

## BENMARA'S TIER-1 SCALE MINERALS SYSTEM POTENTIAL

### HIGHLIGHTS

- *Independent review of Resolution's Benmara Project, in Northern Territory, concludes that the Project is highly prospective for Tier-1 scale Iron Oxide Copper Gold (IOCG), Sedimentary Exhalative (SEDEX), Sedimentary-hosted Mount Isa Copper (Cobalt), and Unconformity-related Uranium mineralisation.*
- *IOCG analogues for Benmara include those of the Cloncurry IOCG Province, of which the Ernest Henrey Deposit is an example.*
- *SEDEX analogues for Benmara include the Century Zinc Deposit and the McArthur River Deposit.*
- *Sedimentary-hosted Mount Isa Copper (Cobalt) analogues for Benmara include the Mount Isa Copper Deposit and the Walford Creek Copper-Cobalt Deposit.*
- *Unconformity-related uranium analogues for Benmara include the Westmoreland Uranium Field and the deposits of the world-class Athabasca Uranium Province.*
- *The Benmara Project and RML's Carrara Range Project are adjacent to the South-32-Encounter Jessica and Carrara Joint Venture Projects.*
- *Resolution will focus on the generation of Tier-1 targets across the project's broad Mineral System prospectivity.*

Resolution Minerals Ltd (RML or Company) (ASX: RML) is pleased to announce the results of a recent independent review of its Benmara Project (**Benmara** or the **Project**). The review was undertaken by Mr Ross Brown of Riviere Minerals, who has over 30's experience in base metals and sedimentary-hosted uranium mineral systems and exploration.

The **Benmara IOCG, SEDEX, Mount Isa Cu-Co, and Unconformity-related Uranium Presentation** follows this announcement. The review has accessed previously released data and general information available publicly on the ASX portal, on the Northern Territory Government Spatial Territory Resource Information Kit for Exploration (**STRIKE**) and on the Geoscience Exploration and Mining Information System (**GEMIS**).

Key take ways in the positive assessment of the IOCG, SEDEX, Mount Isa Cu-Co, and Unconformity-related uranium potential of the Benmara Project include that:

- The project area includes six granted Exploration Licences, with a total area of 3,064km<sup>2</sup>;
- The large but manageable project area is amenable to well-funded Tier-1 scale Mineral Systems exploration, such as that occurring by South32-Encounter on the adjacent Jessica-Carrara JV project areas;
- The project is well positioned within the Brunette Downs Rift Corridor, considered independently to be a high probability IOCG corridor;
- The project hosts correctly aged and favourable basin sediments for SEDEX and Mount Isa Cu mineralisation and is located on structural intersections associated with Tier-1 mineralisation (McArthur River, Walford Creek deposits);

Key take aways of Benmara CONTIUNED...

- The project hosts several Mount Isa Cu-type targets with coincident discrete Cu-Co-Zn geochemical anomalies and geophysical GEOTEM/VTEM anomalies, which are located on the mineralised Fish River Fault (the Walford Creek Deposit occurs on the Fish River Fault 60km to the east); and that...
- The project hosts exposures and sub-cropping extensions of the Westmoreland Conglomerate, with coincident discrete U2/Thorium anomalies with a combined total strike length of approximately 6kms.

Riviere Minerals believes that Benmara represents an exploration project of rare potential. *"It is unusual that a single project has such a range potential for Tier-1 scale mineralisation... such is the regional location of Benmara."*

**Authorised for release by the board of Resolution Minerals Ltd.**

For further information, please contact Aharon Zaetz Executive Director.

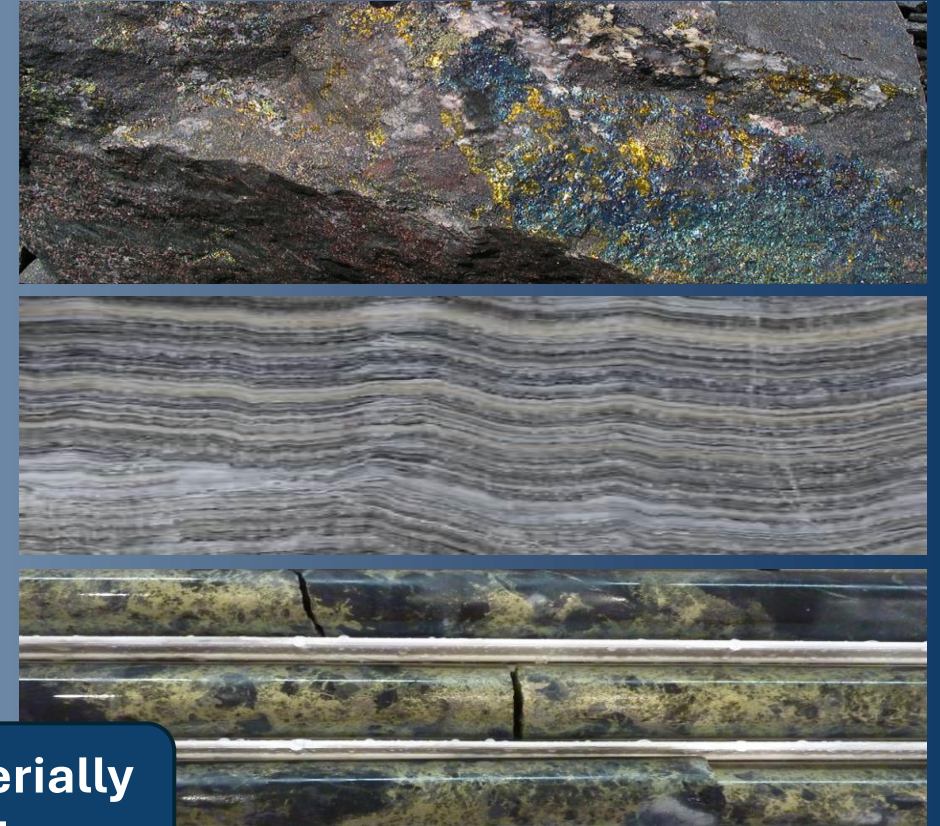
**Aharon Zaetz**  
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Resolution Minerals Ltd.  
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[ari@resolutionminerals.com](mailto:ari@resolutionminerals.com)

RML confirms that this announcement the Company is not aware of any new information or data cross referenced in this announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcement.

# The Exploration Potential of Resolution Minerals' Benmara Project



- The potential exists for the discovery of large-scale, Tier-1 deposits at Resolution Minerals Ltd (ASX: **RML**) **Benmara Project** (100% owned)
- Validated Exploration Models include:
  - Iron Oxide Copper Gold (**IOCG**) **Ernest Henry-type**
  - Sedimentary Exhalative (**SEDEX**) **Arthur River-type**
  - Sedimentary Hosted **Mount Isa-type**
  - Unconformity-related uranium **Athabasca, Westmoreland-type**



**This is an exciting project in a region that is materially under-explored with Tier-1 deposit potential.**



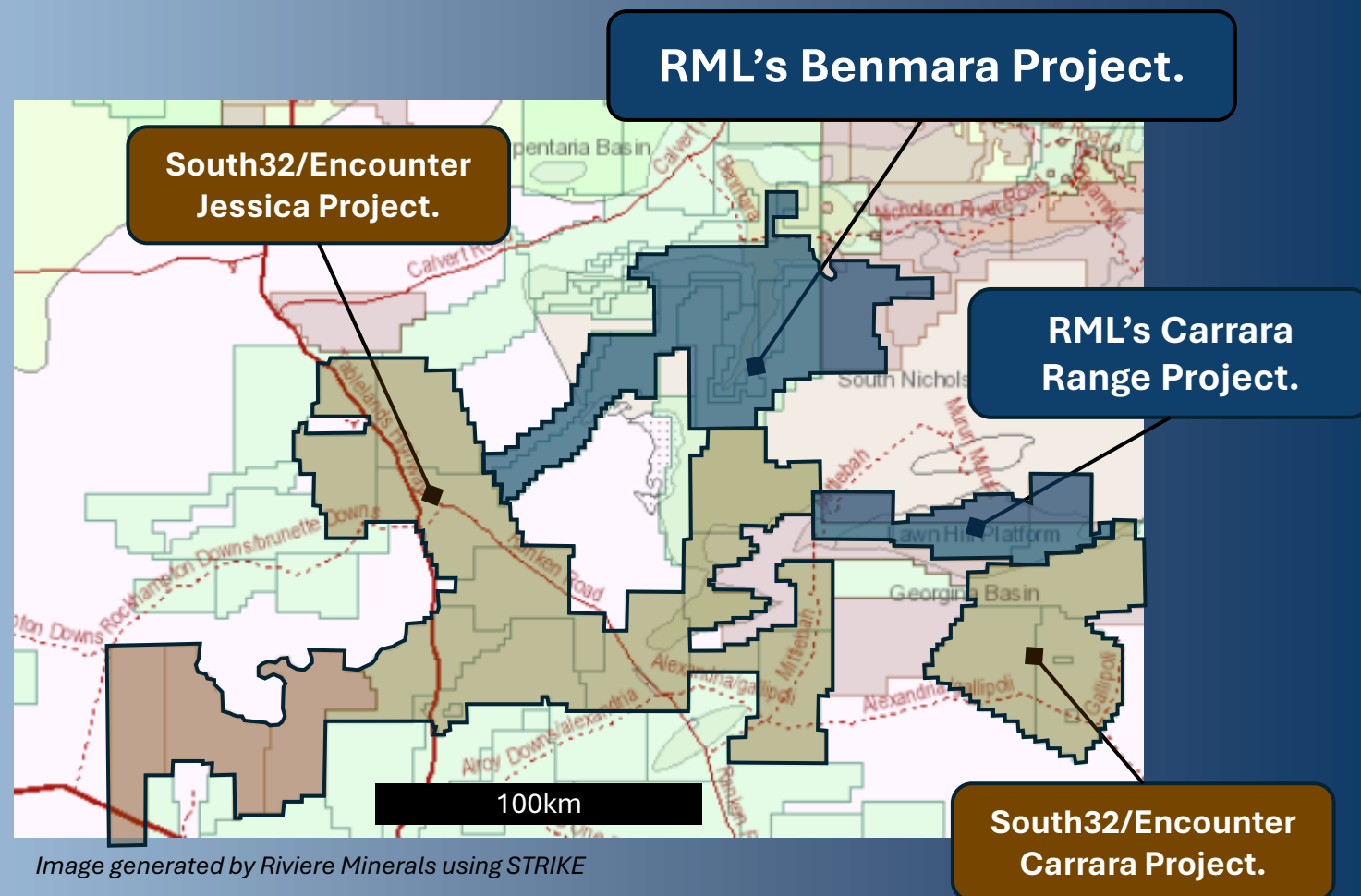
*Rivière*  
MINERALS PTY LTD

*Rock specimens are not the property of Resolution Minerals Ltd*

*Presentation compiled by Rivière Minerals for Resolution Minerals, July/August 2024*

## Benmara Project Tenement Holding (100% owned by Resolution)

- RML's Benmara Project comprises seven ELs (six that are granted)
- RML's Benmara and Carrara Range projects have a combined total area of  $\pm 4,500$  sqkm (blue shaded areas)
- South32-Encounter's two JV projects (brown shaded areas), **Jessica** and **Carrara** are adjacent to RML's projects
- As manager of the JV, South32 is exploring for Tier-1 IOCG and sedimentary-hosted base metal deposits



A large landholding is a significant advantage when applying regional exploration models to an under-explored area.

# Resolution's Benmara Project Tenement Details



## EL31287

- Ownership: Xavier Resources Pty Ltd (100%)
- Grant Date: 13 December 2016
- Expiry Date: 12 December 2024 (**valid for 4 further months**)
- Area: 313.32sqkm (96 blocks)

## EL32228

- Ownership: Xavier Resources Pty Ltd (100%)
- Grant Date: 29 March 2021
- Expiry Date : 28 March 2027 (**valid for 31 further months**)
- Area: 663.24sqkm (203 blocks)

## EL32229

- Ownership: Xavier Resources Pty Ltd (100%)
- Grant Date: 15 September 2021
- Expiry Date : 14 September 2027 (**valid for 37 further months**)
- Area: 228.45sqkm (70 blocks)

## EL32849

- Ownership: Xavier Resources Pty Ltd (100%)
- Grant Date: 4 April 2022
- Expiry Date: 3 April 2028 (**valid for 44 further months**)
- Area: 231.46sqkm (71 blocks)

## EL32850

- Ownership: Xavier Resources Pty Ltd (100%)
- Grant Date: 4 April 2022
- Expiry Date: 3 April 2028 (**valid for 44 further months**)
- Area: 812.06sqkm (249 blocks)

## EL32883

- Ownership: Xavier Resources Pty Ltd (100%)
- Grant Date: 9 May 2022
- Expiry Date: 8 May 2028 (**valid for 45 further months**)
- Area: 815.75sqkm (250 blocks)

## ELA33059

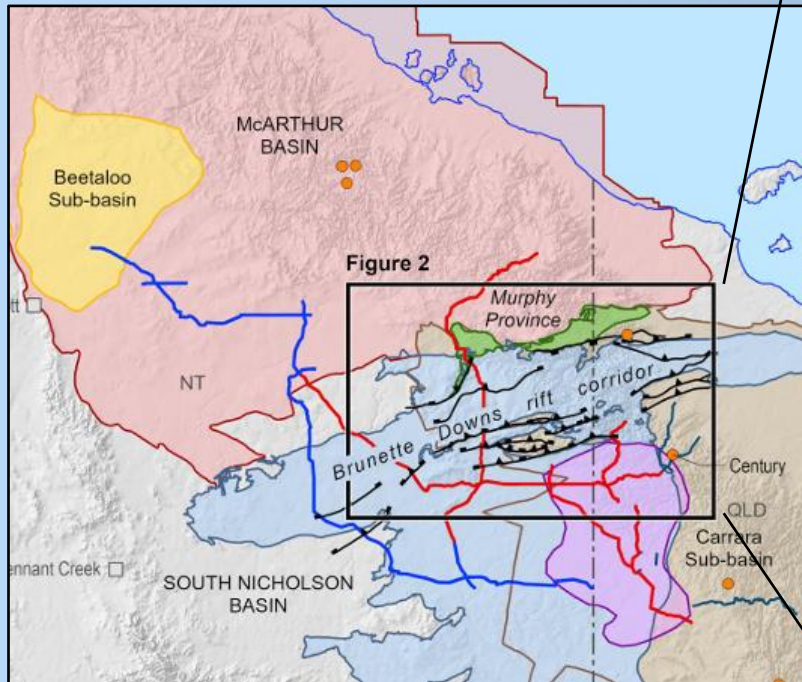
- Ownership: Xavier Resources Pty Ltd (100%)
- Consent Date: 24 February 2022
- Area: 246 blocks
- Land ownership: Waanyi/Garawa Aboriginal Land Trust

**A large granted landholding of 3,064sqkm is conducive to regional mineral exploration and attractive for major mining houses operating in the area or for those wishing to enter the area.**



# A Regional Perspective of the Benmara Project

The Benmara Project hosts southern McArthur Basin, Murphy Province and South Nicholson Basin sequences within the Brunette Downs Rift Corridor

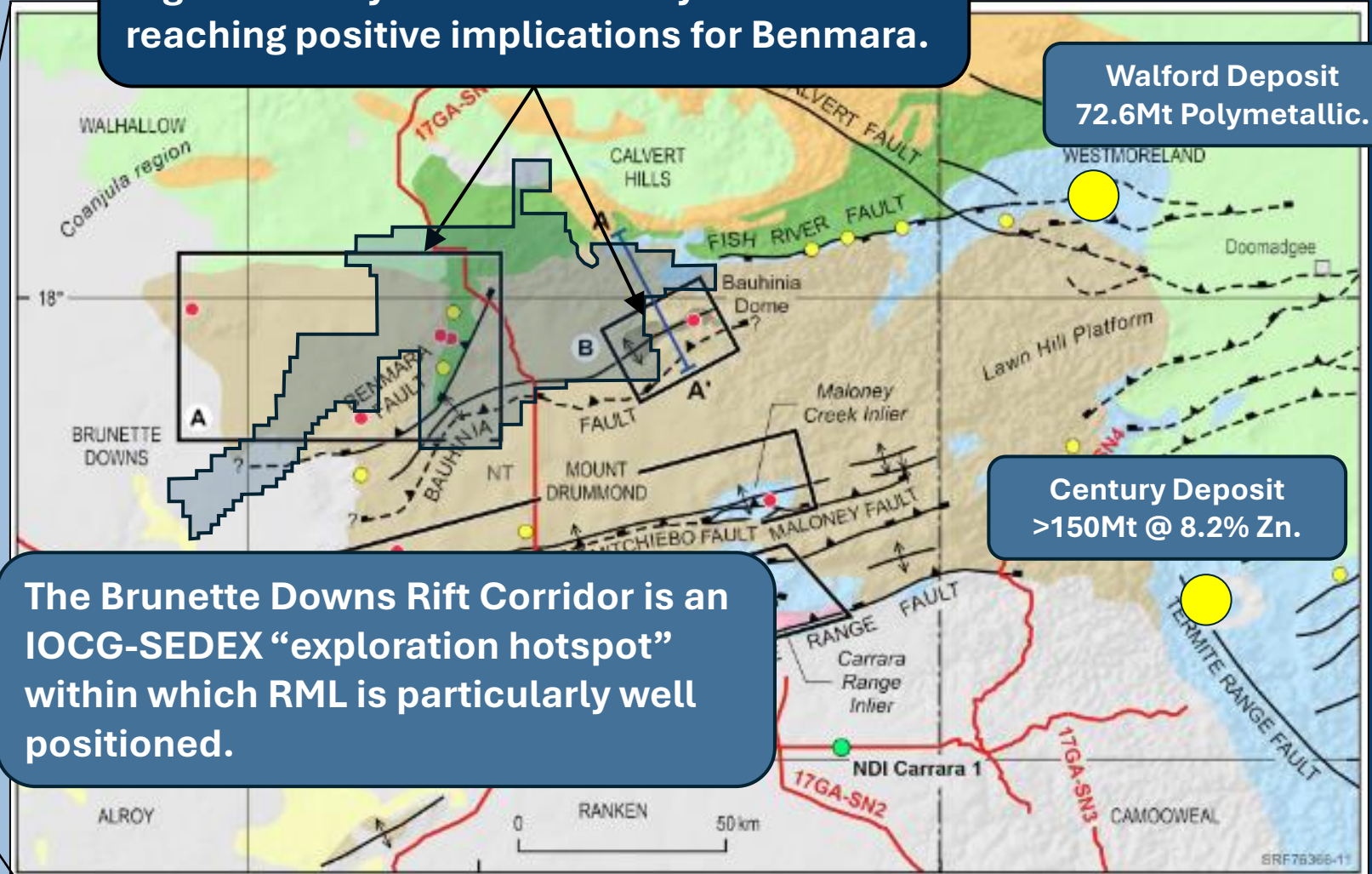


The Benmara Project overlaps with two GSA regional study areas. The study has far-reaching positive implications for Benmara.

Walford Deposit  
72.6Mt Polymetallic.

Century Deposit  
>150Mt @ 8.2% Zn.

The Brunette Downs Rift Corridor is an IOCG-SEDEX “exploration hotspot” within which RML is particularly well positioned.



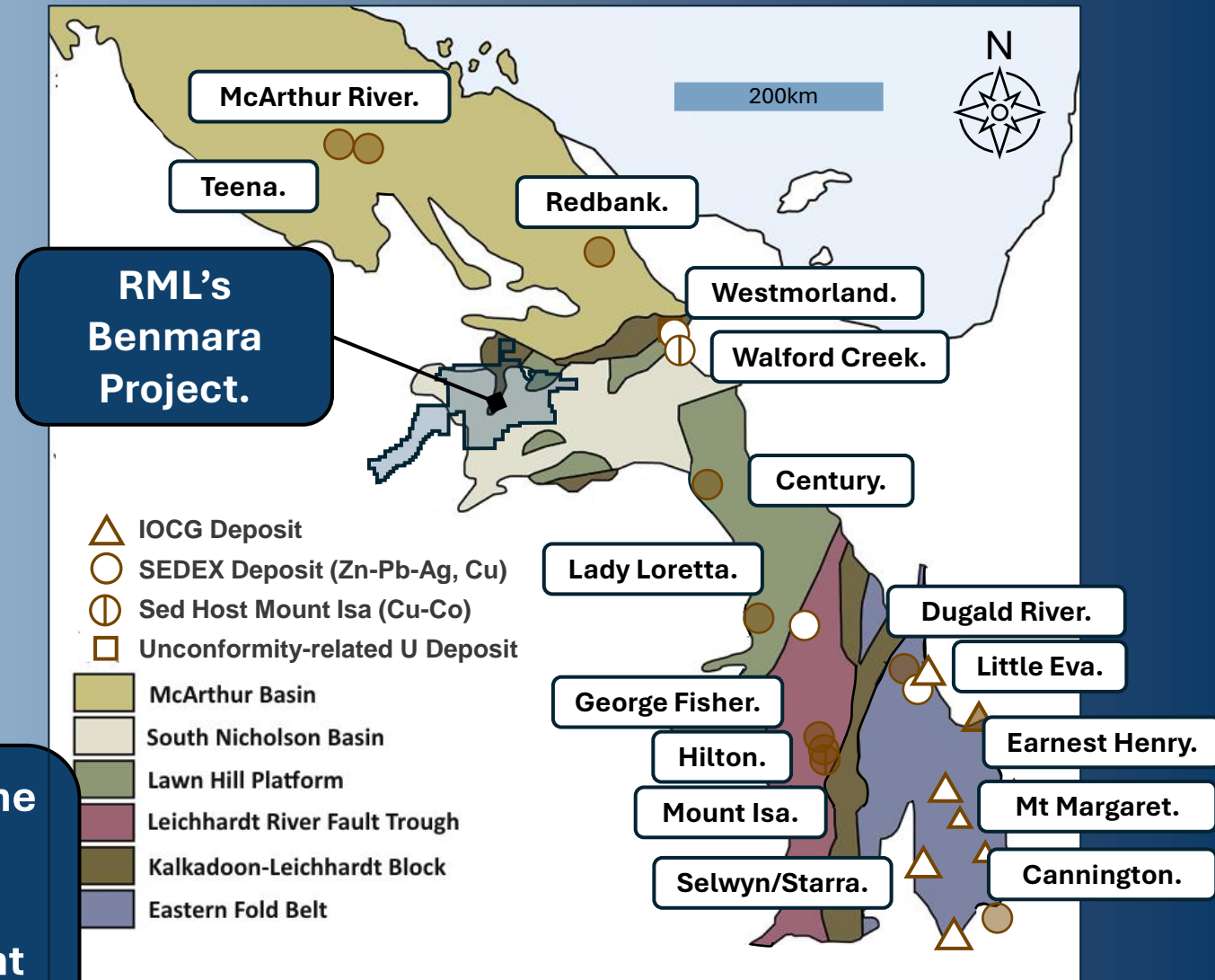
Geological map from C. J. Carson, N. Kositcin, J. R. Anderson & P. A. Henson (19 Oct 2023): A revised Proterozoic tectono-stratigraphy of the South Nicholson region, Northern Territory, Australia—insights from SHRIMP U–Pb detrital zircon geochronology, Australian Journal of Earth Sciences, DOI: 10.1080/08120099.2023.2264355



# Benmara Regional Setting and Known Tier-1 Deposits in the Region

- The Benmara Project is located within the prolifically endowed **Carpentaria Province** (comprising the McArthur Basin-Lawn Hill Platform-Mount Isa Inlier regions)
- The Carpentaria Province hosts multiple world-class base metal deposits including IOCG and SEDEX Tier-1 deposits
- The Province also hosts Unconformity-related uranium deposits

**Benmara's unique geological location within the Carpentaria Province and within the Brunette Downs Rift Corridor means that the project is prospective for IOCG, SEDEX (Ag-Pb-Zn), Mount Isa (Cu), and Unconformity U mineralisation.**





# Gravity Defines Broad Corridor Prospective for Tier-1 Deposits Across Benmara

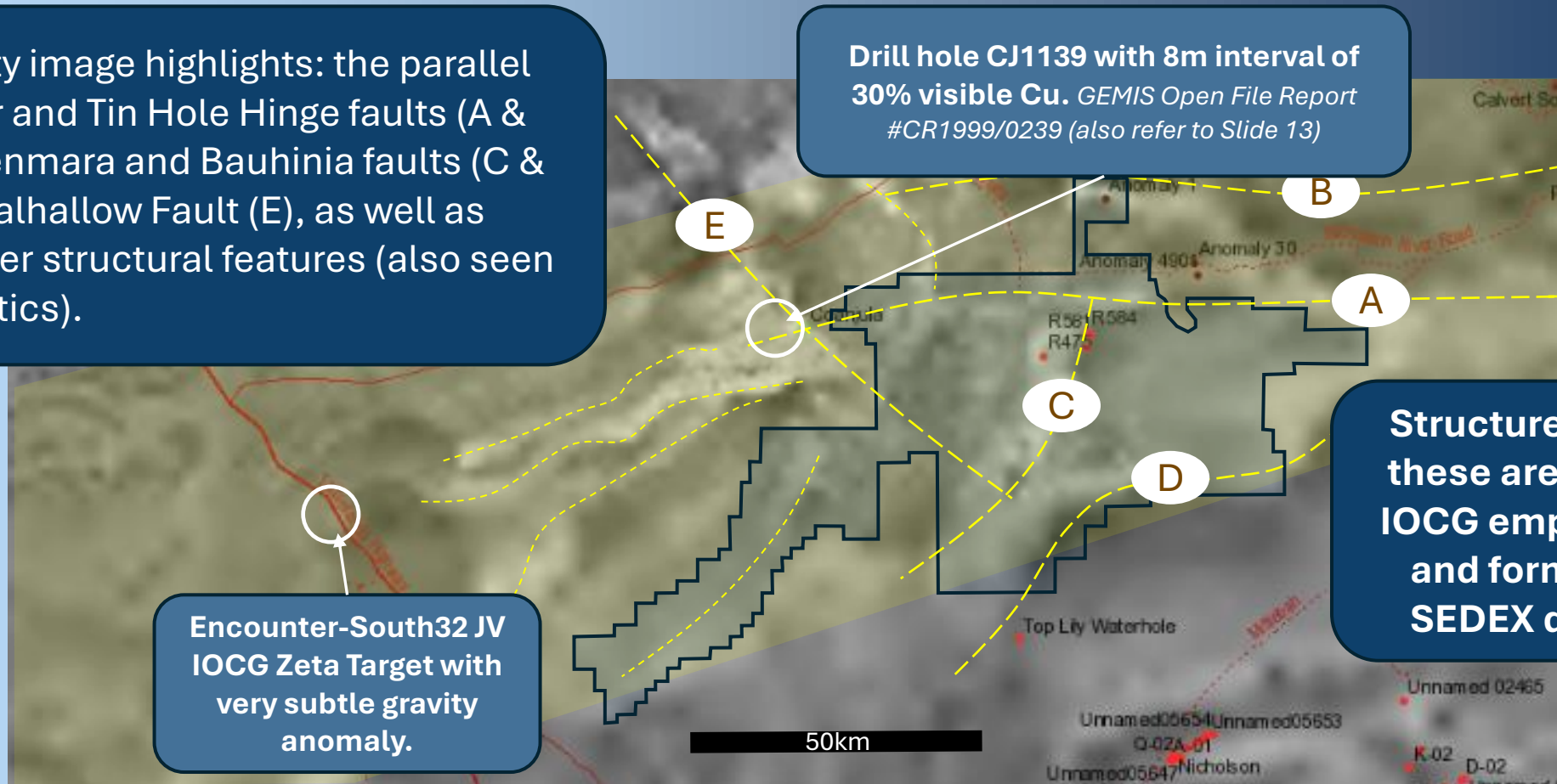
- A regional gravity trend runs SW-NE across Benmara, forming a series of anastomosing gravity high ridges which coincide with/defines the Brunette Downs Rift Corridor (transparent yellow shading)
- The many structural components of the Brunette Downs Rift Corridor (yellow dashed lines) are highly prospective for IOCG, SEDEX, and Mount Isa Cu, Tier-1 scale mineralisation

The gravity image highlights: the parallel Fish River and Tin Hole Hinge faults (A & B), the Benmara and Bauhinia faults (C & D) and Walhallow Fault (E), as well as many other structural features (also seen in magnetics).

Drill hole CJ1139 with 8m interval of **30% visible Cu**. GEMIS Open File Report #CR1999/0239 (also refer to Slide 13)

Encounter-South32 JV IOCG Zeta Target with very subtle gravity anomaly.

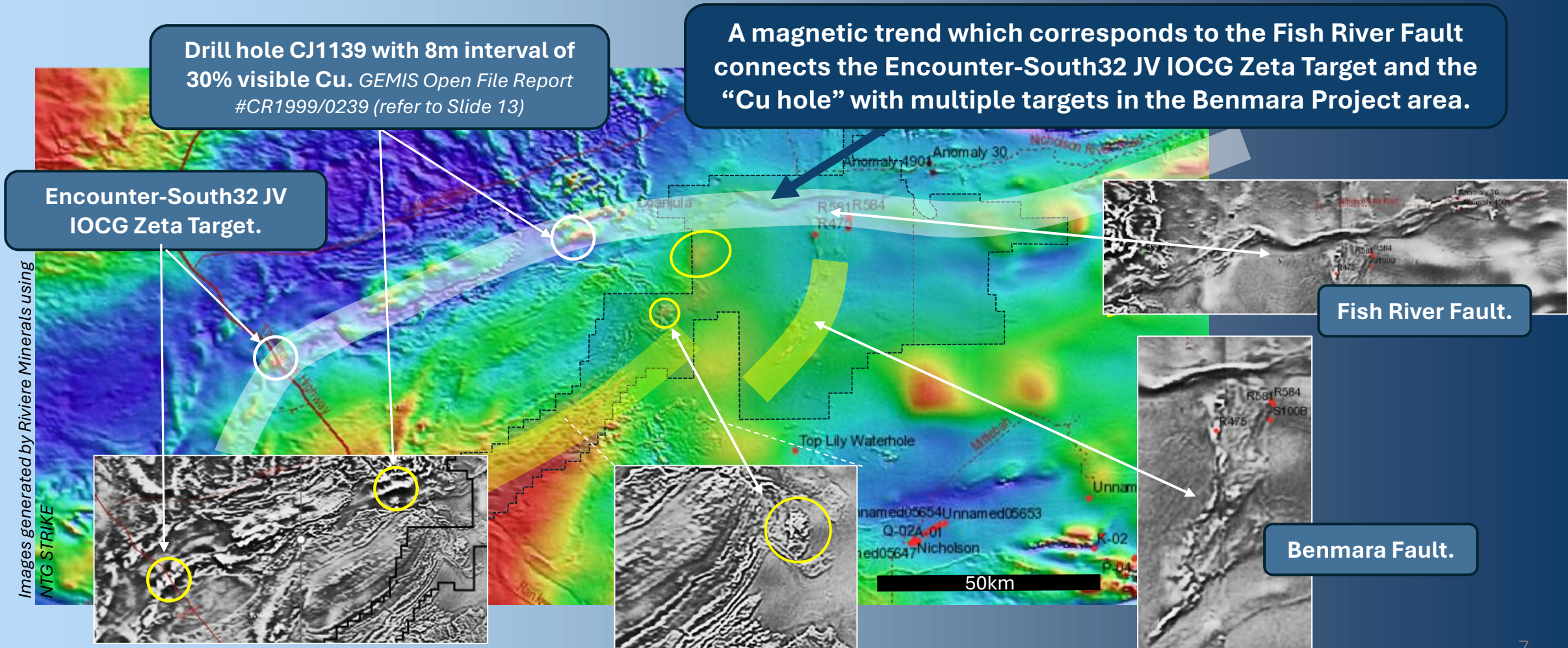
Structures such as these are fertile for IOCG emplacement and formation of SEDEX deposits.





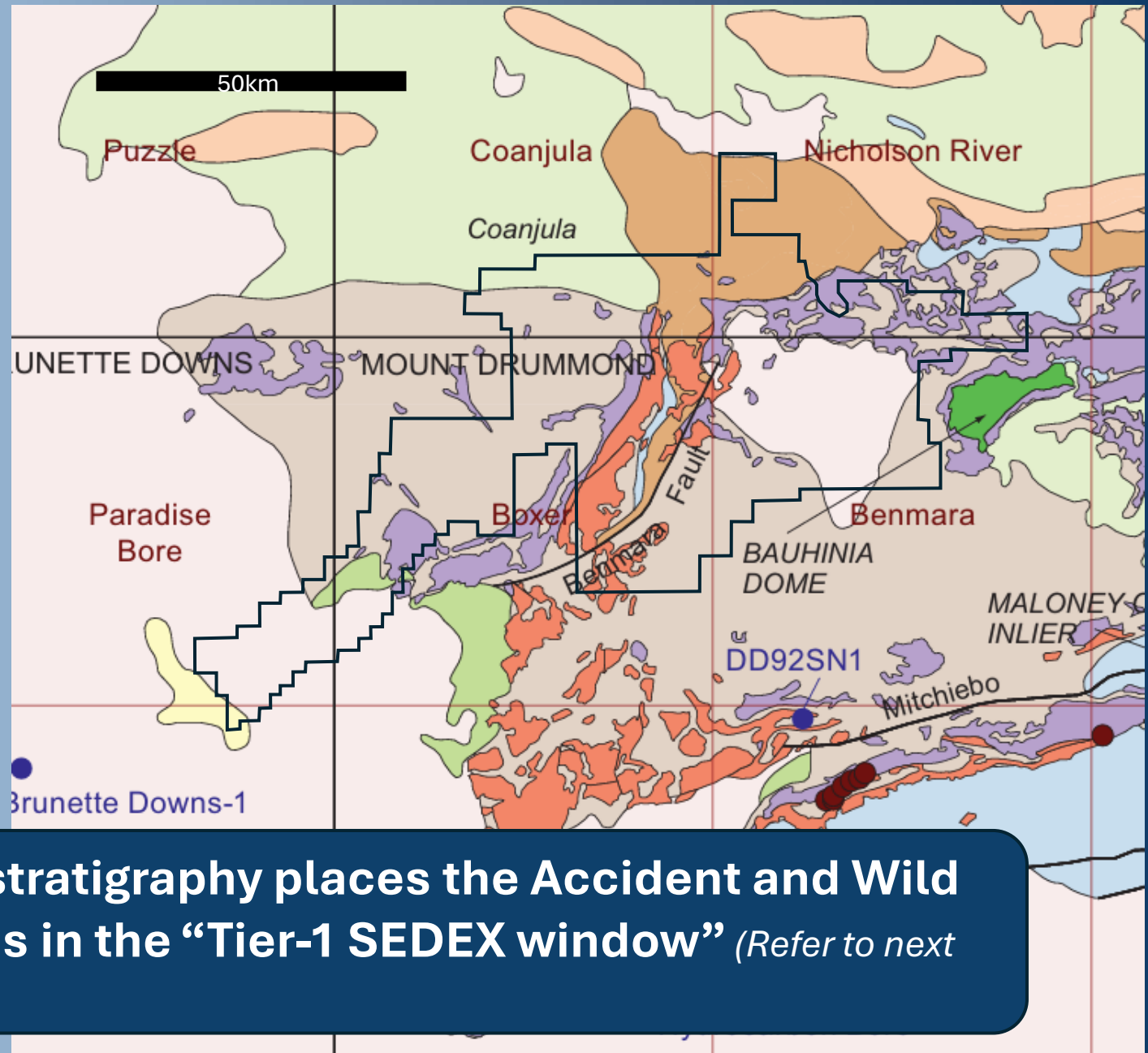
# Magnetics Connects IOCG Target and “Cu-hole” to Benmara

- The Brunette Downs Rift Corridor is also reflected in magnetics with many magnetic features, including broad areas (transparent yellow shading) and individual anomalies
- Coincident magnetic and gravity anomalies are highly attractive IOCG targets



## Benmara Regional Geology

- Benmara can be divided into three geological areas: 1) A northeastern area mostly comprising Murphy Province (tan); 2) A central-north and central N-S area mostly comprising the **Accident Subgroup (purple)** and **Wild Cow Subgroup (red)** and Benmara Group as a *slither of the Murphy Province*; and 3) A broad west and east area dominated by South Nicholson Basin [basin] sediments (pale brown)
- The Accident and Wild Cow subgroups comprise the Mittiebah Sandstone and Crow Formation members



**New tectono-stratigraphy places the Accident and Wild Cow subgroups in the “Tier-1 SEDEX window”** (Refer to next slide).





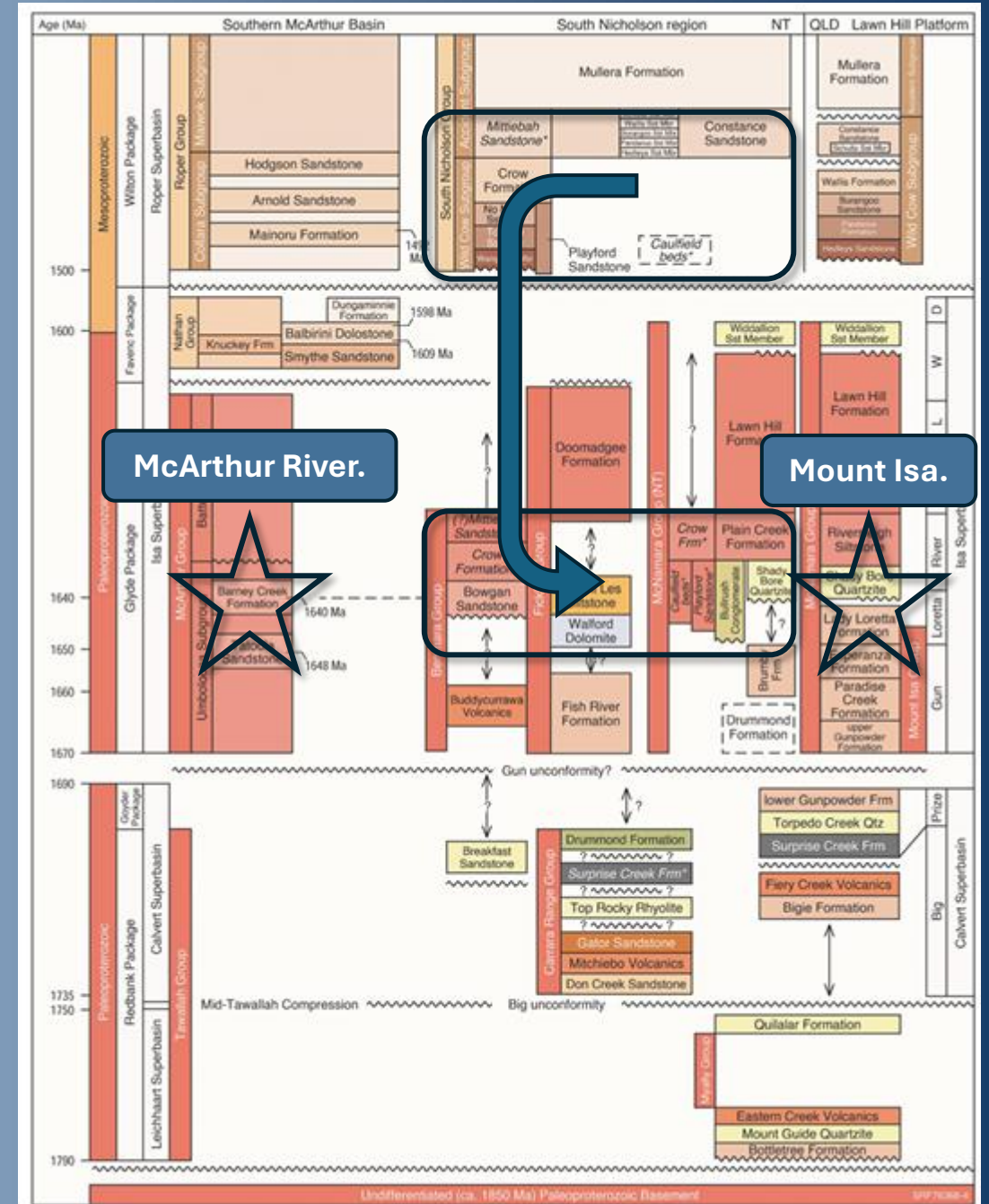
# Revised Basin Stratigraphy Greatly Enhances Tier-1 potential at Benmara

## The New Tectono-Stratigraphic of Benmara

- Accident Subgroup which occurs extensively at Benmara is now stratigraphically a lot older and part of the McNamara Group
- The McNamara Group is stratigraphically equivalent to the Mount Isa Group (in QLD) and the McArthur Group (McArthur Basin NT), with certain marine units believed the stratigraphic equivalent to the **Barney Creek Formation**



Barney Creek Formation outcrop



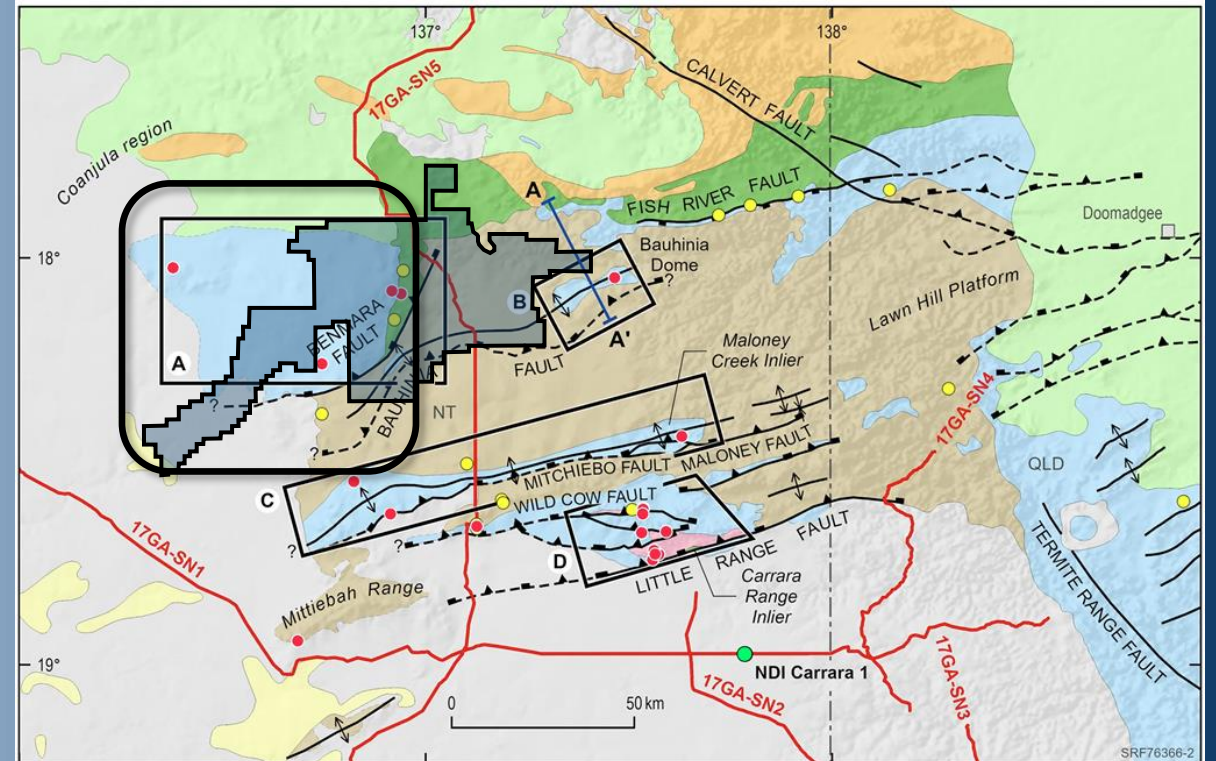
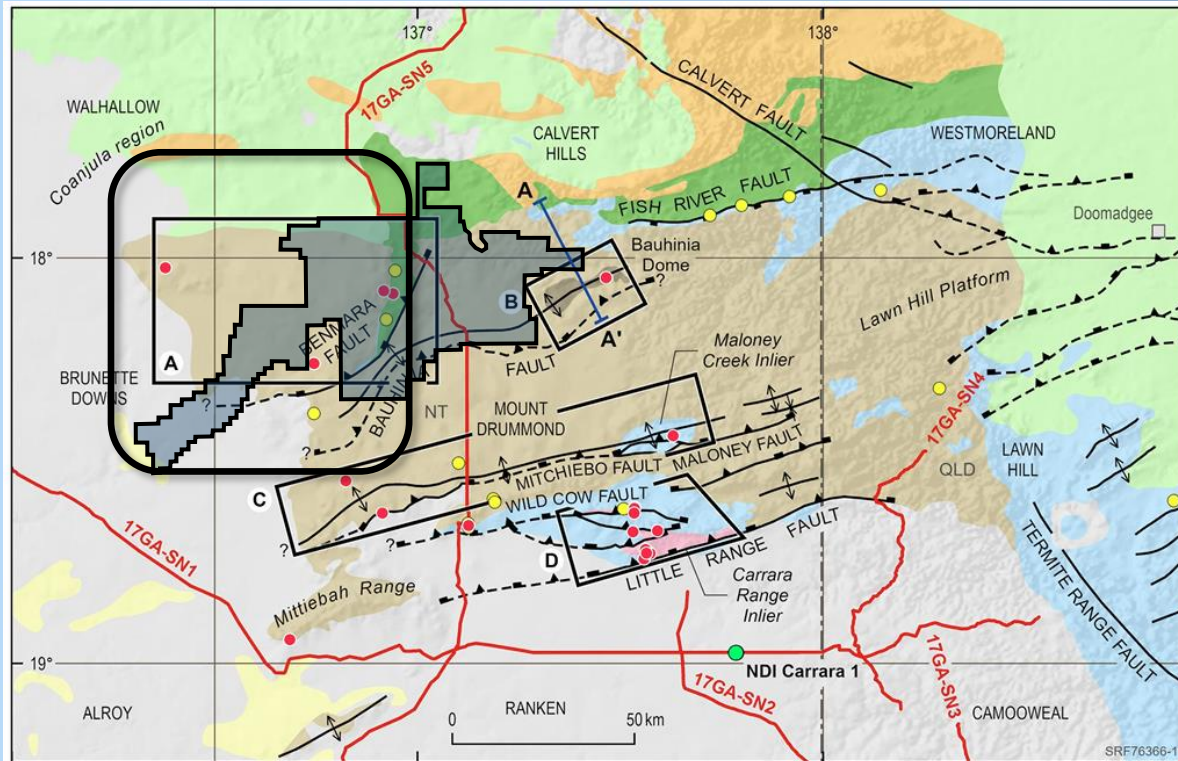
Stratigraphic column from C. J. Carson, N. Kositsin, J. R. Anderson & P. A. Henson (19 Oct 2023): A revised Proterozoic tectono-stratigraphy of the South Nicholson region, Northern Territory, Australia—insights from SHRIMP U–Pb detrital zircon geochronology, Australian Journal of Earth Sciences, DOI: 10.1080/08120099.2023.2264355





## Old and New Geological Setting of Benmara

**Extensive South Nicholson Basin sediments (brown) become McNamara Basin-equivalent sediments (blue).**



**The SEDEX/Mount Isa Cu potential is very greatly heightened.**

*Geological map from C. J. Carson, N. Kositsin, J. R. Anderson & P. A. Henson (19 Oct 2023): A revised Proterozoic tectono-stratigraphy of the South Nicholson region, Northern Territory, Australia—insights from SHRIMP U–Pb detrital zircon geochronology, Australian Journal of Earth Sciences, DOI: 10.1080/08120099.2023.2264355*



# Previous Exploration – Coolabah Minerals / Cedar Resources Benmara Co-Cu-Zn-Pb, U, Au Project

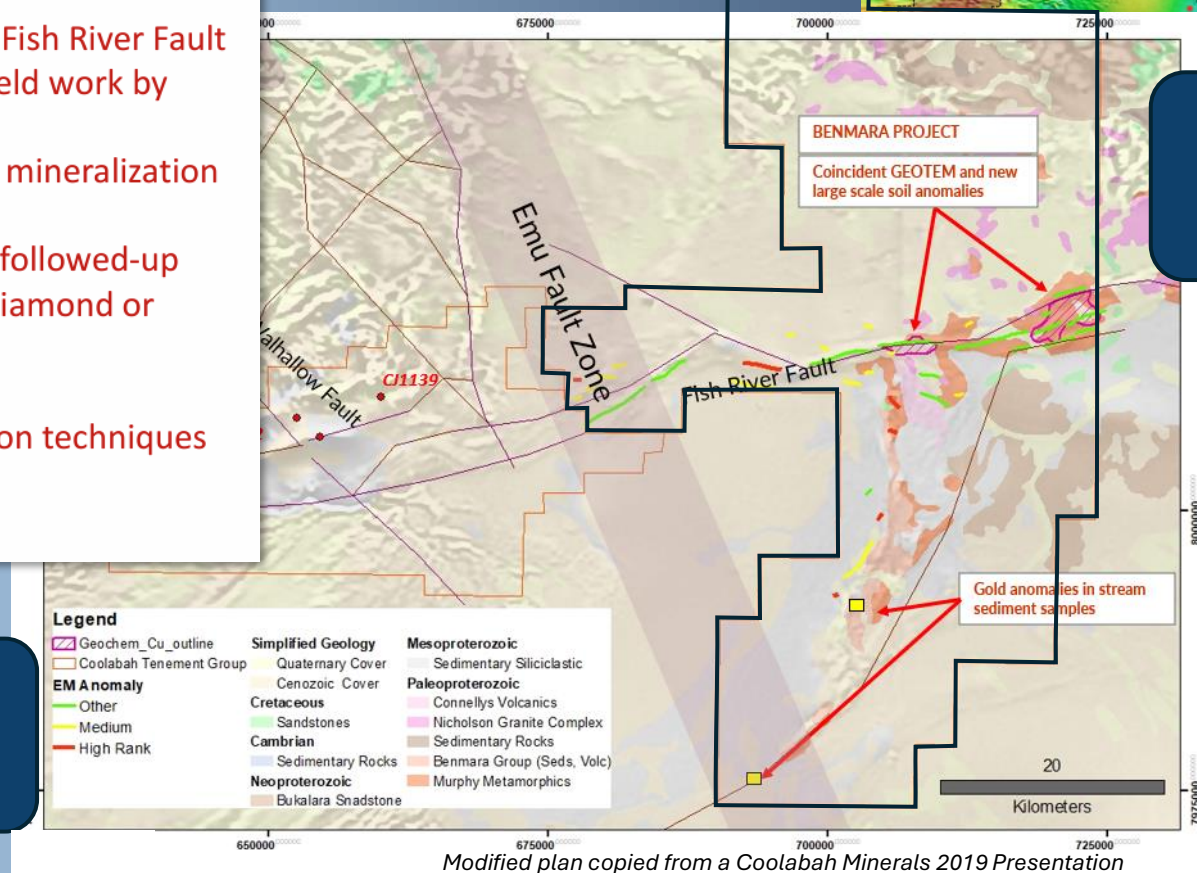
Coolabah-Cedar (**CMCR**) applied Mount Isa Cu-Co/Pb-Zn and Unconformity-related U Exploration Models to the Benmara project area and successfully generated high priority drill targets that were never followed-up

## The Opportunity

- Along strike from large scale mineralisation in QLD – on the Fish River Fault
- Large scale Co-Cu-Zn-Pb anomalies demonstrated by new field work by Coolabah Group
- Historic mapping and sampling identified secondary copper mineralization and hematite alteration
- Historic gold anomalies in stream sediment sampling never followed-up
- Under explored, vast majority of previous exploration had diamond or uranium focus
- Unencumbered tenure, 100% owned, all on pastoral lease
- Outcrop and thin cover over project, conventional exploration techniques effective
- Proterozoic belts highly prospective elsewhere in Australia

*Text excerpt copied from a Cedar Resources Presentation*

**RML acquired the area coinciding with the CMCR Benmara Project.**

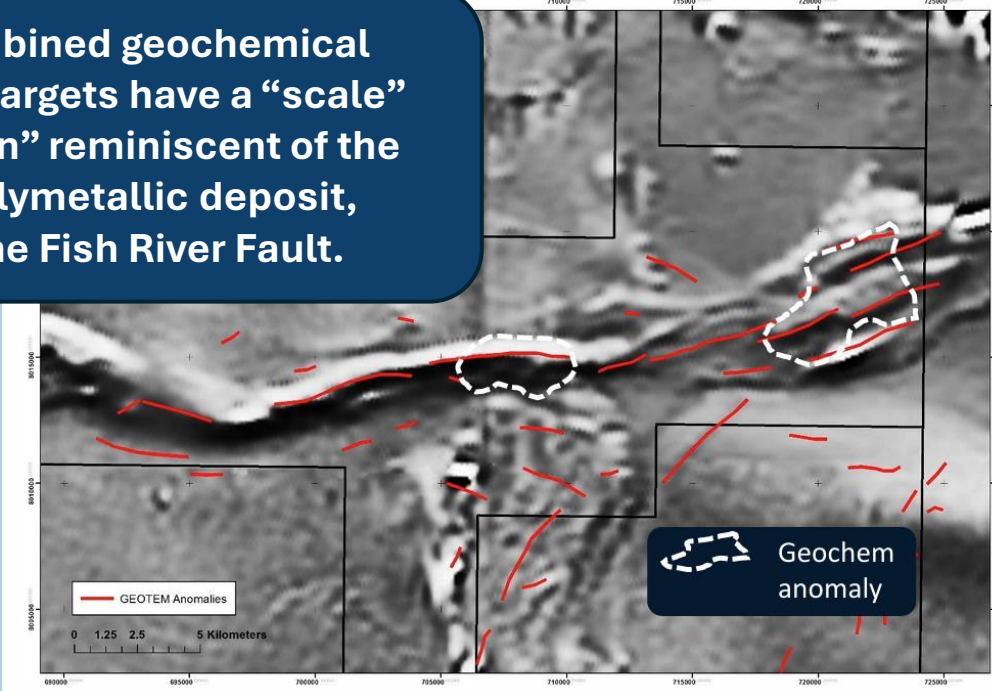


# Coolabah-Cedar Confirms Sedimentary-hosted Mount Isa-Walford Creek Cu-Co Exploration Model

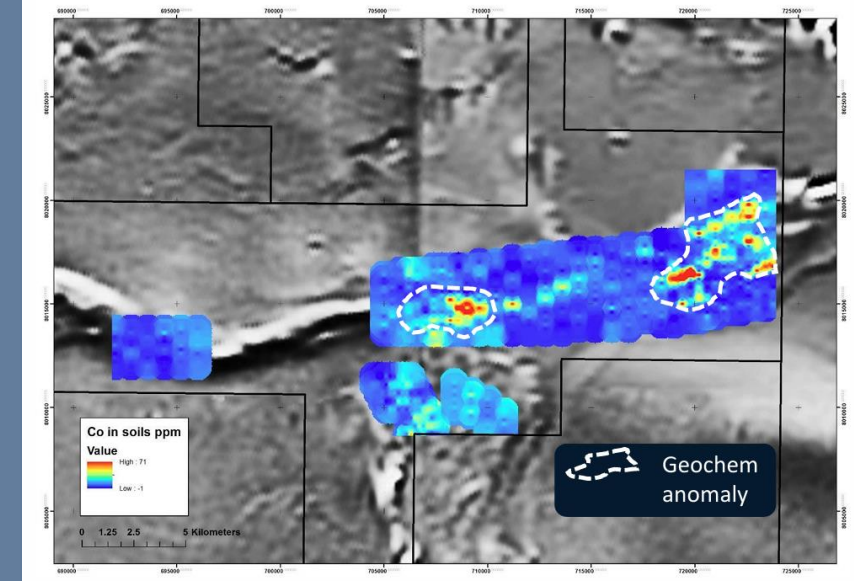
- Strong discrete Cu-Co-Zn soil geochemical anomalies coincide with GEOTEM airborne EM anomalies (Soil Program completed by Cedar Resources. *Results obtained from D. Rawlings, Cedar Resources Final Report for EL30668, September 2019.*)
- Geochem-GEOTEM targets located on Fish River Fault (the Walford Creek deposit occurs on the Fish River Fault (*Refer to Slides 14, 24, 25*))

GEOTEM anomalies and main soil anomalies

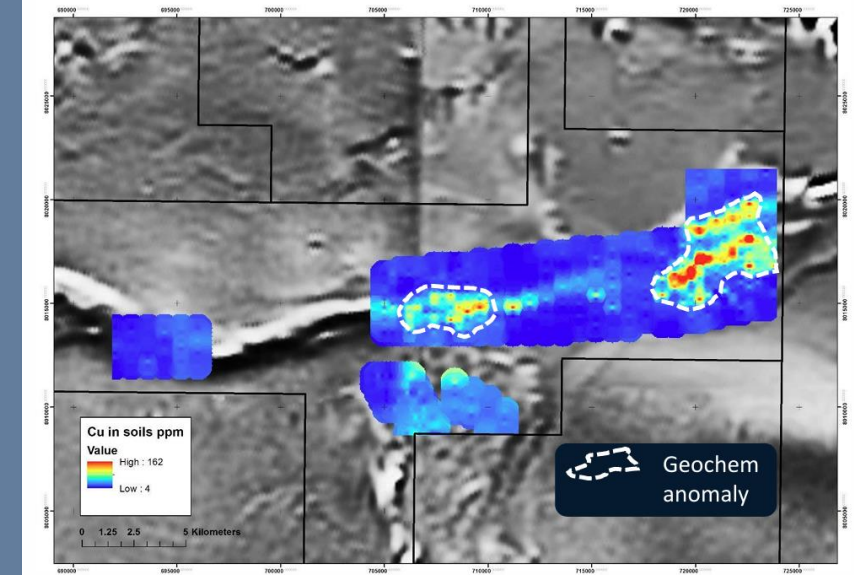
These strong combined geochemical and geophysical targets have a “scale” and “configuration” reminiscent of the Walford Creek polymetallic deposit, also located on the Fish River Fault.



Soil anomalies - Cobalt



Soil anomalies - Copper



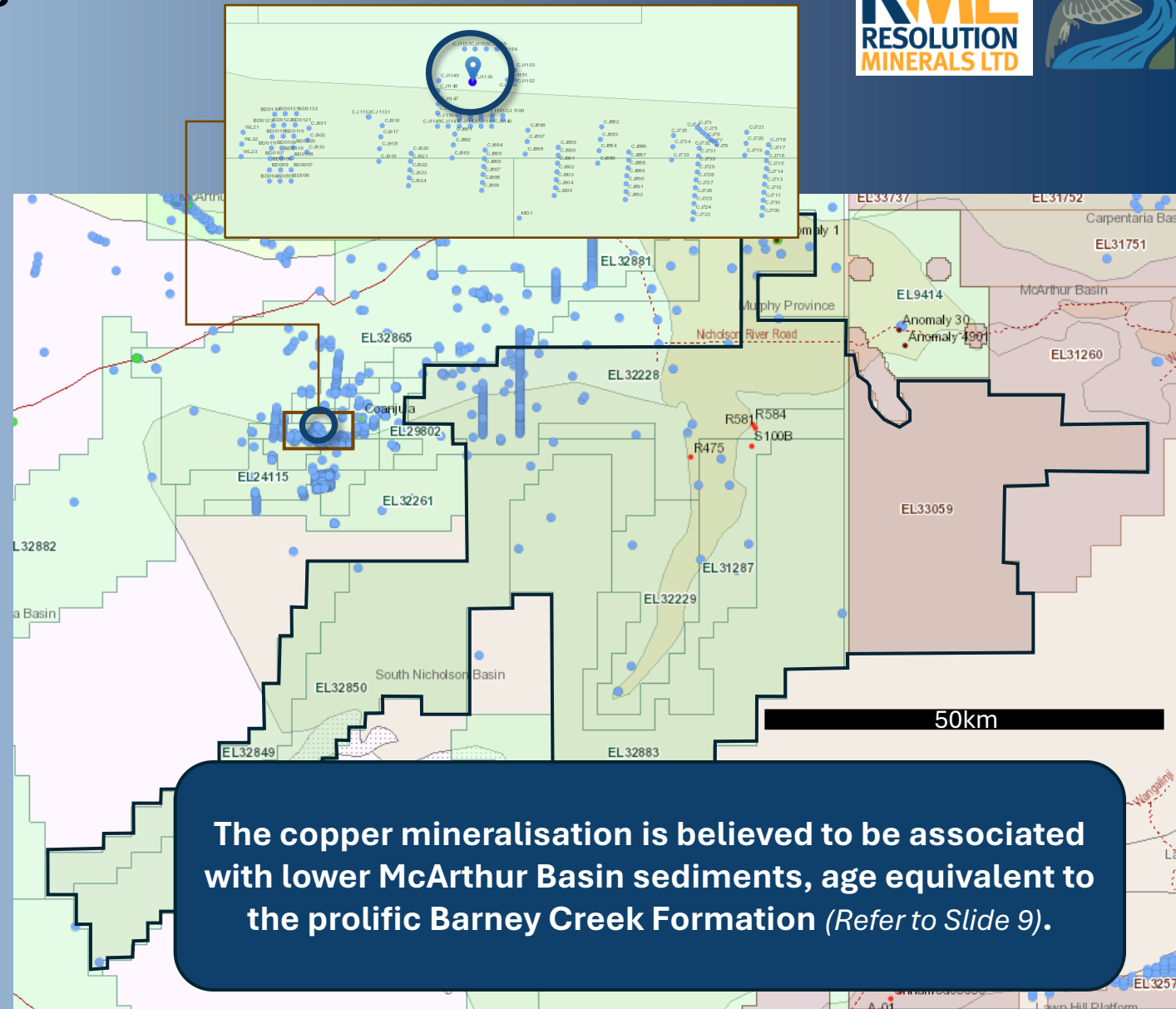


## Previous Exploration - Pass Drilling Campaigns

- Past drilling at Benmara had focussed on diamond and uranium mineralisation
- No past drilling within the project area appears to have tested base metal mineral systems
- **Ashton's drill hole CJ1139 (EOH: 150m) just outside Benmara intersected reduced mudstones and sandstones with copper mineralisation at 108m and between 115m and 123m with up to 30% visible copper**

Cleavage in mudstones varies from  $40^{\circ}$ - $60^{\circ}$ . Sulphides (predominantly pyrite) in small pods or disseminated mainly throughout mudstones. Area of copper enrichment at 108m - mainly 115-123m. Up to 30% Cu.

Extract from original drill log of CJ1129, Open File Report #  
CR1999/0239: Final Report for EL7223 Ashton Mining Ltd  
<https://geoscience.nt.gov.au/gemis/ntgjsipui/handle/1/64075>



Images generated by Riviere Minerals using NTG STRIKE

# RML Generates Mount Isa-Walford Creek Cu-Co Targets (2021)

- RML's identified two VTEM anomalies located on the Fish River Fault
- These are in addition to the two Cu-Co-Zn geochemical and GEOTEM anomalies also on the Fish River Fault (Refer to Slide 12)
- **Fish River Fault now hosts four exceptional Mount Isa-Walford Creek Cu-Co Targets**

**Resolution's target-generation exploration program was highly successful in identifying high quality Tier-1 drill targets.**

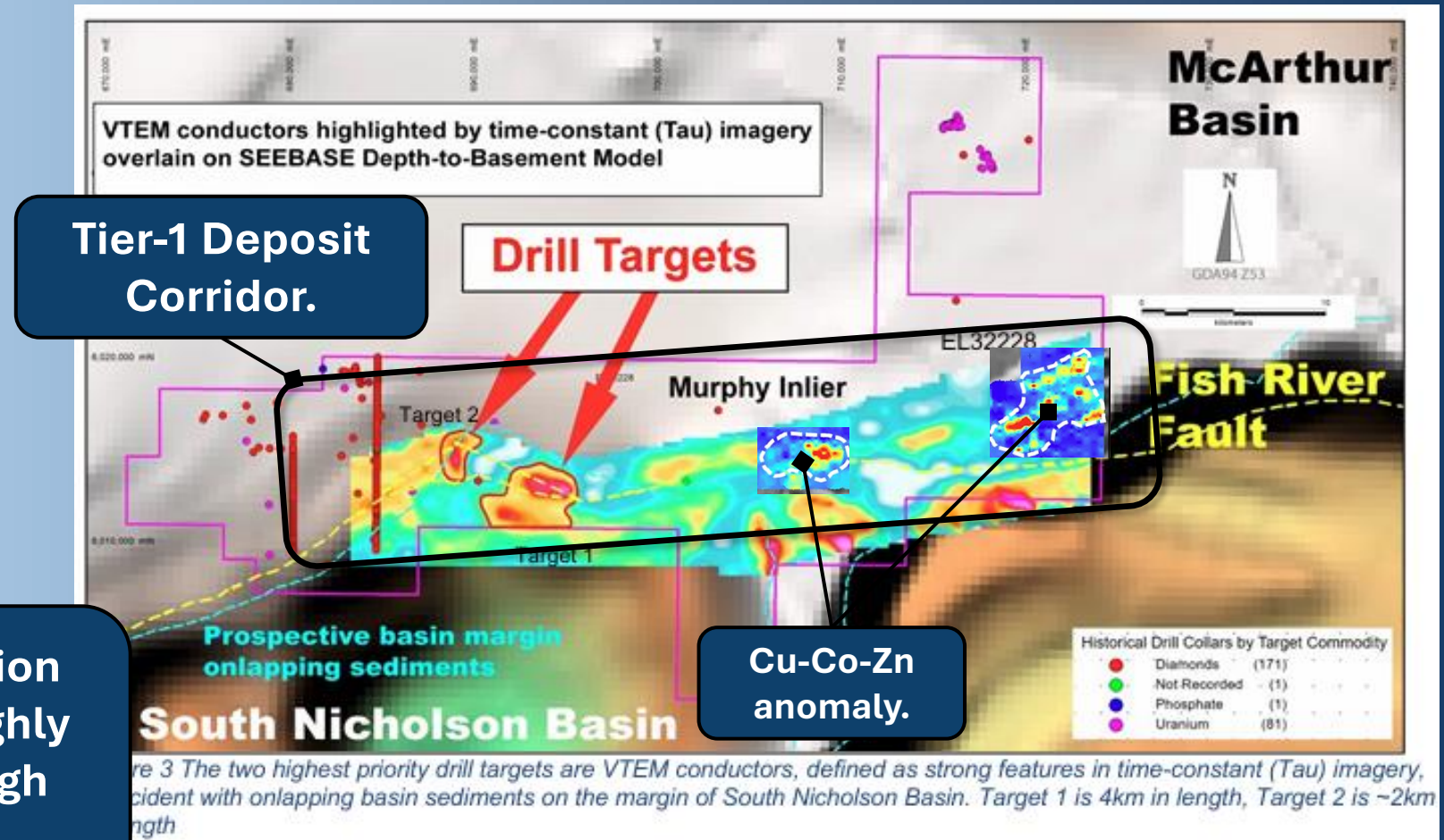
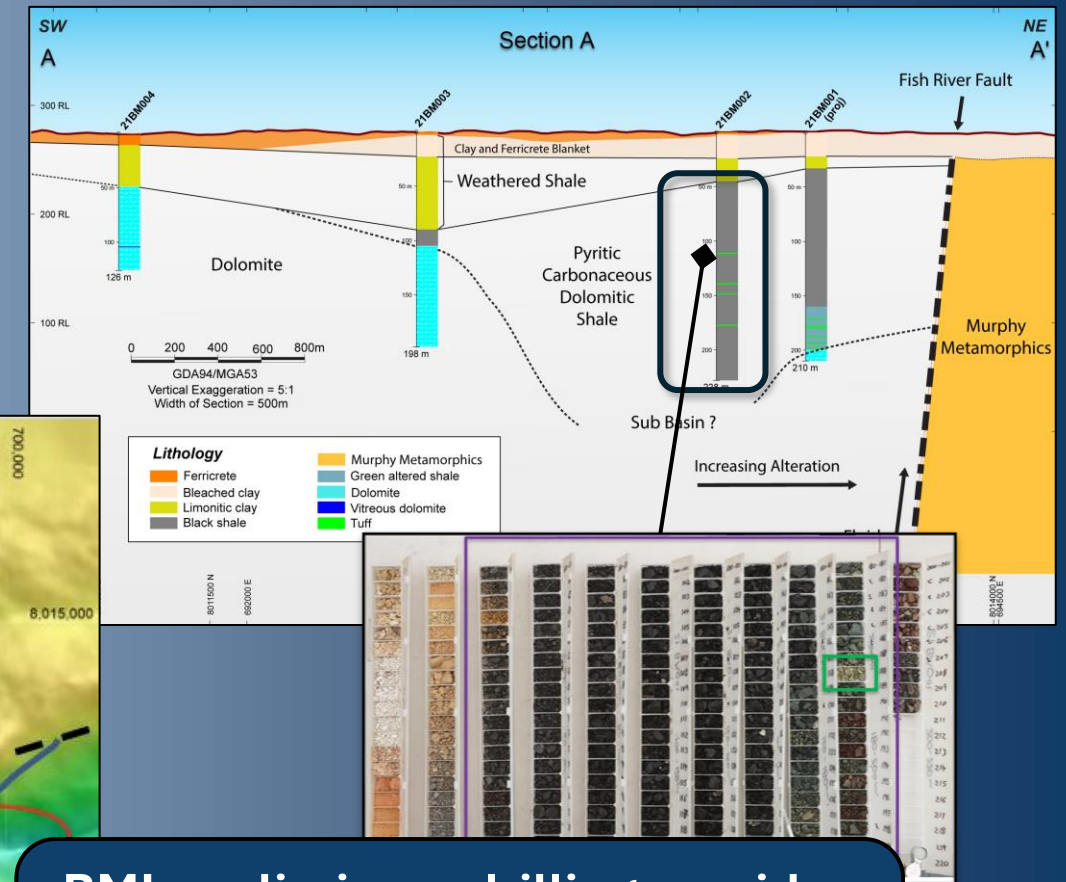
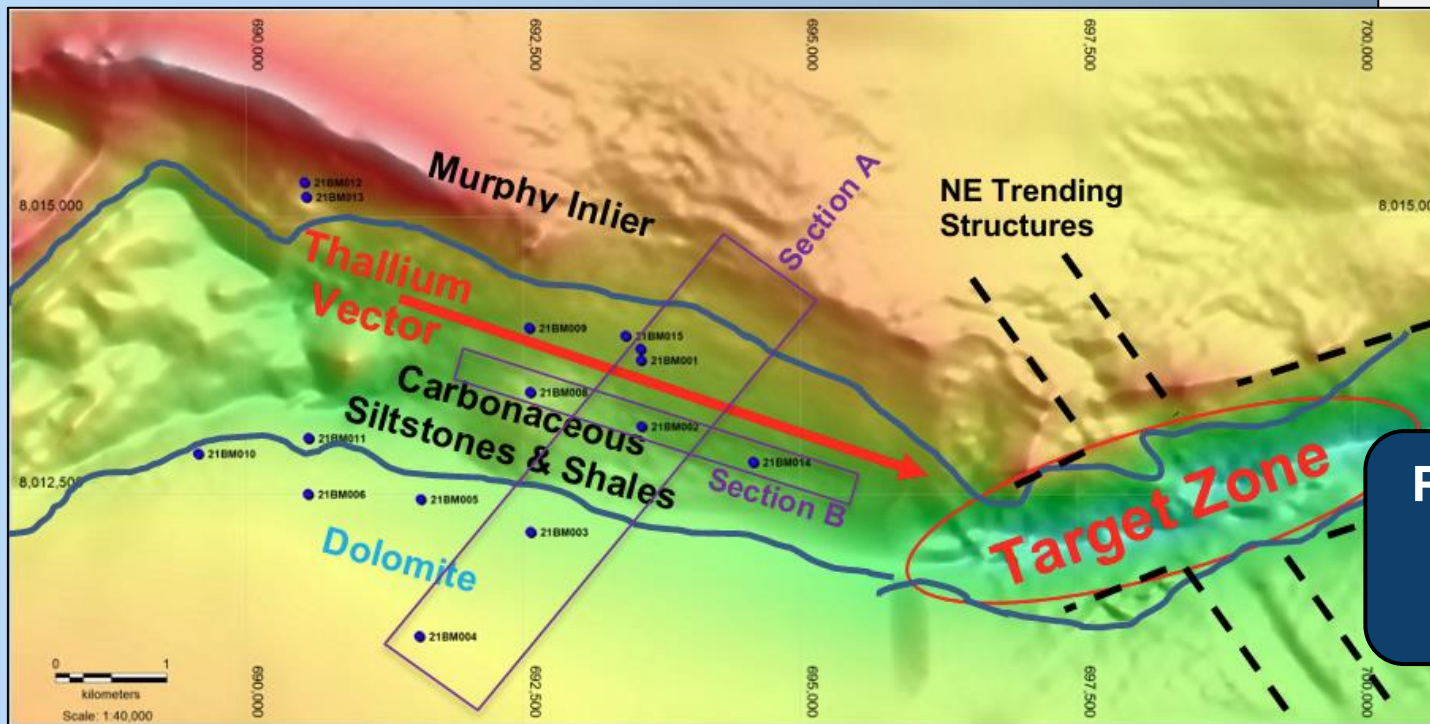


Figure copied from RML ASX Announcement of 1 September 2021 "Copper Drill Targets Identified – Benmara Project, NT"



# RML Drilling Programs Confirm Mount Isa-Walford Creek Cu-Co Exploration Model

- Thick sequences of pyritic shale (in the Benmara Group) with increasing carbonate alternation towards Benmara Fault
- Geochemical (Fe-Mn-Th) pathfinder zoning increasing towards Benmara Fault
- Core holes 23BNM001& 2 confirm findings from RC drilling

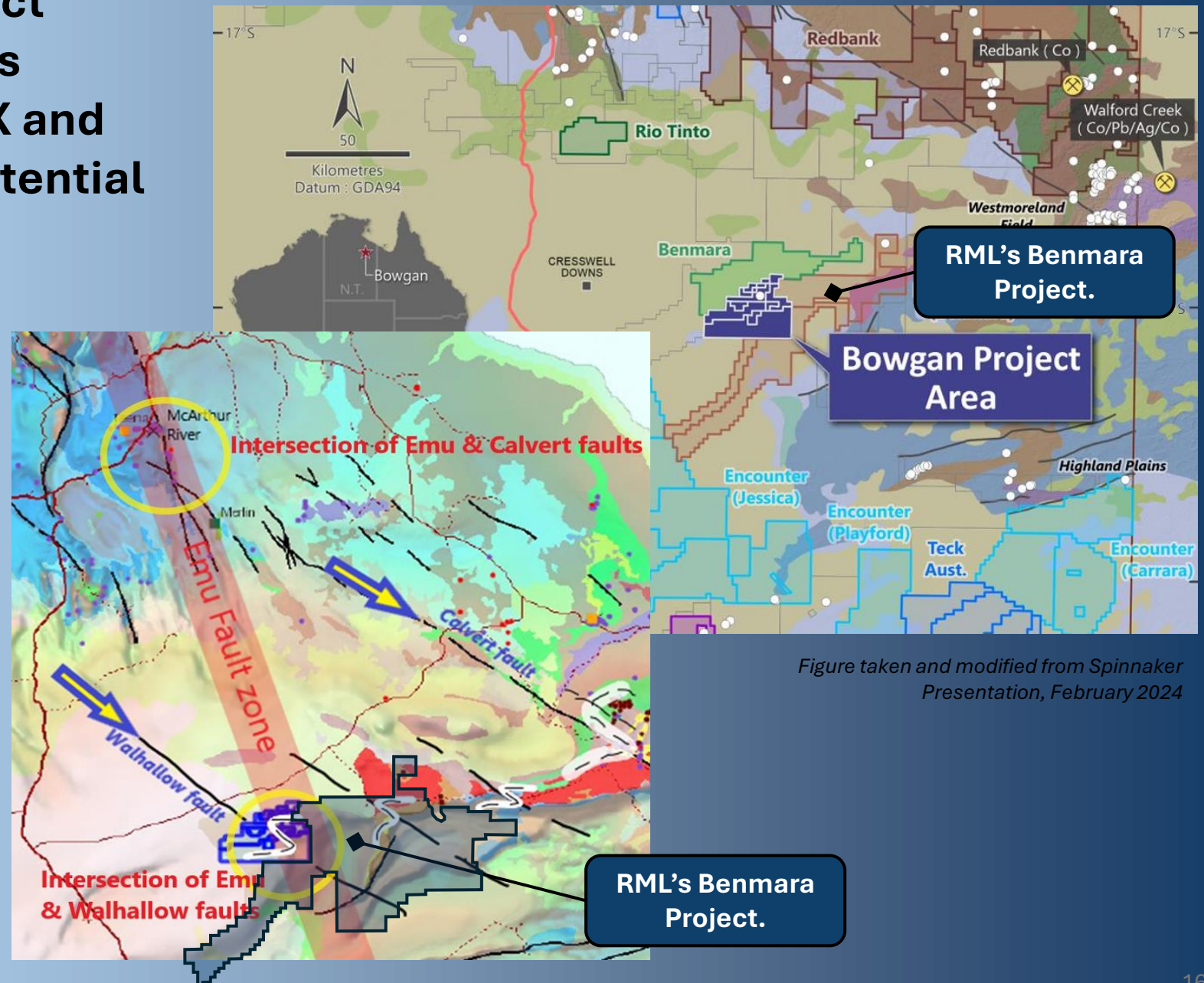


**RML preliminary drilling provides “proof of concept” with further drilling required.**



# Spinnaker's Bowgan Project adjacent to Benmara helps spotlight the IOCG, SEDEX and Unconformity Uranium Potential

- Spinnaker's Exploration Model for Bowgan includes: SEDEX (McArthur River type), IOCG and Unconformity Uranium (Athabasca type)
- **Bowgan and Benmara share the same geology and the same structural setting**
- Both projects occur on an intersection of the Emu, Fish River and Walhallow faults





# South32 2024 Drilling Program

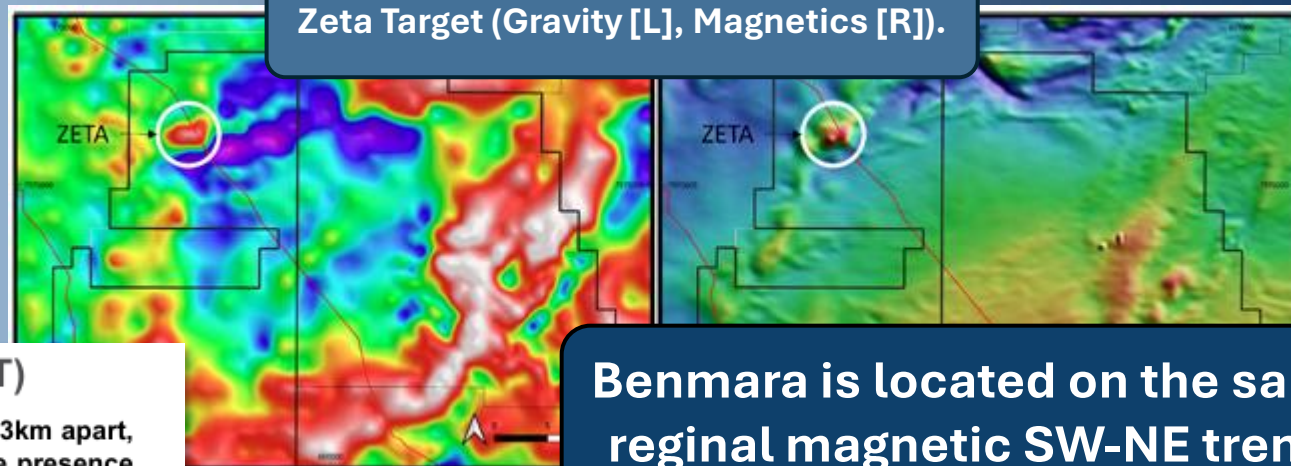
- The Encounter-South32 JV is drilling at the Jessica Project
- The Exploration Model is IOCG mineralisation, and they are focussing coincident magnetic and gravity anomalies

## Copper in first assays from the Jessica Project (NT)

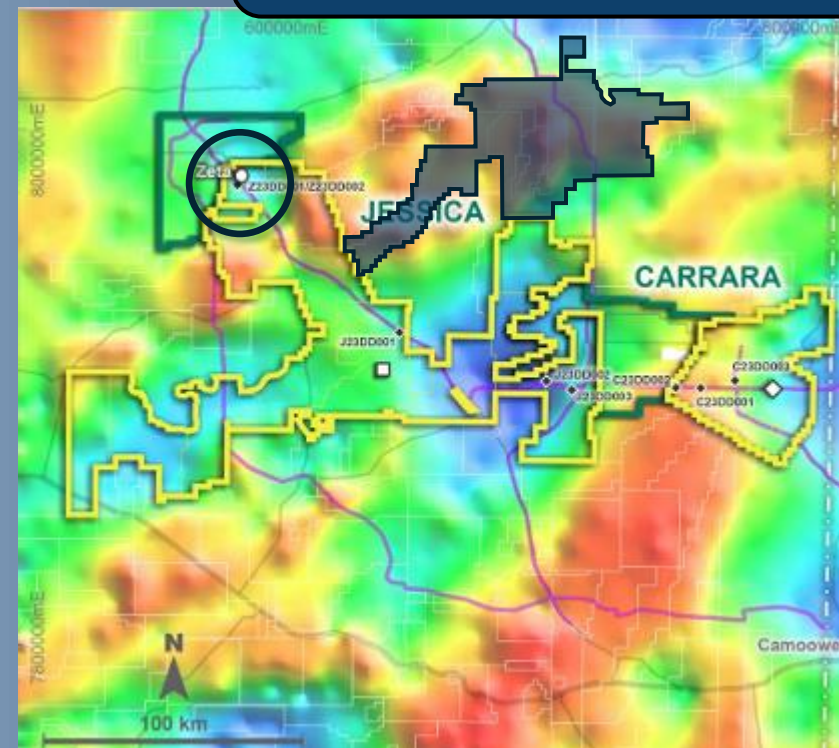
- Assays from the two drill holes completed at the Zeta target ("Zeta"), drilled 1.3km apart, at the Jessica Copper Project ("Jessica") in the Northern Territory confirm the presence of copper sulphide bearing veins and alteration signatures associated with iron oxide copper gold (IOCG) style mineralisation.
- Zeta is a coincident gravity and magnetic anomaly associated with a discrete seismic reflector. Initial drilling has intersected a number of IOCG indicators including:
  - Chalcopyrite and bornite in thin quartz-carbonate veins
  - Intense and pervasive red rock hematite alteration



Copper mineralisation and qtz/carb veins in drilling at Zeta.

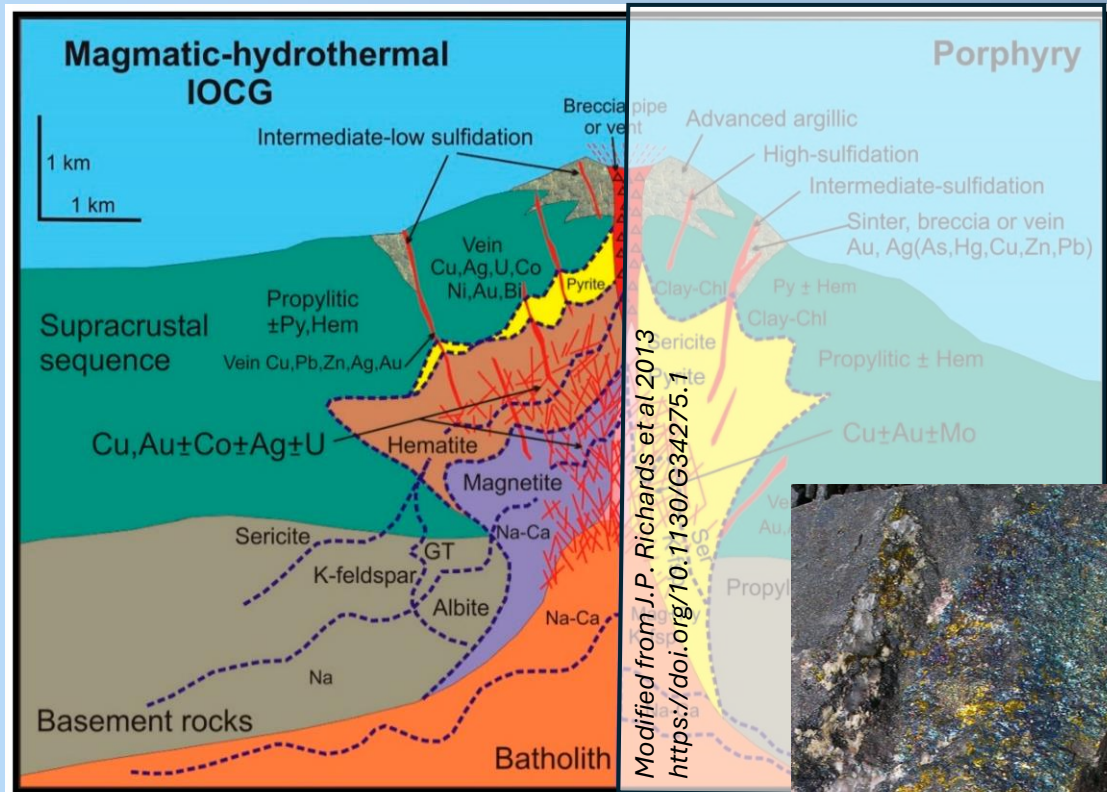


Benmara is located on the same regional magnetic SW-NE trend.



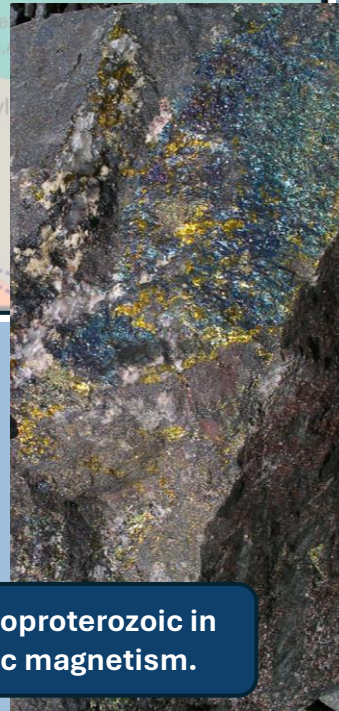


# IOCG Model



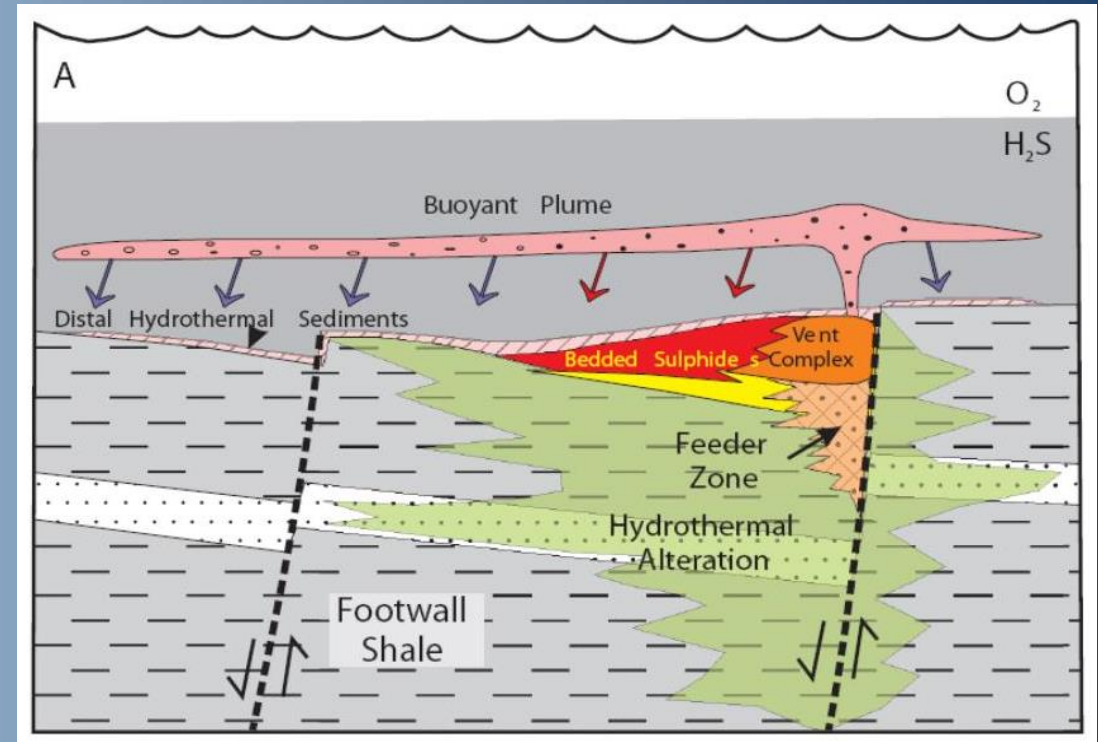
IOCGs (part of the CGI clan of deposits which also include ISCGs) are related to magmatic hydrothermal events that cause alteration, brecciation/veining and mineralisation in an overall oxidised and Fe-rich setting.

**The QLD Cloncurry IOCG-ISCGs are Paleoproterozoic in age and related to orogenic/post orogenic magnetism.**



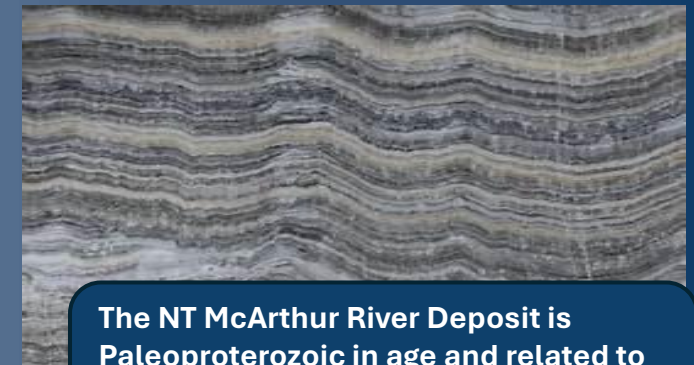
*Rock specimens are not the property of Resolution Minerals Ltd*

# SEDEX Model



Modified from J911 Metallurgist  
SEDEX Sedimentary Exhalative Ore Deposits  
(911metallurgist.com)

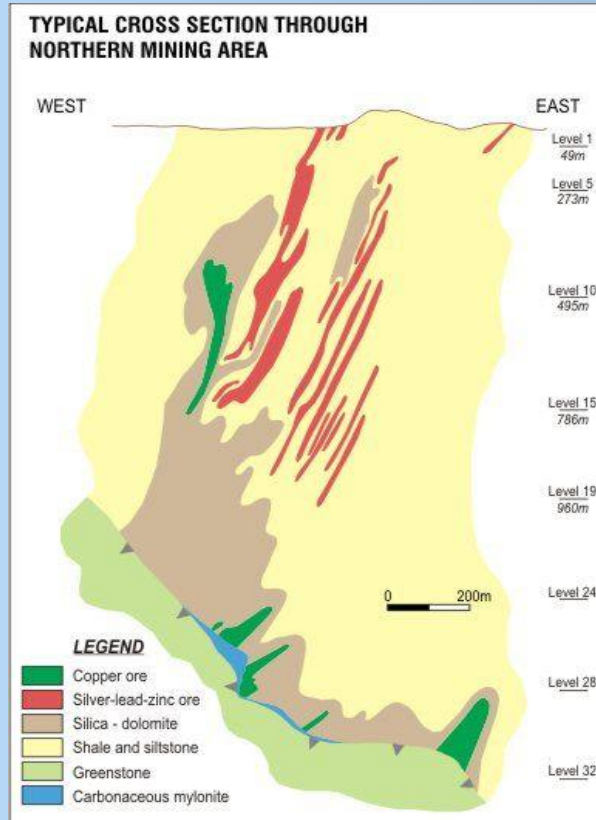
SEDEX deposits are related to hydrothermal “basin dewatering” events that cause syn-depositional alteration and predominantly laminated mineralisation (Pb-Zn ± Ag) that is adjacent to and extends from an active sedimentary basin-related fault.



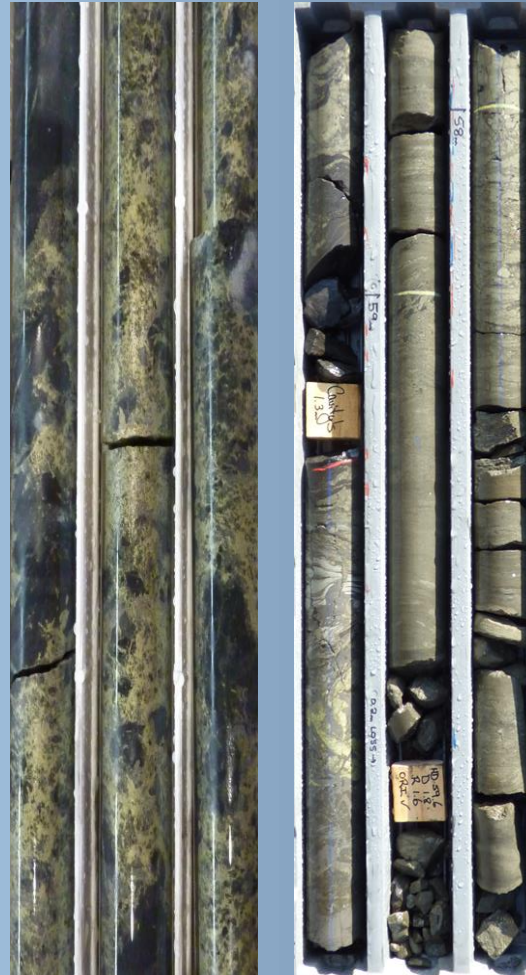
**The NT McArthur River Deposit is Paleoproterozoic in age and related to the Batten Trough-controlling Emu Fault (within the Arthur Basin).**



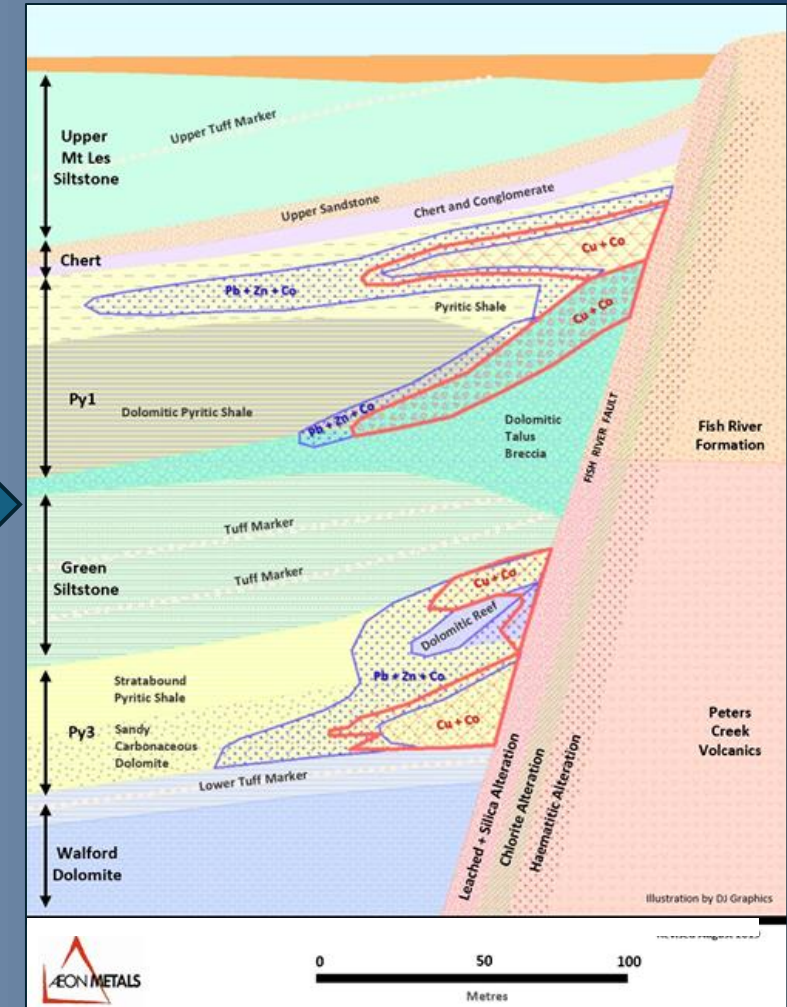
# Mount Isa (Cu-Co) - Walford Creek Model



The Mount Isa Cu [Co] deposit is a unique sedimentary-hosted mineral system with few deposits like it globally. A hybrid deposit with hydrothermal/magmatic influences.



Rock specimens are not the property of Resolution Minerals Ltd



The Walford Creek Cu-Co deposit is in many respects similar to the Mount Isa Cu [Co] deposit.

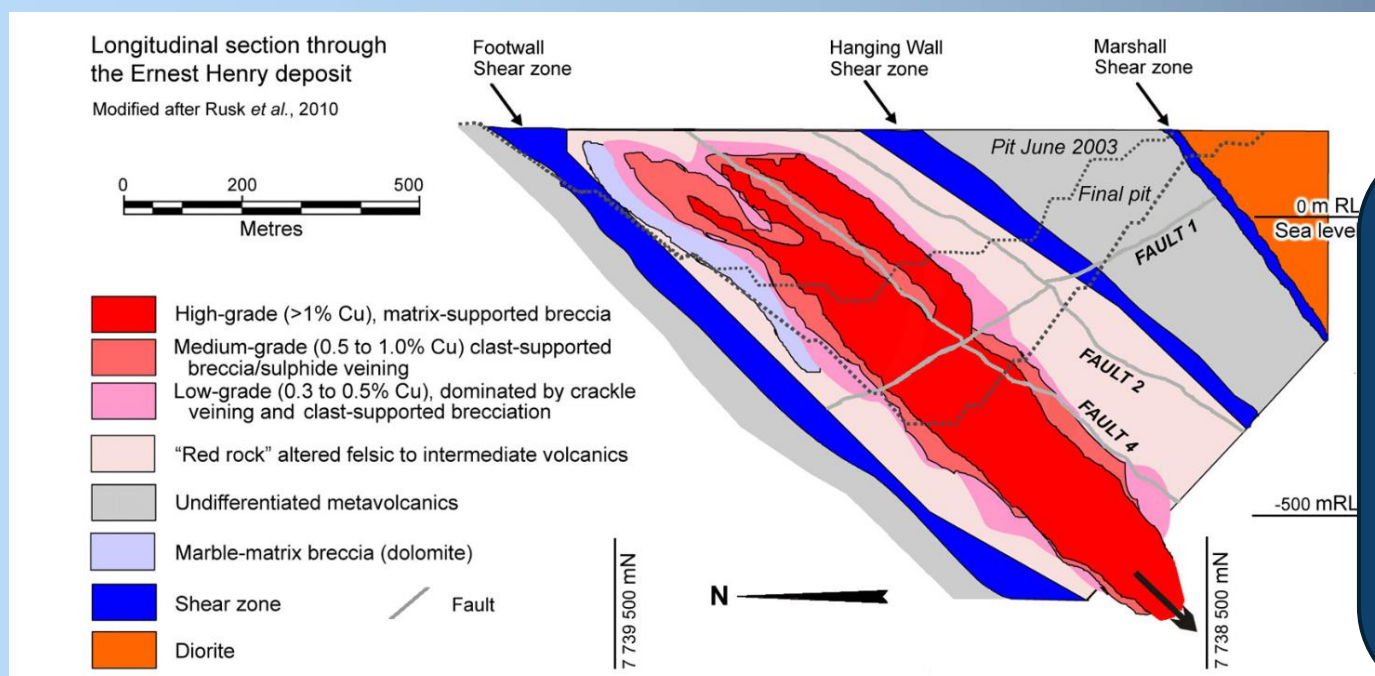
Modified from Walford Creek Deposit, Chapter 19, Northwest Mineral Province Deposit Atlas  
[https://espace.library.uq.edu.au/data/UQ\\_f5c1c1a/Chapter\\_19\\_Walford\\_Creek](https://espace.library.uq.edu.au/data/UQ_f5c1c1a/Chapter_19_Walford_Creek)

# IOCG Analogue for Benmara – the Ernest Henry Deposit

- Located in the Easter Fold Belt (of the Mount Isa Inlier) (Refer to slide 5)
- Located adjacent to the NNW-SSE Cloncurry Fault Zone
- Local geology includes Paleoproterozoic sediments (1760-1660Ma) and volcanics intruded by granites (1540-1500Ma)
- Mineralisation is associated with structurally controlled localised [regional] hydrothermal alteration and brecciation and veining



Rock specimen is not the property of Resolution Minerals Ltd



**Ernest Henry had a pre-mining (1998)  
Measured Mineral Resource of 166Mt @  
1.1% Cu & 0.54g/t Au**

**At 2020 the remaining Total Resource  
was 75.4Mt @ 1.15% Cu & 0.61g/t Au**

Measured Resource - 4.7 Mt @ 0.93% Cu, 0.51 g/t A, Indicated Resource - 55.2 Mt @ 1.16% Cu, 0.61 g/t Au, Inferred Resource - 15.5 Mt @ 1.17% Cu, 0.62 g/t Au)

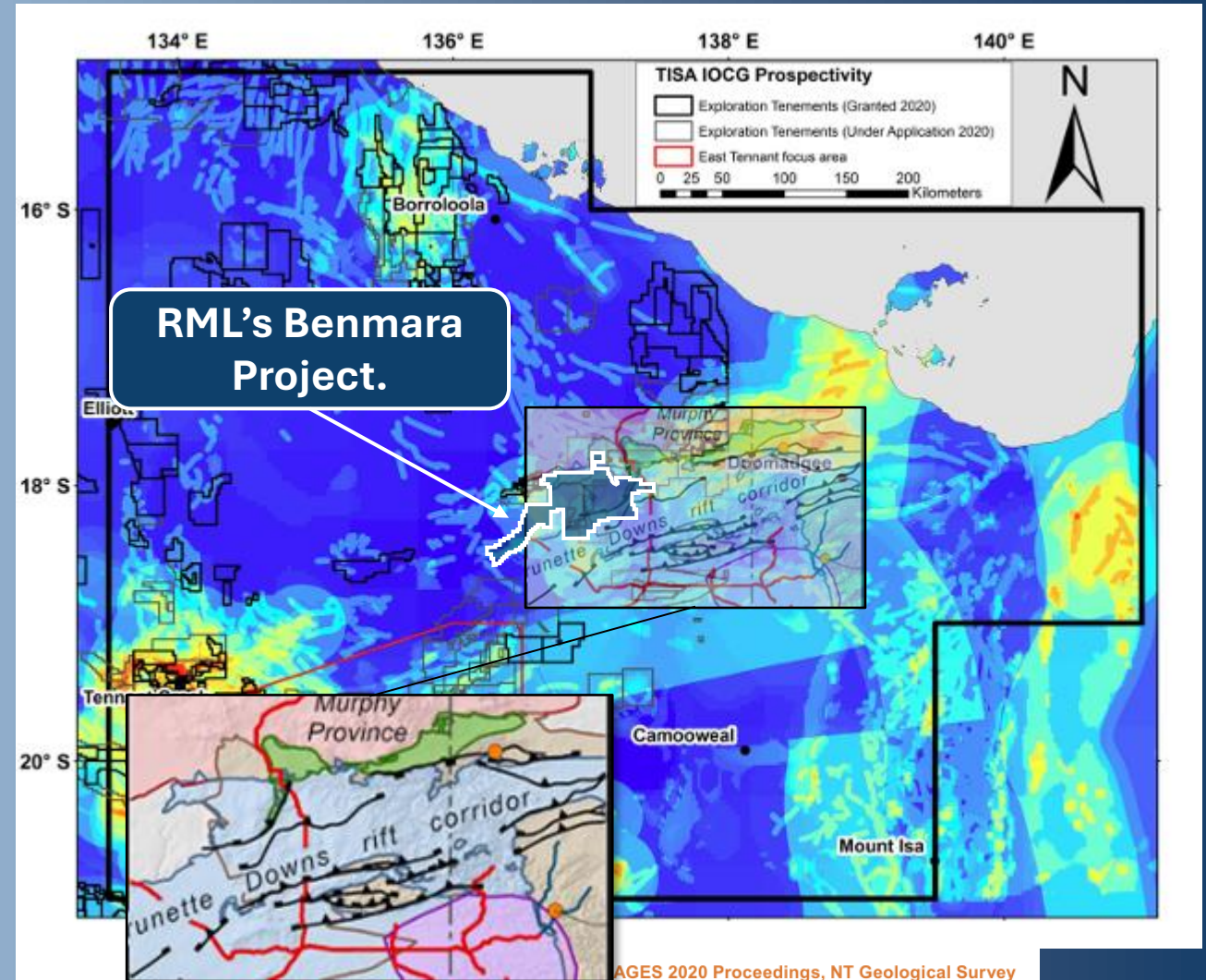
Resource statements from Porter GeoConsultancy 2005: Link: [PorterGeo Database - Ore Deposit Description](#)



# IOCG Potential at the Benmara Project

## Benmara is highly prospective for Tier-1 scale IOCG mineralisation

- Benmara is centrally located on a TISA IOCG Prospectivity corridor which coincides with the **Brunette Downs Rift Corridor** (Refer slide 4)
- Benmara hosts:
  - Deep structures orogenic structures that serve as conduits for IOCG emplacement
  - Magnetic and gravity anomalies are associated with these structures
- Benmara is “along strike” from a current IOCG (magnetic-gravity) target recently drilled by South32



Exploring for the Future: Integrated geoscience supporting exploration and discovery in the under cover Tennant Creek – Mount Isa region

Ron Hackney<sup>1,2</sup>, Anthony Schofield<sup>1</sup>, Andy Clark<sup>1</sup>, Michael Doublier<sup>1</sup>, James Murr<sup>1</sup>, Roger Skirrow<sup>1</sup>, James Goodwin<sup>1</sup>, Andrew Cross<sup>1</sup>, Liam Pitt<sup>1</sup>, Jingming Duan<sup>1</sup>, Wenping Jiang<sup>1</sup>, Phillip Wynne<sup>1</sup>, Angela O'Rourke<sup>1</sup>, Ian Roach<sup>1</sup> and Karol Czarnota<sup>1</sup>



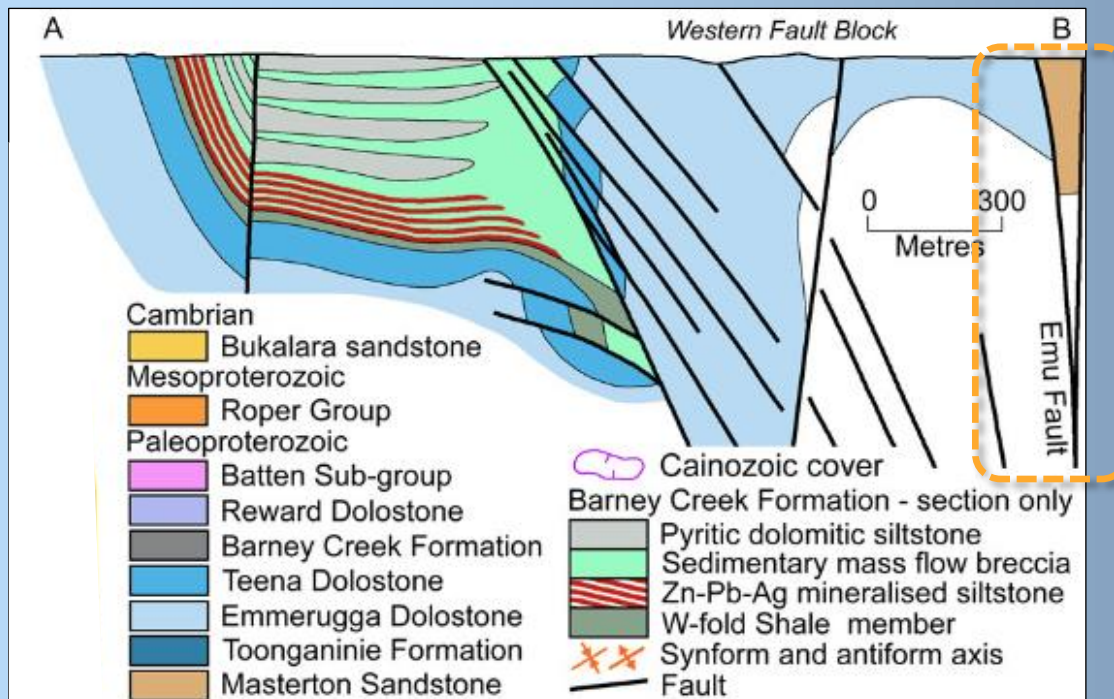




# SEDEX Analogue for Benmara – the McArthur River (HYC) Deposit

- Located in the southern McArthur Basin (part of the Carpentaria 1,200km long Zn Belt) (Refer to slide 5)
- Located adjacent to the NNW-SSE Emu Fault (which trends southwards to Benmara) (Refer to slide 6)
- Hosted in sediments are the Barney Creek Formation of the McArthur Group (Refer to slide 12)

***“The ca 1640Ma Barney Creek Formation is one of the most prospective units for classic-dominated (CD-type) Zn-Pb deposits in the world, hosting the giant McArthur River Zn-Pb-Ag and Teena Zn-Pb deposits.”*** Kunzmann et al 2021 <https://doi.org/10.1080/08120099.2022.2095030>



## In 2004 HYC a Total Mineral Resource and Reserve as follows:

Proven Reserve - 5.2 Mt @ 31.0% Zn, 5.3% Pb, 53 g/t Ag,  
 Probable Reserve - 26.0 Mt @ 11.0% Zn, 5.1% Pb, 53 g/t Ag  
 Measured Resource - 80.0 Mt @ 13.0% Zn, 5.8% Pb, 57 g/t Ag,  
 Indicated Resource - 41.0 Mt @ 12.0% Zn, 5.5% Pb, 57 g/t Ag,  
 Inferred Resource - 0.7 Mt @ 17% Zn, 5% Pb, 60 g/t Ag.

Resource statements from Porter GeoConsultancy 2005:

Link: [PorterGeo Database - Ore Deposit Description](#)

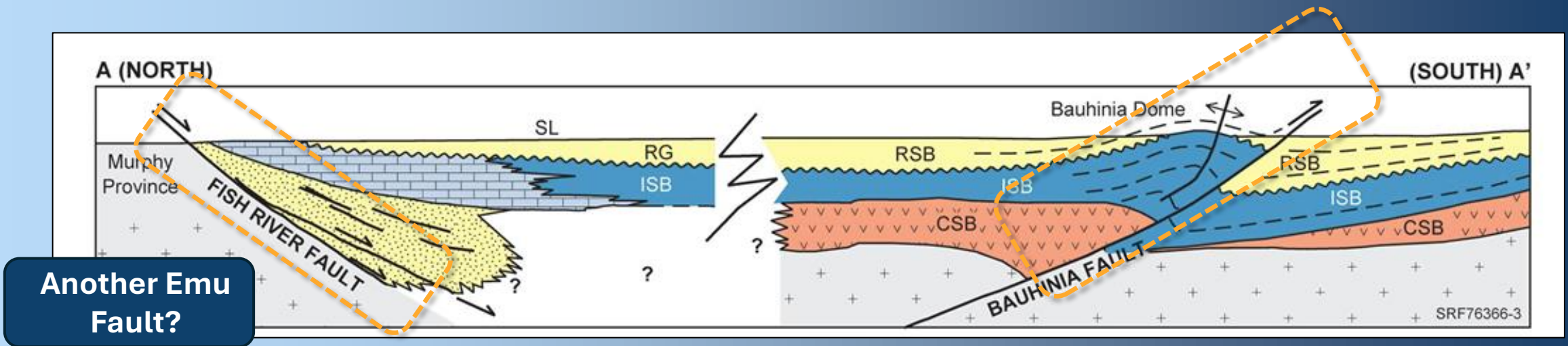
Cross section modified from Ahmad et al 2013  
<https://doi.org/10.1016/j.chemgeo.2020.119975>

# SEDEX Potential at the Benmara Project

## Benmara is highly prospective for Tier-1 scale SEDEX mineralisation

Benmara hosts:

- Lithologies assigned to the McNamara Group which is stratigraphically equivalent to the Mount Isa Group (in QLD) and the McArthur Group (McArthur Basin NT)
- Deep basin-related structures that serve as conduits for SEDEX development
- Magnetic and gravity anomalies are associated with these structures



Cross Section from C. J. Carson, N. Kositcin, J. R. Anderson & P. A. Henson (19 Oct 2023): A revised Proterozoic tectono-stratigraphy of the South Nicholson region, Northern Territory, Australia—insights from SHRIMP U–Pb detrital zircon geochronology, Australian Journal of Earth Sciences, DOI: 10.1080/08120099.2023.2264355



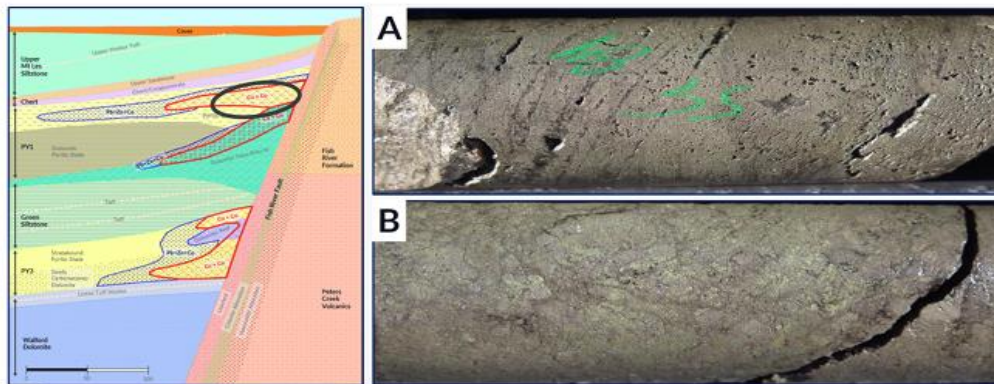


# Sedimentary-hosted Mount Isa Cu-[Co] Analogue for Benmara – Walford Creek



## Walford Creek is a polymetallic Cu-Pb-Zn-Ag-Co-(Ni) sedimentary-hosted sulphide system deposit

- Located in the southern McArthur Basin (part of the Carpentaria 1,200km long Zn Belt) (*Refer to slide 5*)
- Located on the Fish River Fault which trends directly into Benmara
- Hosted in Mt Les Siltstone Fickling Group (ca 1640Ma) equivalent to McNamara Group (*Refer to slide 9*)
- Two broad types of mineralisation are recognised: 1) Massive pyrite Cu-Co mineralisation zone proximal to the hydrothermal conduit (the Fish River Fault; 2) Pb-Zn-Co mineralisation zone distal to the hydrothermal conduit



**Walford Creek (2023) Inferred Mineral Resource of 72.6Mt @ 0.64% Cu, 1.17% Pb, 0.87% Zn, 28.7g/t Ag & 0.12% Co**

Resource statements from AEON ASX announcement 15 March 2023; [02643714.pdf](https://www.aeon.com.au/02643714.pdf) ([weblink.com.au](https://weblink.com.au))

# Sedimentary-hosted Mount Isa Cu-[Co] Potential at the Benmara Project

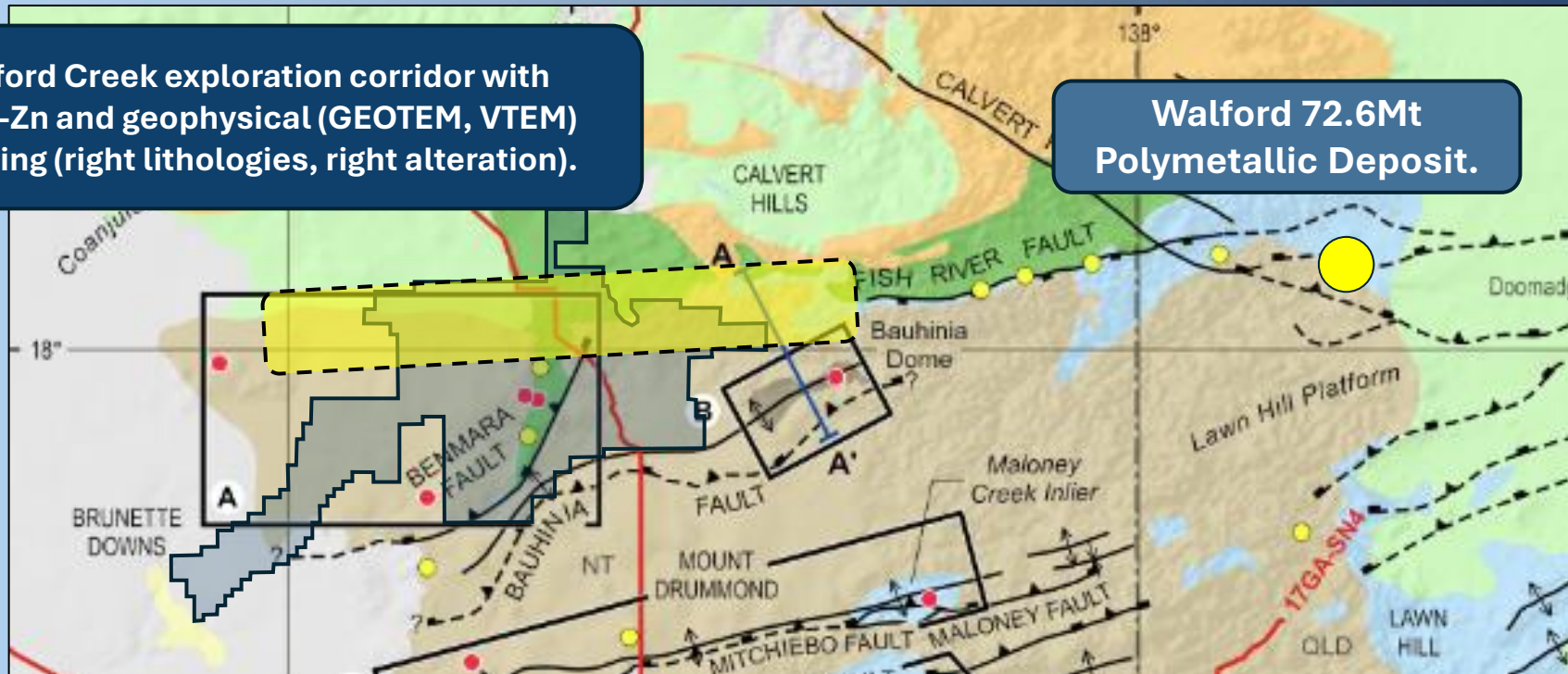
## Benmara is highly prospective for Tier-1 scale Mount Isa/Walford Creek mineralisation

Benmara hosts:

- The same lithologies as Walford Creek polymetallic deposit assigned to the McNamara Group which is stratigraphically equivalent to the Mount Isa Group (in QLD)
- Pyrite-rich carbonaceous sediments with Mount Isa/Walford Creek style alternation identified in RML drilling
- The Fish River Fault – a deep basin-related structure that hosts the Walford polymetallic deposit
- Discrete Cu-Co-Zn geochemical and geophysical anomalies that are located on the Fish River Fault

Mount Isa (Cu) -Walford Creek exploration corridor with geochemical Cu-Co-Zn and geophysical (GEOTEM, VTEM) anomalies, and drilling (right lithologies, right alteration).

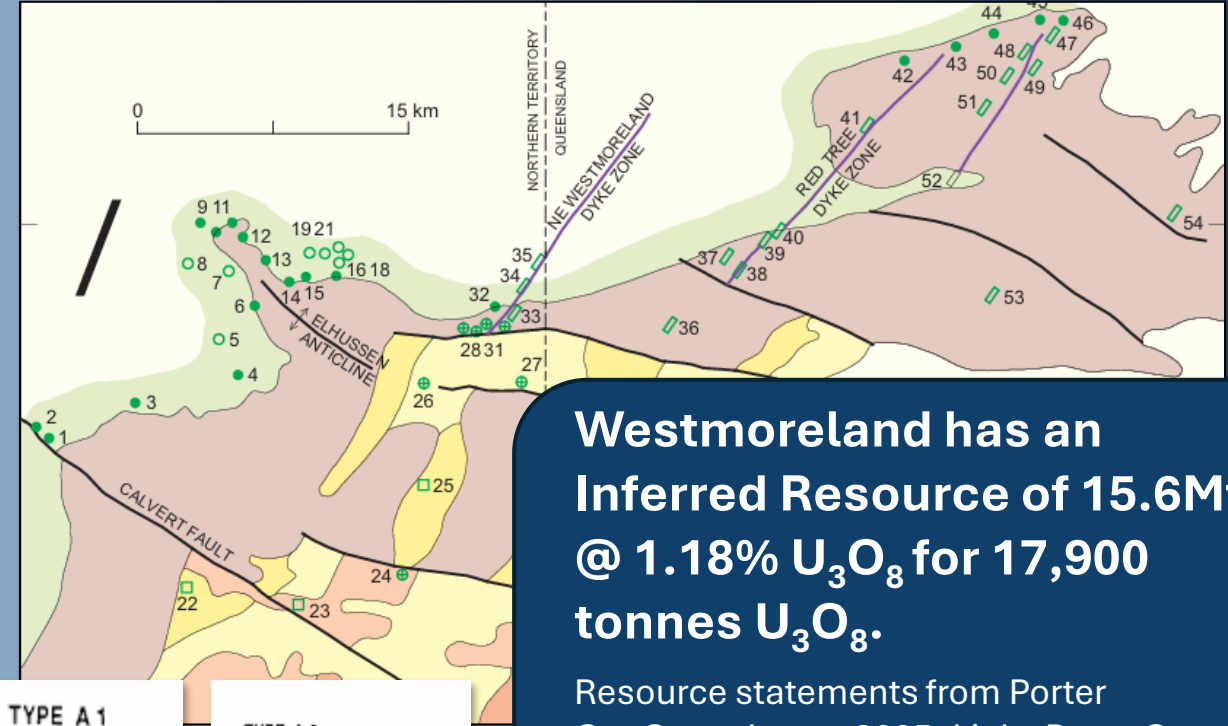
Walford 72.6Mt  
Polymetallic Deposit.





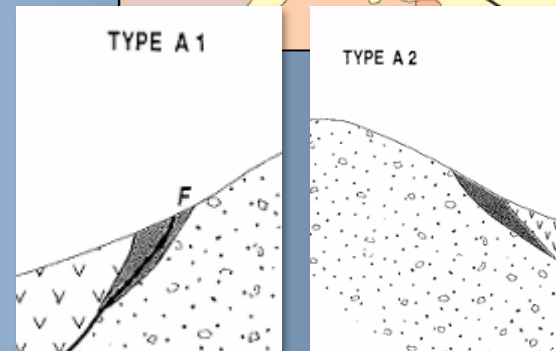
# Unconformity Uranium Analogue for Benmara: Westmoreland

- Located on the margin between the southern McArthur Basin and the Murphy Inlier of the Carpentaria Province (Refer to slide 5)
- Hosted in basal McArthur Basin Westmoreland Conglomerates (ca 1800-1750Ma) sitting unconformably above Murphy Inlier rocks
- Several types of mineralisation are recognised with the two most prevalent being contact-related (A-type) and dyke-related (B-type)
- **The Westmoreland uranium deposits are analogous to the world-class Athabasca** unconformity uranium deposits [*Uranium deposits within the Athabasca Basin are located on deep seated structures at an unconformity between oxidised permeable Palaeoproterozoic-aged sediments and older uranium-rich reduced Palaeoproterozoic/ Archaean-aged granites and metamorphics*]

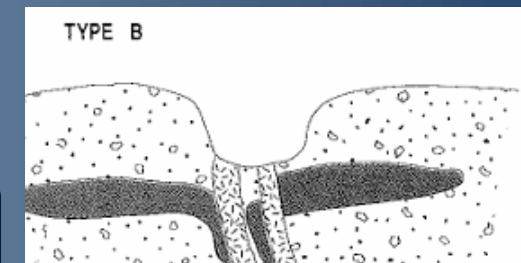


**Westmoreland has an Inferred Resource of 15.6Mt @ 1.18%  $U_3O_8$  for 17,900 tonnes  $U_3O_8$ .**

Resource statements from Porter GeoConsultancy 2005: Link: [PorterGeo Database - Ore Deposit Description](#)



**Westmoreland uranium types.**

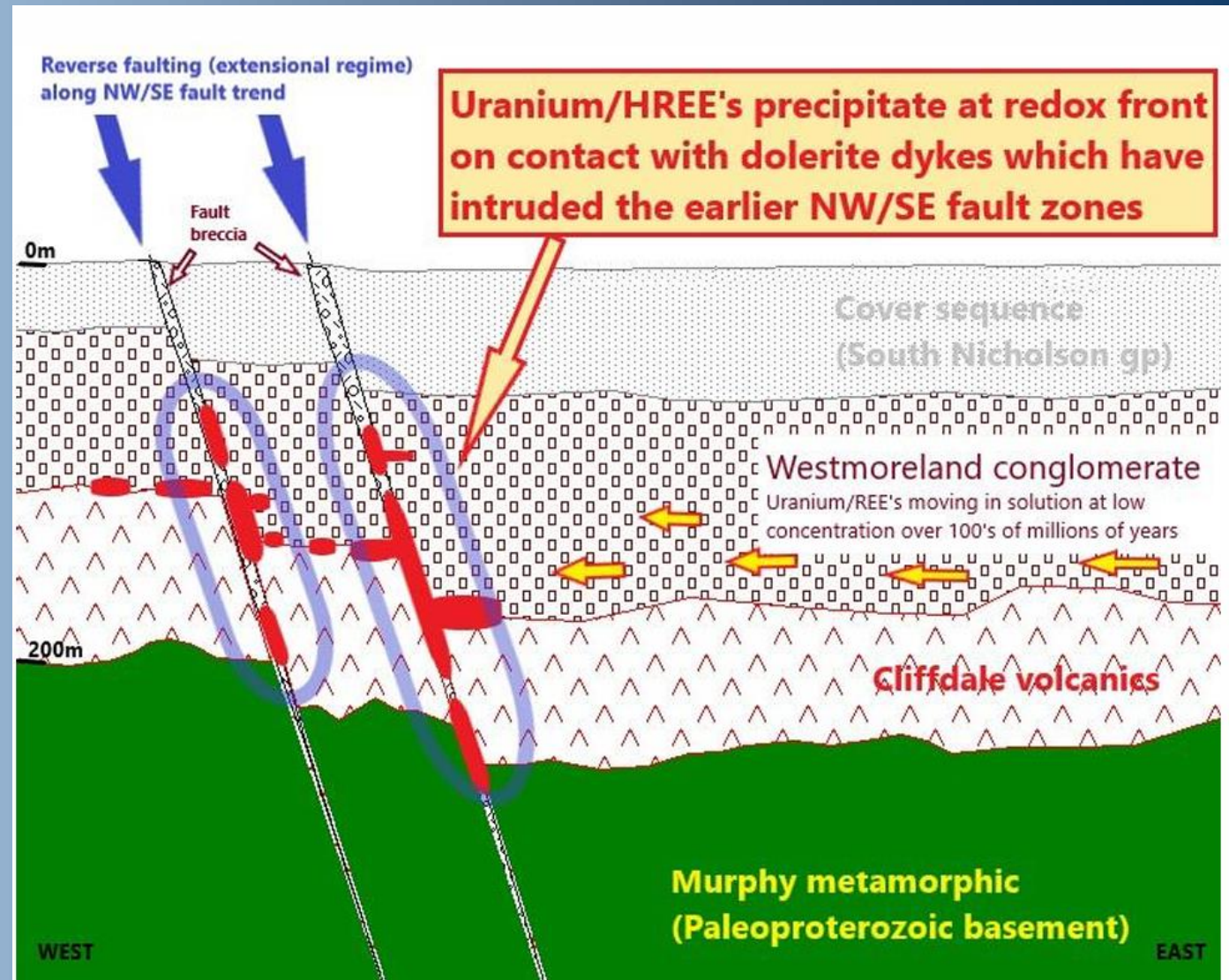


# Unconformity Uranium Potential at the Benmara Project

Benmara is highly prospective for  
unconformity-related uranium  
mineralisation

Benmara hosts :

- Known Westmoreland type uranium mineralisation (*known as Anomaly A*)
- Basal McArthur Basin sediments including stratigraphic equivalents to the Westmoreland Conglomerate (*Refer to Slide 6 and Slide 12*)
- Favourable structures that form conduits and traps for uranium mineralisation



Murphy inlier is the basement unit with unconformity  
with Westmoreland conglomerates – fluid pathways

Figure taken and modified from Spinnaker  
Presentation, February 2024



# Mineral Systems Search Areas of the Benmara Project

The following areas are primary focus areas only for each Exploration Model, with other parts of the project also possible.

## SEDEX/MOUNT ISA Cu/IOCG CORRIDOR

- Known Cu (in drilling) west of Benmara
- Known IOCG target (Enc/S32) west of Benmara
- Magnetic corridor
- Gravity corridor
- Paleoproterozoic sediments
- Large structures (including mineralised Fish River Fault)
- Known discrete Cu-Co-Zn soil chemical anomalies
- Known discrete GEOTEM/VTEM geophysical anomalies

## IOCG

- Magnetic corridor
- Subtle gravity corridor

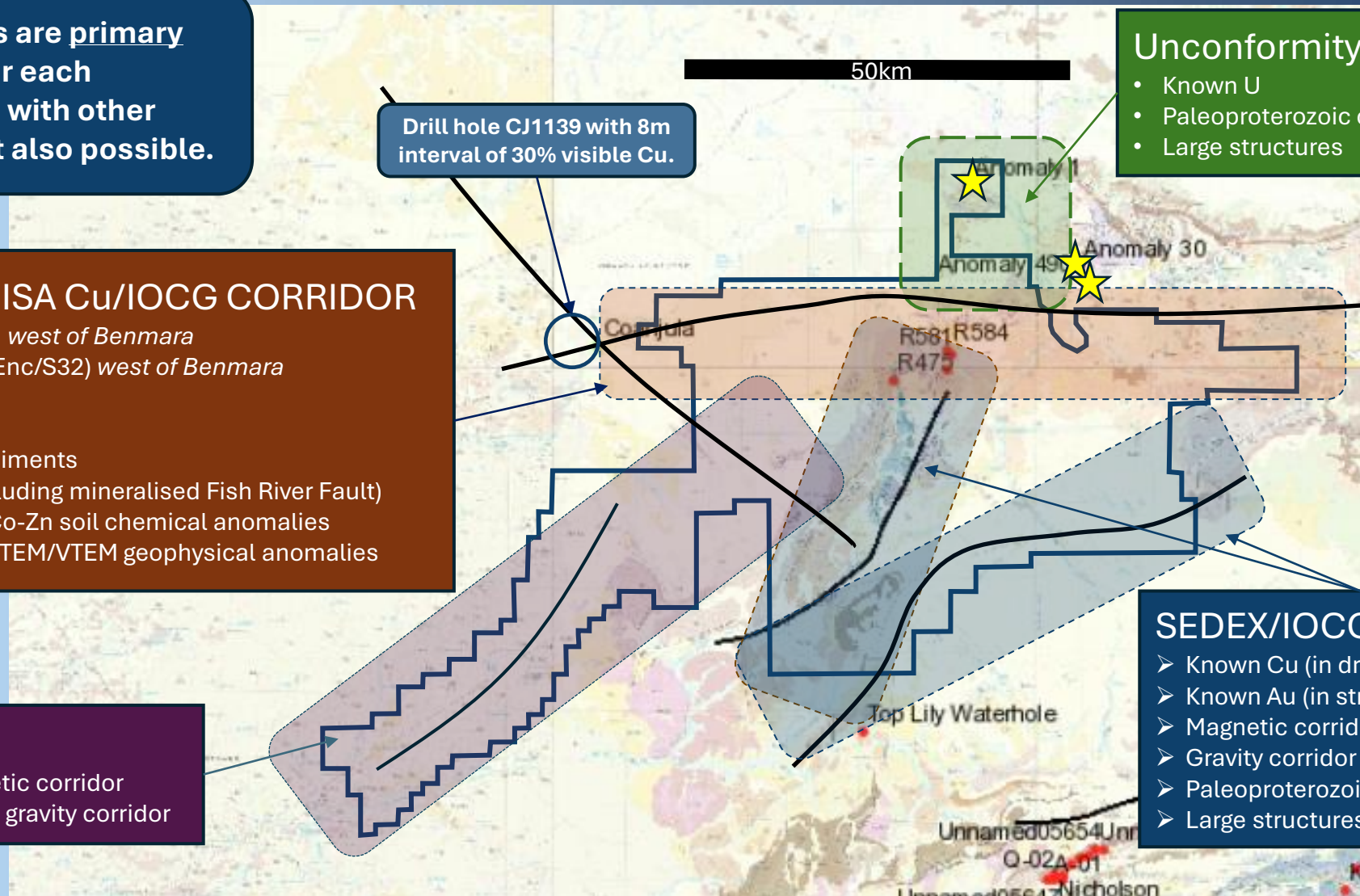
Drill hole CJ1139 with 8m interval of 30% visible Cu.

## Unconformity U

- Known U
- Paleoproterozoic conglomerates
- Large structures

## SEDEX/IOCG

- Known Cu (in drilling)
- Known Au (in stream sampling)
- Magnetic corridor
- Gravity corridor
- Paleoproterozoic sediments
- Large structures



# Recommended Next Steps at the Benmara Project

- *There is potential for Tier-1 IOCG mineralisation associated with deep regional structures with the right geophysical expression*
- *There is potential for Tier-1 SEDEX mineralisation associated with Paleoproterozoic McNamara Group juxtaposed deep regional structures with the right geophysical expression*
- *There is potential for Westmoreland like uranium mineralisation associated with the Westmoreland Conglomerates and various reassigned conglomerates of the basal McNamara Group*

An exploration program to cover all three Exploration Models may include:

## Phase One

- Project-wide review of geophysical data, followed by sub-project scale geophysical surveys - SEDEX, IOCG, U
- Detailed mapping (with spectrometers/Scintillometers) and geochemical sampling (stream/rockchip) especially at the U2/Th anomalies - U

## Phase Two

- Follow-up airborne and/or ground geophysics to better define targets - SEDEX, IOCG, U
- First-pass drill to test targets - SEDEX, IOCG, U





# The Exploration Potential of Resolution Minerals' Benmara Project

## Key Takeaways:

- Benmara has a **large exploration footprint: 90% granted**; and in good standing)
- Benmara (and Carrara Range) are **adjacent to the South32-Encounter JV Jessica and Carrara project**
- Province has had a major geological rethink (led by Geoscience Australia) which has materially **increased the prospectivity for Tier-1 IOCG-SEDEX-Unconformity Uranium deposits of the area**
- Benmara hosts **favourable sediments and deep structures for SEDEX** mineralisation (now correlated to the McNamara Group): Major structures, and several magnetic targets warranting investigation
- Benmara hosts **favourable deep structures for IOCG** mineralisation: Major structures, broad magnetic and gravity corridors with several magnetic/gravity targets warranting investigation
- Benmara hosts **known uranium targets**: U mineralisation associated with strong U2/Th anomalies coinciding with Westmoreland/Murphy Group contact



**Multiple Tier-1 scale deposits possible.**