

***rimfire***

**Experienced Explorer with  
a Critical Minerals Focus**

**March 2023**

**ASX: RIM**

**[rimfire.com.au](http://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 and is an employee of Rimfire Pacific Mining Limited (Rimfire). Mr 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

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Enviably tenement holding in world renowned Lachlan Orogen and Broken Hill Districts (NSW) with demonstrated prospectivity for Critical Minerals and Copper - Gold deposits



Key prospects immediately adjacent to third party projects recently awarded "Major Project" status by Federal Government for Critical Minerals



Experienced in-house geological team with successful exploration track record



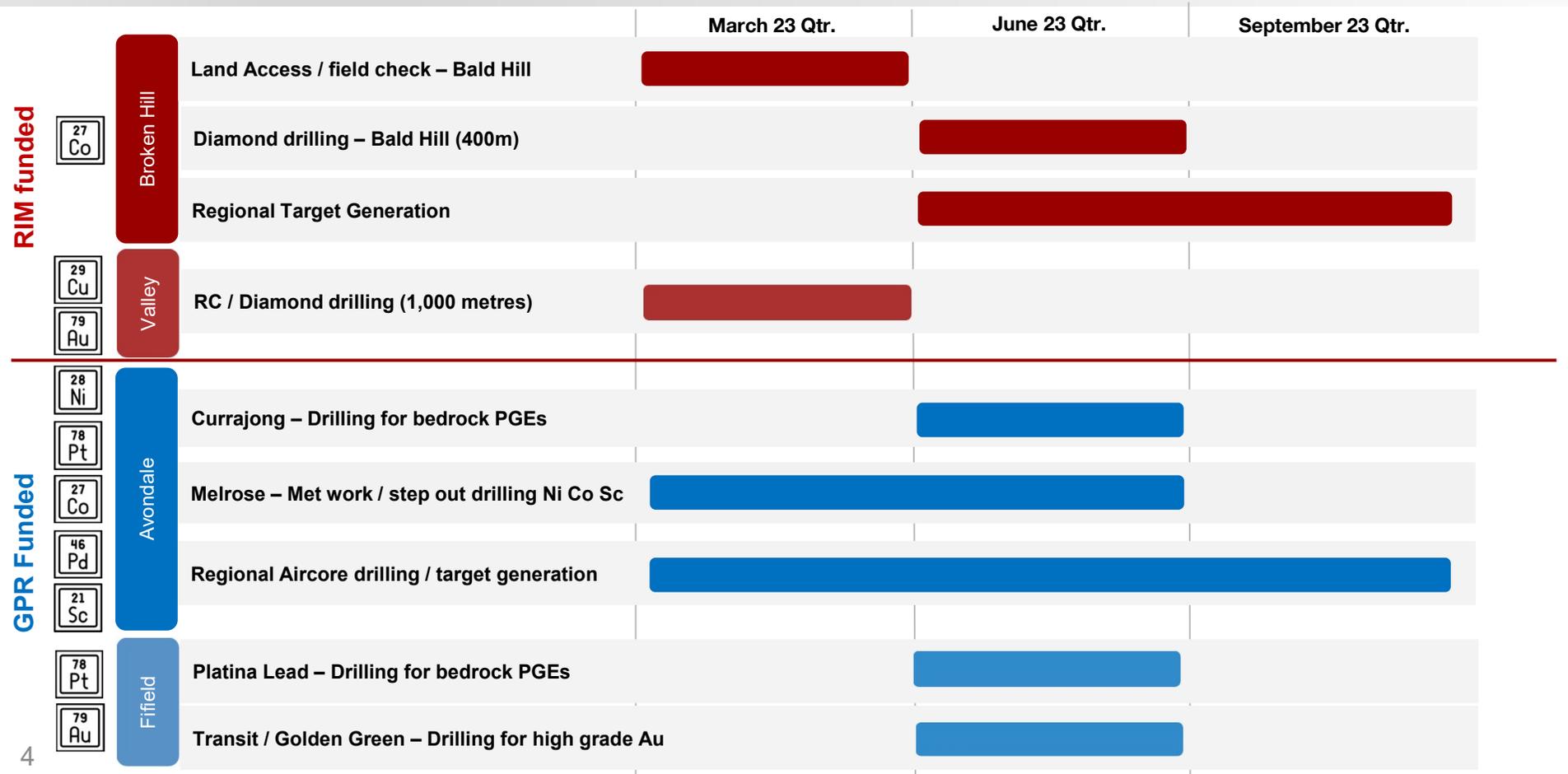
High impact drilling and work programs planned for the next 6 months with supporting news flow



Successful capital raising unlocks exploration on 100% - owned copper and cobalt projects



# Indicative Activity and News flow Schedule



# Corporate Overview



Corporate Structure (ASX:RIM)  
post February 2023 capital raising

**2.00B**  
Shares on issue

**120.3M**  
Options

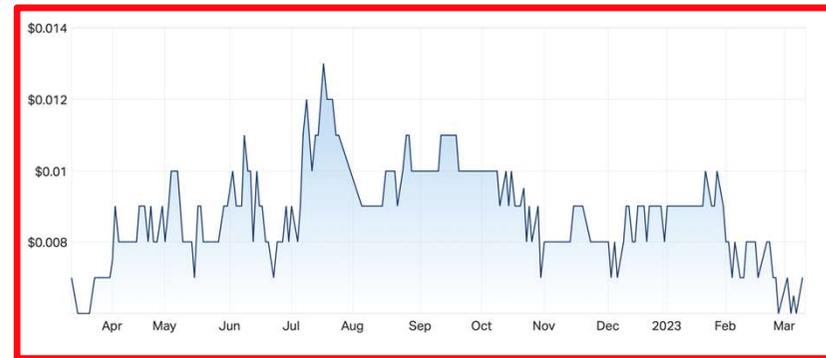
**\$0.006**  
Share price

**\$12.0M**  
Market cap  
(fully diluted)

**\$1.2M\***  
(pro forma cash)

**\$10.5M**  
Enterprise Value

**12 Month Share Price** (range: 0.6 to 1.3 cps)



Top 20 shareholders – 38%

\* Pro forma cash comprises cash at end December 2022 Quarter and proceeds from the February 2023 Placement. The amount does not include any payments received for the Avondale JV. Refer to Rimfire's December 2022 Quarterly Activities and Cashflow Report and ASX Announcement dated 21 February 2023.

# Proven Discovery Team



**David Hutton** • Managing 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

*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.

# Management Team



## **Ian McCubbing** • Non Executive Chair

Ian was appointed Non-Executive Director and Chairman of the Board in 2016. He has over 30 years experience, principally in the areas of corporate finance, M&A and brings a strong commercial background in the resources industry to the Company.

Ian has been a CFO and Non-Executive Director of ASX200 mining companies.



## **Andrew Knox** • Non Executive Director

Andrew was appointed Non-Executive Director of the Board in March 2020. A qualified accountant he has over 35 years of resources experience principally in acquisitions, mergers and capital raisings for micro and low capital companies in the oil and gas and mining industries.

Andrew was formerly a Non-Executive Director of Rimfire from 2005 to 2011. He is currently CEO and Managing Director of ASX listed Red Sky Energy Ltd.



## **Misha Collins** • Non Executive Director

Misha was appointed a Director in July 2021. A qualified metallurgist he has over 23 years of experience in the resources industry principally in resources as a mining executive, financial analyst and company director.

Misha is a Non-Executive Director of Sihayo Gold.



## **Greg Keane** • CFO/Investor Relations

Greg was appointed Rimfire's Chief Financial Officer in May 2017. As an experienced commercial and financial professional in all life cycle stages of an exploration company through to producing operational mining companies, Greg has had significant experience and exposure in defining and implementing operational, commercial and financial strategy.

Greg's experience has been gained in multiple commodities, both locally and internationally.

# Why Critical Minerals?



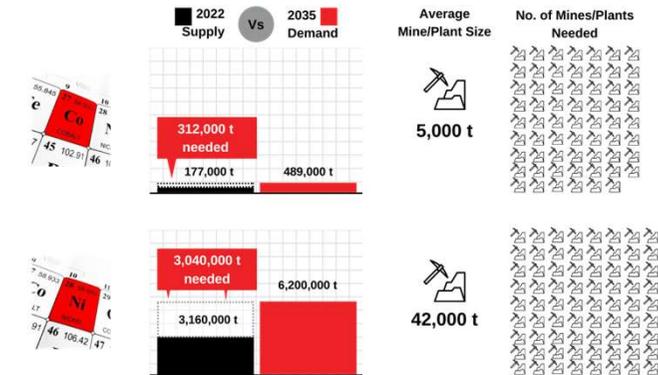
- Critical minerals are metals, non-metals and minerals considered vital for the economic well-being of the world's major and emerging economies, yet whose supply may be at risk due to geological scarcity, geopolitical issues, trade policy or other factors
- They include Antimony, Beryllium, Bismuth, Chromium, **Cobalt**, Graphite, Lithium, Magnesium, Manganese, **Nickel**, Niobium, **Platinum Group Elements (PGEs)**, Rare Earth Elements, Rhenium, **Scandium**, Titanium / Zirconium, Tungsten, Vanadium and Zirconium
- They are required for the manufacture of solar PV plants, wind farms, electric vehicles, battery storage
- Demand increasing due to growth in the renewable energy and advanced manufacturing (defence, aerospace, medical) sectors
- **Critical Minerals plus metals such as copper required to underpin global decarbonisation**

Source: Australian Government's Australian Critical Minerals Prospectus 2021

# Copper, Nickel and Cobalt



- Copper is the 3rd most consumed metal globally & is essential to an electrified (decarbonised) future
- Global copper market = US \$283.4B in 2021, and it is expected to reach US \$394.21B by 2029<sup>1</sup>
- Over the next decade, investment in new copper projects (to meet projected demand) will need to be more than US\$23 billion a year, which is 64% higher than the average annual spend over the last 30 years



Source: Benchmark Mineral Intelligence

Without recycling, the world will need to build 62 new cobalt mining projects of 5,000 tonnes each by the end of 2035 to satisfy demand.

Another 72 mining projects with an average size of 42,000 tonnes will be required to meet battery demand for refined nickel.

“There is going to be a very significant shortage in copper.... The decarbonisation drive will increase the intensity of copper use globally.”

**Richard Adkerson, Chairman and CEO at Freeport-McMoRan**  
the world's largest listed copper miner

1. Source: Wood Mackenzie

Supply chains face substantial risks with >50% of Ni production coming from Indonesia, Russia and China and >70% of Co production from Democratic Republic of Congo.

# Scandium & Platinum Group Elements (PGEs) Market

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- Principal uses of Sc in aluminium-scandium alloys and solid oxide fuel cells (SOFCs)
- Scandium Oxide current price ~ US\$927,000 per tonne<sup>2</sup>
- Demand forecast to increase >2.5x by 2040 driven by the Hydrogen economy
- The use of scandium in high-strength aluminium alloys allows for lightweight and carbon friendly solutions for the transport sector
- Principal uses of PGEs in the automotive sector - catalytic converters
- Future use in Hydrogen Electrolysers and Fuel Cells
- **Global Sc supply totally reliant on China & Russia**
- **Global PGE supply reliant on Southern Africa & Russia**



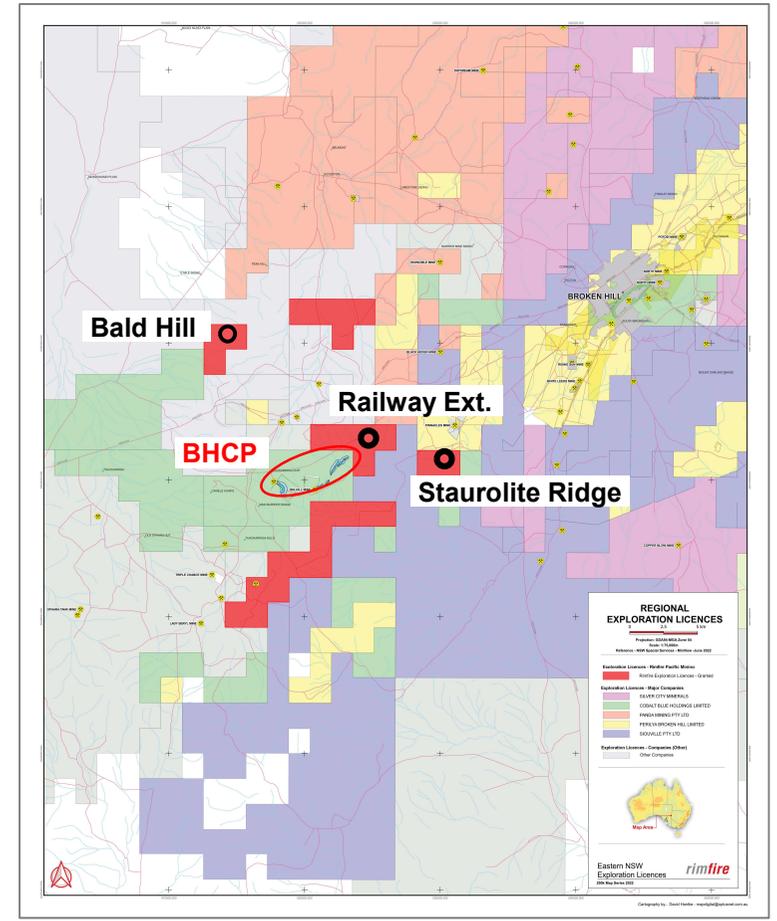
<sup>2</sup> Source: USGS Scandium Fact Sheet 2022 / Shanghai Metals Market

# Key Projects – Broken Hill (100% RIM)



## Cobalt

- Potential area of Future Critical Mineral supply
- Adjacent to Cobalt Blue's (COB.ASX) Broken Hill Cobalt Project (BHCP) - Federal Government Major Project Status
- Rimfire's priority Railway Extension target immediately along strike from COB's Railway Cobalt JORC resource of >40,000t
- Historic drilling (1960's to 1980's) highlights prospectivity in northern blocks. No follow up at time of original drilling
- 61m @ 0.18% Co from 94.5 metres *including 15.25m @ 0.29% Co (Staurolite Ridge)*
- 58m @ 0.10% Co from 48 metres *including 7m @ 0.17% Co, 6m @ 0.15% Co, and 6m @ 0.15% Co (Bald Hill)*

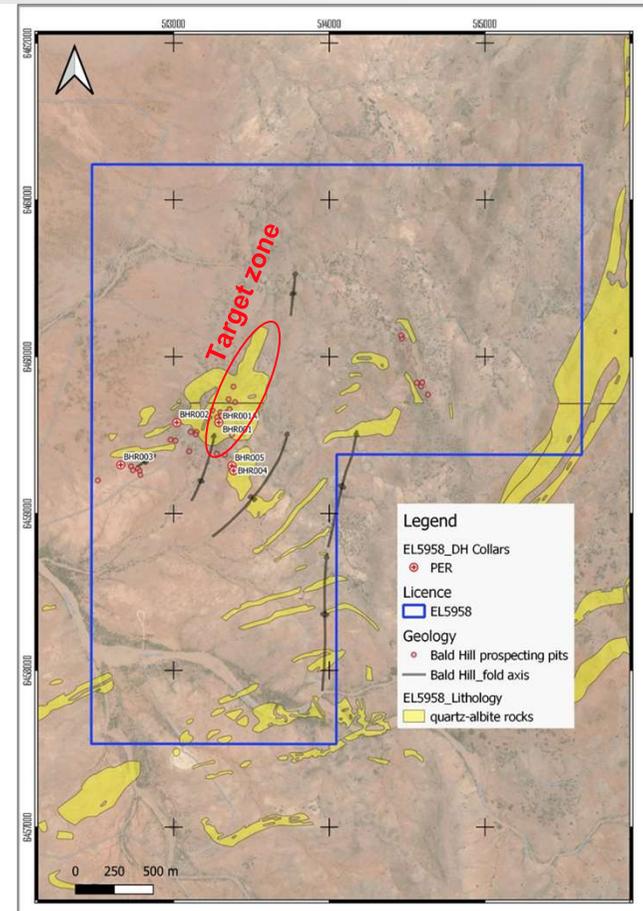


# Key Projects – Broken Hill (100% RIM)

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## Bald Hill Cobalt Target

- Massive sulphide horizon in quartz – albite gneiss host rock
- 58m @ 0.10% Co from 48 metres to EOH in BHR1/1A including 7m @ 0.17% Co, 6m @ 0.15% Co, and 6m @ 0.15% Co
- Thickened sulphides within NNE trending fold hinge
- Historic drilling on limbs of fold hinge (200 – 300 metres away from BHR1/1A) returned multiple drill intercepts, i.e. 7m @ 0.07% Co, 8m @ 0.06% Co, and 15m @ 0.05% Co
- **3 holes / 600 metre diamond drill program to confirm BHR1/1A intercept and test along fold hinge planned for June 2023 Qtr.**



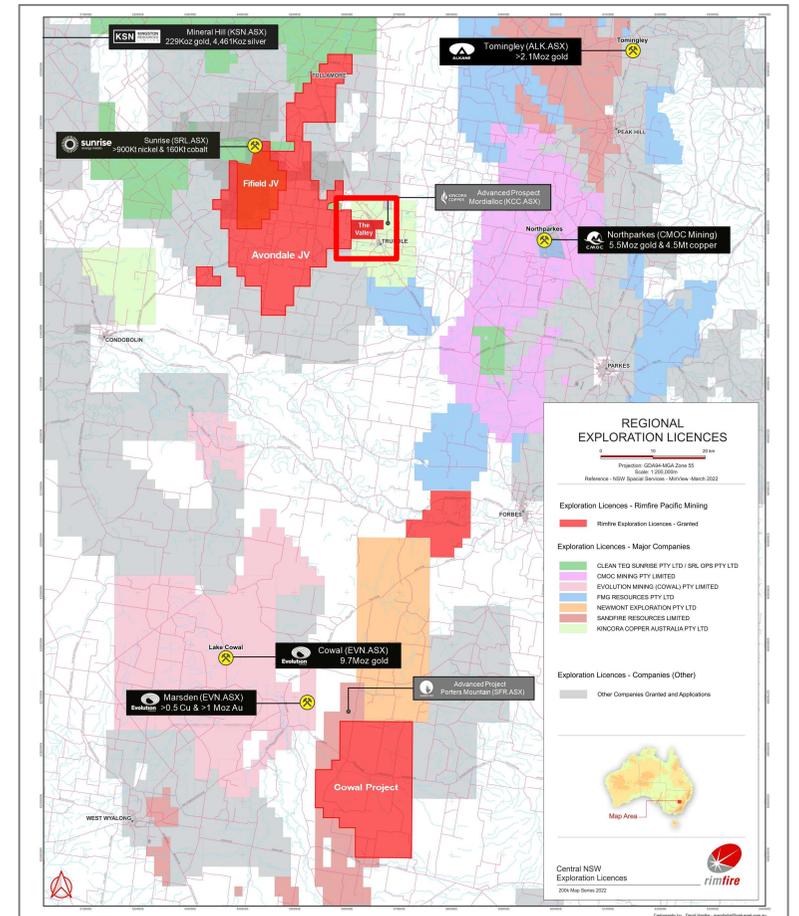
# Key Projects – Valley (100% RIM)



## Copper - Gold

- Adjacent to Kincora (KCC.ASX) Mordialloc Project at Trundle
- 34 km west of CMOC's Northparkes Copper Gold Mine (1.96Mt copper & 2.33Moz gold<sup>3</sup>)
- Award of NSW Government drilling grant following competitive peer review process, reinforces prospectivity of project
- \$185K NSW drilling grant awarded to partially offset drilling costs
- Kincora and FMG currently drilling for copper porphyry systems in the Trundle area
- **Diamond drilling (1,000 metres) program underway**

<sup>3</sup> Source: Northparkes website - Total Measured and Indicated Resources (as at 31 December 2019)

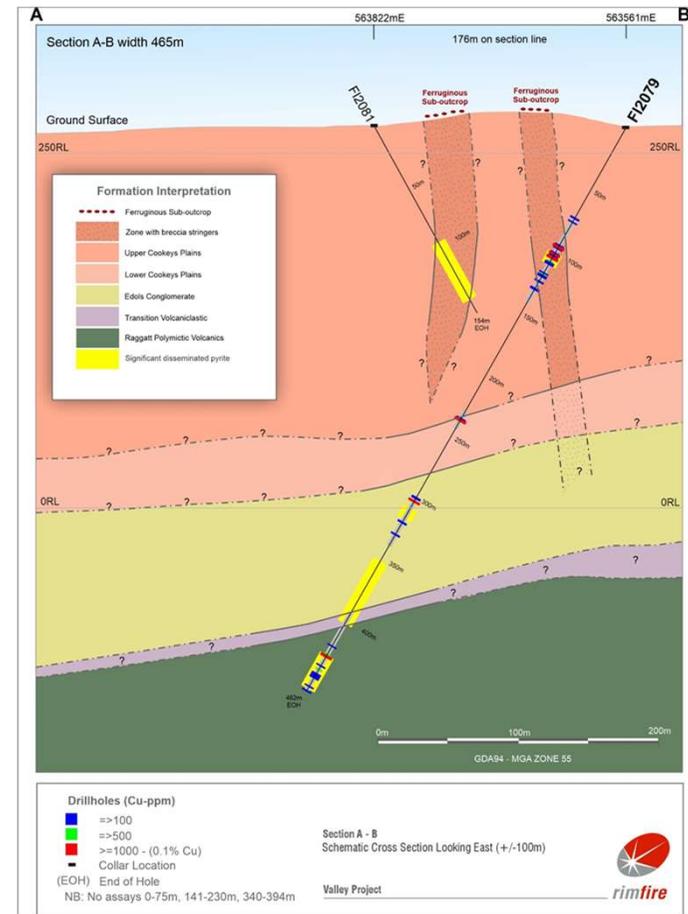
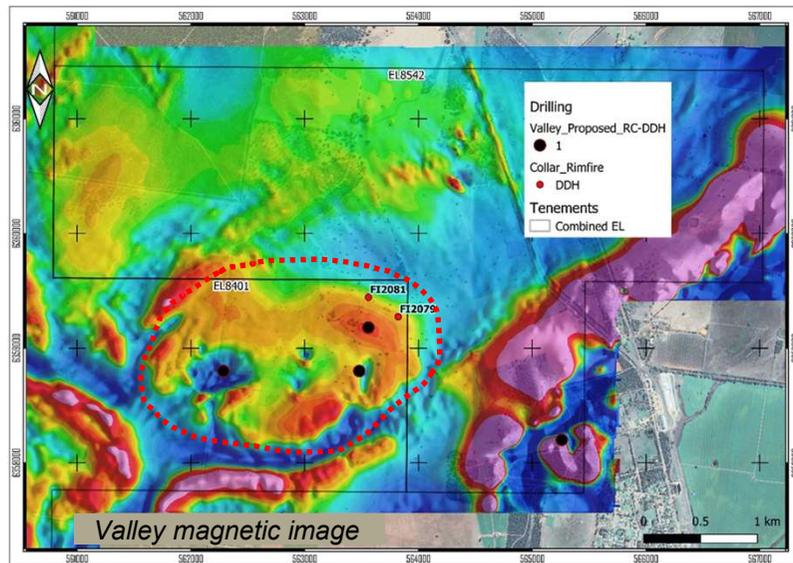


# Key Projects – Valley (100% RIM)



## Valley copper – gold target

- Rimfire drilling (FI2079) in 2021 confirmed the “right” Ordovician bedrock – same type and age as Northparkes system
- Anomalous copper surface geochemistry & magnetic anomalies with footprint similar in size to Northparkes deposit

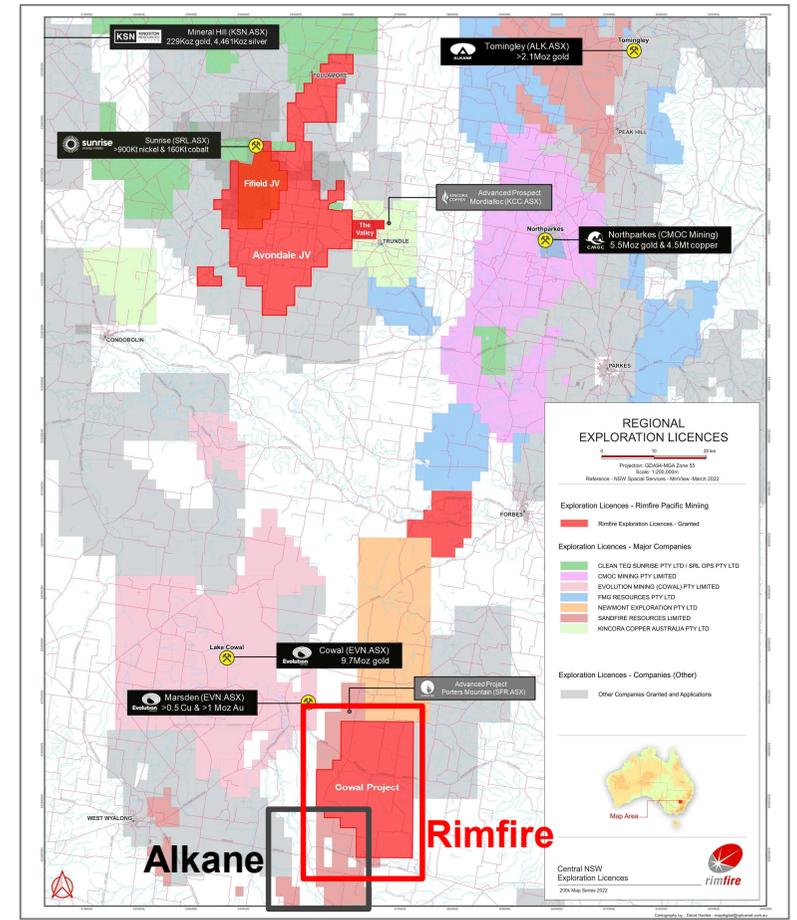


# Key Projects – Cowal (100% RIM)



## Copper - Gold

- Adjacent to Evolution Mining's (EVN.ASX) Cowal Gold Mine (mining depleted Mineral Resource of 305.3Mt @ 0.98g/t gold (9.6Moz) as at 16 February 2022)
- Rimfire's exploration neighbours - Evolution Mining, Sandfire Resources (SFR.ASX), Fortescue (FMG.ASX) and Newmont
- Project overlies a prominent north south trending gravity ridge with multiple historic gold and copper drill intercepts immediately adjacent Rimfire's tenure
- Alkane (ALK.ASX) has just purchased Sandfire's Southern Junee Project which joins Cowal southern boundary (and North Molong Project) for A\$1.9M
- **Seeking an exploration partner**

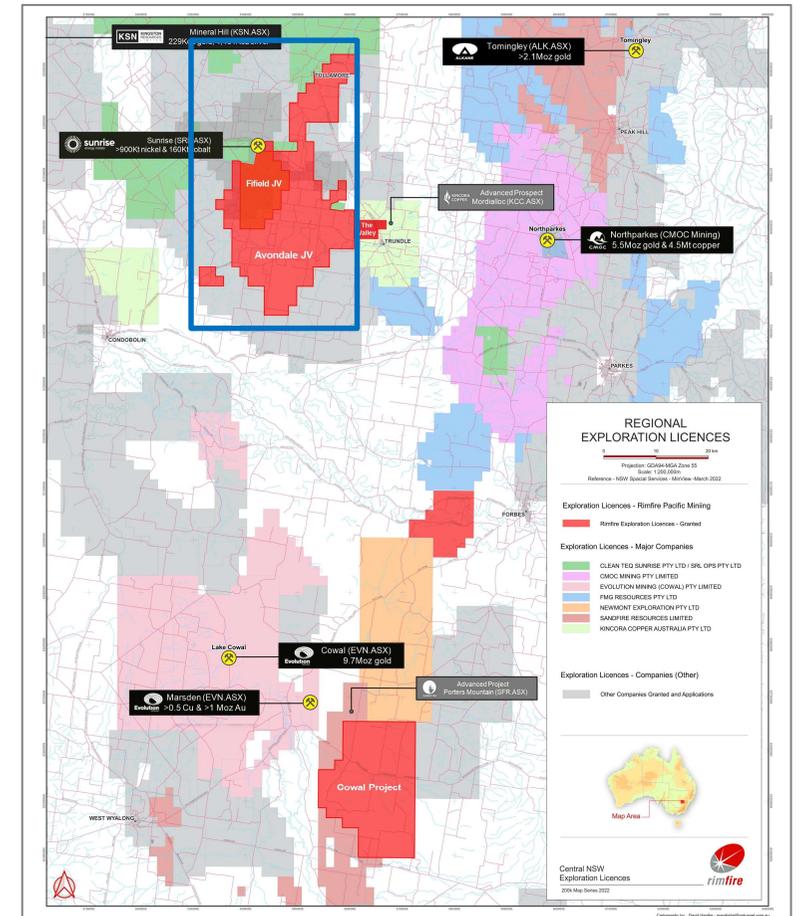


# Key Projects – Avondale (GPR earning up to 75%)



## Nickel – Cobalt – Scandium - PGEs

- Adjacent to Sunrise Energy Metals' (SRL.ASX) Sunrise Nickel Cobalt Scandium Project - Federal Government Major Project Status
- Critical Minerals Discovery potential with 20+ priority exploration targets identified within a 40km long belt
- High-grade drill results from Melrose confirm Critical Minerals prospectivity
  - 21m @ 0.11% Ni, 0.07% Co, and 529ppm Sc from 3 metres including 9m @ 0.17% Ni, 0.15% Co and 688ppm Sc
  - 4.9m @ 0.36% Ni, 0.11% Co and 349ppm Sc from 5 metres
  - 4.3m @ 0.42% Ni, 0.09% Co and 296ppm Sc from 10.1 metres
- Exploration activities funded by GPR

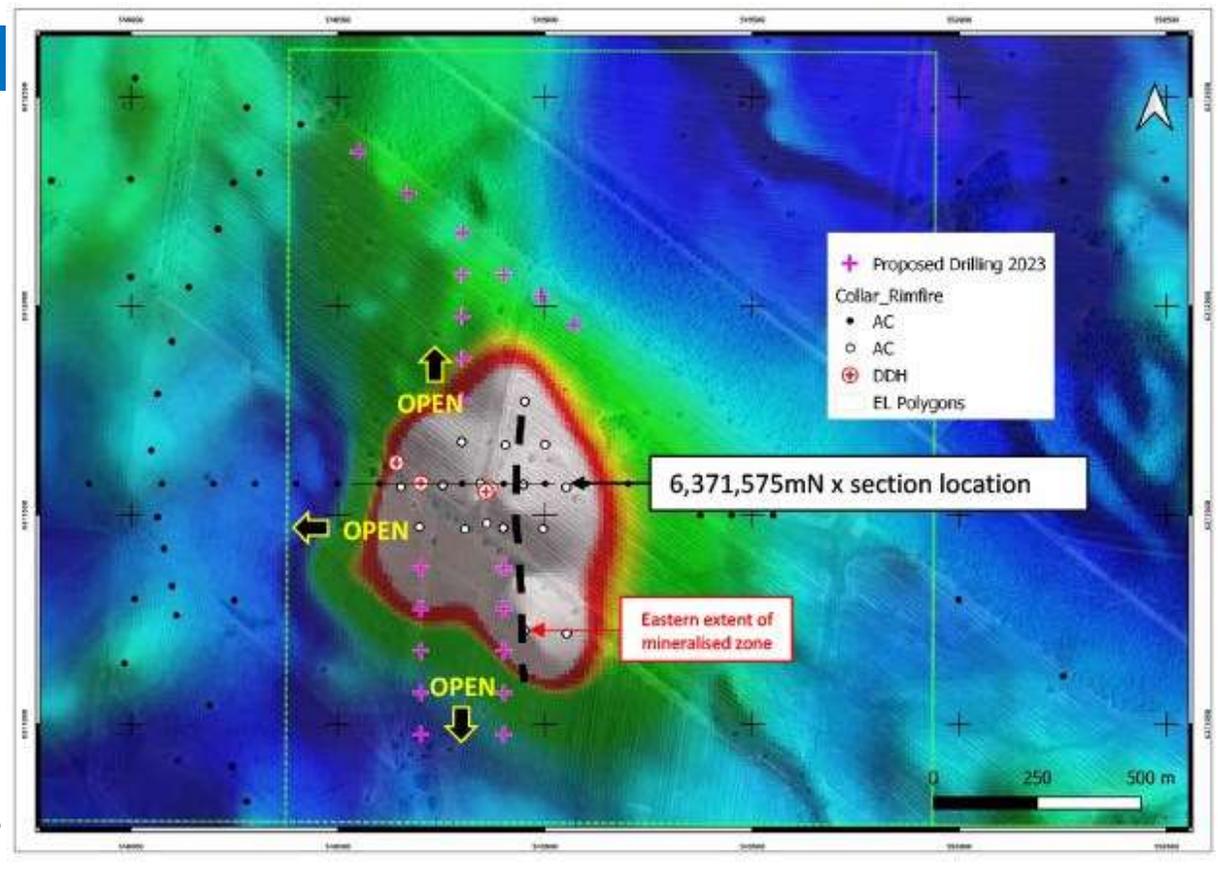


# Key Projects – Avondale (GPR earning up to 75%)



## Melrose Ni Co Sc

- High grade laterite – hosted Ni Co Sc mineralisation at surface (very low strip ratio)
- Bulk sample submitted to specialist metallurgical consultancy (IMO) for beneficiation and leaching trails at **atmospheric pressures**
- **Step out aircore drilling to determine extents of mineralisation - March 2023**
- Resource drill out to be undertaken subject to favourable outcome of both step out drilling and IMO studies



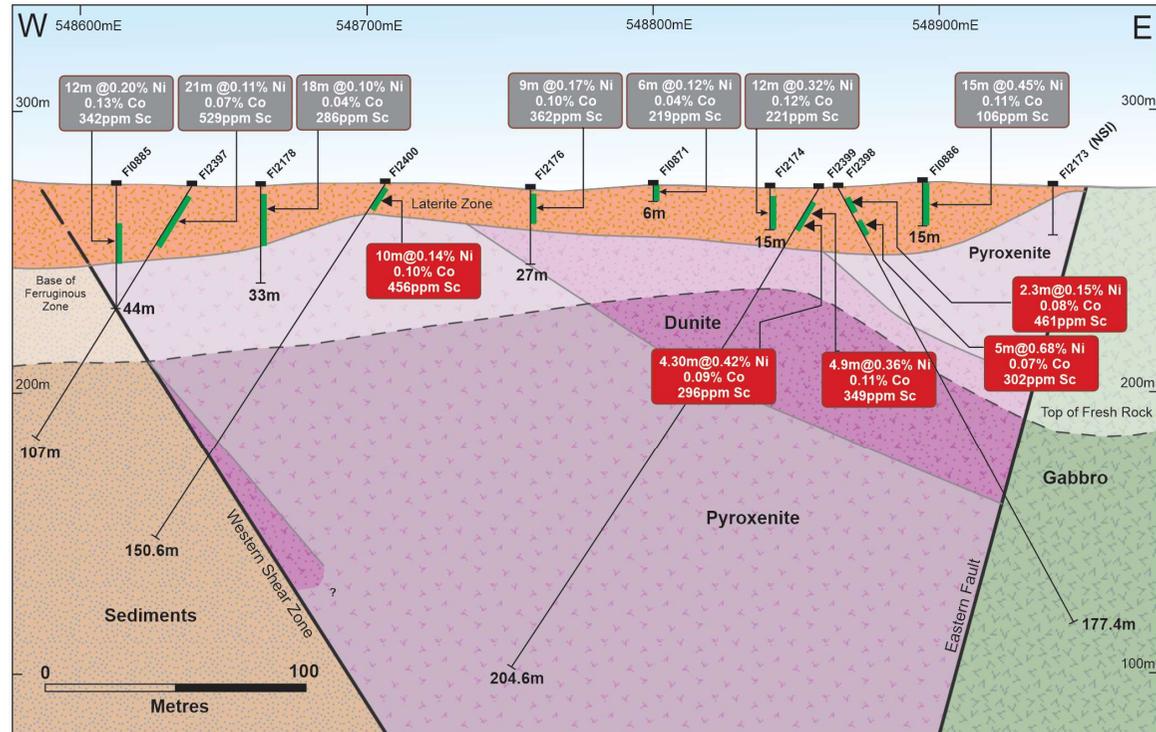
Melrose magnetic image

# Key Projects – Avondale (GPR earning up to 75%)



## Melrose Ni Co Sc

- Ni Co Sc mineralisation within flat-lying laterite zone developed over pyroxenite host rocks
- Anomalous PGEs within laterite developed over dunite host rocks
- 4.3m @ 0.48 g/t Pt + Pd from 10.1 metres in FI2399
- 5.0m @ 0.38 g/t Pt + Pd from 16 metres in FI2398



Melrose Section 6,371,575mN



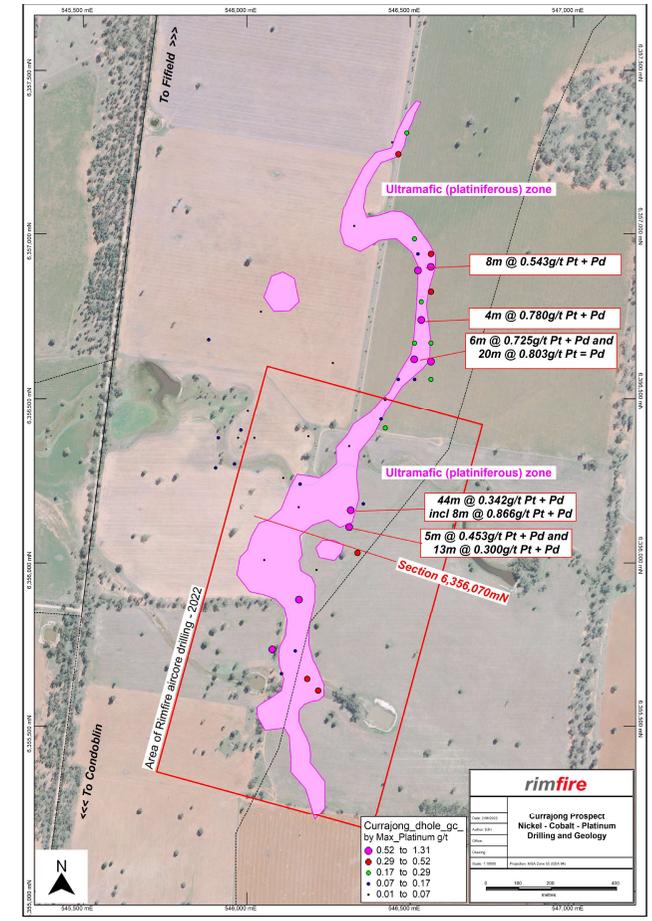
# Key Projects – Avondale (GPR earning up to 75%)



## Currajong Nickel Cobalt PGEs

- Nickel cobalt mineralisation within laterite zone developed over 2.5 km long ultramafic unit
- 34m @ 0.29% Ni, 0.15% Co, and 101ppm Sc from 6 metres including 16m @ 0.27% Ni, 0.22% Co, and 120ppm Sc
- Strongly anomalous PGEs within underlying ultramafic rocks
- 44m @ 0.34g/t Pt + Pd from 8 metres including 8m @ 0.87g/t Pt + Pd and 2m @ 1.34g/t Pt + Pd from 12 metres
- 6m @ 0.72g/t Pt + Pd from 26 metres and 20m @ 0.80g/t Pt + Pd from 52 metres (Hole ended in mineralisation)
- **Drill follow-up of PGE intercepts planned for June 23 Qtr.**

Currajong aerial photo showing interpreted boundaries of ultramafic unit



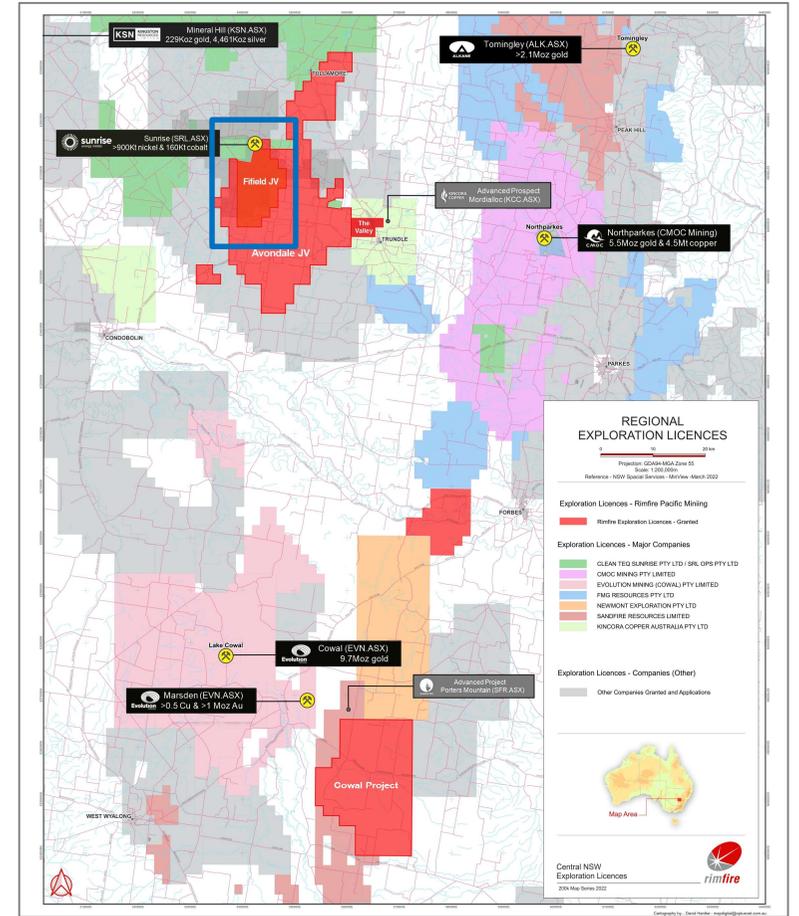


# Key Projects – Fifield (GPR earning up to 60%)



## Gold - PGEs

- Sorpresa JORC Resource (Maiden JORC Resource 125Koz gold, +7.9Moz silver) – leaching trials continuing
- Platina Lead - Australia's largest historic source of mined platinum. Drilling planned for June 23 Qtr. to test for possible bedrock source of PGEs
- New gold zone drilled at Jack's Lookout
- 5m @ 3.23g/t gold, 24g/t silver from 320 metres
- 61m @ 0.14g/t gold from 355 metres *including 21m @ 0.18g/t gold, 0.21% zinc, 8m @ 0.23g/t gold, 0.17% zinc, and 17m @ 0.14g/t gold*
- Significantly increases the search space for discovering extensions to Sorpresa deposit and / or new gold - silver deposits
- Exploration activities funded by GPR

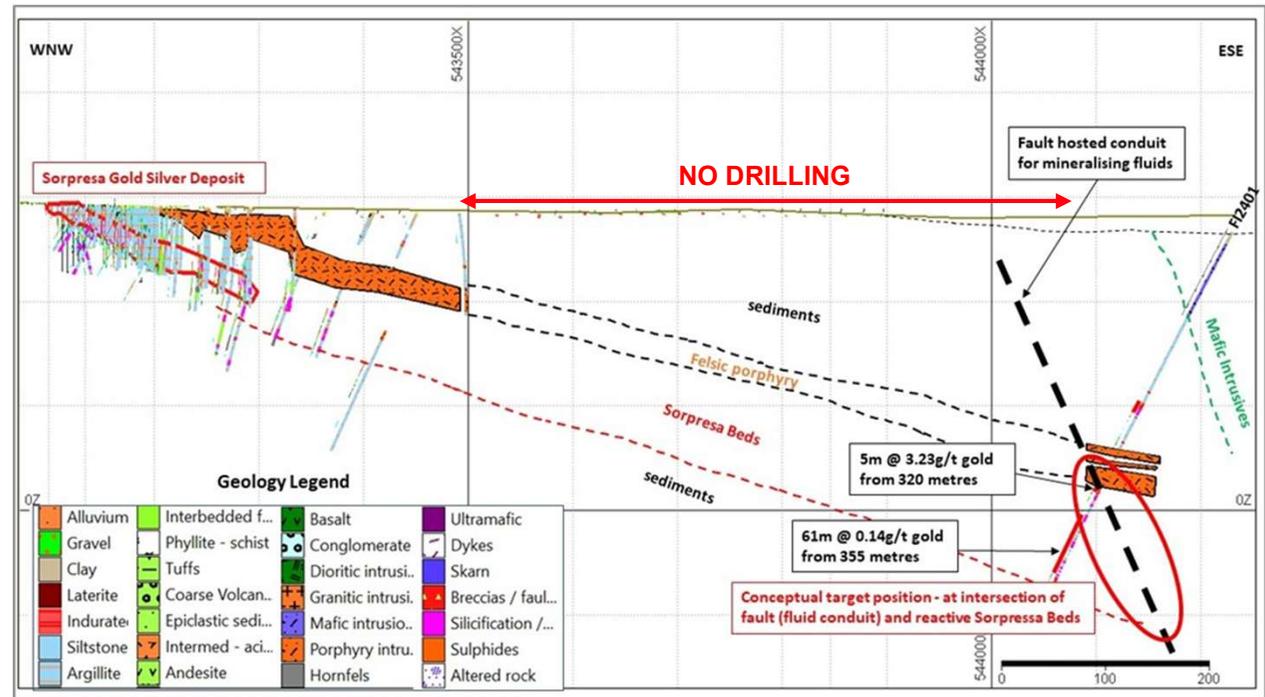


# Key Projects – Fifield (GPR earning up to 60%)



## Jacks Lookout Gold

- FI2401 intersected wide zone of gold and silver prospective “Sorpresa Beds” 600 metres downdip of Sorpresa
- No drilling within 500 metre radius of FI2401
- New geological model for high grade mineralisation



# Appendix 1 – References



## Technical information referred to in this presentation has been sourced from the following ASX Announcements:

- Sunrise Energy Metals (ASX: SRL) – Sunrise Project Awarded Major Project Status, 6 Dec 2021
- Cobalt Blue Holdings (ASX: COB) – Grant of Australian Major Project Status, 2 Mar 2022
- Rimfire Pacific Mining (ASX: RIM) – Valley Results support potential for nearby porphyry system. 27 July 2021
- Rimfire Pacific Mining (ASX: RIM) – Rimfire awarded \$185K drilling grant at Valley. 12 January 2022
- Rimfire Pacific Mining (ASX: RIM) – Critical Minerals Discovery Opportunity at Avondale Project. 28 March 2022
- Rimfire Pacific Mining (ASX: RIM) – Strong nickel, cobalt and scandium drill results. 4 April 2022
- Rimfire Pacific Mining (ASX: RIM) – Significant Ni, Co and Pt drilling results at Currajong. 8 June 2022
- Rimfire Pacific Mining (ASX: RIM) – High-grade scandium at Melrose. 19 September 2022
- Rimfire Pacific Mining (ASX: RIM) – Significant nickel cobalt scandium results at Melrose. 20 October 2022
- Rimfire Pacific Mining (ASX: RIM) – High-grade cobalt targets identified at Broken Hill. 3 November 2022
- Rimfire Pacific Mining (ASX: RIM) – Broad gold zones drilled at Jacks Lookout, Fifield NSW. 14 November 2022
- Rimfire Pacific Mining (ASX: RIM) – Priority copper target defined at East Cowal Project. 7 December 2022
- Rimfire Pacific Mining (ASX: RIM) – Rimfire investigating Ni – Co – Sc recoveries at Melrose. 9 February 2023
- Rimfire Pacific Mining (ASX: RIM) – Drilling underway at the 100% - owned Valley copper target. 24 February 2023
- Rimfire Pacific Mining (ASX: RIM) – Melrose nickel cobalt scandium aircore drilling underway. 8 March 2023



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