

## MINERALISED PORPHYRIES IN FIRST LUNA EAST DRILL HOLE

- Luna East drilling intersects felsic porphyries with disseminated arsenopyrite
- Mineralisation style similar to giant Donlin Creek intrusion-related gold deposit

Riversgold Limited (ASX: RGL, “Riversgold”) is pleased to provide an update on its projects in southwest Alaska, USA, where diamond drilling has intersected sulphide mineralisation in the first hole drilled at the Luna East target, including two felsic porphyries with disseminated arsenopyrite, similar to the mineralisation style present within the giant Donlin Creek gold deposit.

The Company has three 100%-owned projects within the Tintina Gold Province in southwest Alaska, USA, and is currently exploring for a large intrusion-related gold (IRG) deposit, such as the giant 45 million-ounce Donlin Creek gold deposit, approximately 150km to the north.

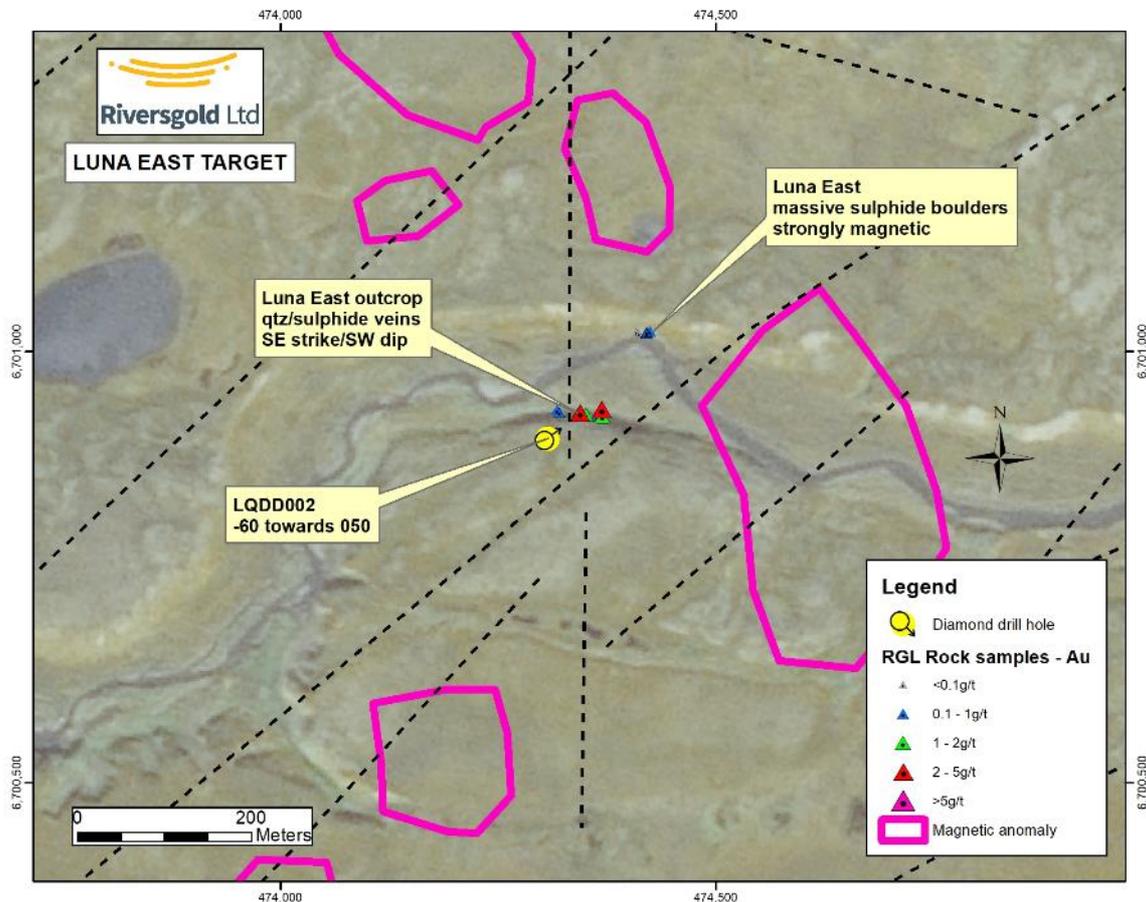
Diamond drill hole **LQDD002** aimed to test below outcropping quartz/sulphide veins within fine-grained sediments beneath a thin layer of glacial till and alluvium at the Luna East target. The outcropping veins had previously been sampled and returned several anomalous gold results up to **3.72g/t Au** with associated Ag (up to 66.5 g/t), As (several samples >10,000ppm), Bi (up to 84.8ppm), Cu (up to 0.7%) and Sb (up to 71.3ppm). The prospect had never previously been drilled.

**LQDD002** intersected quartz/feldspar porphyries at 18.4-19.2m and at 43.89-44.96m downhole containing abundant coarse-grained disseminated arsenopyrite and minor pyrrhotite and chalcopyrite (Figure 1). The host rock is fine grained sediments, as observed in the Luna East outcrop.

Analysis of the porphyries with a handheld XRF unit indicated highly elevated As (up to 2.7%) and anomalous Co (300-500ppm). Gold results will follow once fire assay analysis has been completed.



**Figure 1.** Quartz/feldspar porphyry with coarse disseminated arsenopyrite (18.44-19.20m).



**Figure 2.** Luna East target showing location of LQDD002 in relation to known mineralisation.

The hole also intersected two zones of semi-massive pyrrhotite at 24.69-25.30m and 41.80-41.90m downhole, along with pyrite and chalcopyrite (Figure 3). This mineralisation looks similar to the large massive sulphide boulders on the north side of the creek, which have previously assayed up to 1.2% Cu.



**Figure 3.** Semi-massive pyrrhotite with lesser pyrite and chalcopyrite (24.69m).

The hole was abandoned at 45.57m downhole due to difficult drilling conditions.

**Table 1.** Summary geological log of **LQDD002**

From	To	Description
0	18.44	Fine grained sediments with variable alteration and veining
<b>18.44</b>	<b>19.20</b>	<b>Quartz/feldspar porphyry with coarse dissem. aspy and minor po and cpy</b>
19.20	24.69	Fine grained sediments with variable alteration and veining
<b>24.69</b>	<b>25.30</b>	<b>Semi-massive pyrrhotite with pyrite and chalcopyrite</b>
25.30	41.80	Fine grained sediments with variable alteration and veining
<b>41.80</b>	<b>41.90</b>	<b>Semi-massive pyrrhotite with pyrite and chalcopyrite</b>
41.90	43.89	Fine grained sediments with variable alteration and veining
<b>43.89</b>	<b>44.96</b>	<b>Quartz/feldspar porphyry with coarse disseminated. aspy</b>
44.96	45.57 (EOH)	Fine grained sediments with variable alteration and veining

Riversgold's Managing Director, Mr Allan Kelly, said the mineralisation seen in LQDD002 was particularly significant given the apparent similarities to that seen at Donlin Creek.

"The bulk of gold mineralisation at Donlin Creek is hosted within felsic porphyry dikes and is associated with arsenopyrite; similar to what we are seeing in our first drill hole at Luna East," Mr Kelly said.

"The semi-massive pyrrhotite is also like massive sulphide veins observed at Donlin Creek," he added.

"We have similar geology, a comparable structural setting and now we have shown we have similar styles of mineralisation in drill core on our projects for the first time," Mr Kelly said.

The Company advises that **LQDD001**, testing beneath the main Luna outcrop, has recently been completed. The hole was drilled to a depth of 126.98m and encountered variably altered quartz feldspar porphyry, with disseminated pyrite, from surface to 107.93m downhole.

The hole was terminated in fine grained sediments at a downhole depth of 126.98m.

The core from LQDD001 has been logged and cut, with half-core samples sent for analysis. The core from LQDD002 is currently being logged and cut.

The drill rig has now moved to the Quicksilver target where drilling of **LQDD003** has commenced.

**Table 2.** Collar information for drilling to date<sup>1</sup>.

Hole	Target	Easting	Northing	RL	Dip	Azimuth	Total Depth
LQDD001	Luna	473,300	6,700,350	503	-60	140	127.0m
<b>LQDD002</b>	<b>Luna East</b>	<b>474,306</b>	<b>6,700,899</b>	<b>501</b>	<b>-60</b>	<b>050</b>	<b>45.57m</b>
LQDD003	Quicksilver	476,272	6,702,990	1,080	-60	140	In progress

For further information please contact:

**Allan Kelly**  
 Managing Director  
 Riversgold Limited  
 info@riversgold.com.au

**Michael Vaughan**  
 Fivemark Partners  
 +61(0)422 602 720  
 michael.vaughan@fivemark.com.au

<sup>1</sup> Coordinates in UTM NAD83 Zone 4N

## **About Riversgold Limited**

Riversgold listed on the ASX in October 2017 and has a portfolio of gold exploration projects within the Eastern Goldfields of Western Australia, the Tintina Gold Belt in southwest Alaska, USA, and the Gawler Craton of South Australia, along with applications for mineral exploration tenements in Cambodia, adjacent to the 1 million-ounce Okvau gold deposit.

Riversgold's Board has a track record of successful exploration, discovery, development and production.

### **Competent Person Statement**

The information in this document that relates to Exploration Results is based on information compiled by Mr Allan Kelly, a Competent Person who is a Member of The Australian Institute of Geoscientists (AIG). Mr Kelly is the Managing Director and CEO of Riversgold Ltd. He is a full-time employee of Riversgold Ltd and holds shares and options in the Company.

Mr Kelly has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Kelly consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

Information relating to historical results for the Luna/Quicksilver project, including JORC Table 1 information is included the Independent Geologists Report included in the Replacement Prospectus dated 11 August 2017.

The Company confirms that it is not aware of any new information or data that materially affects the information in the original market announcements, and that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.

*Section 1 Sampling Techniques and Data – Luna Drilling*

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core cut in half for analysis</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond drilling with BTW core</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample recovery estimated using length of core recovered as percentage of drill footage</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core will be logged for lithology, alteration and mineralisation</li> </ul>
Sub-sampling techniques and	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled,</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core will be cut in half with half core sent for analysis and half retained</li> </ul>

Criteria	JORC Code explanation	Commentary
sample preparation	<p>rotary split, etc and whether sampled wet or dry.</p> <ul style="list-style-type: none"> <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>	
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <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 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> </ul>	<ul style="list-style-type: none"> <li>No data as yet</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No data as yet</li> </ul>
Location of data points	<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>	<ul style="list-style-type: none"> <li>Drill hole located using handheld GPS.</li> <li>Datum is NAD83 Zone 4N</li> </ul>
Data spacing and distribution	<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 for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Single drill hole</li> </ul>
Orientation of data in relation to geological structure	<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>	<ul style="list-style-type: none"> <li>Drill hole oriented perpendicular to interpreted dip and strike of outcropping geology</li> </ul>

Criteria	JORC Code explanation	Commentary
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable as no samples taken</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audit undertaken</li> </ul>

## 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 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>	<ul style="list-style-type: none"> <li>State of Alaska mining claims owned 100% by Riversgold's Alaskan subsidiary, "Afranex (Alaska) Limited"</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous work completed at Luna by Gold Crest Mines and Southern Crown Resources Ltd.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Riversgold is exploring Intrusion-related Gold (IRG) mineralisation.</li> </ul>
Drill hole Information	<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>	<ul style="list-style-type: none"> <li>Shown in text of announcement</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No aggregation undertaken</li> </ul>
Relationship between	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration</li> </ul>	<ul style="list-style-type: none"> <li>True width unknown at this stage</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>mineralisation widths and intercept lengths</i>	<p><i>Results.</i></p> <ul style="list-style-type: none"> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Plan shown</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Plans shown</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Significant rock chip for Luna East shown on drill plan</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling of targets refined from combination of geological mapping, geochemical sampling and IP survey.</li> </ul>