

## ASX ANNOUNCEMENT

29 January 2015



# Quarterly Activities Report for the Period Ended 31 December 2014

Riedel Resources Limited (**ASX: RIE**, "Riedel" or "the Company") is pleased to present its 2014 December Quarter Activities Report:

## HIGHLIGHTS

### Marymia Project

#### *Australian Mines Limited ("Australian Mines") Earning Up to 80%*

##### Nickel exploration

- Detected strong bedrock conductor below nickel oxide mineralisation at Burton Prospect
  - 4m @ 1.07% nickel intersected by historic drilling above this conductive body
  - 1,500 x 600m nickel-copper-platinum-palladium soil anomaly coincident with target
- Identified bedrock conductor beneath nickel-copper soil anomaly at Wyman Prospect
  - Coherent 1,200m x 800m nickel-copper anomaly present above the conductor
  - Favourable high-magnesium ultramafic rocks present across the target area

##### Copper exploration

- Confirmed the presence of a cluster of EM conductors along Jenkin Fault at Marymia
  - Supergene copper-lead-zinc oxide anomaly overlies these bedrock conductors
  - Modelling of late-time conductors currently in progress

##### Forward Programme

- Drill testing of priority nickel, copper and gold targets commencing March 2015
- Drilling of priority gold targets to be partly funded by **\$150,000** grant secured by Australian Mines from the Western Australian Government

### Corporate

- Cash at 31 December 2014 - **\$0.395M**

#### COMPANY DIRECTORS

Mr Ian Tchacos  
Non-Executive Chairman

Mr Jeffrey Moore  
Managing Director

Mr Ed Turner  
Technical Director

Mr Andrew Childs  
Non-Executive Director

#### COMPANY SECRETARY

Ms Sue Symmons

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ASX CODE: RIE



Riedel's assets include a portfolio of gold, copper and nickel projects and significant land holdings in prospective Archaean- and Proterozoic-age terranes of Western Australia (see *Figure 1 for location of projects*).

The Company has a mixture of advanced and early stage prospects, including:

- Marymia – (copper, gold, nickel and base metals) Australian Mines earning up to 80% by project expenditure of up to \$3.3M;
- Charteris Creek – (copper, molybdenum, gold and base metals) FMGR earning up to 80% by project expenditure of up to \$1.0M;
- Cheritons Find (gold - <sup>1</sup>Inferred Resources of 1.4Mt @ 2.4g/t Au for 108,000 oz);
- Millrose (gold - <sup>2</sup>Inferred Resources of 4.0Mt @ 2.4g/t Au for 309,000 oz).

Furthermore, the Western Australian Projects are augmented by a number of additional prospects, including existing joint ventures, royalty agreements and free carried interests.



**Figure 1: Western Australia Project locations**

<sup>1</sup> Sons of Gwalia – 29 November 2000. This information was previously prepared and disclosed on the basis of compliance with the JORC Code – 2004 Edition. The Inferred Mineral Resources have not been subsequently updated to satisfy compliance with the JORC Code - 2012 Edition as the information has not materially changed since it was last reported.

<sup>2</sup> Phil Jones (AI Maynard & Assoc) – 2010. This information was previously prepared and disclosed on the basis of compliance with the JORC Code – 2004 Edition. The Inferred Mineral Resources have not been subsequently updated to satisfy compliance with the JORC Code - 2012 Edition as the information has not materially changed since it was last reported.

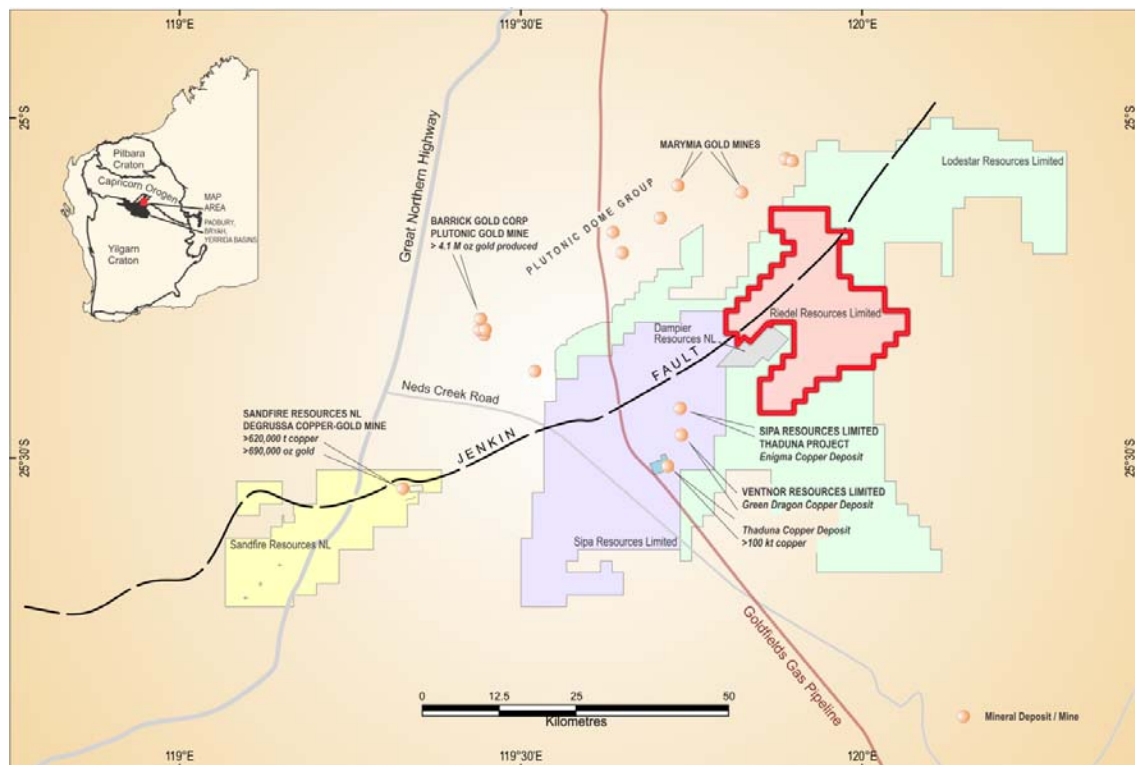
## MARYMIA PROJECT JOINT VENTURE

### Australian Mines earning interests up to 80%

On 30 April 2014 Riedel announced the key terms and conditions of a farm-in and joint venture arrangement over exploration licences 52/2394 and 52/2395 (“the Marymia Project”) with Australian Mines Limited (ASX: AUZ, “Australian Mines”). A Heads of Agreement was signed by the parties and if the farm-in and joint venture arrangement proceeds to its full conclusion, **the earn-in will be worth up to \$3.3M.**

### Marymia Project tenement location and geology

Riedel holds two exploration licences (E52/2394 and E52/2395) which collectively form the Marymia Project and cover an area of more than 425 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.



**Figure 2: Marymia Project - Location Map**

The Marymia Project is located approximately 30 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 Ventnor Resources Limited's Green Dragon and Thaduna copper deposits (100,000 tonnes contained copper metal) in Western Australia's Mid-West region (see Figure 2).

Significant regional structures identified in the project area include the Jenkin Fault and prospective, mineralised geology including the Archaean-aged Baumgarten Greenstone Belt and Proterozoic-aged sediments belonging to the Yerrida and Earraheedy Groups. The project is prospective for copper, gold, nickel and base metal mineralisation and Riedel has delineated numerous high priority targets for each of these commodities.

### Activities for the Quarterly period ended 31 December 2014

Australian Mines continued to explore high priority project areas with Moving Loop Electromagnetic surveys (MLEM) during the Quarter and successfully identified strong conductors that could be related to nickel and/or copper sulphide mineralisation.

As reported by Australian Mines on 18 November 2014, this high-resolution MLEM survey successfully identified a strong late-time conductor which was subsequently named **the Burton Prospect**. Burton is located beneath a thick layer of nickel oxide mineralisation which was recognised by a historic scout drilling intercept of **22 metres @ 0.58% nickel from 22 metres depth** (see Figures 3 and 4).

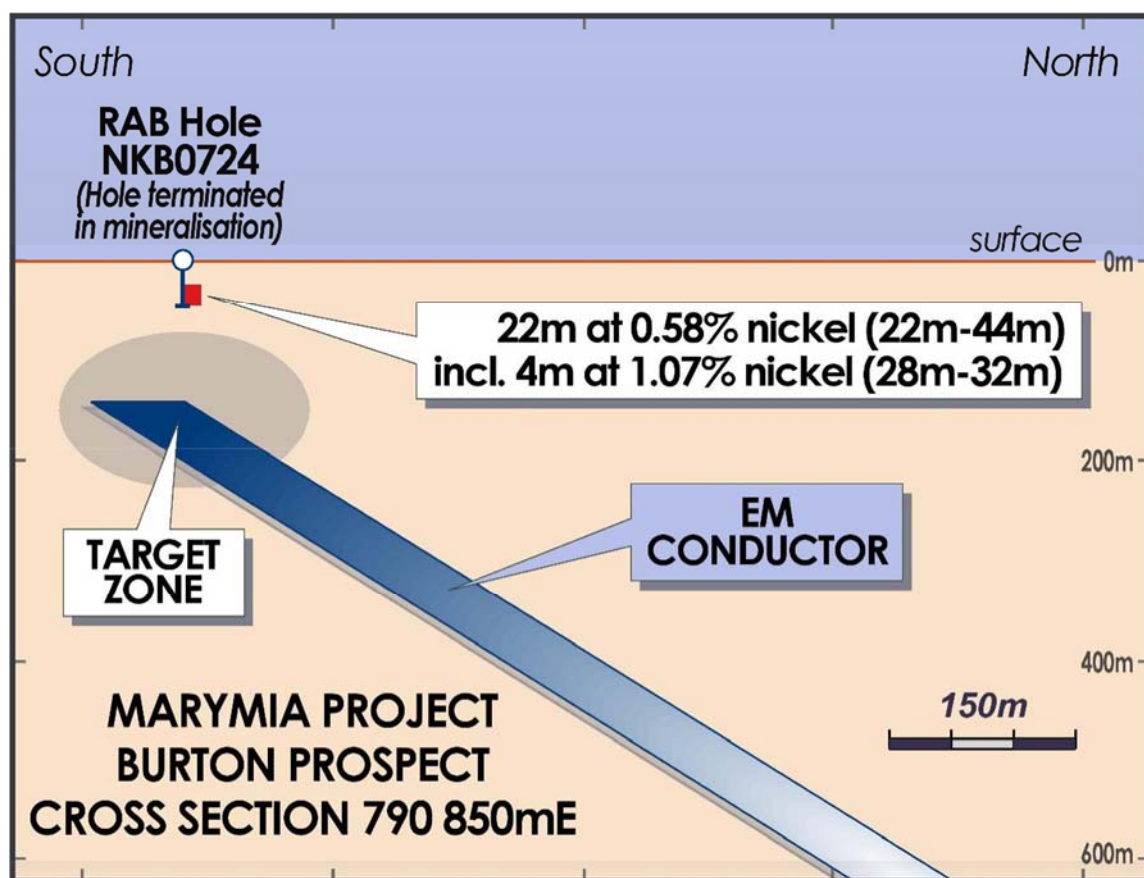
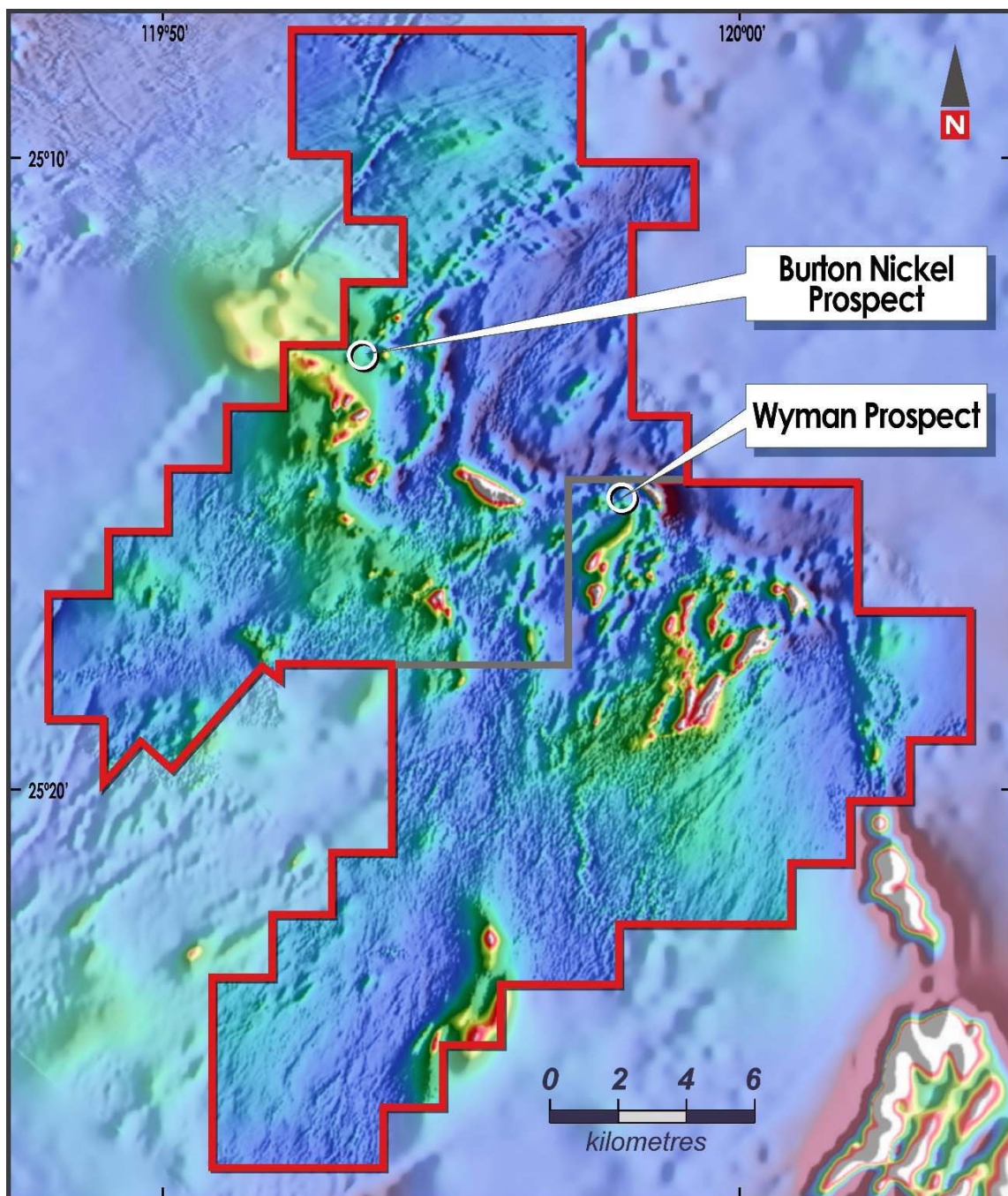


Figure 3: Burton Prospect - Position of the modelled EM conductor (in blue) immediately below historic drill hole NKB0724.



Modelling of the newly identified Burton Prospect anomaly indicates that the top of the conductive body occurs at a depth of 140 metres from the surface. Drill testing of this high priority nickel sulphide target is anticipated to commence in March 2015.



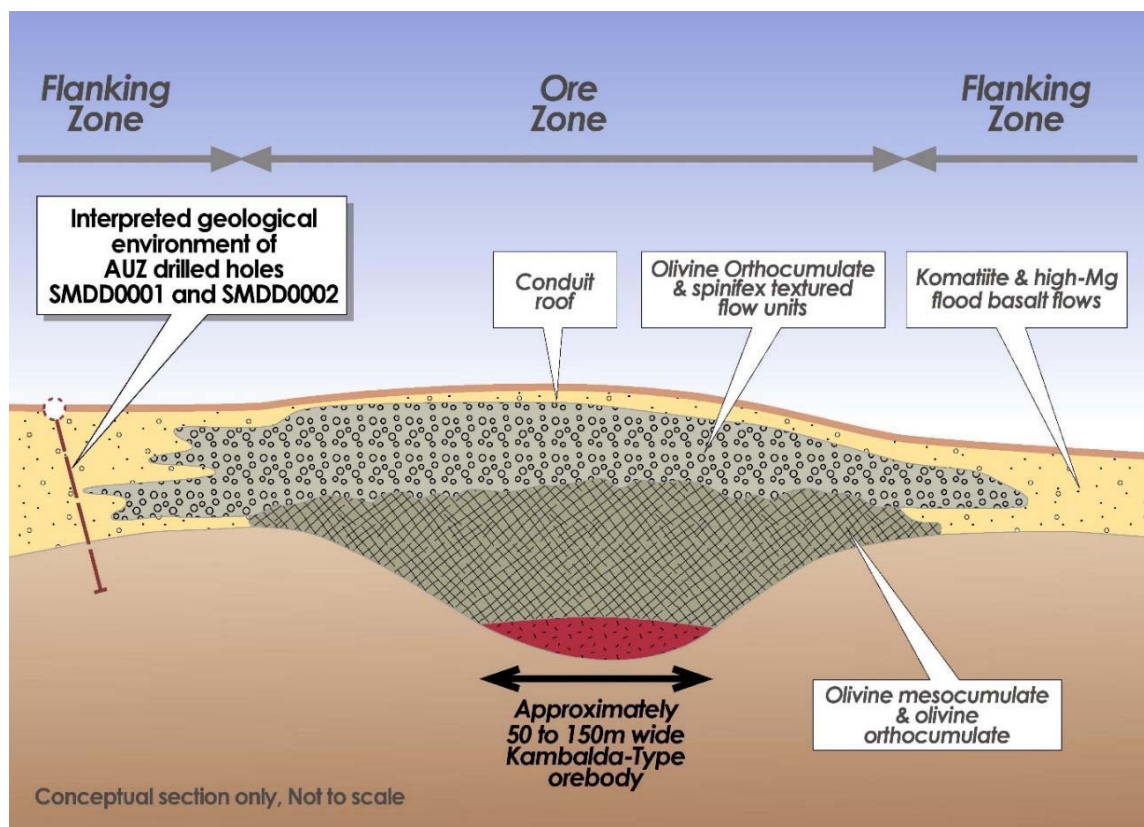
**Figure 4: Marymia Project - Location of newly detected conductive bodies (Burton and Wyman Prospects) superimposed over high resolution aeromagnetic data.**

Following the Burton Prospect announcement, Australian Mines advised that the ground-based MLEM survey had also identified a discrete bedrock conductor below the nickel-copper geochemical anomaly of MM001<sup>3</sup>. Target MM001, now named **the Wyman Prospect**, represents the northern extension of the Simmons ultramafic sequence and has a coincident surface geochemical anomaly extending for 1,200 x 800 metres with a strong coherent nickel and copper response (see Figure 4).

Recent drilling by Australian Mines along strike from the newly-identified Wyman Prospect bedrock conductor successfully intersected high-magnesium ultramafic rocks which represent the prerequisite geology for Kambalda-style nickel deposits.

Furthermore, analysis of geological and drilling data from previous exploration at the Simmons Prospect by Australian Mines suggests that diamond core holes SMDD001 and SMDD002 are located within the “Flanking Zone” of the ultramafic sequence (see Figure 5).

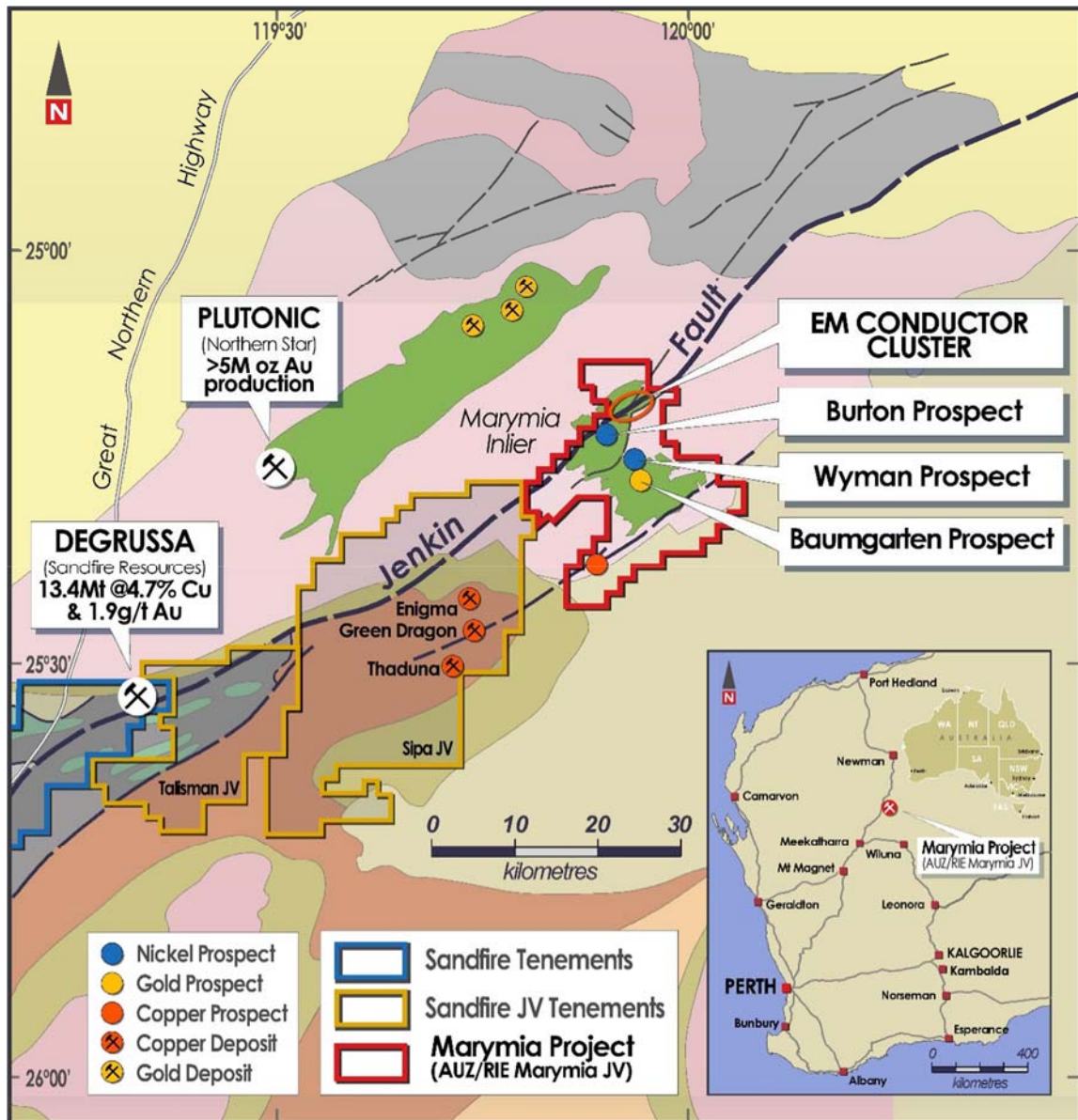
Confident that its exploration is vectoring towards desired “Ore Zone” or “Main Zone” komatiite geology, Australian Mine is finalising detailed geological studies over the greater Simmons prospect area prior to planning further drilling at this coincident geophysical and geochemical anomaly in the coming months.



**Figure 5: Schematic cross-section of a typical Kambalda-style nickel deposit (Image modified from Hoatson et al., 2006, Nickel sulphide deposits in Australia, Ore Geology Reviews, 29, 177-241).**

<sup>3</sup> Australian Mines Limited, Quarterly Activities Report Figure 2, released 30 October 2014.





**Figure 6: Marymia Project region - Schematic geological map showing EM conductor cluster in relation to the Burton Prospect, Wyman Prospect and the Jenkin Fault.**

In October 2014 Australian Mines announced that historic wide-spaced reconnaissance rotary air blast (RAB) drilling within the Marymia Project area had identified an area of extensive base metal anomalism along the Jenkin Fault<sup>4</sup>.

Assay results from this historic drilling included **1 metre @ 1% lead + 0.1% zinc + 220ppm copper** from 18 metres depth (drill hole PYRB363) in addition to broader base metal anomalism

<sup>4</sup> Plutonic Operations Limited, Annual Technical Report for tenement E52/533, period 03/07/1995 to 02/07/1996

in oxidised rocks including **12 metres @ 950ppm lead** (drill hole PYRB359), **8 metres @ 1,450ppm lead** (drill hole PYRB373) and **12 metres @ 1,011ppm zinc** (drill hole PYRB376)<sup>5</sup>.

A subsequent ground-based EM survey over these supergene base metal anomalies by Plutonic Operations Limited in 1996 successfully identified a cluster of four moderately conductive bodies proximal to the Jenkin Fault<sup>6</sup> (see *Figure 6*). The source of these four historic EM anomalies along the Jenkin Fault remains untested by drilling.

Australian Mines has therefore designed a first-pass reverse circulation (RC) drilling programme over these coincident EM and base metal anomalies, with drilling anticipated to commence in the first half of 2015.

### **Co-Funded Drilling Grant**

During the Quarter Australian Mines received notification from the Western Australian Department of Mines and Petroleum (DMP) that the Company was successful with its Co-funded Drilling application for innovative exploration targets.

Through this co-funding agreement, the DMP will contribute a total of \$150,000 to Australian Mines' exploration programme with the funds to be allocated to upcoming drilling at the underexplored Baumgarten gold prospect.

Previous drilling of near-surface oxide material at Baumgartens returned a number of promising intersections, including **3 metres @ 9.53 g/t gold** from 51 metres (drill hole BRC23) and **2 metres @ 7.15 g/t gold** from 31 metres (drill hole RB620)<sup>7</sup>. The primary source of this supergene mineralisation has yet to be effectively tested by deeper drilling.

With the Baumgarten prospect potentially hosting high-grade primary gold mineralisation below the supergene gold layer, Australian Mines is therefore proposing to undertake diamond core drilling to test this interpreted mineralised zone as part of the Company's upcoming Marymia drilling campaign.

Australian Mines' success in securing this funding grant from the Western Australian Mines Department is considered a strong endorsement of the Company's technical team and the underlying mineral potential of the Marymia Project.

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<sup>5</sup> Plutonic Operations Limited, *Annual Technical Report for tenement E52/533, period 03/07/1994 to 02/07/1995*

<sup>6</sup> Plutonic Operations Limited, *Annual Technical Report for tenement E52/533, period 03/07/1996 to 02/07/1997*

<sup>7</sup> Riedel Resources Limited, *2012 Annual Report*, released 6 September 2012

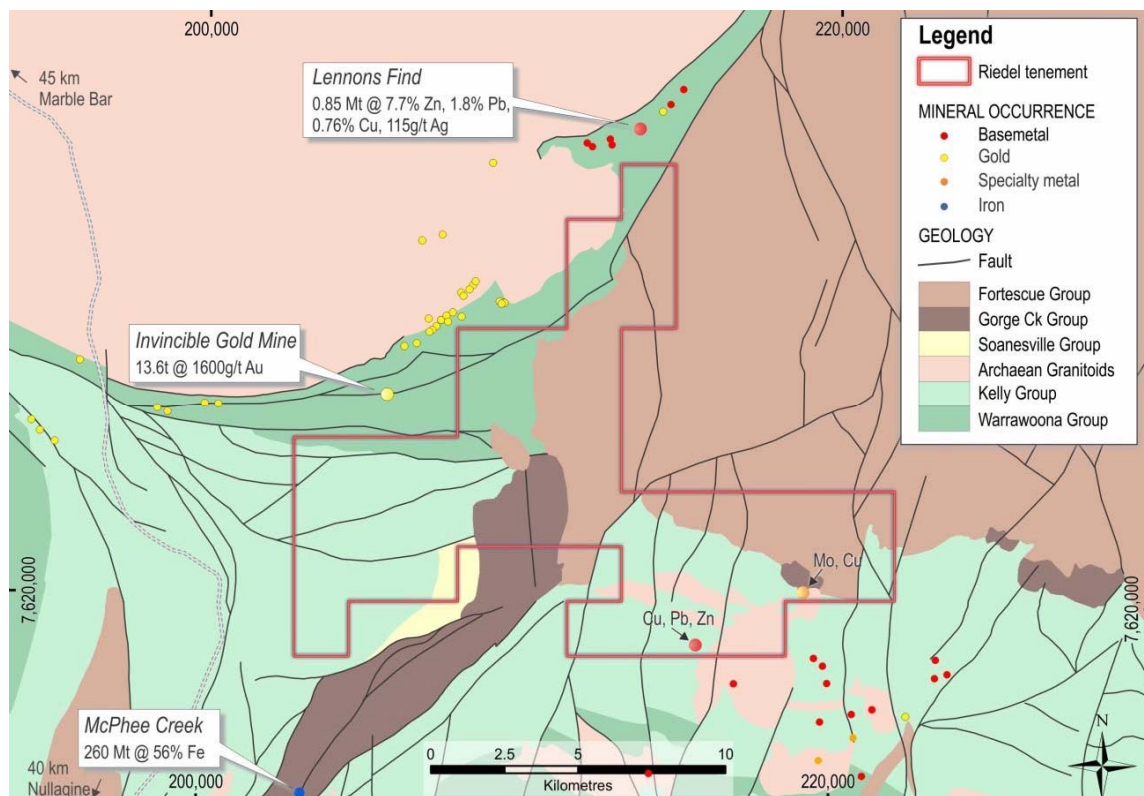


## CHARTERIS CREEK PROJECT JOINT VENTURE

### FMG Resources Pty Ltd earning interests up to 80%

In January 2014 FMG Resources Pty Ltd (“FMGR”), a wholly-owned subsidiary of Fortescue Metals Group Ltd, entered into a Farm In and Joint Venture Agreement with the Company worth up to \$1M over Exploration Licence 45/2763.

Riedel’s 100%-owned tenement is 131km<sup>2</sup> in area and 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 7 for project location*).



**Figure 7: Charteris Creek Project – Geological Map highlighting known mineral occurrences and deposits**

### Tenement Location and Geology

E45/2763 is located within the East Pilbara Granite Greenstone Terrain. Tectonically, it is encompassed by the Marble Bar and Kelly Greenstone Belts and Mount Edgar Granitoid Complex in the west and northwest and McPhee Dome and Hamersley Basin to the east and southeast.

The Charteris Creek Project focuses on Archaean intrusive rocks, which are intruding the greenstones 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.

Indications for a porphyritic source of the minerals have been given in previous exploration reports (see Figure 7).

### **Activities for the period ended 31 December 2014**

During the Quarter, FMGR continued with interpretation of geochemical and mapping data collected during 2014 in the Lightning Ridge area. No additional samples were collected in the field, however, rock chip samples dispatched for petrological geochemical analysis during the September Quarter are still outstanding due to technical issues at the contracted petrology laboratory. Integration and further interpretation of the petrological results will be a key step in increasing FMGR's understanding of the geological setting. It is hoped that this additional information will clarify the origin of some key lithological types identified in the project area.

To date, the empirical data acquired indicates that there are structural and porphyritic elements interacting to control the zones of anomalous copper and molybdenum seen within the project area. The observed alteration systems, surrounding what has historically been believed to be the core of an Archaean copper-porphyry system, show typical alteration assemblages although they are less prominent than those seen in younger known porphyries.

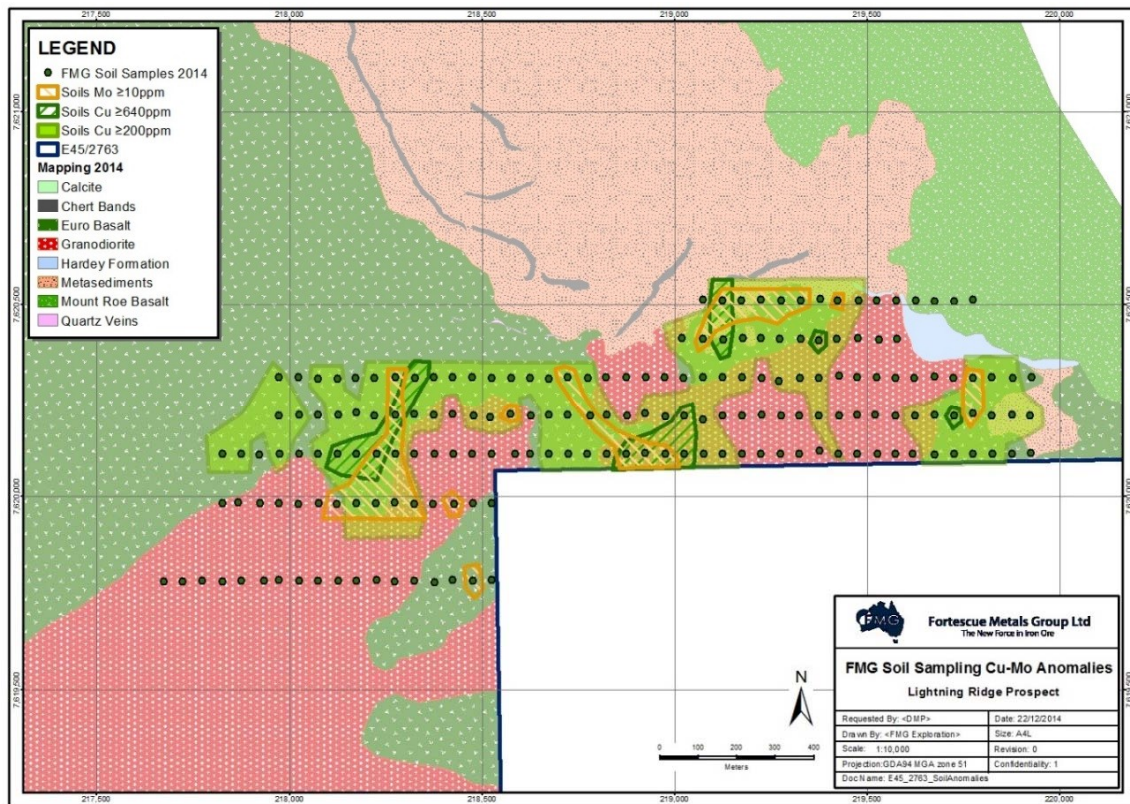
Hydrothermal alteration at Lightning Ridge is characterised by mafic mineral-destructive quartz-clay-mica-pyrite (i.e. phyllic) alteration. The sites of the magmatic mafic minerals (e.g. biotite, hornblende and pyroxene) have been obscured and the feldspars replaced by sericite and clay. This type of phyllic alteration is common in late-stage overprinting of porphyry copper systems. Marginal to the phyllic alteration zones, sericite and chlorite alteration as well as silicification can be observed in adjacent basalt rocks. Mafic minerals in the basalt are commonly replaced by chlorite and/or leucoxene.

Another zone of alteration and copper mineralisation to the north-east of the main prospect also shows signs of porphyry-style alteration. A high density of 'B-type' quartz veins was observed, reaching total rock volumes of 5-20%. This high density of veining indicates a more proximal location to the centre of a possible porphyry system. Malachite and disseminated *in-situ pitch limonite* also occur, together with strong clay- and sericite alteration. Alteration and 'B-type' quartz veins disappear underneath Archaean metasediments of the Gorge Creek Group.

Hence, one of the concepts being investigated is that the majority of the porphyry intrusion may be concealed beneath Archaean sedimentary and volcanic rocks. If this is the case, the alteration seen in the field may only be the peripheral alteration halo to a much broader concealed system.

This hypothesis is supported by the analysis of soil geochemical copper and molybdenum values over the Lightning Ridge prospect, where coincident copper-molybdenum enrichment can be observed (see Figure 8). An open anomaly at the northern end of the soil grid is of particular interest, as the observed alteration of the host rock disappears below Archaean sediments.

Future work will include the analysis, integration and interpretation of the outstanding petrology samples. The model of a mineralised system under cover will be assessed, based on these results. Further exploration within the project (possibly including the remainder of the tenement) will be planned accordingly.



**Figure 8: Charteris Creek Project - Cu-Mo anomalies identified in FMG soil sample grid**

## CHERITONS FIND PROJECT

Riedel continues to investigate options to commercialise the Cheritons Find Gold Project, including project development by way of toll treatment and/or other treatment opportunities.

Consequently, MWH Australia (MWH) were commissioned to conduct a Level 1 Vegetation, Flora and Targeted Flora Survey and opportunistic recording of Malleefowl mounds within exploration tenement E77/1793. The overall scope of the Level 1 Vegetation and Flora Survey was to gain a broad, understanding of the vegetation associations that occur within the Survey Area.

This study is one of several that are required prior to completing a project development feasibility study and applying for conversion from an Exploration Licence to a Mining Lease.

## MILLROSE PROJECT

During the Quarter, application was made for a Retention Licence over the Millrose gold deposit and surrounding areas. The objective of this application is to protect the gold resources already defined until such time as studies determine that an economically robust gold mining operation can be established at Millrose. Unlike Exploration Licences, a retention licence does not require minimum expenditure commitments to be satisfied and upon grant of the Retention Licence, the underlying Exploration Licence can be relinquished.

## CORPORATE

The Company held Cash Reserves at 31 December 2014 of **\$0.395M**.

## TENEMENT SCHEDULE

Following is the schedule of Riedel Resources minerals tenements as at 31 December 2014.

Area of Interest	Tenement reference	Nature of interest	Interest
Charteris Creek	E45/2763	Direct	100%
Bronzewing South	E36/623	Indirect	80%
Bronzewing South	M36/670	Indirect	80%
Delaney Well	E36/734	Direct	100%
West Yandal	M36/615	Royalty	0%
Marymia	E52/2394	Direct	100%
Marymia	E52/2395	Direct	100%
Millrose	E53/1304	Direct	100%
Millrose	E53/1305	Direct	100%
Millrose	R53/2 (application)	Direct	100%
Porphyry	M31/157	Royalty	0%
Dulcie	P77/3727	Direct	20%
Dulcie	P77/3728	Direct	20%
Dulcie	P77/3729	Direct	20%
Cheritons Find	E77/1793	Direct	100%

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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](http://www.riedelresources.com.au)



## Appendix 1: JORC Code, 2012 Edition

### Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>Gem Geophysics completed a ground-based moving loop electromagnetic survey over the Marymia Project on behalf of Australian Mines between October and December 2014.</p> <p>The transmitters for this geophysical survey were 200 metre by 200 metre single turn loops (decreasing to 100 metre by 100 metre loops for the in-fill survey) with a SMARTem 24 system used as the receiver.</p> <p>The line spacing for this survey was 100 to 200 metres. The along line station spacing for the initial survey was 100 metres. This station spacing tightened to 50 metres for the in-fill survey lines.</p> <p>At least two readings were acquired at each station in order to ensure data repeatability.</p> <p>Quality assurance and quality control (QA/QC) of the electromagnetic data was independently verified by Southern Geoscience Consultants in Perth.</p> <p>Assay results related to historic drilling and/or soil sampling were sourced from ASX announcements released by previous tenement holders. Footnotes and references for historic samples or assays are provided in the main body of this report.</p> <p>Australian Mines is unable to comment on the accuracy and appropriate calibration of the analytical tools and analysis used during previous drill and soil sampling programs.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>Soil samples were taken as part of a reconnaissance mapping and prospecting program. Sampled material was obtained for the B horizon typically 20-30 centimetres below the surface. Material was passed through a 210um</p>

mesh sieve to recover 200g samples of the fine fraction material for analysis. Samples were taken at 100x50 meter spacing over the main target area. Additional sampling over a secondary target area was completed at 100x100m spacing.

All samples were sent to Bureau Veritas for sample preparation and assay.

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#### **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.)

#### **Marymia Project**

The historic drill data reference in this report is rotary air blast.

#### **Charteris Creek Project**

No drilling undertaken.

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#### **Drill sample recovery**

- Method of recording and assessing core and chip sample recoveries and results assessed.
- Measures taken to maximise sample recovery and ensure representative nature of the samples.
- 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.

#### **Marymia Project**

Australian Mines is unable to comment on the method of recording and assessing drill chips, and sample recoveries from historic drilling at Marymia.

Based on available reports, it is assumed that the historic drill samples referenced in this report were taken at one metre intervals.

No records of sample recoveries were identified in previous reports and it is not possible to determine if a relationship exists between recovery and grade.

#### **Charteris Creek Project**

No drilling undertaken.

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#### **Logging**

- Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.
- Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.
- The total length and percentage of the relevant intersections logged.

#### **Marymia Project**

Historic drill chips at Marymia were geologically logged at one metre intervals.

Drill chips were not logged to any geotechnical standard and the data is insufficient to support Mineral Resource estimation at this stage.

Logging of rotary air blast drill chips is considered to be semi-quantitative given the nature of rock chip fragments and the inability to obtain detailed geological information.

From the available historic reporting, 100% of the rotary air blast drill chips were logged.

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**Charteris Creek Project**

No drilling undertaken.

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**Sub-sampling techniques and sample preparation**

- If core, whether cut or sawn and whether quarter, half or all core taken.
- If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.
- For all sample types, the nature, quality and appropriateness of the sample preparation technique.
- Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.
- 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.
- Whether sample sizes are appropriate to the grain size of the material being sampled.

**Marymia Project**

Australian Mines is unable to comment on the manner in which historic drill chips were sampled, or the preparation techniques applied during collection.

Australian Mines is unable to comment on quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.

Australian Mines is unable to comment if field duplicates were collected, or whether sample sizes were appropriate to the grain size of the material being sampled.

**Charteris Creek Project**

The samples have been sorted & dried. The whole samples have been pulverized in a vibrating disc pulveriser.

Standard QAQC procedures adhered to during the acquisition of Stream and Soil samples.

Field duplicates were acquired at a frequency of 1 in every 20 sample taken.

Standards were acquired at a frequency of 1 in every 33 sample taken.

Internal laboratory QAQC was completed to the required standard

Only internal laboratory QAQC was completed on the rock chip samples submitted.

**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.
- For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
- Nature of quality control procedures adopted (e.g. standards, blanks, duplicates,

**Marymia Project**

The survey parameters and geophysical equipment used by Gem Geophysics for the moving loop electromagnetic survey at Marymia includes:

**Survey Parameters**

Survey direction: northwest-southeast

Station spacing: 200 metres (first-pass)

50 metres (in-fill lines)

**Receiver**

external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.

Receiver: SMARTem 24

dB/dt sensor: 3-component B-field magnetometer

Component: X,Y,Z

#### **Transmitter**

Transmitter: Zonge ZT-3 (modified)

Transmitter loop: 200 metres (first pass)

Transmitter frequency: 1 Hertz

Transmitter current: 28 Amps

At least two readings were acquired at each station in order to ensure data repeatability.

The moving loop system is fully calibrated and daily tests were carried out to ensure data quality.

#### **Charteris Creek Project**

The samples have been sorted & dried. The whole samples have been pulverized in a vibrating disc pulveriser.

Gold analysis was completed using an Aqua Regia digest. Results were determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.

Multi Element analysis was completed using a digest and reflux with a mixture of acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. Results were determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.

Internal laboratory QAQC includes repeat assaying of at least 1 in 20 samples in the batch.

Internal laboratory QAQC includes repeat assays for verification of significant gold results.

Internal laboratory QAQC includes inclusion of standards and blanks to test equipment for accuracy and efficiency.

Australian Mines is unable to comment on the quality, nature and appropriateness of the assaying and laboratory procedures used by previous explorers during their drill programs.

#### **Verification of sampling**

- The verification of significant intersections by either independent or alternative company personnel.

#### **Marymia Project**

All primary analytical data acquired by Gem Geophysics during the moving loop



<b>and assaying</b>	<ul style="list-style-type: none"> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<p>electromagnetic survey were recorded digitally and sent in electronic format to Southern Geoscience Consultants in Perth for independent quality control and evaluation.</p> <p>Australian Mines is unable to comment on the documentation, data entry procedures and data storage protocols used by the previous explorers during their drilling programs.</p> <p>No twinned hole drilling is proposed by Australian Mines at this stage.</p> <p>Only historic assay data released by previous explorers have been used by Australian Mines. No adjustments have been made to historic assay values.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>All assay data is internally verified upon receipt from the laboratory and subsequently stored in an Acquire database.</p>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>The data points of Gem Geophysics' moving loop electromagnetic survey were located using standard GPS positioning.</p> <p>Drill hole collar locations were recorded using handheld Garmin GPS.</p> <p>The expected accuracy is +/- 5 metres for easting and northings and 10 metres for elevation coordinates. Elevation values were in AHD.</p> <p>The grid system used is Map Grid of Australia (MGA) GDA94 Zone 50.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>All sample points were located using a hand held GPS.</p> <p>Data captured in GDA 94, Zone 51.</p>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>The line spacing for the moving loop electromagnetic survey was 100 to 200 metres. The along line station spacing for the initial survey was 100 metres. This station spacing tightened to</p>

	<p>for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<p>50 metres for the in-fill survey lines.</p> <p>Historic drill data is not being used for estimating a Mineral Resource or modelling of grade at this stage in exploration.</p> <p>Based on the information contained within historic ASX announcements of previous explorers, it is assumed that no sample compositing was applied to the historic drill samples.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>Soil grid used over the main prospect was 100x50m. 100x100m was used for the secondary target.</p>
<p><b>Orientation of data in relation to geological structure</b></p>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>Australian Mines is targeting komatiite-hosted nickel sulphide, DeGrussa-style copper-gold and Plutonic-style gold mineralisation at Marymia.</p> <p>The orientations of any drilling completed by Australian Mines are designed to intersect the proposed target at right angles in an attempt to minimise the risk of biased sampling.</p> <p>The orientation of the drilling is deemed sufficient at this stage of exploration.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>Soil sample grids have been designed in an east-west direction to test targets which including possible structures that appear to be predominately orientated in a north-south direction.</p>
<p><b>Sample security</b></p>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>The chain of custody is managed by AUZ.</p> <p>Samples are stored on site and are delivered by AUZ personnel directly to the assay laboratory.</p>
<p><b>Audits or reviews</b></p>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>All data acquired from the Marymia moving loop electromagnetic survey was independently reviewed by an experienced geophysicist at Southern Geoscience Consultants.</p> <p>No independent audit of the historic drilling assays has been completed to date.</p>

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**Charteris Creek Project**

Standard internal verification of assay data did not reveal any inaccuracy. General advice from an external consultant was obtained regarding sampling and assay techniques prior to the commencement of the sampling program.

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## Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>The Marymia Project (and Simmons prospect) is located within the Western Australian exploration licences of E52/2394 and E52/2395.</p> <p>On 30 April 2014, Australian Mines announced it had signed a Heads of Agreement with Riedel Resources Limited (ASX code: RIE) in relation to the Marymia Project.</p> <p>Exploration licences E52/2394 and E52/2395 are within the Marymia and Ned's Creek Pastoral Leases and contained within the Native Title Claim boundaries of the <i>Gingirana</i> (WAD6002/03) and <i>Yugunga-Nya</i> (WAD6132/98) Traditional Owners.</p> <p>Exploration activities on E52/2394 and E52/2395 are permitted under agreements dated; 7 October 2010 between Audax Resources Ltd (a subsidiary of Riedel Resources) and the Yamatji Marpa Aboriginal Corporation as agent for the <i>Yugunga-Nya</i> people; and</p> <p>23 October 2010 between Audax Resources and Gingirana Pty Ltd. Australian Mines is permitted to operate under these agreements as the company is joint venturing with Riedel Resources on this project.</p> <p>Exploration licences E52/2394 and E52/2395 are in good standing with no impediments to exploration known to exist at the time of writing.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>Exploration activities were all undertaken on EL 45/2763, which comprises the Charteris Creek Project. The Licence is held by Riedel Resources Ltd ('Reidel') and registered in the name of Audax Minerals Pty Ltd.</p> <p>The Licence was granted on 8 November 2011 and is due to expire on 8 November 2016.</p> <p>On 16 January 2014 FMG Resources Pty Ltd entered into a Farm In and Joint Venture Agreement with Reidel to earn an 80% interest in the tenement over a six year period.</p> <p>The Licence is in good standing. The minimum expenditure commitment has been exceeded in</p>



the first and second terms and will be met in the third year of term.

## Exploration done by other parties

- Acknowledgment and appraisal of exploration by other parties.

### Marymia Project

Limited exploration and drilling programs have previously been undertaken across the Marymia Project by other companies.

A summary of the historic anomalous gold and nickel intersections are outlined in the Prospectus released by Riedel Resources Limited on 23 November 2010.

Plutonic Operations Limited's technical reports submitted to the WA Department of Mines and Petroleum for tenement E52/533 (which now forms part of Australian Mines' tenement E52/2395) are also referenced in the accompanying report.

### Charteris Creek Project

Exploration around the Gobbos Granodiorite intrusion started in the mid-1960s. Five main project areas were identified, namely the Bridget, Gobbos, Lightning Ridge, Otways and Wallabirdee Ridge prospects by previous explorers.

## Geology

- Deposit type, geological setting and style of mineralisation.

### Marymia Project

AUZ are targeting three types of mineral deposits at Marymia;

- (i) DeGrussa-style volcanogenic massive sulphide copper-gold,
- (ii) Kambalda-style komatiite-hosted nickel sulphide, and
- (iii) Plutonic-style Archaean gold.

The Marymia Project overlies the Baumgarten Greenstone Belt, which is the interpreted northern extension of the Eastern Goldfields Province of the Yilgarn Craton. The geology of the Marymia Project comprises an Archaean greenstone sequence of basalts and komatiitic ultramafic rocks.

### Charteris Creek Project

Copper porphyry target. Porphyry systems within or marginal to the intrusions. Granodiorite and tonalite intrusives rocks of Archean age are

		<p>situated within the McPhee Dome and have intruded volcanic and sedimentary rocks of the also Archean Yilgalong (or: McPhee) Greenstone Belt.</p> <p>Copper-molybdenum-silver-zinc-gold mineralization proximal and distal to porphyry systems has been reported.</p>
<p><b>Drill hole Information</b></p>	<ul style="list-style-type: none"> <li>• 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: <ul style="list-style-type: none"> <li>◦ easting and northing of the drill hole collar</li> <li>◦ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>◦ dip and azimuth of the hole</li> <li>◦ down hole length and interception depth</li> <li>◦ hole length.</li> </ul> </li> <li>• 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.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>Summary of historic exploration results, including a tabulation of the Material drill holes for the project are outlined in the ASX announcement released by the previous explorer Riedel Resources on 12 September 2013.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>No drilling undertaken.</p>
<p><b>Data aggregation methods</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>Based on the information contained within Riedel Resources' announcement of 12 September 2013, it is assumed that the mean grades of the historic drill results referred to in this report have been calculated using a 0.3% nickel lower cut-off grade, no upper cut-off grade and a maximum internal waste of four metres.</p> <p>No metal equivalents have been used in this report.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>No drilling undertaken.</p>
<p><b>Relationship between mineralisation widths and</b></p>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>There is insufficient understanding of the bedrock geology at present to determine the true</p>

<b>intercept lengths</b>	<ul style="list-style-type: none"> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	<p>thickness of any reported drill intersections.</p> <p>Any intersections included in the accompanying report are down hole lengths. The true widths of these intersections are not known.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>No drilling undertaken.</p>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>Appropriate maps and sections are included in the body of the accompanying report.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>The images in this report show the geology of the general region and more detailed Fortescue mapped geology in the main project area.</p> <p>Additional images depict those copper and molybdenum values that are considered to be anomalous in the stream and soil sediment sampling completed by Fortescue.</p>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>The accompanying document is considered to represent a balanced report.</p> <p>Comprehensive report of the historic Exploration Results relied on by Australian Mines in this report are provided in Riedel Resources' Prospectus released via the ASX on 23 November 2010.</p> <p><b><u>Charteris Creek Project</u></b></p> <p>Geological mapping and geochemical sampling have been the primary exploration tools used to date.</p> <p>Maps displaying copper and molybdenum were chosen for inclusion in this report as at this early stage their distributions are the easiest to recognise.</p> <p>Interpretation of the acquired data is preliminary and by no means comprehensive.</p>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• 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,</li> </ul>	<p><b><u>Marymia Project</u></b></p> <p>Other exploration data collected by the Company is not considered material to this report at this stage. Further data collection will be reviewed and reported when considered material.</p>

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geotechnical and rock characteristics; potential deleterious or contaminating substances.

Historic exploration has been undertaken at this location by previous explorers with the results summarised in Riedel Resources' Prospectus released via the ASX on 23 November 2010.

**Charteris Creek Project**

Not applicable.

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**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).
- Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.

**Marvymia Project**

Future exploration work may include the drill testing of geophysical anomalies and/or structural targets, as well as the interpreted depth extensions of known mineralisation.

**Charteris Creek Project**

Finalising the interpretation of data gathered to date as well as outstanding petrological descriptions will lead to a more robust mineralisation model for the project area. Stream sediment sampling may also be extended into other parts of the tenement area.

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**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 full time employee of 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.*