Developing Critical Resources for the Green Economy

www.etech-resources.com

# ETECH RESOURCES

## RARE EARTH ELEMENTS IN NAMIBIA

# Company Presentation

NOVEMBER 2023 | DETAILED

TSXV: REE | FSE: K2i

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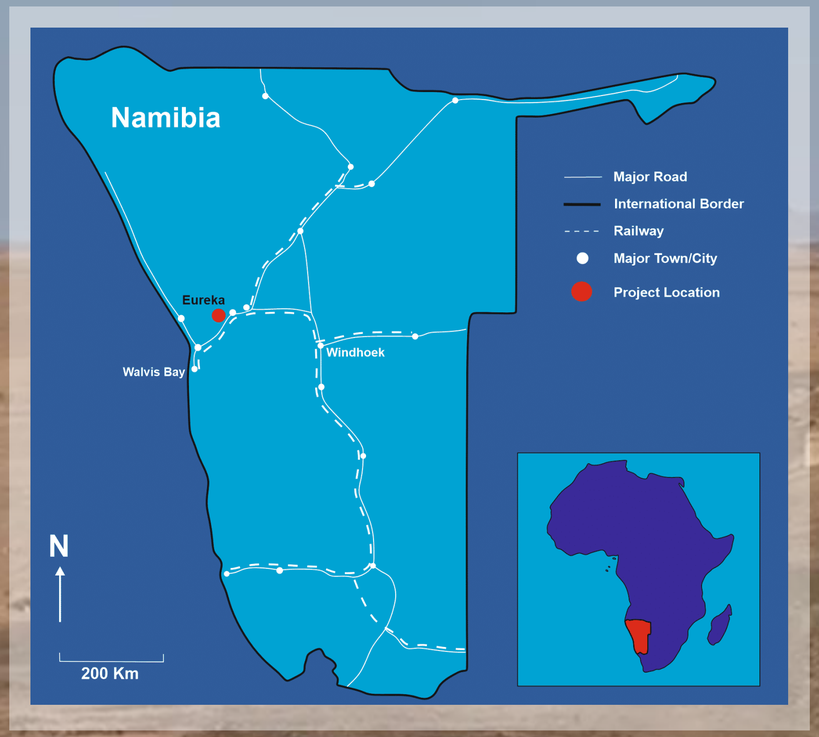
The technical and scientific information in this presentation has been reviewed and approved by Pete Siegfried, BSc. (Hons), M.Sc., who is a Consulting Geologist and a director of GeoAfrica Prospecting Services cc and has reviewed and approved the scientific and technical information in this presentation. Mr. Siegfried is a member of The Australasian Institute of Mining and Metallurgy (AusIMM) membership number: 221116 (CP Geology), and a Qualified Person for the purposes of National Instrument 43-101. Mr. Siegfried consents to the inclusion of this information for the presentation.

# Eureka Rare Earth Element Project

- Located in the Erongo Mining Corridor of Namibia
- Namibia is a top tier country for mining and is one of Africa's most stable countries




## QUICK PROJECT STATISTICS AND DATA

### TOPOGRAPHY
FLAT & SPARSELY POPULATED

### 2KM
TO B2 HIGHWAY

Tarmac roads are kept in good condition

### 10KM
TO RAILWAY

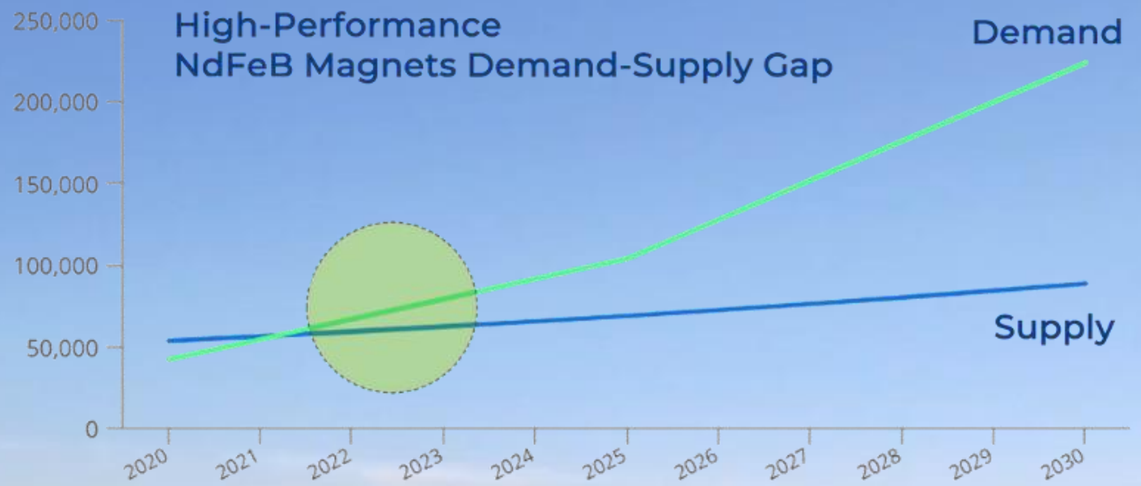
Railway to Walvis Bay runs parallel to B2 Arterial Road

### 140KM
TO WALVIS BAY CONTAINER PORT

Namibia's largest commercial port

### POWER
ACCESS TO ELECTRICITY

### WATER
ACCESS TO WATER




Source: Argus Media 2022

## Focus on Critical Rare Earth Elements

# Nd & Pr

Neodymium Praseodymium

COMPANY DETAILS

# Board & Management Team

## TODD BURLINGAME

**CEO | CANADA**

Todd is a mining executive with 30+ years of resource development experienced including Canadian rare earth element projects. He has been successful in advancing large scale projects by innovation and ESG best practices.

## ROB RANDALL

**CFO | CANADA**

A contract CFO for a number of public companies including Torrent Capital, Antler Gold and Sona Nanotech. Rob has extensive financial experience working within many African countries overseeing all financial aspects of resource exploration and production activities.

## JIM MEGANN

**CHAIR | CANADA**

Jim is Managing Director of Numus Financial a Director of Torrent Capital, a publicly traded investment issuer; Director of OARO; and a Director of Sona Nanotech and brings extensive capital markets experience

## KEN MARSHALL

**DIRECTOR | CANADA**

Extensive experience in the Information Technology and Telecommunications Sectors, having served in various positions at Rogers Communications throughout his career.

## JOHN PHILPOTT

**DIRECTOR | CANADA**

Founder and CEO of CanAm Physician Recruiting Inc. CanAm has been the leading physician recruitment and placement company in the Canadian and international markets for more than two decades.

## CHRIS DRYSDALE

**DIRECTOR | NAMIBIA**

Experienced professional with international experience in the mineral and exploration industry. Currently serves as CEO for Antler Gold Inc.

## PROF FRANCES WALL

**DIRECTOR | UK**

Professor of Applied Mineralogy at Camborne School of Mines, University of Exeter. 30+ yrs experience researching the geology and process mineralogy of global rare earth deposits and practically linking exploration stage studies to responsible sourcing outcomes. Chair of the British Geological Survey Science Advisory Committee. Member of the UK Critical Minerals Expert Committee.

Experienced Leadership and Management

# Exploration Team

- In-country team
- Local employees
- Environmental and HSE compliance

**DENNIS BILLE**
SENIOR GEOLOGIST

**SENSIKUS ANGULA**
GEOLOGIST

**ERASTUS IIYAMBO**
GEOLOGIST

**TUWILIKA NGHIPALENDJILA**
JUNIOR GEOLOGIST

# EPL 6762 & EPL 8748

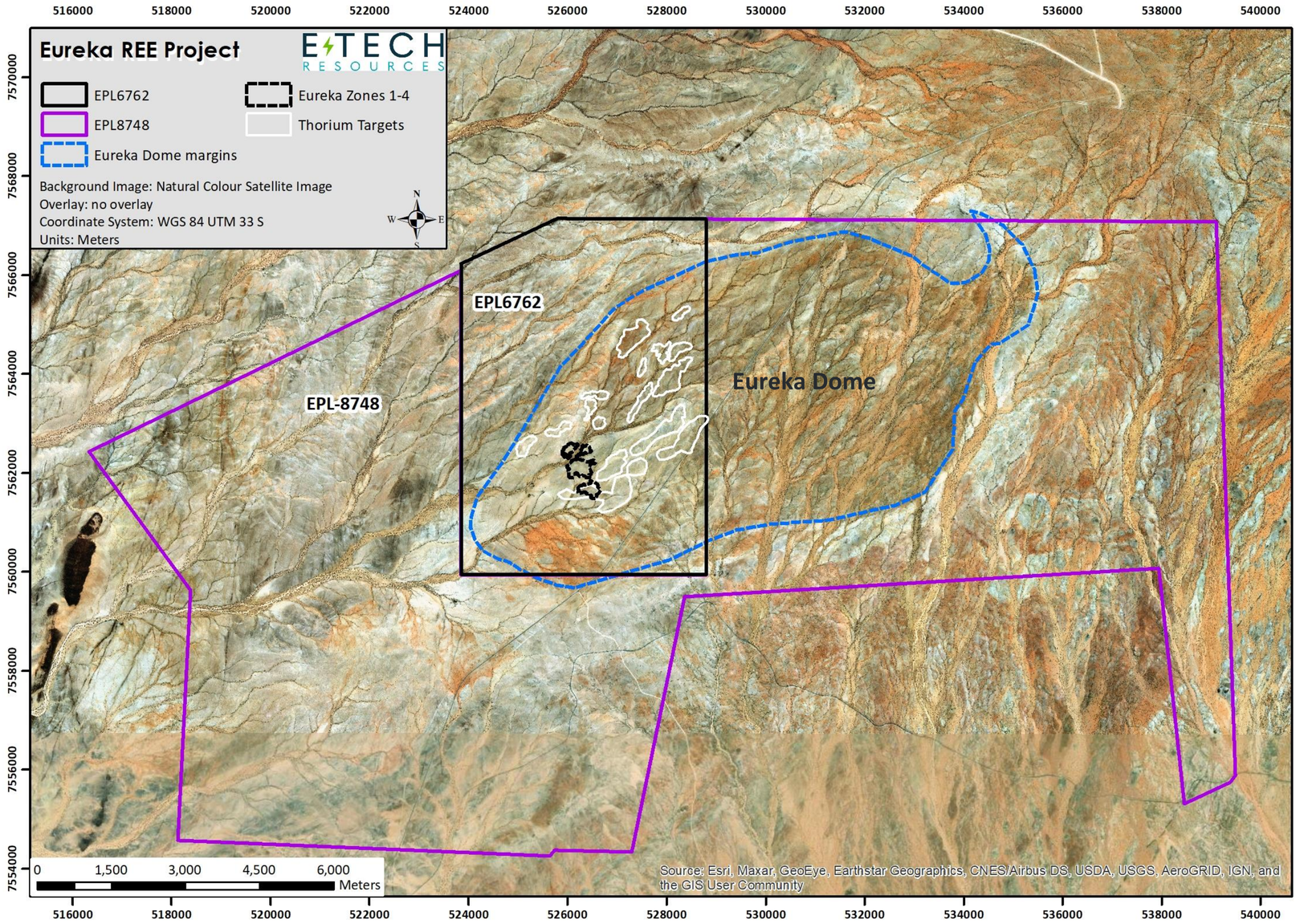
New acquisition

- Increased land position by >200%
- Along strike of EPL 6762 mineralization
- Multiple strong geophysical signatures similar to EPL6762 discovery zones

Total area of "Eureka Dome" ~56km²

=

**7,850** FIFA Football Fields



# EPL 6762

| | Total Area of EPL 6762 | Area (Zone 1-4) | Dome Area (~1/3) |
|---|---|---|---|
| Original | 3,474 ha* (34,737,800 m2)** | ~1 km2 | ~20.7 km2 |

# EPL 8748

| | Total Area of EPL 8748 | Dome Area (~2/3) |
|---|---|---|
| Newly Acquired | 16,520 ha* (165,200,000 m2)** | 35.3 km2 |

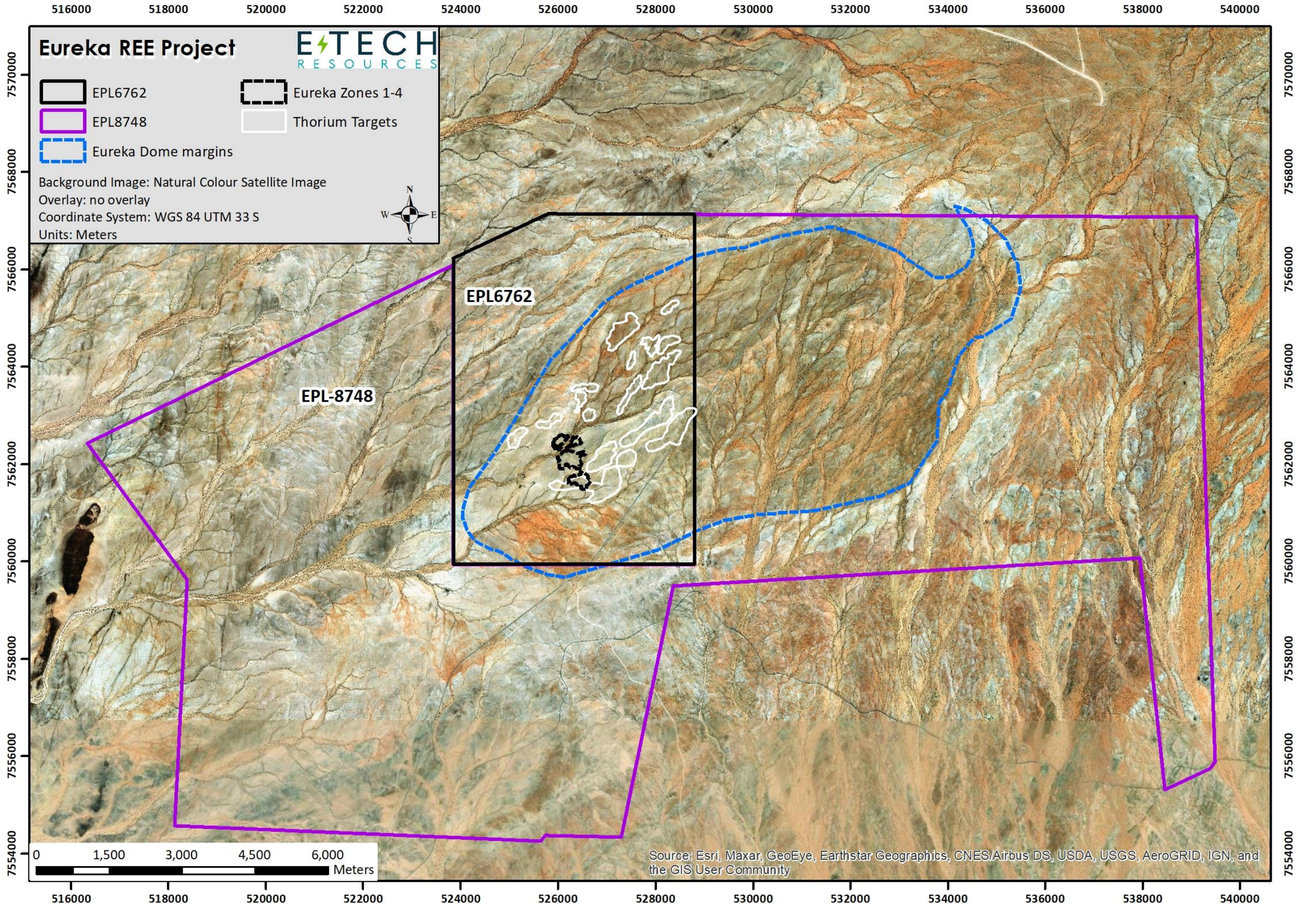
# COMBINED

| | Total Area of EPL 6762 & 8748 | Total Area of the Eureka Dome |
|---|---|---|
| | 19,994 ha* (199,940,000 m2)** | ~ 56km2 |

* Rounded to nearest 1 | ** Rounded to nearest 100

Mar , 2023

## NR: E-TECH RESOURCES EXPANDS LANDHOLDINGS AT THE EUREKA PROJECT



# Exploration Activities

**Legend:**
DD – Diamond Drilling
RC – Reverse Circulation

## 2017

Phase 1 RC Campaign (EU001-EU019

*Phase 1:*
19 holes in Zone 1, 2 & 3

## Q2-Q3 2021

Phase 1 DD Campaign (ED001-ED020)

*Phase 1:*
20 Holes, 2225.8m in Zone 1, 2 & 3

## Q4 2021 –Q2 2022

Phase 2 DD Campaign (ED021-ED031)

Phase 2 RC Campaign (ER001-ER023)

Phase 3 RC Campaign (ER024-ER062)

*Phase 2:*
DD: 11 Holes, 5753m in Zone 1 & 3
RC: 23 Holes, 3282m in Zone 1 & 3
*Phase 3:*
RC: 39 Holes, 3120m, Zone 1,2,3 & 4

## Q2-Q3 2022

Magnetic survey program totaling 1060 line-km's

Wide-spread ground radiometric survey totaling 1224 line-km's

Widespread mapping program covering entire prospective area, approx. 11,200 points.

## Q4 2022

Phase 4 RC Campaign (ER063-ER079)

pXRF Composite geochemical sampling of all historical RC drilling samples from the historical RC drilling campaign.

*Phase 4:*
RC: 17 Holes, 1360m in wider exploration targets

Acquisition of EPL 8748

New discovery at Adder Target

Assay Results from 38 rock chip samples

2016 - 2019 | 2021 | 2022 | 2023

TSX.V: REE listing

## Q2-Q3 2021

Maiden Inferred Mineral Resource 43-101

- 310 Kt at an average grade of 4.8 % TREO, or 310 Kt of 0.7 % NdPrO, with a 1.3 % TREO cut-off applied done by SRK Consulting

## Nov 2021 - Highlights

High-Grade Diamond Drill Intercepts Up To 100 Meters Below Current Resource

- 6.5 % TREO over 3.8 meters, including 11.2 % TREO over 2.2 meters, from 129.9 meters (ED004)

## Dec 2021 - Highlights

Further High-Grade Assays And Expands The Mineralized Footprint

- Drill Hole ER023: 4.5% TREO over 8 meters (including 17% TREO over 2 meters) from 54m to 62m

## Feb 2022

Second Drill Campaign Results

Significant intersections include:

- 9.4m @ 1.3% TREO (ED008)
- 4.8m @ 1.2% TREO (ED009)
- 1m @ 13.4% TREO (ED017)
- 3.5m @ 4% TREO (ED011)
- 4.2m @1.2% TREO (ED017)
- 1.9m @ 1.8% TREO (ED019)

## Mar 2022

Second Drill Campaign Results

Significant intersections include:

- 11.2m @ 1.2% TREO (ED013)
- 2.2m @ 2.4% TREO (ED014)
- 8.8m @ 1.0% TREO (ED015)
- 6.3m @ 1.9% TREO (ED020)

Zone 1,2,3 & 4
31 DD & 81 RC holes drilled

## Q4 2022

Establishing geological characteristics of Eureka deposit that will lead to new target identification

Identifies 17 new targets for exploration drilling

## Q4 2023

- EPL 6762 full scale geochem program
- Ultra-high resolution magnetic UAV survey
- Investigation of sustainable surgical mining methods
- Advance metallurgical test-work

The shift towards a clean energy future and the increasing demand for critical minerals require innovative technologies to find and extract these minerals efficiently and responsibly

# FOUR PILLARS

- Pursuing four key areas
- Building on past success
- Underpinned by innovation, sustainability and value creation
- Bigger picture approach

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| EXPLORATION | RESOURCE | METALLURGY | SUSTAINABILTY |

# 01 Exploration

NR: E-Tech Resources Inc. Ramps up Exploration Activities and Engages Gecko Namibia and Flightec Namibia

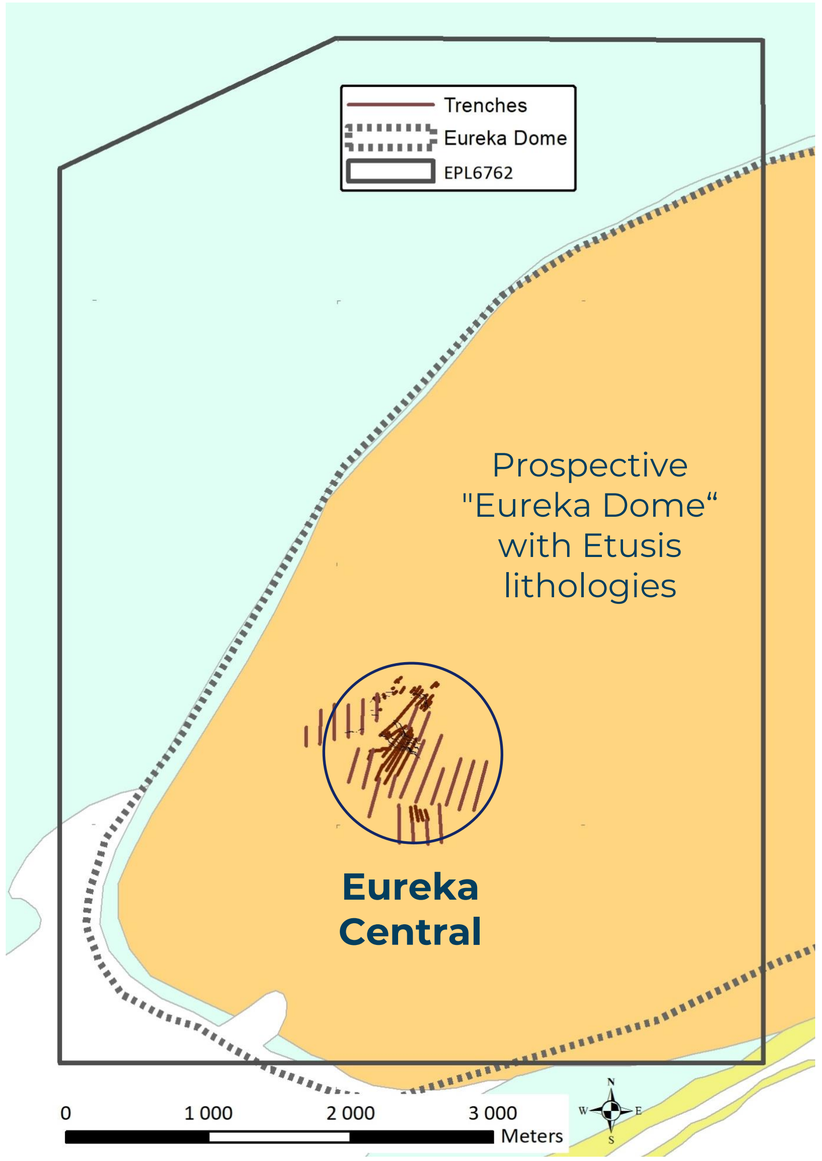
16 October 2023

- Validation of concepts and exploration approach
- Engagement of Gecko Exploration: Highly experienced, efficient,  proven track record in rare earth exploration
- Focus on economic mineralization and the bigger picture
- Outcome driven, operational safety and efficiency-lead
- Systematic soil survey programs
- State of the art technology: High-resolution UAV mag survey

# 01 Exploration

## EUREKA DOME

- Exploration with trenching and drilling focused on Eureka Central surrounding the historic discovery outcrops
- Eureka Central hosts the 2021 Mineral Resource Estimate
- Mapping, geophysical and soil geochemical surveys revealed rare earth mineralization throughout the Eureka Dome (orange area) on EPL 6762

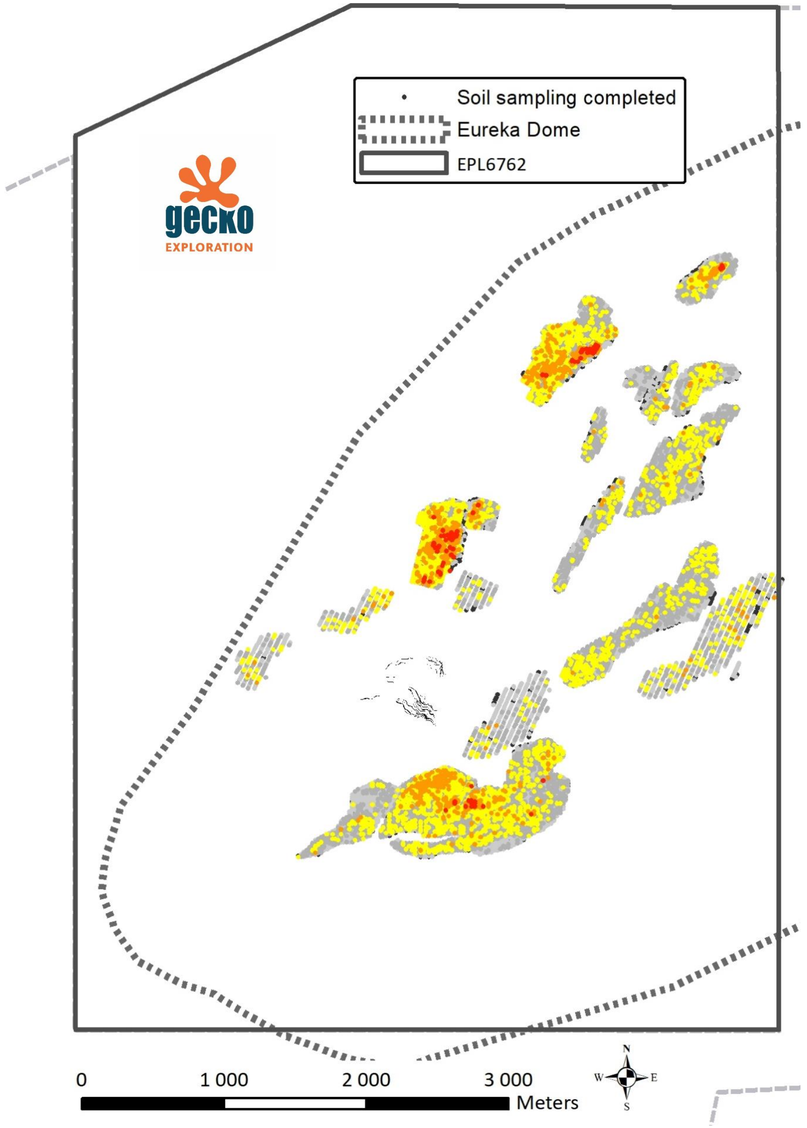



Simplified geological map with Eureka deposit on EPL 6762

# 01 Exploration

## GEOCHEMICAL SOIL SURVEYS

- Initial targeting of similar scale occurrences
- High density soil sample surveys
- Focused on monazite "proxy mineral" anomalies  (thorium and lanthanum)
- Several new targets have been identified




Lanthanum anomalies in soil

# 01 Exploration

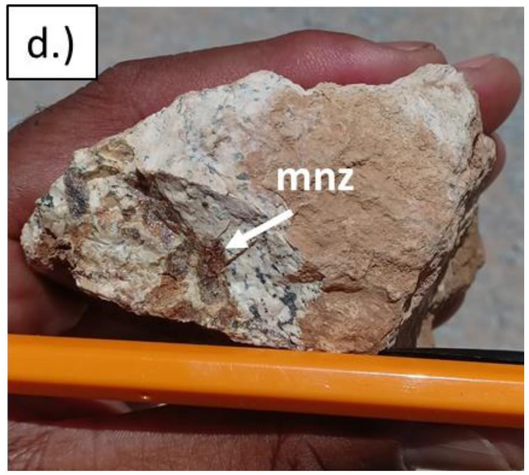
## SAMPLING WITH PXRF

May 29, 2023

**NR: E-Tech Resources Inc. Announces New Discovery at Adder Target**

The pXRF instrument allows E-Tech to conduct a continuous results-driven and streamlined exploration project at a fraction of the cost.

The pXRF is a **significant exploration tool** and will allow the company to conduct "live" analysis of all its samples, allow us to build continues elemental composition data sets and it will ultimately lead to a massive cost reduction caused by lengthy sample result delays.




In the field to **ground truth and guide** our ongoing exploration campaigns

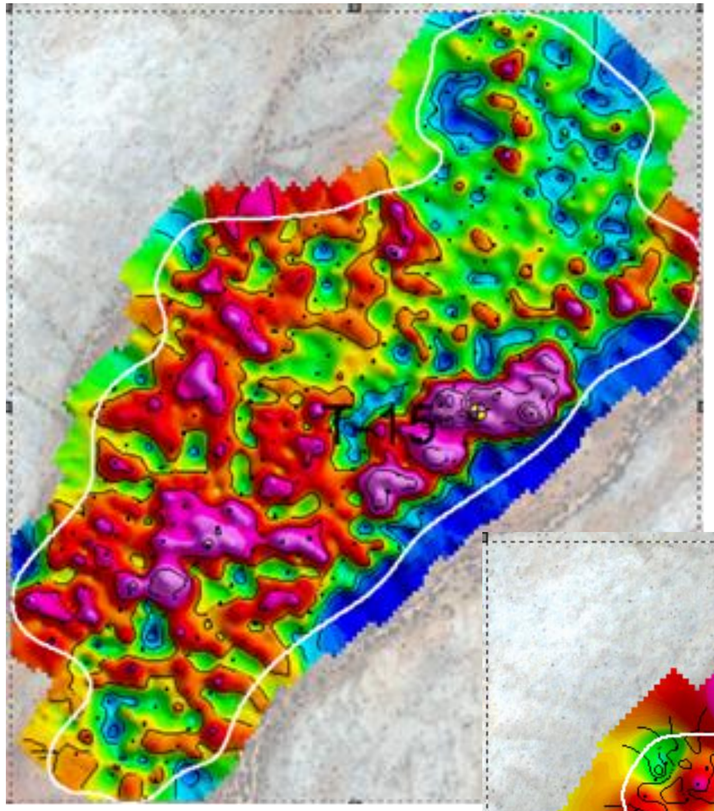
Allow for continuous down hole sampling and building robust data sets – **more data = better understanding = discovery potential.**

**pXRF allows for sampling of all historical exploration samples** that may not have been sent for assay originally – potential to identify previously missed opportunities.

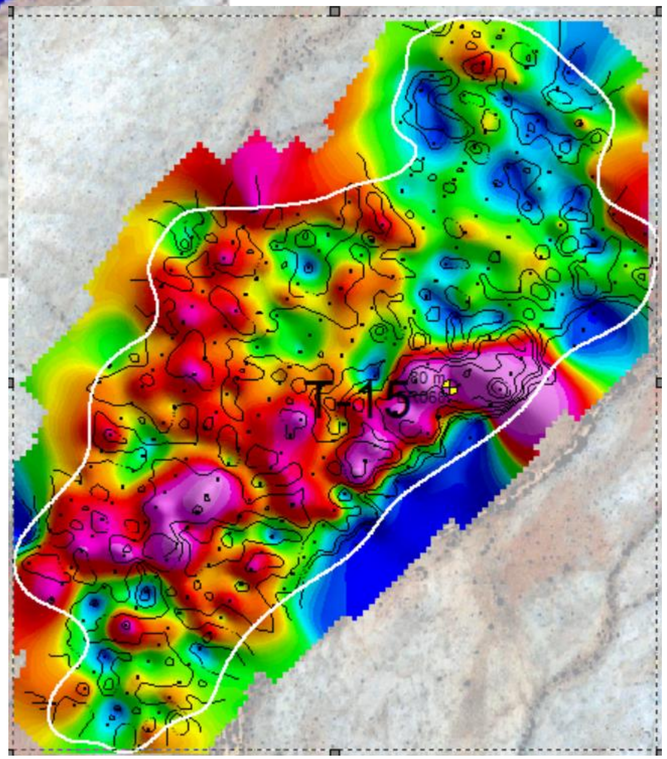
# 01 Exploration

## PROGRAM OPTIMIZATION

- August review of soil sample grid spacing
- Findings: *"we can still pickup an anomaly with a wider grid. Once the anomaly has been identified, narrower infill analysis can be done..."*
- Increased grid spacing from 10X20 meters to 20X40 meters
- Broader scale Geochem survey programs are now achievable



10X20 Meter grid spacing

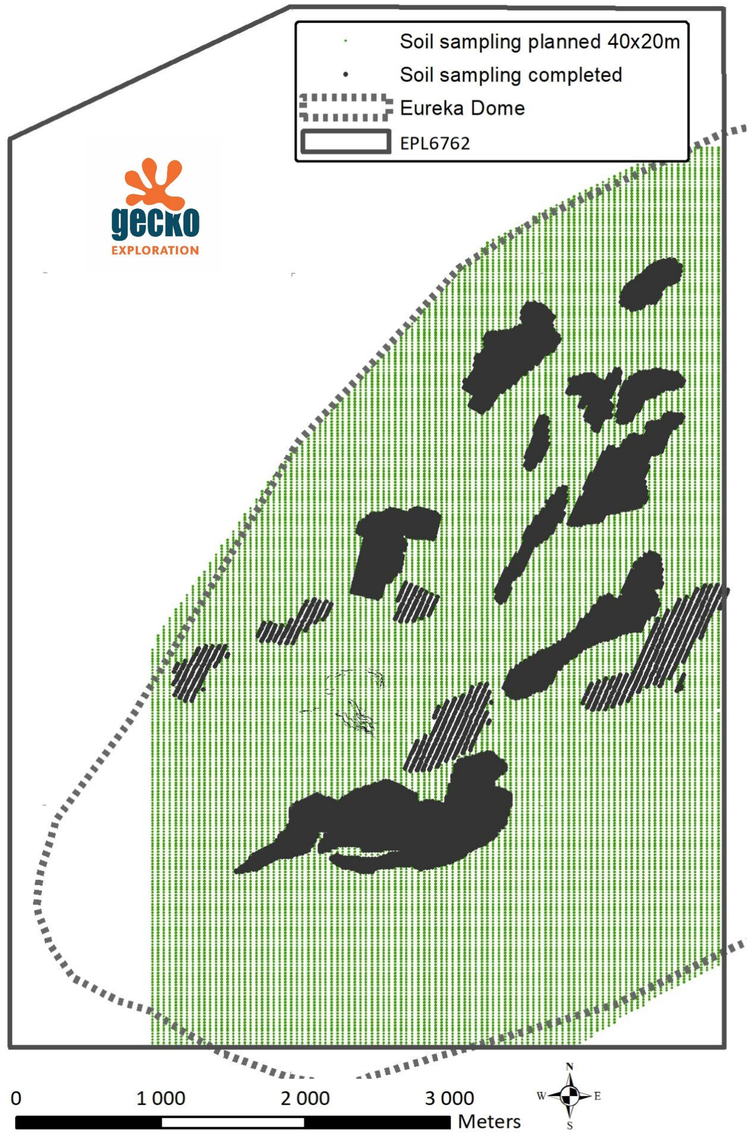


20X40 Meter grid spacing

# 01 Exploration

## Q4 2023 GEOCHEMICAL SOIL SURVEYS

- New approach, bigger picture, increased technical expertise with Gecko
- Systematic soil survey covering EPL 6762 portion of the Eureka Dome (about 21,000 additional soil samples)
- Optimized sampling logistics quadrupling the capacity of the field team
- Very limited budget implications
- Completion of survey targeted before Christmas 2023
- Interpretation of regional scale data will increase potential for further  discoveries

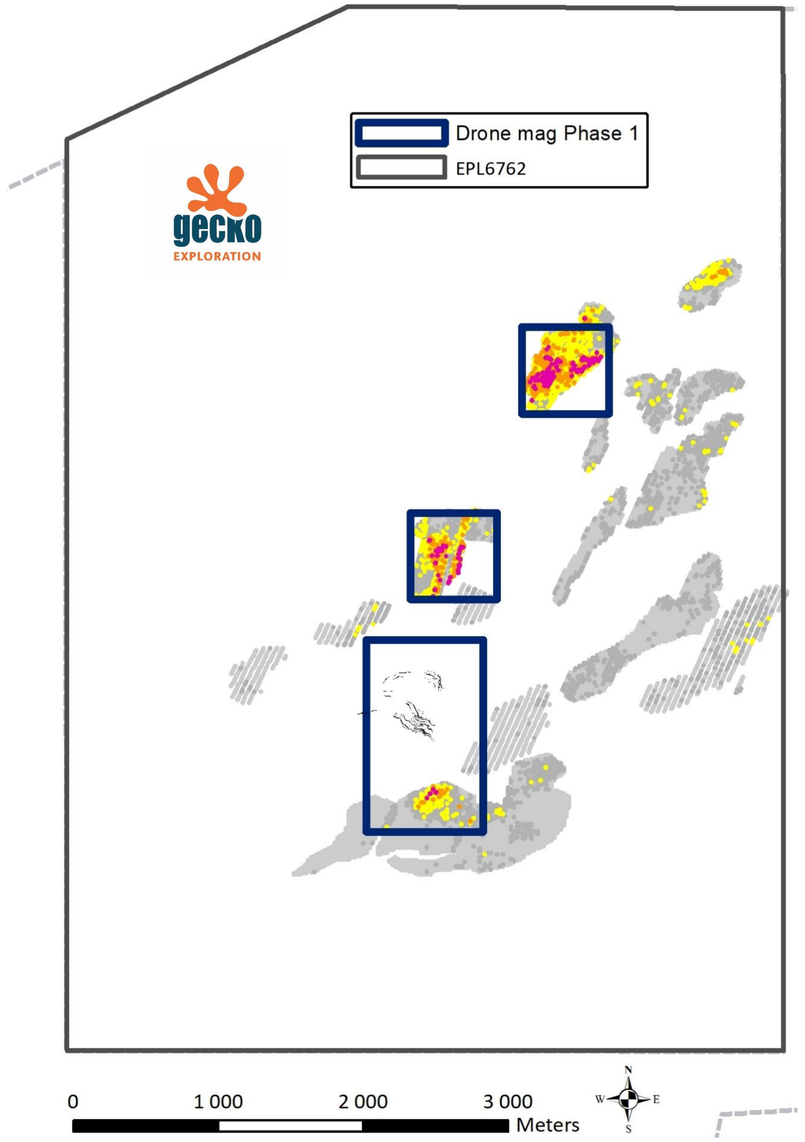



Planned soil survey (green) and existing sample points (black)

# 01 Exploration

## HIGH-RESOLUTION UAV MAGNETIC SURVEY

- E-Tech is finalizing an agreement with Flightec Systems to conduct high-resolution, UAV-based magnetic surveys
- Flightec is a Namibian company specialised in UAV surveys
- State-of-the-art equipment, strong international technological development and data processing team
- Phase 1 magnetic surveys over Eureka Central and the new prospects T9 and T15 to test targeting methods
- Phase 1 surveys are expected to be completed by October 2023
- Data interpretation ready for drill planning by end of 2023

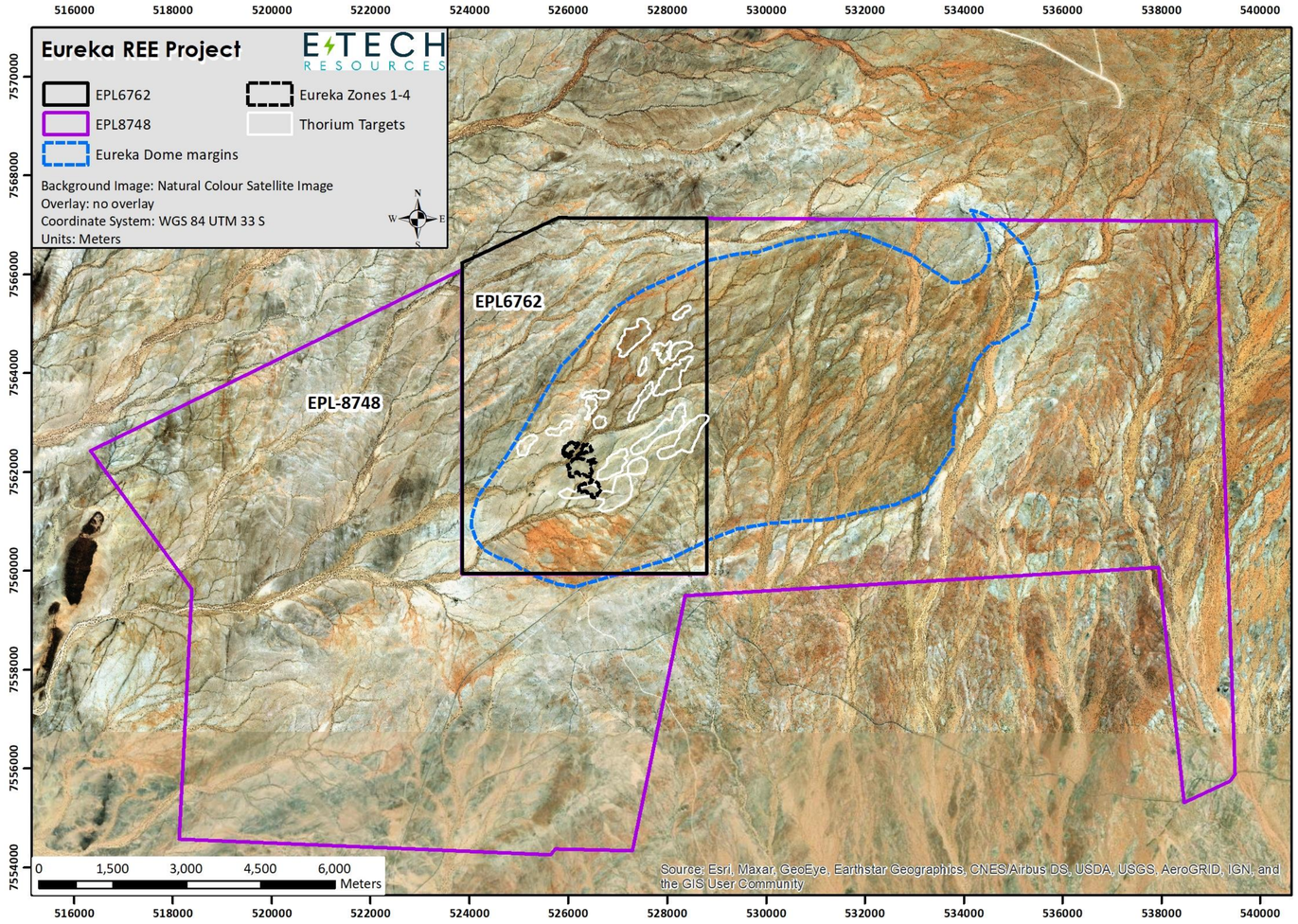



Planned Phase 1 UAV mag surveys

# 01 Exploration

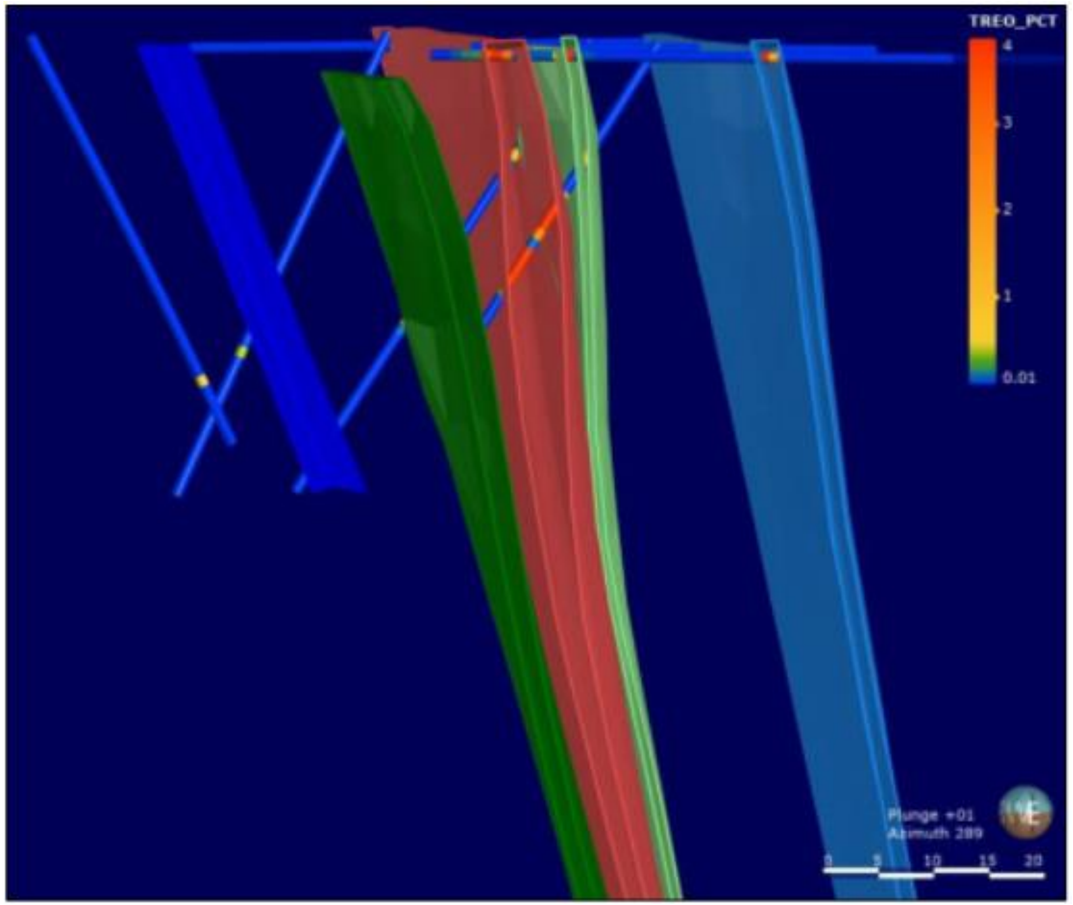
## 2024: UNLOCKING POTENTIAL

- Setting up for success on new EPL 8748
- Accelerated exploration with highly experienced partners
- Focus on commercially significant REE mineralization
- Data interpretation of soil geochem and drone mag by end of the 2023
- Development of a drill program by January 2024
- EPL 8748 geochem program planned for early 2024



# 01 Resource

- Independent Technical Report, Eureka Rare Earth Project, Namibia (SRK, August 2021)
- Additional diamond drill, RC drill, and assay results have been collected in 2022-23
- Mineral Resource Estimate Update
- Investigating alternative mining methods to increase resource and reduce impacts




Cross section through mineralization wireframes

# 02 Resource

GUIDANCE TOOL

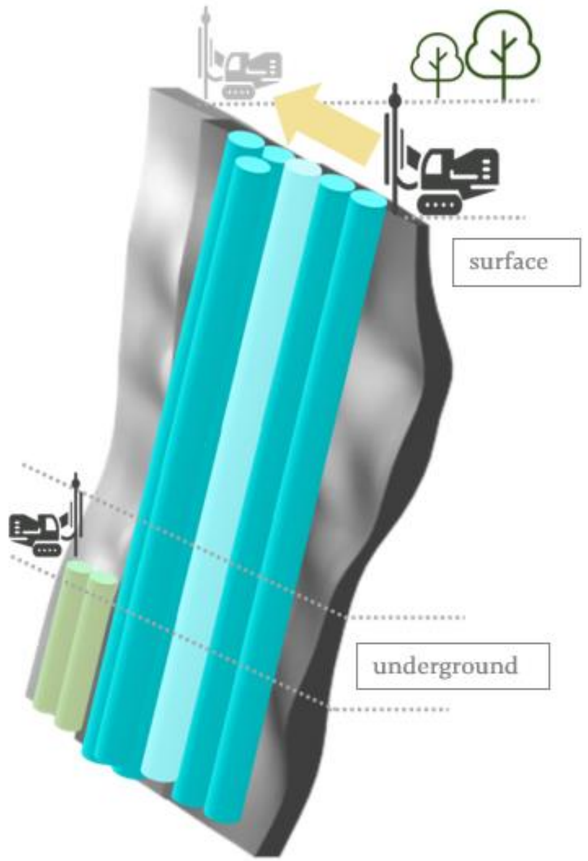
*Defines orebody in high resolution to calculate trajectory.*

SURGICAL MINING SOFTWARE

*Calculates optimal trajectory using Guidance Tool data, hole sequencing, ore recovery.*


SMART DRILLING SYSTEM

*Ensures drill follows trajectory to reduce dilution and collect production data.*




NOVAMERA

**Sept 27, 2023**

**NR: E-Tech Resources Enters Into MOU to Evaluate Deployment of Novamera's Surgical Mining Technologies at Eureka Project**

# 02 Resource

Novamera's unique technology integrates into conventional drilling equipment, making them able to pinpoint, map, navigate and extract high-value narrow vein deposits without the need for costly infrastructure.

NOVAMERA
Surgical Mining Technologies

## Economic Benefits

- Easily scalable, mobile equipment.
- Lower project risk & lower CAPEX.
- Reduces tailings costs & environmental liabilities.
- Faster ore-production & permitting.
- Increases production flexibility.
- Integrates quickly & easily into existing operations.

## Environmental Impact

- Minimal footprint & disruption.
- Waste/tailings returned to ground (reduces risk of tailings disasters).

## Safety & Social License

- Zero Entry Mine, operators remain above ground.
- No blasting, dust or noise pollution.

**Sept 27, 2023**

**NR: E-Tech Resources Enters Into MOU to Evaluate Deployment of Novamera's Surgical Mining Technologies at Eureka Project**


*Figures by Novamera

# 03 Metallurgy

## ORE BENEFICIATION

Chemical-free beneficiation to meet the technical specifications of processors

**AT EUREKA**
**OFF THE SHELF EQUIPMENT**
**BASED ON EARLY-STAGE BULK SAMPLING & BENCH-SCALE TESTING OF OUTCROP MATERIAL**

**NO** XRAY SORTING

**NO** HARSH CHEMICALS

**NO** FLOTATION REQUIRED

**>65%** RECOVERY

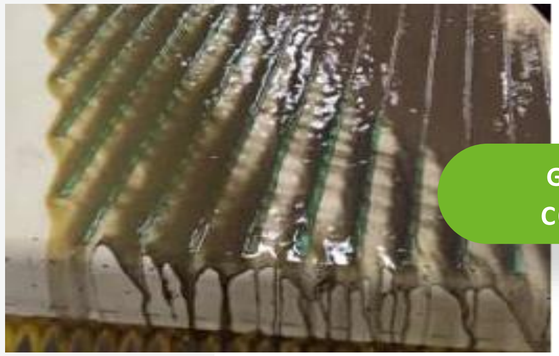
**>60%** TREO GRADE

OF >97% MONAZITE CONCENTRATE
after 1st pass using
Gravity & Magnetic Process

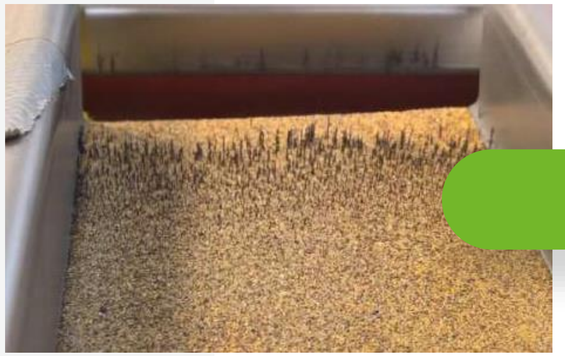
AMENABLE SHIPPING OF PRODUCT
Due to low radioactive levels

POTENTIAL LOW COST OF PRODUCTION RELATIVE TO COMPETITORS
As confirmed by SGS Mineral Services

MONAZITE IN HOST ROCK



GRAVITATIONAL CONCENTRATION



MAGNETIC SEPARATION

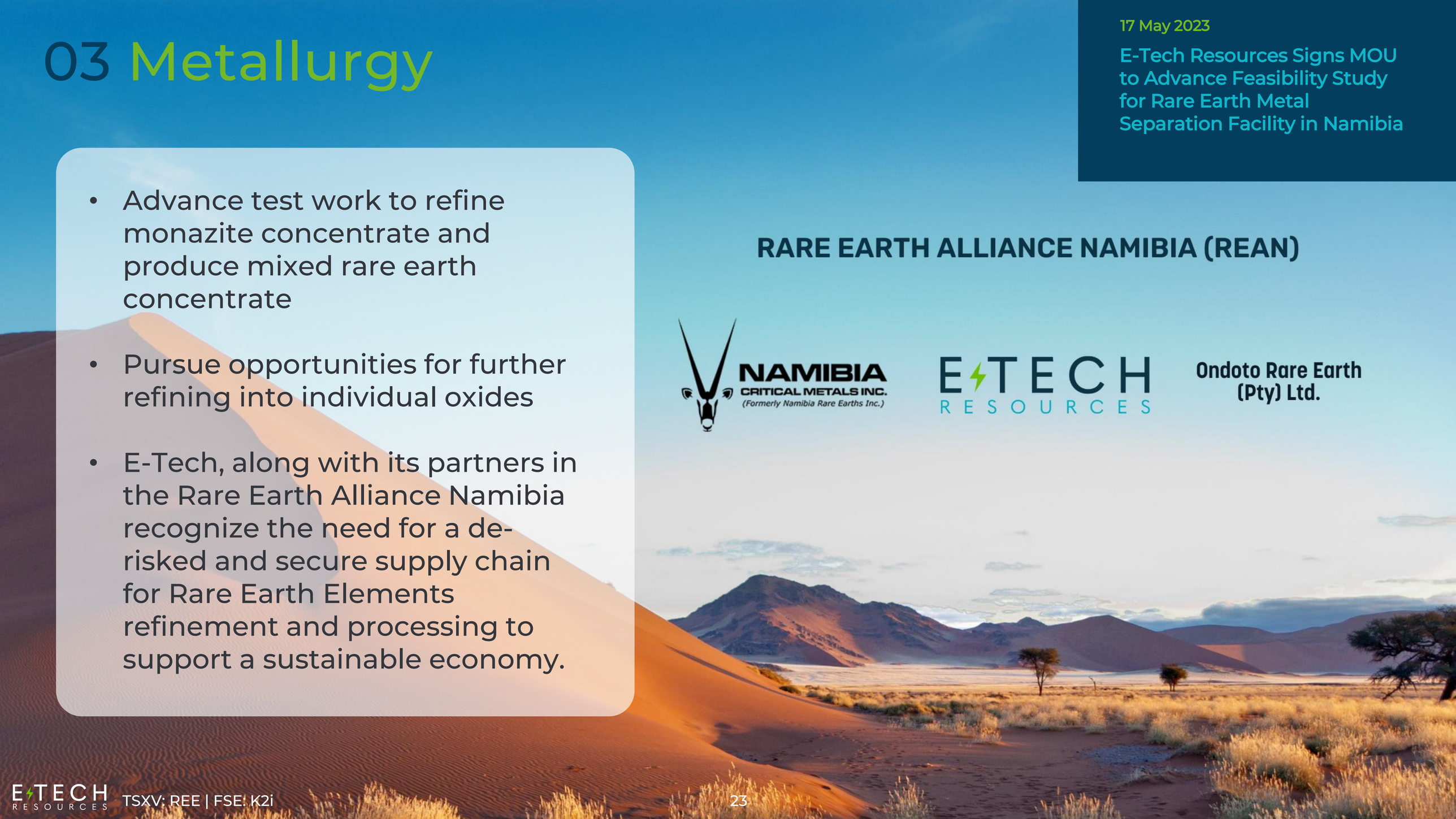
MONAZITE CONCENTRATE

# 03 Metallurgy

- Advance test work to refine monazite concentrate and produce mixed rare earth concentrate
- Pursue opportunities for further refining into individual oxides
- E-Tech, along with its partners in the Rare Earth Alliance Namibia recognize the need for a de-risked and secure supply chain for Rare Earth Elements refinement and processing to support a sustainable economy.

17 May 2023

**E-Tech Resources Signs MOU to Advance Feasibility Study for Rare Earth Metal Separation Facility in Namibia**

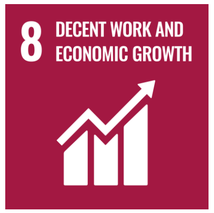


# 04 Sustainability

## COMMITTED TO RESPONSIBLE ENVIRONMENTAL, SOCIAL & CORPORATE GOVERNANCE


Health & Safety


Jobs & Education




Best Practice & Transparency


Value Chain Management


Inclusiveness & Fairness


Community Support


Efficient Consumption


Environmental Care

**PROF FRANCES WALL**
DIRECTOR | UK

Dr. Wall has led large consortium research projects such as HiTech AlkCarb and SoS RARE and is currently Principal Investigator for the UK Research and Innovation Interdisciplinary **Circular Economy** Centre for Technology Metals (Met4Tech).

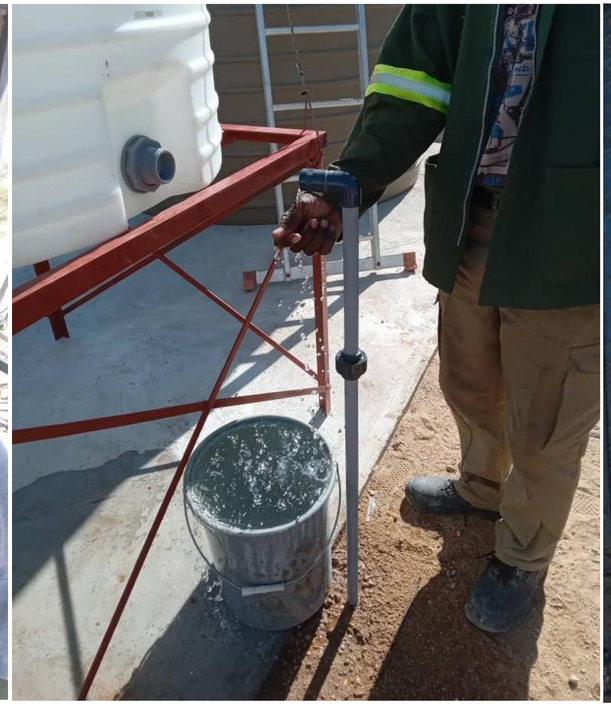
Dr. Wall is the Chair of the British Geological Survey Science Advisory Committee. Member of the UK Critical Minerals Expert Committee.

# 04 Sustainability

## REVERSE OSMOSIS COMMUNITY PROJECT

In **July 2023**, the community at Eureka celebrated the installation of a Reverse Osmosis (RO) plant, which has brought clean drinking water to the area for the first time. This project was made possible through the sponsorship of E-Tech Resources and the implementation efforts of HEPWater.

The RO plant has been a game-changer for the community and their livestock, as it uses advanced technology to remove 99.9% of viruses, bacteria, pyrogens, and other contaminants from the water. This has ensured that the residents and their livestock now have access to safe and clean drinking water, improving their overall health and well-being.



# 2024 Path Forward

2024 is shaping up to be a pivotal year for Etech.  Early indication of positive results along with strategic financing will position us to reach the next level in the exploration and development of the Eureka project.  Our goals for 2024 include:

- Commence early 2024 drill program EPL 6762
- Reconnaissance exploration and test targets  EPL 8748
- Update mineral resource estimate
- Test program of Novamera mining technology
- Advance metallurgical test-work

COMPANY DETAILS

# Financials

How is the project funded?

By 100% Equity Capital

Where are you listed?

We are dual listed: primarily on the TSX-V & co-listed on the Frankfurt Stock Exchange

Capital Structure

| | |
|---|---|
| Issued & Outstanding | 82,971,530 |
| Options | 2,860,000 |
| Warrants | 1,400,000 |

Market Capitalization

| | |
|---|---|
| Share Price | C$ 0.065 |
| Market Cap | C$ 5,393,149 |
| Cash | ~C$ 106,000 |

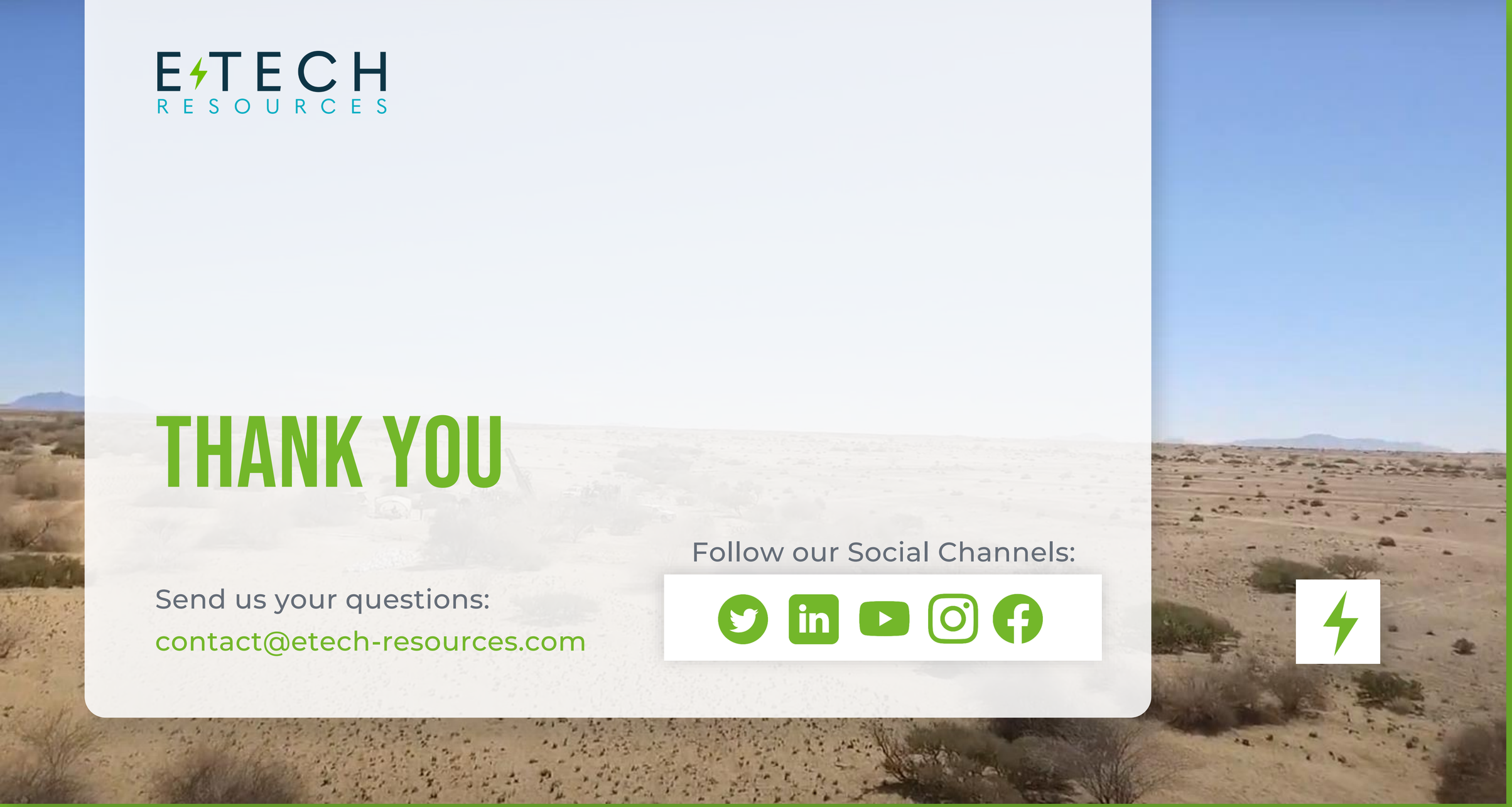
As at 30 June 2023

E-TECH RESOURCES

# THANK YOU

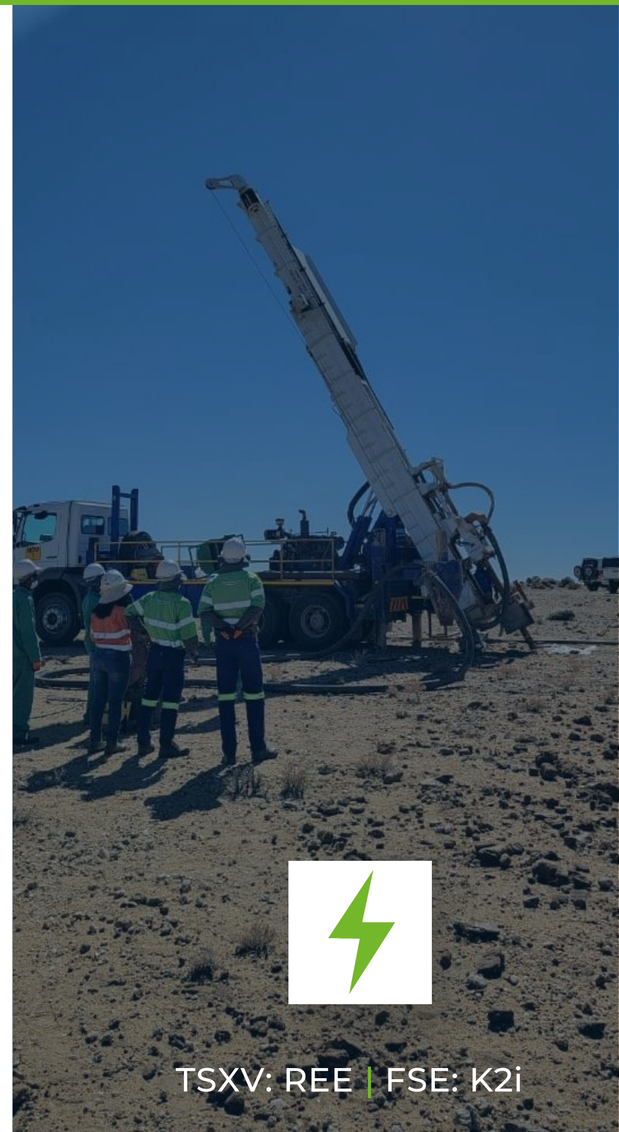
Send us your questions:
contact@etech-resources.com

Follow our Social Channels:



E-TECH RESOURCES

# Appendix



INTRODUCTION

# WHY NEODYMIUM?

**01** Neodymium (Nd) is used to make high strength & high-performance neodymium magnets

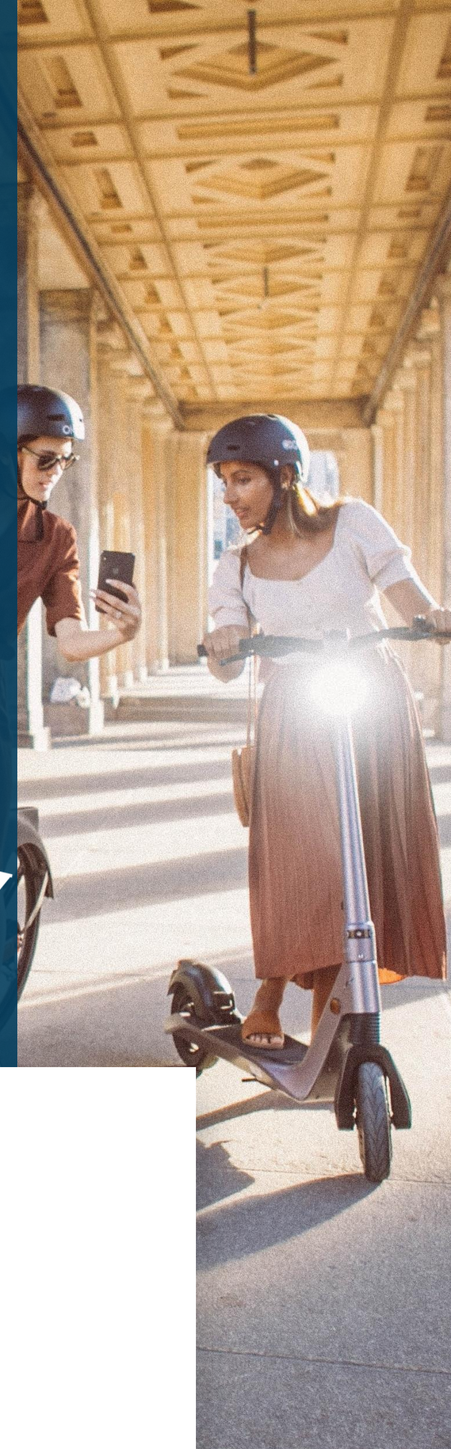
**02** Smart solutions to clean energy sourcing, and efficient power transmission, will be key to our future interconnectivity.

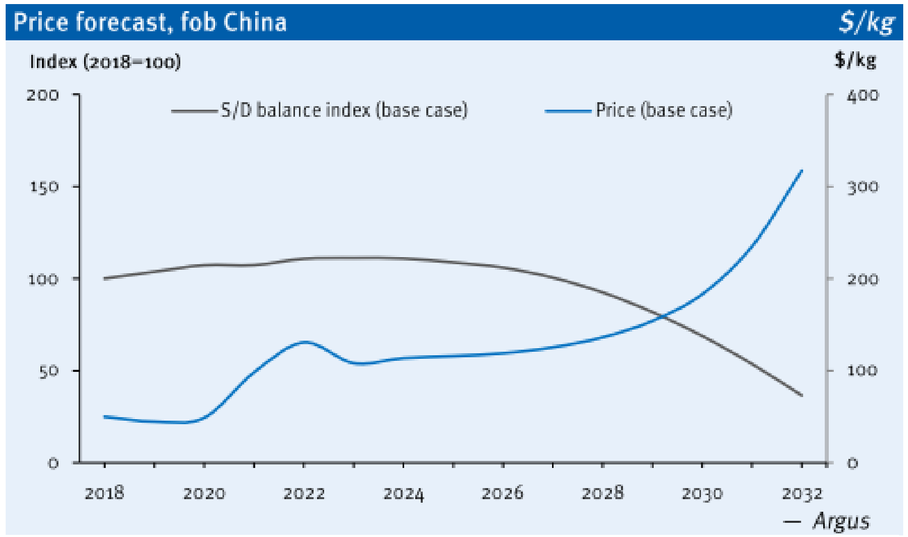
**03** High-performance materials are essential for reliable e-mobility and renewable energy generation.

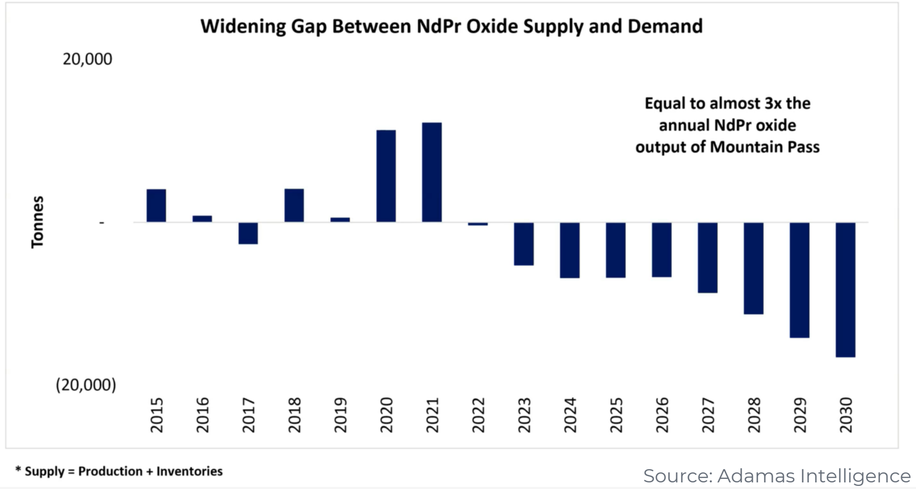
**04** Nd is a key rare earth element (along with Praseodymium) to the high-growth, hi-tech markets that support a circular economy.

## High-Strength Neodymium Magnets (NdFeB) are used in:

- Electric Vehicles (Full electric and hybrids)
- Wind Turbine generators
- Consumer Electronics
- Speakers
- Defence sector
- Conventional ICE Vehicles
- Other E Mobility
- Air Conditioning






* Supply = Production + Inventories

Source: Adamas Intelligence

Nd & Pr

# Price & Demand Forecast

TSXV: REE | FSE: K2i

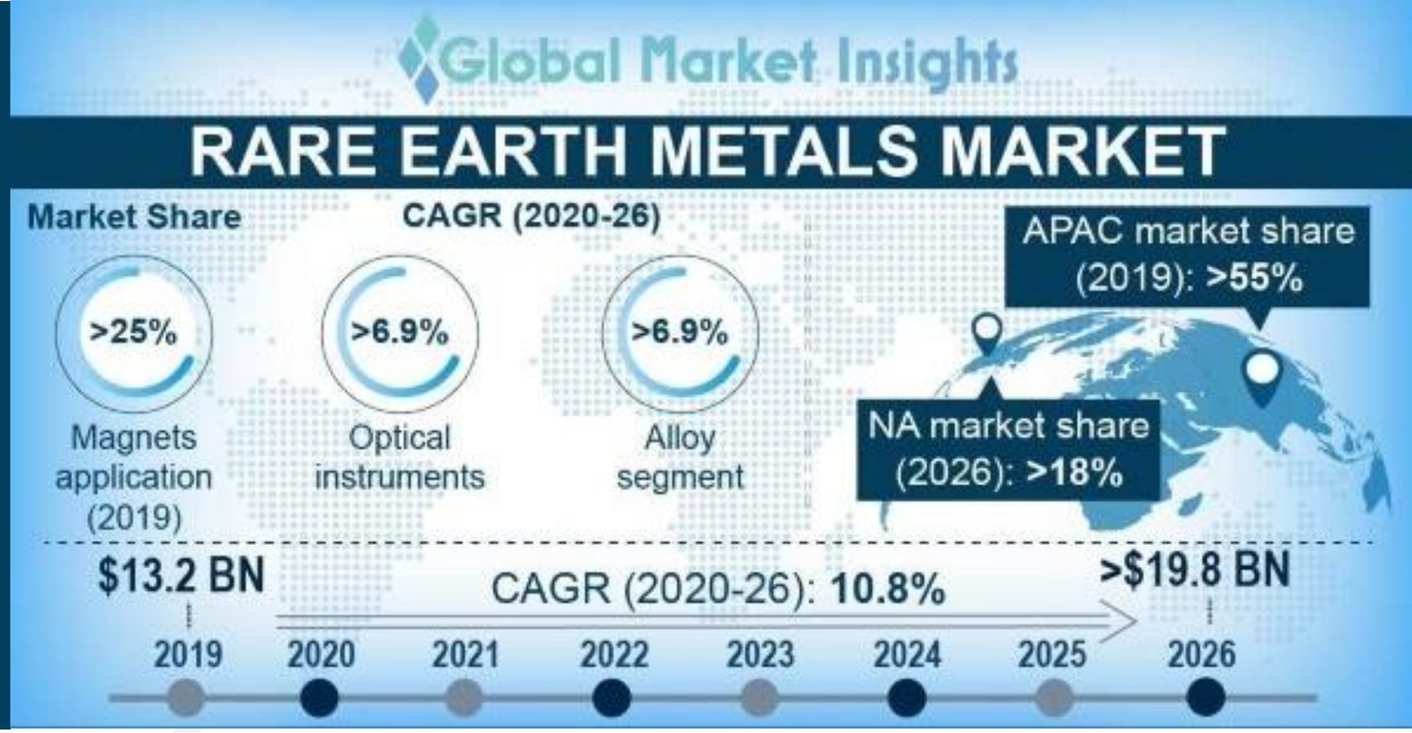

The REE magnet materials Nd and Pr have experienced more than **150% price increase** over the last 2 years.

1. Anticipated deficit for REE magnet supply
2. Expected deficit of REE magnet material supply
3. Monopolistic & opaque supply from China
4. High dependency on import from China
5. Increasing domestic demand in China
6. Complex and disruptable supply chains
7. Underinvestment in ex-China value chains
8. Opaque ESG compliance in China – manufacturers increasingly keen to track ethical sources of raw materials



E-TECH RESOURCES

# REE Energy Metals Market Value




## REE METALS MARKET

**$20b**

Nearly doubling in the next 5 years

## REE MAGNET DEMAND

**+50%**

Demand increase in the next 5 years

The drivers are found in the strong demand ramp-up for

**ELECTRICAL EV MOTORS**
**&**
**WIND TURBINES**

## GLOBAL REE METAL & MAGNET SUPPLY

**+80%**

Will still come from China

## GLOBAL REE ORE MINING & PROCESSING

**+60%**

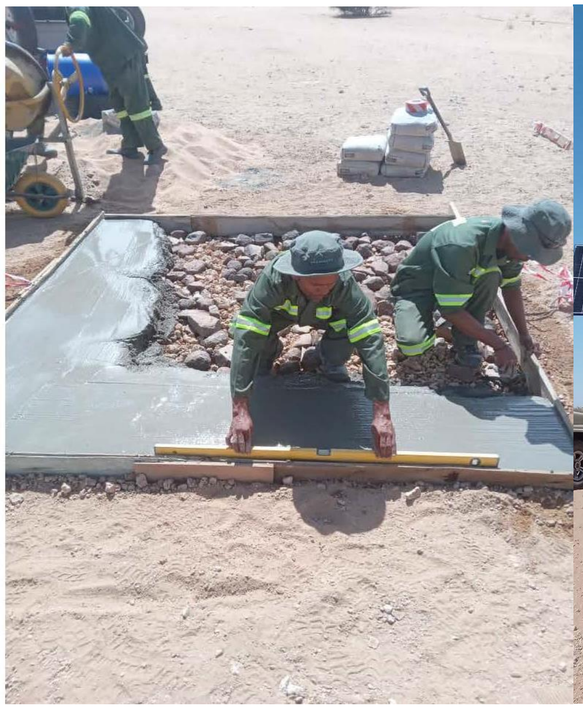
Will remain to originate from China

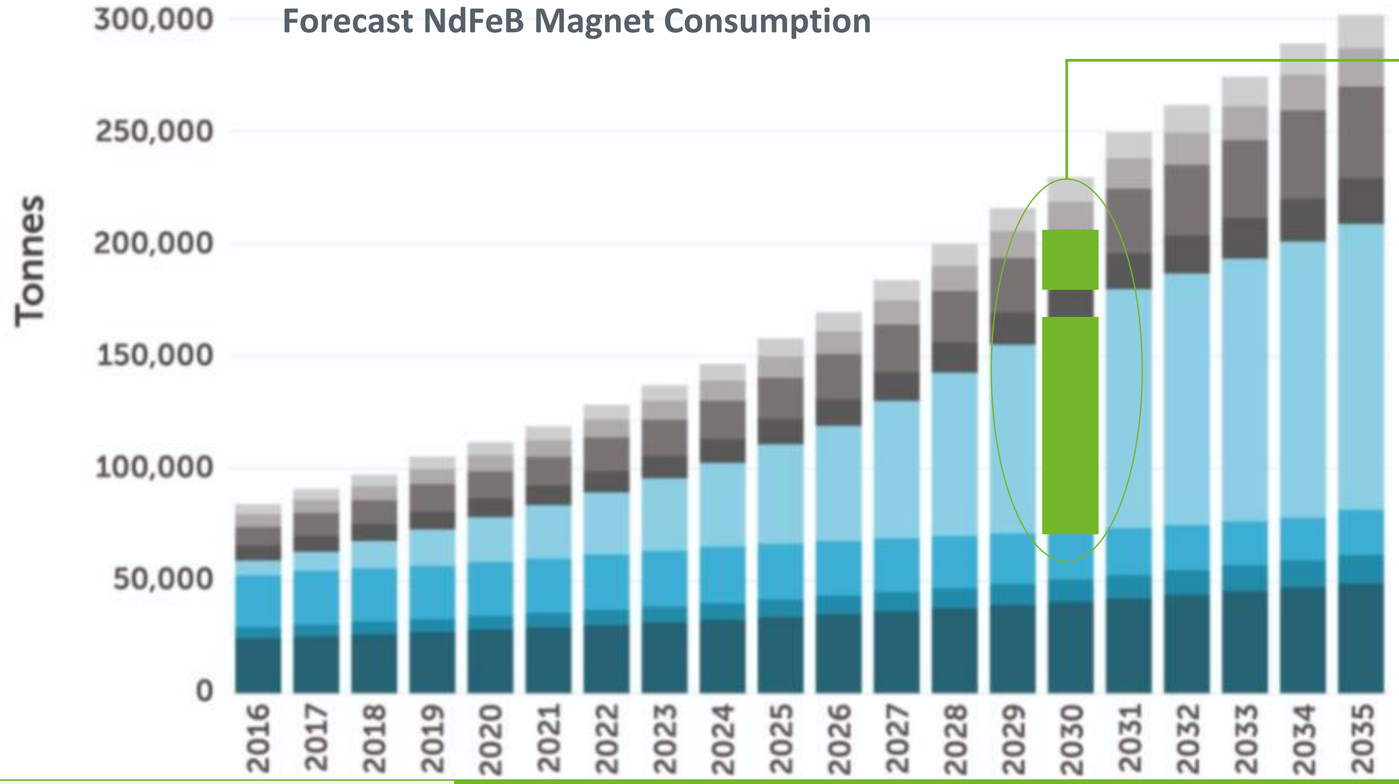


https://www.gminsights.com/industry-analysis/rare-earth-metals-market

# 04 Sustainability

Contributing to the community while developing the resources of Namibia






Consumer Electronics
Speakers
Conventional Vehicles
HEV, PHEV, EV
Other E Mobility
Other
Wind Turbines
Air Conditioning

'Other' includes MRI, elevator motor, magnetic separator, robotics and industrial applications.

Forecast

NdPr MAGNETS & APPLICATIONS

# 2030 Market Needs.

**2030**
**120,000** T/Y
Projected demand of NdFeB for EV & Wind Turbines alone

**EQUALS**
**60,000** T/Y
NdPr Oxide
(@ 0.5kg NdPr Oxide / 1kg NdFeB metal)

**EQUALS**
**300,000** T/Y
TREO
(@ 20% NdPr Oxide)

**EQUALS**
**100X**



Cracking Plants Units
(@ 3000 t/y TREO,
as in development by SRC, Canada)

**EQUALS**
**6,000**
PMSG Wind Turbine Units
(@ 5t NdPr Oxide / 16 MW PMSG unit)

+

**30M**
BEVs
(@ 1kg NdPr Oxide / 131 kW BEV motor)

NdFeB – High-strength Neodymium Magnets
EV – Electric Vehicle | BEV – Battery Electric Vehicle | PHEV - Plug-in Hybrid Electric Vehicle
NdPr – Neodymium Praseodymium
TREO – Total Rare Earth Oxide
PMSG – Permanent Magnet Synchronous Generator

https://www.arultd.com/products/supply-and-demand.html#images

NdPr OXIDE

# 2030 Market Imbalance.

**GLOBAL DEFICIT**

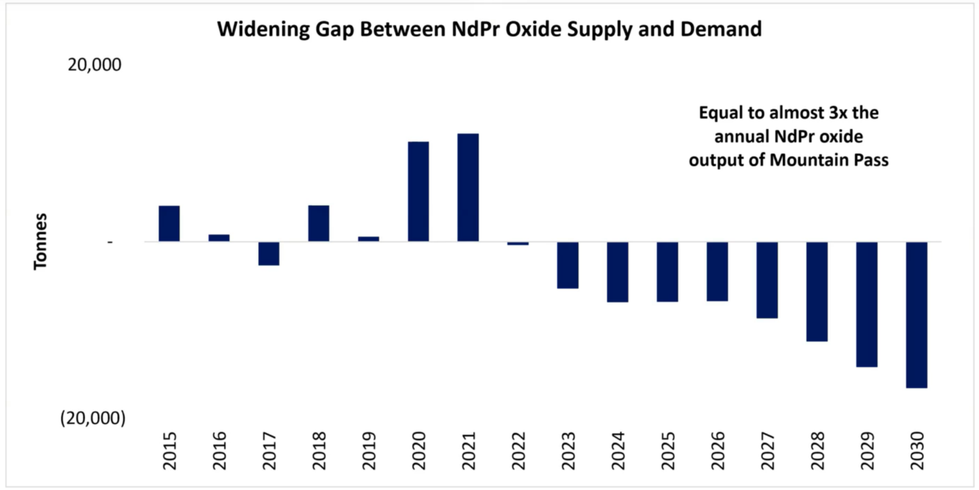
**50,000 T**

NdFeB PM material by **2030**

**EQUALS**

**25,000 T**

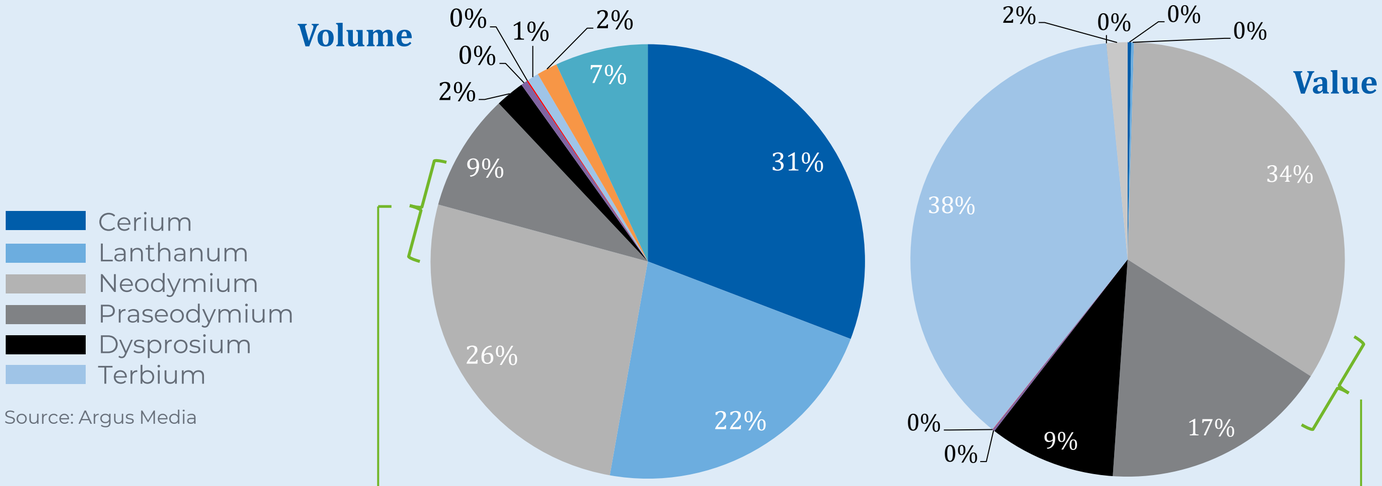
NdPr Oxide (from new mining capacity)




* Supply = Production + Inventories

Source: Adamas Intelligence

## Rare earth oxide demand by element (volume & value), 2030




Source: Argus Media

**Natural, Geological TREO** supply basket entails up to

**25%** of Nd and Pr Origin

**Global Demand in 2030**

**>35%** of TREO demand basket to be from Nd & Pr sources by 2030

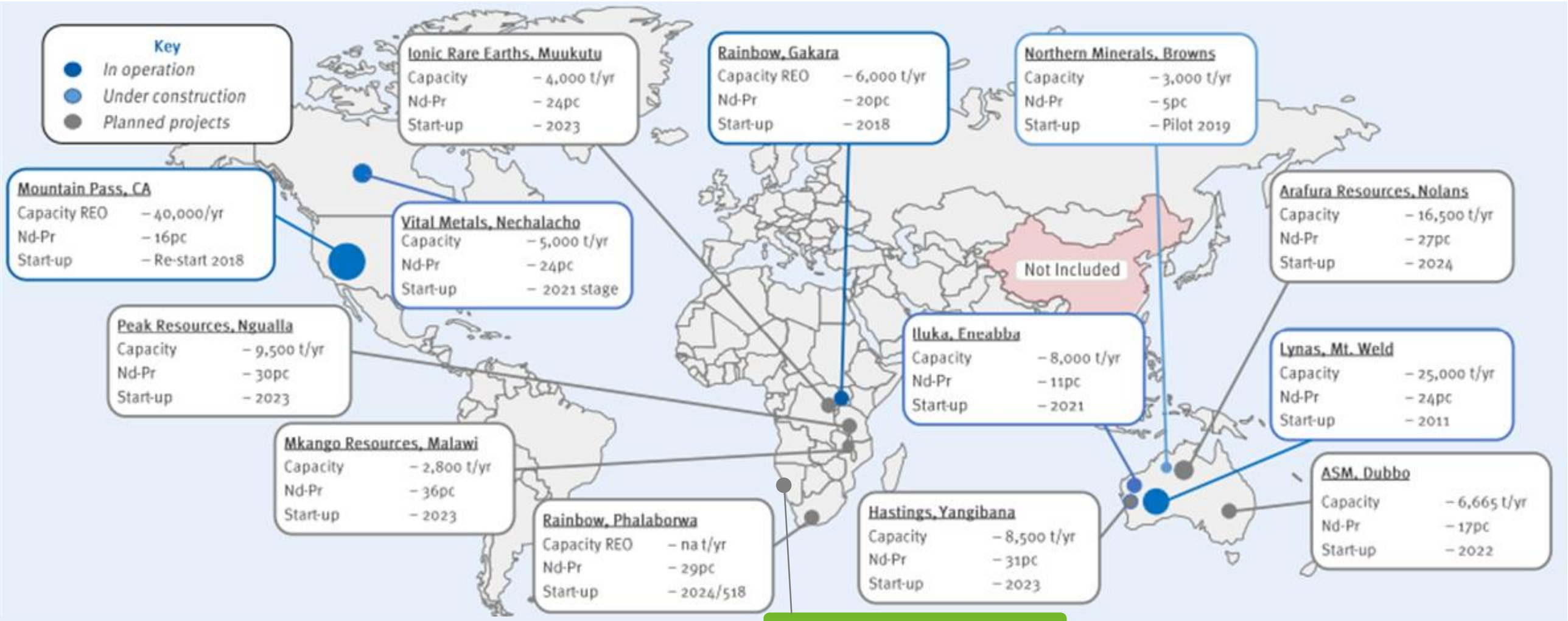
**TREO Value Basket**

**>50%** will stem from Nd and Pr compounds

(due to the demand for NdFeB PM for electrification & de-carbonization)

Demand growth with expected supply deficit & geopolitical concerns = high price = high value of NdPr

# Global TREO Pipeline




**… And why does Eureka have many competitive advantages?**

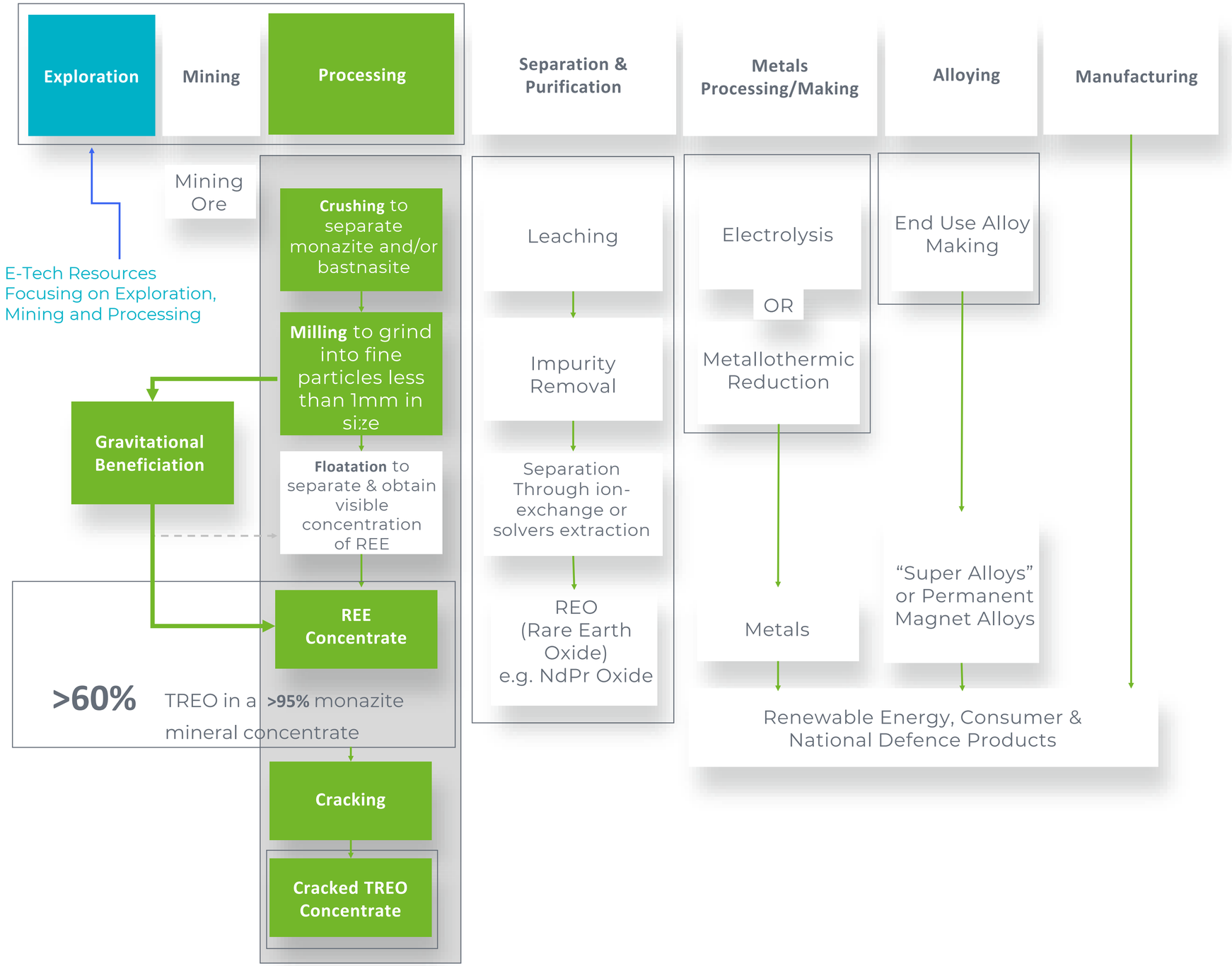


Source: Argus Media


THE EUREKA

# Value Chain

Simple processing stages (ore beneficiation), at **EUREKA**

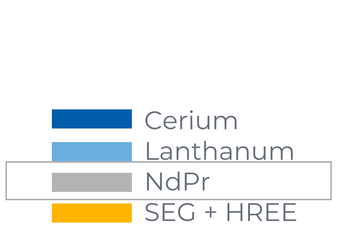


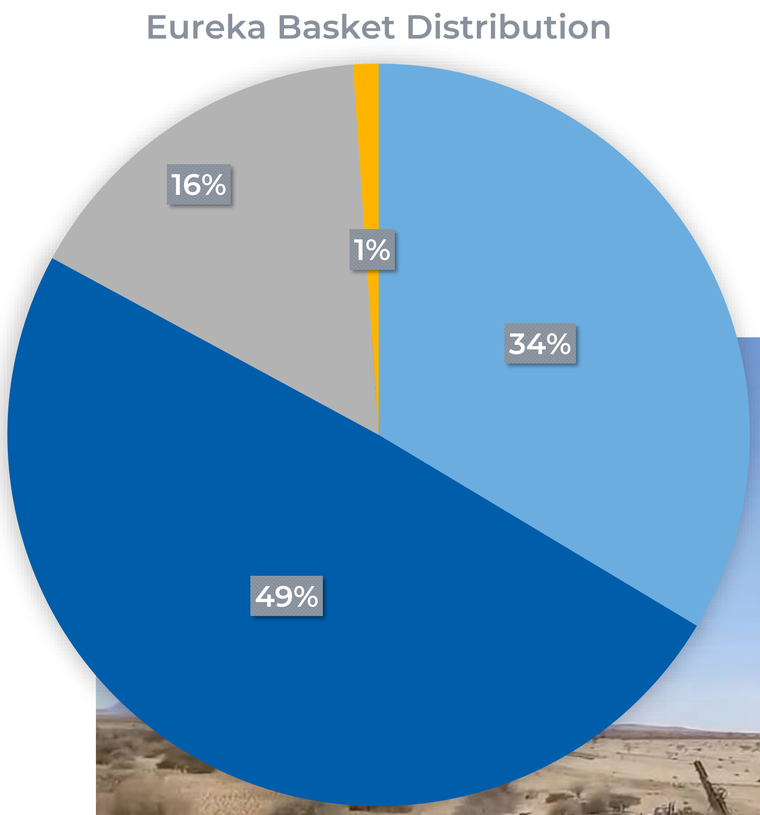


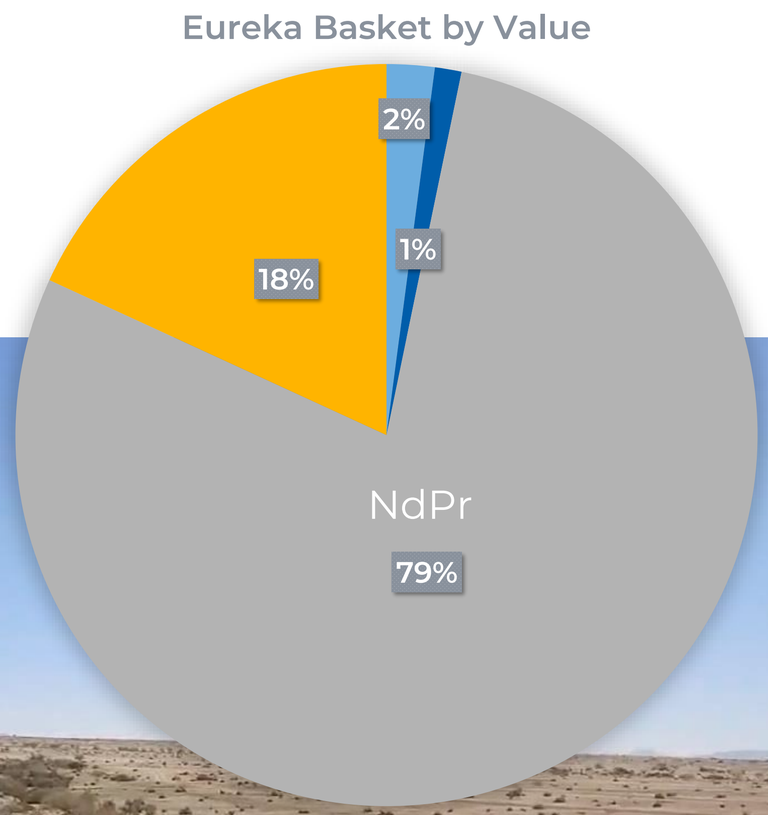

https://netl.doe.gov/coal/rare-earth-elements/program-overview/background

EUREKA'S AVERAGE

# BASKET DISTRIBUTION & BASKET BY VALUE




Notes:
NdPr - Neodymium & Praseodymium
SEG - Samarium, European & Gadolinium
HREE - Heavy Rare Earth Elements

TREO CONCENTRATION

# Project Benchmarking.

Eureka has a low risk and high sustainability profile

- High grade deposit and accessible geology
- Easy ore and concentrate processability
- Mining-friendly jurisdiction
- Excellent infrastructure

=> Low-cost base and high IRR potential

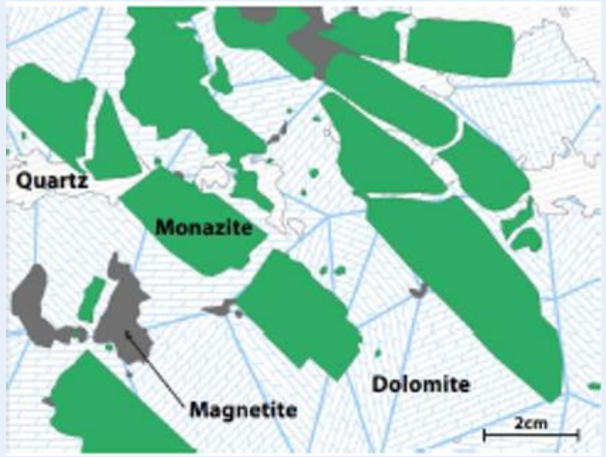
Advantageous — Disadvantageous

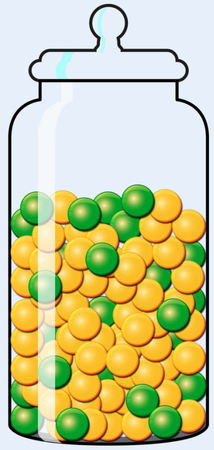
| DEPOSIT | OPERATOR | PRODUCING YET? | DEPOSIT SIZE | PREDOMINANT MONO-MINERALIC REE ORE | GRAINSIZE OF TARGET ORE | EASE OF PROCESSING / RECOVERY | RADIO-ACTIVITY | ACCESS | COUNTRY RISK | COST OF PRODUCING |
|---|---|---|---|---|---|---|---|---|---|---|
| **Mount Weld, Australia** | Lynas | | | Monazite | Fine grain | Flotation | | | | |
| **Mountain Pass, USA** | Shenghe Resources | | | Bastnasite monazite | Medium | Flotation | | | | |
| **Gakara, Burundi** | Gakara, Burundi | | | Bastnasite monazite | Large | Physical only | | | | |
| **Eureka, Namibia** | E-Tech Metals | | Delineation required | Monazite | Large | Physical only | | | | |
| **Songwe, Malawi** | Mkango Resources | | | Synchysite apatite | Fine grain | Flotation Un-optimised | | | | |
| **Steenkamps kraal, RSA** | Steenkamps kraal | | | Monazite | Large | Flotation | ~6 wt. % Th | | | |
| **Ngualla, Tanzania** | Peak Resources | | | Bastnasite monazite | Fine grain | Flotation | | | | |
| **Mineral Sand** | Madagascar | | | Monazite | Fine grain, liberated | Physical only | ~10 wt. % Th | | | |

Information not complete for brevity

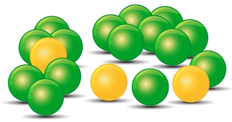
# REE Project Beneficiation

Unweathered carbonatite (**Eureka**)



Coarse grained, simple assemblage

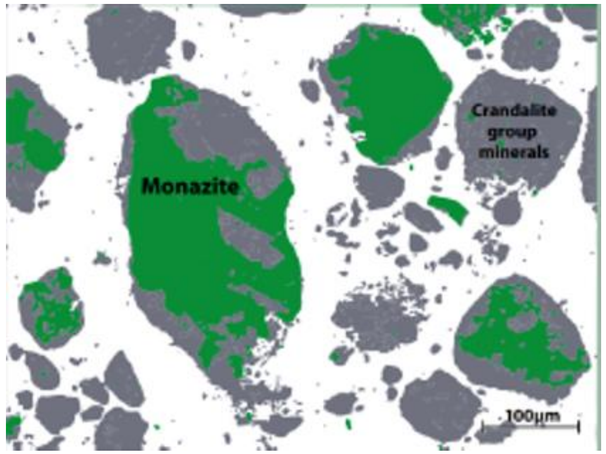


**Eureka**

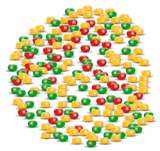
## First Pass Recovery

Processing requirements are **simpler,** with **higher recovery** of green “sweeties”, with lower contamination (yellow sweeties).

Complex weathered carbonatite




Small grained, complex assemblage



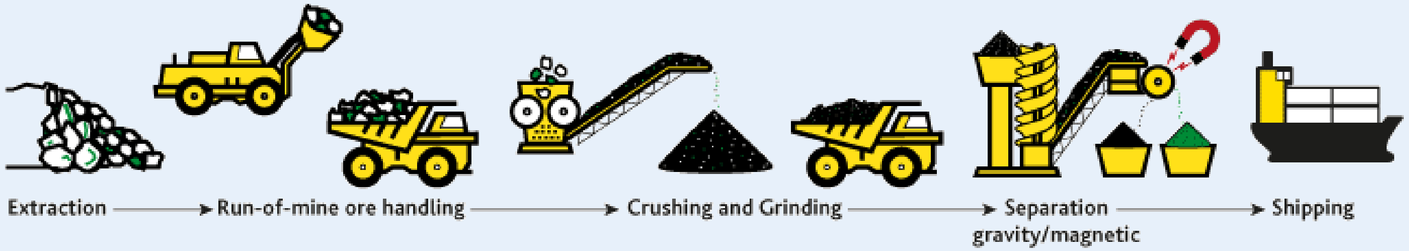
## Complex Processing

Processing requirements are **more complex** due to smaller grain size. This results in lower recovery of green “sweeties” and a **less pure, more contaminated, REE mineral concentrate** product.

For illustration purposes only

# REE Project Beneficiation

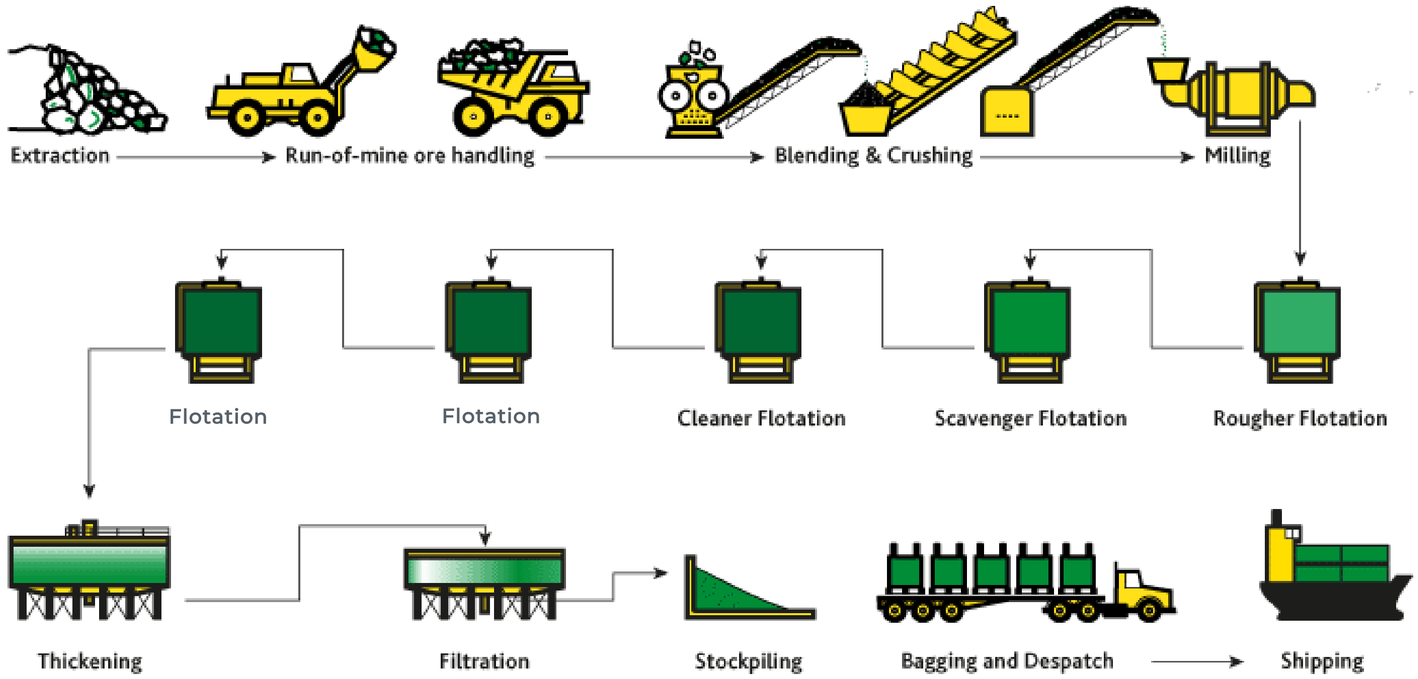
## Low-cost $ Simple flow-sheet to mineral concentrate




## Eureka High-grade

to mineral concentrate with
>65% TREO

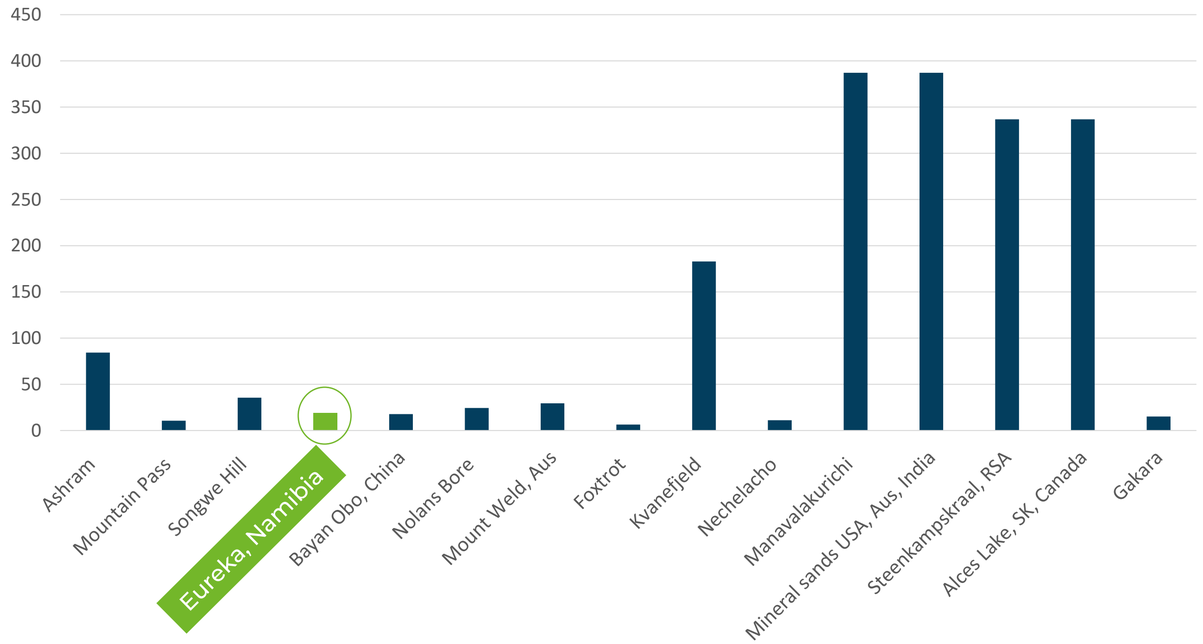
## High-cost $$$ Complex flow-sheet to mineral concentrate



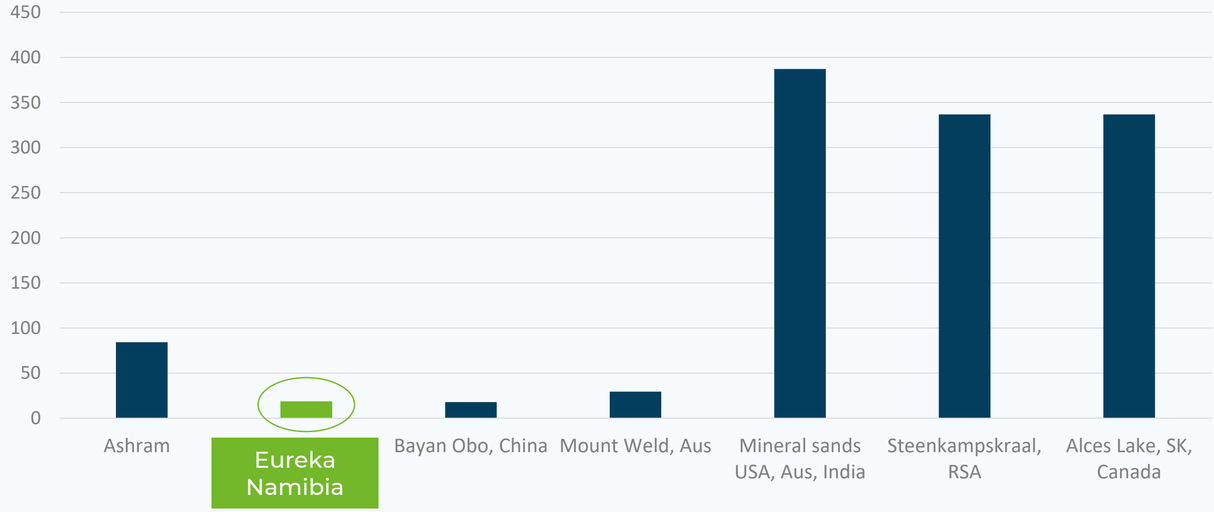

## Other Projects Low-grade

to mineral concentrate with
~40% TREO

# Radioactivity of REE ore mineral at deposit




**Radioactivity of main REE ore at deposit**
Each at empirical purity comparison




**Radioactivity Specific Activity (Bq/g) monazites compared**
Each at empirical purity comparison

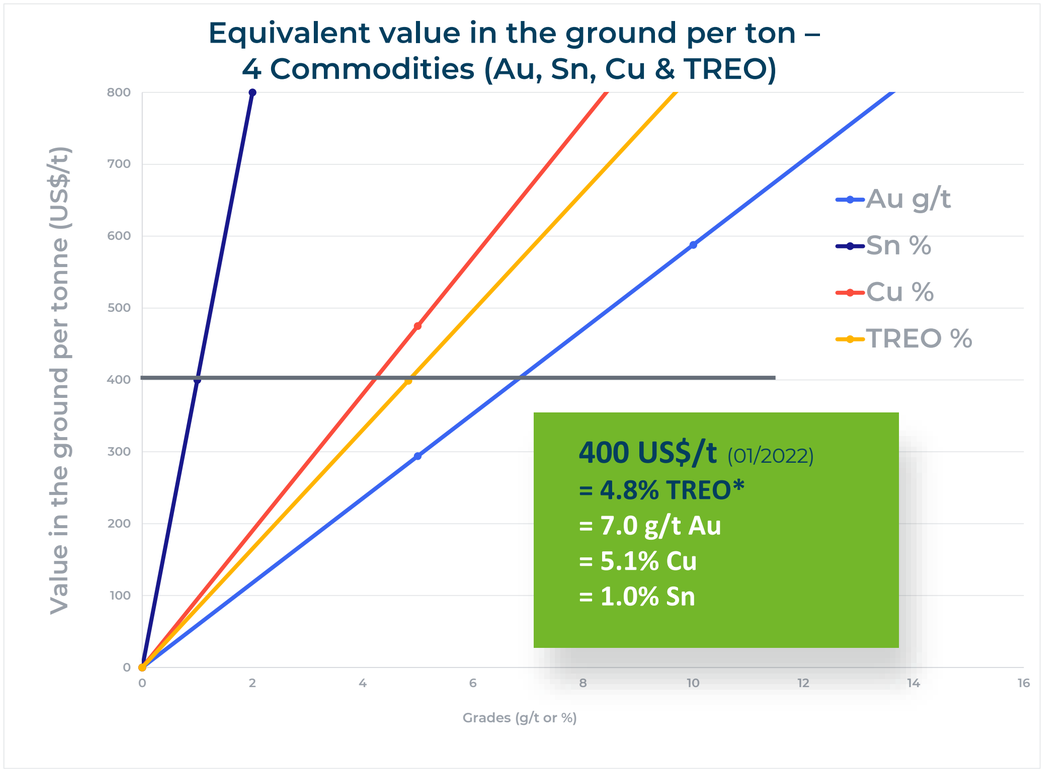


Source: Published Technical Reports & Peer Revied Journals

# In-Situ Basket Value

Eureka in-situ equivalent value

| Sales Options | Description | Key Value Drivers | Potential | Risk | Customer | Plant required |
|---|---|---|---|---|---|---|
| Sell Mineral Concentrate (>65 TREO%) | All TREO incl. Th/U mixed in first marketable product | Fast Time-tp-Market, Low cost basis | Low-cost simple mechanical process, Th/U content remains in product | Small customer circle, high discount factor | Sell to Regional Competitors, toll-crack processors, traders or Chinese customers | Beneficiation plant |




*Based on an assumed monazite mineral price of 5,600US$/t @ 67% TREO Grade

Value chain development can lead to Vertical M&A value add



* Respective commodities based on 14 Jan 2022 prices. Sources: Argus, LME