

24 May 2023

Cobalt and Copper Potential at Bald Hill

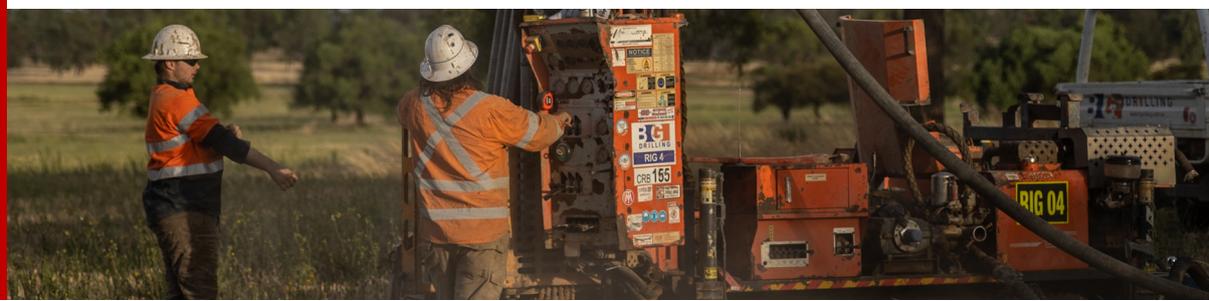
Highlights

- Rock chip sampling returns up to 1,945ppm cobalt & 3,900ppm copper from gossan & highlights copper potential of Bald Hill target
- Historic (early 1980's) drill program intersected high-grade cobalt mineralisation at Bald Hill with no follow up including:
 - 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
- Diamond drilling contractor secured with drilling (up to 3 holes / 600 metres) commencing June
- Bald Hill is one of three highly prospective cobalt targets in close proximity to Cobalt Blue's (ASX: COB) Broken Hill Cobalt Project

Rimfire Pacific Mining (ASX: RIM, "Rimfire" or "the Company") is pleased to advise that rock chip sampling undertaken during a recent reconnaissance trip has reinforced the cobalt and copper sulphide potential of Rimfire's Bald Hill target which lies within the 100% - owned Green View Cobalt Project (located approximately 30 kilometres west of Broken Hill, NSW – *Figure 1*).

Commenting on the announcement, Rimfire's Managing Director Mr David Hutton said: "Exploration for high-grade cobalt at Broken Hill is a key component of our strategy to focus on exploring for critical minerals within highly prospective areas of NSW."

The latest rock chip results reinforce our belief in the area. The copper contained in the rock chips is significant given historic drilling also intersected anomalous copper and this part of the story has never been specifically followed up. We look forward to drilling Bald Hill early next month."



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

Bald Hill discussion

Rock chip sampling undertaken at the Bald Hill target during a recent reconnaissance trip to the area, has returned elevated levels of cobalt and copper as per Table 1 below.

Table 1: Bald Hill rock chip samples

SampleID	Easting	Northing	Cobalt_ppm	Cobalt_%	Copper_ppm	Copper_%
BH1	513,273	6,459,689	-	-	-	-
BH2	513,412	6,459,561	1	0.00	13	0.00
BH3	513,413	6,459,562	19	0.00	775	0.08
BH4	513,420	6,459,761	1,945	0.19	3,900	0.39
BH5	513,513	6,459,865	51	0.01	138	0.01
BH006	513,510	6,459,687	226	0.02	383	0.04
BH007	513,446	6,459,788	1,650	0.17	141	0.01
BH008	513,479	6,459,809	27	0.00	237	0.02

As shown in *Figures 2 - 4*, the samples were collected from outcropping gossanous material in the vicinity of historic drillhole BHR1/1A at Bald Hill.

Cobalt mineralisation at Bald Hill occurs within a folded and outcropping gossanous quartz - albite +/- pyrite psammopelitic composite gneiss unit. Induced Polarisation (IP) geophysical surveying undertaken by North Broken Hill Pty Ltd in 1980/1981 defined multiple chargeability anomalies associated with the quartz - albite +/- pyrite unit, drilling of which (BHR1 to BHR 5 – 651 metres) returned multiple high-grade drill intercepts (*refer to Rimfire ASX Announcement dated 3 November 2022 for technical details and JORC Information*);

- **58m @ 0.10% Co from 48 metres in BHR1/1A including;**
 - **7m @ 0.17% Co from 63 metres, 6m @ 0.15% Co from 81 metres, and 6m @ 0.15% Co from 95 metres**
- **15m @ 0.05% Co from 42 metres in BHR2**
- **5m @ 0.05% Co from 12 metres and 7m @ 0.07% Co from 35 metres in BHR3**
- **7m @ 0.03% Co from 27 metres in BHR4**
- **8m @ 0.06% Co from 25 metres in BHR5**

BHR1/1A was drilled into a north-plunging fold hinge which appears to have significantly “thickened” the quartz - albite +/- pyrite gneiss. BHR2 and 3 were drilled approximately 270 metres away on the western limb of the fold hinge. BHR4 and 5 were drilled 500 metres to the southeast of BHR1/1A on the eastern limb of the fold hinge and were reported as failing to reach target depth due to ground conditions.

At surface the prospective quartz - albite +/- pyrite unit has a surface area of approximately 500 x 500 metres with multiple historic prospecting pits and shallow workings along the fold hinge.

The cobalt mineralisation is described in historic geological logs as being associated with increased sulphide (pyrite) content, with the highest grades occurring within zones of semi massive to massive pyrite.

Copper anomalism (i.e., 3m @ 0.12% copper from 36 metres in BHR2) is also associated with the sulphide unit in a few holes. Bald Hill is a high priority target for further work as there appears to have been no follow up drilling of the area since the original holes were drilled.

After executing a Land Access Agreement with the local landowner, Rimfire has now secured a drilling contractor, and prepared drill sites to undertake a diamond drilling (up to 3 holes – 600 metres) program at Bald Hill, with drilling scheduled to commence early next month to validate the historic drill intercepts and to test the vertical extent of mineralisation as BHR1/1A which ended in cobalt mineralisation.

Bald Hill is one of three highly prospective cobalt targets identified by Rimfire on the Green View Cobalt Project, which are near Cobalt Blue's (ASX: COB) Broken Hill Cobalt Project, the other targets being Staurolite Ridge and Railway Extension.

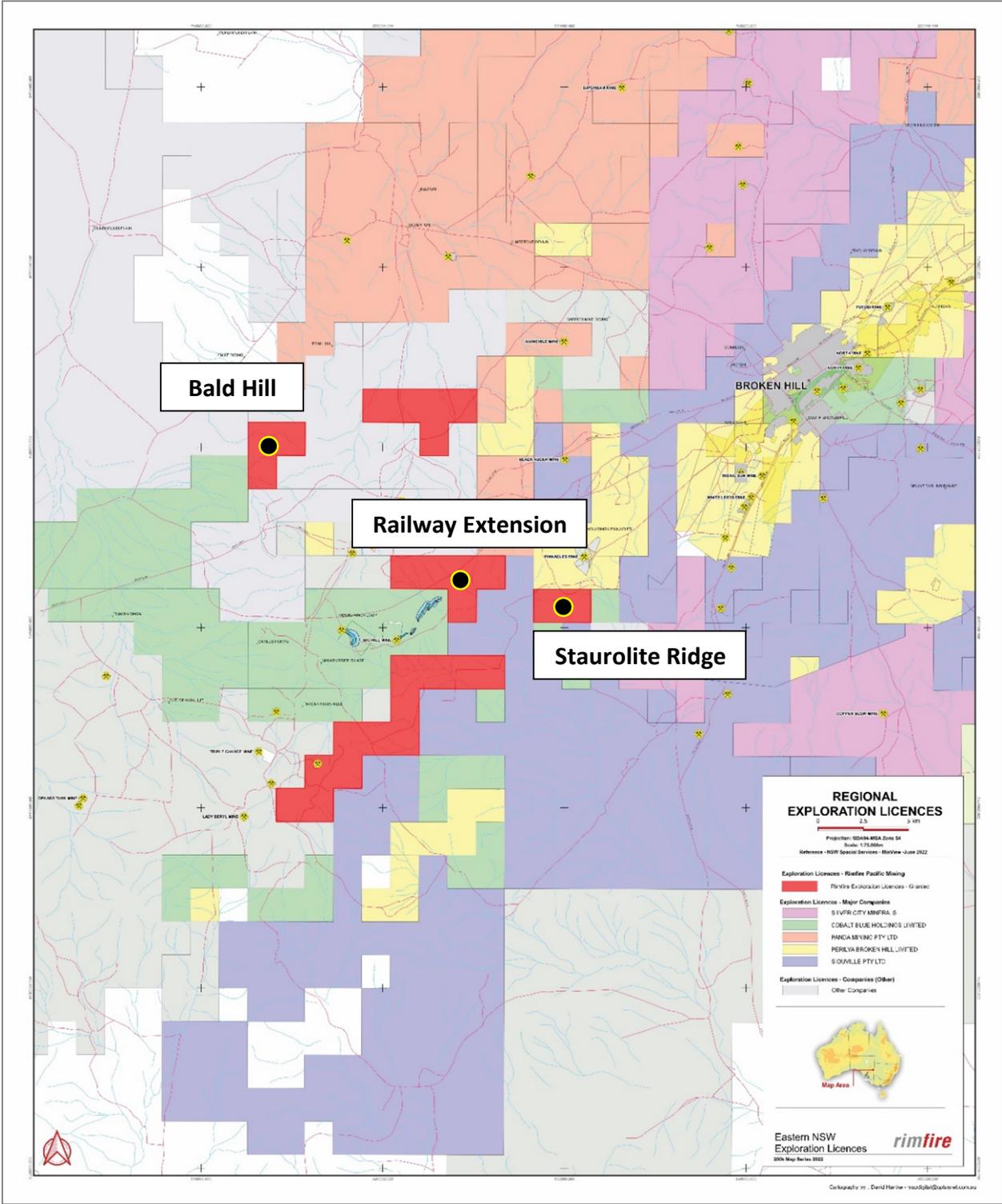


Figure 1: Broken Hill Cobalt Project (red blocks), regional tenement holders and target locations

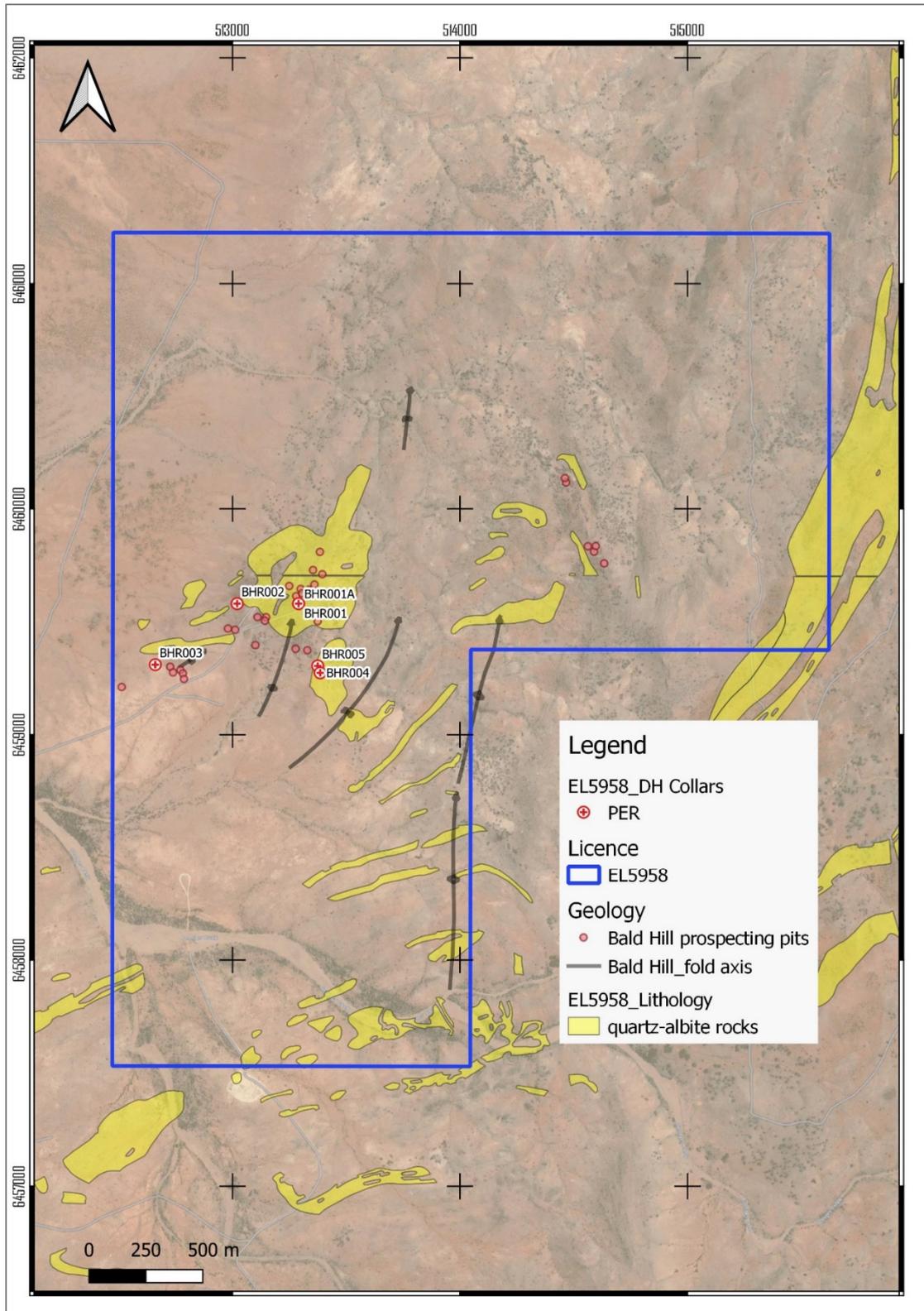


Figure 2: Bald Hill target area plan showing distribution of quartz – albite +/- pyrite unit, fold axes and drilling

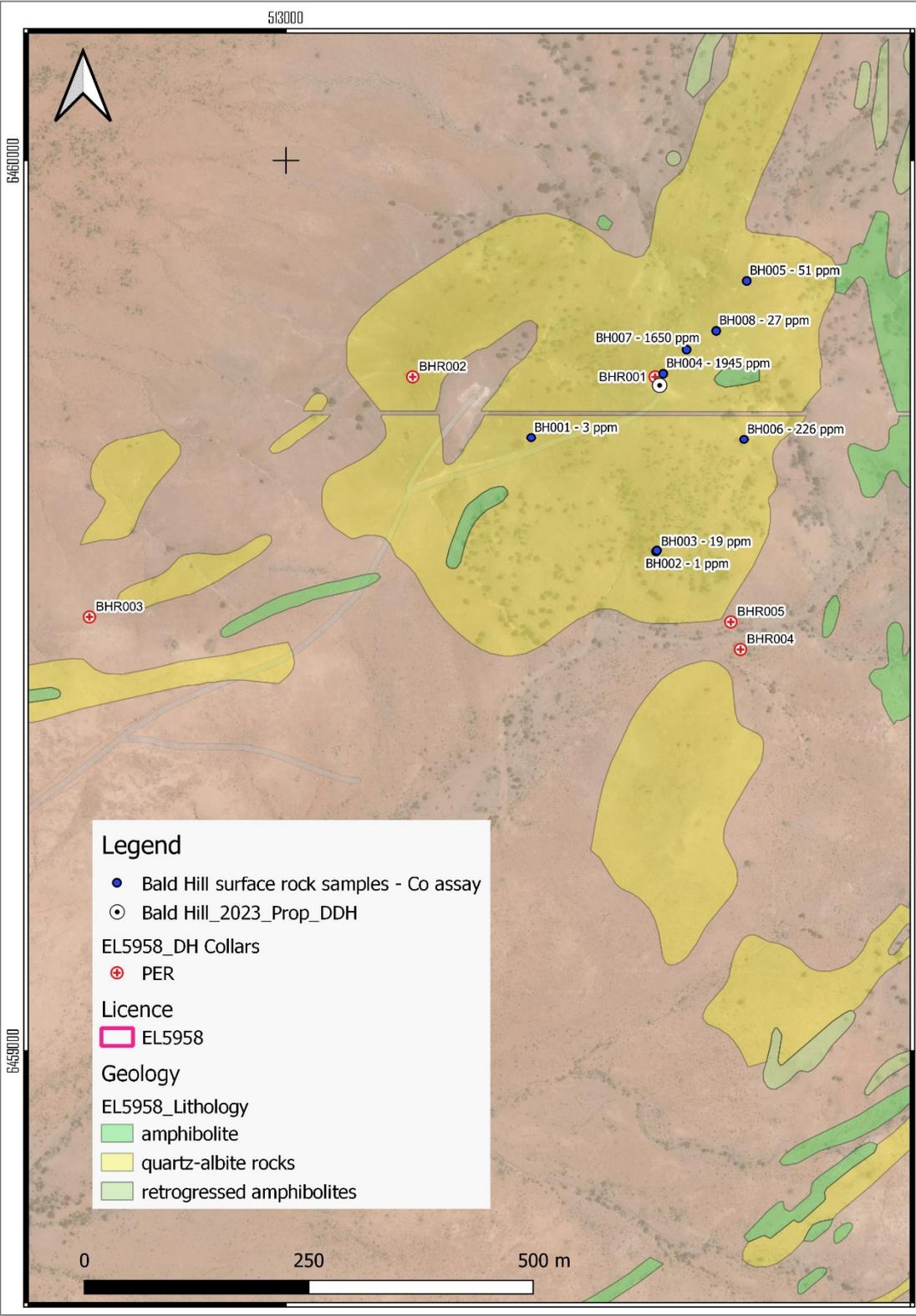


Figure 3: Bald Hill rock chip sample locations



Figure 4: Photo of Bald Hill gossan at location of sample BH007.

This announcement is authorised for release to the market by the Chairman and 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

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 the results of rock chip sampling undertaken on EL5958 (the Broken Hill Cobalt Project) which is 100% - owned by Rimfire Pacific Mining Limited
	Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.	Each rock chip sample comprised approximately 2 kilograms of outcropping material deemed prospective in the field. Samples were geologically described and placed in calcio bags at time of collection.
	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.	Rock chip samples were collected of outcropping ironstone and gossanous material (ex-sulphide) deemed prospective in the field.
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 techniques were employed.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	N/A as no drilling techniques were employed.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	N/A as no drilling techniques were employed.
	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 techniques were employed.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate	Rock chip samples were geologically logged but not to a level of detail sufficient to support appropriate Mineral Resource estimation.

Criteria	JORC Code explanation	Commentary
	Mineral Resource estimation, mining studies and metallurgical studies.	
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geological logging rock chip samples is largely qualitative by nature.
	The total length and percentage of the relevant intersections logged.	N/A as no drilling techniques were employed.
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 techniques were employed.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	N/A as no drilling techniques were employed.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The Sample Preparation technique employed by the laboratory is considered industry standard
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Rock chip sampling is a largely prospecting type of activity and no addition quality control procedures other than placing samples in a sealed calico bag were adopted.
	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.	Rock chip sampling is a largely prospecting type of activity and no addition quality control procedures other than placing samples in a sealed calico bag were adopted.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate to the grain size of the 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 rock samples for base metals and REE's are industry standard. The 4 acid ME-ICP61 and ME-MS41L-REE methods are a near completed dissolution 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 results of using geophysical tools were included in 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.	Due to the nature of the samples being reconnaissance surface rock samples no standards were added by Rimfire however ALS internal QA/QC samples were well within accepted tolerances
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The significant intersections included in this ASX Announcement have been verified by both Rimfire's Exploration Manager and Managing Director.
	The use of twinned holes.	N/A as no drilling techniques were employed.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Geological descriptions and sample locations were written into field notebooks at the time of collection and entered into a digital database at a later date.
	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.	Rock chip sample locations were collected using a handheld GPS with +/- 5 metre accuracy.
	Specification of the grid system used.	As stated in Table 1 of this ASX Announcement.
	Quality and adequacy of topographic control.	Rock chip sample locations were collected using a handheld GPS with +/- 5 metre accuracy.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The location and spacing of historic drillholes discussed in this ASX Announcement are given in 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 rock chip sampling 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.	No sample compositing has 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.	Rock chip sampling is a largely prospecting type of activity and as such no consideration as to whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type has been given.
	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 techniques were employed.
Sample security	The measures taken to ensure sample security.	Samples were placed inside calico sample bags and delivered to ALS Pty Ltd in Adelaide for analysis.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The assay results have 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.	<p>This ASX Announcement details the results of rock chip sampling undertaken on EL5958 (the Broken Hill Cobalt Project) which is 100% - owned by Rimfire Pacific Mining Limited</p> <p>All work was undertaken on Private Freehold Land. No Native Title exists. The land is used primarily for grazing.</p>
	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.	<p>The tenement is in good standing, and all fieldwork is conducted under specific approvals from NSW Department of Planning and Energy, Resources and Geoscience.</p> <p>In addition, Rimfire entered into a land access agreement with each landowner.</p>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Broken Hill 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.
Geology	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.
Drill hole Information	<p>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:</p> <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 rock chip locations are included within Tables and figures included in 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 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.	No weighting techniques or cut off grades have been applied.

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.	No length weighting has been applied given all historic sample intervals 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.	N/A as no drilling techniques were employed.
	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 this 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 within this ASX Announcement.
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 work is discussed in the report 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 (**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 60%)
 - ✓ 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 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](#)

[ASX Announcement: 3 April 2023 - Fifield Earn In Funding Update](#)

[ASX Announcement: 27 April 2023: Exploration Partner Funding Update](#)

[ASX Announcement: 16 May 2023: Fifield Earn-in Project Funding Update](#)

[ASX Announcement: 23 May 2023: Exploration Partner Funding Update](#)

ENDS

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".