



MIRAMAR
RESOURCES LTD.

Exploring for gold and critical minerals

Investor Update - April 2024



miramarresources.com.au | ASX: M2R



Disclaimer/Competent Person Statement

Forward-Looking Statements

Statements in this presentation which are not statements of historical facts, including but not limited to those relating to the proposed transactions, are forward-looking statements. These statements instead represent management's current expectations, estimates and projections regarding future events.

Although management believes the expectations reflected in such forward-looking statements are reasonable, forward-looking statements are based on the opinions, assumptions and estimates of management at the date the statements are made and are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking statements. Accordingly, investors are cautioned not to place undue reliance on such statements.

Competent Person Statement

The information in this report that relates to Exploration Targets or Exploration Results is based on information compiled by Allan Kelly, a "Competent Person" who is a Member of The Australian Institute of Geoscientists. Allan Kelly is the Executive Chairman of Miramar Resources Ltd. He is a full-time employee of Miramar Resources Ltd and holds shares and options in the company.

Allan Kelly has sufficient experience that is relevant to the style of mineralisation and type of deposits 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'. Allan Kelly consents to the inclusion in this presentation of the matters based on his information and in the form and context in which it appears.

Information on historical results for all projects within this presentation, including JORC Table 1 and 2 Information, is included in the Miramar Resources Limited Prospectus dated 4 September 2020.

JORC Table 1 and 2 Information for Miramar results for all projects within this presentation are included in the relevant ASX releases.

Miramar Resources

Eastern Goldfields

- Strategic land position with multiple camp-scale gold projects

Bangemall (Ni-Cu-Co-PGE)

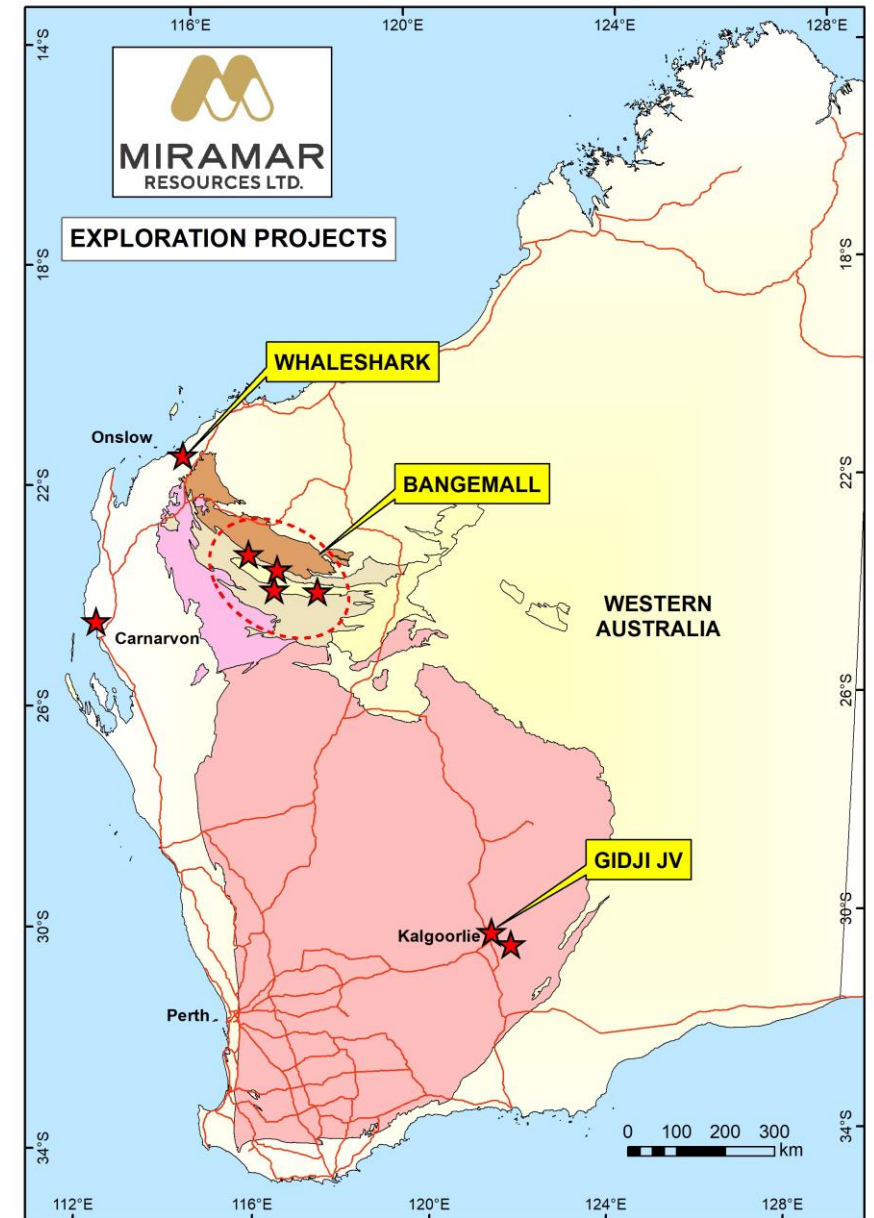
- Exploring for large Ni-Cu-Co-PGE deposits in the underexplored Capricorn Orogen

Whaleshark (Cu-Au-Fe)

- Unique project with multi-commodity potential

Corporate

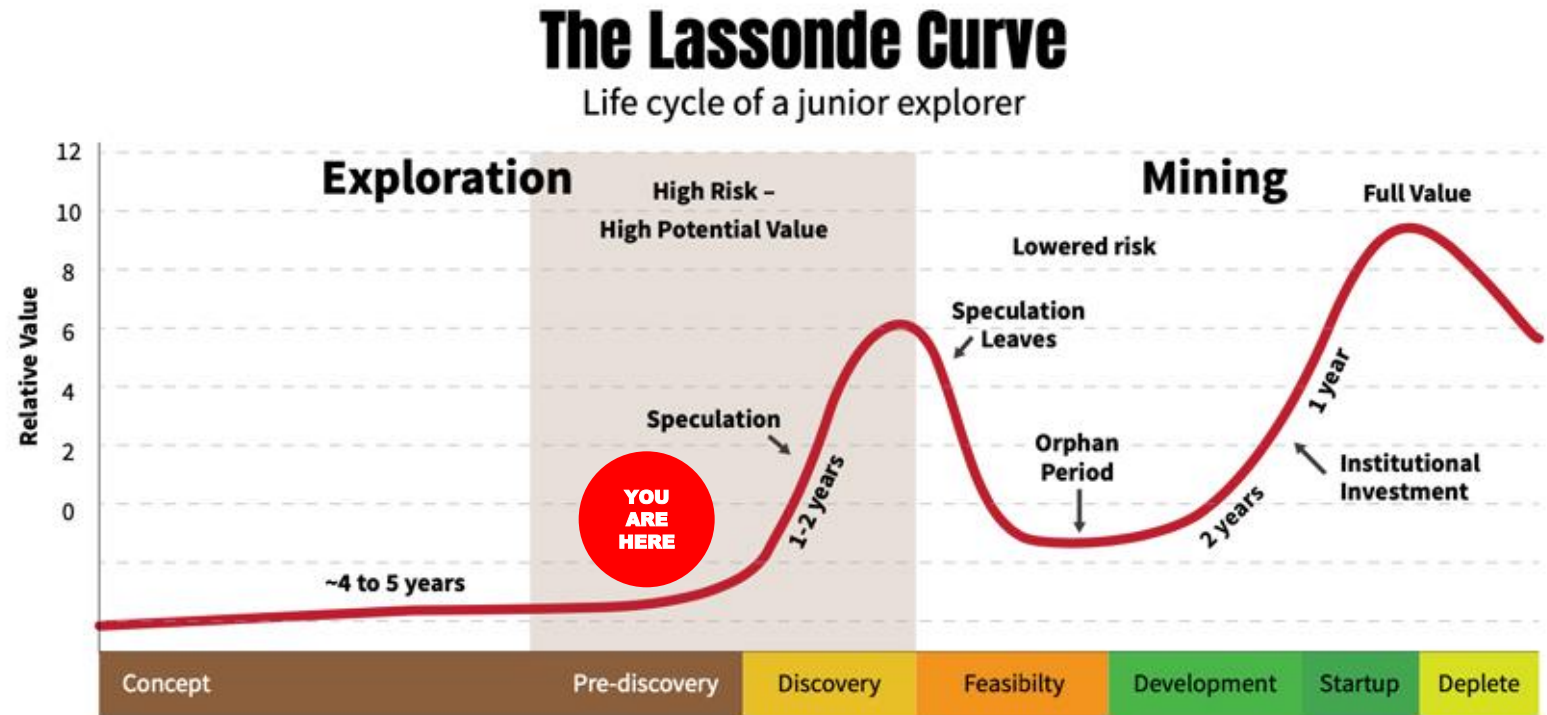
- Track record of discovery, development and production
- Approx. 75% of cash spent on the ground
- Share price leverage to exploration success



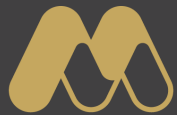
Aiming to create value through discovery

Miramar is exploring for:

- In-demand commodities
 - Nickel
 - Copper
 - Cobalt
 - Gold
- Large and valuable mineral deposit styles
 - Mesothermal lode gold
 - Norilsk-style Ni-Cu-PGE's
 - Iron Oxide Copper-Gold



Source: Brent Cook/Kitco



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Eastern Goldfields

Camp-scale gold opportunities in a
record gold price environment

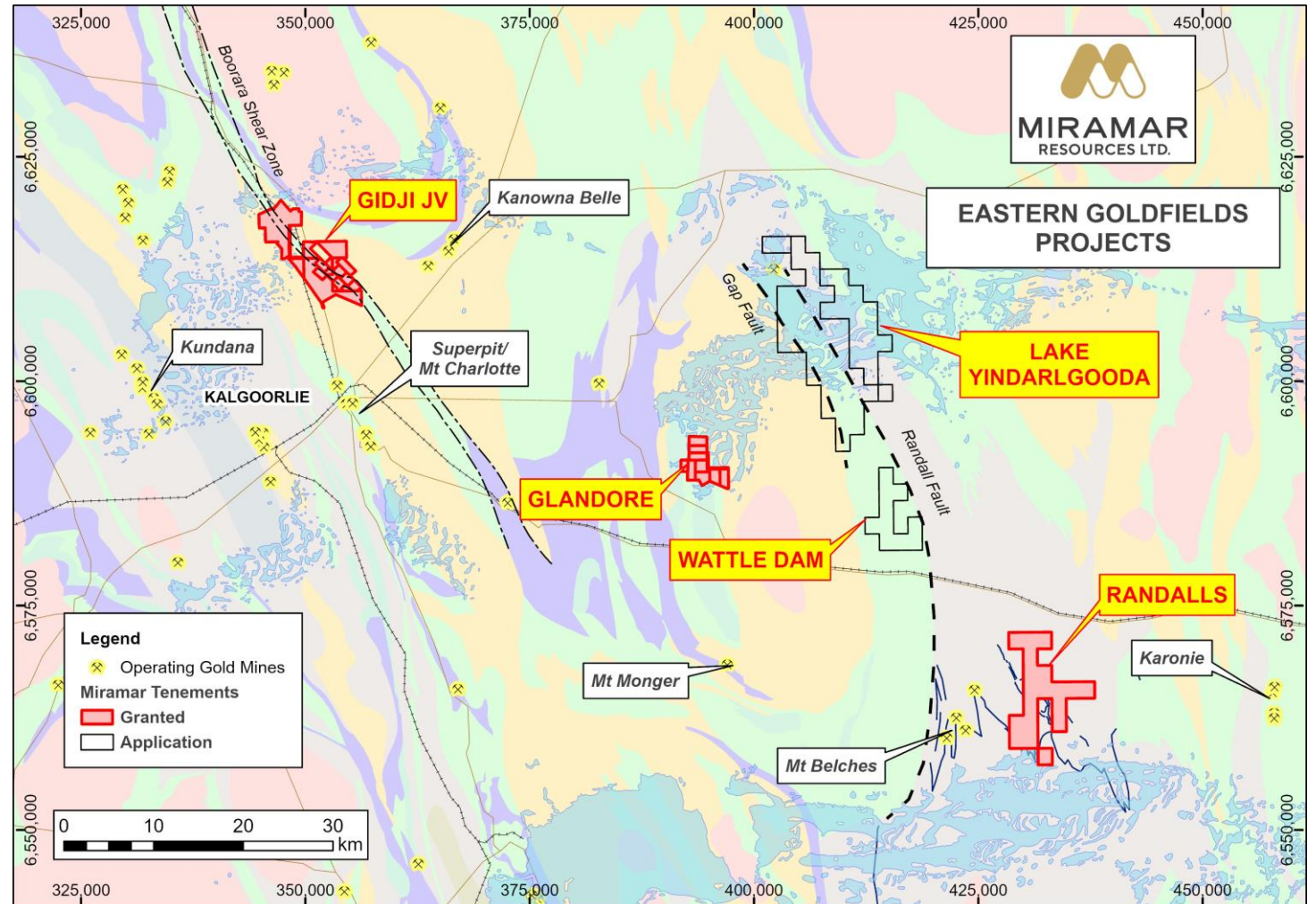
Au

Ni



Eastern Goldfields project portfolio

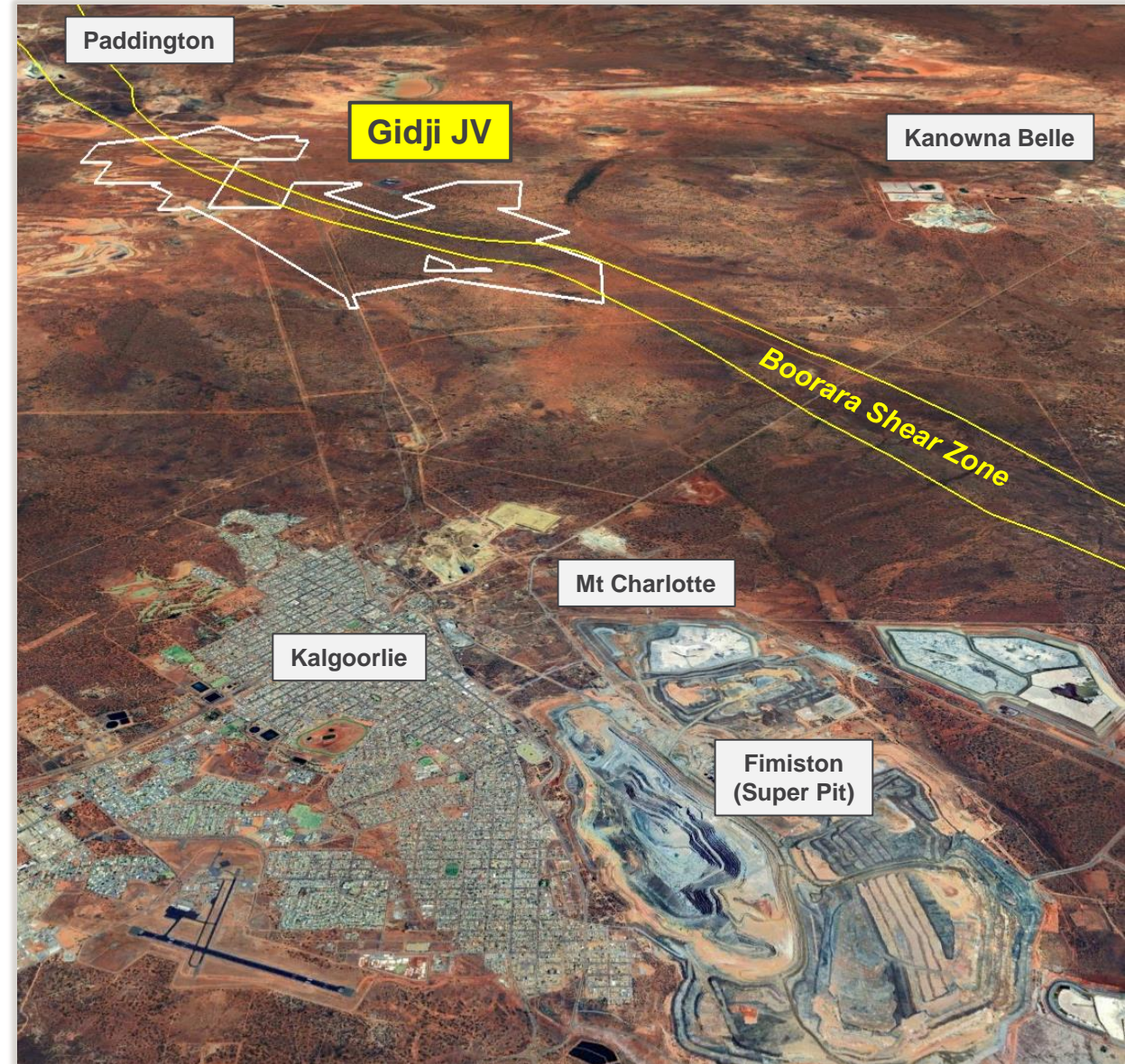
- Strategic landholding in **world-class gold province**
- Proximity to multiple gold mining/processing operations
- Year-round access
- **Record gold price in USD/AUD**



Gidji JV

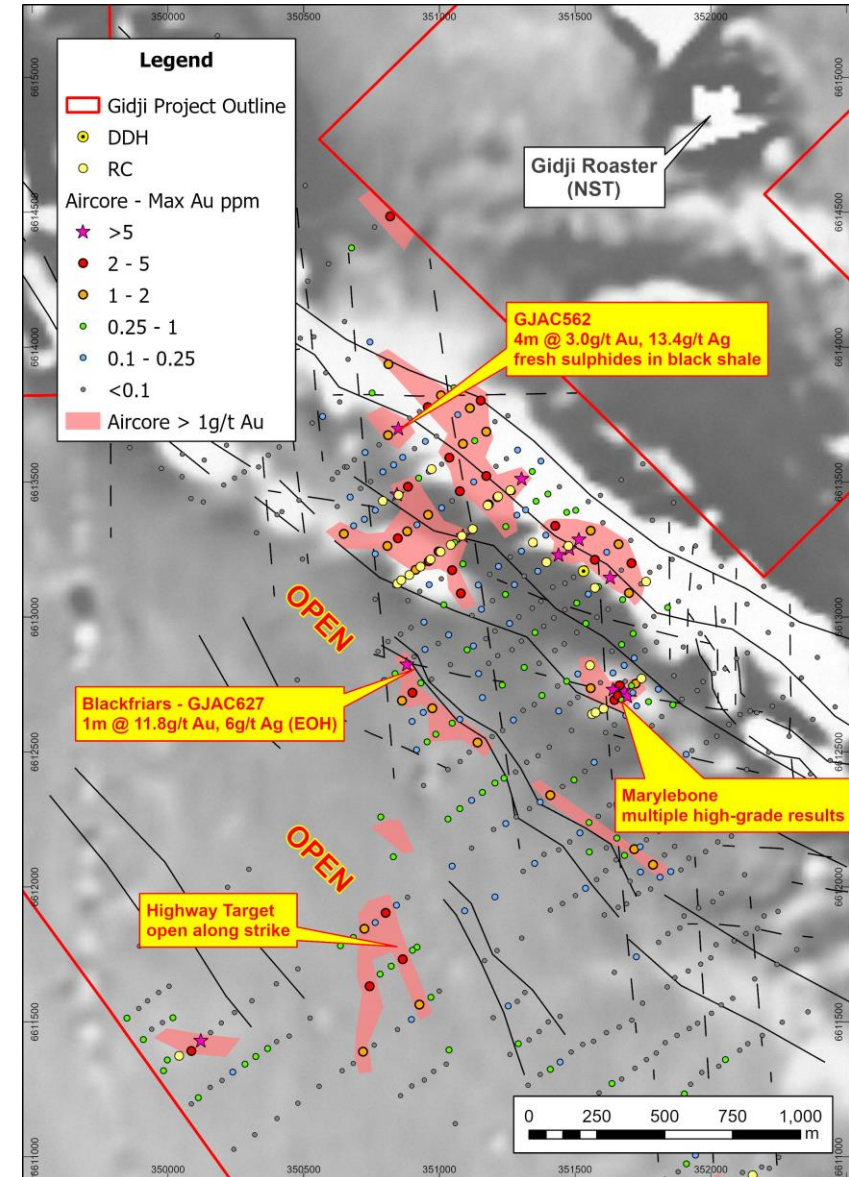
“The cheapest house in the best street”

- Underexplored gold project **15km N of Kalgoorlie** via major highway
- **Dilational jog** in major mineralised structure – **Boorara Shear Zone**
- Surrounded by multiple **major gold deposits** and/or **processing plants**
- Opportunity for discovery of a **new gold camp** with **potential for multiple deposits**



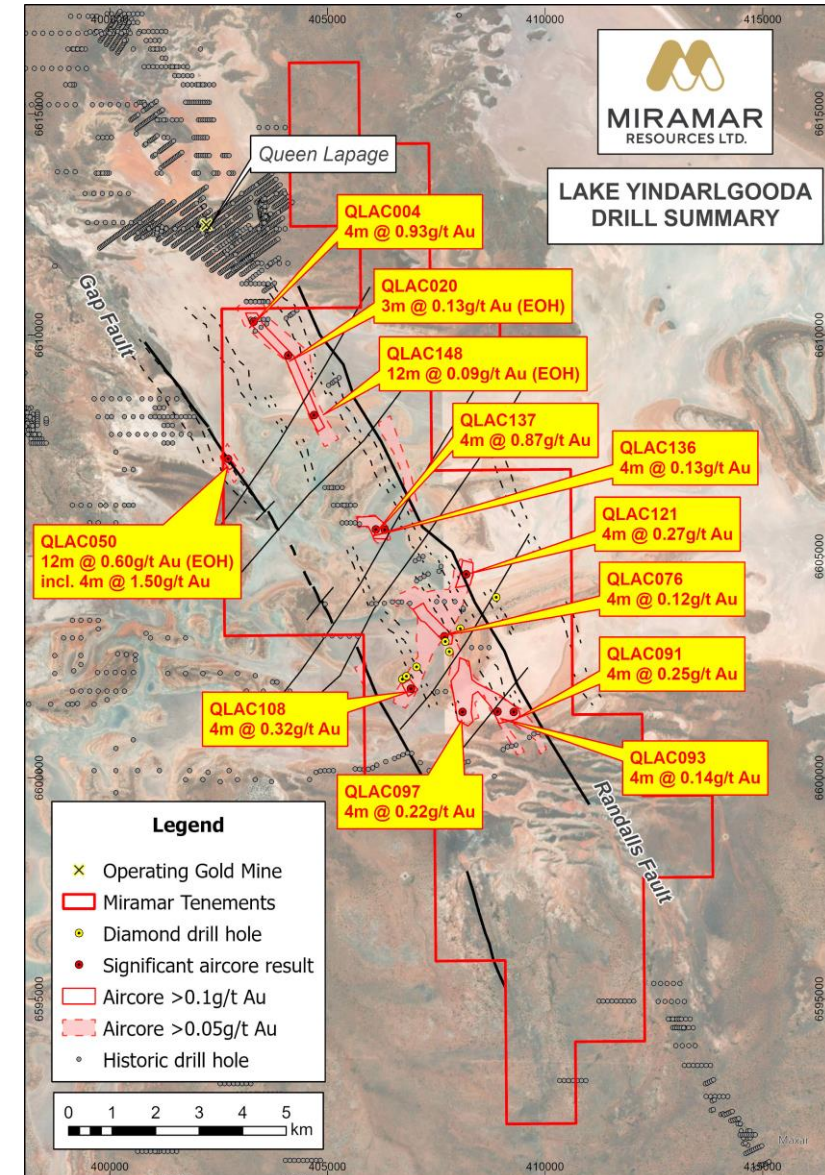
Gidji JV

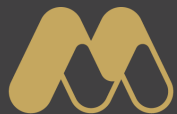
- Widespread supergene gold mineralisation
- Multiple **high-grade aircore results** with **bedrock gold mineralisation** identified
- **Marylebone**
 - **Sulphides in black shale**
 - **4m @ 3.0g/t Au, 13.4 g/t Ag**
- **Blackfriars**
 - **Intrusive at mafic/sediment contact**
 - **1m @ 11.8g/t Au, 6.0g/t Ag (EOH)**
- **Highway/Piccadilly**
 - **3m @ 3.78g/t Au**
- RC drilling planned



Lake Yindarlgooda

- New application covers **17km strike** of major regional structures
- **Multiple significant intersections** from wide-spaced aircore drilling on lake
- Similarities to **+2Moz Invincible** deposit
 - Major NNW trending regional structure
 - Mafic/sediment contact
 - Multiple NE-trending faults





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Bangemall

Exploring for large Ni-Cu-Co-PGE
deposits

Ni

Cu



Bangemall Projects

Miramar is exploring for large Ni-Cu-Co-PGE deposits in the Capricorn Orogen

Proterozoic orogens host large mafic intrusion-related Ni-Cu-Co-PGE deposits

■ Australia

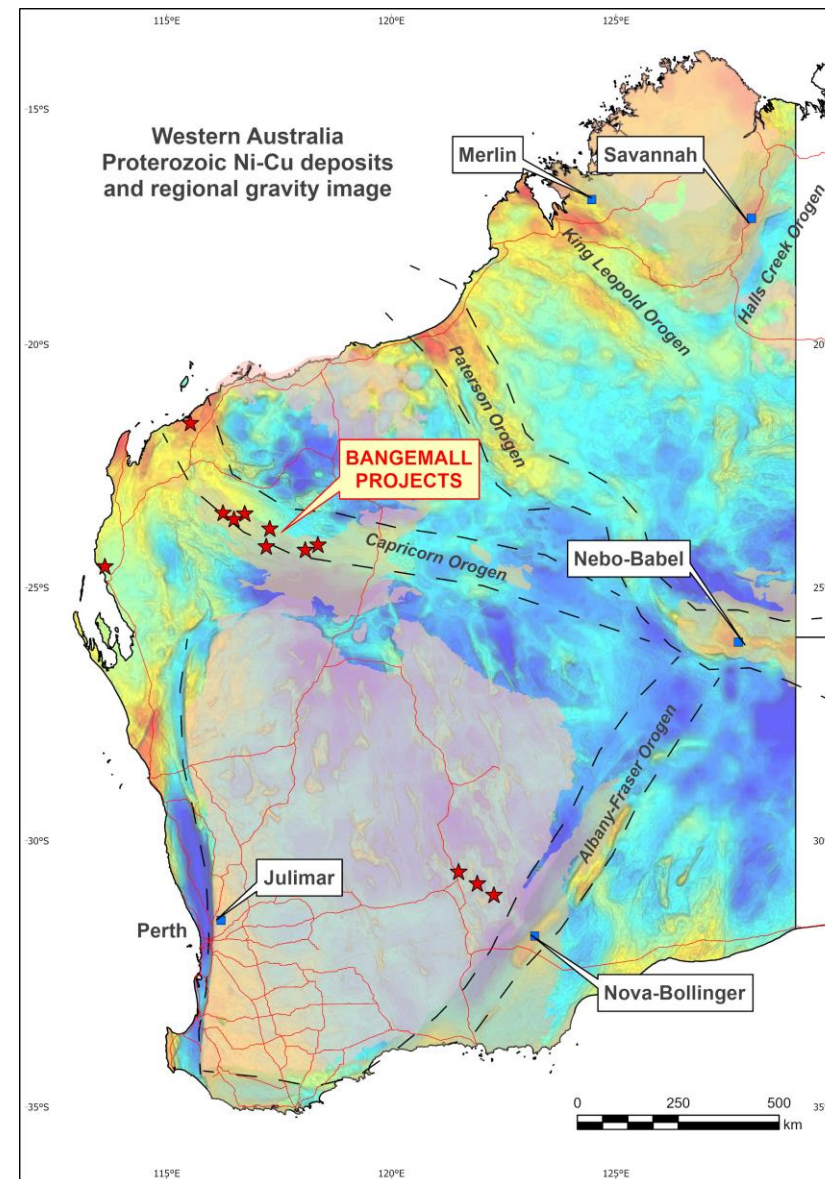
- Nova-Bollinger, Silver Knight, Mawson
- Nebo-Babel, Succoth
- Savannah, Merlin/Dogleg

■ North America

- Raglan, Thompson, Voisey Bay
- Eagle, Duluth, Tamarack

■ China

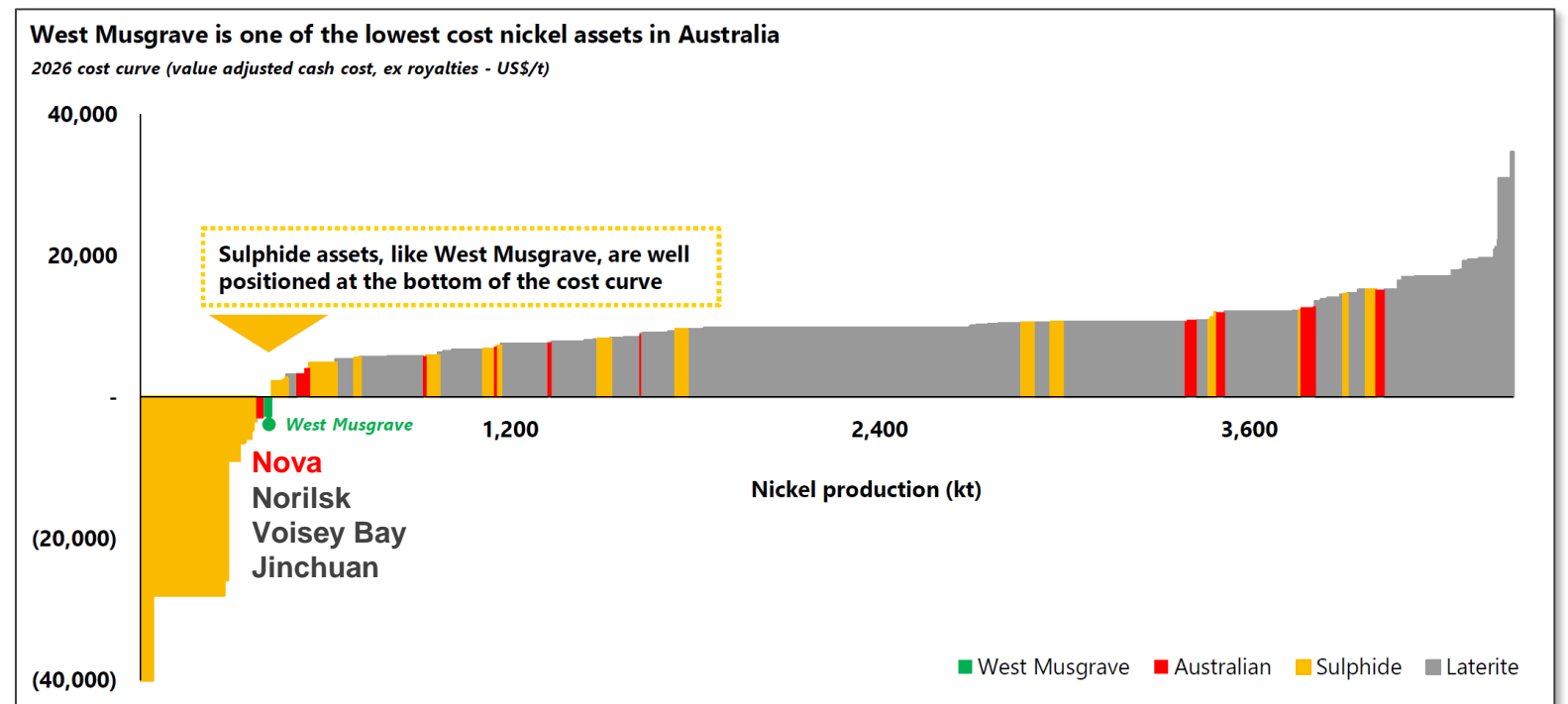
- Jinchuan



Not all nickel deposits are created equal...

Mafic intrusion-hosted Ni-Cu-Co-PGE deposits are:

- **Large**
 - 100's Mt to >1Bt of ore
 - 0.1Mt to >1Mt cont. Ni
- **Valuable**
 - High-grade/tenor
- **Low-cost**
 - High tonnes/vertical meter
 - By-product credits



Source: OZ Minerals Sept 2022

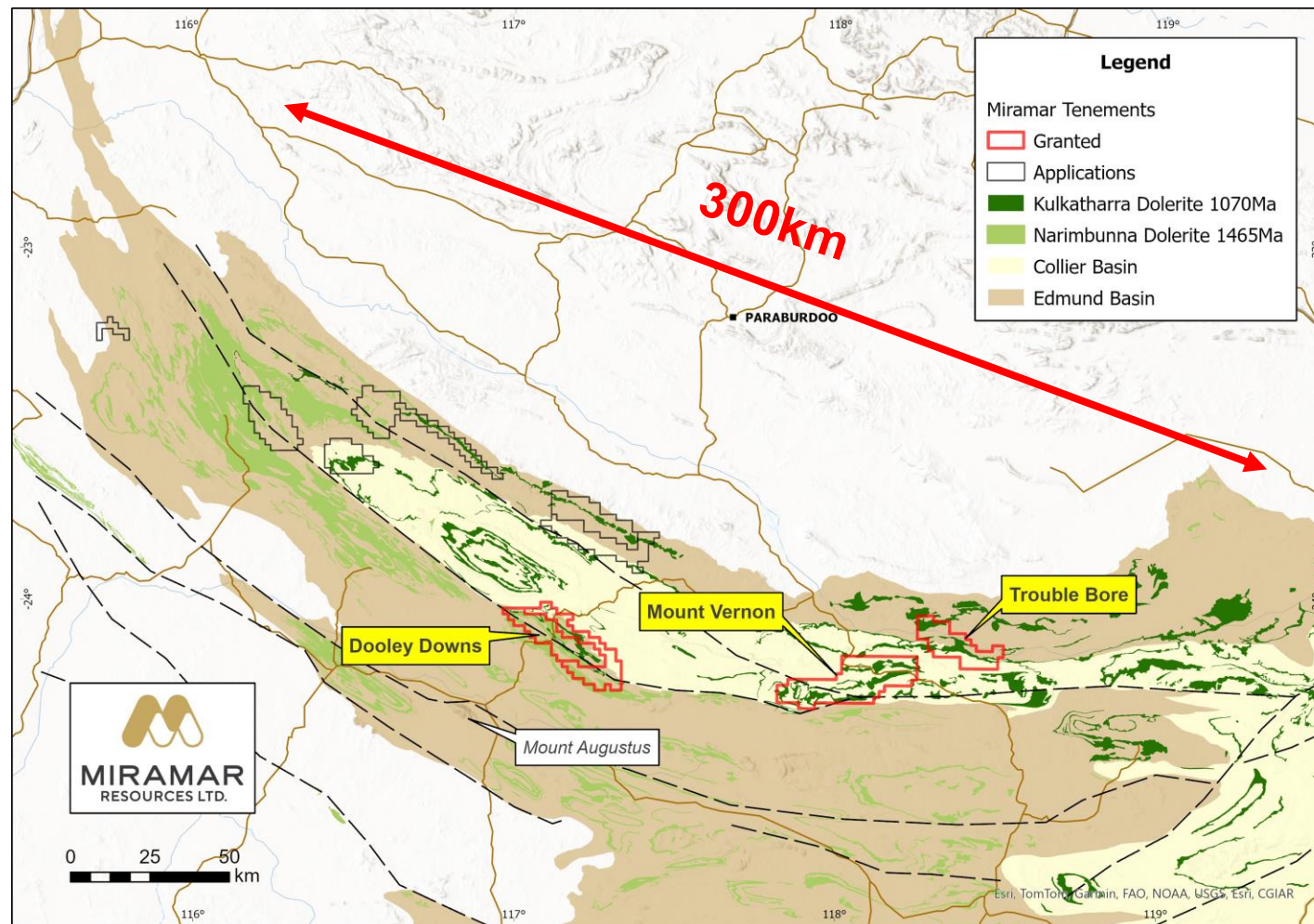
Bangemall – a potential new Ni-Cu-Co province

Strategic landholding

- 2,100km² of tenure
- 100% owned
- First mover status

Key ingredients for Norilsk-style Ni-Cu-Co-PGE's

- ✓ 1070Ma Kulkatharra Dolerite sills
- ✓ Major crustal-scale faults
- ✓ Sulphidic sediments and evaporites
- ✓ Regional-scale geochem and EM anomalies

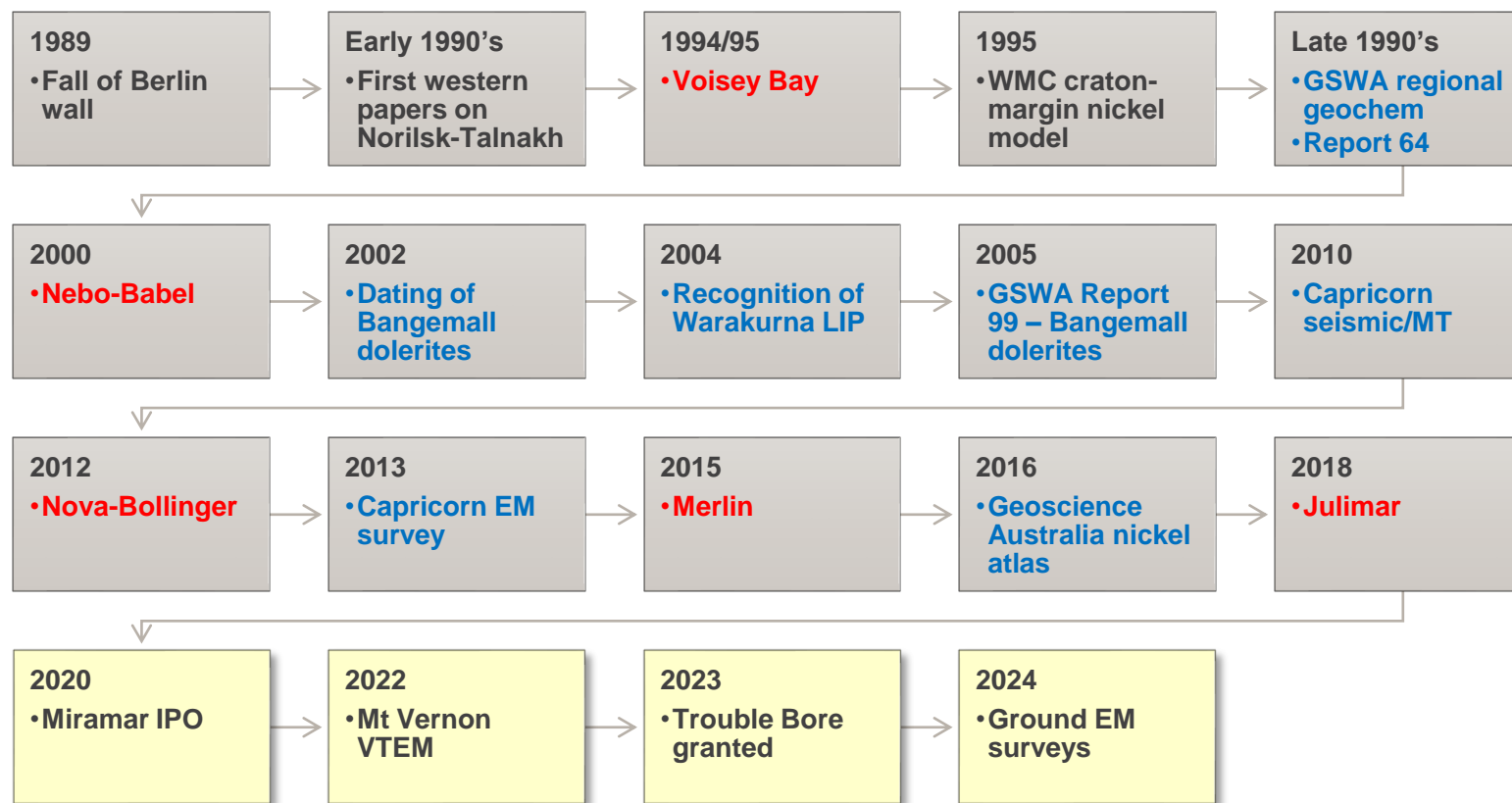


Why the Bangemall...and why now?

The Bangemall Ni-Cu-Co-PGE model has developed over 30 years

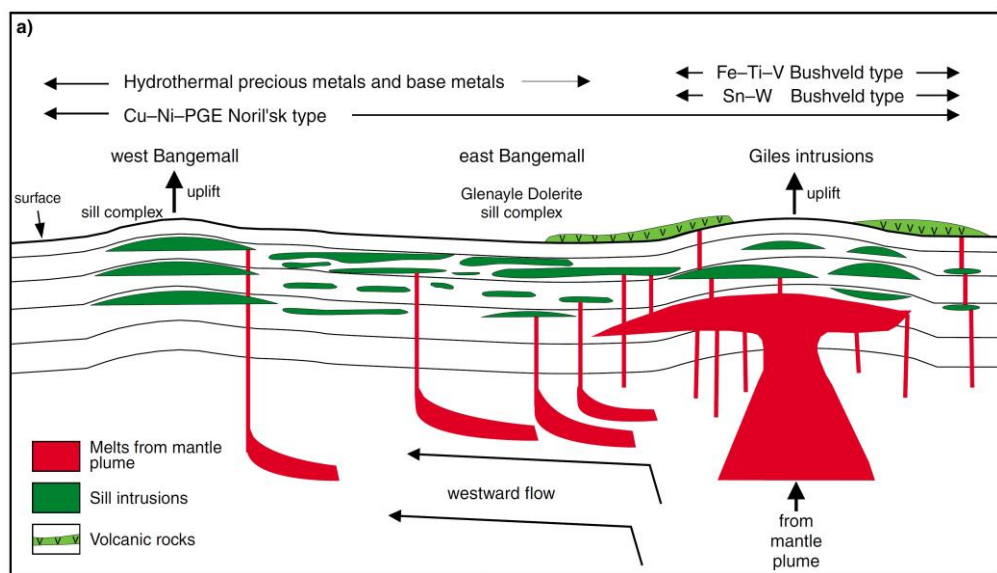
Key events

- Increased understanding of **Norilsk-Talnakh** deposits
- New **Ni-Cu** discoveries in Proterozoic orogens
- Acquisition of key datasets over the **Capricorn Orogen**

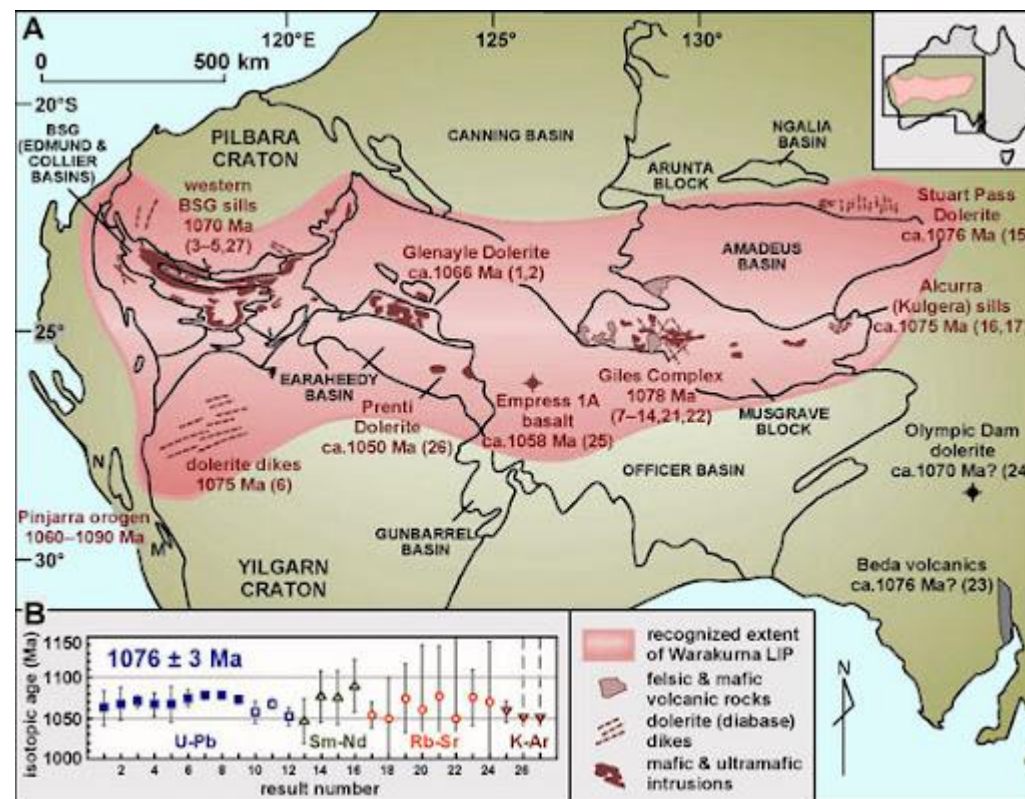


Warakurna Large Igneous Province

- Continental-scale mafic magmatism event related to **1078-1070Ma** mantle plume
- Kulkatharra Dolerite** sills are the same age as Giles Complex (**Nebo-Babel deposits**)
- Ni-Cu-Co-PGE** prospectivity recognised by GSWA, CSIRO and Geoscience Australia



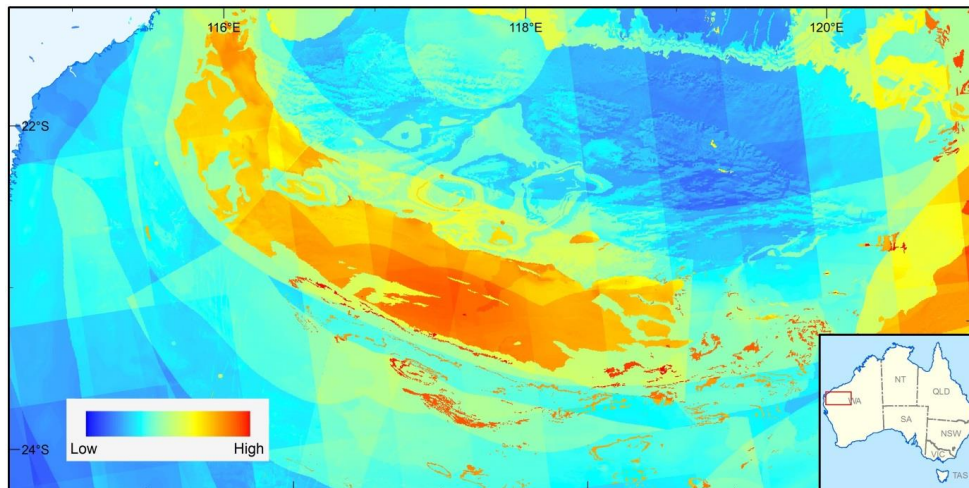
Morris and Pirajno, 2005



Bangemall Ni-Cu prospectivity widely recognised

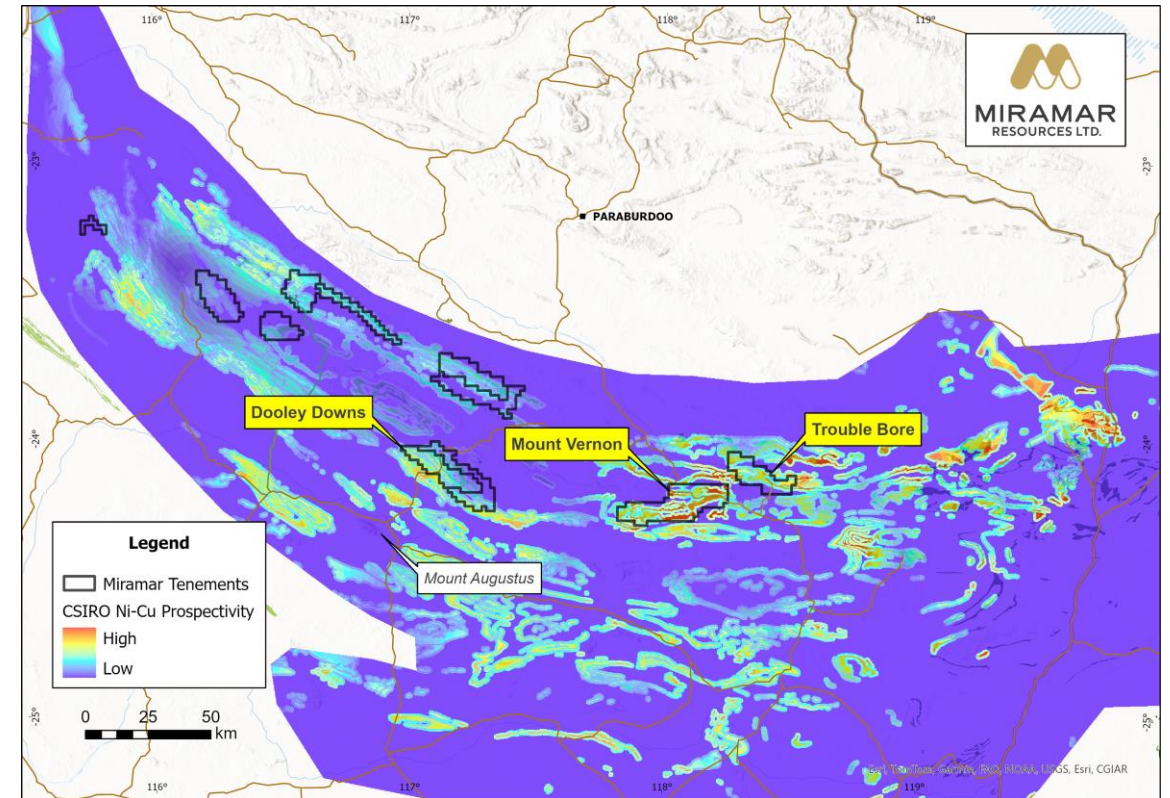
GSWA Report 99 (2005):

- *“The Western Bangemall Supergroup with its thick mafic sill complex would be a prime target for Ni-Cu-PGE sulphides”*
- *“The Bangemall Supergroup is considered to be highly prospective for Norilsk-style Ni-PGE deposits in the sill complexes”*

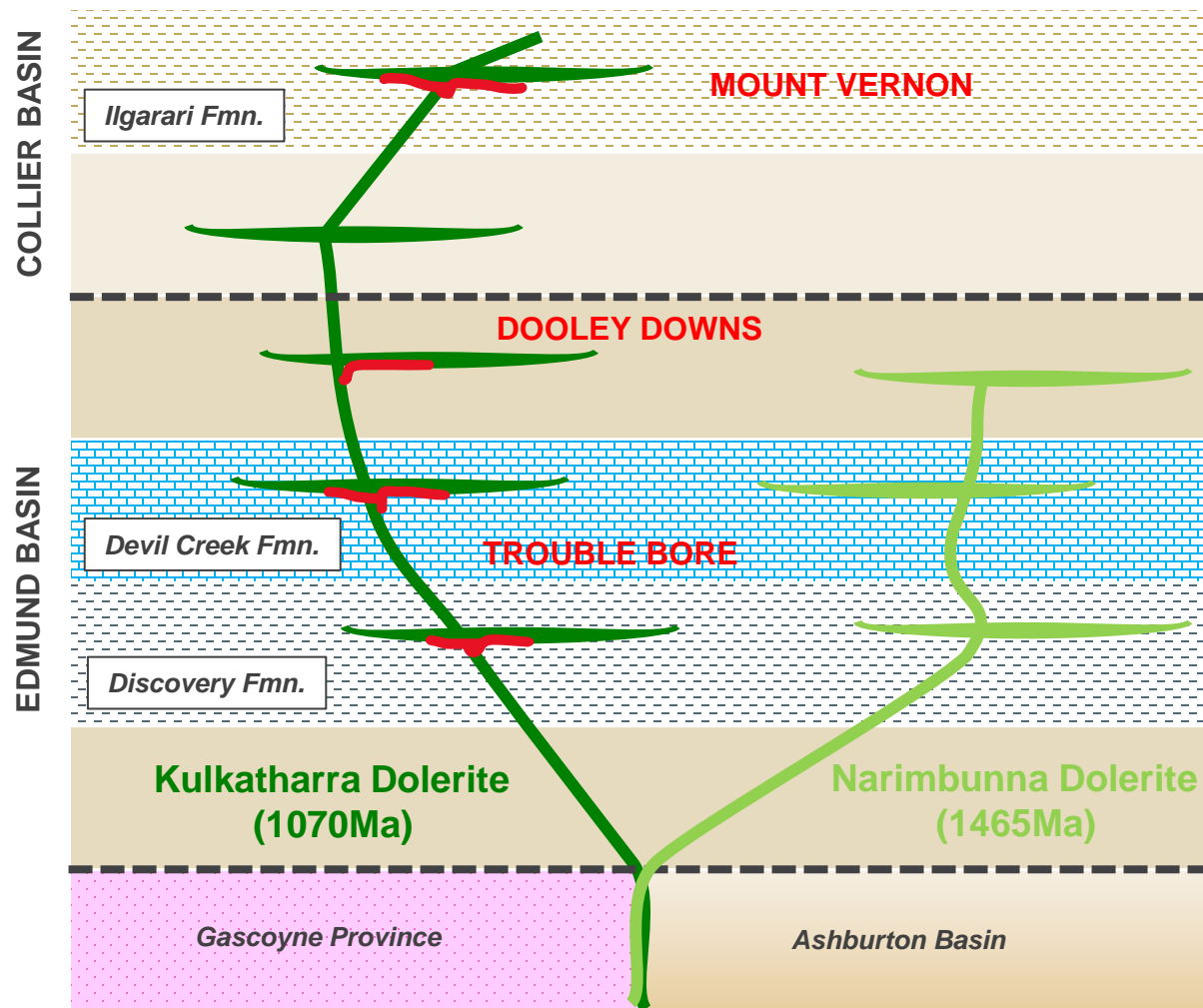


Geoscience Australia Record 2016/01

CSIRO Ni-Cu Prospectivity Mapping



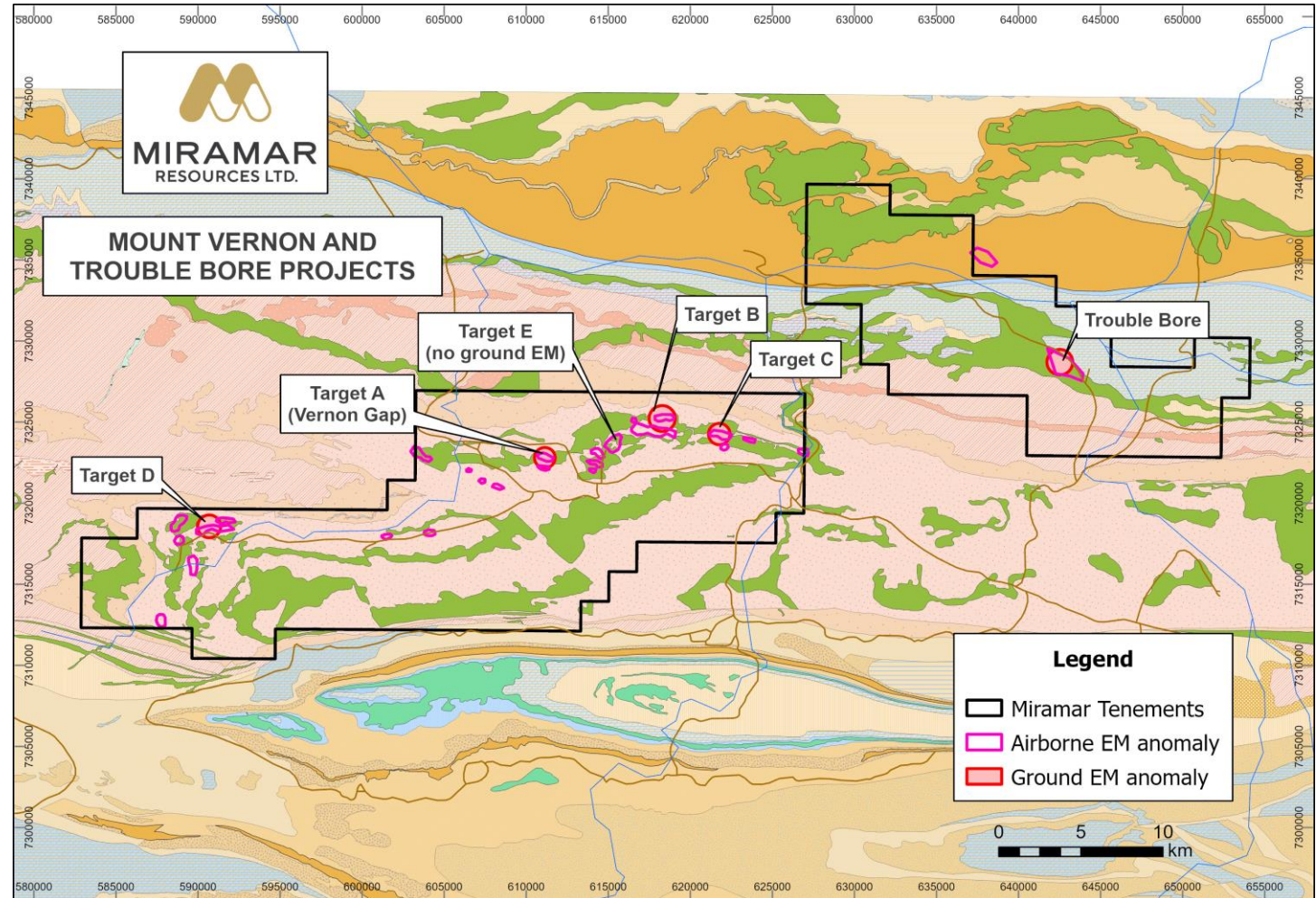
Bangemall - Norilsk-style Ni-Cu-Co-PGE model



- Crustal-scale faults provide conduits for emplacement of **Ni-Cu-Co-PGE**-bearing dolerite sills/feeder dykes
- 1070Ma **Kulkatharra Dolerite** intrudes into **sulphidic** sediments and/or **evaporites**
 - Discovery Formation – **pyritic** siltstones and gypsiferous **evaporites**
 - Devil Creek Formation – stromatolitic and **pyritic** dolomite units
 - Ilgarari Formation – **pyritic** siltstone
- Looking for **Ni-Cu-Co-PGE** sulphides within/beneath **Kulkatharra Dolerite** sills

Multiple high-priority drill targets now defined

- **Kulkatharra Dolerite sills intrude into sulphidic sediments**
- **Geochemical indicators**
 - **PGE** stream sediment anomalism
 - **Ni-Cu** soil anomalies
 - **Ni-Cu-Pd-Pt** in rock chips
- **Sulphides in outcrop**
- **Late-time VTEM anomalies**
- **Shallow ground EM conductors**



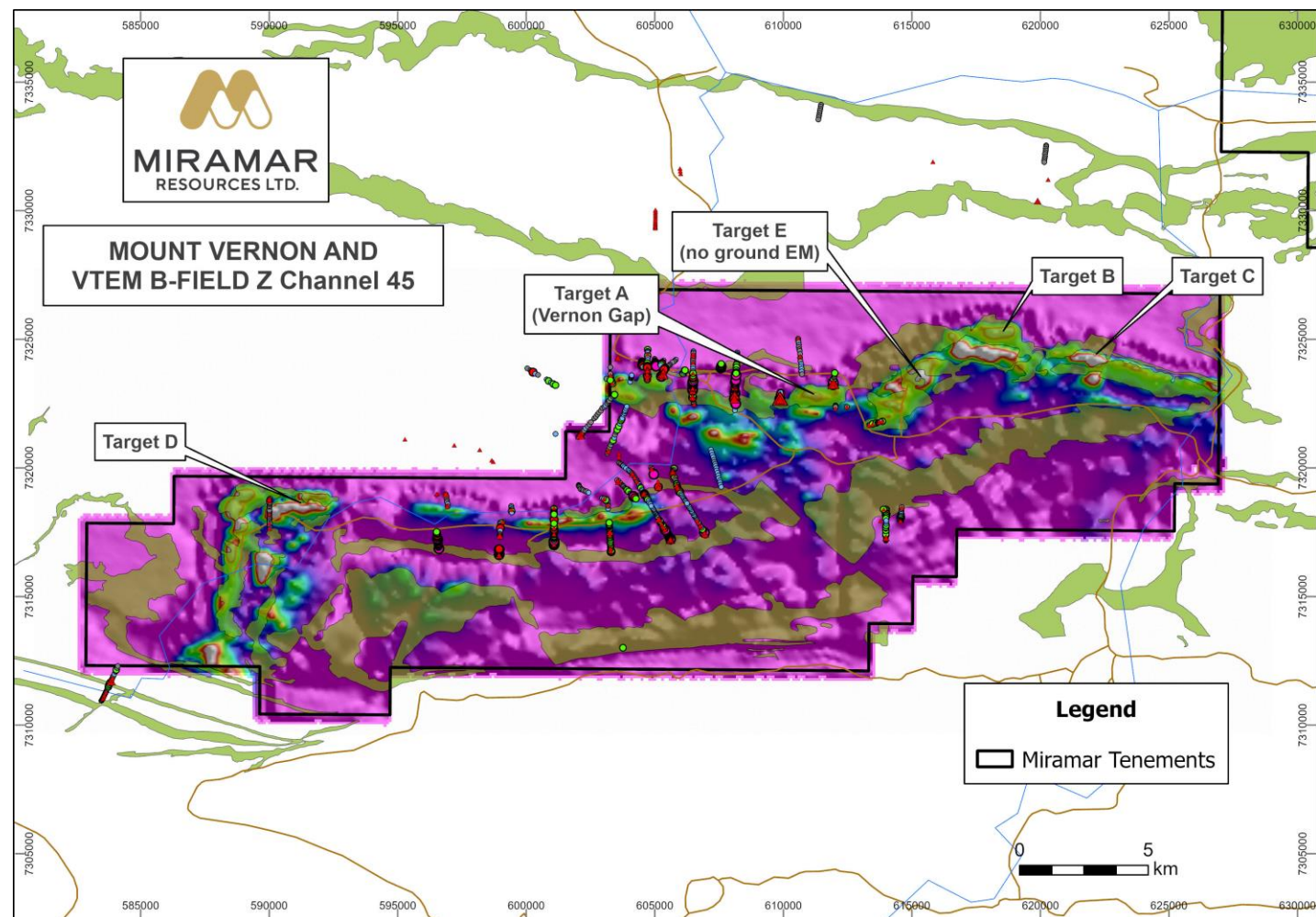
Mount Vernon

- Multiple **late-time EM anomalies** within/under northern dolerite sill
- Follow-up FLTEM survey of 4 VTEM anomalies completed

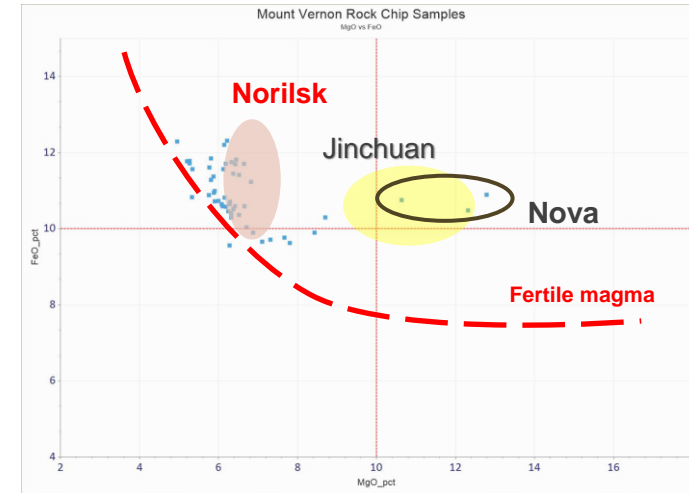
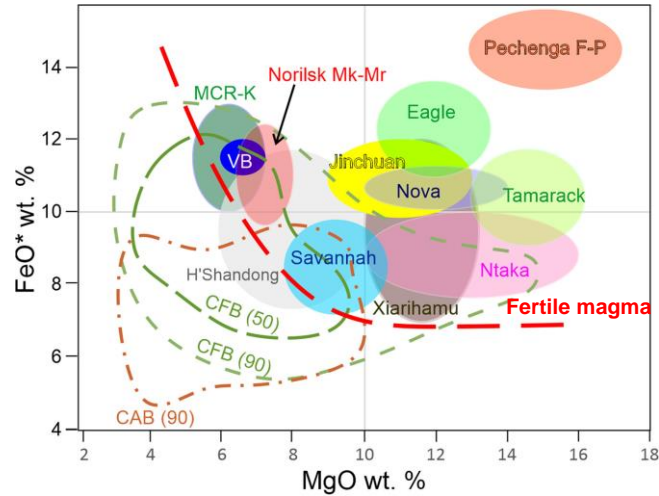


dolerite

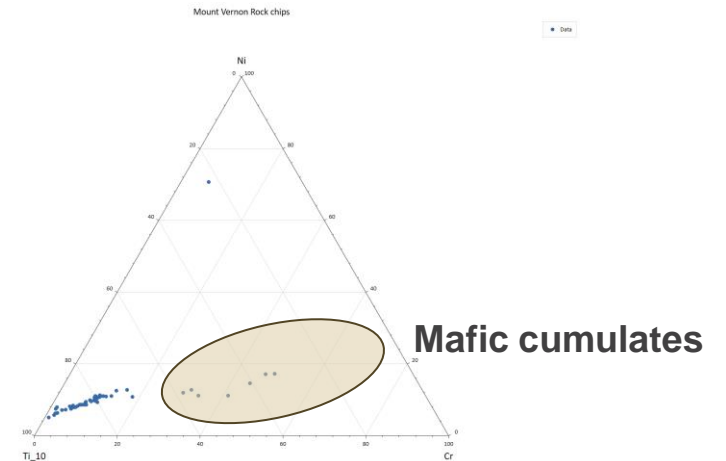
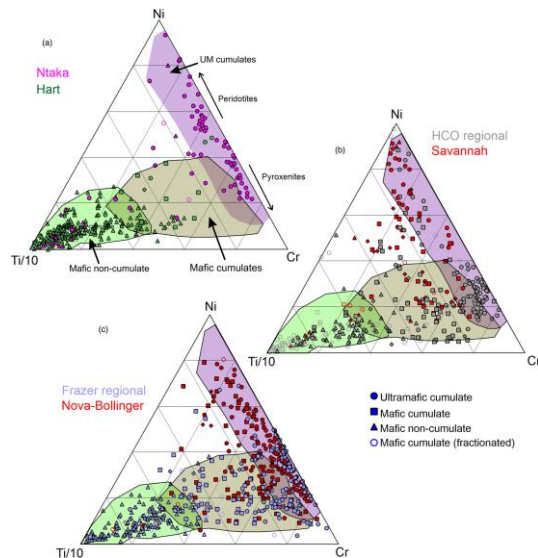
siltstone



Mount Vernon - fertile magma and cumulate rocks

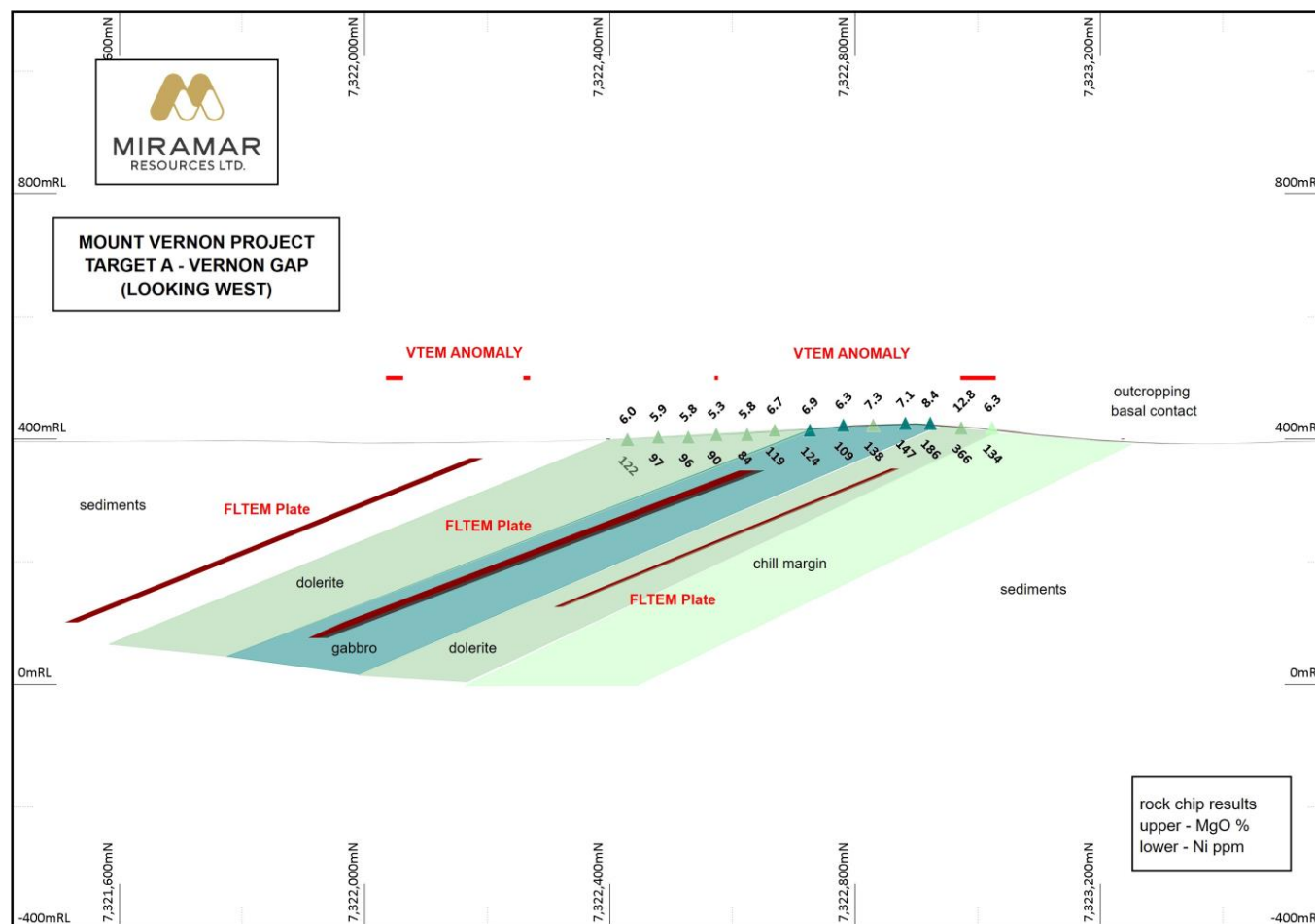


Barnes 2022

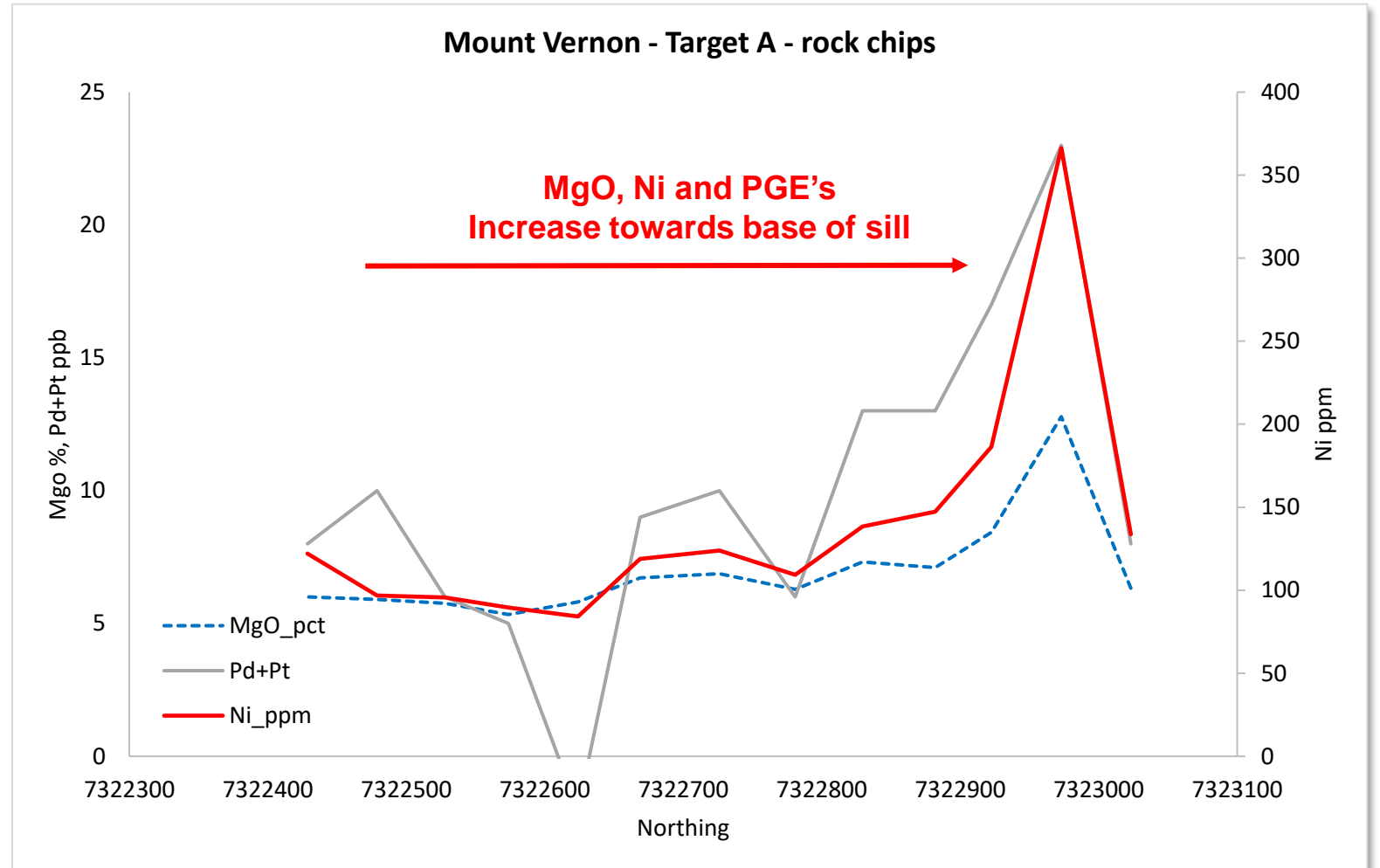


Target A – EM conductors within differentiated sill

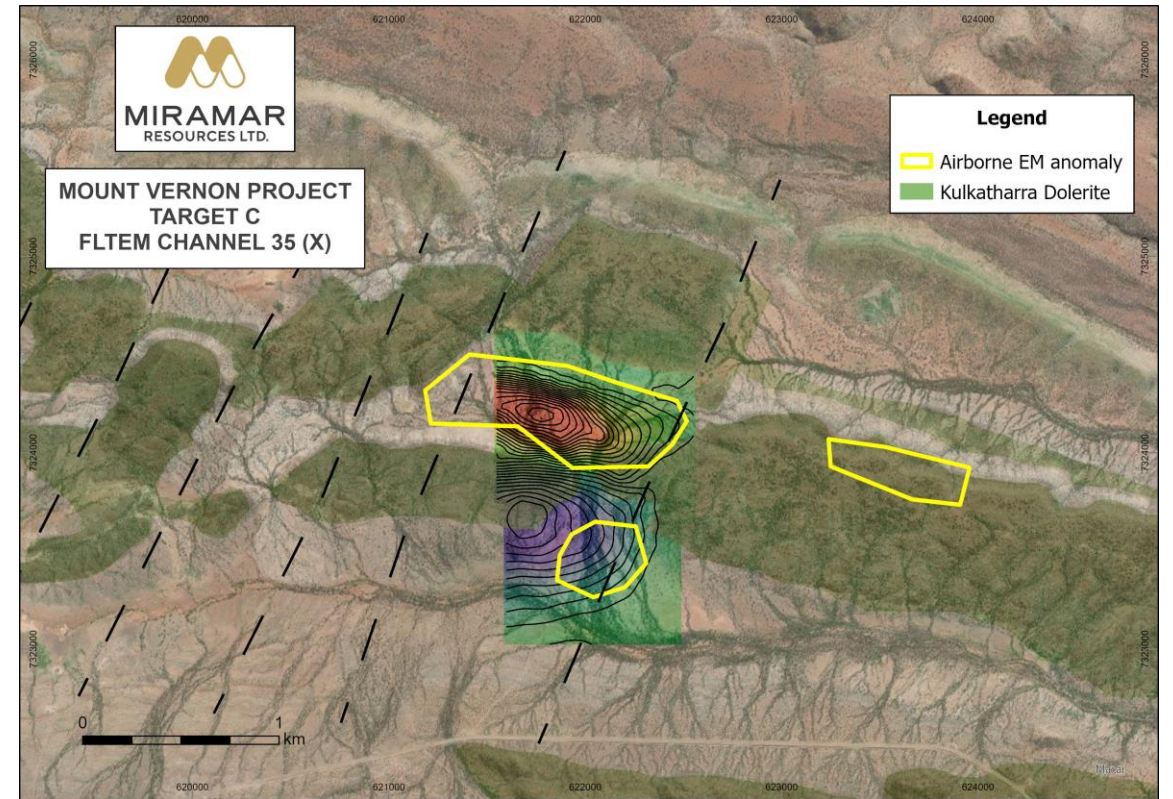
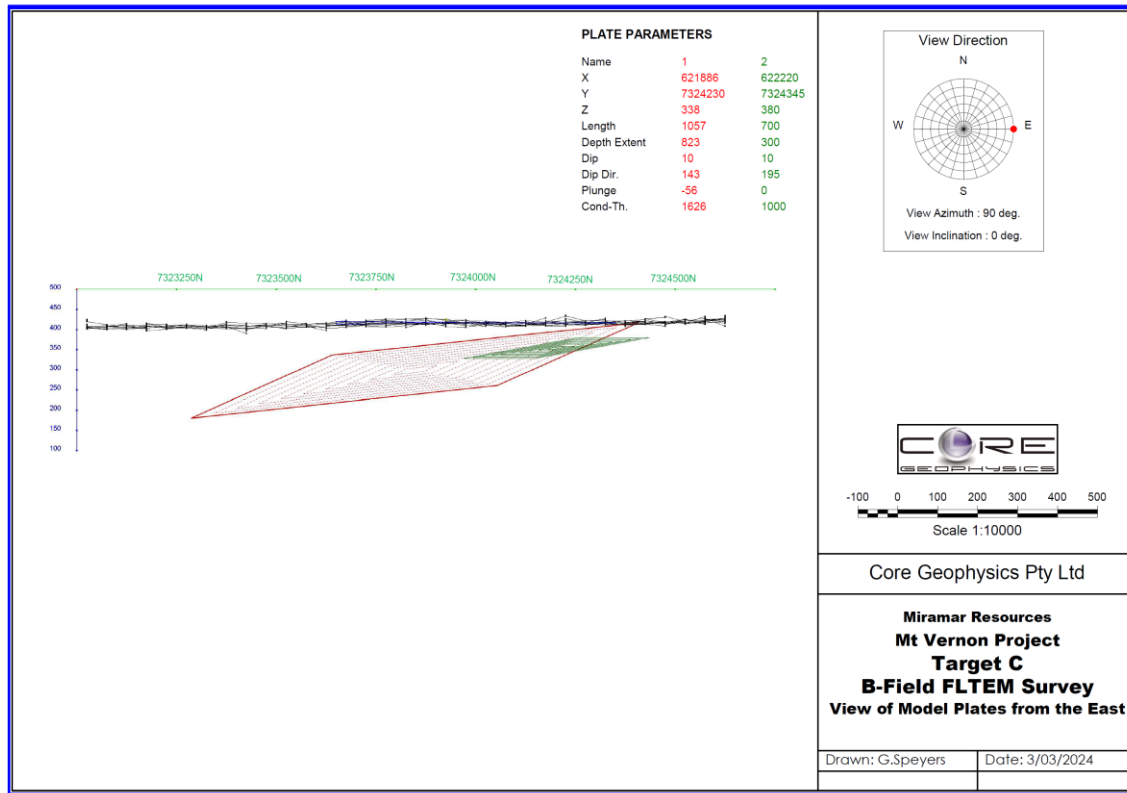
- Differentiated **Kulkatharra Dolerite sill**
- Elevated **Ni-Cu-PGE's** in rock chips
- Disseminated/patchy sulphides
- Ground EM survey identifies **multiple conductive plates**



Target A - evidence of differentiation

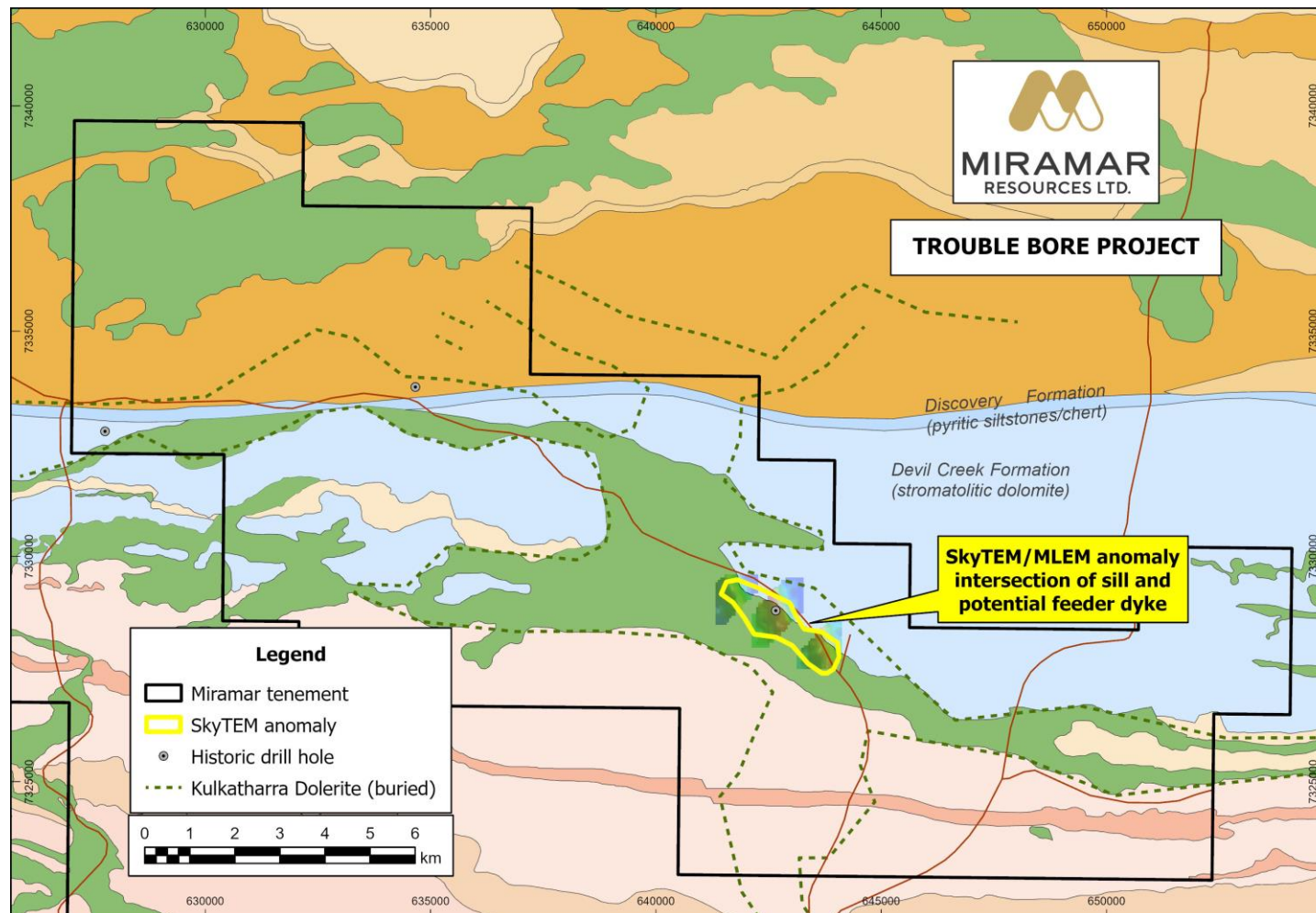


Target C – strong shallow FLTEM conductor



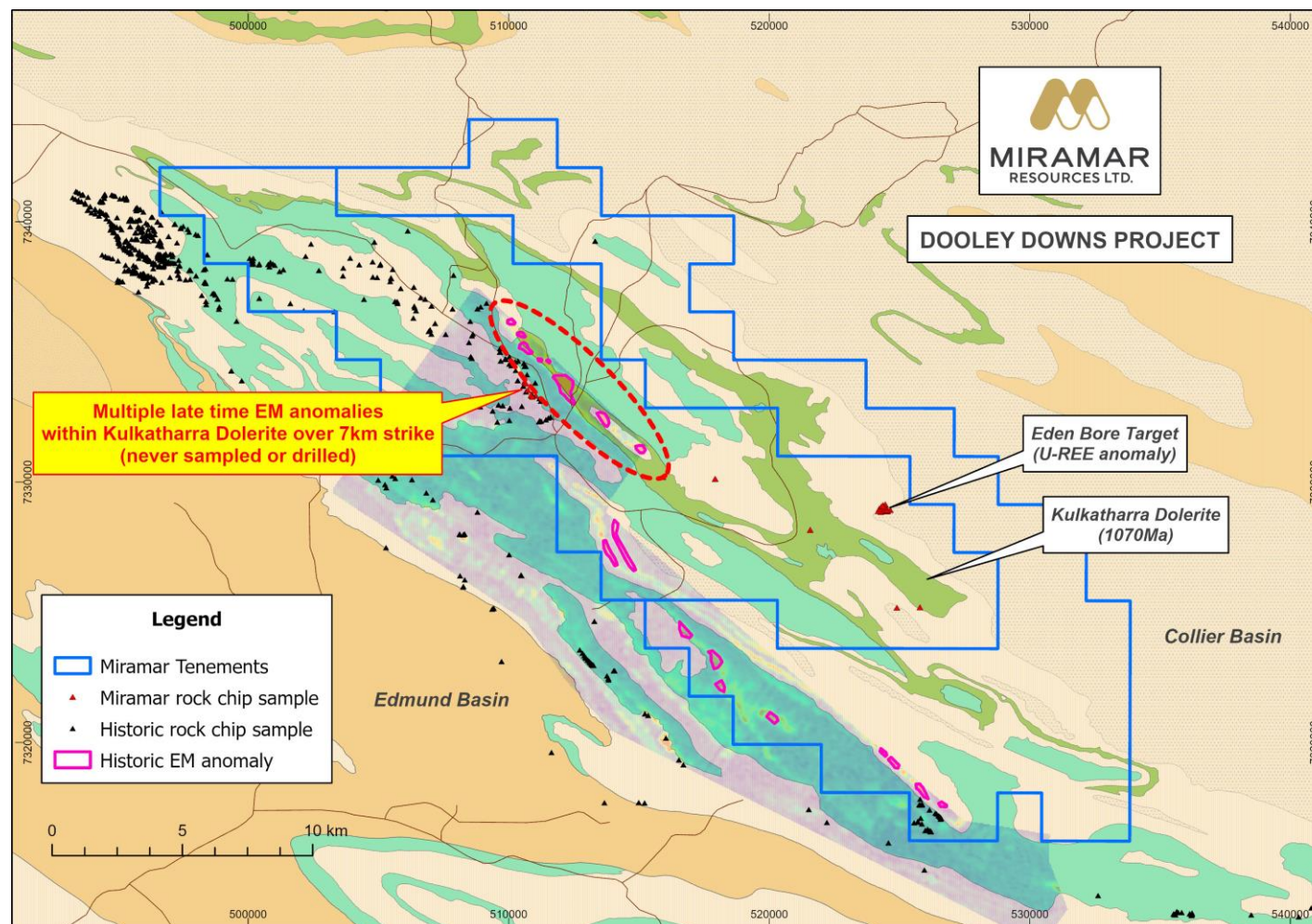
Trouble Bore – potential feeder dyke

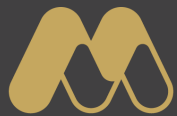
- **Kulkatharra Dolerite** intrudes into **sulphidic** and **evaporitic** sediments – e.g. similar to **Norilsk-Talnakh**
- **Late-time EM anomaly** under shallow cover at intersection of **dolerite sill** and **potential feeder dyke**
- Sampling and RC drilling planned



Dooley Downs – multiple EM conductors

- Dolerite sills intruding into sulphidic sediments
- 1070Ma Kulkatharra Dolerite
- 1465Ma Narimbunna Dolerite
- Multiple late-time EM anomalies over 7km of strike
- Never sampled or drill tested





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Whaleshark

Unique multi-commodity project

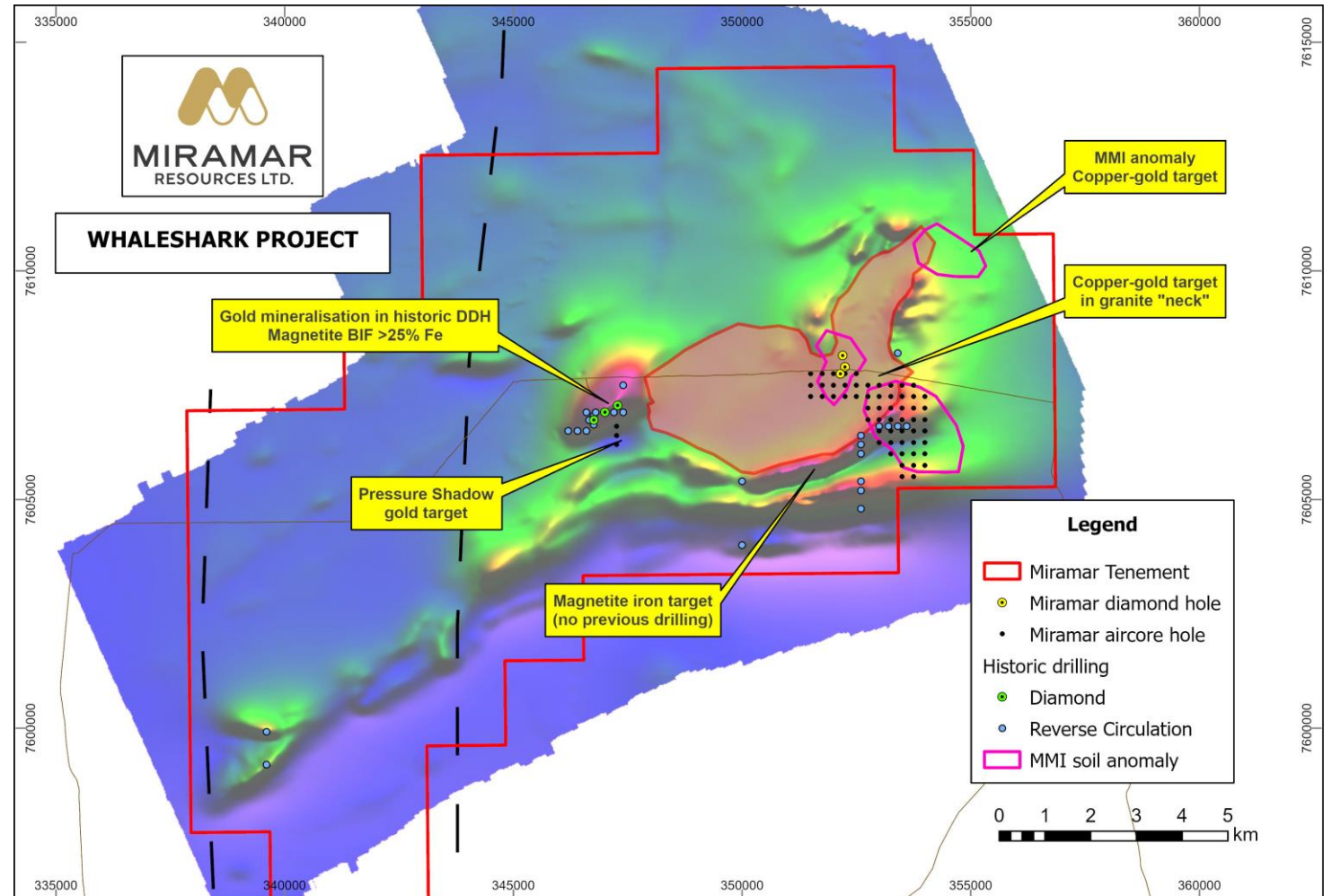
Cu

Au



Whaleshark - multi-commodity potential

- Banded Iron Formation and granodiorite under Carnarvon Basin sediments
- Large MMI soil anomalies and **Cu-Au-Ag-U-Mo** anomalism at top of basement
- **Gold** mineralisation in BIF
- **Copper sulphides** intersected in granodiorite
- Large-scale **magnetite** iron targets identified
- Passive seismic survey will map depth to basement



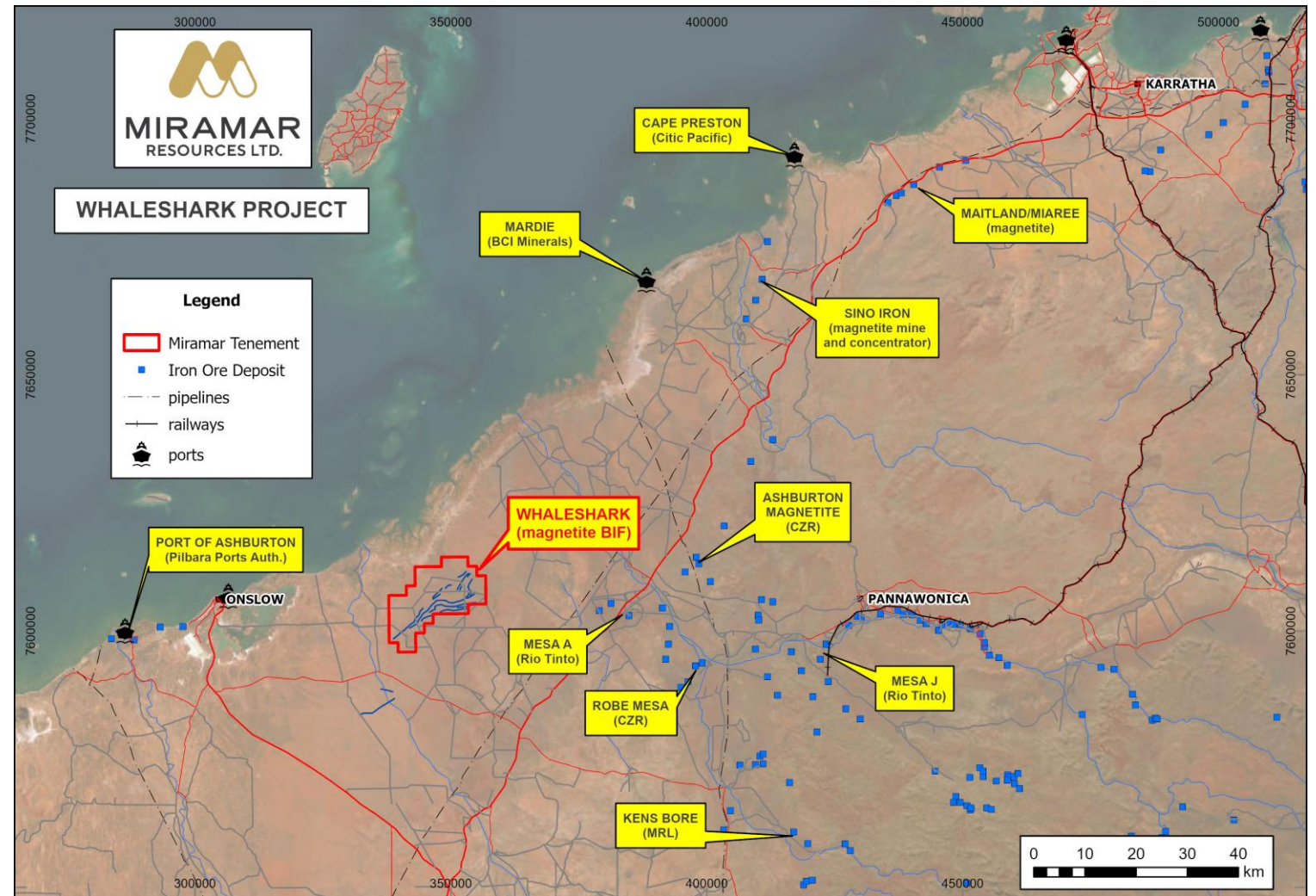
Whaleshark

Infrastructure-rich area

- Major highway
- Gas pipeline
- Port facilities
- Operating magnetite mine/processing facility

Recent Activity

- Commencement of mining at Kens Bore (ASX:MRL)
- CZR sale of 85% of Robe Mesa for **\$102M**



Miramar - Key Objectives for 2024

Eastern Goldfields

- RC drilling of Gidji JV bedrock targets
- Progress Lake Yindarlgooda tenements to grant

Bangemall

- Rock chip sampling
- Heritage survey
- Maiden RC drilling campaign
- Grant of other tenements

Whaleshark

- Map basement depth with passive seismic survey



Experienced Board with track record



Allan Kelly
Executive Chairman

- 30 years' exploration-development-production experience
- **Founding MD, Doray Minerals Ltd (2009-2016)**
- **AMEC "Prospector" Award – 2014**



Marion Bush
Technical Director

- 25 years' experience in exploration, management, directorship and marketing
- Former CEO, Cassidy Gold (TSX-V)



Terry Gadenne
Non-executive Director

- 30 years' experience in military/civil aviation, agriculture and mining services
- Former MD - Mining Logic Pty Ltd



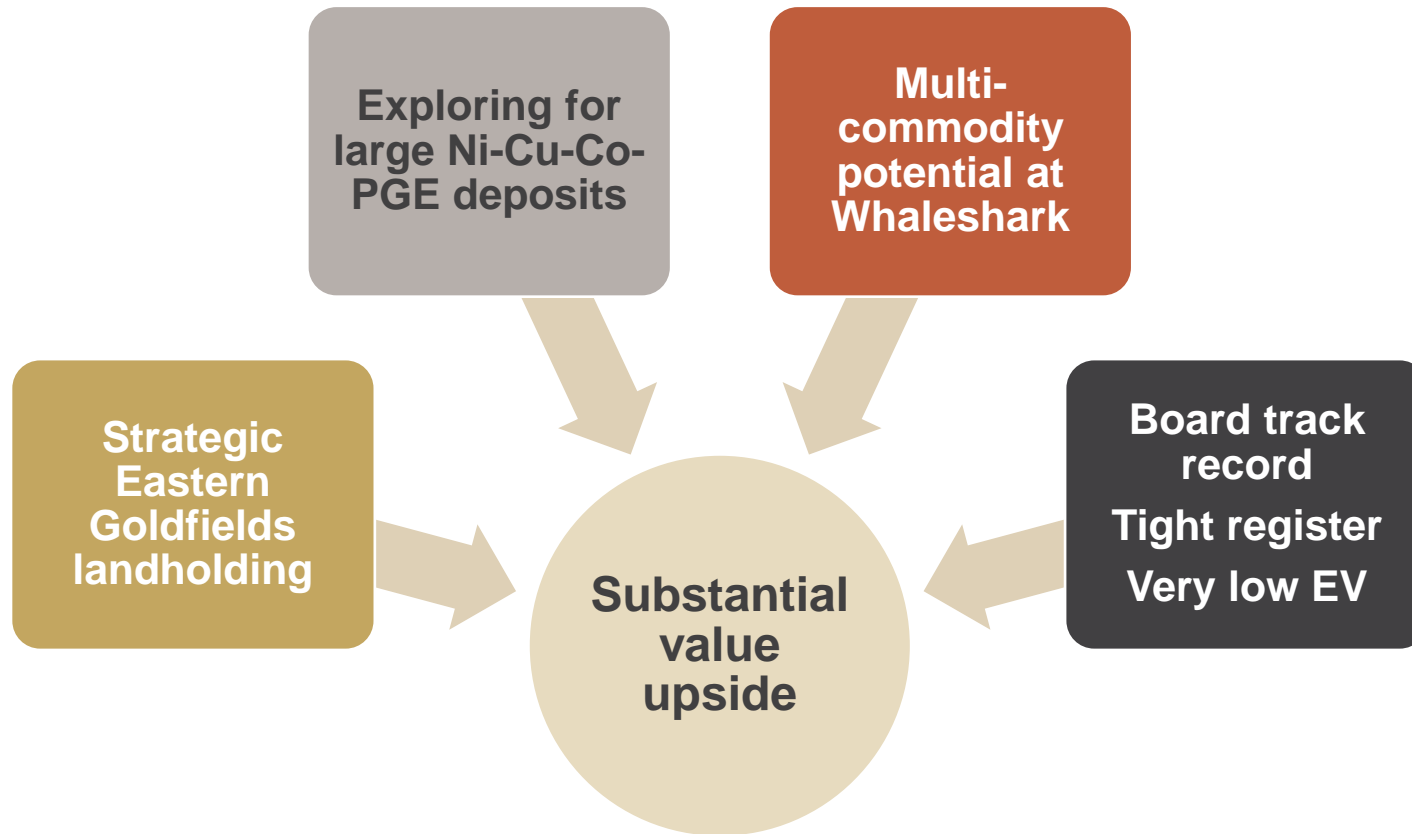
Mindy Ku
Company Secretary

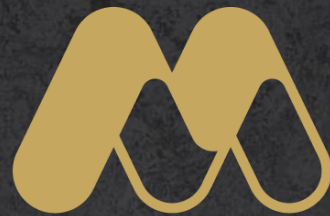
- 15 years' experience with public and private companies

ASX Code	M2R
Shares on Issue (pro-forma)	186.4M
Listed Options (@ 25c)	59.7M
Market Cap (pro-forma)	\$2.9M
Cash (Dec '23)	\$0.7M
Enterprise Value (pro-forma)	\$2.2M

Major shareholders	%
XGS /Allorah (Kelly)	9.4
Faraday Investments	6.5
Top 20	46.3
Combined Board	10.2

Why Invest in Miramar?





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