



RESOLUTIONMINERALS¹

Conceptual sedimentary-hosted base metal targeting along the northern margin of the South Nicholson Basin

Christine G Lawley – Exploration Manager

Technical Presentation

AGES CONFERENCE – Alice Springs, April 2022

COMPANY OVERVIEW



Duncan Chessell

Managing Director

Geologist with 20 years' experience in business, precious and battery metals exploration and project generation in Australia and Papua New Guinea. Triple Mt Everest summiteer. Previous directorships held in the mining and NFP sectors.



Craig Farrow

Non-Executive Chair

Chartered Accountant with a strong commercial acumen across multi sectors including agriculture, professional services and technology. Previous directorships include Vocus Group (ASX:VOC) amongst others.



Dr Paul Kitto

Non-Executive Technical Director

Geologist with 35 years' experience in the mining industry and an impressive track-record including numerous multi-million ounce gold discoveries in Africa, Australia and Papua New Guinea. He is also a Technical Director of Tietto Minerals Ltd (ASX: TIE) Meteoric Resources Ltd (ASX: MEI) and Peako Limited (ASX: PKO).



Andrew Shearer

Non-Executive Director

Geophysicist with a technical and corporate background as a resource analyst. Non-Executive Director of Andromeda Metals (ASX:ADN) and Investigator Resources (ASX:IVR).



Christine Lawley

Exploration Manager

Christine has over 15 years' mineral exploration experience in gold, base and strategic metals with Newmont, Musgrave Minerals and Iluka and holds a Masters Degree in Ore Deposit Geology. Christine has a wealth of experience from mine site geology, resource modelling to early stage exploration. Christine is also Principal Geologist.



Kelvin Blundell

Principal Geophysicist

Sandfire's consulting geophysicist for the significant DeGrussa Cu-Au massive-sulphide discovery and recent success with Musgrave Minerals, Kelvin has 20 years' experience both in Australia and internationally. Kelvin is RML's consulting Principal Geophysicist.

Market Cap

~\$12m

Top 20 Shareholders

31%

Share Price

\$0.018

JMEI Tax Credits

\$1.25m

Shares on issue

658m

Active Projects

4

**Figures current as of 21/3/2022*

Our Mission

Resolution Minerals Ltd (RML) is a junior mineral explorer with projects prospective for in-demand commodities gold, copper and other battery metals. RML believes the best value creation for shareholders is through discovery success. **Hunting for big deposits in big country.**



RESOLUTION MINERALS PROJECTS

ALASKA

PROJECT NAME: 64NORTH

Location: Alaska
Lat-Long: 64°N, 144°W
Key Commodities: Gold, Copper
Ownership: 42% Resolution
JV Partner: RML earning in

Geology
The basement complex geology is composed of a sequence of igneous and metamorphic rocks intruded and overlain by glacial deposits, which are a distinguishing feature of mid-Cretaceous (ca. 70-80 Ma). The igneous rocks are a large area of granitoid intrusions (1000m x 1000m).

PROJECT NAME: WOLLOGORANG

Location: Northern Territory
Lat-Long: 17°S, 137°E
Key Commodities: Copper, Cobalt
Ownership: 100% Resolution
JV Partner: OZ Minerals earning in

Global uncertainty and volatility retains gold's attractiveness

PROJECT NAME: CARRARA RANGE

Location: Northern Territory
Lat-Long: 18°S, 137°E
Key Commodities: Manganese, Iron Ore, Battery Metals
Ownership: 100% Resolution

PROJECT NAME: BENMARA

Location: Northern Territory
Lat-Long: 18°S, 136°E
Key Commodities: Battery Metals
Ownership: 100% Resolution

AUSTRALIA

The voracious appetite for copper, cobalt, nickel, aluminum and other battery metals required to convert the world from fossil fuels to green electrical alternatives is now a short, medium and long term reality

Assets all in the top 20 ranked mining jurisdictions



NORTHERN TERRITORY BATTERY METAL PROJECTS



Companies exploring in the region include BHP, FMG, Rio Tinto, Newcrest, South32

Benmara Project (Cu-Pb-Zn-Ag-Co)

- South Nicholson Basin
- Granted Q1, 2021

Carrara Range Project (Mn, Iron Ore, Cu-Pb-Zn)

- South Nicholson Basin
- Acquired Q1, 2022

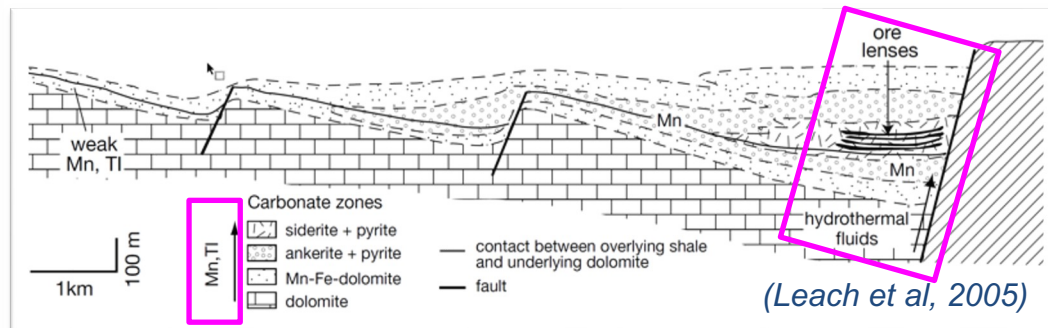
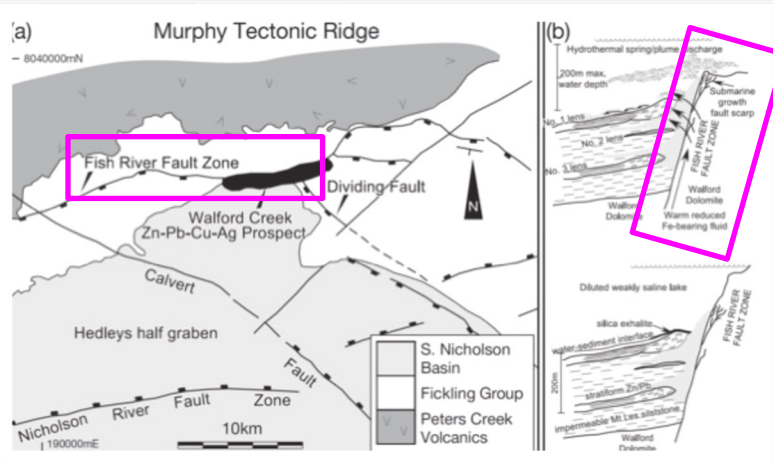
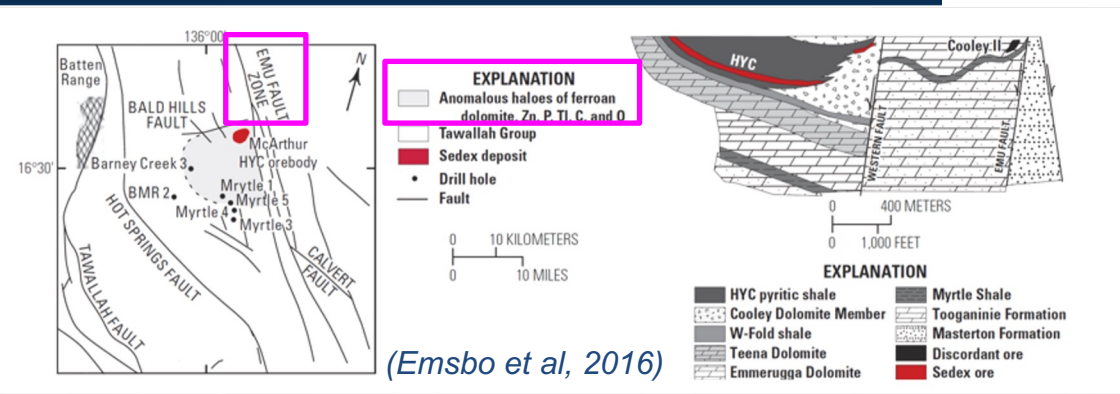
Wologorang Project (Cu, Co, U)

- Southern McArthur Basin.
- farmed out JV
- Proven mineralisation with the Stanton Cobalt Deposit (942kt @ 0.13% Co, 0.06% Ni, 0.12% Cu).

ORE DEPOSIT MODELS – WHAT ARE WE CHASING?

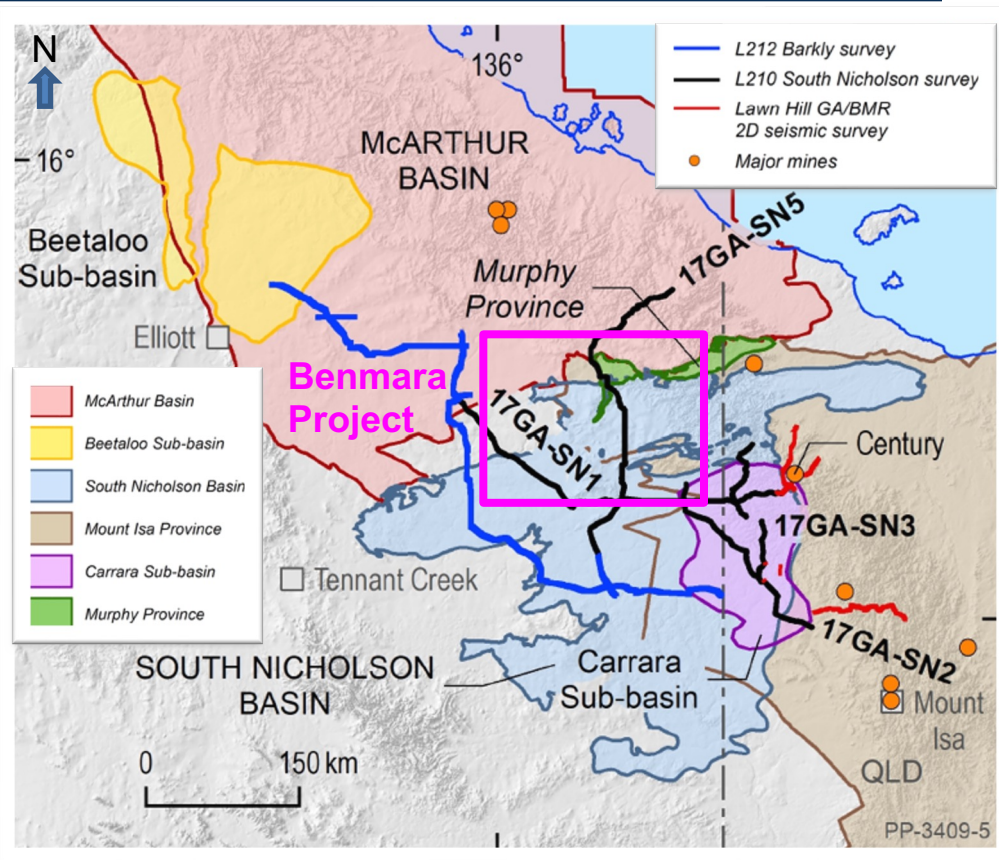
Early stage - RML will continue to apply exploration methods that are effective screening tools across **all sedimentary-hosted base metal deposit styles (e.g., SEDEX, MVT, SSC and polymetallic).**

NT/QLD examples include **HYC, Walford Creek, Century & Lady Loretta. (1) reduced host rocks (2) Palaeoproterozoic (3) structurally controlled**



(Betts et al, 2003)

BASE METAL POTENTIAL – SOUTH NICHOLSON BASIN



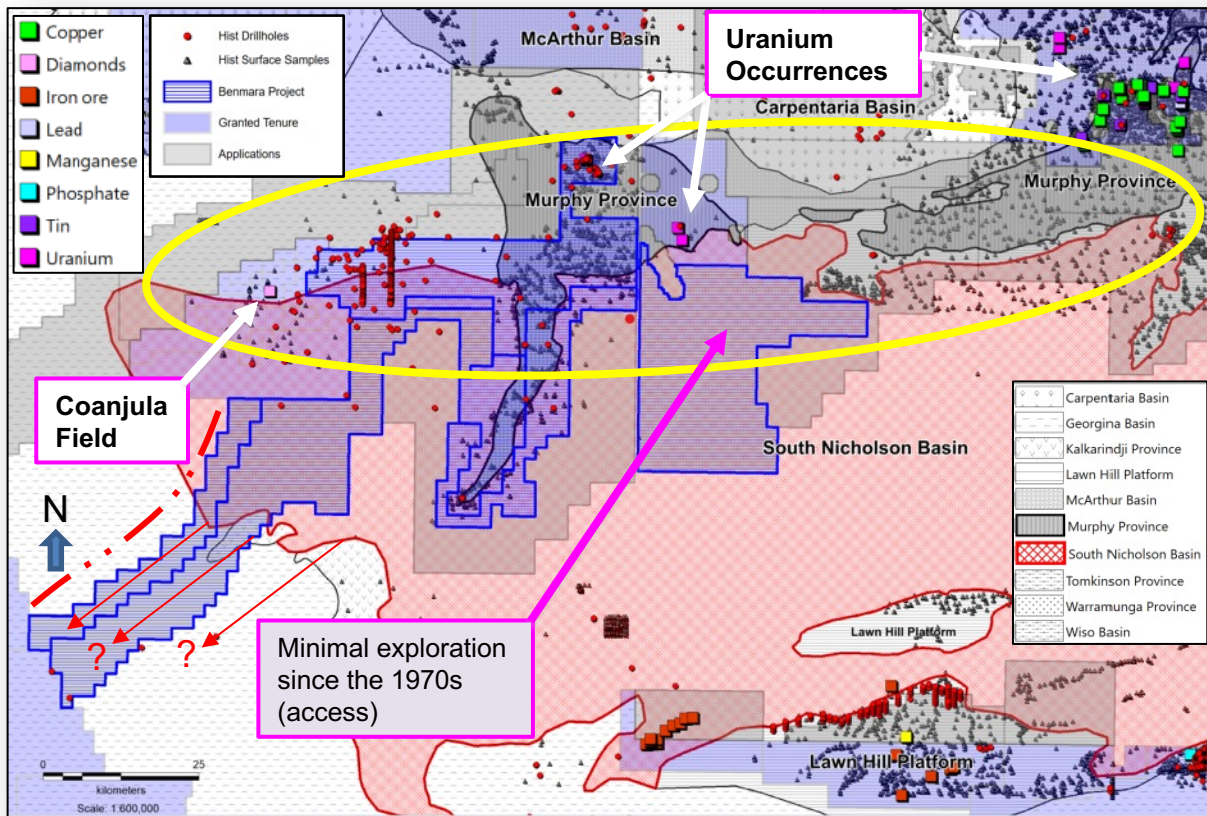
Excellent sedimentary-hosted base metal potential

- Prospective aged package of reduced sediments
- Evidence for **diagenesis**
- Elevated **Thallium (TI)**, base metals
- Intersection of prospective regional scale **structures**
- **Basin margin setting**

Standout greenfield exploration project

Tenure > 200km of strike length

BASE METAL POTENTIAL – SOUTH NICHOLSON BASIN

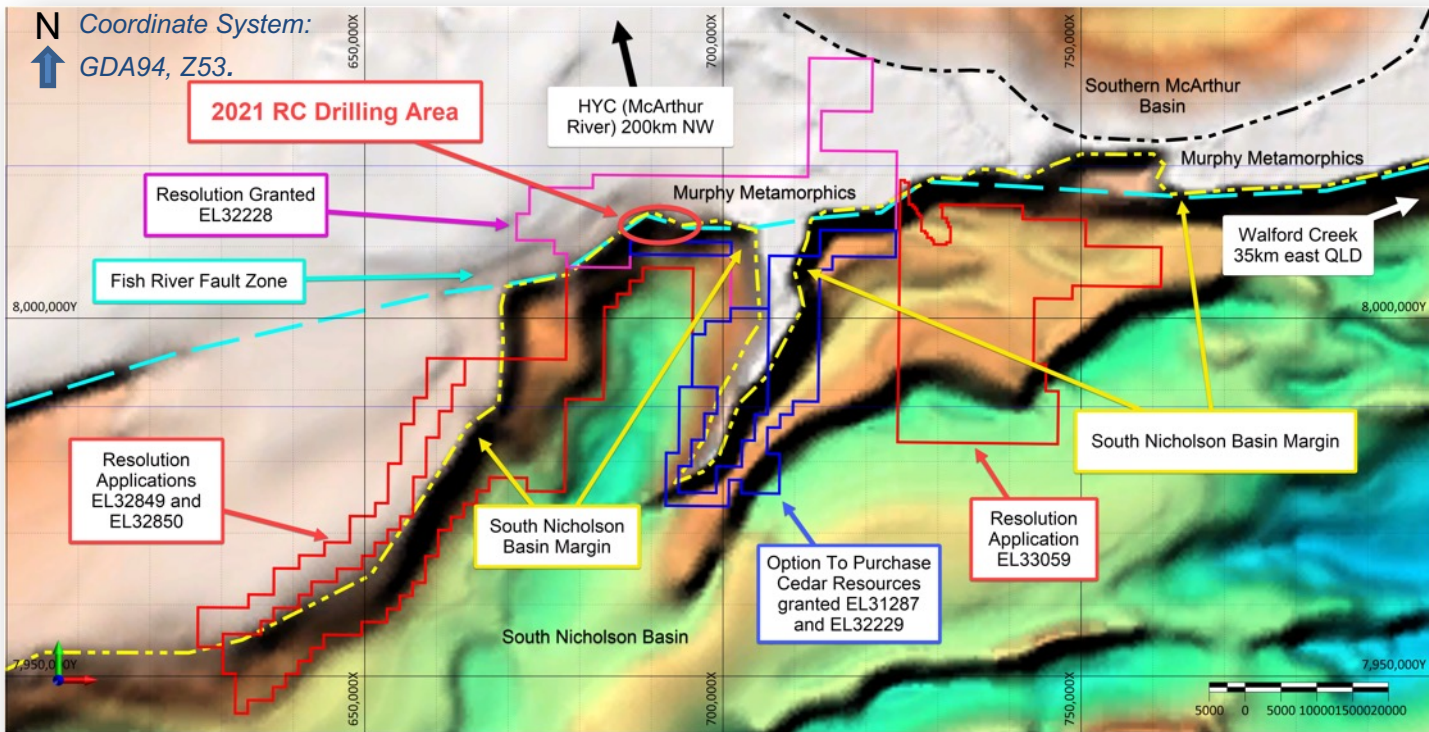


Why previously overlooked?

- **STRIKE** gives the appearance of reasonable data density but → scant multi-element datasets → generally shallow drilling
- **Diamond and uranium focus**
- **Murphy Province** focus, not the overlapping basin units to the south
- **Mesoproterozoic age** not considered prospective within the greater Isa Superbasin
- **New applications in areas with minimal exploration since the 1970s (due to access).**

RECENT GAME CHANGERS – NORTHERN TERRITORY SEEBASE®

The Northern Territory SEEBASE® is a **depth to basement structural model**, which maps major basement structures and defines basin shape and depth to the base of undeformed sedimentary rocks, regardless of age.

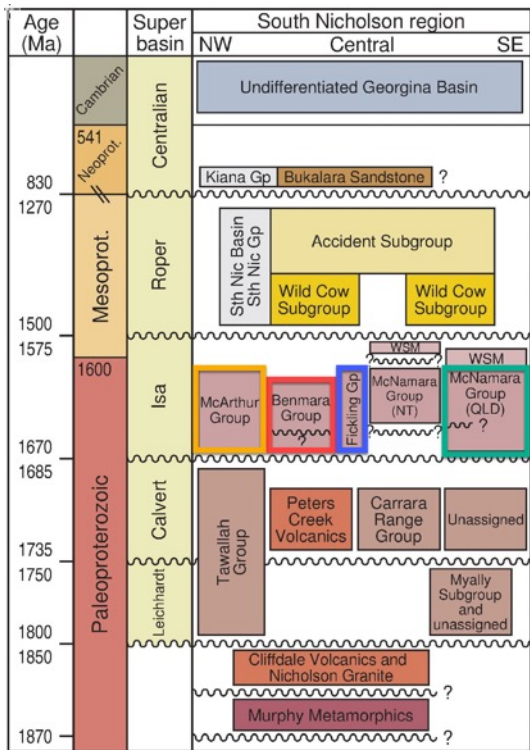


Black Soil Plains Common

SEEBASE® helps reduce **exploration risk – informs ground acquisition.**

> 200km of strike length of the northern margin of the South Nicholson Basin.

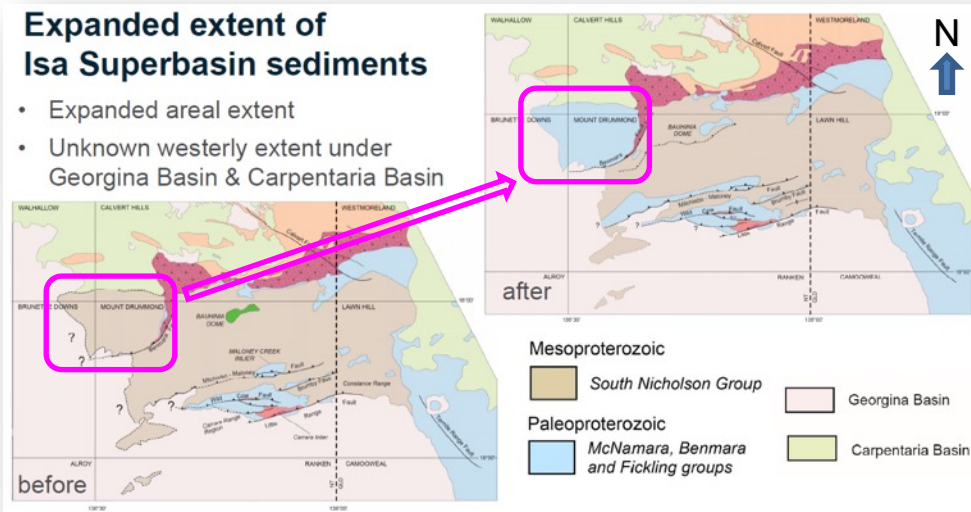
RECENT GAME CHANGERS – GEOSCIENCE AUSTRALIA U-Pb SHRIMP



- U-Pb SHRIMP revised the age of the Benmara Group to be **late Palaeoprot.**
- Middle- to upper-units of the Benmara Group deposited during crustal extension **ca 1640 Ma = McNamara Group, Fickling Group and McArthur Group.**

- HYC (McArthur River)
- Walford Creek
- Century / Lady Loretta
- Benmara Targets

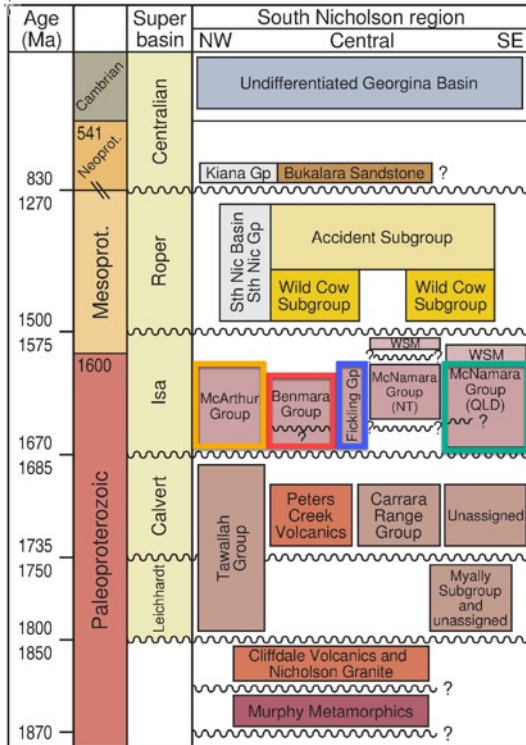
(Carson et al, 2020)



These formations are known to host significant Zn-Pb-Ag and polymetallic Cu-Pb-Zn-Ag-Co resources in the Mount Isa Province and southern McArthur Basin (Carson et al 2020).

RECENT GAME CHANGERS – GEOSCIENCE AUSTRALIA U-PB SHRIMP

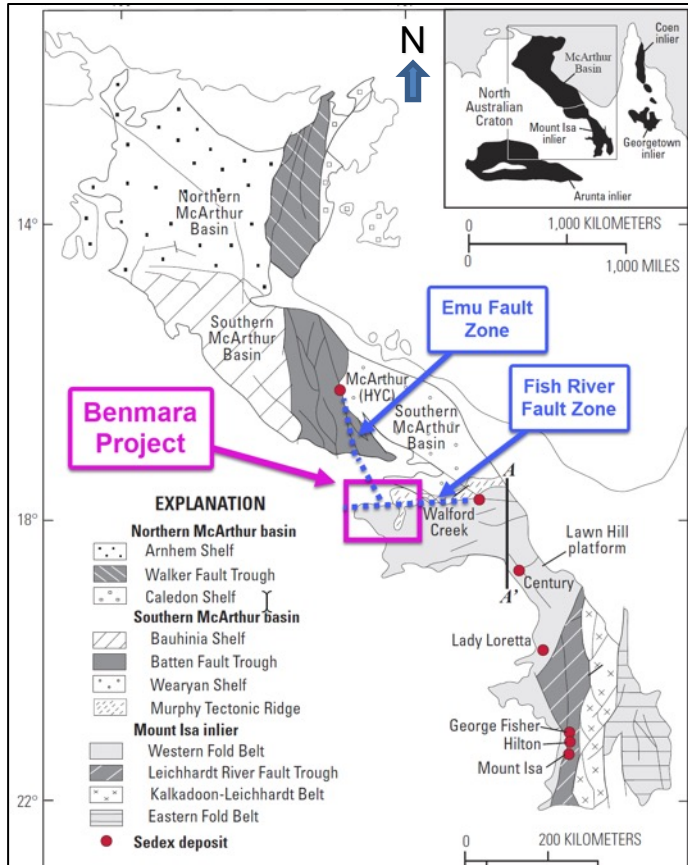
(Betts et al, 2003; Carson et al, 2020)



State	NT	NT	QLD	QLD	QLD
Region	Southern McArthur Basin	South Nicholson Basin	Lawn Hill Platform	Lawn Hill Platform	Lawn Hill Platform
Group	McArthur Group	Benmara Group	Fickling Group	McNamara Group	McNamara Group
Formation	Barney Creek Formation	Crow Formation	Mt Les Siltstone	Lawn Hill Formation	Lady Loretta Formation
Age (Ma)	1639+/- 3	~1640	1640+/-7	1595+/-6	1647+/-4
Deposit Example	HYC (McArthur River)	RML Targets	Walford Creek	Century	Lady Loretta
Deposit Style	Stratiform Zn-Pb-Ag	Stratiform Zn-Pb-Ag & Sediment Hosted Cu	Stratiform Cu-Pb-Zn-Ag-Co	Sediment Hosted Zn-Pb-Ag	Stratiform Zn-Pb-Ag
Host Rock	Dolomitic siltstone, coarse sedimentary breccias, tuffaceous horizons, organic rich pyritic shale.	Carbonaceous, dolomitic and pyritic siltstone and shale (organic rich) with tuffaceous horizons.	Carbonaceous, dolomitic and pyritic shales and local talus breccias.	Siliciclastic, carbonaceous, sideritic, shale and siltstone with tuffaceous horizons.	Carbonaceous, pyritic, dolomitic and sideritic siltstone and shale.
Structure	Emu Fault Zone	Fish River Fault	Fish River Fault	Termite Range Fault	NA

These formations are known to host significant Zn-Pb-Ag and polymetallic Cu-Pb-Zn-Ag-Co resources in the Mount Isa Province and southern McArthur Basin (Carson et al 2020).

BASE METAL POTENTIAL – STRUCTURAL REGIME



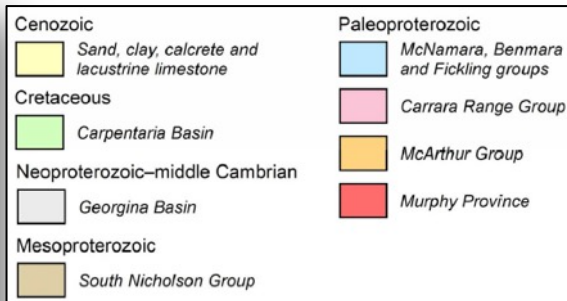
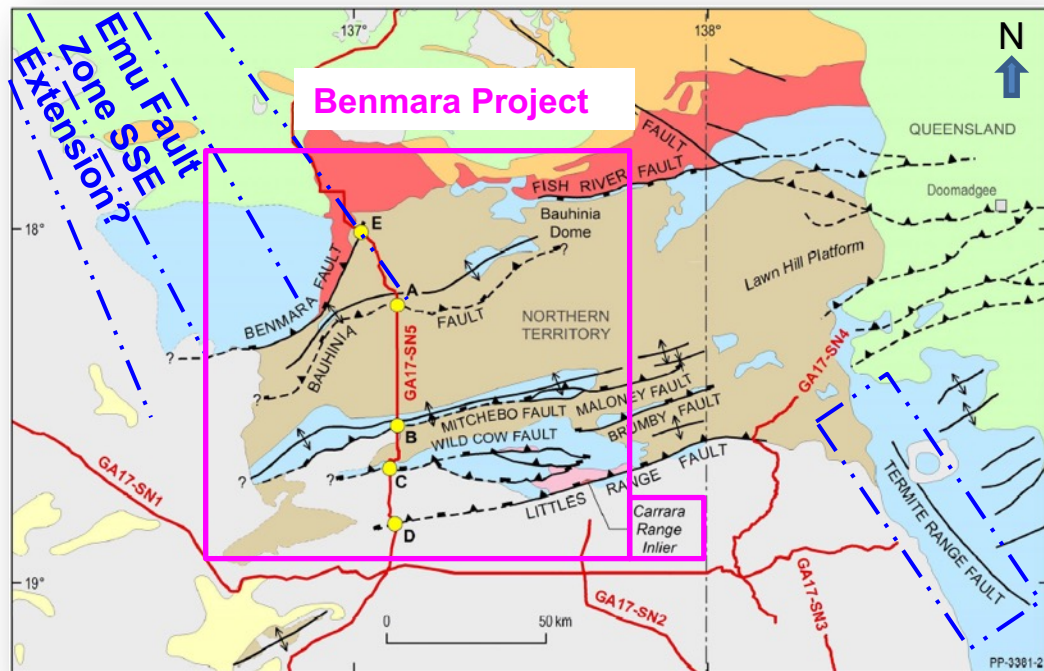
Two major prospective fault zones intersect close to the northern margin of the South Nicholson Basin.

The **Emu Fault Zone** is interpreted to extend NNW to the McArthur River Mine, NT.

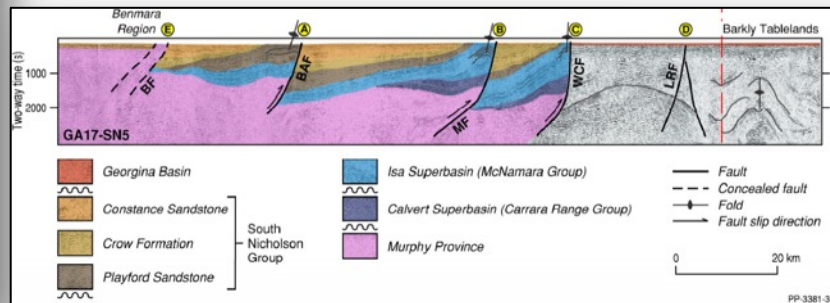
The **Fish River Fault Zone** is interpreted to extend ENE to the Walford Creek Deposit, QLD.

These fault zones have potentially acted as conduits for metal bearing fluid at Benmara.

BASE METAL POTENTIAL – STRUCTURAL REGIME



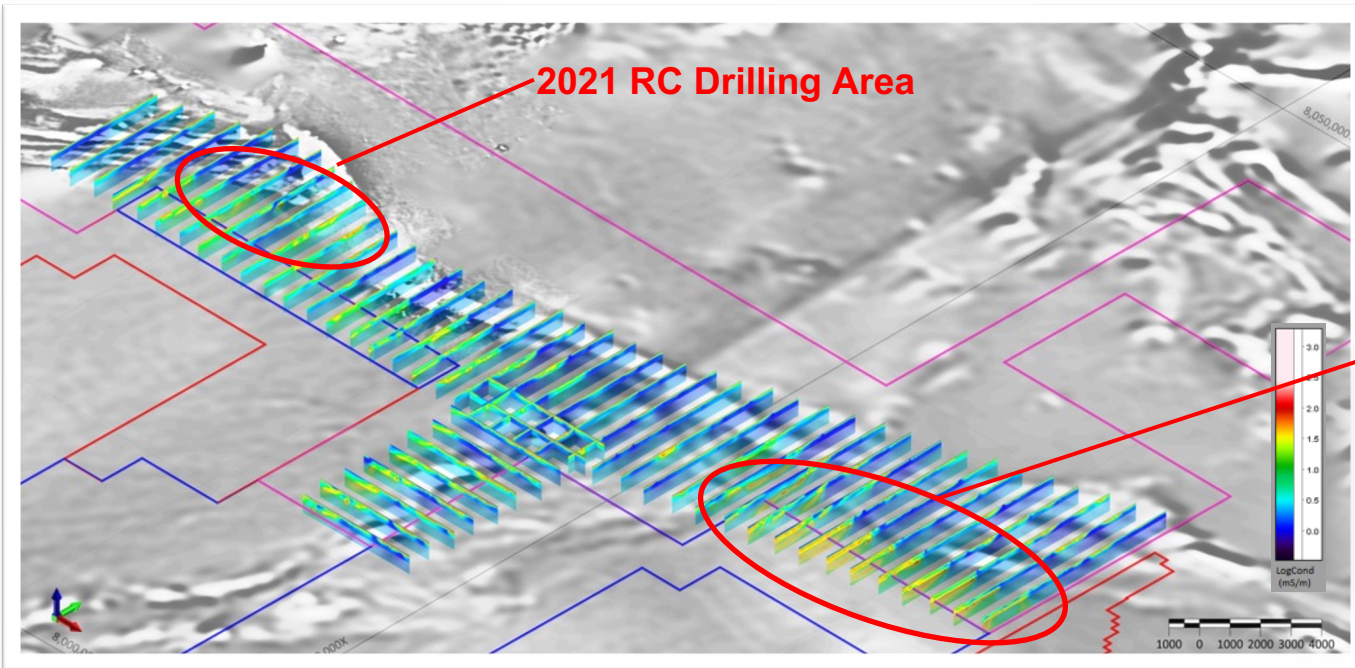
(Carson et al, 2020)



- The **Emu Fault Zone** is interpreted to extend NNW to the giant Zn-Pb-Ag **McArthur River Mine** on the same orientation as the **Termite Range Fault** (providing structural control at Zn-Pb-Ag **Century Mine**).
- The **Fish River Fault Zone** extends ENE into QLD (Walford Creek)
- **Thrust faults** interpreted from Seismic data support continuation of faults seen in the Lawn Hill Platform, QLD.

EXPLORATION TARGETING – VTEM MAX 2021

In 2021, Resolution commenced exploration on permit EL32228 to substantiate the area's prospectivity with an **airborne EM survey (VTEM Max)** and a **scout RC drilling program**.



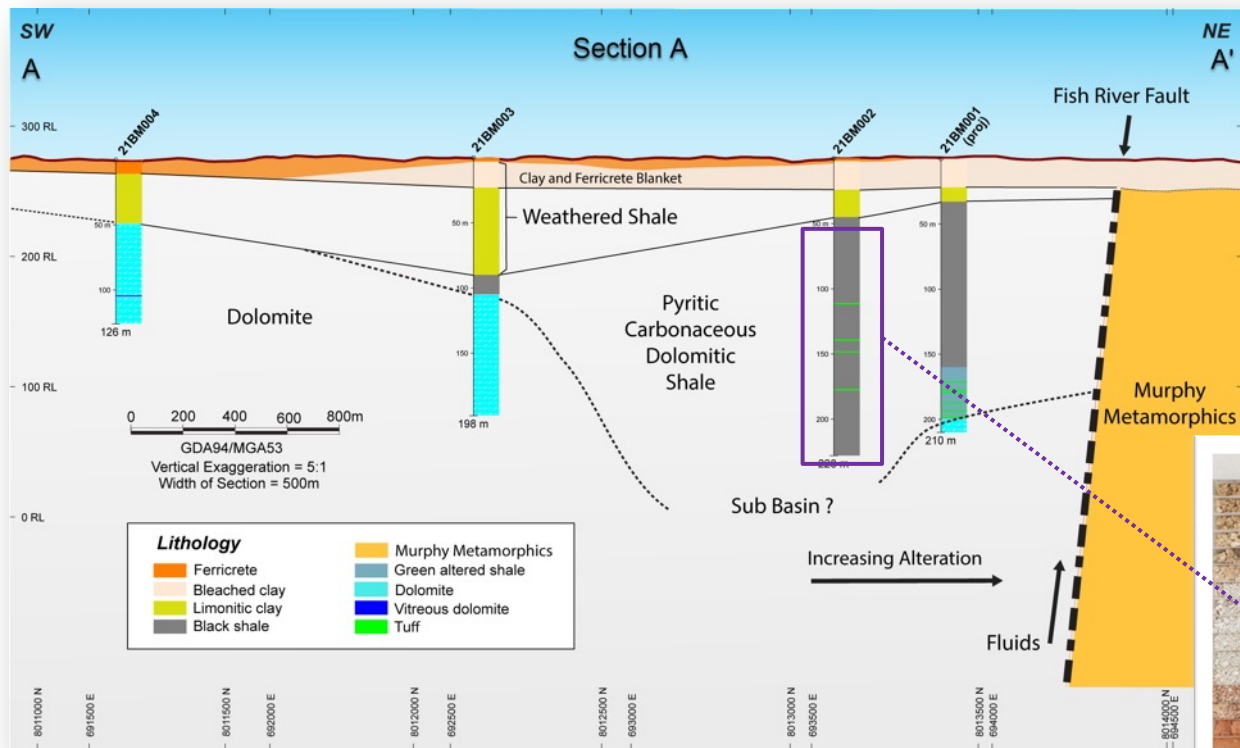
The airborne EM survey identified **km-scale conductors along the margin of the basin**.

A number of these conductors were tested by RC drilling. **Confirmed to be pyritic sediments**.

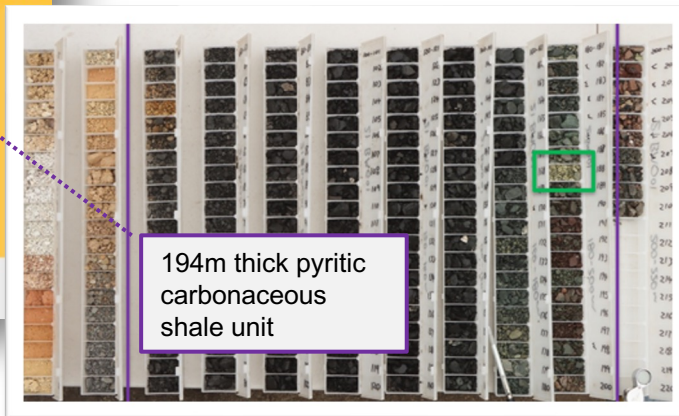
10km long best VTEM conductor yet to be tested.

Benmara VTEM 2.5D Inversion (mS/m) 3D perspective looking northwest (isometric). RTP1VD greyscale background.

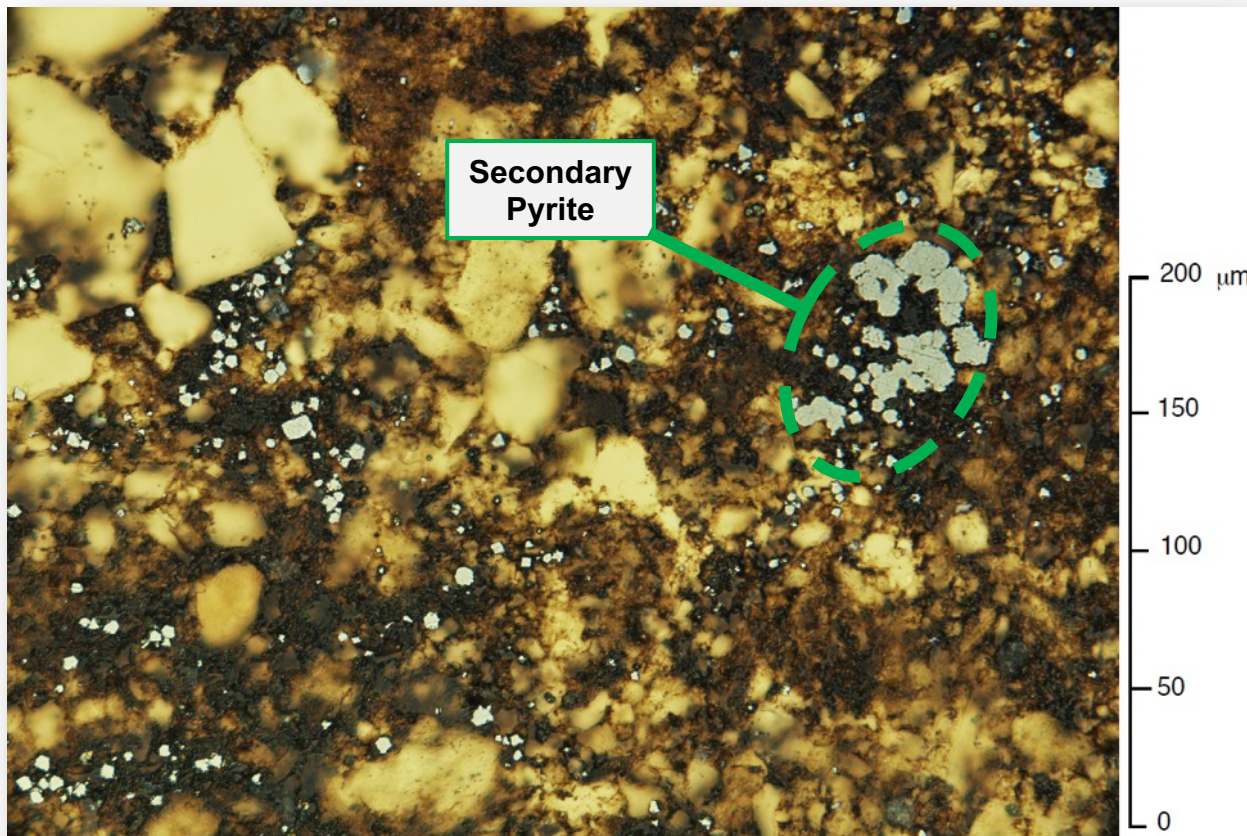
RC RESULTS 2021 – LITHOLOGICAL OBSERVATIONS



- Thick (194 m) pyritic, carbonaceous units
- Analogous to Barney Creek Fm.
- Intense alteration zones
- **Multiple tuff horizons**



RC RESULTS – PETROGRAPHIC OBSERVATIONS



Petrology confirmed lithology

- laminated mudstones
- Carbonates
- Schists (Murphy)

Secondary pyrite was identified, which formed due to fluid infiltration during diagenesis, evidenced by fine grained pyrite being unrelated to primary sedimentary laminations (Mason, 2022).

The presence of **bitumen** was also noted within carbonates.

RC RESULTS – GEOCHEMICAL OBSERVATIONS

Base Metals > Background

- 198 ppm **Pb** in HoleID: 21BM006;
- 357 ppm **Zn** in HoleID: 21BM007;
- 307 ppm **Cu** in HoleID: 21BM013; and
- **0.65 ppm Ag** in HoleID: 21BM009.

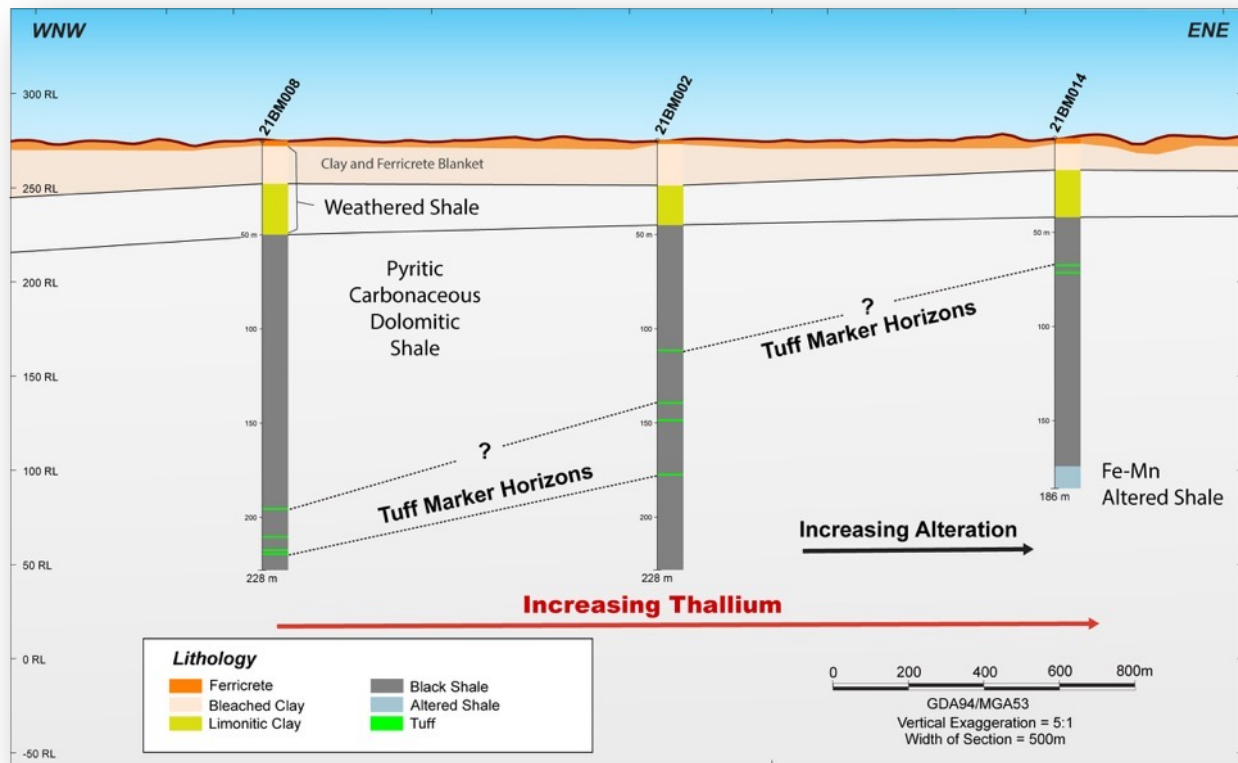
The RC drilling intersected values of 0.1–0.2% Mn and 3–5% Fe.

Fe–Mn carbonate alteration, which is known to be associated with Zn-Pb-Ag mineralisation.

Max value of **42 ppm TI**, with multiple samples exceeding 1 ppm TI;

Could be within kilometres of a base metal deposit.

TI vector from west to east.



RC RESULTS – TOTAL ORGANIC CARBON



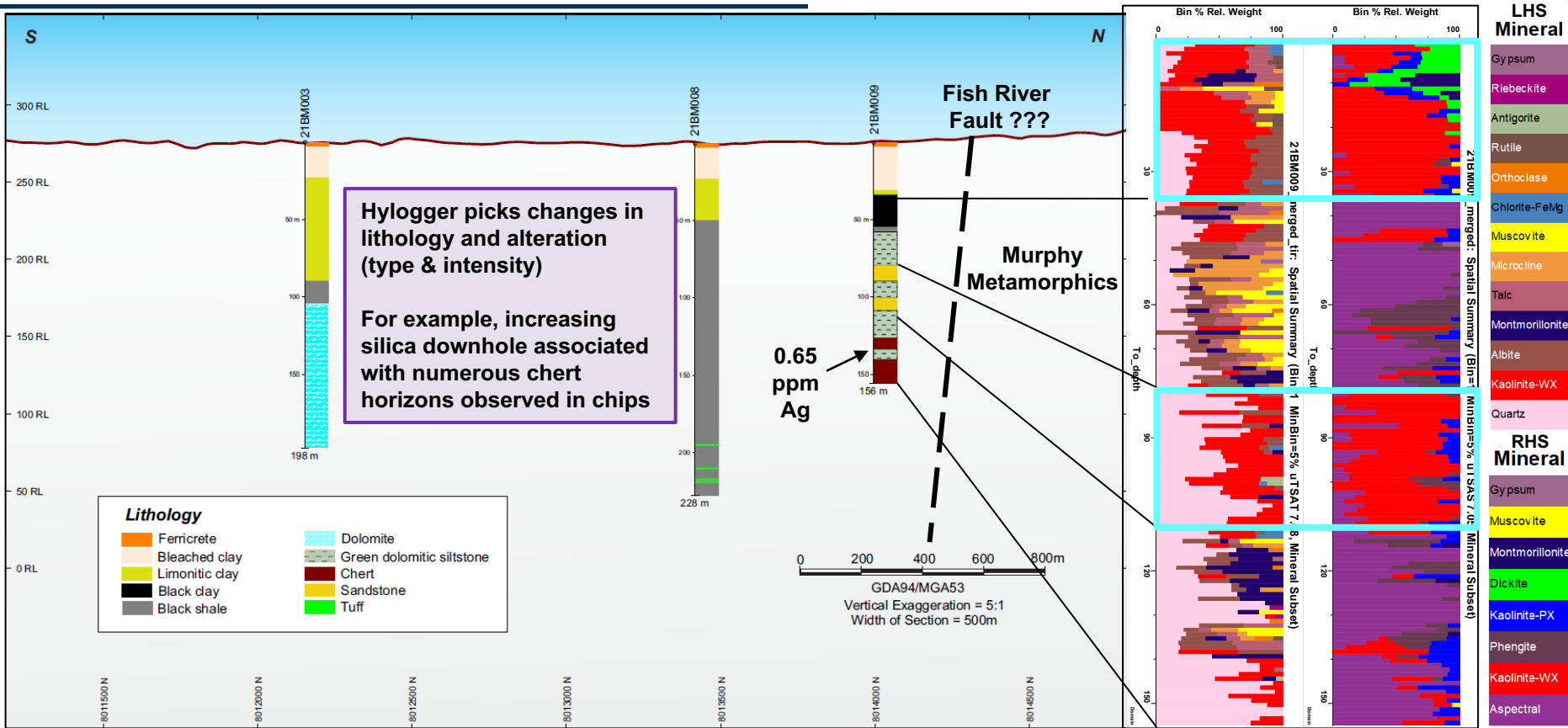
Oil slick on surface of the sieving bucket during logging, which is a good field indicator for >1% TOC

Total organic carbon (TOC) analysis (12 x silty mudstones).

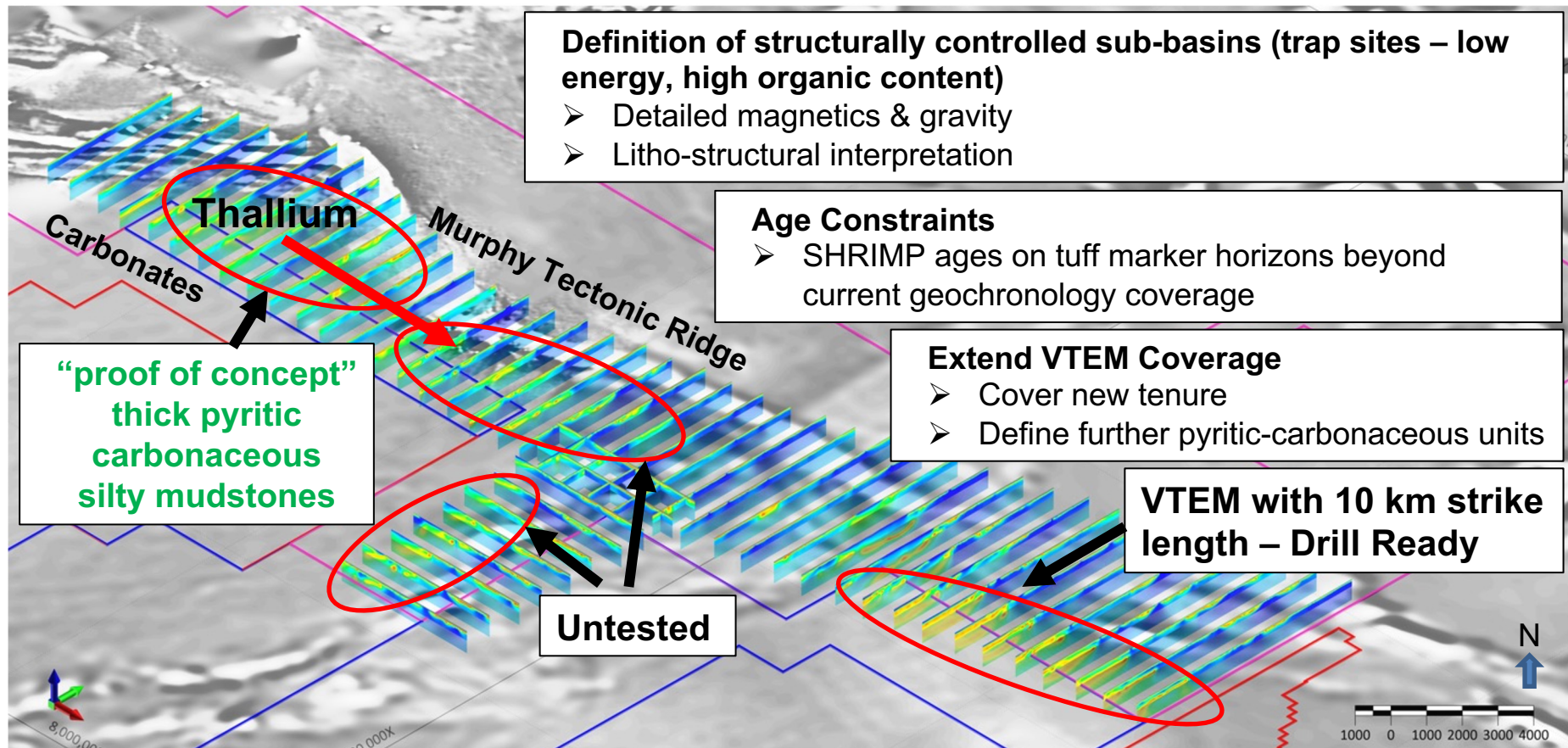
The average TOC value was **2.18%**, with a maximum value of **3.23%**.

This is highly significant given TOC of 1% is sufficient for an effective chemical gradient along which metal may commence precipitation
(Jarrett et al 2020).

RC RESULTS – HYLOGGER (PRELIMINARY DATA – 21BM009)



FUTURE EXPLORATION PLANS – SOUTH NICHOLSON BASIN



BASE METAL POTENTIAL – SOUTH NICHOLSON BASIN



Standout greenfield base metal exploration project

Right Geological Ingredients!

- Intersecting **regional scale structures**, mineralised along strike
- Prospective **Palaeoproterozoic** Age (GA SHRIMP)
- Reduced Sediments (**TOC 1-3%**)
- Evidence for **diagenesis** (petrology)
- Base metal geochemical vectors (**elevated TI, > background Cu-Pb-Zn-Ag**)
- Untested **VTEM conductors** along the basin margin

Supported By

- **Significant ground acquisition (RML & Neighbours)**
- **IPOs underway on adjacent ground**
- **Interest from major and mid tier companies**

DISCLAIMER, JORC INFORMATION & COMPETENT PERSONS STATEMENT

This presentation has been prepared by Resolution Minerals Ltd (Resolution). This document contains background information about Resolution current at the date of this presentation. The presentation is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation. This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sales of shares or other securities in any jurisdiction. This presentation is not a prospectus, product disclosure statement or other offering document under Australian law (and will not be lodged with the Australian Securities and Investments Commission (ASIC) or any other law. This presentation does not constitute investment or financial product advice (nor tax, accounting or legal advice) and has been prepared without taking into account the recipient's investment objectives, financial circumstances or particular needs and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. Recipients should seek professional advice when deciding if an investment is appropriate. All securities involve risks which include (among others) the risk of adverse or unanticipated market, financial or political developments. To the fullest extent permitted by law, Resolution, its officers, employees, agents and advisors do not make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of any information, statements, opinions, estimates, forecasts or other representations contained in this presentation. No responsibility for any errors or omissions from this presentation arising out of negligence or otherwise are accepted. This presentation may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Resolution. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this presentation speak only at the date of issue of this presentation. Subject to any continuing obligations under applicable law, Resolution does not undertake any obligation to update or revise any information or any of the forward-looking statements in this presentation or any changes in events, conditions, or circumstances on which any such forward looking statement is based.

JORC Information

This report includes results that have previously been released under JORC 2012 by the Company Additional details including JORC 2012 reporting tables, where applicable can be found in the following relevant announcements lodged with the ASX and the Company is not aware of any new data or information that materially affects the information included in the announcements listed; 24 November 2017 as "High Grade First Drill Results - Stanton Cobalt Deposit", 29 November 2017 as "Further High Grade Cobalt Results - Stanton Cobalt Deposit", 7 December 2017 as "Stanton Cobalt Resource Remains Open in Multiple Directions", 22 December 2017 as "Detailed Magnetic Survey over Stanton Cobalt Deposit", 5 February 2018 as "Final Drilling Results 2017 Drilling Program", 7 May 2018 as "Stanton Cobalt Resource Diamond Assay Results", 30 May 2018 as "Regional Cobalt Targets Identified on Wollgorang Project", 28 August 2018 as "Copper discovered at First Drill Target", 19 September 2018 as "Copper Discovery Grows at Gregjo Prospect", 28 September 2018 as "AGM Managing Director's Presentation", 9 October 2018 as "Copper Intersection Confirms New Model at Running Creek", 19 October 2018 as "Cobalt System Developing at Running Creek", 14 December 2018 as "Cobalt, Copper System Confirmed at Running Creek", 22 January 2019 as "Geophysics Highlight Potential at Gregjo", and 9 July 2021 as "VTEM Survey Identifies Multiple Conductors - Wollgorang Project" and on the 64North Project: "2019 AGM Managing Director's Presentation" on 26 November 2019, "Exploration Update - 64North Project Alaska" on 14 May 2020, "Drilling Update - 64North Project Alaska" on 24 June 2020, "Investor Presentation - Noosa Mining Virtual Conference" on 13 July 2020, "Drilling Commenced at Reflection Prospect - 64North" on 25 August 2020, "Assays and Operations Update 64North Project Alaska" on 10 September 2020, "Boundary Prospect Results at Pogo Trend - 64North Project" on 24 September 2020, "Drilling Results West Pogo Block - 64North Project, Alaska" on 29 September 2020, "Quarterly Report September 2020" on 30 October 2020, "Alaska Miners Association Technical Presentation" on 5 November 2020, "New Claims Added East Pogo - 64North Project, Alaska" on 14 December 2020, "Outcropping Gold System Identified - Assay Results 2020, 64North, Alaska" on 18 January 2021, "Sunrise Prospect assay results confirm Fort Knox Style mineralisation" on 17 May 2021, "Drilling Program Completed at East Pogo Gold Prospect" on 5 July 2021, "East Pogo Drilling Update - 64North Project" on 6 August 2021, "Positive trenching results identify Pogo-style drill targets - Tourmaline Ridge 64North Project" on 24 February 2022, "Positive Technical study completed - Cu-Au-Mo Porphyry Prospects - Divide Block 64North Project on 25 February 2022 and "Benmara Project Proof of Concept Drilling Successful" on 3 December 2021. The Company is not aware of any new information or data that materially affects the information included in this announcement and all material assumptions and technical parameters underpinning the Mineral Resource continue to apply and have not materially changed.

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Duncan Chessell who is a member of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists. Mr Chessell is a Director and full-time employee of the company. Mr Chessell holds Shares, Options and Performance Rights in the Company as has been previously disclosed. Mr Chessell 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 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Duncan Chessell consents to the inclusion in the report of the matters based on his information in the form in which it appears.

Project Ownerships

64North Project - RML holds a 42% Interest and is earning to a 60% interest with a pathway to earn up to 80% on a "best block", see ASX:RML Announcement 31/1/22. Benmara Project - RML has 100% ownership over most tenements and an Option to purchase 100% interest over the remaining tenure, see RML ASX Announcement 27 September 2021. Wollgorang 100% interest with Farm-in Agreement with OZL to earn-in, see RML Announcement 24 August 2021. Carrara Range Project - RML has a 100% ownership (tenement title transfer in progress) ASX Announcement 3 February 2022.

Australian Projects Location Map – source of data Geoscience Australia (LAB 170km Depth Corridor - Hoggard et al 2020), Northern Territory Government of Australia (STRIKE Tenure and Geoscience Information, Queensland Government (Open Data Portal Queensland Mining and Exploration Tenure Series).

Tintina Gold Province Map – source of data: Kensington (Coeur Mining, www.coeur.com), Pebble (Northern Dynasty, www.northerndynastyminerals.com), Pogo (Northern Star Resources, www.nsrld.com), Fort Knox (Kinross, www.kinross.com), Donlin Creek (NovaGold, www.novagold.com), Livengood (International Tower Hill Mines, www.ithmines.com), Eagle & Dublin Gulch (Victoria Gold Corp, www.vgcx.com), Brewery Creek (Golden Predator, www.goldenpredator.com), White Gold (White Gold Corp, whitegoldcorp.ca), Coffee (Newmont, www.newmont.com).

Authorised for release by Duncan Chessell

Managing Director Resolution Minerals Ltd
ASX:RML

Contact Details

+61 414 804 055 (direct)
duncan@resolutionminerals.com
Level 4, 29-31 King William Street
Adelaide SA 5000, AUSTRALIA
www.resolutionminerals.com

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