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# Red River

RESOURCES LIMITED

**ACQUISITION OF HILLGROVE GOLD-ANTIMONY PROJECT**

July 2019

*Building a multi-asset mining business*

The information contained in this presentation should be read in conjunction with and subject to the cautionary statements contained on this page and the statements contained in and referred to elsewhere in this presentation, including the competent persons statements referred to on slide 17 and the ASX announcements to which this presentation refers.

## FORWARD LOOKING STATEMENTS

This presentation may contain forward looking statements that are subject to risk factors associated with the mining and resources industry. It is believed that the expectations reflected in these statements are reasonable, but they may be affected by a range of variables which could cause actual results or trends to differ materially, including but not limited to: price fluctuations, actual demand, currency fluctuations, geotechnical factors, drilling and exploration results, development progress, operating results, engineering estimates, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial markets conditions in various countries, approvals and cost estimates

The Hillgrove JORC 2004 Mineral Resources are not reported in accordance with the JORC Code 2012

A Competent Person has not done sufficient work to classify the estimates of Mineral Resources or Ore Reserves in accordance with the JORC Code 2012

It is possible that following evaluation and/or further exploration work the currently reported estimates may materially change and hence will need to be reported afresh under and in accordance with the JORC Code 2012

Nothing has come to the attention of Red River Resources that causes it to question the accuracy or reliability of the former owner's estimates

Red River Resources has not independently validated the former owner's estimates and therefore is not to be regarded as reporting, adopting or endorsing those estimates

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## Acquisition of Hillgrove Project

- Red River to acquire 100% ownership of the Hillgrove gold-antimony Project (“Hillgrove”) in northern New South Wales, Australia
- Mineral Resource of 2.8Mt @ 5.1 g/t Au & 1.7% Sb (459koz Au and 48kt Sb) reported in accordance with the 2012 JORC Code, plus a
- Mineral Resource of 3.9Mt @ 4.7 g/t Au & 1.3% Sb (597koz Au and 50kt Sb) reported in accordance with the 2004 JORC Code
- Existing processing facility with a +\$180m replacement cost
- Clear pathway to production, following a period of assessment and study work
- Numerous opportunities to apply clever operatorship and create strong shareholder returns
- Opportunity for Red River to replicate the success of the Thalanga project restart

## Acquisition Price

- Total consideration of \$4m payable in Red River shares (subject to 12-month escrow)
- 23.0m shares issued to Vendor (calculated at 10 day VWAP price to 2 July 2019)
- Acquisition cost of A\$3.80/oz (gold only) based on current Mineral Resource
- Includes \$4.3m in cash backed environmental bonds

## Strategy & Positioning

- Red River to become a multi-asset mining business
- Generating shareholder returns through lean and clever resource and mine development
- Debt free and well funded producer, developer and explorer
- Operating in two tier 1 regions which have exceptional ongoing exploration potential
- Infrastructure-rich locations with exceptional mining, energy and transportation networks



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*Hillgrove acquisition allows RVR to replicate Thalanga success and deliver shareholder value*



JORC 2012 Mineral  
Resource of 459Koz gold &  
48Kt antimony



Includes 250ktpa processing plant,  
flotation circuit, site and UG  
infrastructure, mining fleet



Hillgrove has produced  
>730koz gold and >50kt  
antimony



Potential to convert earlier Mineral  
Resources to Mineral Resources  
reported in accordance with the JORC  
2012 Code



Acquisition increases RVR's  
exposure to gold in a very  
strong price environment



Significant opportunity to  
implement ore sorting and  
upgrade production capacity



Massive resource growth  
potential



Low acquisition cost and  
restart capex enables strong  
shareholder returns



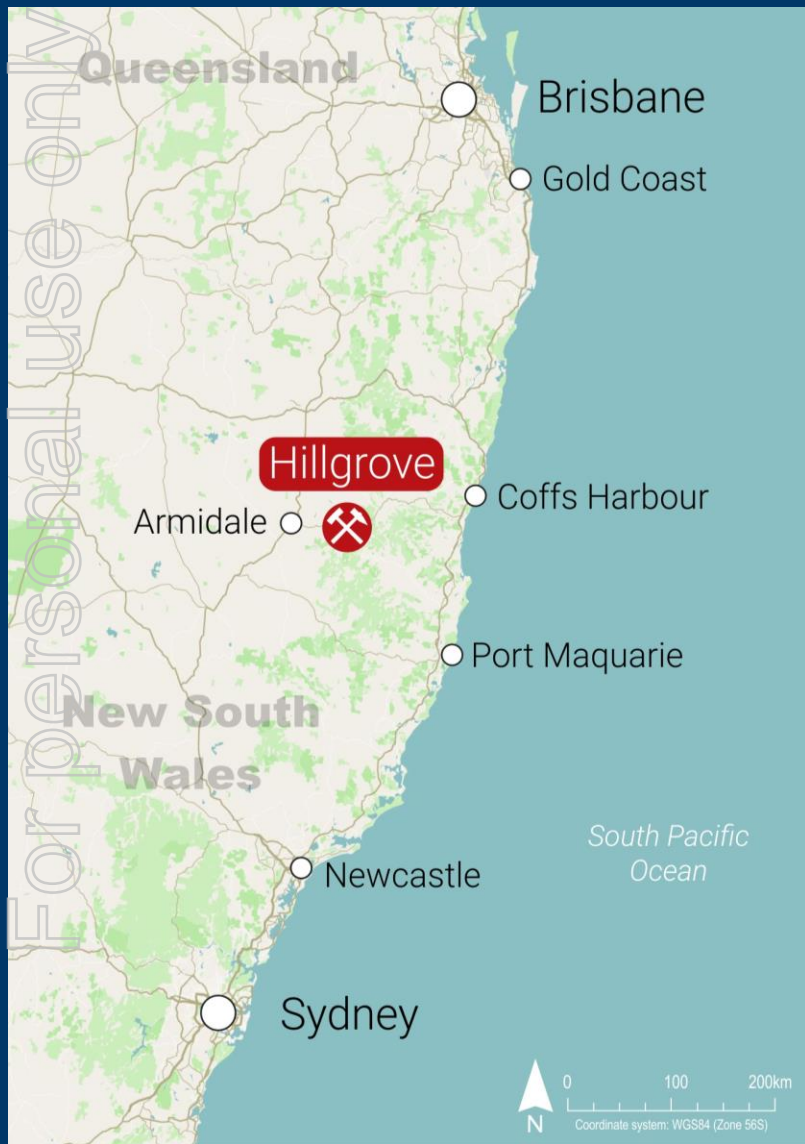
RVR on path to becoming a multi-  
asset, mid-tier mining company

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## Section 1

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# Overview of the Hillgrove Project



## EXCELLENT LOCATION

- 23km east of Armidale in NSW, 1hr 20min flight from Sydney
- Residential workforce
- Excellent regional infrastructure in place - sealed road access and grid power at site (66kV distributor)

## LONG OPERATING HISTORY

- Discovered in 1857
- Modern operational history from 1969 to present
- Over 730Koz Au, 50Kt Sb produced plus by-product tungsten
- Over \$180M capital spent since 2004 to build a new processing plant, infrastructure, TSF & UG mine development

## SIGNIFICANT EXISTING INFRASTRUCTURE

- Existing 250ktpa plant, capable of producing saleable gold and gold-antimony concentrates
- Additional antimony SX-EW plant, pressure oxidation circuit, gold cyanide leach circuit and gold room
- Offices, warehouses, assay lab and maintenance facilities
- UG mining fleet and surface vehicle fleet
- Lined tailing storage facility with approx. 2 years capacity

## LARGE RESOURCE

- Mineral Resource of 2.8Mt @ 5.1 g/t Au & 1.7% Sb (459koz Au and 48kt Sb) reported in accordance with the 2012 JORC Code; in addition to a
- Mineral Resource of 3.9Mt @ 4.7 g/t Au & 1.3% Sb (597koz Au and 50kt Sb) reported in accordance with the 2004 JORC Code

## HILLGROVE GOLD-ANTIMONY MINERAL RESOURCE

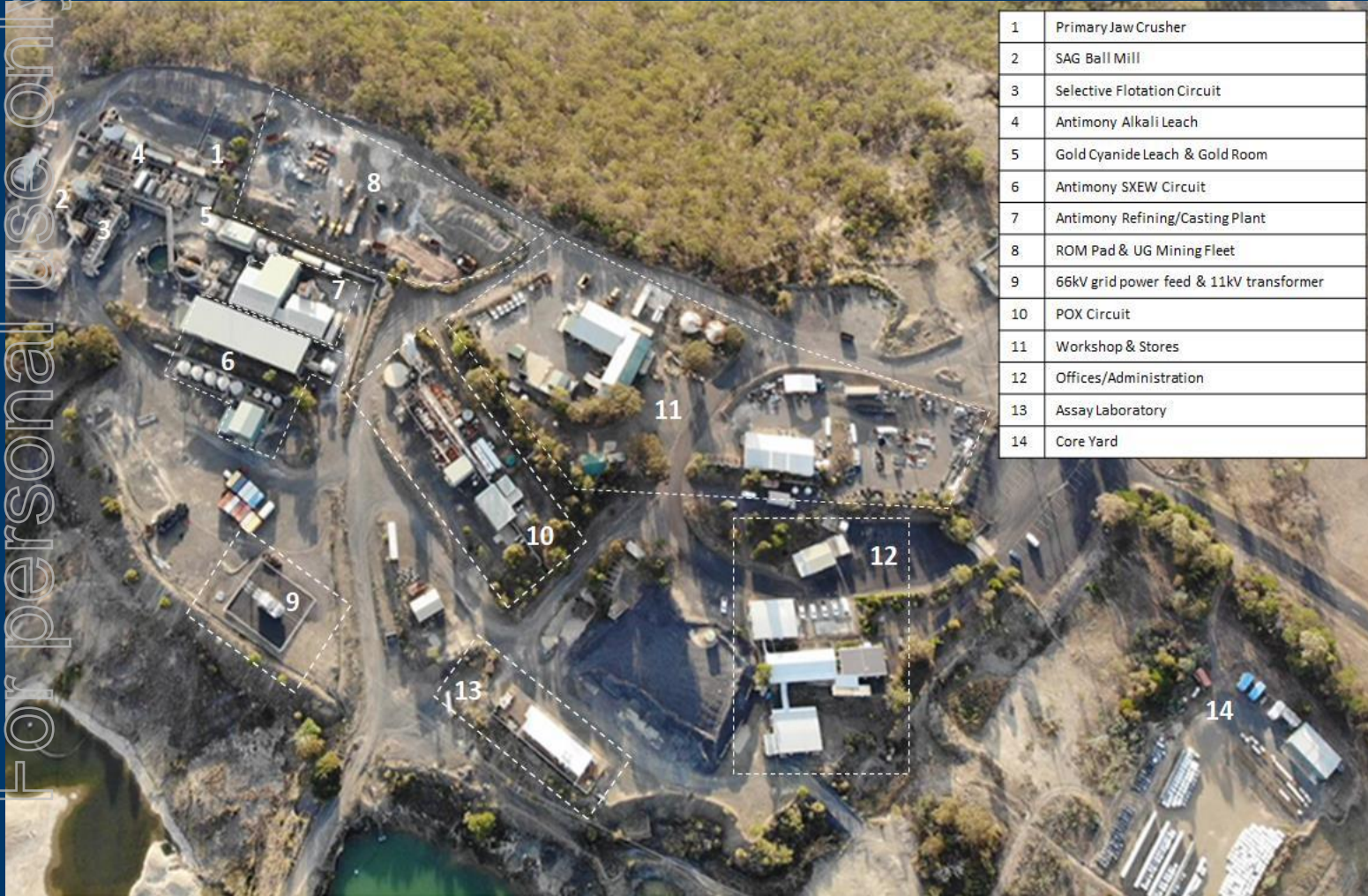
	CLASSIFICATION	TONNES (KT)	GOLD GRADE (G/T)	ANTIMONY GRADE (%)	CONTAINED GOLD (KOZ)	CONTAINED ANTIMONY (KT)
Mineral Resource reported in accordance with JORC 2012 Code	Measured	690	5.8	2.6	129	18
	Indicated	1,100	4.9	1.5	173	17
	Inferred	1,000	5.0	1.1	161	11
	<b>Total</b>	<b>2,800</b>	<b>5.1</b>	<b>1.7</b>	<b>459</b>	<b>48</b>
Mineral Resource reported in accordance with JORC 2004 Code	Measured	706	6.1	1.4	138	10
	Indicated	2,033	4.7	1.1	307	22
	Inferred	1,196	3.9	1.5	150	18
	<b>Total</b>	<b>3,935</b>	<b>4.7</b>	<b>1.3</b>	<b>597</b>	<b>50</b>

Refer to detailed Mineral Resources at end of presentation. For full disclosure details refer to ASX release "Red River acquires Hillgrove Gold-Antimony Project in NSW" dated 3 July 2019

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1	Primary Jaw Crusher
2	SAG Ball Mill
3	Selective Flotation Circuit
4	Antimony Alkali Leach
5	Gold Cyanide Leach & Gold Room
6	Antimony SXEW Circuit
7	Antimony Refining/Casting Plant
8	ROM Pad & UG Mining Fleet
9	66kV grid power feed & 11kV transformer
10	POX Circuit
11	Workshop & Stores
12	Offices/Administration
13	Assay Laboratory
14	Core Yard

Since 2004, over \$180 million has been invested in a new processing plant, infrastructure, TSF & UG mine development

Potential for a low capital cost restart, but to be confirmed through studies





SELECTIVE FLOTATION CIRCUITS



CONCENTRATE FILTER PRESSES

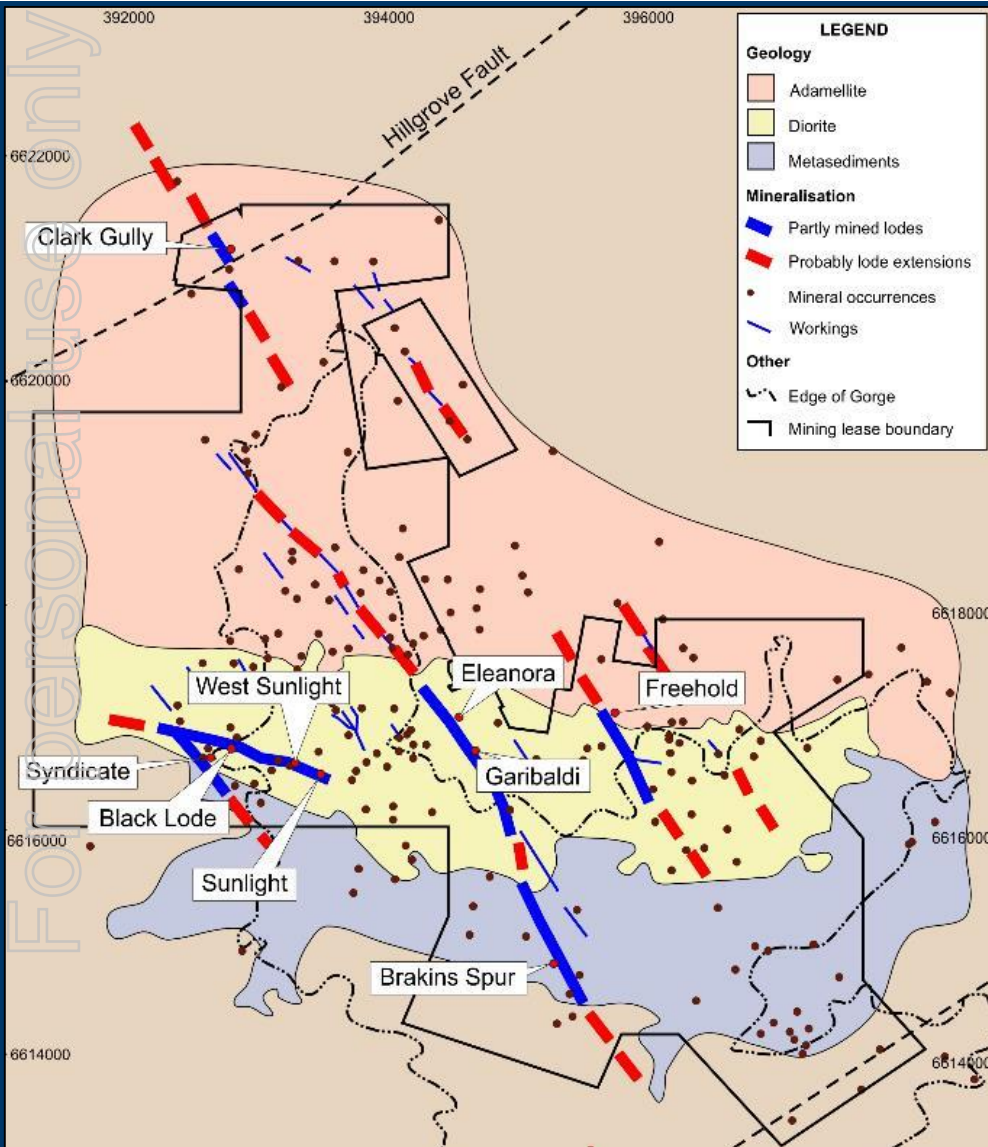


CRUSHING CIRCUIT

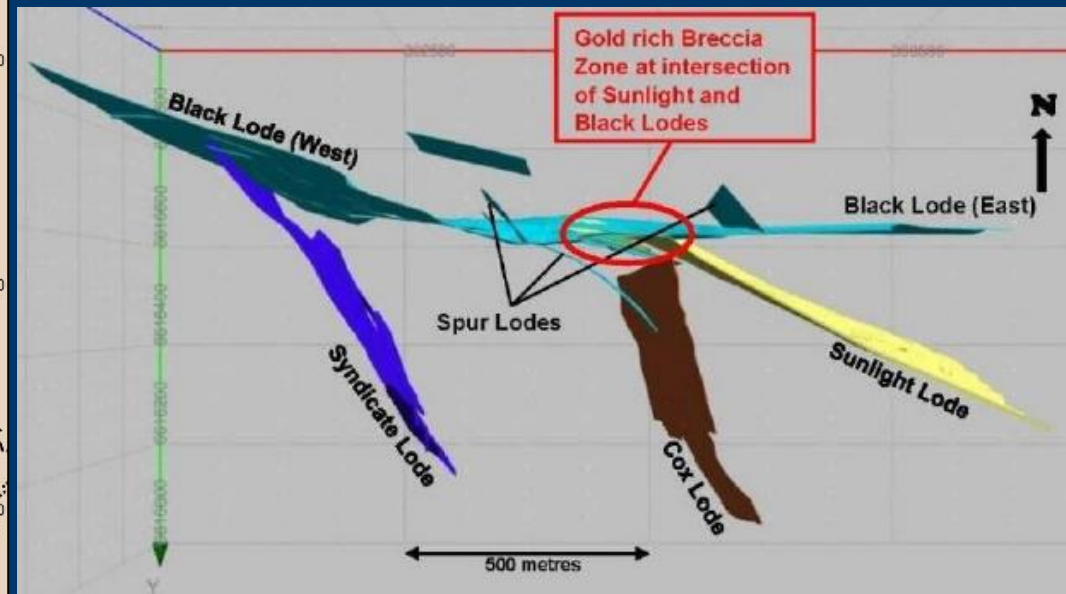


PRESSURE OXIDATION CIRCUIT

- Modern 250ktpa processing plant on care & maintenance
- Plant commissioned by Straits Resources in 2009. Bracken invested \$40M in plant (added multi stream flotation)
- Plant can produce gold and gold-antimony concentrates
- Also contains a Pressure Oxidation (POX) Circuit which successfully treated refractory gold concentrates to produce gold bullion (achieved gold recoveries of ~ 95%)
- Also contains a SX-EW facility to produce antimony metal



- Hosts 200+ known gold-antimony (Au-Sb) deposits
- Majority are steeply-dipping vein systems within NW to WNW striking fracture systems
- Most Au-Sb deposits within existing mining leases
- Vein systems transition to gold dominant at depth with increasing levels of free gold
- All known vein systems are open at depth
- Highly prospective geological setting largely untested by modern, systematic exploration techniques



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## 1. Metz Centre

- Syndicate largely developed
- 3<sup>rd</sup> largest gold production centre in field
- Sunlight and Blacklode contain high-grade free and refractory gold in quartz breccia systems
- Open at depth

## 2. Bakers Creek

- Largest gold production centre in field
- Deepest workings in Hillgrove Field

## 3. Brackins Spur

- Located on southern end of Eleanora structure
- Gold-antimony-tungsten resource – open all directions

## 4. Eleanora/ Garibaldi

- 2<sup>nd</sup> largest gold production centre in field
- Mined since 1880, with modern mining undertaken from 1969-2002
- Total strike length >8km, open all directions

## 5. Freehold

- Moderate gold production
- Not targeted by modern exploration
- Open at depth

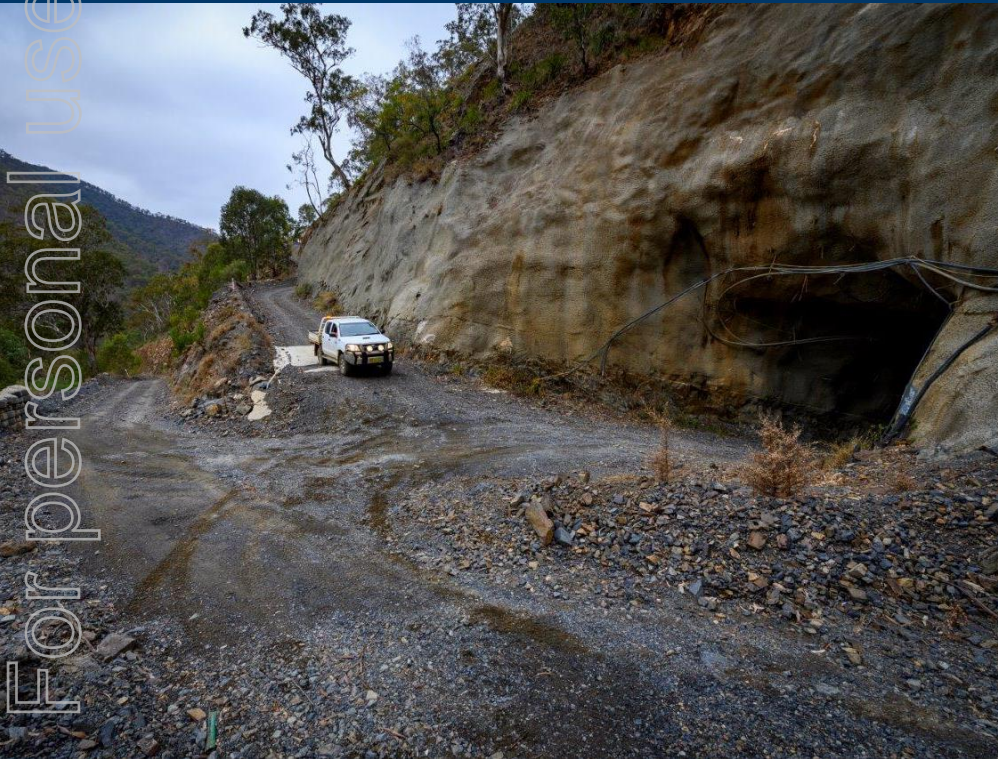
## 6. Clarks Gully

- Recent discovery (~1990)
- Partially mined (oxide gold) in 1994/1995
- Open at depth



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- Metz Area Mine Access to Syndicate, Sunlight, Blacklode and Cox's Lode



- Brackin's Spur Exploration Drives





- Hillgrove operated with an owner-miner UG vehicle fleet
- All UG equipment still on site; including:
  - 3 Volvo A40F trucks
  - 2 development jumbos
  - 1 production jumbo
  - 5 UG loaders
  - Support vehicles
- Extensive surface vehicle fleet; including:
  - 15 light vehicles
  - 1 972G loader
  - Support vehicles (graders, backhoes, forklifts, trucks)

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## Section 2

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# Red River Asset Strategy

- Red River has demonstrated its ability to redevelop, restart and successfully operate underground mines
- The low-capital acquisition and development of Thalanga has generated material value
- Red River is aiming to replicate that success with Hillgrove
- Red River has identified a number of opportunities to unlock the value of Hillgrove



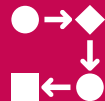
Investigate the use of ore sorting and minor plant upgrades to increase production capacity



Better understand the orebodies by undertaking exploration



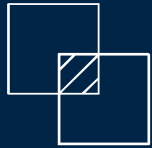
Leverage RVR's exceptional operating experience to ensure optimal outcomes



Use recent antimony processing case studies to determine best processing route at Hillgrove



Confirm the optimum mining strategy during a period of detailed study work / analysis



## SET UP AT HILLGROVE

- Appoint management team
- Evaluate potential synergies with Thalanga – equipment and assets transfer

RVR planning a methodical approach similar to successful Thalanga restart



## UNDERTAKE THOROUGH EXPLORATION & EVALUATION

- Convert historic Mineral Resources to Mineral Resources reported in accordance with 2012 JORC Code
- Targeted exploration to extend vein systems at depth and consolidate along strike
- Review regional consolidation opportunities

RVR restarted production at Thalanga in Sept 2017: 3 years from acquisition (Sept 2014)



## COMPLETE A RESTART STUDY

- Determine processing strategy
- Complete Restart Study
- Capital & operating cost estimates
- Mine design and scheduling
- Concentrate offtake agreements

Thalanga restart completed on time and under budget



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Annexure 1

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## Overview of Antimony

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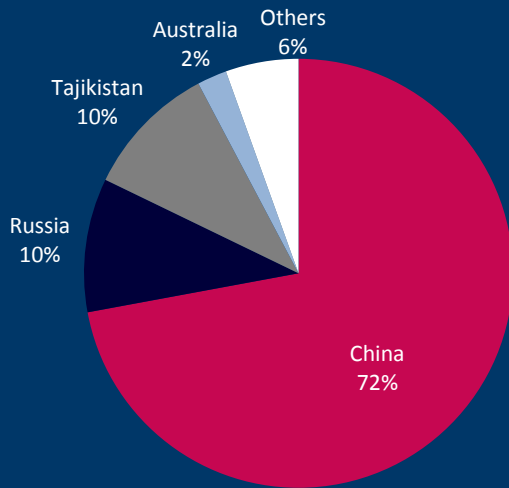
**(USE)** Non metallurgical uses of antimony represent ~62% of global demand. Antimony mainly used in production of flame retardants (as antimony trioxide) representing >50% of all global consumption (~80% of non metallurgical demand)

**(USE)** Metallurgical uses represent ~38% of global demand (antimonial lead in lead acid batteries, bearing metal and ammunition)

**(MARKET SIZE)** Global antimony market is relatively small with estimated primary production of 140,000 tonnes antimony in 2018

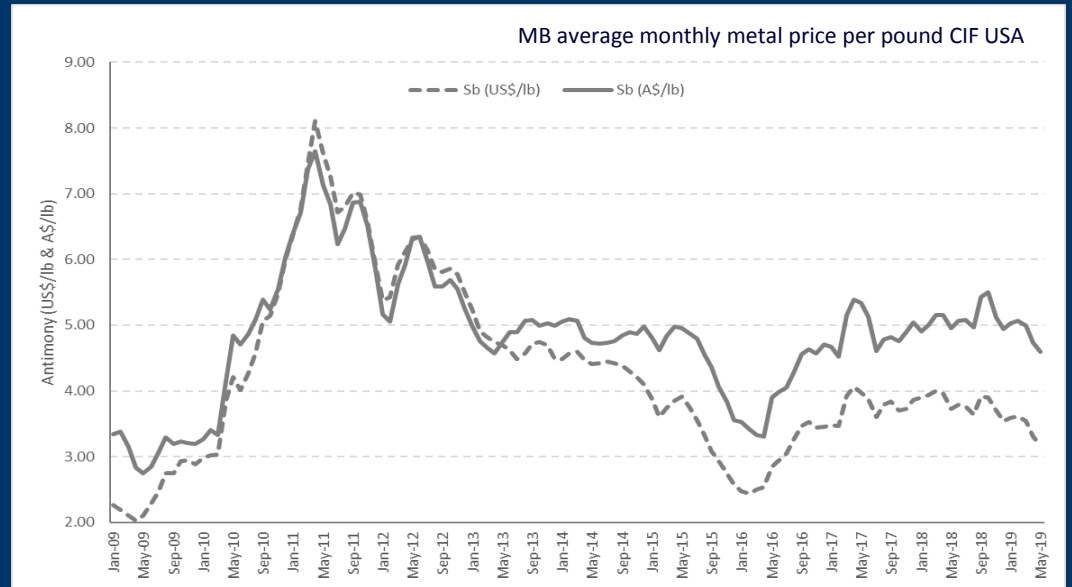
- **(SUPPLY)** China has been main global producer for 20+ years – 72% of global primary production in 2018. Other minor sources of supply from higher sovereign risk countries – Russia and Tajikistan
- **(PRICING)** Antimony is not traded on the LME. Price is set via a number of Metal Bulletin quotations

## 2018 GLOBAL PRODUCTION

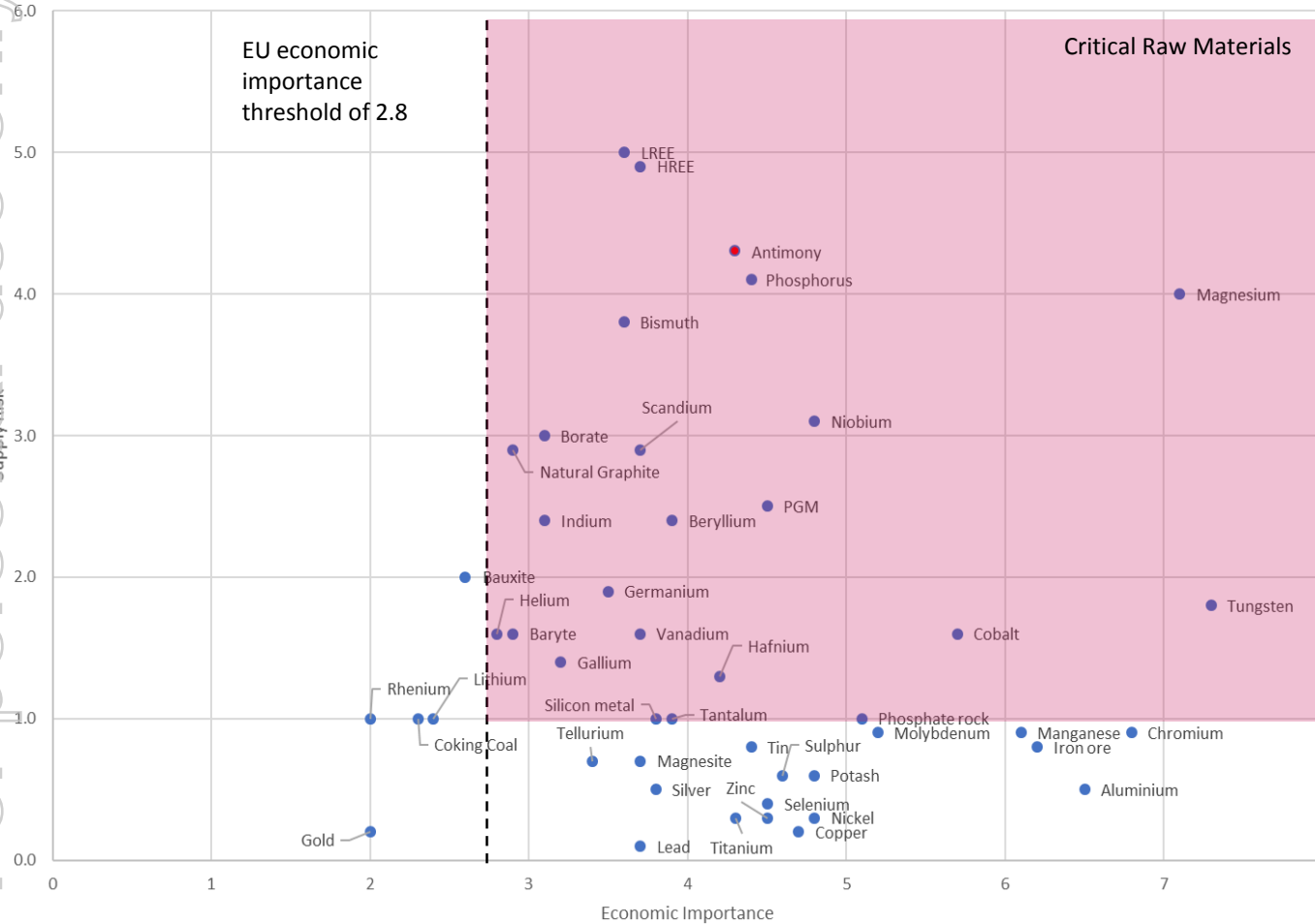


Source: USGS

## ANTIMONY PRICE



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- Antimony identified as a Critical Raw Material (CRM) by the EU
- Identification as a CRM based on two determinants: economic importance and supply risk
- Chinese Gov. considers antimony to be a protected and strategic material – controls mine production of antimony
- Mining restrictions and increased smelting capacity have resulted in China’s antimony concentrate imports increasing

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Annexure 2

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**Hillgrove Mineral Resources**

# HILGROVE MINERAL RESOURCE

Reported in accordance with the 2012 JORC Code

DEPOSIT	CLASSIFICATION	TONNES	GOLD	ANTIMONY	GOLD EQUIVALENT (AU EQ.)	CONTAINED GOLD	CONTAINED ANTIMONY
		(kt)	(g/t)	(%)	(g/t)	(Koz Au)	(Kt Sb)
SUNLIGHT	Measured	270	9.4	0.2	9.0	82	1
	Indicated	260	7.6	0.2	7.3	64	1
	Inferred	150	6.1	0.5	6.3	29	1
	<b>Total</b>	<b>680</b>	<b>8.0</b>	<b>0.3</b>	<b>7.7</b>	<b>175</b>	<b>2</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>1,600</b>	<b>4.5</b>	<b>1.5</b>	<b>6.6</b>	<b>231</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	0.4	0.8	3.0	5.8	0	0
	<b>Total</b>	<b>270</b>	<b>2.0</b>	<b>3.8</b>	<b>8.4</b>	<b>17</b>	<b>10</b>
SYNDICATE	Measured	170	4.4	5.5	13.4	24	9
	Indicated	56	4.7	1.7	7.2	8	1
	Inferred	4	9.3	0.3	9.0	1	0
	<b>Total</b>	<b>230</b>	<b>4.5</b>	<b>4.5</b>	<b>11.8</b>	<b>33</b>	<b>10</b>
<b>TOTAL</b>	<b>Measured</b>	<b>690</b>	<b>5.8</b>	<b>2.6</b>	<b>9.8</b>	<b>129</b>	<b>18</b>
	<b>Indicated</b>	<b>1,100</b>	<b>4.9</b>	<b>1.5</b>	<b>7.0</b>	<b>173</b>	<b>17</b>
	<b>Inferred</b>	<b>1,000</b>	<b>5.0</b>	<b>1.1</b>	<b>6.5</b>	<b>161</b>	<b>11</b>
	<b>Total</b>	<b>2,800</b>	<b>5.1</b>	<b>1.7</b>	<b>7.5</b>	<b>459</b>	<b>48</b>

Source: AMC Consultants Pty Ltd (AMC) Hillgrove Mineral Resource Estimate (August 2017)

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 the AMC Estimate and included this announcement.

For full disclosure details refer to ASX release "Red River acquires Hillgrove Gold-Antimony Project in NSW" dated 3 July 2019

# HILLGROVE MINERAL RESOURCE

Reported in accordance with the 2004 JORC Code

DEPOSIT	MINERAL RESOURCE					MINERAL RESOURCE								
	TOTAL					MEASURED			INDICATED		INFERRED			
	TONNES (KT)	GOLD (G/T)	ANTIMONY (%)	CONTAINED GOLD (KOZ AU)	CONTAINED ANTIMONY (KT SB)	TONNES (KT)	GOLD (G/T)	ANTIMONY (%)	TONNES (KT)	GOLD (G/T)	ANTIMONY (%)	TONNES (KT)	GOLD (G/T)	ANTIMONY (%)
Austins	5	1.4	2.3	0	0	5	1.4	2.3						
Black Lode – Main Lode	1,013	4.1	1.7	134	17	105	4.4	2.8	487	4.4	1.5	421	3.6	1.7
Black Lode – North Splay	23	5.9	3.4	4	1	20	6.1	3.6	3	4.3	2.2			
Black Lode – South Splay	33	3.3	0.1	4	0				30	3.3	0.1	3	3.0	0.1
Black Lode – West Splay	126	3.2	3.2	13	4							126	3.2	3.2
Prendergasts	7	3.0	2.2	1	0	7	3.0	2.2						
Cox's Reef	116	1.7	1.7	6	2	12	1.7	2.0	46	2.0	1.7	58	1.5	1.6
Eleanora (Upper)	787	6.4	1.0	162	8	507	6.6	1.0	280	5.9	0.9			
Eleanora (Lower)	868	4.8	0.3	134	3	47	6.3	1.0	589	4.9	0.3	232	4.1	0.1
Garibaldi	787	3.9	1.4	99	11				513	3.9	1.4	274	4.0	1.4
Freehold	74	6.3	3.5	15	3	3	4.1	3.0	34	6.7	3.6	37	6.1	3.4
Smiths	2	9.0	3.6	1	0				2	9.0	3.6			
Golden Gate	44	7.8	1.9	11	1				31	8.5	1.9	13	6.1	1.8
Cosmopolitan	15	10.1	0.5	5	0				15	10.1	0.5			
Damifino	6	6.8	3.7	1	0							6	6.8	3.7
Lady Hopetoun	29	8.0	1.0	7	0				3	9.1	0.6	26	7.9	1.0
<b>Total</b>	<b>3,935</b>	<b>4.7</b>	<b>1.3</b>	<b>597</b>	<b>50</b>	<b>706</b>	<b>6.1</b>	<b>1.4</b>	<b>2,033</b>	<b>4.7</b>	<b>1.1</b>	<b>1,196</b>	<b>3.9</b>	<b>1.5</b>

Source: Straits Resources Limited (9 May 2011)

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

Sunlight, Syndicate, Brackin Spur and Clark's Gully have been updated and reported by AMC as JORC 2012 Mineral Resources (refer to Table 1)

For full disclosure details refer to ASX release "Red River acquires Hillgrove Gold-Antimony Project in NSW" dated 3 July 2019

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## GOLD EQUIVALENT CALCULATION

The Hillgrove Mineral Resource reported in accordance with the JORC 2012 Code is reported above a gold equivalent (Au Eq.) cut-off of 5 g/t Au Eq. The use of a gold equivalent cut-off is appropriate for the multi-element mineralisation at Hillgrove, where value is obtained from both antimony and gold.

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

$$\text{Au Eq. (g/t)} = (\text{Au g/t} * 91\%) + (2.0 * \text{Sb \%} * 86\%)$$

$$\text{Where } 2.0 = (\text{US\$7,950/100}) / (\text{US\$1,234/31.1035})$$

$$\text{Gold price} = \text{US\$1,234/oz and gold recovery} = 91\%$$

$$\text{Antimony price} = \text{US\$7,950/tonne and antimony recovery} = 86\%$$

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.

The Company has selected to report on a gold equivalent basis, as gold is the metal that contributes the most to the net smelter return gold equivalent (Au Eq.) calculation. It is the view of the Company that all the metals used in the Au Eq. formula are expected to be recovered and sold.

## COMPETENT PERSON'S STATEMENT

### Mineral Resource Reported in Accordance with 2012 JORC Code

The information in this report that relates to the reporting of the Hillgrove Mineral Resource Estimate 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 market announcements 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.

## COMPETENT PERSON'S STATEMENT

### Mineral Resource Reported in Accordance with 2004 JORC Code

The information in this release that relates to Mineral Resources is based on information reviewed 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 in the style of mineralisation and types of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australian 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 his information in the form and context in which it appears.

All Mineral Resource estimates were prepared and first disclosed under the JORC Code 2004 and are an accurate representation of the available data and studies for the Hillgrove Mining Project. This information has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. Work will commence on close of acquisition by the Company to bring each of the Mineral Resources into line with the JORC Code 2012.





# Red River

RESOURCES LIMITED

*"Prosperity Through Lean & Clever Resource Development"*

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