



*rim***fire**

NSW Critical Minerals Focus

Scandium

Cobalt

PGEs

Copper

Nickel

**Technical Presentation -
October 2023**

Disclaimer & Competent Person Statements



Competent Persons Declaration

The information in the report to which this statement is attached that relates to Exploration and Resource Results is based on information reviewed and/or compiled by David Hutton who is deemed to be a Competent Person and is a Fellow of The Australasian Institute of Mining and Metallurgy.

Mr Hutton has over 30 years' experience in the mineral and mining industry and is an employee of Rimfire Pacific Mining Limited (Rimfire). 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'. David Hutton consents to the inclusion of the matters based on the information in the form and context in which it appears.

Forward looking statements Disclaimer

This document contains "forward looking statements" as defined or implied in common law and within the meaning of the Corporations Law. Such forward looking statements may include, without limitation, (1) estimates of future capital expenditure; (2) estimates of future cash costs; (3) statements regarding future exploration results and goals. Where the Company or any of its officers or Directors or representatives expresses an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and the Company or its officers or Directors or representatives as the case may be, believe to have a reasonable basis for implying such an expectation or belief. However, forward looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward looking statements. Such risks include, but are not limited to, commodity price fluctuation, currency fluctuation, political and operational risks, governmental regulations and judicial outcomes, financial markets and availability of key personnel. The Company does not undertake any obligation to publicly release revisions to any "forward looking statement", or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

Investment Highlights

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Enviably tenement holding in world renowned Lachlan Orogen and Broken Hill Districts (NSW) with demonstrated prospectivity for Critical Minerals and Copper - Gold deposits



Two Rimfire projects located adjacent to 3rd party projects with Federal Government “Critical Minerals Major Project” status



Very experienced in-house geological team with successful exploration track record



High impact drilling and work programs planned for the next 6 months with supporting news flow



Proven Discovery Team



Dr Peter Crowhurst • Geology Manager

Peter has over 25 years of exploration experience principally in the areas of project generation, field evaluation, project execution and structural geology.

Peter's experience extends across Australia, Asia and SW Pacific including research work with CSIRO on industry projects. Peter has strong experience with multiple commodities / geological settings including Cu-Au porphyries, seafloor massive Cu-Zn-Pb-Ag sulphides, mineral sands and lithium.



Paul Wright • Technical Consultant

Key role in discovery of Cadia East

Paul has over 30 years of exploration experience including at Cadia, where he was involved in the early exploration work that took Cadia East from a soil anomaly into a significant resource.

Paul has key expertise in porphyry Cu-Au systems and multitude of Au-only systems.



Michael Love • Technical Consultant

Key role in discovery of Lake Cowal, Northparkes, Dubbo Project

Mick has strong experience in the Lachlan Orogen and was heavily involved in the discovery, early exploration and development of Northparkes (Cu / Au porphyry), Lake Cowal (Au), and Dubbo Project (Rare Earths).

Mick has over 30 years of exploration experience with key expertise in greenfields exploration, project discovery, project execution and geology.



Wolfgang Leyh • Technical Consultant

Broken Hill specialist geologist

Wolfgang has over 40 years of exploration experience, throughout Australia with a special expertise in the Broken Hill domain.

Wolfgang's experience ranges from in mine to greenfield exploration across a range of commodities. Pragmatic with an emphasis on "boots on ground" exploration, Wolfgang's geological knowledge of the Broken Hill domain is unapparelled.

Management Team



Ian McCubbing • Non-Executive Chair

Ian was appointed Non-Executive Director and Chairman of the Board in 2016. He has over 30 years experience, principally in the areas of corporate finance, M&A and brings a strong commercial background in the resources industry to the Company.

Ian has been a CFO and Non-Executive Director of ASX200 mining companies.



Andrew Knox • Non-Executive Director

Andrew was appointed Non-Executive Director of the Board in March 2020. A qualified accountant he has over 35 years of resources experience principally in acquisitions, mergers and capital raisings for micro and low capital companies in the oil and gas and mining industries.

Andrew was formerly a Non-Executive Director of Rimfire from 2005 to 2011. He is currently CEO and Managing Director of ASX listed Red Sky Energy Ltd.



Greg Keane • CFO/Investor Relations

Greg was appointed Rimfire's Chief Financial Officer in May 2017. As an experienced commercial and financial professional in all life cycle stages of an exploration company through to producing operational mining companies, Greg has had significant experience and exposure in defining and implementing operational, commercial and financial strategy.

Greg's experience has been gained in multiple commodities, both locally and internationally.



David Hutton • Managing Director

David has over 30 years of exploration experience, with key expertise in greenfields exploration, project discovery, project execution, geology, corporate management and strategy

David was involved with the discovery and / or delineation of numerous precious and base metal deposits, including Thunderbox gold deposit, Altia Silver Lead Zinc deposit, F8 zinc deposit (Pillara) and Barda Gonzales Copper Deposit (Western Argentina).

Why Critical Minerals?



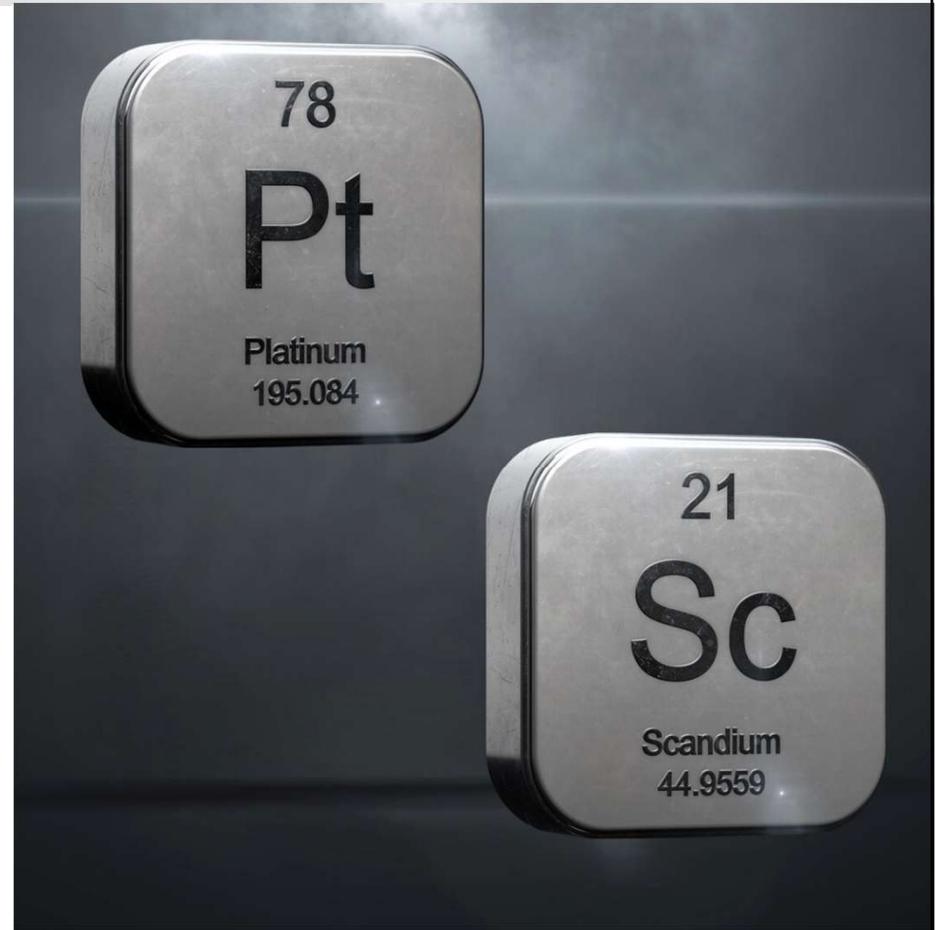
- Critical minerals are metals, non-metals and minerals considered vital for the economic well-being of the world's major and emerging economies, yet whose supply may be at risk due to geological scarcity, geopolitical issues, trade policy or other factors
- They include Antimony, Beryllium, Bismuth, Chromium, **Cobalt**, Graphite, Lithium, Magnesium, Manganese, **Nickel**, Niobium, **Platinum Group Elements (PGEs)**, Rare Earth Elements, Rhenium, **Scandium**, Titanium / Zirconium, Tungsten, Vanadium and Zirconium
- They are required for the manufacture of solar PV plants, wind farms, electric vehicles, battery storage
- Demand increasing due to growth in the renewable energy and advanced manufacturing (defence, aerospace, medical) sectors
- **Critical Minerals plus metals such as copper required to underpin global decarbonisation**

Source: Australian Government's Australian Critical Minerals Prospectus 2021

Scandium & Platinum Group Elements (PGEs) Market

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- Principal uses of Sc in aluminium-scandium alloys and solid oxide fuel cells (SOFCs)
- Scandium Oxide current price ~ US\$927,000 per tonne²
- Demand forecast to increase >2.5x by 2040 driven by the Hydrogen economy
- The use of scandium in high-strength aluminium alloys allows for lightweight and carbon friendly solutions for the transport sector
- Principal uses of PGEs in the automotive sector - catalytic converters
- Future use in Hydrogen Electrolysers and Fuel Cells
- **Global Sc supply totally reliant on China & Russia**
- **Global PGE supply reliant on Southern Africa & Russia**

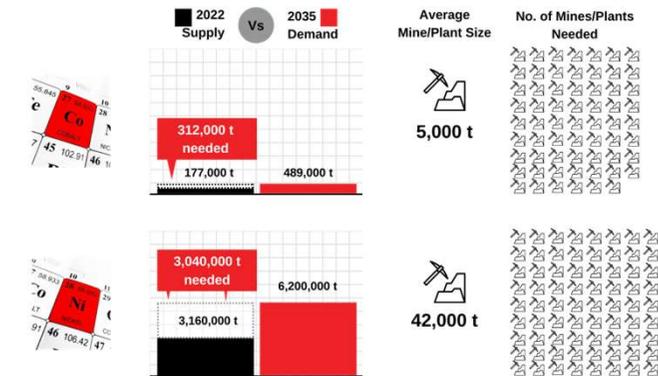


² Source: USGS Scandium Fact Sheet 2022 / Shanghai Metals Market

Copper, Nickel and Cobalt



- Copper is the 3rd most consumed metal globally & is essential to an electrified (decarbonised) future
- Global copper market = US \$283.4B in 2021, and it is expected to reach US \$394.21B by 2029¹
- Over the next decade, investment in new copper projects (to meet projected demand) will need to be more than US\$23 billion a year, which is 64% higher than the average annual spend over the last 30 years



Source: Benchmark Mineral Intelligence

Without recycling, the world will need to build 62 new cobalt mining projects of 5,000 tonnes each by the end of 2035 to satisfy demand.

Another 72 mining projects with an average size of 42,000 tonnes will be required to meet battery demand for refined nickel.

“There is going to be a very significant shortage in copper.... The decarbonisation drive will increase the intensity of copper use globally.”

Richard Adkerson, Chairman and CEO at Freeport-McMoRan
the world's largest listed copper miner

1. Source: Wood Mackenzie

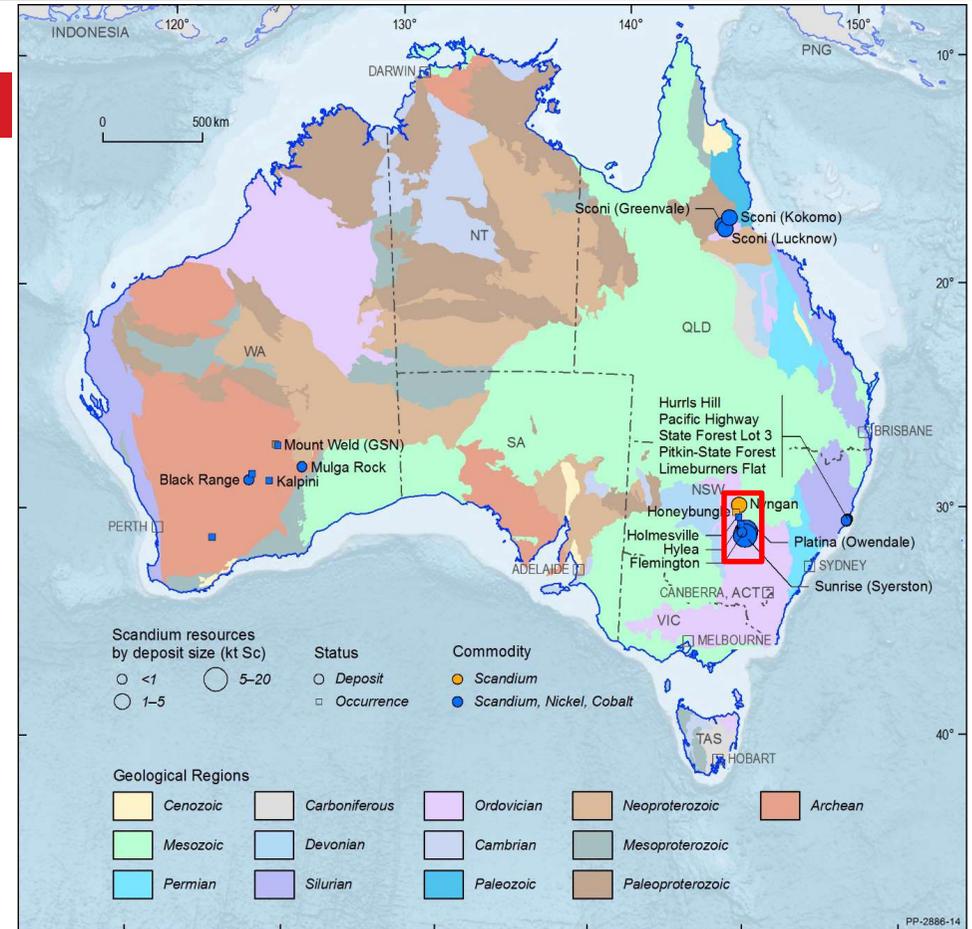
Supply chains face substantial risks with >50% of Ni production coming from Indonesia, Russia and China and >70% of Co production from Democratic Republic of Congo.

Australian Scandium Resources



Central NSW epicentre

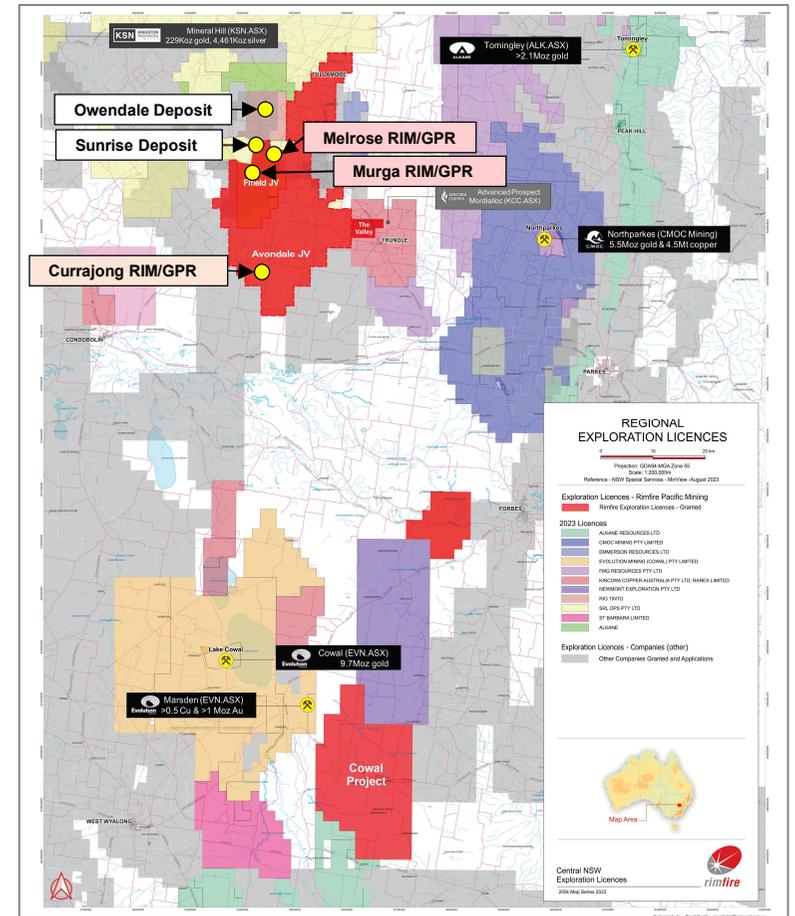
- NSW has some of the highest grade scandium deposits in the world
- NSW hosts scandium only projects and projects where scandium is a by-product alongside cobalt and nickel.
- Strategically located within the Parkes District
- NSW Government is establishing Australia's first Critical Minerals Hub at Parkes
- Existing NSW projects dominated by major companies, i.e., Rio Tinto (RIO.ASX) and Sunrise Energy Metals (SRL.ASX)



Scandium – Fifield / Avondale

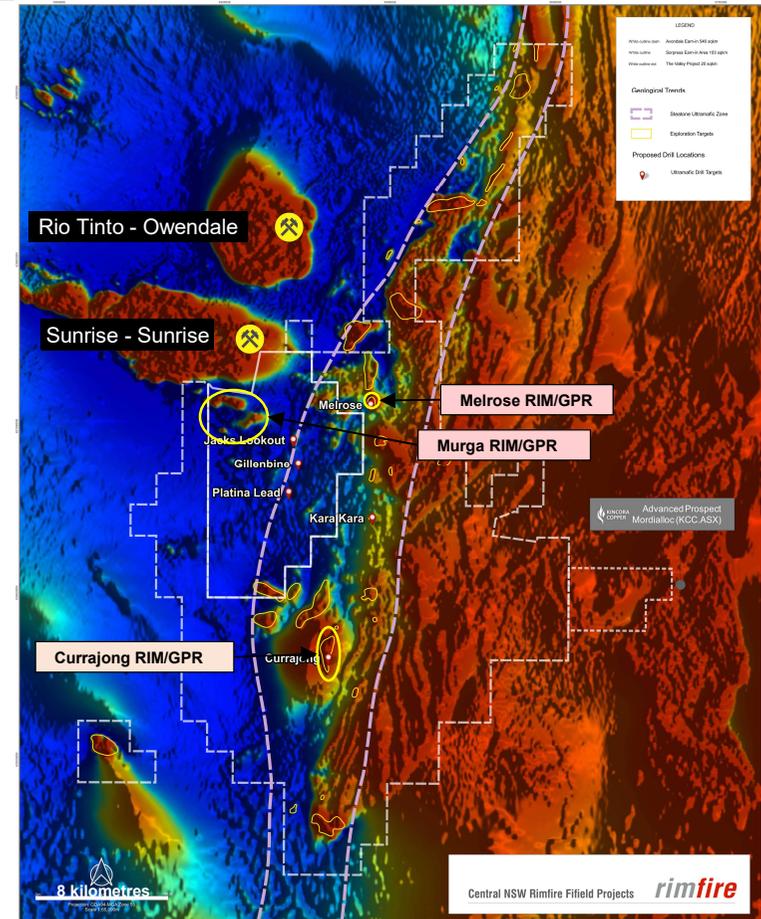


- Rimfire's Fifield and Avondale Projects located within the NSW scandium epicentre 70 kilometres NW of Parkes
- Within same geological domain as the Sunrise Battery Minerals Complex (SRL.ASX) and the Owendale Scandium Project (RIO.ASX)
- Sunrise granted Major Project Status by Australian Government
- Rio Tinto recently purchased Owendale (US\$14M)
- Rimfire is one of the very few ASX – listed junior explorers actively pursuing scandium opportunities within the district
- Rimfire and GPR have a well-established Management and Operating Committee in place
- In consultation with GPR, exploration programs are designed and implemented by Rimfire technical personnel and funded by GPR



Shared scandium geology

- Fifield / Avondale scandium shares the same geology with Sunrise and Owendale
- All lie within a 10km radius of each other
- Scandium (+/- nickel and cobalt) mineralisation occurs within weathered laterite and saprolitic clays developed over Ordovician – age mafic / ultramafic intrusive rocks
- Owendale Total (Measured, Indicated and Inferred) Resource of 610Kt @ 655ppm Sc, 0.44g/t Pt, 0.20%Ni, and 0.14%Co (PGM.ASX Announcement dated 12 July 2016)
- Sunrise Scandium Resource (Measured and Indicated) of 162.70Mt @ 76ppm Sc plus an Inferred Resource of 20.62Mt @ 283ppm Sc (Sunrise Deposit NI 43-101 Technical Report dated 25 June 2018)



The geology of Fifield scandium – regolith profile

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Downhole from surface →

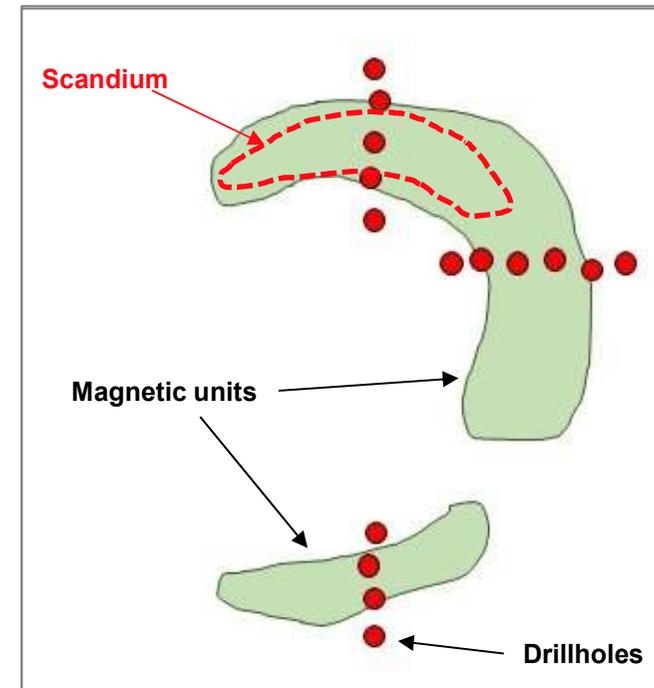


A staged and systematic exploration approach

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Managing geological complexity

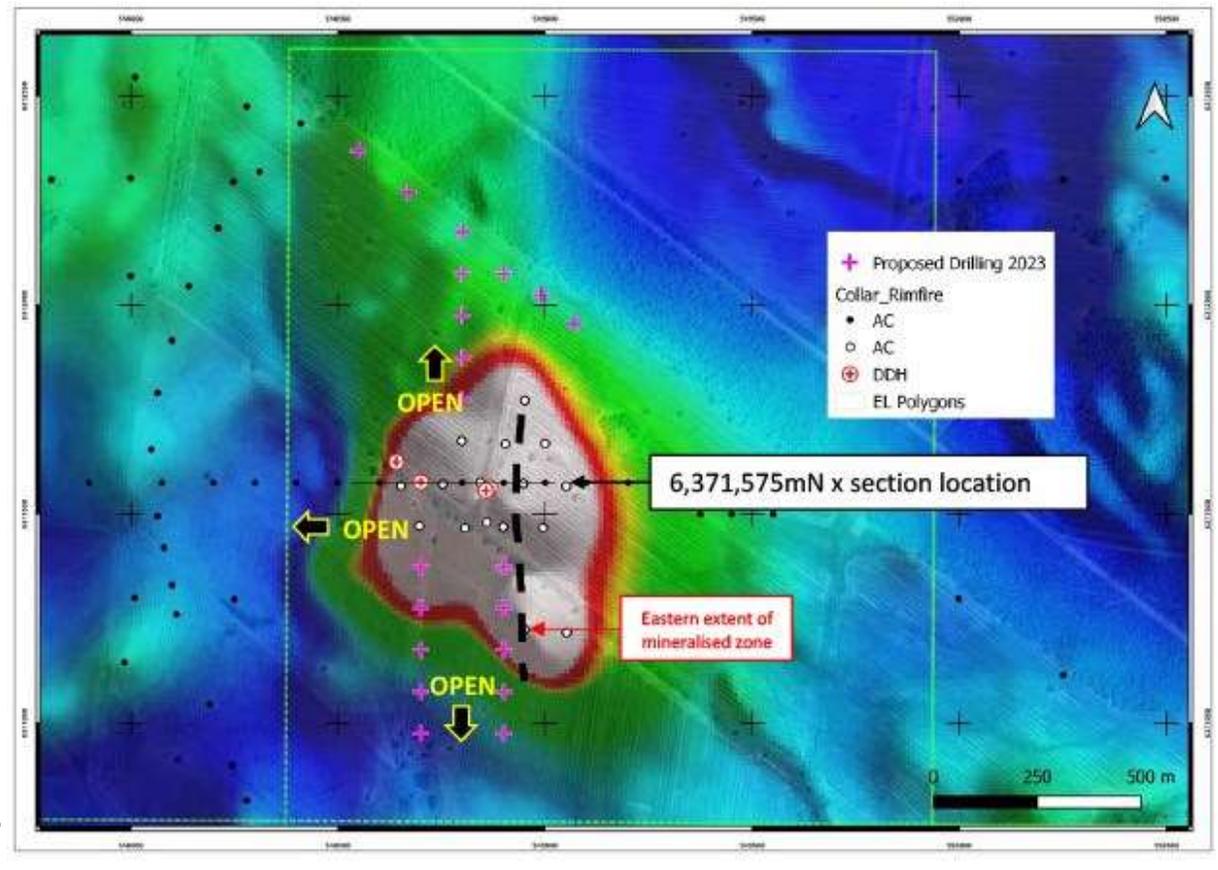
- Issues to consider; spurious magnetic effects, lateral geochemical dispersion, non – uniform weathering
- **Stage 1** – Reconnaissance drilling to determine significance of magnetic anomaly “PROOF OF CONCEPT”
- **Stage 2** – Assuming Stage 1 identifies prospective rock types then additional drilling to define extent of host rocks and Sc “SCOPING”
- **Stage 3** – Assuming Stages 1 and 2 successful and metallurgical test work demonstrates commercial potential, then infill drilling to estimate a Resource “RESOURCE”



Melrose Nickel Cobalt Scandium



- Avondale Earn In Project with GPR.
- GPR right to earn up to a 75% interest by completing expenditure of \$7.5M
- High – grade Ni Co Sc (+PGEs) mineralisation within flat-lying lateritised and weathered zone developed over pyroxenite host rocks
- Stage 2 work program completed awaiting outcome of metallurgical test work before proceeding to Stage 3

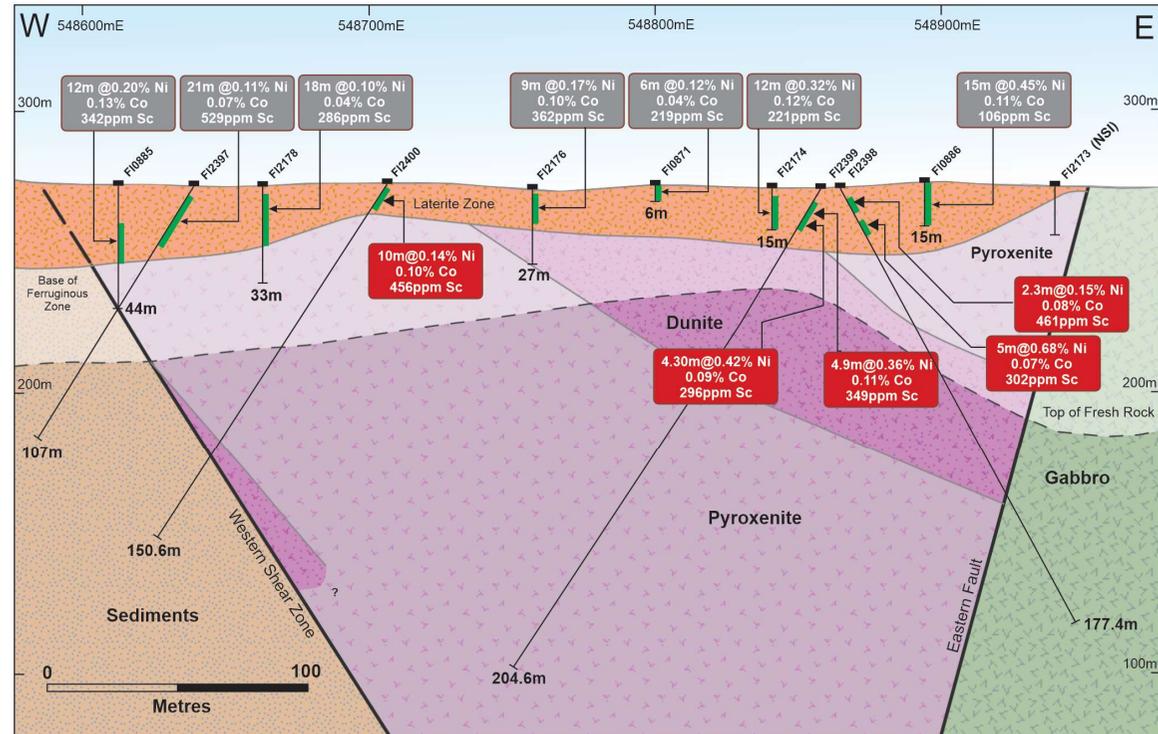


Melrose magnetic image

Melrose – high grade drill intercepts



- 21m @ 0.11% Ni, 0.07% Co, and 529ppm Sc, from 3 metres in FI2397 including 9m @ 0.17% Ni, 0.15% Co and 688ppm Sc from 14 metres
- 2.3m @ 0.15% Ni, 0.08% Co and 461ppm Sc from 3 metres and 5.0m @ 0.68% Ni, 0.07% Co and 302ppm Sc from 16 metres in FI2398
- 4.9m @ 0.36% Ni, 0.11% Co and 349ppm Sc from 5 metres, and 4.3m @ 0.42% Ni, 0.09% Co and 296ppm Sc from 10.1 metres in FI2399
- 10.0m @ 0.14% Ni, 0.10% Co and 456ppm Sc from 1 metre in FI2400 including 5m @ 0.17% Ni, 0.17% Co and 568ppm Sc from 5 metres



Melrose Section 6,371,575mN



Melrose – metallurgical test work



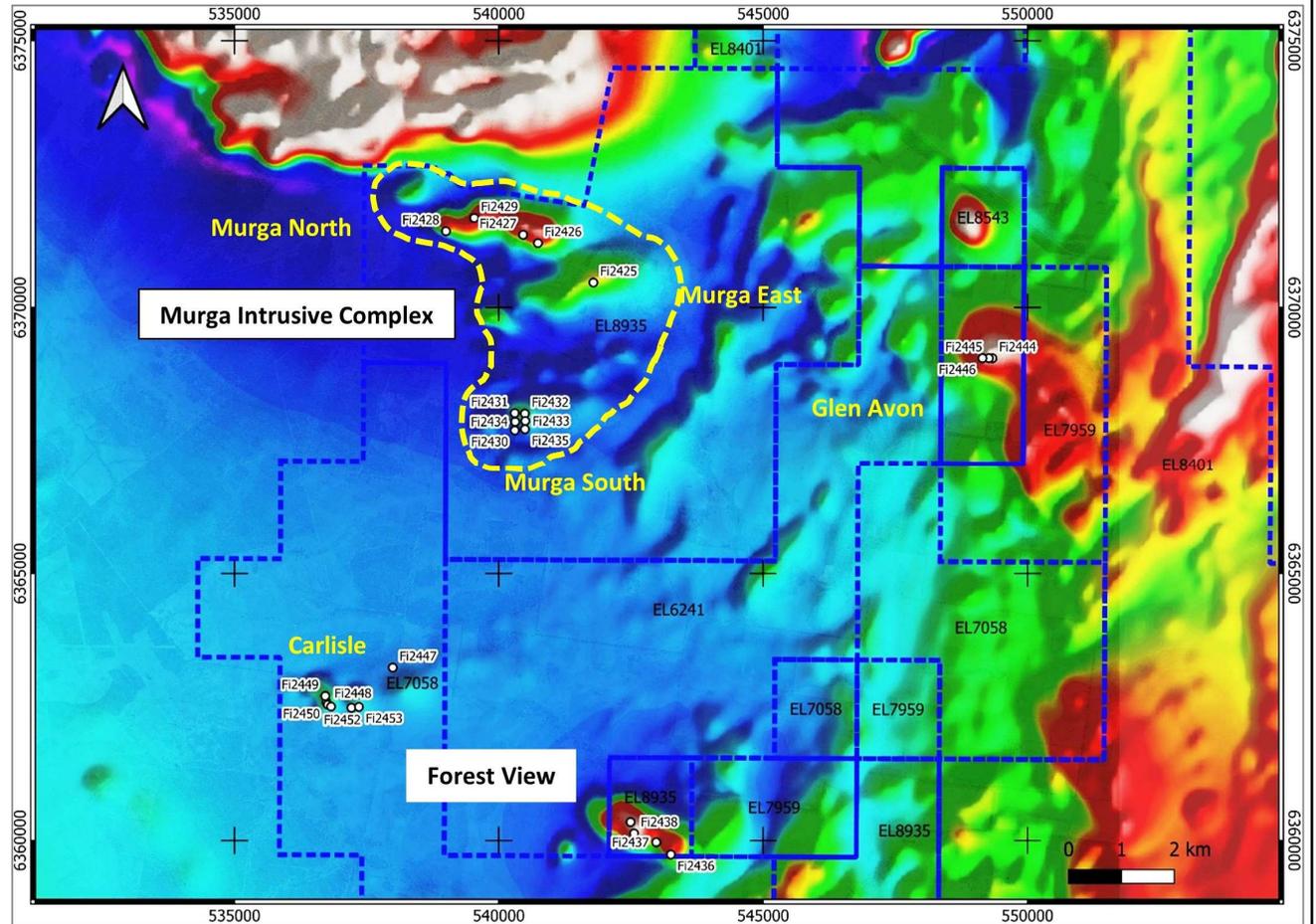
- Independent Metallurgical Operations Pty Ltd (IMO) currently developing a conceptual processing flowsheet (Atmospheric Pressures) with the aim of optimising recoveries and production of a nickel – cobalt – scandium product from Melrose high-grade mineralised material
- Head assaying of 260kg bulk sample returns grades ranging from 0.218% to 0.437% nickel (average - 0.33% nickel), 0.08% to 0.15% cobalt (average - 0.12% cobalt), and 290ppm to 470ppm scandium (average - 380ppm scandium).
- Three leach tests completed with assays awaited

New Murga / Forest View Scandium



- **Fifield Earn In Project with GPR.**
- GPR earning up to a 50.1% interest by completing expenditure of \$4.5M and committing to development funding
- Sc mineralisation within flat-lying lateritised and weathered zone developed over (magnetic) pyroxenite host rocks
- Little if any previous exploration for Sc
- Further Stage 1 work to be undertaken

Murga magnetic image



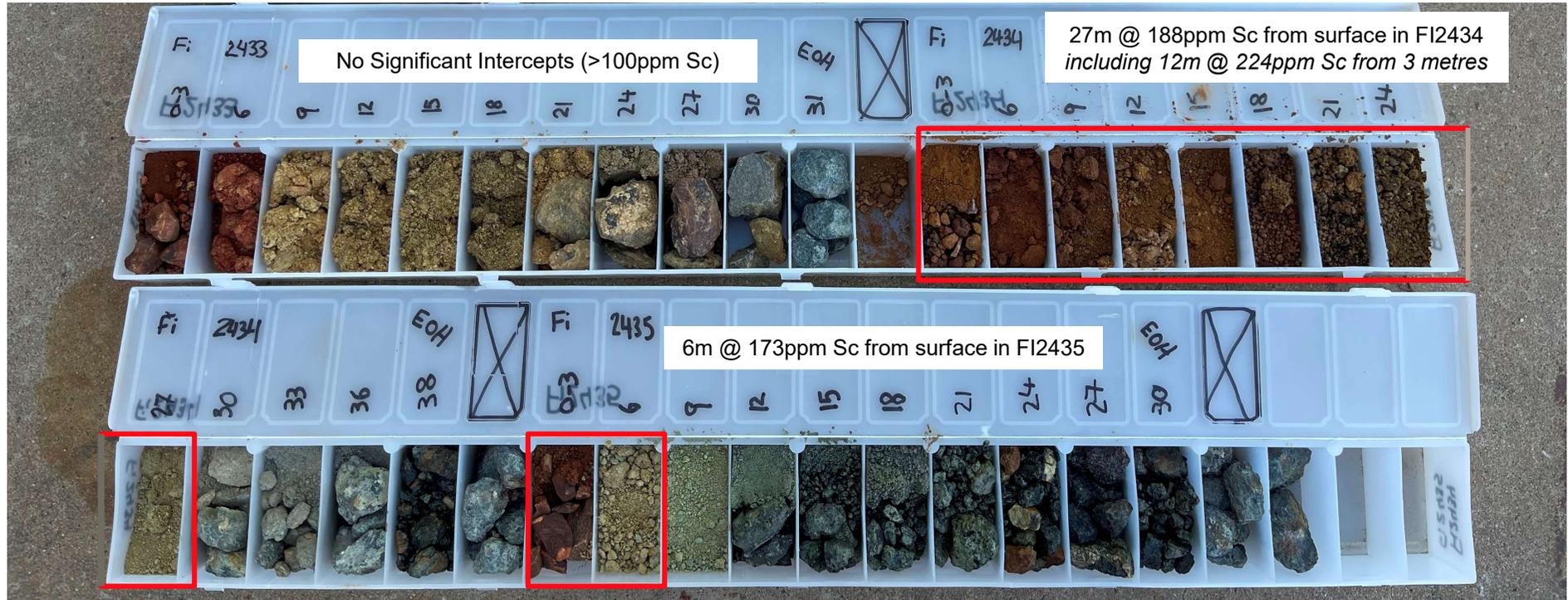
Murga / Forest View – initial drill intercepts



- 3m @ 132ppm Sc from 3 metres in FI2425
- 18m @ 164ppm Sc from surface in FI2426 *including 6m @ 208ppm Sc from 3 metres*
- 5m @ 125ppm Sc from 3 metres in FI2427
- 6m @ 131ppm Sc from 15 metres in FI2429,
- 6m @ 106ppm Sc from 3 metres in FI2430
- 27m @ 188ppm Sc from surface in FI2434 *including 12m @ 224ppm Sc from 3 metres*
- 6m @ 148ppm Sc from 6 metres in FI2438 (Forrest View), and
- 33m @ 127ppm Sc from 6 metres in FI2439 (Forrest View).

Proof of Concept (Stage 1) drilling still to be completed over multiple untested scandium surface anomalies

Murga / Forest View – regolith profile

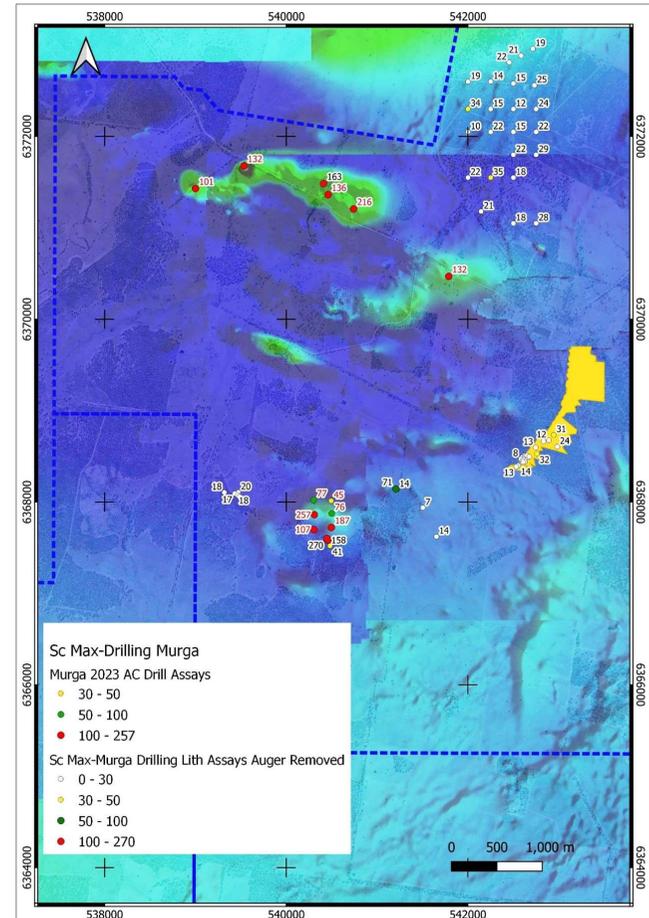
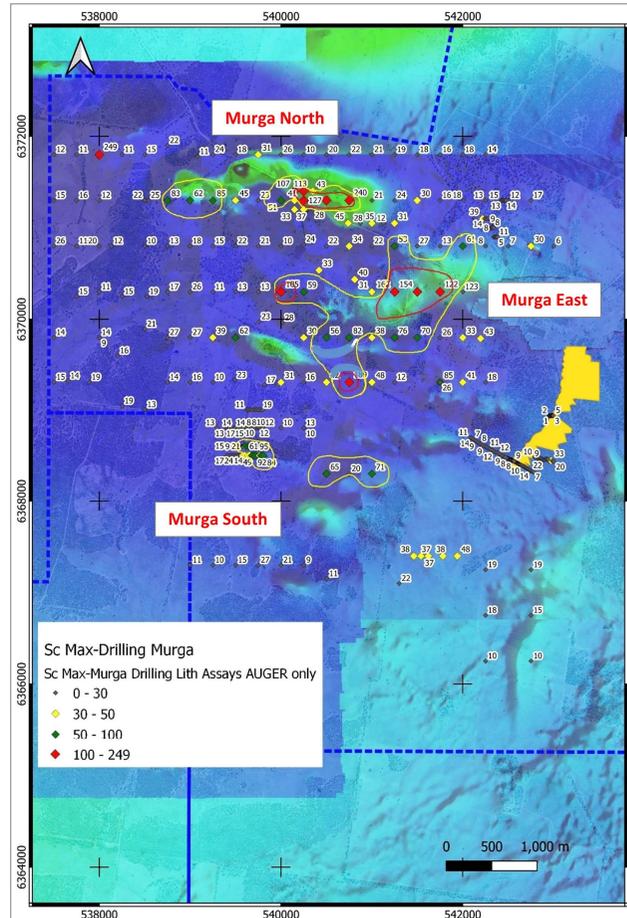


FI2433 – FI2435 were drilled 200 – 300 metres apart at Murga South

Murga Sc targets



- **Historic 500m x 250m auger sampling has defined multiple Sc anomalies at surface that follow-up**
- Most previous exploration focussed on testing for gold and PGEs on the Sorpresa Gold Deposit which lies immediately to the east of Murga.

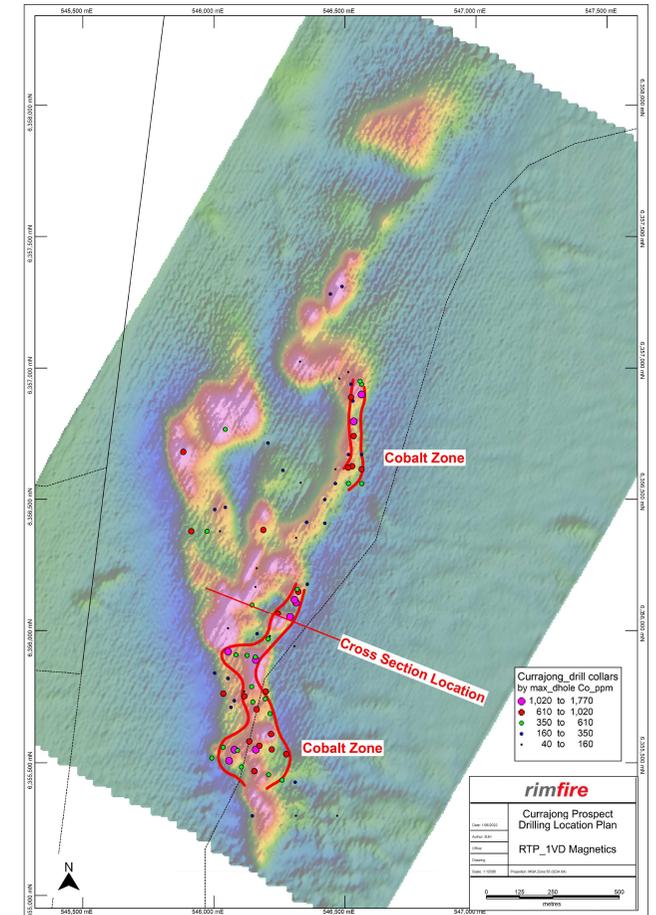


Currajong Nickel Cobalt Scandium



- **Avondale Earn In Project with GPR**
- Nickel cobalt scandium mineralisation within laterite zone developed over 2.5 km long ultramafic unit
- 34m @ 0.29% Ni, 0.15% Co, and 101ppm Sc from 6 metres including 16m @ 0.27% Ni, 0.22% Co, and 120ppm Sc
- Strongly anomalous PGEs within underlying ultramafic rocks
- 44m @ 0.34g/t Pt + Pd from 8 metres including 8m @ 0.87g/t Pt + Pd and 2m @ 1.34g/t Pt + Pd from 12 metres
- 6m @ 0.72g/t Pt + Pd from 26 metres and 20m @ 0.80g/t Pt + Pd from 52 metres (Hole ended in mineralisation)
- Stage 2 work program completed awaiting outcome of Melrose metallurgical test work before proceeding to Stage 3

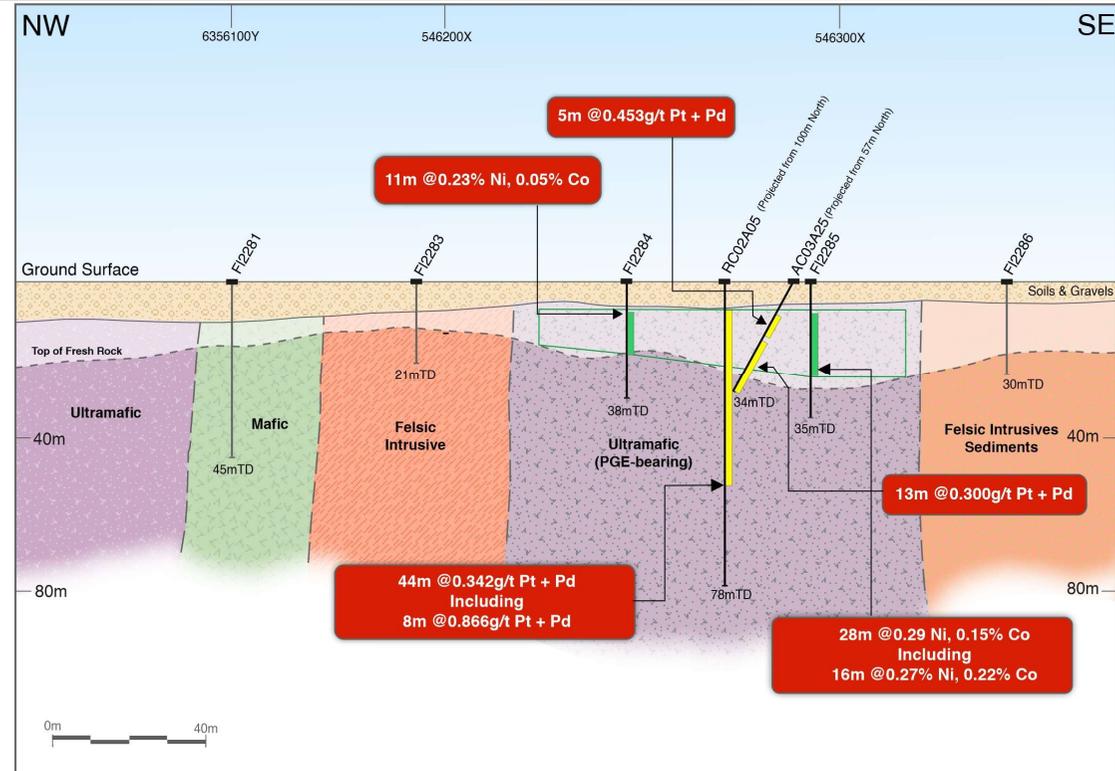
Currajong magnetic image



Currajong Nickel Cobalt Scandium



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Cobalt Zone

Currajong Cross Section 6,356,070mN



Key Scandium takeaways



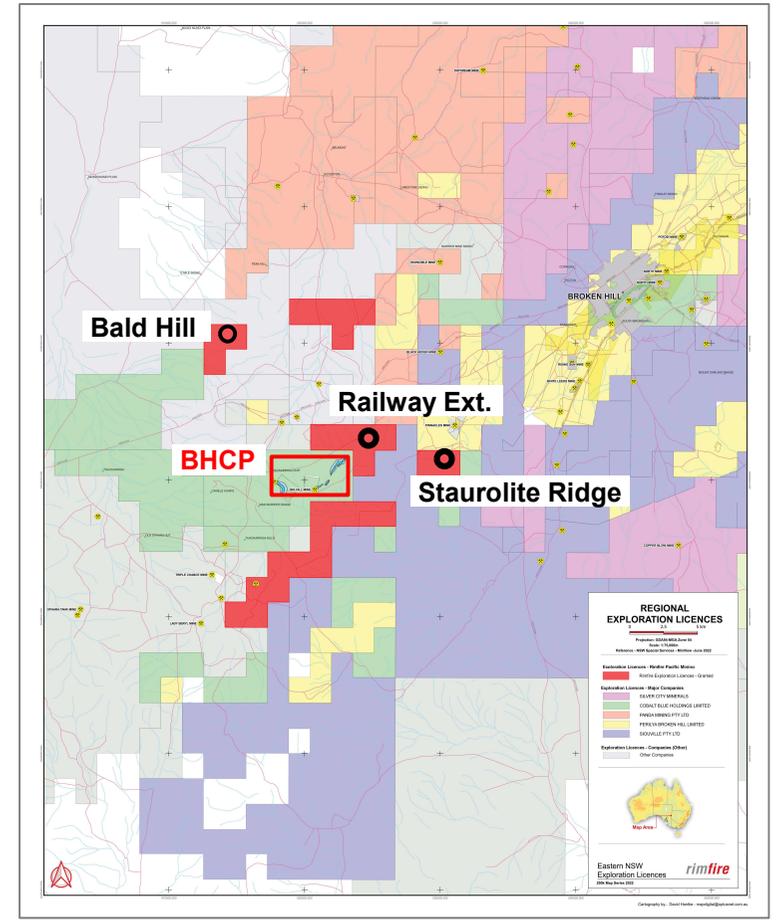
- ✓ Central west of NSW (Parkes District) has some of the highest-grade scandium deposits in the world
- ✓ Deposits and prospects characterised as either purely scandium or as a by-product alongside cobalt and nickel
- ✓ Parkes District scandium projects dominated by major companies, i.e., Rio Tinto and Sunrise Energy Metals
- ✓ Rimfire / GPR is one of the very few junior explorers pursuing scandium opportunities within the Parkes District
- ✓ Rimfire / GPR hold multiple scandium prospects that are at an early stage but with significant size and grade upside
- ✓ We employ a systematic staged exploration approach to manage geological complexity and risk

Other Rimfire 100% - owned Projects



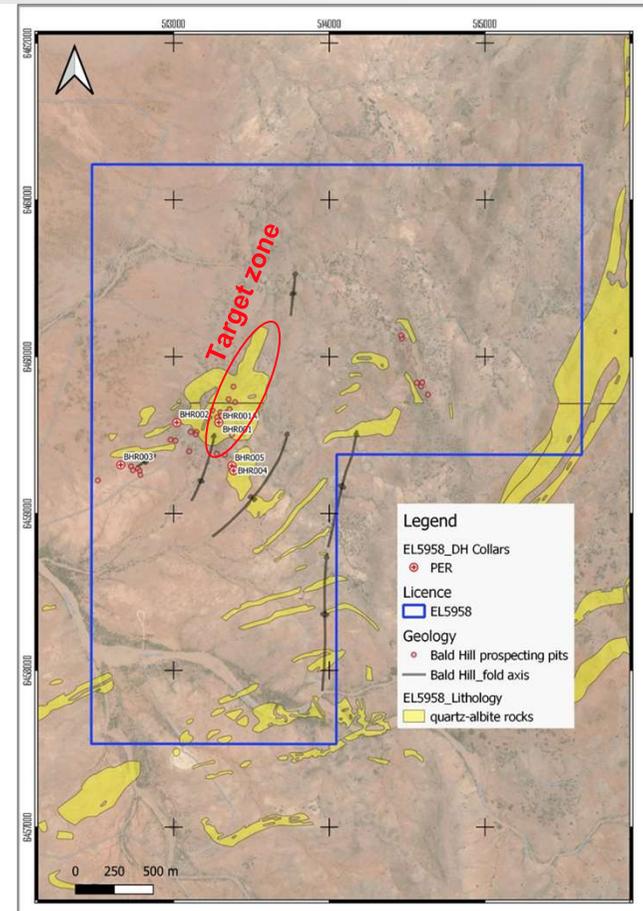
Bald Hill Cobalt

- Potential area of Future Critical Mineral supply
- Adjacent to Cobalt Blue's (COB.ASX) Broken Hill Cobalt Project (BHCP) - Federal Government Major Project Status
- COB new processing technology unlocking value from cobalt sulphides
- Rimfire's priority Railway Extension target immediately along strike from COB's Railway Cobalt JORC resource of >40,000t
- Historic drilling (1960's to 1980's) highlights prospectivity in northern blocks. Never been followed up
- 61m @ 0.18% Co from 94.5 metres including 15.25m @ 0.29% Co (*Staurolite Ridge*)
- 58m @ 0.10% Co from 48 metres including 7m @ 0.17% Co, 6m @ 0.15% Co, and 6m @ 0.15% Co (*Bald Hill*)

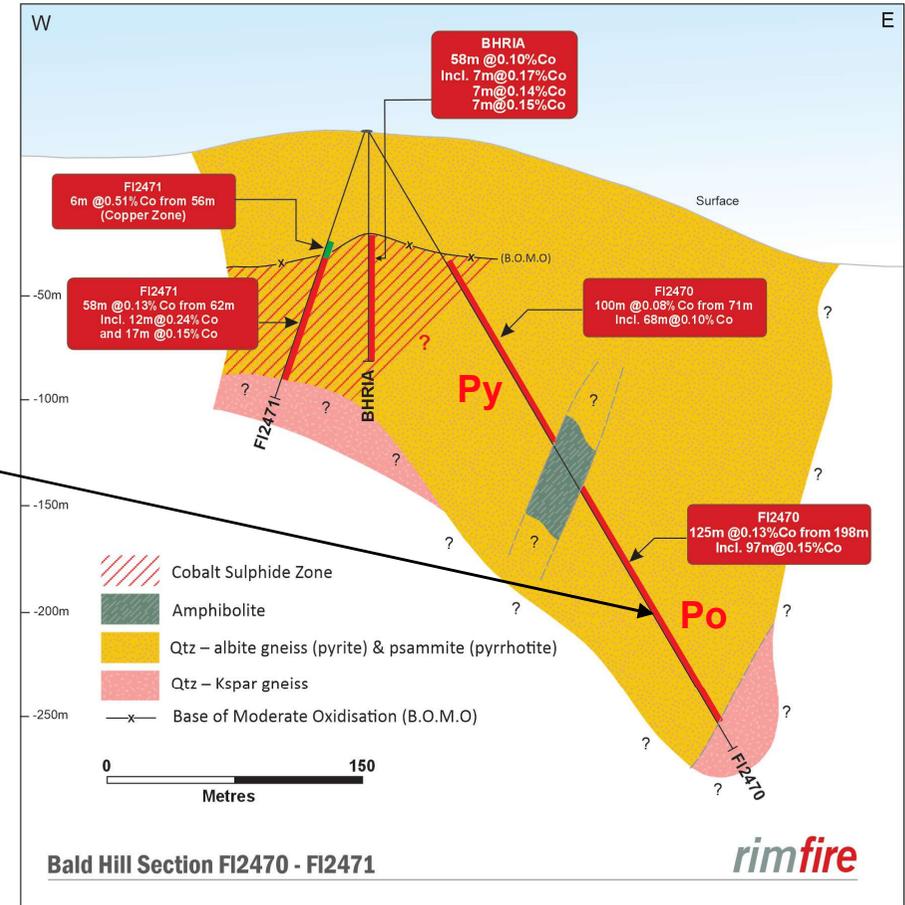


Bald Hill cobalt sulphides

- Sulphide (pyrite – pyrrhotite) rich horizon in quartz – albite gneiss host rock
- High grade cobalt sulphides over very broad widths in recent drilling
- 125m @ 0.13% Co from 198m in FI2470 *including 97m @ 0.15% Co from 226m*
- 58m @ 0.13% Co from 62m in FI2471 *including 12m @ 0.24% Co and 17m @ 0.15% Co*
- 100m @ 0.08% Co from 71m in FI2470 *including 68m @ 0.10% Co from 71m*



Bald Hill cobalt sulphides



Other Rimfire 100% - owned Projects

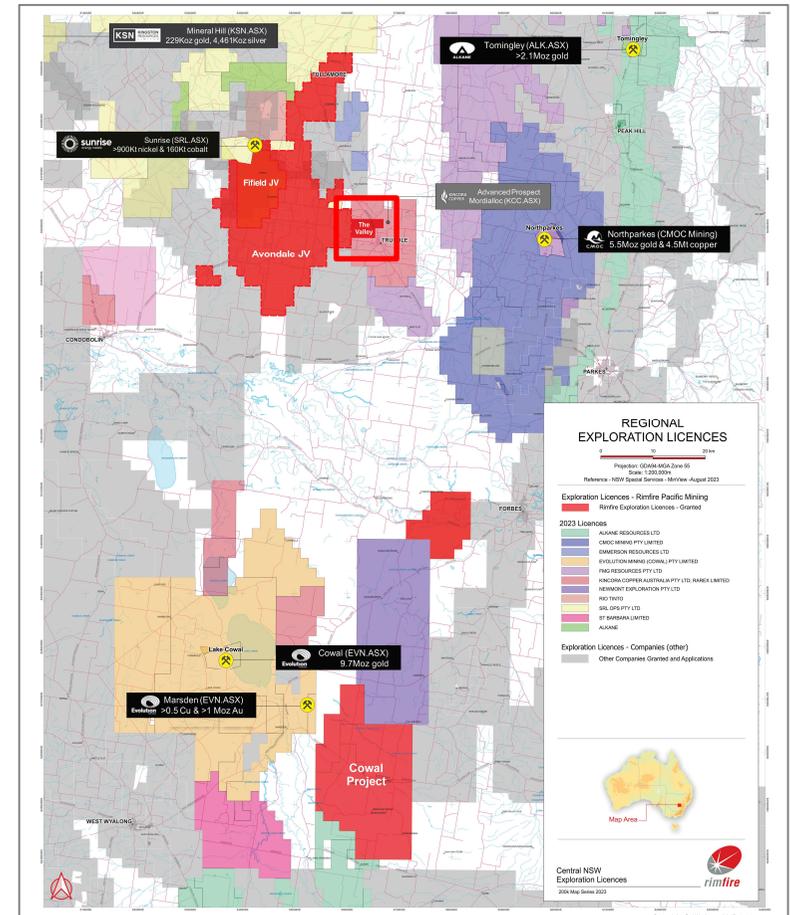


Valley Copper - Gold

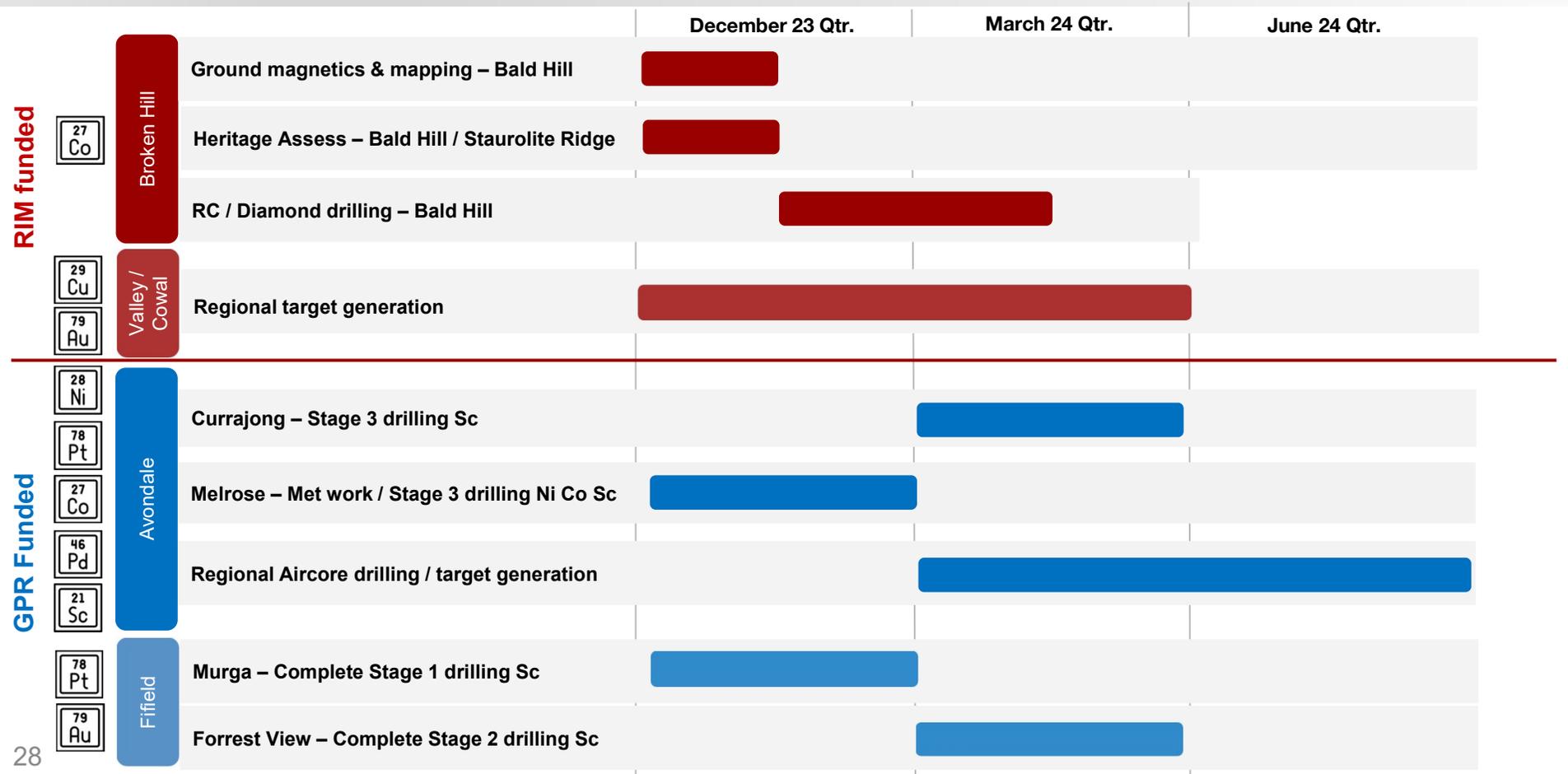
- 34 km west of CMOC's Northparkes Copper Gold Mine (1.96Mt copper & 2.33Moz gold)
- Rimfire drilling has confirmed Northparkes host rocks
- Near surface copper potential requires testing

Cowal Copper - Gold

- Adjacent to Evolution Mining's (EVN.ASX) Cowal Gold Mine (mining depleted Mineral Resource of 305.3Mt @ 0.98g/t gold [9.6Moz] as at 16 February 2022)
- North south gravity ridge with multiple historic gold and copper drill intercepts including recently purchased Porters Mount prospect
- Rimfire's neighbours - Evolution Mining (EVN.ASX), Alkane (ALK.ASX), Fortescue (FMG.ASX) and Newmont



Indicative Activity and News flow Schedule



Corporate Overview



Corporate Structure (ASX:RIM) post August 2023 capital raising

2.10B
Shares on issue

220.3m
Options

\$0.006
Share price

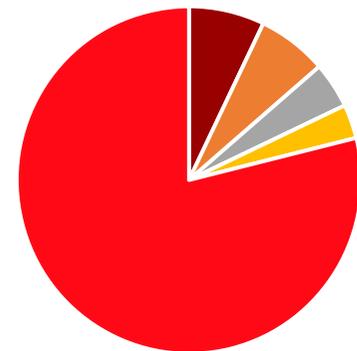
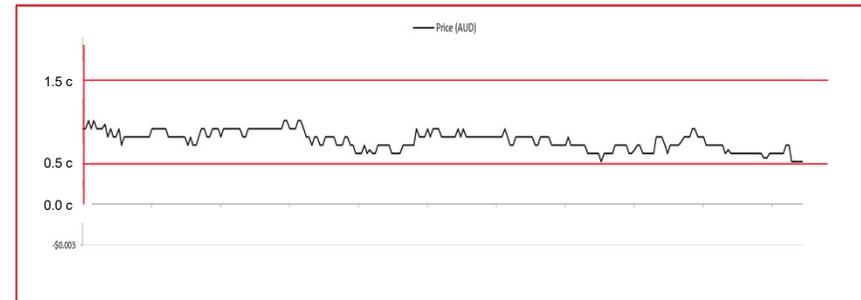
\$14.0m
Market cap
(fully diluted)

\$377K*
Cash

~\$13.0m
Enterprise Value

* Cash at end June 23 Qtr. and excludes proceeds of \$800K from the August 2023 Placement.

12 Month Share Price (range: 0.5 to 1.1 cps)



- Trevor Nairn - 7.09%
- Anton Billis - 6.56%
- GPR - 4.28%
- Management - 3.15%
- Other - 78.93%

Top 20 shareholders – 39.5%

Appendix 1 – References



Technical information referred to in this presentation has been sourced from the following ASX Announcements:

- Sunrise Energy Metals (ASX: SRL) – Sunrise Project Awarded Major Project Status, 6 Dec 2021
- Cobalt Blue Holdings (ASX: COB) – Grant of Australian Major Project Status, 2 Mar 2022
- Rimfire Pacific Mining (ASX: RIM) – Critical Minerals Discovery Opportunity at Avondale Project. 28 March 2022
- Rimfire Pacific Mining (ASX: RIM) – Strong nickel, cobalt and scandium drill results. 4 April 2022
- Rimfire Pacific Mining (ASX: RIM) – Significant Ni, Co and Pt drilling results at Currajong. 8 June 2022
- Rimfire Pacific Mining (ASX: RIM) – High-grade scandium at Melrose. 19 September 2022
- Rimfire Pacific Mining (ASX: RIM) – Significant nickel cobalt scandium results at Melrose. 20 October 2022
- Rimfire Pacific Mining (ASX: RIM) – High-grade cobalt targets identified at Broken Hill. 3 November 2022
- Rimfire Pacific Mining (ASX: RIM) – Rimfire investigating Ni – Co – Sc recoveries at Melrose. 9 February 2023
- Rimfire Pacific Mining (ASX: RIM) – Melrose nickel cobalt scandium aircore drilling underway. 8 March 2023
- Rimfire Pacific Mining (ASX: RIM) – Melrose emerging as a significant Ni, Co, Sc opportunity. 26 June 2023.
- Rimfire Pacific Mining (ASX: RIM) – New Murga scandium project identified at Fifield. 28 July 2023
- Rimfire Pacific Mining (ASX: RIM) – Broad zones of high-grade cobalt at Bald Hill. 18 August 2023
- Rimfire Pacific Mining (ASX: RIM) – Acquisition of Porters Mount Project. 11 September 2023
- Rimfire Pacific Mining (ASX: RIM) – Multiple Scandium Intercepts at Fifield. 3 October 2023



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