

# Exploring the Greenfield Frontiers of Australia



Photo credit: MinEx CRC



# Leading Frontier Mineral Exploration in Australia



1

## SCIENCE DRIVEN

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

2

## 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

3

## 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.

# About Us

## 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 3.6Moz 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 15 years experience
- Science Advisory Committee, Mineral Exploration Cooperative Research Centre
- Experienced mineral exploration company director



#### Anthony McIntosh, Non-Executive Director

*BCom GAICD*

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



#### Neil Chalmers, Exploration Manager

*BSc MSc (Geology) MAIG*

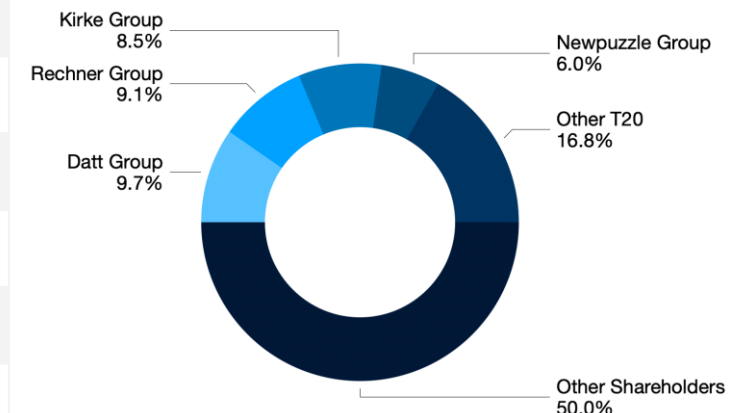
- Exploration geoscientist with over 15 years experience in multiple terrains
- Extensive experience in all mineral exploration methodologies

### Investment Highlights & 2021 Catalysts

- ✓ Tight capital structure with Top 20 holding 50% of Shares on Issue
- ✓ Two co-funded drill programs set for 2021
- ✓ Pipeline of near drill ready greenfield projects to follow
- ✓ SER-FMG Joint Venture at Myall Creek
- ✓ Resource upgrade at Ambergate HMS project to commence this year

### Capital Structure

ASX Code	SER
Shares on Issue	213m
Unlisted Options	11.8m
Share Price (27/8/21)	\$0.051
Market Cap	\$10m
Cash (30/6/2021)	\$2m



## 100% owned copper-gold exploration

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

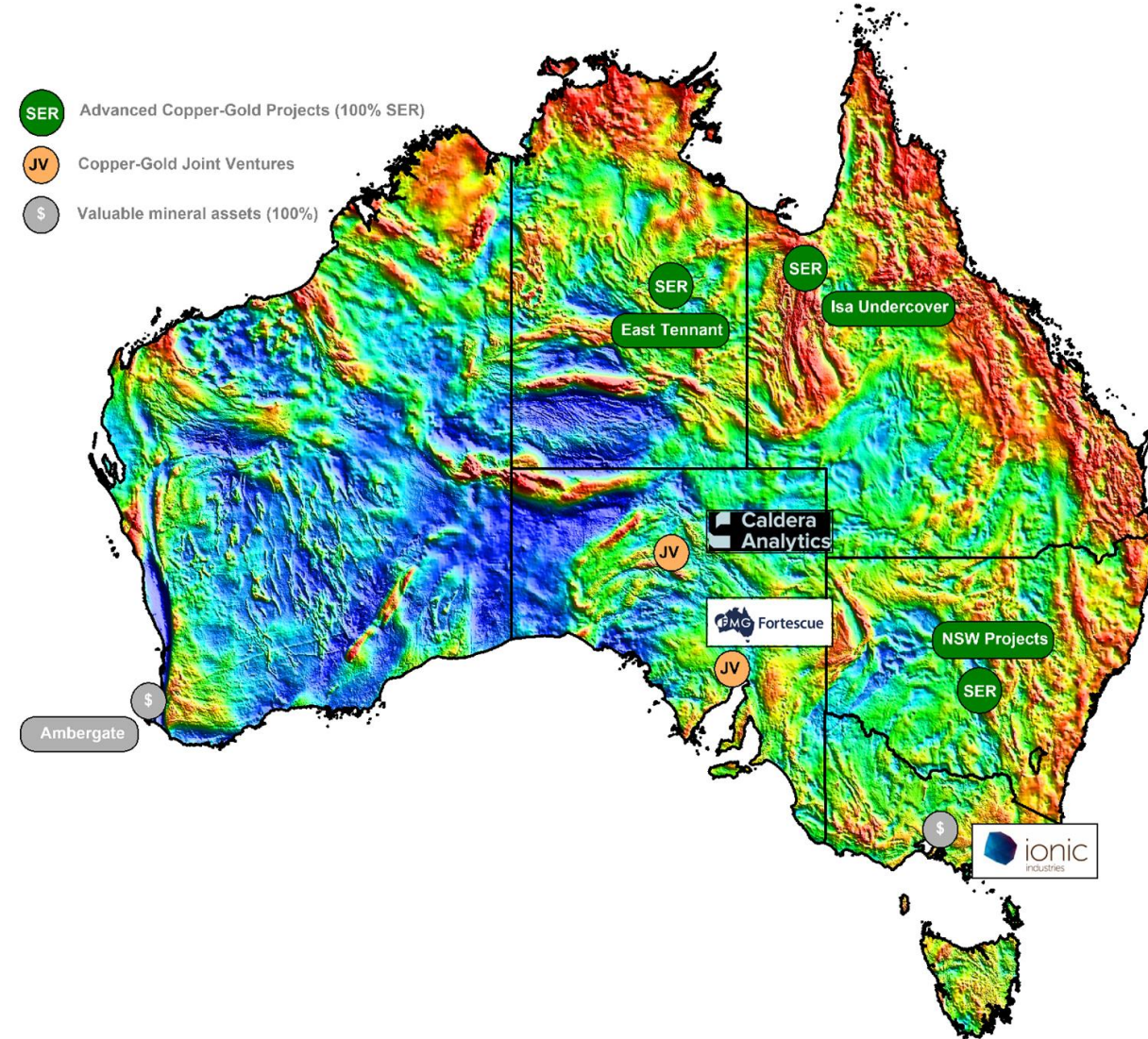
## Joint Venture Exploration

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

## Valuable Minerals Projects

- Ambergate Heavy Mineral Sands

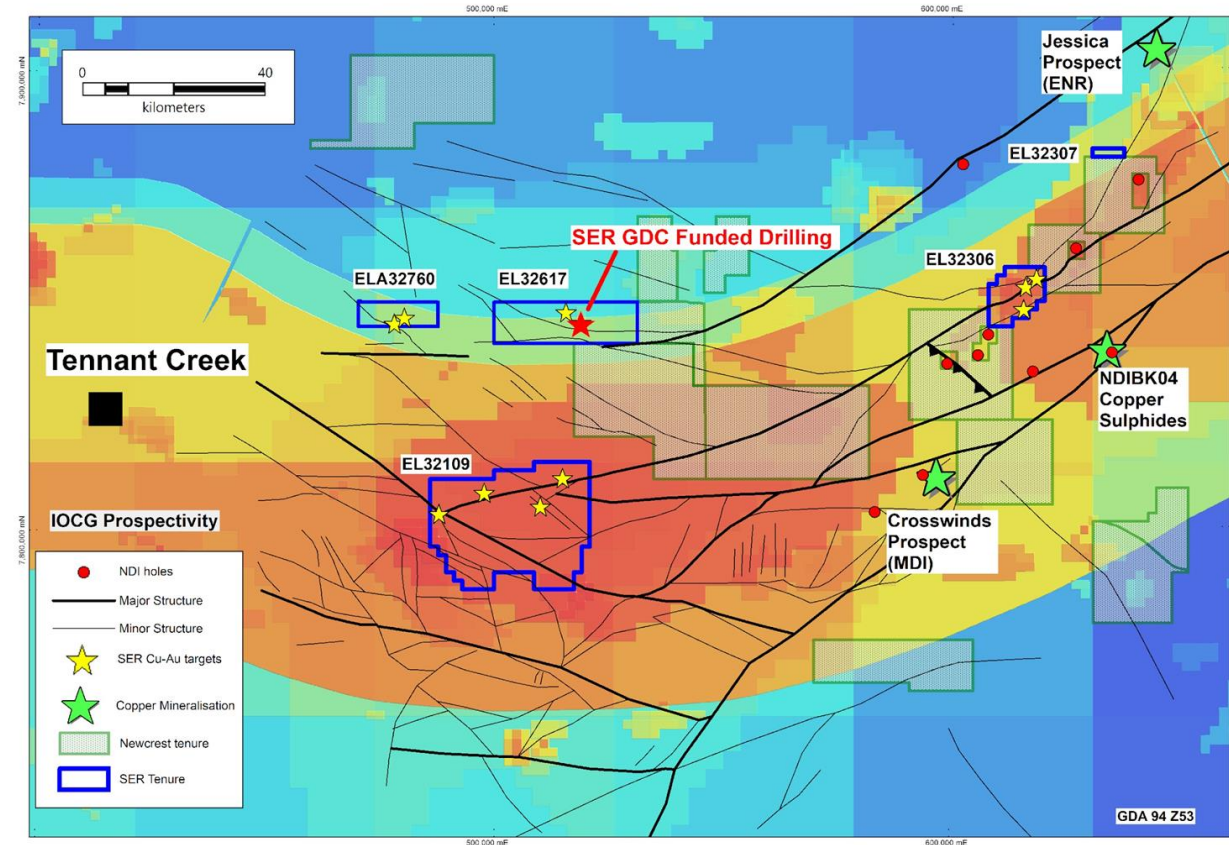
## Equity Holdings & Investments





## Project Background

- Five exploration licenses (ELs) – 100% owned by SER
- Broader region characterised by geological features favourable to host mineral systems, including large-scale changes in lithospheric architecture and zones of high electrical conductivity in the crust and mantle
- Gravity survey completed December 2020 over EL32109, EL32306 & EL32307 co-funded by Northern Territory Government
- Gravity modelling identified nine compelling IOCG targets, four within SER's EL32109, three within SER's EL32306 and two that were in open ground – now pegged by SER (EL32617 & EL32760)
- None of the targets have ever been drill tested
- MinEx CRC National Drilling Initiative (NDI) stratigraphic drilling in 2020 confirmed the prospectivity of the region<sup>1</sup>
- Neighbouring explorers have begun to uncover copper mineralisation
- Gravity survey over EL32617 revealed a particularly compelling gravity and magnetic anomaly



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

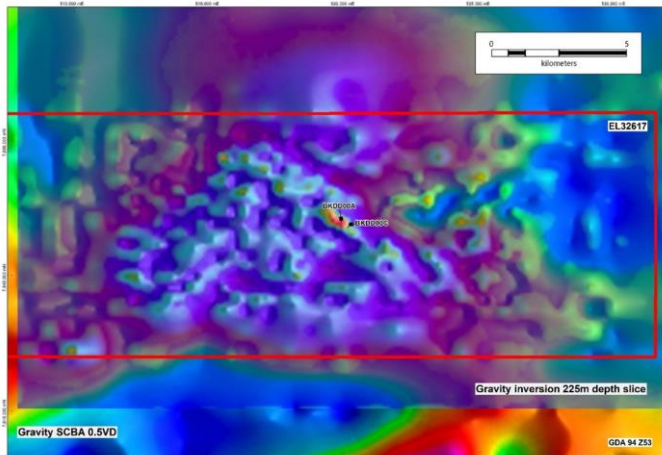
<sup>1</sup> East Tennant Project | Exploring for the Future (ga.gov.au)

## ‘Cottage’ Prospect

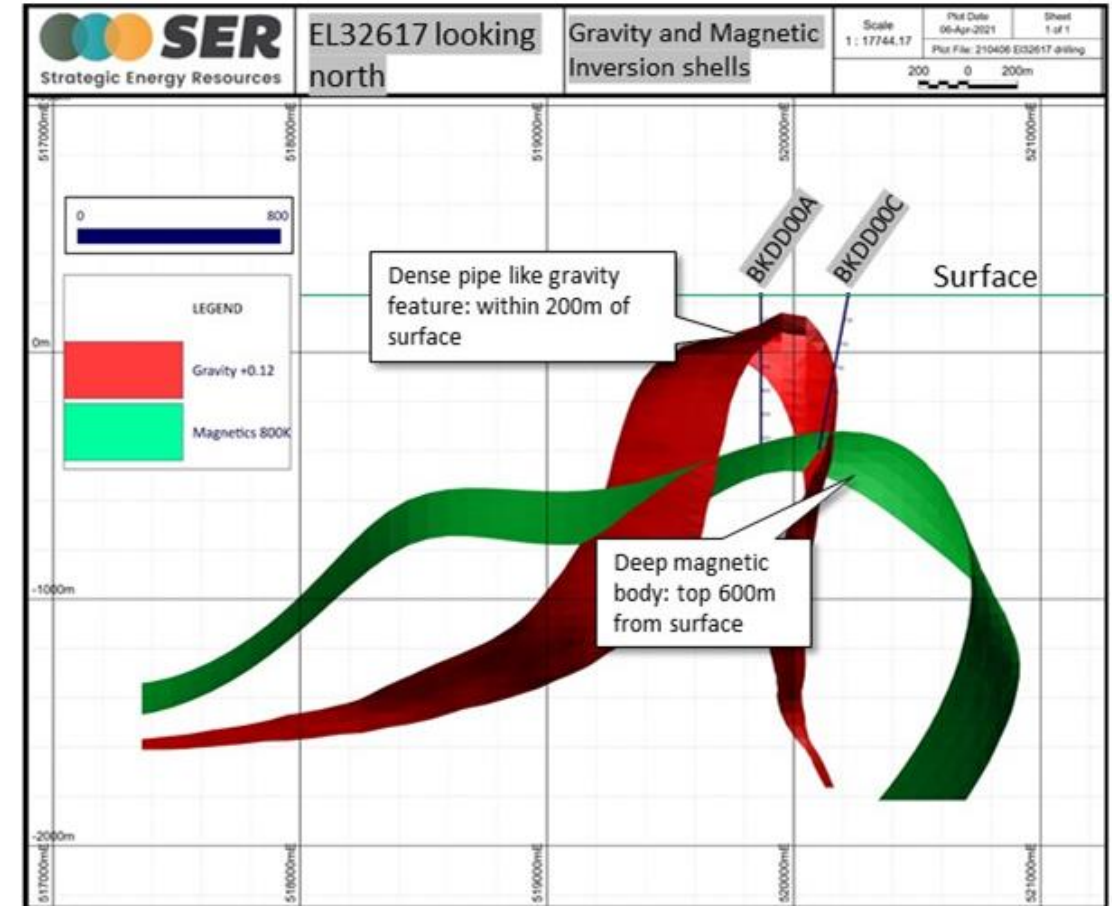
- Processing and modelling of the gravity and magnetic data identified an 8 x 5km body with an amplitude of +5mGal on the ground and 150nT in the air with a central pipe-like response and an associated significant magnetic root system – 200m from surface
- Awarded Northern Territory Government co-funding to drill (\$135k)

## Near Term Drilling:

- 2 x deep diamond drill holes to 650m depth planned to test different parts of the Iron Oxide Copper-Gold (IOCG) target
- Drill rig scheduled to arrive in September



Above: 225m depth slice of gravity inversion displaying top of pipe-like feature and planned drillholes at Cottage



Above: EL32617 Cross section of gravity and magnetic inversions (looking north), with SER planned drillholes

<sup>1</sup> SER ASX Ann: [Exploration Update - East Tennant Copper-Gold Project](#)

## Canobie Domain and Isa North Projects

- Two regionally significant projects consisting of 10 tenements covering over 2500km<sup>2</sup> of extensions to known mineralised terrains
- Geological Survey of Queensland (GSQ) Collaborative Exploration Grant with Caldera Analytics to develop regional Machine Learning Model (\$65k)



## Canobie Domain

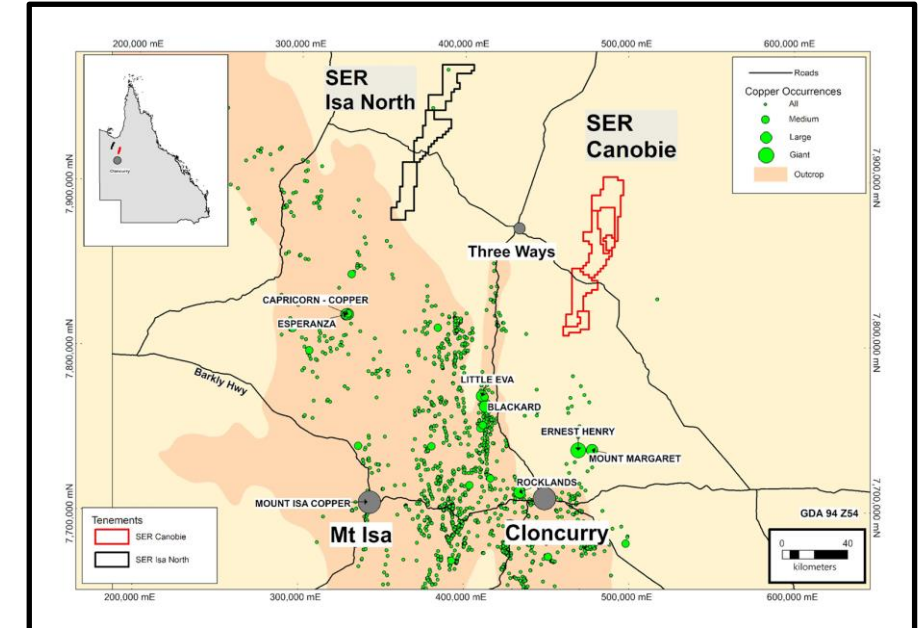
- Seven exploration licences covering 1640km<sup>2</sup>, located in the highly prospective Mt Isa Eastern Succession, home to giant Ernest Henry Copper-Gold mine
- The belt remains significantly underexplored (< 30 drill holes) with historical high-grade gold, nickel, copper, zinc and uranium mineralisation yet to be followed up

## Previous exploration at Canobie shows potential

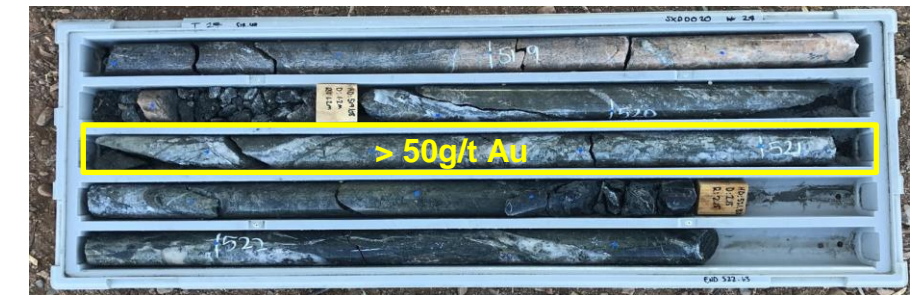
- Saxby Gold Prospect returned multiple high-grade gold hits including 17m @ 6.75g/t Au, 15m @ 9.09g/t Au and 6m @ 12g/t Au<sup>1</sup>
- Tea Tree Nickel Prospect: historical drillhole TT001D intersected 10m @ 0.28% Cu and 0.25% Ni in disseminated to semi-massive sulphides (pyrrhotite with accessory chalcopyrite and pentlandite) hosted in a layered gabbro system<sup>2</sup>

<sup>1</sup> SER ASX Ann: [High grade gold mineralisation intersected at Saxby](#) and [Saxby Drilling Results](#)

<sup>2</sup> SER ASX Ann: [Saxby Exploration Update](#)



Above: Location of SER projects within the Mt Isa Region



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



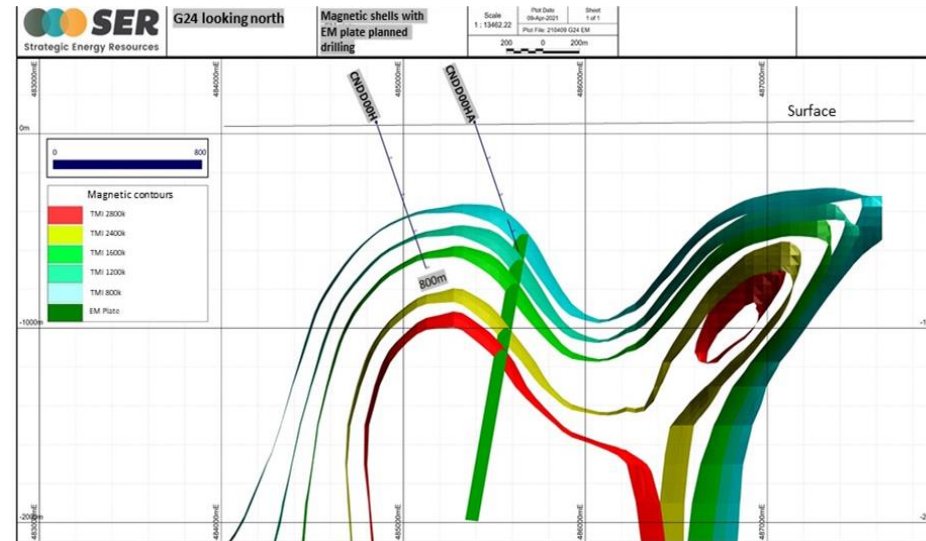
# Upcoming Exploration

## 'Kalarka' Prospect

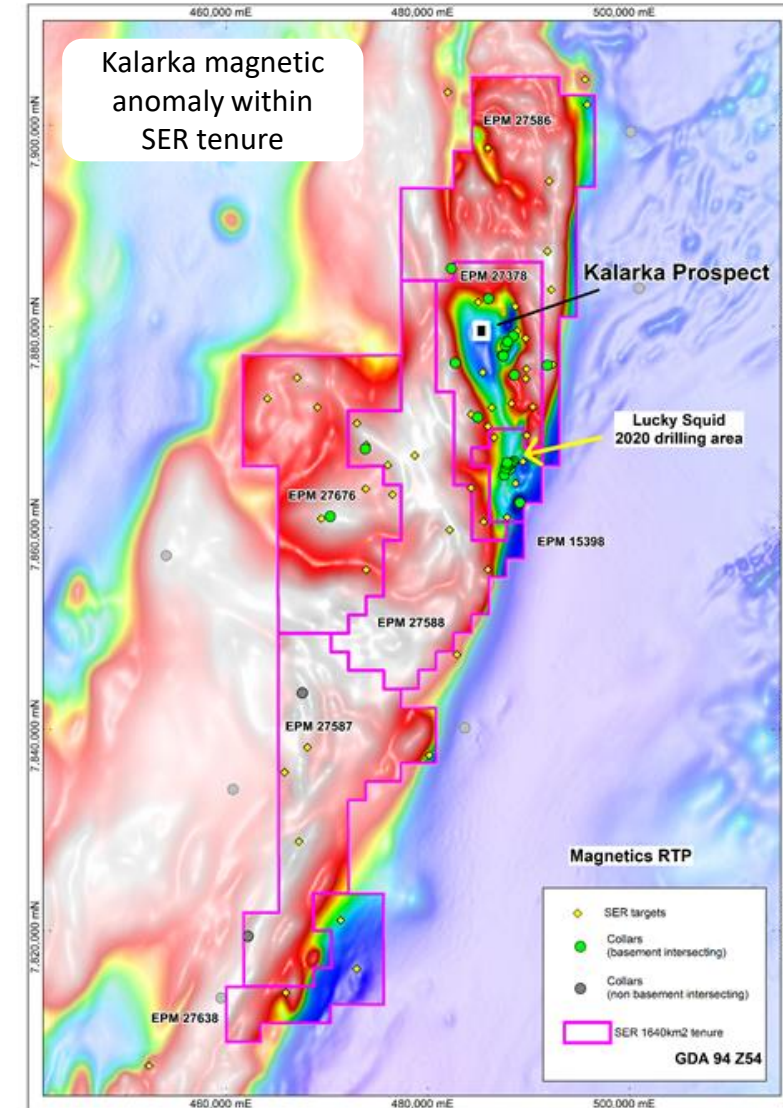
- Located undercover along a major NNW orientated structural break, within an interpreted sub basin defined by a structurally controlled region of low magnetic response, rimmed by a conductive zone
- Sub basin is magnetically quiet except for Kalarka, a discrete 750 x 600m, 40nT aeromagnetic response characterised by an elevated EM response and partially coincident anomalously higher density<sup>1</sup>
- EM response modelled as a steep westerly dipping, highly conductive plate adjacent to a gravity high
- Potential analogue of the Cannington base metal deposit

## Near Term Drilling:

- GSQ Collaborative Exploration Initiative grant awarded to drill test Kalarka (\$100k)
- Two deep diamond holes to test the target are planned
- Drill rig scheduled to mobilise to site after East Tennant drilling



Above: Cross section looking north at magnetic intensity modelled shells with interpreted EM plate steeply dipping west



<sup>1</sup> See SER Ann: [Exploration Update](#)



## Project Background

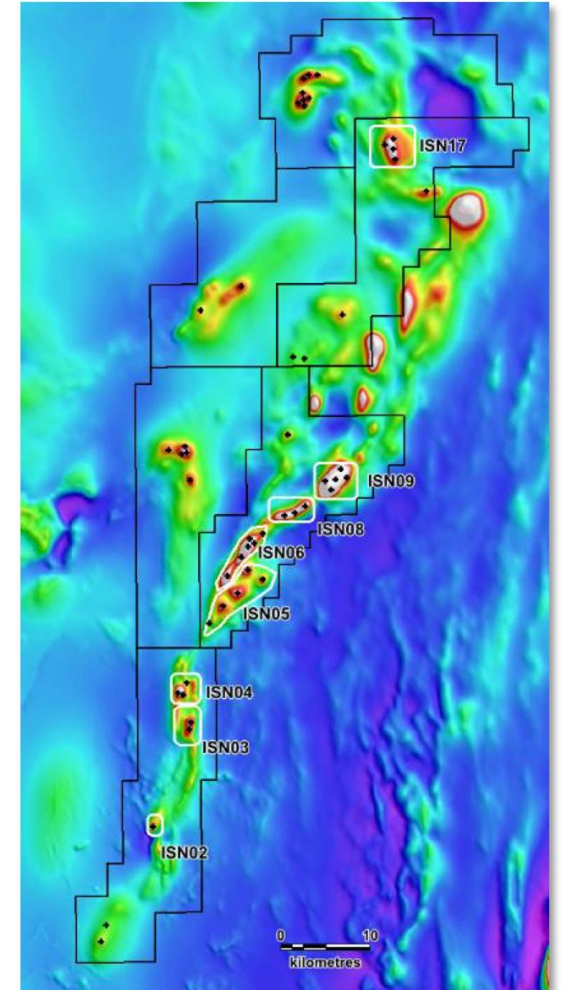
- Pegged by Newcrest (ASX:NCM) in 2018 as part of their 'Undercover Strategy'<sup>1</sup> targeting >200Mt Copper-Gold deposits
- Secured tenements from NCM in 2021 for nil cash consideration, FROR and 1% NSR for 10 years<sup>2</sup>
- NCM drilled 9 holes (5190m) at four target areas and generated two "Priority 1" targets
- NCM follow-up drilling program proposed but never undertaken
- Red Metal / OZ Minerals joint venture Gibson Tank project immediately north set to drill this year

## 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) is a priority target and demands follow-up drilling based on the identification of elevated Cu and pathfinders
- Consistent with Tier 1 'shoulder' or 'near miss' intercept

## Next Steps

- Complete tenement transfer and undertake 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> See NCM December 2018 Quarterly Report: [Newcrest Mining Ltd Quarterly Report - December 2018](#)

<sup>2</sup> See SER Ann: [SER Acquires Isa North Copper-Gold Project from Newcrest](#)

# Cobar Basin & Lachlan Fold Belt

## Overview

### Strategic Rationale

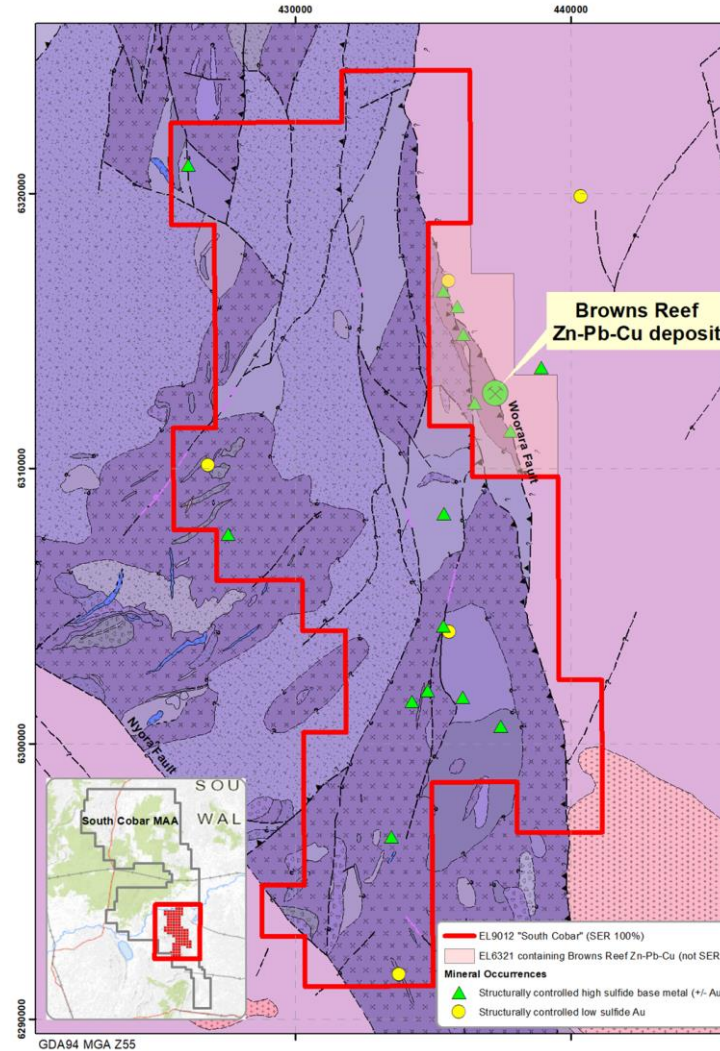
- Geological Survey of NSW (GSNSW) Mineral Allocation Areas represent undercover extensions to mineralised terrains<sup>1</sup>

### South Cobar

- Surrounding existing undeveloped volcanic-hosted massive sulfide (VHMS) mineralisation at Brown's Reef (Pb-Zn-Cu-Ag-Au); and covers several underexplored structural corridors and historical mineral occurrences in a fertile stratigraphic sequence of the Cobar Supergroup
- SER has completed detailed airborne magnetics and drill targeting has commenced<sup>2</sup>

### East Cowl

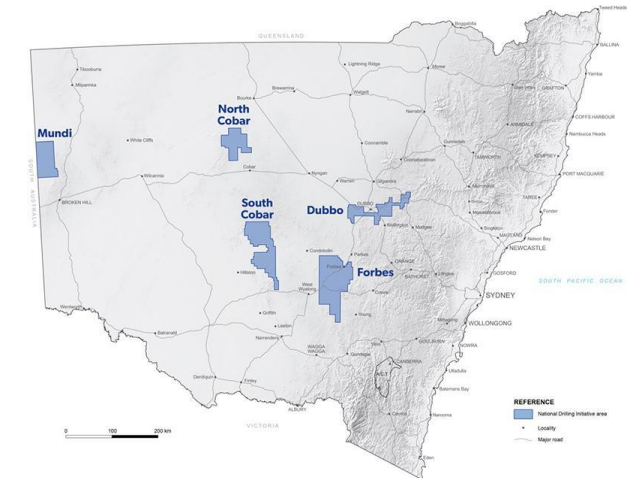
- 7km east of Evolution Mining (ASX:EVN) Cowl Gold Mine (FY20 gold production: 262,035 ounces) and 4km north of Marsden Cu-Au porphyry deposit (FY20 gold resource: > 1Moz Au & 500kt Cu)
- Desktop review underway



Above: South Cobar project with geology and mineral occurrences



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



Above: New South Wales Mineral Allocation Areas

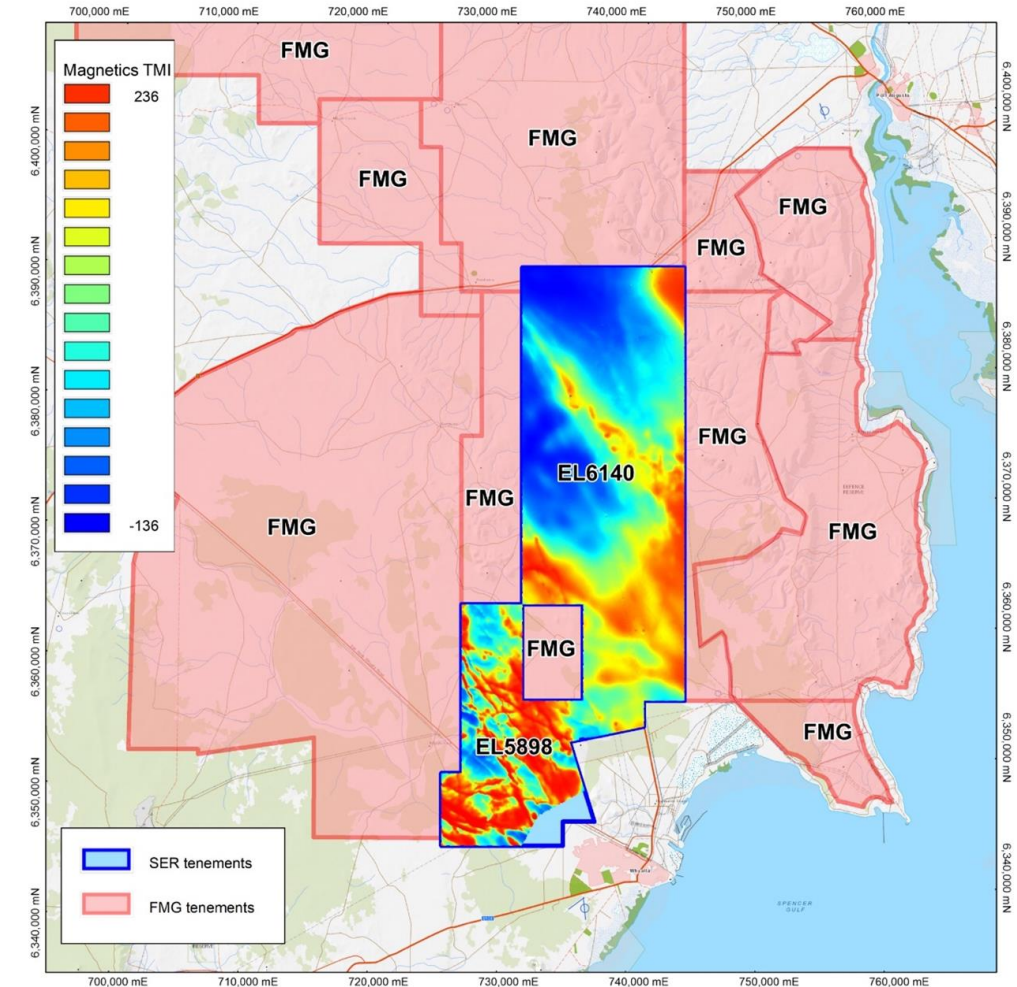
<sup>1</sup> See SER Ann: [SER wins key ground in Cobar Basin and Lachlan Fold Belt](#)

<sup>2</sup> See SER ASX: [Exploration Update - South Cobar Polymetallic Project](#)



## 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

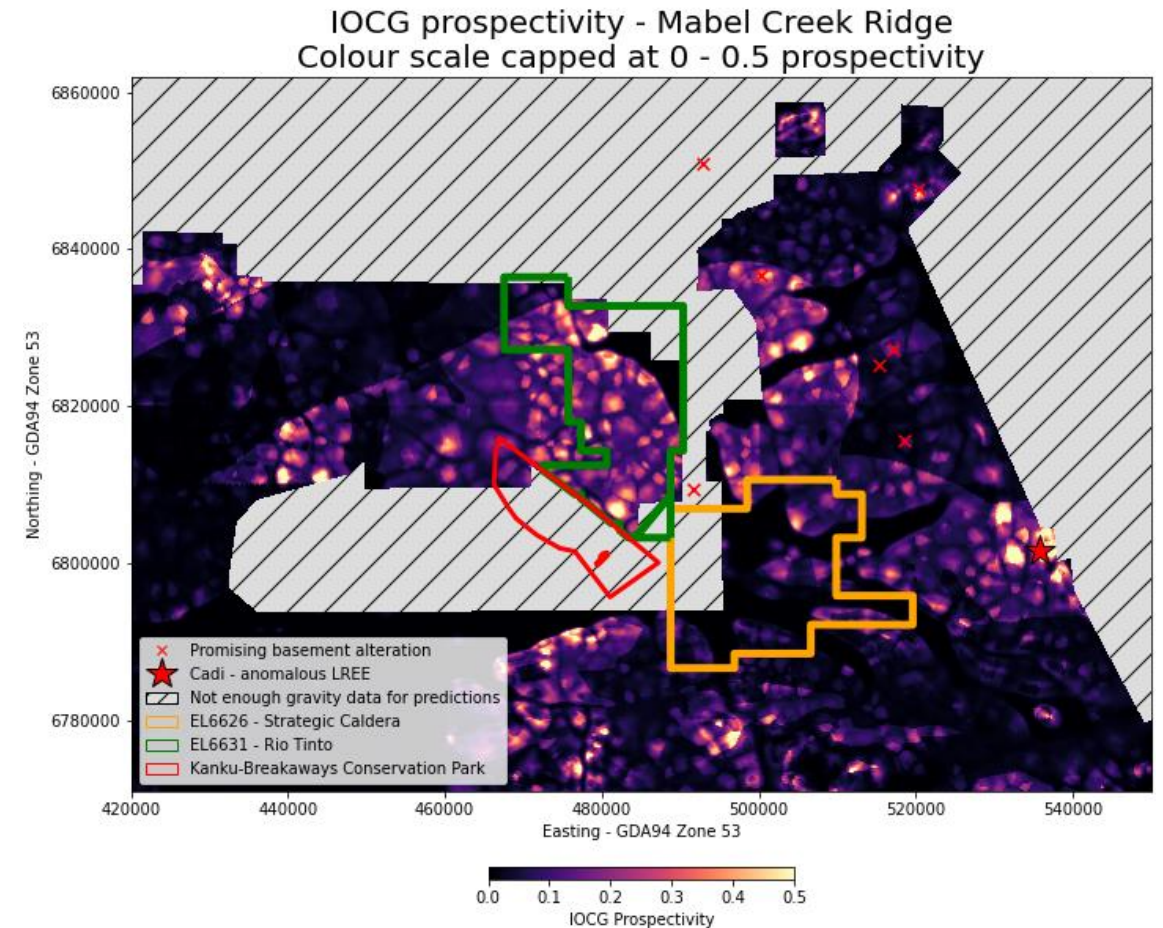


Above: Myall Creek JV project area covered by recent Magnetic survey

<sup>1</sup> SER ASX Ann: [Airborne Magnetic Survey completed at Myall Creek](#)

## 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 methods
- The best open ground target generated as part of the 2020 ExploreSA Challenge
- Strategic Caldera is now building camp scale models that fuse 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
- Machine Learning project currently underway by Oz Minerals in close proximity



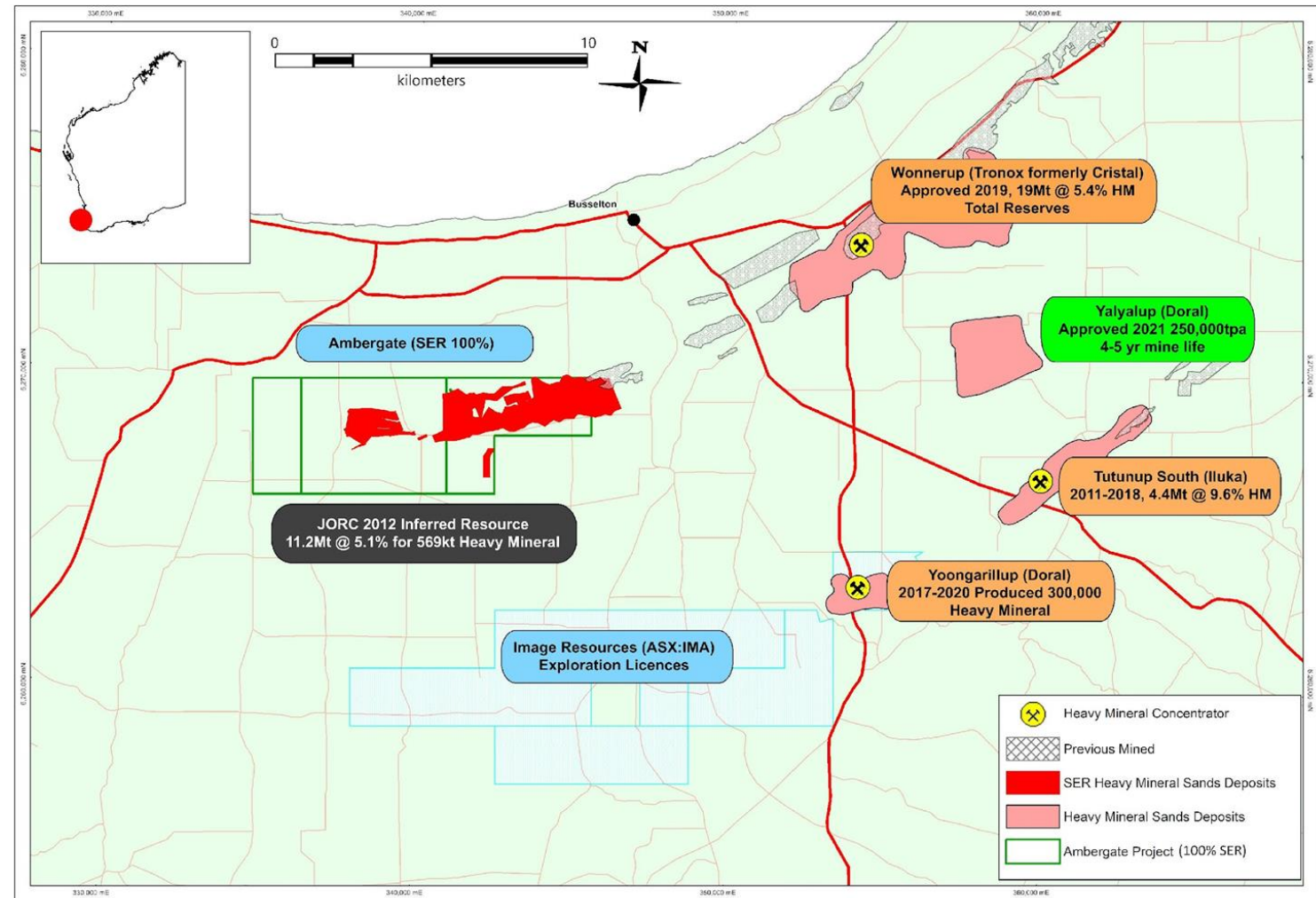
Above: **ExploreSA Challenge** Rejecting 'Big Data' and Embracing Simplicity: IOCG Prospectivity Modelling for New Frontiers Author: Michael Rodda



## Strategic Rationale

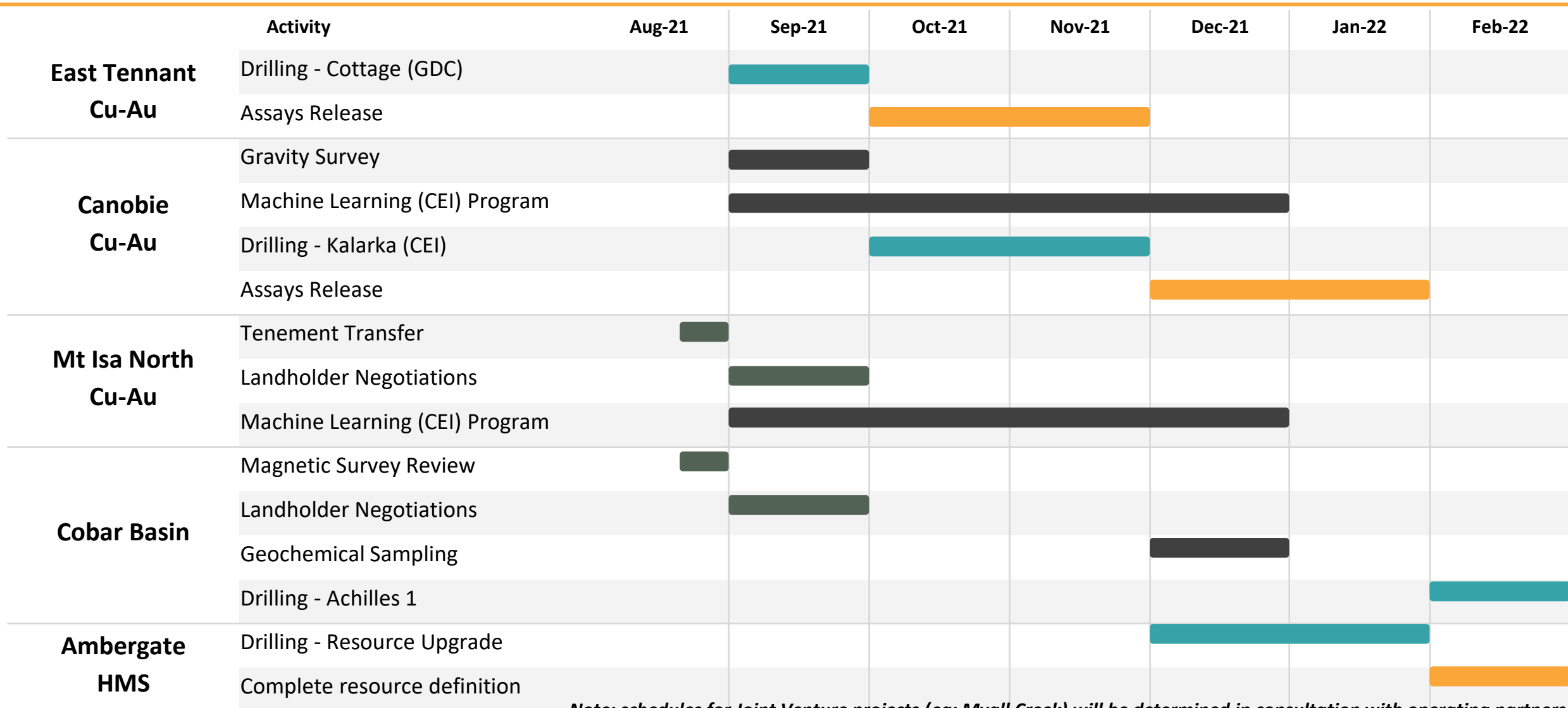
- Located amongst multiple operating Heavy Mineral Sands mines
- Current JORC 2012 Inferred Resource of **11.2.Mt grading 5.1% Heavy Minerals (HM)** for a total HM content of **569,000t** using a low grade Heavy Mineral cut-off of 3% and Slimes cut off <22%<sup>1</sup>
- Heavy mineral assemblage: 73% 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.”*

<sup>1</sup>SER ASX Ann: 17 April 2018: [Major Increase of Ambergate Heavy Mineral Resource](#)



Above: Ambergate Heavy Mineral Resource with surrounding operating HMS mines

# Our next phase of growth



*Note: schedules for Joint Venture projects (eg: Myall Creek) will be determined in consultation with operating partners*



# Investor Contact

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