

# **Investor Highlights**

WHITE CLIFF MINERALS

Exposure to highly prospective and large lithium & REEs projects in a tier 1 mining jurisdiction



Diversified portfolio: rare earths (REE), Lithium, gold, copper & nickel in WA



No Debt: ~\$2.2 million in cash and listed investments\*



Strong news flow: on ground work at Yinnetharra (REE/Li), Hines Hill (REE) and Diemals (REE/Li, Au, Cu, Ni)



Strong board & management: 60+ years corporate/technical experience



<sup>\*</sup> Post completion of placement to raise ~\$1.7 million announced 5 September 2022

# **Corporate Overview**

Capitalisation Data<sup>(1)</sup>

A\$0.027

**747M** 

**A\$20.1M** 

**Share Price A\$** 

Basic S/O (2)

Market Cap (2)

A\$2.2M

A\$17.9M

Cash (2)

Enterprise Value (2)

Board

Michael Soucik
Non-Executive Chairman

Edward Mead
Technical Director

Nicholas Ong
Non-Executive Director

Dan Smith

Non-Executive Director

**Rob Sinclair** 

Non-Executive Director



- . As at 9 September 2022
- 2. Post completion of placement to raise ~\$1.7m announced 5 September 2022. Includes cash and listed investments

# **Projects Overview**



Portfolio of highly prospective REE, lithium, precious and base metal projects





## Yinnetharra (Li/REE)

- Large project covering 574km² within the Gascoyne region
- Located 85km south of (ASX:HAS) world-class Yangibana rare earths project and the recent discoveries by Dreadnaught Resources (ASX:DRE)
- Numerous lithium bearing pegmatites identified in nearby Thirty Three Supersuite





- 1 tenement covering 128km², located 200km east of Perth
- Two circular magnetic features with Ionic Leach<sup>TM</sup> maximum value of 550ppm TREO with 11 samples over 300ppm TREO
- The results correlate with magnetic features tentatively interpreted as possible carbonatite intrusives





## Diemals (REE/Li)

- 6 tenement applications covering 2,427km<sup>2</sup>, located 185km north of Southern Cross
- Underexplored tenure, with very strong Ce responses up to 1,860ppm from GSWA geochemical sampling
- Two greenstones belts identified on the west and east margins prospective for gold, nickel and copper

## Preston River (Li)



- Highly prospective tenement covering 146km<sup>2</sup>
- Situated 30kms north of the giant Greenbushes LCT project
- Adjacent to Lithium Australia's Greenbushes project

## **Reedy South**



- Cue/Meekatharra goldfields covering 272km<sup>2</sup> Immediately south of Triton/South Emu Mine (Westgold)
- Maiden JORC resource of 42Koz Au
- Multiple shallow drill targets including new areas at Cracker Jack and McCaskill Hill

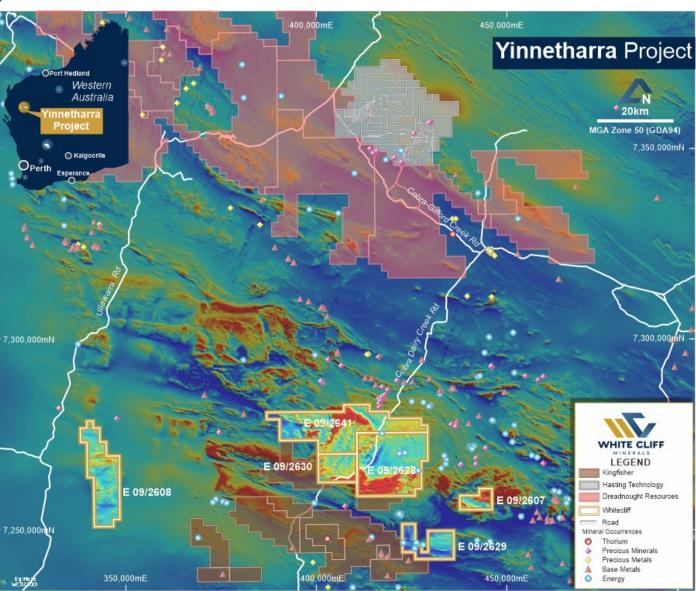
# Yinnetharra REE/Li Project (574km²)

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- The Yinnetharra REE/Li project consists of six tenements, in the Gascoyne of Western Australia
- Located 85km south of Hastings Technology Metals Ltd, Rare Earth world-class Yangibana rare earths project (Gascoyne Metals and Yangibana Tenements) (ASX:HAS) and recent discoveries by Dreadnought Resources Ltd (ASX:DRE), and north and contiguous to Kingfisher Mining Ltd (ASX:KFM)
- Recent Yinnetharra expedited (13) samples have highlighted anomalous values in REE (up to 780ppm TREO)
  - There are still 115 samples results to come
- Strong alteration with anomalous REE's assays, places the samples in a mineralised system

The job now is to refine where we are in that mineralised system





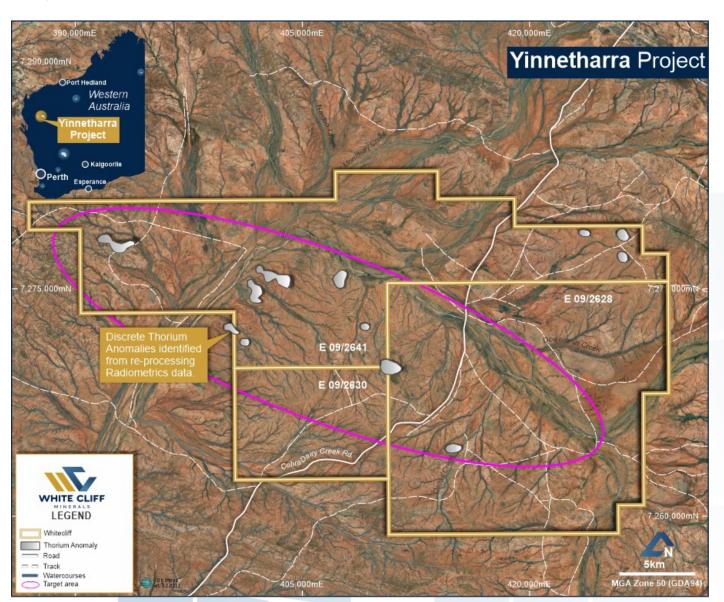




- Samples are on the periphery of newly identified thorium anomalies
- This has generated a new suite of significant targets to be field checked in the coming weeks
- Multiple newly identified thorium targets associated with magnetic anomalies will be field validated and sampled in the upcoming trip
- The red circle continues to be the area of focus

#### Next Steps at Yinnetharra (Q3 2022 - Q1 2023)

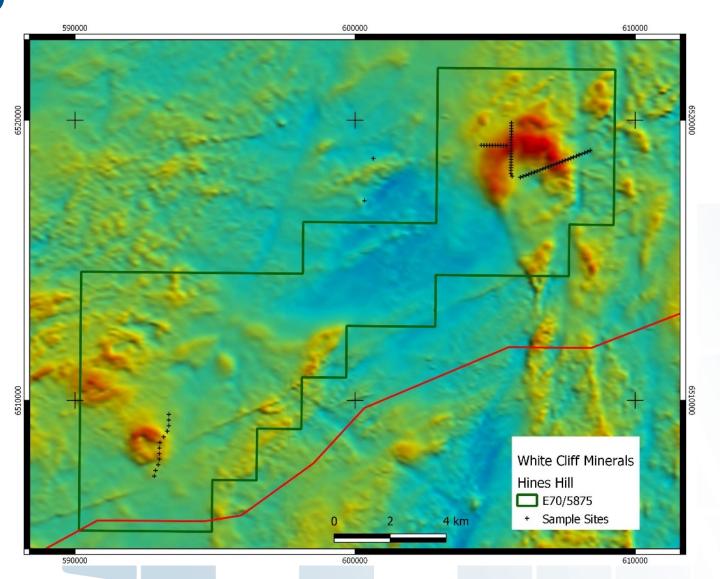
- 115 rock chip sample results due ~1 week
- Refined surface sampling
- High Resolution magnetics and radiometrics survey
- Work programs for maiden drill program design
  - Heritage Survey
  - RC Drill program



# Hines Hill REE Project (128km<sup>2</sup>)

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- The Hines Hill REE project consists of a single tenement, within the wheatbelt region, located about 200km east of Perth on the Great Eastern Highway.
- Maiden reconnaissance soil sampling program at Hines Hill confirms presence of rare earths:
  - Maximum value of 550ppm TREO
  - 11 samples over 300ppm TREO
- The results correlate with magnetic features tentatively interpreted as possible carbonatite intrusives
  - Interpretation of magnetic data over the tenement has identified two intrusive bodies, covering an area of ~5km² in the northeast and ~2km² in the southwest, respectively
  - Carbonatite intrusives are a major source of REE deposits around the world
- The results are highly encouraging for a reconnaissance program, with the Company now in advanced planning for a maiden aircore or auger drill program.



Hines Hill sampling results overlaid on magnetic data, northeast and southwest area.

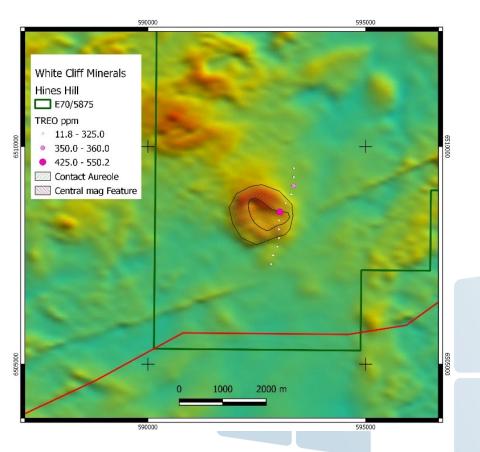




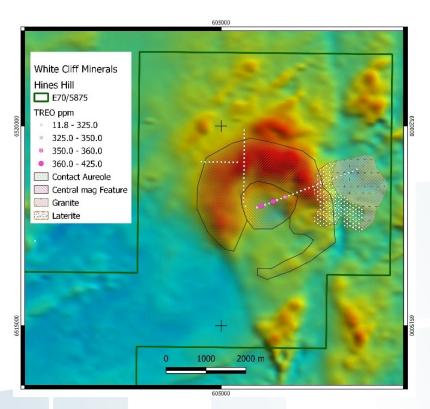
# Next Steps at Hines Hill (0 - 6 months)

- Land access agreement underway
- Maiden Aircore/Auger program
  - 75 holes to 30 metres depth on a 200m x 200m spacing
- Further Aircore drilling
- Potentially change to RC drilling for Resource work
- PQ core for metallurgy

The elevated results also correspond precisely with the magnetic features in the northeast and in the southwest, strongly suggesting the two features are directly related



Hines Hill sampling results overlaid on magnetic data, southwest area.



Hines Hill sampling results overlaid on magnetic data and geology, northeast area.

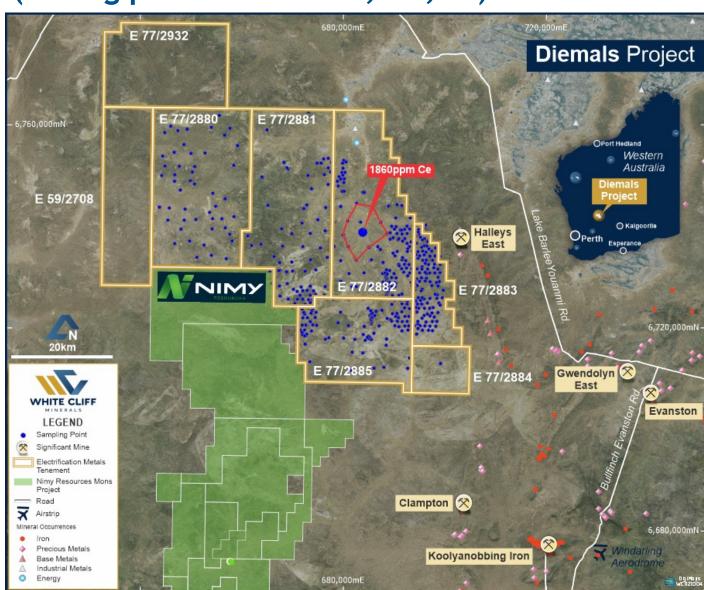


# Diemals REE/Li Project (2,427km<sup>2</sup>) (Strong potential for Au, Cu, Ni)

- The Diemals REE/Li project consists of 6 tenements within the Southern Cross Belt, located 185km north of Southern Cross and 75km east of Paynes Find.
- The project area is underlain by deeply weathered granites and two greenstone belts. Recent reinterpretation of aeromagnetic data confirming the northern tip of the Forrestania greenstone belt that runs through Nimy Resources tenure, continues north into Diemals. An eastern greenstone belt terminates within the western tenement area.
- Very strong Ce responses up to 1,860ppm in ferruginous lateritic material based on the laterite Geochemical database for the western Yilgarn Craton (YLA) published by the GSWA1. Additional results suggest the responses are part of a westerly trending zone.

#### Next Steps at Diemals (0 - 3 months)

- Processing of existing magnetic data
- Surface sampling





- The Preston River Lithium project consists of one tenement application (E70/5871) within the southwest region of Western Australia, located 20km east of Donnybrook and 30km north of the town of Greenbushes. The project is adjacent to Lithium Australia Limited (ASX:LIT) Greenbushes lithium project.
- The project area is underlain by granite gneisses and migmatites of the Balingup Metamorphic Belt. Potentially located slightly east of the significant Donnybrook-Bridgetown Shear Zone associated with the major Greenbushes Pegmatite, the area appears devoid of any previous Li/REE exploration.
- The Preston River tenement is situated only 30 kilometres north of the Greenbushes tin - tantalum - lithium field in similar geological terrane. In addition, the area has several major faults similar to those that seem to influence the siting of the mineralised Greenbushes pegmatites.

## **Other Projects**

- Gardner Range REE Project
- Rat Hill REE Project
- Reedys South Gold Project
  - 42koz Au Inferred JORC Resource







# Exploration Programs: Yinnetharra REE/Li, Hines Hill REE and Diemals REE/Li/Cu/Ni/Au

## Q4 2022 and immediate work programs

#### Yinnetharra

- ~100 rock chip samples pending results expected mid-Sep.
- Refined surface sampling Throughout September
- High Resolution magnetics and radiometrics survey Nov
- Work programs for maiden drill program design
  - Heritage Survey November
  - RC Drill program Late November-early December

#### Hines Hill & North Kellerberrin

- Land access agreement underway Early mid-September
- Maiden aircore program:
  - 75 holes to 30 metres depth on a 200m x 200m spacing
    - Planned early October

#### **Diemals**

- Processing of existing magnetic data Sep/Oct
- Surface sampling Sep/Oct

## Q1-Q2 2023

#### Yinnetharra

Follow up RC drilling program

#### Hines Hill

- Follow-up aircore drilling
- RC drilling for Resource work
- PQ core for metallurgy

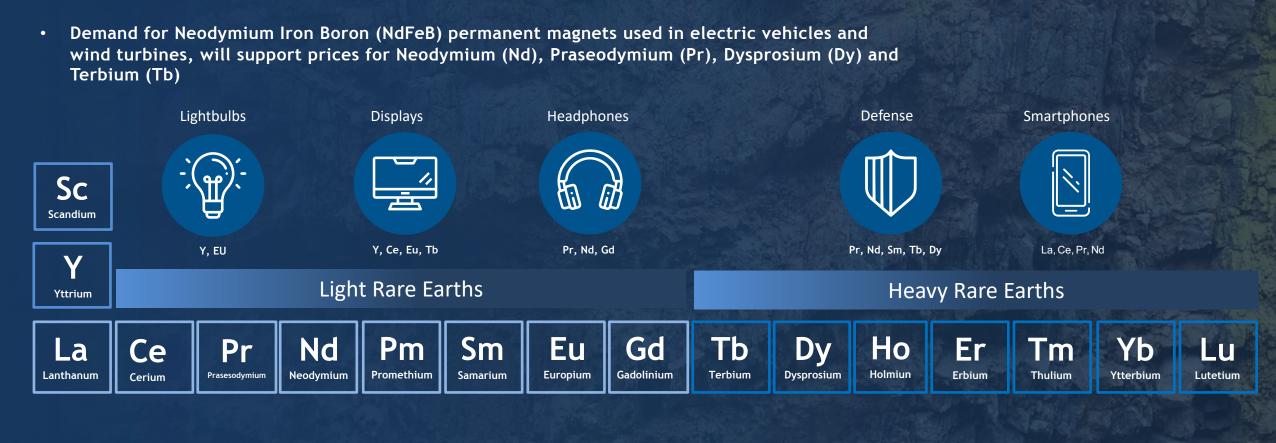
#### **Diemals**

- Airborne Electromagnetics survey
- Refined surface sampling



## What are Rare Earth Elements

- · Rare earth elements comprise 15 lanthanides plus scandium and Ytterbium
- Used in many high-tech applications in small volumes but are critical to performance



# Rare Earths Market Opportunity



#### Transition To Renewable Power Generation

**200kg NdPr Oxide per 1MW** of wind generation capacity

- Each direct drive wind turbine uses a permanent magnet motor that generates between 2-6MW of performance
- Each megawatt requires approx. 200kg pure NdPr Oxide
- Wind turbines anticipated to grow at a CAGR of 17% through to 2025







#### Mass Production Of EVs Has Commenced

Behind each battery is a **Motor** 

- Over 90% of all EVs will be equipped with an NdFeBpermanent magnet
- Each EV consumes an incremental ~1kg of NdPrOxide
- EVs anticipated to grow at a CAGR of 29% over the next five years
- Hydrogen vehicles also reliant on permanent magnetmotor technology
- Hydrogen vehicles also anticipated to grow at a CAGR of 11% through to 2025











## Competent Person Statement & Disclaimer



The information contained in this presentation has been prepared by White Cliff Minerals Limited (Company).

The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Mr Edward Mead, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Mead is a Director of White Cliff Minerals Limited. Mr Mead 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 in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves". Mr Mead 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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This presentation relies on information previously release to the ASX:

- 25 August 2022 "780ppm TREO Discovered at Yinnetharra REE/Li Project"
- 27 July 2022 "June 2022 Quarterly Reports"
- 23 November 2021 "Highly Prospective Rare Earth and Lithium Projects Acquisition and New Tenement Applications"
- 29 October 2020 "Maiden 42,400 Ounces JORC Mineral Resource at Reedy South"



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