



**Ta**  
180.95  
Tantalum

**Nb**  
92.906  
Niobium

**REE**  
Rare Earth  
Elements

**Z**  
91.224  
Zirconium



**TANBREEZ Project**  
Investor Presentation  
October 2022  
**Greenlandic Rare Earths and Critical Minerals Mine**



# Disclaimers & Technical Disclosures



This presentation contains only a brief overview of Tanbreez Mining A/S (Tanbreez), owner of the Tanbreez project in South Greenland, and its respective activities and operations. The contents of this presentation may rely on various assumptions and subjective interpretations which are not possible to detail in this presentation and which have not been subject to any independent verification.

This presentation contains a number of forward-looking statements. Known and unknown risks and uncertainties, as well as factors outside of Tanbreez's control, may cause the actual results, performance and achievements of Tanbreez to differ materially from those expressed or implied in this presentation.

To maximize extent permitted by law, Tanbreez and its officers, employees and advisers are not liable for any loss or damage (including, without limitation, any direct, indirect or consequential loss or damage), suffered by any person directly or indirectly as a result of relying on this presentation or otherwise in connection with it,

The information contained in this presentation is not substitute for detailed investigation or analysis of any particular issue and has been prepared without consideration of your objectives and needs and financial position. Current and potential investors and shareholders should seek independent advice before making any investment decision in regard to Tanbreez or its activities.

## JORC Code (2012) Competent Person Statement

This company is a private company with total funding from a private source. As such the company is not subject to many of the rules & regulations of the ASX or TSX. However, the company has decided that it will at all times abide by the JORC code and to use competent persons or equivalent at all times.

The owner of the tenements and lead geologist Mr. Greg Barnes is a competent person, who is a member of the AIMM. Mr Barnes has been responsible for field work, determination of grades and relationship between metals etc. He has a declared interest but at all times this work has been counter checked by other 'competent persons'.

The second field geologist, Mr. Hans Kristian Schonwandt, who was responsible for much of the drilling, supervising the QAQC, standards etc. Mr Schonwandt is not a member of the AIMM but is a member of the Danish equivalent. Mr. Schonwandt has had approximately 60 years experience as a consulting geologist and was the former head of the Greenland Mines Department for 10 years. Both before and after his secondment to the Greenland government as chief geologist, he spent considerable time working on alkaline rocks.

# Disclaimers & Technical Disclosures



## The Ilimaussaq Intrusion

Mr. Alan Maynard and Mr. Phil Jones, both geological members of the AIMM and AIG qualify as Competent Persons and have been responsible for the checking and independent confirmation of all results, grades, resources etc.

Mr. Rodney Watts specializes in mechanical engineering, has been responsible for all mechanical engineering and testing. Until his retirement last year, was a fellow of the AIMM and as such qualify at that time as a Competent Person under the JORC description. Mr Watts was also in charge of the majority of preparation of reports by MTHøjgaard, the large Danish engineering firm who would not qualify under the Australian JORC code, but were essential under the Greenland Codes & Regulations.

Mr. Rodney Smith was responsible for all chemical testing and evaluation metallurgical work. He is a qualified member of the AIMM and qualifies as a Competent Person in terms of the Australian Code for Reporting.

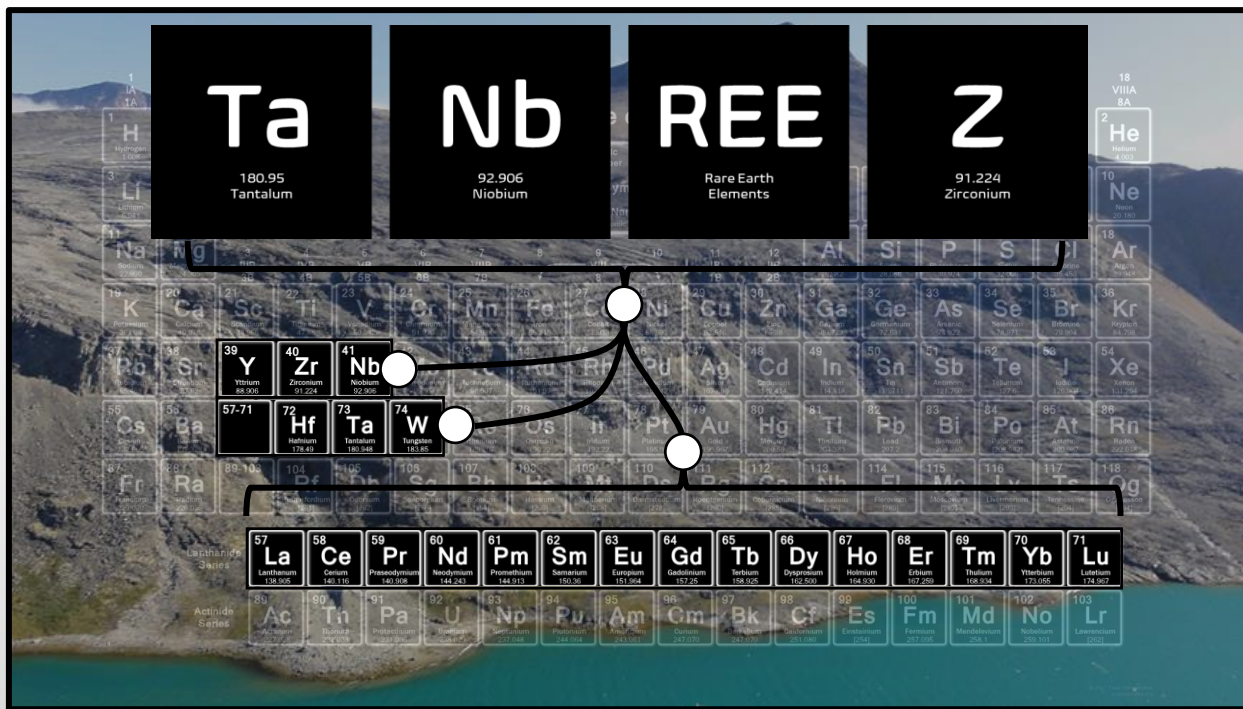
The company's resource estimates are continually updated, the last being December 2019.

Most test work was undertaken at the fully approved AMMTEC facility, with at all times full QAQC being in place.

This presentation is authorized by release by the Managing Director of Tanbreez, Mr. Gregory Barnes.

# OUR MISSION

The Tanbreez Project is a **fully-permitted, globally significant critical minerals project** in Greenland, positioned to unlock rare earth supply for North America.



Tanbreez Mining Greenland A/S is a permitted mine in Greenland containing:

1. Zirconium,
2. Tantalum,
3. Hafnium,
4. Niobium, and;
5. Rare Earth Elements

of significant size and quality, most notably containing >25% heavy rare earths.

Independent valuation of the upstream and downstream portions of the project is US\$5.96B.

Tanbreez A/S contains 4.7 billion tons of multi-element JORC resources, with 50 million tons to reserve standard.

On August 13<sup>th</sup>, 2020, after eight years of effort, Tanbreez was awarded its Exploitation License to commence mining operations in Greenland.

### Focus:

1. Development of the Tanbreez Project in Greenland, and;
2. Securing supply of rare earths for the United States and broader North America, providing critical minerals independence.



# VALUE PROPOSITION: CRITICAL METALS INDEPENDENCE



✓ **Exploitation License Granted**

🏛️ **Significant Interest from the U.S. Government**

🔓 **REE Supply Unlocked for Western World**

💰 **Upstream and Downstream Valuation: ~US\$6B, Independent Upstream Valuation is US\$3.59B**

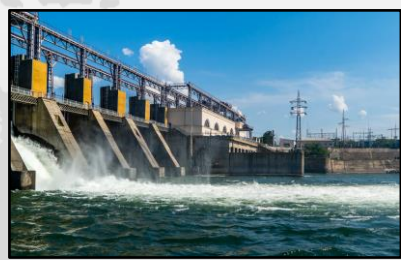
📄 **4.7-Billion-Ton Multi-Element JORC Compliant Resource**

🛡️ **No Harmful By-Products, such as Uranium or Thorium**

🚢 **Infrastructure in-place for year-round direct shipping, off take of product**



Director, Ministers & Local Community signing the Exploitation License in Greenland



Greenland government owned electricity company Nukissiorfiit, to supply Tanbreez with all its hydro-power electricity needs.



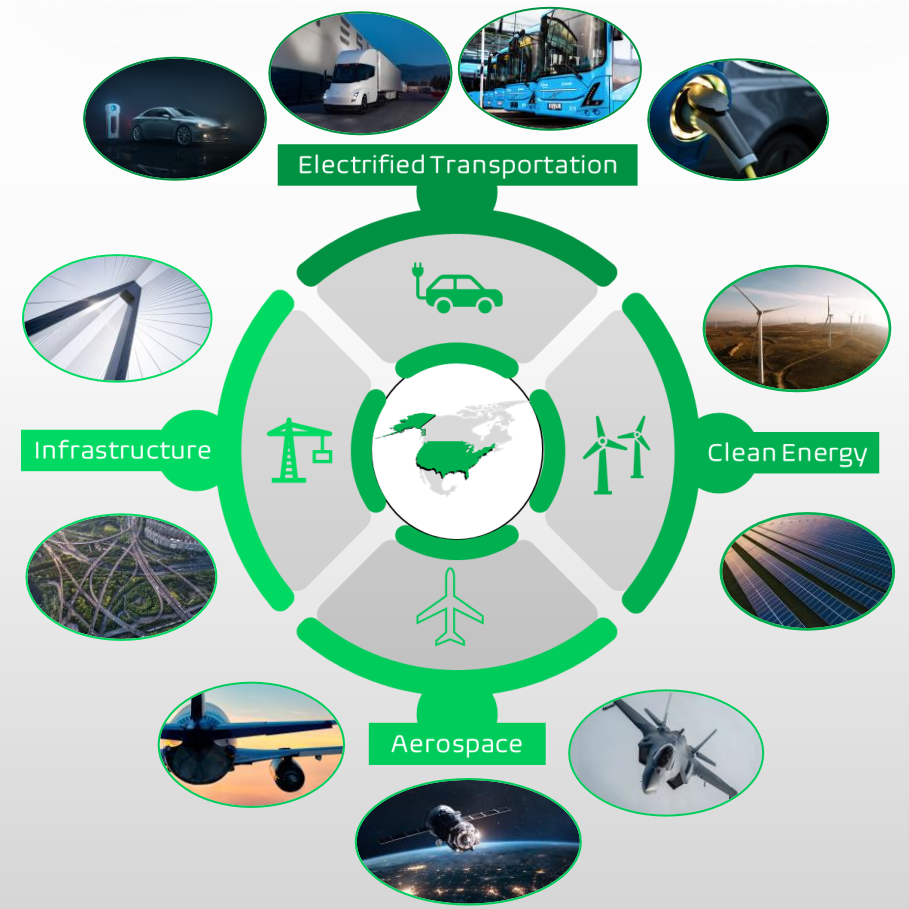
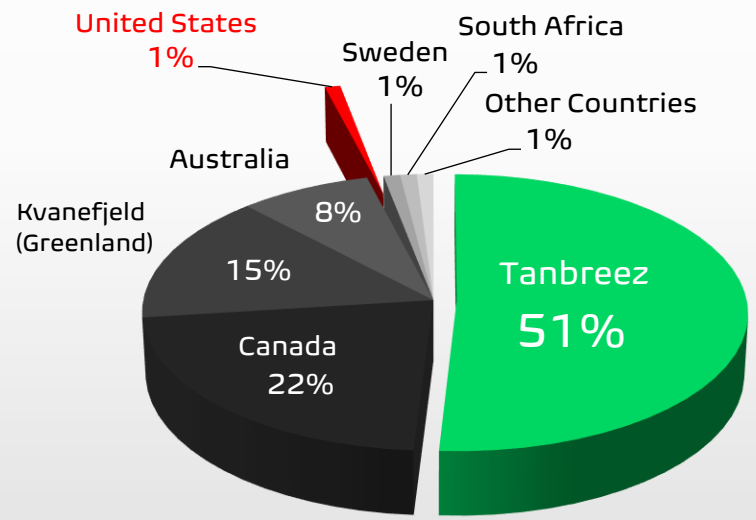
Proposed Plant Infrastructure & Port, fjord had a depth of 104 meters allowing direct shipping from con

(x) Independent valuation prepared by Malcolm Castle (July 30<sup>th</sup>, 2021)

# BOLSTERING U.S. SUPPLY AND NATIONAL DEFENSE



NON-CHINESE TOTAL HEAVY RARE EARTHS BY LOCATION (%)





**Ta**  
180.95  
Tantalum

**Nb**  
92.906  
Niobium

**REE**  
Rare Earth  
Elements

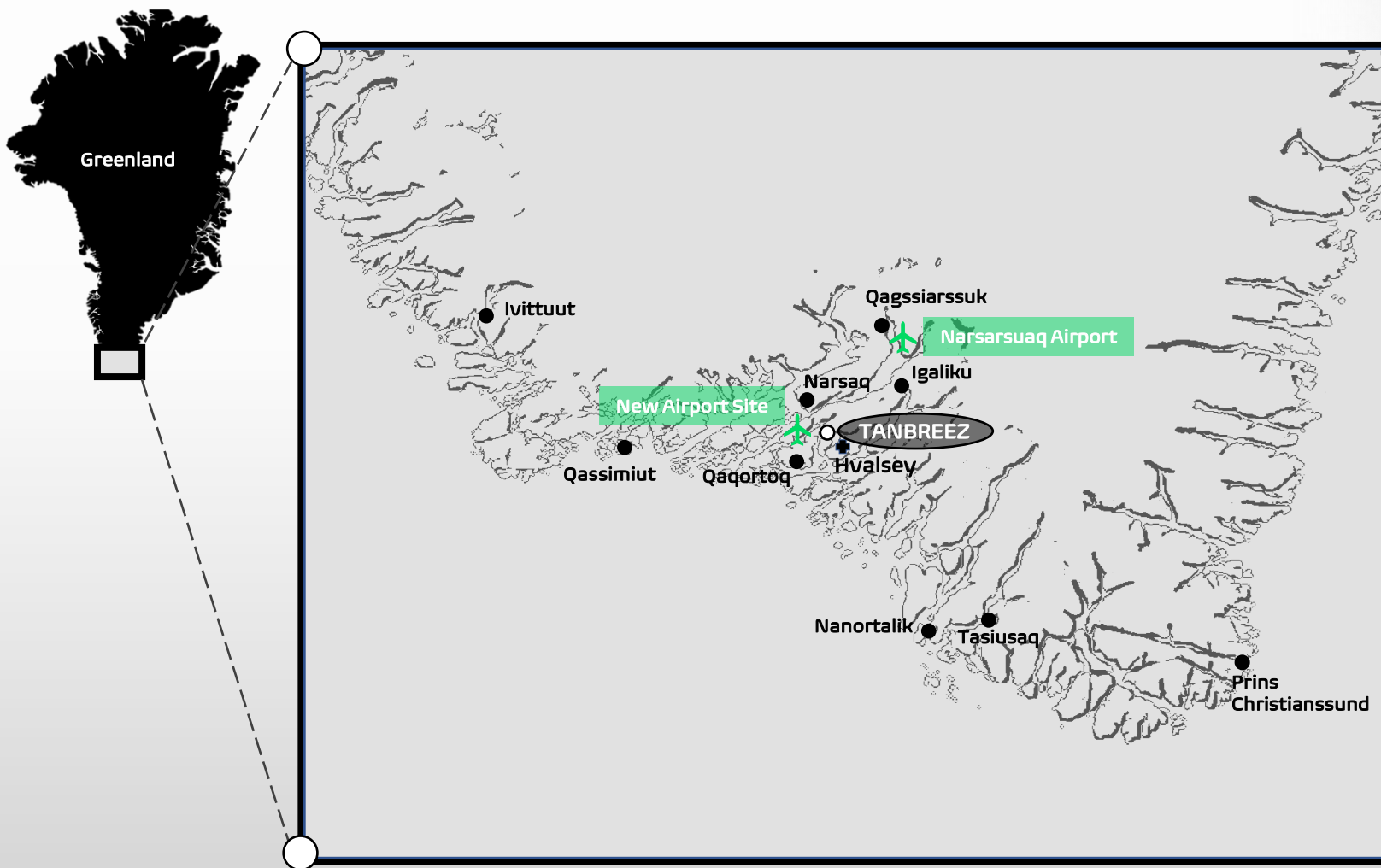
**Z**  
91.224  
Zirconium



# THE ASSET



# PROJECT LOCATION AND INFRASTRUCTURE



The Tanbreez project area is favorably located in Southern Greenland, surrounded by sheep farms

Narsarsuaq international airport is located 35km away (4hr 50m flight from Copenhagen), new airport to be 10 km away

Project area features year-round direct shipping access, via deep water fjords that lead directly to the North Atlantic Ocean

Climatically, Tanbreez is in the mildest part of Greenland with average temperature ranging from 0 to -5°C in winter to 10 to 15°C in summer

Qaqortoq town has a population of 3,500 and is located approximately 25 km from the project area



# BANDED - MINE AREA

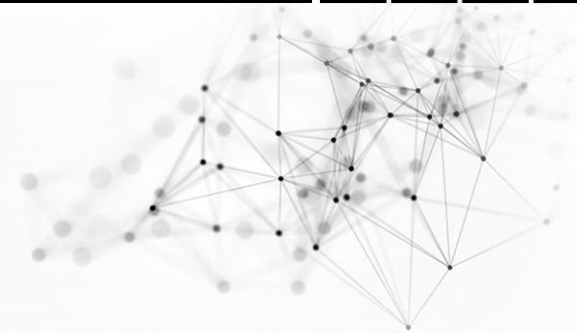


Outcropping ore body known as Kakortokite covers an area of 8 x 5 km and is approximately 400m thick. It is believed to underlie another 42 km<sup>2</sup> within the licensed boundary

All is open, cuttable with about 3% waste and as seen in these photos, almost completely outcropping



*Note the drilling camp to the right of the small lake*



# Mineral Resource

The Kakortokite Body  
**4.7 Billion Tonnes**

**Feldspar Component**  
40% - 1,880 Million Tonnes

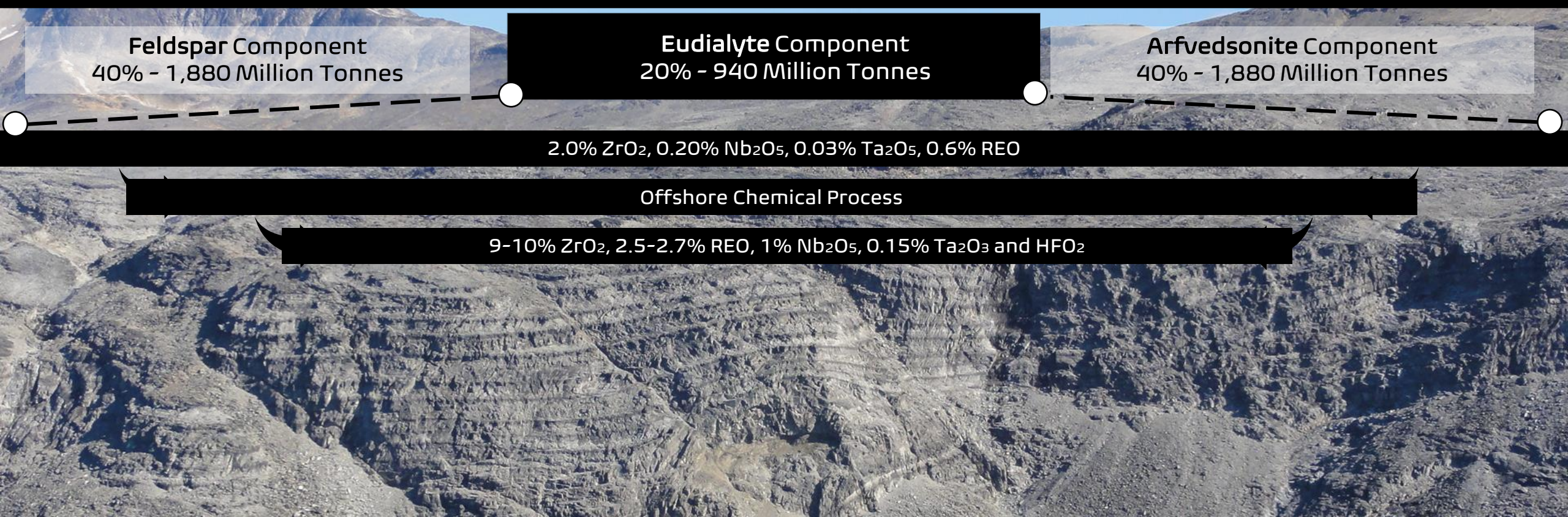
**Eudialyte Component**  
20% - 940 Million Tonnes

**Arfvedsonite Component**  
40% - 1,880 Million Tonnes

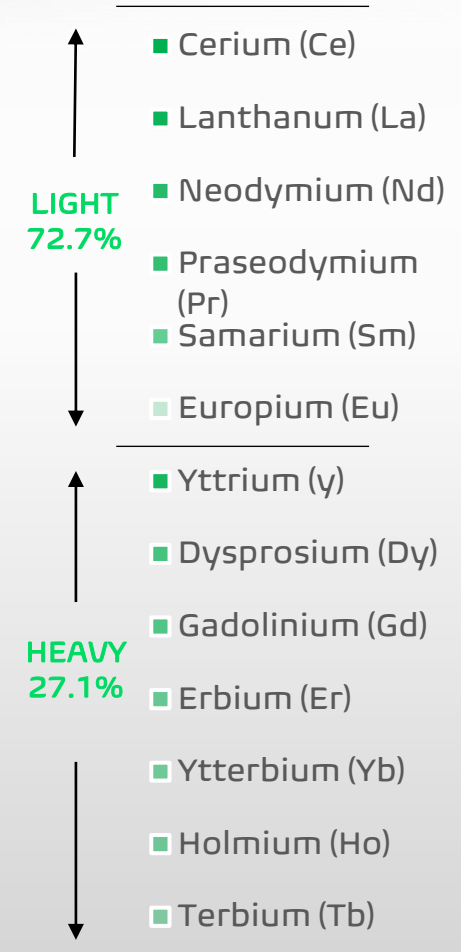
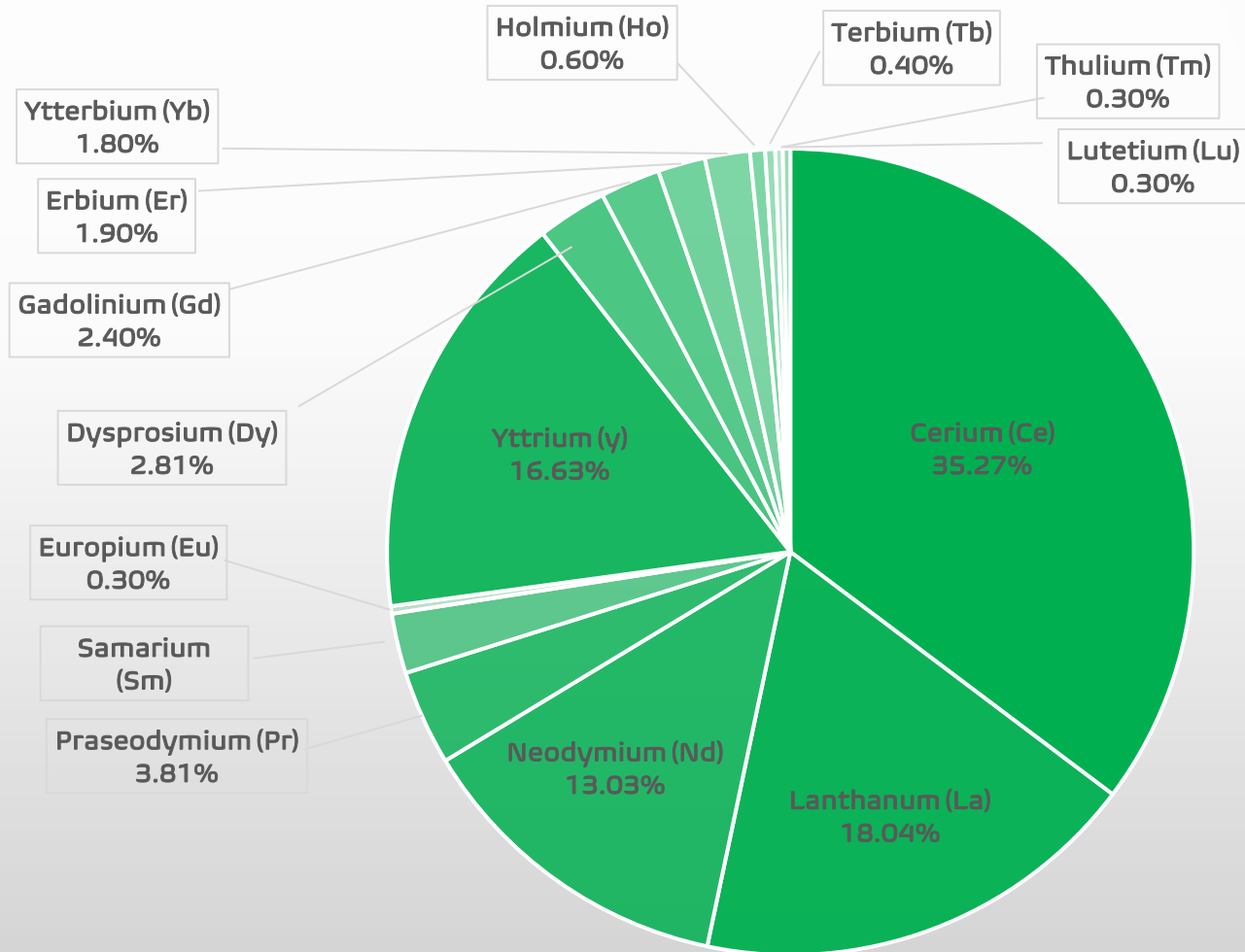
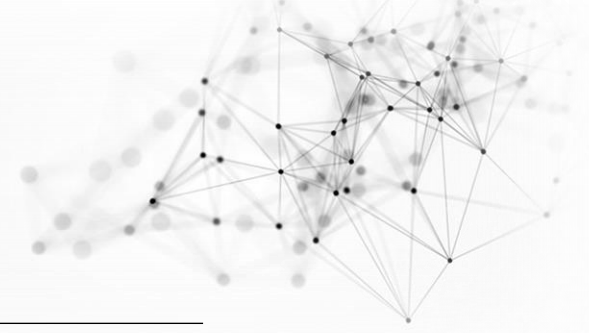
2.0% ZrO<sub>2</sub>, 0.20% Nb<sub>2</sub>O<sub>5</sub>, 0.03% Ta<sub>2</sub>O<sub>5</sub>, 0.6% REO

**Offshore Chemical Process**

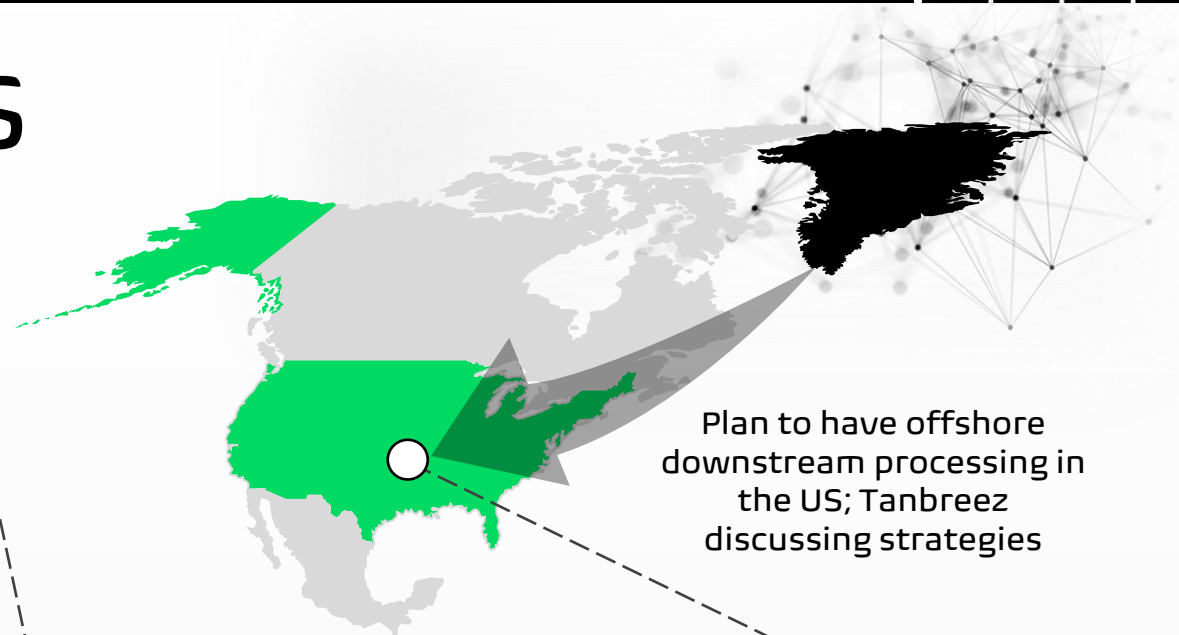
9-10% ZrO<sub>2</sub>, 2.5-2.7% REO, 1% Nb<sub>2</sub>O<sub>5</sub>, 0.15% Ta<sub>2</sub>O<sub>3</sub> and HFO<sub>2</sub>



# TANBREEZ COMPOSTION



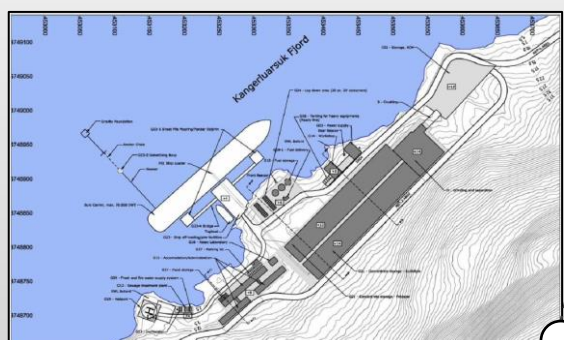
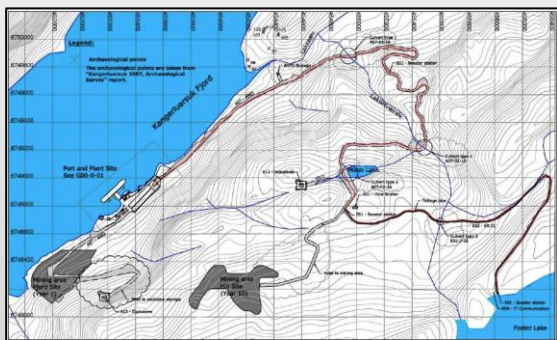
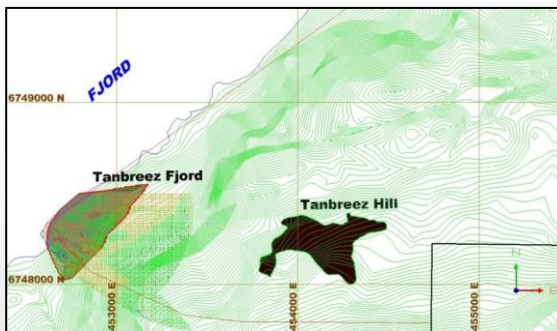
# PROJECT ECONOMICS



Plan to have offshore downstream processing in the US; Tanbreez discussing strategies

**MARKET VALUE SUMMARY - 7-year Ramp Up 1.5 to 3.0 Mtpa<sup>(1)</sup>**

	Market Value, US\$M - Equity Holding		
<b>Tanbreez Project</b>			
<b>Case 1 - 7-year Ramp Up</b>	<b>Low</b>	<b>High</b>	<b>Preferred</b>
Mining project (DCF 1 to 25 yrs)	2,630.0	3,000.0	2,810.0
Excess Resource (26 - 100yrs)	648.0	920.0	768.0
Exploration Ground	9.9	11.9	10.9
<b>Total</b>	<b>3,287.9</b>	<b>3,931.9</b>	<b>3,588.9</b>
Rounded	3,290.0	3,930.0	3,590.0



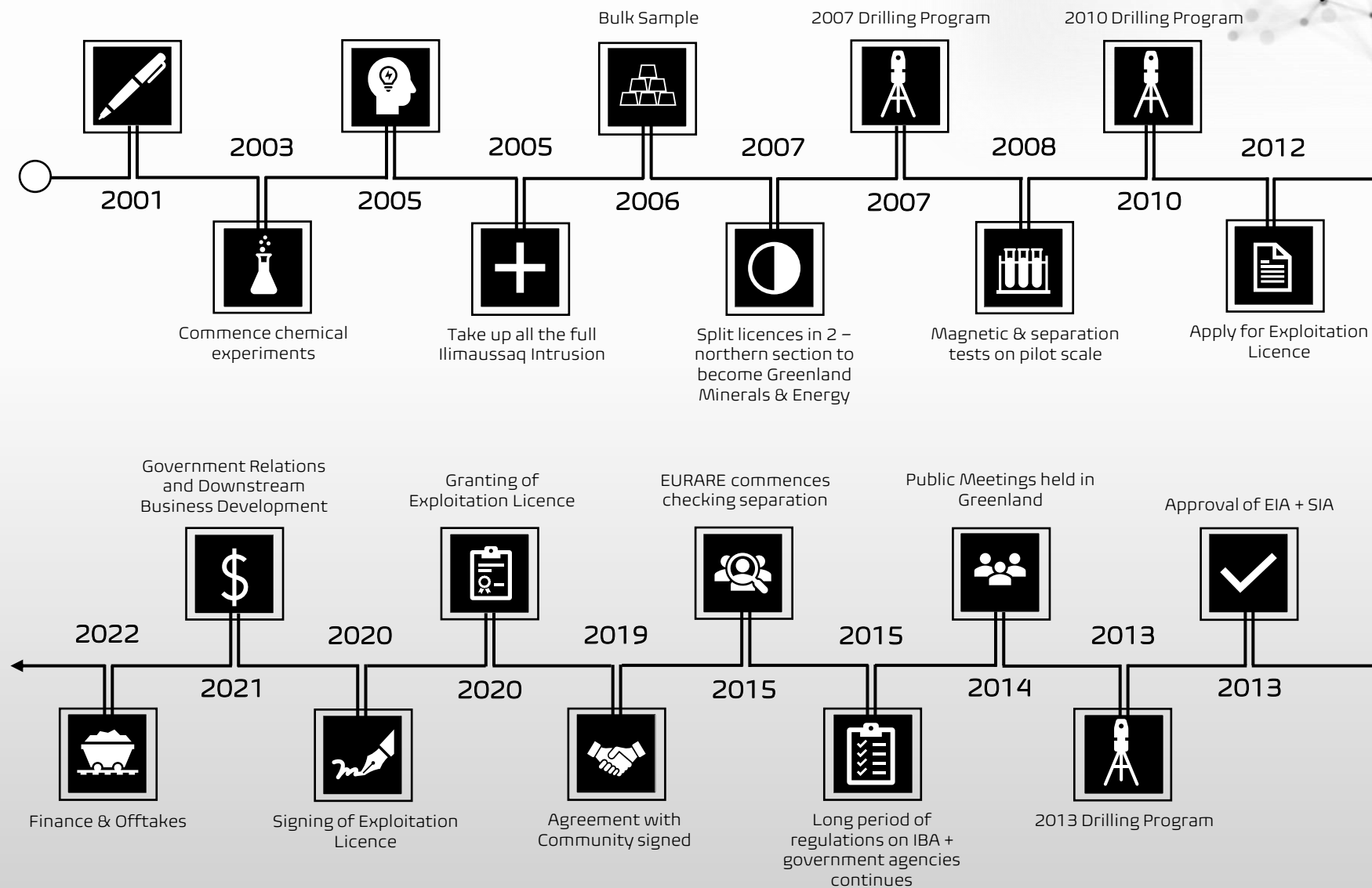
Valuation of the Plant & Mine in Greenland: **US\$3.59B (x)**

Estimated Valuation of the Downstream Plant **US\$2 - 3B**

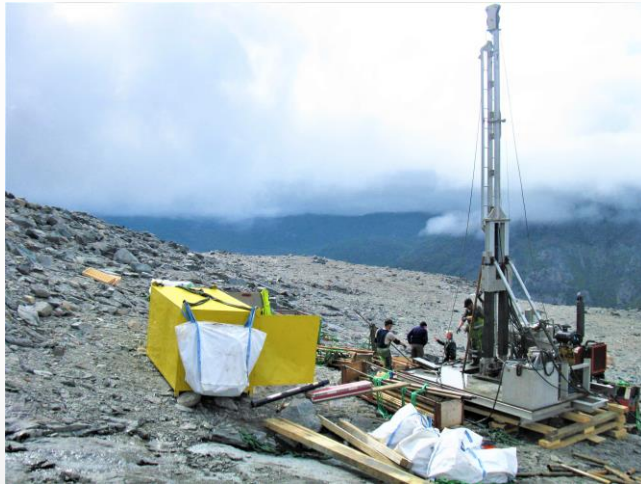
**Total valuation: ~US\$6B (x)**

(1) Independent valuation prepared by Malcolm Castle (July 30<sup>th</sup>, 2021)

# PROJECT PROGRESSION



# WORK COMPLETED TO DATE



Drill Rigs Onsite

EURARE Testing

Crushing Testing in Australia

Tanbreez direct expenditure	A\$50m
Estimated previous expenditure, not including academic work	A\$15m
Number of academic papers	≈ 2,000
Total No. of drill holes	414
Total No. of assays	»500,000
Total No. of assays by Tanbreez	336,548
Total weight of bulk tests	709 tons
Separate Bench Size Bulk Mechanical tests – over 1kg	1469
Of which mechanical bench tests over 100kg	169
Chemical Separation tests (metallurgical)	2229

# ESG



Tanbreez is unique amongst the rare earth projects in that **none of the minerals, ore, concentrate or waste is in any way toxic**. All have shown, after extensive testing, to be inert.

Thus, the pollutants usually associated with rare earths such as **uranium, thorium** and their daughter elements, **radon** and **actinium**, are **not present**. Similarly other pollutants which are associated with the steenstrupine type which also occur in this intrusion ore such as sodium fluorite, sodium phosphate, thallium, lead, etc. are also not present.



**MoU Signed for Hydro Power - further reducing the projects carbon footprint**

In May 2021, the Greenland government owned electricity company Nukissiorfiit, together with Tanbreez, signed a Memorandum of Understanding (MOU), whereby Nukissiorfiit confirms it will supply Tanbreez with all its hydro-power electricity needs.

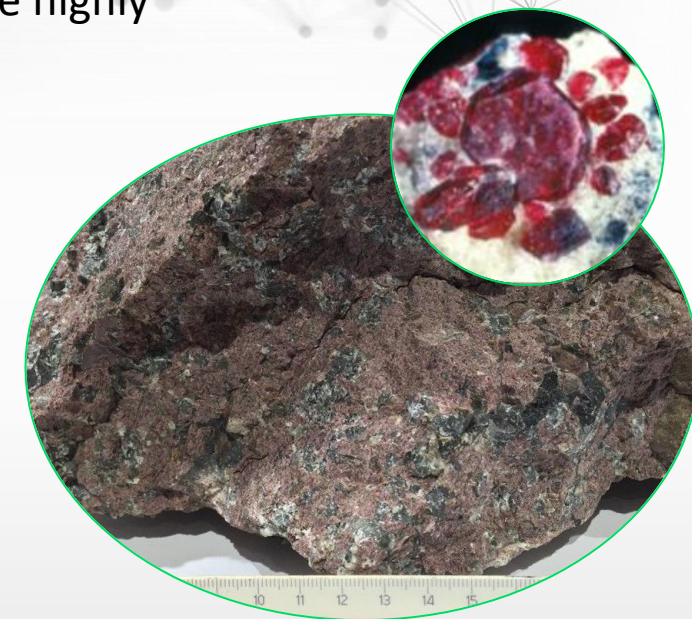


# NFT = CLAIM ON PHYSICAL PRODUCTION

Commodity buyers and traders want access to physical production; buying the NFT gets them preferential access to production when the mine comes online. The NFT is *designed* to be highly profitable to buyers; all incentives are perfectly aligned.

NFT Basket Components	Chemical Formula	Kilograms	Grade	Current Value
Lanthanum	La <sub>2</sub> O <sub>3</sub>	500	99.00%	\$ 1,500
Cerium	CeO <sub>2</sub>	1000	99.00%	\$ 2,500
Praseodymium	Pr <sub>6</sub> O <sub>11</sub>	200	99.00%	\$ 27,659
Neodymium	Nd <sub>2</sub> O <sub>3</sub>	500	99.00%	\$ 75,939
Gadolinium	Gd <sub>2</sub> O <sub>3</sub>	200	99.00%	\$ 16,235
Dysprosium	Dy <sub>2</sub> O <sub>3</sub>	200	99.00%	\$ 92,167
Erbium	Er <sub>2</sub> O <sub>3</sub>	100	99.00%	\$ 9,435
Ytterbium	Yb <sub>2</sub> O <sub>3</sub>	100	99.90%	\$ 2,160
Yttrium	Y <sub>2</sub> O <sub>3</sub>	500	99.90%	\$ 10,325
Niobium	NbO <sub>2</sub>	1000	99.00%	\$ 79,653
Tantalum	Ta <sub>2</sub> O <sub>3</sub>	300	99.00%	\$ 80,060
Hafnium	HfO <sub>2</sub>	100	99.00%	\$ 91,000
Zirconium	ZrO <sub>2</sub>	2000	99.00%	\$ 56,224
			Basket Price	\$ 544,858
			Coupon discount is worth:	\$ 54,486

\* The spot prices are for illustration purposes only; commodity prices change daily and can be highly volatile.



Eudialyte is the REE host rock at Tanbreez. It is coarse-grained, which allows for simple crushing, and contains no thorium or uranium.



# CLAIM ON PHYSICAL PRODUCTION

The NFT is *designed* to be highly profitable to buyers; all incentives are perfectly aligned.

Figure 5: Distribution of outcomes for ten years of profit/loss results from the 10% coupon discount

	Profit from Discount / Yr1	Profit from Discount / Yr2	Profit from Discount / Yr3	Profit from Discount / Yr4	Profit from Discount / Yr5	Profit from Discount / Yr6	Profit from Discount / Yr7	Profit from Discount / Yr8	Profit from Discount / Yr9	Profit from Discount / Yr10
Minimum	\$ 2,311	\$ 4,002	\$ 6,014	\$ 8,383	\$ 11,148	\$ 14,356	\$ 18,059	\$ 22,315	\$ 27,194	\$ 31,828
Maximum	\$ 120,972	\$ 150,369	\$ 195,452	\$ 252,595	\$ 325,251	\$ 417,904	\$ 536,372	\$ 688,221	\$ 883,291	\$ 1,134,390
Mean	\$ 45,355	\$ 55,264	\$ 66,594	\$ 79,561	\$ 94,417	\$ 111,458	\$ 131,026	\$ 153,528	\$ 179,436	\$ 209,307
Standard Deviation	\$ 14,092	\$ 16,574	\$ 19,655	\$ 23,446	\$ 28,084	\$ 33,739	\$ 40,620	\$ 48,988	\$ 59,164	\$ 71,547

Figure 6: Monte Carlo results for Year One of NFT Production

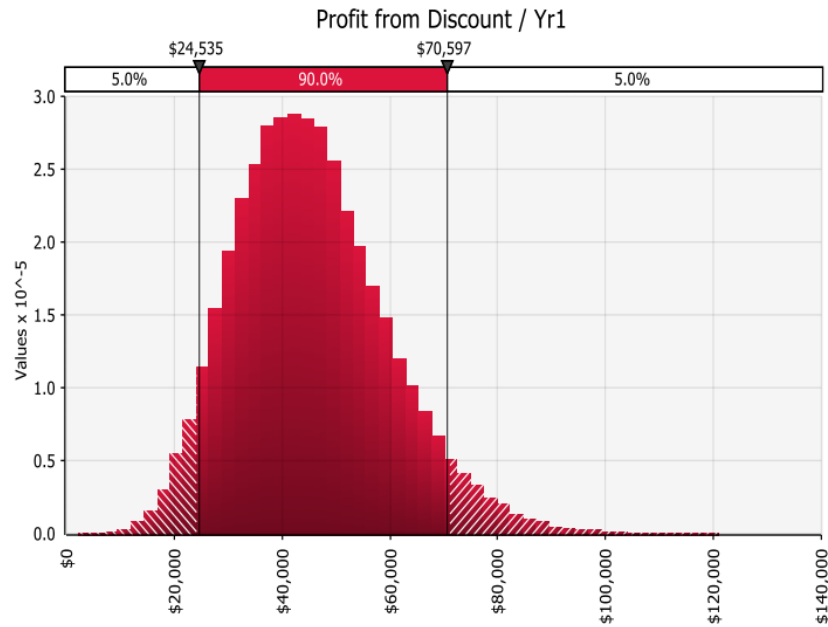


Figure 15: Monte Carlo results for Year Ten of NFT Production

