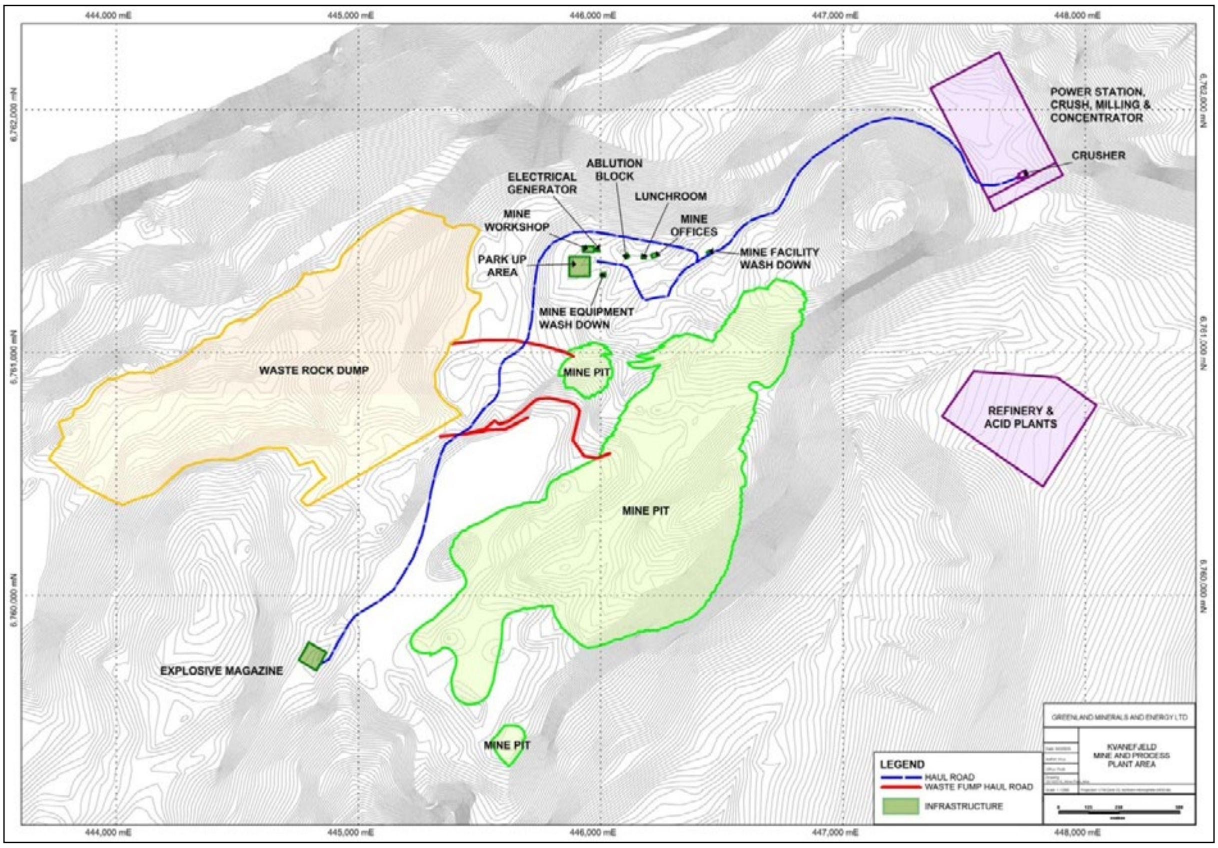

Figure 4. Plan of the Kvanefjeld area displaying the mine pit limits and facilities layout.

4. METALLURGY

4.1. Flowsheet Selection

High quality uranium metallurgical studies were performed on the uranium-rich lujavrites by the Danish state sponsored group Risø laboratories in the 1970's. Since acquiring a majority stake in the Project in 2007, GMEL has instead taken different approach, with a focus on recovering all potential products, as well as developing a method to effectively beneficiate the ore. This commenced by establishing a comprehensive understanding of the minerals that make up the lujavrite-hosted resources. Due to the unique nature of the deposit a customised metallurgical flowsheet had to be developed.

The optimum flowsheet draws on the mineralogical understanding to develop a beneficiation process which concentrates the main rare earth bearing minerals into <10% of the original ore mass. Essentially, the beneficiation process converts the expansive resource material into a low volume, high-grade mineral concentrate that can then be treated to recover rare earths and uranium. Further technical and commercial work was performed to include the partial separation of rare earths as part of the project scope. The rare earths will be produced in 4 different streams with the major product being the Critical Mixed Rare Earth Oxide (CMREO).

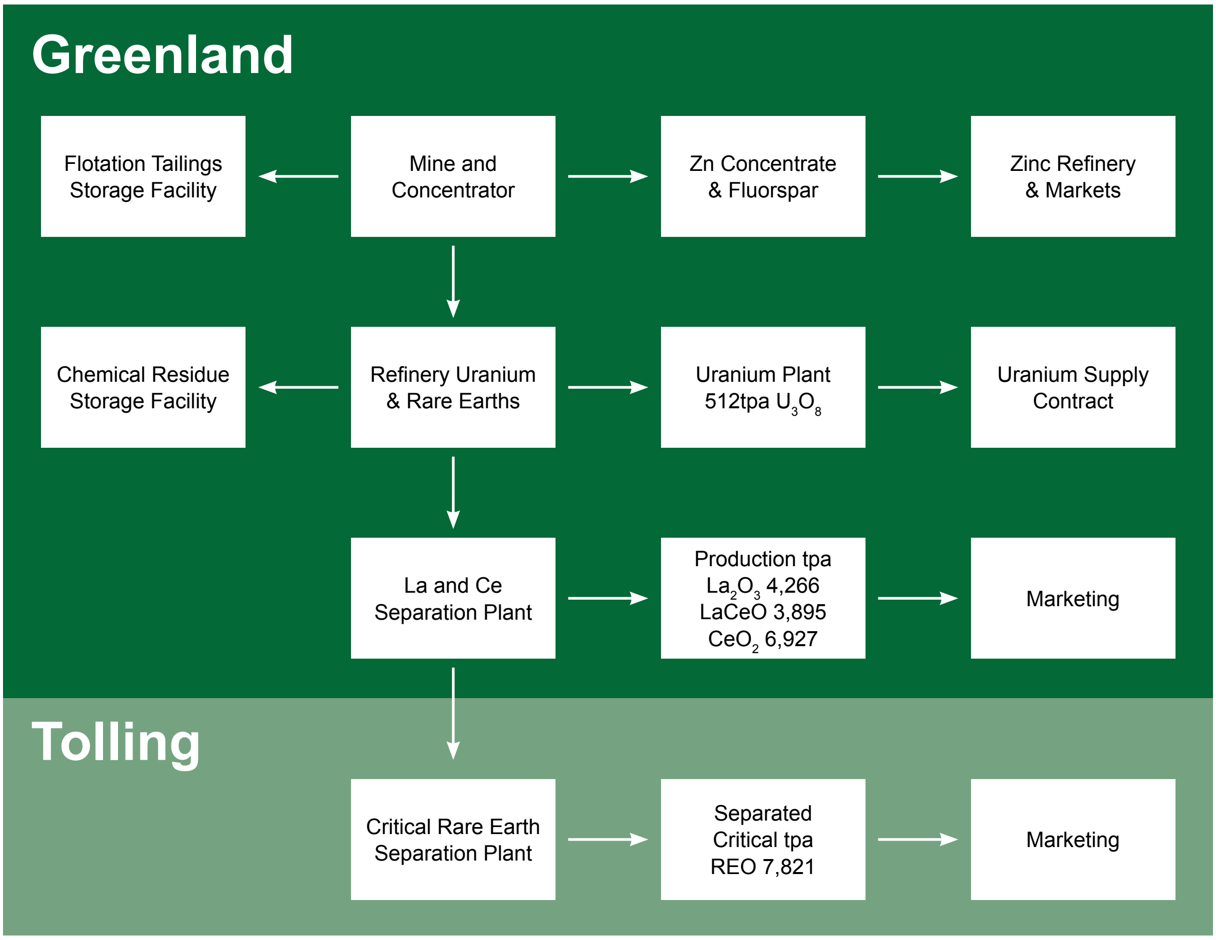

Figure 5. Selected flowsheet and configuration for the Kvanefjeld Feasibility Study.

4.2. Concentrator Metallurgy

Ore mined from the open pit is trucked to the concentrator at a rate of 3 million tonnes per year where beneficiation is performed. The ore is crushed and ground to a particle size of 80% passing 75 microns. Flotation is used as the beneficiation method to concentrate the value minerals. Flotation of the zinc mineral sphalerite from the rest of the ore produces the first product for the project. The zinc concentrate contains ~0.5% of the total ore mass and ~78% of the mined zinc.

The next flotation stage concentrates the rare earth phosphate minerals into 8% of the original ore mass. Approximately 80% of the rare earths are recovered into the Rare Earth Phosphate (REP) mineral concentrate. This typically produces 250,000 tonnes of REP mineral concentrate which is sent to the refinery for further processing. Importantly, as a result of the high upgrade ratio achieved through beneficiation only 250,000 tonnes of the 3Mt mined requires acid dissolution and processing through the metallurgical refinery.

Water is treated by the concentrator before placement into the fjord to the north of the concentrator site. The water treatment removes fluoride and solids from the water and recycles most of the water back into the concentrator. Fluorspar is produced by the water treatment plant as a by-product of the beneficiation process.

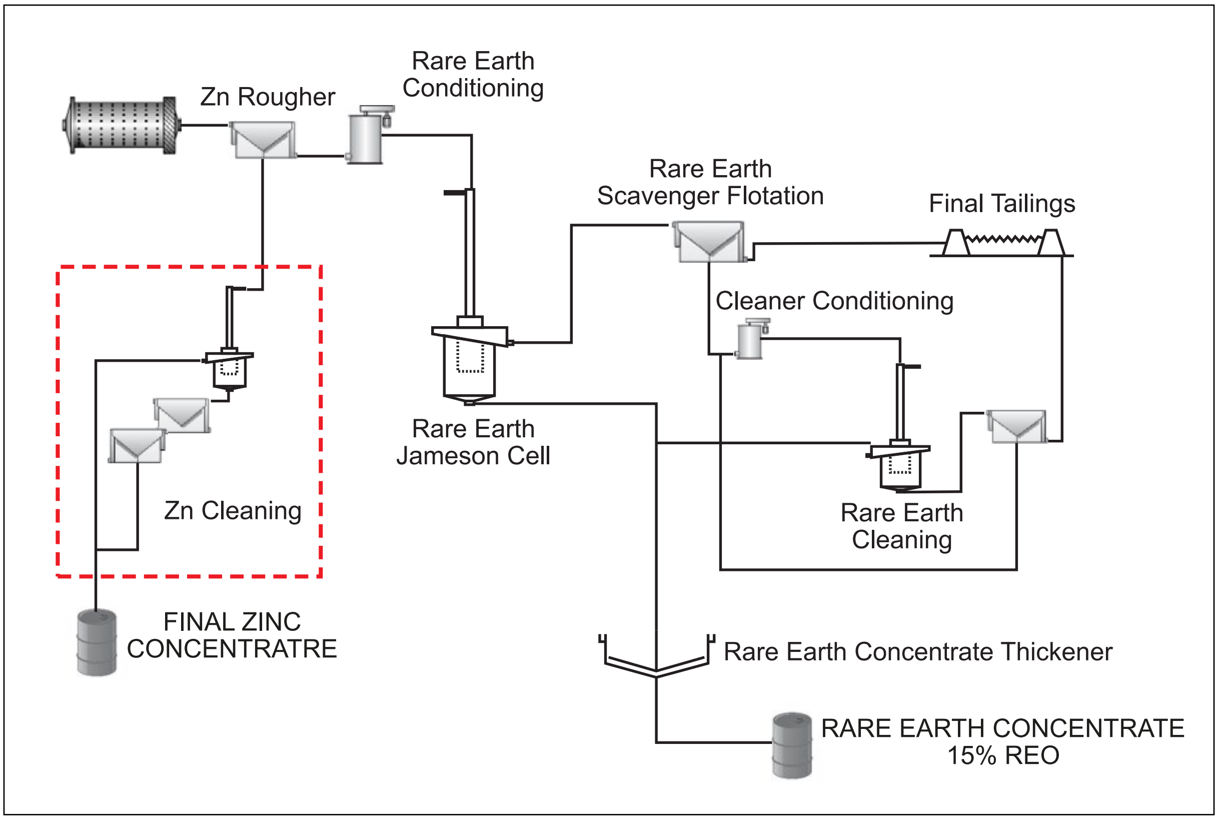

Figure 6. Metallurgical diagram of the concentrator circuit that produces a rare earth – uranium rich mineral concentrate, and a zinc concentrate.

4. METALLURGY (continued)

4.2. Concentrator Metallurgy (continued)

Concentrator Testwork

A careful effort has been made to ensure each section in the flowsheet has had adequate testwork performed to remove technical risk. The Concentrator flowsheet has been extensively tested since 2010.

The crushing and grinding circuit has been tested across a range of ore samples from different domains in the Kvanefjled deposit using industry standard testwork from which commercial size equipment is typically scaled.

The flotation stage has been developed with a rigorous program undertaken by experienced metallurgists. Over 500 laboratory scale flotation tests have been performed at well-respected independent laboratories. This extensive program has resulted in the selection of the most suitable commercial reagent scheme and the operating parameter knowledge to control the system. Added to this are more than 12 large scale and locked cycle tests and 3 pilot plants treating ~40 tonnes of ore. The pilot plant tests were performed in August 2012, November 2013 and April 2015.

Solid liquid separation and tailings characteristics have been measured on samples taken from pilot plant operations to ensure that material is appropriately representative. Ore variability analysis has been performed with six different composites evaluated which are all capable of being treated with the feasibility-level metallurgical design.

4.3. Refinery Metallurgy

REP concentrate from the concentrator is pumped via a pipeline to the refinery, where the concentrate is leached atmospherically in a counter current sulphuric acid leaching circuit. The solution produced by the atmospheric leaching is sent to the uranium circuit for recovery. A uranium by-product is recovered from the sulphuric acid atmospheric leach solution. Industry standard solvent extraction is used to recover the uranium selectively from the sulphate solution. Two stages of precipitation are then performed on the uranium solution to further purify the uranium to a final saleable product.

The leach residue is treated atmospherically with caustic to condition the solids prior to re-leaching. The conditioned solids are re-leached in hydrochloric acid at room temperature to produce rare earth chloride solution.

Lanthanum and cerium are removed from the rare earth chloride solution using solvent extraction to produce four different rare earth products. These products are:

- Lanthanum Oxide 99% grade
- Cerium Hydroxide 99% grade
- Mixed Lanthanum and Cerium Oxide 99% Grade
- Mixed Critical Rare Earth Oxide (Pr to Lu).

The refinery process has been developed by GMEL and combines a number of simple and proven steps to cost effectively produce rare earth products and uranium. The use of atmospheric leaching to treat the concentrate provides a low risk and easy to operate processing plant. The highly alkaline nature of the minerals containing the incompatible elements (i.e. rare earths and uranium) renders them unstable outside their normal environment. The non-refractory nature of these unusual minerals means that atmospheric leaching can be applied.

4. METALLURGY (continued)

4.3. Refinery Metallurgy (continued)

A wide range of leaching tests were performed and compared to the highly aggressive processes such as acid baking/caustic cracking that are required for more common rare earth minerals. These aggressive processes were not required to produce commercially high heavy rare earth and uranium recoveries and thus atmospheric leaching, a highly preferable option, was selected as the leaching method. A large number of bench scale leaching tests have been performed to confirm the high extractions of values from the concentrate. Overall greater than 50 bench scale leaching tests have been performed at relevant leach conditions.

Larger scale continuous testwork has also been performed to demonstrate that the process is effective. This is particularly important for controlling gangue elements in the leach.

Three larger continuous tests have been performed on the counter current leaching circuit which show good gangue control. A continuous 100 hour leach test was also performed, on concentrator pilot plant concentrate, to confirm the performance and provide samples for solid liquid separation testwork.

Metathesis and hydrochloric acid leaching have also been performed at bench scale and larger scale work. The larger scale work accepted feed from larger scale sulphuric acid testwork. This has resulted in two >1 kg batches of mixed rare earth carbonate being produced.

Further pilot plant work is planned at Outotec Laboratories in Pori on the refinery flowsheet in September 2015.

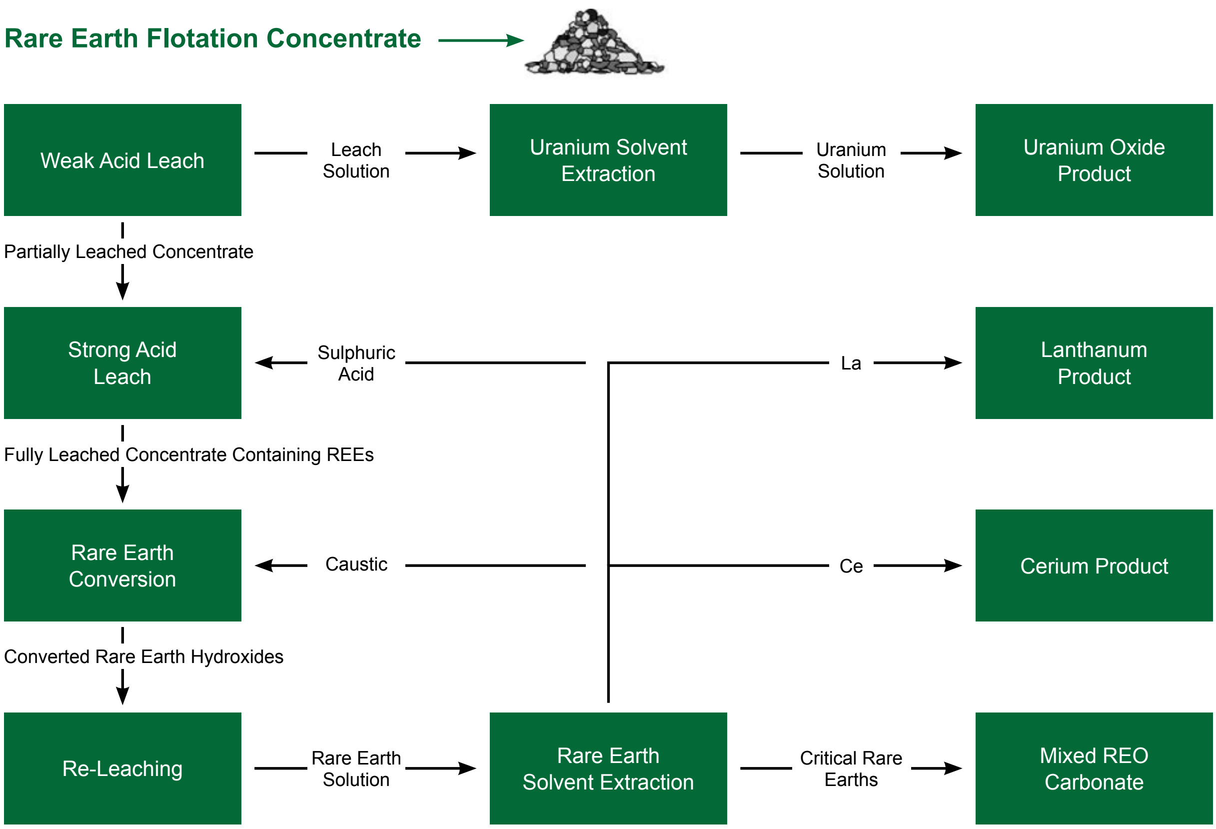

Figure 7. Metallurgical design of the refinery circuit.

5. PROCESS PLANT

5.1. Design

Design Production for Kvanefjeld Project		
Parameter	**Units**	**Value**
Operating Schedule		
• Operating Days/Annum	#	365
• Operating Hours/Day	h	24
• Operating Hours	h	7,884
Plant Feed, solids	t/a Ore	3,000,000
	t/h	380.5
Nominal Plant Feed Grade		
• U_3O_8 equivalent	ppm	380
• REO	%	1.352
Concentrator Recovery		
• Uranium	%	50
• Rare Earth Elements	%	79
Refinery Recovery		
• Uranium	%	90
• Rare Earth Elements	%	70
Nominal Plant Production		
• Mixed Critical Rare Earth Oxide	t/a	7,821
• U_3O_8 equivalent	t/a	512
Lanthanum Oxide	t/a	4,266
Lanthanum-Cerium Oxide	t/a	3,895
Cerium Hydroxide	t/a	6,931
Zinc contained in Zinc Concentrate	t/a	6,182
Fluorspar (Chemical)	t/a	8,909

Table 2.

5.2. Process Utilities

Water is recycled within both the concentrator and refinery to minimise water consumption. This includes recovering decant water from each of the tailings facilities and re-using in the process plants. Excess water produced from the processing plants is treated and pumped into the northern fjord as Treated Water Placement (TWP).

Raw water is provided by the raw water dam which is located near the Refinery. This dam provides 4 weeks of fresh high quality water from the Narsaq river.

Due to the large quantity of hydrochloric acid consumed by the REE plant, a chlor-alkali plant has been incorporated into the process design for on-site acid production. This has the added benefit of producing a caustic soda by-product, which is another major REE plant reagent.

Sulphuric acid is also produced by treating elemental sulphur which is imported to site. The production of concentrated sulphuric acid also produces excess energy which is captured to produce electricity and building heating.

Power generation is provisionally based on use of heavy-fuel-oil fired multiple reciprocating machines. The heavy fuel oil power station is located at the concentrator site. This is done to capture excess energy from the off-gases for process and building heating.

6. TAILINGS MANAGEMENT

6.1. Introduction

The tailings, or residues, arising from the processing plants are engineered and managed to ensure a negligible impact on the environment. The tailings management includes the design, operating and closure concepts. The tailings management design was performed by the independent consultant AMEC Foster Wheeler to Feasibility level standard.

Three tailings streams generated by the project are:

1. The major source is produced by the concentrator and stored in the western end of the Taseq basin located ~1 km to the south of the Refinery. This tailings facility is called the Flotation Tailings Storage Facility (FTSF). This stream is 92% of the solid tailings by mass, and is largely made up of benign silicate minerals such as amphibole and feldspars that have not been chemically degraded. Residual uranium and thorium remain locked within stable mineral structures in the flotation tailings. The minerals are mostly silicates of the lovozerite groups.
2. The second source of tailings, from the Refinery, is potentially recoverable for further processing and is stored in the Chemical Residue Storage Facility (CRSF). This stream is 8% of the solid tailings by mass.
3. Excess water from the facilities is treated and then placed back into the environment. This release is placed into the fjord to the north of the project site. This stream is called the Treated Water Placement (TWP).

The vast majority of the tailings are produced by the flotation process and have not been treated with acidic solutions to break down minerals and extract value elements. This results in most of the tailings being unaltered silicate minerals, allowing easier management. For FTSF, the tailings storage concept involves pumping thickened tailings from the plant via a pipeline and discharging below water level into a natural basin. To store the estimated volume of tailings generated over the life of mine, an embankment will be constructed at the outlet using rock quarried locally.

The key advantages of underwater tailings storage include mitigation of radon gas release and mitigation of dust generation. Based on the information provided, there is sufficient storage in FTSF for the design life of mine production. These tailings still contain lovozerite group Na-silicate minerals that contain some uranium, thorium, zirconium and rare earths. Future studies will be conducted to investigate the potential recovery and processing of these minerals, which are not targeted by the flotation process. This provides the opportunity to increase uranium and rare earth output.

For the CRSF, the concept involves pumping slurry from the Refinery, with reclaim water recycled. The CRSF is a fully lined tailings dam to prevent migration of mildly radioactive solid tailings.

6.2. Residue Storage Facility Site Selection

The Residue Storage Facility (RSF) location has been carefully selected by GMEL after numerous investigations, workshops and site visits. The Company has engaged a number of consultants since 2009 to investigate options for residue storage for the Project. Coffey Mining completed a preliminary study in 2009 which evaluated previously selected locations from Risø work in the 1970’s. AMEC was then engaged to further develop the residue storage facility concept in 2010 and 2011. AMEC Environment & Infrastructure subsequently identified a number of potential site options.

A technical team visited Kvanefjeld to assess potential residue storage facility sites. The identification of potential sites for the Project’s Residue Storage Facility (RSF) focused on the Company’s concession area, at sites adjacent to the Kvanefjeld mineral deposit and the proposed plant site. A total of seven RSF sites were identified which were subsequently assessed based on the following criteria:

- Geotechnical factors
- Impact on the natural environment
- Impact on social environment/position of the local communities.
- Area requirements and topography
- Distance from a likely plant site location and accessibility.

6.2. Residue Storage Facility Site Selection (continued)

The above criteria clearly show that the Taseq basin is the most suitable location for long term management of the tailings streams generated. The Taseq basin was selected for the following main reasons:

1. Lowest and most stable embankment walls
2. Impermeable basin
3. No competing land use or recreation
4. No linkage to drinking water systems
5. Safe pumping distance and height from plant sites
6. Ability to maintain water cover to prevent dust emissions
7. Located on the intrusion so the area is already naturally elevated in radioactivity
8. Not visible from fjords and marine traffic.

An alternative tailings dam location has been identified and evaluated by AMEC Foster Wheeler. The Company will propose this alternative tailings dam location as part of the mining licence application. Figure 8 shows the location of the two tailings dam options. Taseq is located to the east and the alternative sites are located to the west.

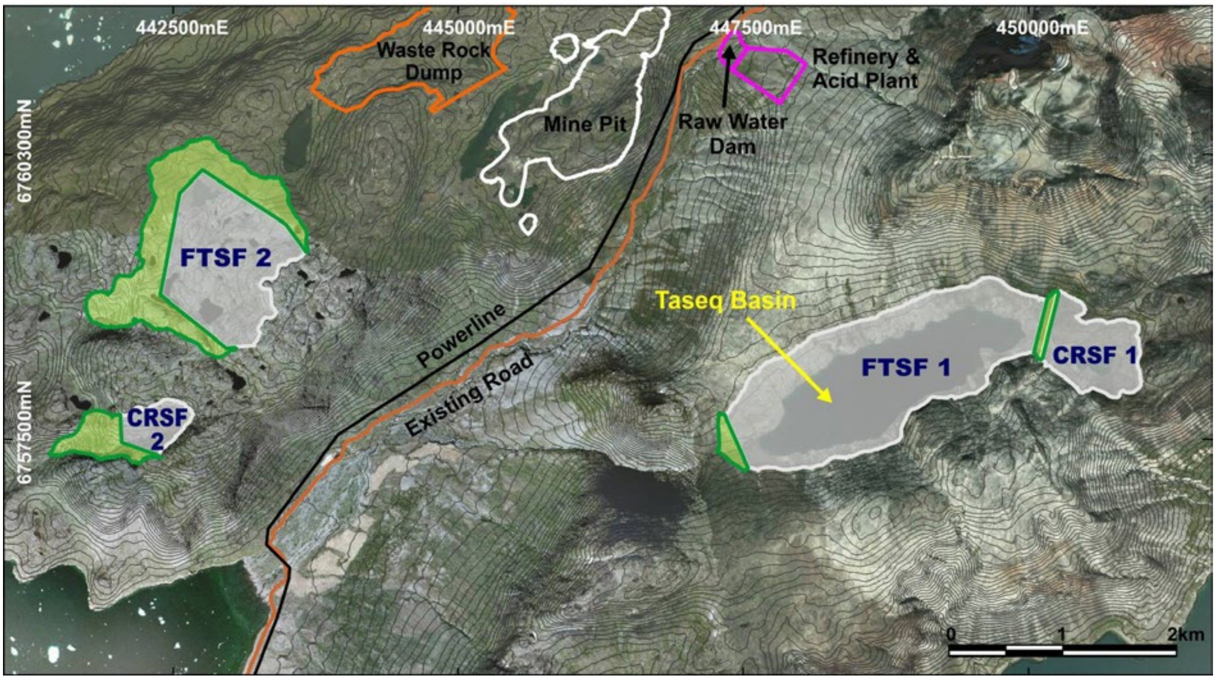

Figure 8. Overview of the Kvanefjeld Project area, showing the location of the two proposed tailings storage facility locations. Tailings Storage Facility scenario 1, located in the Taseq basin, is the preferred option.

6.3. Residue Storage Facility Design

The freeboard assumes that sufficient volume will be available for the retention of runoff from a 1 in 10,000 year precipitation event, otherwise referred to as a probable maximum flood. In addition a 50% buffer has been applied to allow for snow melting summer floods as well.

The FTSF confining embankment will be formed on the western "rim" of Taseq outlet. The Refinery Process plant will produce slurry which is pumped to the CRSF. This facility confining embankment will be formed inside an eastern "neck" within the upstream catchment of Taseq, at an estimated invert of 530 m above sea level. The flotation tailings and chemical residue facilities will be operated together.

The embankments will be sequentially raised in stages to reduce the initial capital cost, whilst still maintaining a robust retention volume suitable for the safe storage of the annual and ultimately final tailings production tonnages, along with precipitation storm event scenarios up to the probable maximum flood (PMF). This staged development is illustrated in Figure 9.

The embankments will be constructed of local rock from the following sources:

- Borrow areas located within the storage facilities environments
- FTSF and CRSF runoff diversion works
- Open pit and process plant works.

All topsoil and unsuitable foundation materials will be excavated from the footprint areas. Embankments will be protected with rock fill on the downstream face for erosion protection during operation. To prevent embankment seepage a double liner has been designed consisting of high density polyethylene line (plastic) geomembrane and geosynthetic clay liner.

The geosynthetic composite system was selected considering following:

- Provide two layers of protection against seepage
- Allow ease of installation
- Self-healing properties of the clay
- Excellent case history precedence for polyethylene systems for rock fill dams.

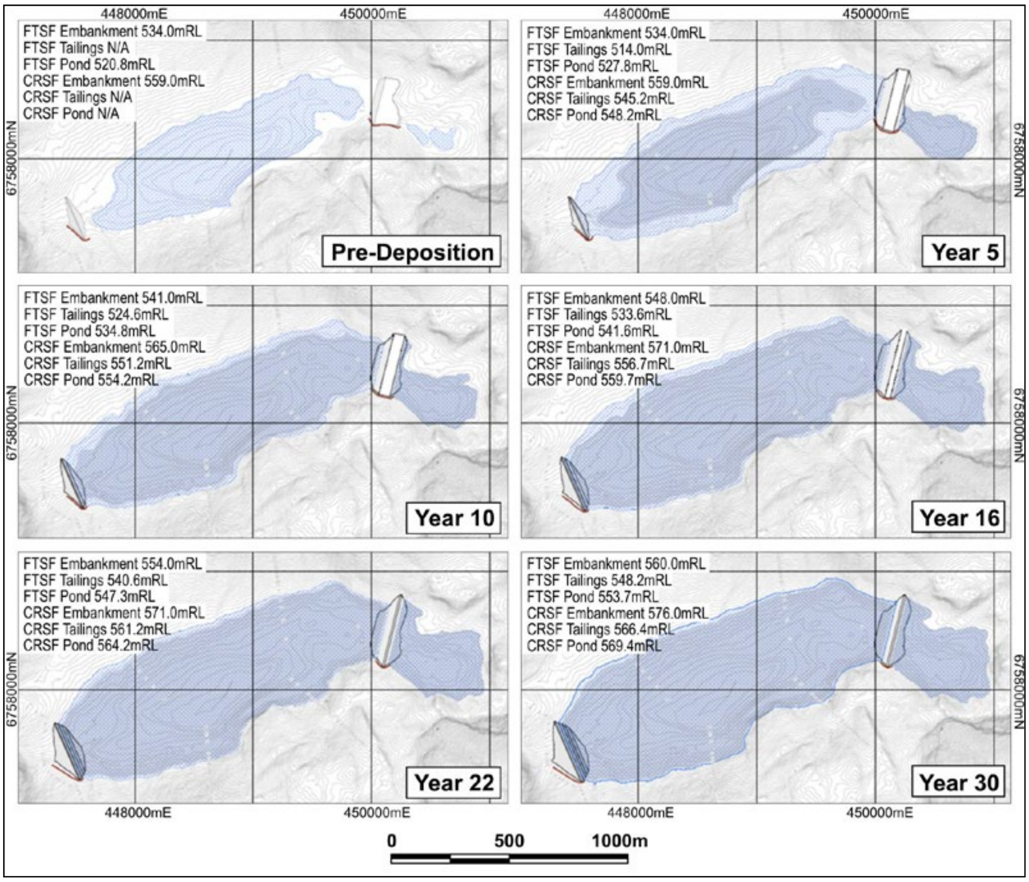

Figure 9. Tailings dam embankment height for the preferred option in the Taseq basin showing water coverage progress over a 30 year period of operation.

7. ENVIRONMENTAL AND SOCIAL

7.1. Environmental and Social Impact Assessments

The successful completion of an Environmental Impact Assessment (EIA) and a Social Impact Assessment (SIA) are necessary pre-requisites for an application for an Exploitation License in Greenland.

GMEL commenced its EIA and SIA in 2011. When completed, these assessments will be reviewed by the Government of Greenland through the office of the Mineral Licence and Safety Authority (MLSA). The MLSA will be supported in its review by the Danish Centre for Environment and Energy (DCE).

The Terms of Reference for both the EIA and SIA were initially approved by the Government of Greenland in 2011. The Company was requested to re-submit the Terms of Reference for approval in 2014 as aspects of the Project design had changed. A public hearing period for the new Terms of Reference was also performed in late 2014. The Company and Greenland's MLSA have responded to all feedback from the public review period.

All scopes of work for studies forming part of the EIA or SIA are issued to MLSA for approval prior to work commencing. Through this process the Company helps to ensure that work on the EIA and SIA is progressing to the satisfaction of the Greenlandic government.

The scoping phase of both the EIA and SIA have been completed. While some collection of baseline data is ongoing, this phase is mostly complete and the assessments are now primarily focussed on the reporting of the impacts. The EIA and SIA will document the results of the baseline studies, the potential impacts of the Project and identify mitigation measures to reduce or, where possible, eliminate the impact of the Project on the social and physical environment. A number of plans will also form part of the EIA and SIA. These will include a Benefit and Impact Plan, a Monitoring and Evaluation Plan and an Environmental Management Plan.

The Company is also conducting an extensive and thorough Stakeholder Engagement process. This process has been designed to ensure that all potential issues regarding the Project are identified at an early stage, thereby allowing for the issues to be effectively integrated into planning and impact assessments.

The Company has given several presentations to the local communities at town hall meetings since commencing its exploration and development studies. These engagements have included:

- Two Community "Open Days" were held in 2010 and 2011
- Four stakeholder workshops were held during 2011 in Qaqortoq, Narsaq and Nuuk, with another held in Narsaq in April 2012
- Local Narsaq area settlement meetings August 2013
- Government workshops with the MLSA in 2013 and 2014.

Figure 10. Left – Company 'open day' in Narsaq in 2011, where residents of Narsaq and Qaqortoq had the opportunity to learn more about the Kvanefjeld Project, and the evolution of mining projects in general from exploration through operation to rehabilitation. A second 'open day' was held in Qaqortoq in 2012. Right top – town hall meeting in Narsaq to update on the EIA and SIA processes. Right bottom – employees on the Kvanefjeld plateau during the 2011 drilling program.

7.2. Baseline studies

Risø conducted environmental baseline studies of the local area in the 1970's and 1980's. A Preliminary Environmental Impact Statement was issued in 1990.

GMEL has been undertaking annual environmental baseline studies since the Project was acquired in 2007. The scope of these studies has included:

- Biological sampling of soil, water, and sediment from lakes, marine and terrestrial locations
- Archaeological surveys
- Hydrological monitoring
- Monitoring of climate and air quality, including dust
- Radiation sampling
- Geochemical characterisation of waste rock and tailings
- Hydrocarbon spills
- Local land use
- Drinking water
- Taseq risk assessment.

A number of social impact studies are also currently underway. These include studies into:

- Traditional living conditions in South Greenland
- Local land use
- The potential impact of the Project on health outcomes
- Opportunities created by the Project and the need for planned coordination of infrastructure development.

The environmental and social issues identified for the Project will be managed in an appropriate manner in conjunction with stakeholder consultation to minimise and avoid adverse impacts to the land and local communities. The Company is committed to operating to the highest levels of environmental standards at all stages of the exploration, development, mining and rehabilitation processes.

8. INFRASTRUCTURE

8.1. Local Existing Infrastructure

The Kvanefjeld Project site is located near the town of Narsaq, which has a population of approximately 1,500 inhabitants. Narsaq has existing infrastructure which was utilised by GMEL during exploration and environmental baseline campaigns. Such infrastructure includes:

- A harbour
- Hotels and other accommodation
- Restaurants and cooking school
- Supermarket
- Water supply
- Helipad
- School
- Medical clinic.

Following the fjord to the north east of Narsaq is the settlement of Narsarsuaq which hosts an international airport and a hotel. The Narsarsuaq airport currently receives regular Boeing 757 flights directly from Copenhagen, Denmark. Narsarsuaq is a 50 minute boat ride from Narsaq harbour. The FIFO workforce is expected to use the Narsarsuaq airport as the Greenland point of entry.

In the surrounding area there is also the larger town of Qaqortoq which has a population of 3,250 inhabitants. Qaqortoq is the capital of the municipality of Southern Greenland and where the mayor has residence.

8.2. Infrastructure Location

With the establishment of a mining operation the following infrastructure upgrades are required for the project:

- Accommodation Village
- Industrial Port Facilities
- Power Supply
- Water Supply
- Roads and infrastructure channels.

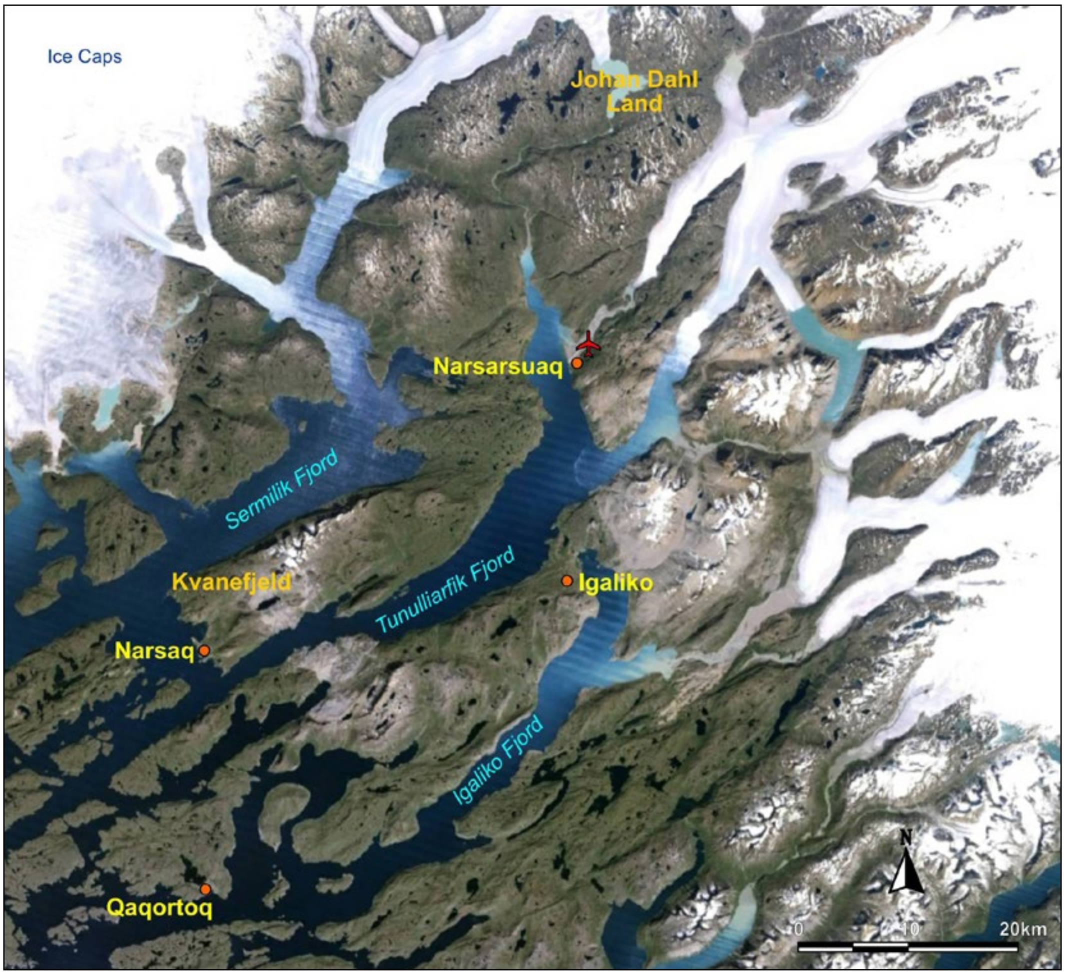

Figure 11. View over the fjords of south-western Greenland showing the main towns and infrastructure nodes. Lakes at Johan Dahl Land have been positively evaluated for the option of hydroelectric power. The fjord system provides direct shipping access to the project area.

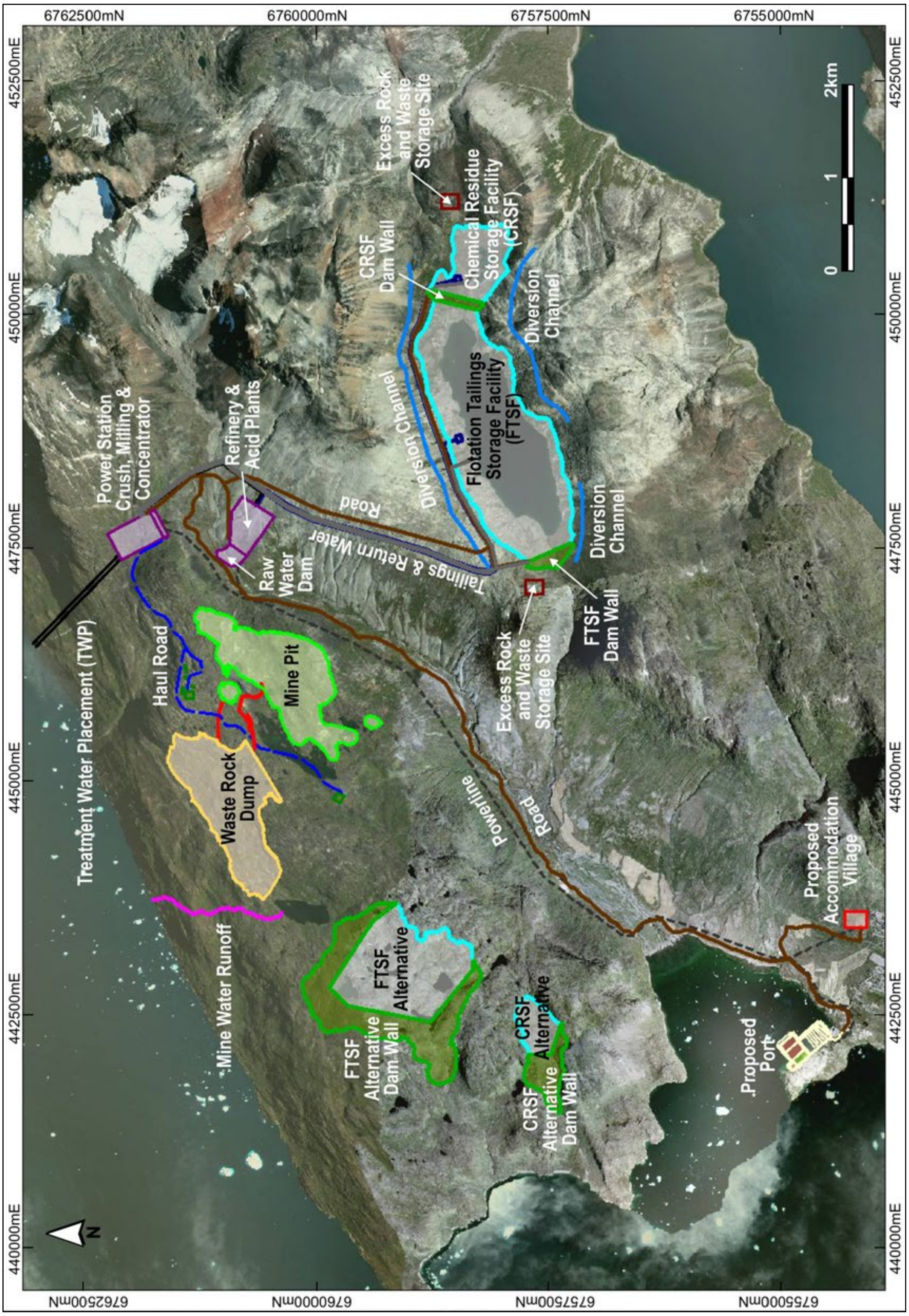

Figure 12. Overview of the Kvanefjeld Project and surrounding areas, highlighting the infrastructure requirements for the project.

8.3. Accommodation Village

During the pioneering stage of construction 316 workers are required to perform the early works. These workers will be accommodated within refurbished accommodation in Narsaq and Narsarsuaq. Additional accommodation capacity will be utilised in the form of cruise ships to provide the necessary capacity. This will provide a large initial economic stimulus to the local community as a variety of support goods and services are required.

The construction of an accommodation village makes up the early works activities which will allow it to be used for the construction phase of the project. It is expected that 1,171 construction workers will be required during the construction phase. These will mostly be accommodated in the newly constructed accommodation village.

It is predicted that a total 787 personnel will be required for the project operation and approximately 325 of these personnel will be recruited locally from within the Southern Greenland municipality. The remaining project personnel will be accommodated on a temporary FIFO (fly in – fly out) basis in a custom built village to be located to the northwest of Narsaq.

An accommodation village will be provided with an access road off a new road connecting the mine and plant to the harbour. The village will be supplied with power (from the process plant power station), water and sewage treatment. A large centre is envisaged, with recreation facilities, meeting rooms, canteen and internet connections.

8.4. Industrial Port Facilities

Dedicated new port facilities will be installed at the Tunu peninsula at Ilua Bay for the use of the project. The new port will handle materials and equipment for the construction of the mine and plant. During the operational phase the port will handle the ongoing import of fuel, reagents, consumables, and the export of products. The new facilities will typically handle handymax size vessels.

The port is designed with a 200 m quay front with conveyors for bulk cargo, and mobile stackers for containers. Adjacent to the quay, an area will be prepared for container stacking and covered bulk storage for both imports and exports.

8.5. Power Supply

Electrical power and heating will be provided by a power plant located at the concentrator site. A new 59 MW heavy fuel oil (HFO) with combined heat/power plant will be established. The power plant will be an efficient and modern design which meets all emission standards for Greenland. Typical power draw from the power plant will be 38 MW used across concentrator, refinery and port sites.

Although the engineering studies are based on using HFO to meet the total project energy requirements, Greenland is well-suited for hydroelectric power development from both a topographical and a hydrological point viewpoint. A potential hydropower facility could be located in the area north of Narsarsuaq called Johan Dahl Land. Ístak and Verkis of Iceland have completed a study which has evaluated and costed the establishment of hydropower for the project. There is adequate hydropower capacity to supply the 38.3 MW electrical requirements for the project.

8. INFRASTRUCTURE (continued)

8.6. Water Supply

The process plants will access raw water from the mine area, Narsaq river, and water resulting from tailings displacement in tailings facilities. Water will be recycled from tailings facilities, which will perform the dual function of tailings and water reservoir.

A raw water dam will be established near the refinery site to provide supplementary water requirements to the project. A water treatment and recycling plant will be established at the concentrator site to recover as much water as possible for re-use in the processing plants. In total 440 m³/hour of water is needed for the processing plants.

The port facilities and accommodation village will source water from the existing Narsaq town water supply. There is adequate town water available for the project and a greatly expanded town of Narsaq.

8.7. Roads and Transport

A new industrial road, approximately 13 km long, will be built to connect the harbour at Ilua Bay, the process plant, the mine and accommodation village. The new road will follow an existing gravel road along the Narsaq River. The new road will be for all imports and exports transport between port, plant and mine, as well as ore transportation from the mine to the plant. Specialised fuel trucks will transport HFO from the port to the power plant at the concentrator site.

Personnel will generally commute by bus between the accommodation village and the work sites at the mine, concentrator and refinery. The existing heliport at Narsaq is considered to require an extension to passenger facilities, but the airport at Narsarsuaq is considered adequate to handle additional passenger loads resulting from the Kvanefjeld construction and operation. A chartered flight from southern England will be used on a twice weekly basis to transport FIFO workers during the operations phase. Additional commercial and chartered flights between Narsarsuaq and Nuuk, Reykjavik and Copenhagen may be necessary for the increased volume of passengers.

9. CAPITAL COST

9.1. Capital Cost Summary

The total project capital cost estimate inclusive of mine infrastructure, process plants, residue storage facilities and area/regional infrastructure is summarised and tabulated in Table 3. The capital cost estimate as summarised in this section is current as of the first quarter 2015, and is presented in United States dollars.

Total Capital Cost Estimate		
	Area	**US$M**
Plant Direct Costs	Area 1000 – Mining	32.5
	Area 2000 – Concentrator Process Plant	225.4
	Area 3000 – Refinery Process Plant	371.2
	Area 5000 – Regional Infrastructure	109.9
	Area 6000 – Major Off-site Infrastructure	6.6
	First Fill Reagents and Consumables	14.9
	Start-up Spares	6.9
	Mobilisation/Demobilisation	35.0
	Commissioning Assistance	2.4
	Total Plant Direct Cost	**804.8**
Plant Indirect Costs	Temporary Construction Facilities	21.4
	Engineering, Procurement and Construction Management	132.7
	Contingency (Growth Allowance)	161.4
	Total Plant Indirect Costs	**315.5**
Total Plant Capital Cost		**1,120.3**
Major Infrastructure	**Total Port Cost**	**111.2**
	Total Accommodation Village Cost	**75.7**
	Power Plant	**53.8**
Total Project Cost		**1,361.1**

Table 3.

The capital cost presented here is exclusive of:

- the cost of the mining fleet, which will be supplied by the mining contractor and is therefore covered under the project operating costs
- owner's costs
- escalation
- currency exchange rate fluctuations.

It is possible for major infrastructure to be financed by third parties under Build Own Operate (BOO) arrangements. The Company is planning to finalise arrangements for these during the next phase of study development, which are expected to result in a significant reduction in the capital requirements as shown in the above table.

9. CAPITAL COST (continued)

9.2. Estimate Cost Breakdown

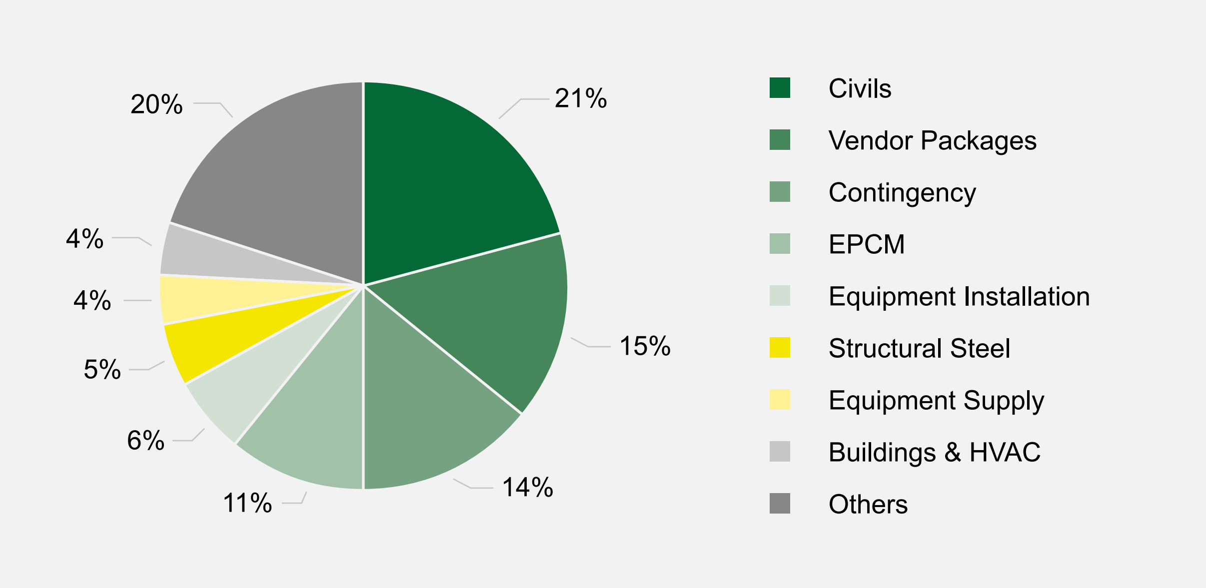

Figure 13. Shows that the largest cost area are the civil earthwork requirements of the project. This is significantly higher than for 'typical' construction projects, due to Greenland's lack of access roads and challenging topography.

9.3. Estimate Basis

The total capital cost estimate is judged to have an accuracy of ± 15 to 25%.

The capital cost estimate covers the following facilities:

- Mining Infrastructure
- Run of Mine (ROM) Pad
- Concentrator Plant
- Refinery Plant
- Flotation Residue Storage Facility (FTSF)
- Chemical Residue Storage Facility (CRSF)
- Raw Water Dam
- Area/Regional Infrastructure, including roads and overland pipelines
- Port
- Accommodation Village
- Power Supply.

9. CAPITAL COST (continued)

9.4. Sustaining Capital

The preliminary cost estimate for the construction of the tailings facilities is US$25.7M which allows for an initial 15m high embankment wall capable of storing flotation tailings for the first 5 years of operation, and an initial 22m embankment wall capable of storing chemical residue for the first two years of operation.

A series of subsequent embankment lifts will be necessary for both storage facilities during the life of the project to maintain plant operation, as summarised in Table 4:

Residue Storage Facility Embankment Lifts			
Storage Facility	**Year of Lift**	**Height of Lift (m)**	**Cost of Lift (US$M)**
Flotation Tailings Storage Facility	5	7	3.1
	10	7	4.0
	15	6	4.2
	22	6	5.1
Chemical Residue Storage Facility	2	7	6.5
	6	6	7.0
	15	6	6.0
	23	5	3.9
Total			**39.8**

Table 4.

10. OPERATING COST SUMMARY

10.1. Operating Cost Summary

Table 5 summarises the total operating cost for the Mine, Concentrator and Refinery, at a nominal plant throughput of 3.0 million tonnes of ore per year.

Costs are inclusive of mining, process plant, and area and regional infrastructure, and represent the average expected operating cost over the life of mine.

Operating Cost Summary – Mine, Concentrator and Refinery[1]

	Proportion of Cost (%)	Annual Cost (US$M/a)	Unit Cost – Total[2] US$/kg TREO	Unit Cost – Net[3,4] US$/kg CREO
Mining and Haulage	7.5	17.9	0.81	0.65
Labour	19.0	45.0	2.03	1.63
Power	13.3	31.7	1.43	1.14
Reagents	22.9	54.4	2.45	1.96
Consumables	4.6	10.9	0.49	0.39
Maintenance Materials	12.9	30.5	1.38	1.10
Freight Costs	13.0	30.8	1.39	1.11
General and Administration	6.8	16.1	0.73	0.58
Total	**100**	**237.3**	**10.71**	**8.56**

Notes:

1. The nominal operating cost presented in this table is the average over the life of mine. The actual operating cost will vary slightly from year to year with variations in ore head grade.
2. Total unit cost per kg of TREO produced at Kvanefjeld.
3. Net unit cost per kg of CREO delivered to the Rare Earth separation plant, net of byproduct credits for yellow cake (uranium), zinc concentrate, fluorspar, lanthanum oxide, mixed lanthanum/cerium oxide, and cerium hydroxide.
4. Byproduct credits based on US$70/lb U_3O_8, US$6.50/kg La2O3, US$5/kg CeO2¬, US$1000/t Zn, US$350/t CaF2.

Table 5.

10. OPERATING COST SUMMARY (continued)

10.1. Operating Cost Summary (continued)

The total operating cost breakdown for the Project, inclusive of product transportation costs is illustrated in Figure 14.

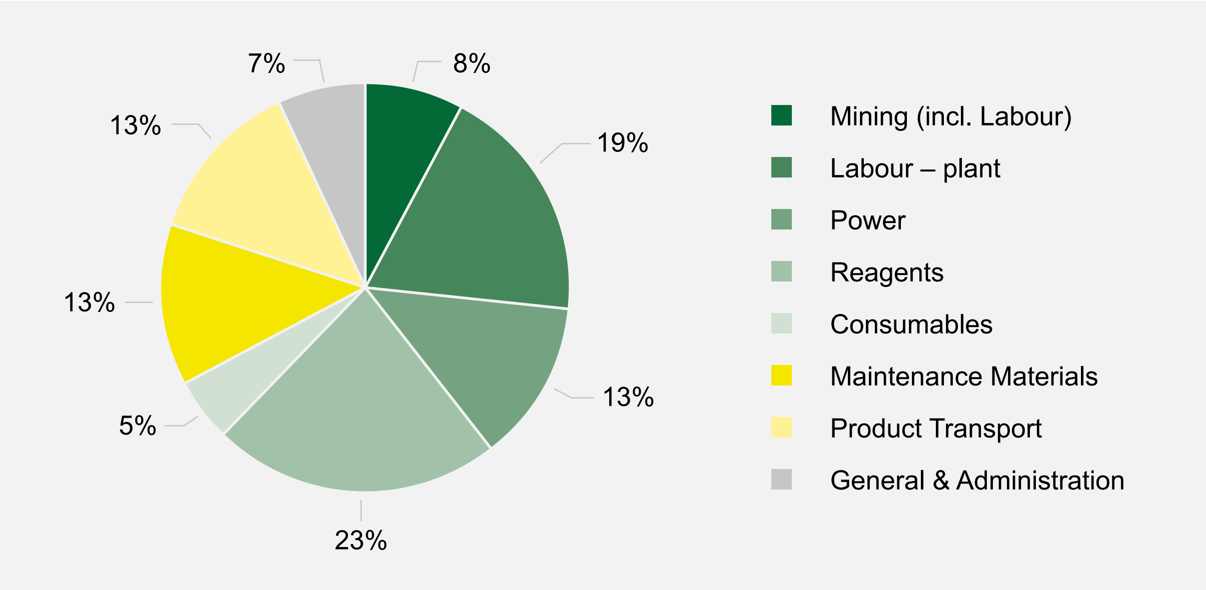

Figure 14. Operating Cost Summary

10.2. Estimate Cost Basis

All costs are estimated in United States dollars as at first quarter 2015 and are based on forecast foreign exchange rates as listed below. The total operating cost estimate is judged to have an accuracy of ± 15 to 25%.

Operating costs were developed with contributions from the following independent consultants and service providers:

- Process plant, plant infrastructure and minor area and regional infrastructure – input from independent engineering consultants Tetra Tech Proteus and AMEC
- Major area and regional infrastructure – independent engineering consultants Ramboll. E. Pihl & Søn AS and Verkis/Istak
- Mining – mining consultants SRK Consulting, MacMahon, GNC Nuna Joint Venture and Dexter Mining Inc.
- Freight – Danish based shipping company Blue Water Shipping (BWS).

10. OPERATING COST SUMMARY (continued)

10.3. Operating Cost Estimation Methods

The following summarises the methods used to develop the operating cost estimate for the Project:

- **Mining:** Mining costs have been estimated in consultation with experienced contract mining groups, based on an optimised mine schedule developed for the Project by SRK Consulting. The mining costs developed by the contract mining groups are fully inclusive of labour, equipment supply (including preliminary mining fleet and replacement for life-of-mine), maintenance, fuel (diesel) consumption, and consumables requirements.
- **Labour/Site Manning:** Labour complements for management, operations and maintenance have been estimated for the mine by the contract mining groups, and for the process plant and infrastructure by Rambøll and GMEL.
- **Labour Rates:** Annual salaries for management, professional and supervisory staff have been estimated based on typical 'Western World' rates. Annual salaries for skilled, unskilled and shift workers are based on the most recent Greenland Wages Agreement between the Greenland Business Association (GE) and the Greenland Workers Union (SIK).
- **Power:** Electrical power consumption has been calculated for the process plant and estimated for the infrastructure. Power costs are based on power supply from HFO fired equipment. Diesel-fired equipment will be used to generate power requirements for the mining facilities and at the tailings facility.
- **Reagents:** Reagent consumptions are based on the mass and energy balances developed by GMEL using the IDEAS® process simulation software package. Unit rates for reagents have been based on budget quotations from single-source suppliers for specialised chemicals, on budget quotations from multiple suppliers for generic reagents, and on in-house information and public domain information used for some minor reagents.
- **Maintenance:** Maintenance costs are estimated based on benchmarks derived from other similar projects. Maintenance costs include expenditure for sustaining capital, maintenance spares and any specialised contract labour.
- **Consumables:** Consumables costs, for miscellaneous items such as steel balls for milling, mill and crusher liner steel, filter cloths, laboratory consumables, water supply and vehicle diesel consumption, are based on a combination of budget quotations and in-house information.
- **General and administration:** Allowances based on AMEC experience, for general freight costs, transport (FIFO) costs for personnel not recruited locally in Narsaq, recruitment, training, insurance and administration costs.
- **Freight:** Costs for all sea freight into Greenland (reagents, consumables, fuel etc.), and out of Greenland (products), are based on a detailed logistics study performed by BWS for the Kvanefjeld Project. Costs are based on a combination of dedicated vessels and commercial freighters as required. Costs for land freight in Greenland and land freight to/from destination ports are estimated based on AMEC experience. The freight costs developed for all products are based on CFR (carriage and freight).

11. MARKETING

11.1. Rare Earths

Supply

China supplies greater than 90% of the world's rare earths from a variety of small mines in the south of China and larger mines in the north. In the north light rare earths are mainly produced with Batou being the dominant producer. In the south there are a number of small rare earth mines which produce mainly heavy rare earths from ionic clay type deposits.

In the western world the production is fairly slim with the following producers of significance:

- Mountain Pass in California being operated by Molycorp. Currently operating at ~7 ktpa of REO
- Mount Weld (Western Australia) and Lynas Advanced Materials Plant (Malaysia) being operated by Lynas Corporation. Currently operating at ~6 ktpa of REO
- Silmet in Estonia receives feedstock from Russia and operated by Molycorp, Estonia. Currently producing ~2 ktpa of separated REO
- La Rochelle Rhodia in France being operated by Solvay. Mainly recycling with limited feed.

Unregulated rare earth production and grey exports from China are also a significant contributor to world production. This is estimated by be ~40 ktpa of rare earth oxide at the lowest operating costs. Eliminating this production without causing civil unrest remains a challenge for the Chinese authorities.

The total global rare earth supply is estimated to be 120 ktpa of REO (official production) plus additional grey exports from China.

China is expected to continue to be the dominant supplier of rare earths in the short to medium term. Western world production is uncertain with new producers struggling financially. China's production is not expected to increase significantly from the current 100 ktpa produced. Increases in efficiency will likely be offset by Chinese state imposed mine closures. The large unregulated production of rare earths from China is not sustainable and in the long term this production will decrease significantly. China has cancelled its export quota system and plans to eliminate rare earth export tariffs. However the anticipated change to China's rare earth resources tax scheme from a production based to a value based tax will modestly reduce supply. This should flow through to higher prices. Overall supply from China has likely peaked as the government-driven sustainable use of resources policy takes effect.

Due to the above factors supply of rare earth feedstocks within China is already tight. It is quite conceivable that China will become an importer of low cost rare earth feedstocks to supplement their internally constrained supply.

Western world producers are likely to continue to struggle economically until there is a significant increase in the rare earth price.

Demand

Following a significant fall in 2009, a result of the global economic downturn, demand for rare earths expanded strongly in 2010 and 2011. The annual rate of growth of the market during this period was ~20%. In addition perceived supply restrictions from China pushed up prices to very high levels. Demand growth slowed in 2012-2014 as high prices caused reduced consumption and temporary substitution. Prices have since decreased significantly yet still remain higher than historical levels experienced prior to 2010.

The global demand for rare earths is expected to grow from 120 ktpa in 2014 to 150 ktpa in 2020 at 4% growth. Strong demand for magnetic materials is the largest market sector and the strongest driver for this demand growth. In addition there are currently no substitutes for the use of rare earths in many speciality electronic devices. As the world moves towards greater energy efficiency and the application of "green energy" the use of rare earths will expand as they are key (yet small) components to this technology. As there are 15 different rare earth produced with multiple uses for each the aggregate demand for rare earths is expected to remain stable due to the diversity of markets.

China is also the most important customer for rare earths with more than two thirds of Chinese rare earth production being consumed within China providing Chinese self-sufficiency. The rest of the world is dependent on exports from China of rare earths. Many western world businesses have moved their rare earth consuming manufacturing businesses to China to ensure reliable supply.

11.1. Rare Earths (continued)

Pricing assumptions

Each of the 15 rare earths have different forecast demand/supply balances which will affect their pricing. The following rare earths are expected be under-produced by the commencement of Kvanefjeld production in 2019:

- Praseodymium
- Neodymium
- Terbium
- Dysprosium
- Holmium
- Yttrium.

The following rare earth markets are expected to be balanced:

- Europium
- Lanthanum.

The following rare earths will be produced in excess to global demand as they are produced in the natural proportions as by-products of the in-demand rare earths:

- Cerium
- Samarium
- Gadolinium
- Erbium
- Thulium
- Ytterbium
- Lutetium.

The following tables include the 2019 rare earth price forecast for each of the rare earths. The Company adopted the most conservative scenario presented by Adamas Intelligence.

Total Rare Earth Production Basket Price

Rare Earth	Production	REO Distribution	Price Forecast
Oxides	**t/year**	**%**	**US$/kg REO**
La_2O_3	5,580	25.18%	6.5
C_eO_4	9,892	44.63%	5
Pr_6O_{11}	955	4.31%	95
Nd_2O_3	2,956	13.34%	85
Sm_2O_3	309	1.39%	5.5
Eu_3O_3	28	0.13%	635
Gd_2O_3	234	1.06%	54
Tb_4O_7	38	0.17%	720
Dy_2O_3	231	1.04%	550
Ho_2O_3	37	0.17%	50
Er_2O_3	105	0.47%	150
Tm_2O_3	9	0.04%	0
Yb_2O_3	82	0.37%	62.5
Lu_2O_3	7	0.03%	610
Y_2O_3	1,699	7.67%	30
Total REO	**22,162**	**100.00%**	**31.2**

Table 6.

11. MARKETING (continued)

11.1. Rare Earths (continued)

Mixed Critical Rare Earth Product Basket Price			
Rare Earth	**Rare Earth**	**REO Distribution**	**Price Forecast**
Oxides	**t/year**	**%**	**US$/kg REO**
La_2O_3	59	0.8%	6.5
C_eO_4	1,025	13.3%	5
Pr_6O_{11}	913	11.8%	95
Nd_2O_3	2,930	38.0%	85
Sm_2O_3	309	4.0%	5.5
Eu_3O_3	28	0.4%	635
Gd_2O_3	234	3.0%	54
Tb_4O_7	38	0.5%	720
Dy_2O_3	231	3.0%	550
Ho_2O_3	37	0.5%	50
Er_2O_3	105	1.4%	150
Tm_2O_3	9	0.1%	0
Yb_2O_3	82	1.1%	62.5
Lu_2O_3	7	0.1%	610
Y_2O_3	1,699	22.1%	30
REO	**7,705**	**100%**	**78.6**

Table 7.

Market balance and price forecasts for the Study were provided by the independent market analyst Adamas Intelligence. The forecast Kvanefjeld basket price for 2019 is $31.2 per kilogram of rare earth oxide. The mixed critical rare earth oxide produced by the Project will have dramatically reduced lanthanum and cerium content which will result in a much higher basket price of $78.6/kg REO. This compares very favourably with the cash costs of production of $8.56/kg of mixed critical rare earths.

11.2. Uranium Oxide

There is only one commercial use for uranium: as fuel for civil nuclear power reactors. The market for uranium is solely dependent upon the civil nuclear fuel cycle which is complex, regulated, and strategically significant for many countries.

There are currently 437 nuclear power plants operable worldwide and 70 plants under construction.

The **World Nuclear Association (WNA)** records that in addition to the 70 plants now under construction, a further 183 plants are in the "Planned" category, which means "approved with major commitments in place and expected to be in operation within 8-10 years". The WNA also identifies another 311 plants as being "Proposed" (which means they are in longer term plans).

In electricity production terms, current nuclear power capacity is 377.7 GWe. The 70 plants under construction will add a further 73 GWe by 2020. The International Energy Agency predicts in its World Energy Outlook (WEO) Report for 2014 that world electricity demand will increase by 80% over the period from 2012 to 2040 and that nuclear should increase its share to 12% by 2040 – a target of 624 GWe or 2.2% per annum compound growth.

- Uranium demand is forecast to grow by somewhere between 40% and 70% by 2030 under 2 scenarios that are favourable towards nuclear power: from around 65,000 mt U in 2014 to between 97,450 mt U and 119,431 mt U in 2030
- The unfavourable scenario forecasts uranium demand to grow modestly until 2020-2022 and then decline from 2026 onwards as plants are decommissioned and not replaced.

Pricing Assumptions

The uranium industry has a long record of "misforecasting" uranium prices.

The uranium price boom in 2007 was exaggerated by the "commodity bubble" which fortuitously coincided with the earliest expressions of longer term supply weakness as the Chinese nuclear program began to expand on top of wider global concerns about climate change and renewed interest in nuclear power. Interestingly, the uranium price began to recover after the global financial crisis of 2008/2009 until the tidal waves associated with the Great Eastern Japan Earthquake in March 2011 destroyed the Fukushima reactors and halted nuclear plant operations in Japan for the next four years. The uranium spot price fell to a low of US$28.25/lb in May 2014 and has languished below US$40/lb since December 2014.

It is difficult to construct a reliable industry cost curve because such a large amount of current production comes from integrated non-independently reporting entities. However, two points emerge from recent price history:

1. Prices in the range of ***US$50/lb to US$70/lb*** led to the investment in two greenfield mining operations in Namibia and Malawi and the rapid expansion of output in Kazakhstan; and
2. Once prices fell below US$40/lb and remained there for many months production was terminated in Malawi and reduced in several other operations and many planned new mines and/or expansions were suspended or cancelled.

As a result of the new price outlook, global uranium production is expected to have fallen by at least 10M lbs to 147 M lbs in 2014.

Prior to Fukushima, the **Ux Consulting Company** was confidently predicting long term uranium prices to be in the range of U$72/lb – US$90/lb from 2019. In its latest Uranium Market Outlook (Q4 2014), UxC has published new "High Price Scenario" forecasts which predict nominal USD prices will reach US$70/lb in 2019.

The problem with this analysis is that it fails to account for the inevitable delays in new mine developments that are caused by persistently poor prices. Significantly higher pricing will be needed to incentivise new primary uranium production to meet demand.

12. FINANCIAL EVALUATION

12.1. “Base Case”

The key financial metrics of the Project are set out in Table 8.

Financial Metrics	
	US$M
Capital Cost	1,361.1
Annual operating cost	235.2
Estimated Annual Fiscal Benefit for Greenland*	97.2
Annual revenue (average)	755.0
Uranium	74.9
Critical rare earth mixed oxide	539.9
Lanthanum and cerium by products	84.2
By products (zinc, fluorspar)	14.5
Net Present Value [NPV]	
Before tax	1,972
After tax	1,400
Cumulative undiscounted free cash flow	6,768.7
Internal rate of Return [IRR]	21.8%
Payback period	6 Years

*Under base case scenario. The Company has not yet negotiated a tax and royalty scheme for the project.

Table 8.

Financial Assumptions

The following assumptions were applied to the financial evaluation:

- Discount Rate of 8% real
- Inflation Rate of 3%
- Light Rare Earth Separation Cost of $15/kg REO
- Heavy Rare Earth Separation Cost of $50/kg REO
- Exchange rates
  - DKK/US$ = 0.155
  - RMB:US$ = 0.163
  - AUD:US$ = 0.795
  - EUR:US$ = 1.153

12.2. Comparison to Previous Kvanefjeld Project Study

In 2013 GMEL completed a study into the construction of a mine and concentrator in Greenland to process 3Mtpa of ore from the Kvanefjeld deposit (the Mine and Concentrator Study). This study considered shipping mineral concentrate from Greenland to a dedicated off-shore refinery for processing. Since completing the Mine and Concentrator study, GMEL has undertaken a review of options for further processing in Greenland in order to satisfy the requirement of the Greenland Mining Act, which stipulates that a company, in receipt of a mining license, completes as much further processing (value-add) in Greenland as is economically feasible.

The result of this review was to establish the refining facility in Greenland and additionally include the separation of lanthanum and cerium as a value adding step in Greenland. The Feasibility Study has been prepared on the basis that lanthanum and cerium are refined in Greenland.

The impact of establishing the refining facility in Greenland and adding a lanthanum and cerium removal step to the flowsheet has been to increase the capital cost of the project by approximately US$300M. The refinery in Greenland requires additional infrastructure support and civil earthworks. However, despite the increase in the capital cost of the project, the Company has been able to maintain the pre-tax NPV of the project at approximately US$1.9B. This has been possible because the Company's technical team has developed a series of enhancements to the flowsheet which have resulted in significantly increased rare earth production through greater recovery.

DATA

Mine and Concentrator Study

- 3Mtpa mine and concentrator at Kvanefjeld producing a rare earth – uranium mineral concentrate
- Offshore refinery producing rare earth hydroxide and uranium oxide
- Capex US$810M [Concentrator US$450, Refinery US$360]
- Opex US$232M [Concentrator US$124, Refinery US$87, Transport US$20]
- NPV [before tax] US$1,910M
- IRR 32.1% [before tax]
- Assumes that US$163M financed by BOO(T) arrangement
- For comparison to the Feasibility Study, a non-BOO(T) scenario results in:
  - Capex US$973, Opex US$232M.

Feasibility Study

- 3Mtpa mine, concentrator and refinery in Greenland producing a variety of rare earth products and uranium
- Capex US$1,361M
- Opex US$237M
- NPV [before tax] US$1,971M
- NPV [after tax] US$1,400M
- IRR 21.8%.

What has changed?

- Refining in Greenland, including lanthanum and cerium separation
- 32 verse 37 years project with total production up 30%
- Technical parameters have changed
- Pricing assumptions are lower
- Capex is up by US$398M
- Opex is unchanged [given uncertainties in estimates]
- NPV [pre tax] is unchanged [given uncertainties in estimates].

ABBREVIATIONS, ACRONYMS AND DEFINITIONS

#	number
%	percentage
%pa	percent per annum
°C	degrees Celsius
°F	degrees Fahrenheit
a	annum
A$ or AUD	Australian dollars
a.s.l	above sea level
AMEC	Amec Foster Wheeler Earth & Environmental (UK) Ltd
ANFO	Ammonium Nitrate Fuel Oil (explosive)
ANSTO	Australian Nuclear Science and Technology Organisation
AS	Australian Standard
ASIAQ	ASIAQ, Greenland Survey
ASU	Air Separation Unit
ASX	Australian Securities Exchange
atm	atmosphere
Base Case	The main project configuration proposed for the development.
BAT	Best Available Techniques
BCM	Bench Cubic Metre
Be	Berrylium
BFD	Block Flow Diagrams
BGM	Bituminous Geomembrane
BIP	Benefit and Impact Plan
Bm^3	Bank cubic metre (of uncompacted earth)
BOO(T), BOOT	Build, Own, Operate (and Transfer) build, own, operate and transfer
BWS	Blue Water Shipping. Danish-based international shipping contractor
Ca	Calcium
$CaCO_3$	Calcium Carbonate
CAD	Computer Aided Design
CaF_2	Calcium Fluoride
CAGR	Compound annual Growth Rate
Capex	Capital expenditure
Ce	Cerium
cm^3	Compacted cubic metre (of earth)
CMREO	Critical Mixed Rare Earth Oxide = Main product produced by the Project
CO_2	Carbon dioxide
CPL	Carbonate Pressure Leaching
CREO	Critical Rare Earth Oxide (Pr, Nd, Eu, Dy, Tb, Y oxide)

ABBREVIATIONS, ACRONYMS AND DEFINITIONS (continued)

Critical Metals Strategy	Report issued by the US Department of Energy in December 2011
Critical Rare Earths	Elements defined by the US Department of Energy as being in both short supply and important in the development of green technologies. This includes Neodymium (Nd), Europium (Eu), Terbium (Tb), Dysprosium (Dy) and Yttrium (Y) due to its scarcity.
CRSF	Chemical Residue Storage Facility
CSIRO	Commonwealth Scientific and Industrial Research Organization
Dexter	Dexter Mining Inc. (formerly RSM Mining Services)
DHI	DHI Water & Environment. A research, consulting and software organisation from Denmark. Formerly known as the Danish Hydraulic Institute
DKK	Danish kroner
DoE	US Department of Energy
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement / Study
EL	Exploration License
EMP	Environmental Management Plan
EMS	Environmental Management System
ENE-WSW	East North East - West South West
EPC	Engineering, Procurement and Construction
EPCM	Engineering, Procurement and Construction Management
EPFI	Equator Principles Financial Institution
Er	Erbium
Eu	Europium
EU	European Union
E-W	East - West
F	Fluorine
FIFO	Fly In Fly Out
FS	Feasibility Study
FTSF	Flotation Tailings Storage Facility
g	gram
GA	Employers' Association of Greenland
GCL	Geosynthetic Clay Liner
Gd	Gadolinium
GDP	Gross Domestic Product
GE	Greenland Business Association
GEUS	Geological Survey of Denmark and Greenland (formerly Greenland Geological Survey (GGU)
GFC	Global Financial Crisis
GMEL	Greenland Minerals and Energy Limited

ABBREVIATIONS, ACRONYMS AND DEFINITIONS (continued)

GPS	Global Positioning System
Grontmij	Grontmij. European company in the Consulting & Engineering industry
GWMG	Great Western Minerals Group Ltd (Canada). Rare Earth Company.
h	hour, hours
H2O	Water
H2S	Hydrogen Sulphide
ha	Hectare
HCl	Hydrochloric acid
HDPE	High Density Poly-Ethylene
HERO	Heavy Rare Earth Oxide
HFO	Heavy Fuel Oil
Ho	Holmium
HREE(s)	Heavy Rare Earth Element(s)
HREO	Heavy Rare Earth Elements as Oxides
IAEA	International Atomic Energy Agency
IBA	Impact and Benefit Agreement
IRR	Internal Rate of Return
ISO	International Standards Organization
ÍSTAK	ÍSTAK Ltd. Icelandic-based prime contracting company.
JORC	Joint Ore Reserves Committee (The AusIMM)
kg	kilogram
kg/t	kilogram/tonne
km	kilometre
km^2	square kilometres
kt	kilotonne(s)
ktpa	Kilotonnes per annum
kW	kilowatt
kWh	kilowatt-hour
L	Litre
L/s	Litre/second
La	Lanthanum
LLDPE	Low Linear Density Polyethylene
LREE(s)	Light Rare Earth Element(s)
LREO	Light Rare Earth Oxide
Lu	Lutetium
m	metre
M	Millions
M/a	Millions/annum
m^2	square metre

ABBREVIATIONS, ACRONYMS AND DEFINITIONS (continued)

m^3	cubic metre
m^3/h	cubic metres/hour
Macmahon	Macmahon Ltd. Australian company providing the complete package of mining services
masl	meters above sea level
MC	Medium-Coarse(grain size), with respect to lujavrite texture
MILT	Ministry of Industry Labour and Trade
MIM	Ministry of Industry and Mineral Resource
Mlbs	Million pounds
MLSA	Mineral Licence and Safety Authority
mm	millimetre
MMR	Ministry of Mineral Resources
mothballed	to stop work on an idea, plan, or job, but leaving it in such a way that you can start on it again at some point in the future
MOU	Memorandum Of Understanding
MRA	Mineral Resource Authority
MREs	Mineral Resource Estimates
mRL	metres Reduced Level or Relative Level
Mt	Million of tonnes
Mtpa	Million of tonnes per annum
Mt/y	Million of tonnes per year
MTO	Material Take-Offs
MW	Megawatt
MWh	megawatt-hours
Na	Sodium
Nb	Niobium
Nb_2O_2	Niobium Oxide
Nd	Neodymium
NE	North East
NEA	Nuclear Energy Agency
NERI	Danish National Environmental Research Institute
NFC	China Nonferrous Metal Industry's Foreign Engineering and Construction Co Ltd. Chinese-based international company focused on the non-ferrous metal sector
NIRAS	NIRAS consultancy, Denmark
NPV	Net Present Value
Nuna	GNC Nuna Joint Venture
OECD	Organisation for Economic Co-operation and Development
Opex	Operating expenditure

ABBREVIATIONS, ACRONYMS AND DEFINITIONS (continued)

Orbicon	Danish-based company which provides engineering consultancy services in the fields of construction, environment, environmental technology, the working environment, organising, and planning.
P_{80}	80% product passing size
PFS	Prefeasibility Study
pH	hydrogen ion exponent (potential Hydrogen)
PMF	Probable Maximum Flood
Pr	Praseodymium
RAL	Royal Arctic Line
Ramboll	Ramboll A/S, an international, multi-disciplinary engineering, design and consultancy company
RE	Rare Earth
REC	Rare Earth Carbonate
REE(s)	Rare Earth Element(s)
REO	Rare Earth Oxide
REP	Rare Earth Phosphate
Risø	Risø National Laboratory. Research Institute (Danish Ministry of Energy), replaced DAEC in 1976
ROM	Run Of Mine (ore)
RSF	Residue Storage Facility
Sa	Samarium
SENES	Specialists in Energy, Nuclear and Environmental Sciences
SG	Specific Gravity (density)
SGS	SGS Lakefield Oretest Independent Laboratory
SIA	Social Impact Assessment
SIK	Greenland Workers Union
SRK	SRK Consulting. Mining consultant
SX	Solvent Extraction
T	Tonne (metric)
tpa	tonnes per annum
t/m^3	tonnes per cubic metre
Tb	Terbium
Th	Thorium
the Company	Greenland Minerals and Energy Limited, GMEL, Greenland Minerals and Energy A/S
the Complex	Ilimaussaq Intrusive Complex lying within the Province of South Greenland
the Project	Kvanefjeld Multi-Element Project
the Study	Feasibility Study
ToR	Terms of Reference
TRE	Total Rare Earth

ABBREVIATIONS, ACRONYMS AND DEFINITIONS (continued)

TREO	Total Rare Earth Oxide, inclusive of Lutetium and Yttrium
TSF	Tailings Storage Facility
U	Uranium
U_3O_8	Uranium Oxide
UK	United Kingdom
UO_2	Uranium dioxide
US or USA	United States of America
US$ of USD	United States Dollar
US$M	United States Dollar, Million
USGS	Geological Survey of the US
UxC	Ux Consulting Company
W	Watt
WAL	Weak Acid Leach
WNA	World Nuclear Association
WTO	World Trade Organisation
y	year
Y	Yttrium
Y_2O_3	Yttrium Oxide
Yellow Cake	Uranium oxide final product typically in the form of U_3O_8
Yb	Ytterbium
Zn	Zinc
ZnS	Zinc Sulphide
Zr	Zirconium
ZrO_2	Zirconium dioxide

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

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

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

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

Note: Figures quoted may not sum due to rounding.

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

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

Note: Figures quoted may not sum due to rounding.

ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy Ltd (ASX: GGG) is an exploration and development company focused on developing high-quality mineral projects in Greenland. The Company's flagship project is the Kvanefjeld multi-element deposit (Rare Earth Elements, Uranium, Zinc), that stands to be the world's premier specialty metals project. A comprehensive pre-feasibility study was finalised in 2012, and the feasibility study will be completed in 2015. The studies demonstrate the potential for a large-scale, cost-competitive, multi-element mining operation. Through 2015, GMEL is focussed on completing a mining license application in order to commence project permitting, in parallel to advancing commercial discussions with development partners. For further information on Greenland Minerals and Energy visit http://www.ggg.gl or contact:

Dr John Mair
Managing Director
+61 8 9382 2322

David Tasker
Professional PR
+61 8 9388 0944

Christian Olesen
Rostra Communication
+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

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

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

GREENLAND
MINERALS AND ENERGY LTD

GREENLAND MINERALS AND ENERGY LIMITED

Registered Office & Principal Place of Business
Unit 6, 100 Railway Road, Subiaco, Western Australia, 6008

Postal Address
PO Box 2006, Subiaco, Western Australia, 6904

Tel: +61 8 9382 2322
Fax: +61 8 9382 2788

www.ggg.gl