



*rimfire*

**Experienced Explorer with  
Critical Minerals Focus**

**February 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

**rimfire**



Enviably tenement holding in world renowned Lachlan Orogen and Broken Hill Districts (New South Wales) with demonstrated prospectivity for Critical Minerals and Copper / Gold deposits



Key Prospects immediately adjacent to two Federal Government declared “Major Project” for Critical Minerals <sup>1</sup>



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



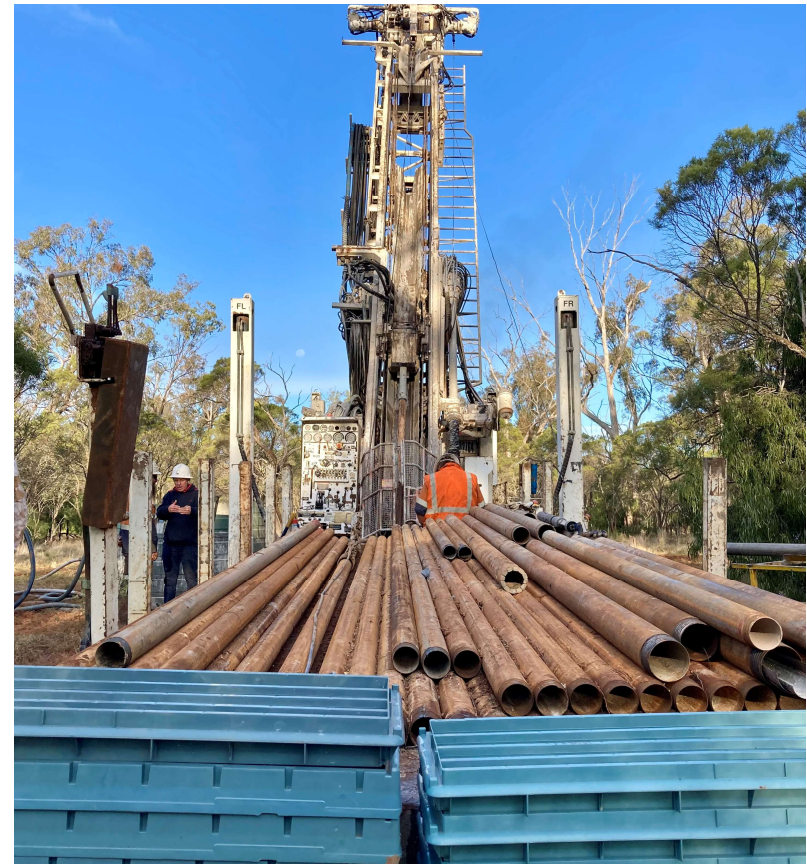
Supportive exploration partner has committed to additional \$3.0M of exploration funding on Earn In projects <sup>2</sup>



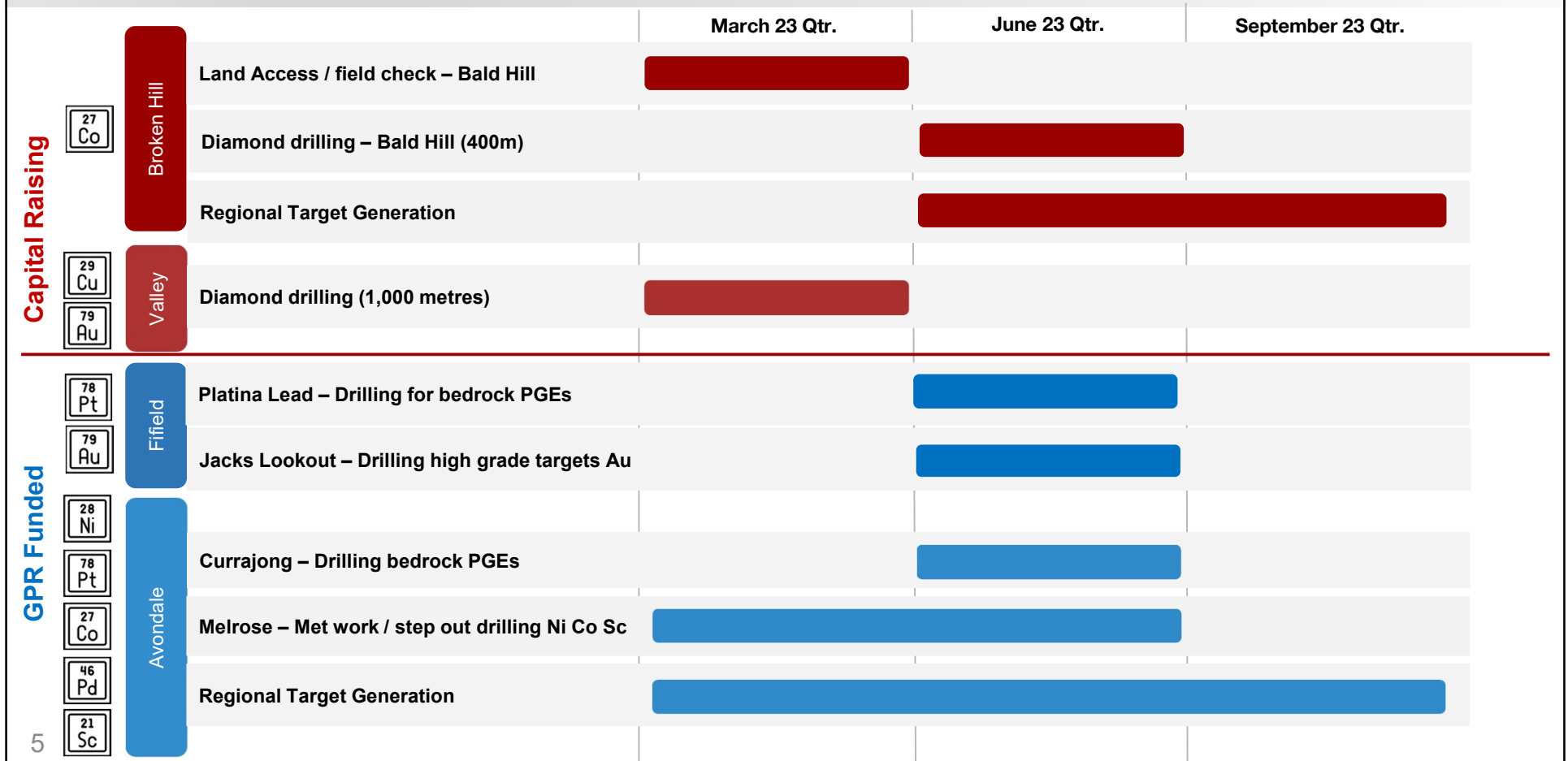
# Capital Raising Summary

*rimfire*

- Seeking ~ \$1.2M to underpin high impact drilling and work programs on Rimfire's 100% - owned projects
- High priority drill targets at Broken Hill (cobalt) and The Valley (copper gold)
- Drilling scheduled to commence at The Valley this week
- Active work programs on separate Earn In projects funded by exploration partner (News flow "free hit")



# Indicative Activity and News flow Schedule



# Capital Raising – Indicative Use of Funds



Project	Activity	Details	Amount
Broken Hill	Land Access / ground reconnaissance		\$ 50,000
	Diamond Drilling - Bald Hills	400 metres	\$ 200,000
	Technical Staff / Assays / Mob / Rehab		\$ 75,000
			<b>\$ 325,000</b>
Valley	Diamond Drilling	1,000 metres	\$ 274,000
	Technical Staff / Assays / mob / Rehab		\$ 150,000
			<b>\$ 424,000</b>
	Placement Cost		\$ 50,000
	Working Capital		\$ 250,000
			<b>\$ 1,049,000</b>

Project	Activity	Details	Amount
Broken Hill	Land Access / ground reconnaissance		\$ 25,000
	Diamond Drilling - Bald Hills	400 metres	\$ 200,000
	Technical Staff / Assays / Mob / Rehab		\$ 75,000
			<b>\$ 300,000</b>
Valley	Diamond Drilling	500 metres	\$ 137,000
	Technical Staff / Assays / mob / Rehab		\$ 75,000
			<b>\$ 212,000</b>
	Placement Cost		\$ 40,000
	Working Capital		\$ 250,000
			<b>\$ 802,000</b>

The Directors reserve the right to make any adjustments to the Use of Funds as they see fit to manage the needs of the Company

# Corporate Overview



## Corporate Structure (ASX:RIM) as at 31 December 2022

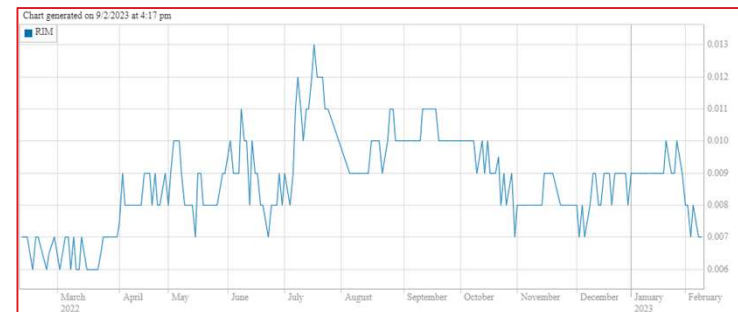
**1.81b**  
Shares on issue

**115.3m**  
Options

**\$0.009**  
Share price

**\$16.29m**  
Market cap  
(fully diluted)

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



## Share Register

- Anton Billis Group – 8%
- Trevor Nairn – 5%
- Golden Plains Resources (GPR) – 5%
- Management – 2%
  
- Top 20 shareholders – 34%

# 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 that are 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

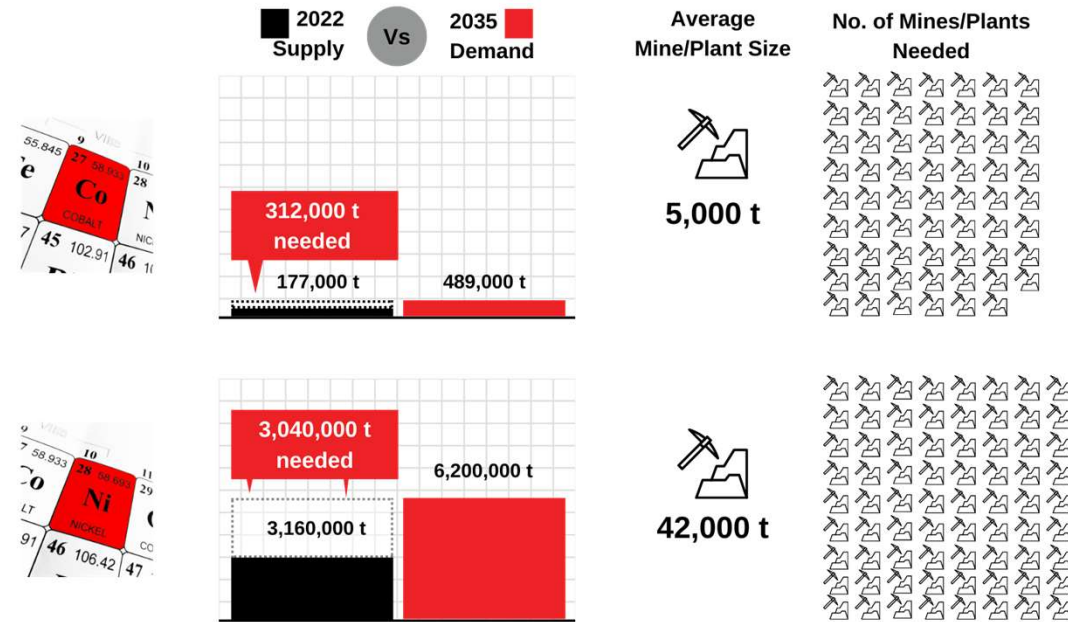
- Copper is the 3rd most consumed metal globally & is essential to an electrified (decarbonised) future
- Global copper market = US \$283.4B in 2021, and it is expected to reach US \$394.21B by 2029
- Over the next decade, investment in new copper projects (to meet projected demand) will need to be more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

“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**

Source: Wood Mackenzie

# Nickel and Cobalt



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.

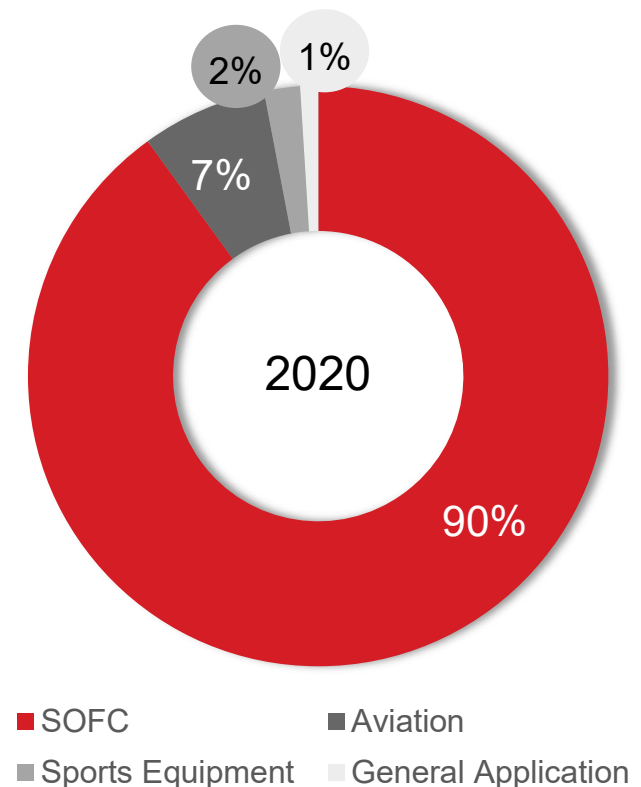
Source: Benchmark Mineral Intelligence

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

- Found in small quantities and commonly produced as a by-product
- Principal uses are in aluminium-scandium alloys and solid oxide fuel cells (SOFCs)
- Scandium Oxide current price ~ US\$927,000 per tonne
- 10 - 20t of scandium are currently extracted per year with demand forecast to increase more than 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
- Geopolitical risk - US supply totally reliant on China and Russia

Scandium Demand



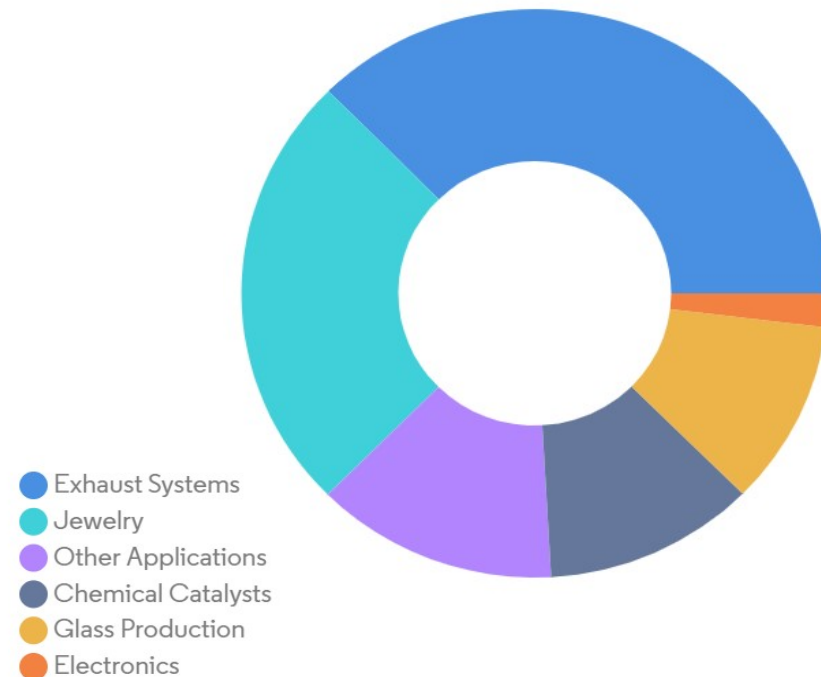
Source: USGS Scandium Fact Sheet 2022 / Shanghai Metals Market

## Platinum Group Elements (PGEs)

*rimfire*

- Principle uses of PGEs in the automotive sector - catalytic converters
- Future use in Hydrogen Electrolysers and Fuel Cells
- Platinum market is expected to reach 7,450 Koz by the end of 2022, with a projected CAGR of over 4.5% during the next 5 years
- Supply side risks with platinum production dominated by South Africa and Russia

**Platinum Market Volume % by Application (current)**

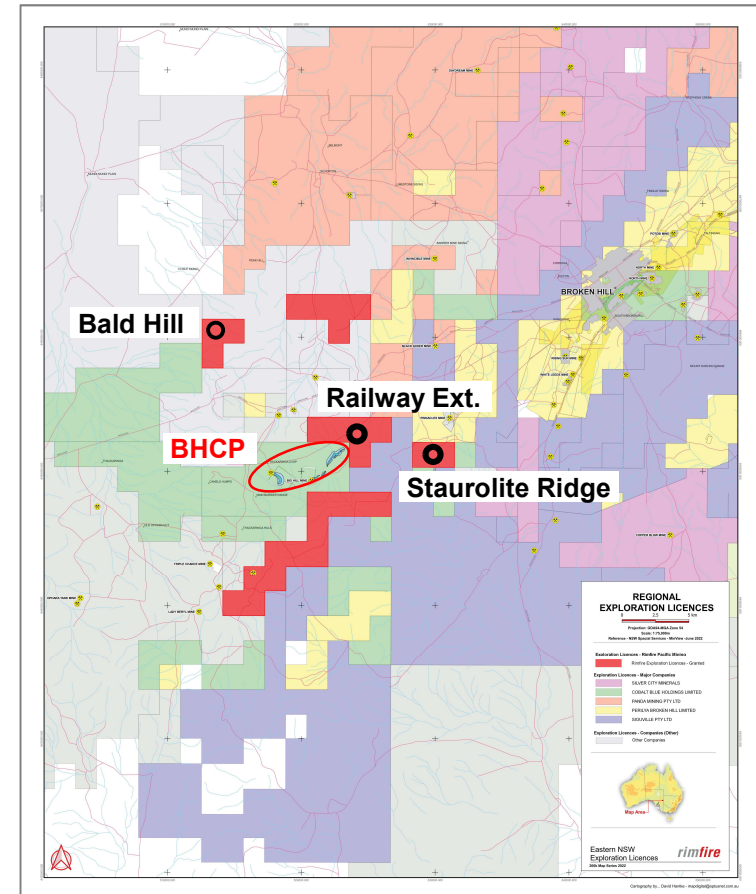


# Key Projects – Broken Hill (100% RIM)



## 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 <sup>1</sup>
- Rimfire's priority Railway Extension target immediately along strike from COB's Railway Cobalt JORC resource of >40,000t <sup>5</sup>
- Historic drilling (1960's to 1980's) highlights prospectivity in northern blocks. No follow up at time of original drilling. <sup>12</sup>
- 61m @ 0.18% Co from 94.5 metres including 15.25m @ 0.29% Co (Staurolite Ridge) – *massive sulphides*
- 58m @ 0.10% Co from 48 metres including 7m @ 0.17% Co, 6m @ 0.15% Co, and 6m @ 0.15% Co (Bald Hill) – *massive sulphides*
- **Drilling to validate Bald Hill intercepts planned June 2023 Qtr.**

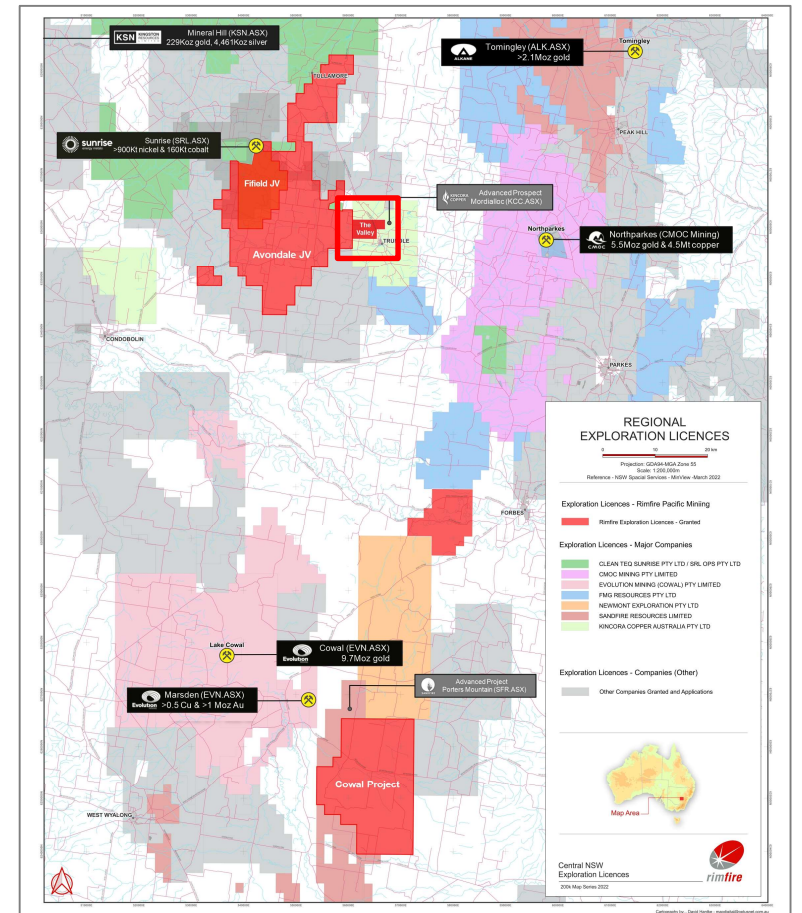


# Key Projects – Valley (100% RIM)



## Copper Gold

- Adjacent to Kincora (KCC.ASX) Mordialloc / Trundle Projects
- Anomalous copper surface geochemistry
- Recent Drilling confirms the “right” Ordovician bedrock – same type and age as Northparkes system <sup>6</sup>
- Reprocessed geophysical data confirms scale footprint is similar in size to Northparkes <sup>6</sup>
- Award of funding contribution from NSW Government through competitive peer review process, reinforces the rationale to firmly test the prospect <sup>7</sup>
- \$185K NSW drilling grant money to part offset drilling costs
- **Drilling to test target planned February 2023**



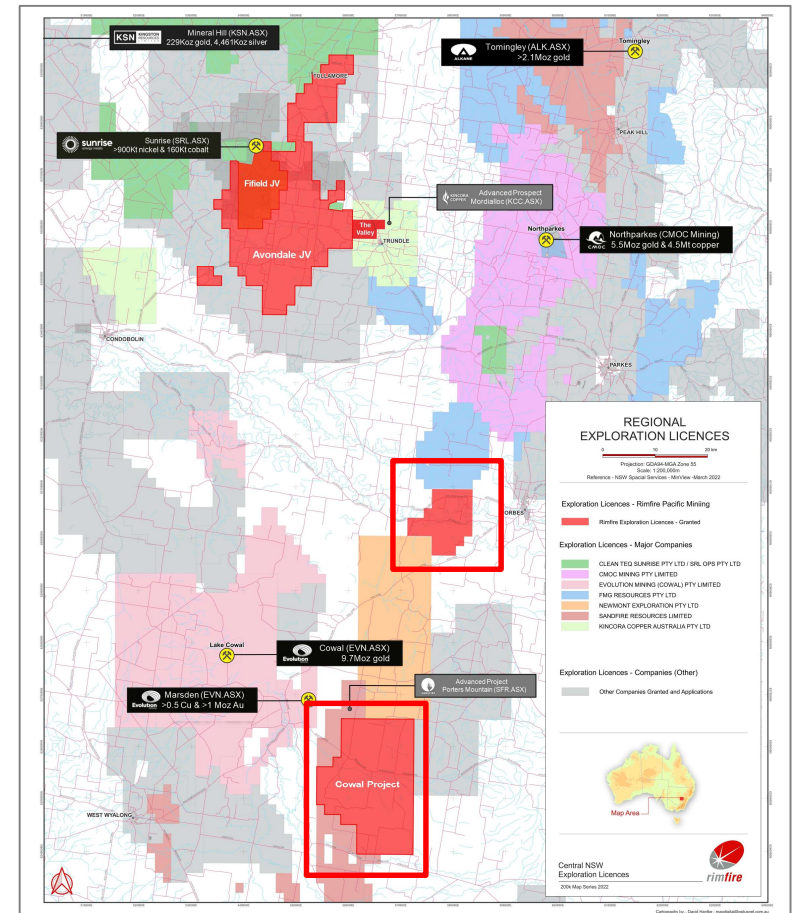


# Key Projects – Cowal (100% RIM)



## Copper Gold

- Adjacent to Evolution Mining's (EVN.ASX) Cowal Gold Mine (mining depleted Gold 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
- New tenement doubles size of project
- Project overlies a prominent north south trending gravity ridge with multiple historic gold and copper drill intercepts immediately adjacent Rimfire's tenure <sup>10</sup>
- **Seeking exploration partner**

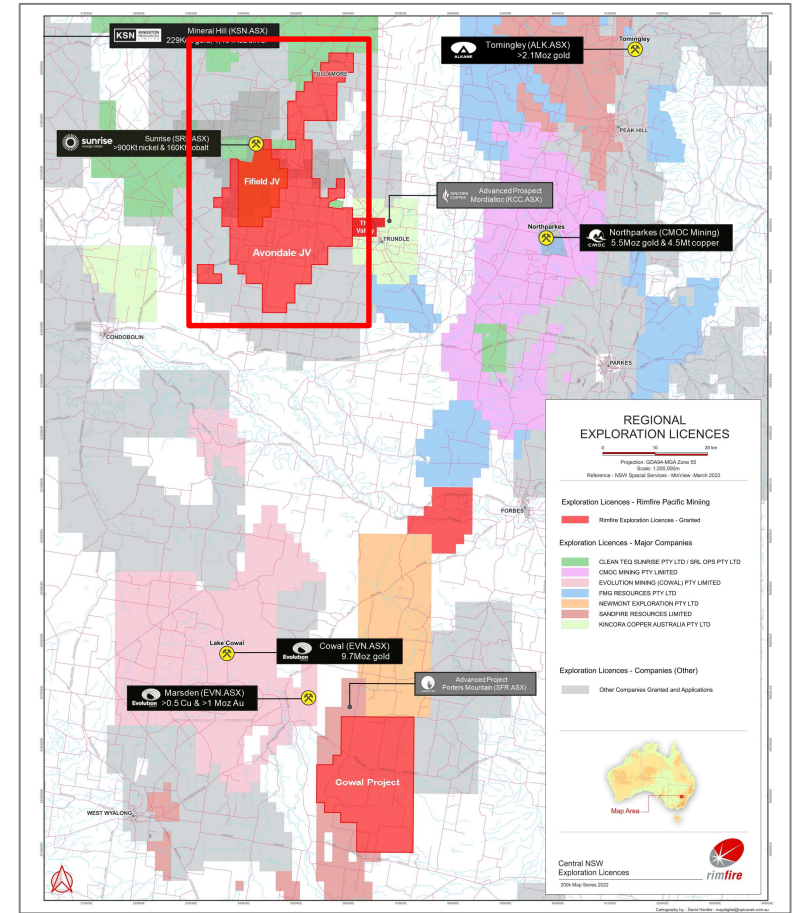


# Key Projects – Avondale (GPR earning up to 75%)



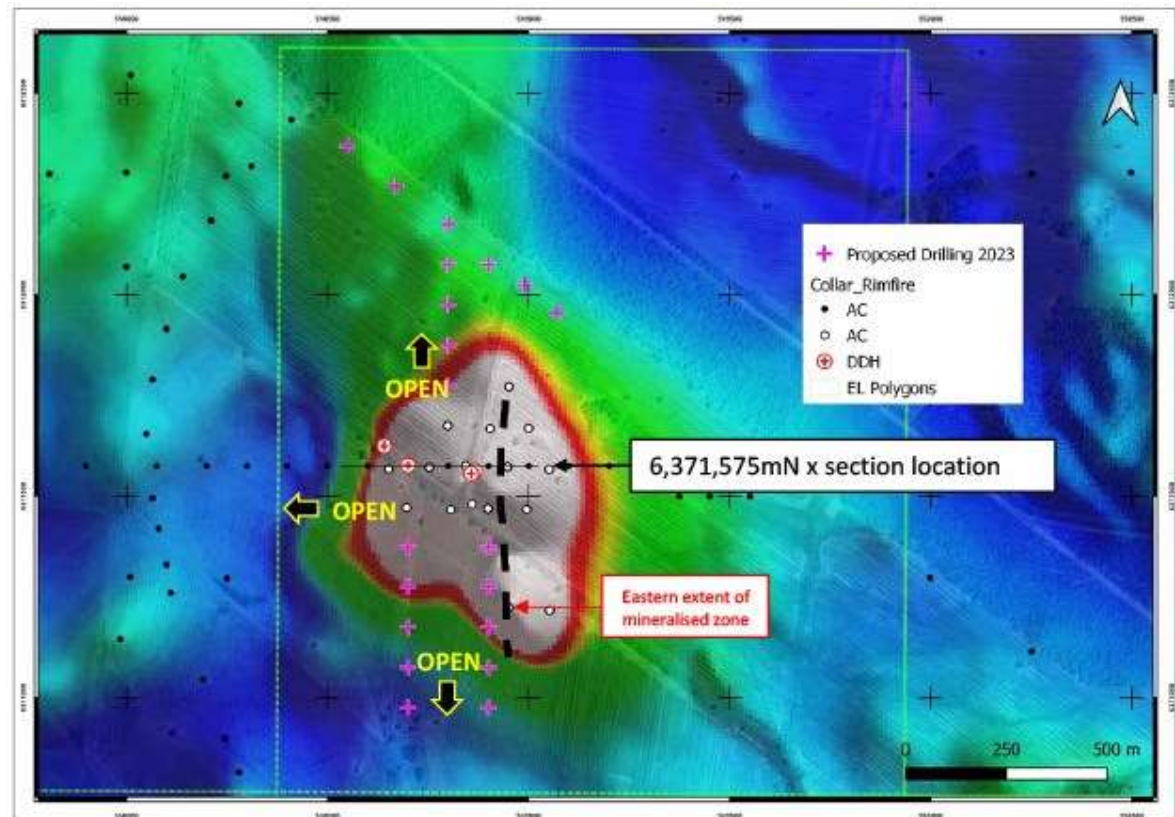
## Nickel Cobalt Scandium PGEs

- Adjacent to Sunrise Energy Metals' (SRL.ASX) Sunrise Nickel Cobalt Scandium Project - Federal Government Major Project Status<sup>3</sup>
- Critical Minerals Discovery potential with 20+ priority exploration targets identified within a 40km long belt
- Initial high-grade drill results from **Melrose** confirm Critical Minerals prospectivity<sup>4</sup>
  - 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 fully funded by JV partner



## Nickel Cobalt Scandium

- High grades in flat-lying laterite zone developed over pyroxenite host rock
- Remains open along strike
- Rimfire “discovery” in 2021

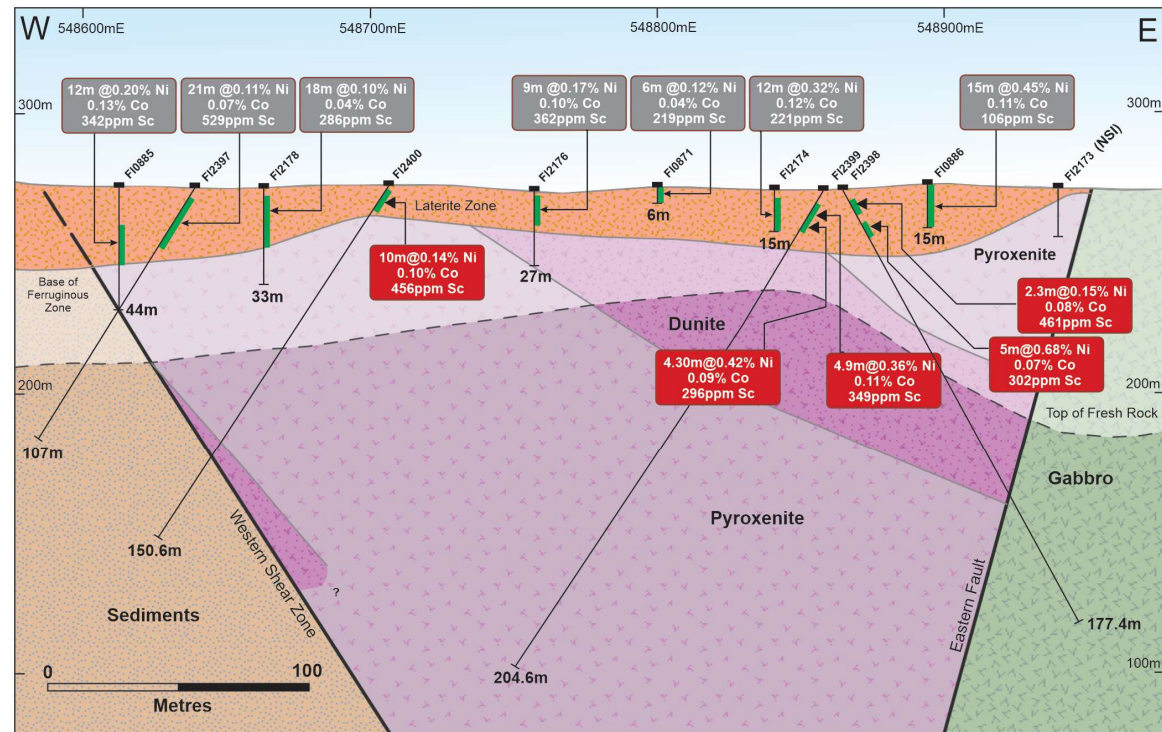


# Melrose



## Nickel Cobalt Scandium

- Dunite and pyroxenite host rocks underlying laterite profile
- At surface (very low strip ratio)
- **Perth – based consultancy (IMO) appointed to investigate extraction of Ni Co Sc using atmospheric leaching**
- **Bulk sample submitted to IMO for metallurgical test work**
- **Step out drilling planned for March 2023**



Melrose Section 6,371,575mN

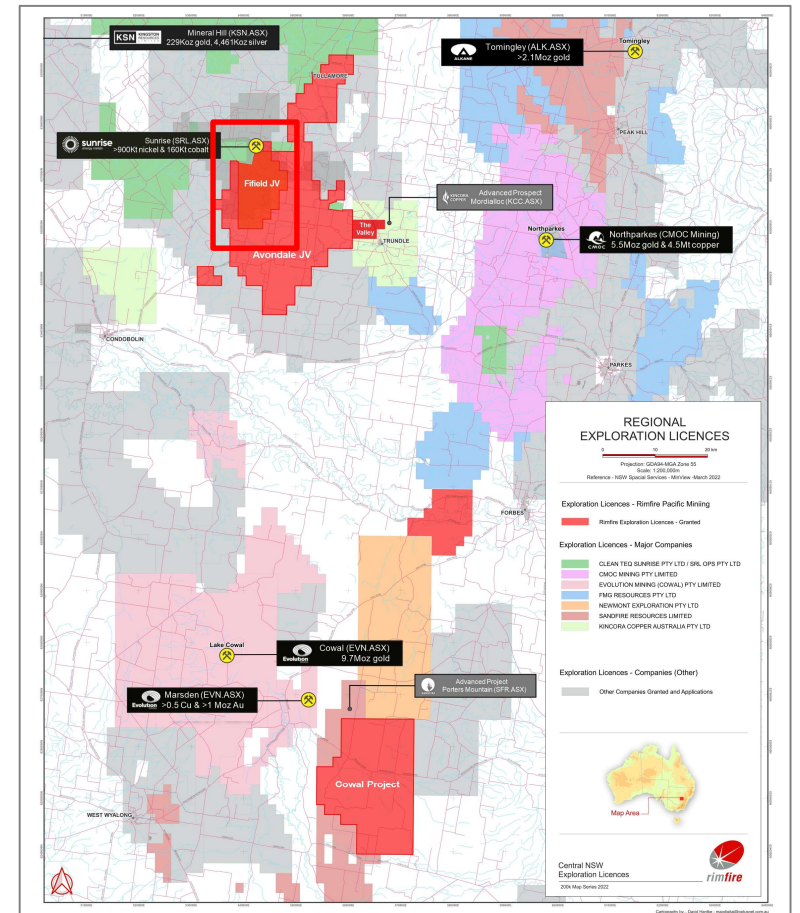


# Key Projects – Fifield (GPR earning up to 60%)



## Gold PGEs

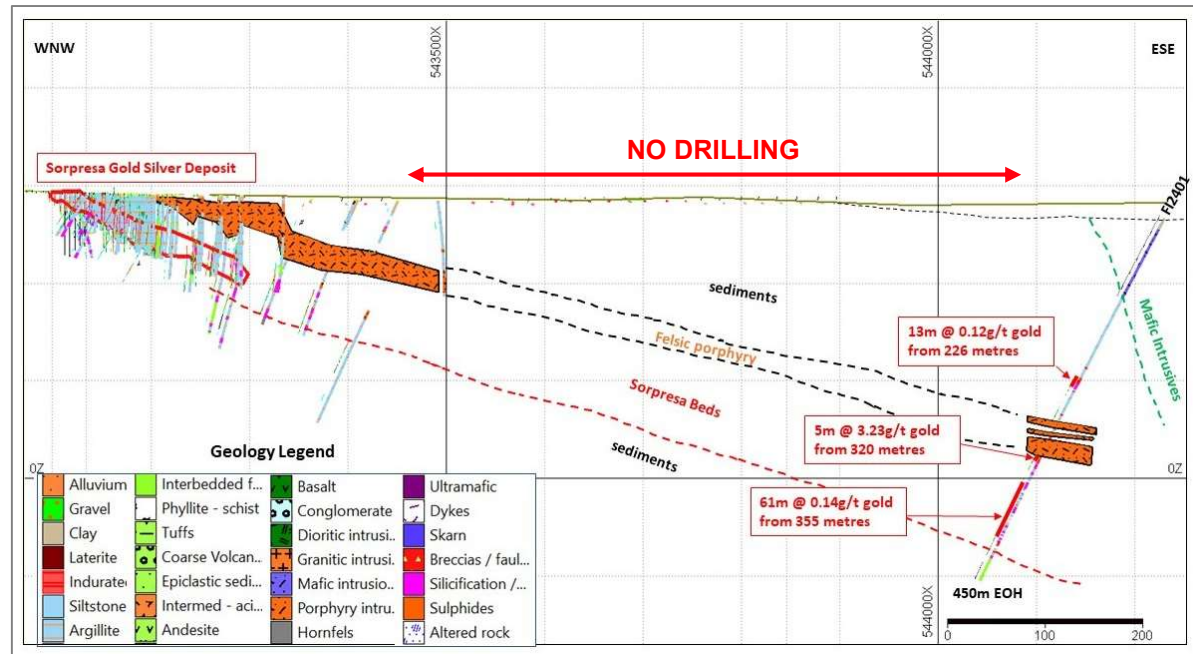
- Sorpresa JORC Resource <sup>8</sup> (Maiden JORC Resource 125Koz gold, +7.9Moz silver) – leaching trials continuing
- Platina Lead - Australia's largest historic source of mined platinum. Drilling planned for June 23 Qtr. to test for bedrock source of PGEs<sup>10</sup>
- New gold zone drilled at Jack's Lookout <sup>13</sup>
- 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 fully funded by JV partner



# Jack's Lookout

## Gold Silver

- FI2401 intersected wide zone of gold and silver prospective “Sorpresa Beds” 600 metres downdip of Sorpresa
- No drilling within 500 metre radius of FI2401
- Geological modelling underway to identify new high grade gold silver targets



# Appendix 1 – Reference Links



<sup>[1]</sup> Sunrise Energy Metals (ASX:SRL) – Sunrise Project Awarded Major Project Status, 6 Dec 2021

<https://wcsecure.weblink.com.au/pdf/SRL/02462596.pdf>

Cobalt Blue Holdings (ASX:COB) – Grant of Australian Major Project Status, 2 Mar 2022

<https://cobaltblueholdings.com/news/grant-of-australian-major-project-status/>

<sup>[2]</sup> Rimfire Pacific Mining (ASX:RIM) – GPR commits to Year 3 of the Fifield Earn-in Project NSW, 11 Apr 2022

<https://www.rimfire.com.au/site/PDF/0462e0fd-62f7-4018-889c-e66191515309/GPRcommitstoYear3oftheFifieldEarninProjectNSW>

Rimfire Pacific Mining (ASX:RIM) – GPR commits to Year 2 of the Avondale Earn-in Project, 14 Mar 2022

<https://www.rimfire.com.au/site/PDF/60b7e1da-724d-49d2-a782-092f7ffbda1a/GPRcommitstoYear2oftheAvondaleEarninProject>

<sup>[3]</sup> Sunrise Energy Metals (ASX:SRL) – Sunrise Project Execution Plan, 28 Sep 2020

<https://wcsecure.weblink.com.au/pdf/CLQ/02286016.pdf>

<sup>[4]</sup> Rimfire Pacific Mining (ASX:RIM) – Strong nickel, cobalt and scandium drill results, 4 Apr 2022

<https://www.rimfire.com.au/site/PDF/b7aff776-164e-4920-8691-c623b4a26772/Strongnickelcobaltandscandiumdrillresults>

<sup>[5]</sup> Cobalt Blue Holdings (ASX:COB) – Broken Hill Cobalt Project

<https://cobaltblueholdings.com/broken-hill/broken-hill-cobalt-project/#deposits>

<sup>[6]</sup> Rimfire Pacific Mining (ASX:RIM) – Valley Results Support Potential for Nearby Porphyry System, 27 Jul 2021

<https://www.rimfire.com.au/site/PDF/b5da569b-e9ee-4727-a25c-8940eab7c6fa/ValleyResultsSupportPotentialforNearbyPorphyrySystem>

<sup>[7]</sup> Rimfire Pacific Mining (ASX:RIM) – Rimfire Awarded \$185k Drilling Grant at Valley, 12 Jan 2022

<https://www.rimfire.com.au/site/PDF/db5cb202-618c-4963-aa0e-518983f7486d/RimfireAwarded185kDrillingGrantatValley>

<sup>[8]</sup> Rimfire Pacific Mining (ASX:RIM) – Sorpresa Gold and Silver Maiden Resource Fifield NSW, 23 Dec 2014

<https://www.rimfire.com.au/site/PDF/d96517e4-bd3c-480f-9361-c44bd22c35d1/SorpresaGoldandSilverMaidenResourceFifieldNSW>

<sup>[9]</sup> Rimfire Pacific Mining (ASX:RIM) – Drilling Commenced at Fifield Platinum Project, 14 Dec 2021

<https://www.rimfire.com.au/site/PDF/6878b70b-ee0d-4068-bcc9-e5acadd6c3a6/DrillingCommencedatFifieldPlatinumProject>

<sup>[10]</sup> Historical Reports submitted to the Regional NSW – Mining, Exploration and Geoscience Department, including [DIGS Geological Survey of NSW Search](#)

<sup>[11]</sup> Rimfire Pacific Mining (ASX:RIM) – High-grade cobalt targets identified at Broken Hill 3 Nov 2022

<https://www.rimfire.com.au/site/pdf/d0c38966-fd5a-4796-a6a7-961de3766266/Broad-gold-zones-drilled-at-Jacks-Lookout-Fifield-NSW.pdf>


<sup>[12]</sup> Rimfire Pacific Mining (ASX:RIM) – Broad gold zones drilled at Jack's Lookout, Fifield NSW 3 Nov 2022

<https://www.rimfire.com.au/site/pdf/d0c38966-fd5a-4796-a6a7-961de3766266/Broad-gold-zones-drilled-at-Jacks-Lookout-Fifield-NSW.pdf>



# *rimfire*

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

 +61 (0) 497 805 918

 [Rimfire Pacific Mining](#)

 [rimfire@rimfire.com.au](mailto:rimfire@rimfire.com.au)

 [@NIRimfire](#)