ASX: M2M

RIU Sydney Resources Round-up

INNOVATIVE EXPLORER PRIMED FOR CRITICAL METAL SUCCESS

9th May 2023

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COMPETENT PERSON STATEMENT

The information in this report that relates to exploration results and exploration targets is based on and fairly represents information compiled by Mr Paul Maher, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Paul 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 Resources and Ore Reserves'. Paul consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

All parties have consented to the inclusion of their work for the purposes of this presentation. The interpretations and conclusions reached in this presentation are based on current geological theory and the best evidence available to the author at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for absolute certainty. Any economic decisions which might be taken on the basis of interpretations or conclusions contained in this presentation will therefore carry an element of risk.

This release is authorised by the Board of Directors of Mt Malcolm Mines NL.

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Right Location Right Rocks Right Commodities Right Choice

The Right Location: easy development opportunity

Strategic position in WA's Eastern Goldfields

Well-placed 10 km east of regional hub; Leonora

- Located in the heart of WA's Goldfields with excellent access to services and transport
- Supportive local community and readily-available workforce

Leverage off local processing facilities

- Multiple gold processing plants in close proximity of project.
    - St Barbara's Gwalia (**ASX: SBM**)
    - Dacian Gold's Mt Morgans (**ASX: DCN**)
    - Red 5's King of the Hills (**ASX: RED**)

Close to rail, roads and power

- Malcolm Rail Head facility is situated on tenement and currently managed and utilized by Minara Resources/Glencore
- The Leonora-Laverton Highway bisects the project providing excellent access
- Mains electricity is accessible from the highway and from several unsealed roads extending through the project

https://stbarbara.com.au/our-operations/our-leonora-operations/

The Right Location: rich neighbourhood of deposits

Well-positioned for Gold, REE and Cu-Zn discovery

Well-endowed gold district

- Boasting a 30km strike of the Keith-Kilkenny Tectonic Zone (KKTZ); world class setting
- Multimillion-ounce gold deposits lie proximal to the significant regional KKTZ
    - Thunderbox (**ASX: NST**)
    - King of the Hills (**ASX: RED**)
    - Apollo Hill (**ASX: STN**)
    - Carosue Dam (**ASX: NST**)

Emerging REE province

- New projects joining Mt Weld in the Leonora-Laverton area
    - Mt Stirling; ASRA Minerals (**ASX: ASR**)
    - Redlings: Marquee Resources (**ASX: MQR**)

Unrealised Cu-Zn potential

- Teutonic Bore-Jaguar-Bentley along strike to the north; Aeris Resources (**ASX: AIS**)
- Precedent for rich deposit formation and very profitable mining and metal extraction

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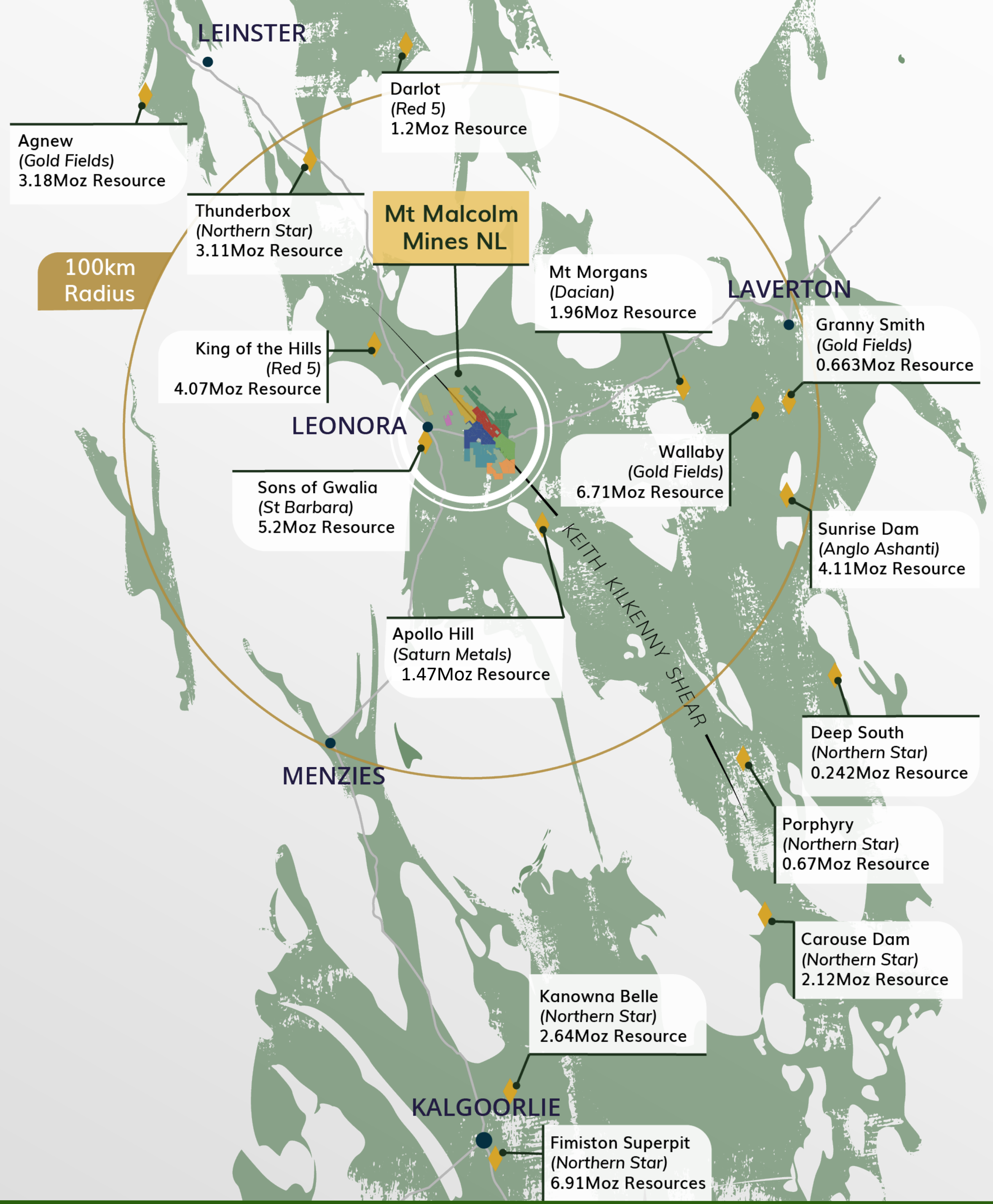


The Right Host Rocks: diversity = more metal potential

Fertile for Gold, REE and Cu-Zn discovery

Alteration and Structure

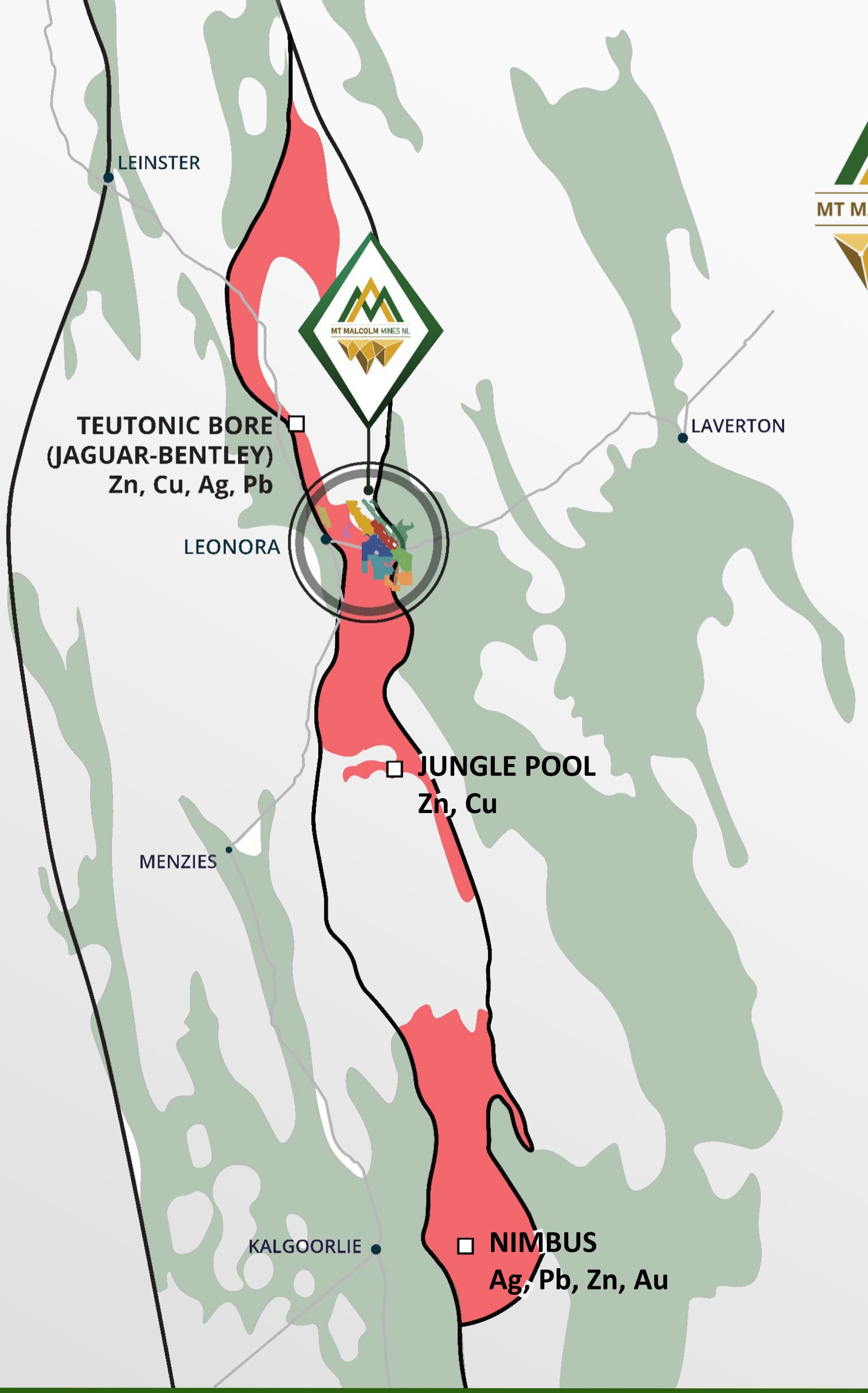
- Key to large gold deposit formation
- Large structures intersecting competency contrasts and high permeability rocks
- Evidenced at flagship Calypso prospect:
    - all the ingredients to grow into a multi-million ounce deposit

Metal-fertile Intrusions

- Discovered alkaline magmatism in same family as carbonatites; host to Mt Weld REE deposit
- Awaiting complete lab geochemistry to confirm association and extent of REE source rock

Regionally significant Cu-Zn terrane

- Volcanic-Hosted Massive Sulfide (VHMS) potential to be confirmed through fingerprinting M2M host rocks
- Determining heat engine for hydrothermal convection of metals is vital for VHMS
    - co-magmatic intrusion candidates are currently being assessed
- Alteration mapping to determine hydrothermal cell footprints will delineate drill targets
    - Outcrop/subcrop rapidly assessed via remote sensing



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The Right Commodities: unique metal inventory

Well-balanced for staging development

Traditional exploration focus

- New Calypso gold discovery primed to take through to resource definition
- Plentiful other prospects – e.g. Golden Crown, Emu Egg, Dover Castle – to supply high grade ore in the short term

REE anomalies growing

- Surface bedrock pXRF results delineating a ~4km strike +1,000ppm TREO surface bedrock anomaly
  - pXRF and radiometrics delineate target areas
- REE source determined; outcropping fertile granite
  - undercover extent to be determined

Attractive VHMS upside

- Following-up 40-year-old Chevron exploration
- Favourable for profitable style of Cu-Zn mineralisation

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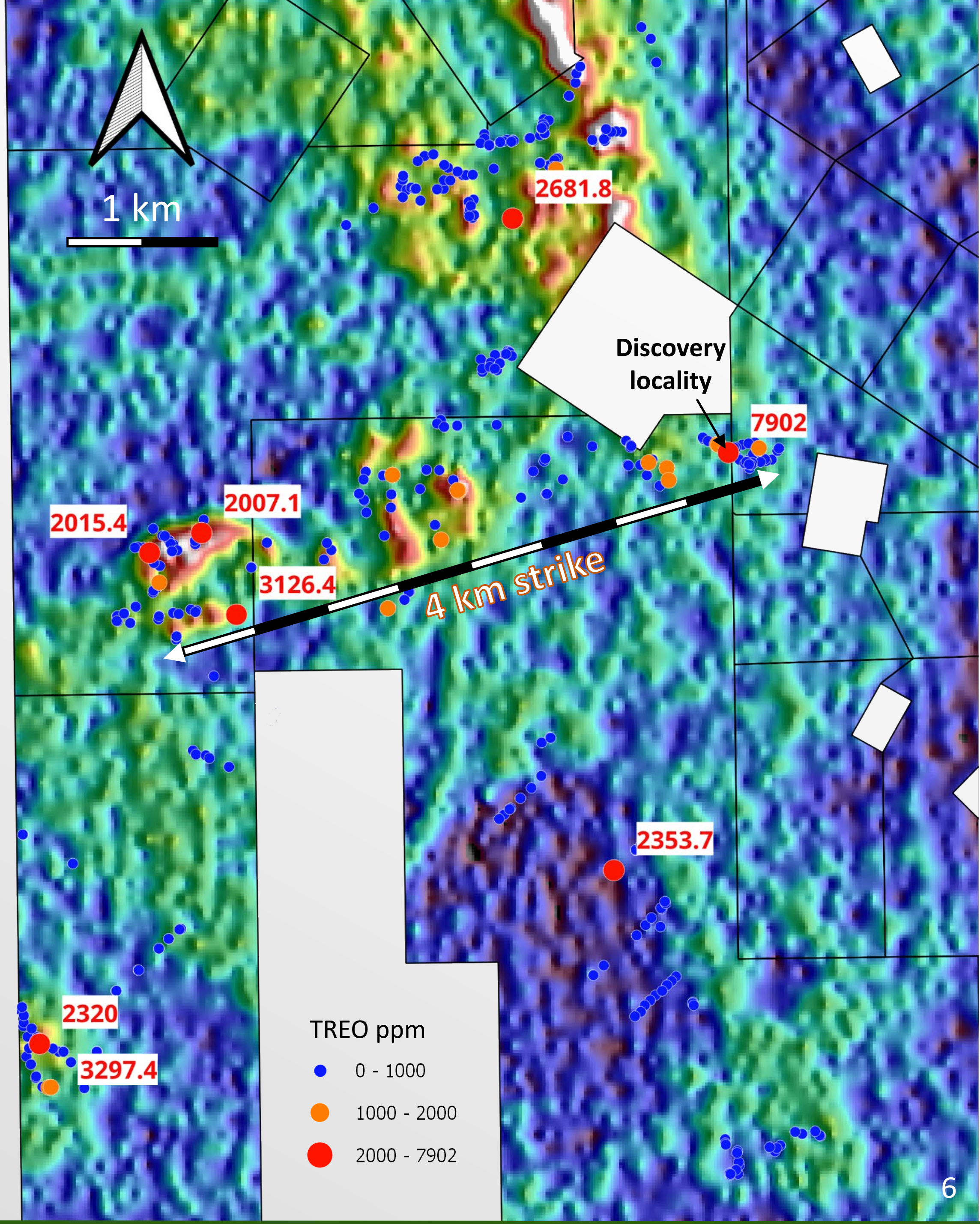
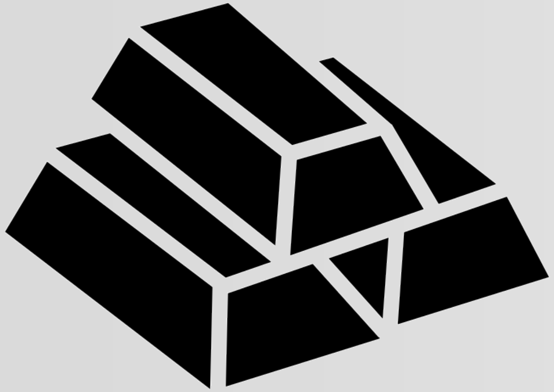
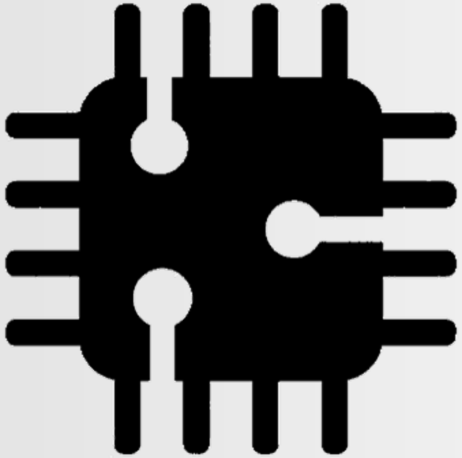


M2M Flagship Prospects

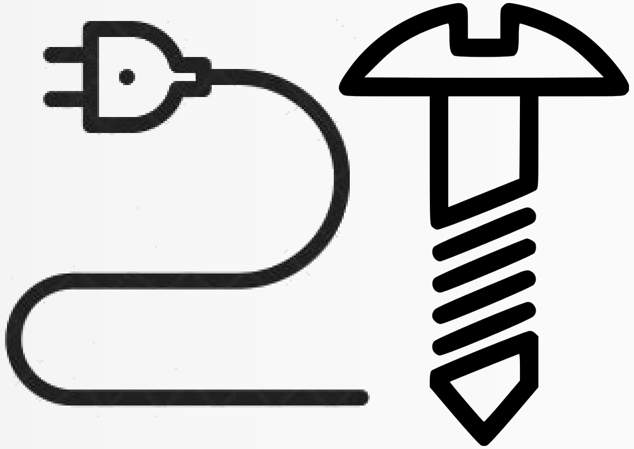
The value proposition…detailed



Calypso



MMC



Malcolm Dam

Calypso geological model defines T2-T3 mineralisation domains

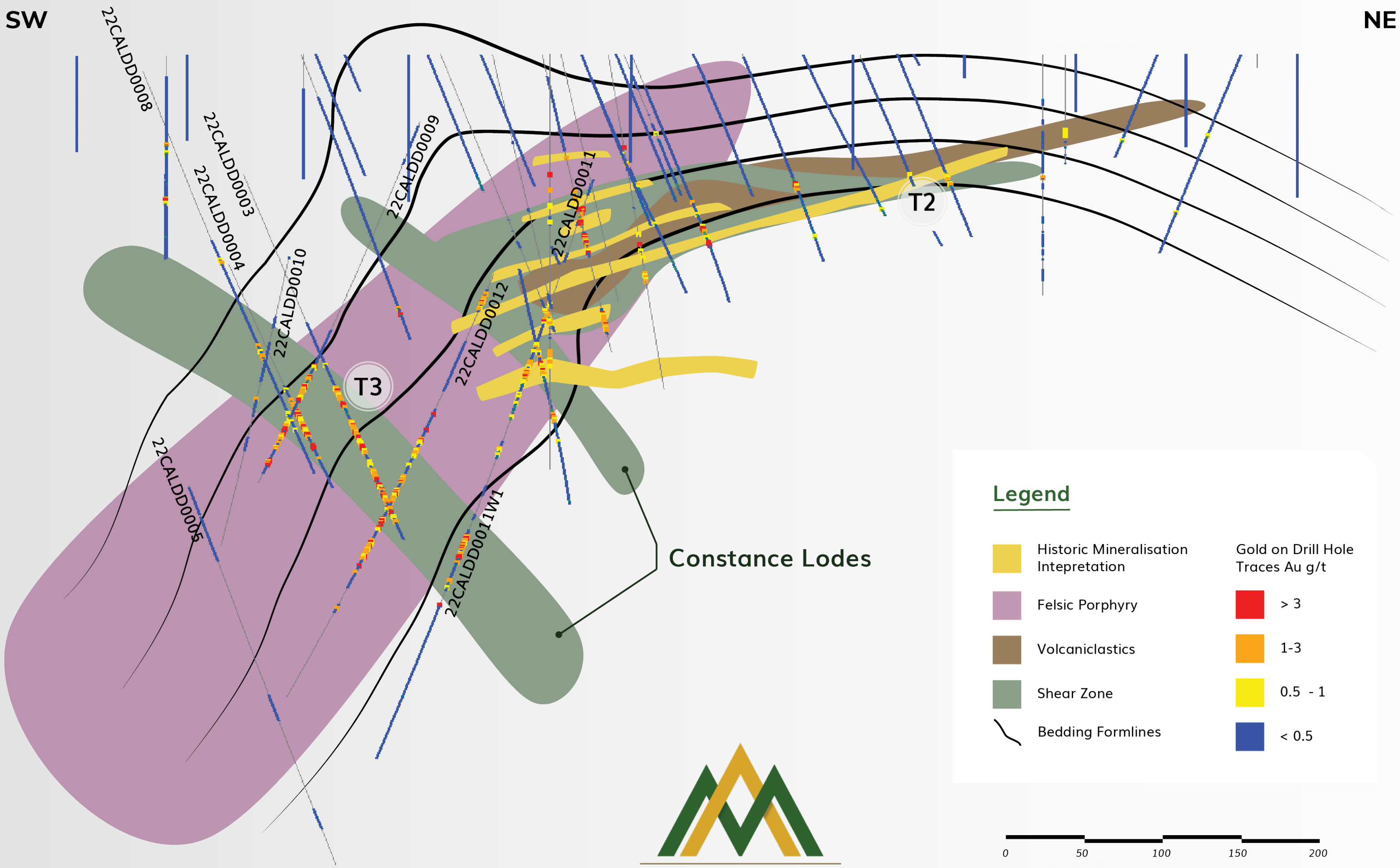
Framework for infill drilling and resource delineation

Constance discovery best M2M DDH results

- 22CALDD011
  16.21m @ 4.01 g/t Au (343.25-359.46m)
  including **0.57m @ 25.81 g/t Au** (352.05-352.62m)
- 22CALDD003
  25.01m @ 2.17 g/t Au (272.84-297.85m)
- 22CALDD004
  23.94m @ 2.08 g/t Au (263.61-287.55m)
- 22CALDD009
  2m @ 7.39 g/t Au (229-231m
- 22CALDD012
  9.7m @ 2.30 g/t Au (339.3-349m)

Resource development plan

- Optimise targeting within T2-T3 corridor using a new geologically-constrained gravity-magnetics inversion from an improved stratigraphy and alteration model
- Build upon the historic estimate 2.9-3.9 Mt at 1.6-2.2 g/t Au aiming for >300 Koz maiden resource
- Fully-scoped drill program and budget by end Q3 2023.



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Calypso Exploration Model

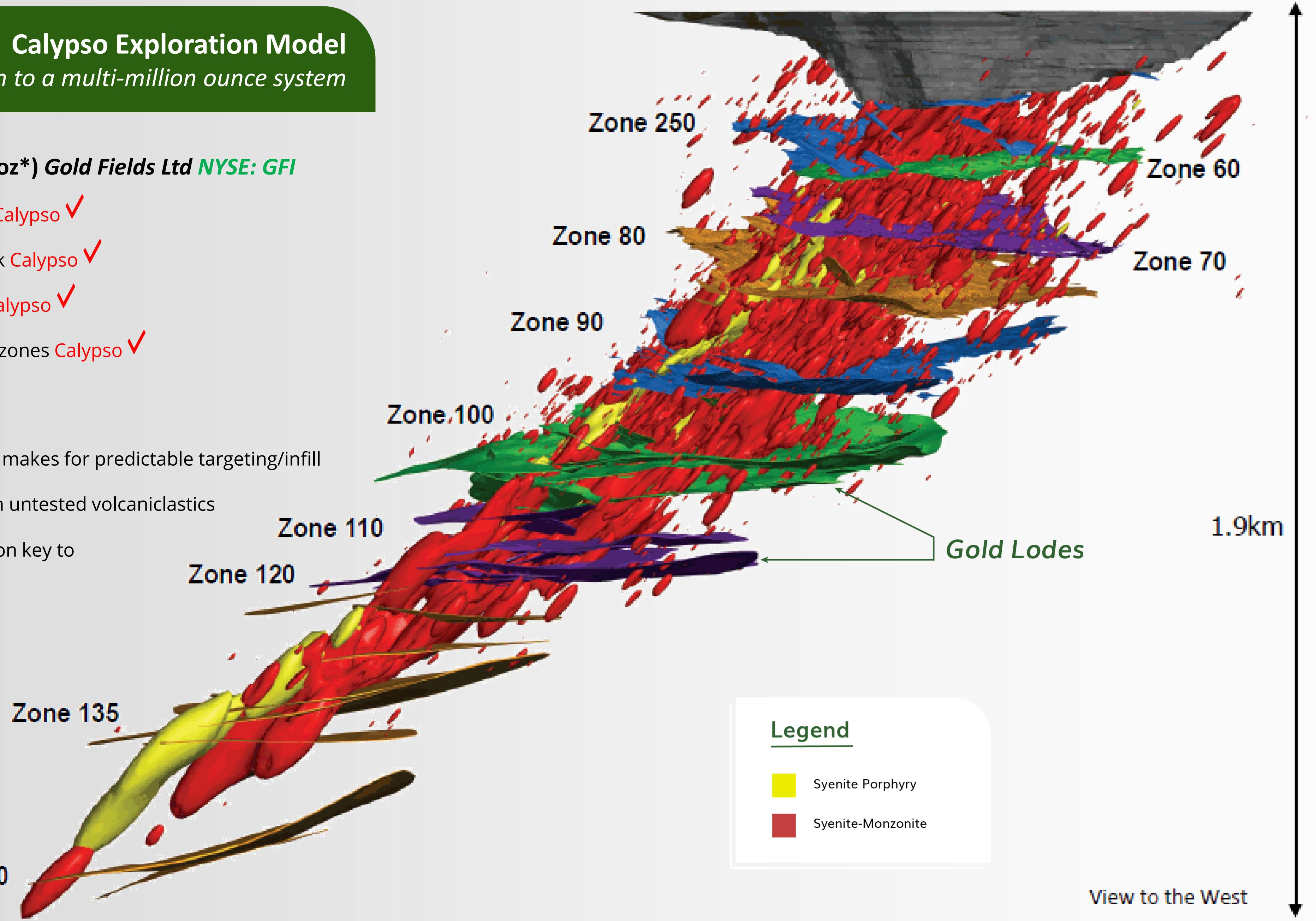
Comparison to a multi-million ounce system

Granny Smith/Wallaby (R&R ~8 Moz*) *Gold Fields Ltd* *NYSE: GFI*

- Porphyry dyke fundamental control Calypso √
- Volcaniclastic conglomerate host rock Calypso √
- Magmatic-hydrothermal alteration Calypso √
- Shallow-dipping, lode-forming shear zones Calypso √

Calypso targeting implications

- Repetition of controlling shear zones makes for predictable targeting/infill
- Greatest mineralisation upside within untested volcaniclastics
- Better understanding of mineralisation key to targeting larger prize at depth



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*https://www.goldfields.com/reports/annual-report-2021/mineral-resources-and-mineral-reserves-summary.php

Image Source: Gold Fields Mineral Resource and Mineral Reserve Supplement to the Integrated Annual Report 2016: Key developments and material issues

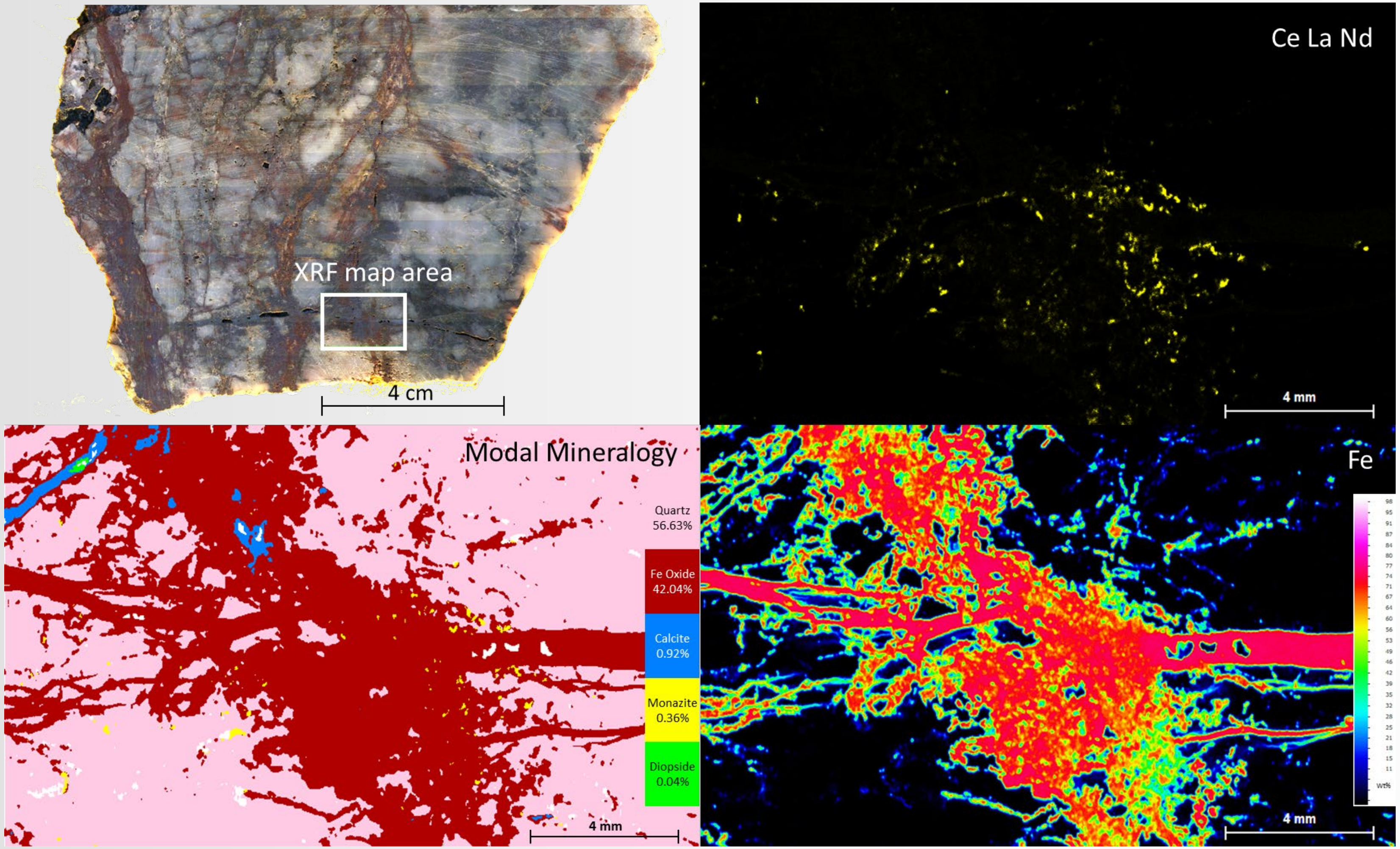
Mt Malcolm Mining Centre (MMC) REE
Moving to target definition

Mineralisation style characterized

- Bruker Tornado micro-XRF mapping
- Ce-La monazite in magmatic-hydrothermal veins
    - within concentrated aggregates
    - potential to upgrade via ore sorting
- Best REEs within host rocks adjacent to source alkaline intrusions (ASX: M2M Annoc. 20/03/23)
    - untested under shallow alluvial cover

Targeting: next steps

- Define extent of source intrusion
- Aircore program to understand footprint and grade of clay-hosted REE



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Malcolm Dam VHMS Cu-Zn

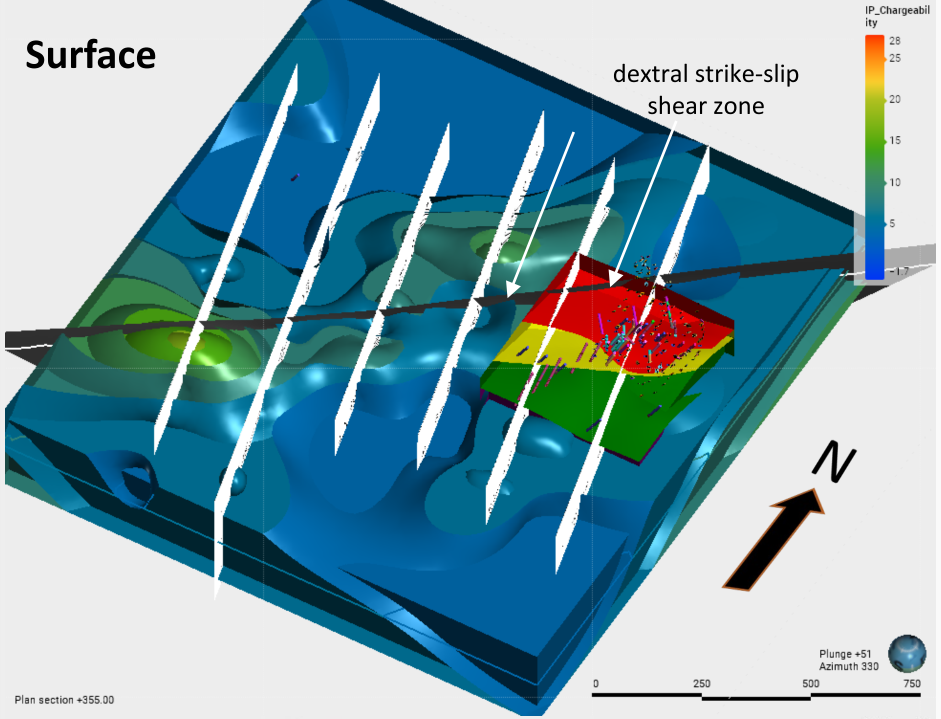
From concept to target

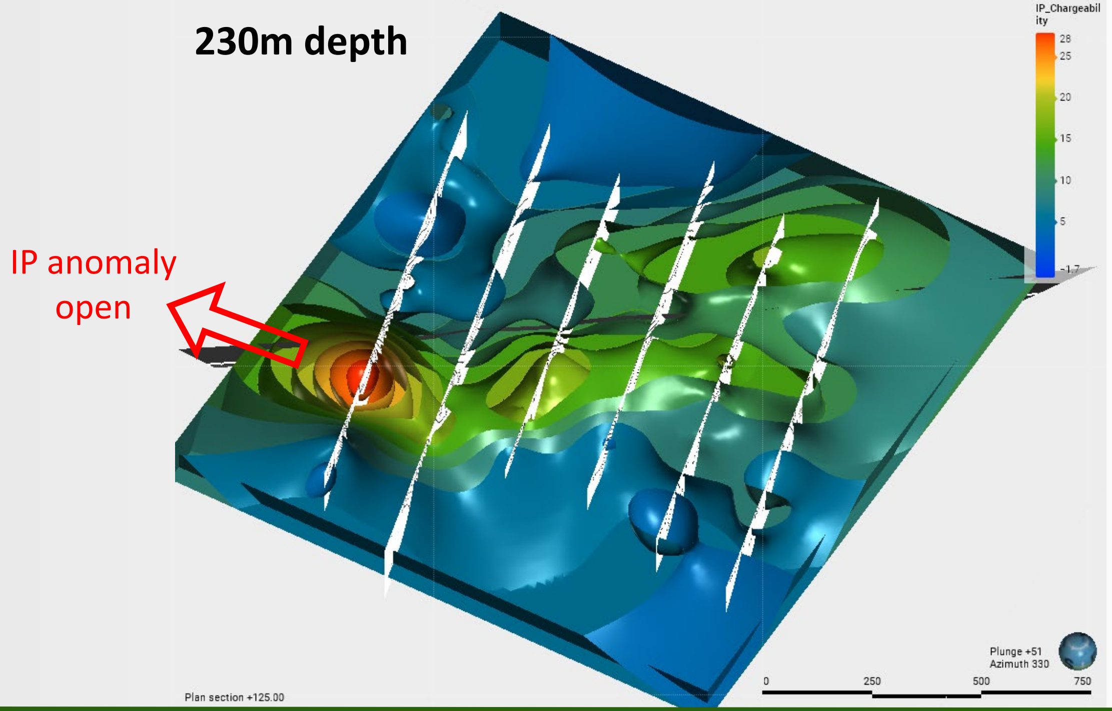
VHMS fertility

- First step: confirm prospective volcanics
- Second step: determine syn-volcanic intrusion
- Third step: upgrade prospect from conceptual to drill testing phase

Targeting: direct evidence

- Chevron IP anomaly at depth: chargeability indicates sulfide body
- Prospect – Golden Crown – historically mined and drilled for gold
    - 3D geological model indicates strata anomalous in metals and sulfide
    - modelling will aid targeting to detect favourable VHMS horizon
- Geophysics to extend existing anomaly and find additional targets





Depth of Portfolio

Maximising discovery potential through a balanced exploration pipeline

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Framework to Objectively Prioritise and Advance Quality Prospects

Target Generation	Prospect Identification	Drill Target Definition	Drill Testing	Mineralisation Continuity	Inferred Resource
conceptual	*surface geochemistry, geophysics*	*drill hole anomalism*	*>1 RC/DDH significant intercepts*	*understanding geological controls*	*validated & JORC compliant*

Malcolm Project
- *Stratigraphic correlation*
- *Prospectivity mapping*

Malcolm Dam
- *Au-in-Soil infill*

Pig Well
- *Soils, auger*

MMC
- *Rockchip **REE** multi-element*

Q2 2023

Emu Egg, Sunday Picnic & Mt Stewart
- *Aircore (Au + Ni)*

Malcolm Dam
- *VHMS**

Q3 2023

Dover Castle & Golden Crown
- *Geol. modelling*

Calypso
- *Deeps exploration*

T2 & Constance Lodes
- *Resource delineation*

Q4 2023

*direct targeting from geophysics and stratigraphic modelling

Experienced Leadership Team

The knowledge to capitalise on an aggressive exploration plan

Board of Directors

Chairman
Robert Downey

Managing Director
Trevor Dixon

Technical Director
Daniel Tuffin

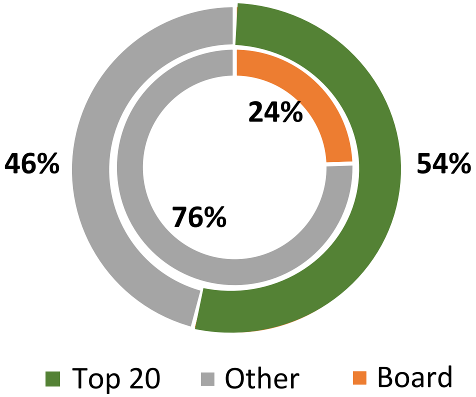
Non-Executive Director
Gary Powell

Management

General Manager
Ned Mladenovic

Exploration Manager
Tony Roache

Shareholder Structure



Capital Structure

ASX Code	***M2M***
Share Price (on 30 Mar '23)	*$0.039*
Cash at Bank (on 30 Mar '23)	$947,000
Total shares on issue	84,852,001
Market Cap	*$3.3M*
Options	*8,515,560*

Use of Funds under IPO Prospectus

Exploration	*$5.5M*
Tenement Fees	*$0.3M*
Expenses of the Offer	*$0.4M*
Admin & Working Capital	*$1.8M*
TOTAL	***$8.0M***

Corporate Governance

Managing business risks through sound business process following strong values

Our values in action

- Safety protocols are to the highest industry standard across all company operations
- Lost time injury rate remains at zero
- Protection of the natural environment is forefront in the minds of all Mt Malcolm employees

- Demonstrating transparent financial reporting
- Respect for all stakeholders
    - Local community
    - Aboriginal land owners
    - Owners/Shareholders

- Mt Malcolm Mines proudly sponsored the 600m Open/Elite Men's Final at the Leonora Golden Gift in 2022.

GOLDEN GIFT 2022

MT MALCOLM MINES NL VALUES
As outlined in the Company Statement of Values

MT MALCOLM MINES NL

FLORA AT CALYPSO

Trevor Dixon | Managing Director

8 Sarich Court
Osborne Park
WA 6017
T: (08) 6244 6617
E: admin@mtmalcolm.com.au

www.mtmalcolm.com.au