

**IMARC**

**International Mining and Resources Conference & Expo**  
ICC Sydney  
November 1, 2023

## **MOJAVE RARE EARTH PROJECT – USA**

Within 1.4km of the only producing Rare Earth Mine in USA  
Mountain Pass is one of the richest deposits of rare earth elements in the world

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The information in this document that relates to exploration targets, exploration results, mineral resources or ore reserves is based on information compiled by David Ward BSc, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AUSIMM), (Member 228604). David Ward is a shareholder of Locksley Resources Ltd. David Ward has over 25 years of experience in metallic minerals mining, exploration and development and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a 'Competent Person' as defined under the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Ward consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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Estimates described in the announcement are a guide only and should never be considered a proxy or substitute for laboratory analysis. Only subsequent laboratory geochemical assay can be used to determine grade of mineralisation. LKY will always update shareholders when laboratory results become available.

# SHAREHOLDINGS

## UNIQUE REE OPPORTUNITY

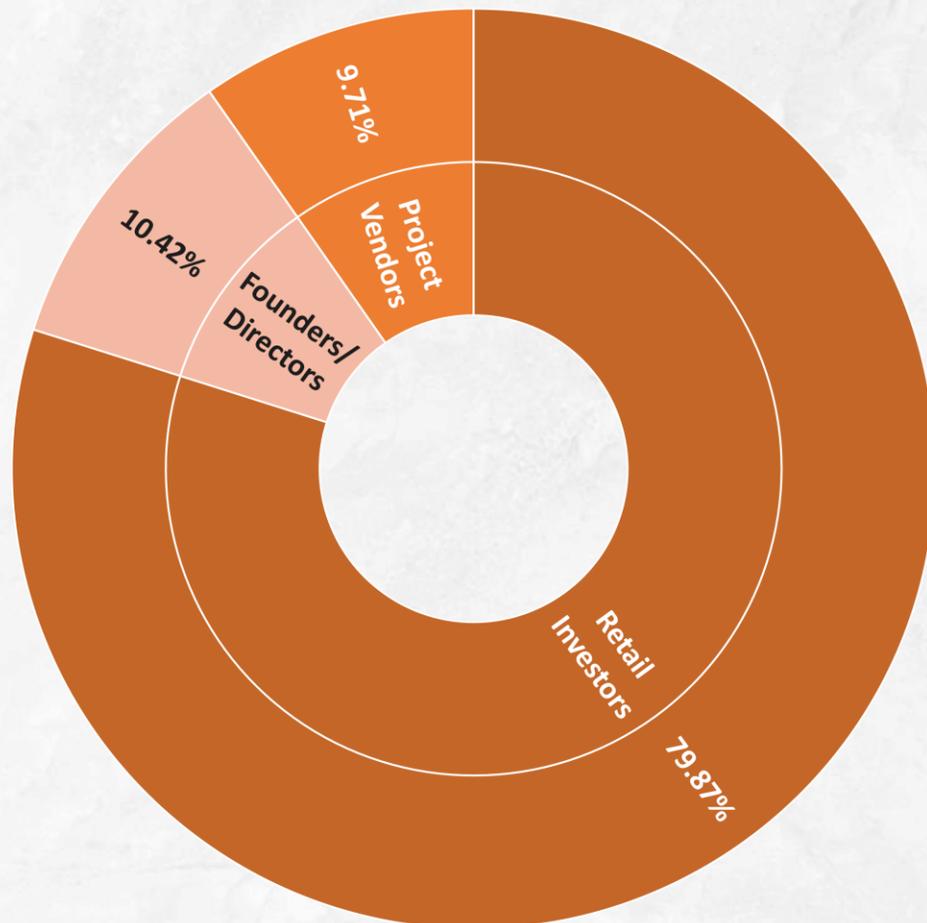
Highly Prospective REE Project

Adjacent to the Giant High-Grade Mount Pass Mine

Exceptional TReO Results up to 12.14%

201 Mineral Claims

## SHAREHOLDER BREAKDOWN



Founders/Directors Project Vendors Retail Investors

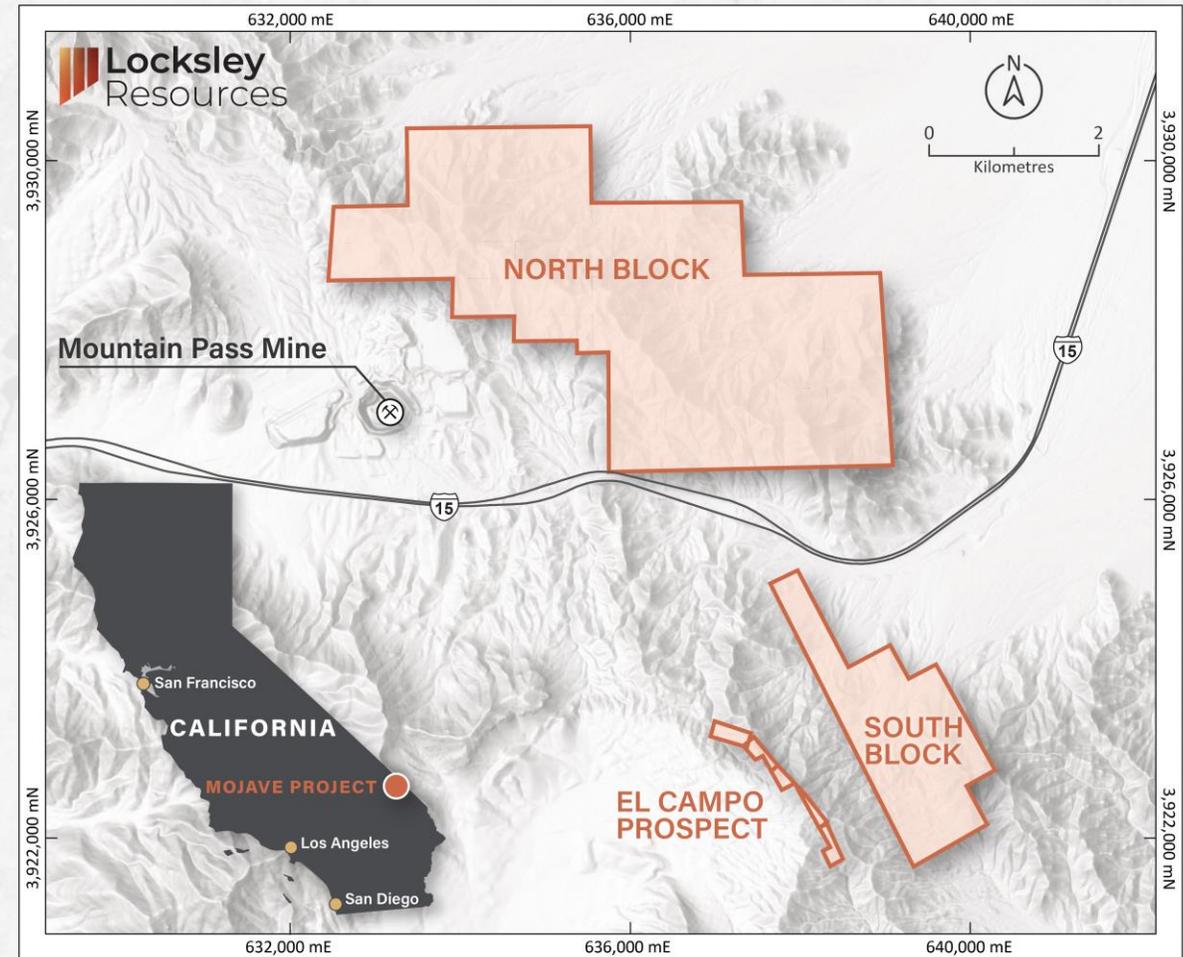
## CURRENT STRUCTURE

ASX Code	LKY
Shares on Issue	146,666,665
Options on Issue <sup>1</sup>	18,700,000
Market Capitalisation (\$0.041)	\$6.0m
Cash at Bank (30 Sep 2023)	\$3.5m
Enterprise Value	\$2.5m

<sup>1</sup> Refer to Locksley ASX release announcement 26/09/2023 for a summary of options exercisable.

# MOJAVE PROJECT OVERVIEW

- Portfolio of **Rare Earths** projects located in **California USA**
- Mojave Project comprises of 201 claims** referred to as the El Campo Prospect and the North Block & South Block
- Claims are **surrounded & abutting the Mountain Pass mine claims**
- Mountain Pass is **one of the highest grade REE mines in the world** the only producing facility in USA<sup>2</sup>
- Rare earth elements (REE)** are indispensable for the functioning of modern society, powering technological innovations and enabling advancements in **renewable energy, electronics, and defence systems**

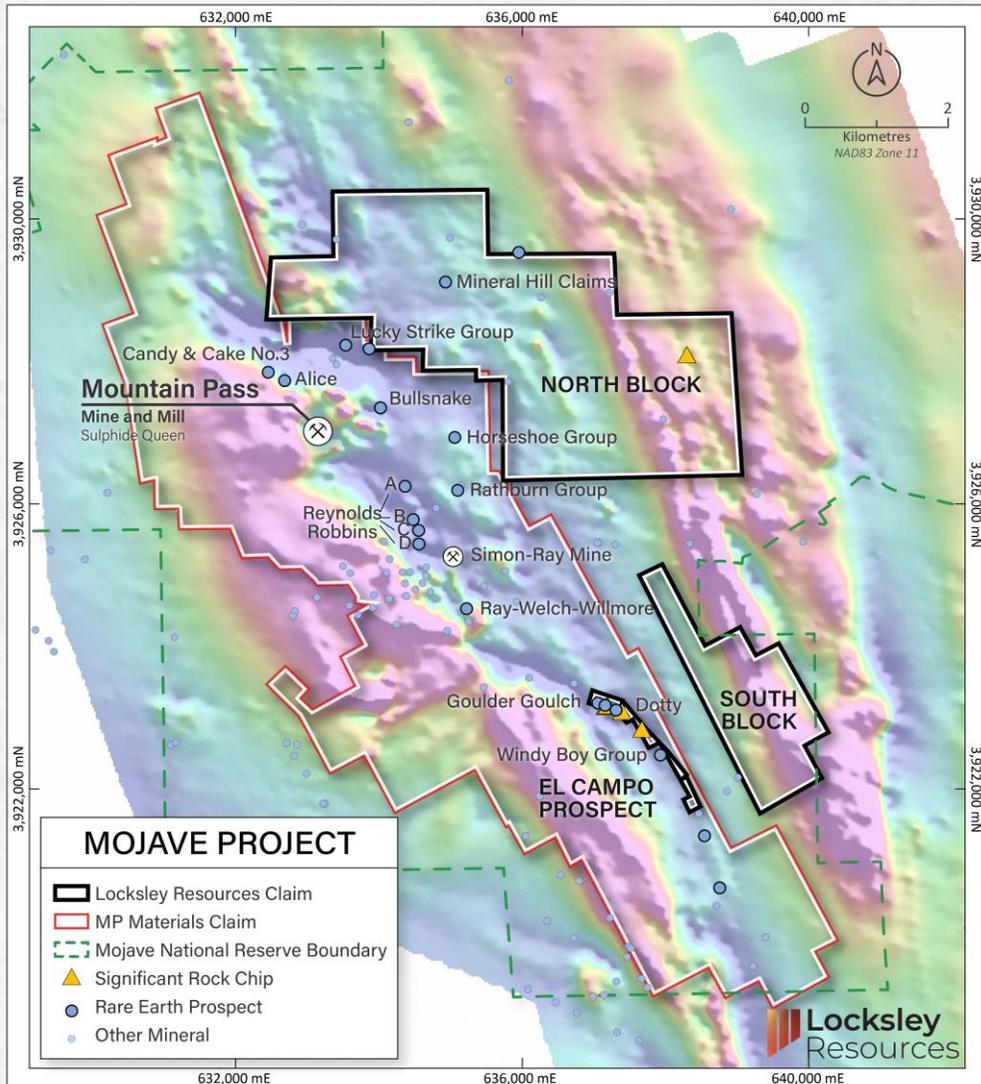


# MOJAVE PROJECT OVERVIEW



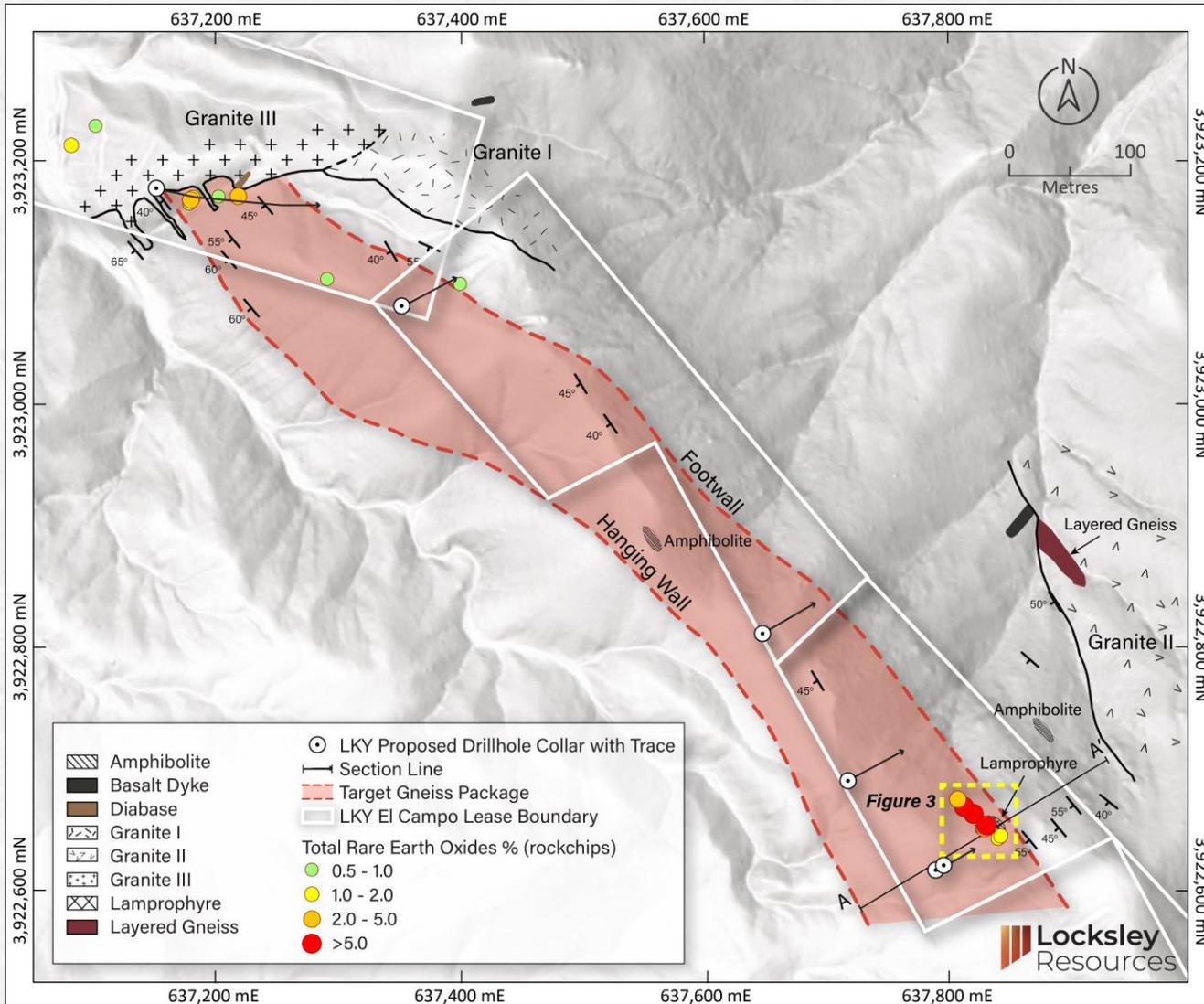
- The Mojave North Block lies just **1.4 km to the northeast** of the Mountain Pass Mine
- Proven metallurgy & ore processing evident at the Mountain Pass Mining operations
- Mountain Pass is **one of the highest grade REE mines in the world** and the **only producing facility in USA<sup>2</sup>**
- **Multiple REE targets** identified within the Mojave Project
- **Drilling application** underway and **well-resourced** for implementation in 2024

# MOJAVE PROJECT – 12.1% TREO



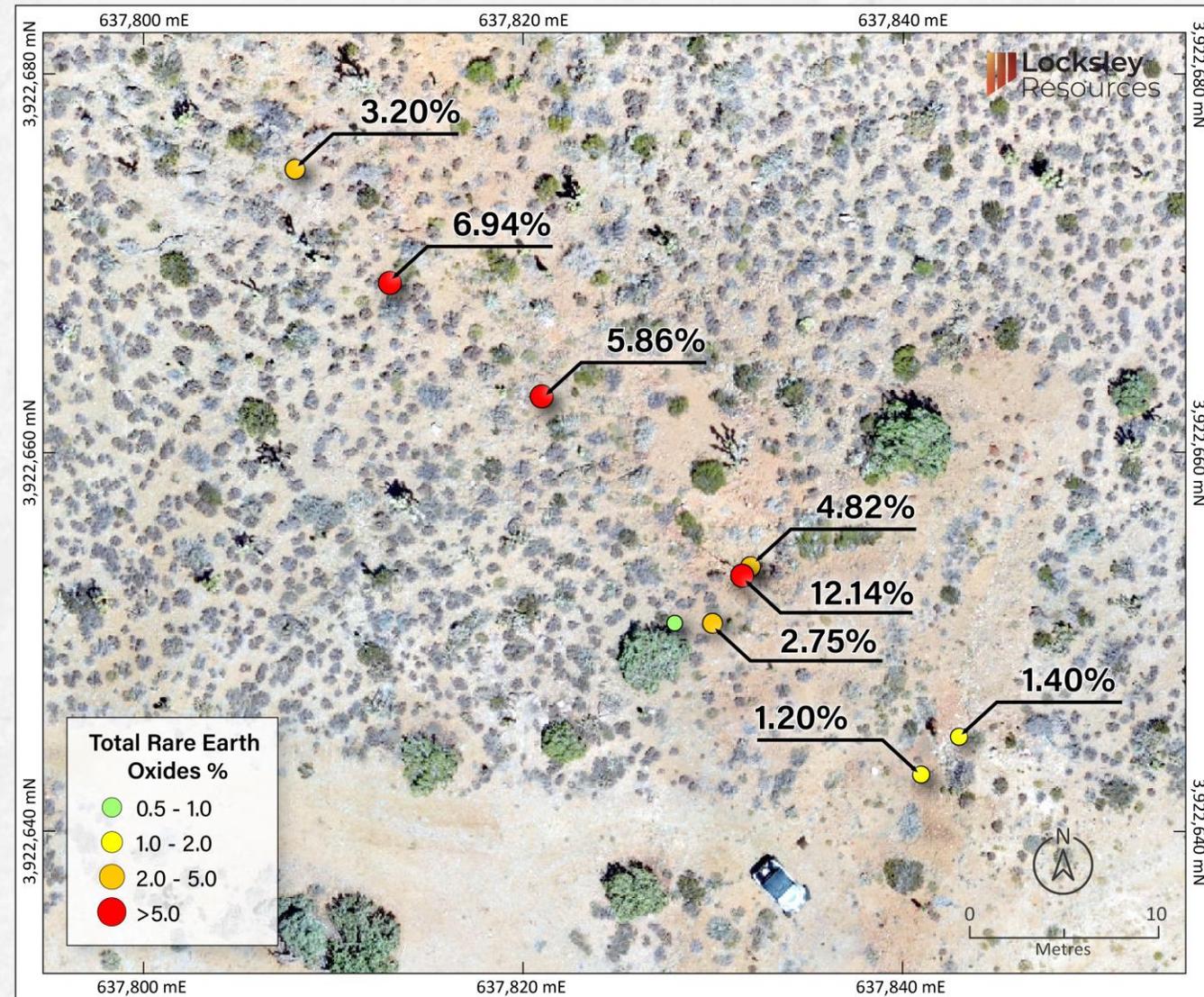
- Multiple REE targets identified within claim areas
- Five (5) rock-chip samples initially collected at the El Campo Prospect returned high grade **TREO results of 3.74% to 9.49%** within a 6-metre-wide mineralised zone
- Stream sediment sampling returned anomalous results ranging from **0.103% (1,030 parts per million) to 0.26% (2,600 parts per million)** total rare earth oxide (TREO)
- 12 high-grade rock-chip samples returning results ranging from **1.03% to 12.1% TREO** along the interpreted mineralised horizon at the El Campo Prospect

# ROCKCHIP – MAPPING DATA – EL CAMPO



- Surface sampling program returned very high-grade assays up to **12.1% (121,388 ppm) Total Rare-Earth Oxide (TREO's)** and **3.19% (31,940 ppm) NdPr**
- The mapping and sampling program identified an **860m long interpreted prospective horizon** associated with high-grade outcropping samples between 1.03% and 12.1% TREO.
- Drillholes will target the **El Campo 'lode'**

# ROCKCHIP – MAPPING DATA – EL CAMPO



- Historic prospecting pits developed on **REE gossan**
- The surface expression of the sampled gossan was seen as an **oxide stain shedding down slope** in detailed drone orthomosaic imagery but could not be traced further than **46m under a steep scree slope** to the north-west so **remains open under cover along strike**

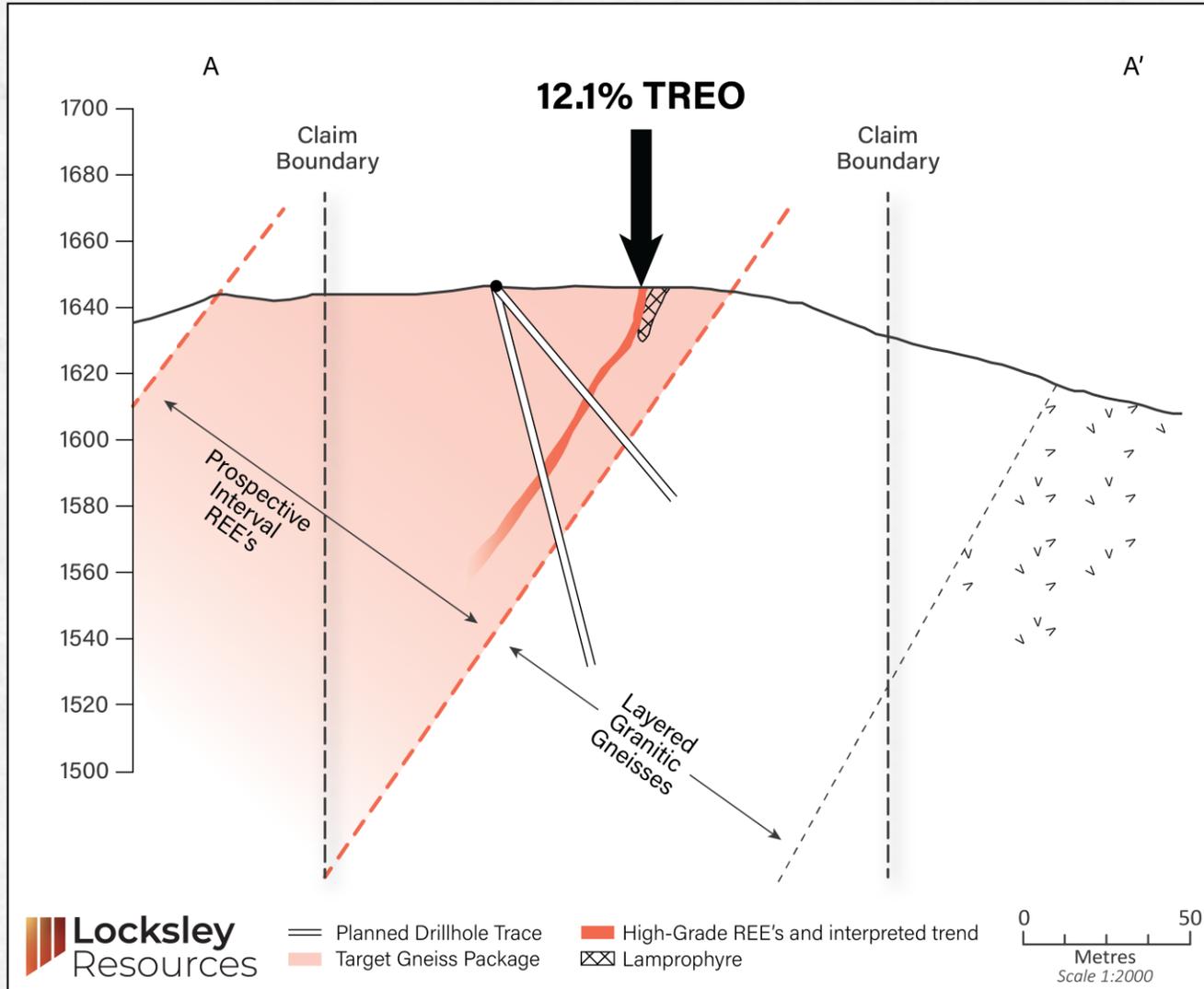
# ROCKCHIP – MAPPING DATA – EL CAMPO



12.1% TREO

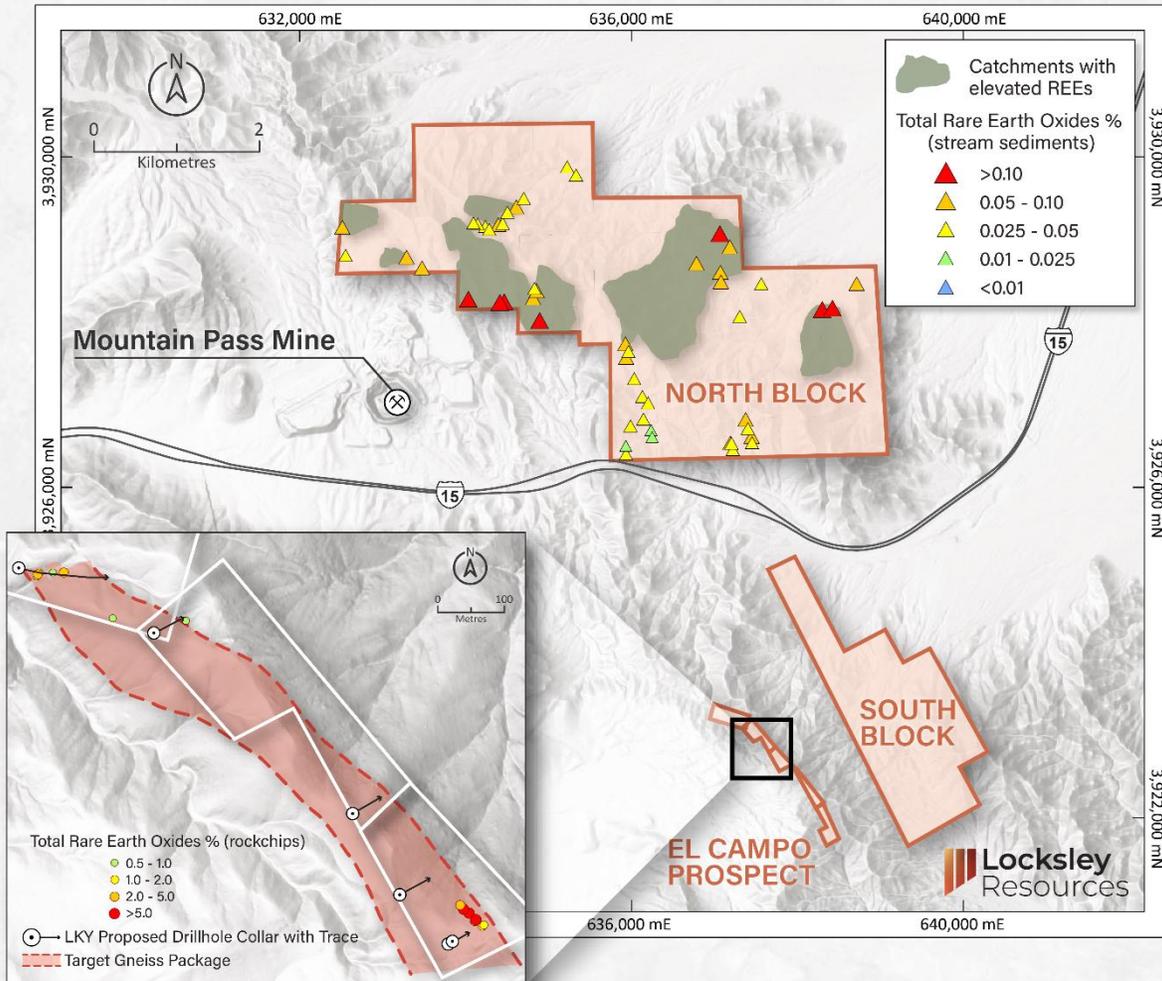
- South-West dipping structure
- Interpreted to be a **pre-existing favourable structural horizon** with REE rich fluids from a nearby carbonatite
- Higher than background radioactivity due to **elevated Thorium** identifies the mineralisation using simple personal gamma detectors

# ROCKCHIP – MAPPING DATA – EL CAMPO



- Mineralized structure dips at **45-70 degrees** to the south-west
- Significant down dip strike** extent of high-grade structure within the claims
- The El Campo '**lode**' runs **close to parallel** to the footwall of the mapped prospective horizon

# STREAM SEDIMENTS – NORTH BLOCK



## Highly Anomalous TREO Results from the Stream Sediment Sampling Program Conducted Over the North Block

- Seven (7) stream sediment samples returned assays ranging from **0.103% to 0.26% TREO (2,600ppm)**
- Six (6) catchment areas have been identified as **prospective for ongoing REE exploration**
- Suggests potentially **multiple El Campo style high-grade structurally controlled REE lodes** within the North Block
- Catchments are interpreted to be **feeding topographic low stream sediments** with elevated REE
- Follow-up North Block sampling program forthcoming

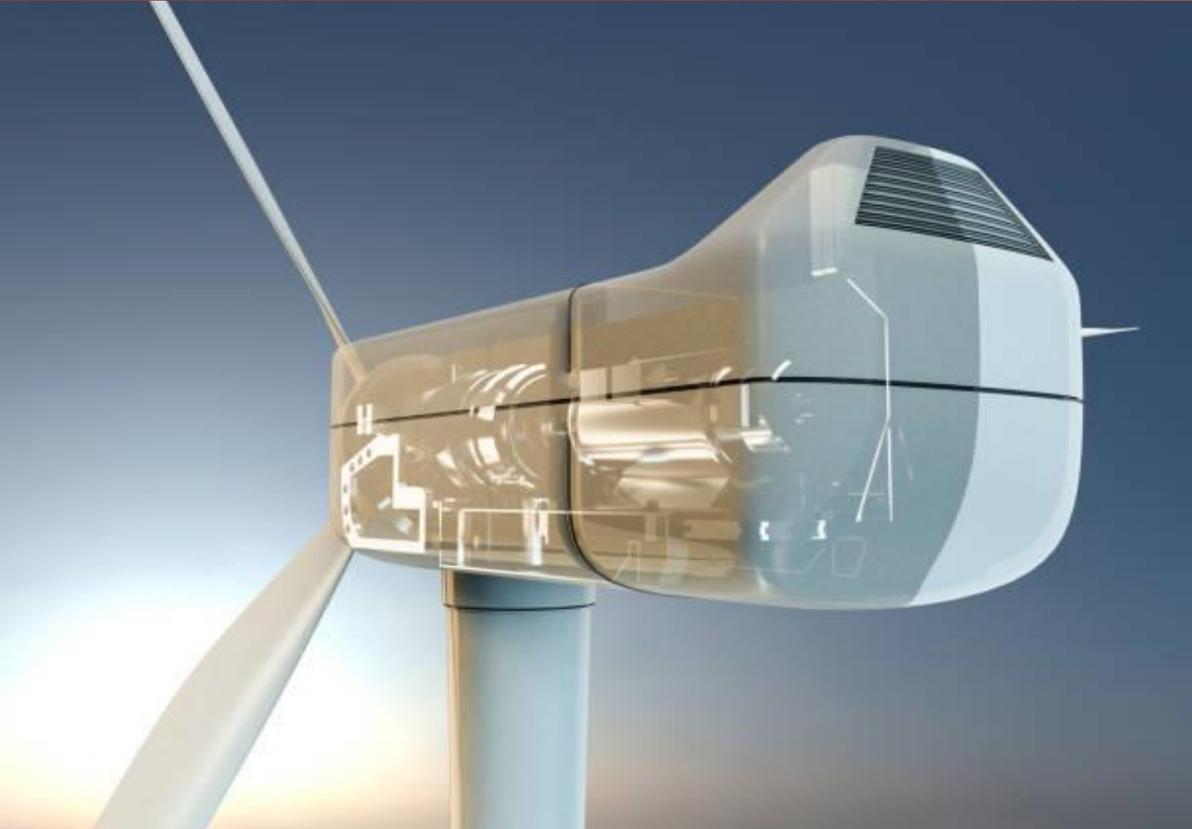
# REE GLOBAL DEMAND



- **The total demand for Rare Earth Oxides (REOs)** is expected to increase from 208,250 metric tons in 2019 to a forecasted 304,678 metric tons by 2025
- In **2021**, the **REE market** was worth around **\$7 billion**, which is projected to reach almost **\$15.5 billion by 2030**
- **73% of REE are used in mature industries and the remaining 27% are used in the production of permanent magnets**, which are essential components in EVs
- **Global sales of electric vehicles (EVs)** continued to be strong. A total of 10.5 million new (both EV and hybrid) EV's were delivered during 2022, with an increase of +55% compared to 2021
- EV sales in the **USA and Canada** increased by 48% year-on-year
- EV sales in **China** increased by +82% year-on-year

Garside, M. (2021, April 27). *Rare earth oxide demand worldwide from 2017 to 2025*. Statista. Retrieved June 20, 2023, from <https://www.statista.com/statistics/1114638/global-rare-earth-oxide-demand/>  
(2023, February 1). *Global Rare Earth Metals Market Outlook Report 2022: A \$15.47 Billion Market by 2030 - Increase in Demand for Semiconductors Bodes well for the Sector*. Cision PR Newswire. Retrieved June 20, 2023, from <https://www.prnewswire.com/news-releases/global-rare-earth-metals-market-outlook-report-2022-a-15-47-billion-market-by-2030---increase-in-demand-for-semiconductors-bodes-well-for-the-sector-301736562.html>  
(n.d.). *Global EV Sales for 2022*. The Electric Vehicle World Sales Database. Retrieved June 19, 2023, from <https://www.ev-volumes.com/>  
(2019, January 29). *Electric vehicles and rare earths*. Edison. Retrieved June 19, 2023, from <https://www.edisongroup.com/insight/electric-vehicles-and-rare-earth/23277/>

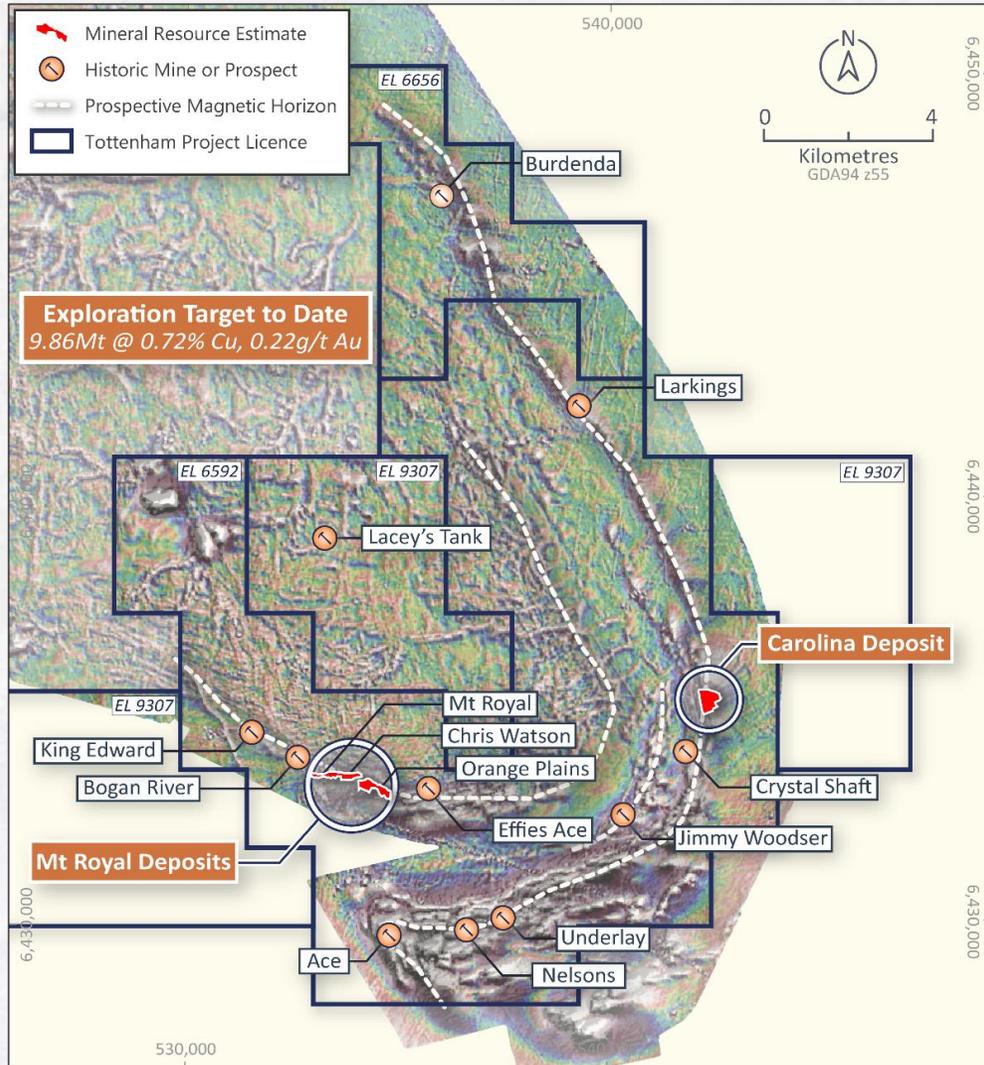
# FUTURE OF REE



- **REE are likely to remain an important part of our future**
  - from quantum computing and material sciences, to medical applications and advances in green technology
- The growth of wind farms will continue to drive demand for **neodymium** and **dysprosium** used in wind turbine motors and the move from internal combustion cars to **EVs** will also increase demand for permanent magnets
- The International Energy Agency (IEA) forecasts the **EV fleet will grow from 3.1 million in 2017 to 125 million in 2030**. Given that an electric vehicle requires between 1 kg to 2 kg of permanent magnets, the REE market is set to expand massively over the next decade
- **Global demand for neodymium** is expected to grow 48% by 2050, exceeding the projected supply by 250% by 2030, and the need for **praseodymium** could exceed supply by 175%

(n.d.). *The Future of Rare Earth Elements*. Science History Institute - Museum and Library. Retrieved June 19, 2023, from <https://sciencehistory.org/education/classroom-activities/role-playing-games/case-of-rare-earth-elements/history-future/#:~:text=The%20Future%20of%20Rare%20Earth%20Elements&text=The%20growth%20of%20wind%20farms,rare%20earth%20magnets%20and%20batteries>  
(2019, January 29). *Electric vehicles and rare earths*. Edison. Retrieved June 19, 2023, from <https://www.edisongroup.com/insight/electric-vehicles-and-rare-earths/23277/>  
Cho, R. (2023, April 5). *The Energy Transition Will Need More Rare Earth Elements. Can We Secure Them Sustainably?* Columbia Climate School - Climate, Earth, and Society. Retrieved June 20, 2023, from <https://news.climate.columbia.edu/2023/04/05/the-energy-transition-will-need-more-rare-earth-elements-can-we-secure-them-sustainably/#:~:text=Demand%20is%20growing&text=Global%20demand%20for%20neodymium%20is,exceed%20supply%20by%20175%20percent>.

# TOTTENHAM PROJECT OVERVIEW



## RECENT DRILLING AT TOTTENHAM RETURNED UP TO 5.03% COPPER AND 0.53G/T GOLD

- Recent results received for 18 RC drillholes totalling 3,267m
- Drilling was designed to add to known resources and extend into new areas
- Global Inferred JORC Mineral Resource stands at 9.86Mt @ 0.72% Cu, 0.22g/t Au**
- Mount Royal – Orange Plains infill drilling
  - 8m @ 1.57% Cu and 0.16g/t Au** from 65m (TORC030)
    - Including **2m @ 5.03% Cu and 0.53g/t Au** from 67m

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