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

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

30 April 2024

March 2024 Quarter - Activities Report

Highlights

- **Multiple work programs focused on high-value critical minerals – scandium, cobalt, and copper across Rimfire's NSW projects**
- **Over 4,000 metres of scandium drilling (aircore, RC and diamond) funded by JV partner GPR undertaken at the Melrose and Murga Scandium Prospects with Murga results due imminently**
- **Drilling to underpin estimate of maiden Melrose Scandium JORC Resource (currently expected by late June 2024) and to determine extent and continuity of mineralisation at Murga**
- **First pass sighter leach test work focussed on producing a combined Scandium – Cobalt – Nickel product at atmospheric pressures, returned recoveries up to 40% scandium, 90% cobalt, and 58% nickel**
- **Ongoing metallurgical test work aimed at maximising scandium recovery and optimising energy requirements and reagent consumption**
- **New copper, cobalt and REE targets identified at the Valley and Broken Hill Projects with follow up of Broken Hill targets planned for early June 2024 Quarter**

Commenting on the Quarterly Activities report, Rimfire's Managing Director Mr David Hutton said: *"Rimfire continues to explore for and discover the critical minerals that are associated with global decarbonisation strategies. We provide unique ASX investment exposure to scandium – an extremely valuable metal.*

Rimfire was very active during the March 2024 Quarter with multiple drill programs at the Melrose and Murga Scandium Prospects. We believe both prospects offer significant opportunities in terms of size and grade and look forward to receiving the results from these programs ahead of a maiden JORC Resource for Melrose in late June.

We also continue to develop new opportunities across the project portfolio with new copper, cobalt and RRE targets identified at both Broken Hill and the Valley".

Introduction and Operational Summary

Rimfire Pacific Mining (**ASX: RIM**, "**Rimfire**" or the "**Company**") is an ASX-listed Critical Minerals exploration company which is advancing a portfolio of projects within the highly prospective Lachlan Orogen ("LO") and Broken Hill ("BH") districts of New South Wales (*Figures 1, 4 and 5*).

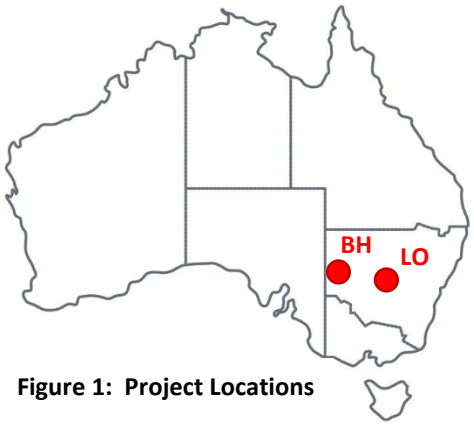

Figure 1: Project Locations

During the March 2024 Quarter (the "Quarter"), Rimfire's exploration activities were focused on advancing the Murga and Melrose Scandium Prospects (Fifield and Avondale Earn In Projects) with over 4,000 metres of Aircore, Reverse Circulation and Diamond drilling conducted with assays awaited.

The drilling was undertaken to underpin the estimate of a JORC Resource for Melrose and to determine the extent and continuity of scandium mineralisation at Murga.

Also, first pass sighter leach test work focused on producing a combined Scandium – Cobalt – Nickel product at atmospheric pressures returned recoveries up to 40% scandium, 90% cobalt, and 58% nickel. Further test work is underway with a particular emphasis on maximising scandium recovery, optimising energy requirements and reagent consumption.

The exploration activities at the Fifield and Avondale are funded by Rimfire's exploration partner - Golden Plains Resources (GPR) and looking ahead to the June 2024 Quarter, Rimfire currently to complete the estimate of a maiden Mineral Resource Estimate (MRE) in accordance with the 2012 JORC Code for the Melrose Scandium Prospect as well as receiving the results of the Murga air core drilling.

Separately on its 100% - owned projects, Rimfire identified cobalt, copper and Rare Earth Element (REE) targets at the Broken Hill Project which will be subject of follow up field assessment during the June 2024 Quarter, and two new Induced Polarisation (IP) chargeability geophysical anomalies associated with surface copper mineralisation at the Valley Copper Project.

Operational Review – Earn In projects

Murga Scandium Drilling

During the Quarter, Rimfire completed an air core drilling program (100 holes / 2,664 metres – *Figure 2*) to determine the extent and continuity of scandium mineralisation at the Murga Scandium Prospect (Fifield Earn In Project).

2,185 drill samples were submitted to ALS Pty Ltd for multi-element analysis with results expected in the first week of May 2024.

The new drilling program follows reconnaissance aircore drilling undertaken in 2023 by Rimfire which successfully intersected strongly anomalous scandium in multiple drillholes (*Rimfire ASX Announcement dated 3 October 2023*);

- 3m @ 132ppm Sc from 3 metres in FI2425
- 18m @ 164ppm Sc from surface in FI2426 *incl. 6m @ 208ppm Sc from 3 metres*
- 15m @ 125ppm Sc from 3 metres in FI2427
- 6m @ 131ppm Sc from 15 metres in FI2429
- 27m @ 188ppm Sc from surface in FI2434 *incl. 12m @ 224ppm Sc from 3 metres*, and
- 6m @ 173ppm Sc from 3 metres in FI2435

At Murga scandium occurs within a strongly weathered horizon overlying magnetic ultramafic (pyroxenite) intrusive rocks of the Ordovician-age **Murga Intrusive Complex.** These pyroxenite rock types have been demonstrated from previous drilling at Murga and the adjacent Melrose Prospect to be spatially associated with scandium mineralisation (*See Rimfire ASX Announcement dated 6 December 2023*).

While geological logging is continuing, an initial review of rock types intersected in the latest Murga drilling indicates that approximately 80% of the holes intersected ultramafic / mafic rock types (including pyroxenite). The significance of this observation will be confirmed once assay results are received however it's also worth noting that the FI2429 intercept quoted above occurred wholly within fresh pyroxenite rock types not the overlying weathered horizon.

The most recent aircore holes were drilled on 100 x 100 metre centres at Murga North and on 400 x 400 metre centres over the remainder of the Murga Intrusive Complex. In total the drilling was carried out over an area of **approximately 20km²**. A size comparison between Murga and the Melrose Prospect is shown on *Figure 2*.

The closer-spaced drilling was undertaken at Murga North to specifically follow up the FI2426 to FI2429 intercepts drilled by Rimfire in 2023 (i.e., 18m @ 164ppm Sc from surface in FI2426 *including 6m @ 208ppm Sc)* which lie within a 1,000-metre x 300-metre east west striking auger anomaly that overlies a linear magnetic feature within the northern portion of the Murga Intrusive Complex ("**Murga North**").

To assist Rimfire's understanding of the basement rock types at Murga, several samples have been submitted for petrological analysis including two samples of the scandium – anomalous fresh pyroxenite from FI2429 (15 – 21 metres).

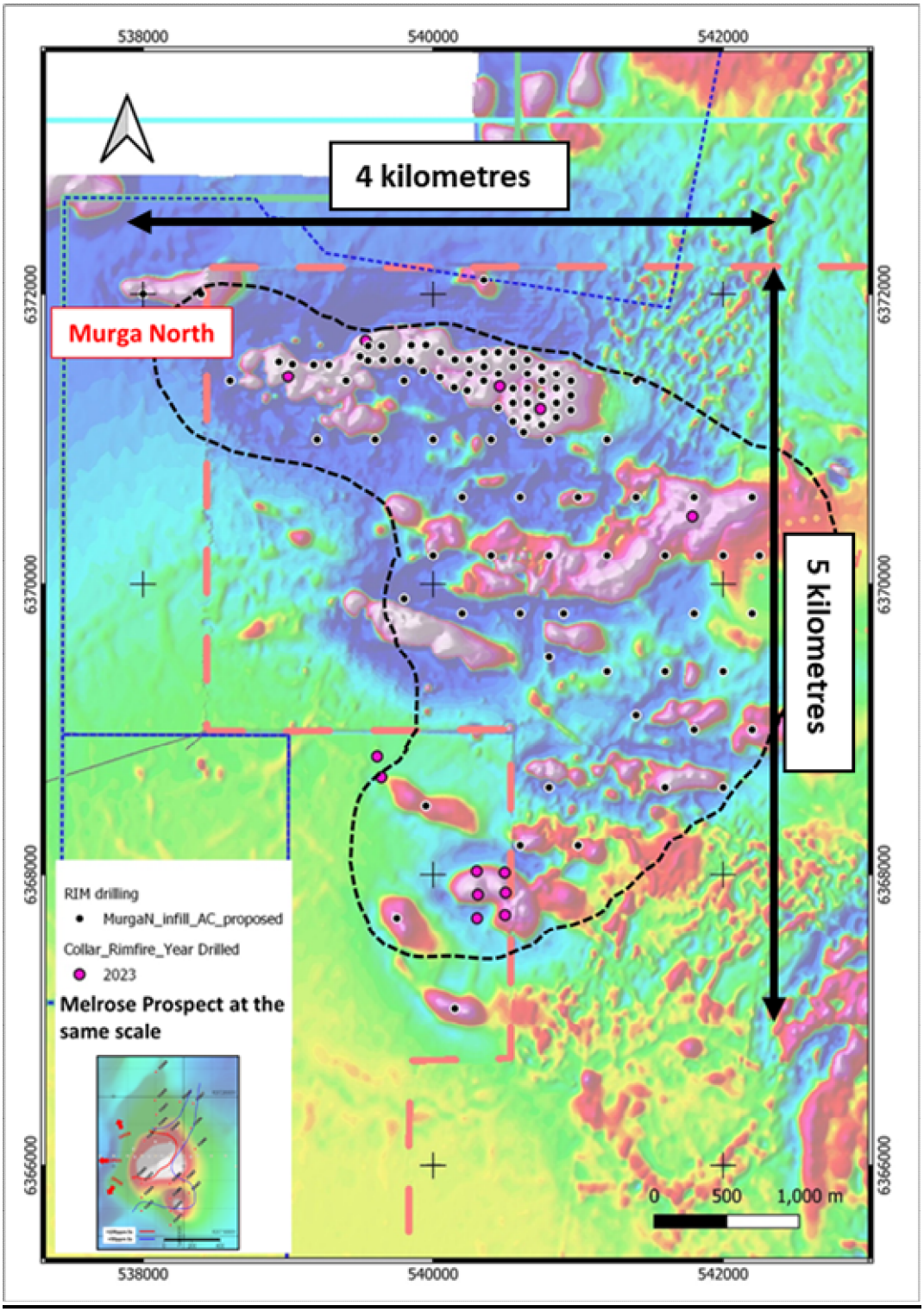

Figure 2: Murga Scandium Prospect showing drilling and size comparison with the Melrose Scandium Prospect on background magnetics image.

Melrose Scandium Drilling

At the end of the Quarter Rimfire commenced a combined Reverse Circulation / Diamond drilling program at the Melrose Scandium Prospect to underpin the estimate of a maiden Mineral Resource Estimate (MRE) in accordance with the 2012 JORC Code which is currently expected to be completed by late June 2024.

The drilling was completed following the end to the Quarter with 36 RC holes (1,741 metres) and 4 diamond holes (206 metres) completed.

At the time of writing, diamond drill core was being cut and sampled, and RC drill samples were being transported to ALS Pty Ltd in Orange NSW for multi element analysis.

Figure 3: Reverse Circulation and diamond drill rig at Melrose Scandium Prospect – April 2024

First pass leach test work demonstrates Sc, Co, and Ni recoveries at atmospheric pressure

During the Quarter, Rimfire received results of first pass sighter leach test work undertaken on mineralised laterite material from the Melrose Scandium Prospect (*see Rimfire ASX Announcement dated 4 March 2024*).

Scandium cobalt nickel mineralisation at Melrose is present within a near surface flat – lying manganese and iron rich laterite horizon that overlies an east-dipping sequence of ultramafic and mafic intrusive rocks.

Previous drilling by Rimfire has returned multiple strongly anomalous drill intercepts from the laterite horizon, e.g. (*Rimfire ASX Announcement 20 October 2022*);

- 21m @ 0.11% Ni, 0.07% Co, and 529ppm Sc, from 3 metres in FI2397 *incl. 9m @ 0.17% Ni, 0.15% Co and 688ppm Sc from 14 metres*,
- 2.3m @ 0.15% Ni, 0.08% Co and 461ppm Sc from 3 metres and 5.0m @ 0.68% Ni, 0.07% Co and 302ppm Sc from 16 metres in FI2398,
- 4.9m @ 0.36% Ni, 0.11% Co and 349ppm Sc from 5 metres, and 4.3m @ 0.42% Ni, 0.09% Co and 296ppm Sc from 10.1 metres in FI2399, and
- 10.0m @ 0.14% Ni, 0.10% Co and 456ppm Sc from 1 metre in FI2400 *incl. 5m @ 0.17% Ni, 0.17% Co and 568ppm Sc from 5 metres*

Perth specialist metallurgical services group - Independent Metallurgical Operations Pty Ltd (IMO) was engaged by Rimfire to conduct **first pass sighter leach test work** with the aim of optimising recoveries of a combined scandium – cobalt – nickel product from high-grade mineralised material from Melrose.

Prior to commencing test work, IMO completed a literature review which emphasized that the High-Pressure Acid Leach (HPAL) technique is the dominant commercial method used to process laterite – hosted mineralisation such as that found at Melrose. The literature review found that instances of Atmospheric Leaching (AL) and Heap Leaching (HL) of lateritic material are extremely rare.

However, while AL and HL are rarely employed commercially, it is typical to perform AL and/or HL test work prior to undertaking HPAL test work, given that AL and HL techniques are more economically favorable (e.g. lower capex requirements) if metal recoveries are close to the higher recoveries that may be achieved by the HPAL technique.

Consequently, the IMO test work was undertaken at atmospheric leach conditions with the aim of obtaining the best metal recoveries and to provide a strong foundation for further studies into commercialising the extraction of mineralised material from Melrose and surrounding Rimfire critical mineral prospects.

To underpin the studies, 260 kg of mineralised PQ three quarter diamond drill core from holes FI2397 – 2400 previously drilled by Rimfire at Melrose was sent to IMO in Perth.

Of the 8 tests conducted, the last test (LT08) achieved the highest metal extractions of all the leach tests, with extractions of 89.3% for cobalt, 87.5% for manganese, 58.1% for nickel and 39.9% for scandium (*Table 1*).

Table 1: LT08 Metal Extraction

Time	Extraction					
	Al	Co	Mg	Mn	Ni	Sc
(hours)	(%)	(%)	(%)	(%)	(%)	(%)
0	9.7%	100%	1.0%	93.5%	54.4%	24.4%
2	12.9%	100%	71.3%	100%	61.7%	33.9%
6	16.2%	100%	80.8%	100%	70.3%	43.4%
24	15.1%	89.3%	66.3%	87.5%	58.1%	39.9%

The improvement in LT08 performance can be attributed to a fine grind of P_{100} 75µm and leaching in 2.7 M H_2SO_4 at 82°C. These conditions were selected as it is reported that goethite dissolves at 2.5 M H_2SO_4 and 80°C.

Following the successful completion of the first pass sighter leach test work, Rimfire has accepted IMO's recommendation to undertake further reductive acid leach tests with a particular emphasis on maximising scandium recovery, optimising energy requirements and reagent consumption.

Concurrent with the next round of metallurgical test work, Rimfire will undertake a program of qualitative X-ray Diffraction (XRD) analysis on existing Melrose drill samples. XRD is a technique used to study the structure, composition, and physical properties of materials and will be used to accurately define what specific minerals (e.g. kaolinite, goethite, manganese, limonite etc.) host each of the scandium, cobalt, and nickel at Melrose.

Fifield and Avondale Earn In Projects Exploration Partner

All exploration activities at the Fifield and Avondale are funded by Rimfire's exploration partner - Golden Plains Resources (GPR), the ownership of which is currently subject to a legal dispute. Rimfire has taken independent legal advice as to its obligations and rights with respect to this matter and continues to operate in accordance with that advice.

Next Steps - Earn In projects

At Murga 2,185 drill samples from the recent aircore drilling were submitted to ALS Pty Ltd in Orange NSW for multi-element analysis with results expected in the first week of May 2024

It is anticipated that if positive results are received from the drilling, further drilling on tighter drill hole spacings will be required as a follow up.

At Melrose, Rimfire currently expects to estimate a maiden Mineral Resource Estimate (MRE) in accordance with the 2012 JORC Code by late June 2024.

Operational Review – 100% owned projects

Compelling Cobalt Copper and REE targets identified at Broken Hill

At the end of the Quarter, Rimfire identified multiple cobalt, copper, and Rare Earth Element [REE] targets at its recently expanded 100% - owned Broken Hill Project which is located 17-30 kilometres west of Broken Hill, NSW (*Figure 5, and see Rimfire ASX Announcement dated 15 April 2024*).

Rimfire also executed Access Agreements with relevant Landowners to facilitate ground reconnaissance, geological mapping, and sampling of these targets.

Bald Hill Extension Target (Cobalt Copper)

Diamond drilling by Rimfire at the Bald Hill Prospect last year successfully intersected high-grade cobalt (Co) associated with strongly disseminated to semi massive sulphide (pyrite, pyrrhotite and trace chalcopyrite + sphalerite) mineralisation (*See Rimfire ASX Announcement dated 18 September 2023*), i.e.;

- 125m @ 0.13% Co from 198 metres in FI2470 *incl. 97m @ 0.15% Co*
- 58m @ 0.13% Co from 62 metres in FI2471 *incl. 2m @ 0.24% Co and 17m @ 0.15% Co*
- 33m @ 0.11% Co from 58 metres incl. *4m @ 0.23% Co and 2m @ 0.21% Co,* and
- 100m @ 0.08% Co from 71 metres in FI2470 incl. *68m @ 0.10% Co*

Higher grade cobalt at Bald Hill is typically associated with a greater abundance of sulphides with zones of coarse-grained semi-massive pyrite / pyrrhotite hosting individual 1 – metre grades of up to 0.79% Co (FI2471 – 67 to 68 metres) (*see Rimfire ASX Announcement 18 September 2023*).

FI2471 also intersected a weathered gossanous zone immediately up hole of the cobalt mineralisation, assaying of which returned strongly anomalous copper (Cu) - 6m @ 0.51% Cu from 56 metres.

Detailed ground magnetic surveying [on 50-metre spaced east west lines] undertaken post drilling has identified a very strong magnetic anomaly [peak value – 57,744nT] coincident with and extending from cobalt and copper mineralisation intersected in Rimfire's 2023 drilling at Bald Hill.

The Bald Hill magnetic anomaly trends NNE, dips to the southeast, and has a near surface extent of 450 x 400 metres and extends to a vertical depth of approximately 300 metres below surface.

3D modelling suggests that the anomaly plunges to the southeast with Rimfire's diamond holes just "clipping" the top of the anomaly.

This is highly significant as the Bald Hill mineralisation is intimately associated with magnetic minerals, i.e. pyrrhotite and magnetite, and as such the magnetic anomaly is interpreted to be "mapping" a potential extension to existing cobalt and copper mineralisation.

Diamond drilling to further test the Bald Hill anomaly is planned for the second half of 2024.

Bald Hill Northeast (Cobalt Copper)

Ground magnetic surveying has also identified a cluster of strong anomalies [56,482nT to 57,744nT] over a surface area of 700 x 300 metres approximately 2 kilometres northeast of Bald Hill, which remains open to the northeast.

Initial ground reconnaissance of the area has identified ferruginous gossanous material associated with many of the magnetic anomalies, rock chip sampling of which returned up to 0.72% cobalt and 0.46% copper. The area appears not to have been drilled by previous explorers.

Further geological mapping and sampling is required to better understand the significance of these initial rock chip results.

Castillo tenements (Cobalt Copper REE's)

Rimfire has recently expanded the size of the Broken Hill Project with the acquisition of two adjoining tenements from Castillo Copper (EL's 8572 and 8599 "Castillo tenements - *see Rimfire ASX Announcement dated 11 January 2024*).

The Castillo tenements cover the same sequence of Proterozoic age deformed and quartz – albite – magnetite gneiss, psammite, and amphibolite units that host the Bald Hill cobalt sulphide mineralisation.

An examination of the NSW Government Minview online GIS portal reveals several historic mineral occurrences within the tenement boundaries that require follow up to better determine their geological significance and exploration potential.

Of initial interest are a cluster of gossanous, quartz veined and copper-stained occurrences within the northwestern portion of EL8572 (NSW *Mineral Occurrences 181678, 181681, 181683 – 181684, 181686, and 181688*).

Additionally there are several shear – hosted pegmatite occurrences within the southern portion of EL8572 and EL8599 (NSW *Mineral Occurrences 181344 – 181348*) which were reportedly mined in the mid-1940's for a mineral called "Davidite" which is a rare earth oxide mineral with chemical end members of either Lanthanum or Cerium.

As such the Castillo tenements are also considered prospective for Rare Earth Element (REEs) mineralisation associated with shear – hosted pegmatite occurrences with geological mapping and sampling are required to better understand the significance of these targets.

Copper geophysical targets identified at the Valley

During the Quarter, Rimfire carried out a small Induced Polarisation (IP) geophysical survey at the 100% - owned Valley Copper Project which lies 34 kilometres west of the Northparkes Copper Gold Mine in central NSW.

The IP survey was designed to test directly beneath a 3 kilometre east – west trending ironstone / gossan ridge that lies within the central portion of the project. Historic rock chip sampling and drilling along the ridge suggests that it represents the surface expression of fault zone that is "leaking" copper mineralisation from an underlying source (*see Table 2 for survey specifications*).

Two reconnaissance holes (FI2079 and FI2081) drilled by Rimfire in 2021 confirmed the area's prospectivity by intersecting a sequence of strongly strong propylitic and epidote chlorite altered volcanoclastic, and polymictic conglomerate rocks interpreted to be Ordovician – age Raggatt Volcanics like the host rocks seen at the Northparkes deposit.

FI2079 also intersected a zone of steeply dipping (near vertical) pyritic fault breccias down dip of the ironstone / gossan ridge, assaying of which returned; 10m @ 800ppm copper from 97 metres (*see Rimfire ASX Announcement dated 27 July 2021*).

The IP survey successfully defined two subtle chargeability features beneath the surface ironstone / gossan outcrops which may be indicative of subsurface mineralisation, although further IP geophysics has been recommended by Rimfire's geophysicist to determine their significance (*Figure 6*).

Table 2: Valley IP geophysical survey specifications

Survey Specifications	
Survey Type	Induced Polarisation
Array Type	2D and 3D Offset: Pole-dipole
Rx Dipole Length	100m, 200m
Tx Dipole Length	Approx. 2-3km
Domain and Cycle	Time domain – 2s or 0.125Hz
Depth of Investigation (n)	Max.
Number of Lines	3
Line Length	2600 to 2800m
Line Separation	200m
Remote electrode	561357E, 6362440N
Coordinate System	GDA94/MGA55

Next Steps – 100% owned projects

Rimfire has recently executed Access Agreements with relevant Landowners to allow Company geologists to undertake ground reconnaissance, geological mapping, and sampling of the Castillo Tenements targets and further sampling of the Bald Hill Northeast target.

Field work has commenced and Rimfire looks forward to providing updates as new information comes to hand.

Given the size of the Company's project portfolio and current priorities Rimfire is considering various strategic options to generate value from the Cowal and Valley projects which may include the introduction of an exploration partner and / or outright divestment.

Corporate Activities

Cash, Capital Structure, and Funding

At 31st March 2024, Rimfire had access to $0.7M of funding (plus an additional $0.3M held in the Fifield and Avondale Earn In Project accounts for exploration activity on those Projects).

Related party transactions of $105K (section 6.1 and 6.2 of the March 2024 Quarter Appendix 5B) are payments for salary and short-term incentive payment (including statutory superannuation) to David Hutton (MD and CEO) and Non-Executive Director fees paid during the March 2024 Quarter including deferred director fees which were suspended during the December 2023 Quarter.

During the Quarter the Company received $500K from GPR. The Company's current plan for the next two quarters is to focus exploration work on our Earn In Projects so cash calls on GPR will be substantially greater in the June Quarter.

During the Quarter 18,817,198 shares were issued to Castillo Copper (ASX:CCZ) and royalty holders on the two Broken Hill tenements (EL8572 and EL8599) for consideration of the purchase of these two tenements totally unencumbered, note these shares are under 6-month escrow.

Also 9,000,000 unlisted employee options were exercised by employees during the period via cashless exercise, resulting in the issue of 6,142,294 ordinary fully paid shares.

With the issues and exercising of unlisted options the capital structure of the Company as at 31st March 2024 is:

- Ordinary Fully Paid Shares - 2,245,204,223
- Unquoted Options expiring with various dates and prices, issued to staff, consultants, and directors – 101,300,000
- Unquoted Options expiring 28 February 2025 @ $0.02 (2 cents) – 143,333,330

Rimfire Tenement Schedule

Below is a listing of the exploration licences held by Rimfire at the 31st of March 2024.

Project	Location	Licence	Interest	Interest Acquired / Farmed in during Qtr.	Interest Reduced / Farmed out during Qtr.
Broken Hill	Broken Hill	EL5958	100%	-	-
		EL8572[1]		100%	
		EL8599[1]		100%	
The Valley	Fifield	EL8542	100%	-	-
		EL8401	100%	-	-
Cowal	Cowal	EL8804	100%	-	-
		EL8805	100%	-	-
		EL9397	100%	-	-
	Porters Mount	EL8329	100%	-	-
Fifield[2]	Fifield	EL8935	100%	-	-
		M(C)L305	100%	-	-
		EL6241	100%	-	-
Avondale[3]	Fifield	EL5565	100%	-	-
		EL7058	100%	-	-
		EL7959	100%	-	-
		EL8401	100%	-	-
		EL8542	100%	-	-
		EL8543	100%	-	-
		EL8935	100%	-	-

[1] Subject to the Tenement Purchase Agreement between Rimfire and BHA No.1 Pty Ltd (Castillo Copper Ltd).

[2] Subject to Fifield Project Earn-in entered during the June 2020 Qtr. however no interest in tenements to be ceded until earn-in conditions met in full.

[3] Subject to Avondale Project Earn-in entered during the June 2021 Qtr., however no interest in tenements to be ceded until earn-in conditions met in full

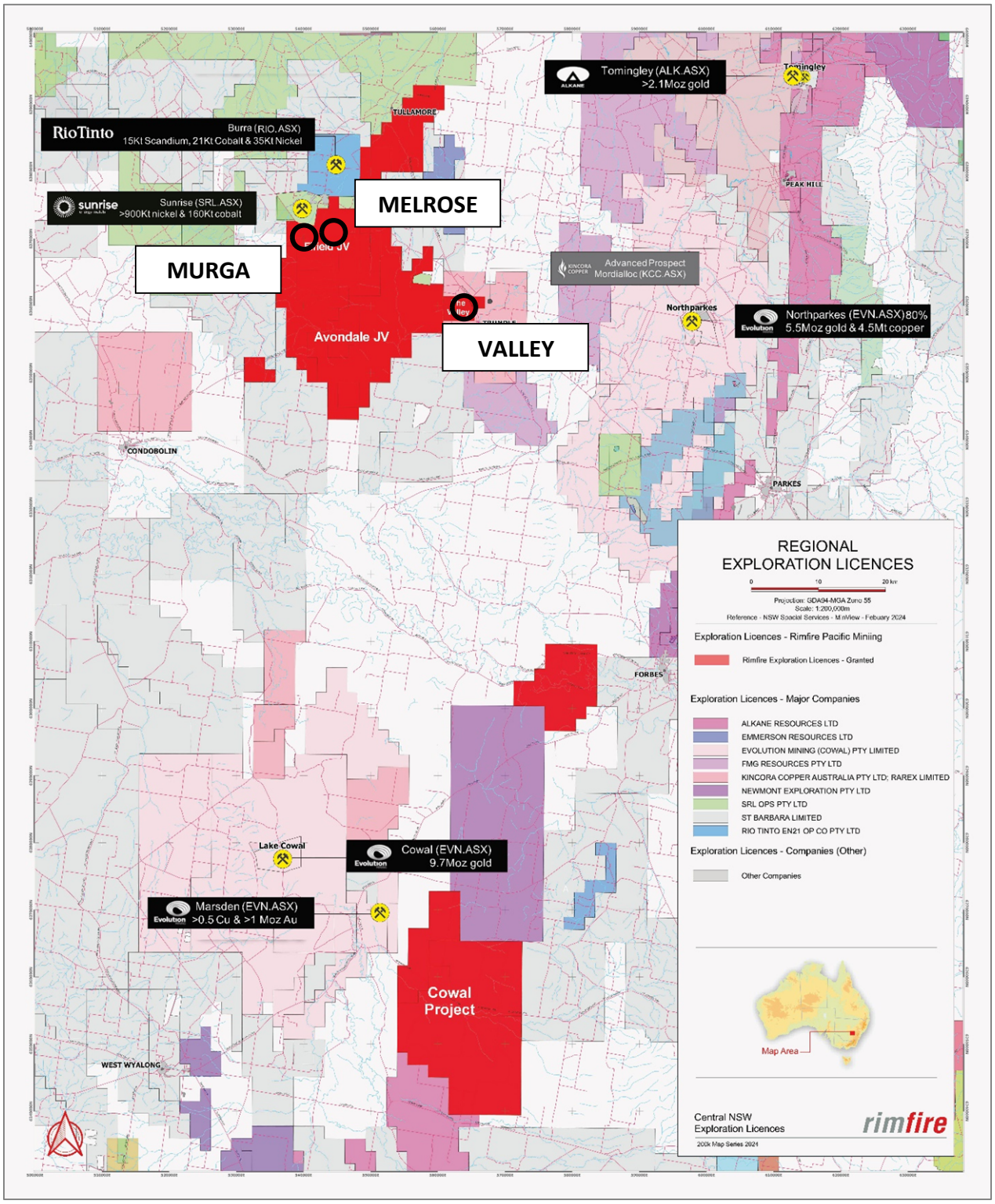

Figure 4: Rimfire Broken Hill Cobalt Project (red blocks), regional tenement holders and target locations

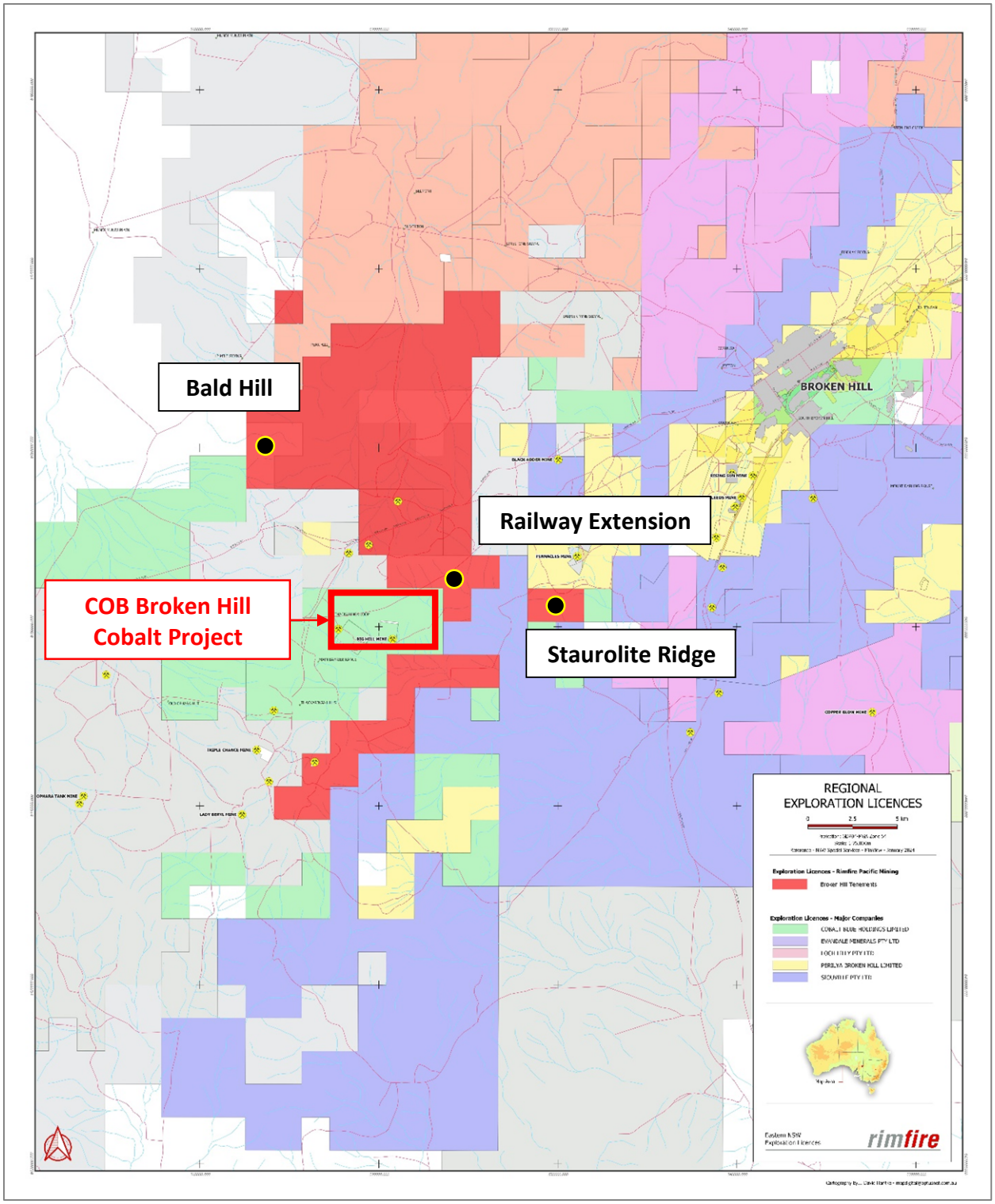

Figure 5: Broken Hill District - Rimfire Project Locations (in red) compared to showing major competitors' and key prospects.

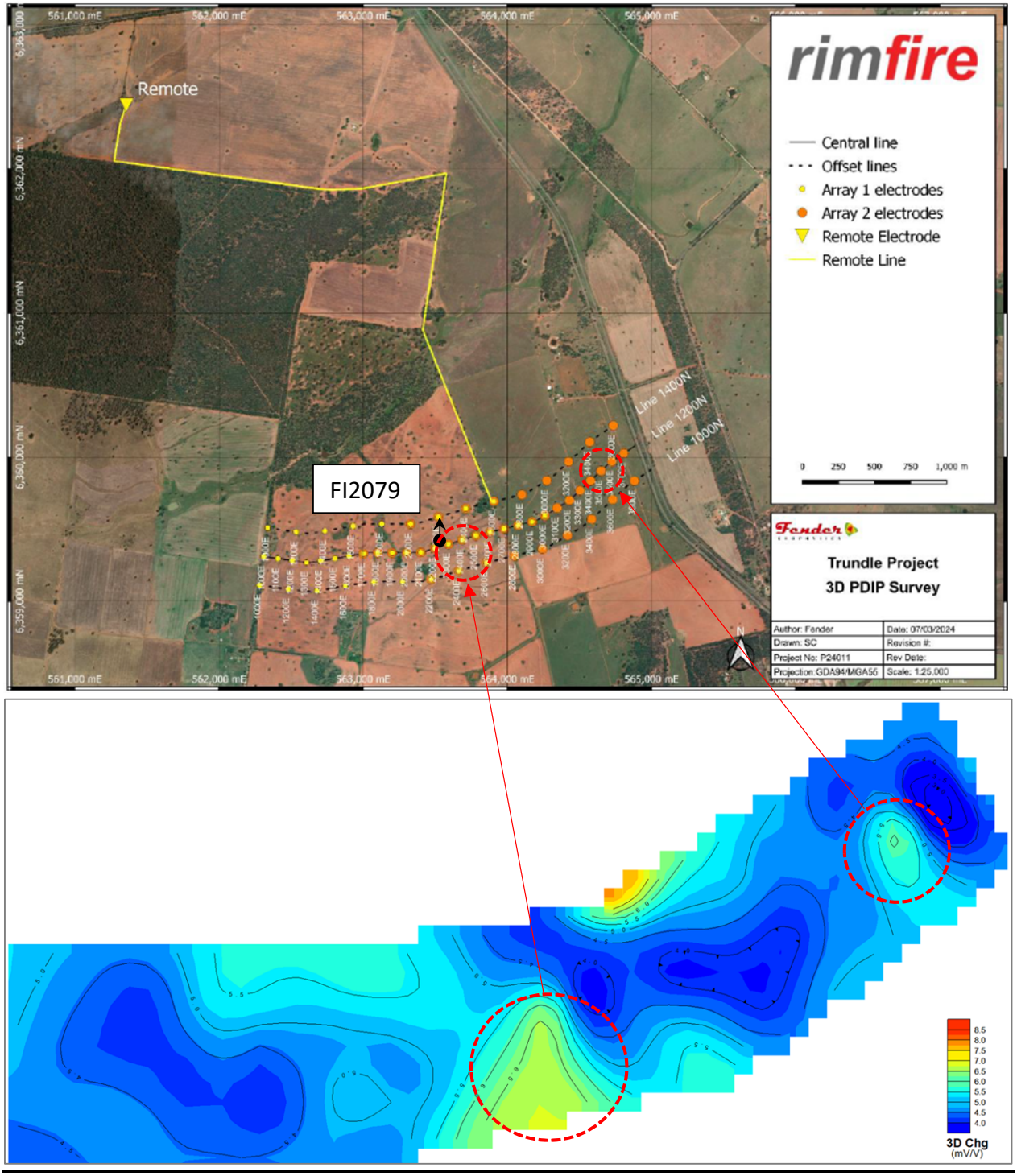

Figure 6: Valley IP survey stations (upper image) and chargeability -100m depth slice image (lower image). Two subtle chargeability anomalies highlighted.

JORC Reporting

Table 2: JORC Code Reporting Criteria

Section 1 Sampling Techniques and Data – IP Geophysical Survey at the Valley

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc).	This ASX Announcement details IP geophysical surveying undertaken by Rimfire Pacific Mining Limited at the company's 100% - owned Valley Project located at Trundle NSW. Survey specifications have been given in Table 2 of this ASX Announcement.
	Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.	N/A as no drilling undertaken.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.	N/A as no drilling undertaken.
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	N/A as no drilling undertaken.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	N/A as no drilling undertaken.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	N/A as no drilling undertaken.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	N/A as no drilling undertaken.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	N/A as no drilling undertaken.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	N/A as no drilling undertaken.

Criteria	JORC Code explanation	Commentary
	The total length and percentage of the relevant intersections logged.	N/A as no drilling undertaken.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	N/A as no drilling undertaken.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	N/A as no drilling undertaken.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	N/A as no drilling undertaken.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	N/A as no drilling undertaken.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	N/A as no drilling undertaken.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	N/A as no drilling undertaken.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	N/A as no drilling undertaken.
	For geophysical tools, spectrometers, handheld XRF instruments (pXRF), etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	The IP geophysical survey was carried out by contractor Fender Geophysics using the following equipment; • Receivers: GDD RX-32 - 16 Channel Receiver • Transmitter: Fender Thunderbird • Power Supply: 22kva generator • Receiver Electrodes: Non-Polarising Porous Pots • Receiver Cable: Multi Core Data Cable • Transmitter electrodes: Aluminium Plates • GPS: Garmin GPS62 • Vehicles: Toyota Hilux Dual Cabs Survey specifications are given in Table 2 of this ASX Announcement.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	N/A as no drilling undertaken.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The geophysical observations including in this Report have been verified by both Rimfire's Exploration Manager and Managing Director.
	The use of twinned holes.	N/A as no drilling undertaken.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary geophysical data was electronically acquired by the Contractor in the field and subsequently processed post survey completion.
	Discuss any adjustment to assay data.	There has been no adjustment to assay data.

Criteria	JORC Code explanation	Commentary
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	IP survey station locations are recorded using handheld Garmin GPS (Garmin GPS62) with a nominal accuracy +/- 3m.
	Specification of the grid system used.	GDA94 Zone 55.
	Quality and adequacy of topographic control.	Handheld GPS, which is suitable for the early stage and broad spacing of this exploration.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The location and spacing of IP stations are shown in Figure 6 of this ASX Announcement.
	Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The data spacing referred to in this ASX Announcement is not sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s).
	Whether sample compositing has been applied.	N/A as no drilling or geochemical sampling undertaken.
Orientation of data in relation to geological structure	·Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	N/A as no drilling or geochemical sampling undertaken.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	N/A as no drilling or geochemical sampling undertaken.
Sample security	The measures taken to ensure sample security.	N/A as no drilling or geochemical sampling undertaken.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The data has been reviewed by senior company personnel including the Exploration Manager and Managing Director with no issues identified.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	Reported results all from Exploration Licence EL8401 at Trundle, NSW which is held 100% by Rimfire Pacific Mining Limited. All IP geophysics was undertaken on Private Freehold Land. No native title claims exist. The land is used primarily for grazing and cropping.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	The tenement is in good standing, and all work is conducted under specific approvals from NSW Department of Planning and Energy, Resources and Geoscience.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No results are relied on from other parties in this report.

Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	The geophysical survey was undertaken at the target called "The Valley" which is interpreted to be a porphyry style geological feature hosted in Raggatt Volcanics similar setting to the host rocks at North Parkes mine ~35km to the east.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth.	All IP survey specifications are included within this ASX Announcement.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the Report, the Competent Person should clearly explain why this is the case.	N/A as no drilling undertaken.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.	N/A as no drilling and / or geochemical results have been reported.
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	N/A as no drilling and / or geochemical results have been reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	N/A as no drilling and / or geochemical results have been reported.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the Reporting of Exploration Results.	N/A as no drilling and / or geochemical results have been reported.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').	
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Included within the ASX Announcement

Criteria	JORC Code explanation	Commentary
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.	N/A as no drilling and / or geochemical results have been reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	There is currently no other substantive exploration data that is meaningful and material to report.
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	Not applicable at this stage as further work yet to be planned.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Not applicable at this stage as further work yet to be planned.

ENDS

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

For further information please contact: Mr David Hutton (MD & CEO) +61 417 974 843 or Mr Greg Keane (CFO / Investor Relations) +61 497 805 918

About Rimfire

Rimfire Pacific Mining (**ASX: RIM**, "Rimfire" or the "Company") is an ASX-listed Critical Minerals exploration company which is advancing a portfolio of projects within the highly prospective Lachlan Orogen and Broken Hill districts of New South Wales, comprising;

The 100% - owned Broken Hill Cobalt Project located immediately west of Broken Hill, NSW and includes;

- Bald Hill, where Rimfire's recent drilling successfully intersected high-grade cobalt (Co) in sulphide mineralisation - *see Rimfire ASX Announcement dated 18 September 2023 Broad zones of high-grade cobalt at Bald Hill*, and
- Railway Extension, which is the interpreted along strike extension to Cobalt Blue Holdings' Railway Cobalt Deposit (COB: ASX).

The 100% - owned Valley and Cowal Projects located west of Parkes and Orange in central NSW:

- The Valley Project - located 35km west of the Northparkes Copper Gold Mine where Evolution Mining (EVN: ASX) has just acquired an 80% interest in the mining operation for up to US$475M – *see Evolution Mining ASX Announcement dated 5 December 2023 Acquisition of an 80% interest in Northparkes Copper Gold Mine*, and
- The Cowal Project - located to the east of Evolution's Lake Cowal Copper / Gold mine (EVN: ASX), which includes the newly acquired Porters Mount Project - *see Rimfire ASX Announcement dated 11 September 2023 Acquisition of Porters Mount Project*

Rimfire has two additional projects in the Lachlan Orogen which are being funded by Rimfire's exploration partner - Golden Plains Resources (GPR):

- Avondale Project (GPR earning up to 75%) & Fifield Project (GPR earning up to 50.1%)

✓ Both projects are prospective for high-value critical minerals – scandium, cobalt, nickel, gold, and PGEs - which are essential for renewable energy, electrification, and green technologies.

✓ Adjacent to both projects is the;

- development ready Sunrise Energy Metals Nickel Cobalt Scandium Project (ASX:SRL), and
- Platina Scandium Project (Owendale Scandium Deposit), which was acquired by Rio Tinto (ASX:RIO) – *see RIO News Release dated 28 April 2023 Rio Tinto acquires high-grade scandium project in Australia*

✓ The Fifield Project hosts the historic Platina Lead mine, the largest historic producer of Platinum in Australia.

For more information on the Avondale and Fifield Earn In and Joint Venture Agreements see:

ASX Announcement: 4 May 2020 - Rimfire enters $4.5m Earn-in Agreement
ASX Announcement: 25 June 2021 - RIM Secures $7.5m Avondale Farm Out

Competent Persons Declaration

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

Mr Hutton has over 30 years' experience in the minerals industry and is the Managing Director and CEO of Rimfire Pacific Mining. 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'.

Mr 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, 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".

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity	
Rimfire Pacific Mining Limited	
ABN	**Quarter ended ("current quarter")**
59 006 911 744	31 March 2024

	Consolidated statement of cash flows	**Current quarter $A'000**	**Year to date (9 months) $A'000**
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	-	-
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(100)	(290)
	(e) administration and corporate costs	(187)	(690)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	3	6
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (GST Received)	14	44
	Other (Earn-In Administration Fee, transfer of funds from Earn-in Account for payment of Earn-in area expenditure)	310	673
1.9	**Net cash from / (used in) operating activities**	**40**	**(257)**

2.	**Cash flows from investing activities**		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	(8)	(8)
	(d) exploration & evaluation	(540)	(1,336)
	(e) investments	-	-

Consolidated statement of cash flows		Current quarter $A'000	Year to date (9 months) $A'000
	(f) other non-current assets	-	-
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	**Net cash from / (used in) investing activities**	**(548)**	**(1,344)**

3.	**Cash flows from financing activities**	-	-
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	1,950
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(6)	(36)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (Lease Liabilities)	-	-
3.10	**Net cash from / (used in) financing activities**	**(6)**	**1,914**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**		
4.1	Cash and cash equivalents at beginning of period	1,204	377
4.2	Net cash from / (used in) operating activities (item 1.9 above)	40	(257)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(548)	(1,344)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(6)	1,914

Consolidated statement of cash flows		Current quarter $A'000	Year to date (9 months) $A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	**Cash and cash equivalents at end of period***	**690**	**690**

**Note in addition to the cash balance above, at the end of March 2024 the Earn-in Project accounts had a total balance of $293k, of which the Fifield Project Earn-in account had a balance of $90k and the Avondale Project Earn-in account had a balance of $203k. These additional amounts are held in trust separately to Rimfire's operating bank accounts and used to pay expenditure for activity conducted within the respective project areas as it occurs.*

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter $A'000	Previous quarter $A'000
5.1	Bank balances	690	1,204
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)***	**690**	**1,204**

**Note in addition to the cash balance above, at the end of March 2024 the Earn-in Project accounts had a total balance of $293k, of which the Fifield Project Earn-in account had a balance of $90k and the Avondale Project Earn-in account had a balance of $203k. These additional amounts are held in trust separately to Rimfire's operating bank accounts and used to pay expenditure for activity conducted within the respective project areas as it occurs.*

6.	Payments to related parties of the entity and their associates	Current quarter $A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	96
6.2	Aggregate amount of payments to related parties and their associates included in item 2	9

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

7.	**Financing facilities** *Note: the term "facility' includes all forms of financing arrangements available to the entity.* *Add notes as necessary for an understanding of the sources of finance available to the entity.*	**Total facility amount at quarter end $A'000**	**Amount drawn at quarter end $A'000**
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	**Total financing facilities**	-	-

7.5	**Unused financing facilities available at quarter end**	-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.	

Not Applicable

8.	**Estimated cash available for future operating activities**	**$A'000**
8.1	Net cash from / (used in) operating activities (item 1.9)	40
8.2	(Payments for exploration & evaluation (classified as investing activities) (item 2.1(d))	(540)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(500)
8.4	Cash and cash equivalents at quarter end (item 4.6)	690
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	690
8.7	**Estimated quarters of funding available (item 8.6 divided by item 8.3)**	1.38
	Note: if the entity has reported positive relevant outgoings (i.e. a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.	

8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

No. During the Quarter there were substantial one off exploration and transaction costs (circa 150k) on 100% owned tenements. In addition, there were catch up payments made on Directors' fees and employee remuneration. The current plan for the next two quarters is to focus exploration work on our Earn In projects. The Earn In project expenditure is currently fully funded by our partner GPR.

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

During the quarter the Company received $500k from GPR. Cash calls on GPR will be substantially greater during the June 2024 quarter. Should any additional funds be required the Company has a history of successfully undertaking capital raisings during the last 15 years with its supportive shareholder base.

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Yes, please see answers to questions 8.8.1 and 8.8.2 above.

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.

Date: 30 April 2024.....

Authorised by: The Board.....
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.

2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – e.g. Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".

5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.