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"Specialty Metals for a Greener World"

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JORC Compliance – Consent of Competent Persons

Information in this presentation that relates to mineral resource estimation reflects information compiled by Mr Robert Spiers and Arnold van der Heyden. Resource estimation was undertaken by Mr Spiers who with Mr van der Heyden are full time employees of Hellman and Schofield Pty Ltd. Mr Spiers is a Member of the Australian Institute of Geoscientists (AIG) and Mr van der Heyden is a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Spiers and Mr van der Heyden have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr Spiers and Mr van der Heyden consent to the reporting of this information in the form and context in which it appears.

Presentation Overview

- **Company focus: *Specialty metal* resources in Greenland**
  - *The emerging* ***Rare Earth Element*** *story*
- **Greenland –** a future aligned with a resource-based economy
- **Kvanefjeld multi-element project**
  - *Resources, feasibility program, path to development*
- **Community and stakeholder relations**

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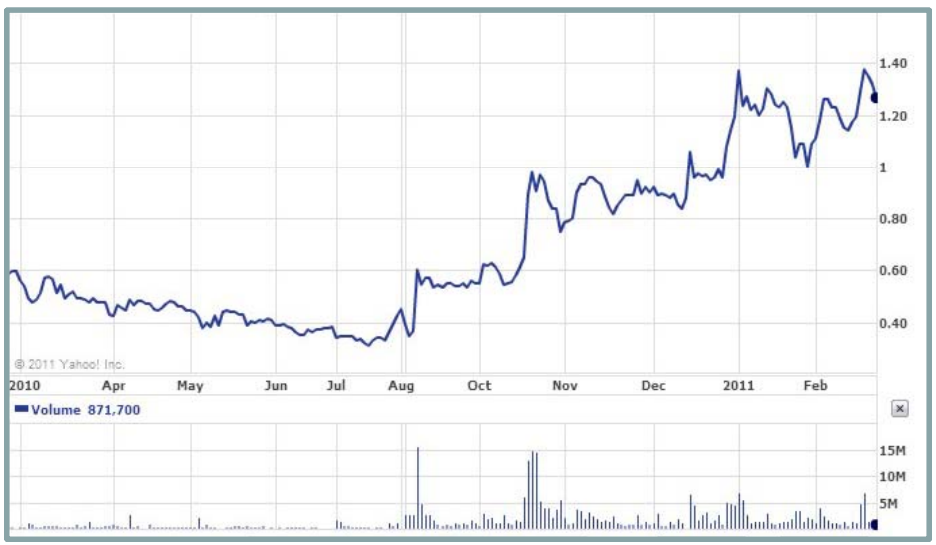
- **Specialty metal focused exploration and development company operating in Greenland**
- **Primary aim: developing the *Kvanefjeld* multi-element project (REEs, U, Zn)**
- **Project features *world-class* REE-U resource base with potential to become one of the worlds largest and most cost-effective rare earth mines**
- **Listed on the ASX (GGG), also trades on US OTC (GDLNF), and Frankfurt (G7P)**



Market Details:

ASX:	**GGG**
52 Week Range:	**$0.31 – 1.41** AUD
Shares:	**310M**
Options:	**110M**
Market Cap: *(undiluted)*	**$350 M** AUD

Top 20 shareholders control 70%

Company Focus

Strategic Metals For Tomorrow

Rare Earth Elements:

- *Specialty metals with unique chemical and physical properties*
- *Essential in many new technologies and consumer products*
  - ***Hybrid cars, wind turbines, laptops, ipods, flat screens, oil refining, catalytic converters, medical and military applications***
- *Critically important to the global manufacturing base*
- *Imminent short supply as China reduces exports*

Uranium:

- *World power crisis, climate change and the nuclear renaissance*
- *Crucial base load energy supply for the future – clean and efficient*

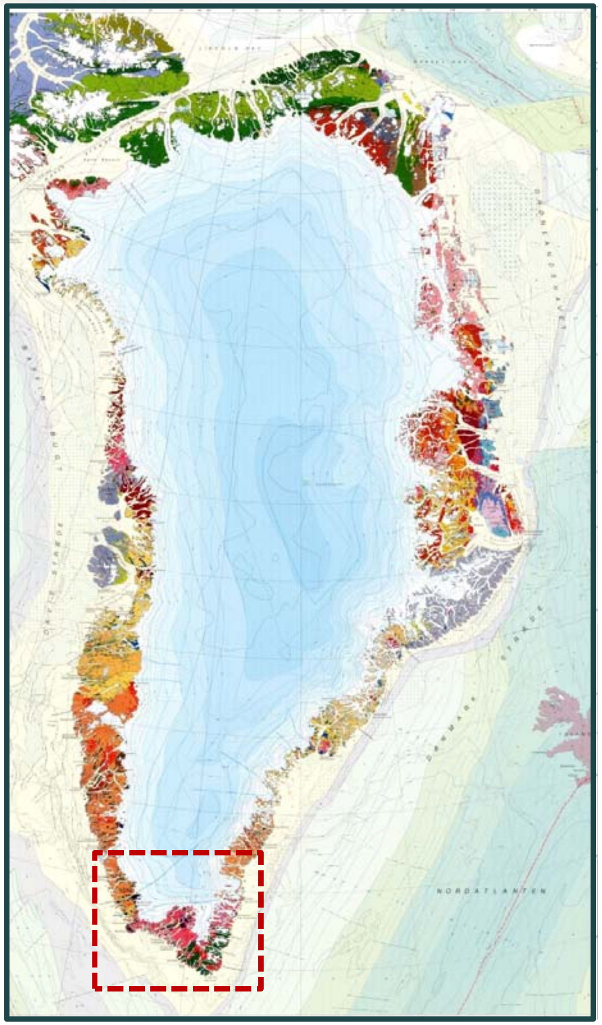
Greenland

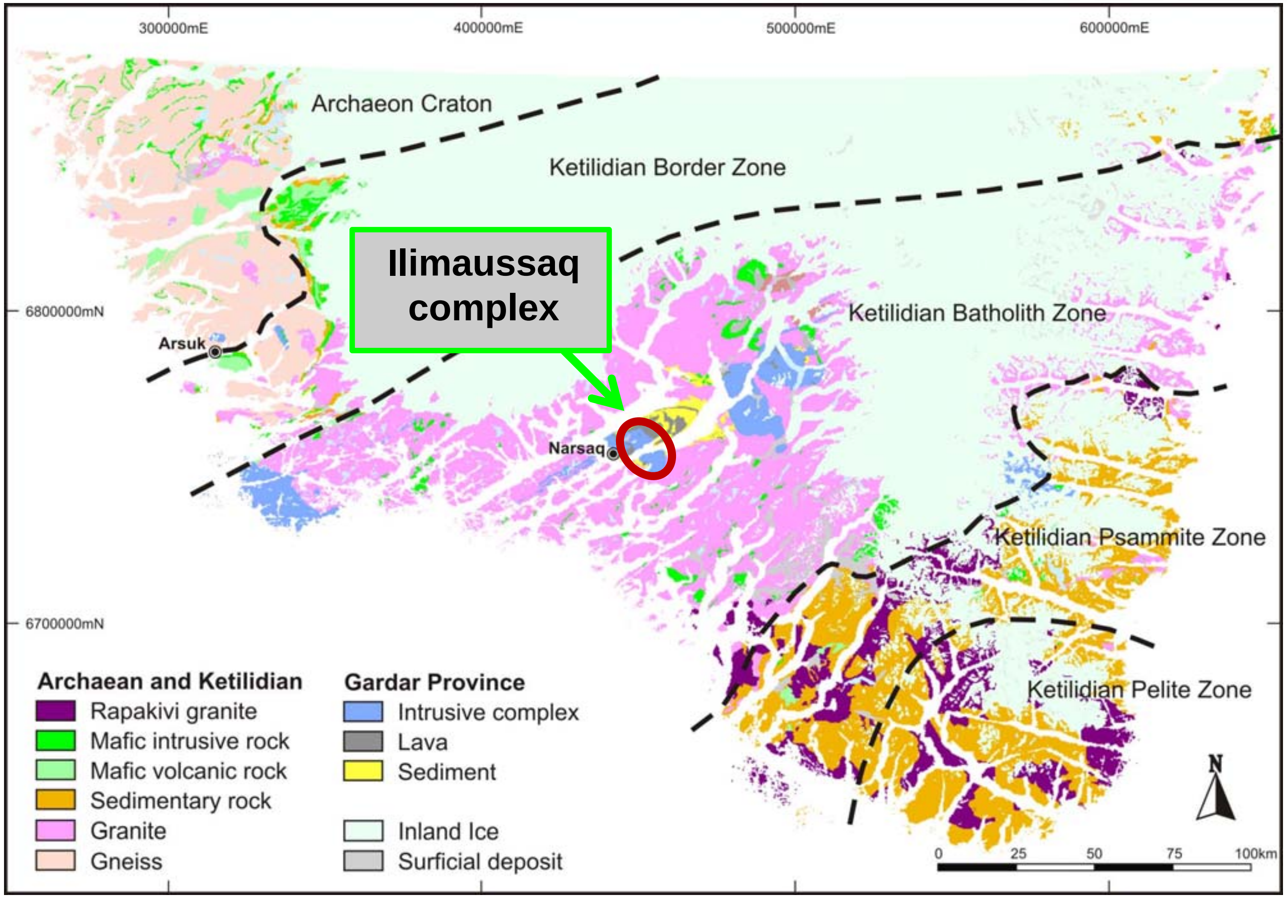
An Emerging Mineral Province

Politically stable democracy:

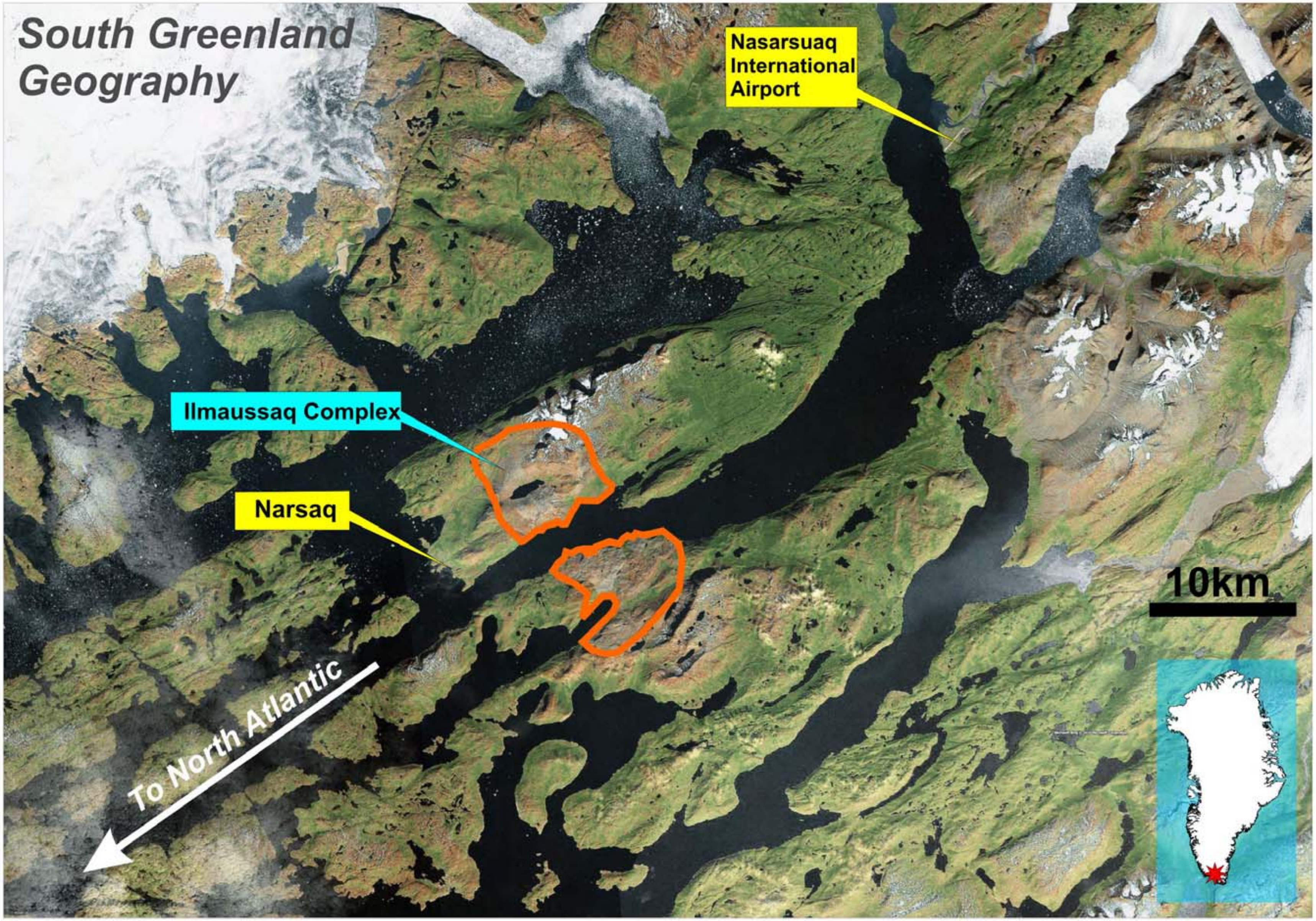
- *Autonomous constituent country within Kingdom of Denmark*
- *Increasing independence with transition from Home Rule to Self Rule*
- *Greenland controls 100% of mineral rights, formerly shared with Denmark*
- *Pro-mining government – increased independence is dependant on establishing strong minerals and hydrocarbon industries*
- *One of the last frontiers for world-class deposit discoveries*

Greenland Geology





Gardar Province – Alkaline intrusions emplaced in a continental rift setting ***(e.g. Ilimaussaq Complex)***


South Greenland
Geography
Nasarsuaq
International
Airport
Ilmaussaq Complex
Narsaq
10km
To North Atlantic

Northern Ilimaussaq Complex – Project Area

457 Mt JORC resource defined at Kvanefjeld (**4.7 Mt REO, 283 Mlb's U_3O_8, 1 Mt Zn**),

New satellite deposits confirmed at Zones 2 and 3, and Steenstrupfjeld

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Kvanefjeld - Resources

At U_3O_8% cutoff grades[1]	Tonnes (million)	U_3O_8%	U_3O_8 lb/t	TREO%[2]	Zn%	Resource category
0.015	365	0.028	0.62	1.06	0.22	Indicated
	92	0.027	0.59	1.12	0.22	Inferred
	457	**0.028**	**0.62**	**1.07**	**0.22**	**TOTAL**
0.020	276	0.032	0.70	1.13	0.23	Indicated
	63	0.031	0.69	1.21	0.24	Inferred
	339	**0.032**	**0.70**	**1.14**	**0.23**	**TOTAL**
0.025	207	0.035	0.77	1.20	0.23	Indicated
	43	0.036	0.78	1.31	0.25	Inferred
	250	**0.035**	**0.77**	**1.22**	**0.24**	**TOTAL**

1) Uranium cut-off grades used owing to greater assay coverage; 2) TREO = rare earth elements plus yttrium

457 Mt Resource containing:

4.9 Mt TREO @ 1.07%,

0.99 Mt Zn @ 0.22% Zn

282 Mlbs U_3O_8 @ 280 ppm U_3O_8

JORC – Compliant, 79% Indicated, 21% Inferred

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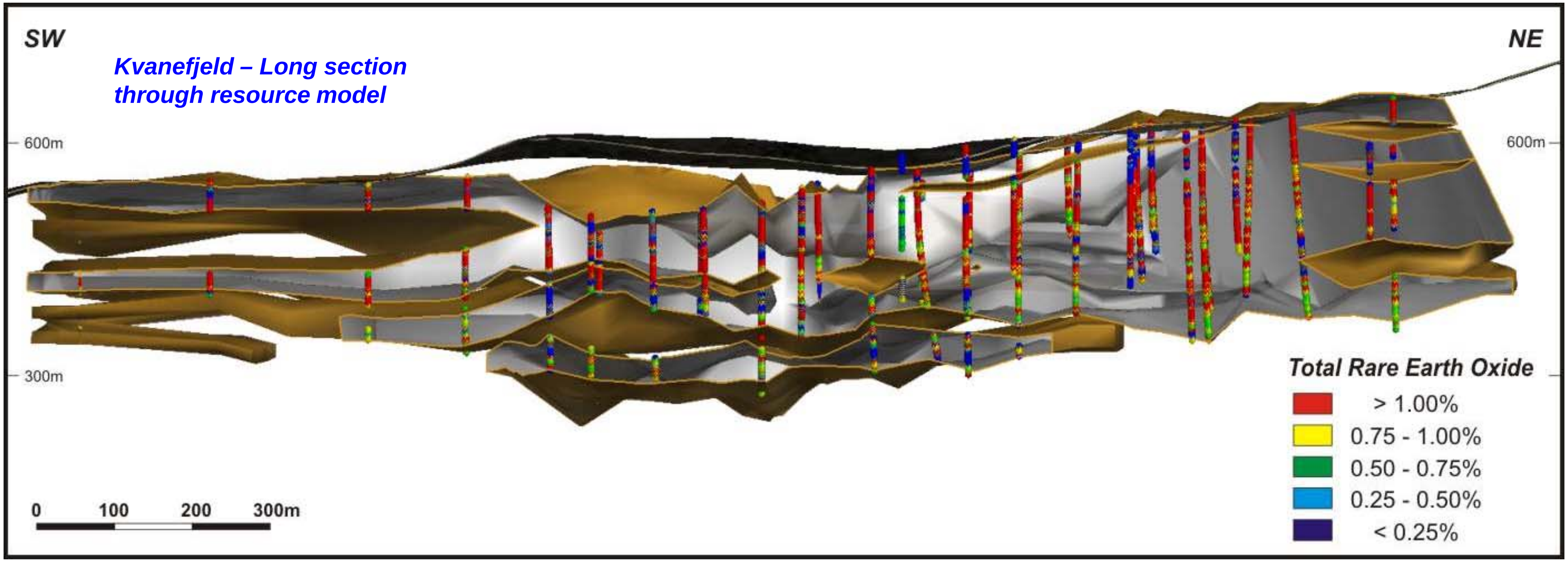
Kvanefjeld – Resource Details

- 457 Mt resource, mostly outcropping and within 300m of ground surface
- Low strip ratio
- Highest grades are in the near-surface environment:
  - Grades range from <u>*>350 ppm U_3O_8, 1.3% REO near surface*</u>, to 200 ppm U_3O_8 and 1% REO below 250 m depth
- Resource is located 7 km from tidewater, with deep water fjords running directly out to North Atlantic Ocean, potential for hydropower, international airport 40 km away



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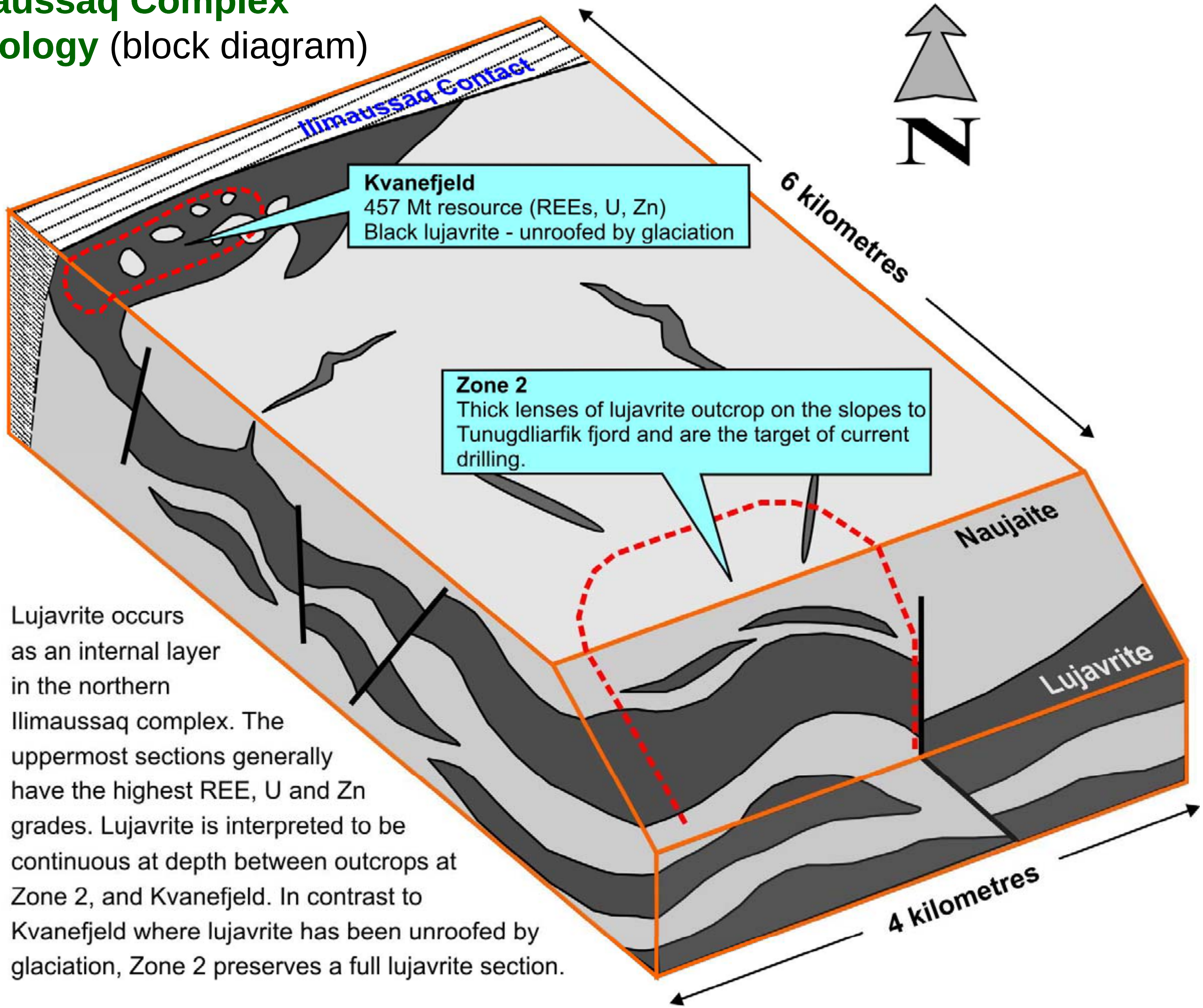
'Zone 2' – *A New Multi-Element Discovery on the Northern Ilimaussaq*

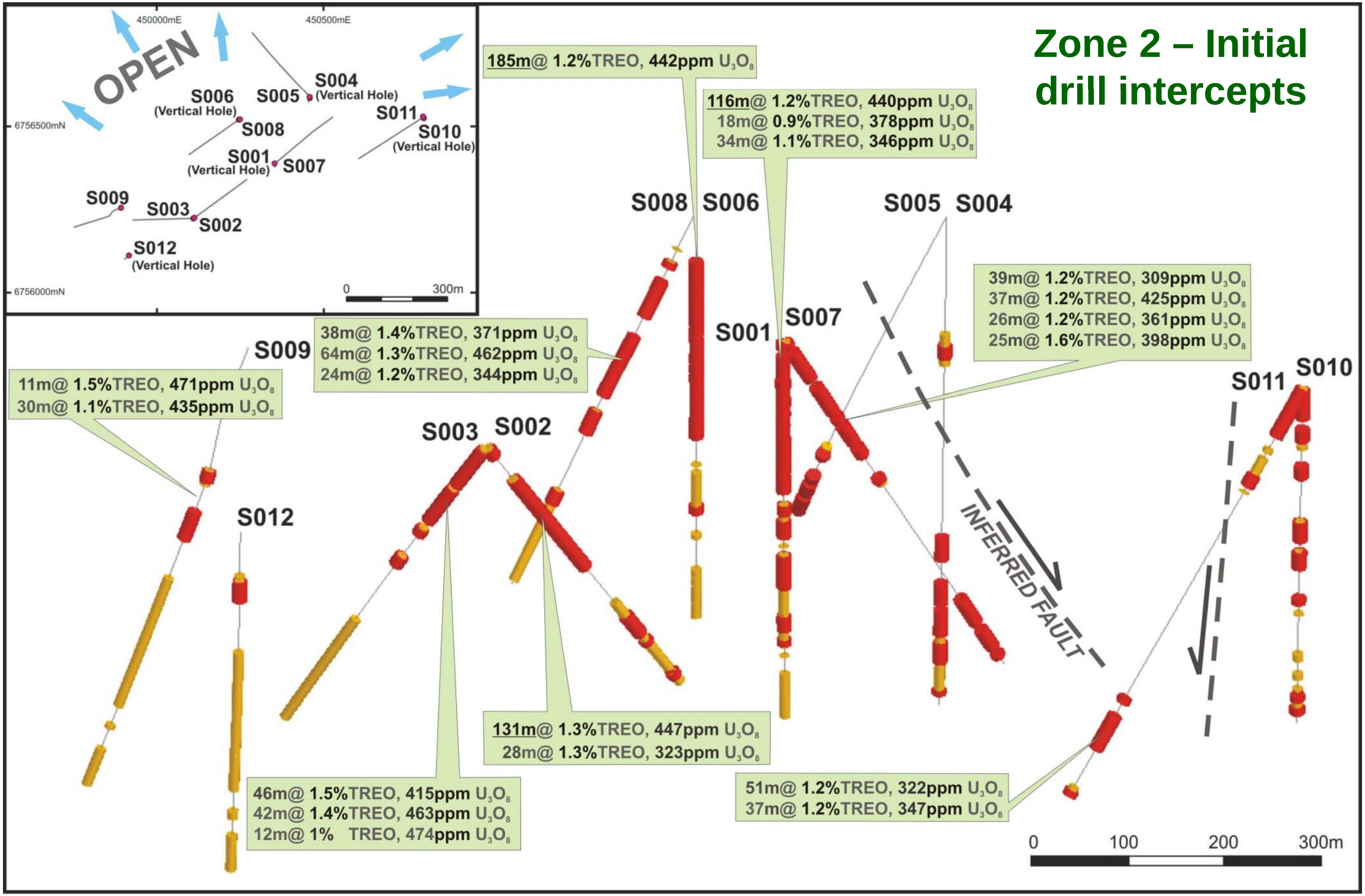
Black lujavrite outcrops extensively in the slopes that run to Tungdliarfik Fjord. The slope is approximately 700m from the ridge crest to sea level.

Northern Ilimaussaq Complex
Schematic geology (block diagram)



Lujavrite occurs as an internal layer in the northern Ilimaussaq complex. The uppermost sections generally have the highest REE, U and Zn grades. Lujavrite is interpreted to be continuous at depth between outcrops at Zone 2, and Kvanefjeld. In contrast to Kvanefjeld where lujavrite has been unroofed by glaciation, Zone 2 preserves a full lujavrite section.

Zone 2 – Initial drill intercepts



Oblique view through drill hole array. View is toward the north. Red = significant intercepts, orange = lower grade lujavrite

Kvanefjeld: Feasibility Program

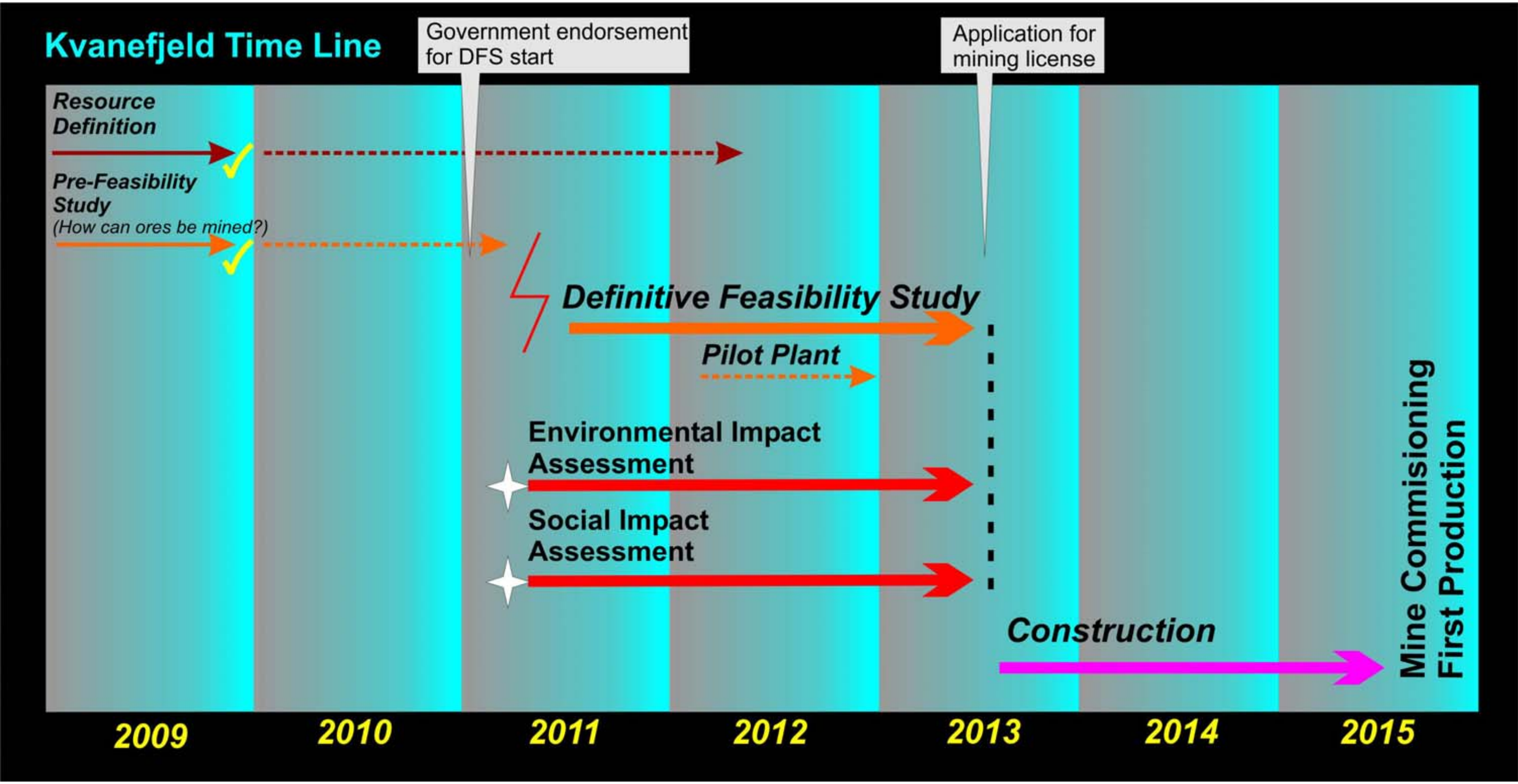
- ***Fully permitted*** under new amendment to license terms, to conduct all studies necessary to evaluate a multi-element mining operation – inclusive of uranium

- ***Interim Report*** released early 2010, outlining a viable base case mining scenario to produce a *rare earth concentrate* and *uranium oxide* product
  - ***Report integrates the outcomes of historical Danish studies and those conducted by GMEL, and presents a viable process flow sheet***

- Building a first-class technical team to develop and optimise the best possible process flow sheet

- Internationally-recognised groups appointed to conduct ***Social*** *and* ***Environmental*** *Impact Assessments* (**Grontmij / Carl Bro, Orbicon**)

Looking Forward



Pre-Feasibility Study

Interim Report: Key Outcomes

- Processing rate of **10.8 Mtpa**
- Forecast nominal production of **43,729 t of REO, and 3,895 t U_3O_8 pa**
- Life of mine throughput: 239 Mt @ 1.01%TREO and 314ppm U_3O_8
- 23 year mine life

Break-even price @ 10% discount: **U_3O_8 – US$37.47/lb, REO – US$5.75/kg**

Unit Costs: **U_3O_8 – US$29.60/lb, REO – US$3.36/kg**

Capital Costs - **US$ 2.31 billion** ***Inclusive of:*** mine infrastructure, new port and power generation facilities, roads, accommodation village, and processing and refining capacity for RE carbonate and uranium oxide production at throughput of 10.8 Mtpa, includes US $380 M contingency

- @ pricing of US $80/lb U_3O_8, and $13.50/kg REO
- NPV = **US $2.2B**, IRR = 24% @ 10% discount

Current Focus

- **Process Development -** *aiming for efficiency*
  - Mineralogical and beneficiation studies well advanced and will result in significant flowsheet enhancements

- **Resources –** *expand and define higher grade zones*
  - Mineral mapping – resource domained by ore mineral assemblage
  - New resource estimate scheduled for Q1 2011
  - Optimised mine schedule to follow

- **Feasibility Studies** *– ramping up in 2011*
  - Launch *Social* and *Environmental* Impact Assessments
  - Definitive feasibility study to commence in Q3 2011


NARSAQ
NUUK
Copenhagen
Vancouver
Toronto
LONDON
PERTH
Adelaide
Sydney
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Location of offices
Active work programs

Aims and Objectives

- **Develop a highly efficient process flow sheet to produce:**
  - Both light and heavy REE concentrates, zinc concentrate, and uranium oxide. Potential to also produce a zirconium and fluoride products
- **Long term, sustainable operation**
  - Ensure the project is developed with minimal environmental impact, and most appropriate social considerations
  - Long mine life will create multi-generational employment, infrastructure benefits
  - Utilise hydro-electric power; *cleaner, cheaper, lower inflation risk*
- **Establish a world-class mining operation**
  - Ensure that the operation is internationally competitive
  - Developed to worlds best practice
  - Aid in raising Greenland’s profile in global investment community

Community Open Day, August 2010, Narsaq

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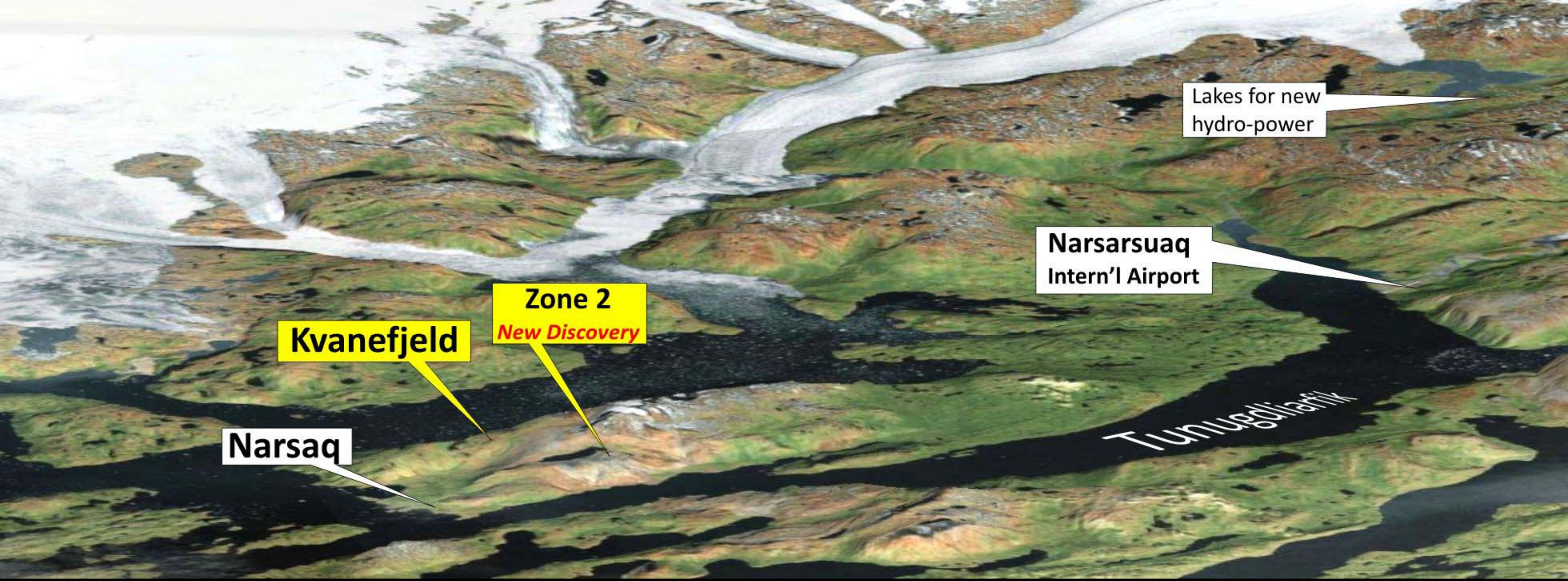
Stakeholder and Community Support

- ✓ ***South Greenland Municipal Council***
- ✓ ***Mayor of south Greenland***
- ✓ ***Labour Union (SIK)***
- ✓ ***Employers Union***
- ✓ ***Mining and trade schools***

SUMMARY

Advancing one of the worlds most strategically important projects

- World class JORC-compliant multi-element resource with enormous upside
- Initial pre-feasibility study outcomes indicate potential for Kvanefjeld to become an **economically robust, large-scale producer** of **RE concentrate** and **uranium oxide**
  - Potential to cost-effectively supply ~**20% of global REE demand** as of 2015/16 owing to diversified production profile
- Fully permitted to evaluate the project under Greenland’s amended license terms
- **Well positioned for strong growth as Kvanefjeld advances toward development**



View over the broader geography of the Kvanefjeld multi-element project. The distance from Narsaq to Narsarsuaq airport is approximately 45km.

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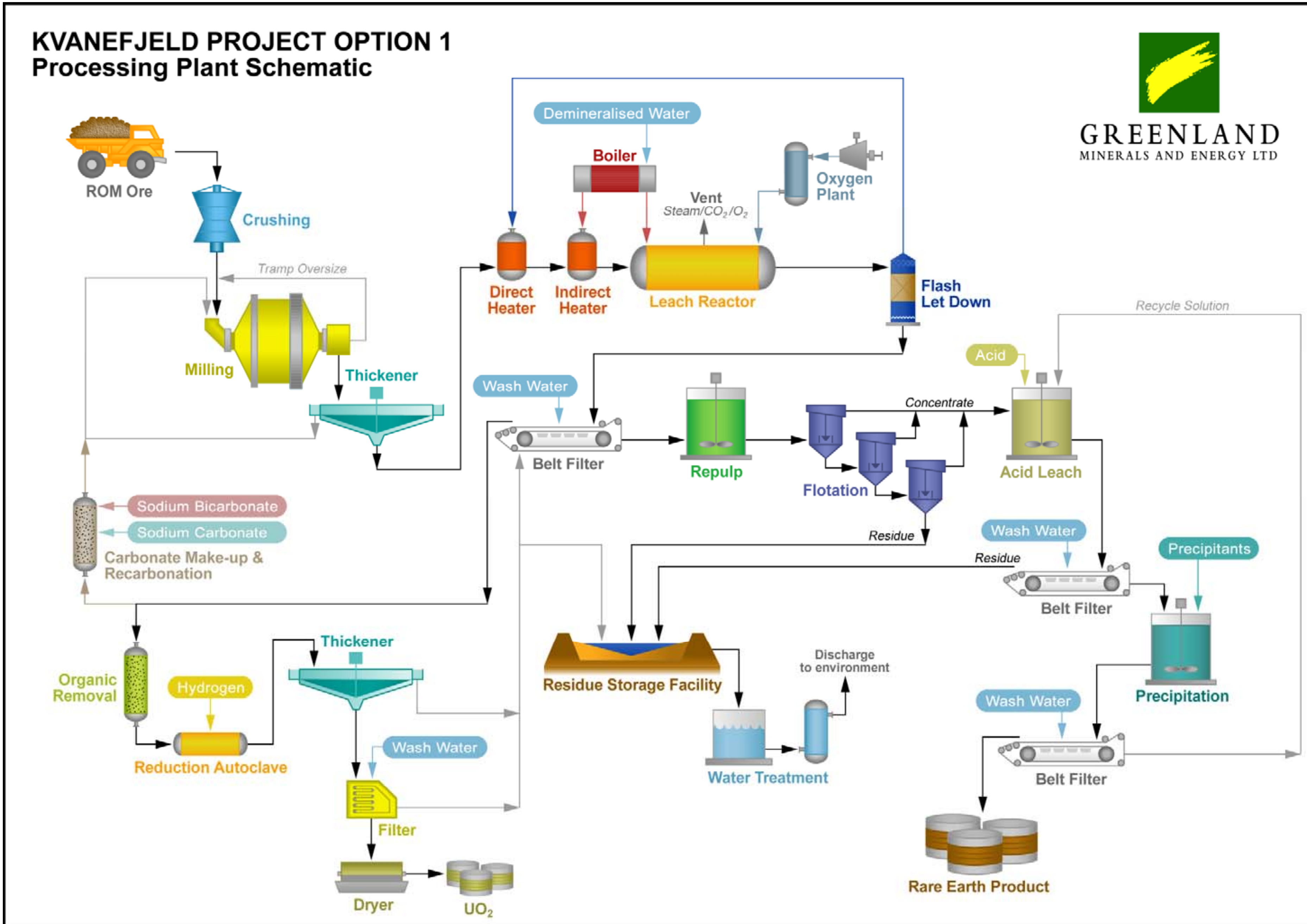
Supplementary Information

Process flow sheet – base case scenario:

1- alkaline pressure leach uranium extraction; ***2*** - concentrate REE minerals; ***3*** - extract REEs with dilute HCl wash



Project Ownership Structure

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(Australian based company listed on ASX)

61%

WESTRIP HOLDINGS LIMITED

(UK based private company)

39%

Greenland Minerals and Energy Ltd can move to 100% ownership of the Greenlandic subsidiary Greenland Minerals and Energy A/S through two option agreements that do not expire. For $10 million AUD in cash or shares (elected by Westrip), Greenland Minerals and Energy Ltd can move to 90% ownership, and with an additional payment of $50 million in cash or shares can move to 100%.

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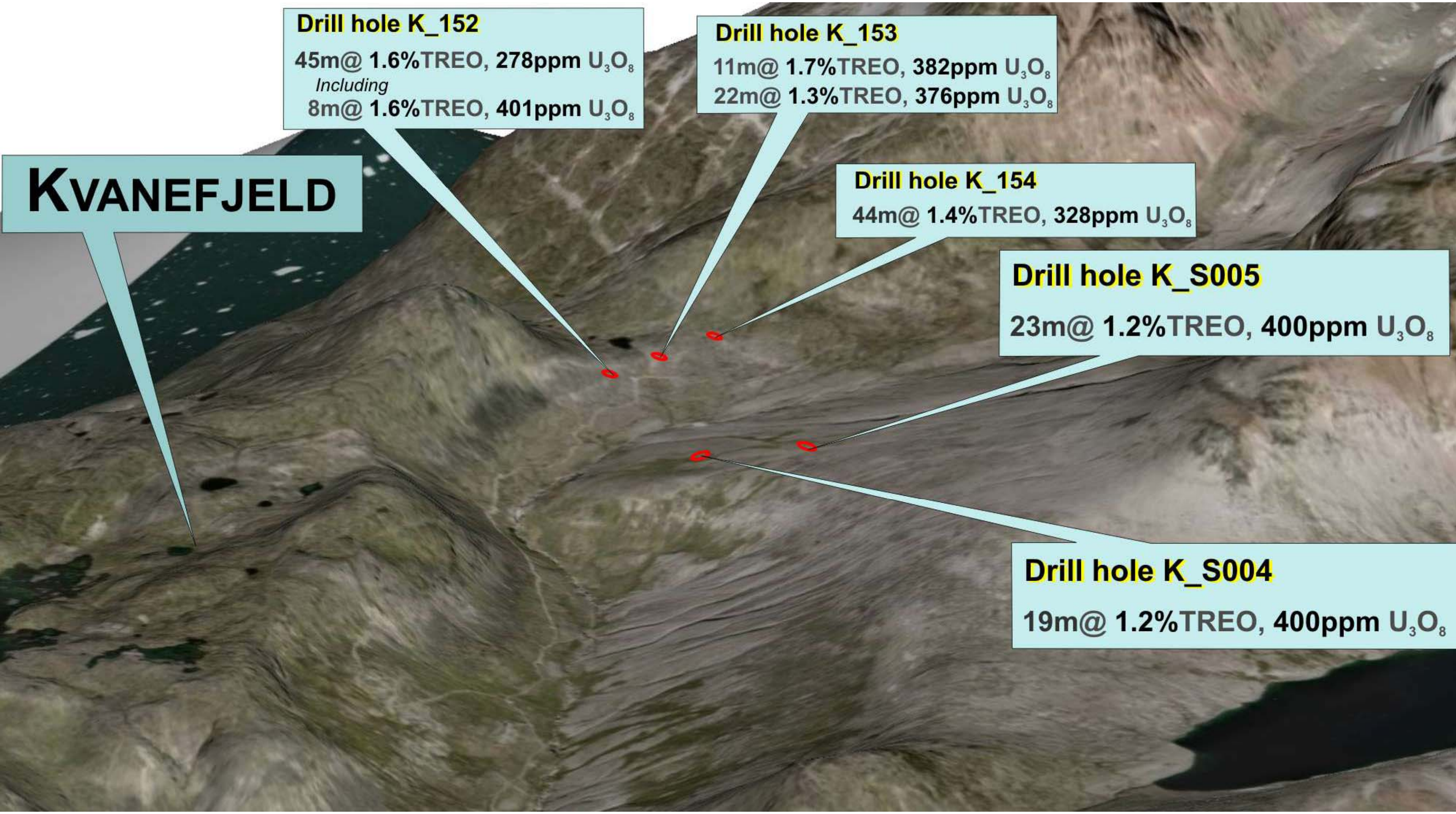
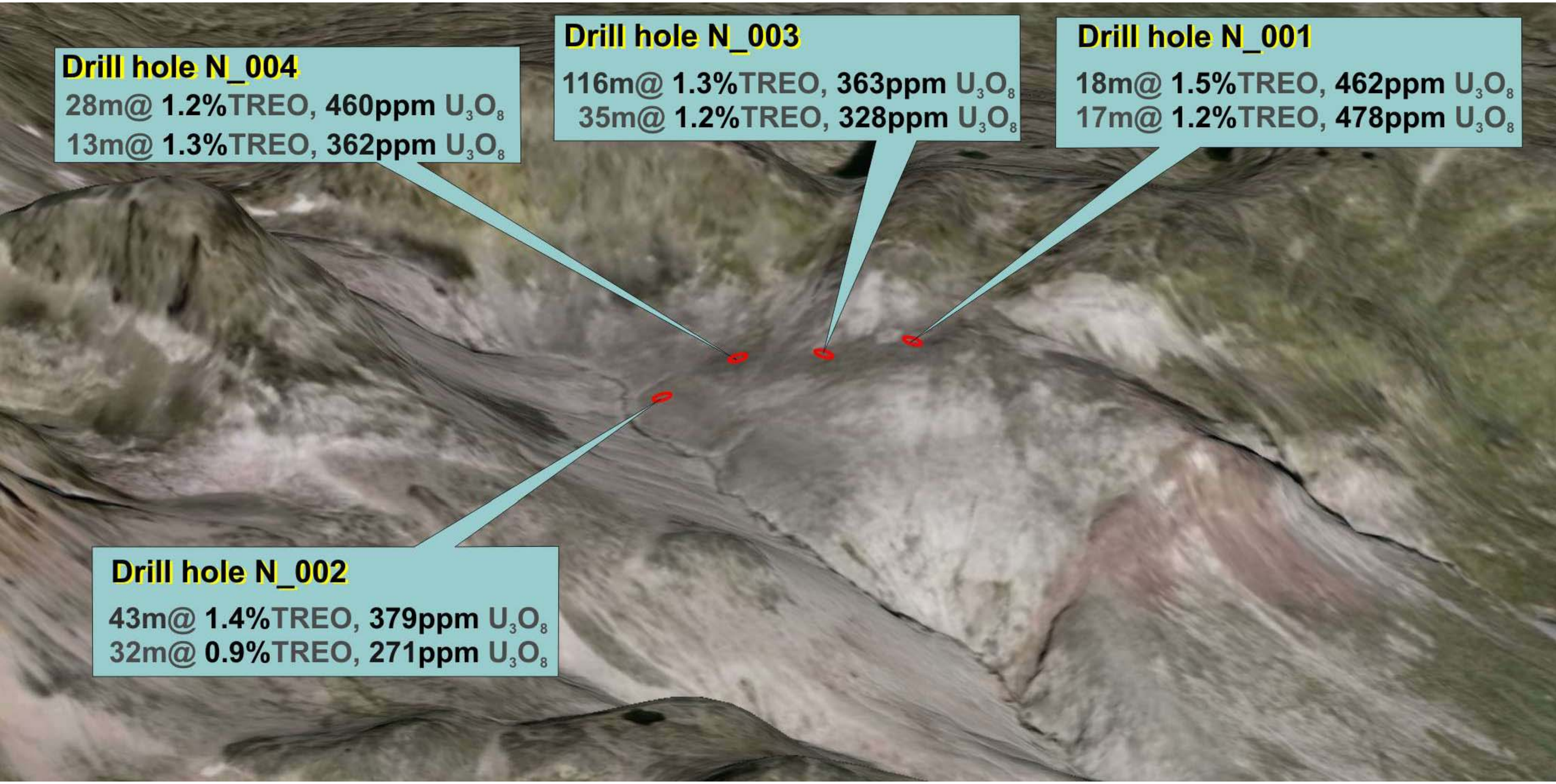
EXPLORATION LICENSE 2005/28 OVER NORTHERN ILIMAUSSAQ COMPLEX

Steenstrupfjeld – Initial drill intercepts



Zone 3 – Initial drill intercepts



Site visit to Kvanefjeld project area, September 2nd, 2009
The Honorable Mr Ove Karl Berthelsen (Minister for Commerce and Raw Materials); Dr John Mair (Greenland Minerals); Mr Simon Simenson (Mayor of South Greenland); Mr Jørn Skov Neilson (Director of Bureau of Minerals and Petroleum)

Greenland Minerals and Energy Ltd is aware of and respects the Greenlandic government stance on uranium exploration and development in Greenland – which is currently a zero tolerance approach to the exploration and exploitation of uranium. However, a new amendment has now been introduced to the exploration license terms that creates a framework for the evaluation and permitting of projects that include uranium. The Company is fully permitted to evaluate a multi-element mining operation.

The company is currently advancing the Kvanefjeld Project, recognised as the world's largest undeveloped JORC compliant resource of rare earth oxides (REO), in a multi-element deposit that is inclusive of uranium and zinc.

Greenland Minerals will continue to advance this world class project in a manner that is in accord with both Greenlandic Government and local community expectations, and looks forward to being part of the community discussion on the social and economic benefits associated with the development of the Kvanefjeld Project.