





# Leaders in Frontier Mineral Exploration across Australia



## SCIENCE DRIVEN

- Internal project generation using the latest Government datasets
- Engage leading industry specialists to generate the best targets



## FRONTIER EXPLORATION

- Secure large land holdings of undercover extensions to mineralised terrains
- Utilise cutting-edge emerging exploration technologies and techniques to increase the chance of discovery



## SHARE RISK & REWARD

- Form Joint Ventures with well funded partners
- Actively pursue Government co-funding opportunities



### COMPETENT PERSONS STATEMENT

The technical information in this announcement complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and has been compiled and assessed under the supervision of Mr Stuart Rechner BSc (Geology) MAIG MAusIMM, a Member of Australian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy. Mr Rechner has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activity being undertaken to qualify as a Competent Person under the JORC Code. Mr Rechner is a Director and shareholder of SER and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

# Corporate Overview

## Our Team



### Stuart Rechner, Executive Chairman

*BSc (Geology) LLB MAIG MAusIMM MSEG GAICD*

- Experienced company director & exploration / development geologist
- Director at Kingston Resources Ltd, developing 3.8Moz Misima Gold project
- Former Australian diplomat with postings to Beijing and Jakarta



### David DeTata, Managing Director

*BSc MSc PhD (Chemistry) MBA GAICD*

- Accomplished scientist and executive with over 20 years experience
- MinEx CRC Science Advisory Committee Member
- Experienced company director with previous roles in mineral exploration and technology companies



### Anthony McIntosh, Non-Executive Director

*BCom GAICD*

- Accomplished company director with board positions in several listed and unlisted companies, including gold and copper explorers
- Board member of Echo Resources Ltd until takeover by Northern Star Resources



### Neil Chalmers, Exploration Manager

*BSc MSc (Geology) MAIG*

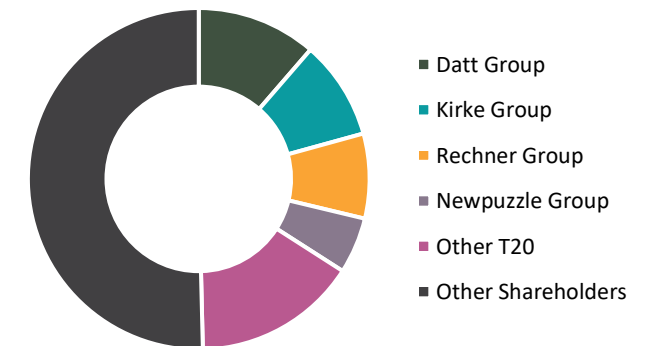
- Exploration geoscientist with over 15 years experience in multiple terrains and commodities across Australia
- Extensive experience in all mineral exploration methodologies

## Investment Highlights & Company Newsflow

- ✓ Tight capital structure with Top 20 holding 50% of Shares on Issue
- ✓ 4x co-funded exploration programs since 2020 worth over \$350k
- ✓ Pipeline of near drill ready greenfield projects to follow
- ✓ SER-FMG JV on ground activities set to commence early 2022
- ✓ Resource upgrade at Ambergate HMS project to commence 2021

## Capital Structure

ASX Code	SER
Shares on Issue	240m
Unlisted Options	11.8m
Share Price	\$0.039
Market Cap (9/11/21)	\$9.3m
Cash (30/9/2021)	\$2.6m



## 100% Owned Copper-Gold Projects

- East Tennant Copper-Gold
- Isa Undercover Initiative
- Cobar Basin & Lachlan Fold belt

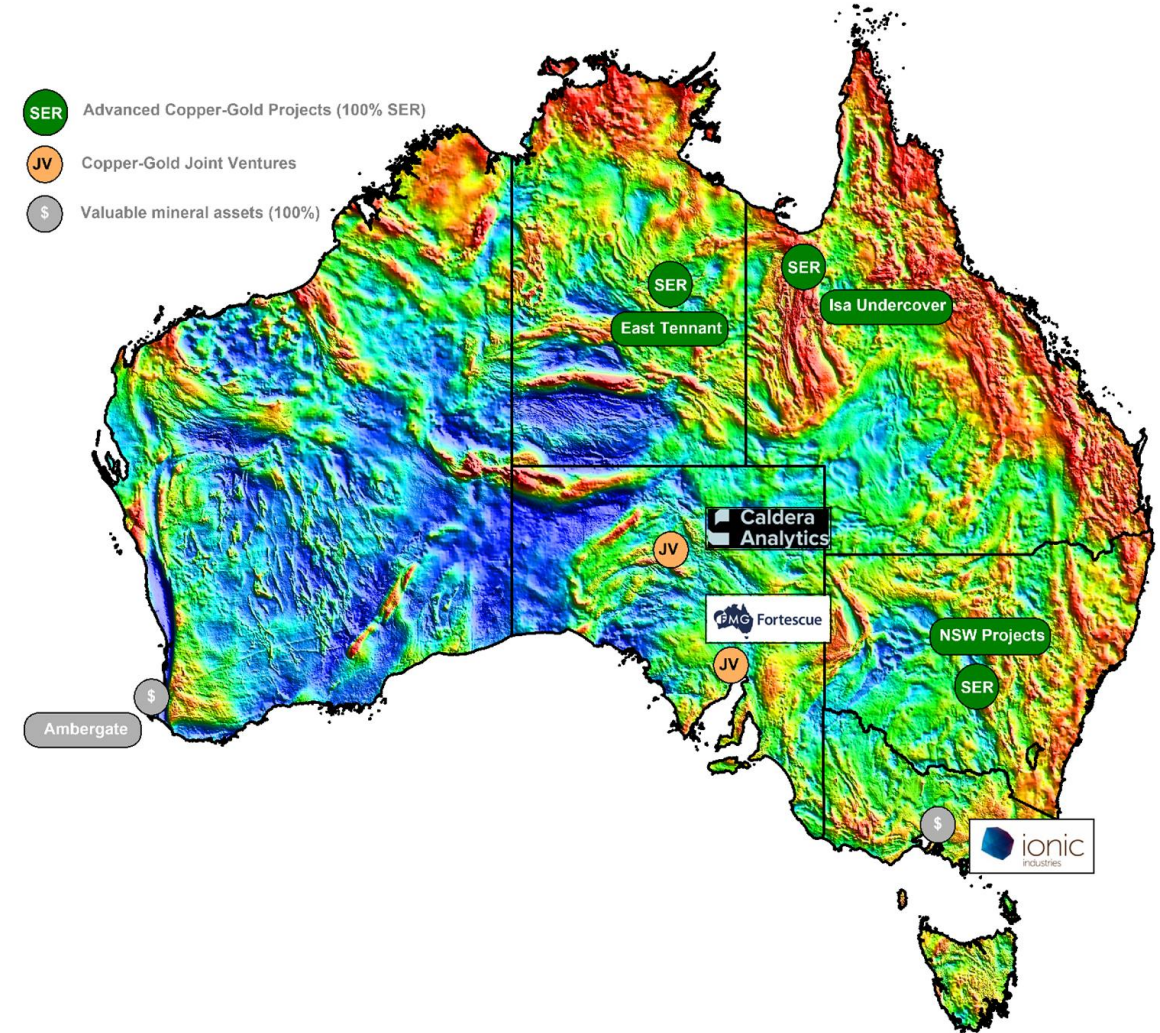
## Joint Venture Exploration

- Myall Creek Copper-Gold JV with FMG
- Mabel Creek Copper-Gold JV with Caldera Analytics

## Valuable Minerals Project

- Ambergate Heavy Mineral Sands

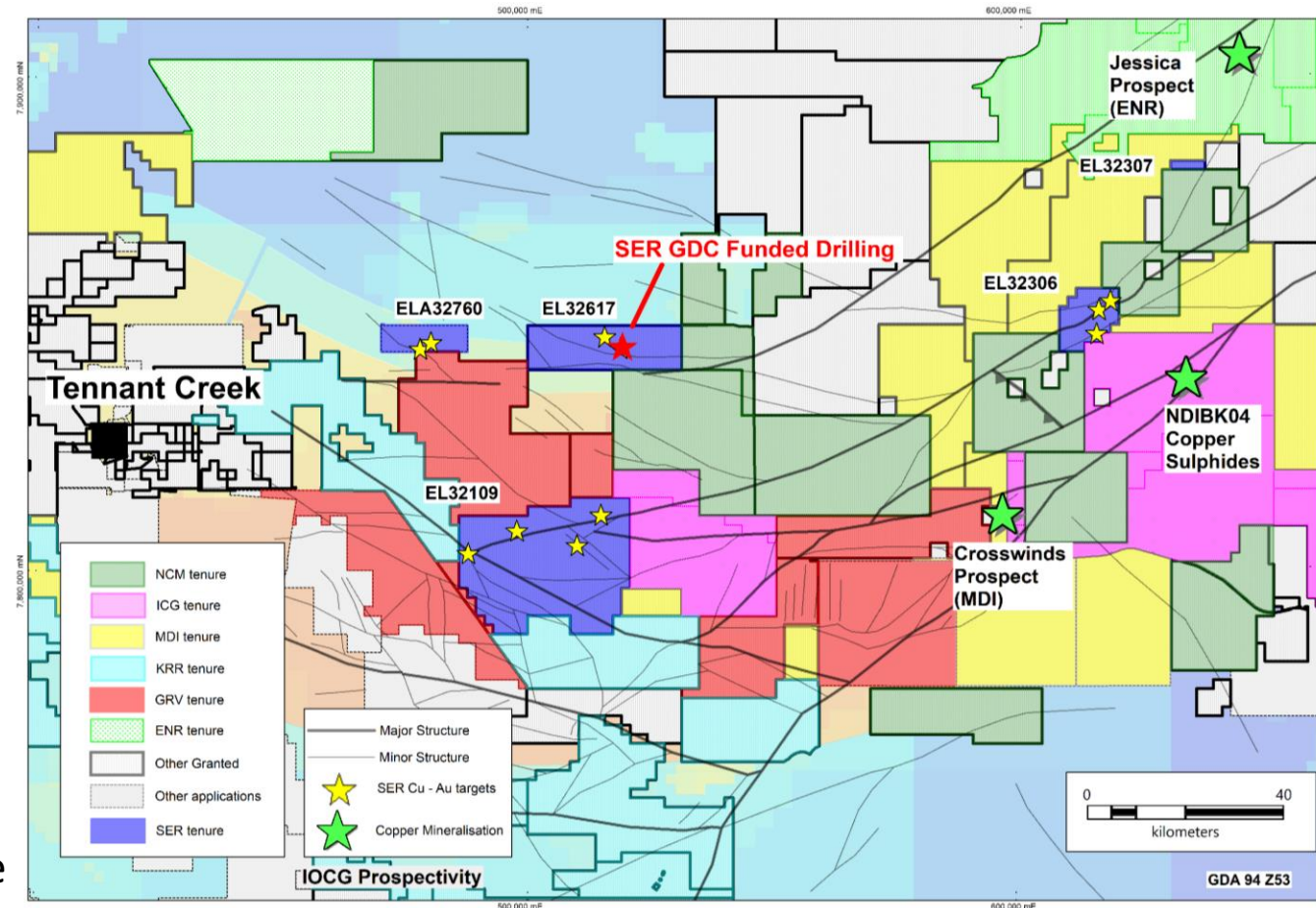
## Equity Holdings & Investments





## Project Background

- Highly prospective but underexplored region located between the major copper-gold districts of Tennant Creek and Mt. Isa
- Five exploration licenses (ELs) – 100% owned by SER – covering 1300sqkm – limited shallow drilling<sup>1</sup>
- Gravity survey (Dec '20) over EL32109, EL32306 & EL32307 co-funded by Northern Territory Government (GDC Round 13) – 9 targets identified
- Gravity survey (March '21) over EL32617 revealed a compelling gravity and magnetic anomaly<sup>2</sup>
- Awarded NTGS co-funding (June '21) to undertake a diamond drill program at Cottage
- Two deep diamond drill holes were planned to test the gravity and magnetic feature of the IOCG target



SER's East Tennant Copper-Gold Project over Geoscience Australia IOCG Prospectivity map with SER targets (yellow stars) and copper mineralisation (green stars)

<sup>1</sup> ASX: SER Announcement 14 February 2020

<sup>2</sup> ASX: SER Announcement 5 March 2021

## Drill Program

- Single deep diamond drill hole (75°) to 690.4m depth to test the gravity and magnetic feature
- On-site core logging suggests the drill hole did not directly intersect a major mineralising system
- IOCG type alteration present within hole including fine grained pervasive hematite alteration, localized patchy hematite – carbonate – chlorite breccias: quartz and hematite veins and veinlets common.
- Re-modelling of target post assays to be undertaken to enhance our understanding of the prospect, our additional Exploration Licences in the region and the greater East Tennant area
- MinEx CRC PhD student developing a 'mineral system model' to aid exploration across the region



*Above: BKDD001 fly-over during drilling*

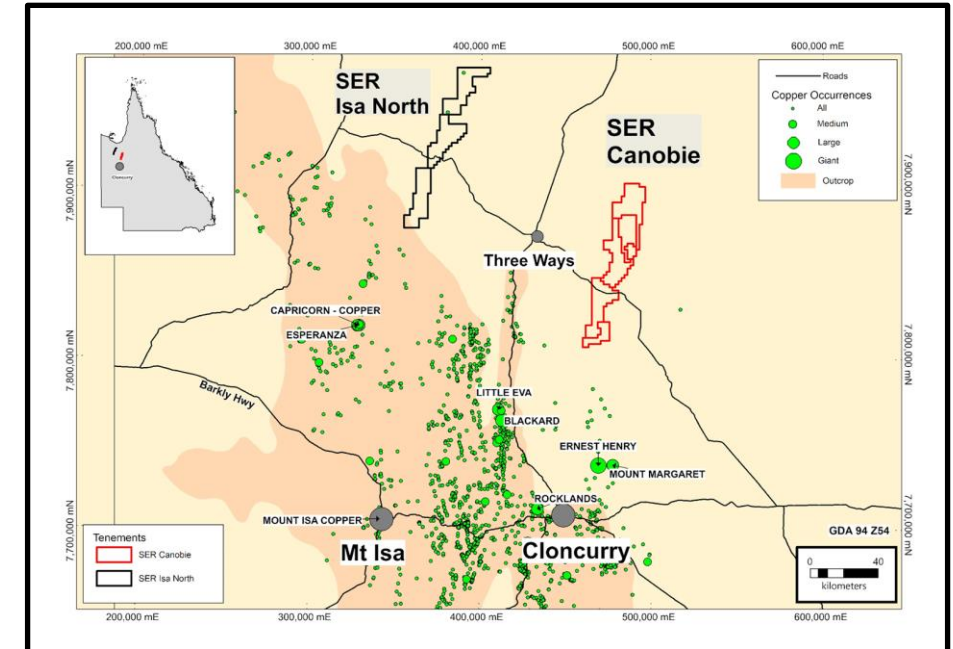


## Canobie Domain and Isa North Projects

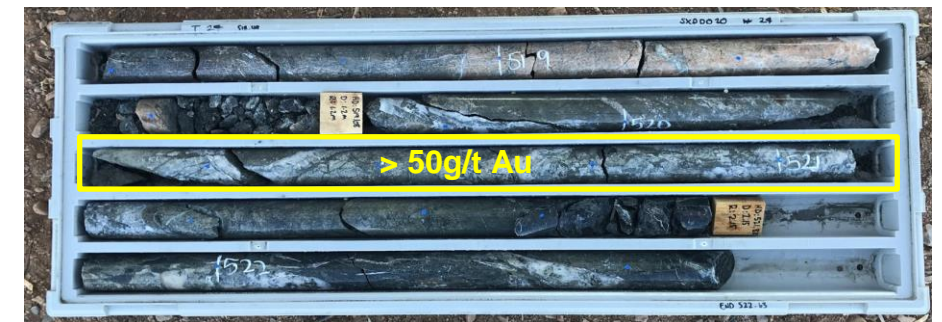
- Two regionally significant projects consisting of 10 tenements (>2,500km<sup>2</sup>) of extensions to known mineralised terrains
- **Geological Survey of Queensland (GSQ) CEI Grant with Caldera Analytics to develop regional Machine Learning Model**

## Canobie Domain

- 7 exploration licences (1,640km<sup>2</sup>), located in the highly prospective Mt Isa Eastern Succession, home to giant Ernest Henry Cu-Au mine
- Significantly underexplored (< 30 drill holes) with historical high-grade gold, nickel, copper, zinc and uranium mineralisation
- **Saxby Gold Prospect:** multiple high-grade gold hits including 17m @ 6.75g/t Au, 15m @ 9.09g/t Au and 6m @ 12g/t Au<sup>1</sup>
- **Tea Tree Nickel Prospect:** drillhole TT001D intersected 10m @ 0.28% Cu and 0.25% Ni in disseminated to semi-massive sulphides (pyrrhotite with accessory chalcopyrite and pentlandite) hosted in a layered gabbro system<sup>2</sup>



Above: Location of SER projects within the Mt Isa Region



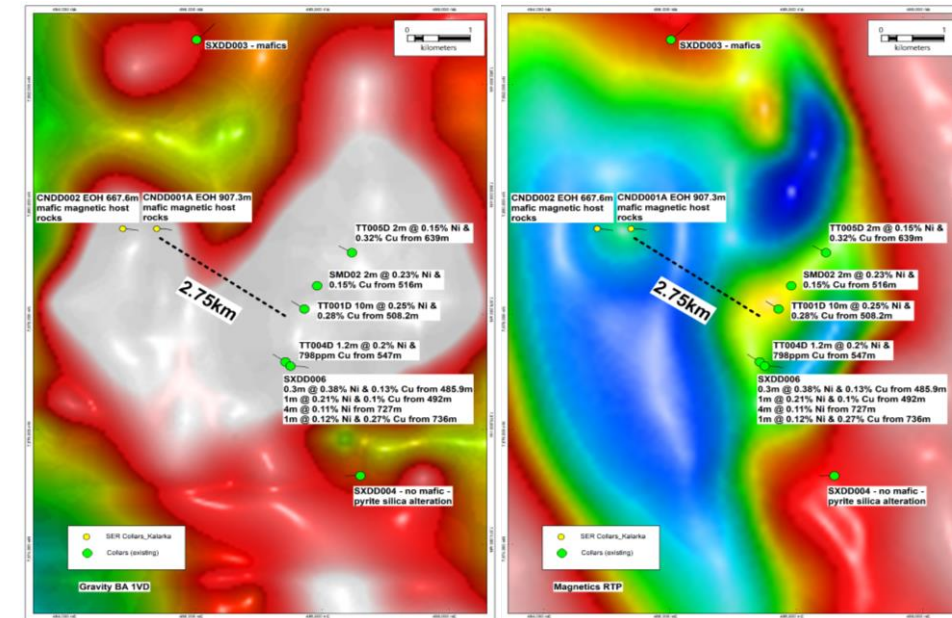
Above: SXDD020 Drill core from Saxby Prospect indicating region of >50g/t Au

<sup>1</sup>ASX SER Announcement 13 December 2019 & 10 December 2020

<sup>2</sup>ASX SER Announcement 26 August 2020

## Drill Program

- Kalarka - a discrete 750 x 600m, 40nT aeromagnetic response characterised by an elevated Electromagnetic (EM) response and partially coincident anomalously higher density.
- Two deep diamond drill holes 535m apart to 907.3 & 667.6m
- **Both drill holes intersected mafic / ultramafic intrusive units with evidence of disseminated and semi-massive magmatic sulphides<sup>1</sup>**
- Inherent similarities in host rocks and sulphide mineralisation style to nearby Tea Tree Ni-Cu sulphide prospect – increasing the size of the prospective mafic system
- Tea Tree drill hole TT00D1, located approximately 2.75km southeast of Kalarka recorded a 10.4m intersection at 0.25% Nickel and 0.28% Copper<sup>2</sup>
- Drilling supported by a GSQ CEI grant (\$100k)
- Clonagh gravity survey completed over southern Canobie region



Above: Left: Drill holes intersections surrounding the Kalarka Prospect over a Bouguer Gravity image Right: Reduction to Pole Magnetic Image.



Above: CNDD001A at 635.9m down-hole showing matrix-textured sulphide zone

<sup>1</sup> ASX SER Announcement 11 November 2021

<sup>2</sup> ASX SER Announcement 26 August 2020

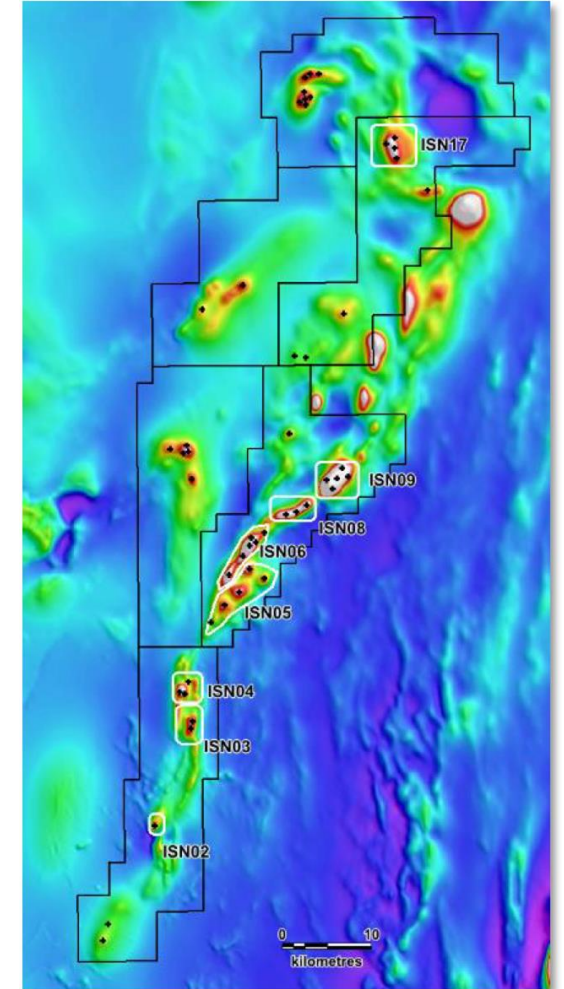


## Project Background

- Pegged by Newcrest (ASX:NCM) in 2018 as part of their 'Undercover Strategy'<sup>1</sup> targeting >200Mt Copper-Gold deposits
- Secured tenements this year 2021 for nil cash, FROR and 1% NSR for 10 years<sup>2</sup>
- NCM drilled 9 holes (5190m) at four target areas and generated two "Priority 1" targets, which were never followed up
- Red Metal / OZ Minerals joint venture Gibson Tank drilling underway now

## Our Strategy

- Newcrest identified 8 priority target areas based on structural position, geophysical signature, depth to basement and target size
- The target Lorraine North (ISN03) demands follow-up drilling based on the identification of elevated Cu and pathfinders - Tier 1 'near miss' intercept
- Tenement transfer near completion with Machine Learning Project to aid drill targeting



Above: NCM tenement map showing location of targets identified by Newcrest. Source: Newcrest: Isa North Update Presentation January 2021

<sup>1</sup> ASX: NCM Announcement 30 January 2019

<sup>2</sup> ASX: SER Announcement: 4 May 2021

# Overview

## Strategic Rationale

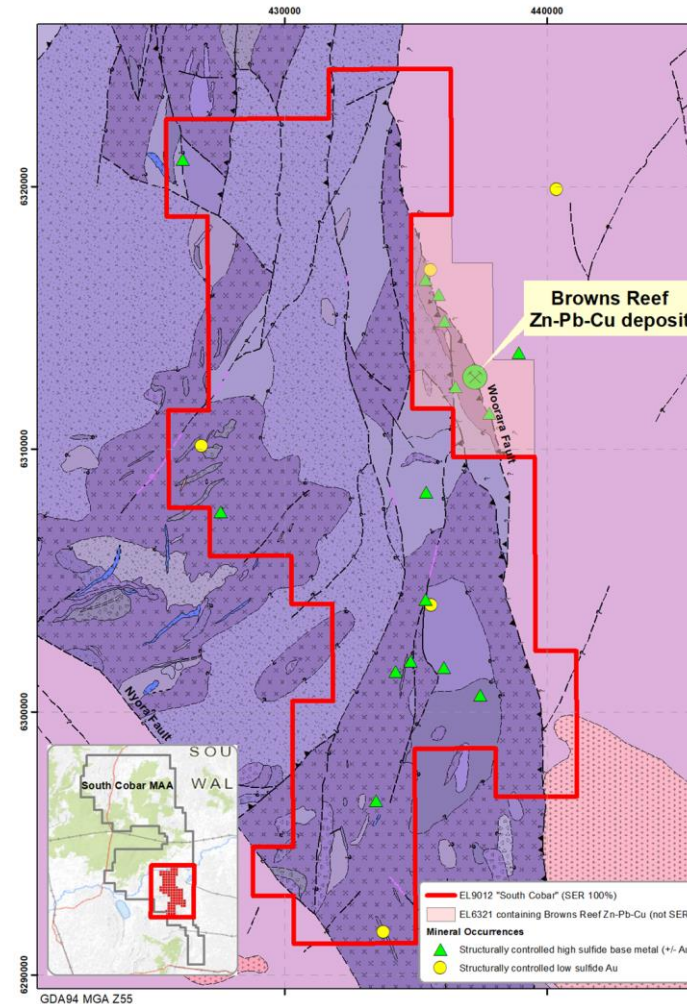
- Geological Survey of NSW (GSNSW) Mineral Allocation Areas represent undercover extensions to mineralised terrains<sup>1</sup>

## South Cobar

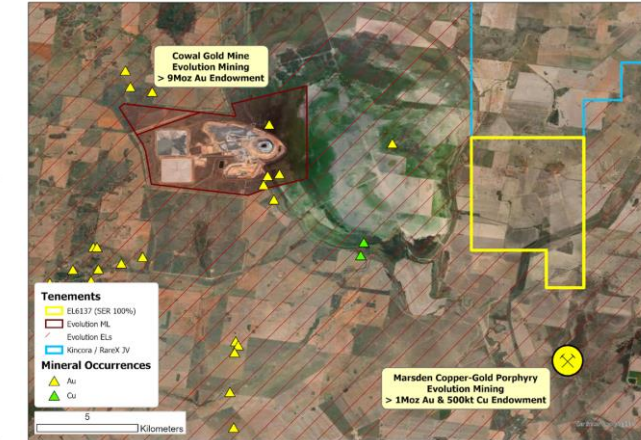
- Surrounding the undeveloped Brown's Reef (Pb-Zn-Cu-Ag-Au); and several underexplored structural corridors with historical mineral occurrences in a fertile stratigraphic sequence of the Cobar Supergroup
- Airborne magnetic survey completed<sup>2</sup>, soil geochemistry project scheduled this year

## East Cowl

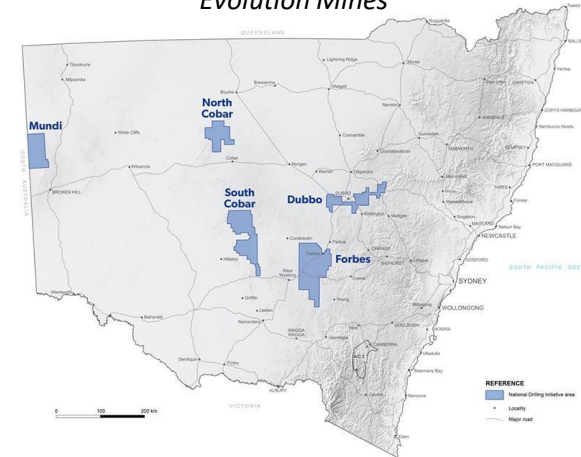
- 7km east of Evolution Mining (ASX:EVN) Cowl Gold Mine and 4km north of Marsden Cu-Au porphyry deposit – desktop review underway



Above: South Cobar project with geology and mineral occurrences



Above: East Cowl project with mineral occurrences; note nearby Cowl mine held by Evolution Mines



Above: New South Wales Mineral Allocation Areas

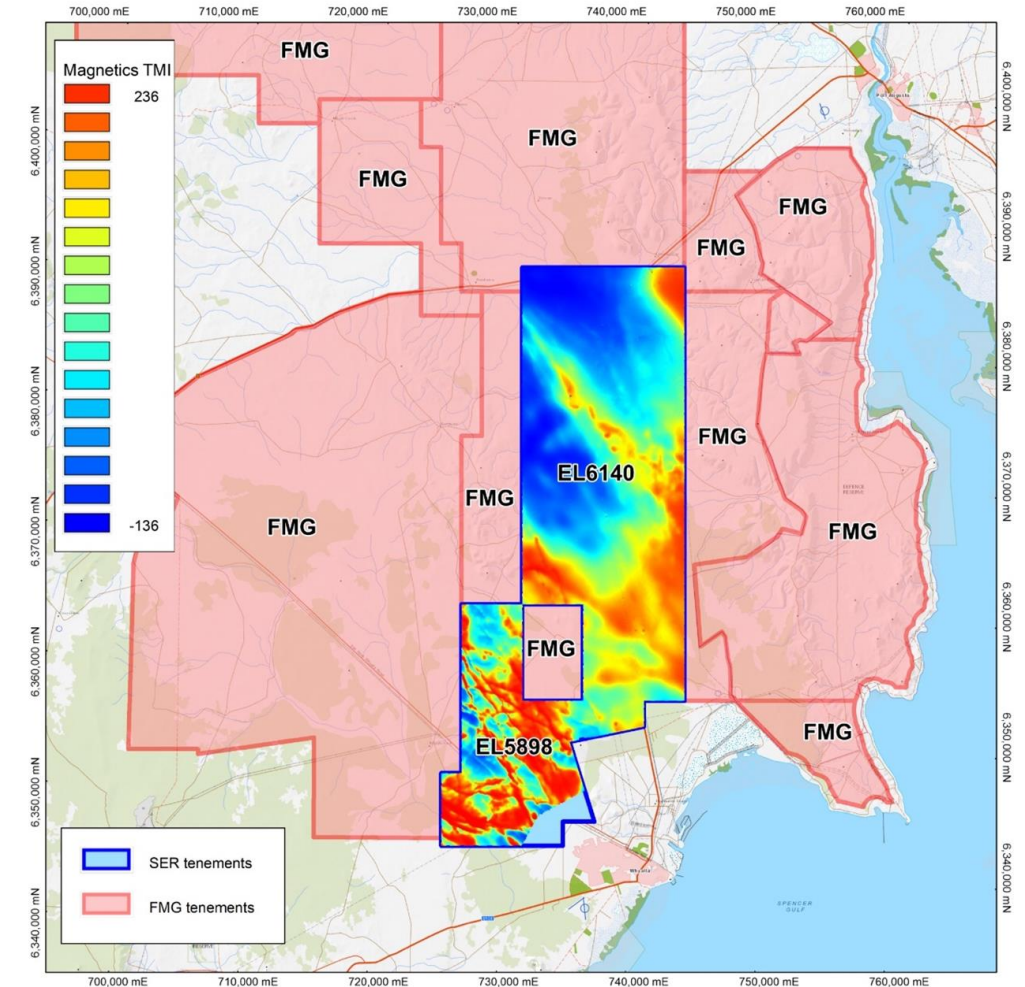
<sup>1</sup> ASX: SER Announcement 18 January 2021

<sup>2</sup> ASX: SER Announcement 16 June 2021



## Strategic Rationale

- Prime location in Olympic Copper-Gold Province, home to giant producing mines: Olympic Dam, Prominent Hill, Carrapateena
- Project surrounded by FMG to the north, east and west
- Historical drilling intersected occurrences of copper and other base metals including significant cobalt mineralisation; however basement remains untested
- 2019 FMG signed a farm-in deal to earn 80% interest by sole funding \$1.5m exploration<sup>1</sup> **(includes minimum 1500m drilling)**
- FMG completed detailed magnetic / radiometric survey in early 2020
- Native title agreement to be finalised followed by a ground gravity survey to generate drill targets

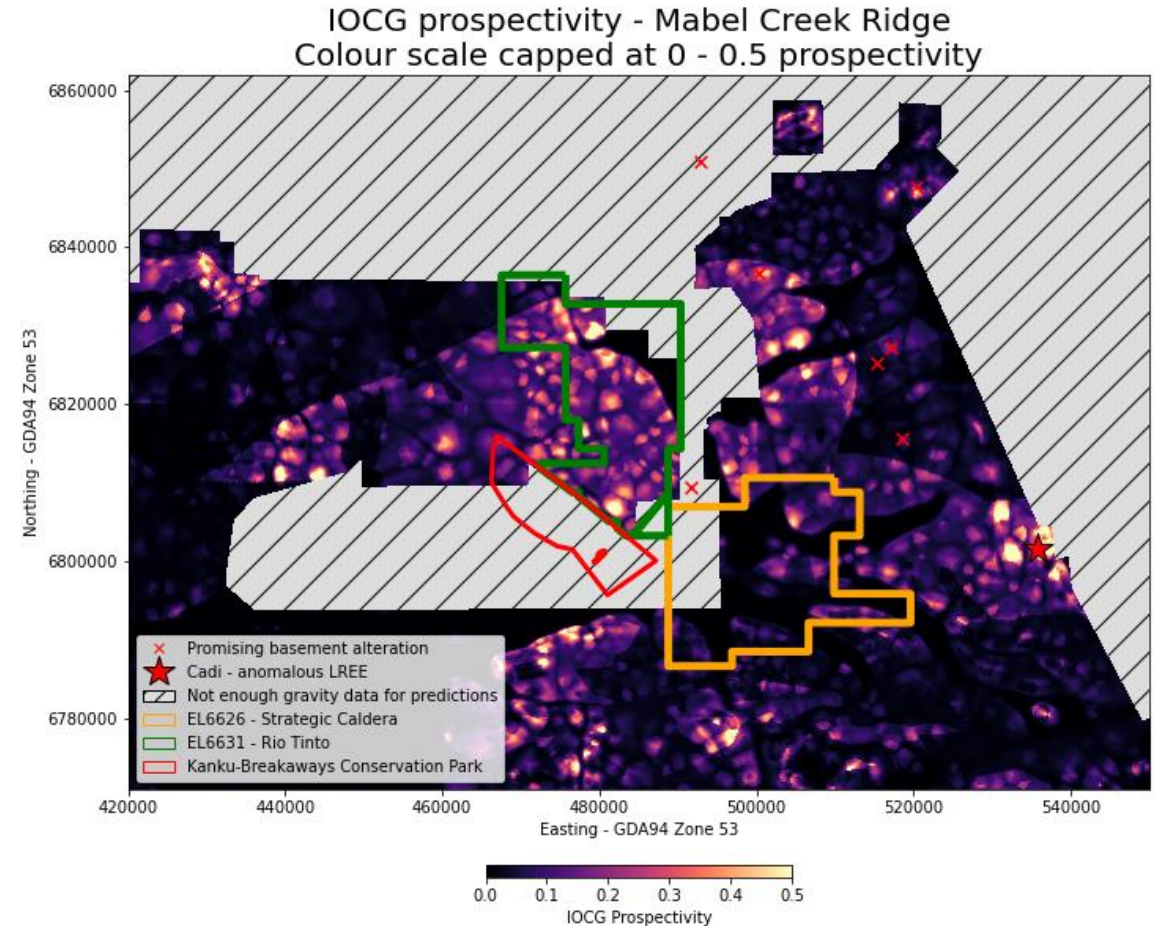


Above: Myall Creek JV project area covered by Magnetic survey image

<sup>1</sup> ASX: SER Announcement 6 March 2020

## Strategic Rationale

- Located in the Gawler Craton, east of Coober Pedy, 489km<sup>2</sup> area pegged based on a synthesis of machine learning and traditional geoscientific ground selection
- The most prospective open ground target generated as part of the 2020 ExploreSA Challenge
- Strategic Caldera is now building camp scale models that fuses machine learning and traditional exploration methodologies to refine target areas for further geophysical work and subsequent drill testing
- Historic drilling in the area has intersected IOCG alteration and anomalous REE
- Native Title negotiations underway prior to detail ground gravity being conducted
- Oz Minerals using Machine Learning at their nearby Mt Woods project

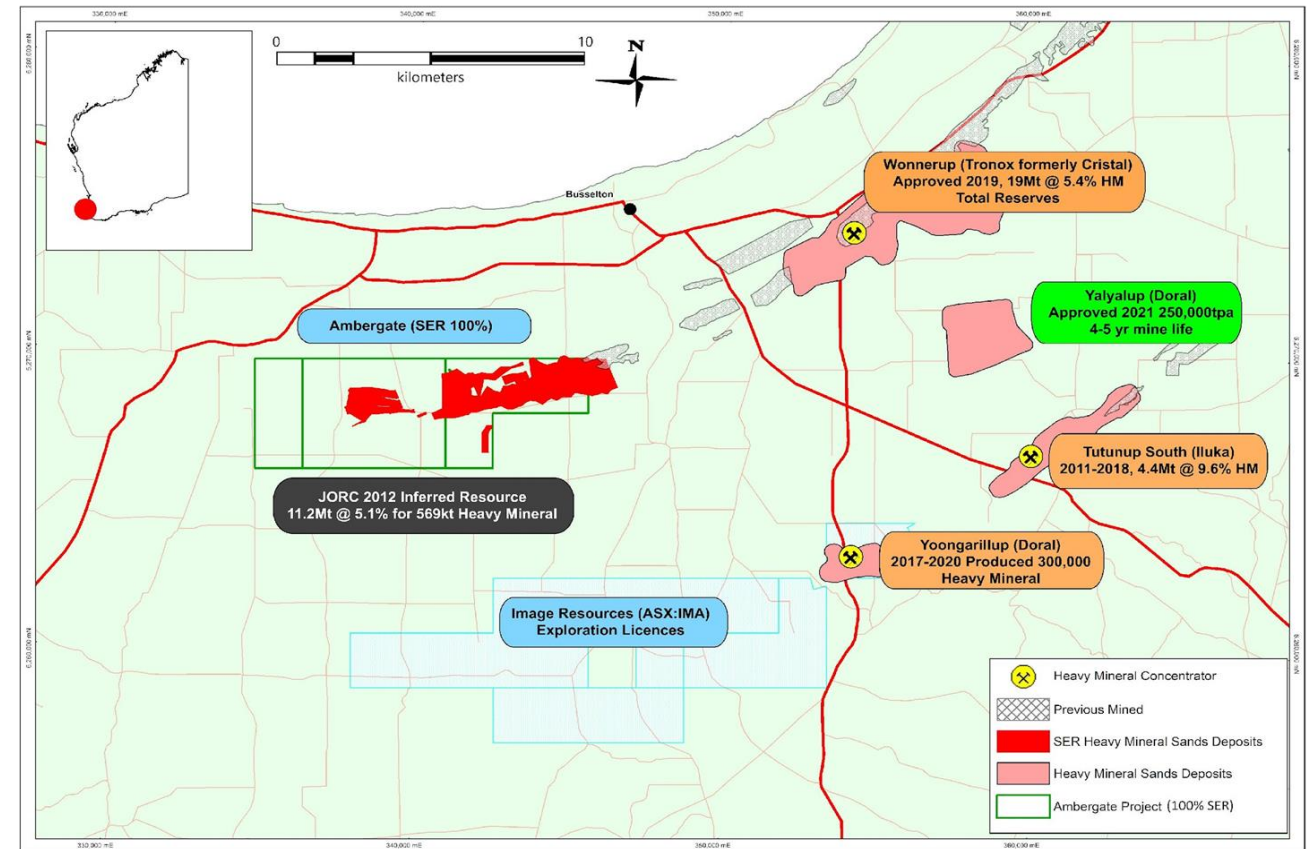


Above: **ExploreSA Challenge** Rejecting 'Big Data' and Embracing Simplicity: IOCG Prospectivity Modelling for New Frontiers Author: Michael Rodda



## Strategic Rationale

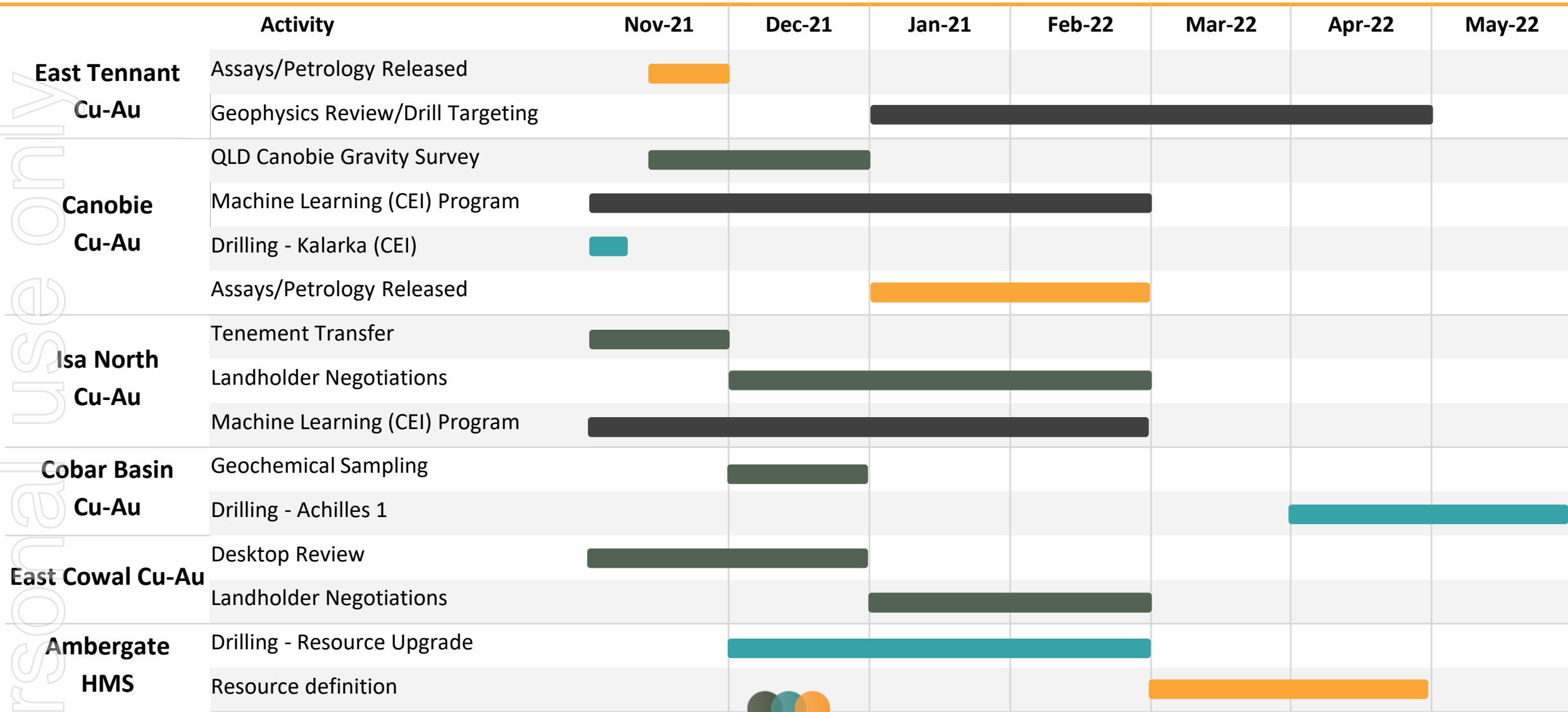
- Located amongst multiple operating Heavy Mineral Sands mines
- Current JORC 2012 Inferred Resource of **11.2.Mt grading 5.1% Heavy Minerals (HM) for a total HM content of 569,000t** using a low grade Heavy Mineral cut-off of 3% and Slimes cut off <22%<sup>1</sup>
- Heavy mineral assemblage: 73% ilmenite 12% leucoxene, 12% zircon, 0.6% monazite, 2% other; all from surface
- Resource based on original tenements; Resource upgrade planned for Q4 2021, and will include extensions to the West held by SER
- SRK Independent Report (2018): “*Ambergate appears to have reasonable potential for economic extraction by way of small open pit surface mining.*”



Above: Ambergate Heavy Mineral Resource with surrounding operating HMS mines

<sup>1</sup> ASX: SER Announcement 3 November 2021

# Our next phase of growth





# Investor Contact

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