encounter
RESOURCES LIMITED

Sediment Hosted Copper in the Territory

Annual Geoscience Exploration Seminar (AGES)

5-6 April 2022
Alice Springs, Northern Territory

Sarah James

ASX: ENR

Disclaimer and compliance statement

This presentation has been prepared by Encounter Resources Limited ("Encounter"). The information contained in this presentation is a professional opinion only and is given in good faith. Certain information in this document has been derived from third parties and though Encounter has no reason to believe that it is not accurate, reliable or complete, it has not been independently audited or verified by Encounter.

Any forward-looking statements included in this document involve subjective judgement and analysis and are subject to uncertainties, risks and contingencies, many of which are outside the control of, and maybe unknown to Encounter. In particular, they speak only as of the date of this document, they assume the success of Encounter's strategies, and they are subject to significant regulatory, business, competitive and economic uncertainties and risks. Actual future events may vary materially from the forward looking statements and the assumptions on which the forward looking statements are based. Recipients of this document ("Recipients") are cautioned to not place undue reliance on such forward-looking statements.

Encounter makes no representation or warranty as to the accuracy, reliability or completeness of information in this document and does not take responsibility for updating any information or correcting any error or omission which may become apparent after this document has been issued.

To the extent permitted by law, Encounter and its officers, employees, related bodies corporate and agents ("Agents") disclaim all liability, direct, indirect or consequential (and whether or not arising out of the negligence, default or lack of care of Encounter and/or any of its Agents) for any loss or damage suffered by a Recipient or other persons arising out of, or in connection with, any use or reliance on this presentation or information.

The information in this report that relates to Exploration Results is based on information compiled by Ms. Sarah James who is a Member of the Australasian Institute of Mining and Metallurgy. Ms. James holds shares and options in and is a full time employee of Encounter Resources Ltd and has sufficient experience which is relevant to the style of mineralisation under consideration 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'. Ms James consents to the inclusion in the report of the matters based on the information compiled by her, in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases and the form and context of the announcement has not materially changed. 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 market announcements.

This announcement has been approved for release by the Board of Encounter.

The Encounter Business Model

PROJECT GENERATOR MODEL
Progress project pipeline with a mix of alliances, joint ventures and sole funding

TIER 1 TARGETS
Project generation and exploration targeting copper dominant discoveries in world-class mineral belts

HIGH QUALITY PARTNERS
Partner with leading mid-tier and major producers which have talented exploration teams

FAST ADOPTION OF NEW DATA AND TECHNOLOGIES
Fast mover, early adopter of new technologies and datasets

DATA DRIVEN INSIGHTS
Cost effective and innovative data-driven techniques to rapidly prioritise and assess targets

encounter RESOURCES LIMITED

Large scale copper exploration

Attractive demand side dynamics for copper:

- Significant increase in production required to support the global megatrends of vehicle electrification and decarbonisation
- Greater focus on sustainability supports the development of new, modern mining operations in high quality jurisdictions like Australia

Attractive supply side dynamics for copper:

- Current discovery and development pipeline will not satisfy the forecast demand increase
- Average global mined copper grades remain in decline
- Increasing portion of global supply coming from higher risk jurisdictions

Encounter well positioned in three emerging regions in Australia with potential to host large scale copper discoveries

- Validated through joint venture partners and third party interest in 100% owned assets

encounter RESOURCES LIMITED

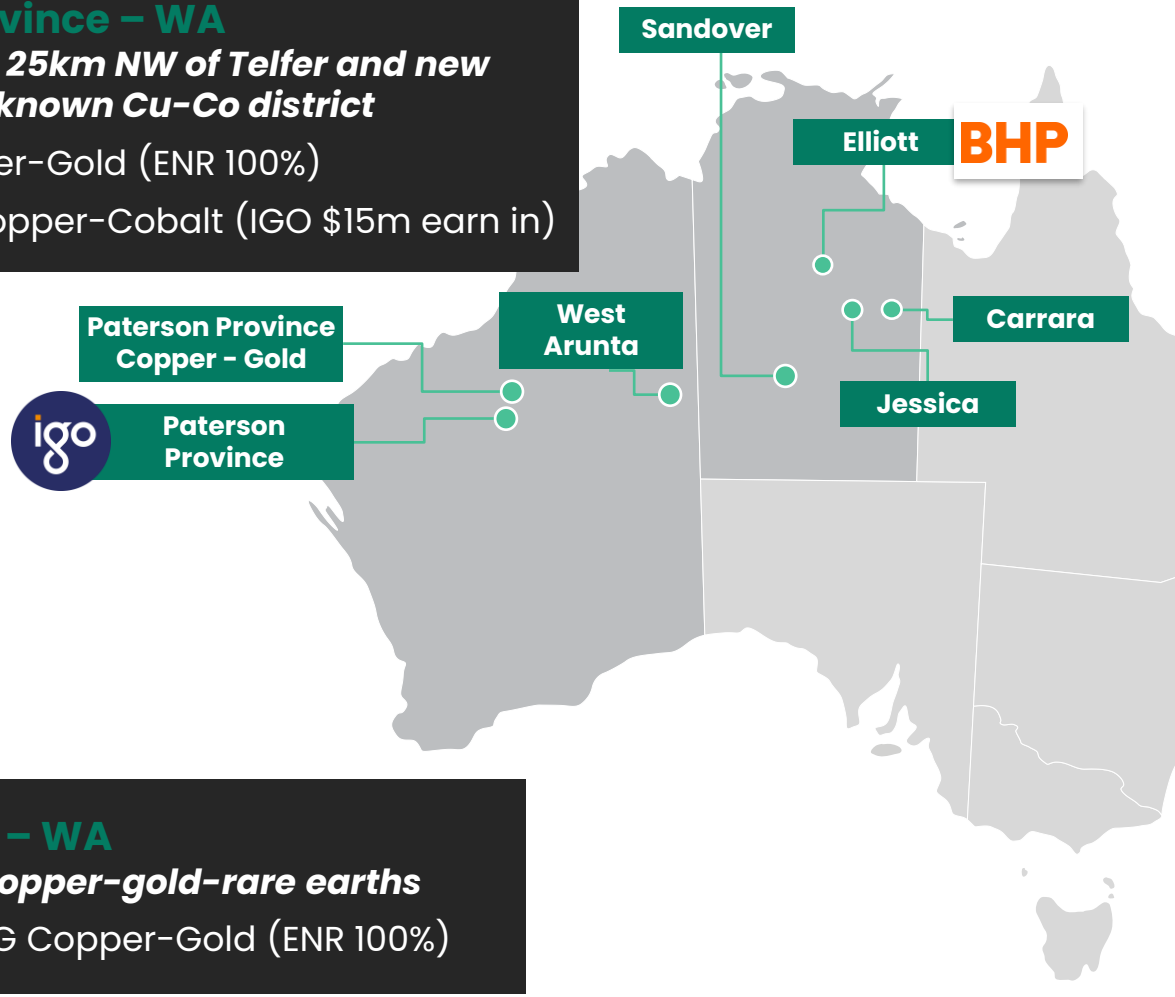
A premier copper exploration portfolio

Early mover positions in world-class minerals belts attracting Tier 1 partners

Paterson Province – WA

Cu-Au System 25km NW of Telfer and new approach in a known Cu-Co district

- Lamil Copper-Gold (ENR 100%)
- Yeneena Copper-Cobalt (IGO $15m earn in)



Northern Territory Copper

Sediment-hosted copper and IOCG targets in emerging region

- Elliott Copper (BHP $25m earn in)
- Jessica Copper (ENR 100%)
- Carrara Copper-Zinc (ENR 100%)
- Sandover Copper (ENR 100%)
- Brunchilly Copper-Zinc (ENR 100%)

West Arunta – WA

IOCG targets copper-gold-rare earths

- Aileron IOCG Copper-Gold (ENR 100%)

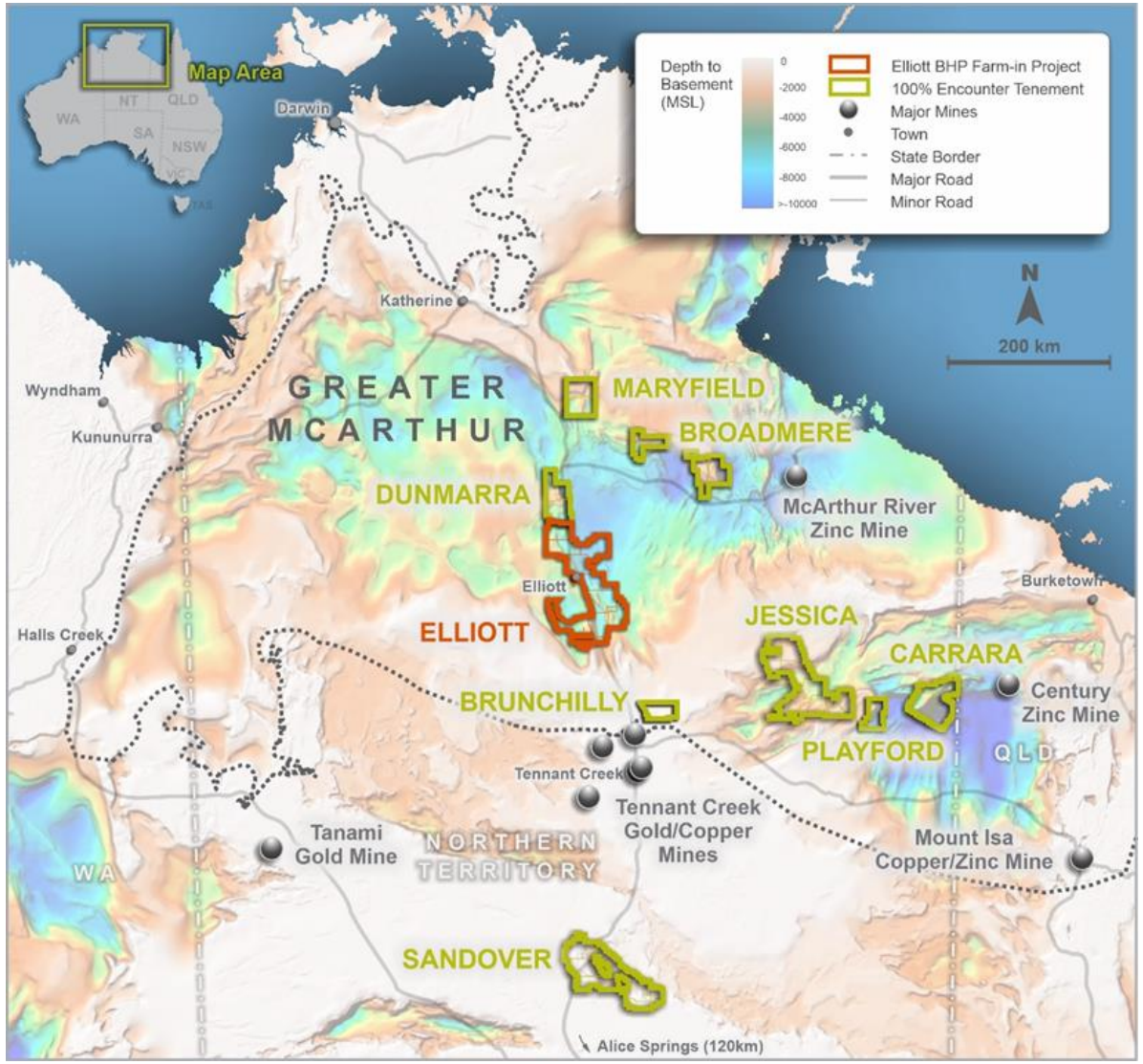
Northern Territory:

The next hot spot for copper in Australia

encounter RESOURCES LIMITED

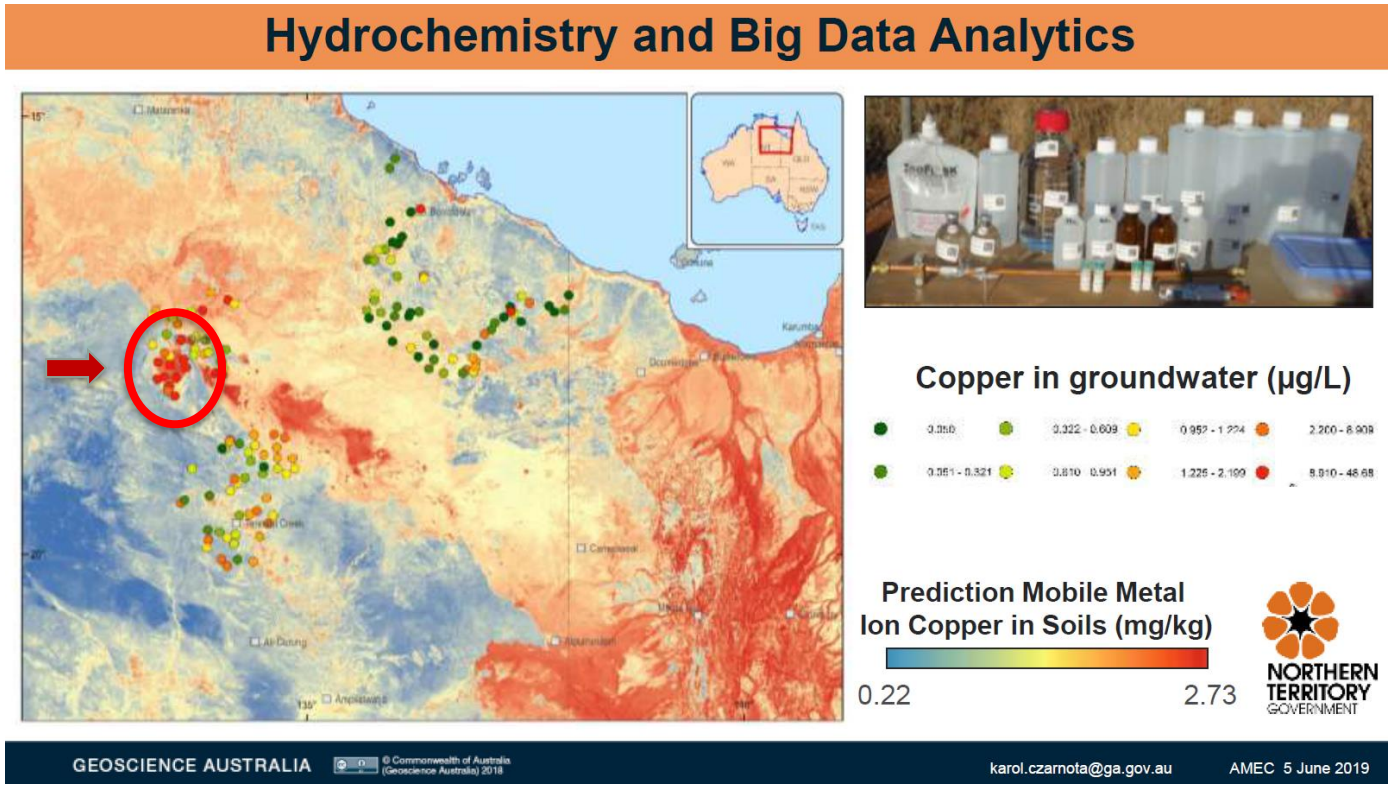
Northern Territory: the next hot spot for copper in Australia

- Highly prospective, vastly underexplored region under shallow cover
- Major copper-gold producing districts of Mt Isa and Tennant Creek
- Transformational investment in pre-competitive data by Geoscience Australia (GA) and the Northern Territory Geological Survey (NTGS)
- These new datasets are providing crucial early insights into areas prospective for sedimentary hosted deposits
- Encounter has used these datasets to build a commanding position of first mover copper opportunities



Elliott Copper Project BHP

- BHP (ASX:BHP) earn-in and joint venture agreement covering the 7,200km^2 Elliott Copper Project
- BHP may earn up to a 75% interest in Elliott by spending up to $25 million over 10 years
- Compelling exploration opportunity in the vastly underexplored Greater McArthur Superbasin
- Key ingredients for the formation of large sedimentary copper deposits
- Standout copper in groundwater anomaly from GA sampling
- Target sequence undercover and untested
- 2022 exploration program, including seismic surveys and drilling, to define prospective deposition sites for sedimentary copper mineralisation

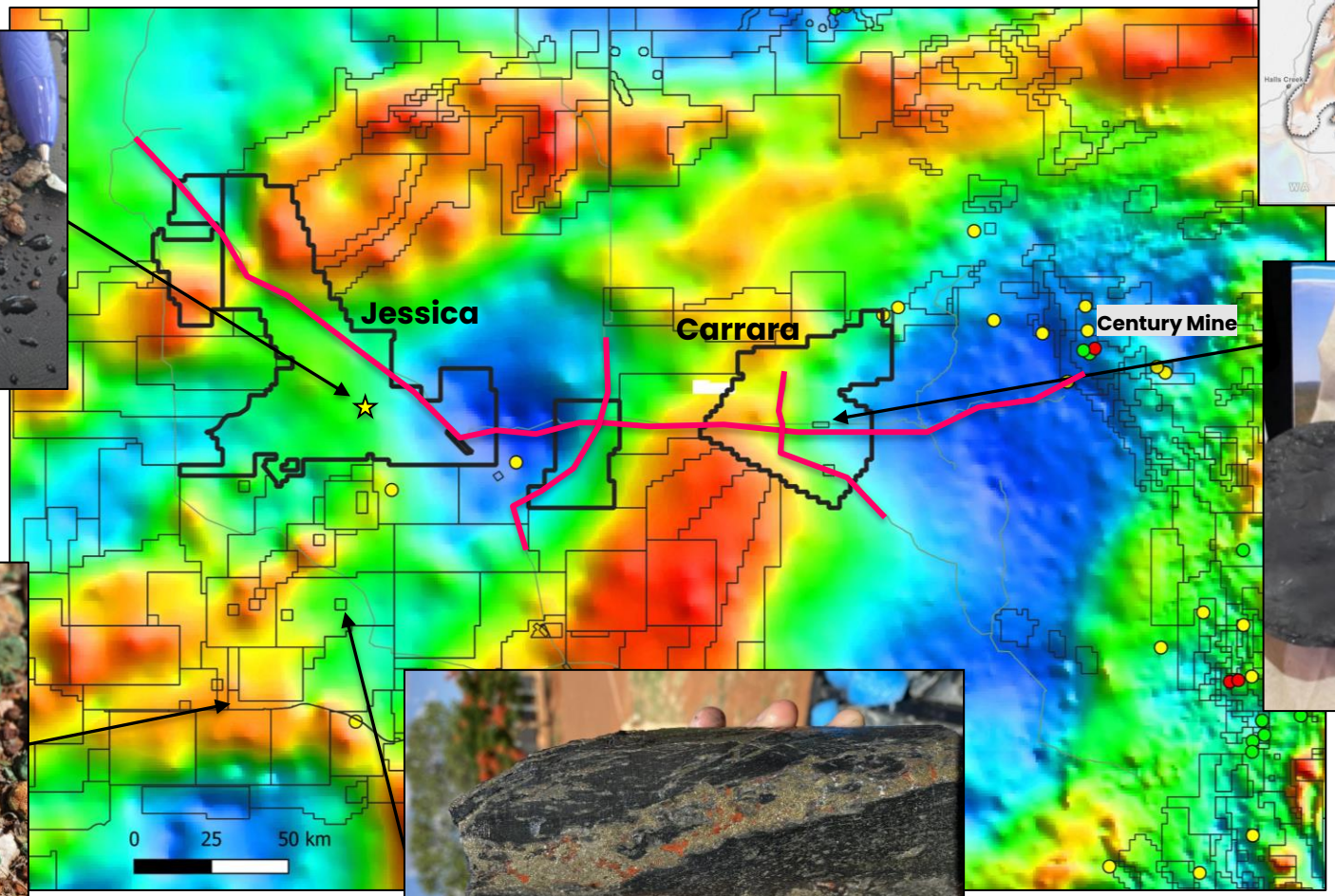


Refer to ENR ASX release 21 May 2021

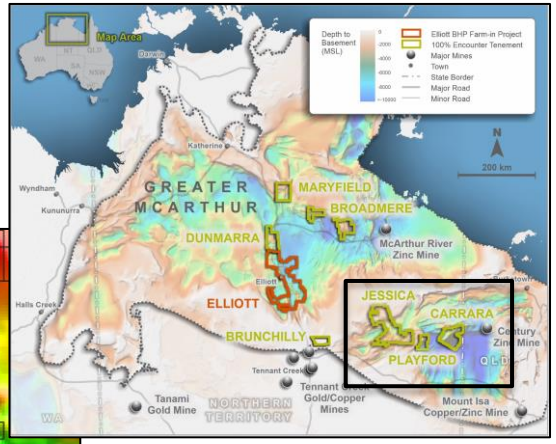
Jessica and Carrara Projects

Copper at surface and at depth

Copper Carbonate (Malachite) 0-3m from RN28419 – chemical assay 1.5% Cu [1]



Background gravity



Chalcopyrite contained in a calcareous shale unit within NDI Carrara1 ~1,617m [4]

Crosswinds Copper Prospect - Malachite (copper carbonate) mineralisation exposed in table drain [2]

Drill hole NDIBK04 pyrite-chalcopyrite vein [3]

[1] Refer ENR ASX release 19 Aug 2020
[2] Refer to ASX:MDI release 23 Dec 2020
[3] Refer to ASX:ICG release 28 Mar 2021
[4] Refer to ENR ASX release 28 Apr 2021

Drillcore is from the national drilling initiative. It is not the property of the company

NTGS Core Library, Darwin

The Sandover Project

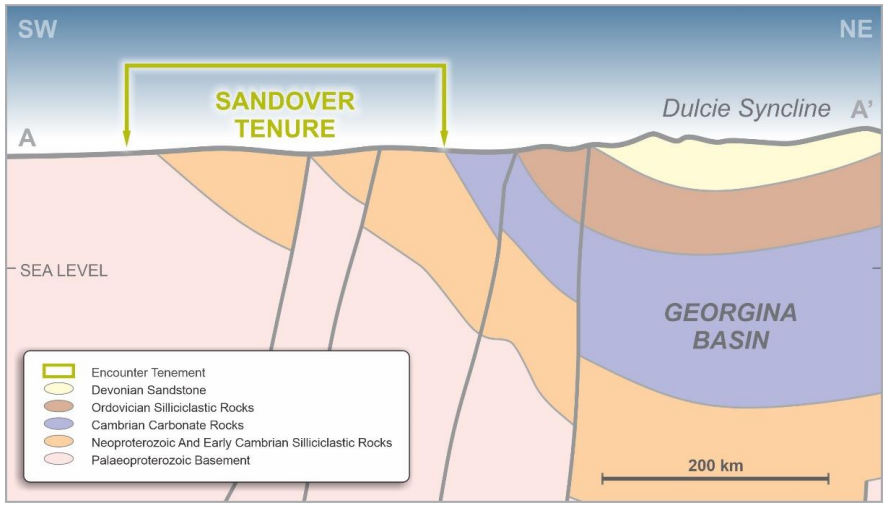
A new sediment hosted copper province in the Northern Territory?

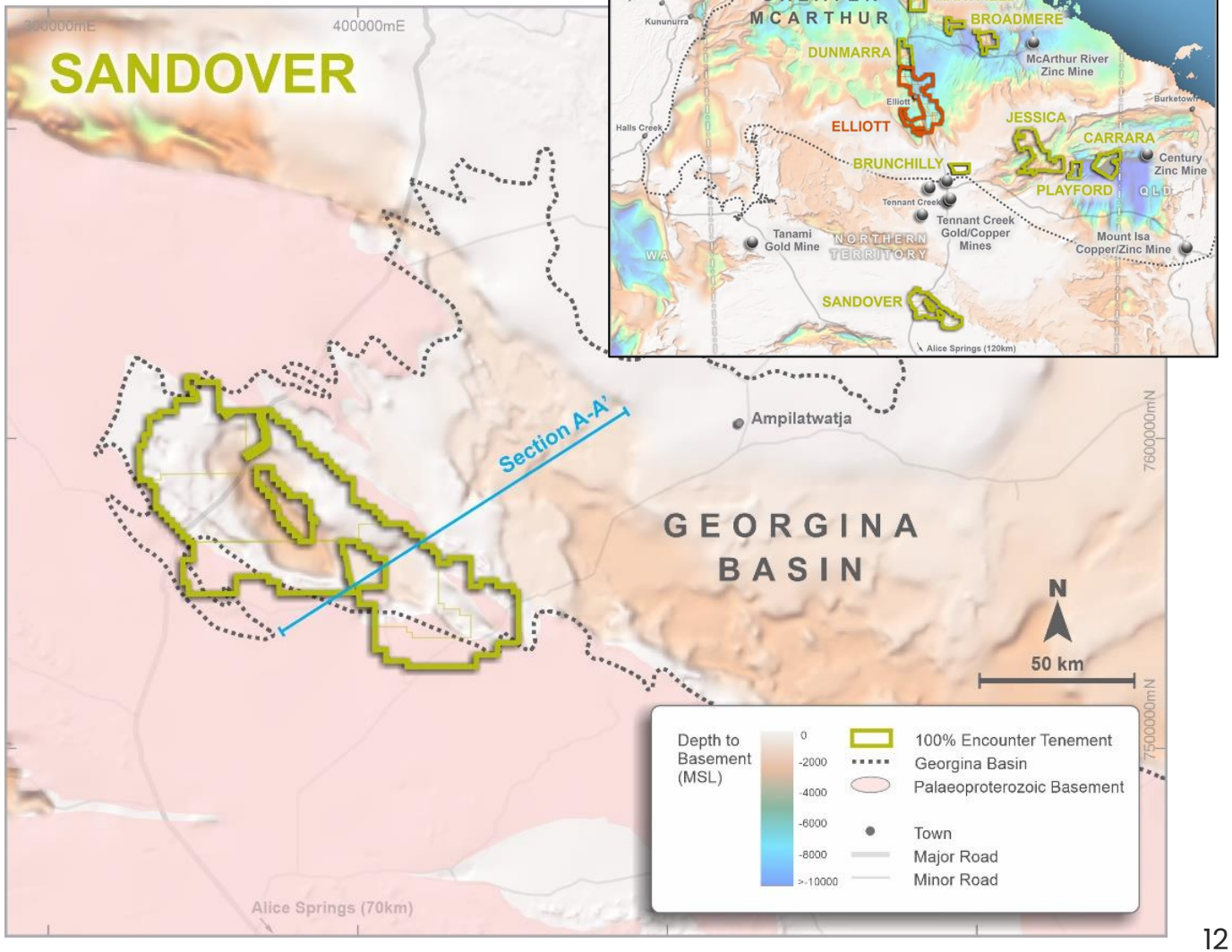
encounter RESOURCES LIMITED

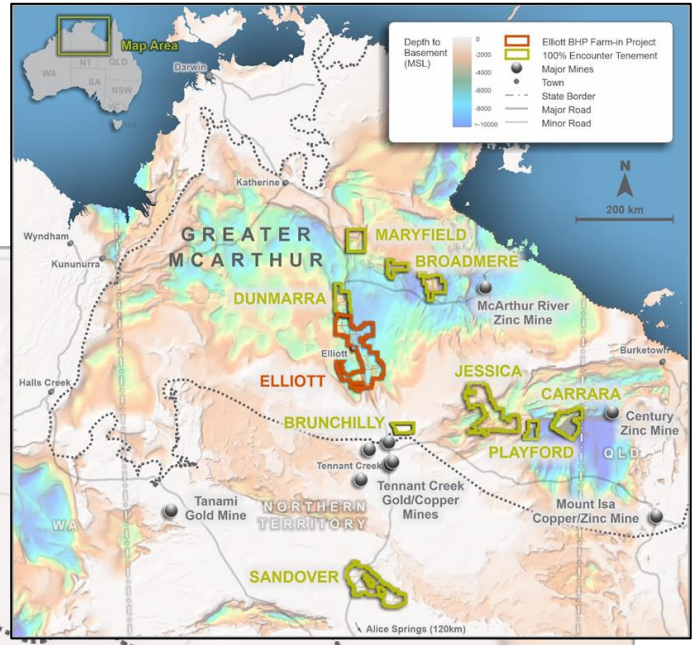
Sandover Project

A partially exposed Neoproterozoic Basin in the Georgina

- 170km north-east of Alice Springs
- Covers a major structural corridor on the southern margin of the Georgina Basin
- Interpreted to represent a locally preserved Neoproterozoic depocentre, overlain by more extensive Cambrian Georgina Basin sediments



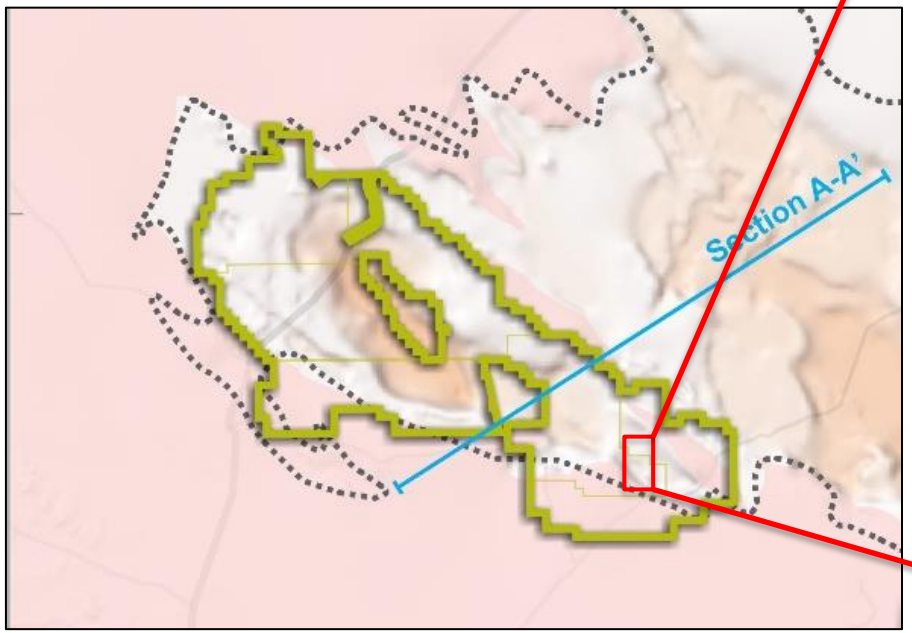


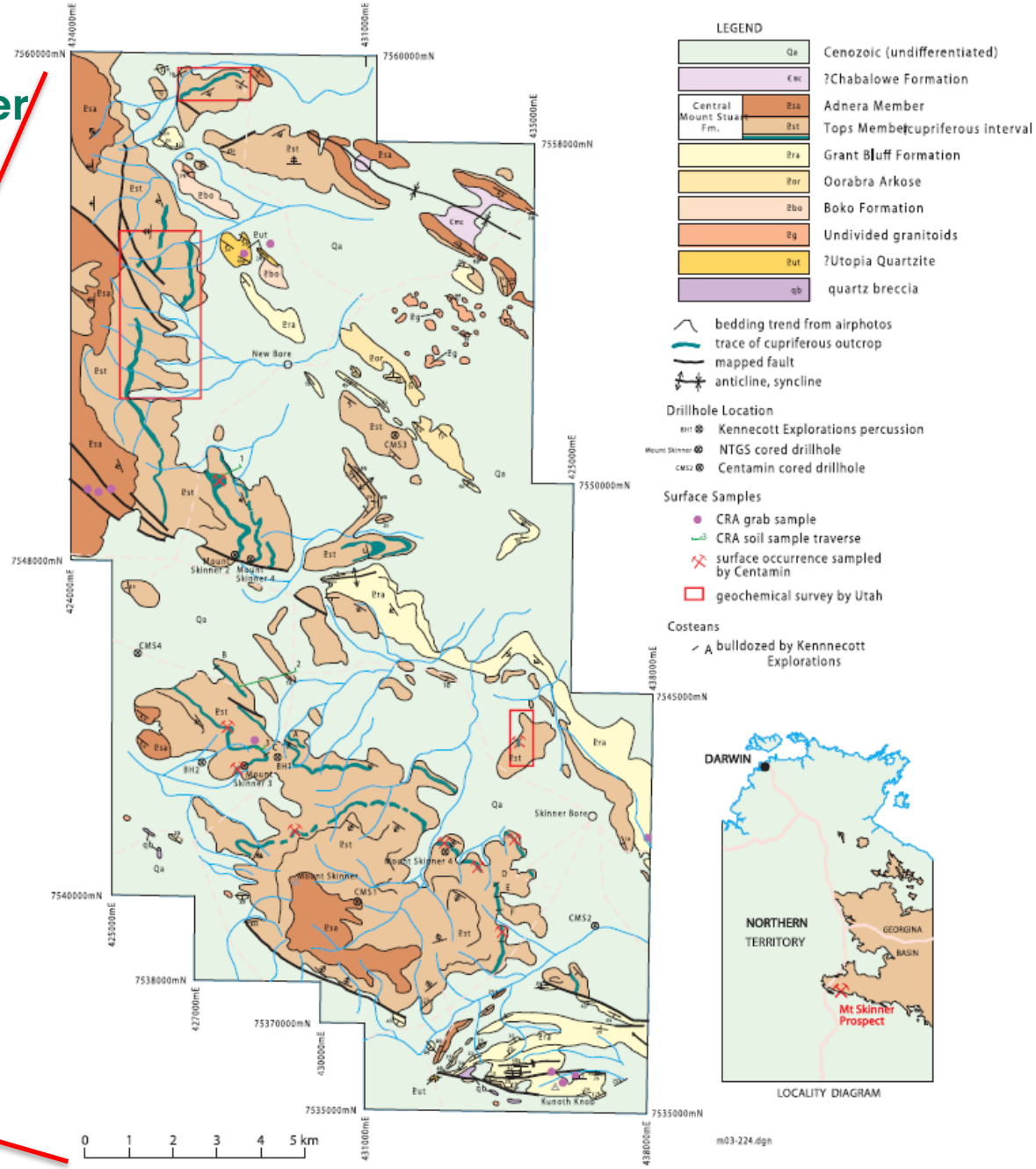


Sandover Project

Outcropping shale units that contain copper

- Historical exploration has mapped copper at surface in a stratiform position extending over 20km of strike in the Mt Skinner area.
- NTGS compiled geological map showing cupiferous outcrop, historical drillholes and surface sampling (compiled by Dunster 2007 from company reports and mapping by Haines 2004)





encounter RESOURCES LIMITED

Sandover Project

- In October 2021 the first field reconnaissance was completed
- Sampling was conducted in four field areas located up to 6km apart to ground truth previously mapped outcropping copper.
- Confirmed the presence of an outcropping red-bed sandstone sequence with multiple, narrow but strike extensive, grey shale units containing copper oxide mineralisation
- Units are assigned to the Tops Member of the Central Mount Stuart Formation. Dolomite and anhydrite are present in the Tops Member.

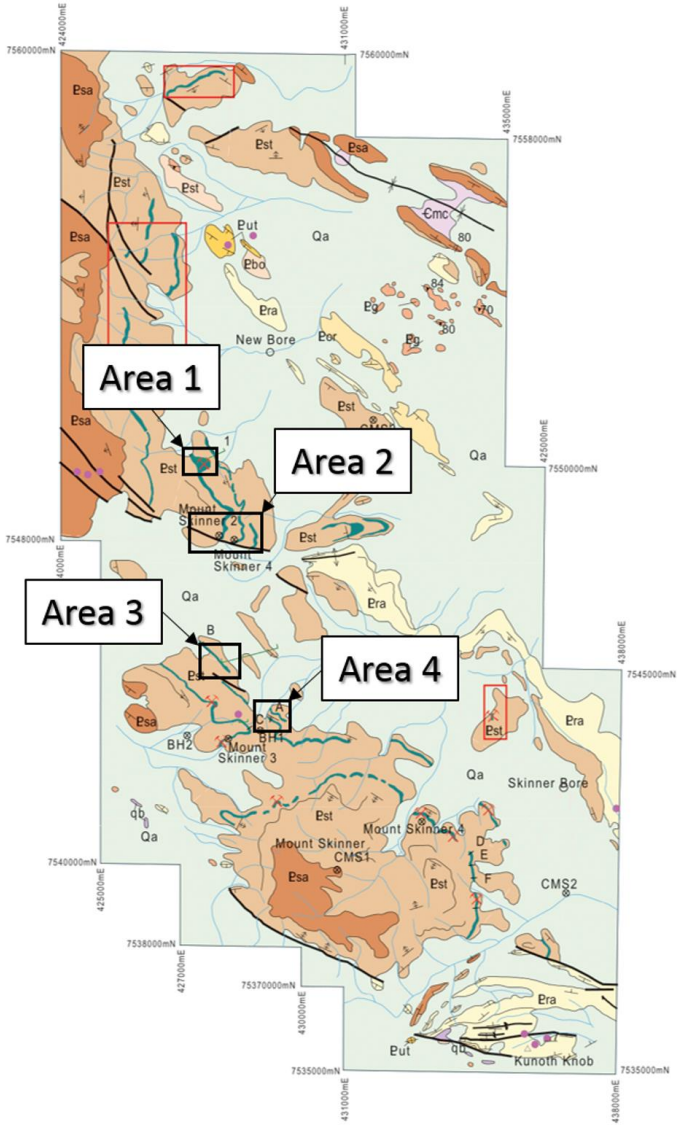
SA0000011 selected sample of surface scree Sandover 5.5% Cu (Area 2)

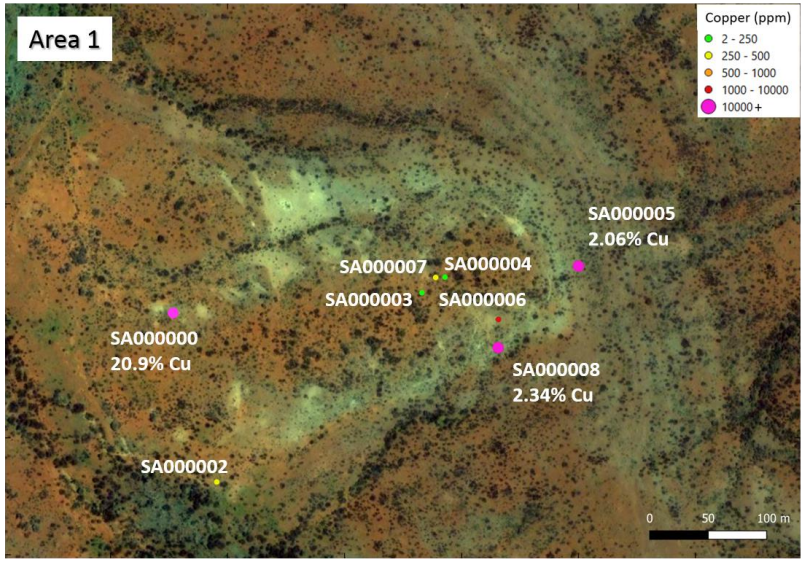
Refer to ENR ASX release 16 December 2021

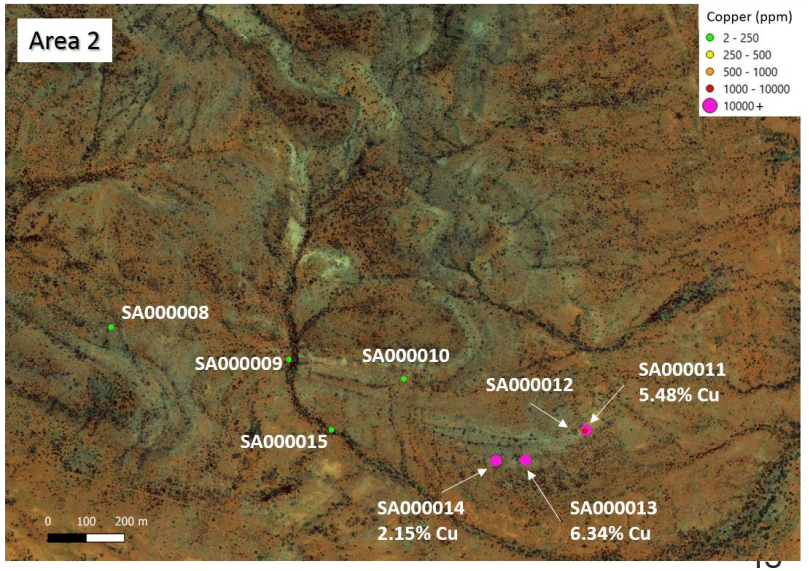
Sandover Project

Outcropping shale units that contain copper mapped for more than 20km

- Sampling of copper mineralisation at surface returned assays up to 20.9% Cu and a suite of highly anomalous pathfinder elements (Zn, Ag, As, Bi, Mo and Pb) at four separate areas over 6km of strike.
- Limited historical drilling was completed between 1966 and 1971 and demonstrated that that anomalous Cu continues downdip and into fresh rock.
- Historical review notes that downhole copper anomalism is associated with locally elevated Ag, As, Co, Mo, Ni, Pb and Zn.
- Diamond core review is commencing this week in Alice Springs.





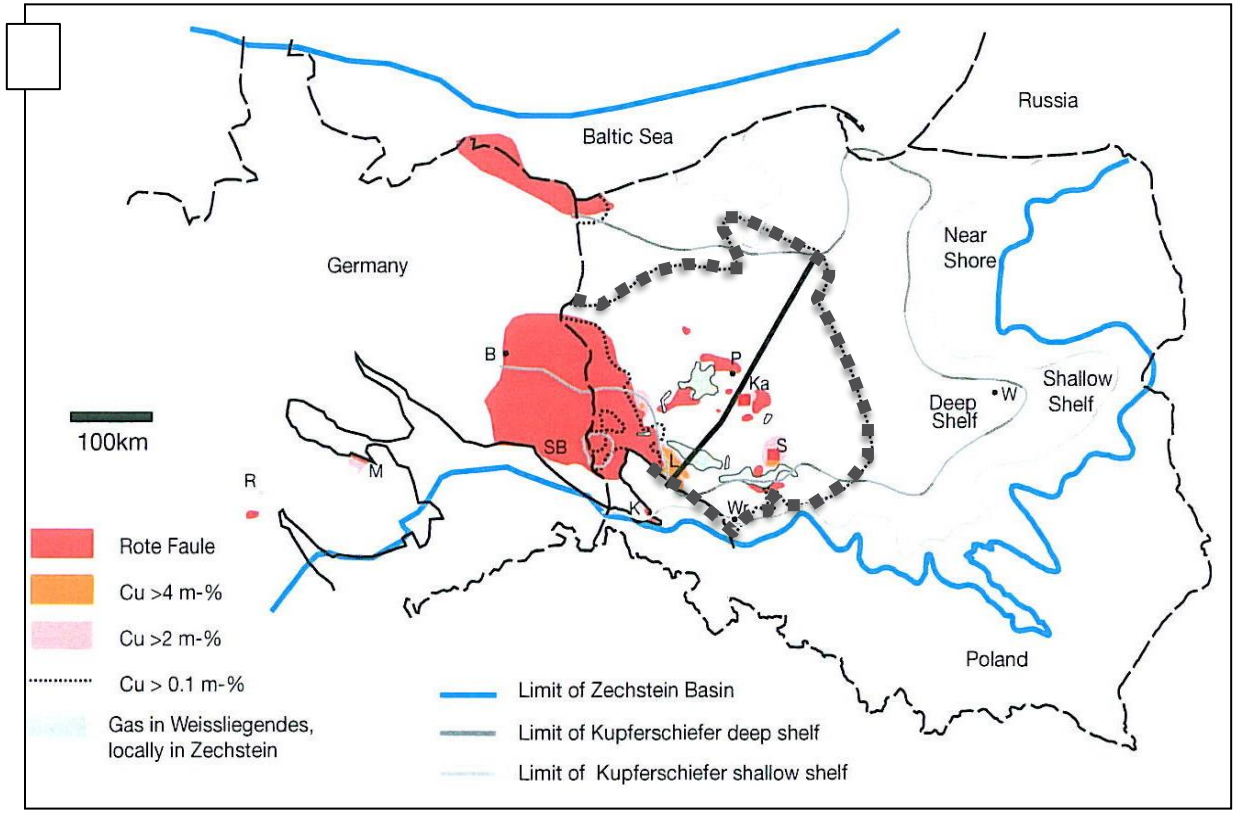


Refer to ENR ASX release 16 December 2021

Sandover Project

A new sediment hosted copper-province in the Northern Territory?

- The major elements of a sediment-hosted copper system are present at Sandover.
- The classic Zambian analogy is particularly relevant in
  - Juxtaposition of Neoproterozoic sediments against crystalline basement
  - Presence of evaporites
  - Reduced stratigraphic units to trap copper brines, within a red-bed sequence
  - Evidence of copper mineralisation event
- Sandover also shows similarities to the Kupferschiefer sediment-hosted copper system in Central Europe.
  - Lack of significant metamorphism and polyphase deformation
  - Potential geochemical zonation Cu-Pb-Zn and significant silver anomalism

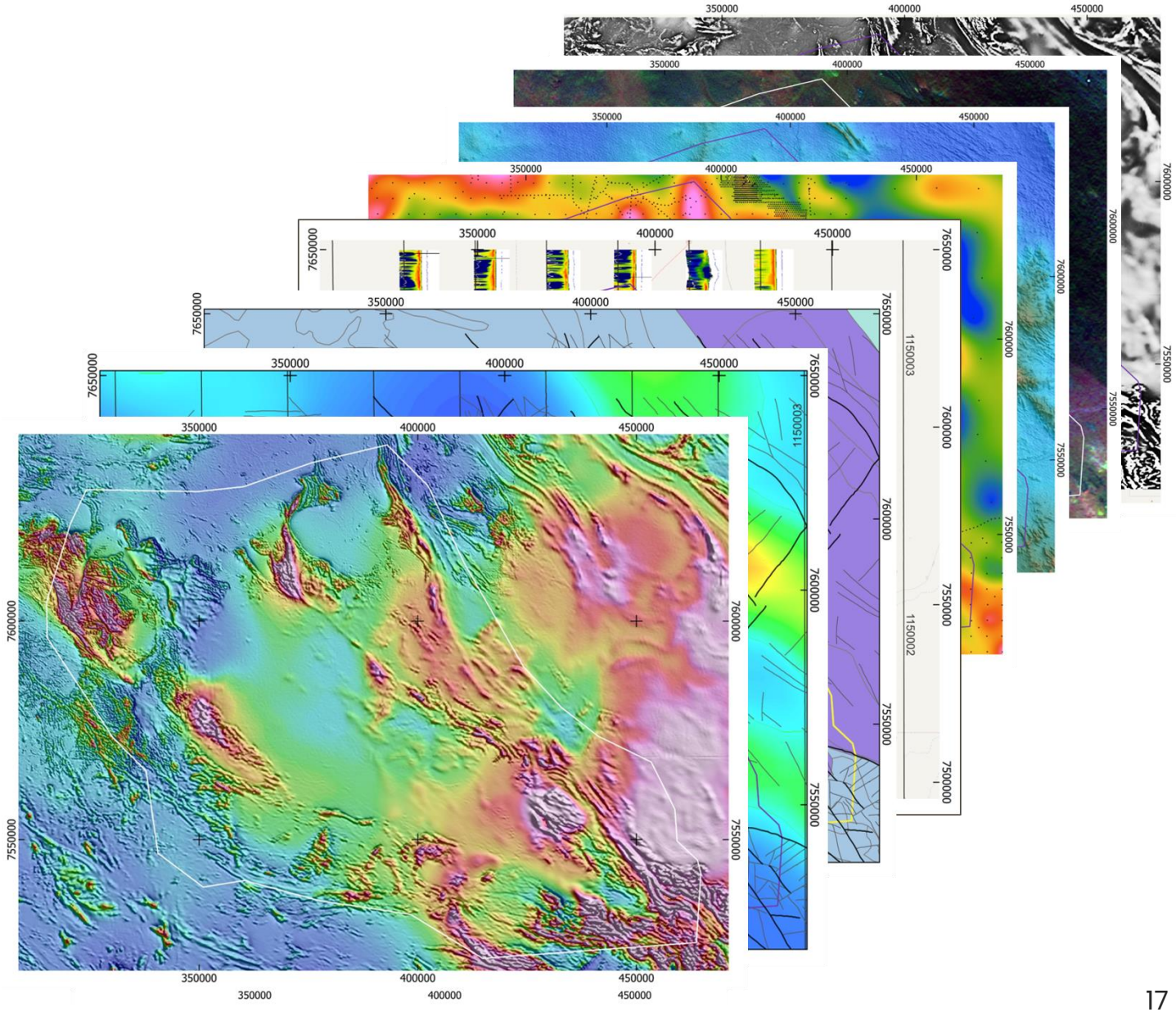


District scale halo of the Kupferschiefer system +1000ppm Cu extends over many 100's of kms

Sandover Project

Exploration Activities

- Geophysical compilation, derivative images and review by Darren Hunt at Terra Resources
- Integration of Magnetics, Radiometrics, Gravity, AusAEM together with Aster, mapped geology, DEM, diamond drillcore stratigraphy and geochemistry.
- On- ground geological reconnaissance and mapping activities extending basin wide
- Integrated basin wide interpretation
- Understanding basement architecture is fundamental to success
- New geophysical survey acquisitions planned gravity survey and evaluating expanded airborne EM coverage.



encounter RESOURCES LIMITED

Next Steps

Designing an exploration program to fast track this emerging opportunity

- Engaging with experts in sediment hosted copper deposit model
- Exploration program to focus on:
  - Identifying and extending reduced units within the basin along strike and under cover
  - Emphasis on basin architecture and where reduced units intersect long-lived basin forming structures as areas with the potential to host major mineral deposits
  - Evaluating further geophysical acquisition
- Sandover also includes known pegmatite occurrences with potential for lithium and other critical metals which will be investigated in conjunction with the copper exploration activities.

encounter RESOURCES LIMITED

Foundations established for major copper exploration drive

Major new copper discoveries required to meet burgeoning demand - constrained supply

Sediment-hosted copper systems are a high grade and large deposit style

Central Australia has the right geology for sediment-hosted and IOCG copper deposits....but underexplored

Partnering with majors to maximise exploration investment and activity

BHP

igo

Exceptional leverage to the decarbonisation and electrification global thematic

encounter RESOURCES LIMITED