

# Completion of Diamond Drilling of Northern Zone 26km ESE of Kalgoorlie

# Highlights

- Diamond drilling of entire central Cross-Section to 450m vertical depth to validate exploration model
- Visible alteration on all holes exceeded initial expectations with all 4 holes drilled deeper than planned
- Program aim was to:
  - Confirm the mineralisation style
  - Mineralisation widths and gold grades
  - Oriented core to gather structural orientation of the mineralisation
- Core is now being moved to ALS in Perth for cutting, photography and assay

**Riversgold Limited (ASX: RGL, Riversgold** or **the Company)** announces that it has completed its maiden diamond drilling program at the Northern Zone Intrusive Hosted Gold Project located 26 km east southeast of Kalgoorlie in Western Australia. Refer to **Figure 1** for location.

On the 9 May 2023, RGL announced the acquisition of an 80% earn-in to Northern Zone<sup>1</sup>. A four hole oriented core diamond drilling program for 1,379m has now been completed and RGL expects to complete the earn-in commitments for the 80% interest in the tenement, once the assays and reporting have been completed.

# The Northern Zone Project has an Exploration Target of 200 to 250 million tonnes at a grade of 0.4 g/t to 0.6 g/t for an exploration target of 2.5 to 4.8 million oz of gold, announced by RGL to the ASX on the 9 May 2023.

**Cautionary Statement**: The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The reader is advised that an Exploration Target is based on existing drill results and geological observations from drilling as well as interpretation of multiple available datasets. The exploration target is based on historical and Oracle drilling results. It uses data from 53 historical drillholes drilled between 1998 and 2012, and 7 drillholes drilled by Oracle in 2021.

The initial aims of the first phase of diamond drilling exploration at Northern Zone are to confirm the mineralisation style, confirm the very wide widths of gold mineralisation seen previously in the RC drilling, and confirm gold grades and gold distribution.

Secondly, the aims are to generate mineral orientation and structural information and, lastly, to generate sufficient core to allow for both metallurgical studies and for the geophysical characterisation of the core with the view of potentially using this information to fast track and better define the size of the mineralised envelope, through improved drill design. RGL is optimistic that all these aims and milestones can be achieved from the drill core.

<sup>&</sup>lt;sup>1</sup> RGL ASX announcement 9 May 2023 "Farm into Significant Porphyry Hosted Gold Project"



David Lenigas, Executive Chairman of RGL, said: "The very wide zones of intense alteration in all four diamond drill holes on this Cross Section demonstrates the high gold prospectivity of the Northern Zone Project and endorses RGL's investment in this Project in a well-endowed province, which is seeing the emergence of intrusive related gold hosted mineralised systems as a genuine host to gold mineralisation. The big questions on actual gold grades and widths will be answered when ALS complete their work in their Perth facilities over the coming weeks".

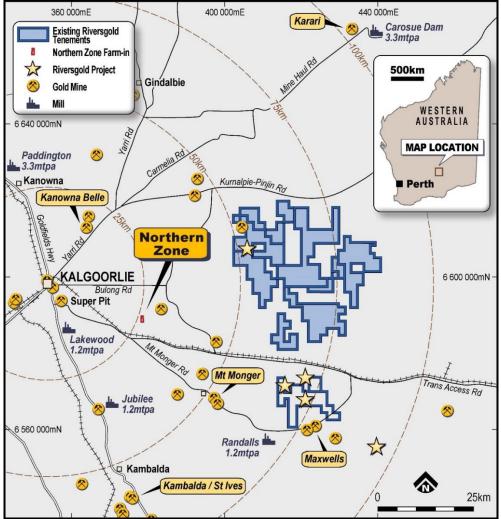


Figure 1: Northern Zone Project Map

The Northern Zone Project is located 26km, east-southeast of the Kalgoorlie Super Pit and is readily accessed from the Bulong road, which is paved to within 9km of the prospect site. The last 9kms consists of 4km of a high-quality haul road with the last 5kms on a station road. The topography is flat lying, open scrub with several historical remnant gold and nickel excavation pits less than 5 kms from the prospect site.

Drilling contractor, DDH1, completed the drilling at Northern Zone using a combination of HQ3 and NQ2 diamond drilling. The core was logged by contract geologists, BMGS, in Kalgoorlie, with oversight from RGL geologists. The detailed logging showed that the host rock to the mineralisation is structurally competent and tonalitic in composition. The mineralisation event has introduced significant micro-fracturing and quartz veining, which acts as the conduit for the significant thicknesses of silica, albite, hematite and fine-grained pyrite alteration (**Figure 2, Table 1**). This style of alteration is the typical alteration pattern associated with intrusive gold related mineralisation. Internal to the broad zones of alteration are narrower zones of more intense alteration and complete textural destruction of the host rock (**Figure 3**).





Figure 2: Northern Zone diamond drill hole RSDD001 (280m – 294m) wide zones of silica, albite and pyrite alteration

**Cautionary Statement:** RGL has not yet quantitatively determined whether the core is gold mineralised or not. The core photograph is provided to support RGL's hypothesis that Northern Zone is likely to be an Intrusive Relative Gold Deposit (IRGD) model where mineralisation occurs in microfractures associated with hydrothermal fluids which is visually evident in the core and is associated with alteration of the more brittle host rock. The diamond drill holes are within a central drill section where RC drill results for gold were previously reported (see ASX release 9 May 2023 "Farm into Significant Porphyry Hosted Gold Project").



Figure 3: Northern Zone diamond drill hole RSDD004 (143m – 147.6m) intense silica, albite and hematite alteration



#### **Next Steps**

RGL will:

- Complete logging of the core;
- Undertake core cutting and sampling of the core;
- Complete interpretation of the geological and assay results upon receipt of the assay results;
- Undertake further metallurgical test work if warranted; and
- Undertake further drilling towards etimating a resource at Northern Zone.

-ENDS-

This announcement has been authorised for release by the Board of Riversgold Ltd.

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#### **Competent Persons Statement**

The Information in this report that relates to exploration results, exploration targets, mineral resources or ore reserves is based on information compiled by Mr Allan Younger, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Younger is a consultant to the company. Mr Younger has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the `Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Younger consents to the inclusion of this information in the form and context in which it appears in this report.

For further information on the Northern Zone Project, please refer to previous ASX announcements:

9 May 2023 RGL to farm-in to Significant Porphyry Hosted Gold Deposit



### **APPENDIX 1: Drilling Information**

Hole ID	Easting	Northing	Dip/Azimuth	RL	Final Depth (m)
RSDD01	381675	6592555	-60/215	356	300
RSDD02	381775	6592715	-60/215	356	406
RSDD03	381835	6592795	-60/215	356	510.1
RSDD04	381595	6592555	-60/215	356	162.6

#### Table 1: Collar Locations for RGL's Phase 1 Diamond Drilling Program (MGA94 Z50)

#### **Table 2: Northern Zone Alteration Details**

Hole ID	Final Depth (m)	Intense Alteration From (m)	Intense Alteration To (m)	Intense Alteration DH Width (m)	All Alteration From (m)	All Alteration To (m)	All Alteration DH Width (m)
		209	262	53			
RSDD01	300.	284	296	12	73	297	224
		232	260	28			
		137	140	3	115 406		201
		266	278	12			
00000	406	280	322	42		406	
RSDDUZ	RSDD02 406	338	343	5		291	
		349	351	2			
		402	405	3			
		252	262	10			
		277	310	33			
RSDD03 510.1	419	423	4	87 502	502	415	
		436	442	6			
		449	458	9			
RSDD04	162.6	131	154	23	25	155	130



#### **APPENDIX 2.**

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results at Northern Zone.

#### Section 1: Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The samples were whole core HQ3 or NQ2 sized, with roller pre-collars.</li> <li>The core is yet to be cut or assayed and as such no statements as to mineralisation within the core can be made.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	Diamond core HQ3 or NQ2 sized, with roller pre- collars. The core has been oriented with standard and modern down hole orientation techniques.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Recovery logs were recorded by the field geologist. Recovery was excellent even through broken ground.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>The core has been professionally logged by Kalgoorlie based consultant and contract geologists with oversight from RGL geologists. 100% of the core has been logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The core is currently still whole and has not been sampled. It will be sampled as half core at the completion of full geological and structural logging.</li> <li>No sub sampling has been applied to the core.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the</li> </ul>	The core is yet to be submitted to the laboratory for assaying.



Verification of sampling and assaying	<ul> <li>analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <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>	The core is yet to be submitted to the laboratory for assaying.
Location of data points	<ul> <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>	The collar position of each hole was recorded using handheld GPS. The down hole survey data was taken at 30m using standard down hole gyro tools.
Data spacing and distribution	<ul> <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 for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	• The holes were drilled on a single section, between existing RC holes. This spacing is sufficient to establish grade and geological continuity of this particular drill section.
Orientation of data in relation to geological structure	<ul> <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>	<ul> <li>This is currently unknown, as RGL is yet to assay the core and final detailed logging is ongoing.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>The core was collected from the rig by BMGS contract geologists and stored securely in their Kalgoorlie yard where it was logged. The core was then strapped and wrapped and shipped via commercial transport to ALS in Perth.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	Data reviews will be conducted when all of the final assay results have been received from the lab.

## Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <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>	<ul> <li>The Northern Zone Project is comprised of one granted prospecting licence (P25/2651) which covers an area of 82 hectares, and is held in the name of Oracle Gold (WA) Pty Ltd.</li> <li>RGL are farming into the Tenement and following this program are expected to have earned an 80% interest.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>See reference in the body of the announcement.</li> <li>The majority of previous exploration in the area was by Northern Mining during 2007 to 2012 under the Blair North project, multiple small resource areas were identified at the George's Reward area to the south of P25/2651. Numerous intersections were made within the area of the PL including BNRC066 listed below.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	The deposit sought is IGR style of mineral deposit.

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Drill hole Information	<ul> <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> <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>	<ul> <li>No assays of the drill holes have been submitted or assayed yet. The Drill Hole logs will be completed once the assay have been received.</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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>	<ul> <li>As there has been no assay data received, no data aggregation has been applied to the assay grades and no metals equivalence calculations have been undertaken.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <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 (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>As RGL has not undertaken any assaying yet no comment can be made about mineralisation widths.</li> </ul>
Diagrams	<ul> <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>	<ul> <li>See body of the announcement for relevant diagrams and photos.</li> </ul>
Balanced reporting	<ul> <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>	<ul> <li>No assay grades are reported in this announcement, and reference to alteration is to indicate the style of mineralisation or potential deposit type.</li> <li>The reporting of exploration results is considered balanced by the competent person.</li> </ul>
Other substantive exploration data	<ul> <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, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	See body of the announcement
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>The initial aims of the first phase of diamond drilling exploration at Northern Zone are to confirm the mineralisation style, confirm the very wide widths of mineralisation seen previously on the central section that the diamond drilling has been completed on, and confirm gold grades and gold distribution. Secondly, the aims are to generate mineral orientation and structural information and lastly to generate sufficient core to allow for both metallurgical studies and allow for the geophysical characterisation of the core with the view of potentially using this information to fast track and better define the size of the mineralised envelope, through improved drill design.</li> </ul>

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