
Quarterly Report

For the quarter ended March 2020

Highlights

- ✓ Results from the Southern Area Phase 2 aircore drilling and bedrock sampling support the interpretation that the bedrock has an Ordovician Macquarie Arc geochemical signature. However, testing indicates that it is likely to be from Stage II volcanism rather than the Stage III and IV volcanism associated with mineralisation at Cowal (gold) and Northparkes (copper / gold).
- ✓ Northern Area Phase 1 aircore drilling indicates a peak copper anomaly value of 703ppm copper.
- ✓ The focus of Phase 3 Drilling Program will be the
 - Northern Gold prospect which is an area with a surface footprint of 400m x 100m of historical gold workings that was partially tested with the Phase 1 drilling program, and
 - Transit prospect where in 2017 Rimfire obtained promising intersections from RC hole Fi0808 (60 degrees inclined hole) of 20m @ 1.11g/t Au from 48m depth.

Rimfire Pacific Mining NL (ASX: RIM) ("the Company" or "Rimfire") is pleased to provide the March 2020 Quarterly Activity Report for activities undertaken at Fifield NSW.

The assays for the second phase of the drilling program for Southern Area provide further support that the Rimfire interpretation of these rocks as part of the Ordovician Macquarie Arc rather than younger Silurian or Devonian rocks is valid ([ASX Announcement: Fifield Exploration Update 26Mar2020](#)). However, based on scandium (Sc) versus zirconium (Zr) ratios, the area appears to be associated with Phase II volcanism rather than the Phase III and IV volcanism that is interpreted as being responsible for the nearby significant gold, and copper / gold mineralised systems of Cowal (Evolution Mining) and Northparkes (CMOC) respectively.

Phase 3 operational planning is in progress for the Northern Gold and Transit prospects including work to obtain the necessary NSW Government drilling approvals and local landholder access agreements. The Coronavirus will influence the scheduling of company activities in the short term.

Craig Riley, Managing Director at Rimfire states:

"During the last quarter the results from the Phase 1 and Phase 2 drilling programs over the Northern and Southern Areas support the Rimfire interpretation that the basement rocks are older Ordovician rocks that also host the nearby significant Northparkes (copper / gold) and Cowal (gold) mines. The focus of work for the next drilling campaign will now transition to the Northern Gold and Transit prospects which both retain strong potential for economic gold mineralisation that could be independent significant discoveries or be accretive projects to any development of the Sorpresa Resource."

Going for gold.

Health, Safety, Environment and Community

Health and Safety

There were no Health or Safety related incidents during the last quarter. The Total Year To Date performance for Minor Injuries, Medical Treatment Injuries and Lost Time Injuries remains zero.

The Company has also implemented Covid-19 preventive measures across all facets of field and office operations to ensure employees and contractors are performing duties in a manner consistent with directives from relevant State and Federal authorities. Where possible internal company communication and external communication with members of the community has been done via electronic communications such as phone or email. The company appreciates the support of the local community, employees and contractors during this period of abnormal business practices.

Environment

There has been recent significant rainfall that has refilled all dams at the Fifield project site. Rain has been localised although sufficient to result in many dams in the local area also receiving good inflows of water. Conservation and management of water resources remains an ongoing focus.

Community

There have been no significant community events during the past Quarter.

Field Project Activity

The Fifield project main activities in the 3 month period to 31st March 2020 have been focused on results of the Phase 1 and Phase 2 drilling programs covering the Northern and Southern Areas ([ASX Announcement: Fifield Exploration Update 26Mar2020](#)).

Ordovician Macquarie Arc Characterisation Study

A component of the Phase 1 and Phase 2 drilling programs in the Southern Area was to obtain bedrock samples for geochemical analysis to determine if the rocks have a similar geochemistry to the Ordovician Macquarie Arc volcanism. This is significant as historically the rocks in the Southern and Northern Areas have been considered younger Silurian / Devonian age rocks and consequently considered less prospective terrane for discovery of major copper / gold or gold mineralised systems. The older Ordovician Macquarie Arc age rocks host nearby major copper / gold and gold mineralised systems including Northparkes (CMOC) and Cowal (Evolution Mining) respectively.

Eight aircore or grab samples of either andesite lavas, associated volcanoclastic rocks or diorite from the Southern Area have been assayed for a suite of 48 elements by ALS (Australian Laboratory Services) (Figure 1).

A preliminary study of the data supports Rimfire's interpretation that the rocks are primarily intermediate in composition and are part of the Ordovician Macquarie Arc. All but one sample plots within or near the Mid to Late Ordovician Goonumbra Volcanic field on a Zirconium (Zr) versus Scandium (Sc) diagram (Figure 2). There are four identified volcanic events recognized within the Macquarie Arc volcanic sequence and they are defined as Phases I to IV. The most significant phases are the Stage III and IV events that are associated with mineralisation events at the Northparkes

Going for gold.

and Cowal mines respectively. The Stage II (Goonumbla) is not considered to be associated with significant large scale Northparkes or Cowal style mineralisation. The outlier is a quartz diorite (F11980) from within a geological feature referred to as the Murrumbogie Dome that may be part of the same Ordovician ultramafic event which hosts the Syerston cobalt nickel deposit.

Southern Area

A total of 36 reconnaissance aircore holes totaling 1,423 metres were drilled in the Phase 1 ([ASX Announcement: Fifield Exploration Update](#)) and Phase 2 programs in the Southern Area (Figure 3). The broad spaced drilling program was aimed at evaluating the Southern Area's potential to host large tonnage Lake Cowal or Northparkes style deposits. As expected, interpreted Ordovician intermediate lithologies were intersected in all holes with more proximal lavas located in the eastern third of the area.

The copper geochemistry for the region is generally subdued with all three metre samples assaying < 254ppm. Gold is also subdued assaying <0.3ppm. The only exception is a three metre interval of quartz diorite from the centre of the Murrumbogie Dome, which assayed 0.29 ppm gold.

The optimal strategy for further work in this area is in development.

Northern Area

During the Phase 1 drilling program eleven aircore holes, totaling 408 metres, were drilled in September 2019 ([ASX Announcement: Fifield Exploration Update](#)). Three holes were intended to confirm the presence and obtain samples from the northern end of a 2.5km long by 800m maximum width anomaly defined by greater than 400ppm copper geochemistry identified by previous explorers. Six holes tested possible extensions to the north and east. While two holes were designed to locate the source of a 2.72% Copper assay from a grab sample located 900metres to the east of the main anomaly (Figure 4).

Diorite assaying up to 703ppm copper was intersected within the copper anomaly identified by previous explorers. This feature is interpreted as being marginal to a zone of anomalous copper in volcanoclastic rocks which are sometimes intruded by diorite dykes assaying less than 400ppm copper.

Rimfire and previous explorers drill holes were terminated at refusal immediately above the base of oxidation. Rimfire's drilling indicates that the 2.5km long copper anomaly is related to a line of discrete moderately copper anomalous (400 to 700ppm copper) diorite plugs. Minor secondary enrichment has resulted in occasional assays exceeding 1000ppm copper at several locations. The two holes designed to locate the source of the 2.72% copper grab sample intersected un-mineralised Devonian sandstone.

The optimal strategy for further work in this area is in development.

Land Tenure

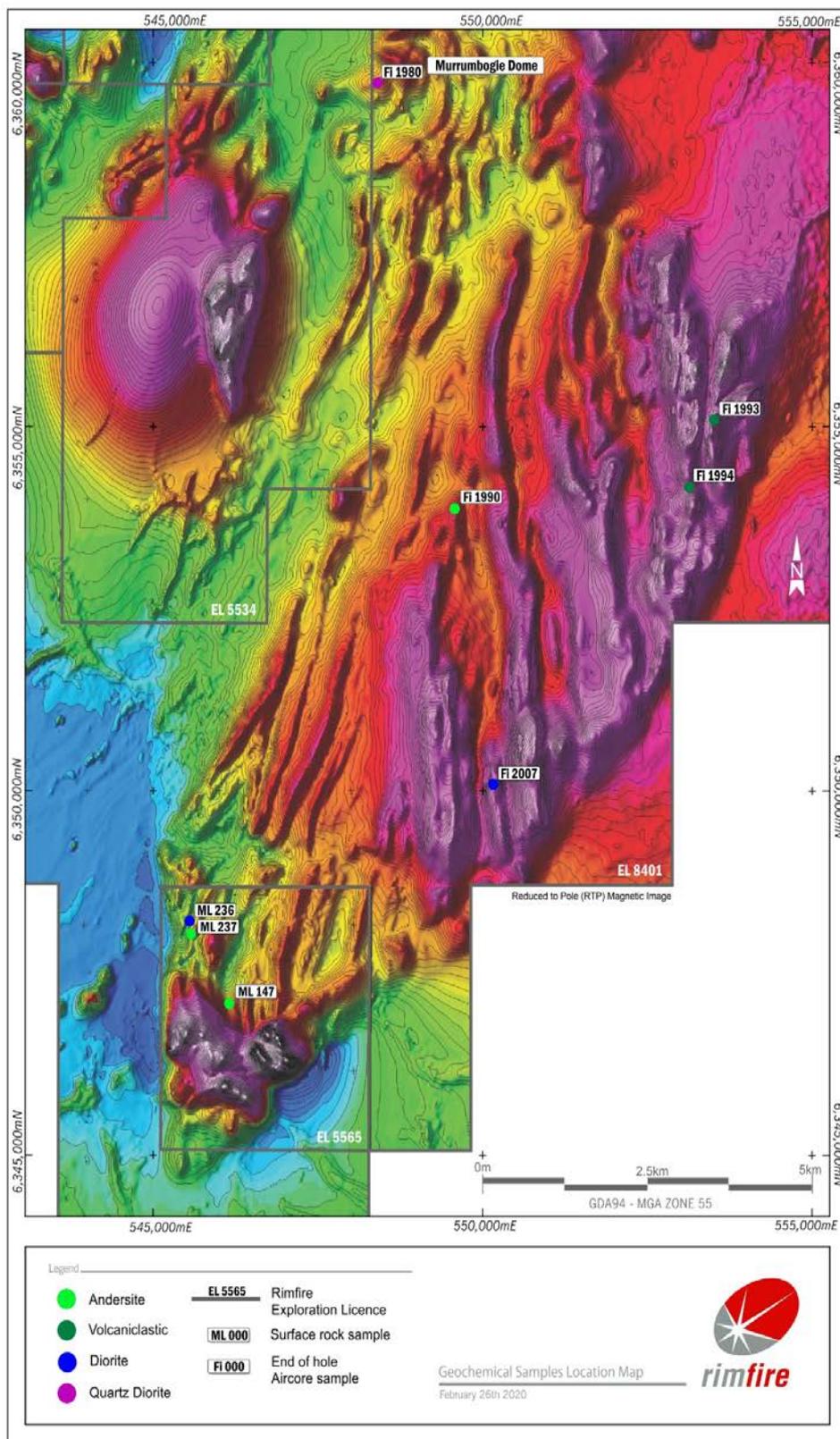
There has also been ongoing routine submittal of Annual Technical Reports (under IMER standards) to NSW Department of Planning, Industry and Environment – Resources and Geoscience to meet government compliance requirements for Rimfire's Exploration Licences.

Going for gold.

On 20 February 2020 Rimfire received confirmation from NSW Department of Planning, Industry and Environment – Resources and Geoscience of the cancellation of EL5534 and grant of EL8935. The Exploration Licence (EL) boundaries are exactly the same except EL8935 includes 2 hectares previously covered by M(C)L306 which has been relinquished. This transfer allows the company to hold this ground under lower cost EL tenure.

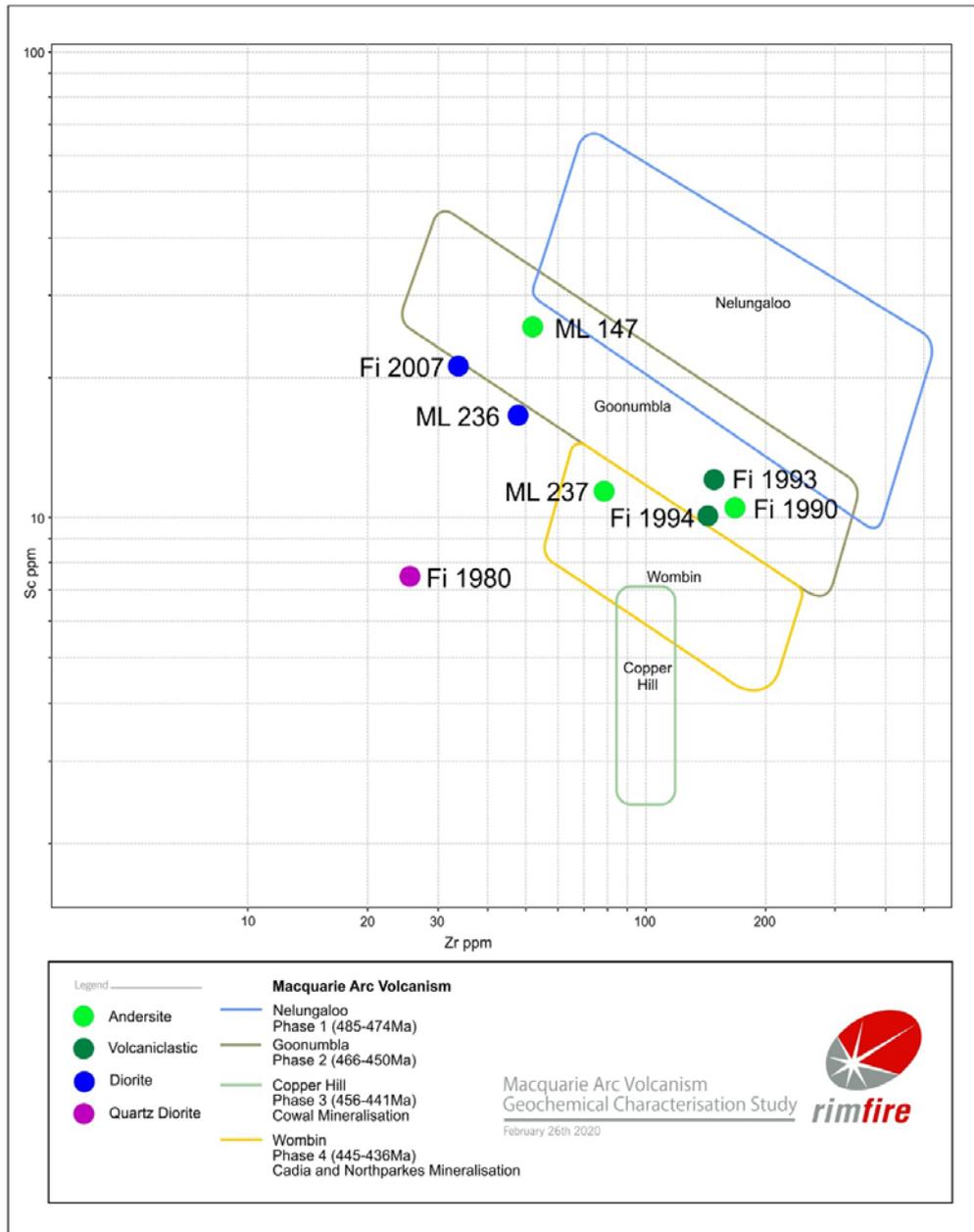
Going for gold.

Figure 1: Southern Area Sample Locations for Macquarie Arc Characterisation Study



Going for gold.

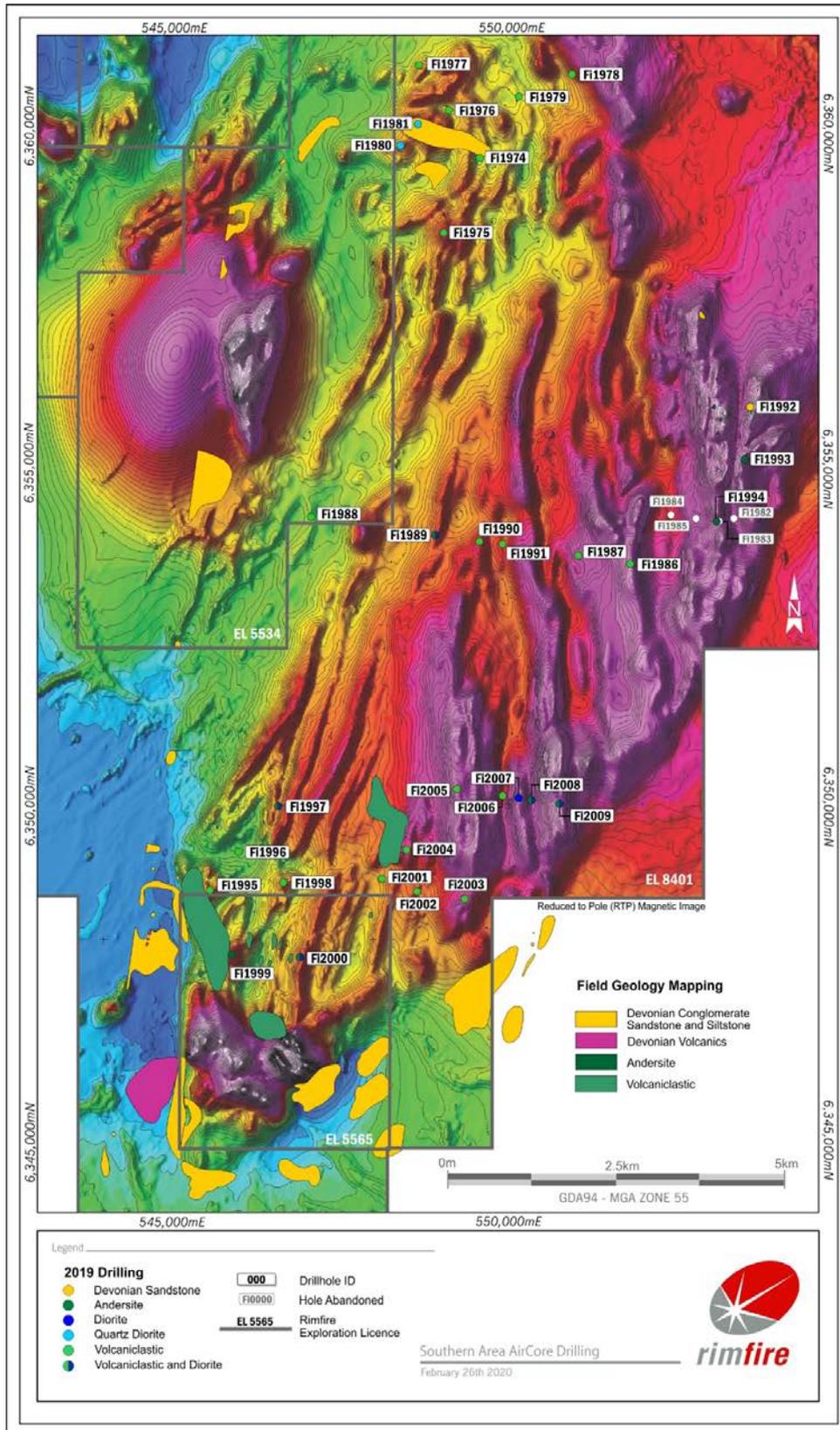
Figure 2: Zirconium vs Scandium Plot to Assess Similarities with other Macquarie Arc Volcanism



References:

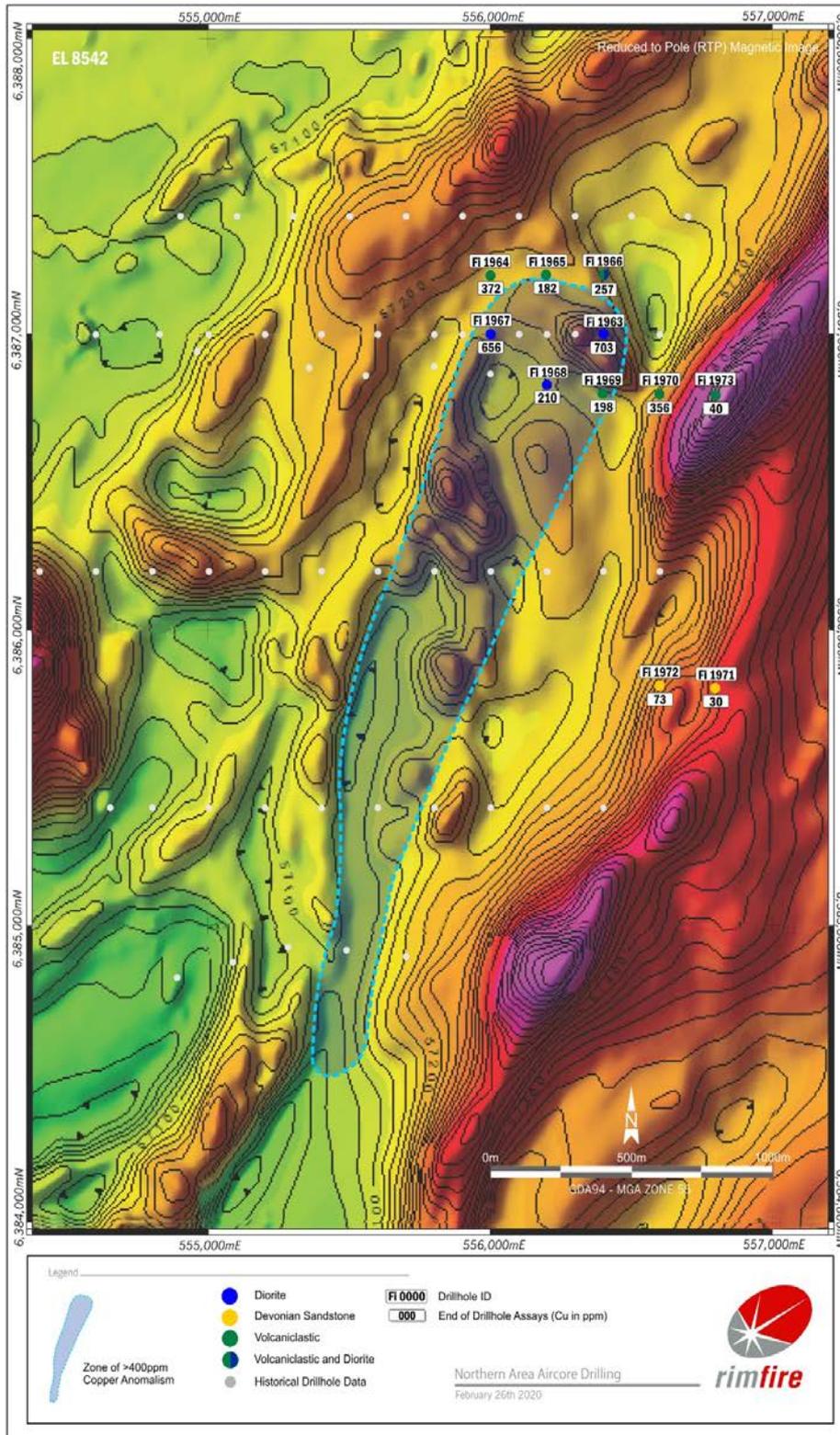
1. Australian Journal of Earth Sciences; An International Geoscience Journal of the Geological Society of Australia, Volume 54, 2007 Issue 2-3: Geological evolution and metallogensis of the Ordovician Macquarie Arc, Lachlan Orogen, New South Wales by A. J. Crawford, D. R. Cooke & C. M. Fanning
2. Episodes Vol. 35, no. 1 p177 to 186: The Macquarie Arc, Lachlan Orogen, New South Wales: its evolution, tectonic setting and mineral deposits by Richard A. Glen, C.D. Quinn and David R. Cooke
3. Quarterly Notes August 2015 No 144 © State of New South Wales through Department of Industry, Skills and Regional Development, Geological Survey of New South Wales 2015. New lead isotopic and geochronologic constraints on mineralisation in the Macquarie Arc — insights from the Lake Cowal district, New South Wales, by David B. Forster, Paul McInnes, Peter M. Downes, Roland Maas, Marc Norman and Phillip L. Blevin.
4. Myall confirmed as a large mineralised system: analogous to Northparkes. Additional drill-ready porphyry Copper Gold targets identified. ASX Media Release, Magmatic Resources, 31 January 2019 p8.

Figure 3: Southern Area Phase 1 and 2 Aircore Drill Hole Locations and Geology



Going for gold.

Figure 4: Northern Area Phase 1 Aircore drill hole locations and Geology



Going for gold.

CORPORATE ACTIVITY

Cash, Capital Structure, Funding, Facilities and Investments

The Company's cash at bank at 31 March 2020 was \$0.2m.

Table 2 - Changes in Capital Structure*

Security Class	31 December 2019	31 March 2020
Ordinary Shares on Issue (RIM)	1,509,408,438	1,509,418,384
Listed Options - 2.2 cents, expire 1 May 2020 (RIMOB)	131,140,518	131,140,518
Listed Options - 1.0 cents, expire 1 May 2020 (RIMOC)	433,790,365	433,780,419
Unlisted Options - Various Prices and Vesting Dates	74,000,000	74,000,000

Change in capital structure during the Quarter was due to 9,946 RIMOC options being converted to ordinary shares.

As the Covid-19 pandemic has unfolded the company has endeavoured to reduce / defer operating costs where possible and is continuing to seek reductions / deferral in payments to directors and staff, suppliers and contractors as well as seeking to gain access to State and Federal government stimulus packages that have been released to soften the impact of the downturn in economy due to the Covid-19 pandemic.

Related party transactions of \$75k (section 6.1 and 6.2 of the March 2020 Quarter Appendix 5B) include payments to Directors of \$28k related to fees incurred during 1 April 2019 to 30 June 2019 and salary including statutory superannuation to Craig Riley (MD and CEO) of \$47k for the March 2020 Quarter.

The Head Office move was made during the Quarter to a significantly lower cost basis location.

Commodity Pricing for the Quarter

During the March Quarter 2020 the gold price continues to appreciate, finishing the quarter with a 4% increase in value to USD 1,584 per ounce. The gold price continues to trade at greater than AUD 2,700 per ounce, trading at AUD 2,703 per ounce (using an exchange rate USD:AUD of 0.64). Gold and Silver Prices from www.kitco.com in New York in USD and Copper and Cobalt Prices from LME.com in USD.

Commodity	Price USD 31 Dec 2019	Price USD 31 Mar 2020	Mar 2020 Quarter % change	Price USD 24 Apr 2020
Gold (oz)	1,517.10	1,584.00	4.41%	1,729.50
Silver (oz)	17.82	13.93	-21.83%	15.27
Copper (t)	6,116	4,797	-21.57%	5,118

Going for gold.

Appendix A - Rimfire Exploration Licences

Below is a listing of the exploration licences held by Rimfire Pacific Mining NL as at 31 March 2020.

No.	Licence	Location	Interest	Interest Acquired / Farmed In During Quarter	Interest Reduced / Farmed Out During Quarter
1	EL7959	Fifield	100%	-	-
2	EL5534**	Fifield	100%	-	-100%
3	EL7058	Fifield	100%	-	-
4	M(c)L305	Fifield	100%	-	-
5	M(c)L306**	Fifield	100%	-	-100%
6	EL8401	Fifield	100%	-	-
7	EL5565	Fifield	100%	-	-
8	EL8543	Fifield	100%	-	-
9	EL8542	Fifield	100%	-	-
10	EL6241	Fifield	100%	-	-
11	EL8804	Greater Lake Cowal Area	100%	-	-
12	EL8805	Greater Lake Cowal Area	100%	-	-
13	EL8935**	Fifield	100%	-	100%
14	EL5958*	Broken Hill	10%		

*Perilya manages the tenement with Rimfire being free carried

**EL5534 and M(c)L306 were relinquished during the Quarter and replaced by EL8935 (covering the same area)

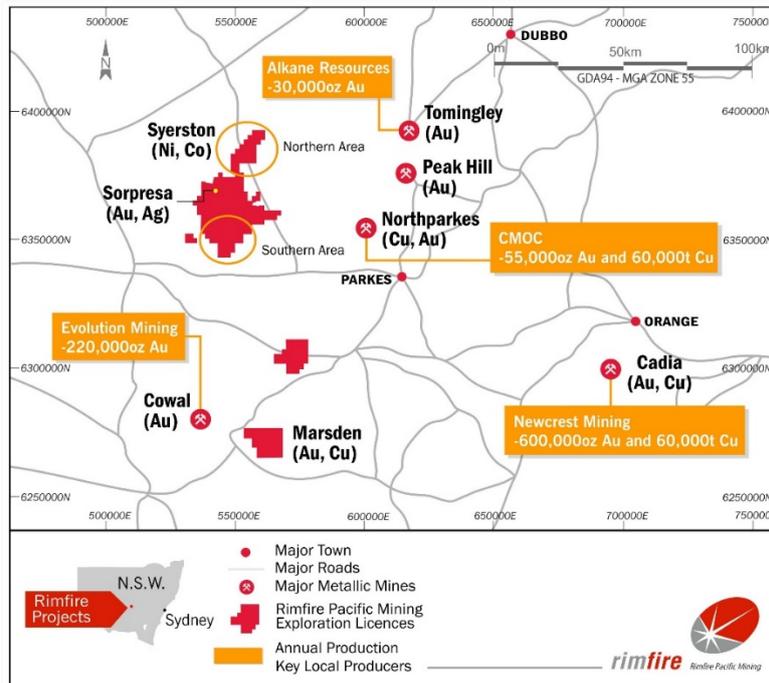
This announcement is authorised for release to the market by the Board of Directors of Rimfire Pacific Mining NL.

For further information please contact:

Craig Riley, Managing Director
+61 3 9620 5866

ABOUT RIMFIRE

Rimfire Pacific Mining (RIM) is an ASX listed resources exploration company with its major focus at Fifield in central NSW, located within the Lachlan Transverse Zone (LTZ). In 2011 the Company made a greenfields discovery, named “Sorpresa”, announcing a JORC Inferred and Indicated Maiden resource in 2014. The information provided in “About Rimfire” is available to view on the company’s website: [ASX Announcements](#).



Rimfire is exploring for a major copper / gold or gold mineralised system such as at Northparkes (Cu/Au) or Cowal (Au) on 915km² of Exploration Licences 100km west of Parkes in central NSW. Multiple prospects with potential for further gold discoveries exist in the area around Sorpresa which are part of Rimfire’s 681km² contiguous tenements. Rimfire also holds two exploration licences covering 234km²; located 40 to 60kms south of the Fifield Project, in a prospective area now part of a moratorium associated with the MinEx Cooperative Research Centre program ([minexcrc.com.au](#))

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 Craig Riley who is deemed to be a Competent Person and is a Member of The Australasian Institute of Mining and Metallurgy.

Mr Riley has over 25 years’ experience in the mineral and mining industry. Mr Riley is employed by Rimfire Pacific Mining (RIM) and is an employee of the Company. Craig Riley 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’. Craig Riley 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.

Going for gold.