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Submitted to:
Critical Metals Corp.
Submitted by:
Agricola Mining Consultants Pty Ltd.
Report Date: 12 March 2025

Malcolm Castle
CONSULTING GEOLOGIST

AGRICOLA MINING CONSULTANTS PTY LTD

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DATE AND SIGNATURE PAGE

The effective date of the Mineral Resource Estimate was 30 August 2016, compiled by independent consultants Al Maynard and Associates Pty Ltd.

Document Reference	Tanbreez Deposit – S-K 1300 Technical Report Summary 12 March 2025 .docx
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The terms 'Competent Person' ('CP') and 'Qualified Person' ('QP") are equivalent. CP refers to the VALMIN Code 2015 and the JORC Code 2012 in Australia. QP refers to the S-K 1300 guidelines in the USA.

EXECUTIVE SUMMARY

Tanbreez Rare Earth Project

The **Tanbreez Rare Earth Project** covers an extensive mineralised kakortokite rock unit located in southern Greenland near the town of Qaqortoq. The project is notable for its high concentration of heavy rare earth elements (HREEs), which are critical for high-tech applications, clean energy, and defence industries. Unlike other major REE deposits, Tanbreez contains very low levels of uranium and thorium, making it more environmentally and politically viable. Two areas within the kakortokite have been intensively drilled and mineral resource estimates have been released to the Australian Stock Exchange.

- Deposit Type: Kakortokite (a layered igneous rock rich in REEs)
- Kakortokite Unit Estimate: ~4.7 billion tonnes of REE-bearing material
- Heavy REE Content: ~27% of Total Rare Earth Oxides (TREO)
- Ownership: Acquired by Critical Metals Corp. (2024)
- Uranium & Thorium: Extremely low (avoiding nuclear regulatory issues)
- Location: Near Qaqortoq, southern Greenland
- Project Stage: Development phase with exploration completed

Strategic Importance: China currently dominates REE production and refining (~85% of the global supply), Tanbreez provides an alternative to Chinese-controlled sources of critical rare earths. The U.S. and EU support REE supply chain diversification to reduce dependence on China. Denmark and the U.S. lobbied to prevent a Chinese acquisition of Tanbreez.

Comparison to Other REE Deposits

Feature	Tanbreez (Greenland)	Kvanefjeld (Greenland)	Mountain Pass (USA)	Bayan Obo (China)
REE Type	HREE-rich	LREE + HREE	LREE-rich	LREE-rich
HREE Percent	27.0%	11.6%	0.49%	1.13%
Uranium Content	Very Low	**High (Regulatory Issue)**	Slight	Slight
Bi Products	Zr, Nb, Hf, Ta	none	none	none
Waste	Very small	significant	significant	significant
Processing Complexity	Low - Moderate	**High (Uranium)**	Moderate	Advanced (China-controlled)
Strategic Risk	Low (Western control)	**High (Chinese investment, uranium issues)**	Medium (Processing still partly in China)	**High (China dominance)**

With high-value HREEs, no uranium regulatory barriers, and Western control, Tanbreez is positioned as a key player in the global rare earth market. The project is expected to attract further investment and strategic partnerships from North America and Europe as countries push for REE supply chain security.

Impact of Tanbreez on Global Rare Earth Supply Chains

The Tanbreez deposit in Greenland could be a major Western rare earth supply source. This has wider implications for the global rare earth supply chain, particularly in the competition between China, the U.S., and the EU for secure REE supplies.

- China's Dominance in the Rare Earth Supply Chain: China controls over 85% of global REE processing with China's Strategic Control Over REE Exports.
- The U.S. and EU's Push for Independent REE Supply Chains: The U.S. is investing in domestic and international REE projects, Tanbreez has no uranium or thorium (Less regulatory risk). Higher heavy rare earth elements (HREEs). More valuable than light REEs. Europe is highly dependent on China for REEs, crucial for Wind turbines (NdFeB magnets) and Electric vehicles (EVs) (Neodymium & Dysprosium).
- Greenland is a potential key Western REE Source. It is rich in REEs (Tanbreez). Politically stable (compared to Africa, where China dominates mining). Strategically located for the Arctic trade routes and NATO interests. With Kvanefjeld stalled due to high uranium content, Tanbreez is a cleaner, more politically viable alternative.

- *Alternative REE Sources for the West*
- Tanbreez – Critical Metals (Greenland): No uranium, high-value HREEs, Western-friendly
- Mt Weld -Lynas Corp. (Australia): Largest REE producer outside China,
- Nechalacho – Vital Minerals (Canada): Building Western-controlled processing capacity
- Mountain Pass – MP Materials (USA): Developing refining to stop reliance on China

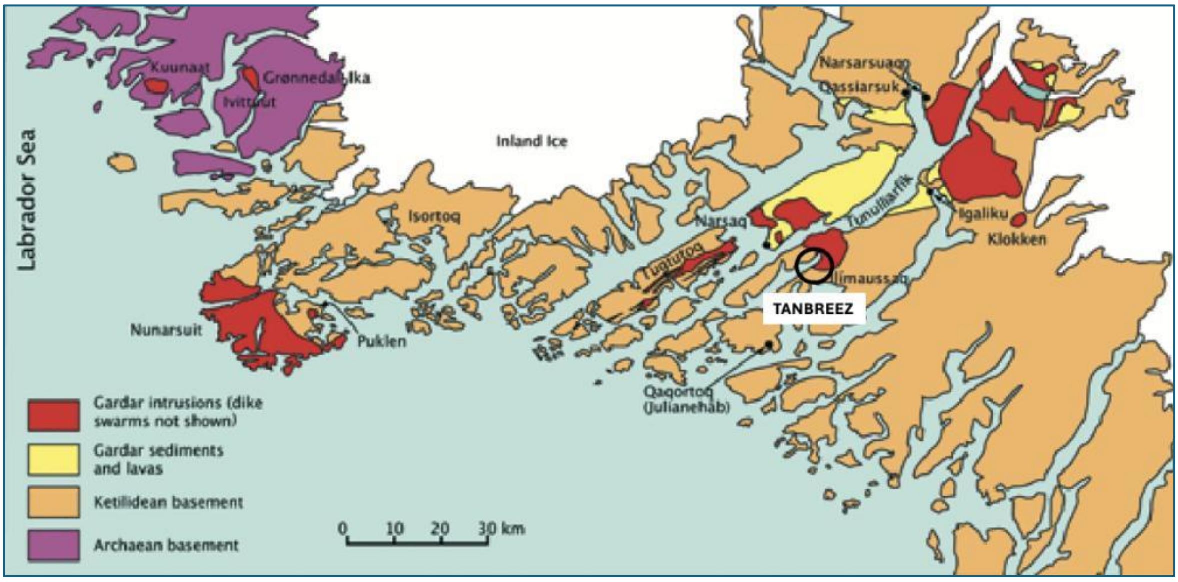
1.1 Property Description and Ownership

The Tanbreez deposit is classified as a peralkaline igneous Rare Earth Element (REE)-Zirconium (Zr) deposit, specifically hosted within the Ilímaussaq Alkaline Complex in South Greenland. It is enriched in TREO, tantalum, zirconium, niobium, and other critical metals. The formation setting is a Mesoproterozoic continental rift-related intrusion (Gardar Rift) and is estimated at ~1.16 billion years old.

The Tanbreez tenure is a Mineral Exploitation Licence, MIN 2020-54, in southern Greenland covering 18km^2. The regional capital, Qaqortoq, is 20 km to the south and the regional airport of Narsarsuaq is being moved to approximately 12 km south of the licence. The major power line which is from hydro power passes 2 km south of the licence. The tenement has ample supply of fresh water. The Tanbreez Licence is registered in the name Tanbreez Mining Greenland A/S, a subsidiary of Rimbal Pty Ltd.

Critical Metals Corp (CRML) current equity interest in the Tanbreez Project is 42%, and European Lithium retains a 7.5% equity interest, for a combined shareholding of 49.5%. CRML has the right to acquire the remaining 50.5% equity interest in the Tanbreez Project.

1.2 Geology and Mineralization



Major intrusions of the Mesoproterozoic Gardar Province of southern West Greenland.

The Ilímaussaq complex (1160 ± 5 Ma) is one of the youngest intrusions of the Gardar Province, South Greenland. This province is the product of a two-stage rifting event (1300–1250 Ma, 1180–1140 Ma) associated with the break-up of a Supercontinent. It constitutes dyke swarms, a volcanic-sedimentary graben fill sequence (the Eriksfjord Formation) and about a dozen volcanic igneous centres. Gardar magmas span a compositional range from alkali basalt to trachyte, alkali granite and strongly peralkaline nepheline syenites with local occurrences of lamprophyre and carbonatite.

The Ilímaussaq Intrusion in Greenland is the most well-known occurrence of kakortokite. Similar peralkaline layered rocks have been identified in other rare metal pegmatitic and plutonic settings. Kakortokite is particularly significant for rare earth element (REE) deposits, and its mineralogical composition makes it an important rock type for critical mineral exploration.

Kakortokite

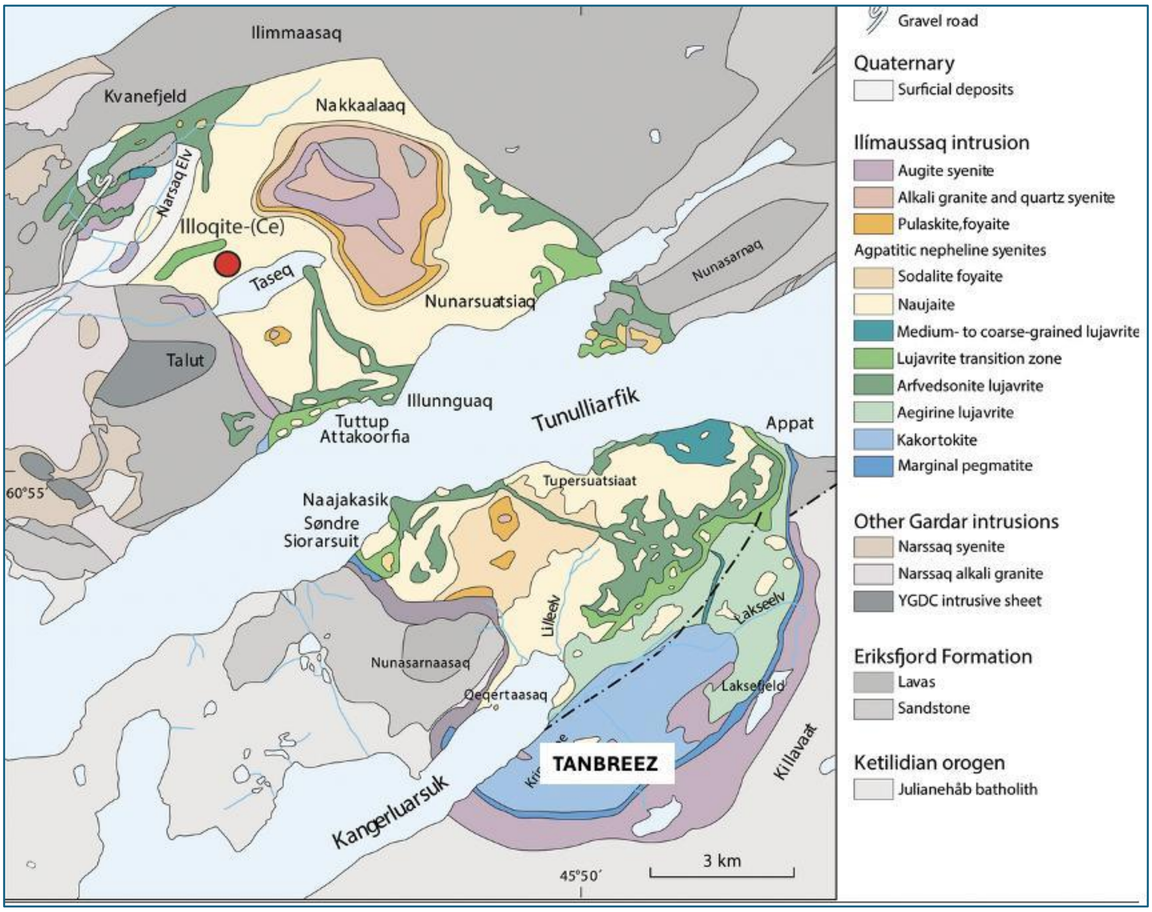
Kakortokite is a layered igneous rock composed primarily of nepheline, alkali feldspar, and arfvedsonite (or other sodic amphiboles and pyroxenes). It is a distinctive rock type found in the Ilímaussaq Complex in Greenland, particularly associated with peralkaline intrusions rich in rare elements.

- Layered Structure: It exhibits rhythmic layering, often alternating between light (feldspar-rich) and dark (mafic mineral-rich) bands.
- Mineralogy: Eudialyte (a rare zirconium-bearing mineral often enriched in rare earth elements). Other components include Feldspar (mainly alkali feldspar), Nepheline (a feldspathoid mineral) and Arfvedsonite or Aegirine (iron-rich amphiboles or pyroxenes).
- Geological Context: Found in peralkaline intrusive complexes, such as Ilímaussaq in Greenland, where it crystallized from highly evolved, silica-undersaturated magmas.
- Economic Importance: Kakortokite often contains rare metals, including zirconium, niobium, tantalum as well as rare earth elements (REEs), making it of interest for mineral exploration.

Tanbreez

Ilímaussaq has a rather simple structure. A border group adjacent to the Julianehåb granite consists of augite syenite, a normal syenite with no special features. Inside this envelope are the agpaitic rocks. Lowest are the kakortokites, a series of spectacularly layered rocks in which cumulus phases are arfvedsonite (alkali amphibole), eudialyte, nepheline and alkali feldspar. At the base of each layered unit is a black layer rich in arfvedsonite. Next comes a red layer rich in eudialyte and above this a white layer consisting largely of nepheline and feldspar (microcline). These layered units are variable in thickness, although 10 m might be about an average. There are 29 of them. The kakortokites contain inclusions of augite syenite and naujaite.

A marginal pegmatite zone, about 50–200 m wide, separates the kakortokite from the augite syenite. The TLK conformably grades upwards into finer-grained and strongly foliated melanocratic eudialyte-nepheline syenite known as lujavrite. The lujavrite occurs in aegirine and arfvedsonite dominated varieties, of which the latter represents the chemically most evolved rock type of the complex. The lujavrite and the kakortokite represent the fourth and final melt batch but may have been formed by several pulses of melt.



Geological setting of the Ilímaussaq complex.

Kakortokite is the dominant host rock for mineralization at Tanbreez. It is composed of rhythmic layers of feldspar, arfvedsonite, aegirine, and eudialyte. The mineral eudialyte is the primary REE-bearing phase. Lujavrite (Secondary Host) is a darker, REE-enriched nepheline syenite that also contains eudialyte, but in a more complex mineralogical setting. The units are enriched in zirconium, niobium, and tantalum.

The primary REE-bearing mineral is Eudialyte, the key carrier of light and heavy REEs, along with zirconium (Zr), niobium (Nb), and tantalum (Ta). Unlike monazite and bastnäsite, eudialyte has low uranium (U) and thorium (Th), making it attractive for mining. Heavy REEs include Dysprosium (Dy), Yttrium (Y), Terbium (Tb). Light REEs include Neodymium (Nd), Praseodymium (Pr), Lanthanum (La). The deposit is especially rich in HREEs, which are critical for high-tech applications.

Additional mineralization includes Zirconium (Zr), and Niobium (Nb) hosted in eudialyte and catapleiite minerals. Zirconium is an important material for nuclear reactors and ceramics. Niobium is used in superalloys and high-strength steels. Iron and Titanium are present as aegirine (iron silicate) and ilmenite (iron-titanium oxide). Unlike many REE deposits worldwide, Tanbreez has low levels of radioactive elements (U, Th), making processing easier and acceptable to government regulations.

The Kakortokite unit

- *The Tanbreez polymetallic REE-Zr-Nb-Ta deposit is hosted in the Ilímaussaq intrusion in South Greenland. The main REE, Zr, Nb and Ta oxides are contained within the Eudialyte component of the Kakortokite unit.*
- *The exposed mineralised unit is made up of kakortokite that is characterized by rhythmically layered units of layers that are either dominated by feldspar, arfvedsonite and eudialyte, respectively. The kakortokite sequence is defined by gradual contacts to the overlying lujavrites and an unexposed (only encountered in drill cores) contact zone with numerous xenoliths to the underlying Black Madonna unit. The border zone contact to the augite syenite ring dyke is well defined and the outer part of the zone cut by pegmatoid dykes.*
- *The kakortokite unit is roughly oval with a long dimension of 5 km and a short dimension of 2.5 km within the Tanbreez tenure. The estimated area is approximately 10 square kilometres and the thickness of the layered kakortokite sequence is over 350m based on deep drilling and creek sections. The mass of the body is approximately* ***4.7 billion tonnes*** *of mineralised host rock.*
- *The estimate is conceptual in nature. It does not indicate any certainty of hosting mineralization and is based on extensive historic and Tanbreez exploration drilling (414 holes) coupled with the exposures on surface and in multiple creek sections. Investors should not place undue reliance on this information.*

1.3 Status of Exploration

Mineral Resource Estimation (MRE) was completed in 2016. The work was commissioned by Rimbal Pty Ltd, a private Australian company and not require to make a public release. The MRE was released to the Australian Stock Exchange in 2025 when the project was acquired by an ASX listed company after a period of due diligence. A Definitive Feasibility Study was completed in 2014 and will be updated. A Mineral Exploitation Licence was granted for the Project in 2020 paving the way for development of the Project. The Company has continued to progress detailed studies and confirmation drilling during the last few years with its advancement towards mining.

Assays for uranium demonstrate background levels, at 10-20 ppm. Thorium does not exceed 100 ppm. Neither appear to concentrate during processing, and remain at background levels. The company believes it can sell the main co-products, arfvedsonite and feldspar, which is anticipated to offset much of the concentrate operating cost.

The Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) were presented to the government and on 8 September 2020 and Tanbreez Mining Greenland A/S exploitation license and Impact Benefit Agreement (IBA) were signed, marking the official granting of the exploitation licence (MIN 2020-54). The signing ceremony took place on top of the Tanbreez rare earth deposit at Killavaat Alannguat, where Jens Frederik Nielsen, the Minister of Industry and Mineral Resources, Simon Simonsen, the Deputy Major of Kujalleq Municipality, and Bolette Maqe Nielsen, Chairman of the Board of Tanbreez, signed the documents.

1.4 Development and Operations

The current exploitation licence includes the right to mine 0.5 million tonnes per year of eudialyte ROM material (total mining 2.5 million tonnes including feldspar and arfvedsonite with essential waste mining) which is the rate at which production will commence while local workers are recruited and trained. Initially this process will employ approximately 80 personnel from Qaqortoq, rising to over 200+ when stage 2 is reached.

Tanbreez believes total production can be lifted by year 5 to 5 million tonnes per year, and 10 million tonnes by year 10 subject to approvals. It is anticipated this initial production of concentrates (0.5 million tonnes per year) will be taken up by North America or Europe where treatment facilities are expected to be established. Further expansions with sales to Asia and Europe are believed possible beyond that time with the potential for local sales of both the arfvedsonite and feldspar (subject to government approvals) the waste will be minimal.

1.5 Mineral Resource Estimate

The information regarding the Mineral Resource Estimates at Tanbreez Hill Zone and Tanbreez Fjord Zone within the Tanbreez Project represent the independent opinion of Al Maynard and Associated Pty Ltd for the current estimates of such resources. The estimates are in accordance with the requirements on the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 (the “JORC Code”).

The Mineral Resource Estimate was released to the Australian Stock Exchange (ASX) in march 2005 by European Lithium Limited (ASX:EUR).

TANBREEZ PROJECT	Mtonnes	TREO	ZrO_2	Nb_2O_5
Tanbreez Hill and Fjord				
Indicated Resource	25.42	0.37%	1.37%	0.13%
Inferred Resource	19.45	0.39%	1.42%	0.15%
Total	44.87	0.38%	1.39%	0.14%

No cut off was applied to the lower or upper limits.

The estimates for the Tanbreez Project are based on interpretations of geological data obtained from drill holes, surface and creek section mapping and sampling through the entire kakortokite sequence.

Al Maynard and Associated Pty Ltd believes that the quoted resource categories in the resource statements are appropriate and properly take into consideration the geology and style of the mineralisation, the density, spacing and quality of the sampling data and grade variability of the mineralisation.

The following sections do not apply to this Report.

1.6 Ore Reserve Estimate
1.7 Capital and Operating Costs
1.8 Economic Analysis

1.9 Permitting Requirements

Mineral Exploitation Licence (MIN 2020-54)

The permitting process for an exploitation licence required for the initiation of mining activities involves the submission of an Environmental Impact Assessment (EIA) and a Social Impact Assessment (SIA). Both assessments require baseline studies and consultations with stakeholders with a strong emphasis on public hearings and reviews by the authorities. The outcome of this multi-stage process is the Impact Benefit Agreement (IBA) which forms the basis of the mining permit.

An EIA must be prepared when a company plans to exploit a mineral deposit following the routines described in the guidelines (Bureau of Minerals and Petroleum 2011). The EIA must cover the entire exploitation period from mine development before the mine starts until the closure of the mine including a subsequent monitoring period. Environmental studies must be able to predict impacts from the specific mining project and describe baseline conditions before areas are affected by construction and operations. Studies must cover some years before construction starts so that the annual and seasonal variations of environmental parameters are considered in the baseline description. The number of years needed to conduct the environmental studies will depend on the project and the site. Often 2–3 years of studies are needed in advance of the EIA report preparation.

1.10 Qualified Person's Conclusions

Tanbreez Project in Greenland is at the *Pre-Development Stage*. Maiden Mineral Resource Estimates in accordance with the JORC Code 2012 have been finalised for the Tanbreez Deposit and released to the Australian Stock Exchange. An Exploitation Licence has been granted by the Government of Greenland and the tenement area has been subjected to extensive exploration over the last four decades. A Definitive Feasibility Study and an Environmental Impact Assessment were compiled in 2014.

The Project should be considered **low risk**. Based on the review of the available technical information and the results of feasibility studies prepared in 2014. Agricola considers the proposed future development activities including an Initial Assessment (Scoping Study or Preliminary Economic Assessment, PEA) for the Project are reasonable and appropriate for the deposit and the development stage.

Agricola was not involved in any of the exploration conducted on the Tanbreez Project but has reviewed the exploration completed to date and the supporting documentation provided by the Company. Overall, the Competent Person/Qualified Person (CP/QP) considers the data used to prepare Mineral Resource Estimates are accurate and representative and has been generated with industry accepted standards and procedures.

The MRE was prepared in accordance with industry best practices and reported in accordance with the guidelines of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 Edition).

The CP/QP considers the MRE representative of the informing data, and that the data is of sufficient quality to support the current MRE classified into the Indicated and Inferred categories. Reasonable prospects for economic extraction have been demonstrated on the Project in 2014 during the DFS and has been upgraded to the present day, as described in the Report. Considering the current and forecast product prices, the assessment for reasonable prospects for economic extraction is, in the CP/QP's opinion, still valid.

The current Mineral Resource Estimates may be materially impacted by any future changes in the breakeven economic cut-off value, potentially resulting from changes in mining costs, processing recoveries, or oxide prices or from changes in geological knowledge because of new exploration data. Estimations are carried out in a manner that faithfully represents the data and mitigates the likelihood of material risk in the estimate.

In undertaking this Report, Malcolm Castle has reviewed the technical inputs pertaining to the projects in an impartial, rational, realistic, and logical manner. Agricola believes that the inputs, assumptions, and overall technical assessment is in line with industry standards and meets the *Reasonable Grounds Requirement of the JORC Code 2012 and the VALMIN Code 2105*. The Report is an accurate representation of the technical aspects of the Project.

2.0 INTRODUCTION

2.1 Terms of Reference and Purpose

This Independent Technical Assessment Report ("ITAR") and S-K 1300 Technical Report Summary ("TRS") (the "Report") will provide an impartial and comprehensive evaluation of the mineral assets associated with the Tanbreez Rare Earth Project ("Tanbreez") in Southern Greenland held by TANBREEZ Mining Greenland A/S (the "Company"). Agricola Mining Consultants Pty Ltd ("Agricola") was engaged to deliver this report, which will potentially be included in an announcement to the Australian Securities Exchange ("ASX") and the Securities Exchange Commission ("SEC").

This Report has been prepared in accordance with the guidelines of the Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets' (the VALMIN Code 2015). The VALMIN Code incorporates the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code 2012) prepared by the Joint Ore Reserves Committee of the AusIMM, the AIG and the Minerals Council of Australia.

In addition, the Report has been prepared in accordance with the relevant requirements of the Listing Rules of the ASX and relevant Australian Securities and Investment Commission Regulatory Guidelines. Where recent exploration results and mineral resource estimates have been referred to in this report, the information was prepared in accordance with the JORC Code 2012. Historic results are clearly identified and may not have been originally reported under the current JORC Code. This Report was also prepared in accordance with the S-K 1300 guidelines as required by the SEC.

Exploration results and mineral resource estimates described in this Report are based on, and fairly represent, information and supporting documentation prepared by competent person. In undertaking this technical assessment, the technical inputs pertaining to the projects were reviewed in an impartial, rational, realistic, and logical manner. Agricola believes that the inputs, assumptions, and overall technical assessment are in line with industry standards and meet the reasonable ground requirements of the VALMIN Code 2015.

2.2 Information on the Author

This Independent Technical Assessment Report was prepared by Malcolm Castle, principal consultant for Agricola Mining Consultants Pty Ltd. Mr Castle holds a BSc Hons (Applied Geology UNSW) and GCertAppFin (Sec Inst,) and is a Member of the Australasian Institute of Mining and Metallurgy (M AusIMM,).

Qualifications and Relevant Experience of the Competent Person ("CP").

Malcolm Castle, the author of this report, is the principal consultant for Agricola Mining Consultants Pty Ltd, an independent geological consultancy.

Education:

He is an appropriately qualified geologist and has the necessary technical and securities qualifications, expertise, competence, and experience appropriate to the subject matter of the report. He studied Applied Geology with the University of New South Wales in 1965 and was awarded a B.Sc.(Hons) degree and then studied at the Securities Institute of Australia with a Graduate Certificate in Applied Finance and Investment in 2004.

Years of Experience:

Malcolm Castle has over 50 years' experience in exploration geology, property assessment and valuation as an exploration geologist. He established a consulting company and specializes in exploration management, technical audit, due diligence and property valuation at all stages of development.

He has been working in exploration geology and property evaluation for major companies for 20 years and as an independent consultant for 40 years. He has worked with gold, base metals, iron ore, lithium and rare earths and been part of the team for project discovery through to feasibility study for FMG in Australia and the Rawas Project in Indonesia as well as technical audits in many countries.

He is the Principal Consultant for Agricola Mining Consultants Pty Ltd, an independent geological consultancy established 40 years ago and has completed numerous Independent Technical Assessment Reports and Independent Valuation Reports over the last two decades as part of his consulting business based in Western Australia.

Relevant Experience:

Malcolm Castle has worked as an exploration geologist in many countries and states of Australia and has prepared technical assessment reports for various companies with mineral assets in those areas over the last 30 years. He is familiar with the progress of exploration and mine development to the present day.

He is a founding member of the Fortescue Metals Group (FMG) and assisted in the preparation of the Definitive Feasibility Studies and the expansion planning from 20003 to 2010. The covered the startup of the company to the early years of production, working in the mining division.

He has compiled Independent Valuation Reports incorporating desktop scoping studies on the Tanbreez Project on several occasions since 2011, including a due diligence report for CRML in 2024.

Professional Registration:

He is a current Member of the Australasian Institute of Mining and Metallurgy since 1964. (MAusIMM). He is a Competent Person under the JORC Code 2012 guidelines.

A 'Competent Person' is a minerals industry professional who is a Member of The Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists. These organisations have enforceable disciplinary processes including the powers to suspend or expel a member. A Competent Person must have a minimum of five years relevant experience in the style of mineralisation or type of deposit under consideration and in the activity which that person is undertaking. If the Competent

Person is preparing documentation on Exploration Results, the relevant experience must be in exploration.

Competent Persons Statement – JORC Code:

The information in this Report that relates to Exploration Results and Mineral Resource Estimates of the Company is based on, and fairly represents, information and supporting documentation reviewed by Malcolm Castle, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Castle has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking to qualify as a Competent Person as defined under the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Castle is not an employee of the Company and is the independent principal consultant for Agricola. Mr Castle consents to the inclusion in this report of the matters based on the information and supporting documentation in the form and context in which they appear.

Independence and Consent

Malcolm Castle, the report's author, and Agricola have no material interest in the company or its mineral properties. Agricola's relationship with the company is solely one of professional association between client and independent consultant. Agricola and it's employees have no conflict of interest with the company.

Fees of $25,000 plus GST are being charged to the company for the preparation of this ITAR/TRS based on agreed-upon commercial rates, the payment of which is not contingent upon the conclusions of the report.

Agricola regards the ASIC guidelines of RG112.31 as being complied with, whereby there are no business or professional relationships or interests that would affect the expert's ability to present an unbiased and independent opinion within this ITAR.

Agricola consents to the inclusion of this independent technical assessment report in the form and context set out in the agreement with the company. Agricola provides its consent with the understanding that the assessment expressed in the individual sections of this report will be considered with, and not independently of, the information set out in full.

Agricola Mining Consultants Pty Ltd has not withdrawn this consent prior to the lodgement of the prospectus containing this Independent Technical Assessment Report.

2.3 Principal Sources of Information and Reliance on Other Experts

This review of the Tanbreez Project is based on information provided by the company, as well as technical reports made by consultants, government agencies, and previous tenants, and other relevant published and unpublished data available up to and including the date of the report. Agricola has tried to make sure that the technical data used to create this ITAR is real, correct, and complete.

Tenement status

Agricola is not qualified to provide extensive commentary on the legal aspects of the tenure of the mineral properties or their compliance with the legislative environment and permits in the various jurisdictions. In relation to the tenement standing, Agricola has relied on the information publicly available on this basis, Agricola has confirmed the tenements comprising the Tanbreez Project in government records including the Grant Document and understands that the tenements are in good standing and has confirmed this with the Company. Agricola understands that there are no legal, regulatory, statutory or contractual impediments to the Company entering the tenements and carrying out development activities

Sources of Information

In respect of the information contained in this report, Agricola has relied on:

- Information and reports prepared by the company.
- The ASX release of the Maiden Mineral Resource Estimate.
- Publicly available information from the Greenland Geological Survey.
- Academic and technical papers in publicly available journals and other sources.

In line with ASIC Regulatory Guide 55 and ASIC Corporations (Consents to Statements) Instrument 2016/72, permission to use statements from these sources is given. Where appropriate, Agricola has received separate consents for internal, unpublished reports.

Site Visits

The preparation of this report did not involve any site visits. Agricola has reviewed reports for all previous exploration and considers that a site visit would not reveal any additional information that would change the recommendations or make a material difference to the contents and of this report.

Exploration results

- The exploration results are based on information and supporting documents that were compiled by the company and reviewed by Agricola. They are a fair reflection of the available data. Exploration results are not presented in a way that unreasonably implies the discovery of potentially economic mineralization.

- When exploration results show mineralization but aren't labelled as an exploration target or a mineral resource, mineralization estimates of tonnes and average grade have not been given. The presentation of exploration results does not indicate the presence of coherent mineralization that could serve as an exploration target.

- The report quotes the downhole widths from historic drill holes but does not report the true widths of mineralization. The report includes an appropriate qualification. Mineralised widths shown are downhole distances. The estimated true width is unclear due to the early nature of the drilling and geological complexity. The weighted average of the aggregate intercepts is found by adding up the lengths of all the samples and dividing that number by the total length. First, multiply all values in the intercept by their corresponding length to calculate the weighted average. Then, add up the resulting products and divide by the sum of the lengths.

- Some types of information, like isolated assays, isolated drill holes, assays of panned concentrates, supergene-enriched soils, or surface samples, have not been shared without being put in context. When exploration results based on rock chip or grab sampling are reported, the location, total number, and assay results for the sampling have been included where possible to ensure samples are not selectively reported. If the visual results are quoted in the absence of assays, they do not include any reference to the grade or economic potential of the possible mineralization. We take character samples, which are isolated samples, to identify the minerals present and assess the sample's quality. They do not represent the average grade of a mass of material.

Mineral Resource Estimates and Exploration Targets

- If exploration targets are reported, the potential quantity and grade are only conceptual. There has been insufficient exploration to estimate a mineral resource under the JORC Code 2012, and it is uncertain if further exploration will result in the estimation of a mineral resource.
- In line with the JORC Code 2012, Mineral Resource Estimates are reviewed with reference to the JORC Table 1 for each deposit.

Cautionary Note Regarding Forward Looking Statements

Forward-looking statements are subject to known and unknown risks and uncertainties and are based on assumptions that could differ in the future and cause actual results to differ materially from those expected or implied by the forward-looking statements. Actual results could differ materially from those anticipated in forward-looking statements for many reasons. Statements are based on information available as of the date of this Report, and expectations, forecasts and assumptions as of that date and involve several judgments, risks and uncertainties.

2.4 Personal Inspection Summary

Malcolm Castle, the author of this report has not visited the Tanbreez Project. He has prepared valuation reports for the Tanbreez Project over the last fourteen years (2010 – 2024) and is familiar with the details of the project and exploration progress to the present day.

- 31 August 2010 - Independent Valuation Report on the Tanbreez Project In Greenland
- 4 March 2011 - Independent Valuation Report on the Tanbreez Project In Greenland
- 28 October 2015 - Independent Valuation Report on the Tanbreez Project In Greenland
- 7 February 2022 - Independent Valuation Report on the Tanbreez Project In Greenland,
- 26 March 2023 - Independent Valuation Report on the Tanbreez Project In Greenland, Effective Date 26 March 2023
- 20 August 2024 - Independent Technical Assessment and Due Diligence Report on the Tanbreez Tenement Min 2020-54 In Southern Greenland Held By Rimbal Pty Ltd

2.5 Previously Filed Technical Report Summary Reports

European Lithium released an announcement to the Australian Stock Exchange in March 2025 on The Maiden Mineral Resource Estimate for the Tanbreez Project located in Greenland. This estimate was prepared by Al Maynard and Associates Pty Ltd on 30 August 2016 in accordance with the JORC Code 2012. The author of the report, A.J. Maynard, BAppSc (Geol), MAIG MAusIMM, is an independent consultant with long experience with the project and qualify as 'Competent Persons' under the JORC Code 2012 and the VALMIN Code 2015.

The report was commissioned by Rimbal Pty Ltd, a private company registered in Australia and not required to provide any disclosure. The Mineral Resource Estimate was provided by European Lithium for reference in accordance with ASX Listing Rules as a basis for further public disclosures relating to the Tanbreez Project following the acquisition of the Project by Critical Mets Corp and appropriate due diligence.

The Mineral Resource Estimate has not been updated and no more recent estimates or data relevant to the reported mineralisation is available.

No S-K 1300 Technical Report Summaries have been filed on the Tanbreez Project.

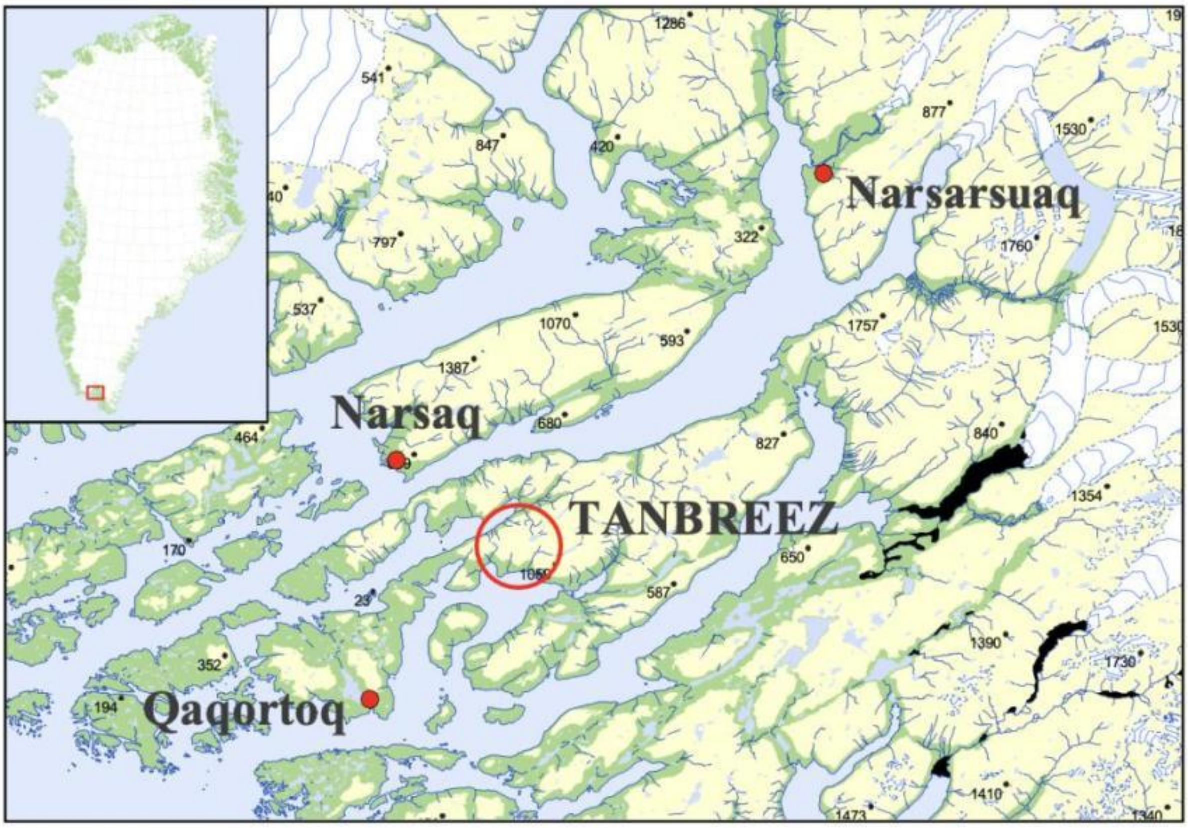
3.0 PROPERTY DESCRIPTION

3.1 Property Location

The Tanbreez license, MIN 2020-54 is in southern Greenland. The regional capital, Qaqortoq, is 20 km to the south and the regional airport of Narsarsuaq is being moved to approximately 12 km south of the licence. The major power line which is from hydro power passes 2 km south of the licence. The tenement has ample supply of fresh water.

Qaqortoq is the capital of the Kujalleq municipality in southern Greenland, located near Cape Thorvaldsen. it is the most populous town in southern Greenland with a population of approximately3,500, and the fourth or fifth-largest town in Greenland. Qaqortoq Heliport operates year-round, linking Qaqortoq with Narsarsuaq Airport (a distance of 60km) and, indirectly, with the rest of Greenland and Europe. Feasibility assessments were underway regarding building a landing strip for fixed-wing aircraft.

Given the proximity of the Tanbreez rare earth deposit to Qaqortoq, the new airport could significantly enhance logistics and transportation for mining operations, offering more efficient routes for personnel and equipment.



Location of the Tanbreez Project

Aerial view of the town of Qaqortoq *in southern Greenland*

3.2 Mineral Rights

The present status of the tenements in Greenland is based on a review of the official grant document signed on 19 August 2020 by the Government of Greenland, Ministry of Mineral Resources. This Report has been prepared on the assumption that the tenements are lawfully accessible for evaluation.

The regional capital, Qaqortoq, is 20 km to the south and the regional airport of Narsarsuaq is being moved to approximately 12 km south of the licence. The major power line which is from hydro power passes 2 km south of the Licence. The tenement has ample supply of fresh water.

The landscape at Tanbreez is characterized by relatively high and steep mountains and the long narrow Kangerluarsuk Fjord. The proposed port and most infrastructures will be located near the head of the fjord close to the outlet of Lakseelv, the largest river in the area. Outflow from the proposed tailings pond (Fostersø) will flow through Laksetværelv to Lakseelv. The ground is rich in minerals, which could lead to natural high levels of many metals in the soil, sediment, and water.

The Lakseelv River has a large population of fish (Arctic char) while Laksetværelv and Fostersø Lake are without fish stocks. Tanbreez is almost devoid of vegetation above 50-100m elevation while dwarf heath vegetation occurs along the shore of the fjord and lower parts of Lakseelv River. Wildlife is limited to two terrestrial mammal species (a fox and a hare) and small numbers of marine mammals (seals and whales). The birdlife is limited to a few common and widespread species of South Greenland. No sea bird colonies are found along the fjord. A few species occurring in the study area are listed on the Greenland Red list of threatened species, most notably White-tailed eagle. However, no nesting sites of the eagle are known from the project area.

In 2001 the exploration license for the Tanbreez area was taken up by Rimbal Pty. Ltd. Exploration at Tanbreez was initiated in 2007 though the subsidiary Westrip as the TANBREEZ Project. In 2010 the TANBREEZ Mining Greenland A/S, a subsidiary of Rimbal, based in Nuuk was formed.

The Tanbreez Project is situated on the southeast side of the Kangerluarsuk Fjord near the head of the fjord. The fjord is mostly steep sided and surrounded by mountains rising to 700-1,000 m with the Killavaat mountain to the east rising to 1,200 m.

Mineral Licence	
Licence Code	MIN 2020-54
Registered Holder	Tanbreez Mining Greenland A/S
Licence Type	Mining Exploitation Licence (MIN)
Licence Status	Active Licence
Official Area	18 square kilometres
Grant Dat	8-Sep-20
Expiry Date	7-Sep-50

The total land holding for the Tanbreez Project is 18 square kilometres.

Location of Tanbreez Tenement MIN 2020-54

On 13 August 2020, the Government of Greenland approved an application for an exploitation permit for an area of 18 km^2 located at Tanbreez in South Greenland to TANBREEZ Mining Greenland A/S (MIN 2020-54). Tanbreez has been granted an exploitation permit valid for a period of 30 years. The exploitation permit gives Tanbreez the right to exploit elements found in the eudialyte mineral.

The status of the tenements has been verified by Agricola by reference to the Document of Grant and the list of Exploration Licences in Greenland published on the Government website, pursuant to paragraph 67 of the VALMIN Code. The tenements are believed to be in good standing at the date of this Report as represented by the Company.

The Tanbreez tenement area MIN 2020-54.

3.3 Description of Property Rights

The legislation for the mineral industry in Greenland

In the following some relevant information related to the licensing and permitting procedures for the mining industry in Greenland are summarized. It should be noted that more detailed information is published on the relevant internet portal of the Government of Greenland (www.govmin.gl) which is continuously updated.

The main principles for the administration of mineral resource activities are laid out in the Greenland Parliament Act no. 7 of December 7, 2009, on Mineral Resources and Mineral Resource Activities (the Mineral Resources Act). This was a result of the increased autonomy under the Act on Greenland Self-Government from 21 June 2009, when the Danish/Greenlandic relations regarding mineral resource activities in Greenland changed and the Government of Greenland took over the responsibility for the mineral resources. The latest changes to these rules and regulations have been enacted in 2014.

Following the recent amendment to the Mineral Resources Act, there are now three main authorities involved with the legal foundation and regulations for minerals and hydrocarbons in Greenland. These are the Mineral Licence and Safety Authority (MLSA), the Ministry of Mineral Resources (MMR), and the Environment Agency for the Mineral Resources Activities (EAMRA).

The MLSA is the one-door authority. Licensees and other parties covered by the Mineral Resources Act communicate with the MLSA and receive all notifications, documents, and decisions from the MLSA. It is the overall administrative authority for licences and mineral resource activities and is the authority for safety matters including supervision and inspections.

The MMR is responsible for the overall strategy concerning mineral and energy resources, policies on the same subjects, legal issues, marketing of mineral and energy resources in Greenland, and socio-economic issues related to mineral and energy resource activities, such as SIA, IBA, and royalty schemes.

The EAMRA is the administrative authority for environmental matters relating to mineral resources activities, including protecting the environment and nature, environmental liability and EIA. The EAMRA is an agency under the Ministry of Nature, Environment and Justice.

Licensing and permitting procedures.

Mineral exploration licences (MEL)

Applications for mineral exploration licenses are submitted to the MLSA and handled according to the procedures defined in the Mineral Resource Act. In general, one licence area may consist of up to 5 subareas, but the distance between any two subareas must not exceed 40 square kilometres. Licences are granted for 5 years with the option for renewal. The licensee is obligated to commit yearly exploration expenses regarding the licence area.

In addition to traditional licences, a small-scale licence can be granted to citizens living in Greenland. Claims of up to 1 km2 can be held by individuals and activities are subject to certain restrictions. This licence type is typically granted to private collectors of gemstones.

Mineral exploitation licences (MIN)

The permitting process for an exploitation licence required for the initiation of mining activities involves the submission of an Environmental Impact Assessment (EIA) and a Social Impact Assessment (SIA). Both assessments require baseline studies and consultations with stakeholders with a strong emphasis on public hearings and reviews by the authorities. The outcome of this multi-stage process is the Impact Benefit Agreement (IBA) which forms the basis of the mining permit. The relevant rules and regulations are outlined at: www.govmin.gl/minerals/terms-rules-laws-guidelines.

An EIA must be prepared when a company plans to exploit a mineral deposit following the routines described in the guidelines (Bureau of Minerals and Petroleum 2011). The EIA must cover the entire exploitation period from mine development before the mine starts until the closure of the mine including a subsequent monitoring period. Environmental studies must be able to predict impacts from the specific mining project and describe baseline conditions before areas are affected by construction and operations. Studies must cover some years before construction starts so that the annual and seasonal variations of environmental parameters are considered in the baseline description. The number of years needed to conduct the environmental studies will depend on the project and the site. Often 2–3 years of studies are needed in advance of the EIA report preparation.

Administration of the Mineral Sector 2020-2024

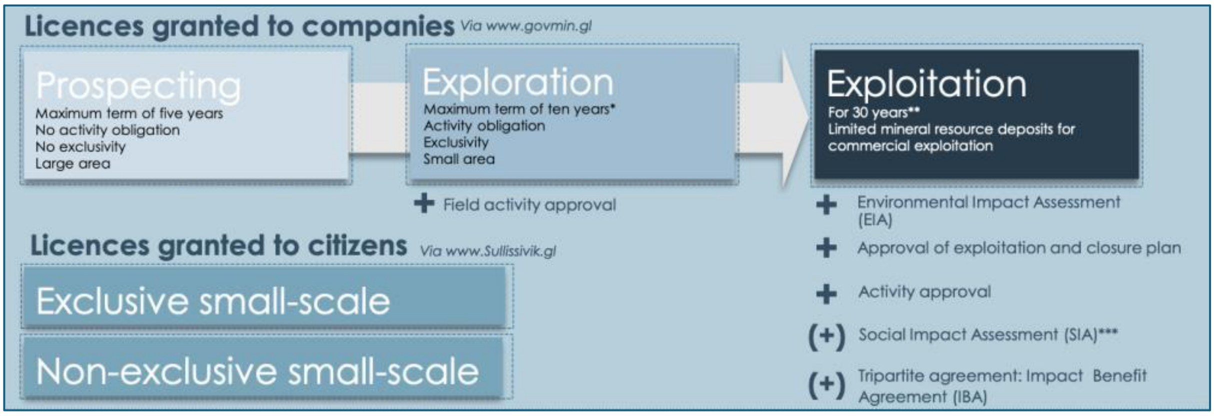
In Greenland, mineral resource activities are divided into three phases: prospecting, exploration and exploitation. To carry out these mineral resource activities, you need a licence from the Government of Greenland. The Mineral Licence and Safety Authority is responsible for processing applications for prospecting and exploration licences (and applications for approval of field activities).

When a holder of an exploration licence wishes to apply for a licence to exploit mineral resource deposits, the licensee must provide an environmental impact assessment (EIA) together with the application and, where a project is deemed to have a material impact on social conditions, also a social impact assessment (SIA).

Mineral resource activity will inevitably have an impact on the environment. Environmental laws in the mineral resources sector are to ensure that all activities are carried out with due respect for the environment, nature and the climate, and therefore, there are requirements for an EIA report and ongoing monitoring of the mineral resource activities. The Environmental Agency for Mineral Resource Activities (EAMRA) under the Ministry of Nature and Environment is responsible for the environmental aspects of mineral resource activities and has prepared a separate strategic memorandum for the environmental aspects of mineral resources, which will be made available at www.govmin.gl.

One of the purposes of the SIA is to describe what Greenland can expect to gain from a given project in terms of jobs, taxes and royalties, new business opportunities for subcontractors, etc. Terms must be specified in the exploitation licence on the extent to which a licensee is required to enter and fulfil a social sustainability agreement and other socio-economic matters, a so-called Impact Benefit Agreement (IBA). The IBA is an agreement between the licensee, one or more local authorities and the Government of Greenland, providing specific requirements for the use of local workers etc.

Before initiating construction and exploitation activities, the Government of Greenland must approve an exploitation and closure plan including, among other things, security for clean-up obligations. In addition, the activities must be carried out in accordance with activity approvals.



Ban on Uranium Mining

On December 2, 2021, a law prohibiting preliminary investigation, exploration, and exploitation of uranium entered into force in Greenland on the day following its promulgation. The new law bans mining only for uranium; the mining of other minerals is still allowed.

The new law provides that the preliminary investigation, exploration, and exploitation of uranium is prohibited unless they are directed at something other than uranium and the average uranium content of the total resource is below 100 ppm by weight. The Greenlandic government may also lay down rules that specify that the mining prohibition may apply to radioactive elements other than uranium. Such rules may cover permissible limit values and the restriction and revocation of permits for the preliminary study, exploration, or utilization of the radioactive elements in question.

The law also provides that the government may impose fines for violations of section 1 and that companies ("legal persons") may be held criminally liable in accordance with Chapter 5 of the Greenlandic Criminal Code.

It is noted that the uranium content of the mineral resource estimates at the Tanbreez deposit is below 100 ppm.

3.4 Royalty Payments

The royalty elements are differentiated for the various types of minerals, and the main terms for royalties are:

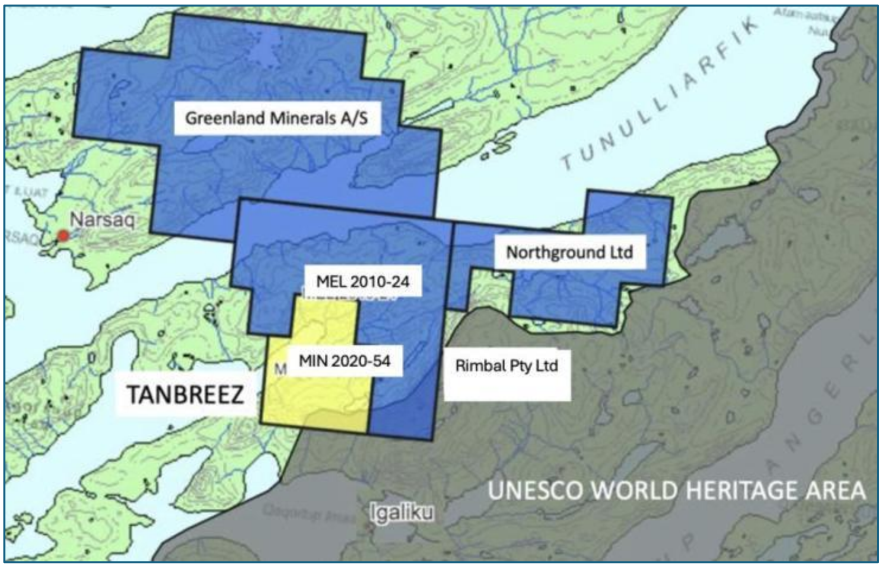
- a licensee exploiting minerals, other than rare earth elements, uranium and gemstones, shall pay a sales royalty of 2.5 per cent of the value of minerals (on certain terms, corporate income tax and corporate dividend tax may be offset against sales royalties).
- a licensee exploiting rare earth elements shall pay a sales royalty of 5 per cent of the value of the elements (on certain terms, corporate income tax and corporate dividend tax may be offset against sales royalties).

3.5 Significant Encumbrances to the Property

Qaqortukulooq (Hvalsey): Contains 11 Norse and 2 Thule sites, including the best preserved Norse ruin in Greenland and the site of the last recorded mention of Europeans in Greenland in 1408 Hvalsey Viking Church ruins are situated approximately 11km south of the proposed mine. The church was the main cathedral for Greenland, and it is thought that the first church on this site was built in the 11th century by Thorkell Farserk, a relative of Eric the Red.

Hvalsey Viking Church Ruins

The church and its surroundings have been designated a world heritage site. Around this the local community, the central government in cooperation with the Company have put up a buffer zone. The buffer zone recommended and accepted by all parties is the top of the rugged range with south flowing creeks in the heritage and buffer zone, and the north flowing creeks in the mining area. They are separated by rugged ranges which reach a height of approximately 1,000m, effectively isolating the UNESCO site from the mineral resource areas.



The UNESCO World Heritage Area covers the southeast corner of the Tanbreez Tenement. It does not cover the kakortokite outcrop.

3.6 Other Significant Factors and Risks Affecting Access

No other significant factors have been identified that affect access to the site.

4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 Topography and Land Description

Physiography

The kakortokite unit outcrops well over an area of 5 x 3km which forms as a plateau that dips shallowly to the north. This plateau ends with a north facing cliff up to 400m high. The zone extends to 40m below sea level.

Vegetation

The minerals sodalite and eudialyte are slightly soluble and will form small amounts of silica gel in water. Such silica gel, when taken up by plants blocks their water pathways, thus killing the plant. These rocks thus act as a natural herbicide, so no vegetation can grow on the deposit and because of erosion, little soil remains, resulting in the deposit consisting mostly of outcropping rocks. As is virtually no overburden to remove which is well shown in the figure above.

Tanbreez Base Camp with minimal vegetation

4.2 Access to the Property

The current international airport is at Narsarsuaq, some 45km to the north, but the airport is currently being shifted to north of Qaqortoq, 15km south of the mine. At present flight times by helicopter from Qaqortoq to the mine site is roughly 5 minutes less from the new airport.

Access is also possible all year round by a boat via the fjords which offer protection from the weather – it is about a 45 minute from Qaqortoq, or about 10 minutes by boat from the new airport. In this part of Greenland due to the warming effects of the gulf stream the fjords usually do not freeze over, allowing access all year round by sea.

Eleven kilometres south of the deposit is the old Norse Cathedral at Hvalsey. This area is now in an UNESCO world heritage listed area, around which there is a secondary protection or buffer zone. This zone occurs on the opposite side of the rugged range which has a different river drainage system. The development and operations at Tanbreez will have no effect on the UNESCO site.

There are plans for a road to be constructed to the world heritage site. At some time in the future a road from Tanbreez to this road will give vehicle access to town.

The access fjord gives excellent access to the mine site which is 100m deep and very close to shore allowing an almost land backed berth. Ships to about 60,000 tonnes are capable to get to site. There are 2 possible routes to get to site allow access even on the rare case of blockage of the entrance by icebergs.

The company has mapped a proposed road up the hill which means over 90% of the property will be accessible with a wheeled vehicle if required. It will also mean complete access and reduce the need for helicopters.

Two shipping routes to the Tanbreez site

4.3 Climate Description

The climate of Qaqortoq, the state capital, is polar, although with maritime influences, with very cold winters, during which the temperature is a few degrees below freezing, and quite mild summers. The average daily temperature is above freezing even at night for six months of the year, from May to October. Precipitation is moderate, at 970 millimetres per year, with a maximum from August to November.

The winter is cold, but it is significantly less cold and long than in the central-northern part of Greenland. The average temperature in February is around -5 °C. The average temperature is below freezing even during the day from December to March, however, it can sometimes exceed this value, and it can rain even in this season.

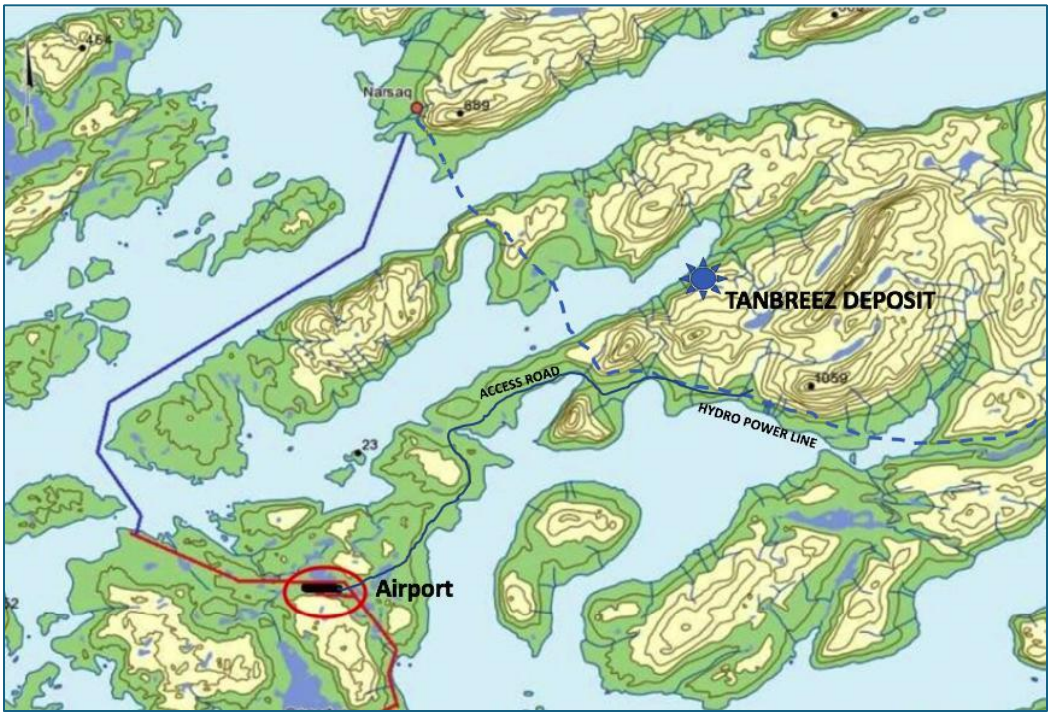
Summer, from June to August, is quite mild. The average in July and August is almost 9 °C. Rainfall is quite frequent, and it practically never snows, except occasionally in the first half of June. In this season, fog forms quite often. Sometimes there can be short very mild periods, from one to three days, during which the temperature can reach or exceed 20 °C.

In Qaqortoq the sea is always very cold, however, it reaches around 0°C at the end of winter (remember that the sea, being salty, freezes at about -2 °C).

The company has maintained and independently monitored weather station on the Tanbreez site. The data indicated the average winter temperature was -5°C, with a range from 9°C to -

21°. While the summer temperature averaged between 4°C to 10°C, with a range from -3°C to 18°C.

4.4 Availability of Required Infrastructure



Location and Existing Infrastructure in the Tanbreez area

Local Resources

Greenland is an independent colony (i.e. self-governing) of Denmark and as such most areas such as health, law & order, mining, environment, social welfare etc are in line with European standards. Most Greenlanders have completed secondary school (to the age of 17), with many completing further education in Denmark or Greenland to university level. The Danes are responsible mostly for defence and foreign affairs.

The company has spent considerable time assessing the local human resources and is convinced that 90% plus is available locally (refer later in this report). In addition to that Greenlanders have had a long tradition of having to be self-sufficient. For example, if a car, or more so a boat broke down and there was only one ship per year, the machine would have to be fixed locally. Even though today most towns have daily aircrafts, and ships once a week or so, this reliance on self-sufficiency is still strong. Thus, in the industrial area at the nearby regional capital of Qaqortoq there is available a set of competing engineering facilities, and original thinkers far beyond what a normal town of such a size with would be expected to provide.

Major Towns

There are 3 major towns in the area:

Town	Population	Main Business
Qaqortoq	3,500	Regional administration centre
Narsaq	1,300	Greenland abattoirs
Nanortalik	1,100	Gold mining & fishing

Qaqortoq also has a tertiary business school while Narsaq has Greenland's only advanced catering school.

Labour

The Greenland Tax Act is one where the personal income tax goes to the local community where the person lives. Thus, if a person lives at any of the towns in this community which includes Qaqortoq, Narsaq and Nanortalik, then the resultant personal income tax stays in the town. Company tax, income tax on foreign workers and royalties go to the central government. This means the local community is fully aware of all local people capable of fulfilling set jobs and more so people who have left the community to seek employment elsewhere. The community is also responsible for much of the housing in these towns which is a major problem for workers who wish to move families to town. For this reason, Tanbreez signed a cooperation MoU agreement with the community enabling them to aid in the recruitment of a locally based workforce.

Infrastructure - Electricity

The area is totally powered by hydro power. Tanbreez has signed an agreement with the Greenland government power company (Nukissiorfiit) to supply all the projects power needs. Thus, the company anticipates that in Greenland the company will have a minimal, if not zero, carbon footprint.

Infrastructure – Water

On the Tanbreez licence there are 2 freshwater creeks, the smaller of which is headed by Fostersø Lake.

5.0 HISTORY

History of the discovery & exploration

The discovery of uranium at the northern end of the intrusion in the 1950's meant two groups were intensely exploring from 1960 to 1980. In the north, outside the current licence, the Danish government was exploring for uranium and a cryolite mining company in the south, was exploring the eudialyte. This spurred on much activity, hundreds of papers, books, comparison with the large eudialyte deposits on the Kola Peninsula at Lovozero and Khibina. After the Danish government decided against going nuclear and the cryolite company decided to halt its zirconium research the exploration faded away in the 1970s.

Eudialyte Exploration 1985 to the Present

Exploration of the zirconium-rich kakortokites continued in 1985, when the Danish company A/S Carl Nielsen obtained an exclusive licence to carry out exploration centred around the exposed kakortokites and the adjacent marginal pegmatite in the southern part of the complex. The thickest layer of red kakortokite, layer +16, was examined in two drill holes in 1986. During 1987, potentially economic eudialyte-rich parts of the marginal pegmatite, kakortokites and Naujaites within the concession area were mapped and sampled, and samples of the marginal pegmatite were metallurgically tested.

In 1987, the Canadian company Highwood Re-sources Ltd. obtained permission to explore areas be-tween the fjords Tunulliarfik and Kangerluarsuk and carried out bulk sampling and drilling to test the feasibility of exploitation of eudialyte-rich rocks. This company was joined by Platinova Resources Ltd. and Aber Resources Ltd. In 1988 this group and A/S Carl Nielsen formed a joint venture, combining their mineral licences. The main target was the exposed kakortokites, minor targets were the marginal pegmatites in the southern part of the complex. The joint venture co-operation was continued in 1990 with an extensive drilling programme and metallurgical testing of potential ores from the southern part of the complex. At the end of this activity the Canadian partners and the Danish participants went through a period of restructuring resulting in Highwood Resources taking over all interests in the prospect at the end of 1992.

In 1992 the Danish company Mineral Development International A/S (MDI) obtained the exclusive right to explore the sodalite-rich Naujaites in the northern part of the complex. The aim was to investigate the possibilities of using sodalite as raw material to produce synthetic zeolites.

Several research projects involving colleagues from other countries have been supported by various foundations. The Danish Natural Science Research Council supported a Canadian Danish project aiming at a comparison of the mineralogy of Mont Saint-Hilaire, Quebec, with the Narssârssuk mineral occurrence associated with the Igaliko Complex, South Greenland, and the Ilímaussaq complex. The Danish company First Development International A/S in 1993 supported a Danish–Russian project consisting of an examination of the drill cores from the 1977 drilling programme kept at the Risø National Laboratory. The aim was to find some of the water-soluble minerals discovered in the Khibina and Lovozero complexes. The drill cores are rich in villiaumite, but holes in the samples indicate that other water-soluble minerals have been dis-solved during and after drilling. Only one of the Kola minerals was discovered, natrophosphate.

In 1994–1997 INTAS (International Association for the Promotion of Co-operation with Scientists from the Independent States of the Former Soviet Union) supported a Danish–French Russian Spanish research co-operation with the purpose of promoting comparative studies of the mineralogy of agpaitic nepheline syenites in Ilímaussaq, the Khibina and Lovozero complexes of the Kola Peninsula, and the Tamazeght complex, Morocco. Field work was carried out in Ilímaussaq in 1994, in Khibina and Lovozero in 1997 and in Tamazeght in 1999.

The Danish Natural Science Research Council in 1997 supported an Austrian Danish research project with the purpose of studying pegmatites and hydro-thermal veins and the relations to their country rocks in the Ilímaussaq complex and at the Narssârssuk mineral locality associated with the Igaliko Complex in South Greenland.

The Tanbreez Deposit

Tanbreez parent company, Rimbal Pty Ltd, took up the Tanbreez licence in 2001 and the whole intrusion subsequently in 2005. It subsequently sold the northern part of the intrusion, including the previous uranium exploration areas to Greenland Minerals & Energy in 2007. Since then, that company has been able to establish a JORC deposit more than 1 billion tonnes of ore containing rare earth, uranium and zinc. In 2010 Rimbal transferred its initial licence into the Greenlandic company, Tanbreez Mining Greenland A/S, which, in 2012, applied for the Exploitation Licence, MIN 2020-54, that was granted in September 2020. Tanbreez is an anagram of the chemical symbols for tantalum (Ta), niobium (Nb), rare earths REE) and zirconium (Zr) - Ta-Nb-REE-Z.

The government of Greenland, and earlier Denmark, have completed several surveys of the region including Aerial magnetic survey, Aerial regional radiometric survey, Regional gravity survey and Regional geochemical survey.

Tanbreez has extended this with their own localised aerial magnetic, radiometric and topographic surveys. The aerial magnetic survey, radiometric survey and the gravity survey do not show any anomalies on this licence which was expected. With the radiometric surveys identifying the uranium and thorium anomalies associated with this deposit north of this licence. No radiometric anomalies were located within the Tanbreez Project.

Concluding remarks

An impressive number of papers have been published on the geology, mineralogy, petrology and geochemistry of the Ilímaussaq alkaline complex. Major exploration programmes have investigated the economic potential of rocks rich in uranium, zirconium, niobium and beryllium and the technical use of sodalite. Many remains, however, to be investigated and published.

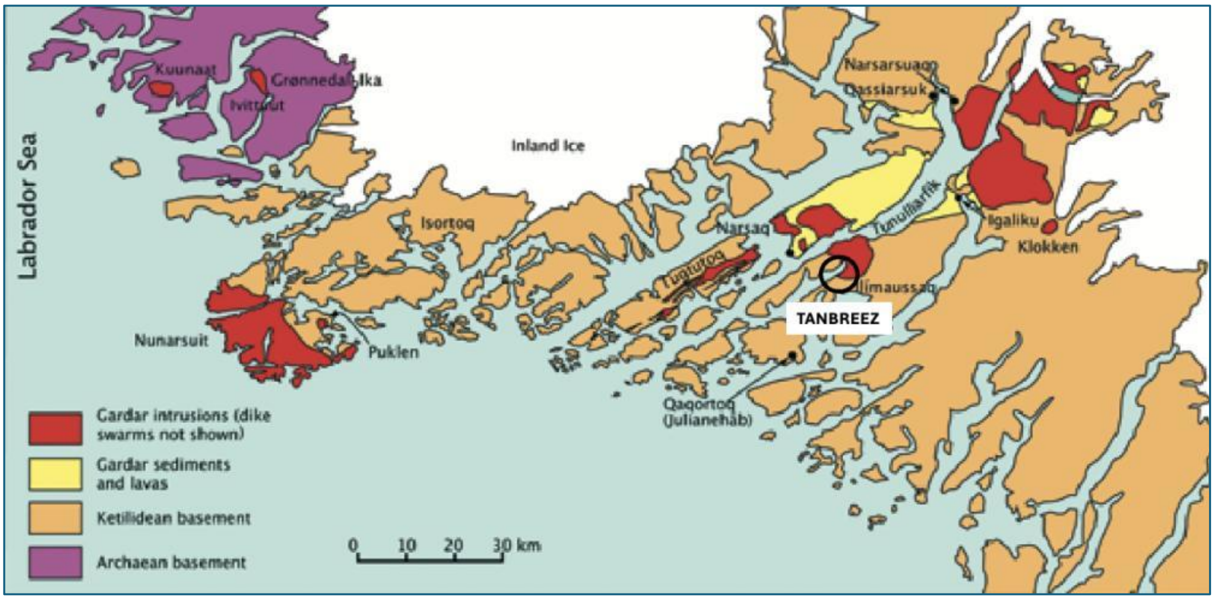
To gain a fuller understanding of the petrogenesis of the complex several drill holes were required, first in the deepest part of the kakortokites to explore the hidden layered floor series, and through the roof series to give access to the sheets of augite syenite, alkali granite, etc. occurring in a topography which makes access difficult. Many aspects of the geology of the complex have not yet been studied in detail, this applies for instance to the spectacular layering of some of the arfvedsonite lujavrites. Future drilling programmes and quarrying activities should take special measures to safeguard the water-soluble minerals because these must be collected immediately on exposure to the atmosphere.

The agpaitic nepheline syenites are among the most evolved igneous rocks known. Petrological studies of the rocks of the complex can therefore bring important knowledge about many natural petrological processes.

6.0 GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1 Regional Geology

The Ilímaussaq complex (1160 ± 5 Ma) is one of the youngest intrusions of the Gardar Province, South Greenland. This province is the product of a two-stage rifting event (1300–1250 Ma, 1180–1140 Ma) associated with the break-up of a Supercontinent. It constitutes dyke swarms, a volcanic-sedimentary graben fill sequence (the Eriksfjord Formation) and about a dozen volcanic igneous centres. Gardar magmas span a compositional range from alkali basalt to trachyte, alkali granite and strongly peralkaline nepheline syenites with local occurrences of lamprophyre and carbonatite.



The Ilimaussaq Complex and Tanbreez location

Ilímaussaq hosts some of the most chemically evolved magmatic rocks on Earth and is the type locality for agpaitic rocks. The complex was emplaced at 3 to 4 km depth (1 kbar), intruding into the Eriksfjord Formation and granites of the Julianehåb Batholith (1800 Ma). The complex is roughly disc-shaped with approximately 1500 m of vertical exposure and horizontal dimensions of about 17 by 8 km.

Emplacement occurred by at least four successive melt batches that were derived from a common, deep-seated magma chamber. The first batch crystallised a metaluminous augite syenite that is preserved in the roof zone and around the intrusion to the south. The second melt batch produced a thin sheet of peralkaline granite and quartz syenite. The third and fourth melt batches delivered the volumetrically dominant sequences, most of which crystallised eudialyte-group minerals. The third and fourth batch cored the earlier units and formed syenite and nepheline syenite, subdivided into a roof and a floor sequence, separated by a sandwich horizon representing the final and most evolved melt fraction. Crystallisation of the syenite started from the roof and progressed downwards to form conformable layers of pulaskite, foyaite, sodalite foyaite and a poikilitic sodalite- floor sequence, although the true bottom of the magma chamber is not exposed.

The Ilímaussaq intrusive complex is one of several alkaline complexes formed during Mesoproterozoic rifting in the southwestern part of Greenland, which collectively is called the Gardar province. Ilímaussaq is the youngest major intrusion of the Gardar province. The Ilímaussaq alkaline complex is among the largest known alkaline complexes in the world and has been studied since the early 19th century.

The complex measures 17 by 8 km, and the exposed vertical thickness is about 1700 m. It is estimated that the complex was emplaced 3-4 km below the contemporary surface at the discontinuity between the Ketilidian crystalline basement and the overlying Eriksfjord Formation made up of continental sandstones and lavas of mainly basaltic composition. The basement and the overlying sandstones and lavas are intruded by numerous mainly basaltic dykes. The Eriksfjord Formation is the surface expression of Gardar activity and is preserved only in down-faulted blocks. The basalts in the part of the Gardar rift zone which contains the Ilímaussaq igneous complexes are richer in alkalis, P, Ba, Sr, Nb and LREE than the basic rocks in other parts of the Gardar province.

Ilimaussaq as the final and youngest intrusion all these volatile minerals developed into one large pegmatite-like body. This intrusion is some 18km long, 8km wide and at least 4km deep, super enriched in these elements. So much so that one of the main rock forming minerals, eudialyte, is a zirconium mineral with the rock perhaps 50 times enriched over the original magma.

The spectacularly layered kakortokites in the mountain known as Kringlerne (Tanbreez). Each unit begins with a black layer, followed by a red layer and topped with a white layer.

Kakortokite Summary

Kakortokite is a rare, layered igneous rock composed primarily of feldspar, eudialyte (a zirconium-rich silicate), and arfvedsonite (an iron-rich amphibole). It is notable for being a major host rock for rare earth elements (REEs), zirconium, and other critical minerals. Major Occurrences include the: Ilímaussaq Complex, Greenland (including the Tanbreez and Kvanefjeld deposits), Lovozero Massif, Russia, Mont Saint-Hilaire, Canada.

Rare Earth Elements (REEs)include high concentrations of heavy REEs (HREEs), crucial for advanced technology, Zirconium & Hafnium: Used in nuclear reactors and aerospace, Low Uranium & Thorium: Unlike carbonatite-hosted deposits, kakortokite has minimal radioactive elements, making extraction easier and more environmentally friendly. Applications include Green Energy: REE magnets for wind turbines and EVs, Defence & Aerospace: Advanced alloys, radar, and missile guidance systems, Electronics: Smartphones, semiconductors, and lasers.

Comparison to Carbonatite Deposits

Feature	Kakortokite (e.g., Tanbreez, Greenland)	Carbonatite (e.g., Bayan Obo, China)
REE Type	High in Heavy REEs (HREEs)	Mostly Light REEs (LREEs)
Uranium/Thorium	Very Low	High (Environmental & Regulatory Issue)
Main Minerals	Eudialyte, feldspar, amphibole	Bastnäsite, monazite, fluorocarbonates
Processing Complexity	Moderate	High (due to radioactive elements)

The Tanbreez Project in Greenland is one of the largest known kakortokite-hosted REE deposits in the Western sphere. Its high concentration of HREEs and low environmental risks (due to minimal uranium/thorium) make it a strategic alternative to China-dominated REE sources.

Prospective Units of the Ilímaussaq Complex

The Ilimaussaq intrusion has a distinctive number of units and horizons numbering about 257 separate recognisable units. However, these can be split into just 8 main units, some of which are heavily mineralised and some which are not. From the oldest these are:

i). **The outer syenite shell** – non mineralised and vertical dipping. Originally it is possible these were several steeply dipping cores of syenite of which only the outer survives the various metasomatic events. This unit occurs in this licence.

ii). **The upper series** – composed of foyaites, sodalite foyaite and an alkali granite. These are about 40m thick and have no economic significance and outcrops north of this licence.

iii). **Black Madonna** – a very fine grained quelsh which is at least 200m thick and may be part of the original magma chamber. It is enclosed above and below by the kakortokite which it predates. It has no economic significance. At both its top and bottom this unit has been metasomatised to kakortokite. It is only known from drill holes on this licence.

iv). **Naujaite** – A sill some 600m thick that occurs just beneath the upper sequence. The rock is a nepheline syenite composed of nepheline, feldspar, eudialyte, and sodalite. Within this are considerable amounts of eudialyte which contain all the zirconium, niobium, tantalum and rare earths of this unit. The overall grade is about a 1/3 of that of the kakortokite, between 0.5 and 1.0% $Zr\ O_2$. While perhaps economic elsewhere such as Lovozero in Russia its grade does not compare with the lower and younger kakortokite in significance. The main unit does in places have high grade metasomatic replacement zones of all most pure eudialyte in a deposit called the EALS. Both the naujaite and EALS occur in the north of this licence.

v). **Kakortokite** - The main orebody in the sequence is about 400m thick and is composed of some 29 units with each unit composed of 3 bands of:

a) Red – eudialyte rich band

b) Black – arfvedsonite rich band

c) White – Feldspar rich band

All these bands contain eudialyte and are economic for eudialyte recovery. The units come in 3 specially separated groups:

a) Lowest – a group of 3 units (labelled alpha, beta & gamma) below the Black Madonna and undoubtedly further units exist below the level of the drilling. These are probably too deep to mine being approximately 300m from the surface.

b) Main sequence – the lowest being Unit -19 occurs at about 40m below sea level to the highest unit +20 at about 500m above sea level. These units outcrop almost fully in an area of 5 x 3km as a plateau. This contains all the published resources although undoubtedly further reserves occur down dip and along structure to the northeast. This mostly outcrops on this licence.

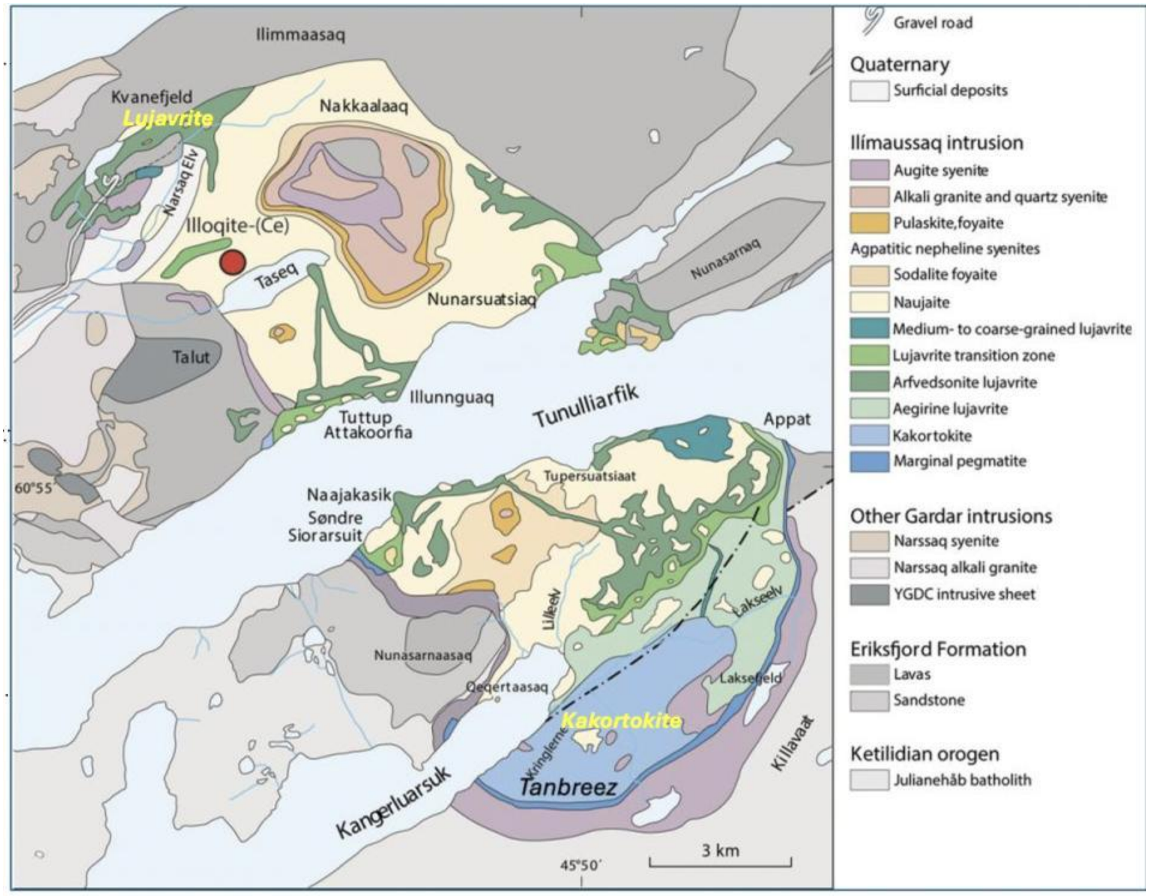
c) Northern Group (also known as Area C) – This sequence which is up to 60m thick occurs on the northern side of the Lakseelv fault. Here there are some 9 bands (labelled A to I) at a slightly higher grade. Their relationship to those on the other side of the fault the main sequence is still in dispute - although clearly of similar origin.

vi). **Green Lujavrite** – Stratigraphically above the top of the kakortokite the rock changes to a green lujavrite with the main change, the arfvedsonite, is replaced by green aegirine. The lower zone is mineralised at about 1.2% ZrO_2 and has been mapped by some drilling (here the less obvious red bands are labelled with roman numerals). Traditionally the green lujavrite is divided into two, the lower where the aegirine is plate like, and the upper which has aegirine in needle-like shapes small amounts of this occurs on this licence.

vii). **The central black lujavrite** – represents the continuation of the lujavrite sequence of rocks with the green lujavrites aegirine being replaced by the black mineral arfvedsonite. This has about 7 separate pulses of magma, three of which are possibly economic for light rare earth, uranium and zinc. This rock was deposited under very high P.H. perhaps as high as PH 13 for the latest pulse. These are absent from the Tanbreez licence but are the main ore for the Kvanefjeld mine of Energy Transition Minerals Ltd (formerly Greenland Minerals & Energy Ltd).

viii). **Fenites** – these are rocks that have resulted from the chemical reaction between the metasomatic fluids from the volcanic event with other earlier rocks and the country rocks. These rocks are characterised by large amounts of red haematite with good grades of light rare earths and uranium.

ix). **Other** – In addition to these basic units there are numerous smaller intrusions, dykes and pipes. Each unit does produce its own characteristic pegmatites characterised by unique minerals. There are also later intrusions of augite syenite as sills and dykes. In addition, there is also a green granite sill and feeder dyke (which is off the licence) and microsyenite dykes, with also feeder dykes to many units. There is also a large volume of metasomatic zones which occur as vertical zones (up to 0.5km in diameter). These metasomatic replacement zones are characterised by red haematite veins, epidote, sulphides and a unique REO mineral (these do not contain uranium).



Geological map of the Ilímaussaq complex. Tanbreez is hosted in the kakortokite unit. Kvanefjeld is hosted in the lujavrite (green)

The kakortokite-arfvedsonite-eudialyte-nepheline syenite known locally as naujaite. The lowermost exposed sequence, locally termed “kakortokite”, consists of medium- to coarse-grained agpaitic nepheline syenites, most of which are rhythmically layered. The kakortokite postdates the naujaite and is interpreted as a magmatic floor sequence, although the true bottom of the magma chamber is not exposed. The kakortokite sequence is subdivided from bottom to top into three structural subunits: the lower layered kakortokite, slightly layered kakortokite and transitional layered kakortokite.

A marginal pegmatite zone, about 50–200 m wide, separates the kakortokite from the augite syenite. The TLK conformably grades upwards into finer-grained and strongly foliated melanocratic eudialyte-nepheline syenite known as lujavrite. The lujavrite occurs in aegirine and arfvedsonite dominated varieties, of which the latter represents the chemically most evolved rock type of the complex. The lujavrite and the kakortokite represent the fourth and final melt batch but may have been formed by several pulses of melt.

Augite syenites

The augite syenite shows a xenomorphic texture with grain size varying between 2 and 20 mm. The main minerals are strongly exsolved perthitic alkali feldspar, olivine, clinopyroxene and Fe–Ti oxides. Sodalite fayalites. This rock type is typically medium to coarse grained with grain sizes up to 20 mm. The main minerals are euhedral perthitic alkali feldspar, nepheline, sodalite, olivine and resorbed relics of augite, sector-zoned Na-rich clinopyroxene, aenigmatite, fluorite, rare eudialyte and zoned ferrorichterite. Analcime appears to occur as a late liquidus phase, but most analcime forms together with secondary sodalite by replacement of primary sodalite and nepheline.

Kakortokites

Kakortokite is a medium- to coarse-grained nepheline syenite and forms the main magmatic layered part of the intrusion in the southern part of the complex. Most of the 29 described units consist of three layers, which are named based on colour. Basal black layers of predominantly arfvedsonite are followed by red layers rich in eudialyte, then by white layers rich in nepheline and alkali-feldspar, which are generally the thickest. The layers maintain a consistent thickness throughout a unit. Although most of the units contain all three layers, some do not. Black layers have abrupt lower contacts with subjacent white layers but typically pass gradationally upwards to red layers. The units are labelled based on their position with respect to a marker unit called zero (e.g., unit +16 is the 16th unit above the marker; unit -3 is the 3rd unit below the marker).

Naujaites

Naujaite is a cumulate rock consisting of large (up to 5 mm) euhedral sodalite crystals that floated to the top of the magma chamber. Later crystallising phases are mainly nepheline, alkali-feldspar, aegirine, arfvedsonite, and eudialyte, which result in a predominantly poikilitic texture. Individual feldspars can be up to 25 cm, and both aegirine and arfvedsonite can form crystals up to 30 cm. The amount of eudialyte in naujaite is inconsistent and it may be completely absent. Rinkite is a common accessory mineral in naujaite, which is the most exposed rock in Ilímaussaq.

Lujavrites

Lujavrite is a meso- to melanocratic agpaitic to hyperagpaitic syenite with a pronounced lamination caused by the orientation of mafic minerals and, in part, felsic minerals such as feldspars. The two most abundant varieties of lujavrite in Ilímaussaq are named based on colour: in green lujavrite the predominant mafic mineral is aegirine; in black lujavrite, the main mafic mineral is arfvedsonite. The felsic minerals in lujavrite are nepheline, albite, microcline, and sodalite. Lujavrites are fine grained (up to 0.6 mm), but sodalite grains can be up to 2 mm and mafic minerals up to 1 mm. A coarser type of lujavrite is called M-C-lujavrite (medium to coarse grained), in which the individual grains can reach sizes of more than one cm and are locally pegmatitic. A fourth type, naujakasite lujavrite, contains naujakasite and is associated with the highly agpaitic stage of the complex. In these lujavrites, naujakasite generally occurs at the expense of nepheline. Locally the lujavrite contains up to 75 % volume naujakasite. The water-soluble mineral villiaumite is abundant in most of the lujavrites but has been leached out in some near-surface rocks. Lujavrite is the rock unit containing the highest amounts of incompatible elements and is the major ore of the Kvanefjeld deposit.

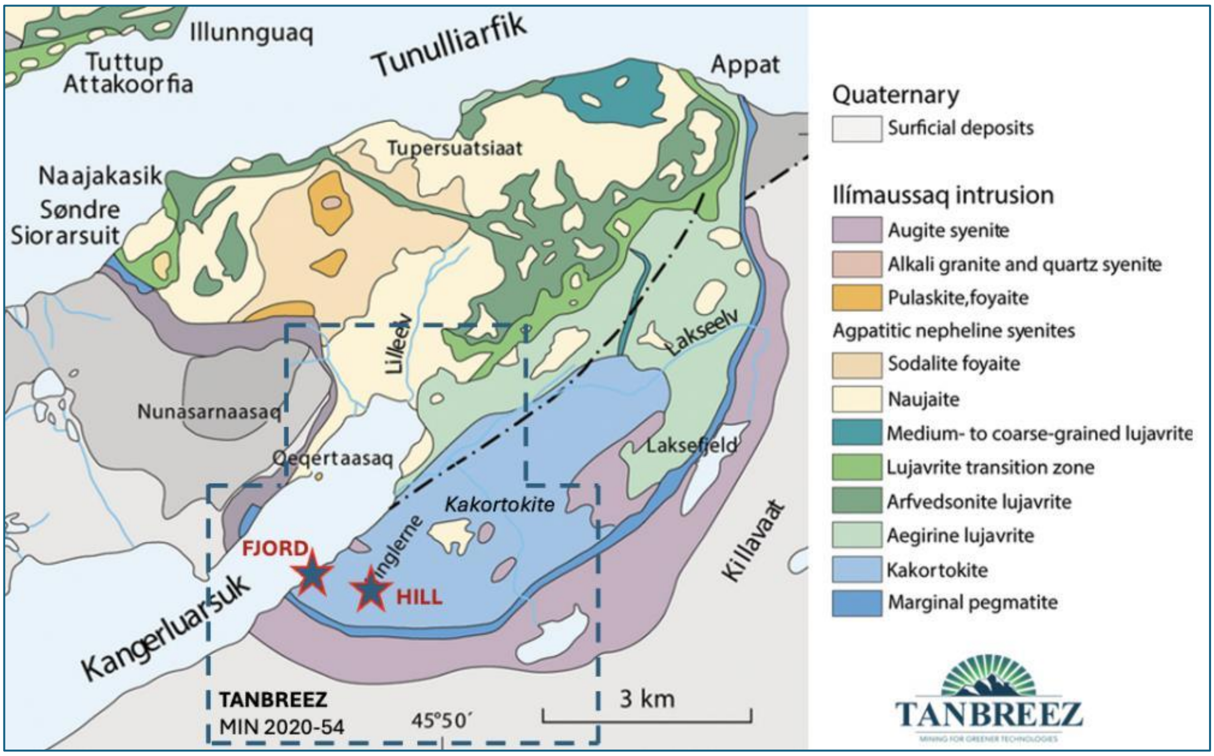
Structure of the Kakortokite Sequence

Layered Kakortokite Sequence

The exceptionally well-exposed kakortokite in combination with the subhorizontal structure of the sequence were used to estimate the tonnage of the lower layered kakortokite in 1971. The calculation was based on detailed mapping of the 29 rhythmic units in the exposed part of kakortokite. The estimate was repeated in 2005 based on the geological map of the Southern part of the IlÍmaussaq Complex. These historic estimates measured 209m and 218m, respectively for the total thickness of the lower layered kakortokite, which is within the expected uncertainty of this kind of survey. The volume of kakortokite was determined using a planimeter to measure the area on the map between the contours of the different rhythmic units.

The stratigraphic borehole DX-01 was drilled in the central part of the kakortokite Sequence in 2010 and shows a total thickness of the lower layered kakortokite of 270 m, which is 35 m more than the measured thickness on the surface. The difference in thickness cannot convincingly be explained by the uncertainty in the measurements but is most probably related to structural conditions. This makes the correlation between numbered layers on the surface and the layering observed in drill cores difficult, except for correlation over short distances and involving kakortokite layers with very characteristic textures.

6.2 Local and Property Geology



Kakortokite outcrop dominates the Tanbreez Area east of the Kangerluarsuk Fjord.

The kakortokite is well-exposed along the Kringlerne coast, east of the Kangerluarsuk fjord. It constitutes a modal mineralogy of alkali feldspar, nepheline, arfvedsonite and eudialyte with minor sodalite, aegirine, aenigmatite and fluorite. The LLK forms an approximately 234 to 269-metre-thick sequence consisting of at least 29 tripartite modally layered units. Each unit is on average 8 m thick and consists of a basal black layer dominated by arfvedsonite followed by a thin red layer rich in eudialyte (sometimes poorly developed) and sealed by a thick white top layer rich in feldspar and nepheline.

Layers are numbered '−11 to +17' in relation to a well-developed marker horizon '0' and suffixed with a letter indicating their respective colour (B for black, R for red, W for white). A fine-grained unlayered melanocratic rock type intersects the LLK between unit −7 and −2 and has most commonly been referred to as a "slumped" kakortokite, or more recently described as a "hybrid" sequence between a more primitive Ti-rich melt that mixed with the kakortokite crystal mush.

The approximately 50-metre-thick sequence of SLK starts on top of the last recognisable three-layer unit (+17), but, due to poor exposure and severe alteration, a detailed investigation is unavailable to date. The overlying, approximately 60-metre-thick TLK crops out north of the Lakseelv Valley and shows an upward decrease in grain size and an increase in the ratio of aegirine to arfvedsonite. Layering is less pronounced and rhythmic than in the LLK and identified units, separated by eudialyte-rich horizons, were labelled with the letters A to I from top to bottom.

Both the Fjord and the Hill rare-earth mineral sites are located within a kakortokite batholith covering an area of approximately 5km x 2.5km, on the south side of the Kangerluarsuk Fjord.

The layered Ilimaussaq intrusion, host of the Tanbreez Project (middle ground plateau)

The exposed sequence rises from the Fjord up to about 400masl and is comprised of 95% kakortokite and 5% other rocks, mostly syenite dykes and sills.

The Kakortokite is a rhythmically layered intrusion, composed of arfvedsonite, eudialyte, alkali-feldspar and nepheline with some sodalite, that dips shallowly to the north at about 10-15^{o}. This layering is composed of black, red and white layers with the colours reflecting enrichment of various minerals:

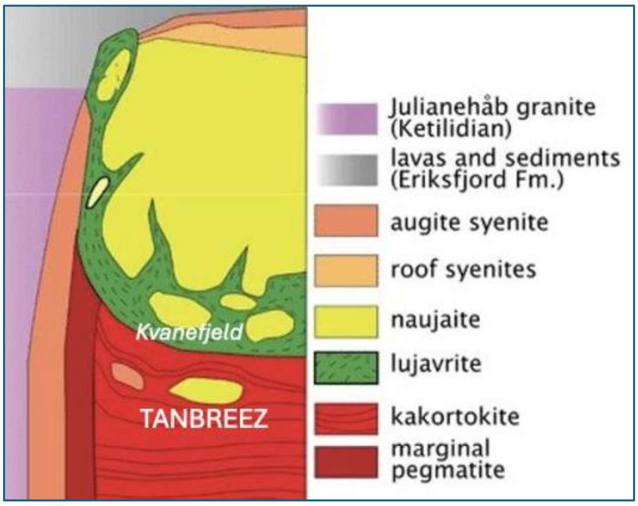
- The black layers are enriched in arfvedsonite.
- The red layers are enriched in eudialyte.
- The white layers are enriched in alkali-feldspar and nepheline with local sodalite.

Conventionally, each coloured horizon (black, red, white) is termed a layer. Each of the three layers together form a unit composed of black, red and white layers in ascending order. The exposed part of the kakortokite consists of 29 units labelled +1 to +17 and -1 to -11 above and below respectively of a datum 'unit 0'. Drilling has revealed that more units also occur below the surface and as part of the Black Madonna litho-stratigraphy.

This layering stands out clearly from the distance however it is not always so obvious up close and in drill core. Some layers are faint while others are much more strongly developed There is a pronounced thickness variation between layers as well as in texture and grain size which helps in identifying marker horizons.

On average a unit is about 12.5m thick however they are not always fully developed and in some cases with black/red layers very faint or missing. An approximate average thickness of the individual black, red and white layers is 1.5m, 1m and 10m respectively.

The eudialyte content of the black and white layers is similar with a little less than 10% by volume, whereas the eudialyte content of the red layers is around 30 - 40% vol.



The Tanbreez REE deposit is hosted in the rhythmically layered basal kakortokite series (red) whereas the Kvanefjeld REE deposit is associated with the highly fractionated arfvedsonite-lujavrite (green).

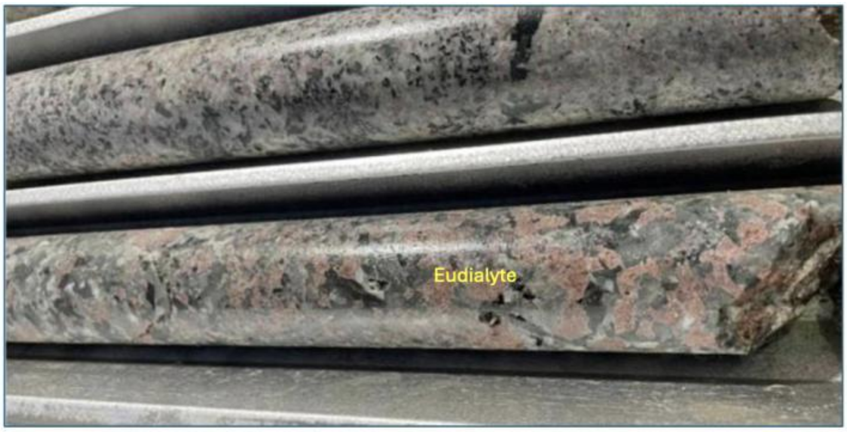
6.3 Mineralization

The Tanbreez Project is one of the world's most significant rare earth element (REE) deposits, hosted in the Ilímaussaq Alkaline Complex. The mineralization is primarily associated with the peralkaline syenite rocks, especially the kakortokite and lujavrite layers.

Kakortokite is the dominant host rock for mineralization at Tanbreez. It is composed of rhythmic layers of feldspar, arfvedsonite, aegirine, and eudialyte. The mineral eudialyte is the primary REE-bearing phase. Lujavrite (Secondary Host) is a darker, REE-enriched nepheline syenite that also contains eudialyte, but in a more complex mineralogical setting. The units are enriched in zirconium, niobium, and tantalum.

The primary REE-bearing mineral is Eudialyte, the key carrier of light and heavy REEs, along with zirconium (Zr), niobium (Nb), and tantalum (Ta). Unlike monazite and bastnäsite, eudialyte has low uranium (U) and thorium (Th), making it attractive for mining. Heavy REEs include Dysprosium (Dy), Yttrium (Y), Terbium (Tb). Light REEs include Neodymium (Nd), Praseodymium (Pr), Lanthanum (La). The deposit is especially rich in HREEs, which are critical for high-tech applications.

Additional mineralization includes Zirconium (Zr), and Niobium (Nb) hosted in eudialyte and catapleiite minerals. Zirconium is an important material for nuclear reactors and ceramics. Niobium is used in superalloys and high-strength steels. Iron and Titanium are present as aegirine (iron silicate) and ilmenite (iron-titanium oxide). Unlike many REE deposits worldwide, Tanbreez has low levels of radioactive elements (U, Th), making processing easier.



Coarse grained Eudialyte (pink) in drill core from the Tanbreez Hill area demonstrating the coarse nature of the mineralisation(assays are included in the MRE estimate.

Styles of Mineralisation

The Ilimaussaq intrusion has several different styles of mineralisation. The company has assessed most but with a government ban on uranium those with uranium are not currently being explored.

Kakortokite

The kakortokite unit is a distinctively banded group of eudialyte bearing nepheline syenite layers which are the lowest exposed unit in the intrusion. The kakortokite has been the subject of the most extensive exploration in the whole intrusion with over 400 holes, over 709 tonnes of bulk samples and over 500,000 assays. The kakortokite is characterised by three groups of minerals, each with a distinctive colour:

- Red – eudialyte, ~ 2-6% ZrO_2
- Black – arfvedsonite, ~ 1-2% ZrO_2
- White – feldspar, nepheline and sodalite, ~ 1% ZrO_2

The deposit consists of the 3 bands, one of each colour that make up a unit with over 50 units mapped. However, each band itself is economic with the average grade of about 1.9% ZrO_2. Bands range from 1m to over 10m thick. They persist over large areas seen on the cliff face.

Eudialyte Summary

Eudialyte is a rare, complex silicate mineral that serves as an important source of zirconium, niobium, and heavy rare earth elements (HREEs). It is typically found in peralkaline igneous rocks, such as kakortokite. Eudialyte is primarily found in peralkaline igneous complexes, including Ilímaussaq Complex, Greenland (Tanbreez deposit), Kola Peninsula, Russia (Lovozero and Khibiny massifs), Mont Saint-Hilaire, Canada, and Norra Kärr, Sweden.

Economic Importance: Rare Earth Elements (REEs): High concentrations of Heavy REEs (HREEs) like dysprosium and terbium, Zirconium & Niobium: Used in nuclear reactors, aerospace, and high-strength alloys, Low Uranium & Thorium: Unlike monazite and bastnäsite (common in carbonatite deposits), eudialyte has very low radioactive elements, making processing safer and more environmentally friendly.

Comparison to Other REE Minerals

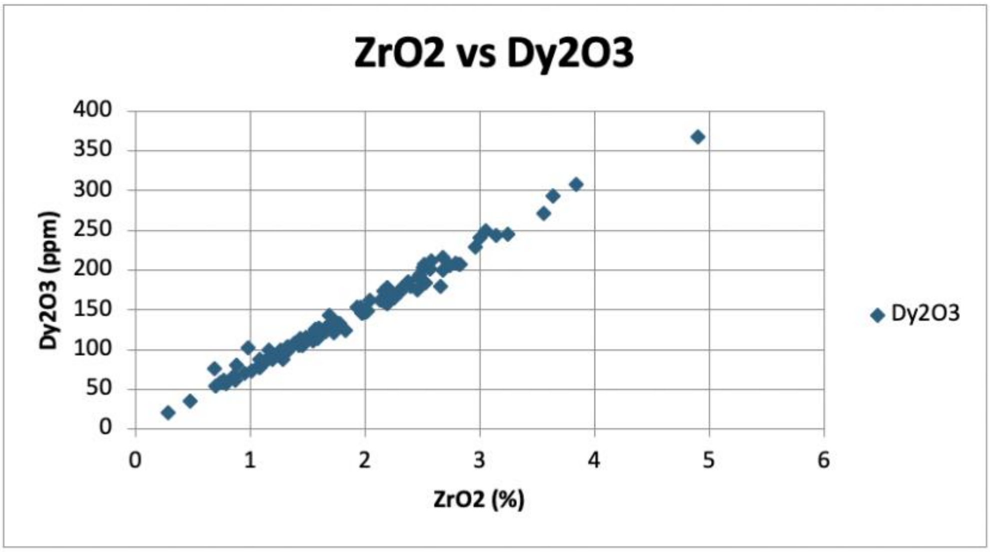
Feature	Eudialyte (Kakortokite-hosted, e.g., Tanbreez)	Monazite (Carbonatite-hosted, e.g., Bayan Obo)	Bastnäsite (Carbonatite-hosted, e.g., Mountain Pass)
REE Type	Heavy REEs (HREEs)	Light & Medium REEs	Light REEs
Uranium/Thorium	Very Low	High	Moderate
Processing Difficulty	Moderate	High (due to radioactivity)	Moderate
Main Locations	Greenland, Russia, Canada	China, Australia, India	USA, China

Industrial Applications: Electric Vehicles (EVs): High-performance magnets (NdFeB), Wind Turbines: Permanent magnets for generators, Aerospace & Defence: Radar, missile systems, and jet engines, Electronics: Smartphones, semiconductors, and medical imaging,

Significance of Eudialyte in the Tanbreez Deposit: Tanbreez is one of the largest known eudialyte-rich REE deposits, providing a strategic, non-Chinese source of heavy rare earths. Low environmental impact due to minimal uranium and thorium content. Western-controlled REE supply, reducing reliance on Chinese production.

Ratio of ZrO_2 to REO

There is a clear relationship between ZrO2 and REO (using Dy_2O_3 as a proxy) and the median that was used to estimate REO values for the earlier drilling programs.



Relationship with zirconium oxide and dysprosium oxide over 203 samples

2013 Drilling	ZrO2 %	TREO %	HREO %	LREO %	HREO % %	TREO: $Zr0_2$
Average	1.70	0.45	0.12	0.33	27.1%	0.26
Median	1.43	0.39	0.10	0.28	26.7%	0.27
Minimum	0.01	0.02	0.00	0.02	18.1%	1.99
Maximum	7.38	1.72	0.48	1.28	27.8%	0.23

Average grade statistics of TREO light and heavy REE's in relation to ZO_2

High Grade Intercepts, 2024

Critical Metals Corp. (CRML) has completed due diligence and has undertaken a recent drilling program at Tanbreez Fjord for confirmation, extension and infill drilling to prepare the project for Mine Development Studies and anticipates assay results will be available in the near future.

CRML. has received the results for the first drill hole from its 2024 drilling program. This first drill hole was strategically positioned to both confirm the existing mineralization and enhance the overall quality control process for the mineral body at the Tanbreez Project.

The drill hole commenced at an elevation of 19 meters above sea level and entered a unit of the Tanbreez Project at a depth of 40 meters. The 40-meter section of the drill hole averaged 1.82% ZrO_2, 0.47% TREO (of which 27% is the average heavy rare earth content), 0.19% Nb_2O_5, 130 ppm Ta_2O_5, 395 ppm HfO2, and 102 ppm Ga_2O_3.

Based on initial results obtained from Critical Metals Corp's recent drilling program, four high-grade zones have now been identified on the site.

High Grade Zones:

- Unit Zero – This unit is up to 5 meters thick and is located approximately 50 meters behind the proposed plant location. This unit represents a potential target for future exploration.
- Base of the Kakortokite – At this zone there is a metasomatic replacement by eudialyte of the underlying unit. The unit possesses a high-grade of rare earth element material, which is located approximately 40 meters below the surface.
- EALS – This horizon is entirely separate from the Kakortokite and occurs within the overlying naujaite. In some areas, the unit is high-grade and can be traced for approximately 3 kilometres, with a thickness of up to 80 meters. This year, the company conducted surface diamond drilling and extensive sampling across the unit. The EALS horizon contains many pegmatites and returned significant assay results, including grades exceeding 5% ZrO_2 and more than 2% REO. Notably, the percentage of heavy rare earths within the rare earth fraction ranged up to 40.8%.
- Area G – This area, identified this year, spans over 1 km² and contains extensive late-stage pegmatites and pegmatite scree. The area also holds high-grade ore in a zone that will adjoin the proposed road to the tailings area. There was a high concentration of Gallium discovered in this zone, with values reaching up to 147 ppm Ga_2O_3.

Layered Kakortokite Sequence with 13 of the 29 identified layers

6.4 The Kakortokite Unit

An estimate of the size of the Kakortokite unit within MIN 2020-54 (the Tanbreez Project) was announced in 2014 at ERES2014: 1st European Rare Earth Resources Conference, 04-07/09/2014 and published in the 'Rare Earths Industry, Technological, Economic, and Environmental Implications publication, 2016, Pages 73-85' (*the" Schonwandt Paper")*:

> *Schønwandt. H.K., 2016, A Description of the World-Class Rare Earth Element Deposit Tanbreez, South Greenland— Rare earth Industry, 2016, Chapter 5, page 73-85, Hans K. Schønwandt, Gregory B. Barnes, and Thomas Ulrich.*

Abstract

"The Tanbreez deposit is a highly fractionated ortho-magmatic Zr-Nb-Ta-REE deposit in the southern part of the 1.13Ga old Ilímaussaq intrusive complex in South Greenland. The commodities are hosted in the zirconosilicate mineral eudialyte, occurring concentrated in kakortokite at the floor of the exposed intrusion. The kakortokite sequence is outcropping over an area of 5 x 2.5 km and has a total thickness of 335 m. A conservative estimate specifies the unit to more than 4 billion tons. Linear correlations between ZrO_2 and individual REE indicate that eudialyte is by far the main REE bearing mineral in kakortokite. Estimated average grades are 1.75% ZrO_2, 0.18% Nb_2O_5 and 0.6% total REO, of which heavy REE make up 30% (including yttrium)."

Mr. Hans Kristian Schonwandt was responsible for much of the drilling, supervising the QA/QC, standards etc. Mr Schonwandt is a member of the Danish Professional institute, IDA. 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.*

The owner of the tenements and lead geologist Mr. Greg Barnes is a competent person, who is a member of the AusIMM. Mr Barnes has been responsible for field work, determination of grades and relationship between metals.

Surface exposure of the kakortokite unit

- The Tanbreez rare earth element (REE) deposit in South Greenland is a world-class mineralised unit hosted within the Ilímaussaq intrusive complex. The deposit is primarily composed of kakortokite, a layered rock rich in zirconium (Zr), niobium (Nb), tantalum (Ta), and REEs, particularly in the mineral eudialyte. Covering an area of approximately 5 x 2.5 km with a thickness of 335 meters.
- Geologically, Tanbreez is part of the Meso-Proterozoic Gardar Province, formed around 1.13 billion years ago. The complex is made up of three main phases of rock formations, with the kakortokite sequence positioned in a saucer-shaped structure, dipping at 10-15 degrees. The deposit is bounded by the Black Madonna unit below and lujavrite above.
- Ore grades in the deposit include 1.75% ZrO_2, 0.18% Nb_2O_5, and 0.6% total REO (including yttrium), with heavy REEs making up approximately 30% of total REO content. The deposit is notable for its low uranium (20 ppm) and thorium (53 ppm) content, making it more viable for processing (announced in the *the" Schonwandt Paper)*.
- Tanbreez Mining Greenland A/S, owned by Rimbal Pty Ltd (Australia), holds the exploration license and plans initial mining operations near Kangerluarsuk. The combination of significant volume, well-defined ore zones, and favourable geochemistry, positions Tanbreez as a key potential supplier of critical REEs outside China.

Size of the Kakortokite Unit

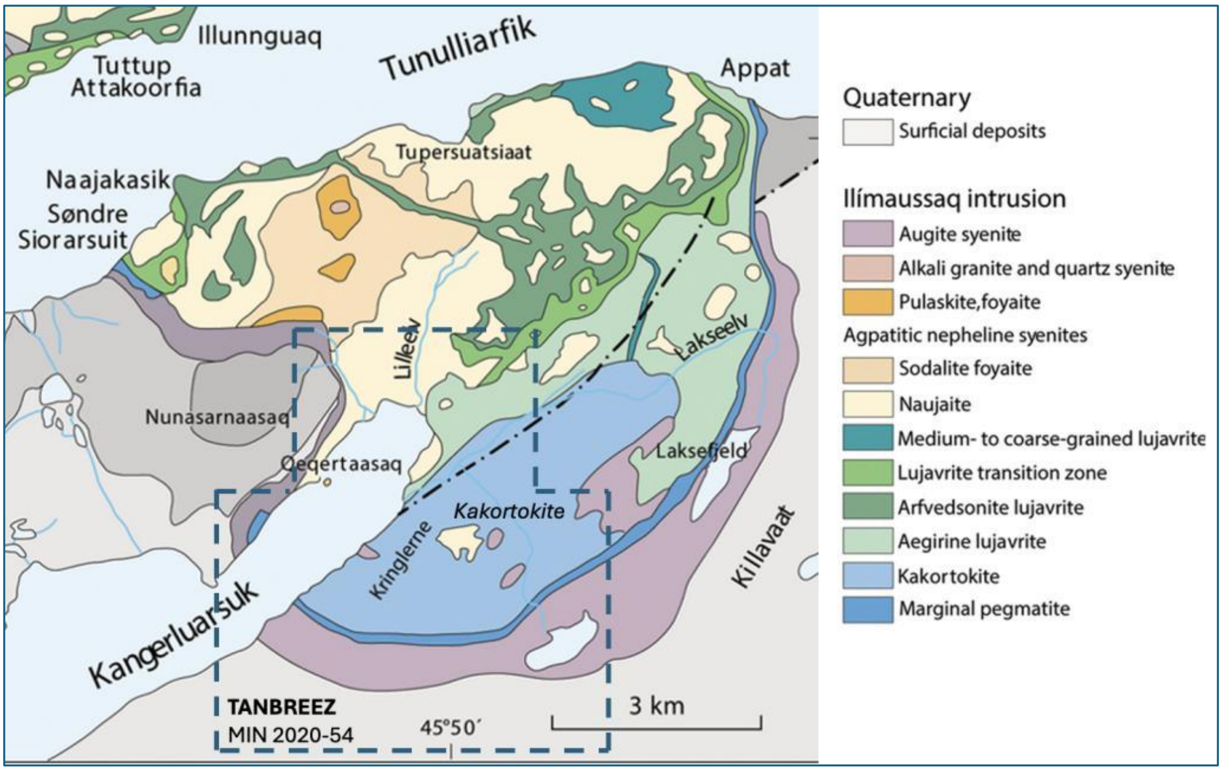
The Kakortokite Unit within the Tanbreez REE deposit in South Greenland is a large, well-exposed, and layered rock formation that serves as the primary host for zirconium, niobium, tantalum, and rare earth elements. The body spans an area of approximately 5 km by 2.5 km and has a total thickness of ~350 meters based on deep drilling, making it one of the most substantial REE-bearing formations globally.

Structurally, the kakortokite sequence is characterized by a saucer-shaped geometry, with steep to vertical layers at the periphery that transition into a gentle dip of 10-15 degrees towards the centre. It is divided into three distinct subunits: the Lower Layered Kakortokite (LLK) at 209 meters, the Slightly Layered Kakortokite (SLK) at 35 meters, and the Transitional Layered Kakortokite (TLK) at 40 meters. The deposit is overlain by lujavrite and underlain by the Black Madonna unit, which has been encountered in drill cores but remains unexposed at the surface. The substantial thickness, extensive exposure, and well-defined stratification of the kakortokite make it a world-class mineralised body, holding immense economic and industrial significance.

- *The kakortokite unit is roughly oval with a long dimension of 5 km and a short dimension of 2.5 km. The estimated area is approximately 10 square kilometres based on the oval shape. The thickness of unit is based on deep drillholes that demonstrated thickness in excess of 350m. Approximately 45% of the assays from the 2013 drilling program exceeded the lower cutoff, suggesting 40% to 50% of the unit is mineralised. The density of the unit is approximately 3 tonnes per cubic metre and the mass of the kakortokite unit is estimated to be in the range 4.2 to 5.3 billion tonnes with an average of approximately* ***4.7 billion tonnes*** *of material exposed in outcrop and in creek sections.*

KAKORTOKITE MASS ESTIMATE		
Length	~5.00	km
Width	~2.50	km
Surface Area	~10	km^2
Thickness	~350	metres
Density	3.00	tonnes/cu.m.
Prospective layers	40% to 50%	Over 0.3% TREO
Prospective Kakortokite	4.2 to 5.3	Billion Tonnes
Average Estimate	~4.7	Billion Tonnes

Estimate of Kakortokite tonnage



The Kakortokite unit within the Ilimaussaq Complex

Kakortokite Assessment

The Tanbreez REE deposit in South Greenland contains significant concentrations of zirconium (Zr), niobium (Nb), tantalum (Ta), and rare earth oxides (REO), hosted mainly in the mineral eudialyte within the kakortokite sequence. A review of the JORC compliant 2013 drilling campaign based on a 1.5% ZrO_2 cut off indicated the following average grades.

	1.5% ZrO_2 Cut off				
	ZrO_2%	TREO%	HREO%	Ratio	Nb_2O_5%
Minimum	1.51	0.34	0.11	32%	0.15
Average	2.38	0.59	0.16	28%	0.24
Maximum	7.38	1.60	0.42	26%	0.70
Percent of total assays					45%
Based on 2013 drilling Program					

- Zirconium Oxide (ZrO_2): 2.4%
- Niobium Pentoxide (Nb_2O_5): 0.2%
- Total Rare Earth Oxides (REO, including Yttrium): 0.6%
- Heavy Rare Earth Elements (HREE) content: 28% of total REO

Mineralogy & Processing Considerations

- Eudialyte is the dominant REE-bearing mineral in the deposit.
- Bulk rock analysis shows strong linear correlations between Zr and REEs, confirming eudialyte as the primary ore mineral.

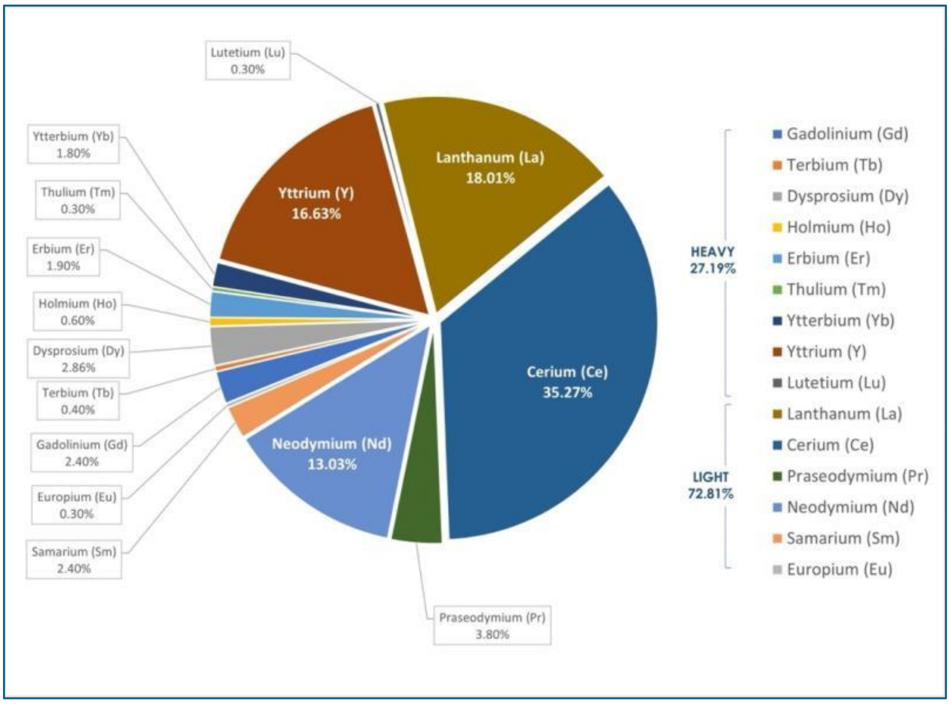
- The low uranium (16 ppm) and thorium (42 ppm) content makes ore processing more favourable compared to other REE deposits.
- This position Tanbreez as a world-class REE deposit, with a substantial mineral base and strong economic potential.

Assessments of the deposit in earlier studies show a variation in grade of the lower layered kakortokite between within the Eudialyte component that makes up 20% of the kakortokite. The average grade is higher than the average grade at the Tanbreez Hill and Tanbreez Fjord areas based on the 9-hole drilling program in 2013 and reflects widespread sampling throughout the kakortokite unit. The Tanbreez Hill and Tanbreez Fjord areas were selected as the start-up area because of the location close to the planned port area. Higher grade zones will be added to the portfolio in due course.

The commodities are all contained in eudialyte, a Na-rich zirconosilicate mineral. Eudialyte is by far the most abundant Zr bearing mineral in kakortokite, occurring in the black, white and red layers. The bulk rock data show close linearly correlation between ZrO_2 and Nb, Ta and light and heavy REO which is a clear indication that eudialyte is virtually the only REE-bearing mineral.

The distribution of the total REO in the kakortokite shows a quantity of 28% heavy REE (including Y) and 72% light REE. Investigations have shown that no or very little cryptic variation occurs in the minerals of kakortokite, consequently, little change in the eudialyte composition is expected in ore and therefore the magnetic properties of eudialyte would remain the same for the benefit of the planed magnetic concentration of eudialyte.

Importantly, drill core assays show elements such as U and Th have background values (20ppm and 53ppm, respectively), which is an advantage in processing the ore.



Proportion of the different REE+Y found in the Tanbreez deposit

The potential quantity and grade of the kakortokite unit are conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource in accordance with the JORC Code (2012 Edition). The estimate is based on extensive historic and Tanbreez exploration drilling (414 holes) coupled with the exposures in multiple creek sections. Investors should not place undue reliance on this information.

6.5 Deposit Type

The Tanbreez deposit is classified as a peralkaline igneous REE-Zr deposit, specifically hosted within the Ilímaussaq Alkaline Complex in South Greenland. It is, enriched in zirconium (Zr), niobium (Nb), and other critical metals. The formation Setting is a Mesoproterozoic continental rift-related intrusion (Gardar Rift) and is estimated at ~1.16 billion years

The Tanbreez ore deposit is a highly fractionated ortho-magmatic tantalum–niobium–zirconium–rare earth element (REE) deposit in the southern part of the 1.13-giga-annum–old Ilímaussaq intrusive complex in South Greenland. The commodities are hosted in the zirconosilicate mineral eudialyte, occurring concentrated in kakortokite at the floor of the exposed intrusion.

The kakortokite sequence is outcropping over an area of 5×2.5km and has a total thickness of 350 m, estimated at 4.7 billion tonnes that does not indicate any certainty of hosting mineralization. The estimate is conceptual in nature. It is based on extensive historic and Tanbreez exploration drilling (414 holes) coupled with the exposures in multiple creek sections. Investors should not place undue reliance on this information.

Linear correlations between ZrO_2 and individual REE indicate that eudialyte is by far the main REE-bearing mineral in kakortokite. Estimated average grades at 1.5% ZrO_2 cut off are 2.4% ZrO_2, 0.2% Nb_2O_5, and 0.6% total rare earth oxides, of which heavy REE make up 28% (including yttrium). Eudialyte, feldspar, and arfvedsonite concentrates can be obtained by crushing and milling the ore, with subsequent high-intensity magnetic separation. It is anticipated that apart from eudialyte, feldspar and arfvedsonite concentrates can be used.

7.0 EXPLORATION

7.1 Exploration Work

Between 2000 and 2025, the Tanbreez Rare Earth Project in southern Greenland progressed from initial exploration to advanced development, focusing on its substantial rare earth element (REE) resources.

Early Exploration (Before 2000):

Initial geological surveys and sampling identified the presence of eudialyte, a mineral rich in zirconium, niobium, tantalum, and REEs, within the Ilímaussaq intrusive complex. These findings prompted further investigative efforts to assess the deposit's potential.

Resource Delineation and Licensing (2000–2016):

Comprehensive drilling programs were conducted to delineate the deposit's scale and composition. These efforts culminated in the Greenland government's issuance of an exploitation license in August 2020, authorizing mining operations and marking a significant milestone in the project's development.

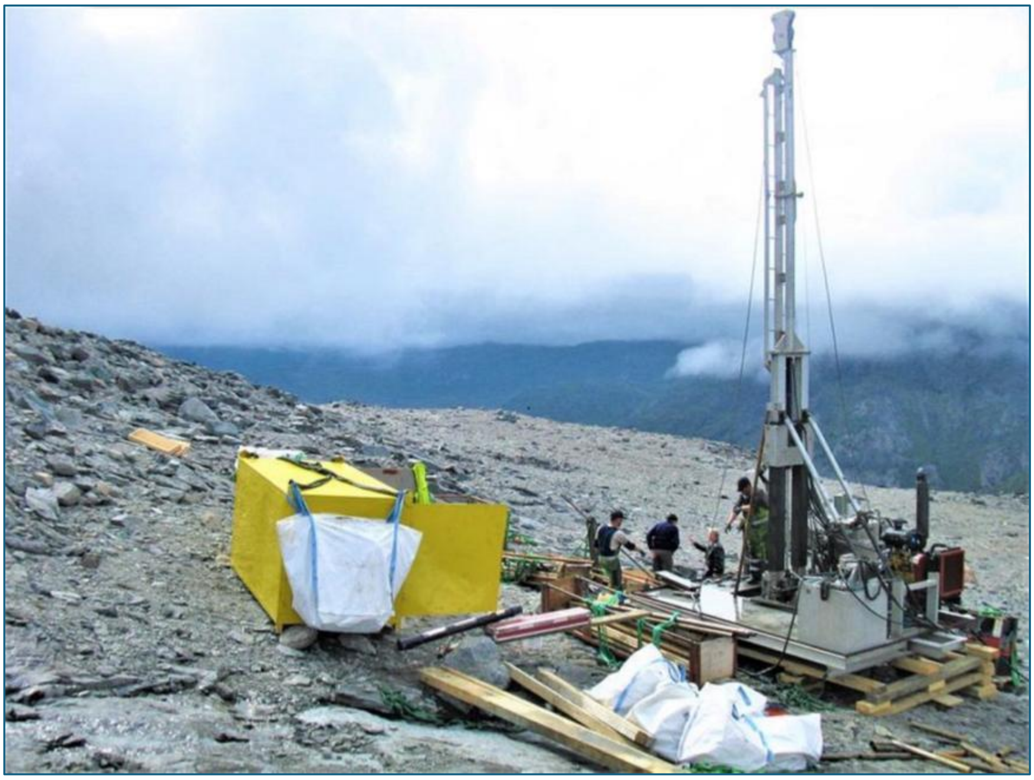
7.2 Geological Exploration Drilling

Between 2000 and 2013, the Tanbreez deposit in southern Greenland underwent extensive drilling to evaluate and confirm its rare earth element (REE) resources. Initial exploration efforts in the early 2000s focused on geological surveys and sampling, which identified significant mineralization of eudialyte—a mineral rich in zirconium, niobium, tantalum, and REEs—within the Ilímaussaq intrusive complex.

Drill access roads at Tanbreez

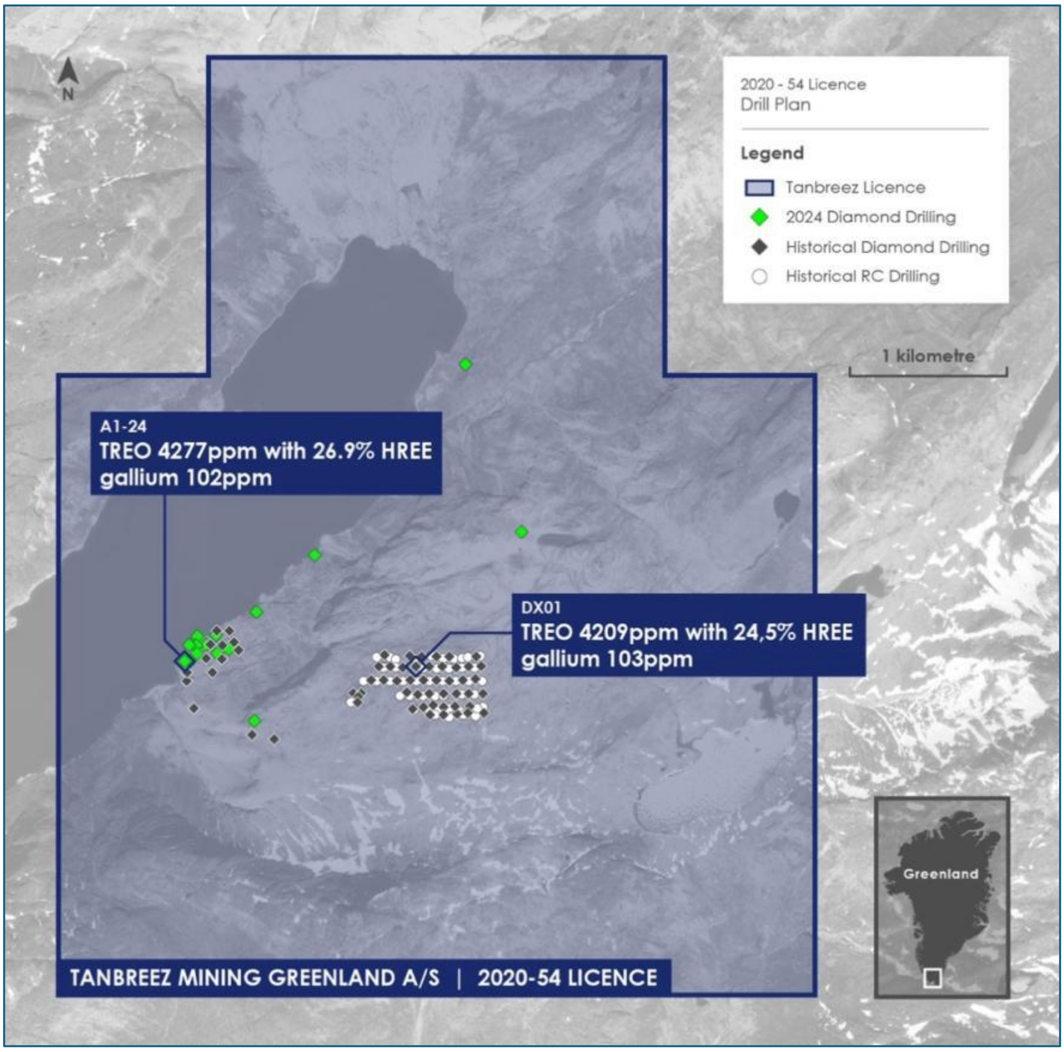
Key highlights of the drilling campaigns:

- **Early Exploration (2000s):** Initial geological surveys and sampling confirmed the presence of eudialyte, a rare-earth-rich mineral. Early assessments indicated that the deposit contained significant heavy rare earth elements (HREEs) alongside zirconium, tantalum, and niobium. Highwood Resources and others drilled 296 drill holes into the area, many of those were less than 20 metres deep exploring the surface material. The holes are historical and insufficient details are available.
- **2007-2010:** Targeted drilling programs were conducted to delineate the deposit’s scale and composition, supporting applications for mining licenses. Several drill holes were completed to establish a clearer picture of the deposit’s scale and mineral composition. These efforts supported Tanbreez Mining’s application for an exploitation license. Rimbal drilled 14 diamond holes in 2007 and 46 diamond holes plus 49 RC holes in 2010.
- **2013-2016:** Additional drilling and metallurgical testing refined estimates of the deposit’s size and economic feasibility. Studies confirmed that approximately 30% of the total REEs at Tanbreez were heavy REEs, which are particularly valuable. Rimbal drilled 9 diamond holes in 2013. The overall drill database of 414 drill holes was used to compile a Mineral Resource Estimate and a Definitive Feasibility Study in 2016. 184 drill holes were included in the MRE assessment, including 66 valid holed drilled by Highwood.



Drilling on exposed eudialyte layers

- **2017:** This work and the Environmental Impact Assessment (EIA), Social Impact Assessment (SIA) and Impact Benefit Agreement (IBA) were presented to the government as an application for an exploitation licence.
- **2020:** The Greenland government granted an exploitation license (MIN 2020-54), marking a transition from exploration to development. This was based on extensive prior drilling and feasibility studies. By 2020, Tanbreez was considered one of the world's largest REE deposits, with over 4 billion tonnes of mineralized kakortokite. The focus then shifted toward securing investment and infrastructure for future mining operations.

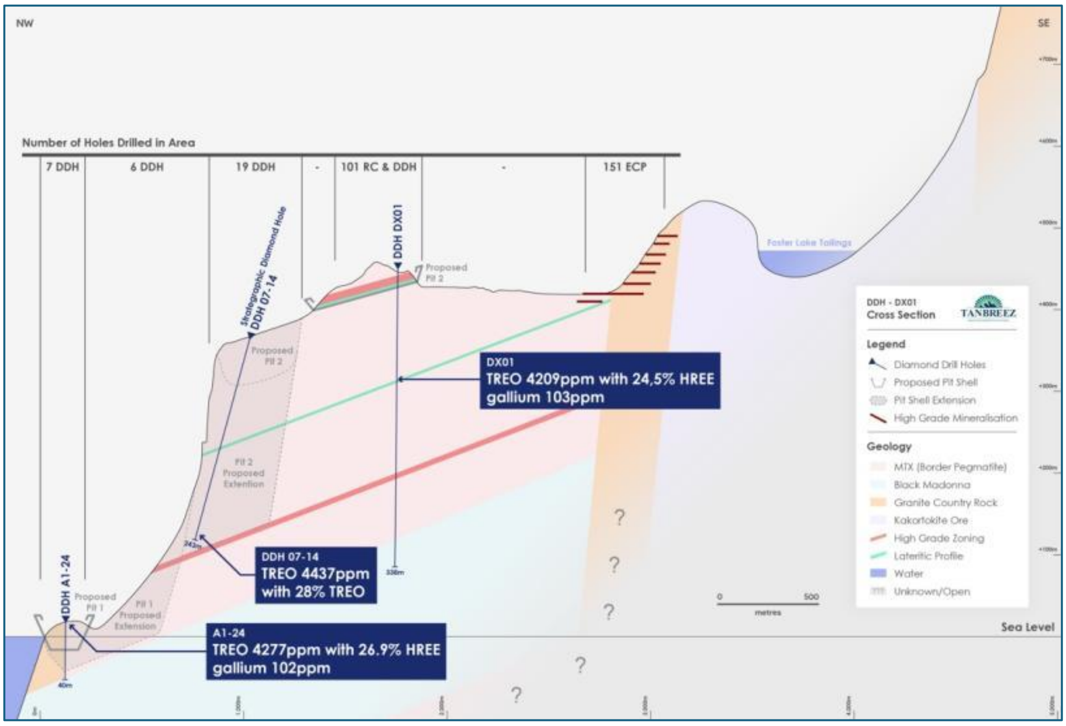


Plan of drill hole collars on the Tanbreez Project.

- **June 2024**: Critical Metals Corp., a mining development company, signed a binding agreement to acquire a controlling interest in the Tanbreez Project. This strategic move aimed to establish a reliable supply of REEs for North America and Europe, reducing dependence on existing sources.

- **September 2024**: A diamond drilling program commenced, consisting of 14 holes totalling up to 2,200 meters. The objective was to upgrade the resource to U.S. SEC standards and enhance potential mine throughput.
- **October 2024**: The Greenland Cabinet of Ministers granted an extension to the project's exploitation license. The revised timeline requires submission of exploitation and closure plans by the end of 2025, provision of financial security by June 30, 2026, and commencement of mineral exploitation by the end of 2028.
- **December 2024**: Drilling activities led to the discovery of high-grade zones, including significant concentrations of gallium—an essential element for computer chips and defence applications.

These developments underscore the Tanbreez Project's evolution into a strategically important source of rare earth elements, poised to diversify global supply chains and support technological advancements in various industries.



Cross section of Tanbreez Hill and Tanbreez Fjord with deep confirmatory drill hole DX-01 and DDH 07-14

7.3 Hydrological Characterization

Hydrological characterisation is not applicable to the mineral resource estimate phase of the Project.

7.4 Geotechnical Drilling and Sampling

Geotechnical Drilling is not applicable to the mineral resource estimate phase of the Project.

8.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

8.1 Site Sample Preparation Methods and Security

Sample Preparation & Storage

The core was transported from drill hole to the centre of operation at Qaqortoq via helicopter. All samples were logged in Greenland and then split (with one quarter of each core being cut and sent to Perth for crushing and assaying). Duplicate samples and samples for petrological work where a second quarter of the core was used. Samples were usually assayed in one metre sections.

The core samples were then sent to Perth where the core was crushed, split and assayed in a commercial laboratory. The bulk sample from this is stored while an approximate 200g repeat of the final grind prior to assays is also kept in Perth. The cut core in Greenland stored in core trays is stored in 6 locked containers.

Percussion drill samples were taken each metre which was then split to approximately 2kg to be sent to Perth for testing. The remainder is stored in locked containers at Qaqortoq. A representative sample from the percussion drill holes is also stored in Perth. In places of lesser importance such as through syenite sills these samples were combined to 5 m sections.

In Perth storage is at the company's office at South Perth, in a locked shed storage units located near the Perth airport and a farm for the bulk samples. Some 200 tonnes of the bulk samples remain to be tested. Bulk samples were taken in 200 litre drums or 1-tonne bags and then transported via a helicopter to a beach where they were barged to Qaqortoq and sealed in drums prior to shipment to Perth. Some large diameter diamond drill holes were drilled in the deposit for geotechnical drilling, these are stored at Qaqortoq.

8.2 Laboratory Sample Preparation Methods and Analytical Procedures

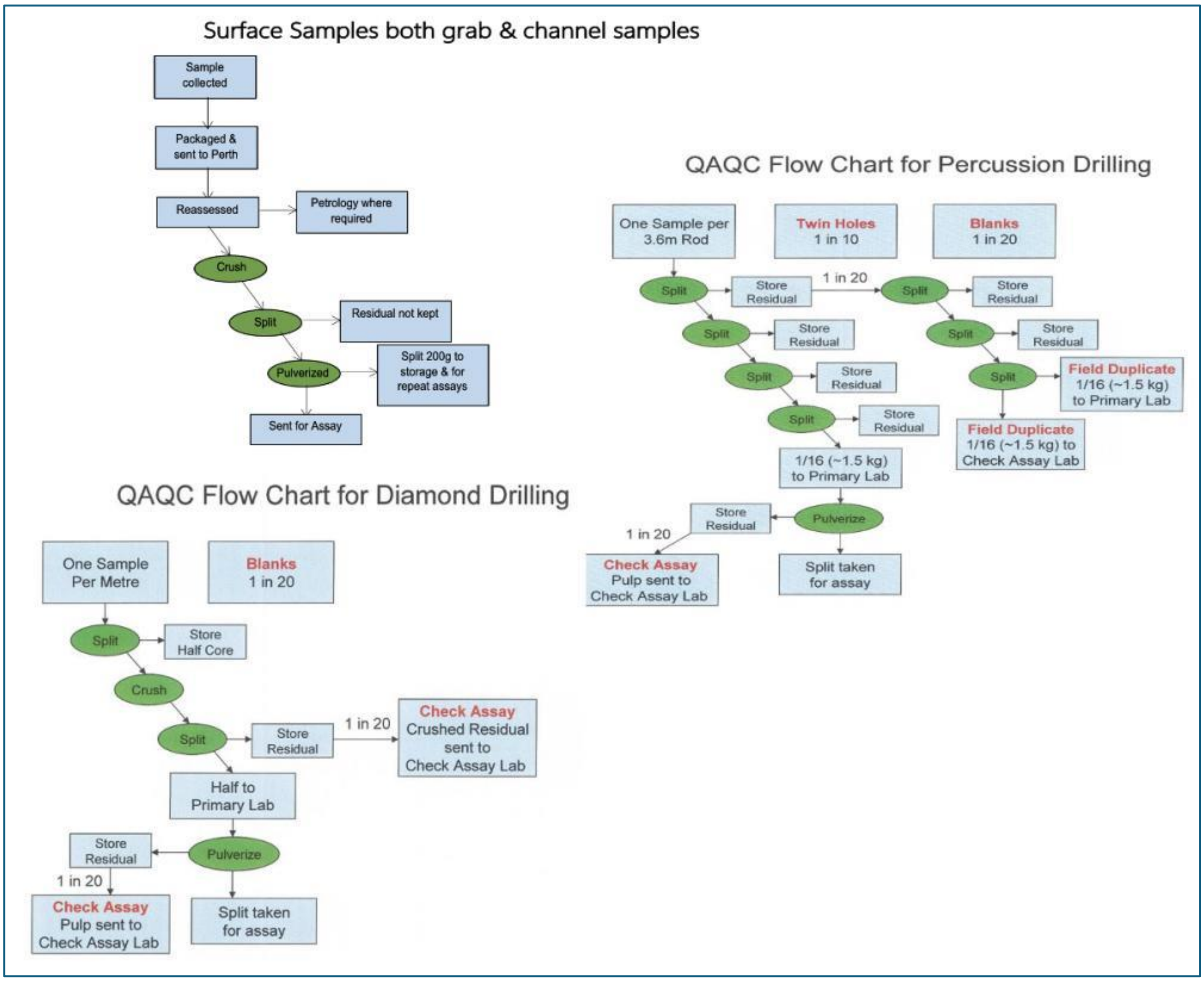
All analysis, bulk testing has been undertaken at commercial independent laboratories under the supervision of the company and its own independent advisers. The company has been fortunate in that with so many elements in direct proportion errors in assaying, mistyping of results etc are obvious and easily rechecked initially by graphing (referred to later in this report).

In the case of the 2 handheld XRF machines owned by the company, both have been standardised against the approximately 2000 splits from 2007. No handheld XRF results have been used to determine published head grade.

With over 500,000 assays, spread over 40 years and at least 10 separate laboratories used with different techniques, there is a considerable range of detection limits. There were also considerable variations with options used for assaying. For example, in one particular year the lower limit for thorium and uranium was set at 50 ppm, which is above background level, but well below the 130-ppm established standard where it is deemed hazardous. Thus, giving virtually, a whole year results as less than 50 ppm. As an example, below is a list of the various lower standards.

In the case of rare earths, most laboratories utilise 0-1000 ppm by ICP and then 1000 ppm – 100% using the XRF (Fusion), as neither is accurate outside the range (for the handheld XRF limits are not quoted as they are not used in the calculations). Care must be then taken to then ensure the higher XRF values are comparable to the ICP. One year in 2012 all REE were rejected due to the problem that the XRF values were far too high when compared to the ICP.

8.3 Quality Control and Quality Assurance Programs



The original QA/QC program was set up by the independent geological firm, SRK for Tanbreez, and Tanbreez has followed those guidelines, although as a private company this was not a requirement as the JORC code for example was setup for companies to report to the ASX. The following procedures have been used to obtain samples for assays.

The overall conclusions of the QA/ QC work completed are as follows:

a) The 2007 samples repeated by UltraTrace showed no variation over 27 elements except for hafnium which showed some variation due to sample concentration and detection gap.

b) Samples re-assayed from Highwoods 1980's showed high correlation of results when re-assayed by UltraTrace some 20 years later.

c) Samples assayed by UltraTrace and SGS also showed a high degree of correlation.

d) Tantalum assays unless done in a precise way are probably unreliable.

e) Two XRF machines were standardised and showed they could be used for field determination – no portable XRF results have been used in determination of grade.

f) 5 large bulk samples taken showed that variation did occur between labs if care was not taken with overriding instructions and a need for clear understanding of variation that can occur between different methods e.g. differences between ICP and XRF can be minimised.

g) A good correlation using the portable XRF machine was also standardised for uranium and thorium using samples from another mining company. Other elements had good correlation.

h) A large proportion of the hundreds of samples had their S.G. tested and show most were in the range 2.72 to 2.81 (except where sodalite was present).

i) For most assaying campaigns, blanks from the Julianhab granite were used. These showed almost constant results, and no assay campaigns were rejected on the ground of cross contamination between samples during crushing.

j) In 2007, 2010 and 2013 drilling programs approximately 1:20 samples were randomly repeated which except for minor variation in hafnium showed remarkable consistency.

k) In 2007, 2010 and 2013 duplicate samples of samples were taken – these likewise showed remarkably similar results.

l) Standards provided by the laboratories again showed remarkably similar results.

m) In all cases the lower levels of detection were noted, although this appears to have had no effect, except in the case of hafnium. Many assays undertaken for Th and U were below the level of detection of 50 ppm in 2007. Tests following have been set to lower levels of detection. Tests have also been undertaken on a wide range of elements, some of which consistently were below the level of detection.

n) Sample results rejected were later tantalum results plus the 2012 rare earth results where differences between the ICP and XRF results were too large. All other results were deemed satisfactory.

8.4 Qualified Person's Opinion

The sample preparation, security, and analytical procedures applied for the Tanbreez Project were appropriate and fit for the purpose of establishing an analytical database for use in grade modelling and preparation of Mineral Resource estimates.

The Qualified Person was not directly involved during the exploration drilling programs or sample selection. There is extensive documentation on the various QA/QC procedures both by the owners and the laboratories. Based on a review of the procedures and subsequent review of the internal and laboratory checks standards and repeats, it is the opinion of the Qualified Person that the drill core handling, data collection, sampling and assay methods used are suitably aligned with accepted industry practice and the measures taken to ensure sample representativeness were reasonable for the purpose of estimating Mineral Resources.

9.0 DATA VERIFICATION

The data verification included a review of standard operating procedures that guide the core handling, logging, sampling and QA/QC, assay methods, logging, and sampling data. Agricola has relied on the Company to provide the necessary assay QA/QC plots. No validation of the assays in the database against the lab certificates was conducted.

Review of the reports, logging, sampling and QA/QC protocols, assay methods, geological data and QA/QC data generated by the Company used to inform the MRE was completed by Agricola. No check logging or sampling of the drill core generated by the Company has been conducted by Agricola.

9.1 Mineral Resources

The nature of the geology does not lead to significant variable grade intersections, rather a constant grade Twin holes have been used to give similar results No adjustment to assay data was required.

Agricola has not independently verified the data used in the Mineral Resource Estimate.

10.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical Testwork, 2011

Extensive metallurgical testwork has been undertaken on samples of eudialyte and a bulk sample through a pilot plant. Pilot Plant scale tests have been carried out prior to Tanbreez material by Highwood, EURARE and Curtin University. In 2009 and in 2011 Tanbreez commissioned an Australian metallurgical test laboratory (Ammtec) to conduct detailed metallurgical testing to establish the parameters required for the design of a physical processing circuit for the ore. The results of the testwork are to be included in the design criteria to enable the completion of a feasibility study.

Total number of Assays	336,548
Total weight of bulk tests	709 tonnes
Separate Bench size bulk mechanical teats over 1kg	1469
Mechanical bench tests over 100kg	169
Chemical Separation tests (metallurgical	2229

Metallurgical tests completed by Rimbal Pty Ltd on the Tanbreez Project.

Key processing characteristics of the ore include:

- The TANBREEZ deposit contains three main mineral species: arfvedsonite, eudialyte and feldspar.
- The eudialyte contains all the valuable metals of interest in the ore. The valuable elements have been shown to occur in constant proportion to the zirconium content. This has enabled testwork and design to progress based on Zr assays.
- The eudialyte is liberated at the relatively coarse grain size of 330 µm.
- The eudialyte can be physically upgraded by a factor of three by magnetic separation.

The three primary minerals within the orebody have been shown to have specific magnetic properties. The arfvedsonite is highly magnetic and the feldspar is nonmagnetic, while the eudialyte exhibits magnetic behaviour in a strongly magnetic field. These properties have been utilised in formatting a testwork programme at Ammtec with the results from that campaign taken into the feasibility study.

The following programs of testing are currently being conducted at Ammtec.

- Bench scale magnetic separation tests to refine specific process criteria.
- Bulk high pressure grinding rolls and semi-commercial scale magnetic separation testing to produce sufficient eudialyte and feldspar samples for downstream processing by others.
- Tailings settling studies and waste rock testwork to provide input to the environmental aspects of the feasibility study.

Extraction of metals from Eudialyte

This method of separation has been used on this body since the early 1900's, the first recorded separation of this ore. Optimised by Rimbal for the Tanbreez orebody in about 2003-4 it has since been repeated on that same company's ore by groups such as the European Union, Curtin University in Western Australia, Aachen University etc, while groups mining other eudialyte deposits such as Norra Karr (Sweden), Lovozero (Russia) etc have been able to separate the ore in a similar fashion.

In a process to extract the metals that was developed by Rimbal on the Tanbreez ore, this likewise has been extensively recreated on eudialyte ore supplied by Rimbal to the following groups:

- The EU through its EURARE program
- Aachen University in Germany has extensively treated Tanbreez ore to pilot plant stage and successfully extracted Zr, Hf, Nb and the rare earth products.
- Hazel Lim from Curtin University in Western Australia completed a full PhD on the separation of products from eudialyte from this licence.
- Similar success on separating products from eudialyte has been achieved by other mining groups such as Norra Karr (Sweden), Lovozero (Russia), Investors in USA and Canada.
- Likewise, there are numerous successes from other universities in the academic sphere such as the Colorado School of Mines, numerous Russian data and several other German universities.

Eudialyte Processing

- The Mineralised Zone is composed of 20% Eudialyte 40% Feldspar and 40% Arfvedsonite.
- The valuable oxides are contained within the Eudialyte component, and this component can be separated from the Arfvedsonite and feldspar components by well known magnetic methods to produce a concentrate at the mine site. The concentrate will be shipped to a chemical treatment plant in the USA or Europe.
- Eudialyte deposits are rare and known in other deposits including Norra Karr in Sweden. There is significant research into chemical treatment of eudialyte and results have been encouraging.
- *Eudialyte processing has been well researched, and a large parcel treated in a pilot plant. The initial processing will focus on the production of a concentrate in Greenland and the science behind this is well known and achievable.*

The separation of eudialyte from ore is well established using a standard dry magnetic separation technique. This method is dependent on:

- The grain size being large enough
- A lack of aegirine
- Not over grinding the sample

Constant magnetic susceptibility of the eudialyte (some deposits can have 3 different eudialytes present which can be a different magnetic susceptibility). Tanbreez has both types depending in the host rocks, and the procedure is be considered proven.

10.1 Qualified Person's Opinion

The testwork conducted to date has confirmed the historical testwork conducted and demonstrated that the eudialyte is amenable to the production of rare Earth concentrates using conventional processing technologies (i.e. DMS) that can potentially be further processed into separate rare earth oxides. Additional work is required to address some of the issues around the processing of the MHP material. It is the Agricola's opinion that the testwork completed to date is adequate to demonstrate the possibility of future economic development of the Mineral Resource Estimate.

11.0 MINERAL RESOURCE ESTIMATES

Maiden Mineral Resource Estimate (MRE) for Tanbreez REO Project, Greenland

- The Tanbreez Project includes two rare earth mineral sites: Tanbreez Fjord and Tanbreez Hill, hosted in a kakortokite unit estimated at 4.7 billion tonnes (a conceptual estimate of the mineralised unit).
- MRE:
  - Indicated Resource: 25.4 MT @ 0.37% TREO,
  - Inferred Resource: 19.5 MT @ 0.39% TREO.
  - Total MRE: 44.9 MT @ 0.38% TREO, 1.39% ZrO_2, 0.14% Nb_2O_5.
- Heavy Rare Earth Elements (HREEs) - Over 27%, a rare composition compared to other REE projects.
- The JORC 2012-compliant report was commissioned by Rimbal Pty Ltd., a private Australian company, in 2016. The MRE is based on drilling campaigns between 2007 and 2013, 184 holes, 6,431.8m. There are no updated estimates since 2016.
- The MRE was released to the Australian Stock Exchange (ASX) in March 2025 following the acquisition of the project by Critical Metals Corp and European Lithium Ltd at the completion of Due Diligence, Independent Audit review and confirmation drilling. These essential phases were required to finalise the acquisition.

Overview of the Tanbreez Project

The Tanbreez Project is a significant critical minerals asset positioned to provide a sustainable, reliable and long-term rare earth supply for North America and Europe. Once operational, Tanbreez is expected to supply REEs to customers in the western hemisphere to support the production of a wide range of next-generation commercial products, as well as demand from the defence industry. The Tanbreez Project is expected to possess greater than 27% HREEs, which carry a much higher value than LREEs. In an industry where competitors primarily target LREE, the Tanbreez Project is believed to be unique not only due to its significant size, but also because of its HREE asset mix.

Al Maynard & Associates Pty Ltd ("Maynard") was commissioned by Rimbal Pty Ltd to estimate the zirconia and rare earth resources and provide details on the resource estimates at the two sites within the kakortokite unit. Maynard updated its reports to the JORC Code 2012 in 2016. The authors of the report are independent consultants with a long experience with the project. They qualify as 'Competent Persons' under the JORC Code 2012 and the VALMIN Code 2015 - A.J. Maynard, BAppSc (Geol), MAIG MAusIMM, P.A. Jones, BAppSc (App.Geol), MAusIMM, MAIG.

The two reports:

- *Al Maynard & Associates Pty Ltd, 2011, Resource Estimates at Two Sites within the Tanbreez Project for Rimbal Pty Ltd, Revised: 20 October 2011*
- *Al Maynard & Associates Pty Ltd, 2016, Resource Estimates at Two Sites within the Tanbreez Project (JORC 2012) for Rimbal Pty Ltd, Revised: 30 August 2016*

2016 Mineral Resource Estimate Summary

TANBREEZ PROJECT	Mtonnes	TREO	ZrO_2	Nb_2O_5
Tanbreez Hill and Fjord				
Indicated Resource	25.42	0.37%	1.37%	0.13%
Inferred Resource	19.45	0.39%	1.42%	0.15%
Total	44.87	0.38%	1.39%	0.14%

No cut off was applied to the lower or upper limits

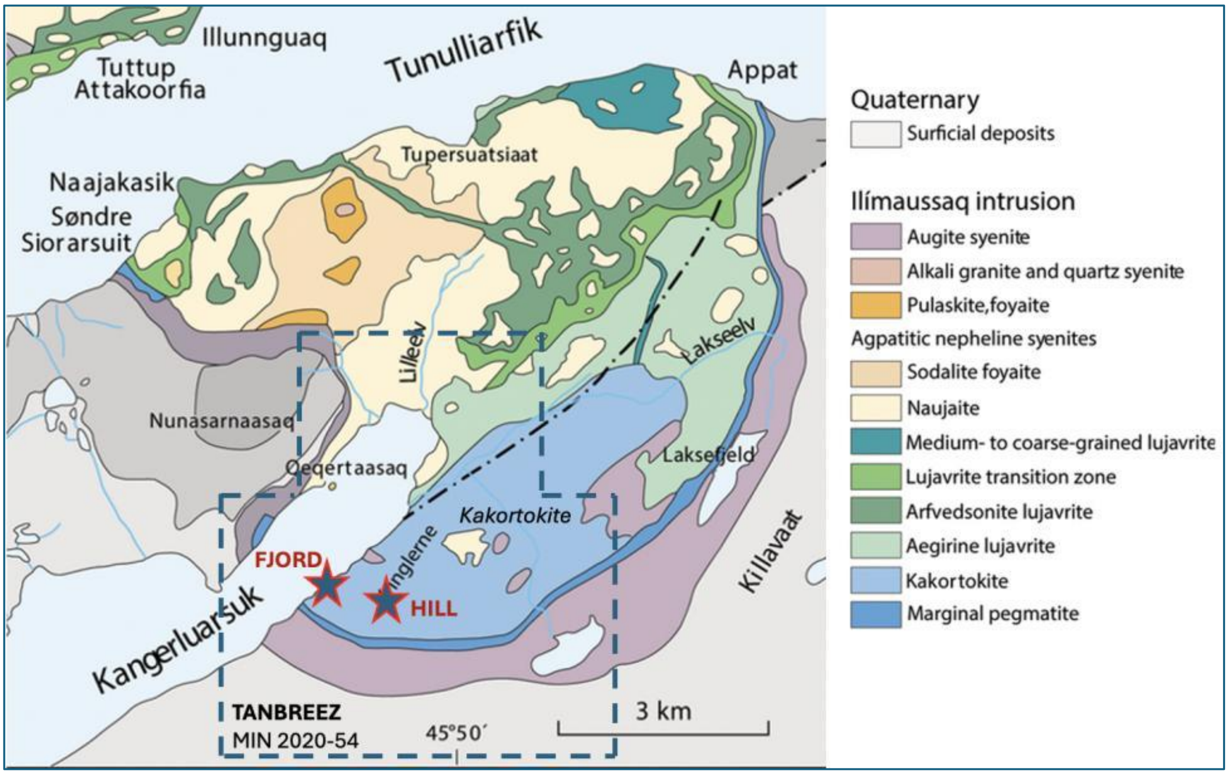
European Lithium ASX Announcement

ASX ANNOUNCEMENT, European Lithium Ltd, 3 March 2025 – 'Maiden Mineral Resource Estimate Of 45mt Tanbreez REO Project Greenland'

The full Announcement is available on the European Lithium website and the ASX Announcement Platform. (www.europeanlithium.com). This Report includes the JORC Table 1 for the Mineral Resource Estimate.

11.1 Key Assumptions, Parameters, and Methods

Geology and Geological Interpretation



Kakortokite outcrop dominates the Tanbreez Area east of the Kangerluarsuk Fjord.

Tanbreez Hill and tanbreez Fjord deposits shown within kakortokite

The **Ilímaussaq Complex** in Greenland is a large peralkaline igneous intrusion famous for its unique mineralogy and economic potential. It is the type locality for several rare minerals, including kakortokite and eudialyte, and is one of the most well-studied peralkaline complexes in the world.

A layered kakortokite unit is well-exposed along the coast, east of the Kangerluarsuk fjord. It constitutes a modal mineralogy of alkali feldspar, nepheline, arfvedsonite and eudialyte with minor sodalite, aegirine, aenigmatite and fluorite. The unit forms an approximately 250 to 300-metre-thick sequence consisting of at least 30 layered units. Each unit is on average 8 m thick and consists of a basal black layer dominated by arfvedsonite followed by a thin red layer rich in eudialyte (sometimes poorly developed) and sealed by a thick white top layer rich in feldspar and nepheline. Both the Tanbreez Fjord and the Tanbreez Hill rare-earth mineral sites are located within a kakortokite unit covering an area of approximately 5km x 2.5km.

The layered Ilimaussaq intrusion, host of the Tanbreez Project (middle ground slopes and plateau)

The exposed sequence rises from the Fjord up to about 400m above sea level and is comprised of 95% kakortokite and 5% other rocks, mostly syenite dykes and sills.

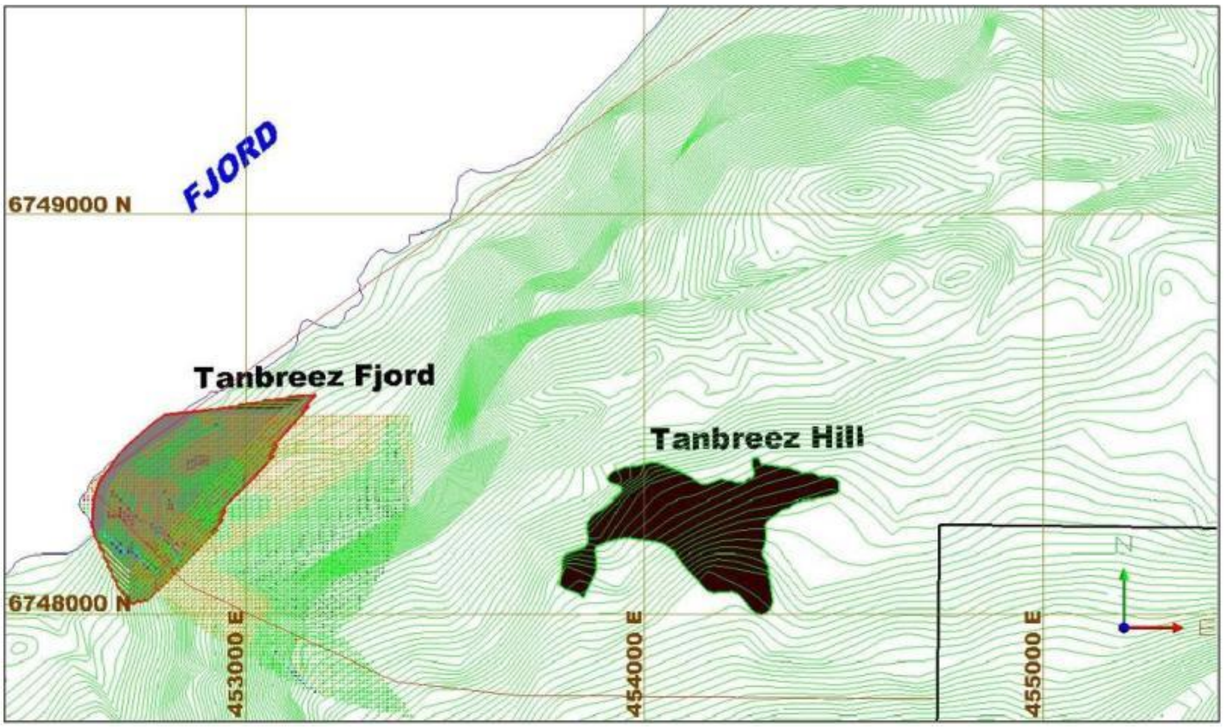
Kakortokite is a rare, layered igneous rock composed primarily of nepheline, alkali feldspar, and aegirine, often with significant amounts of eudialyte, arfvedsonite, and other rare minerals. It is typically found in peralkaline igneous complexes, particularly in nepheline syenites. The host unit dips shallowly to the north at about 10-15^{o}. This layering is composed of black, red and white layers with the colours reflecting enrichment of various minerals:

- The black layers are enriched in arfvedsonite.
- The pink layers are enriched in eudialyte.
- The white layers are enriched in alkali-feldspar and nepheline with local sodalite.

This layering stands out clearly from the distance however it is not always so obvious up close and in drill core. Some layers are faint while others are much more strongly developed. There is a pronounced thickness variation between layers as well as in texture and grain size which helps in identifying marker horizons.

Eudialyte is a rare, complex silicate mineral that contains zirconium, sodium, calcium, iron, manganese, and rare earth elements (REEs). It typically forms in peralkaline igneous rocks, such as nepheline syenites and kakortokites, and is known for its distinctive red to pink coloration.

The eudialyte content of the black and white layers is similar with a little less than 10% by volume, whereas the eudialyte content of the pink layers is around 30 - 40% vol.



Tanbreez Hill and Tanbreez Fjord location map.

Sampling and Sub Sampling Techniques

Sample Preparation & Storage

The core was transported from drill hole to the centre of operation at Qaqortoq via helicopter. All samples were logged in Greenland and then split (with one quarter of each core being cut and sent to Perth for crushing and assaying). Duplicate samples and samples for petrological work where a second quarter of the core was used. Samples were usually assayed in one metre sections.

The core samples were then sent to Perth where the core was crushed, split and assayed in a commercial laboratory. The bulk sample from this is stored while an approximate 200g repeat of the final grind prior to assays is also kept in Perth. The cut core in Greenland stored in core trays is stored in 6 locked containers. Following the receival of assays and with the eclipse of time all cores have been relogged at least a second time.

Percussion drill samples were taken each metre which was then split to approximately 2kg to be sent to Perth for testing. The remainder is stored in locked containers at Qaqortoq. A representative sample from the percussion drill holes is also stored in Perth. In places of lesser importance such as through syenite sills these samples were combined to 5 m sections.

In Perth storage is at the company's office at South Perth, in a locked shed storage units located near the Perth airport and a farm for the bulk samples. Some 200 tonnes of the bulk samples remain to be tested. Bulk samples were taken in 200 litre drums or 1-tonne bags and then transported via a helicopter to a beach where they were barged to Qaqortoq and sealed in drums prior to shipment to Perth. Some large diameter diamond drill holes were drilled in the deposit for geotechnical drilling, these are stored at Qaqortoq.

All analysis, bulk testing has been undertaken at commercial independent laboratories under the supervision of the company and its own independent advisers. The company has been fortunate in that with so many elements in direct proportion errors in assaying, mistyping of results etc are obvious and easily rechecked initially by graphing (referred to later in this report). The handheld XRF machines owned by the company, both have been standardised against the approximately 2000 splits from 2007. No handheld XRF results have been used to determine published head grade.

Quality Control and Quality Assurance Programs

The original QA/QC program was set up by the independent geological firm, SRK for Tanbreez, and Tanbreez has followed those guidelines, although as a private company this was not a requirement as the JORC code for example was setup for companies to report to the ASX. The following procedures have been used to obtain samples for assays.

The overall conclusions of the QA/ QC work completed are as follows:

- The 2007 samples repeated by UltraTrace showed no variation over 27 elements except for hafnium which showed some variation due to sample concentration and detection gap.
- Samples re-assayed from Highwoods 1980's showed high correlation of results when re-assayed by UltraTrace some 20 years later.
- Samples assayed by UltraTrace and SGS also showed a high degree of correlation.
- Five large bulk samples taken showed that variation did occur between labs if care was not taken with overriding instructions and a need for clear understanding of variation that can occur between different methods e.g. differences between ICP and XRF can be minimised.

- A large proportion of the hundreds of samples had their S.G. tested and show most were in the range 2.72 to 2.81 (except where sodalite was present).
- For most assaying campaigns, blanks from the Julianhab granite were used. These showed almost constant results, and no assay campaigns were rejected on the ground of cross contamination between samples during crushing.
- In 2007, 2010 and 2013 drilling programs approximately 1:20 samples were randomly repeated which except for minor variation in hafnium showed remarkable consistency.
- In 2007, 2010 and 2013 duplicate samples of samples were taken – these likewise showed remarkably similar results.

The sample preparation, security, and analytical procedures applied for the Tanbreez Project were appropriate and fit for the purpose of establishing an analytical database for use in grade modelling and preparation of Mineral Resource Estimates.

Drilling Techniques

Between 2000 and 2013, the Tanbreez deposit in southern Greenland underwent extensive drilling to evaluate and confirm its rare earth element (REE) resources. Initial exploration efforts in the early 2000s focused on geological surveys and sampling, which identified significant mineralization of eudialyte—a mineral rich in zirconium, niobium, tantalum, and REEs—within the Ilímaussaq intrusive complex.

DRILLING STATISTICS	Year	Number	Metres	Average
First Phase				JORC 2004
Diamond	2007	14	2,148.20	153.4
RC	2007	67	1,083.10	16.2
Second Phase				JORC 2004
Diamond	2010	46	901	19.6
RC	2010	48	1,470.00	30.6
Third Phase				JORC 2012
Diamond	2013	9	829.5	92.2
Total		184	6431.8	35.0
2007 Diamond Drilling includes stratigraphic holes.				

Key highlights of the drilling campaigns:

- **2007 and 2010:** Targeted drilling programs were conducted. Several stratigraphic drill holes were completed to establish a clearer picture of the deposit's scale and mineral composition. These efforts supported Tanbreez Mining's application for an exploitation license. Rimbal drilled 14 diamond holes in 2007 and 46 diamond holes plus 49 RC holes in 2010.
- **2013:** Additional drilling and metallurgical testing refined estimates of the deposit's size and economic feasibility. Studies confirmed that approximately 30% of the total

REEs at Tanbreez were heavy REEs, which are particularly valuable. Rimbal drilled 9 diamond holes in 2013. The overall drill database of 414 drill holes was used to compile a Mineral Resource Estimate and a Definitive Feasibility Study in 2016. 184 drill holes were included in the MRE assessment, including 66 valid holed drilled by Highwood.

- **2017:** This work and the Environmental Impact Assessment (EIA), Social Impact Assessment (SIA) and Impact Benefit Agreement (IBA) were presented to the government as an application for an exploitation licence.
- **2020:** The Greenland government granted an exploitation license (MIN 2020-54), marking a transition from exploration to development. This was based on extensive prior drilling and feasibility studies. By 2020, Tanbreez was considered one of the world's largest REE deposits, with over 4 billion tonnes of mineralized kakortokite.

Criteria Used for Classification

The drill hole data was first compiled then verified and checked for errors. No significant problems were found in the data once it was compiled. East-west cross sections were created by digitising the Upper and Lower blocks at Tanbreez Hill and the mineralised zone at Tanbreez Fjord, snapping to the drill hole intercepts.

Given that the eudialyte mineralisation is quite regularly disseminated throughout the kakortokite host rock there is sufficient geological mapping to give confidence on the limits of the modelling and the quality of drill hole data is sound, all resources at Fiord West within 50 m of a drill hole intersection are considered Indicated and between 50-100 m of a drill hole intersection Inferred according to the JORC (2012) code. Due to the lack of drilling on a regular grid at Fiord East the resources within 50 m of a drill hole intersection are considered only Inferred.

To assist with mining scoping studies the modelling was extended out to 250 m and this modelled mineralisation beyond the Inferred Resources is classified as an Exploration Target according to the JORC code for reporting mineral resources and ore reserves and that this modelling is therefore only conceptual in nature as there has been insufficient exploration drilling done in these areas to define a Mineral Resource and it is uncertain if further exploration will eventually result in the determination of a Mineral Resource.

Sample Analysis Method

Diamond drill holes, R.C. holes, channel chip samples with samples cross checked at separate laboratories, at different times. The samples have also been independently checked twice with a handheld XRF machine using pressed duplicates. Drill holes have been twinned with diamond, R.C. and even channel samples repeat. Repeat holes of diamond drilling, R.C. holes and surface samples are almost identical in assays.

The sampling shows very even grade with no nugget effect at approx. 2% ZrO2 the grade is remarkably constant. All mineralisation is within the mineral eudialyte with as a result the Zr is directly proportional to HF, Ta, Nb, all the REE etc.

All the assaying was done by Ultra Trace Pty Ltd in Perth, Western Australia by ICP analysis. The remaining pulps not used for assaying are stored in Perth. Initially a full scale ICP analysis was done on holes 2010DD10-D20, 2010DD10-D13, 2010DD10-D30 and 2010DD10-D42. After these results were obtained it was decided that the remaining samples would be assayed for Zr, Ce, Dy, Nb, and Y only for the 2010 drilling program. A full suite of rare Earth oxides, ZrO_2, Nb_2O_5 and other oxides were analysed for the 2013 drilling Campagne under the guidelines of JORC 2012. There is a clear relationship between ZrO_2 and REO (using Dy_2O_3 as a proxy) and the median was used to estimate REO values for the earlier drilling programs.

Estimation and modelling techniques

The resource modelling method using digital block models with grades interpolated using the Inverse Distance Squared algorithm with restricted search ellipses and domain wireframes is appropriate for the style of mineralisation modelled. No deleterious elements were identified. Cutting and capping of grades was not used as the grade of each unit is remarkably constant along strike and down dip with very few outliers. The resource model was validated by visually checked against drilling and statistically comparing the resource grades against the drill assays.

The modelling was done in two passes. The first pass with a wider 100 m horizontal circular radius was used to model the Inferred resource and the second pass 50 m horizontal radius was used to model the Indicated resource. The wider 100 m horizontal search radius with a 10m vertical ellipse radius produced a more smoothed grade model than the second pass with a tighter 5 m vertical radius. Once the modelling was complete the model above the topography was removed.

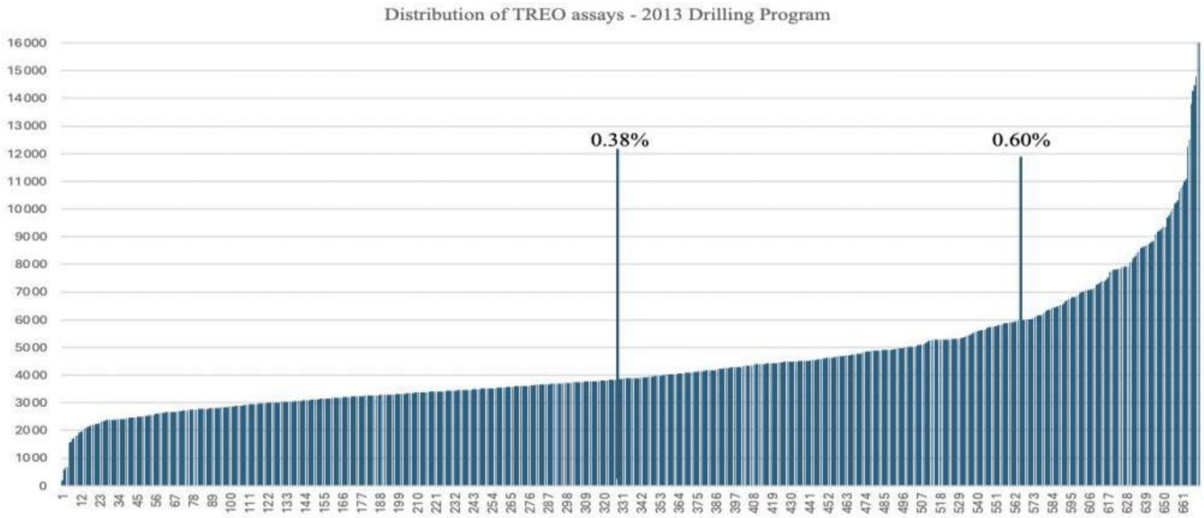
The resources were modelled using MineMap software. Search radii of 250 m horizontal circular and 50 m vertical was used to model resources. The search ellipses were oriented vertically in the edge zone and horizontally in the core.

Cut-off parameters

No cut-off grades applied to the resources as the deposit will be bulk mined. The anticipated mining method and detailed review of grade variability suggests that all the mineralised zones will be sent to the ROM Pad. Arfvedsonite and Feldspar may be recovered and sold with estimated waste materials less than 5%. The average grade without applying a cut - off grade is 0.38% TREO. The average grade for the entire length of the stratigraphic holes below the Mineral Resource Estimate is 0.40 to 0.45% TREO.

Percentile	ZrO_2%	TREO%	HREO	LREO	HREO%	Nb_2O_5
10%	0.93%	0.27%	0.07%	0.20%	24.55%	0.10%
20%	1.07%	0.30%	0.08%	0.23%	25.57%	0.11%
30%	1.20%	0.33%	0.09%	0.25%	26.16%	0.13%
40%	1.32%	0.36%	0.09%	0.26%	26.69%	0.14%
Median 50%	1.43%	0.39%	0.10%	0.28%	27.02%	0.15%
60%	1.58%	0.43%	0.12%	0.32%	27.48%	0.17%
70%	1.77%	0.48%	0.13%	0.35%	27.85%	0.18%
80%	2.17%	0.55%	0.15%	0.40%	28.28%	0.22%
90%	2.78%	0.71%	0.20%	0.51%	28.71%	0.29%

Distribution of ZrO_2,TREO and Nb_2O_5 assays for the 2013 Drilling Program



Mining, Metallurgical and Environmental Factors

The resources will be bulk mined in open pits, so no mining losses or dilution factors are required. Metallurgical and economic studies conducted by the client indicate that the resources can be economically exploited by mechanical separation bulk testing by Tanbreez backed up these earlier results. All separation work has been done by independent consultants

All products and potential wastes have been fully tested by independent environmental consultants. All waste samples tested have proved to be inert. A full E.I.A completed and accepted by the government.

11.2 Mineral Resource Estimate

TANBREEZ PROJECT	Million Tonnes	TREO %	ZrO_2 %	Nb_2O_5 %	Total %
TANBREEZ HILL					
Indicated Resource					
Upper	3.20	0.47%	1.72%	0.14%	2.33%
Lower	13.46	0.30%	1.11%	0.11%	1.52%
Total	16.66	0.33%	1.22%	0.12%	1.68%
Inferred Resource					
Upper	0.93	0.40%	1.48%	0.13%	2.01%
Lower	4.72	0.28%	1.04%	0.10%	1.42%
Total	5.65	0.30%	1.11%	0.11%	1.52%
TOTAL	22.31	0.33%	1.20%	0.11%	1.64%
FJORD DEPOSIT					
Indicated Resource	8.76	0.44%	1.63%	0.17%	2.25%
Inferred Resource	13.80	0.42%	1.55%	0.16%	2.13%
TOTAL	22.56	0.43%	1.58%	0.16%	2.17%
Tanbreez Hill and Fjord					
Indicated Resource	25.42	0.37%	1.37%	0.13%	1.87%
Inferred Resource	19.45	0.39%	1.42%	0.15%	1.96%
TOTAL	44.87	0.38%	1.39%	0.14%	1.91%

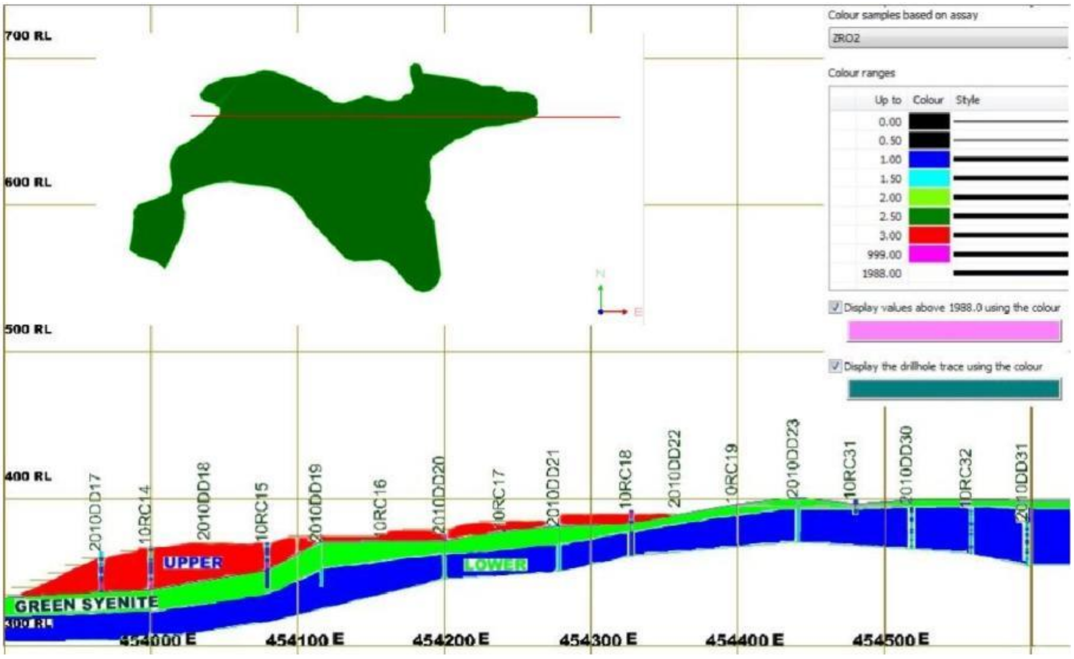
Estimated in accordance with the JORC Code 2012
No lower cut off values were applied to the estimation
Source: Al Maynard and Associates, 30 August 2016, Agricola Mining Consultants Pty Ltd

Details of the 2016 Mineral Resource Estimate, *Estimation and modelling techniques*

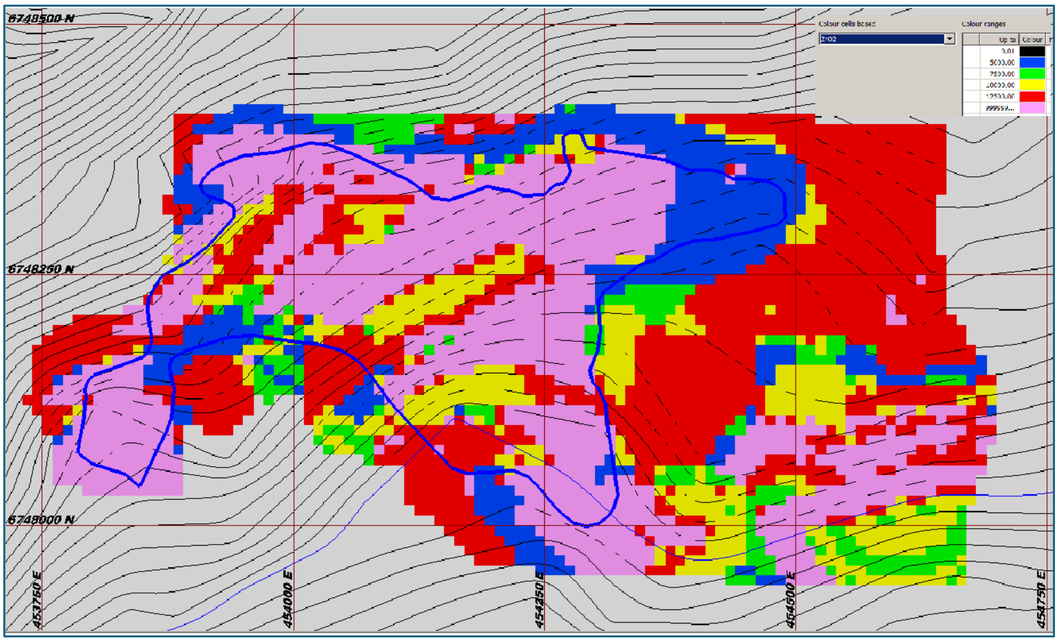
The resource modelling method using digital block models with grades interpolated using the Inverse Distance Squared algorithm with restricted search ellipses and domain wireframes is appropriate for the style of mineralisation modelled. No deleterious element was identified. Cutting and capping of grades was not used as the grade of each unit is remarkably constant along strike and down dip with very few outliers. The resource model was validated by visually checked against drilling and statistically comparing the resource grades against the drill assays.

The modelling was done in two passes. The first pass with a wider 100 m horizontal circular radius was used to model the Inferred resource and the second pass 50 m horizontal radius was used to model the Indicated resource. The wider 100 m horizontal search radius with a 10m vertical ellipse radius produced a more smoothed grade model than the second pass with a tighter 5 m vertical radius. Once the modelling was complete the model above the topography was removed.

The resources were modelled using MineMap software. Search radii of 250 m horizontal circular and 50 m vertical was used to model resources. The search ellipses were oriented vertically in the edge zone and horizontally in the core.



Tanbreez Hill - A typical cross section with Upper (red) and Lower (blue) blocks and interstitial syenite (green).



Tanbreez Hill - The upper surface of the block model. The blue line shows the mapped limits of the green syenite sill within which the Upper resource estimate was confined.

11.3 Basis for Establishing the Prospects of Economic Extraction for Mineral Resources

Eudialyte is a rare, complex silicate mineral rich in elements such as sodium, calcium, iron, manganese, zirconium, and rare earth elements (REEs). Its unique composition make it valuable as a potential source of critical metals. Eudialyte is increasingly recognized for its economic potential due to its content of zirconium, niobium, and REEs, which are essential in various high-tech applications. The global demand for these elements has heightened interest in eudialyte as an alternative resource. Notably, eudialyte deposits are found in regions such as Russia, Greenland, Canada, and Norway. The Ilímaussaq complex in Greenland, for instance, is one of the world's largest known eudialyte-hosted deposits (Tanbreez), presenting a significant repository of REEs, zirconium, and niobium.

The supply chains for critical metals like REEs and niobium are often dominated by a few countries, leading to potential vulnerabilities. For example, China controls a significant portion of the world's heavy REE supply, while Brazil is a major producer of niobium. This concentration has prompted interest in diversifying sources, with eudialyte deposits offering a potential alternative.

The growing demand for REEs and other critical metals in technologies such as electronics, renewable energy, and defence systems positions eudialyte as a potential resource. However, successful market integration depends on overcoming extraction challenges, ensuring economic viability, and developing environmentally sustainable practices. Ongoing research and technological advancements are crucial to unlocking eudialyte's full market potential.

11.4 Mineral Resource Classification

The information regarding the Mineral Resource Estimates at Tanbreez Hill and Tanbreez Fjord in the Tanbreez Project represent the independent opinion of Al Maynard and Associated Pty Ltd for the current estimates of such resources. The estimates are in accordance with the requirements on the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2012 (the "JORC Code").

The estimates of the Tanbreez Project are based on interpretations of geological data obtained from drill holes, surface and creek section mapping and sampling through the entire kakortokite sequence.

The Competent Person for Al Maynard and Associated Pty Ltd believes that the quoted resource categories in the resource statements are appropriate and properly take into consideration the geology and style of the mineralisation, the density, spacing and quality of the sampling data and grade variability of the mineralisation.

The resource modelling method, digital block models with grades interpolated using Inverse Distance Squared algorithm with restricted search ellipses and domain wireframes is appropriate for the style of mineralisation modelled. No deleterious elements have been identified. Uranium and thorium are below the required limits. Cutting and capping of grades was not used as the grade of each unit is remarkably constant along strike and down dip with very few outliers.

The Competent Person for Al Maynard and Associated Pty Ltd believes that the quoted resource categories in the resource statements are appropriate and properly take into consideration the geology and style of the mineralisation, the density, spacing and quality of the sampling data and grade variability of the mineralisation.

11.5 Assumptions for Multiple Commodity Mineral Resource Estimate

The suite of minerals within the Mineral Resource Estimate was based on assay results of the drill core and RC sample splits. Individual assays for ZrO_2, TREO and Nb_2O_5 are quoted separately, and no equivalent grades were assessed.

11.6 Mineral Resource Uncertainty Discussion

The information regarding the Mineral Resource Estimates at Tanbreez Hill and Tanbreez Fjord in the Tanbreez Project represent the independent opinion of Al Maynard and Associated Pty Ltd for the current estimates of such resources. The estimates are in accordance with the requirements on the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2012 (the "JORC Code").

The estimates of the Tanbreez Project are based on interpretations of geological data obtained from drill holes, surface and creek section mapping and sampling through the entire kakortokite sequence.

11.7 Qualified Person's Opinion on Factors that are Likely to Influence the Prospect of Economic Extraction

The 2016 Mineral Resource Estimate Report was reviewed by Malcolm Castle, principal consultant for Agricola Mining Consultants Pty Ltd. Mr Castle holds a BSc Hons (Applied Geology UNSW) and GCertAppFin (Sec Inst and is a Member of the Australasian Institute of Mining and Metallurgy (M AusIMM).

The information provided in the report by Al Maynard and Associates clearly sets out the steps taken to ensure and high-quality outcome for the resource estimate.

The current Mineral Resource estimates are classified as Indicated and Inferred Resources under the JORC Code 2012. Details of the estimate are included in JORC Table 1 attached to the report. and have been determined by drill density and number of drillholes and samples utilized in grade estimation. The resource classification accounts for all relevant factors and reflects the competent person's views of the deposit. The resource classification appropriately and reasonably reflects the varying levels of confidence of the resource model to predict average grade and tonnages for the resources if it were to be mined. Confidence in the relative accuracy of the estimate is reflected by the categorization of the mineralisation as Indicated and Inferred Resources.

Malcolm Castle is satisfied that the Mineral Resource Estimates are reasonable and carried out to a high professional standard in accordance with the JORC Code 2012. There is no more recent information available that would materially alter the finding of the 2016 Mineral Resource Estimate.

Competent Persons Statement – Malcolm Castle:

The information in this Report that relates to Exploration Results and Mineral Resource Estimates of the Company is based on, and fairly represents, information and supporting documentation reviewed by Malcolm Castle, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Castle has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he is undertaking to qualify as a Competent Person as defined under the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Castle is not an employee of the Company and is the independent principal consultant for Agricola. Mr Castle consents to the inclusion in this report of the matters based on the information and supporting documentation in the form and context in which they appear.

SECTIONS 12 to 15 & 17 to 19 not applicable to this ITAR/TRS

12.0 MINERALRESERVEESTIMATES

This section is not applicable to this TRS.

13.0 MINING METHODS

This section is not applicable to this TRS.

14.0 PROCESSINGANDRECOVERYMETHODS

This section is not applicable to this TRS.

15.0 INFRASTRUCTURE

This section is not applicable to this TRS.

17.0 ENVIRONMENTAL STUDIES, PERMITTING, AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS

This section is not applicable to this TRS.

18.0 CAPITALANDOPERATINGCOSTS

This section is not applicable to this TRS.

19.0 ECONOMICANALYSIS

This section is not applicable to this TRS.

16.0 MARKET STUDIES

Comparison of Heavy Rare Earth Elements (HREE) Vs. Light Rare Earth Elements (LREE)

Rare earth elements (REEs) are divided into two groups based on their atomic numbers and chemical properties: Light Rare Earth Elements (LREEs): Lanthanum to Gadolinium (atomic numbers 57-64), and Heavy Rare Earth Elements (HREEs): Terbium to Lutetium (atomic numbers 65-71) + Yttrium (atomic number 39, behaves like HREEs).

Feature	Heavy Rare Earth Elements (HREEs)	Light Rare Earth Elements (LREEs)
Elements Included	Y, Tb, Dy, Ho, Er, Tm, Yb, Lu	La, Ce, Pr, Nd, Sm, Eu, Gd
Abundance	Less abundant and harder to extract	More abundant and easier to mine
Market Value	Higher due to scarcity and demand	Lower, except for Nd & Pr
Major Applications	High-tech industries, defence, medical imaging	Magnets, catalysts, glass polishing
Main Minerals	Eudialyte, Xenotime	Bastnäsite, Monazite
Global Deposits	Found in kakortokite (e.g., Tanbreez, Greenland) and ion-adsorption clays (China)	Found in carbonatites (e.g., Mountain Pass, USA and Bayan Obo, China)

Economic & Geopolitical Importance

HREEs are more strategically valuable due to their scarcity and high-tech applications. China dominates HREE production (~90%), primarily from ion-adsorption clay deposits. Western projects (like Tanbreez, Greenland) aim to diversify supply and reduce reliance on China.

LREEs are more common and easier to extract, but HREEs are rarer and more valuable for advanced technologies. The Tanbreez deposit in Greenland is a major HREE source, offering an alternative to Chinese-controlled supply chains.

Industrial Applications

Application	HREE Use	LREE Use
Electric Vehicles (EVs)	Dysprosium (Dy) & Terbium (Tb) in high-temperature permanent magnets	Neodymium (Nd) & Praseodymium (Pr) in magnets
Wind Turbines	Dy & Tb in permanent magnets	Nd & Pr in magnets
Aerospace & Defence	Erbium (Er) in laser systems, Yttrium (Y) in jet engines	Nd in targeting systems
Medical Imaging	Yttrium (Y) in MRI contrast agents	Gadolinium (Gd) in MRI contrast agents
Glass & Ceramics	Yttrium (Y) in phosphors, Lutetium (Lu) in scintillators	Lanthanum (La) in camera lenses

The rising demand for consumer durables such as tablets, laptops, and smartphones is one of the factors driving the consumption of rare earth elements. The demand for these elements in developing economies is estimated to expand rapidly owing to an increase in industrialization, building and construction activities, and various digitization activities by governments in the respective countries.

The boost in the demand for electric vehicles (EVs) in Germany, United States, and the U.K. is estimated to surge the consumption of rare earth minerals. Stringent rules on carbon discharges, and increasing concerns about the environment, have augmented the development of non-conventional energy sources, which will further increase the usage of these elements. However, the high cost of these minerals and the monopoly of China-based manufacturers is expected to hinder the market growth.

Rare Earth Elements Market Growth Factors

The rare earth elements (REE) market is experiencing significant growth, driven by the increasing demand for clean energy technologies, electric vehicles (EVs), and advanced electronics. This surge is prompting substantial investments and strategic initiatives worldwide.

Increasing Adoption of Different Rare Earth Elements to Fuel Market Growth Different types of elements are witnessing a rise in their demand from several industries due to their physical and chemical properties being ideal for specific applications. Cerium is used as a polishing agent and its demand is rapidly rising due to the growth of the electronics industry. Cerium is extensively used to polish surfaces such as display panels, liquid crystal displays, glass magnetic memory disks, and glass display panels. Additionally, the rising demand for such elements such as lanthanum, samarium, europium, and others for applications in batteries, displays, lasers, and optical electronics, will further fuel the growth of the market.

Rising Demand from Various Applications to Drive the Market Expansion Technological advancements have been on the rise owing to the modernization of society and growing applications for industrial and commercial needs. Consumer attractiveness toward advanced gadgets and products is the primary factor driving the demand for magnets in the market. Moreover, even tiny magnets have the strength making them incredibly versatile for applications such as medical science, electronic motor manufacturing, and jewellery making.

There has been a rapid increase in the automotive industry over the years supported by population growth, technological development, and disposable income growth. Magnets are heavily used in the automotive industry for various parts such as motors, actuators, sensors, and switches. Additionally, rare earth elements are used in other applications such as catalysts, additives, ceramics, and metallurgy. The rising demand for catalysts, additives, ceramic products, and metal products from various end-use industries such as chemical, oil & gas, automotive, and electronics is anticipated to fuel the product demand.

Eudialyte Market Analysis

Eudialyte is a rare, complex silicate mineral rich in elements such as sodium, calcium, iron, manganese, zirconium, and rare earth elements (REEs). Its unique composition make it valuable as a potential source of critical metals. Eudialyte is increasingly recognized for its economic potential due to its content of zirconium, niobium, and REEs, which are essential in various high-tech applications. The global demand for these elements has heightened interest in eudialyte as an alternative resource. Notably, eudialyte deposits are found in regions such as Russia, Greenland, Canada, and Norway. The Ilímaussaq complex in Greenland, for instance, is one of the world's largest known eudialyte-hosted deposits (Tanbreez), presenting a significant repository of REEs, zirconium, and niobium.

The supply chains for critical metals like REEs and niobium are often dominated by a few countries, leading to potential vulnerabilities. For example, China controls a significant portion of the world's heavy REE supply, while Brazil is a major producer of niobium. This concentration has prompted interest in diversifying sources, with eudialyte deposits offering a potential alternative.

The growing demand for REEs and other critical metals in technologies such as electronics, renewable energy, and defence systems positions eudialyte as a potential resource. However, successful market integration depends on overcoming extraction challenges, ensuring economic viability, and developing environmentally sustainable practices. Ongoing research and technological advancements are crucial to unlocking eudialyte's full market potential.

Deposit	**Tanbreez**	**Norra Karr**	**Lovozero**
Location	Greenland	Sweden	Kola Peninsula, Russia
Host Mineral	Eudialyte	Eudialyte	Eudialyte
Size	4.7 billion tonnes	110 million tonnes	7.5 billion tonnes
Grade	0.6% REO 2.4% ZrO_2 0.17% Nb_2O_5	0.5% REO 1.7% ZrO_2 0.05% Nb_2O_5	0.42% REO
% HREO	28%	52%	~30%
Permission to mine	Granted	No hold up	Different system
U & Th	Background	31 U and 63 Th	Both below 100 ppm
Grain size	Sand size	Moderate	Moderate
Arfvedsonite/ Aegirine	Arfvedsonite	Aegirine	Aegirine
Separation	Magnetic	Magnetic	Magnetic
Chemical tests	Complete	Complete	Partially completed
Variation in chemistry	No variation	At least 3 types	Not mentioned
Infrastructure	Edge of the Fjord	Inland	Large towns nearby

Eudialyte Rare Earth Deposits

20.0 ADJACENT PROPERTIES

REE mineralisation

Of the intrusions in the Gardar province, the economically most important for REE are the Ilímaussaq intrusion (1160 Ma), hosting the Kvanefjeld and Tanbreez (Kringlerne) REE deposits, and the Igaliko nepheline syenite complex (1273 Ma), hosting the Motzfeldt Sø REE deposit.

The Ilímaussaq intrusion was largely emplaced during block subsidence and formed by three pulses, of which the third formed layered series of nepheline syenites enriched in REE as well as uranium (U), thorium (Th), niobium (Nb), tantalum (Ta), beryllium (Be), zirconium (Zr) and fluorine (F). The Ilímaussaq intrusion hosts two world class REE deposits:

Comparison of Kvanefjeld to Tanbreez

- **Kvanefjeld**: an intermediate series sandwiched between roof and floor series, consisting mainly of lujavrites, in which the main REE mineral is steenstrupine
- **Tanbreez**: comprising 29 exposed cyclic layers of kakortokite making up the bottom cumulates of the intrusion; the main REE mineral is eudialyte.

Deposit	Kvanefjeld	Tanbreez
REE Type	Mixed LREE & HREE	Rich in HREE
Primary Mineral	Steenstrupine (with uranium)	Eudialyte (low U/Th)
Uranium Content	High	Very Low
Environmental Concerns	Significant (radioactivity)	Low (cleaner mining)
Processing Complexity	Higher (uranium extraction required)	Easier (alkaline leaching)
Chinese Investment	Shenghe Resources (China)	No Chinese control
Geopolitical Risks	High (China & Uranium ban)	Low (Western-friendly)

- *Uranium Mining Ban (2021):* The Greenland government introduced a ban on uranium mining, effectively blocking Kvanefjeld development. Tanbreez has very low uranium content and is approved for development
- *Environmental Concerns*: High radioactivity has led to strong opposition from local communities and environmental groups for the Kvanefjeld deposit. Tanbreez is supported by the local community and government.
- *Regulatory Issues:* Uncertainty over Greenland's stance on rare earth and uranium extraction has slowed investment. Greenland stands firm in its independence from foreign ownership or invasion and is backed by NATO.

The **Motzfeldt Sø** REE deposit is part of the Motzfeldt centre, which in turn is one intrusion of the Igaliko nepheline syenite complex and shows significant Ta-Nb enriched zones in altered syenite and minor pegmatite and diorite dykes, and high grade REE intersections that are related to the pegmatite intrusives at depth.

The Greenlandic REE-enriched carbonatites vary in age between the Archaean and Jurassic. The most important of those, in terms of REE resources, are Sarfartôq, Qaqarssuk and Tikiussaq.

The **Sarfartôq** carbonatite intrusion is located on a Precambrian thrust zone and intruded about 600 Ma during the opening of the Iapetus Ocean. The core of the complex consists of rauhaugite with schlieren of sövite and beforsite dykes, surrounded by a sodium-type fenite zone with pyrochlore-bearing rocks. The carbonatite contains REE bearing minerals in veinlets of dolomite and REE-carbonatite, and in shear zones.

The **Qaqarssuk** (or **Qeqertaasaq**) phoscorite-carbonatite complex consists of carbonatite ring dykes that intruded into the Archaean basement at 173 Ma. The carbonatite is surrounded by fenitised basement. The ring dykes consist of sövite, olivine-sövite, and dolomite carbonatite. They are cut by late-stage sövite veins, REE-carbonatite veins, ferrocarbonatite and lamprophyre dykes.

The carbonatite complex **Tikiusaaq** was discovered in 2005, since a study of regional stream sediment geochemistry and aeromagnetic data. The complex consists of a central intrusive carbonatite surrounded by a fenite zone with carbonatite and aillikite dykes.

The **Niaqornakavsak** and **Umiamako Nuna** are two small high-grade REE occurrences in the Palaeoproterozoic Karrat Group in central west Greenland. The Karrat Group consists of metasediments and metavolcanic rocks and the REE-enriched horizons consist of banded carbonates in amphibolites.

Location of Rare Earth Deposits in Greenland

21.0 OTHER RELEVANT DATA AND INFORMATION

The Tanbreez Deposit

- Mineralised host Size: Tanbreez has an estimated 4.7 billion tonnes of REE-ZrO_2-Nb_2O_5 bearing kakortokite, positioning it among the world's largest known rare earth deposits. The Deposit has very low uranium and thorium.
- Heavy Rare Earth Elements (HREE) Concentration: Approximately 27% of the total rare earth oxides (TREO) at Tanbreez are heavy rare earth elements, which are more valuable due to their applications in advanced technologies. Higher HREE content, eudialyte mineralization and lower uranium and thorium
- Acquisition by Critical Metals Corp.: In late 2024, Critical Metals Corp., a New York-based mining development company, acquired a controlling interest in the Tanbreez Project. This move aligns with efforts to secure supply chains for critical minerals in North America and Europe.
- Geopolitical Considerations: Stable, mining-friendly location. Prior to the acquisition, U.S. and Danish officials lobbied Tanbreez's management to avoid selling the project to Chinese firms, underscoring the strategic importance of the deposit in reducing Western dependence on Chinese rare earth supplies.

Comparison of Tanbreez Deposit to Carbonatite Hosted Deposits

The Tanbreez deposit in Greenland, hosted in kakortokite (a layered peralkaline rock), offers several advantages over carbonatite-hosted rare earth element (REE) deposits in terms of mineralogy, processing, environmental impact, and economics. Here's why Tanbreez is better than carbonatite-hosted deposits:

1. Lower Uranium and Thorium Content → Safer and Easier Processing

- Tanbreez has very low uranium (U) and thorium (Th) levels, whereas many carbonatite-hosted deposits contain high amounts of radioactive monazite and bastnäsite.
- Why this matters: Safer extraction and refining - Less radioactive waste means fewer environmental and regulatory challenges.
- Lower disposal costs - No need for expensive handling and storage of radioactive tailings.
- Easier permitting - Many countries restrict the processing of REEs with high Th/U due to nuclear regulations.

2. Higher Heavy Rare Earth Element (HREE) Content

- Tanbreez contains significant heavy REEs (HREEs) like dysprosium (Dy), terbium (Tb), and yttrium (Y).

- Carbonatite deposits (e.g., Bayan Obo, Mountain Pass) are dominated by light REEs (LREEs) such as cerium (Ce) and lanthanum (La), which have lower market value.
- Why this matters: HREEs like Dy and Tb are critical for high-performance magnets in EVs and wind turbines.
- The demand for HREEs is rising, and supply is more constrained, making Tanbreez a strategically valuable deposit.

3. Eudialyte Mineralization → Easier REE Extraction

- The primary REE-bearing mineral in Tanbreez is eudialyte, while carbonatites are often rich in monazite and bastnäsite.
- Why eudialyte is better: Low radioactivity → Unlike monazite, which contains thorium.
- Easier processing → Can be treated with alkaline leaching, avoiding the complex acid-based processing needed for monazite.
- Lower waste production → Less environmental impact compared to monazite-based REE processing.

4. Large, Consistent, and Near-Surface Deposit

- Tanbreez is a massive, layered, near-surface deposit, making it cheaper and easier to mine than deep or complex carbonatite-hosted deposits.
- Why this matters: Lower mining costs → Open-pit mining is more economical than deep underground extraction.
- Consistent mineralogy → Carbonatites can be geologically complex, requiring more selective mining.

5. Environmentally Friendly and Politically Stable Location

- Greenland offers a politically stable and mining-friendly jurisdiction, compared to carbonatite-hosted REE deposits in regions with higher geopolitical risks (e.g., China, Africa).
- Why this matters: Sustainable mining potential → Lower environmental footprint due to clean processing methods.
- Supply chain security → Western nations seek alternatives to China-dominated REE sources.

Undesirable uranium and thorium in rare earth elements

Uranium (U) and Thorium (Th) are considered undesirable in rare earth element (REE) deposits primarily due to radioactivity, environmental concerns, and regulatory challenges. Here's why they are problematic:

1. Radioactive Hazards

- Thorium (Th) and Uranium (U) decay over time, emitting alpha, beta, and gamma radiation, which can be hazardous to human health.
- Exposure risks include lung cancer (from inhaling radioactive dust), radiation burns, and contamination of soil and water.

2. Waste Management Challenges

- When REEs are extracted from minerals like monazite or bastnäsite, the thorium and uranium remain as byproducts.
- Radioactive tailings (waste material) require secure long-term storage, often needing special disposal sites, liners, and containment measures.
- Regulatory agencies impose strict environmental and safety protocols, increasing operational costs.

3. Complex and Costly Processing

- REE separation from radioactive elements adds an extra step in refining, increasing costs.
- Some REE deposits cannot be developed due to high uranium/thorium content, as companies would need a separate license to handle radioactive materials.

4. Stricter Regulations and Export Restrictions

- Many countries heavily regulate the extraction, transport, and disposal of uranium and thorium.
- Some nations ban or restrict the mining of thorium-rich REEs due to environmental concerns.
- Import restrictions: Countries like the U.S. and EU may limit imports of REEs from deposits with high thorium/uranium due to nuclear non-proliferation policies.

5. Environmental Contamination Risks

- Uranium and thorium can leach into groundwater from tailings ponds, contaminating drinking water sources.
- Accidental spills or poor storage can cause long-term environmental damage.

Why Some REE Deposits Are Preferred Over Others

- Carbonatite-hosted REEs (e.g., Bayan Obo, China; Mountain Pass, USA) tend to contain higher uranium and thorium.
- Peralkaline rocks (e.g., kakortokite from Tanbreez, Greenland) often have lower uranium and thorium, making them easier to process.
- Ionic clay deposits (Southern China) have very low uranium/thorium, making them highly desirable for REE extraction.

While uranium and thorium naturally occur in many REE deposits, their radioactivity increases environmental risks, processing costs, and regulatory hurdles. Deposits with low uranium and thorium content (like eudialyte-rich kakortokite in Greenland) are often preferred for safer and more economical REE extraction.

Environment, Permitting and Social Impact

Environmental studies:It is a requirement of the Greenland Self Government that Environmental and Social Impact Assessments are prepared to evaluate the potential impacts on the environment and the community, of proposed developments, such as an open pit mine.

An Environmental Impact Assessment (EIA) report was prepared in compliance with the official guideline of the BMP, “BMP guidelines – for preparing an Environmental Impact Assessment (EIA) Report for Mineral Exploitation in Greenland” 2nd Edition, January 2011 (Bureau of Minerals and Petroleum 2011).

The EIA has been prepared by the independent consultant Orbicon A/S (Denmark) supported by Orbicon Greenland A/S. Orbicon has been contracted by TANBREEZ Mining PLC. The report is supported by environmental baseline studies carried out by Orbicon in 2007 – 2011. The EIA is dated December 2014.

Environmental issues: The deposition of tailings and waste rock in Fostersø can potentially have an impact on the lake itself, Laksetværelv which drains Fostersø and Lakseelv downstream the point where it meets with Laksetværelv (and ultimately the fjord).

The majority of the large Arctic char in Lakseelv occur in the lower part of the river downstream the point where it meets with Laksetværelv. This is also the part of the river where most (if not all) of the Arctic char spend the winter. during summer large numbers of adult Arctic char migrate into the fjord.

A major concern regarding deposition of tailings and waste rock in Fostersø is the potential release of metals and other elements to the lake water. Such releases of contaminants, such as heavy metals, into the water of Fostersø can potentially have effects on the Arctic char population in Lakseelv and key prey organisms for these fish.

Required permits & status of permitting: Prior to the commencement of exploitation and development activities, a plan for the activities, including the organisation of production and production installations, must be approved by the Greenland government. In this connection, an EIA report must be prepared, and a public consultation process be carried out. The purpose of an EIA is to identify, predict and communicate the potential environmental impacts of a proposed mining project in all its phases from before the commencement of mining to after closure, and to propose measures to address and mitigate these impacts.

The draft EIA is published on the government’s public consultation portal for a minimum of eight weeks. During this period, public consultation meetings are held in relevant towns and settlements. At the end of the consultation period, the licensee must address all comments in the three languages in a white paper and revise the EIA. Following consultation with authorities, a final EIA is submitted to the Mineral Resources Authority.

There are no rules guaranteeing a maximum processing time, and specific circumstances, complexity and individual negotiations may lead to a longer processing time. The EIA has been lodged and accepted by the Ministry for Mineral Resources.

Climate Change: Greenland is often considered “ground zero” for the climate crisis because even small shifts in temperature can have outsize impacts across the entire Arctic region Scientists have estimated that if the Greenland ice sheet were to melt completely, it could raise global sea levels by more than seven metres. This will be a matter for infrastructure planning in the future as it is proposed to position the plant at the edge of the Fjord.

The conclusion of the EIA is that if the mitigating measures proposed in the EIA report are implemented and the mining activities are carried out in accordance with good environmental practice then the significance of the impacts on the environment will be low. No significant contamination by toxic materials or other pollutants is expected to take place. Dust dispersal will be small and local and will not contain toxic material. No key animals (such as White-tailed eagle and Arctic char) or rare plants are believed to decline or be displaced because of the mine project.

Social Impact Assessment (SIA)

The Greenland Act has an important section on the Social Impact Assessment (SIA) which must be completed before an Exploitation Licence can be granted. Much of the original work was completed in 2010-11 with the original submission occurring in March 2012.

This assessment was first updated in August/ September 2013, and most recently in July and December 2019 and July 2020, with the Exploitation Licence being approved in September 2020. As such there is a large amount of data from both the company and from the consultants during this extensive period of examination.

The overall objective of the SIA is to identify and analyse the potential aspects of the proposed mining activity and to recommend initiatives to realise sustainable development opportunities as well as to mitigate the negative impacts. The SIA is based on a high degree of engagement with all stakeholders.

At the conclusion of the SIA program the company, the government and the local community signed an Impact Benefit Agreement (IBA). All agreed that the SIA had been able to cover all the aspects and more required under the Act. The conclusion noted the urgent need for local employment with about a third of the population having had to move out of the area due to lack of work over about the last decade.

All agreed that maximising the local workforce participation would do much to overcome any mitigating problems caused by importing workers. Following on from this and before this the community and Tanbreez have spent considerable time discussing each other’s needs and advise what sort of recruitment or training will be required so as to not create local shortages. It has been much appreciated by Tanbreez that this initiative to some extent has been led by the local mayor, his staff and in fact the whole business community in Qaqortoq.

Proposed Mining Project (Forward Looking Statements)

The Company prepared a comprehensive Definitive Feasibility Study (DFS) in 2014 that proposed the Tanbreez project will extract, process and export eudialyte mineral concentrates containing Zirconium, Yttrium, Niobium, Hafnium, Tantalum and Rare Earth elements as well as feldspar and arfvedsonite co-products. The Environmental Impact Assessment (EIA) of the environmental impact of development, operation, and closure of the mining project, according to Greenlandic guidelines has been prepared and published for public scrutiny.

The Company believes that it has a reasonable basis for providing the forward-looking statements and forecast financial information. The Project is at the DFS phase and although reasonable care has been taken to ensure that the facts are accurate and that the opinions expressed are fair and reasonable, no reliance can be placed on the information contained or on its completeness. A key conclusion of the DFS is that the Project is considered to have positive economic potential.

Mine Design and Ore Reserve Calculation will be required a part of a Definitive feasibility Study to commence in 2025.

Forward-looking statements are subject to known and unknown risks and uncertainties and are based on potentially inaccurate assumptions that could cause actual results to differ materially from those expected or implied by the forward-looking statements. Actual results could differ materially from those anticipated.

22.0 INTERPRETATION AND CONCLUSIONS

The Tanbreez license, MIN 2020-54 in southern Greenland, is 10 km west of Narsaq, the Provincial Capital. The regional capital, Qaqortoq, is 20 km to the south and the regional airport of Narsarsuaq is being moved to approximately 12 km south of the licence. The major power line which is from hydro power passes 2 km south of the licence. The tenement has ample supply of fresh water.

The tenement covers a portion of the Ilimaussaq Intrusion which is part of the Gardar sequence of alkaline rocks. This series of deep-seated alkaline rocks represent a volcanic event that lasted up to 200 million years, occurring both in Greenland and Canada. The intrusion, which is possibly the most differentiated deposit known, is prospective for in rare earths, niobium, tantalum, zirconium, lithium, beryllium etc. The Ilimaussaq intrusion is 18 km long, 8 km wide and possibly 4 km thick.

The Tanbreez mineralization is a highly fractionated Zr-Nb-Ta-REE deposit in the southern part of the Ilímaussaq intrusive complex in South Greenland. The commodities are hosted in the mineral eudialyte, that is concentrated in the kakortokite layer at the floor of the exposed intrusion. The kakortokite Sequence is outcropping over an area of 5.0 by 2.5 km within MIN 2020-54 and has a total thickness of 270 m. A conservative estimate suggests the Kakortokite Sequence is 4.7 billion tonnes. Linear correlations between ZrO2 and individual REE indicate that eudialyte is by far the main REE bearing mineral in the kakortokite. This does not indicate any certainty of hosting mineralization. The estimate is conceptual in nature. It is based on extensive historic and Tanbreez exploration drilling (414 holes) coupled with the exposures in multiple creek sections. Investors should not place undue reliance on this information.

The Ilímaussaq intrusion was largely emplaced during block subsidence and formed by three pulses, of which the third formed layered series of nepheline syenites enriched in REE as well as uranium (U), thorium (Th), niobium (Nb), tantalum (Ta), beryllium (Be), zirconium (Zr) and fluorine (F).

The Ilímaussaq intrusion hosts two world class REE deposits. There is a significant difference between the Kvanefjeld and Tanbreez deposits The REE at Kvanefjeld are hosted in the **steenstrupine** mineral phase that also includes elevated values of uranium and thorium. Tanbreez REE are hosted in the **eudialyte** phase that has low levels od deleterious elements.

- **Kvanefjeld**: hosted by an intermediate series sandwiched between roof and floor series, consisting mainly of lujavrites, in which the main REE mineral is steenstrupine. This deposit contains a significant component of uranium. The Greenland government has legislated a ban on uranium exploration and mining.
- **Tanbreez (Kringlerne)**: comprising 29 exposed cyclic layers of kakortokite making up the bottom cumulates of the intrusion. The main REE mineral is eudialyte which has only background amounts of uranium. The Greenland government is fully supporting of the Tanbreez project

Current Stage of the Project

Mineral Resource Estimations have been completed, and a Full Feasibility Study was compiled in 2016 and now needs to be updated. The Company has continued to progress detailed exploration during the last few years with its advancement towards mining.

The company has completed 414 drill holes, 709 tonnes of bulk samples taken for pilot plant testing, and 500,000 assays, of which 336,548 were used by Tanbreez in its assessments.

Tens of thousands of assays for uranium which show all are at background levels, at 10-20 ppm. Thorium does not exceed 100 ppm. Neither appear to concentrate during processing further indicating they are behaving as background metals only. The company believes it can sell most of the co-products arfvedsonite and feldspar, which is anticipated to offset much of the upgrading cost.

On 8 September 2020, Tanbreez Mining Greenland A/S' exploitation license and Impact Benefit Agreement were signed, marking the official granting of the exploitation licence. The signing ceremony took place on top of the Tanbreez rare earth deposit at Killavaat Alannguat, where Jens Frederik Nielsen, the Minister of Industry and Mineral Resources, Simon Simonsen, the Deputy Major of Kujalleq Municipality, and Bolette Maqe Nielsen, Chairman of the Board of Tanbreez , signed the documents.

The company at present has the right to mine 0.5 million tonnes per year which is the rate production will commence while local workers are recruited and trained. Initially this process will employ approximately 80 personnel from Qaqortoq, rising to over 200+ when stage 2 is reached.

Tanbreez believes this production can be lifted by year 5, subject to approvals. It is anticipated this initial production is to go to North America or Europe where treatment facilities are expected to be established. Further expansions with sales to Asia and Europe are believed possible beyond that time with the potential for sales of both the arfvedsonite and feldspar (subject to government approvals) the waste will be minimal.

22.1 Mineral Resources

The current Mineral Resource estimates are classified as Indicated and Inferred Resources under the JORC Code 2012. Details of the estimate are included in JORC Table 1 attached to the report. and have been determined by drill density and number of drillholes and samples utilized in grade estimation. The resource classification accounts for all relevant factors and reflects the competent person's views of the deposit. The resource classification appropriately and reasonably reflects the varying levels of confidence of the resource model to predict average grade and tonnages for the resources if it were to be mined. Confidence in the relative accuracy of the estimate is reflected by the categorization of the mineralisation as Indicated and Inferred Resources.

23.0 RECOMMENDATIONS

Tanbreez Project in Greenland is at the *Pre-Development Stage*. Mineral Resource Estimates in accordance with the JORC Code 2012 have been finalised for the Tanbreez Deposit. An Exploitation Licence has been granted by the Government of Greenland and the tenement area has been subjected to extensive exploration over the last four decades. A Definitive Feasibility Study was compiled in 2013. An Environmental Impact Assessment was compiled in 2014.

The Project should be considered low risk. Based on the review of the available technical information and the results of Feasibility Studies prepared in 2014. Agricola considers the proposed future exploration and studies for the Project are reasonable and appropriate in the context of the areas of the development of the deposit and the development stage.

Agricola was not involved in any of the exploration conducted on the Tanbreez Project but has reviewed the exploration completed to date and the supporting documentation provided by the Company. Overall, the Qualified Person considers the data used to prepare Mineral Resource Estimates (MRE) and exploration potential is accurate and representative and has been generated with industry accepted standards and procedures.

The MRE was prepared in accordance with industry best practices and reported in accordance with the guidelines of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 Edition).

The Qualified Person considers the MRE representative of the informing data, and that the data is of sufficient quality to support the current MRE classified into the Measured, Indicated and Inferred categories. Reasonable prospects for economic extraction have been demonstrated on the Project in 2014 during the DFS and has been upgraded to the present day, as described in the Report. Considering the current and forecast product prices, the assessment for reasonable prospects for economic extraction is, in the Qualified Person's opinion, still valid.

An Initial Assessment (Scoping Study or Preliminary Economic Assessment should be compiled as a basis for further work.

Preliminary Economic Assessment (PEA) – Tanbreez REO Project (Greenland)

1. Resource & Grade

- Total Resource Estimate: 45MT @ 0.4% REO.
- Host Rock: Kakortokite unit (~4.7 billion tonnes).
- Significant Heavy Rare Earth Elements (HREEs): Over 27% of REEs are HREEs (higher market value).

2. Mining Method & Infrastructure

- Planned Method: Open-pit bulk mining with minimal waste (~5%).
- Processing: Mechanical separation techniques for REE concentration.
- Logistics Advantage: Deep-water fjords provide year-round direct shipping access.
- Proximity to North America & Europe, reducing transportation costs.

3. Market & Revenue Potential

- Strategic Importance: Supply chain security for Europe & North America (critical for defence & high-tech industries).
- Unique mix of HREEs, unlike most global projects that focus on Light REEs (LREEs).
- Pricing Considerations: HREEs (Dy, Tb, Y) command higher prices due to demand in magnets, batteries & defence.
- Current REE market trends indicate strong long-term demand.

4. Capex & Opex Considerations

- Capital Expenditure (Capex):
- Processing plant & mining infrastructure required.
- Potential partnership with European/North American entities to support funding.
- Operating Expenditure (Opex): Lower costs due to open-pit mining.
- On-site processing can enhance cost efficiency.
- Shipping logistics optimized due to coastal proximity.

5. Environmental & Regulatory Factors

- Granted exploitation license (MIN 2020-54) by Greenland government.
- Environmental studies completed: Waste samples confirmed to be inert.
- JORC 2012 compliance ensures credibility for future feasibility studies.

6. Next Steps

- Detailed definitive feasibility study (including CAPEX/OPEX projections).
- Metallurgical testing & optimization of REE extraction processes.
- Securing offtake agreements & partnerships for market integration.

This Report suggests strong economic potential, with HREE dominance, favourable mining conditions, and strategic geographic positioning. A Definitive Feasibility Study (DFS) would provide further clarity on the project's full economic viability.

23.1 Mineral Resources

Before a full mining feasibility study can be implemented a sufficient proportion of the resources to support a mining operation must be in the JORC Code Measured and Indicated category. The current MRE reports 60% in the indicated and 40% in the Inferred category and the Competent Person for Al Maynard and Associated states, "*There are sufficient rocks that host the REE mineralisation, mainly kakortokite, already mapped and sampled on the tenement to significantly extend these resources at a comparable head grade"*.

- Further diamond drilling is recommended on an 80m grid spacing, allowing a maximum extrapolation of grades from drill intersections in resource block modelling below the current 40m floor of the MRE.

24.0 REFERENCES

The Tanbreez Project

These references offer a comprehensive overview of the Tanbreez Project's development, strategic significance, and contributions to the global rare earth elements supply chain.

1. **Official Tanbreez Project Website**: Provides detailed insights into the project's mission, location, mineral resources, and development updates.

https://tanbreez.com/?utm_source=chatgpt.com

2. **Long Finance Report on the Tanbreez Project**: Offers an in-depth analysis of the project's valuation, resource estimates, and strategic importance in supplying rare earth elements to North America.

https://www.longfinance.net/media/documents/Mannahatta_NFT_Preso_Feb2023.pdf

3. **Reuters Article on U.S. Interest in Tanbreez**: Discusses the geopolitical significance of the project, highlighting U.S. and Danish officials' efforts to prevent its sale to Chinese firms, emphasizing its strategic value.

https://www.reuters.com/markets/commodities/us-lobbied-greenland-rare-earths-developer-tanbreez-not-sell-china-2025-01-09/?utm_source=chatgpt.com

4. **Mining.com Update on Tanbreez Drilling Program**: Details the commencement of a diamond drilling program aimed at upgrading the resource to U.S. SEC standards and enhancing potential mine throughput.

https://www.mining.com/critical-metals-flags-additional-mining-upside-for-tanbreez-rare-earth-project/?utm_source=chatgpt.com

5. **High North News on Critical Metals' Acquisition**: Reports on Critical Metals Corp.'s acquisition of a controlling stake in the Tanbreez Project, underscoring its strategic importance and access to key transportation routes. .

https://www.highnorthnews.com/en/critical-metals-corp-aquire-controlling-stake-large-rare-earth-project-greenland?utm_source=chatgpt.com

6. **Critical Metals Corp. Press Release on Drilling Initiatives**: Announces the launch of a diamond drilling program to evaluate the mine's resources and projected lifespan, marking a significant step in the project's development.

https://criticalmetalscorp.gcs-web.com/news-releases/news-release-details/critical-metals-corp-has-commenced-drilling-tanbreez-rare-earth?utm_source=chatgpt.com

7. **Nukiga Community Feature on Tanbreez**: Highlights Tanbreez's commitment to sustainable mining practices, focusing on minimal waste and carbon emissions in their operations.

https://www.nukigacommunity.com/tanbreez/?utm_source=chatgpt.com

8. **GlobeNewswire Update on Project Advancements**: Provides updates on the extension of the project's exploitation license and the completion of a diamond drilling program, reflecting ongoing development efforts.

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10. **Financial Times Article on Greenland's Mining Prospects**: Explores the increasing global interest in Greenland's mining sector, with a focus on projects like Tanbreez amid geopolitical tensions and the demand for critical minerals.

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The VALMIN Code:

These resources provide comprehensive information on the VALMIN Code, its applications, and its significance in the assessment and valuation of mineral and petroleum assets.

The VALMIN Code is a comprehensive framework that establishes standards and guidelines for the technical assessment and valuation of mineral and petroleum assets and securities, particularly for independent expert reports. It is a collaborative effort by The Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). The Code ensures that public reports are prepared with competence, materiality, and transparency, aligning with industry best practices and regulatory requirements.

1. **Official VALMIN Code Website**: Provides access to the full text of the VALMIN Code, including the latest 2015 Edition, which became mandatory for AusIMM and AIG members from July 1, 2016.

https://www.valmin.org/?utm_source=chatgpt.com

2. **2015 Edition of the VALMIN Code (PDF)**: Direct link to the 2015 Edition of the VALMIN Code, outlining fundamental principles, mandatory requirements, and supporting recommendations for the assessment and valuation of mineral assets.

https://www.valmin.org/docs/VALMIN_Code_2015_final.pdf?utm_source=chatgpt.com

3. **AusIMM Codes and Standards**: Offers insights into various codes and standards related to the mining industry, including the VALMIN Code, detailing obligations for the assessment and valuation of mineral assets and securities.

https://www.ausimm.com/about-us/codes-and-standards/?utm_source=chatgpt.com

4. **Applications of the VALMIN Code**: An article discussing the practical applications of the VALMIN Code for geologists and other resource professionals, providing guidance on conducting evaluations and valuations of mining and exploration tenure.

https://www.ausimm.com/bulletin/bulletin-articles/applications-of-the-valmin-code--a-guide-for-geologists-and-other-resources-professionals/?utm_source=chatgpt.com

5. **Release of the VALMIN Code 2015 Edition**: An announcement by SRK Consulting discussing the release and significance of the 2015 Edition of the VALMIN Code, highlighting its role as a companion to the JORC Code.

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Regulation S-K 1300:

Regulation S-K 1300, adopted by the U.S. Securities and Exchange Commission (SEC), modernizes property disclosures for mining registrants. It replaces the previous Industry Guide 7 and introduces new requirements for disclosing information about mining properties. Below is a list of references related to S-K 1300:

1. **SEC's Modernization of Property Disclosures for Mining Registrants**: This guide provides an overview of the new rules and their applicability to registrants with material mining operations.

https://www.sec.gov/resources-small-businesses/small-business-compliance-guides/modernization-property-disclosures-mining-registrants-small-entity-compliance-guide?utm_source=chatgpt.com

2. **17 CFR § 229.1300 (Item 1300) Definitions**: The Code of Federal Regulations outlines specific definitions and requirements under S-K 1300.

https://www.ecfr.gov/current/title-17/chapter-II/part-229/subpart-229.1300/section-229.1300?utm_source=chatgpt.com

3. **SEC Adopts New Rules for Mining Disclosures**: An article discussing the SEC's adoption of S-K 1300, highlighting key changes and implications for mining companies.

https://www.nortonrosefulbright.com/en/knowledge/publications/73ff7193/sec-adopts-new-rules-for-mining-disclosures?utm_source=chatgpt.com

4. **Understanding the SEC's New Mining Disclosure Rules**: This publication provides insights into the SEC's overhaul of mining disclosure requirements, transitioning from Industry Guide 7 to S-K 1300.

https://www.dorsey.com/newsresources/publications/client-alerts/2019/02/new-mining-disclosure-rules-2019?utm_source=chatgpt.com

5. **SME Guide for Reporting**: The Society for Mining, Metallurgy & Exploration offers a guide that aligns with the principles of S-K 1300, aiding professionals in preparing compliant reports.

https://www.smenet.org/Professional-Development/SME-Guide-for-Reporting?utm_source=chatgpt.com

6. **Understanding SEC S-K 1300 Regulations**: SRK Consulting provides an overview of the new reporting requirements under S-K 1300, effective from January 1, 2021.

https://www.srk.com/en/publications/understanding-sec-s-k-1300-regulations?utm_source=chatgpt.com

7. **S-K 1300 Compliance & Disclosure Interpretations**: This resource discusses the SEC's Compliance & Disclosure Interpretations related to Regulation S-K 1300, offering clarity on various aspects of the regulation.

https://www.groffengineering.com/s-k-1300-compliance-disclosure-interpretations/?utm_source=chatgpt.com

National Instrument 43-101

National Instrument 43-101 (NI 43-101) is a Canadian regulatory standard that governs the disclosure of scientific and technical information about mineral projects by mining companies. Established to protect investors and ensure the accuracy of information, it outlines the requirements for public reporting on mineral properties. For comprehensive information on NI 43-101, consider the following references:

1. **National Instrument 43-101 Standards of Disclosure for Mineral Projects**: This document provides the complete text of NI 43-101, detailing definitions, requirements for disclosure, and guidelines for technical reports.

https://www.osc.ca/sites/default/files/pdfs/irps/ni_20160509_43-101_mineral-projects.pdf?utm_source=chatgpt.com

2. **CIM Definition Standards on Mineral Resources and Reserves**: Published by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), this document offers standardized definitions for mineral resources and reserves, which are incorporated by reference into NI 43-101.

3. **British Columbia Securities Commission (BCSC) NI 43-101 Page**: The BCSC provides access to the current version of NI 43-101, related forms, and companion policies, along with proposed amendments and notices.

https://www.bcsc.bc.ca/securities-law/law-and-policy/instruments-and-policies/4-distribution-requirements/current/43-101?utm_source=chatgpt.com

4. **National Instrument 43-101: Royalty and Streaming Disclosure**: This article discusses the application of NI 43-101 to royalty and streaming companies, highlighting specific disclosure requirements and exemptions.

https://cassels.com/insights/national-instrument-43-101-royalty-and-streaming-with-ni-43-101-disclosure/?utm_source=chatgpt.com

25.0 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

Agricola is relying on information provided by Tanbreez Mining Greenland A/S concerning legal, political, environmental, or tax matters relating to the Project. This information has been supplied through personal communications with staff, provision of technical information and data, and the uploading of relevant information to a project data room. Technical conversations via email have been held with Greg Barnes, Principal of Rimbal Pty Ltd and George Karageorge, Managing Director and Geologist, Geosan Consulting.

Glossary of Technical Terms

alluvial	Pertaining to silt, sand and gravel material, transported and deposited by a river.
alluvium	Clay silt, sand, gravel, or other rock materials transported by flowing water and deposited in comparatively recent geologic time as sorted or semi-sorted sediments in riverbeds, estuaries, and flood plains, on lakes, shores and in fans at the base of mountain slopes and estuaries.
alteration	The change in the mineral composition of a rock, commonly due to hydrothermal activity.
andesite	An intermediate volcanic rock composed of andesine and one or more mafic minerals.
anomalies	An area where exploration has revealed results higher than the local background level.
anticline	A fold in the rocks in which strata dip in opposite directions away from the central axis.
auger sampling	A drill sampling method using an auger to penetrate upper horizons and obtain a sample from lower in the hole.
bedrock	Any solid rock underlying unconsolidated material.
carbonate	Rock of sedimentary or hydrothermal origin, composed primarily of calcium, magnesium or iron and CO_3. Essential component of limestones and marbles.
character samples	Isolated samples taken to determine the minerals present and the grade. They do not represent the average grade of a volume of material.
chert	Fine grained sedimentary rock composed of cryptocrystalline silica.
chlorite	A green coloured hydrated aluminium-iron-magnesium silicate mineral (mica) common in metamorphic rocks.
clastic	Pertaining to a rock made up of fragments or pebbles (clasts).
conglomerate	A rock type composed predominantly of rounded pebbles, cobbles or boulders deposited by the action of water.
diamond drill hole	Mineral exploration hole completed using a diamond set or diamond impregnated bit for retrieving a cylindrical core of rock.
ductile	Deformation of rocks or rock structures involving stretching or bending in a plastic manner without breaking.
erosional	The group of physical and chemical processes by which earth or rock material is loosened or dissolved and removed from any part of the earth’s surface.
fault zone	A wide zone of structural dislocation and faulting.
feldspar	A group of rock forming minerals.
felsic	An adjective indicating that a rock contains abundant feldspar and silica.
folding	A term applied to the bending of strata or a planar feature about an axis.
foliated	Banded rocks, usually due to crystal differentiation because of metamorphic processes.

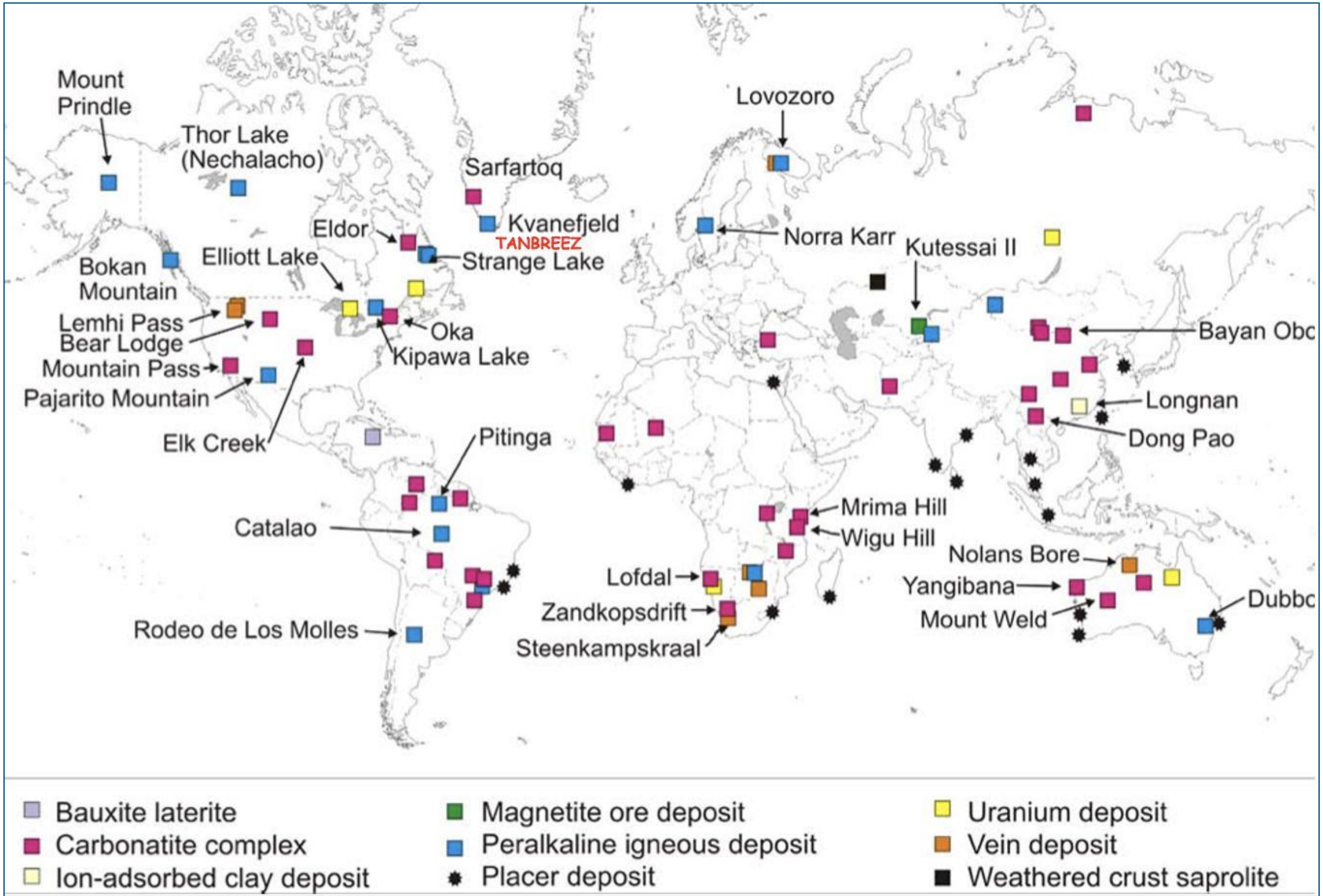
g/t	Grams per tonne, a standard volumetric unit for demonstrating the concentration of precious metals in a rock.
geochemical	Pertains to the concentration of an element.
geophysical	Pertains to the physical properties of a rock mass.
granite	A coarse-grained igneous rock containing mainly quartz and feldspar minerals and subordinate micas.
granodiorite	A coarse-grained igneous rock composed of quartz, feldspar and hornblende and/or biotite.
greenschist	A metamorphosed basic igneous rock which owes its colour and schistosity to abundant chlorite.
gypsum	Mineral of hydrated, or water-containing, calcium sulphate.
hematite	Iron oxide mineral, Fe_2O_3.
hydrothermal fluids	Pertaining to hot aqueous solutions, usually of magmatic origin, which may transport metals and minerals in solution.
igneous	Rocks that have solidified from a magma.
In situ	In the natural or original position.
intermediate	A rock unit which contains a mix of felsic and mafic minerals.
intrusions	A body of igneous rock which has forced itself into pre-existing rocks.
intrusive contact	The zone around the margins of an intrusive rock.
joint venture	A business agreement between two or more commercial entities.
laterite	A cemented residuum of weathering, generally leached in silica with a high alumina and/or iron content.
lithological contacts	The contacts between different rock types.
metamorphic	A rock that has been altered by physical and chemical processes involving heat, pressure and derived fluids.
ppb	Parts per billion; a measure of low-level concentration.
RC drilling	A drilling method in which the fragmented sample is brought to the surface inside the drill rods, thereby reducing contamination.
regolith	The layer of unconsolidated material which overlies or covers insitu basement rock.
residual	Soil and regolith which has not been transported from its point or origin.
rhyolite	Fine-grained felsic igneous rock containing high proportion of silica and felspar.
rock chip sampling	The collection of rock specimens for mineral analysis.
saprolite	Disintegrated, in-situ rock, partially decomposed by the chemical and physical processes of oxidation and weathering.
satellite imagery	The images produced by photography of the earth's surface from satellites.
schist	A crystalline metamorphic rock having a foliated or parallel structure due to the recrystallisation of the constituent minerals.

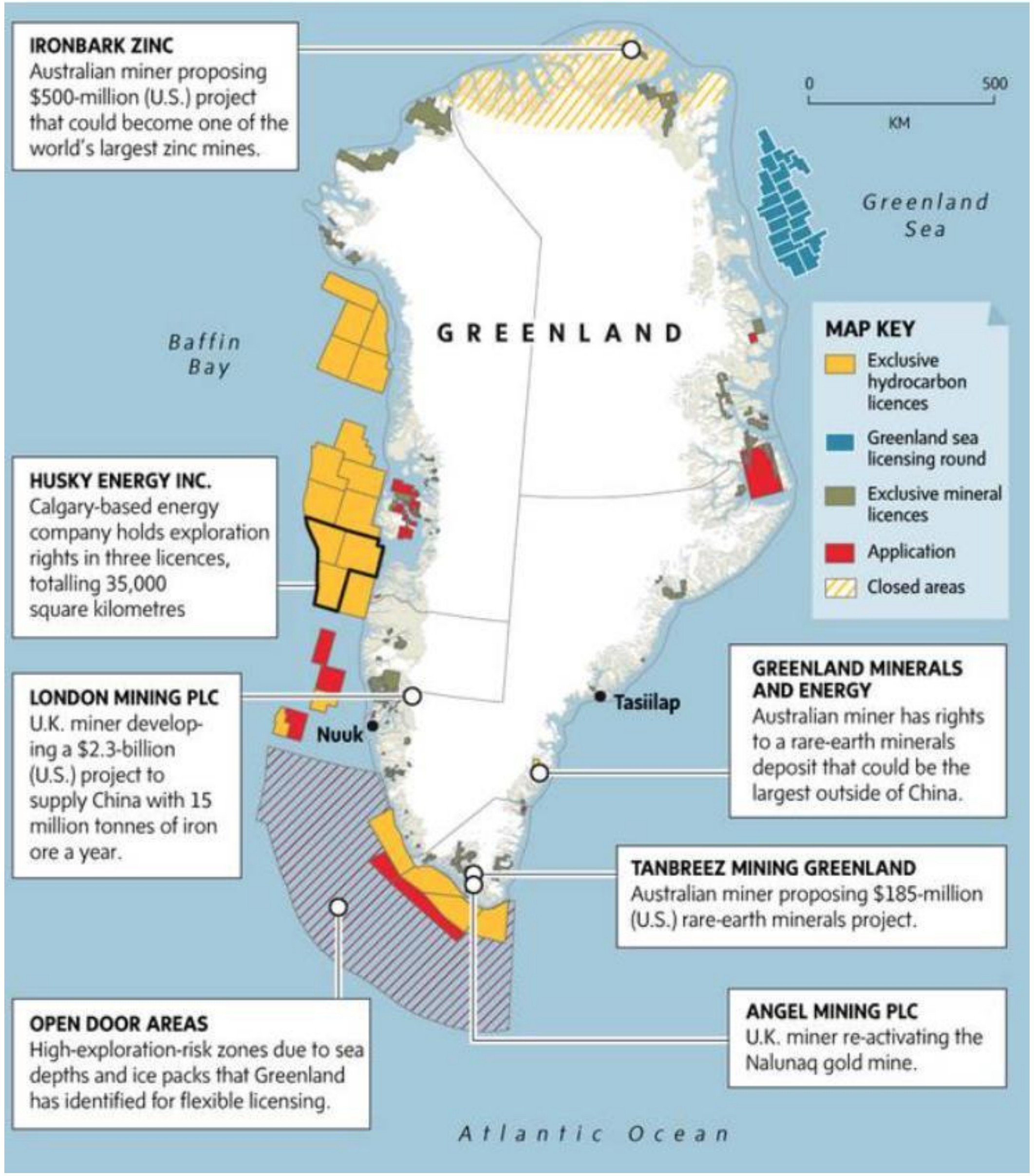
scree	The rubble composed of rocks that have formed down the slope of a hill or mountain by physical erosion.
sedimentary	A term describing a rock formed from sediment.
sericite	A white or pale apple green potassium mica, very common as an alteration product in metamorphic and hydrothermally altered rocks.
shale	A fine grained, laminated sedimentary rock formed from clay, mud and silt.
sheared	A zone in which rocks have been deformed primarily in a ductile manner in response to applied stress.
sheet wash	Referring to sediment, usually sand size, deposited over broad areas characterised by sheet flood during storm or rain events. Superficial deposit formed by low temperature chemical processes associated with ground waters, and composed of fine grained, water-bearing minerals of silica.
silcrete	Superficial deposit formed by low temperature chemical processes associated with ground waters, and composed of fine grained, water-bearing minerals of silica.
silica	Dioxide of silicon, SiO_2, usually found as the various forms of quartz.
sills	Sheets of igneous rock which is flat lying or has intruded parallel to stratigraphy.
silts	Fine-grained sediments, with a grain size between those of sand and clay.
soil sampling	The collection of soil specimens for mineral analysis.
stocks	A small intrusive mass of igneous rock, usually possessing a circular or elliptical shape in plan view.
strata	Sedimentary rock layers.
stratigraphic	Composition, sequence and correlation of stratified rocks.
stream sediment sampling	The collection of samples of stream sediment with the intention of analysing them for trace elements.
strike	Horizontal direction or trend of a geological structure.
subcrop	Poorly exposed bedrock.
sulphide	A general term to cover minerals containing sulphur and commonly associated with mineralisation.
supergene	Process of mineral enrichment produced by the chemical remobilisation of metals in an oxidised or transitional environment.
syenite	An intrusive igneous rock composed essentially of alkali feldspar and little or no quartz and ferromagnesian minerals.
syncline	A fold in rocks in which the strata dip inward from both sides towards the axis.
talc	A hydrous magnesium silicate, usually formed due to weathering of magnesium silicate rocks.
tectonic	Pertaining to the forces involved in or the resulting structures of movement in the earth's crust.
thrust fault	A reverse fault or shear that has a low angle inclination to the horizontal.

tremolite	A grey or white metamorphic mica of the amphibole group, usually occurring as bladed crystals or fibrous aggregates.
veins	A thin infill of a fissure or crack, commonly bearing quartz.
volcaniclastics	Pertaining to clastic rock containing volcanic material.
volcanics	Formed or derived from a volcano.
zinc	A lustrous, blueish-white metallic element used in many alloys including brass and bronze.

Worldwide Rare Earth Deposits

WORLD REE DEPOSITS by Deposit Type and size (Mt REO)									
Project	Company	Location	Deposit type	REE mineral	Total Resource Mt	Grade %	HREE %	REO Mt	HREE MT
Alkanie Intrusion Host									
Tanbreez	Tanbreez Mining	Greenland	Alkaline rock	eudialyte	4700	0.60%	27.00%	28.20	7.61
Kvanefjeld	ETM Limited	Greenland	Alkaline rock	steenstrupine-(Ce), lovozerite	1013	1.10%	11.60%	11.14	1.29
Lovozersky	LLC Lovozersky GOK	Russia	Alkaline rock	loparite - eudialyte	7500	0.42%	30.00%	31.50	9.45
Nechalaco (Thor Lake)	Vital Minerals	Canada	Alkaline Rock	Fergusonite-(Y), zircon, monazite,	95	1.46%	8.70%	1.39	0.12
Dubbo	Australian Strategic	Australia	Alkaline rock	REE carbonates, eudialyte Group	75	0.74%	23.10%	0.56	0.13
Norra Karr	Tasman	Sweden	Alkaline rock	eudialyte	110	0.50%	52.00%	0.55	0.29
Red Wine (Two Tom)	Canada Rare Earth	Canada	Alkaline rock	monazite, cerium-calcium silic:	41	1.18%	6.00%	0.48	0.03
Carbonitite Host									
Bayan Obo	China Northern Rare	Mongolia	Carbonatite	bastnasite, monazite, xenotime	1000	4.00%	1.13%	40.00	0.45
Nam Xe	Vietnam Government	Vietnam	Carbonatite	parisite	550	1.40%	1.38%	7.70	0.11
cata|ao 1	Anglo American	Brazil	Carbonatite	monazite	119	5.50%	0.30%	6.55	0.02
Ashram	Commerce Resources	Canada	Carbonatite	bastnasite, monazite, xenotime	249	1.88%	3.50%	4.68	0.16
Ngualla	Peak Resources	Tanzania	Carbonatite	bastnasite	215	2.15%	1.60%	4.62	0.07
Longonjo	Pensana Rare Earths	Angola	Carbonatite	REE carbonates and phosphates	313	1.43%	5.04%	4.48	0.23
Fen	REE Minerals Holding	Norway	Carbonatite	bastnasite	486	0.90%	3.02%	4.37	0.13
Mountain Pass	MP Materials	USA	Carbonatite	bastnasite	47	8.90%	0.49%	4.18	0.02
Tomtor	ThreeArc Mining LLC	Russia	Carbonatite	monazite, xenotime, pyrochlore	27	11.90%	9.10%	3.21	0.29
Maoniuping	China Rare Earth G	China	Carbonatite	bastnasite	107	2.95%	11.10%	3.16	0.35
Mount Weld	Lynas Rare Earths	Australia	Carbonatite	pseudomorphs monazite	56	5.40%	3.97%	3.02	0.12
Araxd	CBMM	Brazil	Carbonatite	monazite, gorceixite	40	3.00%	2.33%	1.20	0.03
Elk Creek	NioCorp Developm	USA	Carbonatite	bastnasite, allanite	297	0.35%	12.00%	1.04	0.12
Zandkopsdrift	Frontier Rare Earths	South Africa	Carbonatite	monazite	43	2.04%	7.26%	0.88	0.06
Araxa	ARA	Brazil	Carbonatite		92	0.66%	2.50%	0.61	0.02
Araxa	Itafos/St George	Brazil	Carbonatite		28	4.22%	2.40%	1.19	0.03
Bear Lodge	Rare Element	USA	Carbonatite	REE carbonate and fluorocarbona1	16	3.05%	3.48%	0.49	0.02
Dongpao	Toyota Tsusho & sojitz	Vietnam	Carbonatite	bastnasite	3	10.00%	0.95%	0.30	0.00
Yangibana	Hasting Technology	Australia	Carbonatite	monazite	30	0.93%	6.92%	0.28	0.02
Other Host Rocks									
Nolans	Arafura Resources	Australia	Hydrothermal/I	apatite, monazite, allanite	56	2.60%	2.87%	1.46	0.04
Round Top	Texas Mineral	USA	Rhyolite	yttrofluorite, yttrocerite, bastnasite	950	0.06%	74.20%	0.57	0.42
Strange Lake	Torngat Metals Limited	Canada	Alkaline granite	bastnasite, zirconosilicates, ferria	55	0.89%	37.30%	0.49	0.18


Mount Prindle
Thor Lake (Nechalacho)
Sarfartoq
Kvanefjeld
TANBREEZ
Lovozoro
Norra Karr
Kutessai II
Eldor
Strange Lake
Elliott Lake
Bokan Mountain
Lemhi Pass
Bear Lodge
Mountain Pass
Pajarito Mountain
Oka
Kipawa Lake
Elk Creek
Bayan Obo
Longnan
Dong Pao
Pitinga
Catalao
Mrima Hill
Wigu Hill
Lofdal
Zandkopsdrift
Steenkampskraal
Nolans Bore
Yangibana
Mount Weld
Dubbo
Rodeo de Los Molles
Bauxite laterite
Carbonatite complex
Ion-adsorbed clay deposit
Magnetite ore deposit
Peralkaline igneous deposit
Placer deposit
Uranium deposit
Vein deposit
Weathered crust saprolite


IRONBARK ZINC
Australian miner proposing $500-million (U.S.) project that could become one of the world's largest zinc mines.
0
500
KM
Greenland Sea
Baffin Bay
GREENLAND
MAP KEY
Exclusive hydrocarbon licences
Greenland sea licensing round
Exclusive mineral licences
Application
Closed areas
HUSKY ENERGY INC.
Calgary-based energy company holds exploration rights in three licences, totalling 35,000 square kilometres
LONDON MINING PLC
U.K. miner developing a $2.3-billion (U.S.) project to supply China with 15 million tonnes of iron ore a year.
Nuuk
Tasiilap
GREENLAND MINERALS AND ENERGY
Australian miner has rights to a rare-earth minerals deposit that could be the largest outside of China.
TANBREEZ MINING GREENLAND
Australian miner proposing $185-million (U.S.) rare-earth minerals project.
ANGEL MINING PLC
U.K. miner re-activating the Nalunaq gold mine.
OPEN DOOR AREAS
High-exploration-risk zones due to sea depths and ice packs that Greenland has identified for flexible licensing.
Atlantic Ocean

Known Eudialyte Deposits

Deposit	Tanbreez	Norra Karr	Strange Lake	Kipawa	Lovozero	Toongi	Pajarito, USA
Location	Greenland	Sweden	Canada	Canada	Kola Peninsula, Russia	New South Wales, Australia	Indian land, New Mexico
Size	4.7 billion tonnes so far	31 mt	492.5 mt	15.5 mt	Largest with billions tonnes		24mt
Grade	1.9% ZrO_2, 0.2% Nb_2O_5, 0.6% REO and 0.03% Ta_2O_5	0.6% REE, 1.36% ZrO_2	2.6% ZrO_2 but not recovered, 0.54% REE, 0.31% Y_2O_5, 0.4%	0.873% ZrO_2, 0.434% TREO	State secret	1.9% ZrO_2, 0.45% Nb_2O_5, 0.03% Ta_2O_5 + 0.89% REO	0.08% REO, 1.2% ZrO_2
% HREO	22-30%	Varies 30-70%	47% but of the heavies 96% is Y	0.36	≈ 30%	0.3	High
Other REO minerals	Rare catapleiite	Catapleiite assayed for NbTa	Many minerals	Several mineral	Limited	Another mineral	REO Are several others including monazite
Permission to mine	Granted	No environmental hold up	Pre-feasibility	? building the plant	Different system	mining ? native title	Uncertain
U/Th	Background	31 U and 63 Th	High thorium 950 ppm, moderate uranium 70 ppm	Thorium over 1000 ppm, uranium over 100 ppm	Both below 100 ppm	Is a problem	Not specified but will be above 100 as monazite is present
Grain size	Sand size	Moderate	Fine grained & had to be floated - no Zr		Moderate	Very fine grade	Not mentioned
Arfvedsonite/ Aegirine	Arfvedsonite	Aegirine	Arfvedsonite	Arfvedsonite	Aegirine	Irrelevant as whole rock to be dissolved	Aegirine
Separation	Magnetic	Magnetic	Floatation only	Believed to be magnetic	Magnetic	Total digestion	Not mentioned but probably floatation
Chemical tests	Complete	Complete	Complete	Complete	Partially completed	Completed	Uncertain
Variation in chemistry	No variation	At least 3 types	Many minerals of which eudialyte may be one	Eudialyte is one of 3 but there are other REE minerals present here	Not mentioned	Considerable	Variation in minerals
Infrastructure	On edge of water		Isolated 170km no road to port then 1000 to treatment very cold	Not good	Moderate with large towns nearby a 1km high hill is the orebody	About 500km from port but infrastructure good	Is on native title land

JORC Code, 2012 Edition – Table 1 TANBREEZ DEPOSIT

Section 1 Sampling Techniques and Data

Al Maynard & Associates Pty Ltd, 2016, Resource Estimates at Two Sites within the Tanbreez Project (JORC 2012) for Rimbal Pty Ltd, Revised: 30 August 2016

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Diamond drill holes, R.C. holes, channel chip samples with samples cross checked at separate laboratories, at different times. The samples have also been independently checked twice with a hand held XRF machine using pressed duplicates. Drill holes have been twinned with diamond, R.C. and even channel samples repeat. • Repeat holes of diamond drilling, R.C. holes and surface samples are almost identical in assays. • At this stage about 97% of the body is economic and can be mined and treated. • The sampling shows very even grade with no nugget effect at approx. 2% ZrO_2 the grade is remarkably constant. All mineralisation is within the mineral eudialyte with as a result the Zr is directly proportional to HF, Ta, Nb, all the REE etc.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Diamond, R.C., channel chip sampling – partly in previously diamond cut channels. The deposit has no weathering and virtually outcrops 100%.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• All cores have been logged • Sample recovery is virtually 100% • No loss of material and as a result no bias.

Criteria	JORC Code explanation	Commentary
	• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	All cores are logged and photographed Virtually all sections of all cores are in ore grade material with only sections in the augite syenite and black Madonna not being economic
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all cores taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Usually half core has been assayed, in some sections core has been taken for petrological work R.C. holes were riffle split to size Sample preparation is standard of core split, all crushed and split (usually by an independent laboratory) Quality control, standards, repeats, duplicates and blanks have been used The grain size is about sand size and these samples on re-assaying give almost identical results. All assaying methods and techniques are appropriate
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Handheld XRF results have not been used for resource modelling Different assay techniques all match within acceptable limits These samples assayed, often twice, were used to calibrate the XRF machines successfully. All have been done and all showed results at acceptable levels of recovery or better

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	The nature of the geology does not lead to significant variable grade intersections, rather a constant grade Twin holes have been used to give similar results No adjustment to assay data was required.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Drill holes were surveyed using an independent surveyor The early holes (1989) used a local grid subsequent transferred to a GPS (1994). Topographic control from existing maps and from a recent geophysical survey.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	Drill hole spacing varies to accommodate steep topography meaning holes on standard grids have to be slightly shifted Sample distribution is adequate for good geological control Sample compositing to 5m sections done in some percussion holes
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	No structural bias is possible in this large deposit Variation to grade is slight as the rocks generally dip shallowly to the north – most holes were vertically drilled
Sample security	• *The measures taken to ensure sample security.*	Samples taken and kept in locked containers in nearby town
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	All data is reviewed as a matter of fact about every 3 years. External reviews by banks and the government have occurred on several occasions – so far no differences to the interpretation, results, size

Criteria	JORC Code explanation	Commentary
		have been advanced

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The exploration licence is controlled 100% by the group. An application for an exploitation licence has been submitted, under Greenland law this cannot be refused. The Exploitation Licence MEL 2020-54 was granted in August 2020
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Earlier exploration by other groups is included and acknowledged with all their drill cores being re-assayed
Geology	• *Deposit type, geological setting and style of mineralisation.*	A zone 5km x 3km x 400m of disseminated mineralisation in very large igneous intrusions
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain*	All holes have been surveyed – earlier drilled holes have been placed by translating the local coordinates then used to today's GPS. Summaries of drill holes and location maps included in report.

Criteria	JORC Code explanation	Commentary
	why this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No cut off grades have been used except to the west where about 1% ZrO_2 is used. Most holes were assayed at 1m intervals irrespective of geology No metal equivalents used
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	The mineralisation is layered at a relatively flat dip of up to 20 degrees so the mainly vertical holes intersect the mineralisation at an angle that makes the apparent thicknesses longer than the true widths. The resource modelling method accounts for these apparent thicknesses
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	All the appropriate maps and sections are included in the report
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Only grades of resource estimates are quoted in report to avoid biased reporting of drilling results
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or*	All the meaningful and material exploration data included in the report So far no contaminants such as U, Th, F known to affect the ore

Criteria	JORC Code explanation	Commentary
	contaminating substances.	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Immediate future work will concentrate on in-fill drilling on the Tanbreez Fiord and Tanbreez Hill deposits in preparation for mining.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	All results have been proofread by several personnel and independent consultants All data checked against original logs and assay certificates where possible, checked in MineMap software for down-hole integrity
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	There have been no site visits by the Competent Person due to a lack of time to visit the isolated site.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	Total confidence as the orebody is simple structurally and outcrops almost 100%. All the drill holes match the mapped surface geology The geology was used to confine the mineralisation in the resource modelling.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	5km x 3km x 400m all outcrop below that level and plunging to the north not assessed

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	The resource modelling method, digital block models with grades interpolated using Inverse Distance Squared algorithm with restricted search ellipses and domain wireframes is appropriate for the style of mineralisation modelled. No deleterious element so far identified Cutting and capping of grades was not used as the grade of each unit is remarkably constant along strike and down dip with very few outliers. The resource model was validated by visually checked against drilling and statistically comparing the resource grades against the drill assays
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The bulk densities used for tonnage estimates are on a dry basis
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	No cut-off grades applied to the resources as the deposit will be bulk mined.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the*	The resources will be bulk mined in open pits so no mining losses or dilution factors are required. Metallurgical and economic studies conducted by the client indicate that the resources can be economically exploited

Criteria	JORC Code explanation	Commentary
	case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Mechanical separation proven for over 100 years (since 1889) – bulk testing by Tanbreez backed up these earlier results. All separation work has been done by independent consultants
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a Greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	All products and potential wastes have been fully tested by independent environmental consultants All waste samples tested have proved to be inert Full E.I.A completed and accepted by the government
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	As expected with a large igneous intrusion with no vugs, bulk density tests produced consistent results throughout the mineralisation. All the bulk density measurements were taken of dry samples.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	The Competent Person believes that the quoted resource categories in the resource statements are appropriate and properly take into consideration the geology and style of the mineralisation, the density,

Criteria	JORC Code explanation	Commentary
	• *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	spacing and quality of the sampling data and grade variability of the mineralisation.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	There has been no independent audit of the current resource estimates
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The global resources quoted have been checked by the Competent Person and the resource categories used properly reflect the accuracy and confidence level of the resource estimates. The resource modelling was checked using appropriate statistical and qualitatively against the drilling. There has been no mine production from any of the resource locations however bulk metallurgical samples, when tested, returned assays as expected from the resource modelling.