RIMFIRE PACIFIC MINING LTD

ASX: RIM

"Critical Minerals Explorer"

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8 August 2024

Diamond drilling underway at Bald Hill Cobalt Copper Prospect, Broken Hill

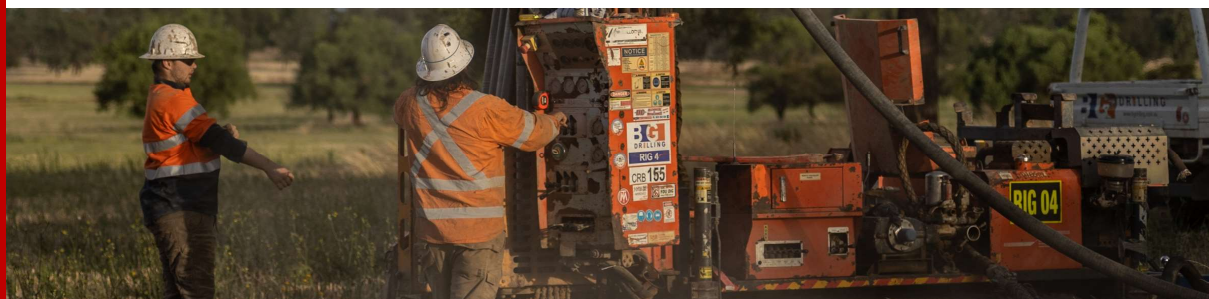
Highlights

- **1,000m diamond drill program testing for extensions to previously obtained high grade drill intercepts at Bald Hill, e.g.;**
  - **125m @ 0.13% Co from 198m *incl 97m @ 0.15% Co*,**
  - **58m @ 0.13% Co from 62m *incl 12m @ 0.24% Co and 17m @ 0.15% Co*,**
  - **33m @ 0.11% Co from 58m *incl 4m @ 0.23% Co and 2m @ 0.21% Co*, and**
  - **6m @ 0.51% Cu from 56m in FI2471**
- **Drilling will also test a very strong magnetic anomaly which is interpreted to be a potential extension to the previously demonstrated Bald Hill cobalt and copper mineralisation**
- **Rimfire's Broken Hill Project lies within same geological domain as the Mutooroo Deposit (HAV.ASX) - 191Kt copper, 20Kt cobalt and 86Koz gold and the Broken Hill Cobalt Project (COB.ASX) - 87Kt cobalt**
- **Drilling assay results expected by mid-October 2024**

Commenting on the announcement, Rimfire's Managing Director Mr David Hutton said: *"Rimfire is exploring throughout New South Wales for critical minerals that are associated with global decarbonisation strategies, such as scandium, PGEs, copper, and cobalt.*

While we remain firmly focussed on delivering a maiden scandium JORC resource at Fifield and Avondale, we are also keen to advance our highly prospective Broken Hill Project especially the Bald Hill prospect.

Given the existing drill intercepts coincide with an outstanding magnetic anomaly along strike and with all targets lying within a favourable geological setting we think that Bald Hill is an exciting opportunity to discover a significant cobalt and copper deposit. We look forward to providing further market updates as new information comes to hand."



Rimfire Pacific Mining (ASX: RIM, "Rimfire") is pleased to advise that a 1,000-metre diamond drill program has commenced at its 100% - owned Bald Hill Copper Cobalt Prospect (Broken Hill Project) which is located 30 kilometres west of Broken Hill, NSW (*Figures 1 and 2*).

Drilling will test the significance of a very strong magnetic anomaly interpreted to be **a potential extension to previously drilled high-grade cobalt (Co) and copper (Cu) mineralisation** at Bald Hill, (*See Rimfire ASX Announcement dated 18 September 2023*), i.e.;

- **33m @ 0.11% Co from 58 metres in FI2469 *including 4m @ 0.23% Co and 2m @ 0.21% Co***
- **100m @ 0.08% Co from 71 metres in FI2470 including *68m @ 0.10% Co,***
- **125m @ 0.13% Co from 198 metres in FI2470 *including 97m @ 0.15% Co,***
- **58m @ 0.13% Co from 62 metres in FI2471 *including 12m @ 0.24% Co and 17m @ 0.15% Co, and***
- **6m @ 0.51% Cu from 56 metres in FI2471.**

Mineralisation at Bald Hill is associated with a greater abundance of sulphides with zones of coarse-grained semi-massive pyrite / pyrrhotite (plus lesser amounts of chalcopyrite and sphalerite) hosting individual single metre grades of up to 0.79% Co (*FI2471 – 67 to 68 metres*).

Detailed ground magnetic surveying (on 50m spaced east west lines) undertaken post the 2023 drilling identified a very strong magnetic anomaly [peak value – 57,744nT] coincident with and extending from the cobalt and copper drill intercepts (*See Figures 3 – 5*).

The Bald Hill magnetic anomaly trends NNE, dips to the southeast, and has a near surface extent of 450 x 400 metres and extends to a vertical depth of approximately 300 metres below surface. 3D modelling suggests that the anomaly plunges to the southeast with Rimfire's 2023 diamond holes just "clipping" the top of the anomaly.

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

Diamond drillholes will be positioned specifically to intersect the magnetic anomaly to confirm its significance.

Plenty of upside with additional targets identified

In addition to Bald Hill, several other targets have been identified across the Broken Hill Project from a review of historic exploration data – principally aeromagnetic and gravity geophysical data, drilling data and surface geochemistry. Ground magnetic surveying, geological mapping and rock chip sampling undertaken by Rimfire during the last 12 months have refined the targets.

While still being advanced to "drill ready" status, the additional targets reinforce the project's upside beyond the Bald Hill prospect and are summarised below;

Bald Hill Northeast (Cobalt Copper)

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

Initial ground reconnaissance of the area has identified ferruginous gossanous material associated with many of the magnetic anomalies, rock chip sampling of which returned up to 0.72% cobalt and 0.46% copper (*See Figure 3 and Table 1*). **The area has not been drilled by previous explorers**.

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

Black Hill East (Cobalt Copper)

Located 10 kilometres east of Bald Hills, reconnaissance rock chip sampling at the southern end of a 600-metre-long NNE trending coincident magnetic linear feature / VTEM conductor has returned anomalous cobalt and copper values up to 0.15% cobalt and 0.13% copper (*See Figure 2 and Table 1*).

The anomalous rock chip samples were described in the field as being strongly ferruginous and manganiferous quartz veined psammite with black oxide coatings

Further mapping and sampling are required along the remainder of the prospective feature which apart from some minor prospecting pits, remains largely unexplored by previous workers. **Apart from a line of shallow auger holes, the area has not been drilled.**

Staurolite Ridge (Cobalt)

At Staurolite Ridge, exploration undertaken by Broken Hill South Limited in the early 1960's identified multiple Induced Polarisation (IP) chargeability anomalies (over a strike length of 3,050 metres) associated with gossanous outcrops and localised copper - staining. Given the presence of chalcopyrite (copper sulphide), Staurolite Ridge appears to have been explored primarily as a copper opportunity (*see Figure 2 and Rimfire ASX Announcement 3 November 2022*).

Six holes (SR1 to SR6 – 2,681 metres) were drilled in 1961/1962 to test the Staurolite Ridge IP chargeability anomaly with all holes intersecting varying degrees of sulphides (i.e., pyrrhotite, pyrite +/- chalcopyrite) ranging from disseminated to semi-massive sulphides within a distinctive siliceous garnet – staurolite "lode" horizon.

SR1 was drilled into the strongest part of the IP chargeability anomaly and intersected 88.4 metres (down hole width) of "strong" pyrite and pyrrhotite mineralisation, assaying of which returned;

- 61m @ 0.18% Co from 94.5 metres in SR1 *including 15.25m @ 0.29% Co from 125.05 metres*.

SR1 was the only hole analysed for cobalt despite the remaining five holes intersecting varying widths of disseminated sulphides.

Staurolite Ridge reportedly occurs within an area of cultural heritage significance and Rimfire is currently in the process of engaging a specialist consultant to better understand this issue.

Railway Extension (Cobalt)

The Railway Extension target directly lies north northeast and along strike from Cobalt Blue's Railway Cobalt Deposit (*see Figure 2*) which has a JORC Indicated and Inferred Resource of 74.1Mt @ 766 CoEq ppm for 45Kt of contained cobalt (*see Cobalt Blue ASX Announcement 30 November 2023*).

Cobalt mineralisation at Railway is associated with the same quartz - albite +/- pyrite host unit seen elsewhere on Rimfire's project, and geophysical (aeromagnetic and airborne EM) data plus geological data suggests that the host unit continues across the tenement boundary onto Rimfire's ground. The quartz - albite +/- pyrite unit is interpreted to have approximately 800 metres of strike length at Railway Extension although drilling is needed to confirm if the extension contains the same grade and extent as the Railway Deposit to the west.

Regional Geological setting of the Broken Hill Project

Rimfire's 100% - owned Broken Hill Project covers an area of 190km² and is considered prospective for the discovery of cobalt, copper, and Rare Earth Element [REE] deposits.

Regionally, the project tenements lie within a NE – SW trending zone that marks the boundary between the Olary Domain and the Broken Hill Domain which collectively forms part of the larger Proterozoic - age Curnamona Province (also referred to as the "Willyama Supergroup") which straddles the South Australia – New South Wales border (*see Figures 6 and 7*). Both domains are lithologically similar although the Broken Hill Domain is characterised by a greater proportion of pelitic metasediments compared to the Olary Block.

The cobalt and copper prospectivity of the boundary zone is highlighted by the presence of Havilah Resources' (HAV.ASX) Mutooroo Copper Cobalt Gold Deposit 35 kilometres to the southwest of Rimfire's Bald Hill prospect and Cobalt Blue's (COB.ASX) Broken Hill Cobalt Project 10 kilometres south of Bald Hill.

Mutooroo has a total combined [sulphide] resource of 12.53Mt @ 1.53% copper, 0.16% cobalt and 0.20 g/t gold (191Kt copper, 20Kt cobalt and 86Koz gold - *see Havilah ASX Announcement dated 05 June 2020*).

Cobalt Blue's Broken Hill Cobalt Project has a global Mineral Resource estimate comprising 126.5Mt at 867 ppm (0.08%) cobalt equivalent (CoEq) [i.e., 690 ppm (0.07%) cobalt, 7.5% sulphur & 134 ppm nickel] for 87Kt contained cobalt using a 275 ppm CoEq cut-off (*see Cobalt Blue ASX Announcement dated 30 November 2023*).

Next Steps

Diamond drilling is expected to take 6 – 7 weeks to complete with drill samples to be submitted progressively throughout the program for laboratory analysis.

Final analytical results are expected by mid-October 2024 and Rimfire looks forward to providing updates as new information comes to hand.

JORC Statement

Historic details for the Railway Extension and Staurolite Ridge targets referred to in this ASX Announcement have been sourced from the NSW Government Minview online GIS portal which is publicly available at the following website - MINVIEW online portal.

Details of the ground magnetics survey referred to in this ASX Announcement have been previously reported in Rimfire's *ASX Announcement dated 18 September 2023.*

JORC details for the rock chip results detailed in this ASX Announcement are shown in the following tables of this ASX Announcement.

Figure 1: Diamond drill rig at Bald Hill yesterday afternoon (7/8/2024)

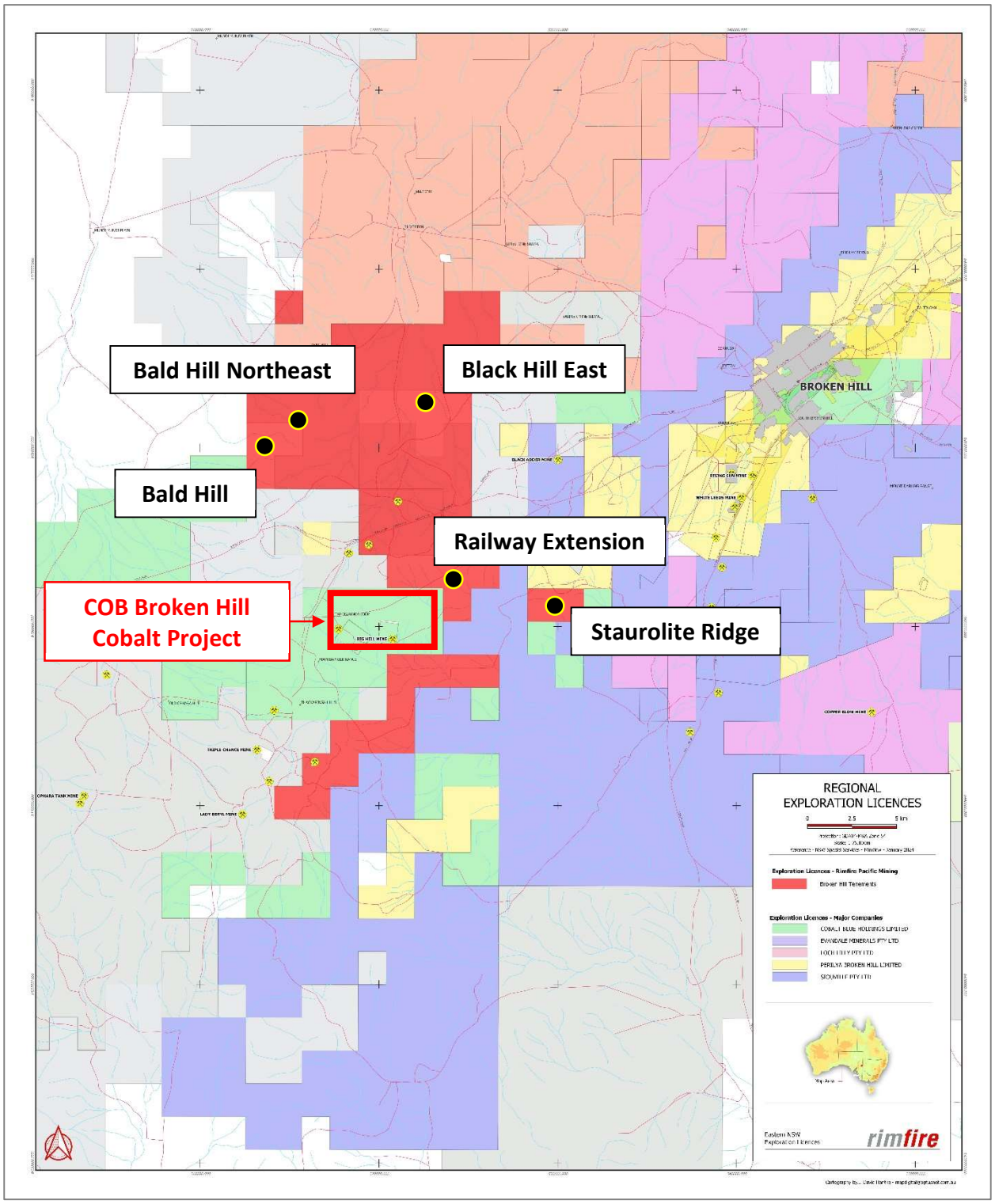


Figure 2: Rimfire Broken Hill Project (red blocks), regional tenement holders and target locations

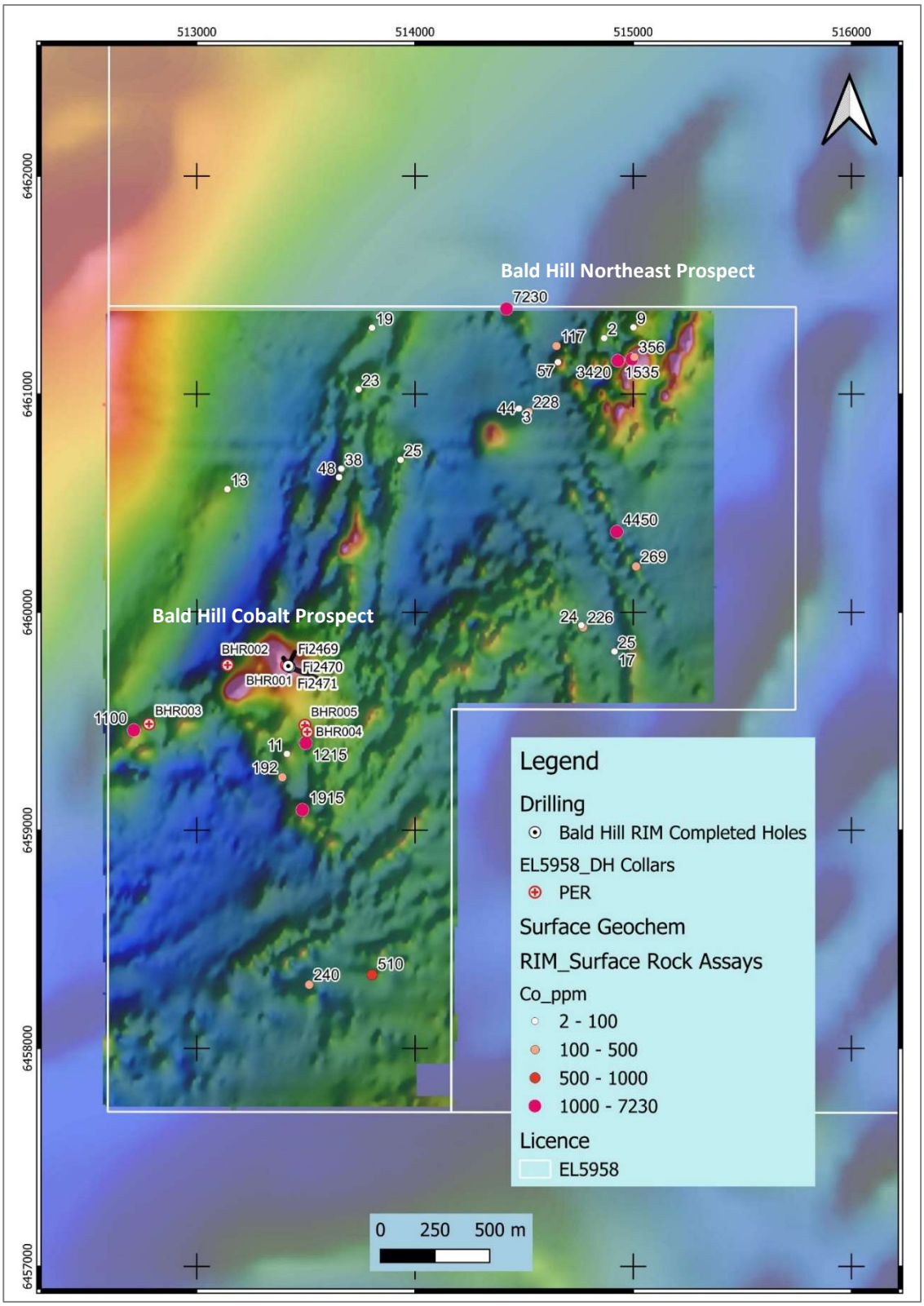


Figure 3: Bald Hill Prospect and Bald Hill Northeast target – ground magnetic image showing cobalt (ppm) assay values and drill holes

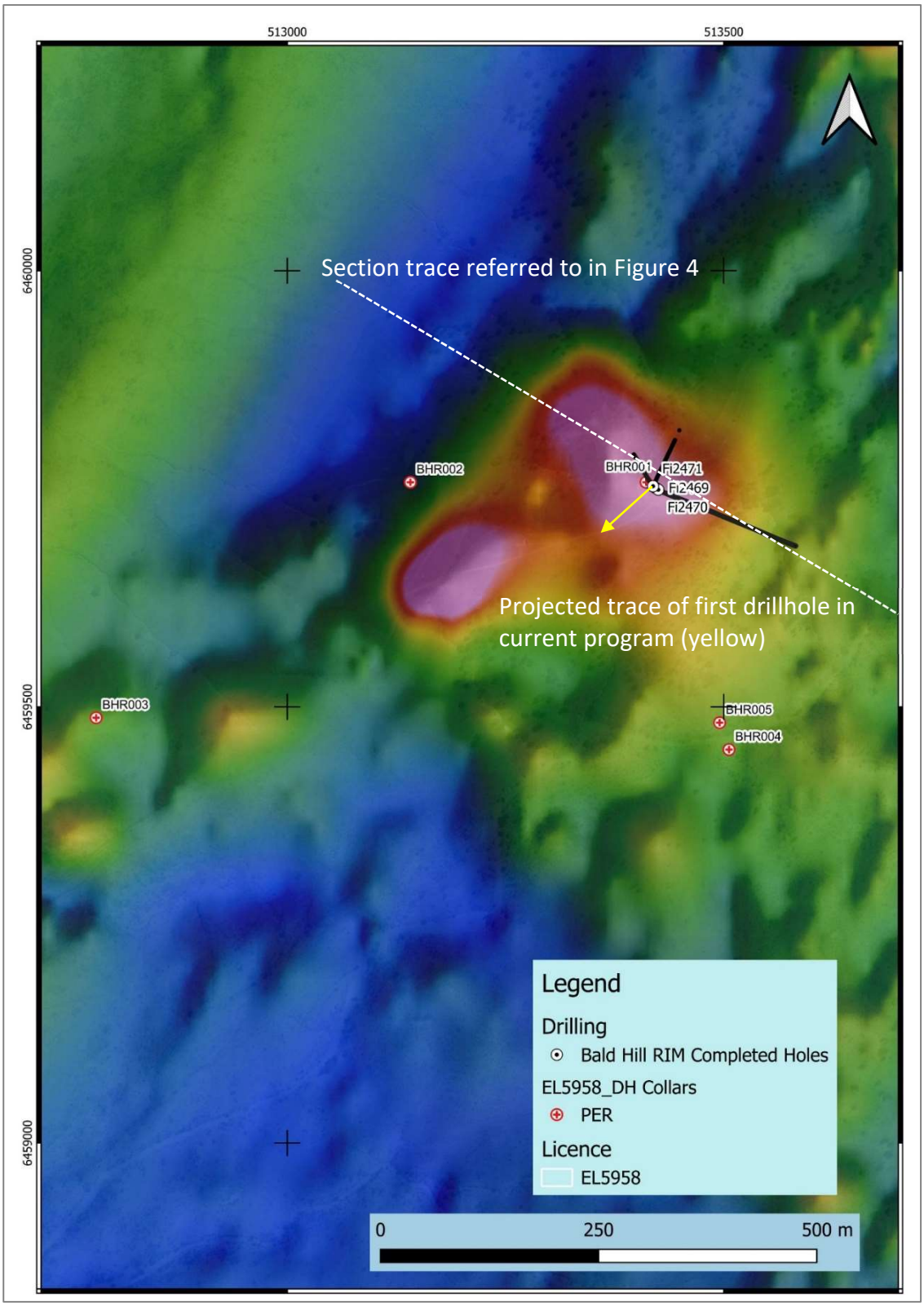


Figure 4: Bald Hill Prospect – ground magnetics image showing existing drill holes and newly identified magnetic body. Section trace referred to in Figure 4 shown in white.

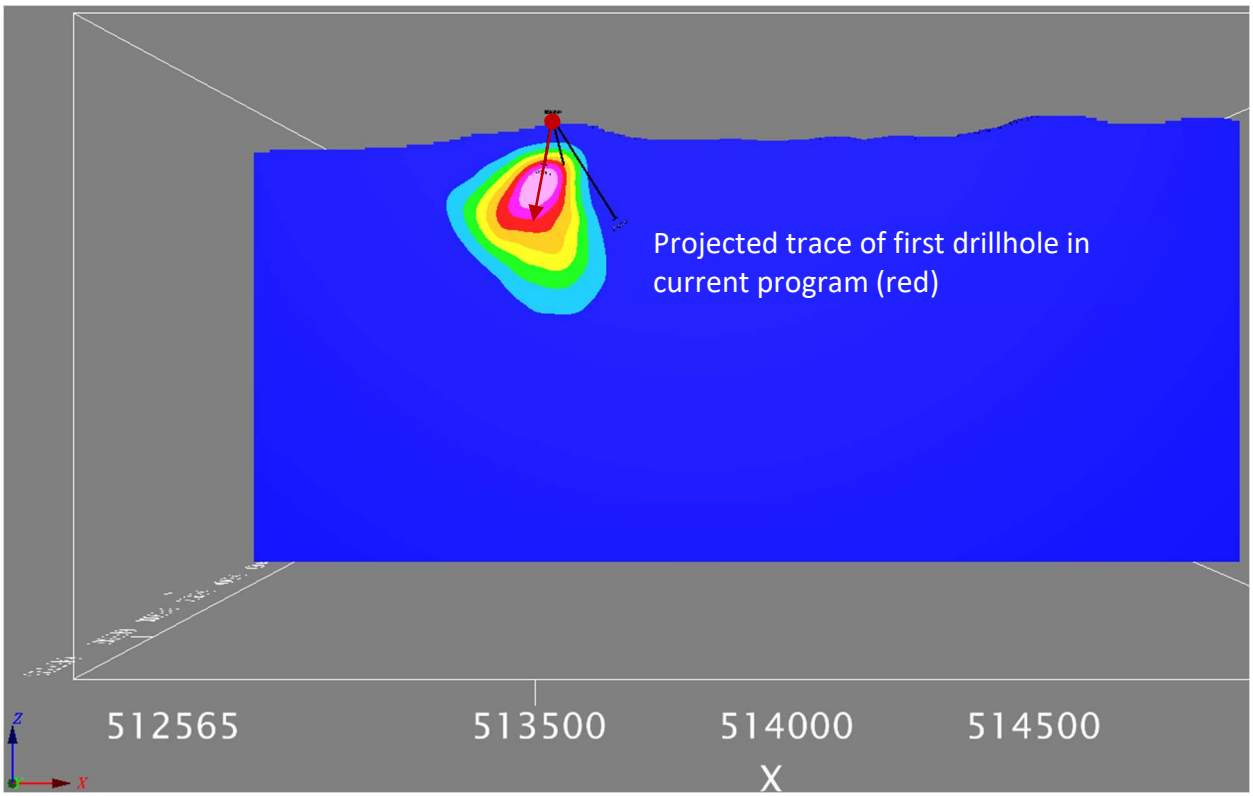


Figure 5: Bald Hill Prospect – cross section showing Rimfire 2023 drill hole traces and modelled magnetic body from ground magnetic data. Section trace shown on Figure 3.

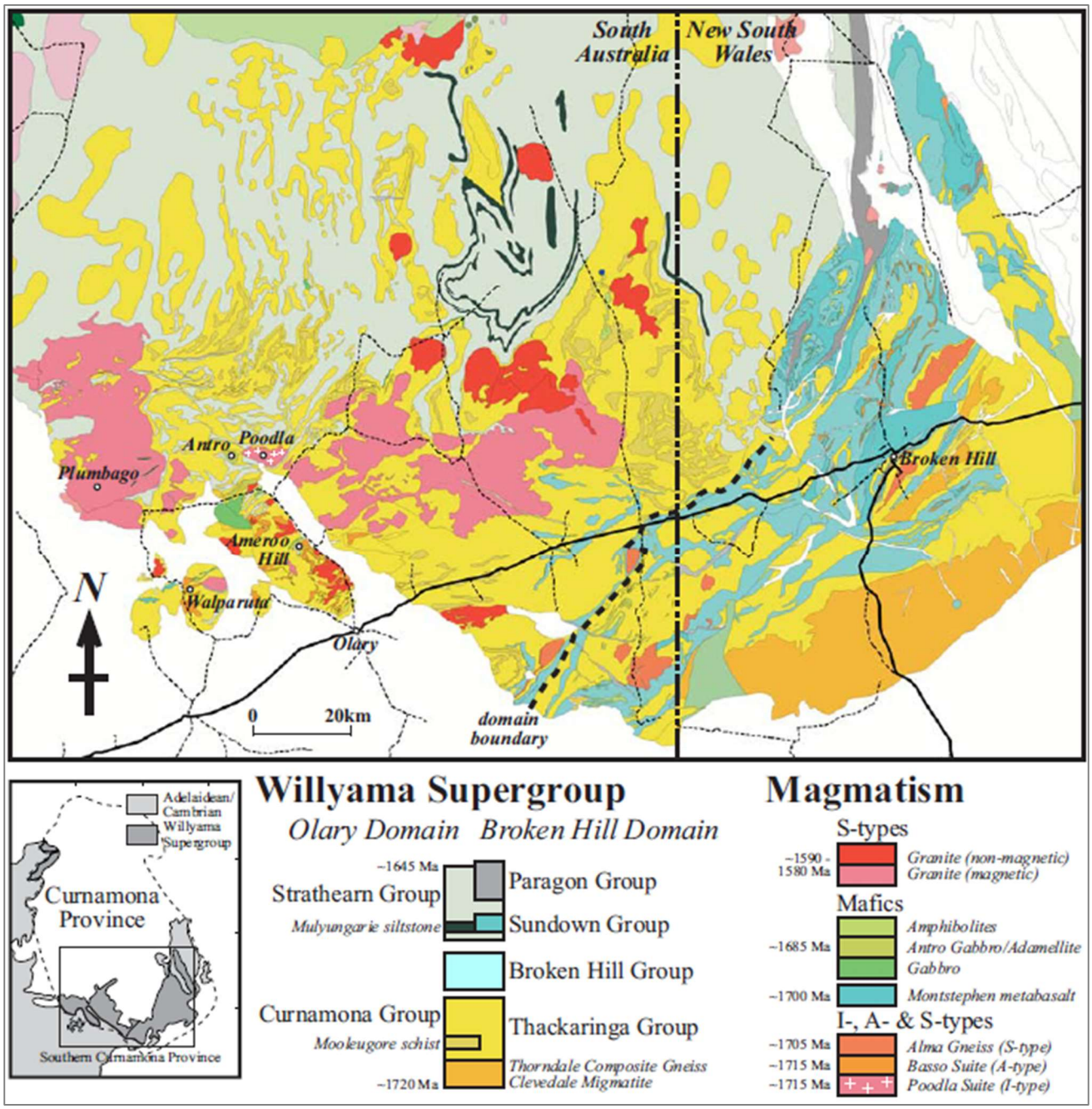


Figure 6: Interpretated solid geology of the Southern Curnamona Province showing the Olary and Broken Hill Domain Boundary. (Figure modified from Rutherford, L. 2006. Developing a tectonic framework for the southern Curnamona Cu-Au province: geochemical and radiogenic isotope applications. PhD Thesis. University of Adelaide, School of Earth & Environmental Sciences – Geology and Geophysics, p. 268).

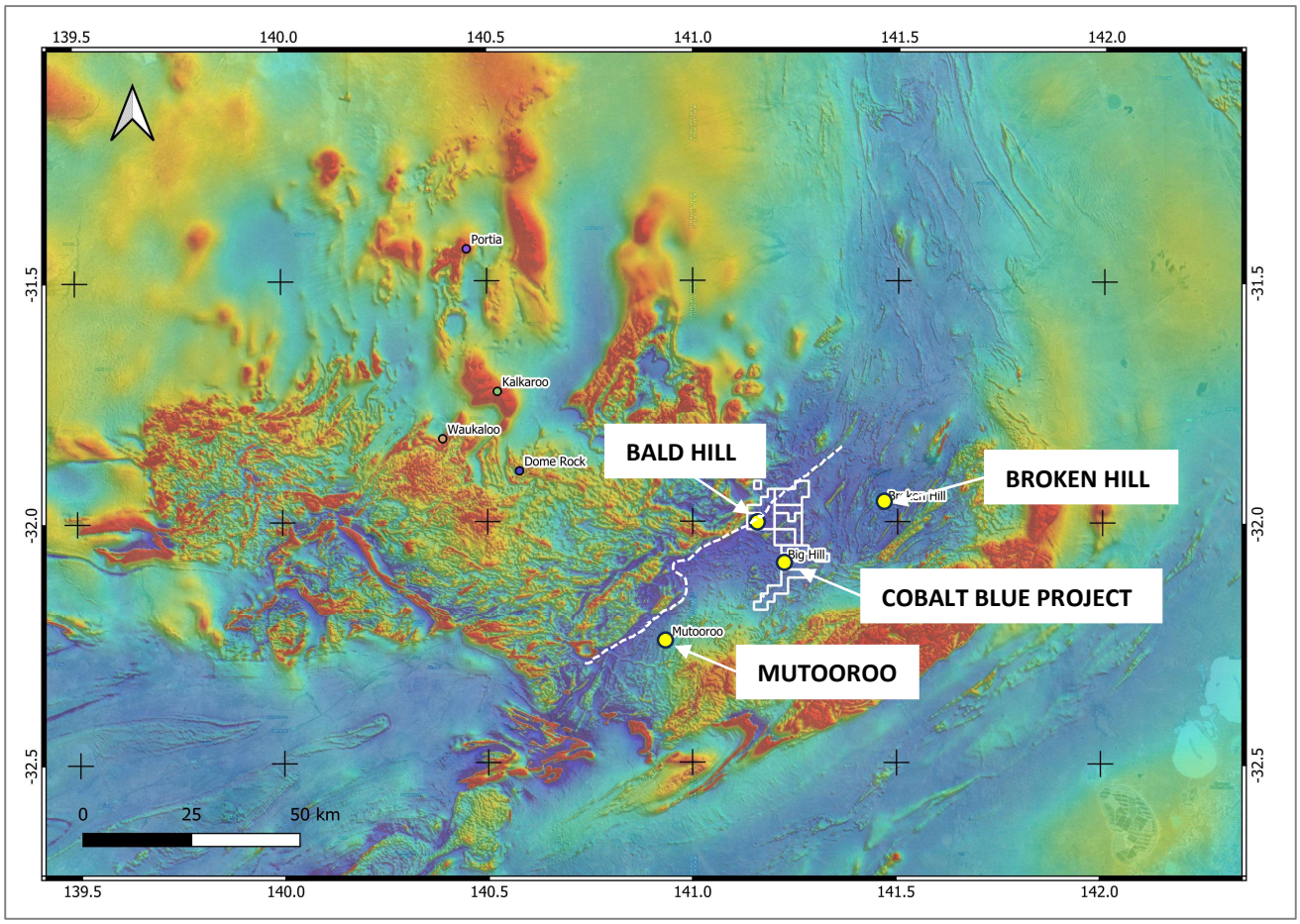


Figure 7: Compilation of publicly available aeromagnetic images of the Southern Curnamona Province showing the Olary and Broken Hill Domain Boundary.

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

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Table 1: Bald Hill and Black Hill area - Rock Chip Sampling Details and Assay Values

Sample ID	GDA_East	GDA_North	Assay Method	Co_ppm	Cu_ppm	Description
B00590	513,803	6,461,304	ME-ICP61	19	34	Gossan
B00591	514,419	6,461,391	ME-ICP61	7,230	336	Gossan
B00592	514,770	6,459,930	ME-ICP61	226	162	Gossan
B00593	514,762	6,459,940	ME-ICP61	24	276	Gossan
B00594	513,652	6,460,619	ME-ICP61	48	59	Biotite rich rock -gossanous
B00595	513,140	6,460,564	ME-ICP61	13	30	Soil
B00596	514,867	6,461,257	ME-ICP61	2	14	haematite - stained qtz vein
B00597	513,662	6,460,658	ME-ICP61	38	52	Sediment
B00598	513,934	6,460,699	ME-ICP61	25	497	Gossanous - heavy
B00599	514,655	6,461,146	ME-ICP61	57	690	Ironstone
B00600	513,741	6,461,022	ME-ICP61	23	121	Ironstone
B00601	514,476	6,460,934	ME-ICP61	44	49	haematite - stained qtz vein
B00602	515,001	6,461,306	ME-ICP61	9	11	micaceous rock
B00603	514,476	6,460,934	ME-ICP61	3	22	quartz - iron staining
B00604	514,924	6,460,369	ME-ICP61	4,450	4,000	bleached amphibolite
B00605	514,993	6,461,160	ME-ICP61	1,805	4,620	Gossan / qtz albite gneiss
B00606	514,929	6,461,153	ME-ICP61	3,420	1,945	Gossan
B00607	514,648	6,461,221	ME-ICP61	390	676	Sediment? Garnetiferous
B00608	514,648	6,461,221	ME-ICP61	745	488	gossan / qtz vein
B00609	514,520	6,460,918	ME-ICP61	228	151	massive magnetite
B00610	514,648	6,461,221	ME-ICP61	117	217	Sediment? Garnetiferous
B00611	515,013	6,460,210	ME-ICP61	269	637	Gossan
B00612	514,914	6,459,820	ME-ICP61	25	664	Gossan
B00613	515,005	6,461,170	ME-ICP61	356	809	Gossan. Box works
B00614	514,914	6,459,820	ME-ICP61	17	731	Ironstone. Leached
B00615	514,929	6,461,153	ME-ICP61	1,535	1,640	bleached amphibolite
B00616	513,413	6,459,350	ME-ICP61	11	306	Gossan / ironstone
B00617	513,392	6,459,243	ME-ICP61	192	534	Sediment / siliceous
B00618	513,484	6,459,094	ME-ICP61	1,915	87	Siliceous / chert?
B00619	513,515	6,458,292	ME-ICP61	240	391	Siliceous / chert?
B00620	513,803	6,458,338	ME-ICP61	510	101	Ironstone
B00621	512,711	6,459,459	ME-ICP61	1,100	1,210	Chert / Ironstone
B00622	513,499	6,459,400	ME-ICP61	249	642	Sediment / siliceous
B00623	513,499	6,459,400	ME-ICP61	1,215	293	ironstone / gossan?
B00647	520,136	6,462,015	ME-ICP61	53	87	Sediment / siliceous
B00648	520,146	6,462,015	ME-ICP61	70	39	Sediment / siliceous
B00649	520,156	6,462,015	ME-ICP61	69	46	Sediment / siliceous
B00650	520,166	6,462,015	ME-ICP61	70	41	Sediment / leached
B00651	520,176	6,462,015	ME-ICP61	69	302	siliceous / gossan ?
B00652	520,140	6,462,158	ME-ICP61	45	88	micaceous rock
B00653	520,150	6,462,158	ME-ICP61	39	91	amphibolite
B00654	520,160	6,462,158	ME-ICP61	53	121	amphibolite / leached

B00655	519,979	6,462,273	ME-ICP61	44	34	biotite rich rock - sediment
B00656	519,969	6,462,273	ME-ICP61	56	42	biotite rich rock - sediment
B00657	519,787	6,462,462	ME-ICP61	16	91	feldspathic gneiss
B00658	519,797	6,462,462	ME-ICP61	16	53	feldspathic gneiss
B00659	519,789	6,462,461	ME-ICP61	17	1,340	Sediment Garnetiferous
B00660	519,531	6,458,939	ME-ICP61	66	118	Sediment / gneiss
B00661	519,434	6,458,903	ME-ICP61	49	222	siliceous / micaceous rock
B00662	519,822	6,458,896	ME-ICP61	19	112	leached micaceous rock
B00663	523,032	6,461,173	ME-ICP61	16	545	Sediment / gossan
B00664	523,052	6,461,173	ME-ICP61	7	562	siliceous sediments
B00665	523,101	6,461,646	ME-ICP61	1,530	779	Sediment / gossan
B00666	523,111	6,461,646	ME-ICP61	1,500	1,370	Sediment / siliceous / gossan
B00667	523,052	6,461,341	ME-ICP61	50	92	Sediment / siliceous
B00668	523,062	6,461,341	ME-ICP61	52	179	Sediment / micaceous
B00669	523,072	6,461,341	ME-ICP61	35	45	Sediment / leached
B00670	523,082	6,461,341	ME-ICP61	116	191	feldspathic pegmatite
B00671	523,010	6,461,525	ME-ICP61	270	437	gossan
B00672	523,020	6,461,525	ME-ICP61	349	497	Sediment / gossan
B00673	523,020	6,461,200	ME-ICP61	6	320	leached gossan
B00674	523,030	6,461,200	ME-ICP61	35	826	Sediment / siliceous / gossan
B00675	523,040	6,461,200	ME-ICP61	6	291	qz rich Sediment
B00676	523,060	6,461,200	ME-ICP61	6	272	qz rich Sediment / goss
B00677	523,070	6,461,200	ME-ICP61	7	233	qz rich Sediment / goss
B00678	514,879	6,461,787	ME-ICP61	90	91	amphibole gneiss
B00679	514,949	6,461,759	ME-ICP61	20	53	iron stained sediments
B00680	515,040	6,461,788	ME-ICP61	48	68	iron stained sediments
B00681	515,196	6,461,679	ME-ICP61	77	337	sediments / leach
B00682	515,206	6,461,679	ME-ICP61	67	322	sediments / leach
B00683	515,216	6,461,679	ME-ICP61	72	353	sediments / leach
B00684	516,739	6,458,137	ME-ICP61	53	210	iron rich sediments
B00685	516,823	6,458,177	ME-ICP61	52	123	Sediment / kaolinite rich
B00686	516,833	6,458,177	ME-ICP61	56	54	Sediment / micaceous
B00687	516,843	6,458,177	ME-ICP61	55	43	Sediment / kaolinite rich
B00688	516,819	6,458,105	ME-ICP61	56	37	micaceous sediment - qz vn
B00689	516,741	6,458,077	ME-ICP61	50	51	Sediment / kaolinite
B00690	515,034	6,458,090	ME-ICP61	46	39	Sediment / kaolinite qz rich
B00691	515,321	6,458,066	ME-ICP61	58	125	Sediment / micaceous
B00692	514,395	6,457,976	ME-ICP61	50	142	iron stained sediments
B00693	514,718	6,461,415	ME-ICP61	94	50	micaceous sediment
B00694	514,370	6,461,448	ME-ICP61	282	115	micaceous sediment - goss
B00695	514,901	6,459,327	ME-ICP61	263	311	Sediment / gossan
B00696	514,911	6,459,327	ME-ICP61	76	1,080	Sediment / gossan
B00697	514,921	6,459,327	ME-ICP61	258	205	Sediment / gossan / leached
B00698	515,222	6,459,022	ME-ICP61	93	67	Sediment / micaceous
B00699	515,224	6,459,009	ME-ICP61	54	38	iron stained sediments

B00700	515,217	6,458,978	ME-ICP61	12	4	iron stained sediments
B00701	515,367	6,459,129	ME-ICP61	17	7	ptygmatic folded sediment
B00702	515,351	6,459,344	ME-ICP61	12	15	Sediment / siliceous
B00703	515,215	6,460,932	ME-ICP61	11	10	magnetic Sediment / siliceous
B00704	515,195	6,461,117	ME-ICP61	14	20	magnetic gneiss / siliceous
B00705	515,205	6,461,117	ME-ICP61	46	106	magnetic amphibolite
B00706	515,980	6,460,783	ME-ICP61	12	13	Sediment / siliceous / gneiss
B00707	515,980	6,460,657	ME-ICP61	51	11	Sediment / siliceous / gneiss
B00708	515,958	6,460,518	ME-ICP61	13	121	Sediment / siliceous / gneiss

JORC Reporting

Table 2: JORC Code Reporting Criteria

Section 1 Sampling Techniques and Data – Rock Chip Sampling

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 by Rimfire Pacific Mining Limited at the company's 100% - owned Bald Hill cobalt prospect at Broken Hill, NSW. Rock chip samples were submitted to ALS Pty Ltd in Adelaide, SA for base metal analysis using ALS method ME-ICP61. Sample coordinates, geological descriptions and assay results are given in Table 1 of this ASX Announcement.
	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 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, gossanous material (ex-sulphide)or other rock types deemed prospective in the field. 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.
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.
	Whether core and chip samples have been	Rock chip samples were geologically logged but

Criteria	JORC Code explanation	Commentary
Logging	geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	not to a level of detail sufficient to support appropriate Mineral Resource estimation
	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.	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.	N/A as no drilling techniques were employed.
	If non-core, whether riffled, tube sampled, rotary split & 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.	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 rock samples for base metals and REE's are industry standard. The 4 acid ME-ICP61 method is a near completion 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.	No geophysical tools were used for the collection of rock chip samples.
	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 results included in this ASX Announcement have been reviewed and 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 later entered into a digital database.

Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	Rock chip sample locations were collected using a handheld GPS with +/- 5 metre accuracy.
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 +/- 5m.
	Specification of the grid system used.	GDA94 Zone 54.
	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 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 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.	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.	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 sampling techniques and data received to 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
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.	This ASX Announcement details the results of rock chip sampling undertaken on EL's 5958, 8599, and 8572 (the "Broken Hill Project") which are 100% - owned by Rimfire Pacific Mining Limited All work was undertaken on Private Freehold Land. No Native Title exists. 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 project tenements are 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.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Broken Hill 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 – hosted cobalt and copper mineralisation within metamorphosed and structurally deformed metasediments of the Willyama Supergroup.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth.	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 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 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.

Rimfire has the 100% - owned Broken Hill Cobalt Project which is located immediately west and northwest of Broken Hill and covers several targets including;

- Bald Hill, where recent diamond drilling by Rimfire successfully intersected high-grade cobalt (Co) associated with strongly disseminated to semi massive sulphide (pyrite, pyrrhotite and trace chalcopyrite + sphalerite) mineralisation - *see Rimfire ASX Announcement dated 18 September 2023* *Broad zones of high-grade cobalt at Bald Hill*, and
- Railway Extension, which is the interpreted along strike extension to Cobalt Blue Holdings' Railway Cobalt Deposit (COB: ASX).

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

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

- Avondale Project (GPR earning up to 75%) & Fifield Project (GPR earning up to 50.1%)
- ✓ Both projects are prospective for high-value critical minerals – scandium, cobalt, nickel, gold, and PGEs - which are essential for renewable energy, electrification, and green technologies.
- ✓ Adjacent to both projects are the;
    - development ready Sunrise Energy Metals Nickel Cobalt Scandium Project (ASX:SRL), and
    - Platina Scandium Project (Owendale Scandium Deposit), which was acquired by Rio Tinto (ASX:RIO) – *see RIO News Release dated 28 April 2023* *Rio Tinto acquires high-grade scandium project in Australia*
- ✓ The Fifield Project hosts the historic Platina Lead mine, the largest historic producer of Platinum in Australia.

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

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

Competent Persons Declaration

The information in the report that relates to Exploration and Resource Results is based on information reviewed and/or compiled by David Hutton who is 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".