



## Hillgrove Gold Project Restart Progress

### Highlights:

- Site activities at Hillgrove continue to ramp up with the restart on track and budget for first gold production by year end
- Hillgrove Gold Project has low operating risk and capital cost using staged restart approach
- Stage 1: Gold production from Bakers Creek Stockpile
  - Production of gold doré estimated to start in December 2020
  - Focus on reprocessing Bakers Creek Stockpile (225,000 tonnes @ 2.5 g/t Au)
  - Estimated project capital cost of \$5.0m
- Stage 2: Full Restart of Underground Mining Operations
  - UG mining operations forecast to commence mid to late 2021 in Metz Mining Centre
  - Metz Mining Centre has a JORC Mineral Resource of 3.0Mt @ 4.5 g/t Au & 1.4% Sb (6.5 g/t Au Eq.) (426koz Au & 41kt Sb contained)
  - Production of gold doré, gold concentrate and antimony-gold concentrate
  - RVR is aiming for Stage 2 operational life of +5 years producing 30,000-50,000oz gold equivalent p.a.
- Substantial upside for extended mine life and/or increased production rate from current JORC 2012 Mineral Resource of 5.0Mt @ 4.3 g/t Au & 1.5% Sb (6.4 g/t Au Eq.) (692koz Au & 75kt Sb contained)
- Potential for Eleanora as a second mining front and other targets at Hillgrove

Red River Resources Limited (ASX: RVR) is pleased to update the market on progress at the Hillgrove Gold Project, with gold production to resume at Hillgrove by the end of CY2020.

Red River's Managing Director Mel Palancian said, "Gold production at Hillgrove will transform Red River into a diversified, multi-asset gold and base metals producer, with two Australian operations that have substantial growth upside.

"Having acquired the Hillgrove project in August 2019, we have been methodical in our approach to restarting gold production to ensure we understand our opportunities and how best to leverage them. Starting operations by producing gold doré from waste at the Bakers Creek stockpile provides us with a low-cost restart plan. Then we will follow with Stage 2, which is to restart underground operations from existing development next year.

"We will continue to explore at Hillgrove for gold and critical metals, including antimony and tungsten."

## Hillgrove Gold Project

The Hillgrove Gold Project is about 30km from Armidale in New South Wales. To date, Hillgrove has produced more than 730,000 ounces of gold (in bullion and concentrates), more than 50,000 tonnes of antimony (as metal and in concentrates) plus material amounts of by-product tungsten (in concentrates). The Hillgrove Gold Project has a substantial high-grade JORC 2012 Compliant Mineral Resource of 5.0Mt @ 4.3 g/t Au & 1.5% Sb (6.4 g/t Au Eq.) (692koz gold & 75kt antimony).

Figure 1 Hillgrove Gold Project



The Hillgrove site includes a 250ktpa capacity processing plant, comprising a selective flotation circuit (capable of producing antimony-gold and refractory gold concentrates), an antimony leach/EW/refining & casting plant, a gold cyanide leach circuit & gold room plus a pressure oxidation circuit. The site also has a fully HDPE (high-density polyethylene) lined modern tailing storage facility, which was constructed in 2006 and has approximately two years of production storage capacity.

All of Hillgrove's electricity requirements are sourced from a 66kva grid connected power supply from Ergon Energy with 11kva site power reticulation. Water is sourced from storage dams and underground workings.

Hillgrove has all the office facilities required for operations, including an administration office, mining operations offices, maintenance offices, workshops (heavy vehicle, light vehicle and boilermaker's workshops), process plant offices, metallurgical laboratory building, first aid building, stores warehouse and core shed and yard.

Red River will operate Hillgrove Gold Project as a residential site, with the majority of the workforce likely to reside in Armidale.



## Stage 1 (Bakers Creek Stockpile) Restart

Site activities at Hillgrove continue to ramp up with restart on track and budget for first gold production by year end. The Stage 1 Restart will be based on treating the Bakers Creek Stockpile (225kt @ 2.5 g/t Au) through the Hillgrove Processing Plant to produce gold doré. Production is expected to commence by end CY2020 with an operational life of approximately 12 months.

The gold will be recovered to a gravity gold concentrate and a flotation gold concentrate which will then be leached on site to produce doré, with gold recovery to doré estimated to be 75-80% after ramp up. Stage 1 has an estimated pre-production capital expenditure of approximately \$5.0 million.

## Hillgrove Processing Plant

Restart activities are progressing as planned, on time & budget for the planned production restart. Key activity areas are as follows:

- Site workforce increased to 22; expected to be around 50 when fully operational.
- Installation of a gravity gold recovery circuit – engineering completed, equipment is onsite and scheduled to be installed from beginning of November 2020
- Installation of an Intensive Leach Reactor (Acacia) - has been ordered and delivery expected by early December 2020, engineering completed and structural modifications in progress
- Primary crusher spares are onsite and ready to be installed
- Secondary crusher has been ordered and expected to be delivered within the next 4 weeks; engineering 50% completed
- Rebuilding of feed pumps for filter presses and thickeners underway
- Rectifiers and busbars for the gold electrowinning circuit have been ordered
- Leach tanks are being refurbished, gridmesh replaced in the plant area where needed, rebuilding all pumps and running of new pipelines where needed.

Figure 2 Hillgrove Processing Plant



The diagram illustrates the process flow of the Bakers Creek Concentration Plant. The process begins with the ROM Bin, which feeds into the Primary Crusher. The output of the Primary Crusher goes to the Secondary Crusher. The Secondary Crusher output is then sent to the Crusher Screen. The Crusher Screen output is split: one path goes to the Emergency Feeder and Gold Residue Repulp Feed, and the other path goes to the Ball Mill 315-ML-001. The Ball Mill output goes to the Cyclone Cluster. The Cyclone Cluster output is sent to the Trash Box and Trash Screen. The Trash Box and Trash Screen output goes to the Gravity Concentrator. The Gravity Concentrator output is sent to the Gravity Concentrate Storage. The Gravity Concentrate Storage output is then sent to the Rougher Flotation. The Rougher Flotation output goes to the Cleaner 1 Flotation. The Cleaner 1 Flotation output goes to the Cleaner 2 Flotation. The Cleaner 2 Flotation output goes to the Concentrate Thickener. The Concentrate Thickener output goes to the Concentrate Filter. The Concentrate Filter output is sent to the Gold Residue Leach Feed Tanks. The Gold Residue Leach Feed Tanks output goes to the Gold Leach Tanks. The Gold Leach Tanks output goes to the Bakers Creek Conc Leach Feed Tank. The Bakers Creek Conc Leach Feed Tank output goes to the Leach Filter. The Leach Filter output goes to the Filter Feed Tank. The Filter Feed Tank output goes to the Dore Furnace. The Dore Furnace output goes to the Calcining Oven. The Calcining Oven output goes to the Dore. The Calcining Oven output also goes to the Tails Thickener. The Tails Thickener output goes to the Detox Tanks. The Detox Tanks output goes to the Tails Storage Facility.

The permitting and approval process required to restart operations is well advanced. The majority of consents are related to the process of bringing the site out of suspension and modification of existing consents to allow the processing plant upgrade (addition of gravity circuit).

As part of the Hillgrove Project acquisition, Red River acquired an extensive fleet of mobile equipment (previous owner utilised an owner-operator methodology). The initial focus has been on the units in the fleet that will be utilised in the mining and haulage of the Bakers Creek Stockpile to the processing plant. Red River has sought to use as much of the existing fleet as possible to minimise preproduction capital costs.

Overhaul and servicing activities have commenced on the extensive mobile fleet Red River acquired with the Hillgrove Project, including the overhaul and servicing of the x3 Volvo A40F dump trucks (40 tonne capacity) which will be used to haul the Bakers Creek Stockpile to the plant for processing.



Figure 4 CAT 972G leaving site for overhaul



Figure 5 A40F undergoing maintenance



## Stage 2 (Underground Production) Restart

Work on the Stage 2 (UG Production) Restart is underway to support the planned commencement of UG production in mid to late CY2021. This will allow the Hillgrove Processing Plant to transition from Bakers Creek Stockpile feed to UG ore feed when the Bakers Creek Stockpile is depleted. The aim of the Stage 2 Restart is to deliver a project with the following key parameters:

- Initial mine life of at least 5 years
- Production of 30-50koz Au Eq. from the UG operations

In Stage 2, the Hillgrove Processing Plant will produce a gold-antimony concentrate, a gold concentrate and a gold doré. Red River will also examine the potential to produce a saleable tungsten concentrate from the scheelite ( $\text{CaWO}_4$ ) mineralisation in the Metz Mining Centre.

UG Operations will commence in the Metz Mining Centre, allowing Red River to take advantage of the existing UG development & infrastructure to target the high-grade Lode systems (Syndicate, Blacklode & Sunlight). The Metz Mining Centre Mineral Resource was recently upgraded to 3.0Mt @ 4.5 g/t Au & 1.4% Sb (6.5 g/t Au Eq.) (426koz Au & 41kt Sb contained).

The Metz Mining Centre is currently on active care & maintenance, with all infrastructure (ventilation, power, water) in place to support near term restart of mining. Previous owners invested significant capital in development the Metz Mining Centre, with approximately 3,950m of declines and capital development, 3,400m of ore drives in the Syndicate Lode, 500m of ore drives in Blacklode and 320m of ore drives in Cox's Lode.

Table 1 Metz Mining Centre Mineral Resource

Lode	Classification	Tonnes	Gold	Antimony	Gold Equivalent (Au Eq.)	Contained Gold	Contained Antimony
		(kt)	(g/t)	(%)	(g/t)	(koz Au)	(kt Sb)
Blacklode & Sunlight	Measured	-	-	-	-	-	-
	Indicated	1,511	5.3	1.3	7.1	255	20
	Inferred	1,136	3.6	0.9	4.9	131	10
	<b>Total</b>	<b>2,647</b>	<b>4.5</b>	<b>1.1</b>	<b>6.2</b>	<b>387</b>	<b>30</b>
Syndicate	Measured	199	4.5	4.5	10.9	29	9
	Indicated	96	2.5	2.4	5.9	8	2
	Inferred	23	3.6	0.4	4.1	3	0
	<b>Total</b>	<b>318</b>	<b>3.8</b>	<b>3.6</b>	<b>8.9</b>	<b>39</b>	<b>11</b>
<b>Total</b>	Measured	199	4.5	4.5	10.9	29	9
	Indicated	1,607	5.1	1.4	7.0	263	22
	Inferred	1,159	3.6	0.9	4.9	134	10
	<b>Total</b>	<b>2,965</b>	<b>4.5</b>	<b>1.4</b>	<b>6.5</b>	<b>426</b>	<b>41</b>

Source: Red River Resources Limited 24 September 2020 & 17 August 2020

Blacklode & Sunlight Lode Mineral Resource is estimated at a cut-off grade of 3 g/t Au Eq.

Tonnages and grades are rounded. Discrepancies in totals may exist due to rounding.

Gold equivalent (Au Eq.) has been calculated using the metal selling prices, recoveries and other assumptions contained in included this announcement.



Figure 6 Metz Mining Centre (Mineral Resource Oblique View)

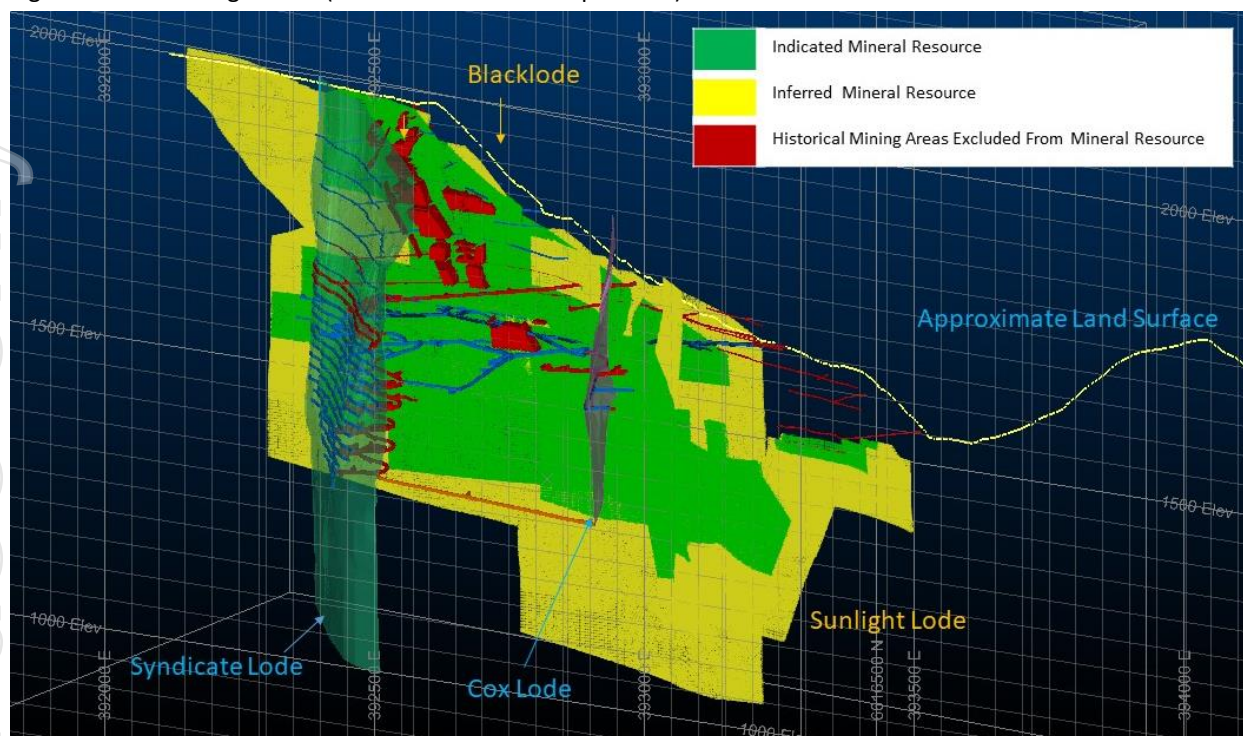


Figure 7 Metz Mining Centre Decline



## Stage 2 (UG Production) Restart Workstreams

The following work is underway (Table 2) as Stage 2 moves forward to a production restart in mid to late 2021. Red River anticipates releasing a comprehensive Stage 2 Restart Study in early 2021.

Table 2 Stage 2 (UG Production) Restart Workstreams

Workstream	Deliverables	Status
<b>Mineral Resource Review</b>	<ul style="list-style-type: none"> <li>Syndicate Resource review</li> <li>Sunlight Resource review</li> <li>Blacklode Resource review</li> </ul>	Complete
<b>JORC 2004 Mineral Resource Conversion</b>	<ul style="list-style-type: none"> <li>Blacklode Resource conversion</li> </ul>	Complete
<b>Ore Reserve Definition</b>	<ul style="list-style-type: none"> <li>Define 3-5 years Ore Reserve</li> <li>Mine design &amp; scheduling</li> </ul>	Underway
<b>Cost Estimates</b>	<ul style="list-style-type: none"> <li>Operating costs</li> <li>Capital costs</li> </ul>	Underway
<b>Tailings Storage Facility</b>	<ul style="list-style-type: none"> <li>TSF3 design work</li> </ul>	Underway
<b>Metallurgical test work</b>	<ul style="list-style-type: none"> <li>Blacklode/Sunlight test work</li> <li>Ore sorting test work</li> </ul>	Underway
<b>Tungsten Study</b>	<ul style="list-style-type: none"> <li>Review historic tungsten drilling data</li> <li>Mineralogical study</li> <li>Ore sorting test work</li> </ul>	Underway

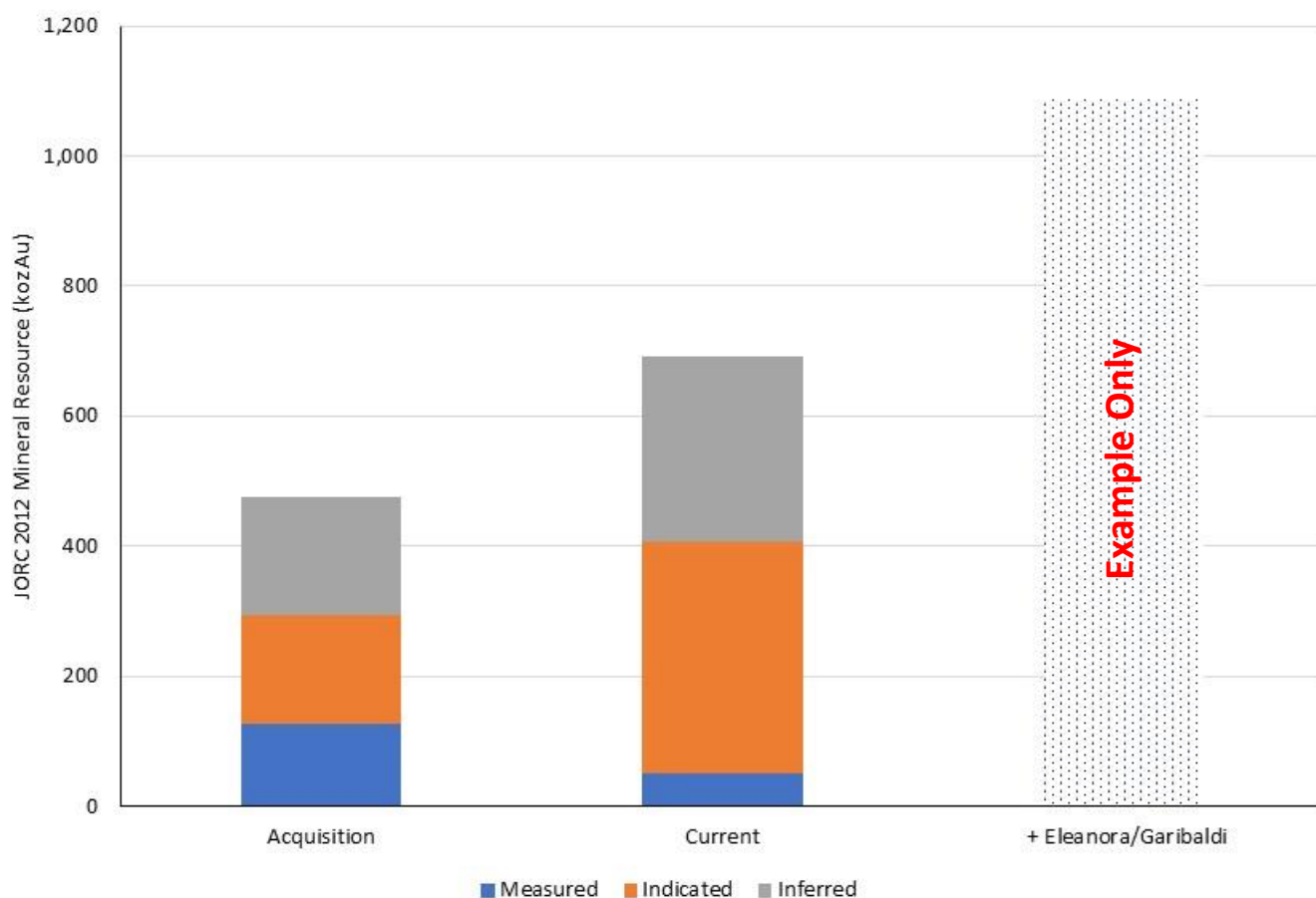


## Growing the Hillgrove Mineral Resource Base

To date, Red River has successfully increased the JORC 2012 Mineral Resource from 2.8Mt @ 5.1 g/t Au & 1.7% Sb (459koz Au & 48kt Sb) as at the date of Hillgrove acquisition, to a current Mineral Resource of 5.0Mt @ 4.3 g/t Au & 1.5% Sb (692koz Au & 75kt Sb).

Red River is currently undertaking drilling activities at Eleanora to support the conversion of the remaining material non-JORC 2012 Mineral Resource (Eleanora-Garibaldi) to a JORC 2012 Compliant Resource.

Figure 8 Growing the Hillgrove Mineral Resource Base



Red River controls the known Hillgrove Mineral Field (Figure 9) which hosts more than 200 known gold-antimony (Au-Sb) deposits. The majority of these deposits are steeply dipping vein systems within NW to WNW striking fracture systems, where the vein systems transition to gold dominant at depth with increasing levels of free gold. All known vein systems are open at depth.

- Phase 1 Eleanora Lode drilling program concluded, with 9 diamond drill holes (total 832.5m drilled) completed, targeting unmined gold-rich sections of the Eleanora Lode (refer to RVR ASX release dated 25 September 2020 “Eleanora Drilling returns up to 32.3 g/t Au”); and
- Curry’s Lode drilling program concluded, with 7 diamond drill holes (total 704.3m drilled) completed. Results will be released when all assay results have been received (expected early November)

With the completion of the Curry’s Lode drilling program, the drill rig has moved back to the Eleanora Lode to commence Phase 2 drilling.

Figure 9 Hillgrove Mineral Field

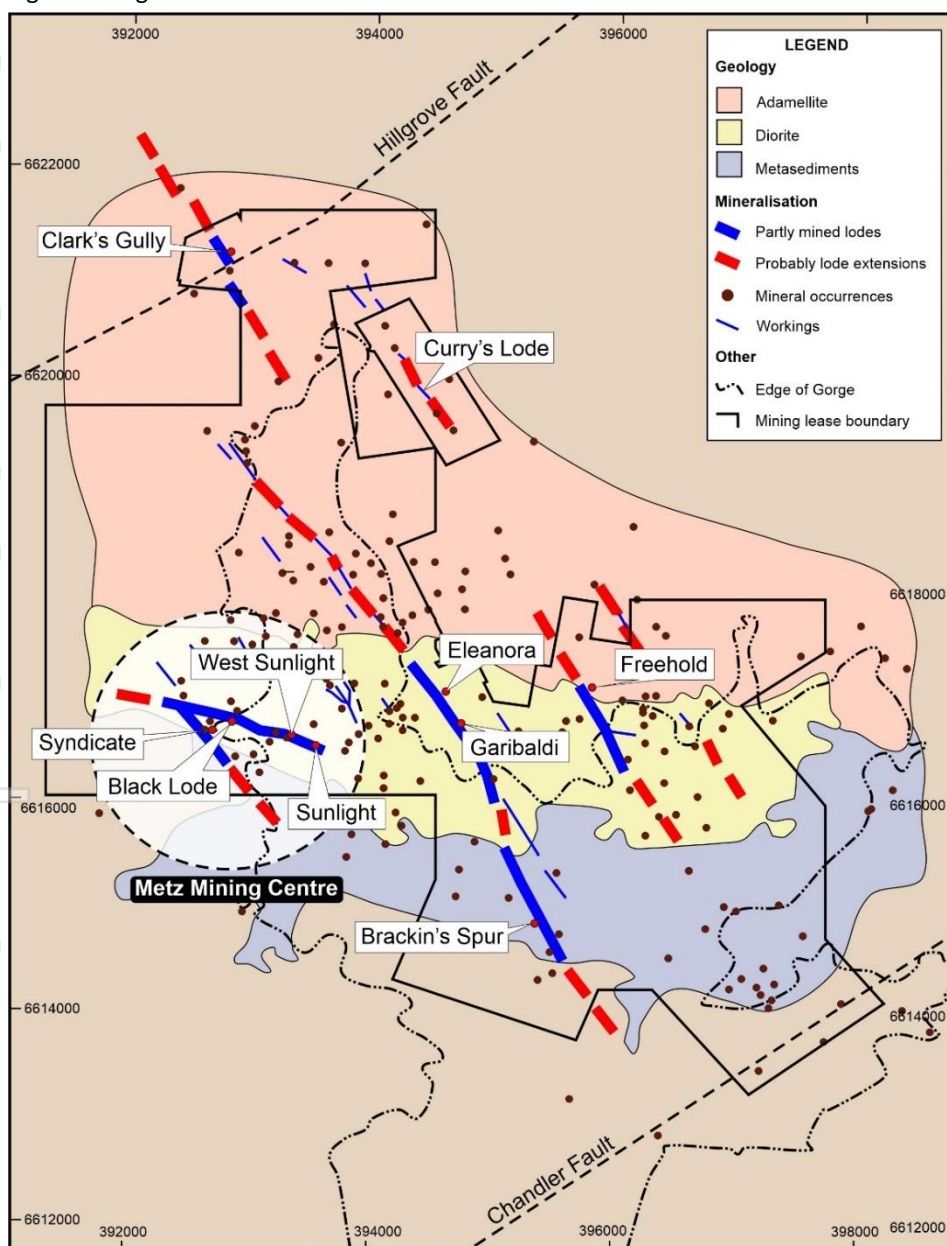




Table 3 Hillgrove Gold Project Mineral Resource

Lode	Classification	Tonnes	Gold	Antimony	Gold Equivalent (Au Eq.)	Contained Gold	Contained Antimony
		(kt)	(g/t)	(%)	(g/t)	(koz Au)	(kt Sb)
Blacklode & Sunlight	Measured	-	-	-	-	-	-
	Indicated	1,511	5.3	1.3	7.1	255	20
	Inferred	1,136	3.6	0.9	4.9	131	10
	<b>Total</b>	<b>2,647</b>	<b>4.5</b>	<b>1.1</b>	<b>6.2</b>	<b>387</b>	<b>30</b>
Brackin's Spur	Measured	73	5.1	0.9	6.2	12	1
	Indicated	640	4.2	1.8	6.9	86	12
	Inferred	870	4.8	1.3	6.5	134	11
	<b>Total</b>	<b>1,583</b>	<b>4.6</b>	<b>1.5</b>	<b>6.6</b>	<b>232</b>	<b>24</b>
Clark's Gully	Measured	170	1.9	4.2	9.0	10	7
	Indicated	96	2.1	3.1	7.3	6	3
	Inferred	0	0.8	3.0	5.8	0	0
	<b>Total</b>	<b>266</b>	<b>2.0</b>	<b>3.8</b>	<b>8.4</b>	<b>16</b>	<b>10</b>
Syndicate	Measured	199	4.5	4.5	10.9	29	9
	Indicated	96	2.5	2.4	5.9	8	2
	Inferred	23	3.6	0.4	4.1	3	0
	<b>Total</b>	<b>318</b>	<b>3.8</b>	<b>3.6</b>	<b>8.9</b>	<b>39</b>	<b>11</b>
Bakers Creek Stockpile	Measured	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-
	Inferred	225	2.5	-	2.5	18	-
	<b>Total</b>	<b>225</b>	<b>2.5</b>	<b>-</b>	<b>2.5</b>	<b>18</b>	<b>-</b>
<b>Total</b>	Measured	442	3.6	3.8	9.4	51	17
	Indicated	2,343	4.7	1.6	7.0	355	37
	Inferred	2,255	4.0	1.0	5.3	286	21
	<b>Total</b>	<b>5,039</b>	<b>4.3</b>	<b>1.5</b>	<b>6.4</b>	<b>692</b>	<b>75</b>
<p>Syndicate Mineral Resource Source: Red River Resources Limited 24 September 2020</p> <p>Blacklode &amp; Sunlight Lode Mineral Resource is estimated at a cut-off grade of 3 g/t Au Eq.</p> <p>Source: Red River Resources Limited 17<sup>th</sup> August 2020</p> <p>Brackin's Spur &amp; Clark's Gully Mineral Resources are estimated at a cut-off grade of 5 g/t Au Eq.</p> <p>Source: AMC Consultants Pty. Ltd. Hillgrove Mineral Resource Estimate (August 2017)</p> <p>Tonnages and grades are rounded. Discrepancies in totals may exist due to rounding.</p> <p>Gold equivalent (Au Eq.) has been calculated using the metal selling prices, recoveries and other assumptions contained in the AMC Estimate and included this announcement.</p>							

### About Red River Resources (ASX: RVR)

RVR is seeking to build a multi-asset operating business focused on base and precious metals with the objective of delivering prosperity through lean and clever resource development.

RVR's foundation asset is the Thalanga Base Metal Operation in Northern Queensland, which was acquired in 2014 and where RVR commenced copper, lead and zinc concentrate production in September 2017.

RVR has recently acquired the high-grade Hillgrove Gold Project in New South Wales, which will enable RVR to build a multi-asset operating business focused on base and precious metals. Gold production at Hillgrove is scheduled to restart at the end of CY2020.

On behalf of the Board,

**Mel Palancian**

**Managing Director**

Red River Resources Limited

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### **Competent Persons Statement Syndicate, Blacklode & Sunlight Mineral Resource**

The information in this report that relates to the estimation and reporting of the Syndicate, Blacklode & Sunlight Mineral Resource are based on and fairly represents, information and supporting documentation compiled by Mr Peter Carolan who is a Member of The Australasian Institute of Mining and Metallurgy and a full-time employee of Red River Resources Ltd.

Mr Carolan has sufficient experience 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 Carolan consents to the inclusion in the report of the matters based on the information in the form and context in which it appears. The information in this report that relates to database compilation, geological interpretation and mineralisation wireframing, project parameters and costs and overall supervision and direction of the Syndicate, Blacklode & Sunlight estimation is based on and fairly represents, information and supporting documentation compiled under the overall supervision and direction of Mr Carolan.

### **Competent Persons Statement Brackin's Spur & Clark's Gully Mineral Resources**

The information in this report that relates to the reporting of the Brackin's Spur & Clark's Gully Mineral Resource Estimate reported in accordance with the JORC 2012 Code is based on and fairly represents, information and supporting documentation compiled by Rodney Webster who is a Member of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Webster is independent of Hillgrove Mines Pty Ltd. and an employee of AMC Consultants Pty Ltd. Mr Webster has sufficient experience 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'.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original report and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original report.

## Gold Equivalent Calculation

### Syndicate, Blacklode & Sunlight Mineral Resources

It is Hillgrove Mines Pty Ltd opinion that all the elements included in the metal equivalent calculation have a reasonable potential to be recovered and sold, based on previous mill production and sales. The gold equivalent (Au Eq.) and the cut-off are based on the following:

Metallurgical test work (carried out in 2016 and 2017) and mill production data demonstrate that total gravity & float recoveries of 91% Au and 86% Sb are achievable. The antimony recovery is applicable where Sb head grades are 1% or greater. The majority of the Sunlight Resource contains an antimony grade of less than 0.5% and therefore antimony recovery is not expected from this material.

The Au Eq. value was calculated using a gold price of US\$1,234 per oz and an antimony price of US\$ 5,650 per tonne where:

- $\text{Au Eq. (g/t)} = (\text{Au g/t}) + (1.424 * \text{Sb \%})$

### Brackin's Spur & Clark's Gully Mineral Resources

It is Hillgrove Mines Pty Ltd opinion that all the elements included in the metal equivalent calculation have a reasonable potential to be recovered and sold, based on previous mill production and sales. The gold equivalent (Au Eq.) and the cut-off are based on the following:

- Metallurgical test work (carried out in 2016 and 2017) and mill production data demonstrates that total gravity/float recoveries of 91% gold (Au) and 86% antimony (Sb) are achievable.
- Net smelter return calculations for the deposits indicate that Au Eq. grades above 4.8 g/t are economic, based on site costs, mill recoveries, off-site transportation and royalty costs.

Au Eq. was calculated based on commodity prices as of 18 July 2017. The individual grades, the assumed commodity prices and metal recoveries, and the Au Eq. formula are as follows:

- $\text{Au Eq. (g/t)} = (\text{Au g/t} * 91\%) + (2.0 * \text{Sb \%} * 86\%)$ 
  - Where  $2.0 = (\text{US\$7,950}/100) / (\text{US\$1,234}/31.1035)$
  - Gold price = US\$1,234/oz and gold recovery = 91%
- Antimony price = US\$7,950/tonne and antimony recovery = 86%