

Broad gold zones drilled at Jack’s Lookout, Fifield NSW

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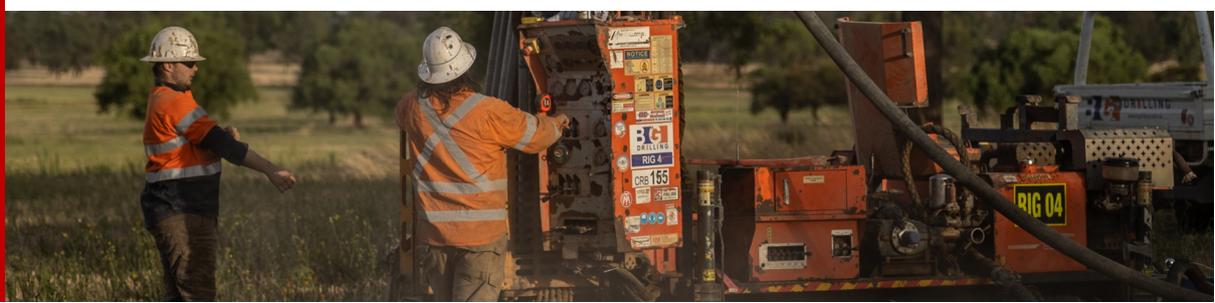
Highlights

- Diamond drill hole FI2401 at Jack’s Lookout has intersected broad zones of strong gold (+/- silver and zinc) anomalism 1km east of Sorpresa Gold-Silver Deposit including;
 - 5m @ 3.23g/t gold, 24g/t silver from 320 metres
- The new gold intercepts lie 600m downdip of Sorpresa within the same host rocks and significantly enhance the gold silver potential of the Fifield area
- Sorpresa hosts a 2012 JORC Code compliant Total Combined Resource of 1.519Mt @ 1.52g/t gold and 70g/t silver (74.3Koz gold and 3.44Moz silver) and remains open in all directions
- Rimfire will undertake geological modelling of FI2401 to determine location of follow up drilling at Jack’s Lookout,
- Drilling to be undertaken in conjunction with drilling at Platina Lead, Currajong, and Melrose prospects

Rimfire Pacific Mining (ASX: RIM, “Rimfire” or the “Company”) is pleased to advise that a diamond hole (FI2401) drilled at the Jacks Lookout target has intersected broad zones of strong gold anomalism 1 kilometre east of the Sorpresa Gold Silver Deposit.

FI2401 was drilled as part of a larger 3,000 metre drill program targeting primary platinum + palladium (PGEs) mineralisation within ultramafics at the Company’s Fifield and Avondale Earn In Projects in central New South Wales (Figures 1 and 2).

Commenting on the announcement, Rimfire’s Managing Director Mr David Hutton said: *“Drilling at Jack’s Lookout was undertaken as part of a detailed search for the source of the alluvial gold and PGEs at Platina Lead. The latest gold results are a pleasant surprise and significantly enhance the gold and silver potential of the Fifield area. Further drilling is planned and Rimfire looks forward to providing further updates as latest information comes to hand.”*



Jack's Lookout lies adjacent to the Platina Lead which was previously mined for coarse alluvial platinum and gold in the 1880's through to the early 1900's and together with other Leads in the area (all of which are on Rimfire tenure) 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 (*Figure 3*).

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

FI2401 was specifically drilled to test a prominent magnetic anomaly located immediately north of the Platina Lead workings that was originally interpreted to represent an ultramafic intrusive body potentially prospective for PGEs.

Instead of intersecting an ultramafic intrusive unit, FI2401 intersected a magnetic mafic intrusive (monzodiorite) before passing into a heavily veined and brecciated sequence of siliceous and sulphidic (pyrite – sphalerite – galena) carbonaceous shales (*Figure 4*). The hole was originally planned to be drilled to 250 metres was extended to a final depth of 450 metres due to the abundance of sulphides encountered in the drill core, particularly sphalerite and arsenopyrite both known to be closely related to Sorpresa gold silver mineralisation.

Assaying of the drillhole has returned broad zones of strong gold (+/- silver and zinc) anomalism within the siliceous and sulphidic carbonaceous sediments (*Table 1*);

- 13m @ 0.12g/t gold from 226 metres in FI2401
- **5m @ 3.23g/t gold and 24g/t silver from 320 metres in FI2401**
- 61m @ 0.14g/t gold from 355 metres in FI2401 *including 21m @ 0.18g/t gold, 0.21% zinc from 355 metres, 8m @ 0.23g/t gold, 0.17% zinc from 382 metres, and 17m @ 0.14g/t gold from 399 metres*

Significance of the drill hole result and Next Steps

The drill results are significant given that the siliceous and sulphidic carbonaceous shale unit that hosts the gold (+/- silver and zinc) anomalism at Jack's Lookout is the same rock unit (the "Sorpresa Beds") that hosts the Sorpresa Gold Silver Deposit, which lies 1 kilometre west of Jack's Lookout.

Sorpresa hosts a 2012 JORC Code compliant Total Combined Resource (*1g/t gold and 85g/t silver cut off*) of 1.519Mt @ 1.52g/t gold and 70g/t silver (74.3Koz gold and 3.44Moz silver) and remains open in all directions (*see Rimfire ASX Announcement dated 6 November 2019*).

As shown in *Figure 5*, the mineralised Sorpresa Beds dip to the east and continue for another 600 metres east and down dip of Sorpresa to the Jack's Lookout drillhole FI2401. Apart from one

shallow historic reverse circulation drillhole and surface auger drilling, the 600 metre “gap” between the two locations is effectively untested.

Recognition of the Sorpresa Beds at Jacks Lookout expands the known extent of gold and silver - prospective host rocks at Fifield and significantly increases the exploration search space for identification of extensions to the existing Sorpresa deposit and / or new gold silver discoveries within the area.

It is also possible that Sorpresa and Jacks Lookout are the source of the alluvial gold mineralisation previously mined at the Platina Lead given their proximity.

Rimfire is currently undertaking geological modelling of the Fifield area to assist in planning further diamond drilling to follow up the FI2401 results. Drilling will be undertaken in conjunction with other holes planned for the Platina Lead, Currajong and Melrose targets and is scheduled to commence early in the March 2023 Quarter once ground conditions improve.

As announced in Rimfire’s September 2022 Quarterly Activities Report diamond drilling at Fifield is currently suspended due to continued wet weather, localised flooding, and adverse ground conditions throughout the project area.

Table 1 – Jack’s Lookout diamond drill hole specifications and intercepts

Hole ID	Easting	Northing	EOH (m)	Azi°	Dip°	From	Width	Gold_g/t	Silver_g/t	Zinc_%
FI2401	544,234	6,6369,193	450	300	-60	226	13	0.12	-	-
“	“	“	”	”	-”	320	5	3.23	24	-
“	“	“	”	”	-”	355	61	0.14	-	-
<i>including</i>						355	21	0.18	-	0.21
<i>and</i>						382	8	0.23	-	0.17
<i>and</i>						399	17	0.14	-	-

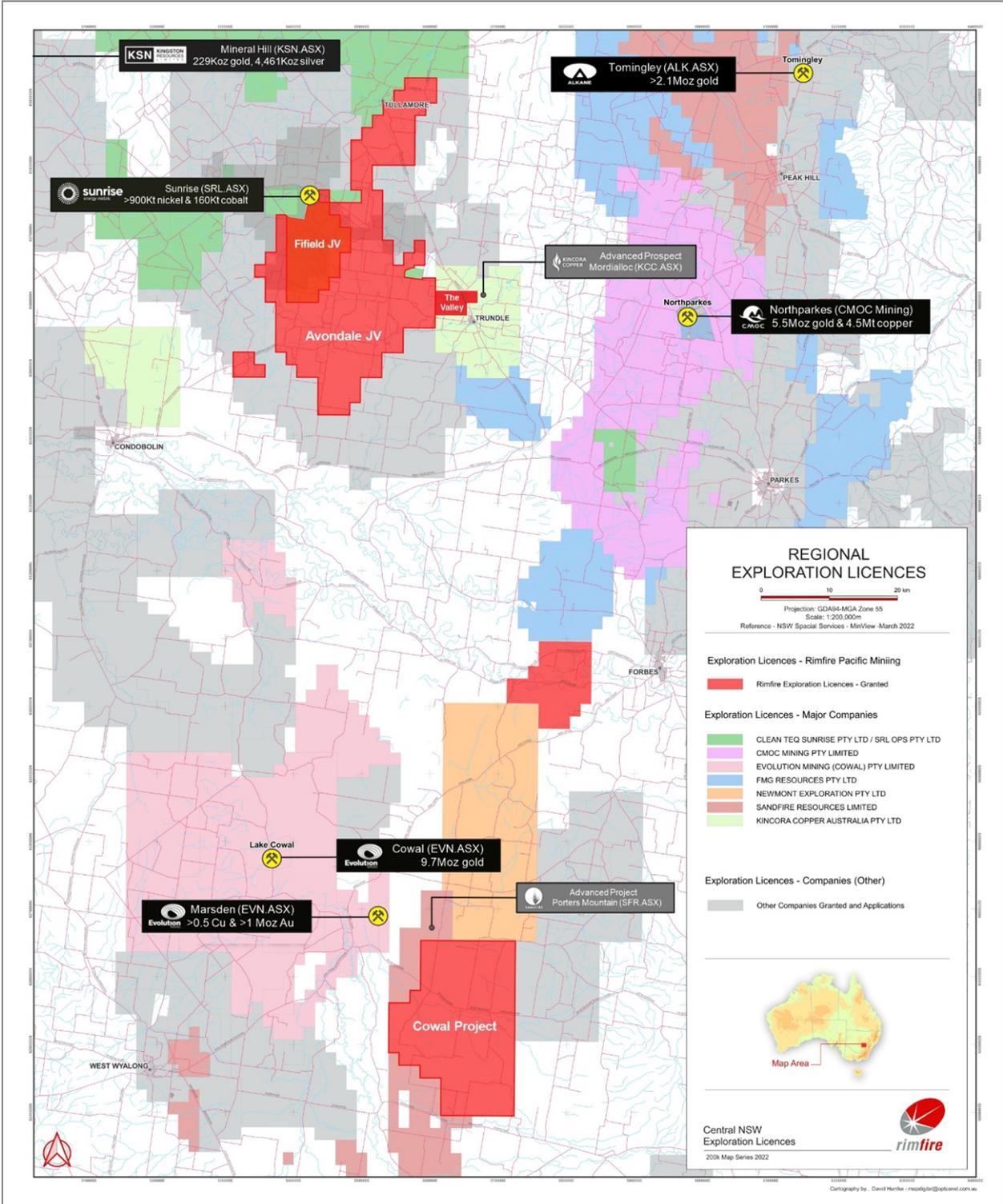


Figure 1: Rimfire Project Locations (in red) showing major competitors' active mines and key prospects.

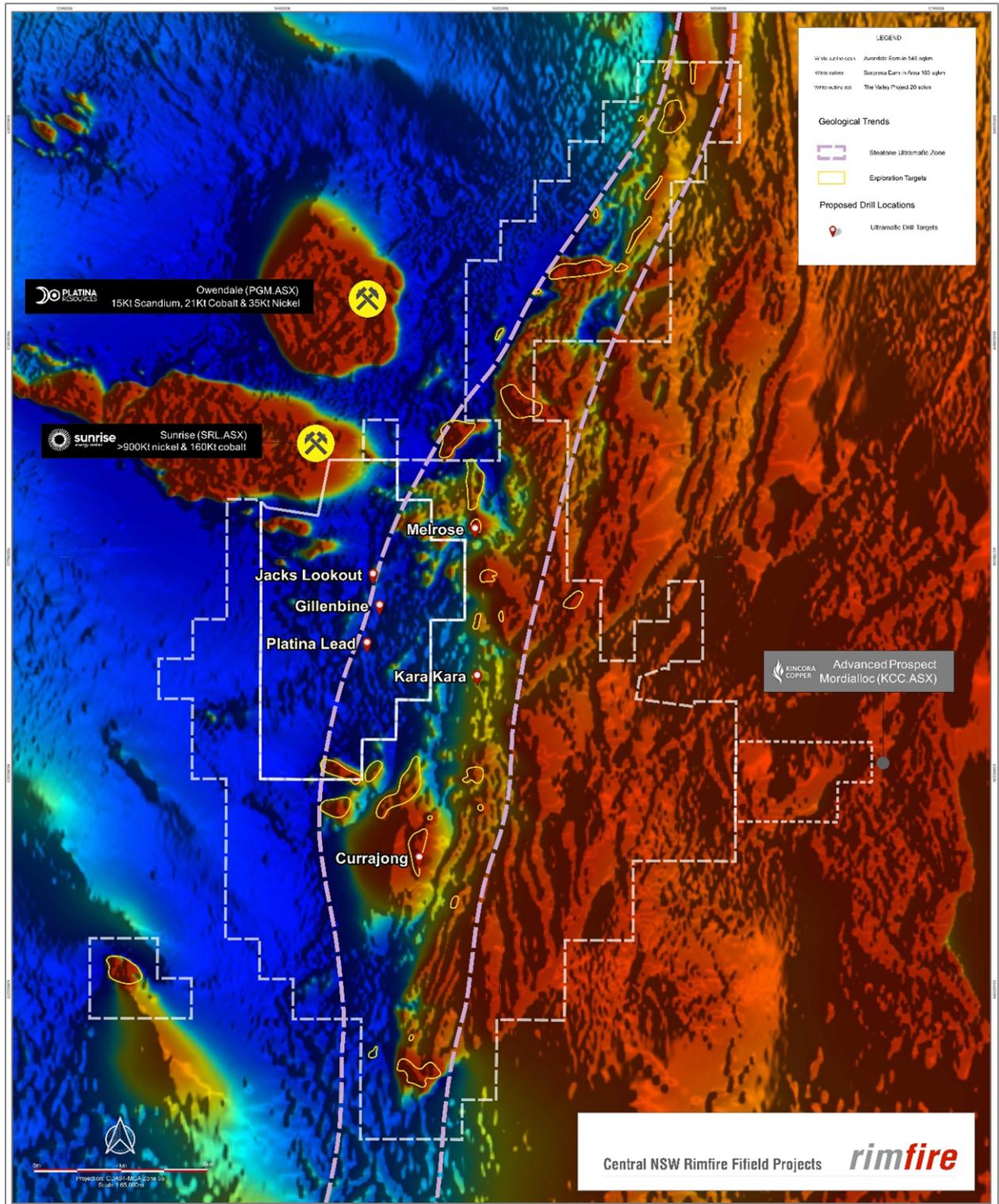


Figure 2: Rimfire’s Avondale and Fifield Projects on RTP TMI background image showing drill locations

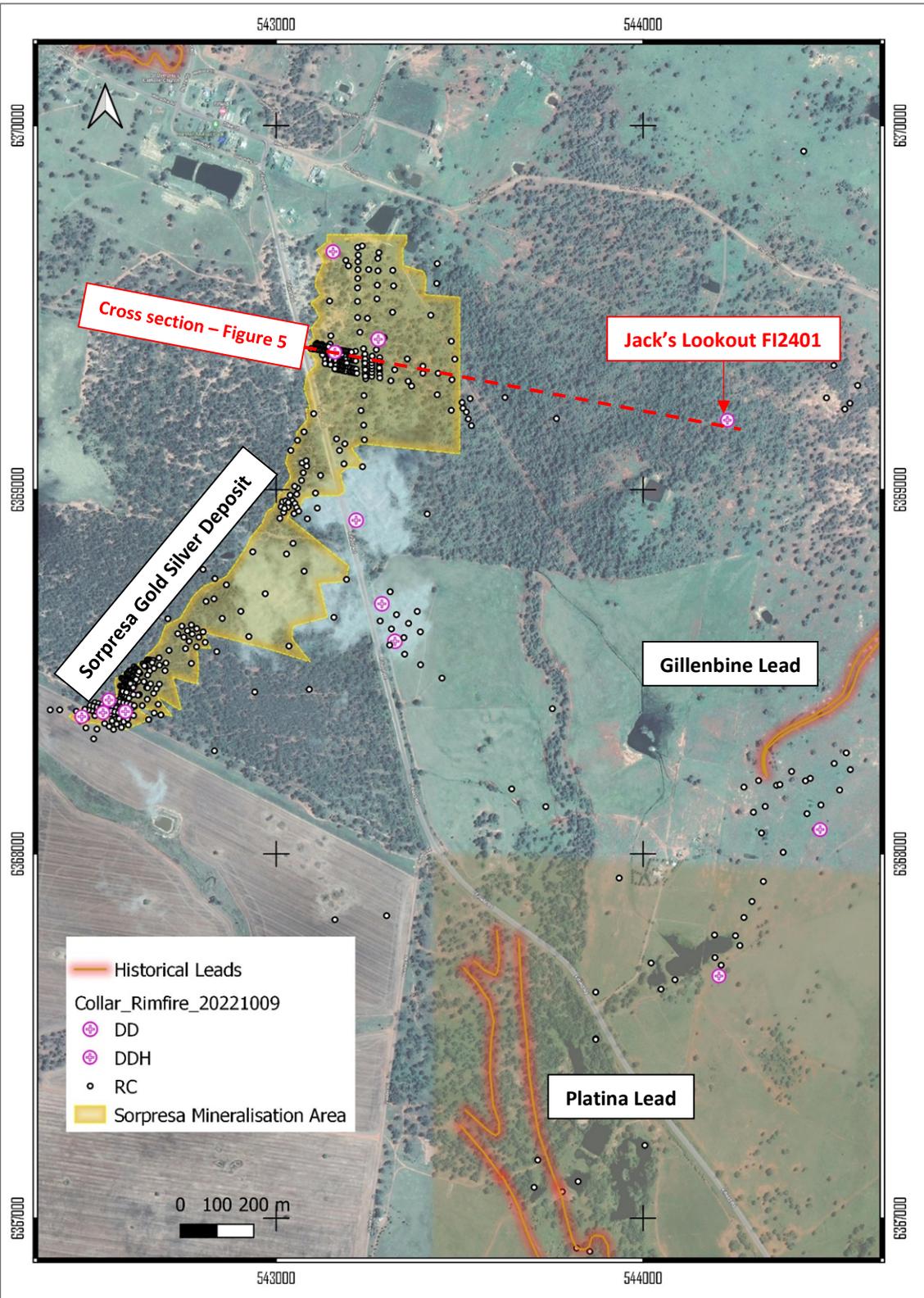


Figure 3: Sorpresa, Jacks Lookout, Platina Lead and Gillenbine Lead locations on aerial photograph background

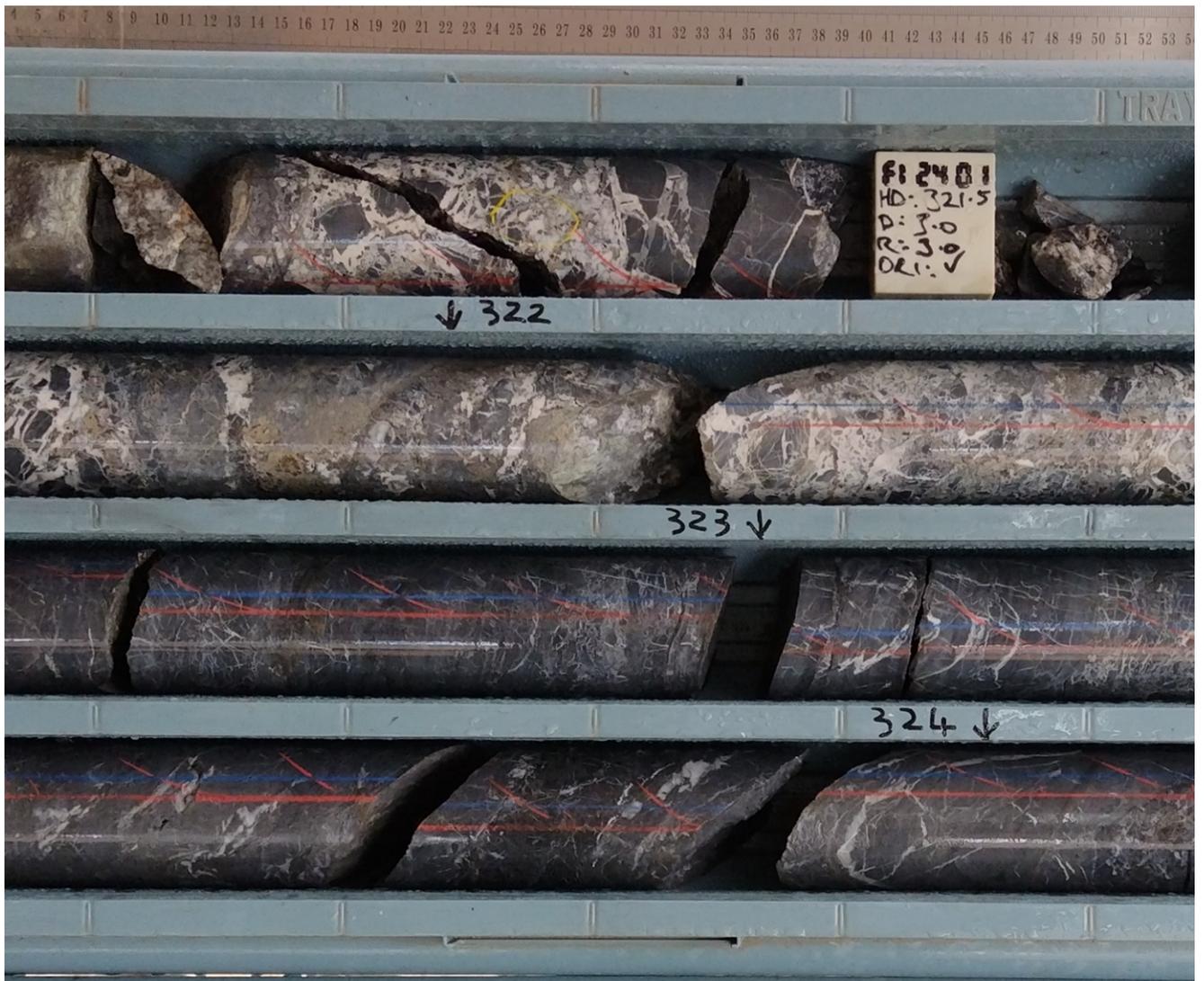


Figure 4: Close up of FI2401 diamond drill core with gold mineralised carbonaceous shale (“Sorpresa Beds”) (322 to 324 metres)

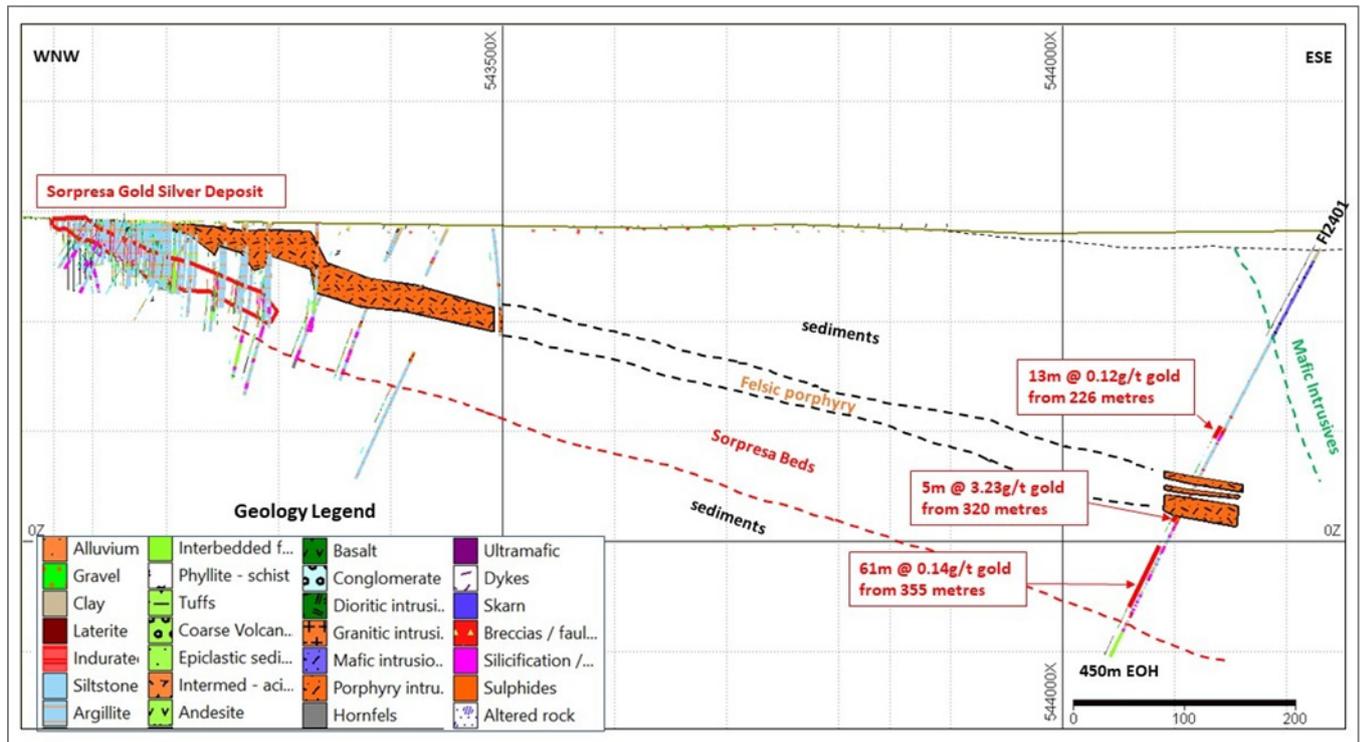


Figure 5: Sorpresa to Jack's Lookout cross section (showing Sorpresa Gold Silver Deposit in red outline, interpreted geology and gold intercepts)

JORC Reporting

Table 2: JORC Code Reporting Criteria

Section 1 Sampling Techniques and Data – Diamond Drilling

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). These examples should not be taken as limiting the broad meaning of sampling.	This ASX Announcement details diamond drilling undertaken by Rimfire Pacific Mining Limited during June – July 2022 at the Jack’s Lookout Prospect. Each diamond drillhole was geologically logged and photographed. Each diamond hole was cut, and half core samples were collected and submitted to ALS Orange for analysis for precious metals (Au, Pt, Pd) using ALS method PGM MS23L and base metals (Ni, Co, Sc) using ALS methods ME-XRF12n and ME-ICP61.
	Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.	To ensure sample representivity, the entire drillhole has been cut and sampled for analysis. Blank samples and reference standards were inserted into the sample sequence for QA/QC.
	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.	To ensure sample representivity, and because the geology of each drilling location is largely unknown (due to no previous drilling beneath the base of weathering), the entire drillhole has been cut and sampled for analysis. Industry standard preparation and assay is conducted at ALS Pty Ltd in Orange, NSW, including sample crushing and pulverising prior to subsampling for an assay sample.
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).	All new drillholes reported in this ASX Announcement are diamond drill holes, the specifications of which are included in Table 1.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	For the diamond drilling reported in this ASX Announcement, rock quality and core recovery details were included in the geological logging procedure. All diamond drill core was photographed as well.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	To ensure sample representivity, and because the geology of each drilling location is largely unknown (due to no previous drilling beneath the base of weathering), the entire drillhole has been cut and sampled for analysis.

Criteria	JORC Code explanation	Commentary
	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.	It is not known whether a relationship exists between sample recovery and grade.
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.	Core samples were geologically and geochemically logged to a level of detail sufficient to support appropriate Mineral Resource estimation, although that was not the objective of the diamond drilling outlined in this ASX Announcement. All diamond drill core was photographed.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geological logging of diamond drill core is largely qualitative by nature.
	The total length and percentage of the relevant intersections logged.	Relevant intersections have been geologically logged in full.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Each diamond drillhole was geologically logged and photographed. Each diamond hole was cut, and half core samples were collected and submitted to ALS Orange for analysis.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Not Applicable as only core samples were obtained from the diamond drilling.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	For the diamond drilling, half core samples were collected and submitted to ALS for sample preparation and analysis using industry standard and appropriate techniques.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	To maximise representativity of samples, individual half core samples were collected every metre throughout the entire length of the drillhole.
	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.	To ensure that sampling is representative of the in-situ material, individual half core samples were collected every metre throughout the entire length of the drillhole. Additionally retained half core can be subsequently resampled (1/4 core) to verify initial results if needed.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes (typically ~ 2kg) of half core are considered appropriate to the grainsize of material being sampled.
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.	The methods used by ALS to analyse the half core samples for precious and base metals are industry standard. The ME-ICP61 method is a partial technique while the XRF12n method (used for the diamond drill results in this Report is considered to be total technique.
	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.	Not applicable as no geophysical tools were used or results of using geophysical tools were included in this Report.
	Nature of quality control procedures adopted	Certified standards were submitted along half

Criteria	JORC Code explanation	Commentary
	(e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	core samples to the laboratory.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The significant intersections including in this Report have been verified by both Rimfire's Exploration Manager and Managing Director.
	The use of twinned holes.	Not applicable as no twinned holes drilled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Sampling data was recorded on field sheets at the sample site. Field data was entered into an excel spreadsheet and saved on Cloud server. Geological logging was recorded directly in LogChief program during drilling and backed up on Cloud server. Assay results are typically reported in a digital format suitable for direct loading into a Datashed database with a 3 rd party expert consulting group.
	Discuss any adjustment to assay data.	There has been no adjustment to assay data.
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.	Sample locations are recorded using handheld Garmin GPS 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 diamond drillholes discussed in this Report are given in Table 1 and various figures of this Report
	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 and distribution of diamond drilling referred to in this Report 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.	Sample compositing has not been applied.
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.	Not Applicable as no sample compositing has been applied.
	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.	The relationship between the drilling orientation and the orientation of key mineralised structures is considered not to have introduced a sampling bias.
Sample security	The measures taken to ensure sample security.	Samples double bagged and delivered directly to the laboratory by company personnel.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The sampling techniques and 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 EL8935 which is wholly - owned by Rimfire Pacific Mining Limited. The tenement forms part of the Company's Fifield Project which is subject to an Earn In and Joint Venture Agreement with Golden Plains Resources Pty Ltd (GPR) whereby GPR can earn up to a 60% interest All samples were taken on Private Freehold Land. No Native Title exists. 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.	The Jacks Lookout Prospect where the diamond drilling was conducted has not been previously explored by third parties.
Geology	Deposit type, geological setting and style of mineralisation.	The target area lacks geological exposure, and available information suggests the bedrock geology across the prospect area is dominated by shallowly – dipping sediments which have been structurally deformed and altered. Gold mineralisation occurs within a carbonaceous shale unit and has been emplaced as a result of hydrothermal activity.
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: <ul style="list-style-type: none"> • 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 drillhole specifications are included within Table 1 of this ASX Announcement. All collar locations are shown on the figures included with 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.	Not applicable as no drill hole information has been excluded.
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.	A lower cut-off grade of 0.1g/t gold (100 ppb gold) has been used in determining the reported intercepts. No top cuts have been used.

Criteria	JORC Code explanation	Commentary
	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.	Length weighting has not been applied because all samples were of equal length.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been reported.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the Reporting of Exploration Results.	The drill results included in this Report occur within a shallow – dipping zone and given all the diamond drill holes are angled, the significant intercepts are considered to represent downhole widths.
	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
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.	All results are included in this Report.
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).	Planned further is discussed in the document in relation to the exploration results.
	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

About Rimfire

Rimfire Pacific Mining Ltd (ASX: RIM) is an ASX-listed exploration company focused on exploring for critical minerals (nickel, cobalt, scandium, copper, gold, and PGEs) within the Lachlan Orogen and Broken Hill districts of NSW.

The Company has two 100% - owned copper – gold prospective projects that are located west of Parkes and Orange in central New South Wales:

- 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 and northwest of Broken Hill and covers a number of targets including the interpreted along strike extension to Cobalt Blue Holdings' Railway Cobalt Deposit (COB: ASX).

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 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 Avondale and Fifield Earn In and Joint Venture Agreements 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](#)

ENDS

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

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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.

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".