



**ASX Announcement**

**ASX Code: RVR**

**31 OCTOBER 2022**

## **Quarterly Activities Report for the period ending 30 September 2022**

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### **Leadership**

- Managing Director Mel Palancian resigned 19 July 2022, is currently on medical leave
- Chairman Brett Fletcher and Non-Executive Director Ian Smith resigned on 31 August 2022
- Mark Hanlon was appointed Chairman on 29 August 2022
- Patrick O'Connor was appointed as a Non- Executive Director on 9 August 2022 and became an Executive Director on 5 September 2022

### **Thalanga Operation**

- Due to ongoing operational performance at Thalanga during October with reduced mining and mill production Red River's subsidiary, Cromarty Resources Pty Ltd, was placed into Voluntary Administration on 28 October 2022. Post their appointment, the Administrators have determined to place the Thalanga operations on care and maintenance. Red River is the largest secured creditor of Cromarty Resources Pty Ltd (Cromarty) Red River has provided a guarantee to Trafigura Pte Ltd in relation to the working capital facility agreement between Cromarty and Trafigura
- Red River suspended underground operations at Thalanga from 2 August 2022 until 19 August 2022 following a 'fall of ground' event in a stoping area
- Progressive re-establishment of mining areas occurred using revised ground support and updated geotechnical procedures for stoping. The additional ground support and technical work significantly impacted the forecast FY 2023 mining schedule, reducing ore availability and decreasing the mining rate
- Quarterly mill production of 41kt (down 54% QoQ)
- Quarterly production of 2,018 DMT zinc concentrate (down 67% QoQ), 1,098 DMT copper concentrate (down 67% QoQ), 576 DMT lead concentrate (down 58% QoQ) due to lower grade and tonnes milled
- Liontown resource delineation drilling continued with Gap Lode drilling returning high-grade copper results

### **Hillgrove Gold Project**

- Red River placed Hillgrove into care and maintenance in the quarter
- An options study is expected to be completed during CY2023 to determine the optimal development strategy for Hillgrove
- Drilling returned high-grade, broad gold intercepts at Eleanora-Garibaldi
- Bakers Creek follow up holes BKC009 and BKC010 assay results are pending

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## Corporate

- Unaudited consolidated EBITDA loss for the quarter of \$9.5 million
- Cash on hand at 30 September 2022 of \$3.2 million, a decrease of \$8.7 million over the quarter
- Red River drew down a further US\$7.0 million and repaid US\$2.0 million on its working capital facility during the quarter. The balance outstanding at the end of the quarter was and currently is US\$9.0 million
- Net working capital at 30 September 2022 of negative \$11.7 million, a decrease of \$11.6 million over the quarter
- Restricted financial assets of \$18.6 million (cash backed security bonds and deposits) as at 30 September 2022

**Executive Director Patrick O'Connor** commented:

*"Red River faced very real challenges at its Thalanga Operation during the quarter..*

*The placing of Cromarty Resources Pty Ltd into Voluntary Administration is tremendously disappointing for all stakeholders but is in the best interests of the Company's shareholders as it takes steps to preserve shareholder value. The appointment of Administrators is only to Cromarty, not the Company, and does not extend to Hillgrove Mines Pty Ltd.*

*We are in discussions with various stakeholders regarding options to preserve shareholder value and we will provide further updates in due course."*

## **1. SAFETY AND ENVIRONMENTAL PERFORMANCE**

### **1.1. Thalanga Base Metal Operations Safety and Environmental Performance**

Thalanga's site headcount during the period was 130 people. There were 63 full-time Cromarty Resources employees and an additional 67 contractors working in exploration and mining, with a total 86,677 hours worked. The Total Recordable Injury Frequency Rate (TRIFR) is 5.5 for September YTD. There were zero medically treated injuries during the quarter, and two Lost Time Injuries (LTIs).

During the quarter, implementation of the revised Environmental Authority identified that new conditions were not being met. Department of Environment and Science (DES) were notified of the non-compliances and rectification actions commenced. Project work to prepare for the wet season has also highlighted potential water balance issues and the site has initiated corrective action.

### **1.2. Hillgrove Gold Mine Safety and Environmental Performance**

Hillgrove's site headcount was reduced during the period to 13 people with 27,629 hours worked. The Total Recordable Injury Frequency Rate (TRIFR) is 15.5 for September YTD. There were zero medically treated injuries during the quarter, and one Lost Time Injury (LTIs).

Under care and maintenance, operations have been suspended and site activity is focussed on meeting all statutory requirements for management and monitoring such that the asset and operating licence are held in good standing. The current focus is directed toward management of stored water.

## 2. THALANGA BASE METAL OPERATIONS (QUEENSLAND)

Red River's Thalanga Operations is located approximately 65km southwest of Charters Towers in Northern Queensland and 200km from Townsville. Thalanga produces separate copper, lead and zinc concentrates with material precious metal (gold and silver) credits.

On 28 October 2022, Red River announced that Michael Ryan, David McGrath and Kathryn Warwick of FTI Consulting (Australia) Pty Ltd (**FTI**) were appointed as administrators, joint and several, of its wholly owned subsidiary and owner and operator of the Thalanga Mine, Cromarty Resources Pty Ltd (**Cromarty**) (**Administrators**).

The appointment of Administrators is only to Cromarty, not the Company, and does not extend to Hillgrove Mines Pty Ltd.

### 2.1. Operations Update

Thalanga Operations mined 36kt @ 1.0% Cu, 1.3% Pb, 3.2% Zn, 0.2 g/t Au & 39 g/t Ag (8.7% Zn Eq.), and processed 41kt of ore grading 0.9% Cu, 1.2% Pb, 3.2% Zn, 0.2 g/t Au & 31 g/t Ag (8.2% Zn Eq.).

Quarterly production was impacted by two disrupting incidents:

- Unaccounted explosives in the underground mine resulted in suspension of blasting for four days from 15 July until 19 July 2022.
- 'Fall of ground' (ASX Announcement 4, 19 & 30 August 2022) resulted in suspended mining operations from 2 August until 19 August 2022 and reduced production for the remainder of the quarter.

RVR worked closely with all stakeholders, including the regulator, to ensure operations restarted safely.

Following the 'fall of ground' event, progressive re-establishment of mining areas has occurred using revised ground support and updated geotechnical procedures for stoping, however the additional ground support and technical work has significantly impacted the forecast FY2023 mining schedule, reducing ore availability and decreasing the mining rate.

Since the 'fall of ground' event in August 2022, RVR's Executive Management has focused on:

- re-establishing production at Far West / Thalanga, particularly the development and installation of upgraded ground support to ensure safe and compliant stoping activities.
- Changing staffing levels and roster to implement more cost-efficient campaign processing at the Thalanga site and match processing capacity to the reduced mining rate.
- Managing the onsite mining contractor, Pybar, including multiple requested variations, payment claims and its proposed renegotiation of the contract rates.
- Managing water compliance issues at Thalanga and preparation for future rainfall events and wet season compliance including interactions with consultants and the regulator.

It has become apparent that the revised forecast mining rate will be about 20-22kt per month for the remainder of the FY2023 period, and the mining rate is unlikely to return to the historical forecasted FY2023 Budget mining rate of 30kt per month.

Underperformance in the revised mining rate since the 'fall of ground' event negatively impacted the cash flow where it emerged that additional capital was required to maintain solvency on the forward mining schedule in Cromarty.

The reduction in mine tonnage coupled with lower grade ore, as a result of changes in access to planned mining areas, combined with an increased in mining unit costs, has resulted in a material change in the expected cashflows for the foreseeable future from the current Thalanga Operation at the Far West Mine.

Zinc concentrate production for the quarter was 2,018 DMT (down 67% QoQ). Zinc recovery to zinc concentrate averaged 82.8% for the period and a high-quality zinc concentrate grading 54.4% zinc was produced.

Lead concentrate production for the quarter was 576 DMT (down 58% QoQ). Lead recovery to lead concentrate was 67.3%, with an average concentrate grade of 58.3% Pb, 3.2 g/t Au & 1,276 g/t Ag produced during the period.

Copper concentrate production for the quarter was 1,098 DMT (down 67% QoQ). Copper recovery to copper concentrate averaged 74.3% for the period, with an average copper concentrate grade of 25.2% Cu, 2.3 g/t Au and 242 g/t Ag.

## **2.2. Concentrates Sales & Marketing**

Thalanga sold 2,110 DMT zinc concentrate, 665 DMT lead concentrate and 1,139 DMT copper concentrate during the quarter.

Cromarty delivered base metal concentrates under long-term offtake agreements to Trafigura (zinc and lead concentrate) and Glencore (copper concentrate).

Cromarty continued to execute a short-term hedging program over the quotation period (QP) for sales of zinc and lead metal already produced. Typically, between 80 and 90% of the payable zinc and lead metal for each shipment of zinc and lead concentrates was hedged for the period from the issue of the first provisional sales invoice to the final settlement of the sale, which may occur one to three months later. The QP hedges currently in place on the quarter's zinc concentrate sales were US\$1.44 per pound of payable zinc metal, were US\$0.80 per pound of payable lead metal in lead concentrate and ranged between US\$3.51 and US\$3.70 per pound of payable copper metal in copper concentrate.

**Table 1: Thalanga Operations Summary for Q1 FY2023 (Quarter ended 30 September 2022)**

	Units	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Q1 FY23
<b>Total Tonnes Mined</b>	<b>kt</b>	<b>103</b>	<b>62</b>	<b>76</b>	<b>90</b>	<b>36</b>
Copper grade	%	1.3	1.3	1.2	1.2	1.0
Lead grade	%	1.6	1.6	1.5	1.4	1.3
Zinc grade	%	4.4	4.6	3.9	3.9	3.2
Gold grade	g/t	0.2	0.2	0.2	0.2	0.2
Silver grade	g/t	37	39	39	34	39
Zinc equivalent grade	%	11.1	12.0	10.4	10.1	8.7
<b>Ore Processed</b>	<b>kt</b>	<b>107</b>	<b>62</b>	<b>74</b>	<b>90</b>	<b>41</b>
Copper grade	%	1.3	1.1	1.0	1.2	0.9
Lead grade	%	1.6	1.7	1.5	1.5	1.2
Zinc grade	%	4.3	4.5	4.1	4.4	3.2
Gold grade	g/t	0.3	0.3	0.2	0.2	0.2
Silver grade	g/t	45	52	33	38	31
Zinc equivalent grade	%	11.4	11.1	9.6	10.6	8.2
<b>Zinc Concentrate Produced</b>	<b>DMT</b>	<b>7,539</b>	<b>4,697</b>	<b>4,858</b>	<b>6,111</b>	<b>2,018</b>
Zinc grade	%	54.4	51.9	55.1	55.8	54.4
Zinc recovery	%	88.7	87.3	88.2	86.4	82.8
<b>Lead Concentrate Produced</b>	<b>DMT</b>	<b>1,984</b>	<b>1,100</b>	<b>1,129</b>	<b>1,356</b>	<b>576</b>
Lead grade	%	62.7	62.2	64.7	66.3	58.3
Gold grade	g/t	3.8	3.7	2.1	2.1	3.2
Silver grade	g/t	1,304	1,458	1,108	1,337	1,276
Lead recovery	%	71.5	64.8	67.9	66.2	67.3
<b>Copper Concentrate Produced</b>	<b>DMT</b>	<b>4,411</b>	<b>1,996</b>	<b>2,302</b>	<b>3,342</b>	<b>1,098</b>
Copper grade	%	27.0	26.9	25.5	25.7	25.2
Gold grade	g/t	2.1	3.6	2.6	2.4	2.3
Silver grade	g/t	312	388	234	244	242
Copper recovery	%	84.5	79.7	79.1	82.2	74.3
<b>Zinc concentrate sold</b>	<b>DMT</b>	<b>7,501</b>	<b>4,929</b>	<b>4,589</b>	<b>6,608</b>	<b>2,110</b>
<b>Lead concentrate sold</b>	<b>DMT</b>	<b>1,983</b>	<b>1,137</b>	<b>1,098</b>	<b>1,491</b>	<b>665</b>
<b>Copper concentrate sold</b>	<b>DMT</b>	<b>4,588</b>	<b>2,022</b>	<b>2,328</b>	<b>3,356</b>	<b>1,139</b>

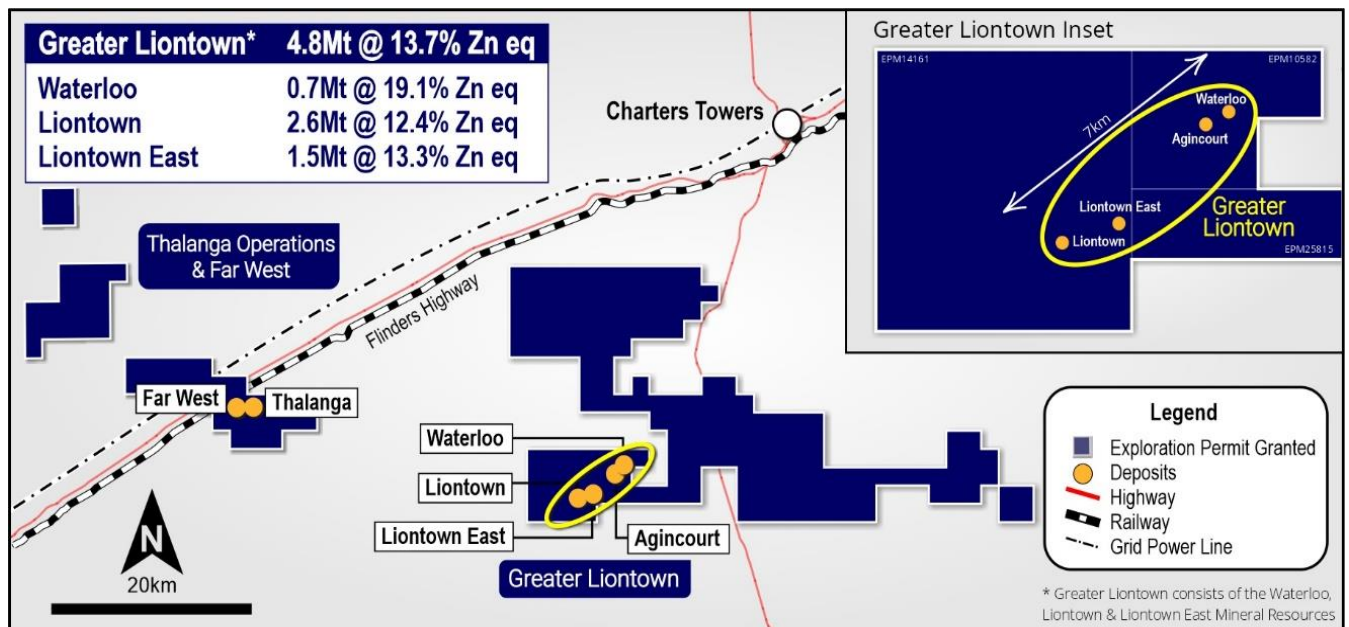
## 2.3. Project Development

### 2.3.1. Greater Lione town Project

The Greater Lione town Project consists of the area from the Lione town deposit in the west to the Waterloo deposit in the east both being high-grade, gold-rich polymetallic deposits and is proposed as a new project area to be developed and processed at Thalanga.

The Greater Lione town Project has a current Mineral Resource at Lione town of 4.1Mt @ 0.6% Cu, 1.9% Pb, 5.9% Zn, 1.1 g/t Au & 29 g/t Ag (12.7% Zn Eq) and Waterloo of 707kt @ 1.9% Cu, 1.6 %Pb, 11.0 %Zn, 0.9 g/t Au & 50 g/t Ag (19.1% Zn Eq). The Greater Lione town Project is located approximately 32km in a direct line from Red River's Thalanga operations (107km by road). The Lione town deposit comprises a stack set

deformed VMS lodes, including subvertical Zn, Pb, Cu, Ag, Au lodes (West Footwall, Main, New Queen, The Gap Lode and Lontown East), plus the underlain by Au, Cu Carrington lode. The system has a 1.7 km strike length and a current maximum 800m vertical extent. The Waterloo deposit is located within 6km to the east and consists of a stack set of deformed VMS lodes with Agincourt lode to its east. The area between the two deposits has over 30 targets identified from the high-definition IP programme previously completed by RVR.



**Figure 1: Greater Lontown Project Map**

During the quarter, definition drilling at Lontown was paused until after the forthcoming wet season and to allow for a re-evaluation of the optimum development strategy for both the Lontown and Waterloo underground mines.

The Company planned to re-evaluate a combined development strategy for all deposits in the Greater Lontown Project, area including the proposed open cut and underground resources at Lontown and Waterloo, to improve the economics by focusing on the high-grade underground tonnages. The future studies are planned to assess alternative flowsheets for treatment of oxide material associated with the various Greater Lontown deposits. The future exploration strategy will look to define the along strike potential and expand the resource base.

Permitting at Lontown continued to be progressed. The Company met with the Jangga people (registered Native Title claimants over Lontown area) in July 2022 and proposed a compensation package for Jangga consideration. The Jangga people have considered the Company's proposal and reverted after the quarter's end with a counter proposal which the Company is evaluating.

The Environmental Authority application for Lontown open pit which was submitted in February 2022 continues in the review period with the DES (Note: mining leases cannot be activated until environmental and native title approvals are in place.) Final steps including public notice periods were planned for the quarter.

Permitting for the Lontown underground development will involve an additional Environmental Impact Assessment for the underground component only. The Greater Lontown Project will plan for a Single Integrated Operation of the Lontown and Waterloo deposits with Thalanga Processing plant and Far West Underground under one Environmental Authority. The application for adding the underground was planned to be progressed in the December quarter.

For the nearby Waterloo deposit, the Company has agreed the quantum of land access compensation with the landholder for access at the Waterloo mining lease (ML100201). However, the detailed terms and conditions of the Compensation Agreement are now being negotiated.

\*Resources and Reserves as per 2022 Annual Report (ASX Announcement 25 August 2022)

Liontown drilling completed during the quarter included 14 diamond holes for a total of 3,374m (Table 2).

**Table 2:** Thalanga Drilling completed in Q1 FY23 (assays pending)

Location	Hole Type	Holes Completed	Total Metres Drilled
Liontown Main	DD	2	487
Liontown New Queen	DD	3	733
Liontown Western Footwall	DD	9	2,154
<b>Total</b>		<b>14</b>	<b>3,374</b>

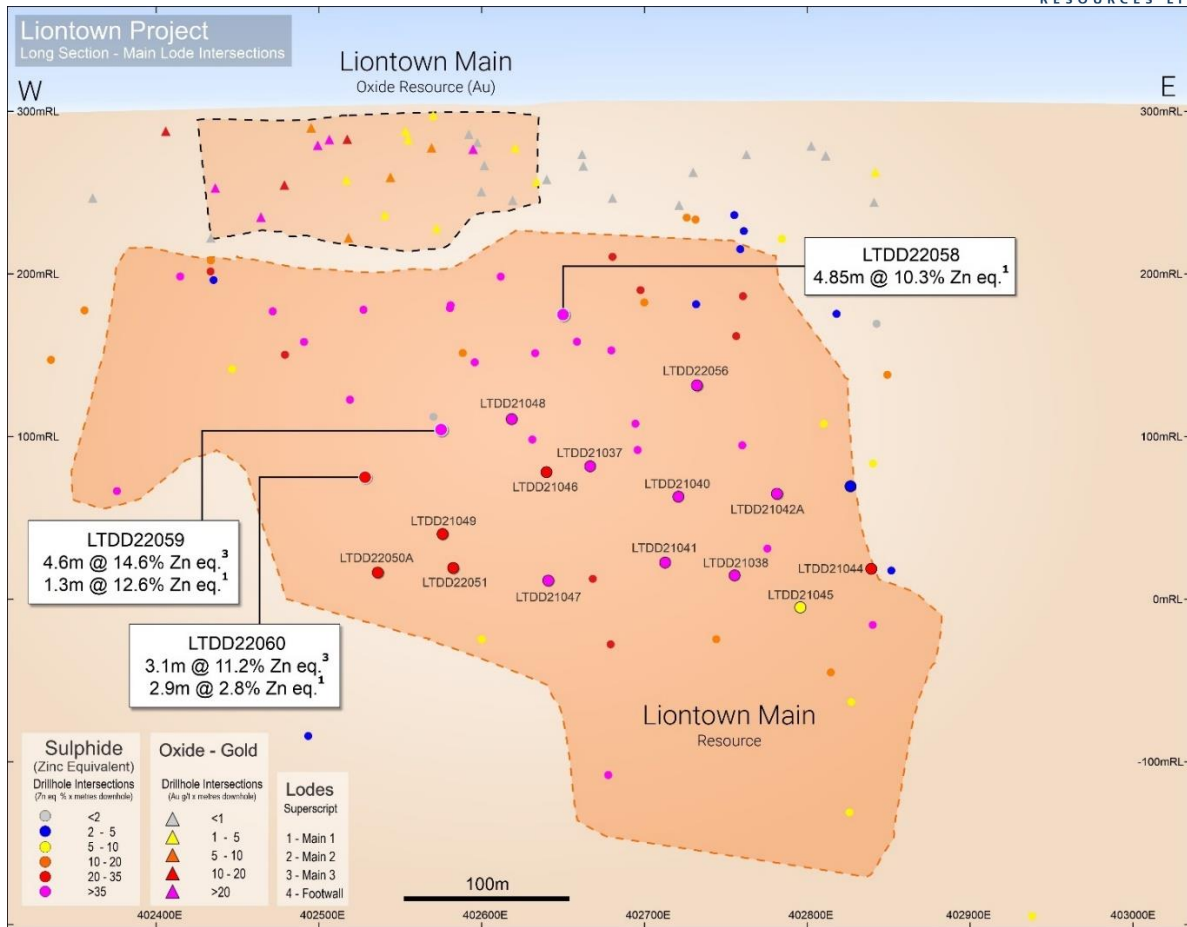
18,418m of drilling is to be included into an update of the Liontown Mineral Resource. Drill results and assays received to date largely support the current estimation. In areas where drilling has increased estimation confidence it is predicted that Inferred material will transfer to an Indicated classification. This will be most relevant to the Main lode section of the Resource where a large portion of the drilling has been focused.

Liontown continued to deliver strong assays both in Main Lode (Figure 2) and the Gap (Figure 3) including;

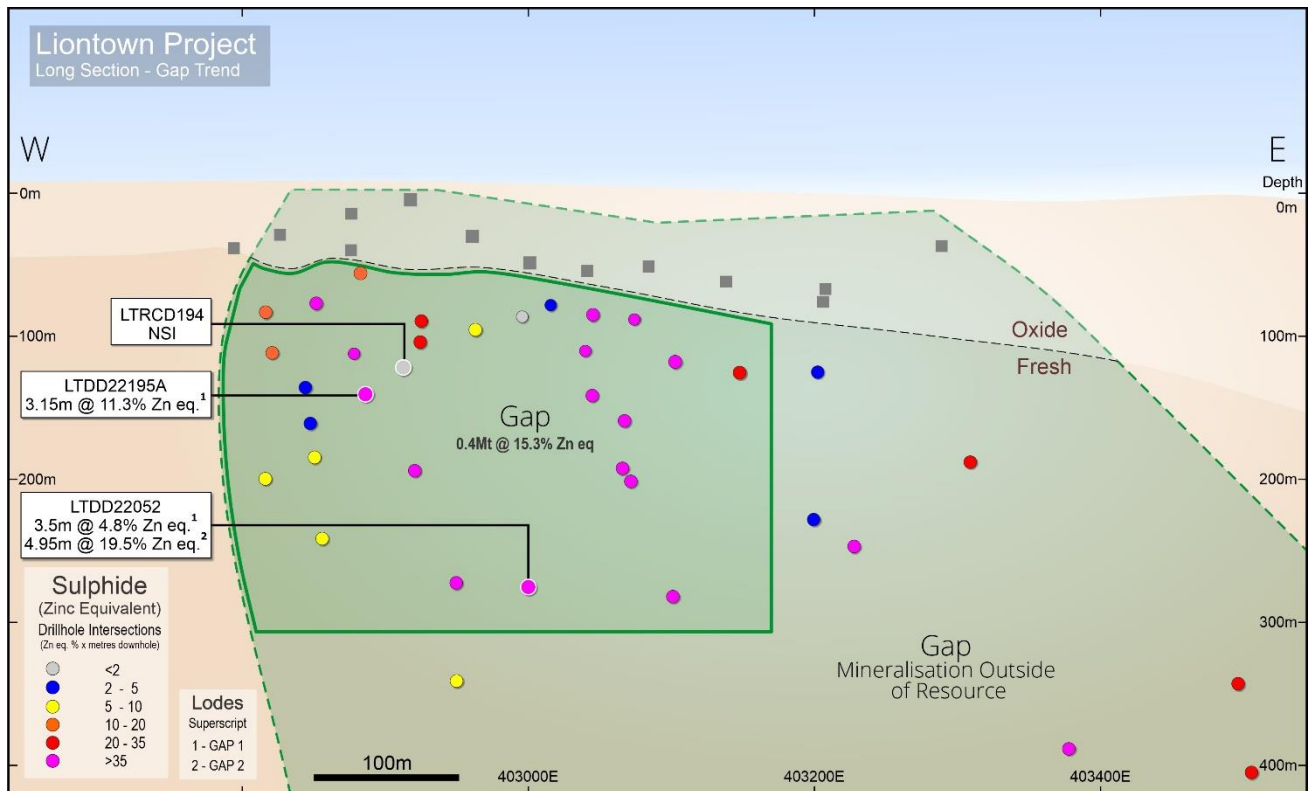
- **4.95m @ 19.5% Zn eq. incl 4.99% Cu from 288.75m (LTDD22052 – Gap Lode)**
- **3.15m @ 11.3% Zn eq. incl 2.74% Cu from 168.0m (LTDD22195A – Gap Lode)**
- **4.60m @ 14.6% Zn eq. from 204.75m (LTDD22059 – Main Lode 3)**
- **4.85m @ 10.3% Zn eq. from 137.45m (LTDD22058 – Main Lode 1)**
- **3.10m @ 11.2 % Zn eq. from 242.15m (LTDD22060 – Main Lode 3)**

(ASX Announcement 19 July 2022)





**Figure 2: Long Section of Main Lode drill intersections (Main 1) and recent drill results**



**Figure 3: Long Section of Gap Lode drill intersections and recent drill results.**

### **2.3.2. Exploration Activities**

Exploration work for the quarter included;

- Validation, correction and addition to historic soil, rock chip and stream assay database in preparation for final design on upcoming soil programmes
- Field mapping, validation and design work for soil sample programme to test mineralisation on the gold + base metal mineralised dilational Trooper Creek fault structure
- Commencement of soil programme design testing the structural zone between Highway East and Kitchen Rock
- Structural field measurements at Coronation to support drill designs at Coronation and Windsor South.
- Review and validation of historic data covering Ermine to investigate potential to reinterpret the historic Plutonic drilling and preparatory to further drill design to test the Ermine to Echidna line of lode

### 3. HILLGROVE OPERATIONS (NEW SOUTH WALES)

Red River's Hillgrove operation is located 30km from Armidale in New South Wales. The Hillgrove Operation has a Mineral Resource of 7.23Mt @ 4.5g/t Au & 1.2% Sb containing 1.04 million ounces of gold and 90kt of antimony (Figure 4).



**Figure 4: Hillgrove Location Map**

#### 3.1. Operations Update

Red River placed Hillgrove into care and maintenance in the quarter to allow for a detailed study on the options available for development incorporating the recent successful drill results.

The Options Study will determine the optimal development strategy at Hillgrove and is expected to be completed during CY2023.

Red River produced 330oz of contained gold in carbon and sold 388oz at Hillgrove for the quarter. This production came from treatment of the final gold bearing residues through the carbon in leach process (CIL).

**Table 3:** Hillgrove Gold Mine Summary for Q1 FY2023 (Quarter ended 30 Sep 2022)

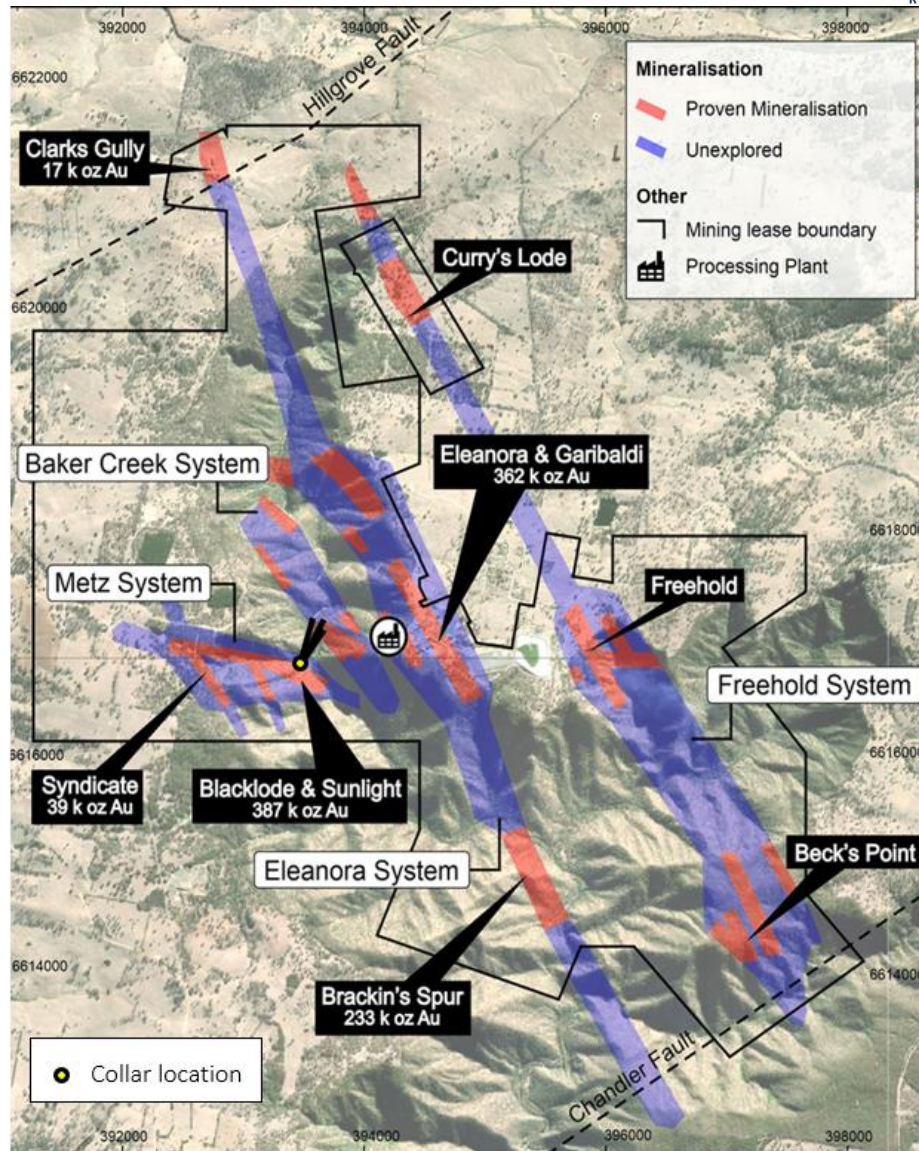
	Units	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Q1 FY23
<b>Ore Processed</b>	<b>kt</b>	<b>40</b>	-	-	-	-
Gold grade	g/t	1.5	-	-	-	-
<b>Gravity gold concentrate produced</b>	<b>DMT</b>	<b>19</b>	-	-	-	-
Gold grade	g/t	1,632	-	-	-	-
Gold recovery to gravity concentrate	%	49.7	-	-	-	-
Gold recovered to gravity concentrate	ozs	1,008	-	-	-	-
<b>Flotation gold concentrate produced</b>	<b>DMT</b>	<b>234</b>	-	-	-	-
Gold grade	g/t	68	-	-	-	-
Gold recovery to flotation concentrate	%	25.2	-	-	-	-
Gold recovered to flotation concentrate	ozs	512	-	-	-	-
Gold (cont. in gold dore)	ozs	667	494	117	-	-
Gold in Carbon	ozs				216	330
<b>Gold Produced</b>	<b>ozs</b>	<b>1,179</b>	<b>494</b>	<b>117</b>	<b>216</b>	<b>330</b>
<b>Gold Sold</b>	<b>ozs</b>	<b>1,362</b>	<b>778</b>	<b>117</b>	<b>136</b>	<b>388</b>

### 3.2 Exploration Activities

Red River continued successful exploration at Hillgrove over the quarter, completing drilling programs at Blacklode, Eleanora/Garibaldi and Bakers Creek, with a total of nine holes completed (2,010m) (Table 4).

**Table 4:** Hillgrove Drilling completed in Q1 FY23 (assays pending)

Location	Hole Type	Holes Completed	Total Metres Drilled
Bakers Creek	DD	1	597
Black Lode	DD	2	276
Eleanora	DD	4	815
Garibaldi	DD	2	322
<b>Total</b>		<b>9</b>	<b>2,010</b>



**Figure 5:** Bakers Creek location in Hillgrove Mineral Field(BKC009, BKC008 and BKC010 (L-R) collar locations)

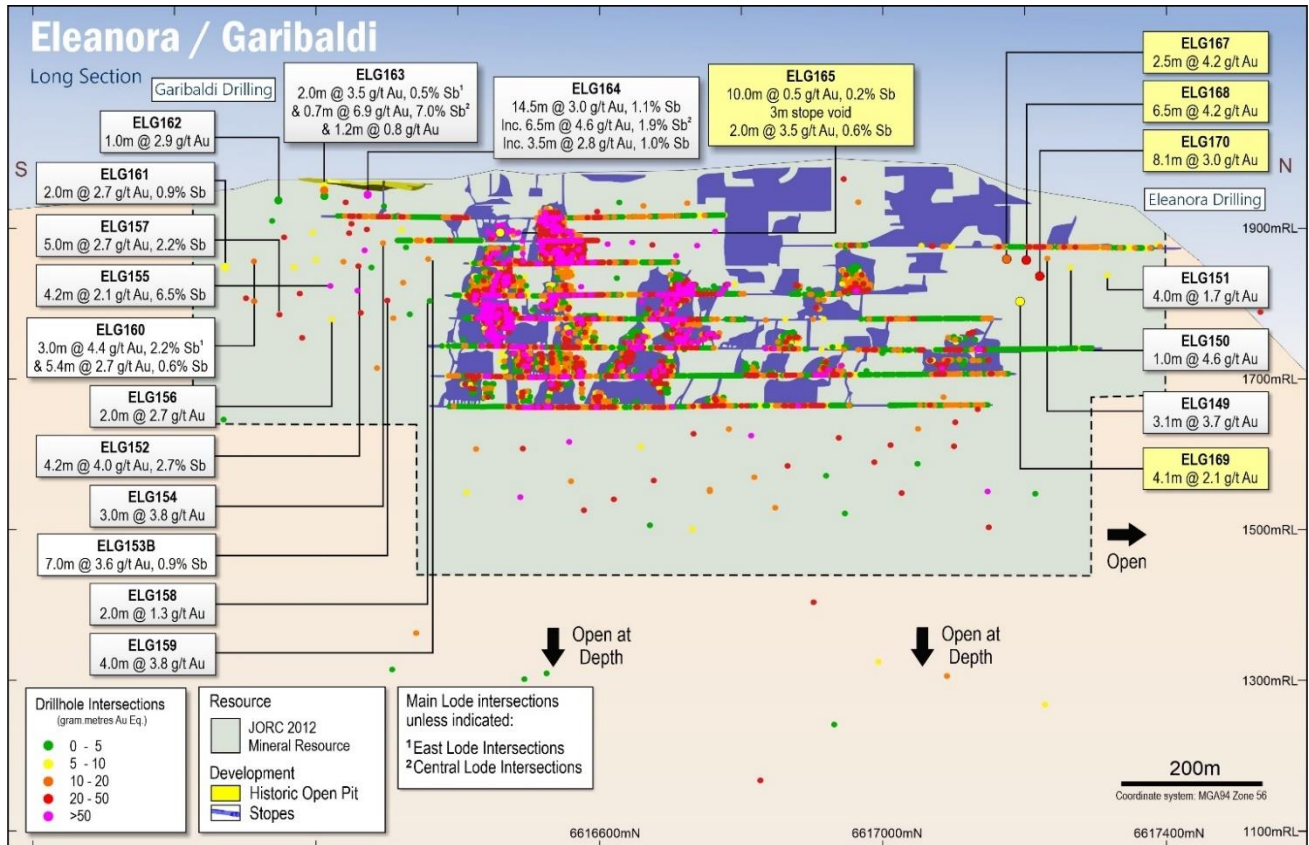
Assays received during the quarter continued to deliver high-grade and broad intercepts from Eleanora-Garibaldi (Figure 6) including;

- **15.0m @ 2.4 g/t Au from 146.0m downhole (ELG168) including:**
  - 11.5m @ 2.9 g/t Au from 147.0m
  - 9.0m @ 3.4 g/t Au from 149.5m
  - 6.5m @ 4.2g/t Au from 149.5m
  - 3.3m @ 5.6 g/t Au from 152.0m
- **8.1m @ 3.0 g/t Au from 168.5m (ELG170) including:**
  - 1.8m @ 5.8 g/t Au from 168.5m
  - 2.6m @ 3.7 g/t Au from 174.0m
- **4.1m @ 2.1 g/t Au and 0.4% Sb from 203.5m (ELG169)**



- **2.5m @ 4.2 g/t Au from 148.5m (ELG167)**
  - And 2.0m @ 3.5 g/t Au from 182.5m

(ASX Announcement 11 August 2022)

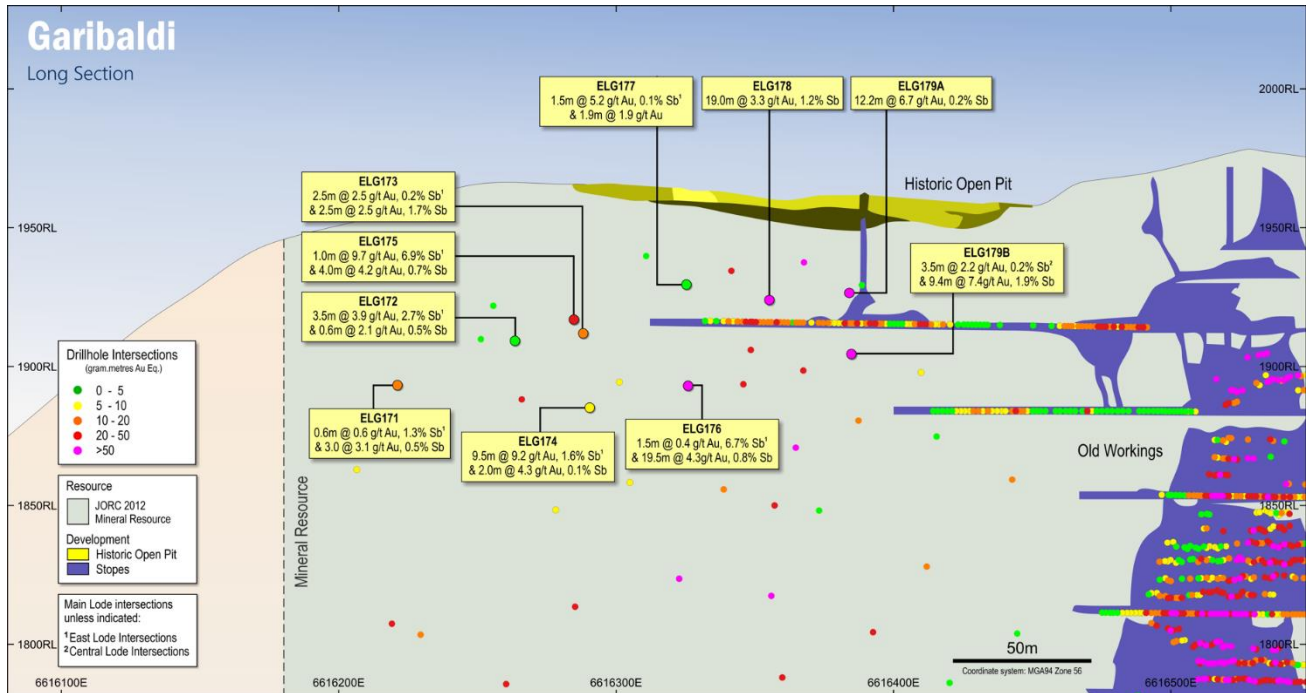


**Figure 6:** Assay results from latest Eleanora-Garibaldi program

Further strong assays were received on the eastern side of Garibaldi (Figure 7) which included;

- 9.5m @ 9.2 g/t Au and 1.6% Sb from 60.5m downhole (ELG174)
- 19.5m @ 4.3 g/t Au and 0.8% Sb from 70.0 (ELG176)
- 19.0m @ 3.3 g/t Au and 1.2% Sb from 31.0m (ELG178) including:
  - 1.5m @ 11.0 g/t Au and 1.5% Sb from 48.5m
- 12.2m @ 6.7 g/t Au and 0.2% Sb from 41.0m (ELG179A) including:
  - 8.8m @ 8.2 g/t Au from 43.5m
- 20.3m @ 4.1 g/t Au and 0.9% Sb from 51.0m (ELG179B) and
  - 9.4m @ 7.4 g/t Au and 1.9% Sb from 61.9m

(ASX Announcement 01 September 2022)



**Figure 7:** Assay results from latest Eleanora-Garibaldi program. Intersection points represent the Eleanora-Garibaldi trend with eastern lode intersections shown in labels.

All numbers and data are rounded. Discrepancies in totals may exist due to rounding.  
 Payable metal is derived from concentrate offtake agreements.  
 C1 cash cost includes actual cash costs plus notional costs (concentrate logistics and realisation costs)  
 C1 cash cost includes credits for copper, lead, gold and silver notionally priced at for the period (Q1 FY23: copper US\$3.47/lb, lead US\$0.90/lb, gold US\$1,735/oz and silver US\$19.20/oz)  
 1 Net Revenue is Gross Revenue less treatment charges, refining fees and penalties relating to concentrate sold



Thalanga Operations net revenue during the quarter was \$8.1 million, with \$3.8 million from sale of zinc in zinc concentrate, \$0.7 million from the sale of lead in lead concentrate, \$2.3 million from sale of copper in copper concentrate and \$1.3 million from sale of payable precious metals (gold and silver) contained in copper and lead concentrates.

Thalanga Operations quarterly EBITDA (unaudited) was a loss of \$6.1 million, a decrease of \$13.6 million over the prior quarter. Compared to the previous quarter:

- Net revenue was \$19.1 million lower with less metal sold (\$21.1 million) and lower realised prices (\$0.4 million) being partially offset by lower treatment charges (\$2.3 million due to the lower sales volumes).
- Realisation expenses were \$2.0 million lower primarily due to the lower sales volumes.
- Operating costs were \$3.6 million lower due to the lower production volumes, partially offset by stand by costs claimed by our mining contractor following the 'fall of ground' event.

**C1 Cash costs** were higher than the previous quarter due to the impact of lower zinc production on cash operating unit costs and the impact of lower lead and copper concentrate production on the value of by-product credits per pound of payable zinc metal.

The calculation of C1 cash costs includes cost incurred on site during the period of no production following the ground fall event, with the exception of stand-by costs proposed to be charged by the mining contractor while the mine was not operating (\$0.8 million).

**Working Capital Facility** – During the September quarter Red River drew down US\$7.0 million and repaid US\$2 million from the Company's working capital facility. At the end of the September quarter the Company's working capital facility was drawn down by a total of US\$9.0 million with US\$6.0 million remaining undrawn. The working capital facility is provided to Cromarty Resources Pty Ltd (in Voluntary Administration) by Trafigura Pte Ltd (Trafigura). Red River has provided a guarantee to Trafigura in relation to the working capital facility between Cromarty and Trafigura.

#### 4.4. Hillgrove Gold Mine Financial Performance

Red River invested \$0.7 million in exploration activities. On an unaudited basis, Hillgrove Mine's EBITDA loss for the quarter was \$2.5 million.



**CAMERON BODLEY**

**Company Secretary**

Red River Resources Limited

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For further information please visit Red River's website [www.redriverresources.com.au](http://www.redriverresources.com.au) or contact us:

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## Thalanga 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 Liontown Project (Liontown and Liontown East) and from ongoing metallurgical data generated from operational activities at Thalanga (processing West 45 and Far West). The Liontown Project is related to and of a similar style of mineralisation to the Thalanga Deposit (West 45 and Far West) and it is appropriate to apply similar recoveries. 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	65%	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 from the Liontown Project. 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:

$$\text{Zn Eq.} = (\text{Zn}\% \times 1.0) + (\text{Cu}\% \times 3.3) + (\text{Pb}\% \times 0.9) + (\text{Au ppm} \times 2.0) + (\text{Ag ppm} \times 0.025)$$

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	2.0	0.025

END