

Exploration Update

Highlights

- Multiple work programs focused on high-value critical minerals - nickel, cobalt, scandium and PGEs at Fifield and Avondale Projects in NSW
- 15 - hole diamond drill program targeting primary platinum + palladium (Pt + Pd - "PGEs") mineralisation within unweathered ultramafic bedrock well underway with 5 of 15 holes completed
- 19 concentrate samples from Platina Lead - Australia's largest historical area of platinum production - currently being analysed for PGE's & gold
- Metallurgical test work to investigate feasibility of recovering cobalt and/or scandium from the laterite host rock underway
- Strong pipeline of news flow over the coming weeks

Rimfire Pacific Mining (**ASX: RIM**, "Rimfire" or "the Company") is pleased to provide an update on current exploration activities underway at its Avondale and Fifield Projects, which are located 70 kilometres northwest of Parkes within the highly prospective Lachlan Orogen of central New South Wales (*Figure 1*).

Commenting on the announcement, Rimfire's Managing Director Mr David Hutton said: "Rimfire's field team continues to focus on discovering high-value critical minerals such as nickel, cobalt, scandium, and PGEs at Fifield and Avondale. With three separate work programs currently underway we are keenly awaiting the results of diamond drilling at Melrose, bulk sampling at Platina Lead, and metallurgical test work of samples from Melrose and Currajong, which will generate strong news flow to the market over the coming weeks."

Diamond drilling – PGE's, nickel, cobalt & scandium

Diamond drilling to test for primary platinum + palladium (PGEs) mineralisation hosted within ultramafic intrusive units at 6 targets (Melrose, Jack's Lookout, Gillenbine, Platina Lead, Kara Kara and Currajong) is continuing and at the time of writing, four holes (FI2397 to FI2400 – 610.4 metres) had been completed at Melrose, a fifth hole (FI2401 – 460 metres) had just been completed at Jack's Lookout and the drill rig was mobilising to the **Gillenbine Lead** (see *Figures 2, 4 and Table 1*).



RIMFIRE PACIFIC MINING LTD

ASX: RIM

"Critical Minerals Explorer"

MANAGEMENT

David Hutton
MANAGING DIRECTOR / CEO

Dr Peter Crowhurst
EXPLORATION MANAGER

Michael Love
GEOLOGICAL CONSULTANT

Paul Wright
GEOLOGICAL CONSULTANT

Greg Keane
CHIEF FINANCIAL OFFICER
and ALTERNATE DIRECTOR
for Ian McCubbing

BOARD

Ian McCubbing
CHAIRMAN

Andrew Knox
NON-EXECUTIVE DIRECTOR

Misha Collins
NON-EXECUTIVE DIRECTOR

Stefan Ross
COMPANY SECRETARY

OFFICE

Suite 142, Level 1
1 Queens Road
MELBOURNE VIC 3004

CONTACT DETAILS

David Hutton
+ 61 417 974 843

Greg Keane
+ 61 497 805 918

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

ABN: 59 006 911 744

At **Melrose (Avondale Project)**, the four drillholes intersected a pervasively serpentinised and iron altered (haematite – magnetite) sequence of ultramafic rock types (dunite – wehrlite – pyroxenite) that are fault bounded against a diorite to east and volcanoclastic sediments to the west. (see *Figures 2 – 3, and Table 1*).

Drilling also intersected a shallow flat lying ferruginous zone (overlying the ultramafic) that contains strongly anomalous nickel (Ni) – cobalt (Co) – scandium (Sc) as confirmed by Rimfire’s aircore drilling undertaken earlier on this year (see *Rimfire’s ASX Announcement dated 4 April 2022*).

- FI2163 – 12m @ 0.23% Ni, 0.11% Co, and 314ppm Sc from 9 metres,
- FI2164 – 9m @ 0.50% Ni, 0.02% Co, and 209ppm Sc from 6 metres,
- FI2174 – 12m @ 0.32% Ni, 0.12% Co, and 221ppm Sc from 3 metres,
- FI2175 – 3m @ 0.24% Ni, 0.07% Co, and 220ppm Sc from surface, and
- FI2176 – 9m @ 0.17% Ni, 0.10% Co, and 362ppm Sc from 3 metres.

Significantly the nickel – cobalt - scandium zone also contains anomalous levels of platinum (Pt) + palladium (Pd) up to 0.31 g/t Pt + Pd (see *Rimfire’s ASX Announcement dated 27 June 2022*).

The PGE mineralisation is thought to be derived from the underlying ultramafic rock types which was tested by the diamond drilling. Samples (1/2 or half core) from the four holes (352 samples) have been submitted to ALS Pty Ltd for multi element and PGE analysis with initial results expected in the coming weeks.

At **Jack’s Lookout (Fifield Project)**, drillhole (FI2401) tested the significance of a prominent magnetic anomaly which is interpreted to represent an ultramafic intrusive rock within a major north – south trending shear zone (see *Figure 2*).

FI2401 intersected a sequence of mafic intrusives, sediments and felsic porphyry. Multiple zones of structural deformation (veining and brecciation), alteration (silica – carbonate), and sulphide development (pyrite +/- sphalerite) have been observed throughout the hole.

FI2401 is currently being geologically – logged and sampled. All core samples will be submitted to ALS Pty Ltd for multi element and PGE analysis.

Following Jack’s Lookout, the diamond drill rig will test for primary PGE mineralisation within fresh ultramafic rocks underneath historic surface alluvial platinum and gold workings at the **Gillenbine Lead** and **Platina Lead** targets, both of which lie on the Fifield Project.

Platina Lead Bulk Sampling – PGE’s, gold

The Platina Lead (**Fifield Project**) was previously mined for coarse alluvial platinum and gold in the 1880’s through to the early 1900’s.

Together with the Gillenbine Lead and other Leads in the area (all of which lie on Rimfire tenements), Fifield remains Australia’s largest dedicated area for platinum production with an estimated 20,000 ounces of platinum and 6,200 ounces of gold produced during this period.

Of the leads, Platina Lead was the most important with an estimated 17,000 ounces of platinum produced at a grade of 5 to 13g/t and 4,400 ounces of gold produced at a grade of 1.5 to 4.6g/t (refer to *Geology and Mineral Deposits of Australia and Papua New Guinea – AusIMM Monograph No. 14 published 1990*).

To determine whether any remnant platinum and gold mineralisation exists within areas of previous mining, Rimfire undertook a large diameter auger (“bucket”) drill program in late 2022.

19 bulk samples (approximately 350 kg each) were obtained from the bedrock interface zone in a shallow alluvial channel that is part of an ancient stranded paleochannel at the Platina Lead (Figures 2 and 4).

Under the supervision of a specialist metallurgical consultant, each sample was processed during the June 2022 Quarter using gravity separation techniques to produce a mineral concentrate which have now been submitted to Intertek Australia in Perth, WA for analysis.

Concentrate samples are being analysed to quantify content of platinum group elements (PGE’s) such as Osmium (Os), Iridium (Ir), Ruthenium (Ru), Rhodium (Rh) and Palladium (Pd) and gold with analytical results are expected within the coming weeks.

Nickel, cobalt & scandium leaching trials

Aircore drilling undertaken by Rimfire during the March 2022 Quarter has identified significant nickel, cobalt, and scandium mineralisation within laterised (weathered) ultramafic rock types at the Melrose and Currajong targets (both on Avondale Project; See *Rimfire’s ASX Announcements dated 4th April and 8th June 2022*).

Of particular interest are the high scandium grades (e.g., FI2176 – 9m @ 0.17% Ni, 0.10% Co, and **362ppm Sc** from 3 metres) at Melrose and the high cobalt grades at Currajong (e.g., FI2285 – 34m @ 0.29% Ni, **0.15% Co**, and 101ppm Sc from 6 metres including 16m @ 0.27% Ni, **0.22% Co**, and 120ppm Sc from 8 metres).

To better understand the potential commercial significance of the material and to assist in determining next steps for both locations, Rimfire has submitted two samples from each locality to ALS Metallurgy in Perth for preliminary test work and analysis. Specifically, the test work will investigate the feasibility of recovering cobalt and / or scandium from the laterite host rock.

A 10 kg sample of PQ diamond drill core from FI2398 (9-20m) at Melrose was submitted and a 10 kg sample of aircore chips from FI2285 (8-24m) at Currajong was submitted.

Table 1 – Diamond Drillhole Specifications.

Prospect	Drill Type	Hole ID	Easting	Northing	EOH (m)	Azi°	Dip°
Melrose	DDH	FI2397	548,690	6,371,575	107.0	270	-55
“	DDH	FI2398	548,850	6,371,575	177.4	90	-60
“	DDH	FI2399	548,850	6,371,575	204.6	270	-55
“	DDH	FI2400	548,645	6,371,605	121.4	270	-55
Jacks Lookout	DDH	FI2401	544,234	6,369,193	460.0	300	-60

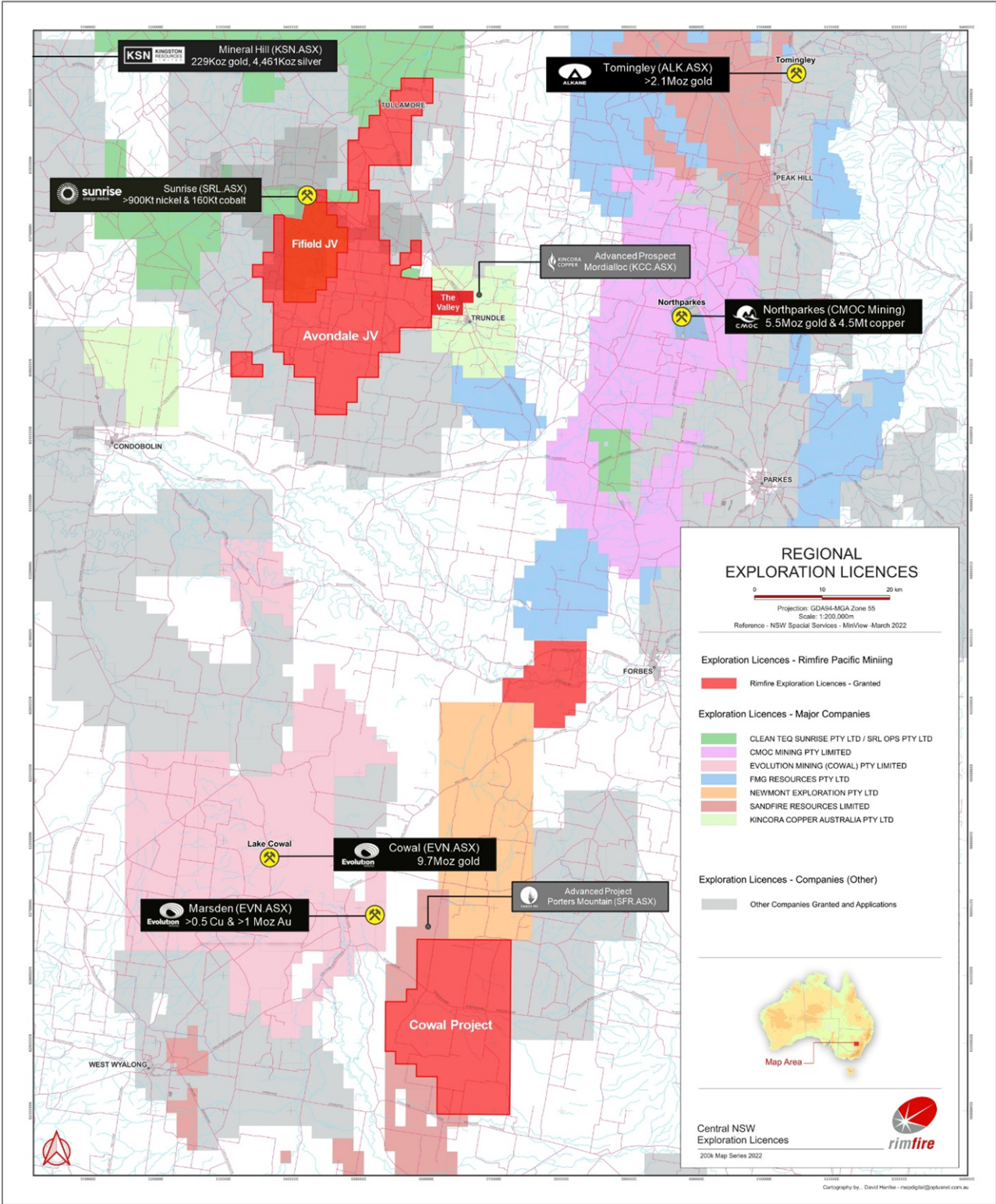


Figure 1: Rimfire Project Locations (in red) showing major competitors' active mines and key prospects.

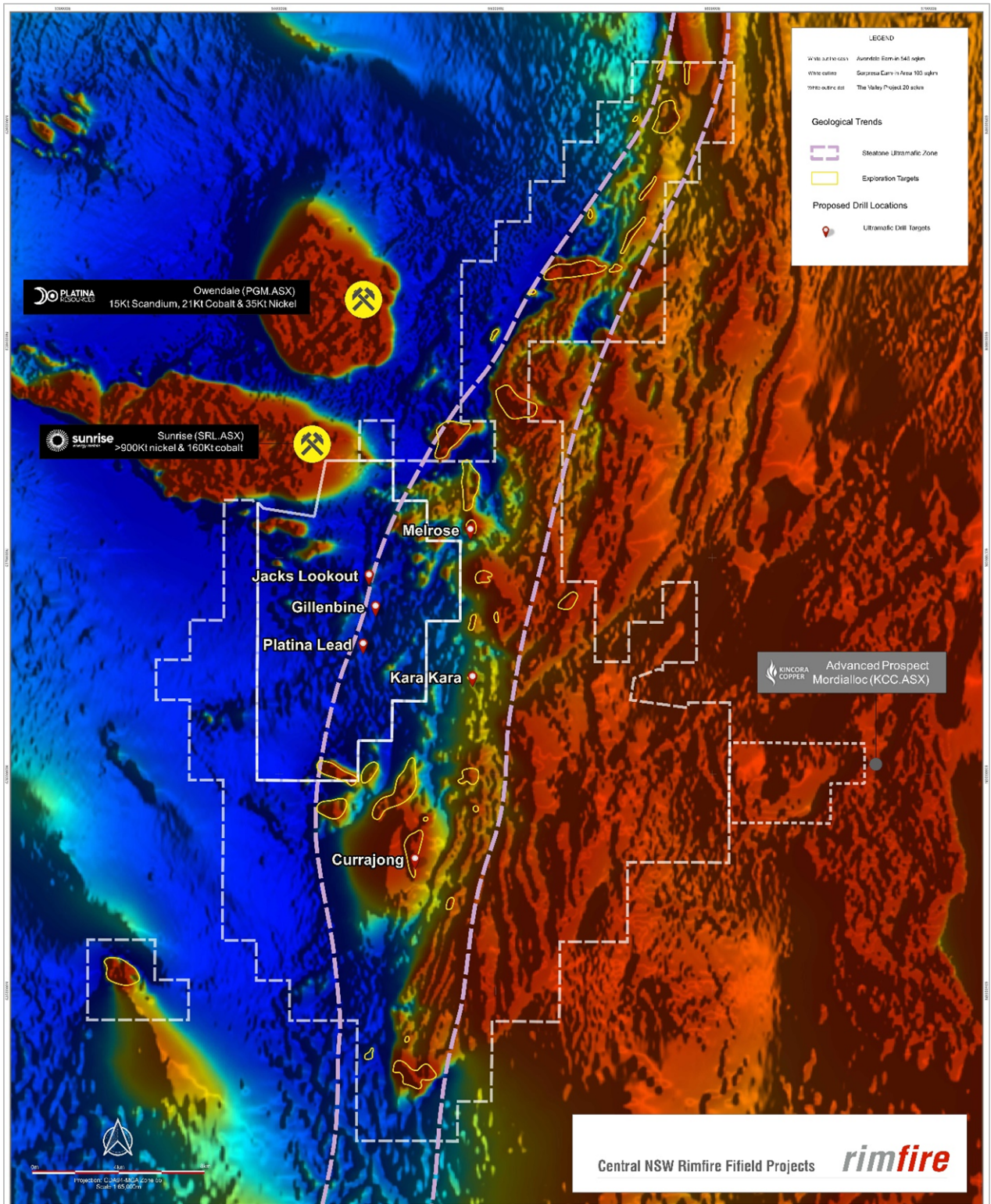


Figure 2: Rimfire's Avondale and Fifield Projects on RTP TMI background image showing Steeton Ultramafic Suture Zone, critical minerals targets (yellow polygons) and drill locations

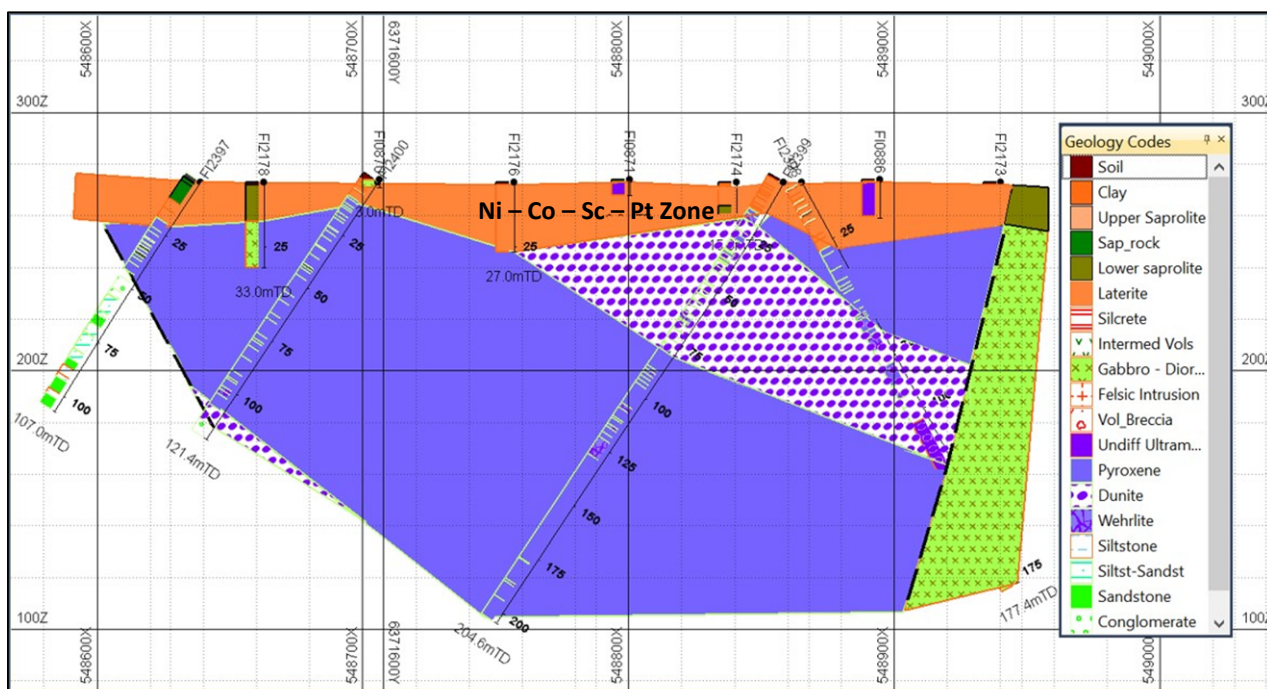
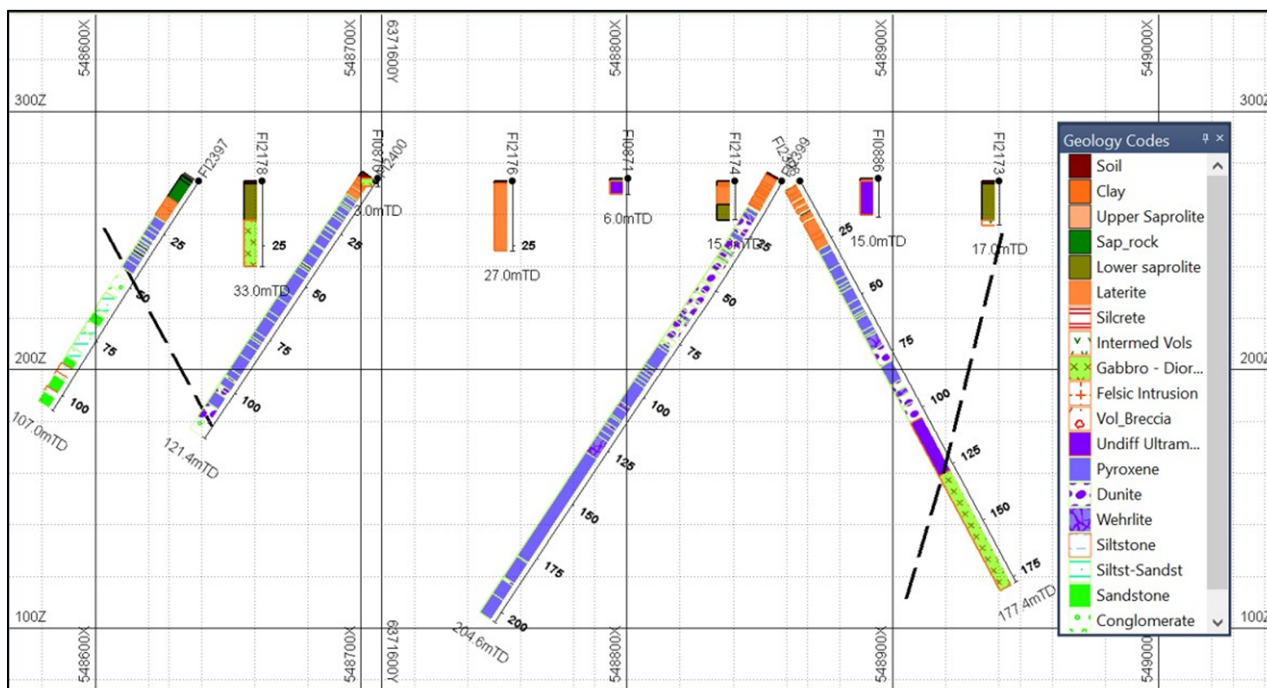


Figure 3: Melrose schematic cross section (6,371,575mN) showing drillhole traces and geology (above) and geological interpretation (below)

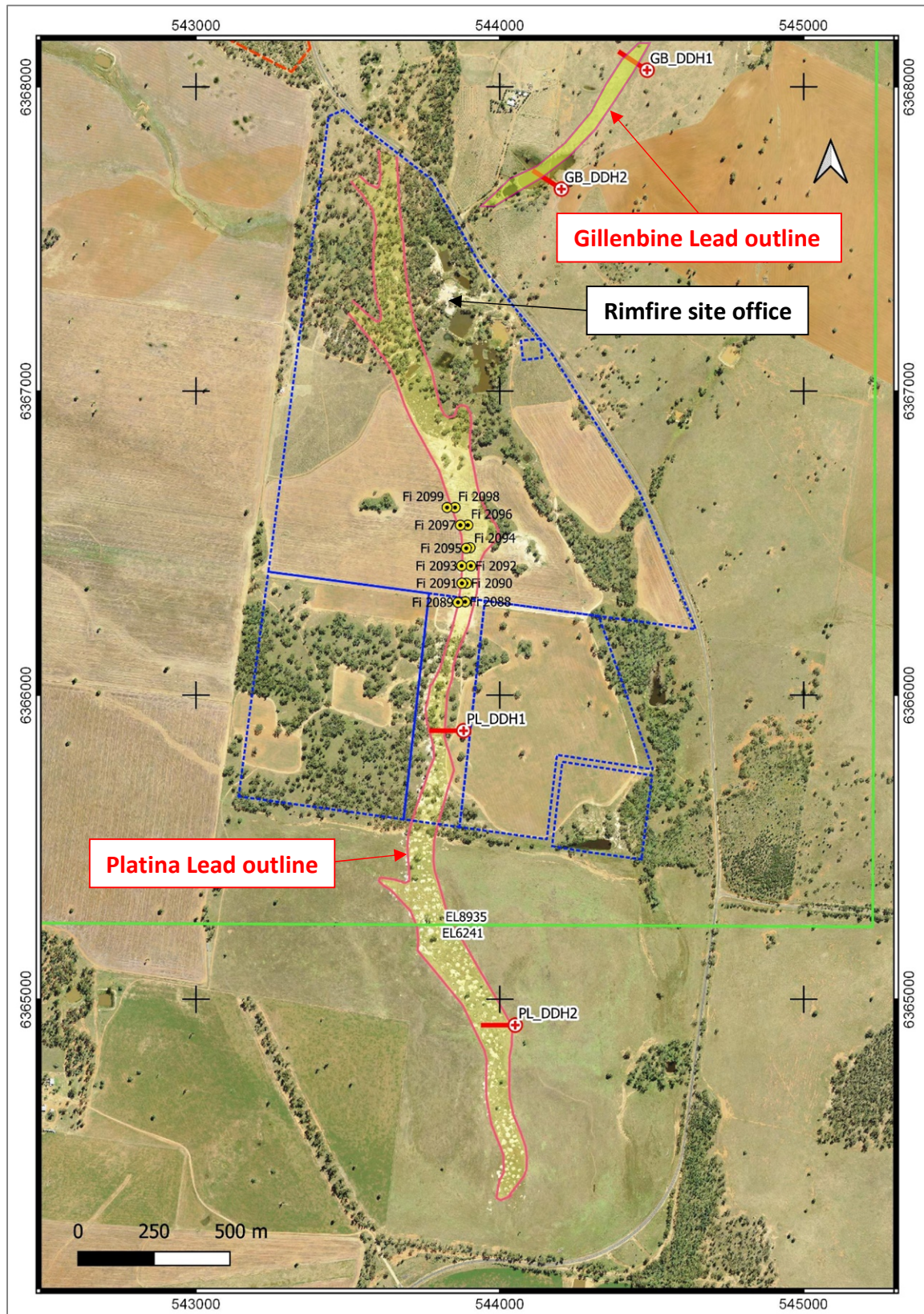


Figure 4: Aerial Photograph of the Platina and Gillenbine Leads showing location of large diameter auger (“bucket”) drillholes (Fi2088 – Fi2099) and planned diamond holes (PL_DDH1 and 2, GL_DDH1 and 2). The blue outline is the boundary of Rimfire’s 100% - owned farmland.

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

For further information please contact:

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

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

About Rimfire

Rimfire Pacific Mining Limited (ASX: RIM) is an ASX-listed exploration company focused on exploring for critical minerals within the Lachlan Orogen and Broken Hill districts of NSW.

Rimfire currently has two 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 60%)
 - ✓ Both projects are prospective for Critical Materials (PGEs, Nickel, Copper & Cobalt) - which are essential for renewable energy, electrification, and green technologies.
 - ✓ The development ready Sunrise Energy Metals Ni-Co-Sc Project (ASX: SRL) is adjacent to both projects.
 - ✓ The Fifield Project hosts the historical Platina Lead mine, the largest producer of Platinum in Australia.

For more information on the JV's see:

[ASX Announcement: 4 May 2020 - Rimfire enters into \\$4.5m Earn-in Agreement](#)

[ASX Announcement: 25 June 2021 - RIM Secures \\$7.5m Avondale Farm Out](#)

[ASX Announcement: 30 June 2022 - Rimfire to receive \\$1.5M cash to vary Fifield Project Earn In](#)

[ASX Announcement: 4 August 2022 – Exploration Partner funding update](#)

Also located in the Lachlan Orogen are two copper – gold prospective Projects that are 100% owned by Rimfire:

- The Valley Project - located 5km west of Kincora Copper / RareX's Mordialloc porphyry copper-gold discovery (KCC.ASX and REE.ASX), and
- The Cowal Project - located to the east of Evolution's Lake Cowal Copper / Gold mine (EVN: ASX)

Rimfire also has the 100% - owned Broken Hill Cobalt Project which is located immediately west of Broken Hill and covers the interpreted along strike extension to Cobalt Blue Holdings' Railway Cobalt Deposit (COB: ASX).

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 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.

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