RIMFIRE PACIFIC MINING LTD

ASX: RIM

"Critical Minerals Explorer"

MANAGEMENT

David Hutton
MANAGING DIRECTOR / CEO

Dr Peter Crowhurst
EXPLORATION MANAGER

Michael Love
GEOLOGICAL CONSULTANT

Paul Wright
GEOLOGICAL CONSULTANT

Greg Keane
CHIEF FINANCIAL OFFICER and ALTERNATE DIRECTOR for Ian McCubbing

BOARD

Ian McCubbing
CHAIRMAN

Andrew Knox
NON-EXECUTIVE DIRECTOR

Misha Collins
NON-EXECUTIVE DIRECTOR

Stefan Ross
COMPANY SECRETARY

OFFICE

Suite 142, Level 1
1 Queens Road
MELBOURNE VIC 3004

CONTACT DETAILS

David Hutton
+ 61 417 974 843

Greg Keane
+ 61 497 805 918

rimfire@rimfire.com.au
www.rimfire.com.au

ABN: 59 006 911 744

12 October 2022

Exploration Presentation – Valley Project

Rimfire Pacific Mining (**ASX: RIM**, "Rimfire" or the "Company"), is pleased to announce that Dr Peter Crowhurst, Exploration Manager will be giving a presentation titled "New porphyry targets emerge from innovative reprocessing of aeromagnetic data" at the NSW Mining and Exploration Conference to be held in Orange from 12 to 13 October 2022.

The presentation focuses on the Company's 100% owned Copper / Gold Valley Project, where our geology team undertook an innovative reprocessing and 3D modelling of the aeromagnetic data.

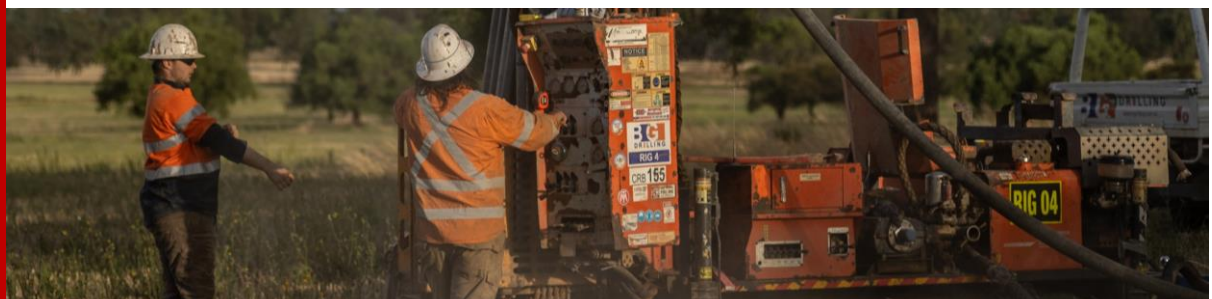
This work greatly enhanced the deeper geological features and assisted in the Company drilling into a highly altered volcanoclastic unit that is interpreted to be equivalent to that found within the Northparkes porphyry system (ASX Announcement 27 July 2021 – Valley Results Support Potential for Nearby Porphyry System) and has assisted in defining the next drill program at the Project.

This announcement is authorised for release to the market by the Board of Directors of Rimfire Pacific Mining.

For further information please contact:

David Hutton
Managing Director / CEO
Ph: +61 417 974 843

Greg Keane
CFO / Investor Relations/
Alternate Director for Ian McCubbing
Ph: +61 497 805 918



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New porphyry targets emerge from innovative reprocessing of aeromagnetic data

Peter Crowhurst – Exploration Manager

NSW Mining & Exploration Conference 13 October 2022

ASX: RIM

rimfire.com.au

Disclaimer & Competent Person Statements

Competent Persons Declaration

The information in the report to which this statement is attached that relates to Exploration and Resource Results is based on information reviewed and/or compiled by David Hutton who is deemed to be a Competent Person and is a Fellow of The Australasian Institute of Mining and Metallurgy.

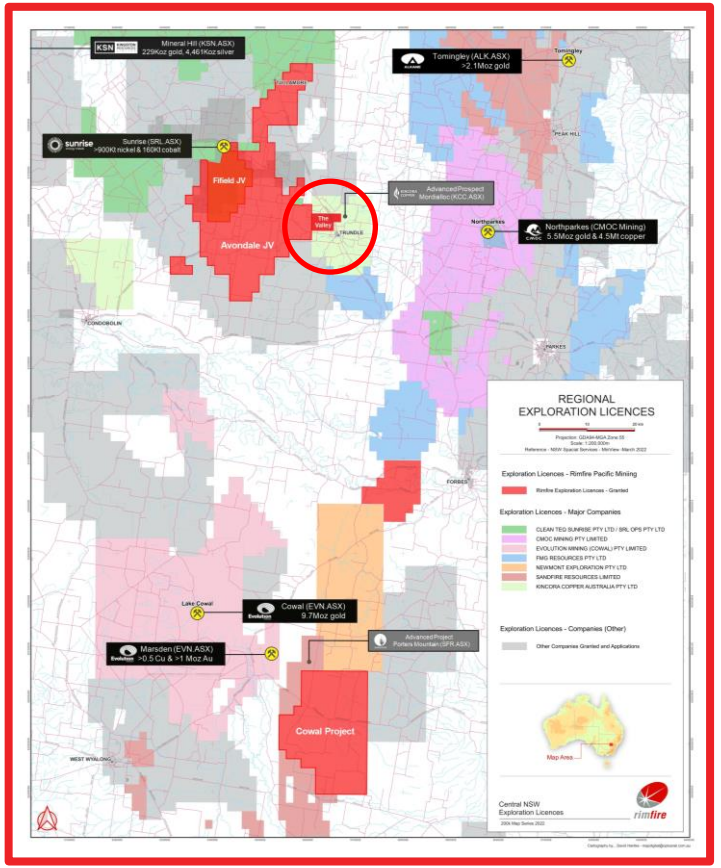
Mr Hutton has over 30 years' experience in the mineral and mining industry. Mr Hutton is an employee of the Company. David Hutton has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. David Hutton consents to the inclusion of the matters based on the information in the form and context in which it appears.

Forward looking statements Disclaimer

This document contains "forward looking statements" as defined or implied in common law and within the meaning of the Corporations Law. Such forward looking statements may include, without limitation, (1) estimates of future capital expenditure; (2) estimates of future cash costs; (3) statements regarding future exploration results and goals. Where the Company or any of its officers or Directors or representatives expresses an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and the Company or its officers or Directors or representatives as the case may be, believe to have a reasonable basis for implying such an expectation or belief. However, forward looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward looking statements. Such risks include, but are not limited to, commodity price fluctuation, currency fluctuation, political and operational risks, governmental regulations and judicial outcomes, financial markets and availability of key personnel. The Company does not undertake any obligation to publicly release revisions to any "forward looking statement", or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

Investment Highlights

- Enviable tenement holding in world renowned Lachlan Orogen and Broken Hill Districts with demonstrated prospectivity for Critical Minerals and Porphyry Copper / Gold deposits.
- Key Prospects immediately adjacent to two Federal Government declared “Major Project” for Critical Minerals[1].
- Experienced in-house geological team with successful exploration track record.
- Fully funded aggressive drill programs planned for the next 6 months with supporting news flow.
- Supportive exploration partner has committed to additional $3.0M of exploration funding[2].



Key Projects - NSW

Valley Project (Cu-Au) – 100% RIM

- Adjacent to Kincora (KCC.ASX) Mordialloc / Trundle Projects
- Anomalous copper results at surface
- RIM exploration work confirms the “right” Ordovician bedrock
- Coupled with geophysical data suggests deeper target exists
- Peer reviewed NSW Government grant provided for drill testing

Broken Hill (Co) – 100% RIM

- Potential area of Future Critical Mineral supply
- Key target immediately along strike from known Cobalt JORC resource of >40,000t[5] in same geological setting
- Further strong prospectivity for critical minerals on other areas of holdings

Cowal (Cu-Au) – 100% RIM

- Adjacent to Evolution (EVN.ASX) Cowal Gold Mine
- 5km^2 copper in saprolite anomaly requires drill testing

Fifield Project (Au-PGEs) – RIM Managed Earn-In with GPR up to 50.1%

- Sorpresa JORC Resource and Transit Gold Prospect
- Platina Lead, largest historic source of Platinum mined in Australia, undergoing bulk sample testing

Avondale Project (Ni-Co-Sc-PGEs) – RIM Managed Earn-in with GPR up to 75%

- Critical Minerals Focus
- Adjacent to known critical mineral JORC resources (Ni, Co, Sc)
- 20+ targets over a 40km long, 4km wide belt, 4 targets being actively worked on
- Initial results from Melrose drilling confirm Critical Minerals prospectivity[4]
- Significant fully funded work programs planned

Proven Discovery Team

David Hutton • Executive Director

David has over 30 years of exploration experience, with key expertise in greenfields exploration, project discovery, project execution, geology, corporate management and strategy

David was involved with the discovery and / or delineation of numerous precious and base metal deposits, including Thunderbox gold deposit, Altia Silver Lead Zinc deposit, F8 zinc deposit (Pillara) and Barda Gonzales Copper Deposit (Western Argentina).

Dr Peter Crowhurst • Geology Manager

Peter has over 25 years of exploration experience principally in the areas of project generation, field evaluation, project execution and structural geology.

Peter's experience extends across Australia, Asia and SW Pacific including research work with CSIRO on industry projects. Peter has strong experience with multiple commodities / geological settings including Cu-Au porphyries, seafloor massive Cu-Zn-Pb-Ag sulphides, mineral sands and lithium.

Michael Love • Technical Consultant

- ***Key role in discovery of Lake Cowal, Northparkes, Dubbo Project***

Mick has strong experience in the Lachlan Orogen and was heavily involved in the discovery, early exploration and development of Northparkes (Cu / Au porphyry), Lake Cowal (Au), and Dubbo Project (Rare Earths).

Mick has over 30 years of exploration experience with key expertise in greenfields exploration, project discovery, project execution and geology.

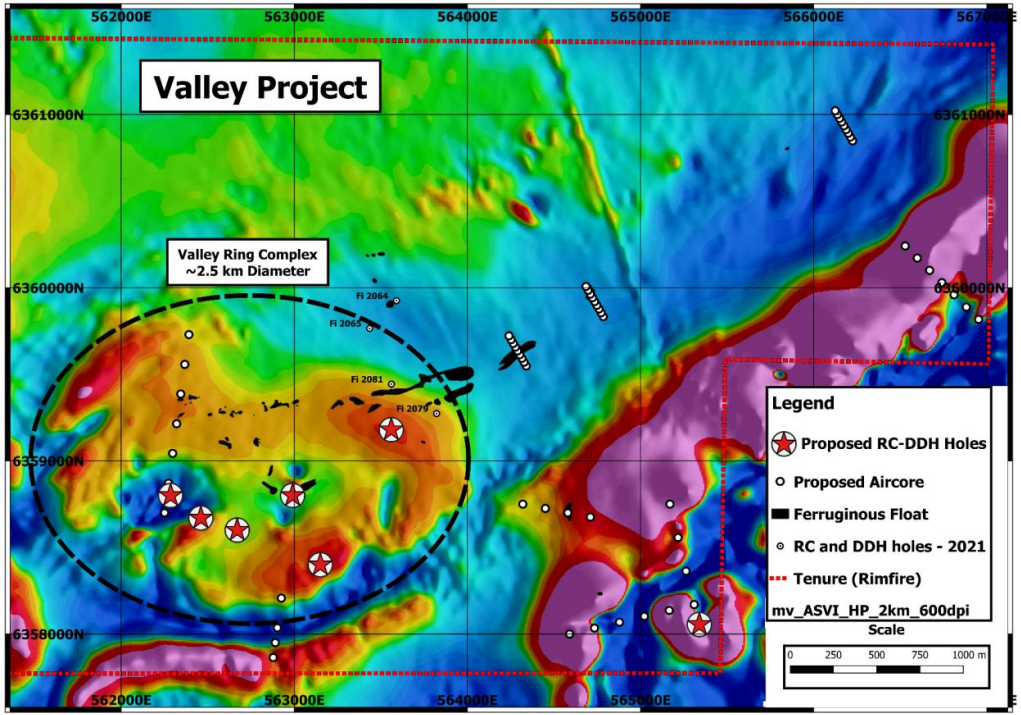
Paul Wright • Technical Consultant - Geology

- ***Key role in discovery of Cadia East***

Paul has over 30 years of exploration experience including at Cadia, where he was involved in the early exploration work that took Cadia East from a soil anomaly into a significant resource.

Paul has key expertise in porphyry Cu-Au systems and multitude of Au-only systems.

The Valley Copper Gold Project (RIM 100%)

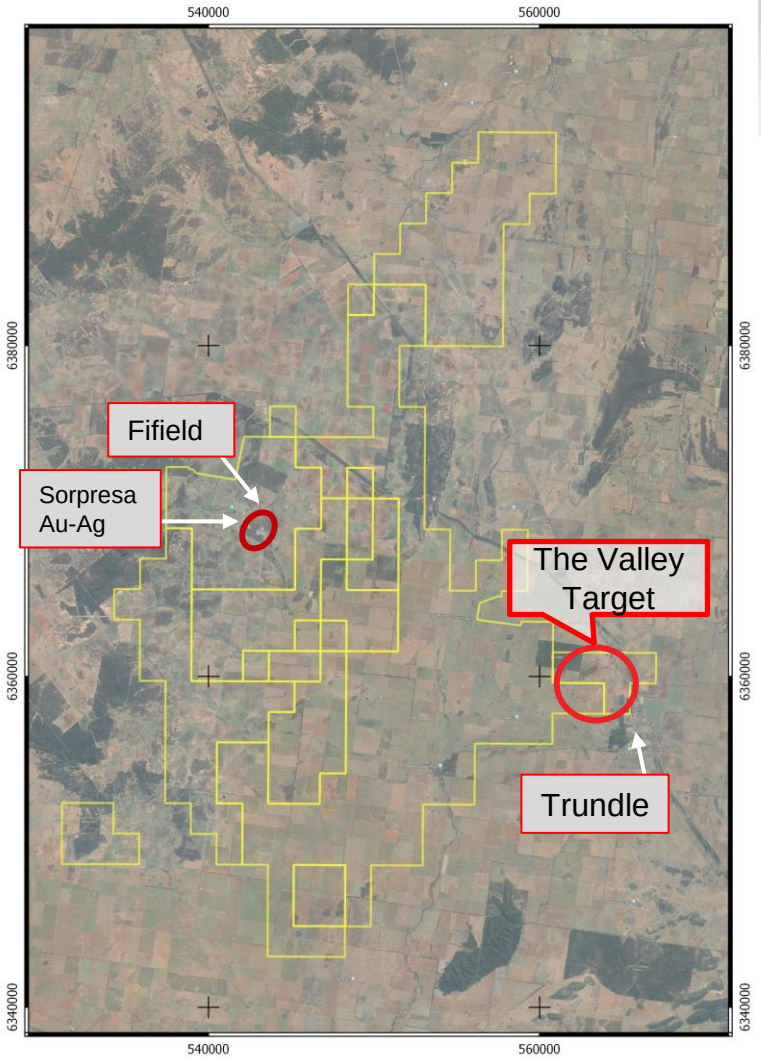


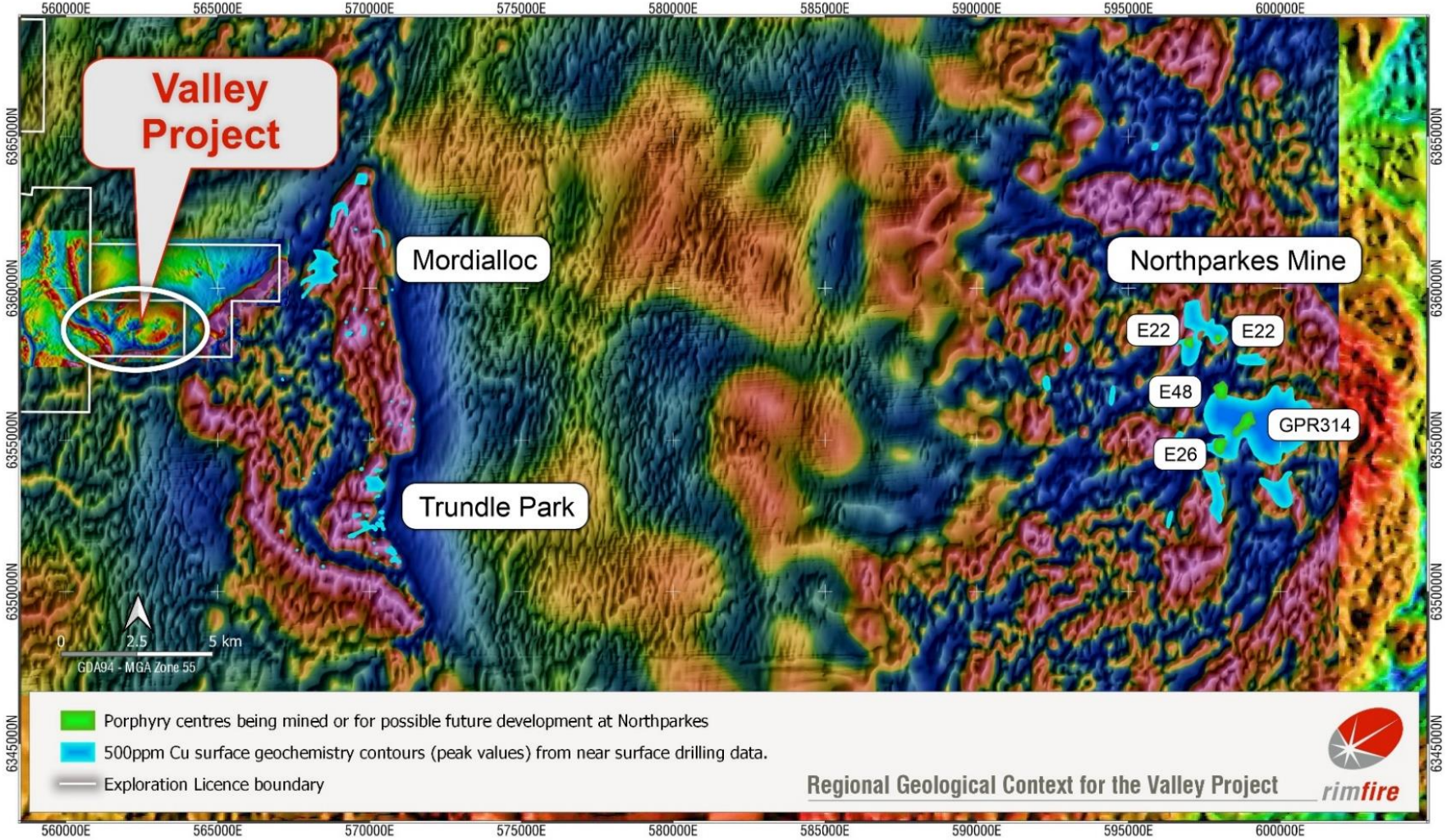
Key Points

- Copper / Gold Target.
- Recent Drilling confirms the “right” Ordovician bedrock – same type and age as Northparkes system.[6]
- Reprocessed geophysical data confirms scale footprint is similar in size to Northparkes.[6]
- Award of funding contribution from NSW Government through competitive peer review process, reinforces the rationale to firmly test the prospect.[7]

Target Location

Yellow outline shows the boundaries of the Rimfire EL's and the main location of Rimfire operational base in Fifield next to the Sorpresa Au-Ag deposit which lies near the western edge of the Macquarie Arc of the Lachlan Orogen

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6345000N
Valley Project
Mordialloc
Trundle Park
Northparkes Mine
E22
E22
E48
GPR314
E26
0
2.5
5 km
GDA94 - MGA Zone 55
Porphyry centres being mined or for possible future development at Northparkes
500ppm Cu surface geochemistry contours (peak values) from near surface drilling data.
Exploration Licence boundary
Regional Geological Context for the Valley Project
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The Valley Target – Executive Summary

Challenge of Exploring Undercover

Large mines such as Cadia, Northparkes and Cowal did have some surface expression in terms of a geochemistry footprint however the next generation of large deposits are likely to be blind targets under cover

A major component required for the exploring undercover is obviously geophysics and in the case of the Valley target there was good quality data, but it had not been fully utilized with innovative processing techniques

Starting point in 2020

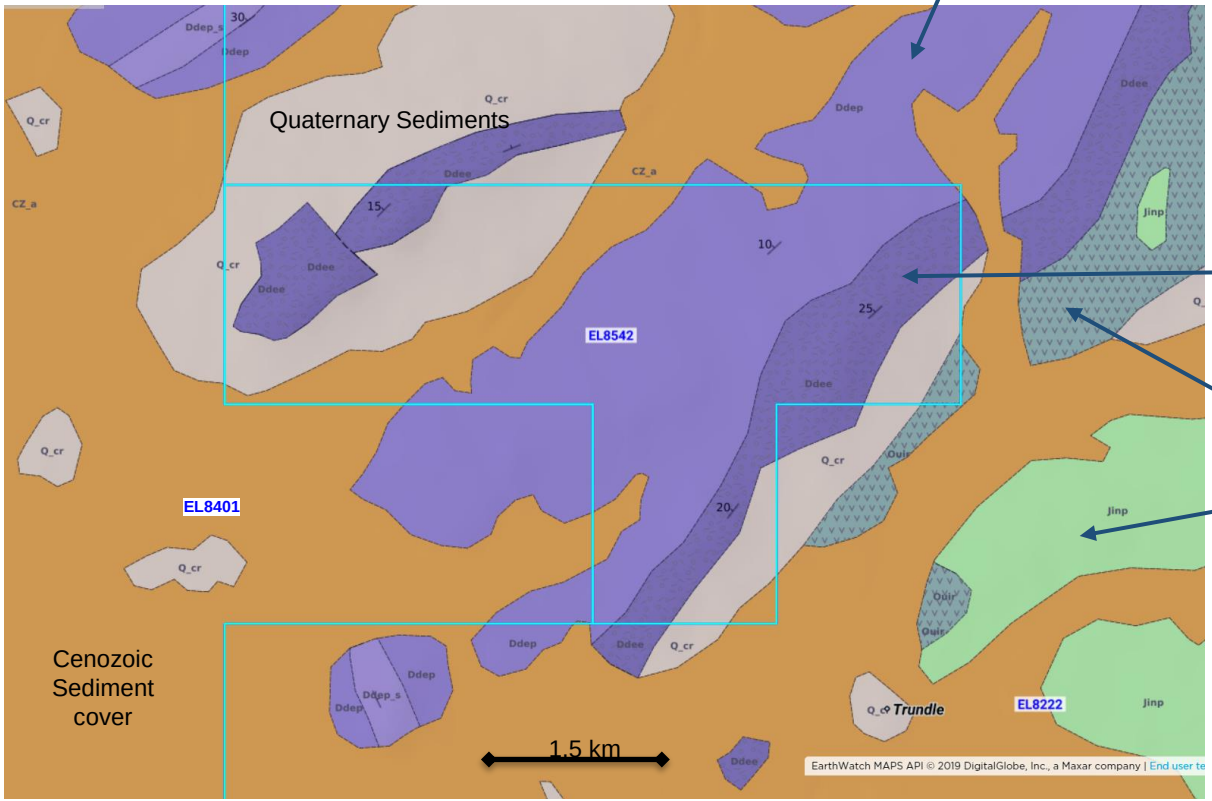
1. Shallow Ironstone Ridge
   - Surface samples yielded sporadic elevated Cu (max >5%) with anomalous As, Au and Zn from an ironstone formation
   - The ironstone forms a thin ridge that likely extends for ~3.5km
2. Ordovician Boundary Zone
   - Elevated Cu values at the zone mapped as boundary of Ordovician and Devonian
   - Coincident with a very prominent magnetic feature – interpreted as fault zone
3. Potential deeper porphyry? targets
   - IP anomalies and a broad, diffuse magnetic feature lie below the ironstone ridge
   - Aeromagnetic data required more innovative data reprocessing and 3D models to delineate features and predicted depths

The Valley Target – Timing of Mineralisation

The age of mineralisation is a key element of interest in the Macquarie Arc section of the Lachlan Orogen;

- Most significant mineralisation in the has been found within the Ordovician units and very little in the Devonian
- The sampling on the Iron Oxide ridge is hosted within the Devonian Derriwong Group where historic samples show elevated copper and zinc in what was interpreted as a ‘gossanous stock’
- The only known Ordovician unit lies in the SE corner of the EL8542 which is mapped as Raggat Volcanics. This unit and associated monzonite intrusions are interpreted to host the local Mordialloc and Trundle skarn and porphyry prospects (Kincora/ Rare X - EL8222).
- It is possible that the Ordovician units dip under ‘The Valley’ target area as there is a magnetic feature of interest.
- Mineral Hill deposit is hosted in Devonian rocks and this indicates that the Devonian units can host significant mineralisation and that these units maybe underexplored based on previous assumptions that Ordovician units are the main mineralised hosts.

Surface Geology



Cookeys Plains Formation
(Shale, siltstone & fine sands)

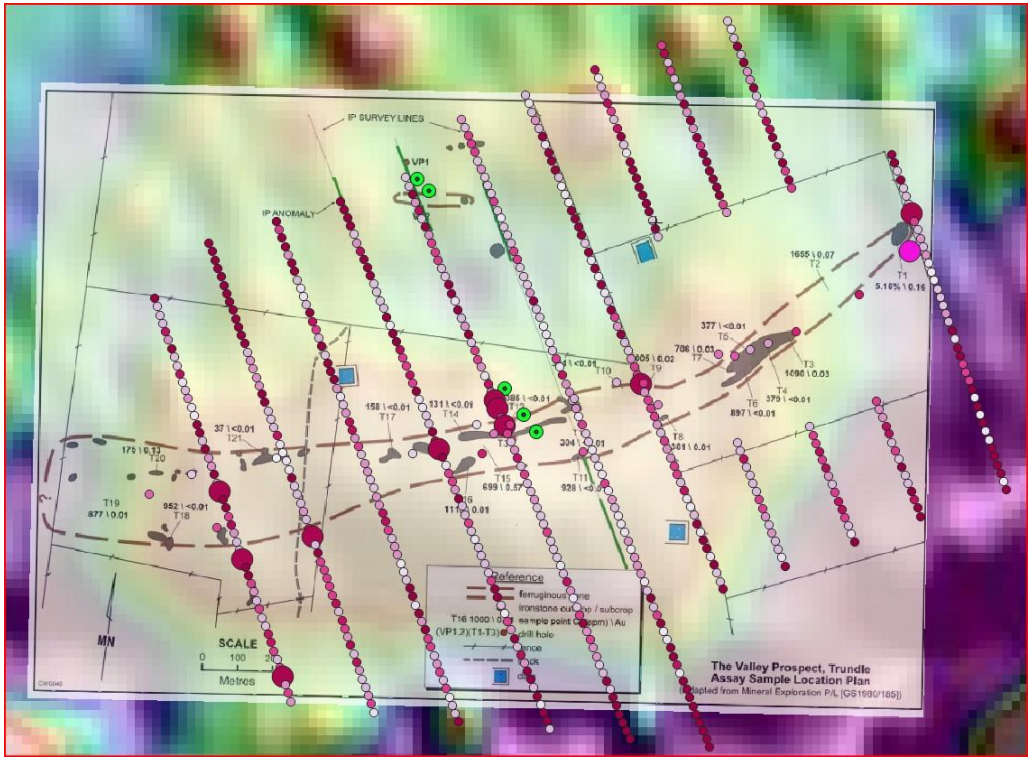
Kincora/Rare X: EL8222 surrounds Rimfire ground Mordialloc Prospect 2km east of EL boundary

Edol's Conglomerate
(Polymictic conglomerate)

Raggatt Volcanics
(Andesitic lavas & volcanogenic sediments)

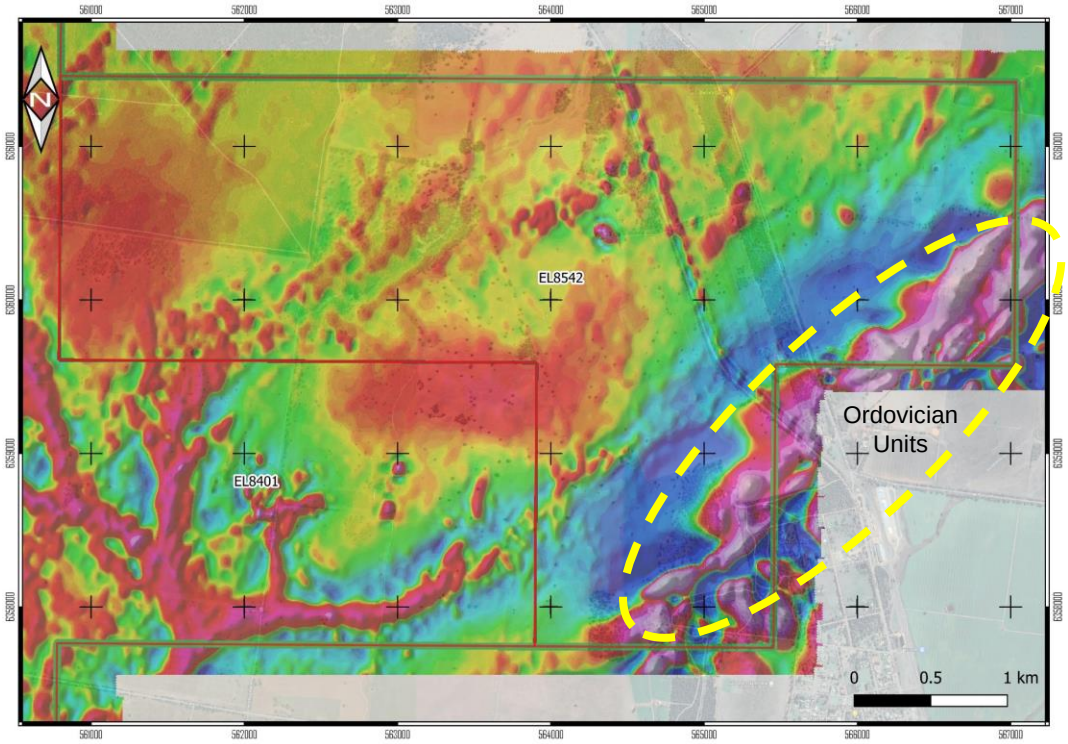
Jurassic Sediments
(Sandstone and Mudstone)

Historical Exploration



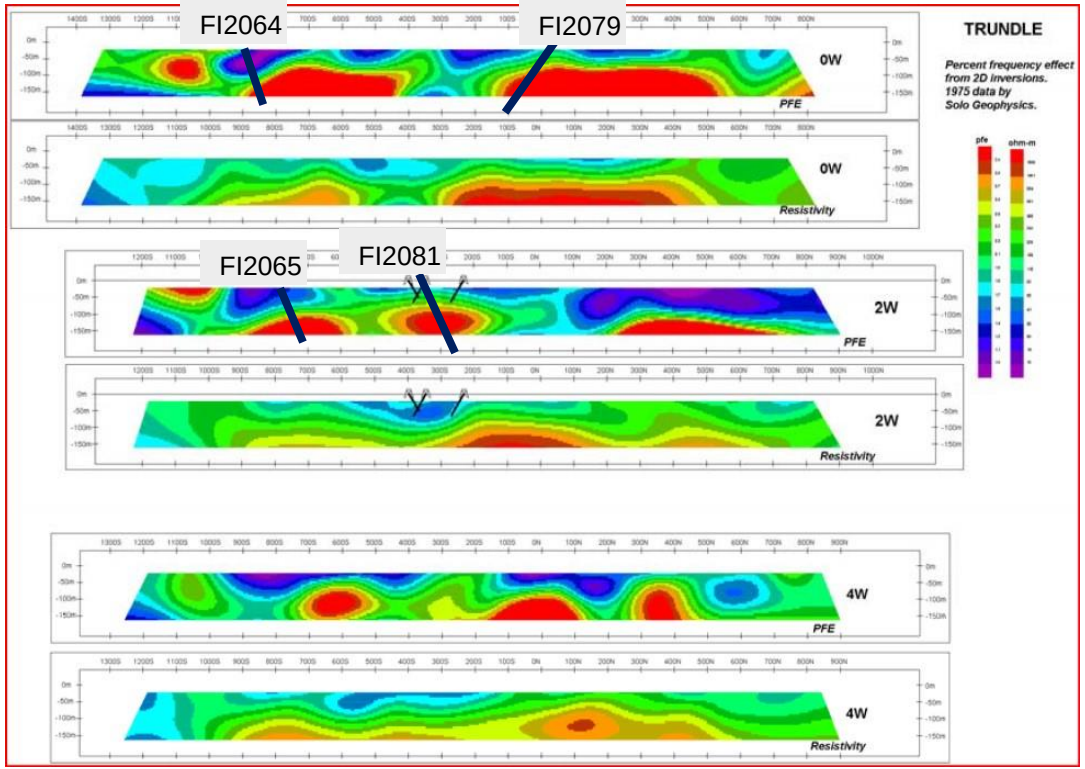
- Soil samples did not yield any Cu values above 240 ppm, however 10 rock samples collected by CRAE yielded >1% Cu with a max ~ 5% Cu. CWG collected 1 sample over 5% Cu. Most were massive limonite or breccia
- Also the Zn values show a broad halo around the ridge and Pb was universally very low. Au (1 sample of 3ppm) and As sporadic with also a small spike of Sb noted
- *Note the pink circle is >5% Cu and larger maroon circles are >1% Cu*
- *Brown dashed line is outline of ironstone ridge and green circles are historical drill holes*

RTP Aeromagnetic Images



- In 2017 an aeromagnetic survey was conducted over the entire Fifield EL package as part of a former JV with NewGold.
- Several standard magnetic plan images such as TMI, RTP and 1VD were produced from this data and this section covers the Valley project.
- Main features include: magnetic high in the SE corner is mapped as being the shallow Raggatt Volcanics which are the Ordovician units that are equivalent to the prospective rocks that host several mineral deposits in the Macquarie Arc; tree like feature is likely maghemite in palaeochannels; a diffuse ‘blob’ in the centre of the main Valley Target area and the linear roughly north trending railway line.

2D IP Inversion Sections

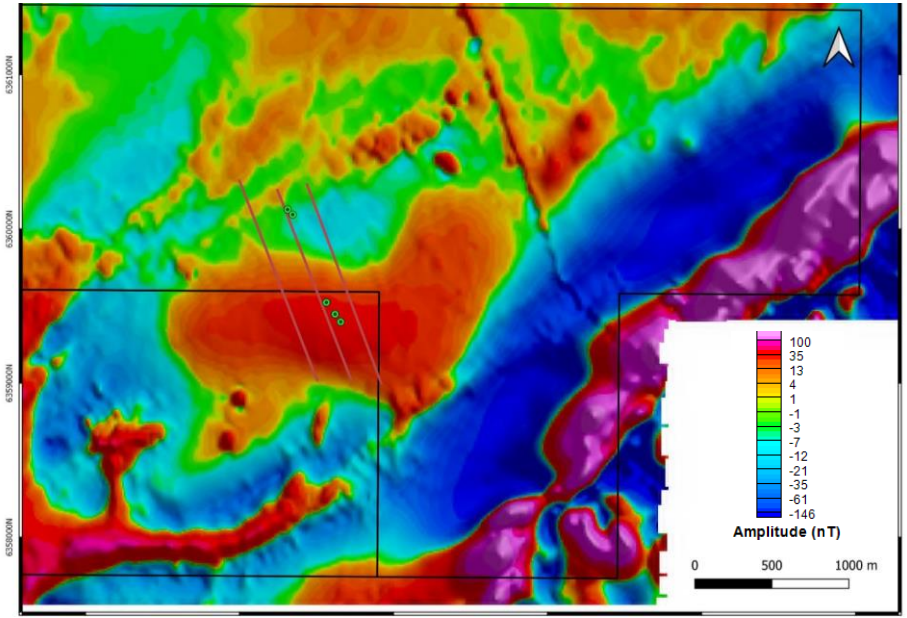


- Reprocessed by Tooronga Geophysics Consultants for Central West Gold NL (CWG) in 2010 from data collected in 1975.
- Note the 3 drill holes completed by CWG (black lines) did not reach the target zone due to issues with water influx with RC drilling. They planned to do diamond holes next, but this did not go ahead.
- Rimfire drilled 2 RC x 150m holes (FI2064 and FI2065) to test the IP anomaly and found disseminated pyrite through the sedimentary units. Note location of subsequent DDH's (FI2079 and FI2081)

Aeromagnetic Data Reprocessing

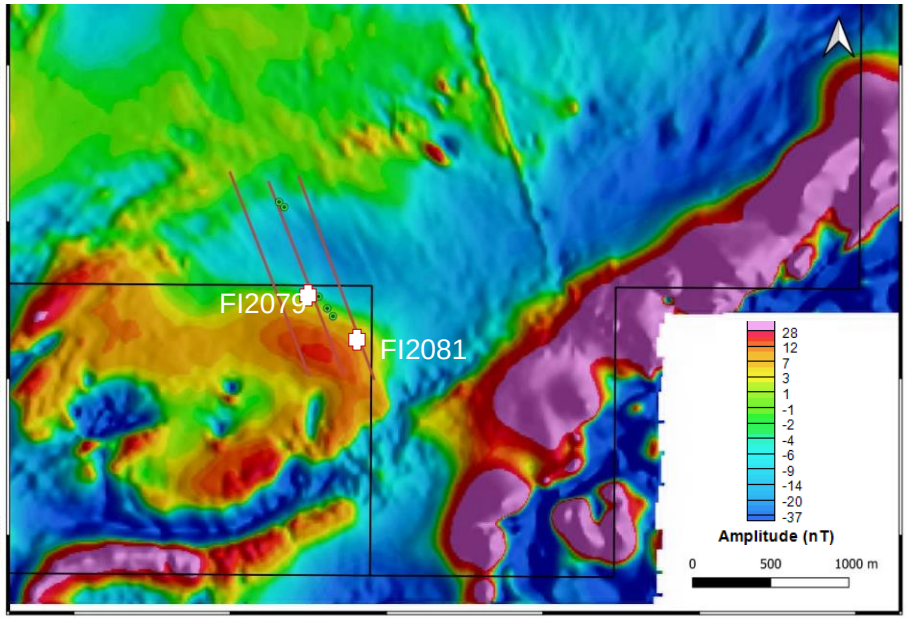
The AVSI model is independent of remanent magnetization and hence more accurate then the standard RTP

RTP HP 2km NL stretch



RTP High Pass filter with 2km wavelength

mv_ASVI HP 2km NL stretch



Magnetic Vector Inversion – Analytical Signal Vertical Integration

3D Modelling of Aeromagnetic Data

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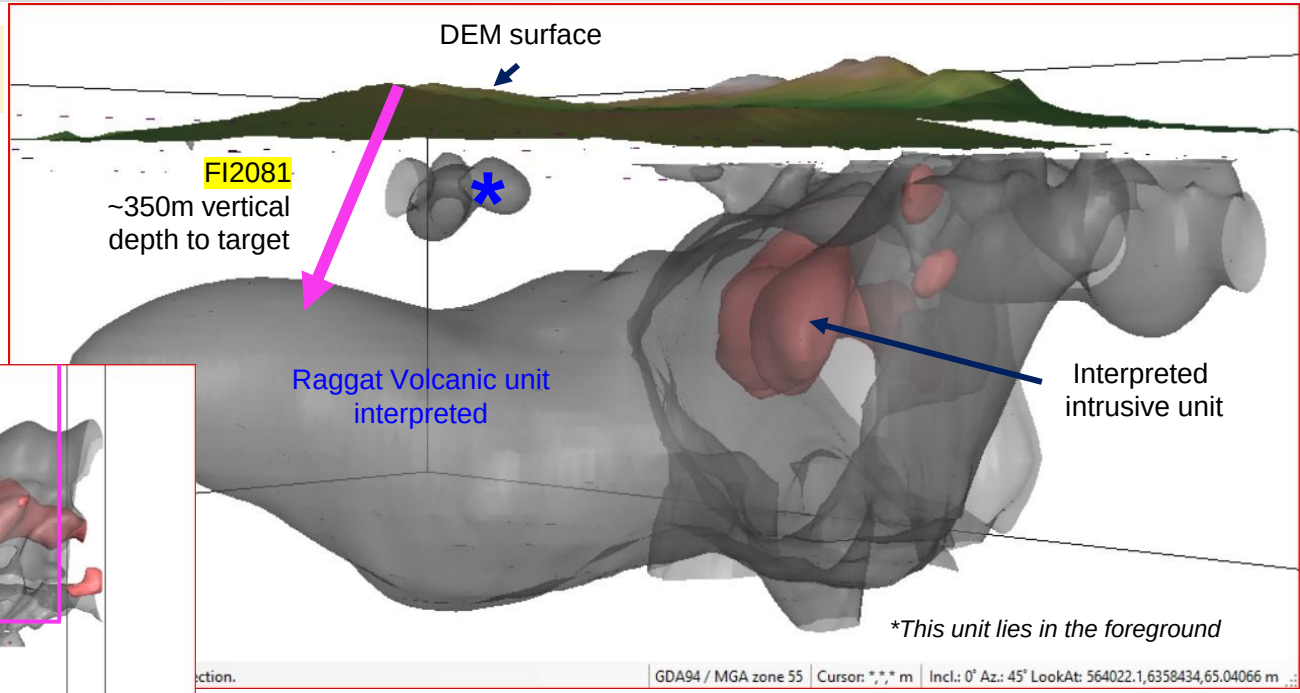
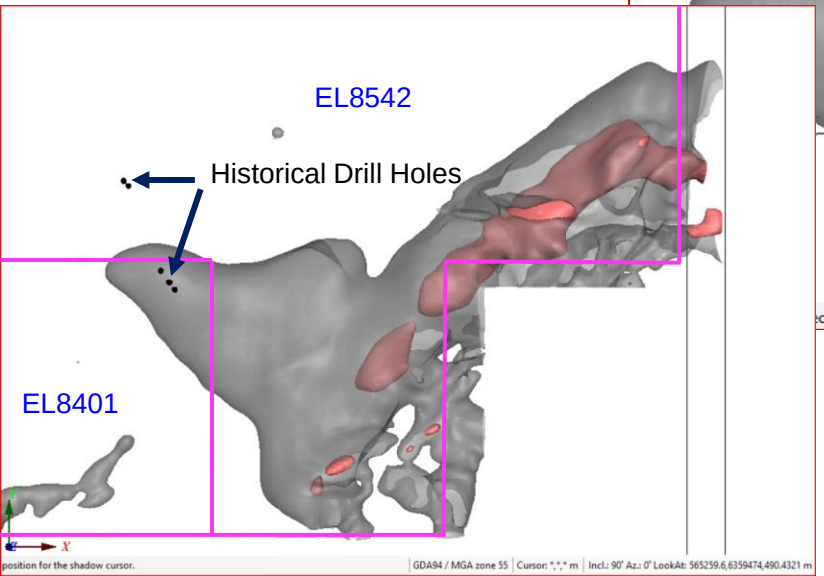
3D isosurfaces viewed towards the NE



Isosurface: pink = 0.025 and grey = 0.0025 mag sus SI units (MVI)

Planview of 3D isosurface



Diamond Drilling Testing Deep Target

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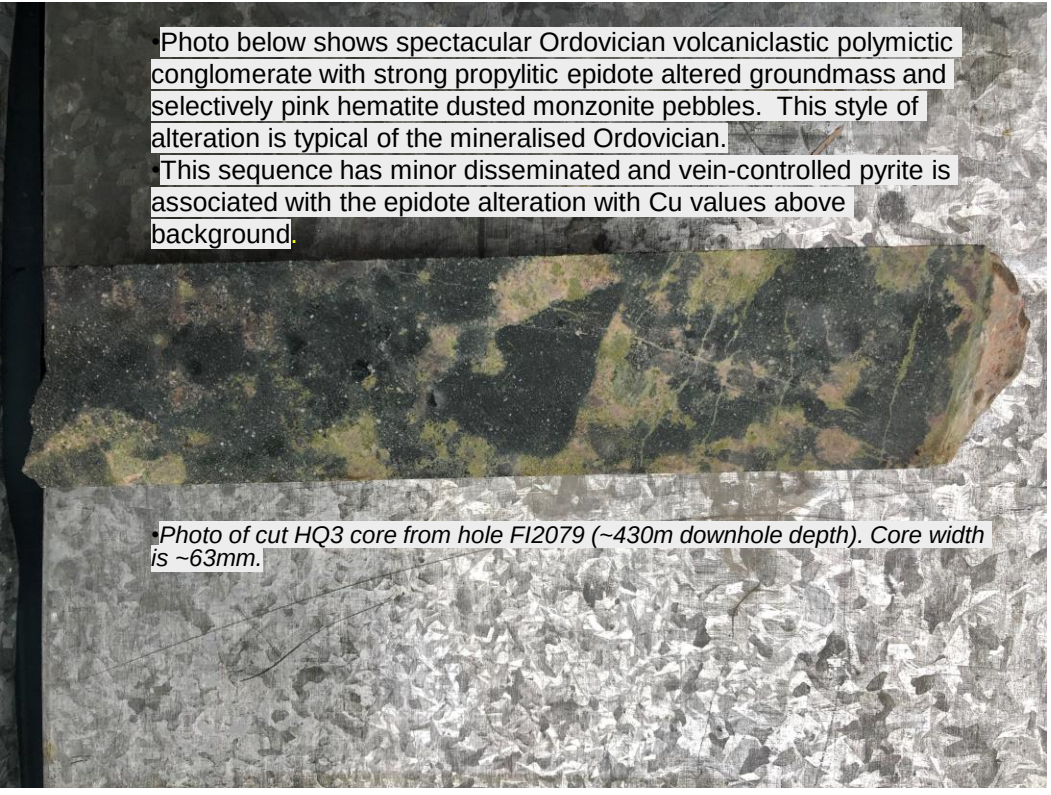
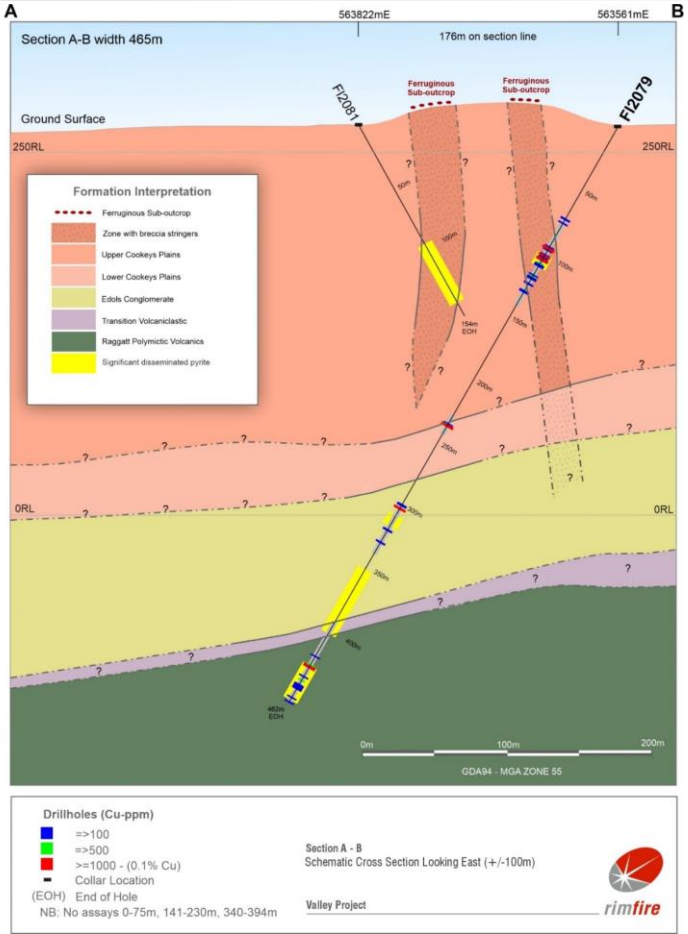


•Photo below shows spectacular Ordovician volcaniclastic polymictic conglomerate with strong propylitic epidote altered groundmass and selectively pink hematite dusted monzonite pebbles. This style of alteration is typical of the mineralised Ordovician.

•This sequence has minor disseminated and vein-controlled pyrite is associated with the epidote alteration with Cu values above background.

•*Photo of cut HQ3 core from hole FI2079 (~430m downhole depth). Core width is ~63mm.*



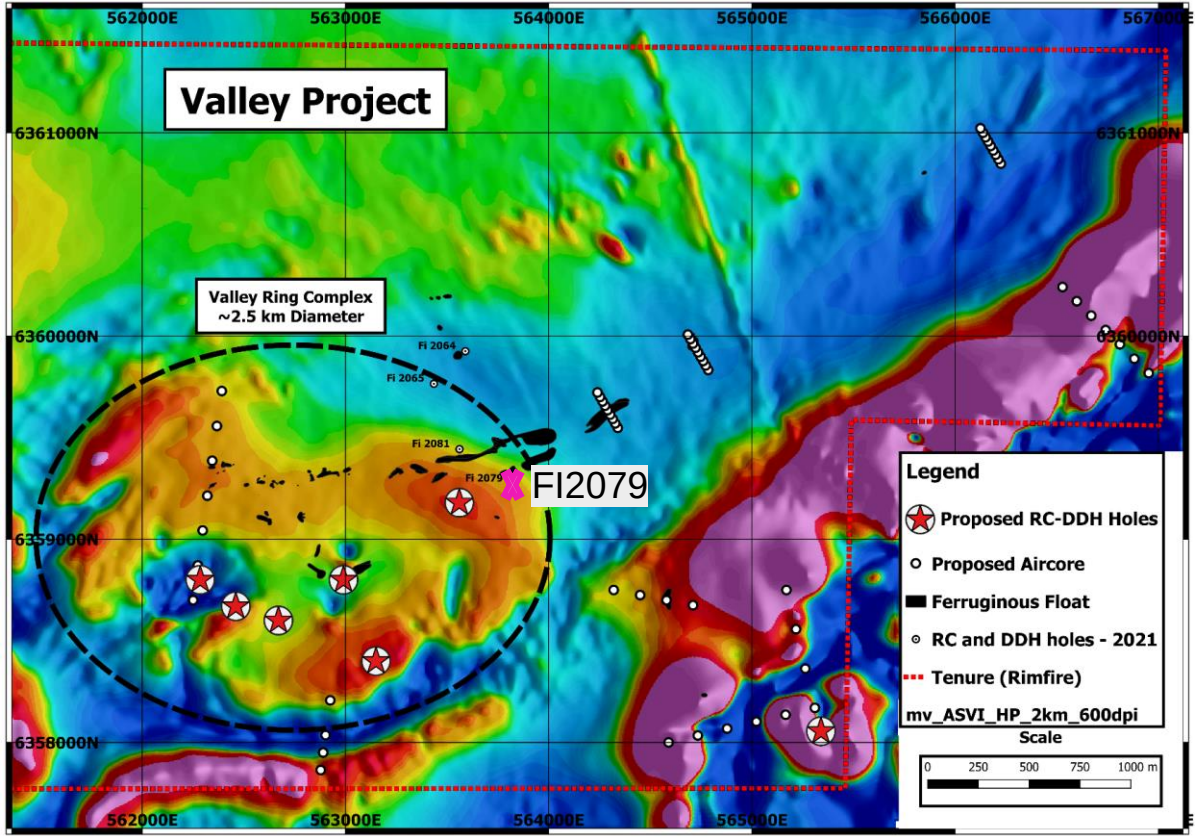
Interpretation and Next Steps

- The logging of the deepest part of the diamond hole (FI2079) is interpreted to be part of the highly altered Raggatt Volcanic sequence which is a diagnostic unit commonly observed elsewhere in the Macquarie Arc and can be found proximal to a mineralised porphyry system

- The magnetic modelling was very precise in defining the boundary of the Devonian sediments and the ‘Ordovician’ basement and therefore provides confidence with the magnetic data in defining the next target which is the cluster of magnetic ‘donuts’ that lie further west of the current drill hole

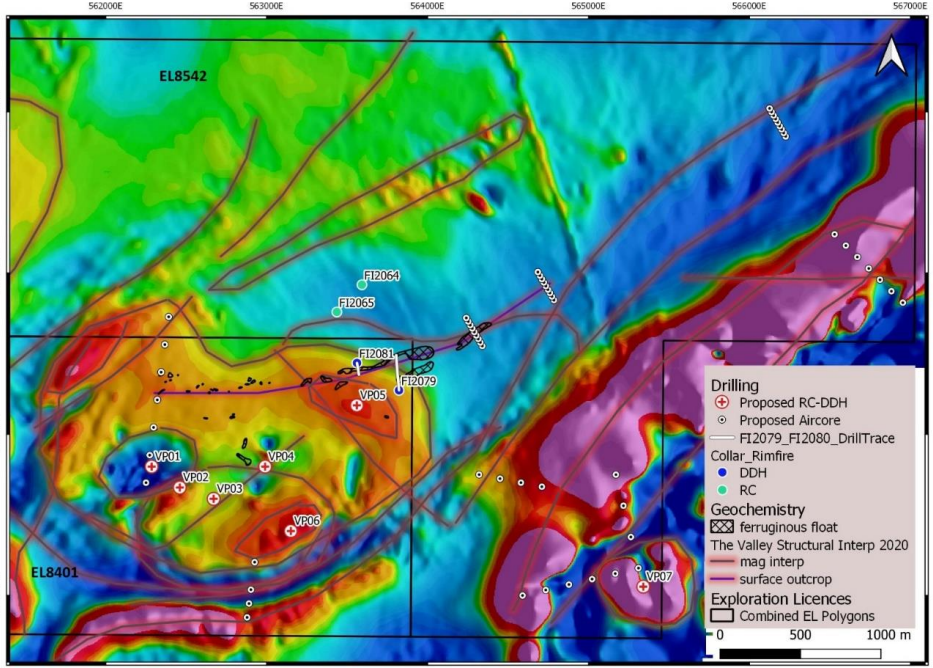
- Funding was secured through a NSW government cooperative drilling fund to support the next stage of deep drilling to test the targets

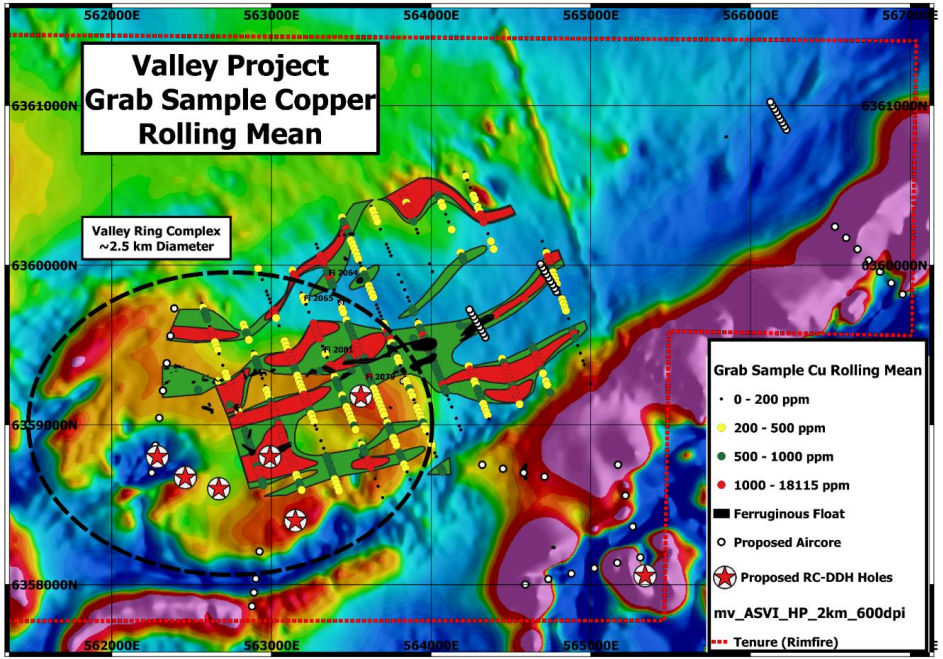
Drill Targets



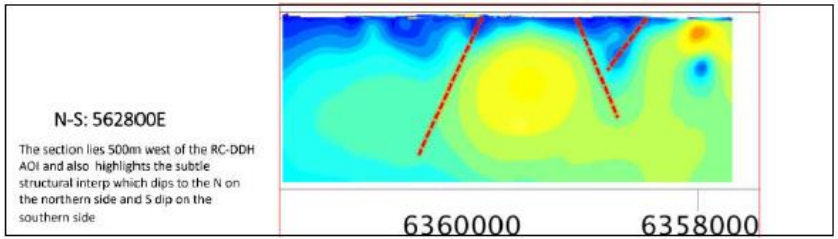
- Location of planned deep RC-DDH with the interpreted magnetic ring complex which appear as a cluster of potential pencil porphyries.
- The drill holes will test a series of different features such as magnetic lows and highs and boundaries of these zones.

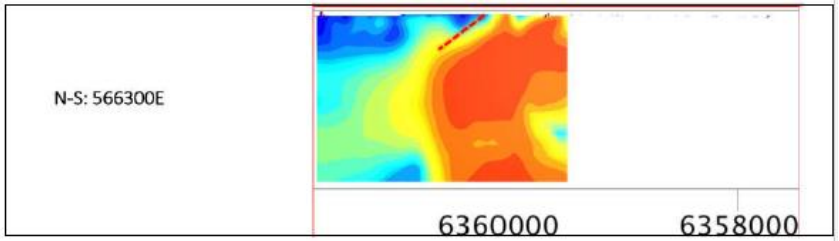
Further detailed structural analysis of magnetic data and surface geochemistry

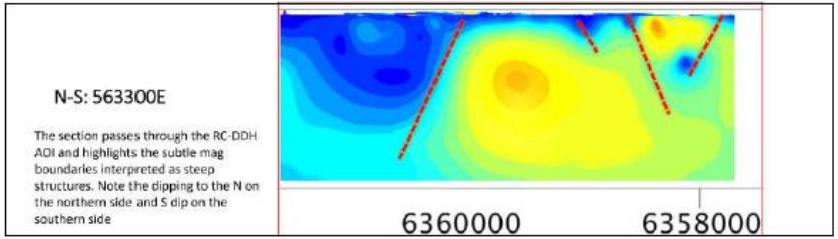


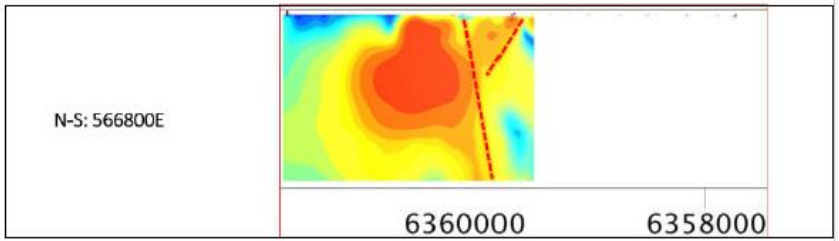


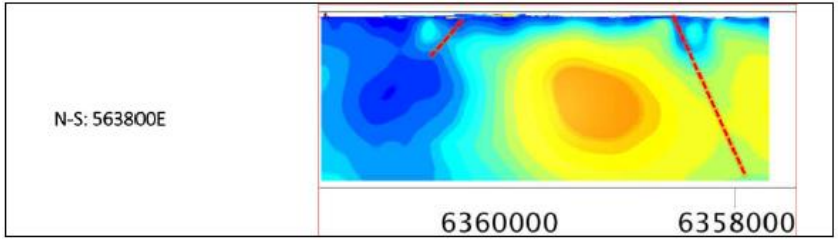
Detailed 3D structural analysis of aeromagnetic data

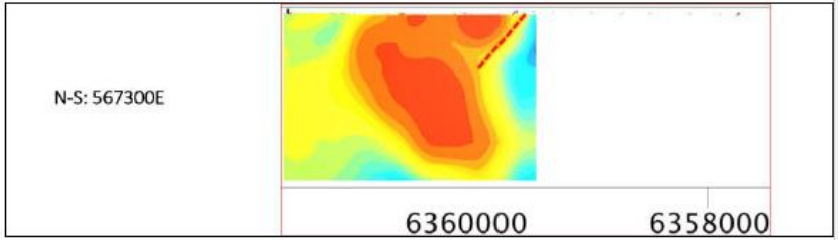




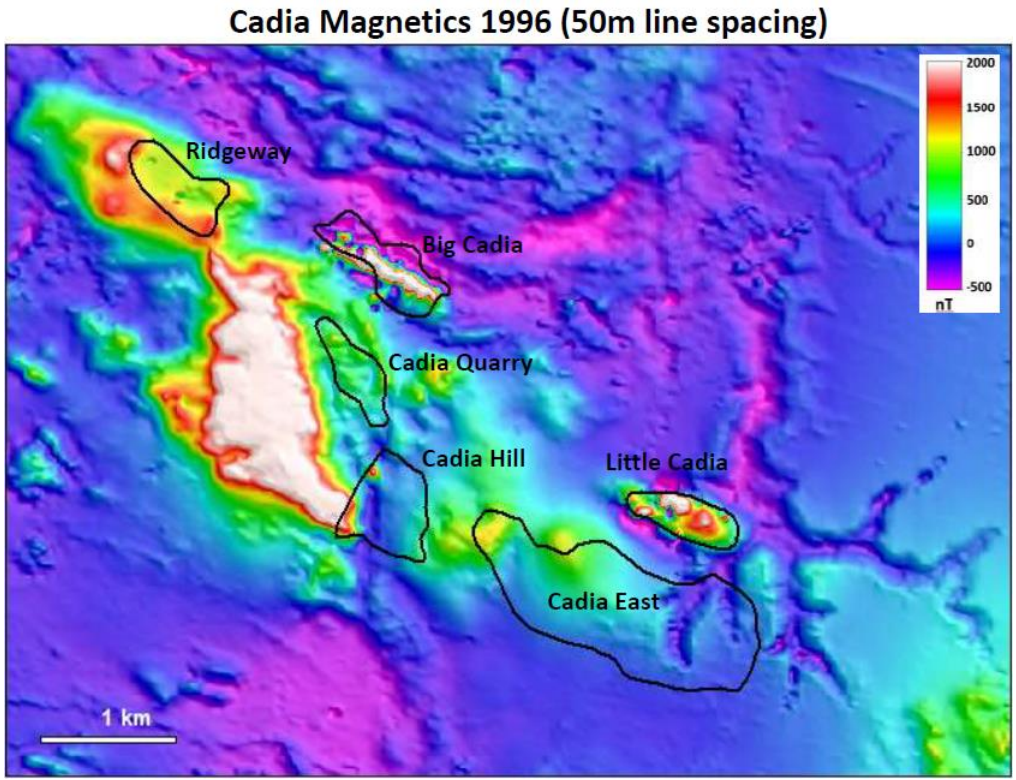


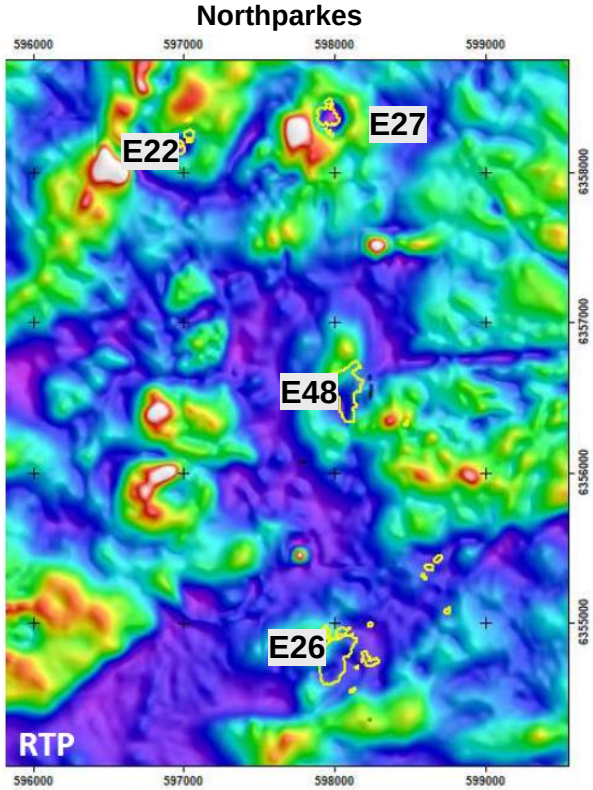






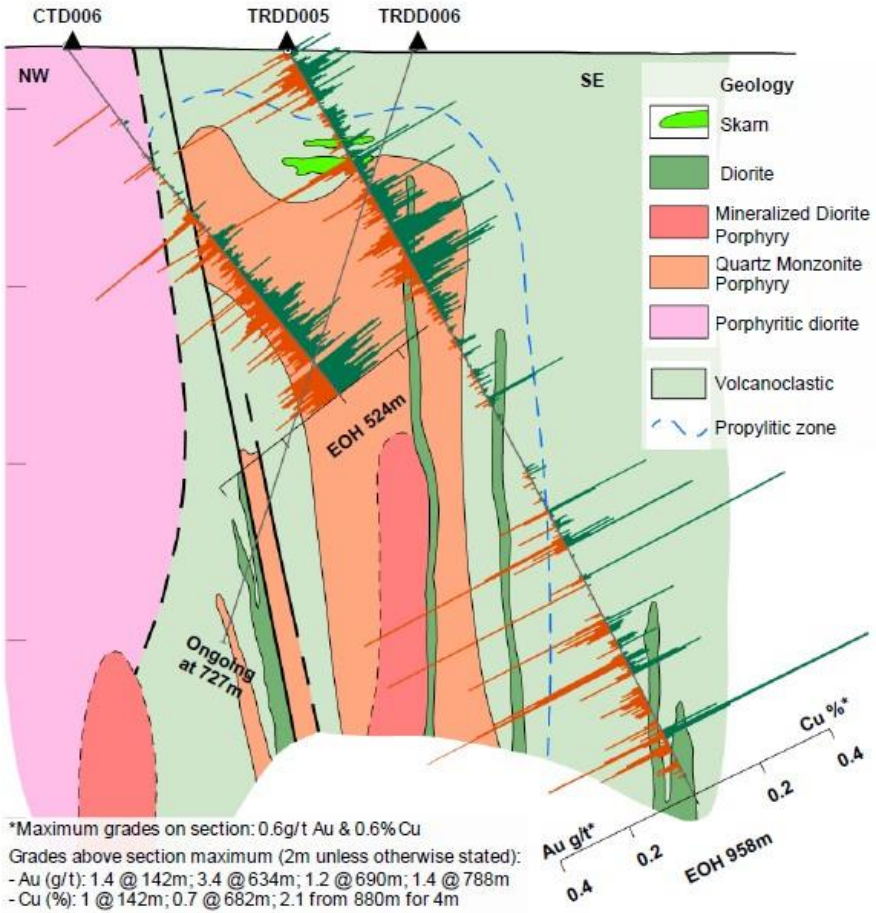
Comparison to Cadia and Northparkes Cu-Au Porphyry Deposits





Reference; Hoschke et al, 2022. AIG Tasmanides Conference

Valley Proximal to Mordialloc Prospect



- Kincora Copper (TSX/ASX)

Mordialloc Prospect cross section of drill hole locations, mineralized highlights and stylized geological model

The Valley target may have a similar setting with the surface samples reflecting leakage from a typical telescoped porphyry system

Cross section of the Mordialloc Cu-Au porphyry prospect (ref: Kincora Copper Ltd, TSX announcement 3rd Sept 2020).

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For further information, please contact Greg Keane (CFO / Investor Relations):

+61 (0) 497 805 918

Rimfire Pacific Mining

rimfire@rimfire.com.au

@NIRimfire