

## Assays Confirm Cobalt at Bald Hill

### Highlights

- **First assay results from recent 3-hole diamond drilling program at Bald Hill returns strong cobalt (Co) drill intercept in sulphides;**
  - **33m @ 0.11% Co from 58m in FI2469 including 4m @ 0.23% Co, and 2m @ 0.21% Co**
- **FI2469 confirms historic intercept in adjacent 1981 drill hole BHR1A;**
  - **58m @ 0.10% Co from 48m including 7m @ 0.17% Co, 6m @ 0.15% Co, and 6m @ 0.15% Co**
- **Bald Hill lies 10 kilometres northwest of Cobalt Blue’s (ASX: COB) advanced Broken Hill Cobalt Project**
- **Assay results for remaining two drill holes which also intersected extensive zones of sulphides expected early - September**

Rimfire Pacific Mining (ASX: RIM, “Rimfire” or “the Company”) is pleased to advise that assay results from the first of three diamond holes recently drilled at the 100% - owned Bald Hill cobalt target has confirmed cobalt mineralisation in sulphides with the following strong intercept;

- **33m @ 0.11% Co from 58m in FI2469 including 4m @ 0.23% Co from 70 metres, and 2m @ 0.21% Co from 83 metres.**

**Commenting on the announcement, Rimfire’s Managing Director Mr David Hutton said:** *“The confirmation of cobalt in sulphides is a great start to our exploration program at Bald Hill and strengthens Rimfire’s growing portfolio of critical mineral projects.*

*With focused exposure to copper, nickel, cobalt, scandium, and PGEs, Rimfire is well placed to deliver shareholder value in this sector.*

*Assay results from the remaining two holes at Bald Hill which both intersected extensive zones of sulphides, are expected early September and Rimfire looks forward to providing updates as information comes to hand.”*

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## Bald Hill discussion

Rimfire's 100% - owned Bald Hill cobalt target is located approximately 30 kilometres west of Broken Hill in NSW and 10 kilometres northwest of Cobalt Blue's (ASX: COB) advanced Broken Hill Cobalt Project – *Figure 1*).

3 diamond holes (FI2469 – FI2471 / 635.6 metres) were recently drilled by Rimfire to validate and confirm the geological setting of cobalt mineralisation previously intersected in wide spaced historic percussion drilling at Bald Hill (*Figure 2*).

To minimise environmental disturbance all three Rimfire diamond holes were drilled as angled holes from an existing drill pad that was originally used to drill BHR1A in 1981.

As detailed in previous Rimfire ASX Announcements (*dated 28 June and 20 July 2023*), each Rimfire drillhole intersected extensive zones of strongly disseminated to semi massive sulphide (pyrite, pyrrhotite and trace chalcopyrite + sphalerite) mineralisation within an intercalated sequence of quartz – albite – pyrite gneiss, amphibolite, and psammopelitic composite gneiss which is underlain in parts by a (non-mineralised) quartz – feldspar – biotite gneiss unit.

Historical geology mapping of Bald Hill suggests that the units have been complexly folded on a regional scale by a series of south-plunging fold hinges which may have structurally “thickened” the rock units and remobilised sulphides within the prospect area.

Assaying of half core samples from FI2469 has confirmed cobalt mineralisation in sulphides with the following strong intercept (*see Table 1 and Figures 3 - 4*);

- **33m @ 0.11% Co from 58 metres including 4m @ 0.23% Co from 70 metres, and 2m @ 0.21% Co from 83 metres.**

As shown on *Figure 3*, FI2469 was drilled to confirm the historic intercept in drillhole BHR1A;

- **58m @ 0.10% Co from 48 metres including 7m @ 0.17% Co from 63 metres, 6m @ 0.15% Co from 81 metres, and 6m @ 0.15% Co from 95 metres.**

BHR1A and FI2469 are interpreted to have drilled into the same south plunging fold hinge while FI2470 and FI2471 were drilled either side of BHR1A. Due to the structural complexity of the prospect area, the nature of the geological relationship between FI2470 and FI2469 is unknown at this stage. Assay results for FI2470, once received, combined with detailed geological logging and surface mapping will enable Rimfire's geologists to better understand the geological relationship between the holes. (*Figure 4*).

Assay results for both FI2470 and 2471 are expected to be received early September 2023.

Bald Hill is located 10 kilometres northwest of Cobalt Blue's (ASX: COB) Broken Hill Cobalt Project which hosts a Total (Measured Indicated and Inferred) Resource inventory of 118Mt @

0.086% (859ppm) cobalt equivalence (687ppm cobalt, 7.6% sulphur and 133 ppm nickel) for 81.1Kt contained cobalt (*Cobalt Blue Mineral Resource Estimate dated 16 September 2021*).

Cobalt deposits at the Broken Hill Cobalt Project are characterised by moderate to steep dipping stratabound zones of disseminated to semi-massive cobaltiferous pyrite mineralisation. This forms 3 distinct bodies known as Pyrite Hill, Big Hill, and Railway.

### Next Steps

At the time of writing, half core samples (447 samples) from FI2470 and FI2471 were being analysed by ALS Pty Ltd with assay results expected early September 2023.

In anticipation of further positive drill results and to assist in planning further drilling, Rimfire is preparing to undertake a detailed ground magnetic survey at Bald Hill (to assist with refining the geological model) along with a heritage assessment of the area.

Rimfire looks forward to providing further updates as new information comes to hand.

**Table 1: Bald Hill – Rimfire Diamond drilling specifications (GDA94\_Zone 54)**

Hole_ID	Easting	Northing	Azi°	Dip°	EOH_metres	From	Width	Cobalt %	Cobalt ppm
FI2469	513,422	6,459,751	25	-61	169.9	58.0	33	0.11	1,148
<i>Including</i>						70.0	4	0.23	2,300
<i>and</i>						83.0	2	0.21	2,075
FI2470	513,425	6,459,749	110.5	-56	336.2	Assays Awaited			
FI2471	513419	6459753	328.8	-71	129.5	Assays Awaited			

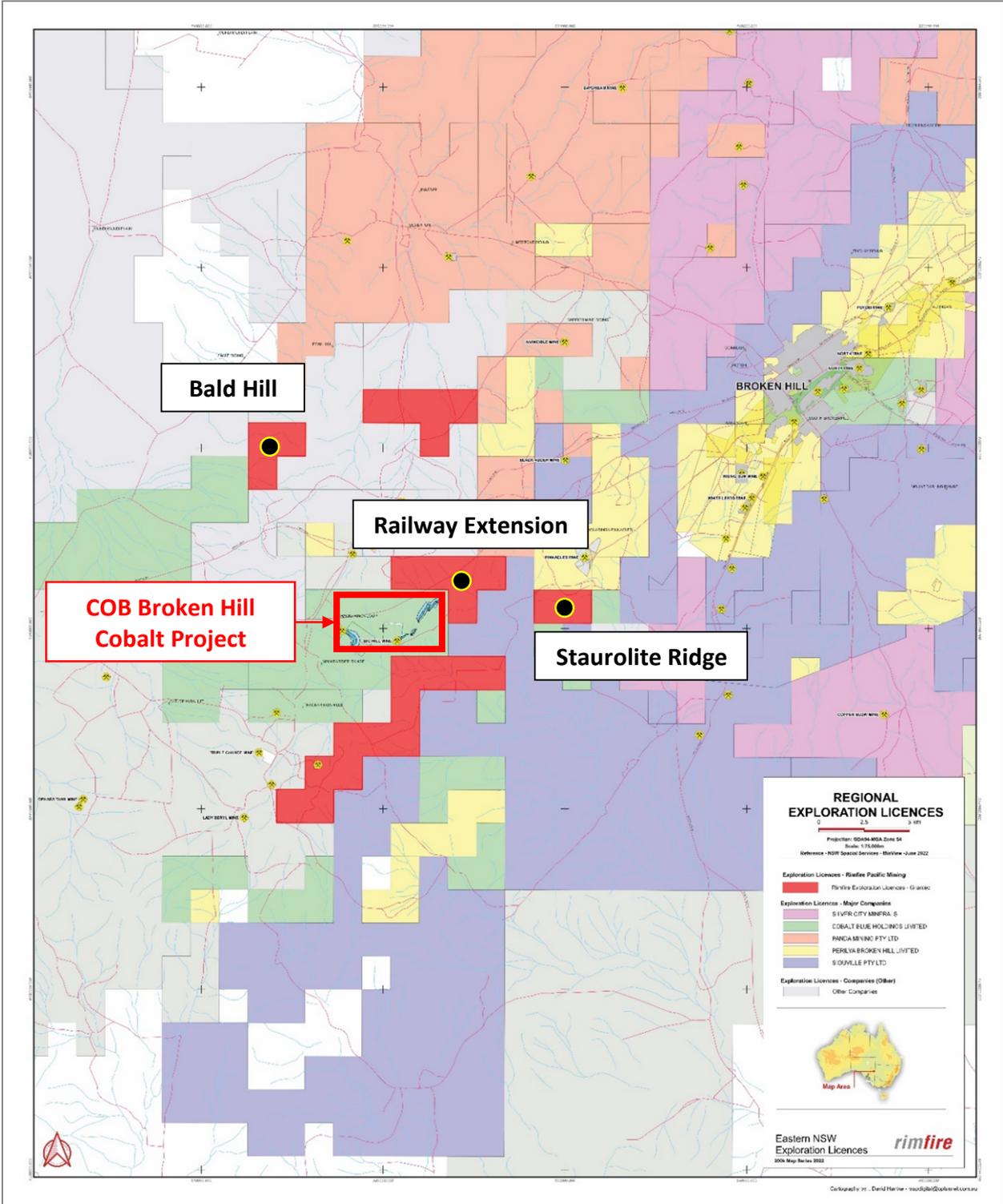


Figure 1: Rimfire Broken Hill tenement (red blocks), regional tenement holders and target locations

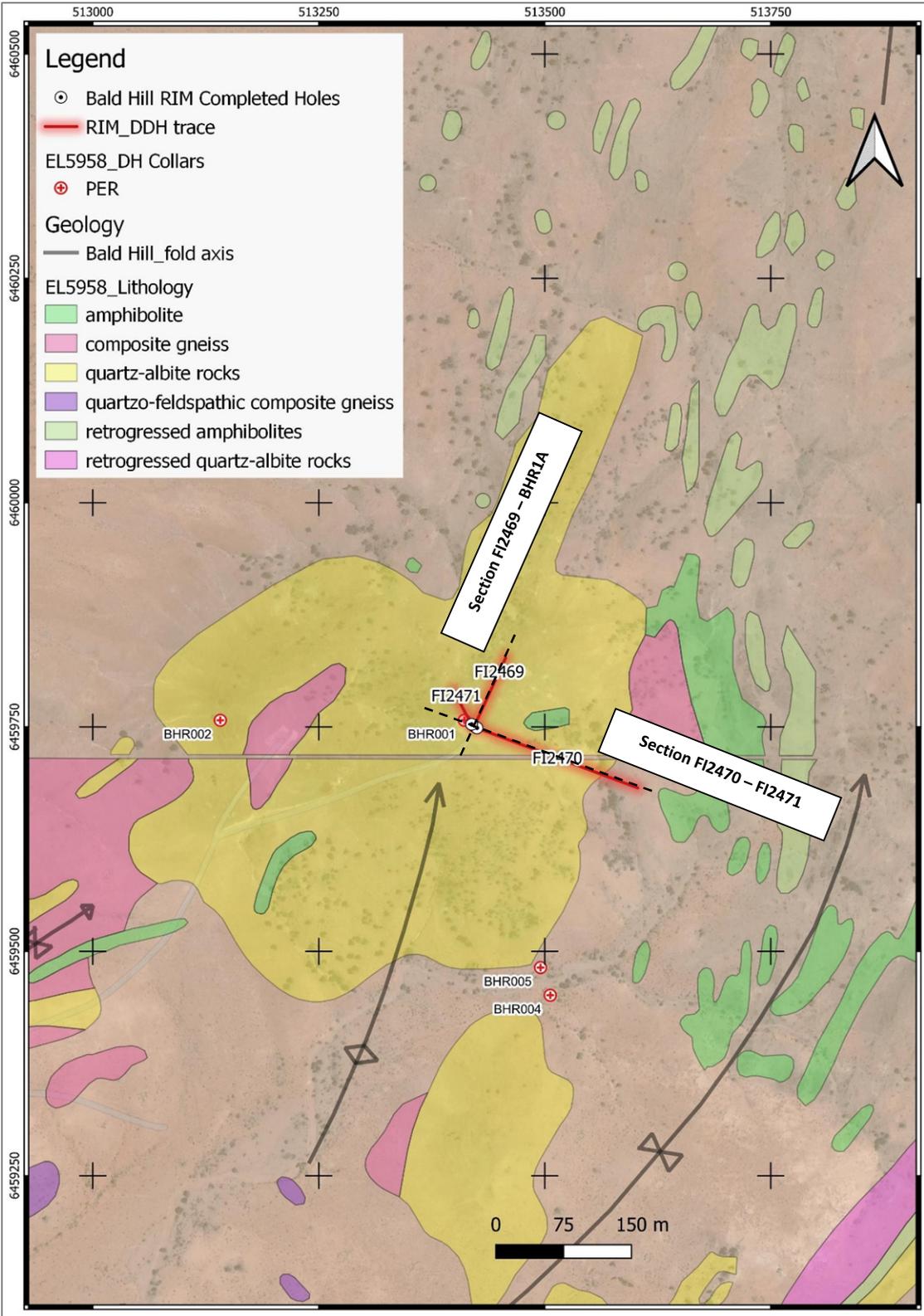


Figure 2: Bald Hill collar locations showing recent Rimfire holes (FI2469 to FI2471) in red

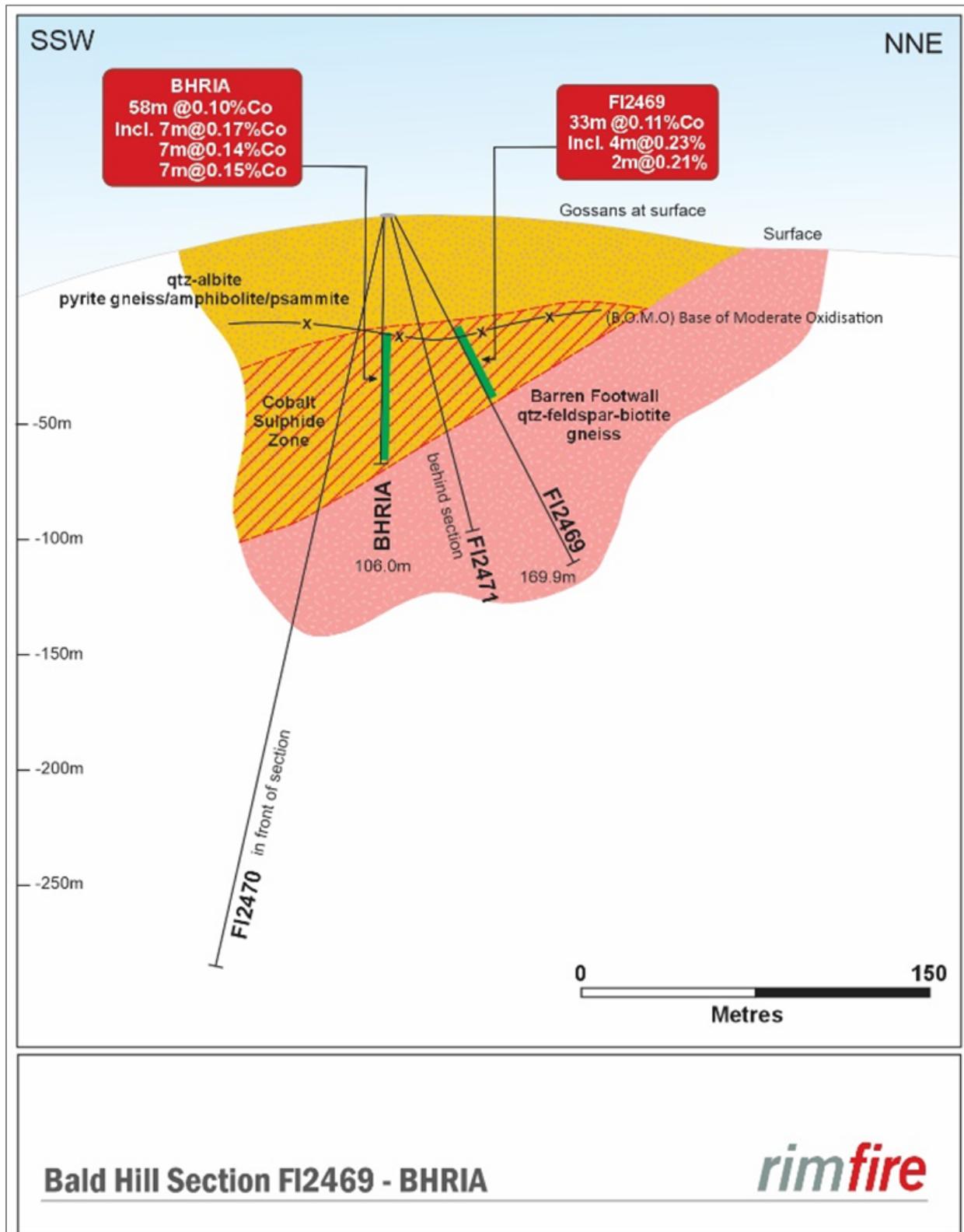


Figure 3: Bald Hill cross section looking to NW. The section shows geological rock types for Rimfire drillholes FI2469 and BHR1A, noting that FI2470 is in front of the section and FI2471 is behind the section. Refer to Figure 2 for section locations.

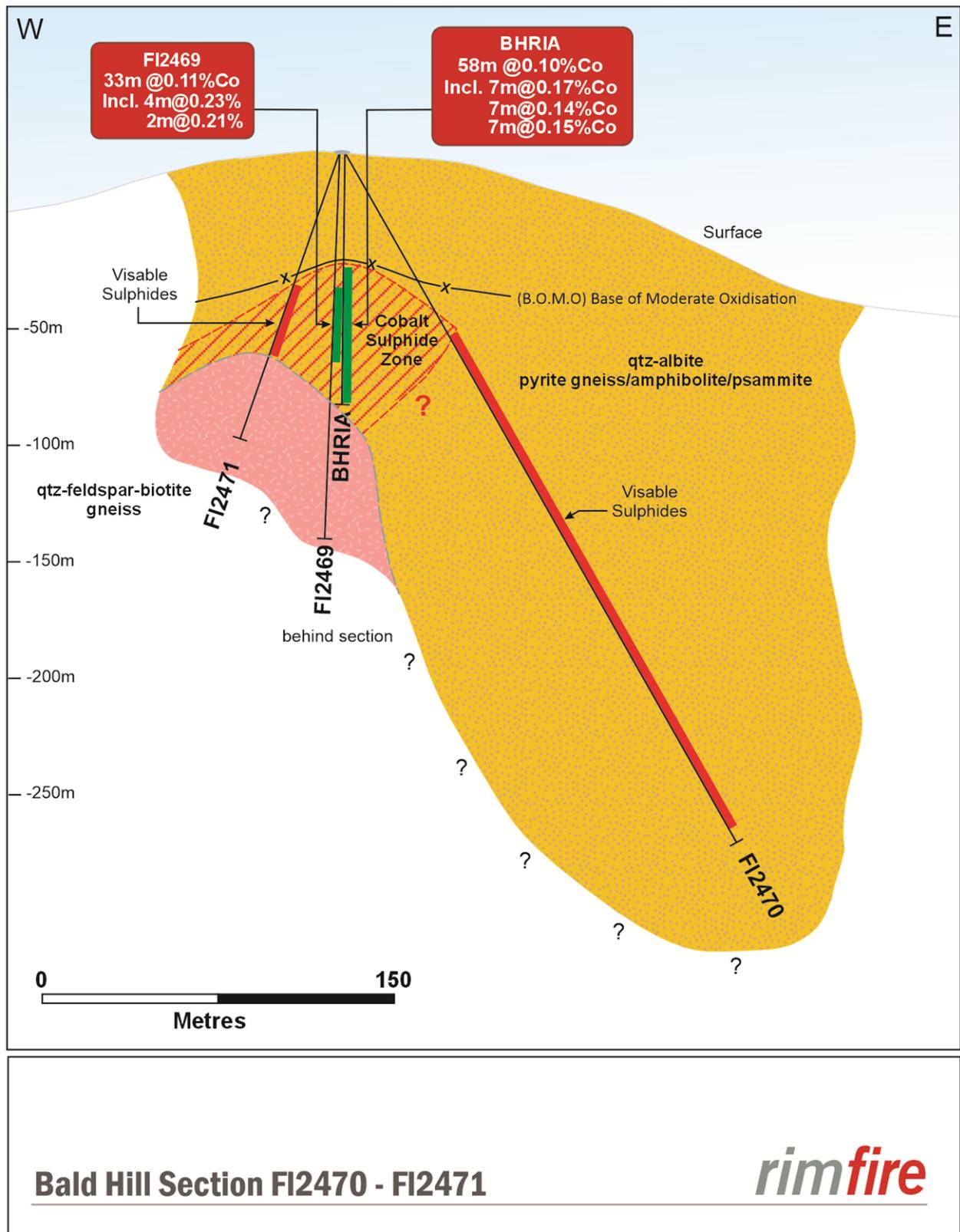


Figure 4: Bald Hill cross section looking to NNE. Note that the geological relationship between FI2470 and FI2469 and BHR1A is unknown at this stage. Refer to Figure 2 for section locations.



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

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## 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.	<p>This ASX Announcement details diamond drilling undertaken by Rimfire Pacific Mining Limited at the company's 100% - owned Bald Hill cobalt prospect at Broken Hill, NSW.</p> <p>Geological logging and sampling have been completed for all 3 holes (FI2469 to FI2471). Assays are yet to be received for FI2470 and 2471). This ASX Announcement provides descriptions of geological rock types encountered by the drilling and significant intercepts for FI2469. Each drillhole has been geologically logged, and all diamond drill core was photographed.</p> <p>Drill samples were submitted to ALS Pty Ltd in Adelaide, SA for base metal analysis using ALS method ME-ICP61.</p>
	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 FI2469 was cut and sampled from surface to 120 metres (total hole depth of 169.9 metres) 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.	<p>To ensure sample representivity, and because the geology of each drilling location is largely unknown (due to high metamorphic grades and structural complexity), the entire drillhole has been cut and sampled for analysis.</p> <p>Industry standard preparation and assay is conducted at ALS Pty Ltd in Adelaide, SA, including sample crushing and pulverising prior to subsampling for an assay sample.</p>
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 will be included in the geological logging procedure. All diamond drill core will be photographed as well.

Criteria	JORC Code explanation	Commentary
	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.
	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.	Diamond drill core samples were geologically logged to a level of detail sufficient to support appropriate Mineral Resource estimation, although that is not the objective of the diamond drilling outlined in this ASX Announcement.
	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 Adelaide for analysis.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	N/A as no assay results from the Reverse Circulation drilling are being reported at this stage.
	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 base metals are industry standard. The ME-ICP61 method is a partial 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.	N/A as no geophysical tools were used or results of using geophysical tools were included in this Report.

Criteria	JORC Code explanation	Commentary
	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.	Certified standards were submitted along half core samples to the laboratory.
<b>Verification of sampling and assaying</b>	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.	FI2469 and FI2471 were drilled adjacent to historic drillhole BHR1A to confirm the geological setting of the earlier hole.
	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 <sup>rd</sup> party expert consulting group.
	Discuss any adjustment to assay data.	There has been no adjustment to assay data.
<b>Location of data points</b>	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 54.
	Quality and adequacy of topographic control.	Handheld GPS, which is suitable for the early stage and broad spacing of this exploration.
<b>Data spacing and distribution</b>	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.
<b>Orientation of data in relation to geological structure</b>	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The relationship between the drilling orientation and the orientation of key mineralised structures is considered not to have introduced a sampling bias.
	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 not known at this stage and will be considered and reported once all assay data has been received. At this stage it is not known whether there is a sampling bias.
<b>Sample security</b>	The measures taken to ensure sample security.	Samples double bagged and delivered directly to the laboratory by company personnel.
<b>Audits or reviews</b>	The results of any audits or reviews of sampling	The sampling techniques and data received to

Criteria	JORC Code explanation	Commentary
	techniques and data.	date 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
<b>Mineral tenement and land tenure status</b>	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.	This ASX Announcement details assay results for the first of three diamond holes drilled at the Bald Hill cobalt prospect which lies within Rimfire's 100% - owned Broken Hill (Green View) Cobalt project. All work was undertaken on Private Freehold Land. The land is used primarily for grazing.
	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 fieldwork is conducted under specific approvals from NSW Department of Planning and Energy, Resources and Geoscience. Rimfire has also executed an access agreement with relevant landowners to undertake this work.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	The Broken Hill (Green View) Cobalt Project has a long history of base metal exploration given its proximity to the Broken Hill mining centre and the geological similarities between Rimfire's project area and the mines. Further details are provided in the body of this report.
<b>Geology</b>	Deposit type, geological setting, and style of mineralisation.	As discussed in the body of this report, Rimfire is targeting sulphide (pyrite) – hosted cobalt mineralisation within metamorphosed and structurally deformed metasediments of the Willyama Supergroup.
<b>Drill hole Information</b>	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"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth.</li> </ul>	All drillhole specifications and sulphide descriptions 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.

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	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 275 ppm cobalt has been used in determining the reported intercepts. No top cuts have been used.
	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.
<b>Relationship between mineralisation widths and intercept lengths</b>	These relationships are particularly important in the Reporting of Exploration Results.	The drill results included in this Report 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').	
<b>Diagrams</b>	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
<b>Balanced reporting</b>	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 significant intercepts are included in this Report.
<b>Other substantive exploration data</b>	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.
<b>Further work</b>	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	Assay results for the remaining two drillholes (FI2470 and FI2471) are yet to be received. Planned further work will comprise geological interpretation, ground magnetics surveying, heritage assessments and drilling.

Criteria	JORC Code explanation	Commentary
	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 (**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.

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’s Mordialloc porphyry copper gold discovery (KCC.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 (Green View) Project which is located immediately west and northwest of Broken Hill and covers several 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 50.1%)
- ✓ Both projects are prospective for high-value critical minerals – nickel, cobalt, scandium, gold, and PGEs - which are essential for renewable energy, electrification, and green technologies.
- ✓ The development ready Sunrise Energy Metals Nickel Cobalt Scandium 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 \\$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 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, 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".