



## Red River completes transformative December quarter

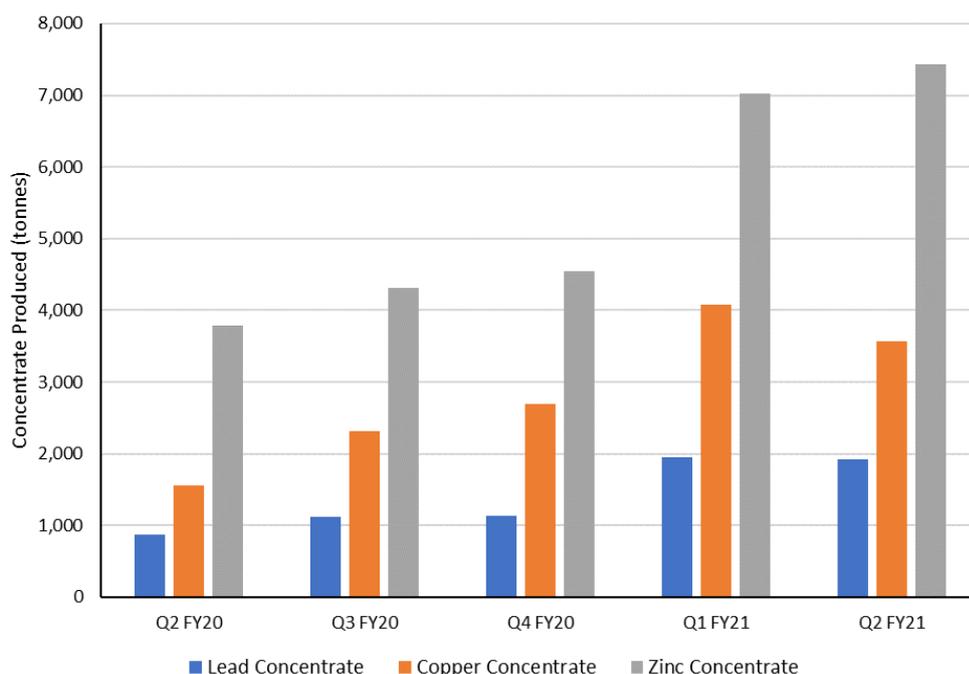
### Quarterly Highlights:

- Red River commenced production at Hillgrove Gold Mine and strong production continues at Thalanga Operations
- Thalanga produced 3,564 tonnes copper concentrate (Q1 FY21: 4,073 tonnes)
- Thalanga produced 7,430 tonnes zinc concentrate (Q1 FY21: 7,026 tonnes)
- Thalanga produced 1,914 tonnes lead concentrate (Q1 FY21: 1,947 tonnes)
- Thalanga Operations ore mined 92kt @ 10.2% Zn Eq. (Q1 FY21: 99kt @ 11.7% Zn Eq.)
- Thalanga Operations ore processed 112kt @ 10.3% Zn Eq. (Q1 FY21: 103kt @ 11.5% Zn Eq.)

Red River Resources Limited (ASX: RVR) is pleased to report a transformative December quarter for the Company, commencing production at its Hillgrove Gold Mine in NSW, with first ore processed through the plant on 29 December 2020. Red River will continue to ramp up production activities at Hillgrove during Q3 FY21.

Strong production continued at Red River’s Thalanga Operation, and the Company produced 3,564 tonnes of high-quality copper concentrate, 7,430 tonnes of high-quality zinc concentrate and 1,914 tonnes of high-quality lead concentrate.

Figure 1 Thalanga Operations Concentrate Production



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Table 1 Thalanga Operations Summary for Q2 FY2021 (Quarter ended 31 December 2020)

	Units	Q2 FY20	Q3 FY20	Q4 FY20	Q1 FY21	Q2 FY21	LTM
Total Tonnes Mined	kt	60	91	83	99	92	365
Copper grade	%	1.0	1.1	1.1	1.5	1.2	1.2
Lead grade	%	1.2	1.3	1.3	1.3	1.4	1.3
Zinc grade	%	3.5	3.5	3.7	4.2	4.0	3.9
Gold grade	g/t	0.2	0.3	0.2	0.1	0.2	0.2
Silver grade	g/t	38	44	42	47	44	44
Zinc equivalent grade	%	9.0	9.4	9.6	11.7	10.2	10.3
Ore Processed	kt	66	84	82	103	112	381
Copper grade	%	0.8	0.8	1	1.3	1.1	1.1
Lead grade	%	1.3	1.2	1.3	1.7	1.6	1.5
Zinc grade	%	3.5	3.3	3.4	4.2	3.9	3.7
Gold grade	g/t	0.2	0.2	0.2	0.3	0.2	0.2
Silver grade	g/t	40	48	44	55	42	47
Zinc equivalent grade	%	8.4	8.5	9.2	11.5	10.3	10.0
<b>Zinc Concentrate Produced</b>	<b>DMT</b>	<b>3,781</b>	<b>4,310</b>	<b>4,544</b>	<b>7,026</b>	<b>7,430</b>	<b>23,310</b>
Zinc grade	%	52.5	54.8	54	53.9	52.8	53.7
Zinc recovery	%	85.8	85.2	86.4	87.3	89.1	87.7
<b>Lead Concentrate Produced</b>	<b>DMT</b>	<b>876</b>	<b>1,117</b>	<b>1,133</b>	<b>1,947</b>	<b>1,914</b>	<b>6,111</b>
Lead grade	%	56.5	63.9	67.5	64.4	68.8	66.2
Copper grade	%	6.1	2.6	2.1	3.3	1.8	2.5
Gold grade	g/t	4.9	5.4	4.6	5.2	4.7	4.2
Silver grade	g/t	1,413	1,826	1,747	1,647	1,497	1,651
Lead recovery	%	58.8	68.1	69.7	72.7	74.4	72.4
Copper recovery	%	9.8	4.1	2.8	4.8	2.7	3.7
<b>Copper Concentrate Produced</b>	<b>DMT</b>	<b>1,560</b>	<b>2,310</b>	<b>2,697</b>	<b>4,073</b>	<b>3,564</b>	<b>12,644</b>
Copper grade	%	24.8	25.3	26.5	26.8	28.4	26.9
Gold grade	g/t	2.2	2.9	2.5	1.9	1.4	2.1
Silver grade	g/t	423	505	367	365	299	372
Copper recovery	%	70.8	83.9	84.7	81.4	79.4	82.9
<i>Table may include rounding errors</i>							

On behalf of the Board,

**Mel Palancian**

**Managing Director**

Red River Resources Limited

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### Zinc Equivalent Calculation

The net smelter return zinc equivalent (Zn Eq.) calculation adjusts individual grades for all metals included in the metal equivalent calculation applying the following modifying factors: metallurgical recoveries, payability factors (concentrate treatment charges, refining charges, metal payment terms, net smelter return royalties and logistic costs) and metal prices in generating a zinc equivalent value for copper (Cu), lead (Pb), zinc (Zn), gold (Au) and silver (Ag).

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

Where:

**Metallurgical Recoveries** are derived from historical metallurgical recoveries from test work carried out at the West 45 and Far West deposits. The Metallurgical Recovery for each metal is shown below in Table 1.

**Metal Prices and Foreign Exchange** assumptions are set as per internal Red River price forecasts and are shown below in Table 1.

Table 1 Metallurgical Recoveries and Metal Prices

Metal	Metallurgical Recoveries	Price
Copper	80%	US\$3.00/lb
Lead	70%	US\$0.90/lb
Zinc	88%	US\$1.00/lb
Gold	15%	US\$1,200/oz
Silver	65%	US\$17.00/oz
FX Rate: A\$0.85:US\$1		

**Payable Metal Factors** are calculated for each metal and make allowance for concentrate treatment charges, transport losses, refining charges, metal payment terms and logistic costs. It is the view of Red River that three separate saleable base metal concentrates will be produced at Thalanga. Payable metal factors are detailed below in Table 2.

Table 2 Payable Metal Factors

Metal	Payable Metal Factor
Copper	Copper concentrate treatment charges, copper metal refining charges copper metal payment terms (in copper concentrate), logistic costs and net smelter return royalties
Lead	Lead concentrate treatment charges, lead metal payment terms (in lead concentrate), logistic costs and net smelter return royalties
Zinc	Zinc concentrate treatment charges, zinc metal payment terms (in zinc concentrate), logistic costs and net smelter return royalties
Gold	Gold metal payment terms (in copper and lead concentrates), gold refining charges and net smelter return royalties
Silver	Silver metal payment terms (in copper, lead and zinc concentrates), silver refining charges and net smelter return royalties

The zinc equivalent grade is calculated as per the following formula:

$$\text{Zn Eq.} = (\text{Zn}\% \times 1.0) + (\text{Cu}\% \times 3.3) + (\text{Pb}\% \times 0.9) + (\text{Au ppm} \times 0.5) + (\text{Ag ppm} \times 0.025)$$

The following metal equivalent factors used in the zinc equivalent grade calculation has been derived from metal price x Metallurgical Recovery x Payable Metal Factor and have then been adjusted relative to zinc (where zinc metal equivalent factor = 1).

Table 3 Metal Equivalent Factors

Metal	Copper	Lead	Zinc	Gold	Silver
Metal Equivalent Factor	3.3	0.9	1.0	0.5	0.025