# **ASX ANNOUNCEMENT**

28 April 2017



# Quarterly Activities Report for the Period Ended 31 March 2017

Riedel Resources Limited (ASX: RIE, "Riedel" or "the Company") is pleased to present its 2017 March Quarter Activities Report:

# **New Projects**

Riedel continued to actively source and review new investment opportunities within the resources sector.

# **Marymia Project**

# Australian Mines Limited Earning Up to 80%

- Preparations continued towards drill testing extensions to the Dixon Prospect with a three-phase, 120 hole aircore drilling programme.
- ➤ Heritage clearance further delayed due to unfavourable weather, forecast completion for early May 2017.

# **Charteris Creek Project**

- Preparations for commencement of Heritage Clearance Survey further impacted by seasonal rain period.
- Exploration has identified a geophysical target prospective for porphyry copper-molybdenum-(gold) mineralisation at Charteris Creek.

# Corporate

## **Financial**

> Cash at 31 March 2017 - \$1.018M

## **COMPANY DIRECTORS**

Mr Jeffrey Moore Executive Chairman

Mr Mark Skiffington Non-Executive Director

Mr Luke Matthews Non-Executive Director

#### COMPANY SECRETARIES

Mr Henko Vos and Ms Abby Siew

#### CONTACT DETAILS

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Riedel's assets include two projects in prospective Archaean- and Proterozoic-age terranes of Western Australia (see Figure 1 for location of projects).

## These include:

- Marymia (copper, gold, nickel and base metals) Australian Mines Limited ("Australian Mines") earning up to 80% by project expenditure of up to \$3.3M;
- Charteris Creek (copper, molybdenum, gold and base metals) Riedel 100%.

These projects are augmented by two Western Australian gold project royalty agreements.



Figure 1: Western Australia Project locations

# MARYMIA PROJECT JOINT VENTURE

# Australian Mines earning interests up to 80%

Exploration licences 52/2394 and 52/2395 ("the Marymia Project") are being explored under a joint venture agreement with Australian Mines.

In 2015 Australian Mines earned a 51% interest in the Marymia Project by completing more than \$1,000,000 worth of expenditure on exploration during the "Stage 1 Earn-in". Australian Mines then elected to proceed with the "Stage 2 Earn-in".

By spending a further \$2,000,000 on exploration within a further 3 year period following the Stage 1 Earn-in, Australian Mines can earn an additional 29% interest (taking their total interest to 80%) in the Marymia Project.

Australian Mines has advised that it is on track to satisfy its exploration spending obligations to earn an 80% interest in the Project by June 2018.



# Project tenement location and geology

E52/2394 and E52/2395, which collectively form the Marymia Project, cover an area of 254 square kilometres in the highly prospective Doolgunna-Thaduna region of the Proterozoic volcano-sedimentary Bryah and Yerrida Basins and Archaean Baumgarten Greenstone Belt in the Marymia Inlier.

The Marymia Project is located approximately 40 kilometres east of the 4.7M oz Plutonic gold mine, 55 kilometres north-east of Sandfire Resources NL's DeGrussa copper-gold mine (550,000 tonnes contained copper metal), and 12 kilometres east-north-east of Sandfire's Green Dragon and Thaduna copper deposits (100,000 tonnes contained copper metal) in Western Australia's Mid-West region (see Figure 2).

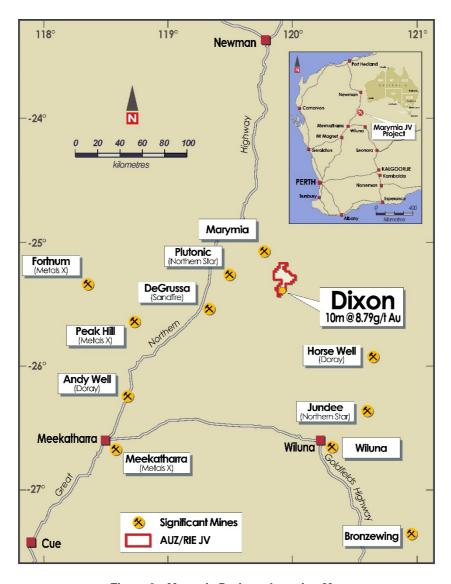


Figure 2: Marymia Project - Location Map



# Activities for the period ended 31 March 2017 and exploration forecast

During the Quarter Australian Mines continued with preparations for the next drilling programme at the Dixon Prospect, which is located within 50 kilometres of the 5-million-ounce Plutonic Gold Mine<sup>[1]</sup>.

Drilling to date has focused on only a few hundred metres of an identified 6-kilometre-long target zone, centred around the Company's maiden drill hole (MMRC106), which returned a very encouraging **10** metres @ **8.79** g/t gold from 130 metres downhole in late 2015<sup>[2]</sup>.

As the gold mineralisation at the nearby Plutonic and Marymia ore bodies reportedly increases at depth, Australian Mines announced in July 2016 of its intention to test the Dixon Prospect's potential to host a significant gold deposit via an 1,800 metre reverse circulation (RC) and 760 metre diamond-core drilling programme. This programme, which is being co-funded by the Government of Western Australia through the competitive Exploration Incentive Scheme, was initially scheduled to be carried out during 2016.

While this RC and diamond drilling programme remains forecast for completion in 2017, the Company's near-term focus is to test the prospectivity of the broader 6-kilometre-long fractionated dolerite unit, before honing in on individual anomalies like Dixon again for closer evaluation.

Due to the nature of shallow transported cover encountered across the prospect area, traditional soil sampling techniques are unlikely to be effective. Accordingly, Australian Mines will utilise shallow aircore drilling to test for the presence and continuity of oxide/supergene gold above the higher-grade bedrock-hosted gold mineralisation. The results will then be used to guide future RC and diamond drilling, which is a strategy that has been applied with much success in analogue scenarios across the Eastern Goldfields<sup>[3],[4].</sup>

Australian Mines has obtained approval from the Western Australian Department of Mines and Petroleum (DMP) to undertake this exploration programme, which comprises 120 aircore drillholes for an estimated 7,185 metres of drilling (see Figure 3).

A formal heritage survey request was submitted by Australian Mines to the appropriate Native Title representative during the December 2016 Quarter and the Company's exploration team is currently on site at Doolgunna-Marymia undertaking the final preparations for the aircore drilling programme.

This drilling programme is designed the test the prospectivity of the broader 6-kilometre-long fractionated dolerite unit that appears to have similar characteristics as Breaker Resources' (ASX: BRB) Lake Roe Project<sup>[5]</sup>.

<sup>[1]</sup> Northern Star Resources NL, Plutonic Acquisition Presentation, released 23 December 2013

<sup>[2]</sup> Australian Mines Limited, High-grade gold zone extended at Dixon prospect, released 6 November 2015

<sup>[3]</sup> Breaker Resources NL, RC drilling underway to test potentially major gold discovery at Lake Roe Project in WA, released 15 February 2016

<sup>[4]</sup> Dampier Gold Limited, Prospectus, released 19 July 2010

<sup>[5]</sup> Apex Geoscience Limited, Lake Roe Gold Project Overview and Comparison to Dixon Prospect, Western Australia, internal company report, dated 18 September 2016



Both Australian Mines' Dixon and Breaker Resources' Lake Roe Prospects are hosted in fractionated dolerites, oriented north south with moderate dips. They also share similar alteration styles (potassic) and sulphide alteration (pyrite and pyrrhotite) and the Lake Roe and Dixon Gold Prospects both exhibit a number of late cross faults responsible for offsetting the corresponding geological units.

At this stage, although only the Lake Roe Project has concentrations of oxide/supergene mineralisation known to be developed at surface, it is anticipated that Australian Mines' proposed 120-hole aircore programme will identify similar oxide mineralisation at Dixon<sup>[6]</sup>.

The Company will continue to keep shareholders updated on aircore drilling progress at Doolgunna-Marymia as information becomes available.

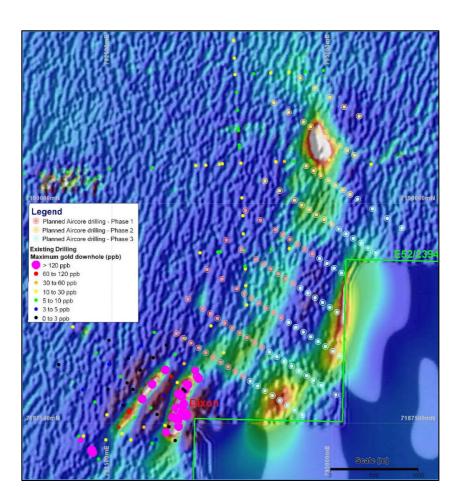


Figure 3: Plan view of the Dixon prospect displaying the maximum gold downhole intercept with the planned air core drilling (by phase) on aeromagnetic image background

Apex Geoscience Limited, Lake Roe Gold Project Overview and Comparison to Dixon Prospect, Western Australia, internal company report, dated 18 September 2016



## **CHARTERIS CREEK PROJECT**

# **Tenement location and geology**

Exploration Licence E45/2763 is located approximately 45km north of Nullagine and 50km south-east of Marble Bar in the Pilbara Region of Western Australia (see Figures 1 and 4 for project location).

The tenement is located within the East Pilbara Granite Greenstone Terrain. The Project area has favourable geology for the discovery of mineral deposits, as highlighted by the presence of numerous gold, copper, base metals and specialty metals discoveries and deposits proximal to the Charteris Creek exploration licence and anomalous copper and molybdenum drill intersections within the licence (see Figure 4).

The Company's exploration focus is on Archaean intrusive rocks, which intrude the greenstone succession overlying the McPhee Dome structure. These are described as Gobbos Granodiorite, a locally porphyritic biotite granodiorite and monzogranite. Various copper and copper-molybdenum occurrences are reported in association with these intrusive rocks.

Despite the strong similarities between the geological/structural setting at Charteris Creek to that which hosts nearby mineral deposits, only limited exploration has been previously carried out within the tenement.

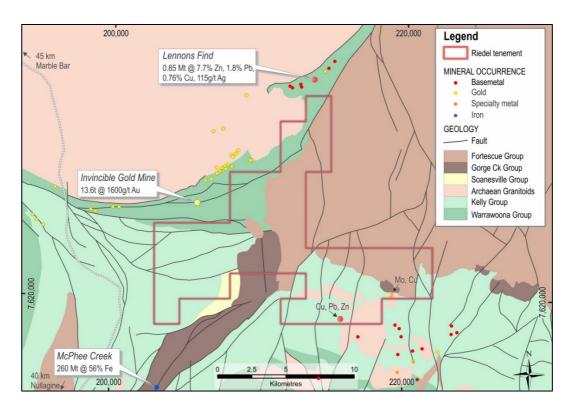


Figure 4: Charteris Creek Project - Geological Map highlighting known mineral occurrences and deposits



Exploration work carried out during 2014-2015 has confirmed that there are structural and porphyritic elements interacting to control the zones of anomalous copper and molybdenum seen within the Project area.

Within E45/2763, several <sup>[7]</sup>historic percussion drillholes at the Lightning Ridge Prospect returned anomalous assay results for copper and molybdenum, including drillhole RS1 (58m) which returned **25m at 1.1% Cu** and **3m at 0.1-0.2% Mo**. In 1969 exploration highlighted potential for the presence of a copper deposit of about 100,000t @ 0.125% Mo and 66,000t @ 1.1% Cu within a lenticular molybdenum-body lying below surface copper mineralisation at Lightning Ridge.

Riedel considers this mineralisation to be distal and not in the centre of a larger porphyry body.

Mineralisation has also been previously defined at other prospects to the south of E45/2763, including at Gobbos. At Gobbos surface samples up to 41% Cu have been recorded as well as 13 metres @ 4.28% Cu from a costean. Historic shallow drilling has also intersected numerous significant intersections of +1% Cu. The mineralisation is interpreted as being part of the same large intrusive body of rocks that extend into Riedel's drilling target area, under Fortescue Group cover.

# Activities for the period ended 31 March 2017 and exploration forecast

As previously announced, Riedel was successful with its State Government 2016-2017 cofunded drilling application. A grant of up to \$75,000 (or half of the direct drilling costs) from the State Government may be used to drill geophysical anomalies at Charteris Creek. The grant is awarded for innovative drilling programmes in previously untested locations and is designed to test for buried copper-molybdenum-(gold) mineralisation.

During the Quarter Riedel's planned heritage survey was further delayed due to late wet season rains. During the wet season access is not possible due to numerous river crossings and boggy ground conditions. The heritage survey is now planned to follow the wet season.

Drilling is initially planned to test one of the large magnetic anomalies identified beneath cover rocks of the younger Fortescue Group for the presence of porphyry Cu-Mo (+/- Au) mineralisation. These magnetic peaks are within a circular feature approximately 1.5km in diameter (see Figure 5).

A 400 metre diamond drill hole will test one of the two magnetic peaks closest to surface. Figure 6 shows the planned drill hole trace and the 3D Inversion and Polygonal Magnetic Model Targets (looking West).

<sup>[7]</sup> Conwest/Mining Advisors, 1969 - MASTER, A. R., 1969. Lightning Ridge Area (W2/3). Wamex report no. 9621, 26p



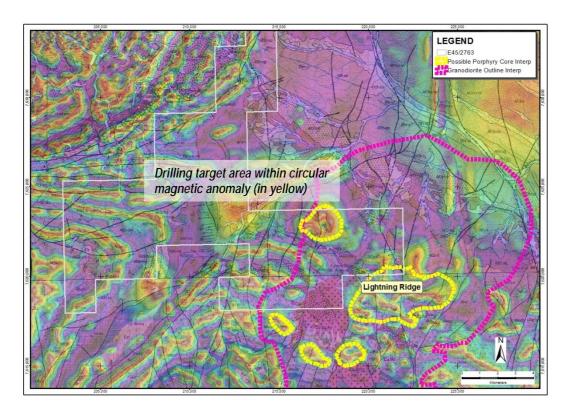


Figure 5: Circular magnetic anomaly interpreted as possible porphyry core within granodiorite intrusive

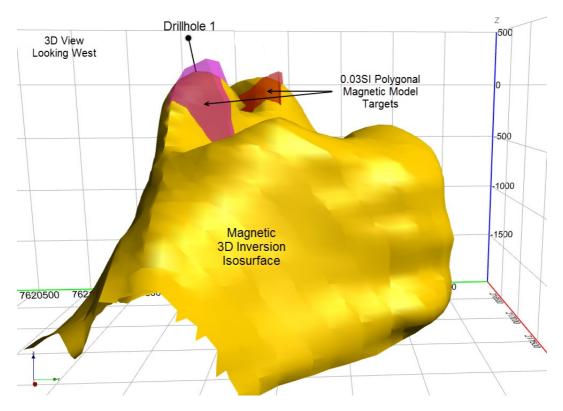


Figure 6: Planned drill hole trace (Drillhole 1) and the 3D Inversion and Polygonal Magnetic Model Targets (looking west).



## **CORPORATE**

During the Quarter Non-Executive Director Andrew Childs advised of his resignation as a director of the Company.

The Company held Cash Reserves at 31 March 2017 of \$1.018M.

# **TENEMENT SCHEDULE**

Following is the schedule of Riedel Resources minerals tenements as at 31 March 2017.

Area of Interest	Tenement reference	Nature of interest	Interest
Charteris Creek	E45/2763	Direct	100%
Marymia	E52/2394	Direct	49%
Marymia	E52/2395	Direct	49%
West Yandal	M36/615	Royalty	0%
Porphyry	M31/157	Royalty	0%

## For further information please contact:

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# **About Riedel Resources Limited**

Riedel Resources Limited listed on ASX on 31 January 2011 and is an Australian-based exploration company established to explore for and develop mineral deposits.

Further information can be found at the Company's website www.riedelresources.com.au

## **Competent Person's Statement**

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Ed Turner, who is a Member of The Australian Institute of Geoscientists. Mr Turner is a consulting geologist to Riedel Resources Limited. Mr Turner has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activities 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 Turner consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.