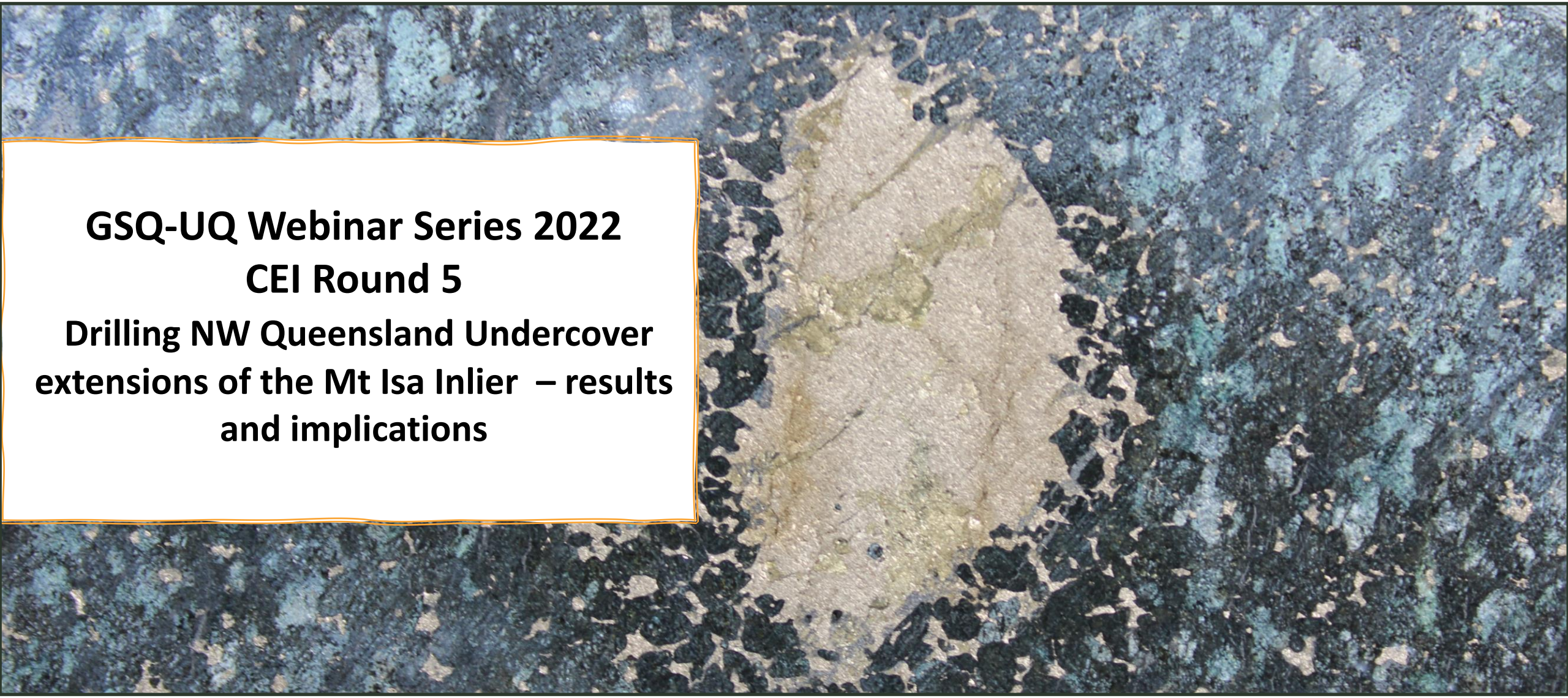
GSQ-UQ Webinar Series 2022
CEI Round 5
Drilling NW Queensland Undercover extensions of the Mt Isa Inlier – results and implications



Above: CNDD001A at 621.85m

ASX : SER
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Competent Person Statement

The information in this presentation that relates to Exploration Results is based on information compiled by Mr Stuart Rechner BSc (Geology) MAIG MAusIMM, a Member of the Australian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy. Mr Rechner is a Director and shareholder of Strategic Energy Resources Limited. Mr Rechner has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Rechner consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

Presentation Overview

- The Canobie Project Team
- Regional Setting
- Historical Exploration
- CEI Drill Program
- Drilling Results
- Implications
- What's next?

Above: CNDD001A at 628 – 640m

The SER Team

Board and Management

Stuart Rechner
Executive Chairman
BSc (Geology) LLB MAIG MAusIMM MSEG GAICD

Dr David DeTata
Managing Director
BSc MSc PhD (Chemistry) MBA GAICD

Anthony McIntosh
Non-Executive Director
BCom GAICD

Technical Team

Neil Chalmers
Exploration Manager
BSc MSc (Geology) MAIG

Dr Chris Yeats
Exploration Manager, NSW
BSc(Hons.) PhD FGSAus

Project Level Consultants

Dr Steve Beresford
Chief Geological Officer
Lapis Consulting
BSc PhD

Theo Aravanis
Director
Arrow Geosciences
BSc Hons.

David McInnes
Geophysicist
Montana GIS
BSc Hons.

Neil Hughes
Geophysicist
Montana GIS
BSc Hons.

Barry Bourne
Geoscientist
Terra Petrophysics
BSc Hons.

James Lally
Principal Consultant
Mining Associates
BSc (Hons) Geology, MSc, PhD, MAIG, MSEG

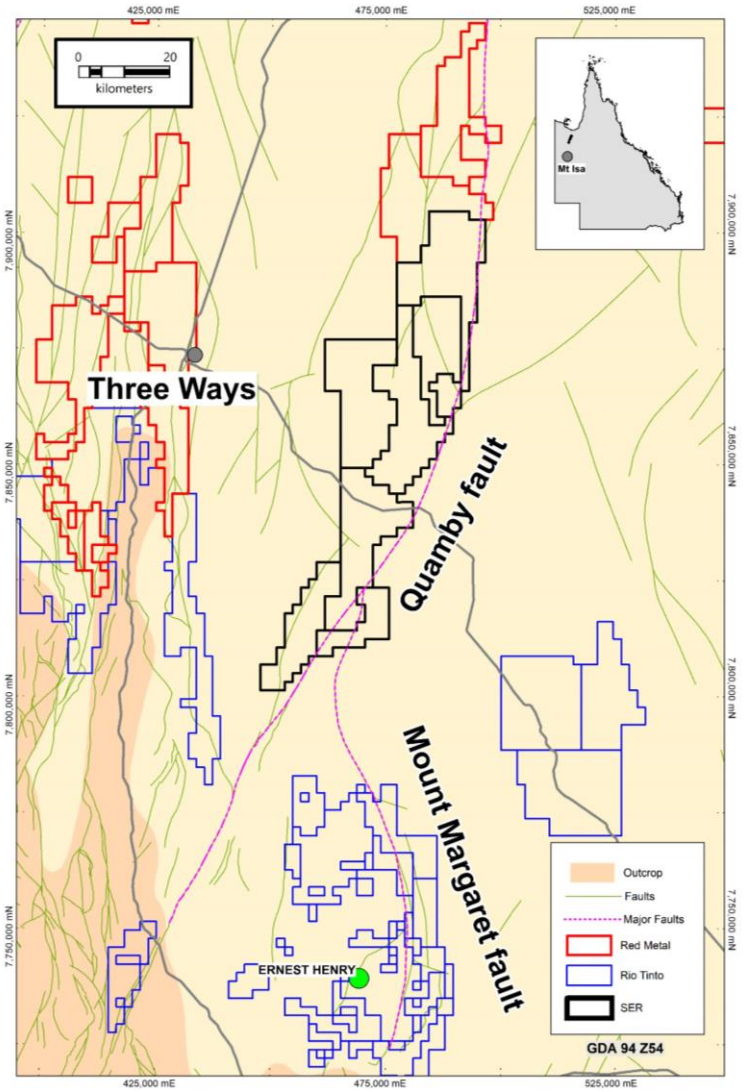
Peter Pollard
Geoscientist
Mining Associates
PhD, FSEG

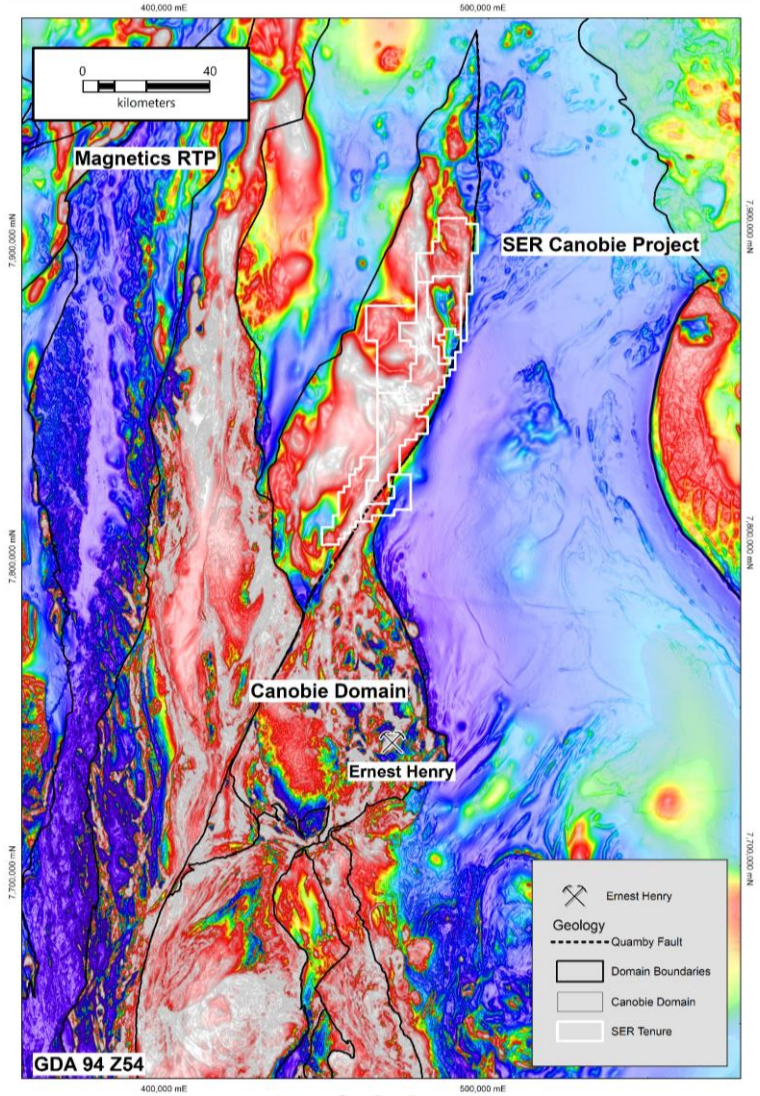
Richard England
Petrologist
Petrology Services

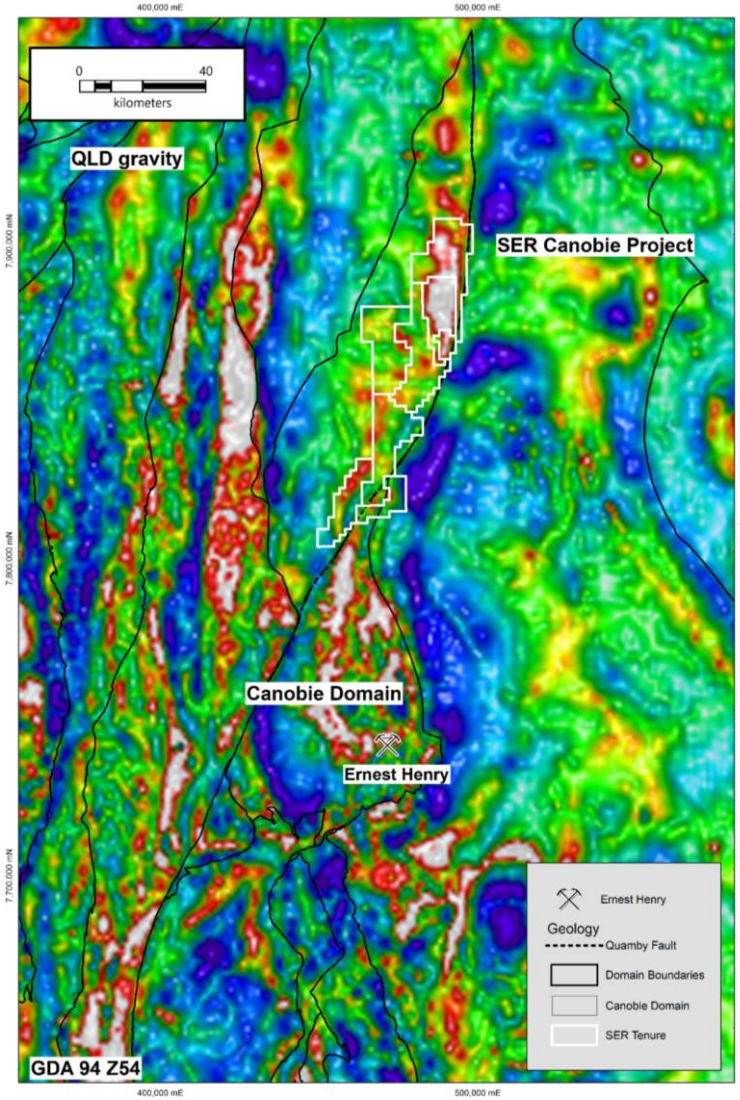
Collaborative Exploration Initiative - Round 5

- Two CEI grants awarded to SER and successfully completed in 2021
- Deep Learning Based Geological Interpretation of Geophysical Data – Reducing Risk of Deep Cover Exploration in the Mt Isa Region **(CEI0308)**
  - Collaboration between SER & Caldera Analytics (Michael Rodda)
  - Presentation given at the GSQ Technical Workshop for Industry in Townsville (GSQ Technical Workshop for Industry - Townsville (Day 1) – YouTube)
- Drilling – New Base Metal Target **(CEI0268)**
  - Co funding to drill one deep diamond hole on the Canobie Project (G24, Kalarka) targeting Pb-Zn-Ag as a Cannington Analogue – first regional drill program since 2008
    - Discrete magnetic target within a broader magnetic low
    - Modelled EM plate
    - Pb-Zn anomalous metasediments in surrounding holes

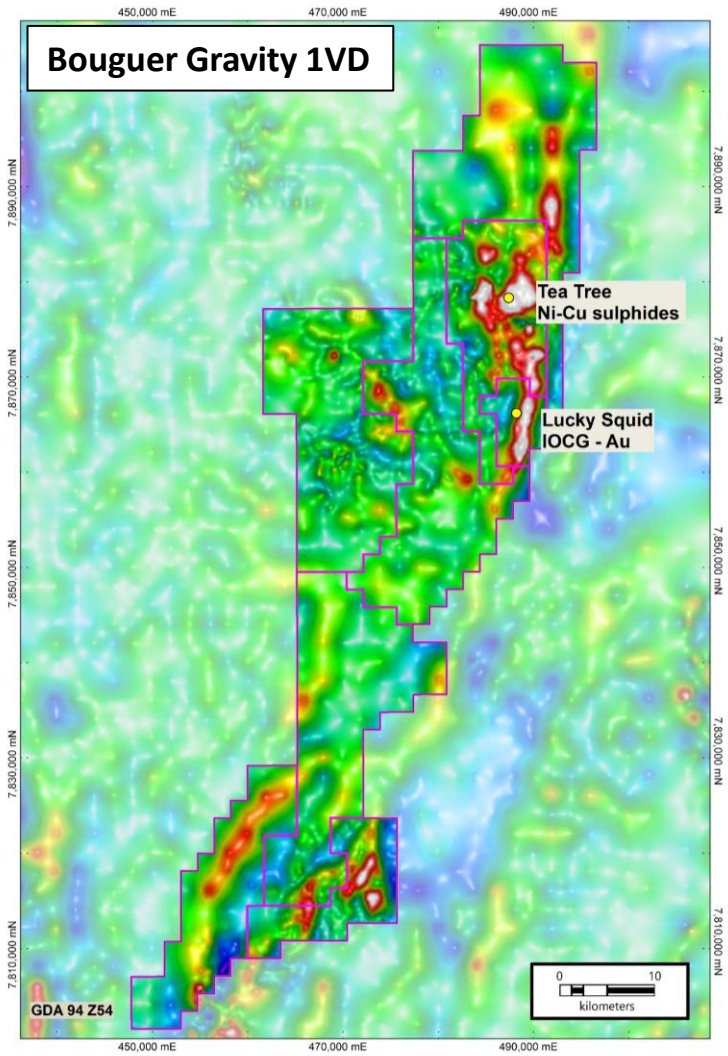
The Canobie Project

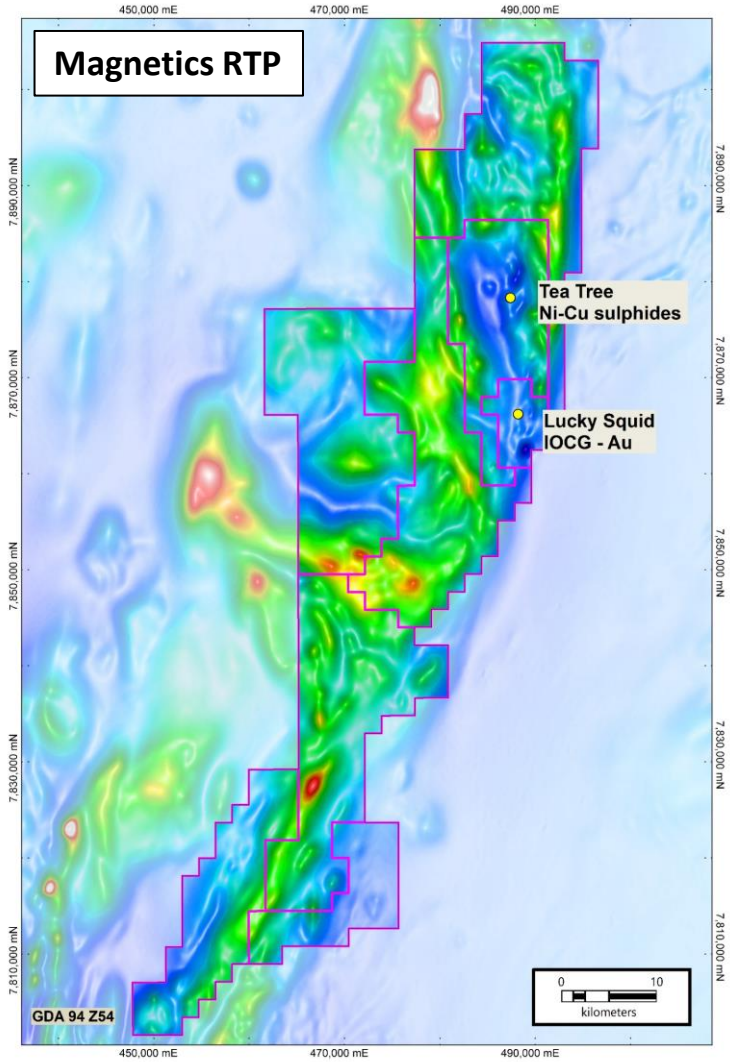


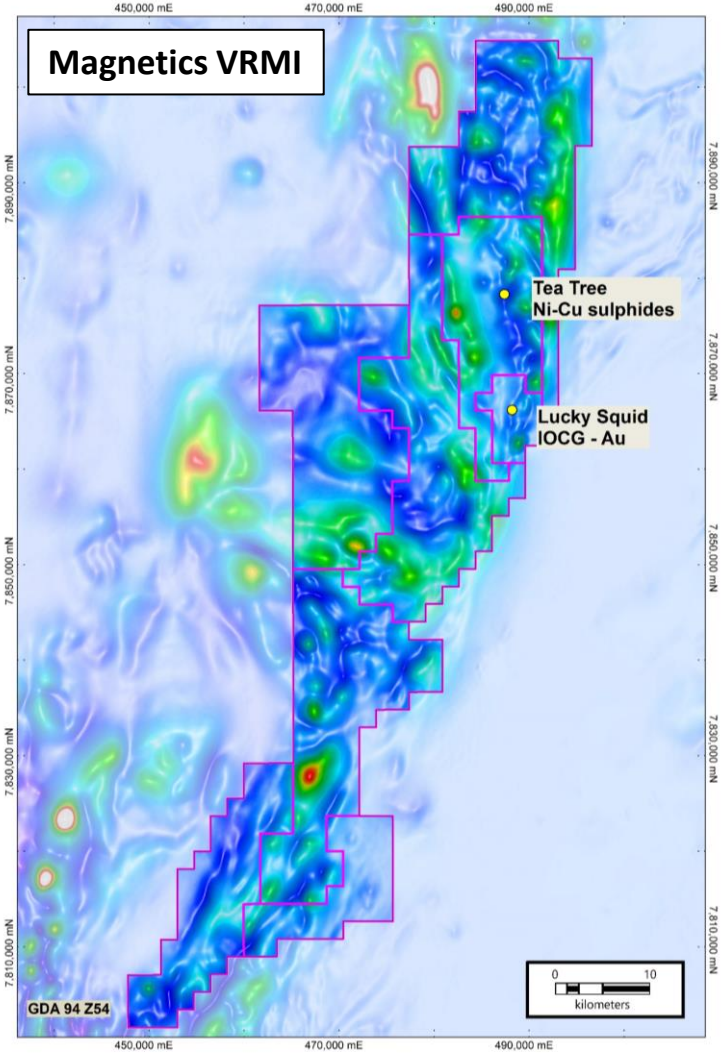




Project Scale







Historical Exploration

1960s
Drilling for Oil shale
No basement drilling

MIM Exploration
1992-1998
Targeting IOCGs
Drilled 6 holes TT00D1-TT00D6
Discovered low grade Ni – Cu at Tea Tree

Anglo American (JV)
2006-2009
SQUID EM
Drilled 7 holes
SXDD001-SXDD007
Discovered high grade gold IOCG at Lucky Squid

Falcon Minerals
2011-2015
Drilled 4 holes at Lucky Squid
SXDD016-SXDD019

1991
Ernest Henry discovery
100km south

Falcon Minerals
2002-2006
Drilled 2 holes
SMD1-SMD2

Anglo Ashanti (JV)
2009 - 2010
SQUID EM
Drilled 5 holes at Lucky Squid
SXDD011-SXDD015
Exited JV

SER
2016-current
Drilled 4 holes at Lucky Squid
SXDD020-SXDD023
Drilled 2 holes at Kalarka
Discovered thick ultramafics with Ni + Cu

Historical Exploration

- 1960's southern end of Canobie explored for shale oil – holes did not intersect basement (Toolebuc Formation)
- 1992-98 MIM conducted a gravity and magnetic survey before drilling 6 holes targeting granites and co-incident magnetic-gravity highs in search of Ernest Henry style deposits. Identified mafic-ultramafic intrusions and sub-economic Nickel-PGE before withdrawing;
    - Tea Tree Prospect: TT001D - 10.4m @ 0.25% Ni & 0.28% Cu from 508.2m. Depth of basement confirmed as ~ 420m
- 2002-06 Falcon Minerals drilled two holes targeting Ni Sulphides (SMD01 & SMD02)(one regional target) leading to a JV with Anglo American
- 2006-2009 Anglo American JV further eight holes targeting SQUID EM anomalies for Ni-PGE, with most targets intersecting highly conductive graphitic meta-sediments
    - SXDD005 - 17m @ 6.75g/t Au from 631m incl 5m @ 19.30g/t Au
- **Focus shifted away from Nickel-PGE towards IOCG potential at Lucky Squid**

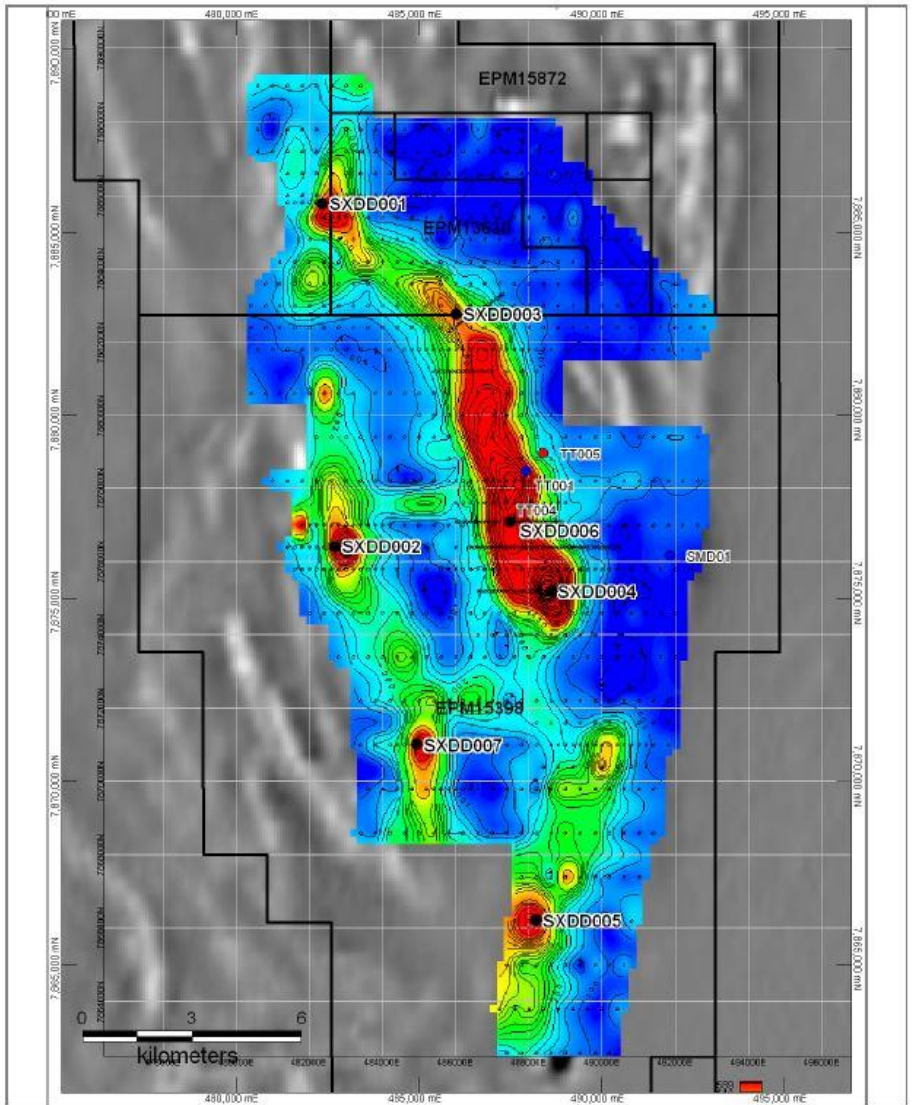


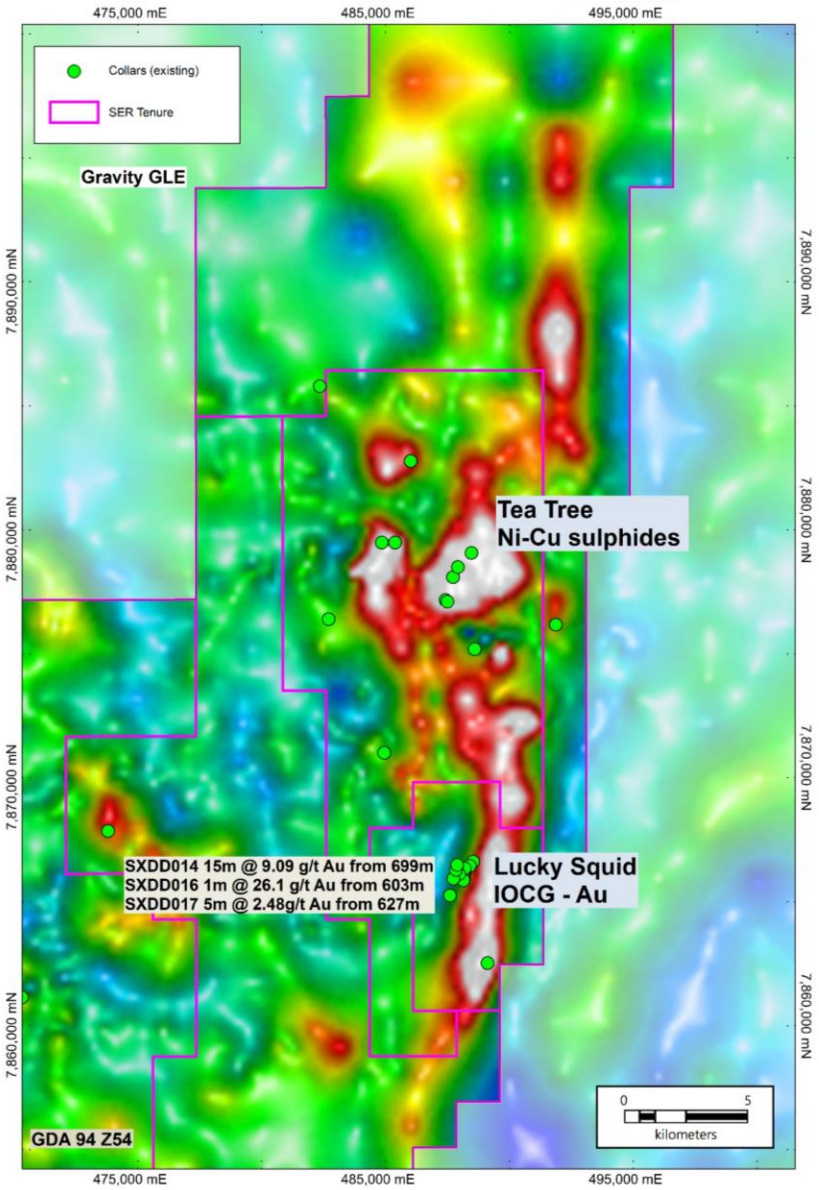
Figure 18: 2008 drill holes and previous drill holes on EM from SQUID survey (700-1000m depth slice), projected on magnetics.

Historical Exploration

- 2009 – 2010 AngloGold Ashanti purchased JV from Anglo American
- Collected close spaced airborne magnetics (100m), gravity and close-spaced SQUID EM and over Lucky Squid Prospect
- 2010 drill program was designed to target up-dip extent of mineralisation intersected at SXDD005 and favourable SQUID EM anomalies
    - SXDD014 – 15m @ 9.09g/t Au from 699m with anomalous Cu
- Targets concluded as conductive graphite-rich metasediments
- 2012 Falcon Minerals drilled a further 4 holes at Lucky Squid targeting a NNE structure including;
    - SXDD016 – 1m @ 26.1 g/t Au from 603m
    - SXDD017 – 5m @ 2.48 g/t Au from 627m

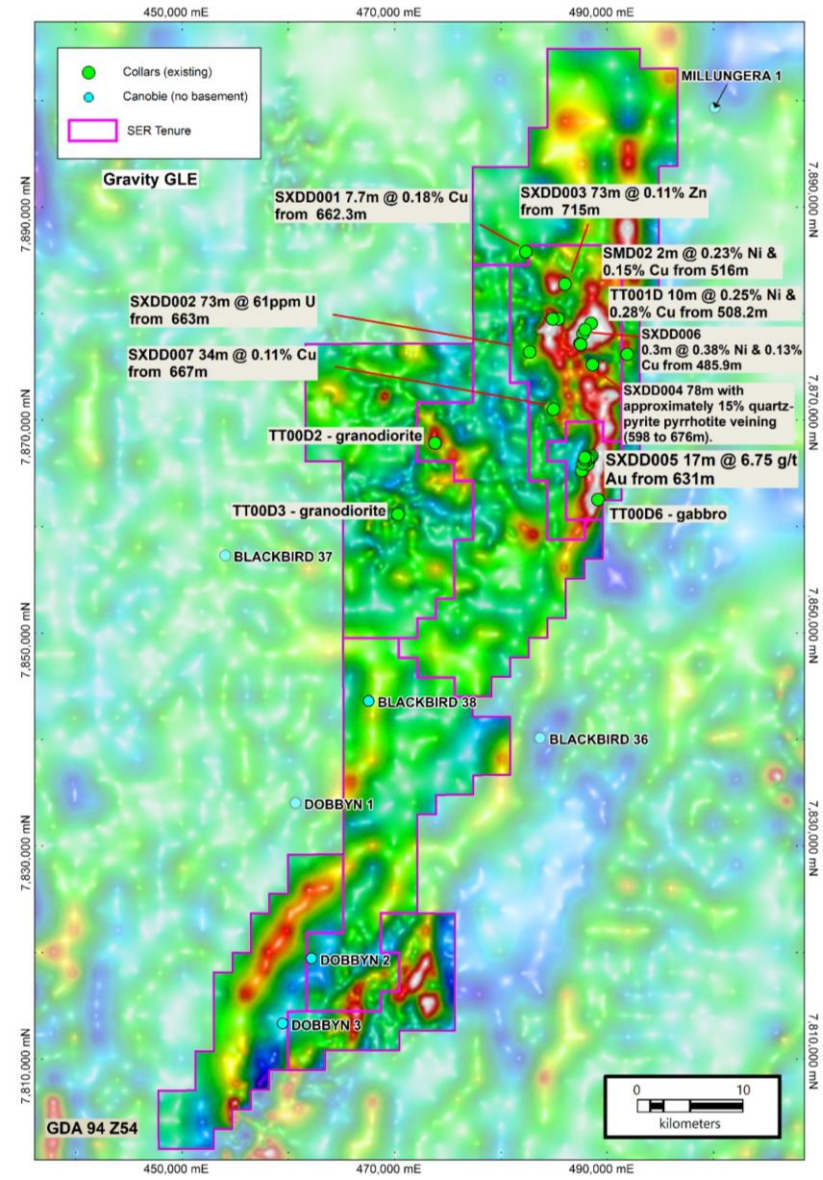
"All holes steepened significantly and this needs to be resolved before drilling recommences".

"Geological evidence suggests main alteration and structure west of drill hole".



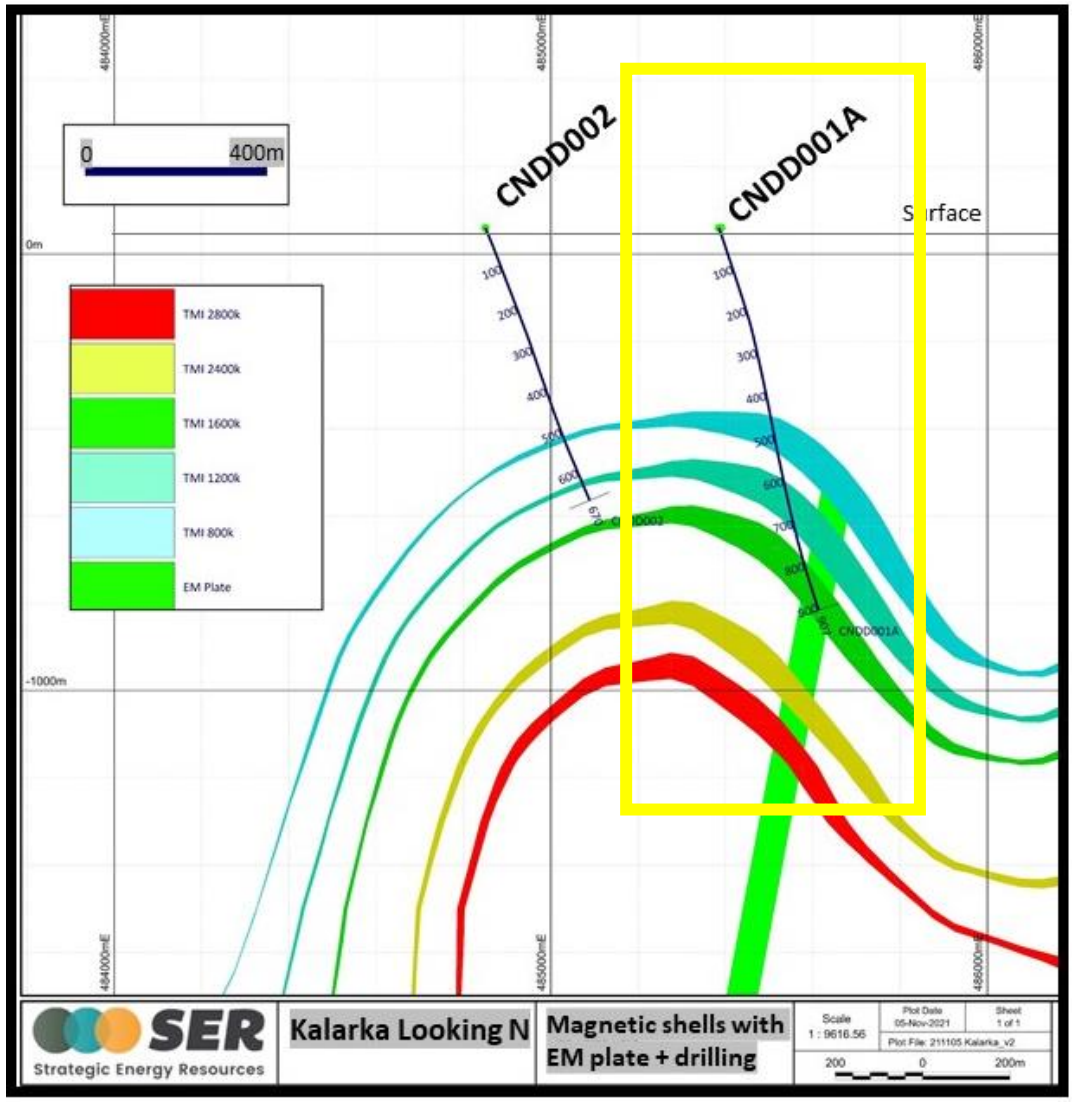
SER Work Program pre CEI

- 2019-2020 Drilled 4 diamond drillholes at Lucky Squid following up on high grade gold IOCG mineralisation
    - SXDD020 – 6m @ 12.08 g/t Au from 519m (incl 2m @ 32g/t Au)
    - SXDD022 – 1m @ 8.37 g/t Au from 650m
    - SXDD023 – 1m @ 1.43 g/t Au from 691m
- Stepped back and made the decision to explore untested targets in the region – capturing expanded tenement footprint
- Re integration, merging of geophysical datasets including magnetics, ground gravity and SQUID EM
- Gravity survey at Clonagh (southern end of tenement package)
- Target generation: **50+ anomalous gravity, magnetic ± EM targets** interpreted to potentially be related to IOCG, magmatic sulphide or sedimentary Pb-Zn systems
- 2021 CEI drilling

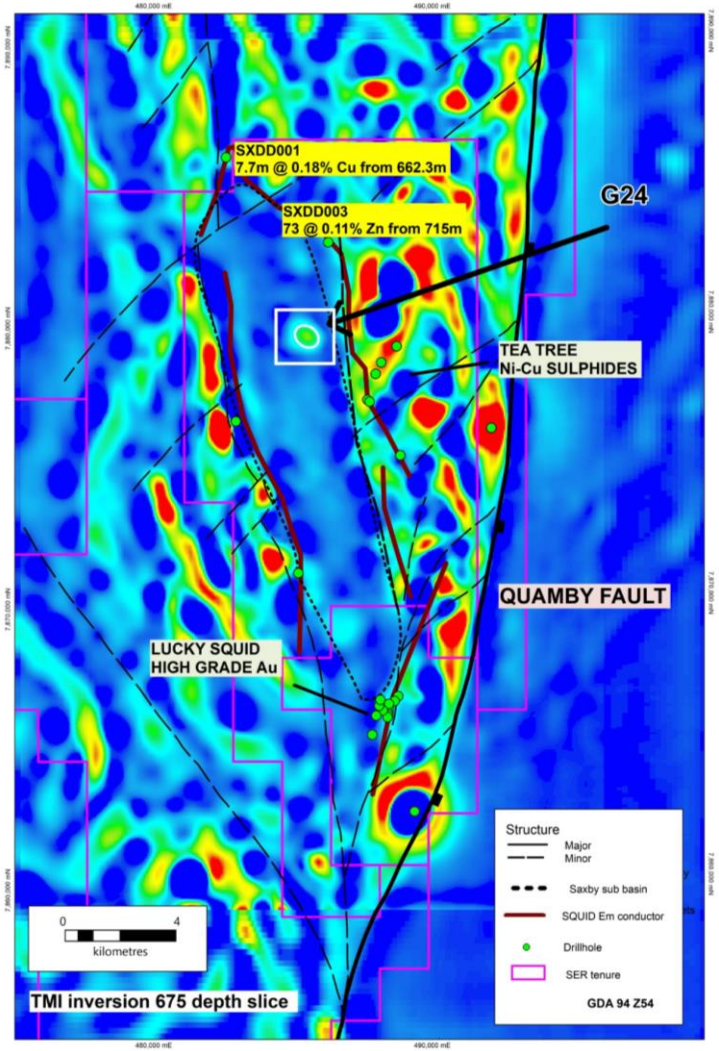


CEI Drill Program (logistics)

- CNDD001A – 907.3m (angled hole) - intersected basement at 474m downhole (drilled October 2021)
- Suffix “A” – due to initial hole failure whilst drilling rotary mud through the overburden – *difficultly of exploring undercover*
- Hole steepened meaning that the EM plate was not intersected until 900m (was planned to be reached at 750m)
- EM plate not directly explained (i.e. no obvious source at projected depth) – likely to be either sourced from the sulphide zones higher in the hole or potentially not intersected
- Petrophysics confirmed magnetic and gravity response explained by the bulk mafic-ultramafic rocks intersected
- Downhole EM attempted – crews on site – failed to collect data due to downhole temperatures too high for the tool – *lesson learnt*
- Hole grouted to secure possible aquifers in the overburden
- 1m half core samples of full basement intersection



Kalarka – not what we had expected?

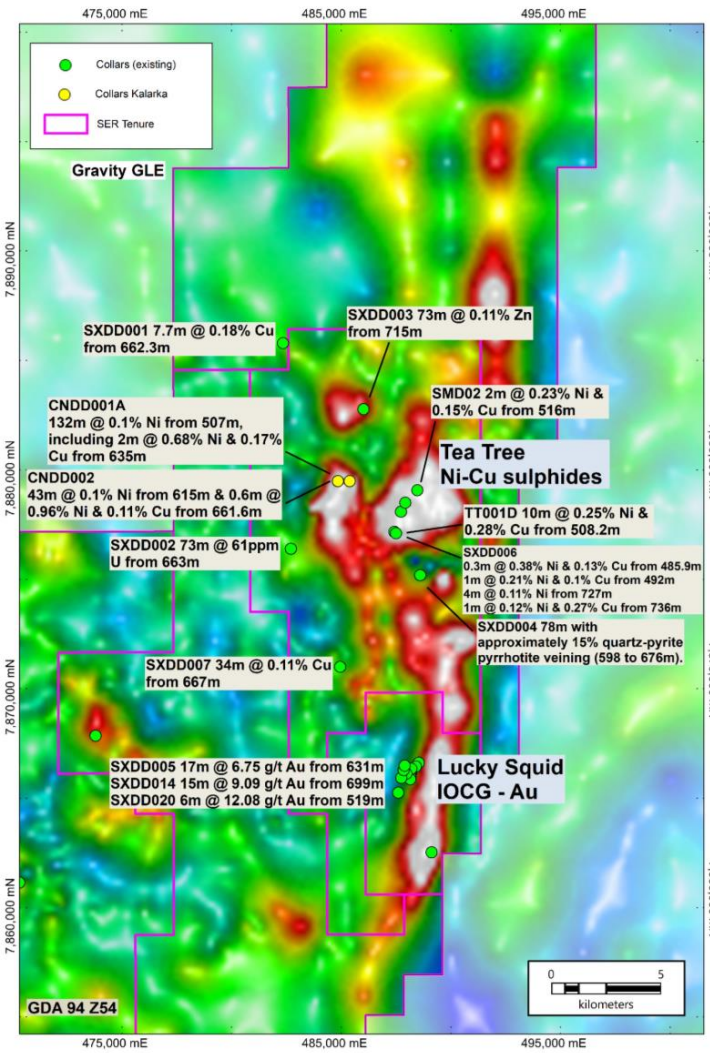


Drill program targeted a magnetic anomaly…..

Drilling intersected a **ultramafics - mafic system** which is mapped in the gravity

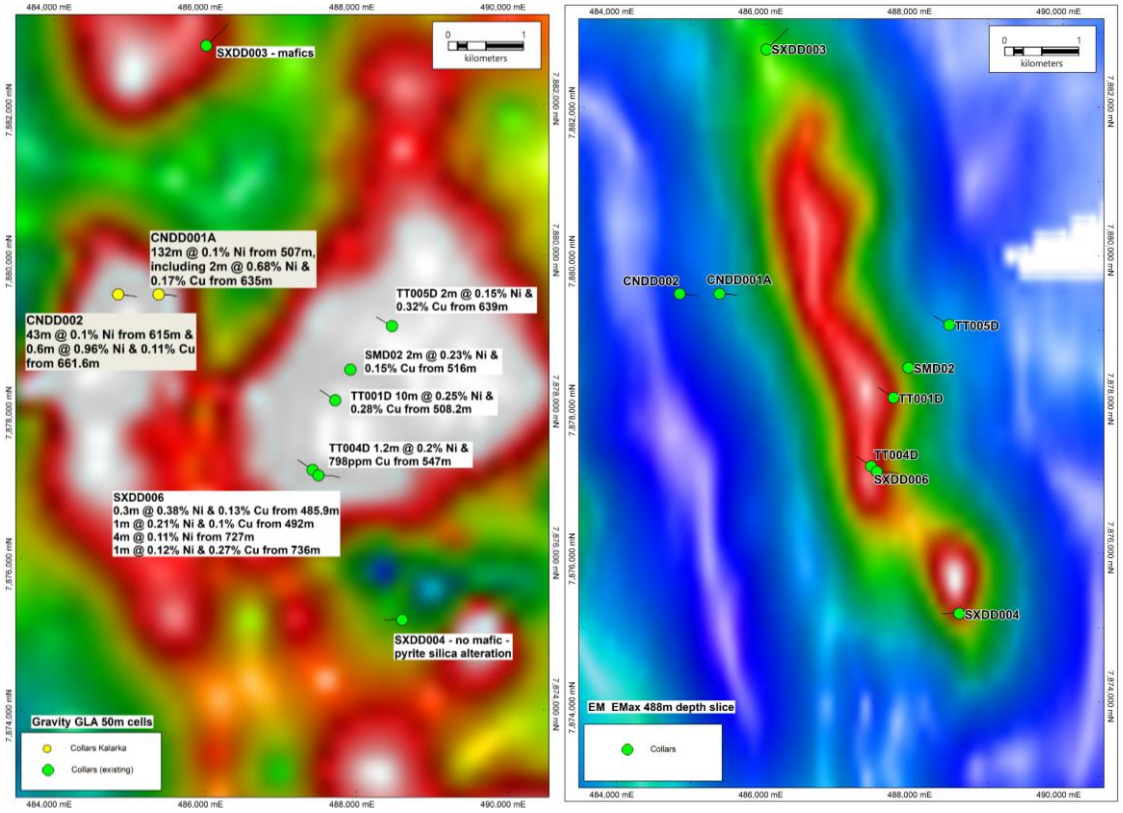
Magnetics more complicated – remanence?

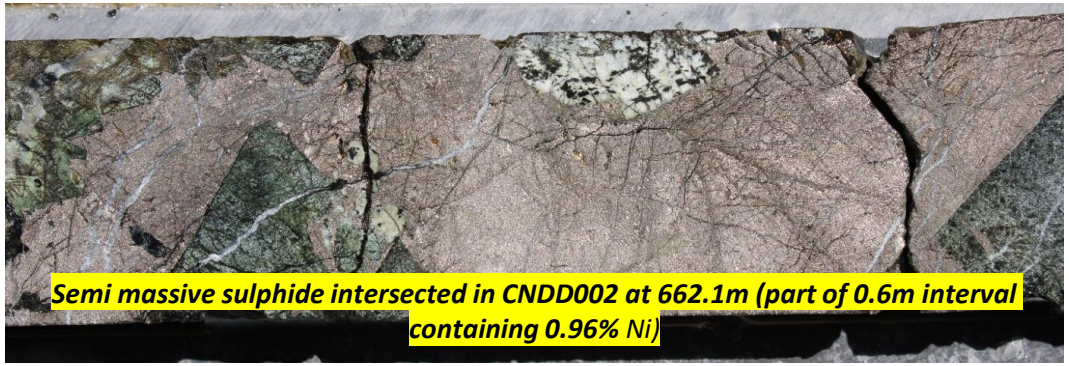
Drilling is a great truth teller…….



Kalarka Results (rocks)

- Two holes intersected a new regional target (Kalarka) located 3km west of the known Tea Tree disseminated sulphide prospect - intersecting thick ultramafics with semi massive sulphide including:
  - **CNDD001A (co funded hole) – 132m of disseminated Ni-Cu sulphides within ultramafic @ 0.1% Ni within from 507m including 2m @ 0.68% Ni, 0.17% Cu from 635m (CEI hole)**
  - CNDD002 – 43m of disseminated Ni-Cu sulphides within ultramafic @ 0.1% Ni within from 615m and 0.6m @ 0.96% Ni, 0.11% Cu from 661.6m
- Petrology confirmed cumulate ultramafics with magmatic sulphides
- Mineralisation dominated by pyrrhotite with low levels of nickel and copper (low R factor)
- Taxites, miarolitic cavities, disseminated sulphides, net textured sulphides, semi massive sulphides
- Engaged global magmatic mineral systems expert Dr Steve Beresford who identified the significant potential of the project and built a geological framework putting the project in context.



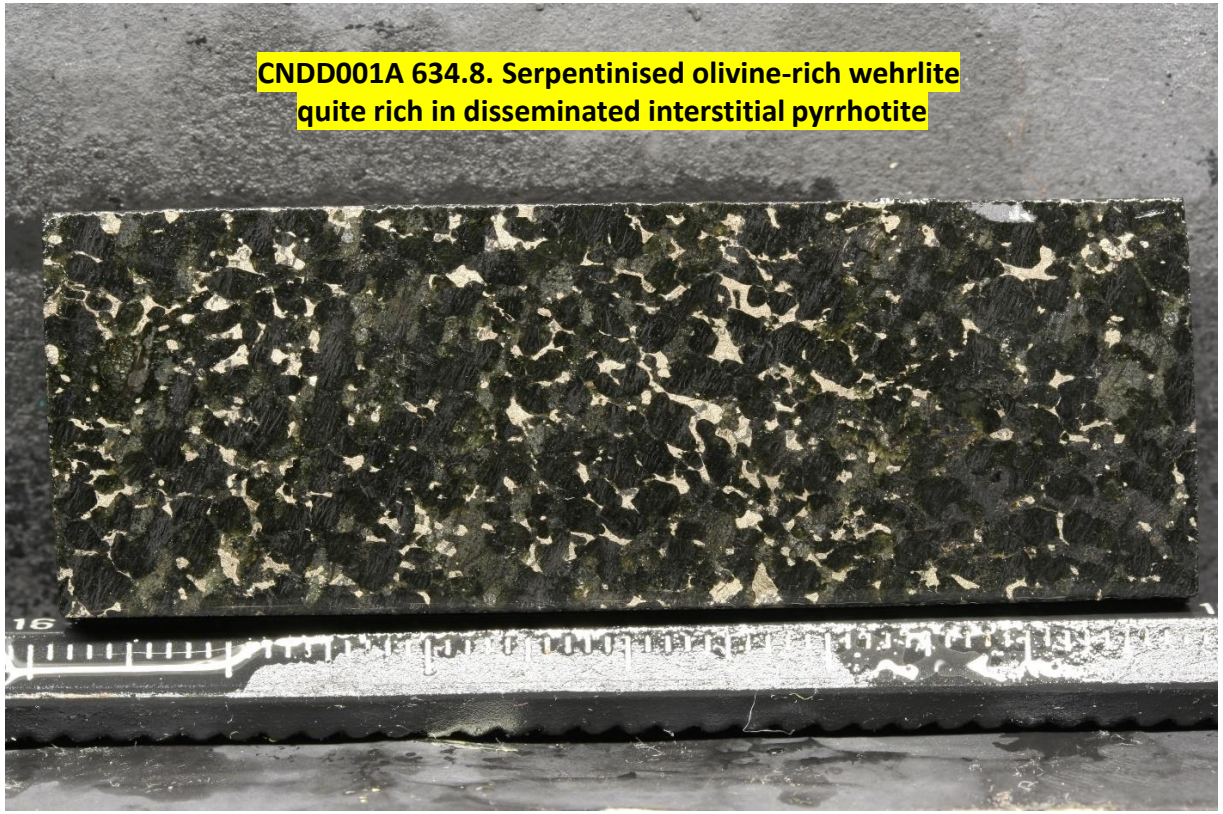


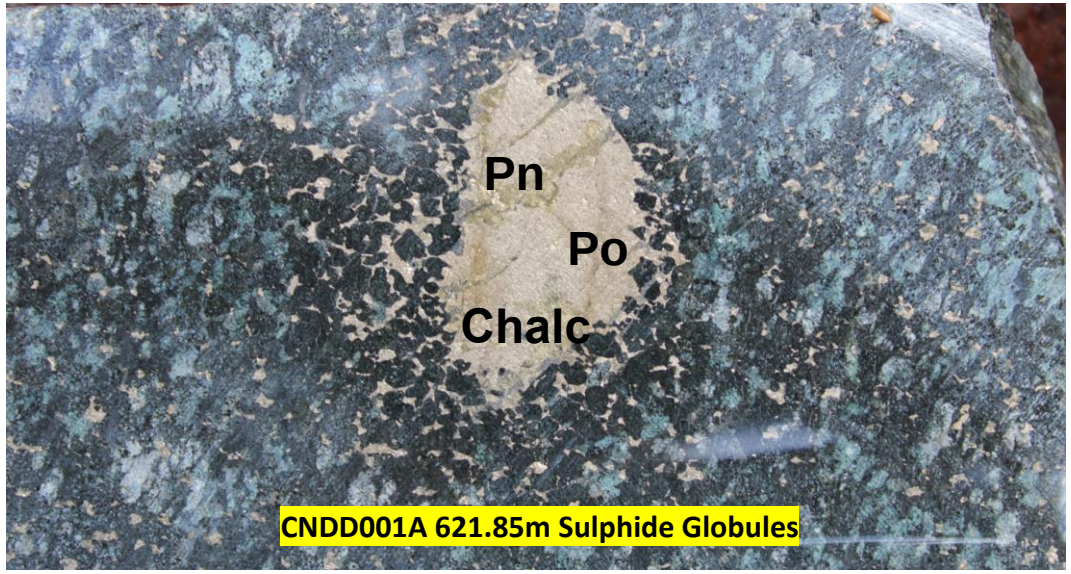
Semi massive sulphide intersected in CNDD002 at 662.1m (part of 0.6m interval containing 0.96% Ni)

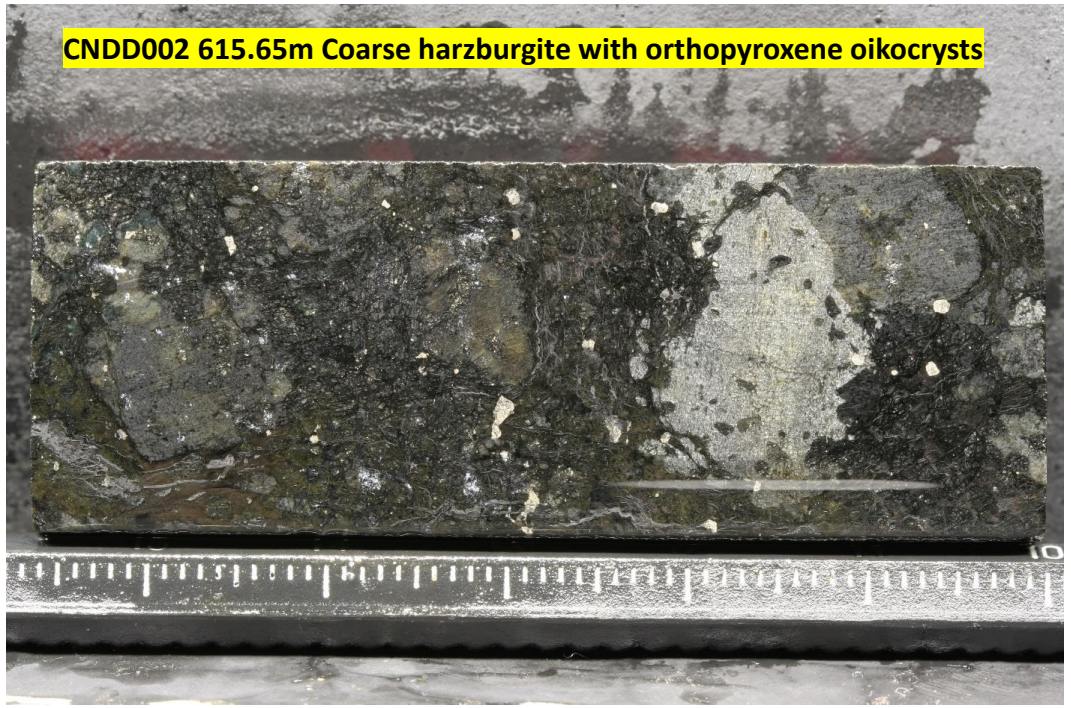
CNDD001A

Rock types – textures

- Drill holes demonstrate that the sulphide saturation is present at Tea Tree







Source: England 2022 Report

CNDD001A

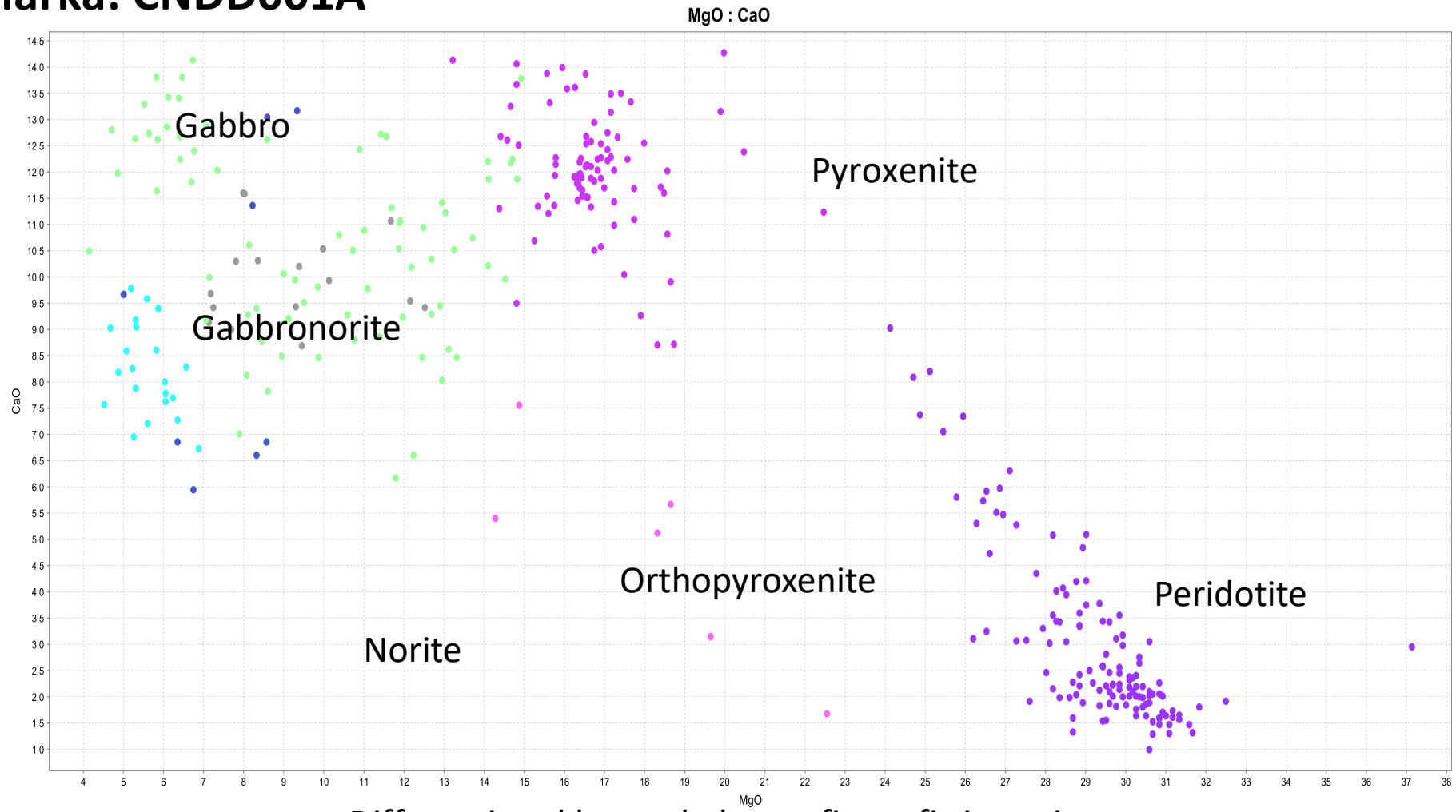
Rock types – textures

CNDD001A 792m – varied crystal size mafic volatile related mafic with thin massive sulphide zone

Local scale example of taxitic texture overlying massive sulphide, within lower volatile rich mafic pulse at Kalarka

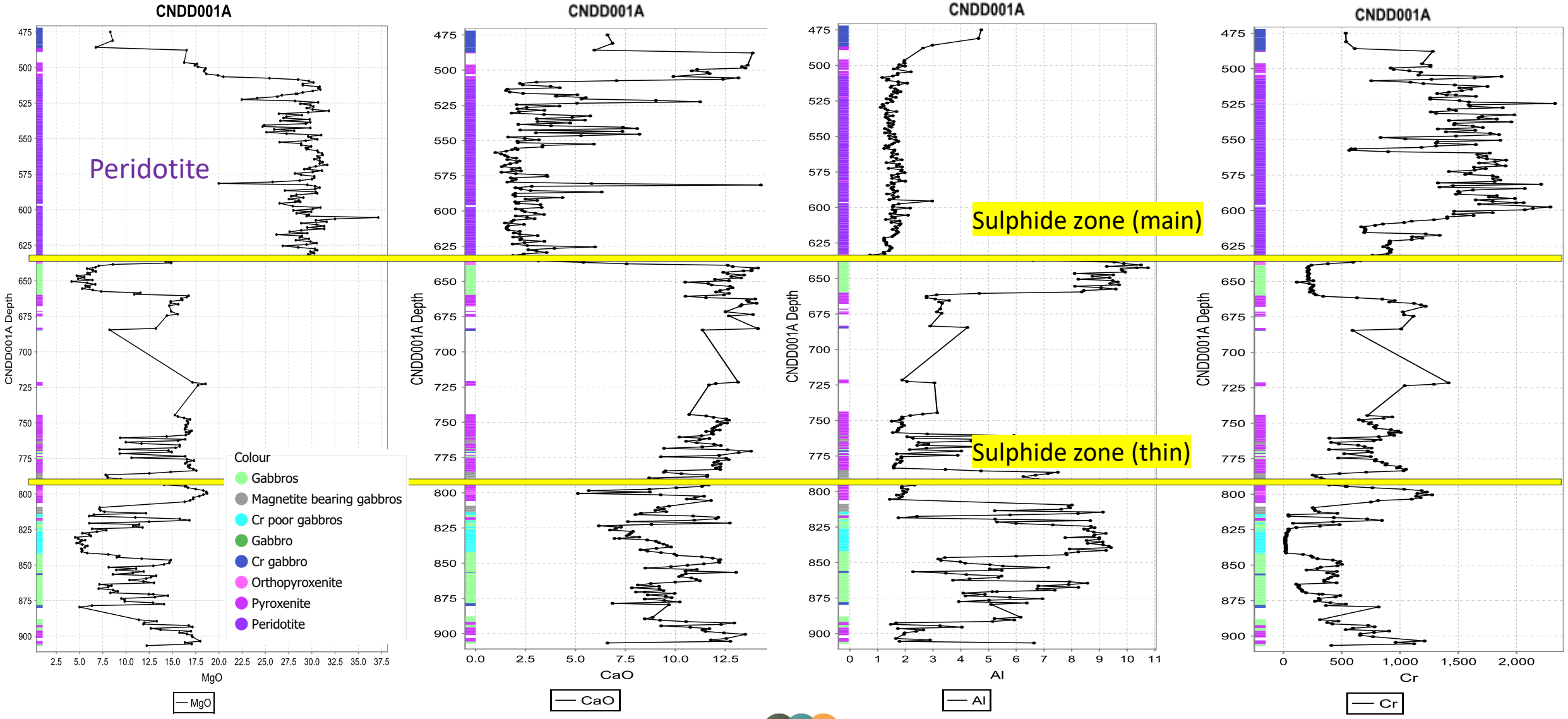
Intrusion Classification and Architecture

Kalarka: CNDD001A



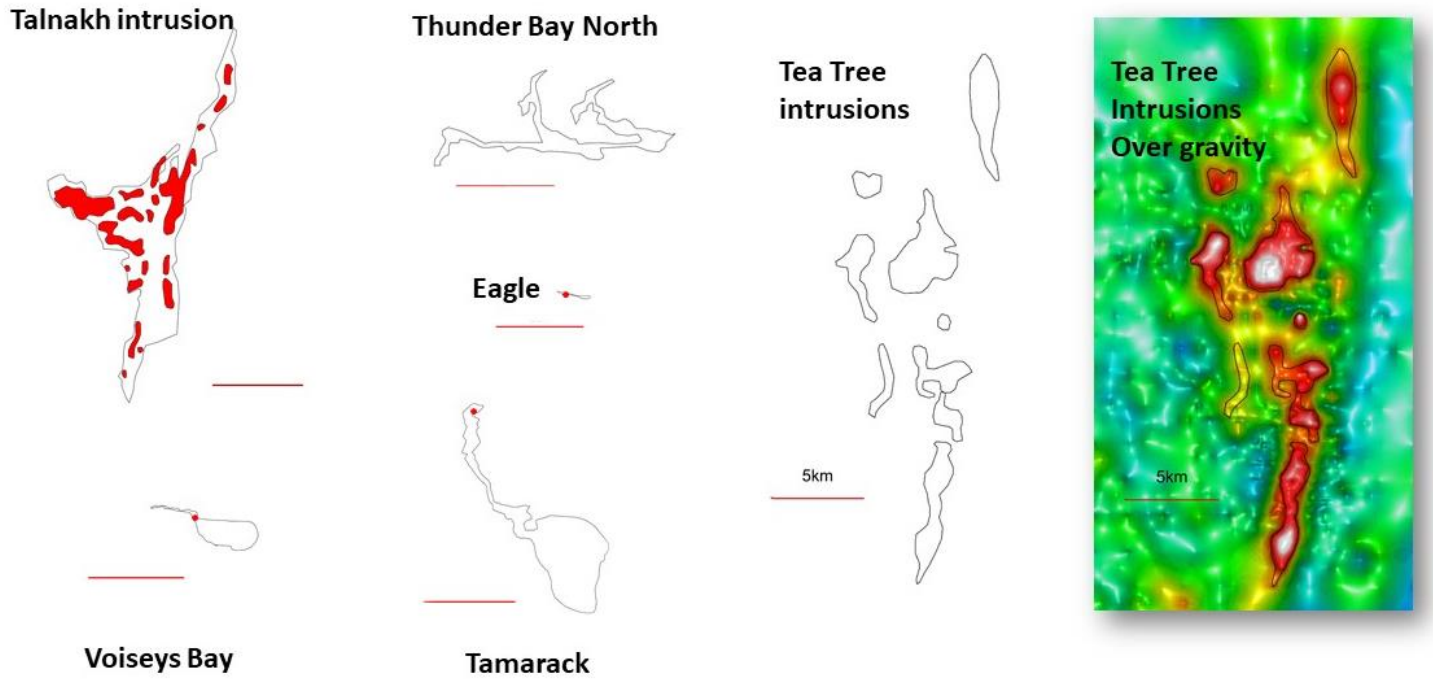
Differentiated layered ultramafic-mafic intrusion

Intrusion Classification and Architecture



Canobie – Magmatic Ni – Cu target

- **Hypothesis:** The Canobie Project contains the key geological criteria to form polymetallic nickel-copper style mineralisation.
    - The layered mafic intrusion drilled at Tea Tree contains fertile primitive ultramafic rocks (right rocks to host massive sulphide mineralisation)
    - Sulphur saturation (forms massive sulphide)
    - Evidence of the magma assimilating suitable host rocks capable of introducing sulphur and metal to form higher tenor mineralisation than identified thus far
    - Geophysical data indicates that favourable intrusion geometry targets are untested within the project (chonoliths)

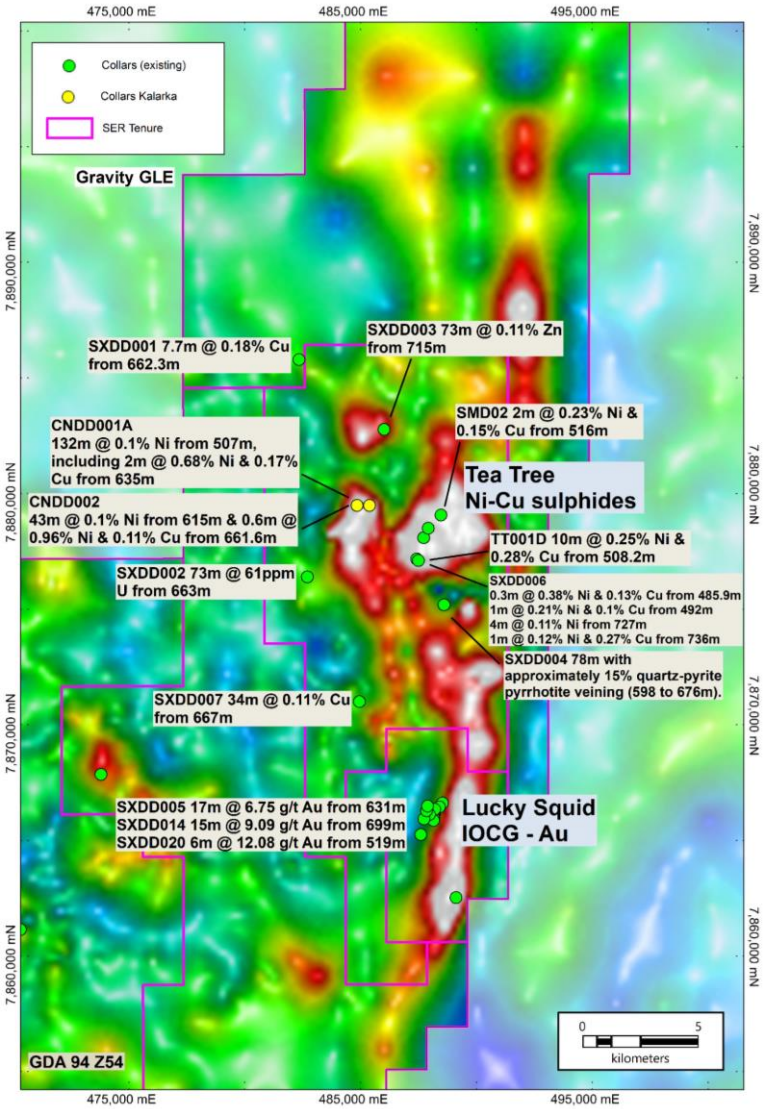


Known Magmatic Ni-Cu systems worldwide (intrusions sizes are to scale)

These geological criteria share similarities to globally significant mineralised systems including Nova-Bollinger (Fraser Range, WA), Thunder Bay (USA), Voisys Bay (Labrador, Canada), Jinchuan (China) and Noril'sk – Talnakh (Russia).

Is Mt Isa the Next Magmatic Nickel Province?

- Regional Setting (of Tea Tree)
  - ✓ Edge of Mt Isa Inlier (Gidyea Suture)
  - ✓ Large Igneous Province – Wonga Suite – Lunch Creek Gabbro (1740Ma) is a LIP
  - Therefore the magma is potentially intruding the Corella Formation (1770 Ma)
    - Corella Formation contains calc-silicates (evaporite) which could act as highly favourable assimilants of sulphur and metal into a magmatic system – (preserved minerals in historically petrology reports from Tea Tree)
      - Acknowledge the difficulty in identifying primary verses secondary salt minerals
  - ✓ Rock types and textures are right, sulphur saturation is right, regional setting works, conceptual better assimilants in the system to form higher tenor grades.
- **What else do we need?**
  - Tea Tree appears to be assimilating graphite and is interpreted as a 'static' intrusion i.e. sulphides have not moved enough to form high grade sulphides: this explains the low tenor sulphides – is this why the Tea Tree EM conductor is large and undisrupted?
  - Is there a dynamic chonolith setting, magmatic nickel-copper systems trapped in tunnel shaped, dynamic portions of the intrusive structure. Mapping gravity in 2D and 3D suggests chonolith – tunnel geometries – this means we need to be looking for smaller intrusions with tunnel geometries.



What's Next?

- SER pegged additional tenure at the southern end of Canobie for possible additional mafic intrusives with Tea Tree similarities
- SER to review all available Tea Tree holes a build a logging and geochemical dataset to map the phases of the Tea Tree intrusive (ongoing)
- Scientifically build the mineralisation model – understand the chemical settings of the system (assimilants) (ongoing)
- Undertake additional geophysical processing techniques and studies to extract all available information from the geophysical datasets – hunt dynamic settings within the intrusion (ongoing)
- Additional geophysical surveys – infill ground gravity to map the intrusion (pending)
- All with a focus of defining new drill targets

Exploration Data Centre – Brisbane – June 2022

Acknowledgements

- SER would like to thanks
  - Collaborative Exploration Initiative (CEI) – GSQ and the Queensland Government
  - Dr Steve Beresford (Mineral Systems Expert)
  - Mr Theo Aravanis (Geophysical Consultant)
  - Mr Dave McInnes (Geophysical Consultant)
  - Field staff + contractors especially Steve Konecny for getting the drilling done during the COVID Pandemic
  - Landholder at Canobie station
  - Traditional owners – The Mitakoodi People

Strategic Energy Resources

For further information:

Investors
David DeTata
Managing Director
T +61 3 9692 7222

Media
Jonathan van Hazel
Citadel-MAGNUS
T +61 411 564 696

Registered Office
Level 4, 100 Albert Road
South Melbourne, Victoria 3205

info@strategicenergy.com.au

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