



## Liontown drilling delivers zones of thick high-grade copper, lead, zinc and gold mineralisation

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### Highlights:

- Assay results received from first five holes drilled in current Liontown program
  - LTDD002 & LTDD005 intersected broad zones of polymetallic mineralisation with strong gold grades in the New Queen Lens approximately 35m below surface:
    - LTDD19002 intersected 55.95m @ 0.2% Cu, 2.6% Pb, 5.8% Zn, 1.1 g/t Au & 12 g/t Ag, (9.7% Zn Eq.) from 39.85m down-hole; and
    - LTDD19005 intersected of 51.30m @ 0.2% Cu, 2.0% Pb, 5.1% Zn, 1.2 g/t Au & 14 g/t Ag, (8.3% Zn Eq.) from 36.70m down-hole
  - The New Queen Lens has a true width is ~15m and contains much higher grade zones; refer to Table 1
  - All five holes drilled hit high grade polymetallic massive sulphide mineralisation in the Liontown Main Lens positions; (Lower, Central & Upper Lenses). Highlights include:
    - LTDD19002: 4.70m @ 18.7% Zn Eq. from 182.6m down-hole and 4.12m @ 18.9% Zn Eq. from 234.50m down-hole;
    - LTDD19003: 3.98m @ 15.6% Zn Eq. from 132.50m down-hole; and
    - LTDD19005 also intersected zones of polymetallic massive sulphide mineralisation in the Liontown Main Lens - assay results are pending
  - LTD001 & LTD004 intersected the copper dominant Carrington Lens & confirm that it is open below the historic workings; highlights include:
    - LTDD19001: 1.19m @ 5.0% Cu from 276.60m down-hole; and
    - LTDD19004: 1.20m @ 3.6% Cu from 205.60m down-hole
  - These results provide confidence in historic drill data and confirm the high grade, gold-rich polymetallic nature of the Liontown Deposit
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Red River Resources Limited (ASX: RVR), is pleased to report further high-grade assay results from drilling at the Liontown Project, part of the Company’s Thalanga Operations in Northern Queensland. The Liontown Project comprises the significant polymetallic massive sulphide deposits at Liontown and Liontown East which have a total Mineral Resource of 3.6Mt at 10.0% Zinc Equivalent.

Red River commenced the current Liontown drilling program in June 2019 (refer to ASX release “Red River commences Liontown drilling program” dated 25 June 2019). This is the first time Red River has drilled Liontown, with the objective of better defining the resource for development and to increase it.

To date, six holes have been completed (LTDD001 to LTD005 and LTD008) with LTD19011 in progress. Assay results have been received for LTD19001 to LTDD19004 and partial assay results for LTDD19005.

**Drill holes LTDD19002, LTDD19005 and LTD19011:**

The drill holes were drilled from the footwall (FW) at Liontown targeting the New Queen Lens, the Liontown Main Lens Lower (Contact Lens located at contact between the hanging wall mixed sediment unit and the footwall volcanoclastic unit) and the Liontown Main Lens (Upper and Central)

**Drill holes LTDD19001, LTDD19003 and LTD19004:**

The drill holes were drilled from the hanging wall (HW) at Liontown targeting the Liontown Main Lens (Upper and Central), Liontown Main Lens Lower (Contact Lens) and the New Queen Lens. Holes 1 & 4 were extended to intersect the Carrington Lens.

Figure 1 Liontown Drilling Plan

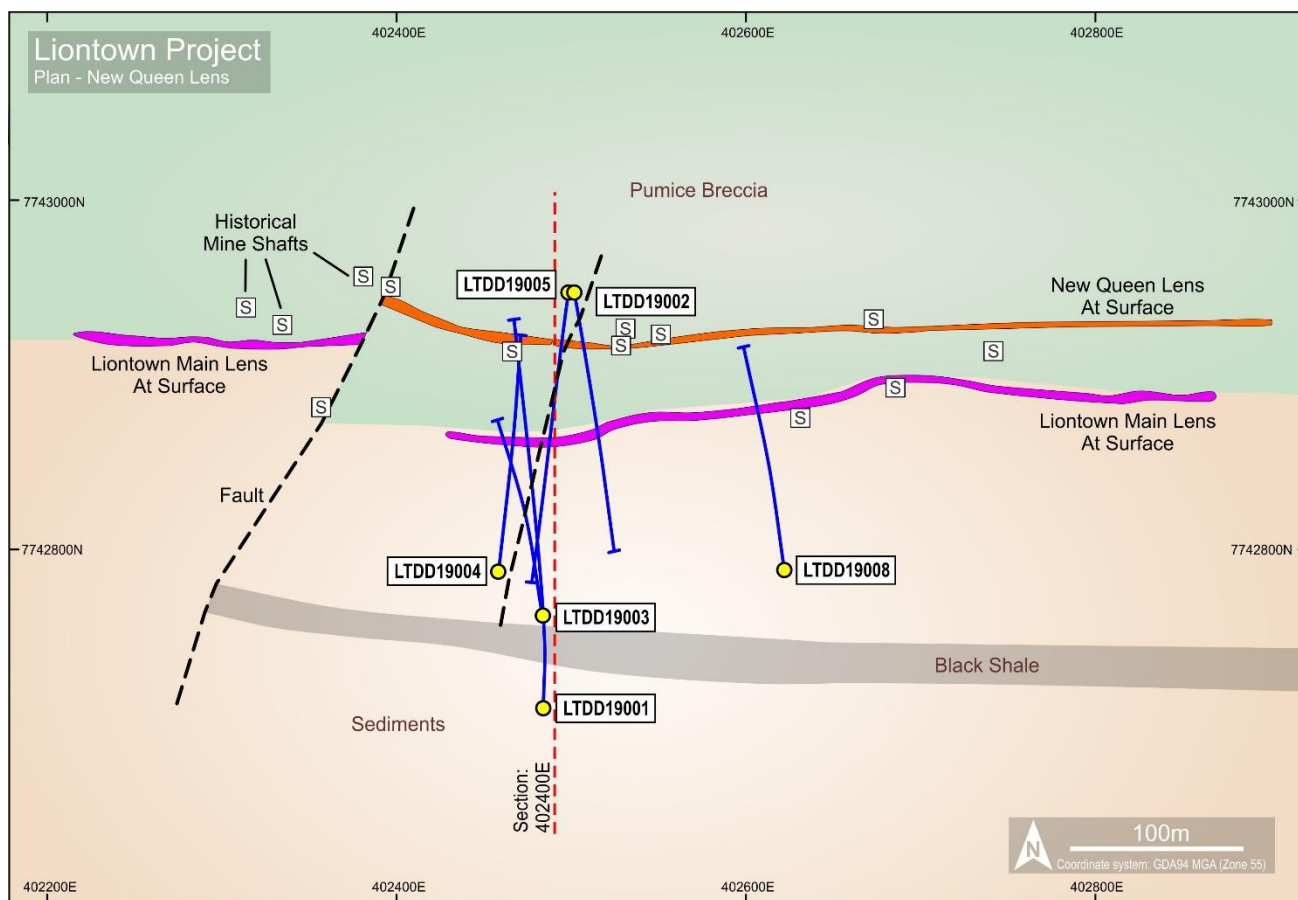
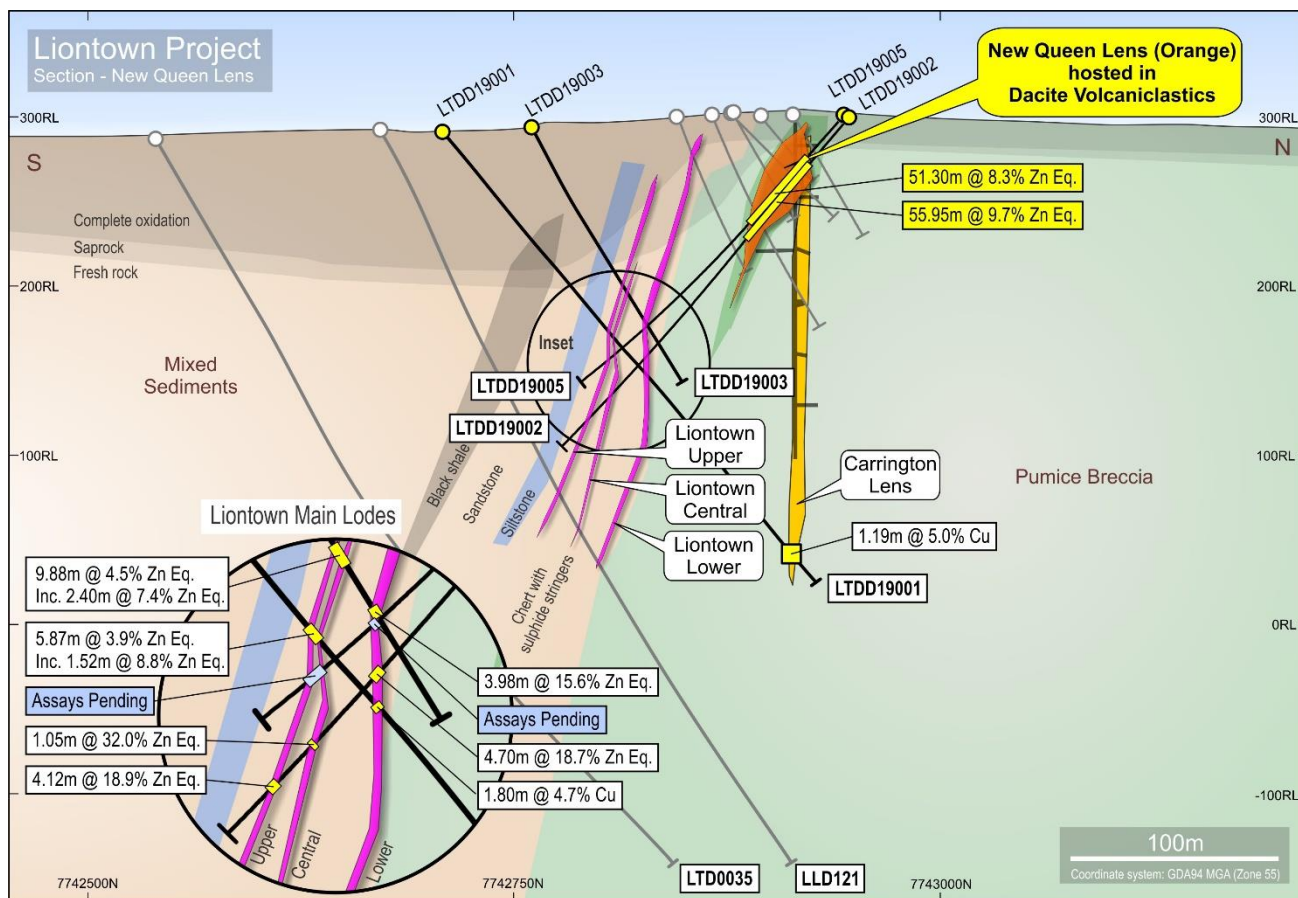


Figure 2 LioneTown Drilling Section



LioneTown Main Lens is interpreted to split into three positions: LioneTown Main Lens Upper, LioneTown Main Lens Central and LioneTown Main Lens Lower (Contact Lens - located at contact between the hanging wall mixed sediment unit and the footwall volcanoclastic unit).

Results to date provide confidence in the historical drill results and confirm the high grade, gold-rich nature of the LioneTown mineralisation.

Figure 3 Example of Zinc Rich New Queen Lens Mineralisation (LTDD19005)

LTDD19005: Intersection of 0.4m @ 2.74% Cu, 0.16% Pb, 43.73% Zn, 3.87 g/t Au & 12.8 g/t Ag from 47.80m to 48.20m downhole

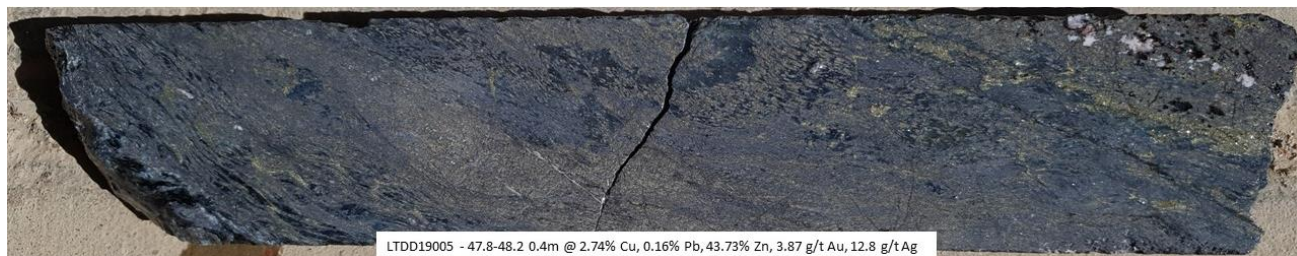


Figure 4 Liontown Main Lens Mineralisation (LTDD19002)

LTDD19002: Intersection of 4.12m @ 0.45% Cu, 3.67% Pb, 11.01% Zn, 0.95 g/t Au & 105.23 g/t Ag from 234.50m to 238.63m downhole

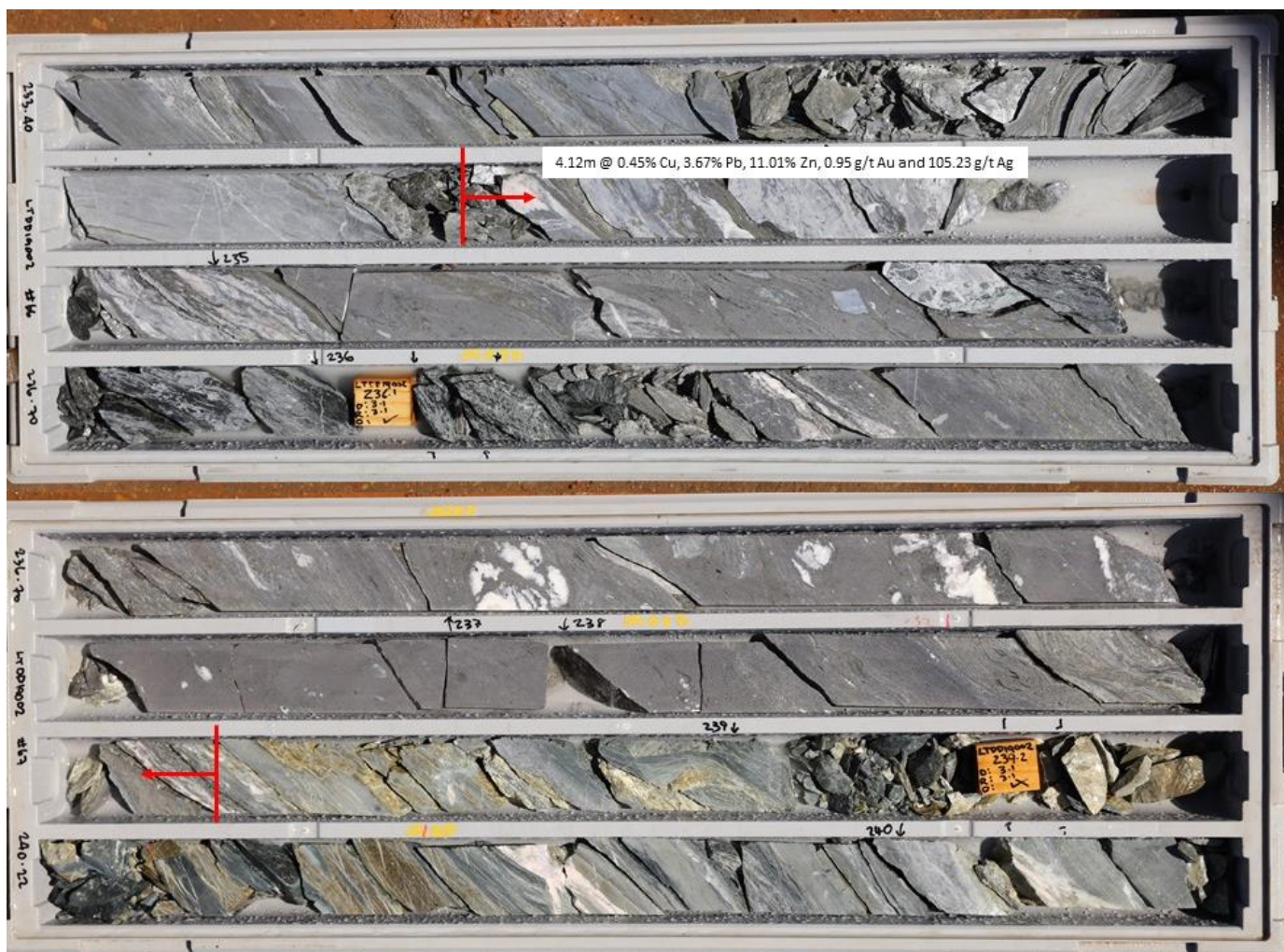


Table 1 Material drill hole assay summary (current drilling), Liontown Project

Hole ID	From (m)	To (m)	Intersection (m) <sup>(1)</sup>	Cu (%)	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)	Zn Eq. (%)	Mineralisation Intersected
LTDD19001	153.13	159.00	5.87	0.1	0.7	2.5	0.2	18	3.9	Liontown Main Lens
<i>inc.</i>	153.13	154.65	1.52	0.2	1.6	5.7	0.3	36	8.8	Liontown Main Lens
<i>inc.</i>	157.70	159.00	1.30	0.2	1.1	4.2	0.3	37	6.8	Liontown Main Lens
LTDD19001	182.20	184.00	1.80	4.7	0.5	1.7	0.1	28	(2)	LML Lower (Contact)
LTDD19001	276.60	277.79	1.19	5.0	0.0	0.0	0.1	7	(2)	Carrington Lens
LTDD19001	301.45	303.77	2.32	1.3	0.0	0.0	0.0	2	(2)	Quartz Veining
LTDD19002	39.85	95.80	55.95	0.2	2.6	5.8	1.1	12	9.7	New Queen Lens
<i>inc.</i>	45.50	50.90	5.40	0.4	4.7	7.8	5.5	21	16.7	New Queen Lens
<i>inc.</i>	58.62	61.76	3.14	0.4	0.0	7.8	0.1	5	9.5	New Queen Lens
<i>inc.</i>	64.45	68.50	4.05	0.3	5.1	10.3	0.3	13	16.4	New Queen Lens
<i>inc.</i>	71.00	95.80	24.80	0.2	2.5	5.5	0.6	14	9.1	New Queen Lens
LTDD19002	182.60	187.30	4.70	2.9	2.0	6.5	0.1	32	18.7	LML Lower (Contact)
LTDD19002	218.05	219.10	1.05	0.8	9.8	18.2	0.4	84	32.0	LML Central Lens
LTDD19002	234.50	238.62	4.12	0.5	3.7	11.0	0.9	105	18.9	LML Upper Lens
LTDD19003	107.92	117.80	9.88	0.1	0.5	3.2	0.2	18	4.5	Liontown Main Lens
<i>inc.</i>	107.92	109.85	1.93	0.2	1.5	4.3	0.3	58	8.0	Liontown Main Lens
<i>inc.</i>	111.65	114.00	2.35	0.1	0.7	4.5	0.2	13	5.9	Liontown Main Lens
<i>inc.</i>	115.40	117.80	2.40	0.2	0.3	6.0	0.2	17	7.4	Liontown Main Lens
LTDD19003	132.50	136.48	3.98	0.7	1.5	11.6	0.1	14	15.6	LML Lower (Contact)
LTDD19004	77.90	88.30	10.40	1.2	4.7	0.6	1.7	9.5	(3)	Liontown Main Lens
LTDD19004	205.60	206.80	1.20	3.6	0.1	0.6	0.3	13	(2)	Carrington Lens
LTDD19005	36.70	88.00	51.30	0.2	2.0	5.1	1.2	14	8.3	New Queen Lens
<i>inc.</i>	41.00	51.85	10.85	0.4	2.7	11.2	0.7	15	15.5	New Queen Lens
<i>inc.</i>	53.70	61.00	7.30	0.1	2.5	5.2	0.5	9	8.4	New Queen Lens
<i>inc.</i>	63.50	68.50	5.00	0.2	2.8	5.1	2.9	14	10.1	New Queen Lens
<i>inc.</i>	82.20	87.00	4.80	0.1	1.3	2.6	3.0	23	6.2	New Queen Lens

(1) Down-hole width – true width of New Queen Lens is approx. 30% of down-hole width, true width of other Lenses are approx. 70% of down-hole width

(2) Zinc equivalent not quoted for copper dominant mineralisation

(3) Oxide mineralisation – zinc equivalent not quoted (for fresh mineralisation only)

LML: Liontown Main Lens

Table 2 Drill hole information summary, Liontown Project

Hole ID	Depth (m)	Dip	Azi (MGA)	East (MGA)	North (MGA)	RL (MGA)	Lease ID	Hole Status
LTDD19001	347.8m	-49	1	402485	7742710	291	EPM14161	Completed
LTDD19002	257.7	-51	185	402500	7742947	300	ML10277	Completed
LTDD19003	176.5	353	-61	402484	7742763	292.9	ML10277	Completed
LTDD19004	212.4	-50	8	402457	7742790	297	ML10277	Completed
LTDD19005	224	153	-47	402500	7742947	300	ML10277	Partial Assays Pending
LTDD19008	279	352	-61	402623	7742789	294	ML10277	Assays Pending
LTDD19011	250	-48	155	402500	7742947	300	ML10277	In Progress

Table 3 Drill hole geological information summary, Liontown Project

Hole ID	From (m)	To (m)	Intersection (m) <sup>(1)</sup>	Mineralised Intercept Description	Status
LTDD19005	163.32	166.6	3.28	Semi massive pyrite, sphalerite, galena and chalcopyrite. Intense silica - sericite alteration	Assays pending
LTDD19005	166.6	171.55	4.95	Massive sulphide sphalerite -galena	Assays pending
LTDD19005	171.55	175.1	3.55	Stringers to sub massive pyrite-sphalerite-galena	Assays pending
LTDD19005	175.1	192.95	17.85	Chert with pyrite-sphalerite-galena stringers	Assays pending
LTDD19005	192.95	195	2.05	Stringers to sub massive pyrite-sphalerite-galena	Assays pending
LTDD19005	195	197.4	2.4	Massive sulphide sphalerite-galena	Assays pending
LTDD19005	197.4	201.1	3.7	Chert with pyrite-sphalerite-galena stringers	Assays pending
LTDD19008	135.19	161.5	26.31	Strongly sericite altered dacite and dacitic tuffs/volcanoclastic units. Moderately to strongly foliated. Blebs of galena and sphalerite throughout (>2%) with 5 narrow (>1m) sub to semi massive galena and sphalerite intervals	Assays pending
LTDD19008	253.4	258	4.6	Copper mineralisation underneath the old workings	Assays pending

(1) Downhole width

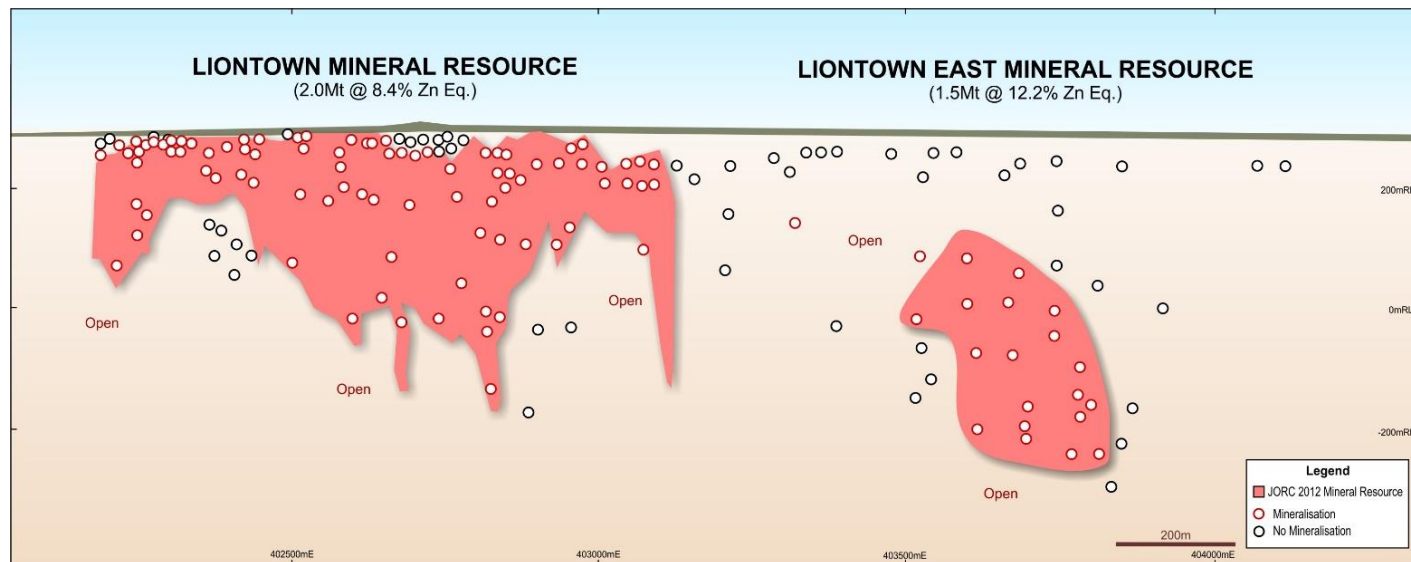
Table 4 Liontown JORC Mineral Resource

Deposit	Resource Class	Tonnage (kt)	Cu (%)	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)	Zn Eq. (%)
Liontown	Measured	-	-	-	-	-	-	-
	Indicated	367	0.5	1.8	4.6	1.3	21	8.3
	Inferred	1,671	0.5	1.5	4.6	0.8	26	8.4
	<b>Subtotal</b>	<b>2,038</b>	<b>0.5</b>	<b>1.6</b>	<b>4.6</b>	<b>0.8</b>	<b>25</b>	<b>8.4</b>
Liontown East	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	1,515	0.5	2.5	7.3	0.7	29	12.2
	<b>Subtotal</b>	<b>1,515</b>	<b>0.5</b>	<b>2.5</b>	<b>7.3</b>	<b>0.7</b>	<b>29</b>	<b>12.2</b>
Combined	Measured	-	-	-	-	-	-	-
	Indicated	367	0.5	1.8	4.6	1.3	21	8.3
	Inferred	3,185	0.5	2.0	5.9	0.7	28	10.2
	<b>Total</b>	<b>3,553</b>	<b>0.5</b>	<b>2.0</b>	<b>5.7</b>	<b>0.8</b>	<b>27</b>	<b>10.0</b>

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

Source: Liontown Deposit JORC 2012 Resource Estimate (ASX Release, 24 June 2015), Maiden Liontown East Mineral Resource (ASX Release, 18 July 2018)  
 Zinc equivalent (Zn Eq.) has been calculated using the metal selling prices, recoveries and other assumptions contained in Appendices of this announcement.  
 It is Red River’s opinion that all elements included in the metal equivalent calculation have a reasonable potential to be recovered and sold.

Figure 5 Liontown Project Mineral Resource Long Section



## **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-Antimony Project in New South Wales, which will enable RVR to build a multi-asset operating business focused on base and precious metals.

On behalf of the Board,

**Mel Palancian**

**Managing Director**

Red River Resources Limited

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## **COMPETENT PERSON STATEMENT**

### **Exploration Results**

The information in this report that relates to Exploration Results is based on information compiled by Mr Steven Harper who is a member of The Australasian Institute of Mining and Metallurgy, and a full time employee of Red River Resources Ltd., and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves' (JORC Code).

Mr Harper consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

### **Liontown East Mineral Resource**

The information in this report that relates to the estimation and reporting of the Liontown East Mineral Resource is 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 Liontown East Mineral Resource estimation is based on and fairly represents, information and supporting documentation compiled under the overall supervision and direction of Mr Carolan.

### **Liontown Mineral Resource**

The information in this report that relates to the estimation and reporting of the Liontown Mineral Resource is based on and fairly represents, information and supporting documentation compiled by Mr Stuart Hutchin who is a Member of The Australasian Institute of Mining and Metallurgy, Member of the Australian Institute of Geoscientists and a full time employee of Mining One Consultants Pty Ltd.

Mr Hutchin 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 Hutchin 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 Liontown Mineral Resource estimation is based on and fairly represents, information and supporting documentation compiled under the overall supervision and direction of Mr Hutchin.

## 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 the Liontown deposit. The Liontown East deposit is related to and of a similar style of mineralisation to the Liontown Deposit 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	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 from Liontown East. 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

## APPENDIX 1

### ASSAY DETAILS

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19001	152.50	153.13	0.63	0.0	0.0	0.0	0.0	1	0.0	
LTDD19001	153.13	153.86	0.73	0.2	2.2	8.6	0.4	48	12.8	Liontown Main Lens
LTDD19001	153.86	154.65	0.79	0.1	1.1	3.0	0.2	24	5.1	Liontown Main Lens
LTDD19001	154.65	155.05	0.40	0.1	0.0	0.4	0.1	2	0.7	Liontown Main Lens
LTDD19001	155.05	155.60	0.55	0.0	0.0	0.1	0.1	1	0.2	Liontown Main Lens
LTDD19001	155.60	156.30	0.70	0.0	0.0	0.1	0.0	1	0.2	Liontown Main Lens
LTDD19001	156.30	156.95	0.65	0.0	0.0	0.3	0.1	2	0.4	Liontown Main Lens
LTDD19001	156.95	157.70	0.75	0.0	0.0	0.0	0.1	1	0.1	Liontown Main Lens
LTDD19001	157.70	158.00	0.30	0.1	1.2	6.3	0.3	55	9.2	Liontown Main Lens
LTDD19001	158.00	158.52	0.52	0.0	0.2	0.7	0.2	14	1.5	Liontown Main Lens
LTDD19001	158.52	159.00	0.48	0.3	2.1	6.5	0.3	52	10.9	Liontown Main Lens
LTDD19001	159.03	160.00	0.97	0.0	0.0	0.3	0.1	1	0.5	
LTDD19001	181.60	182.20	0.60	0.0	0.1	0.1	0.0	2	-	
LTDD19001	182.20	183.13	0.93	0.2	0.7	2.1	0.1	14	-	LML Lower (Contact)
LTDD19001	183.13	183.75	0.62	12.8	0.3	1.6	0.2	60	-	LML Lower (Contact)
LTDD19001	183.75	184.00	0.25	1.4	0.0	0.1	0.0	4	-	LML Lower (Contact)
LTDD19001	184.00	184.70	0.70	0.0	0.1	0.1	0.0	2	-	
LTDD19001	276.00	276.60	0.60	0.2	0.0	0.0	0.0	1	-	
LTDD19001	276.60	276.96	0.36	10.8	0.0	0.1	0.2	14	-	Copper Rich Zone
LTDD19001	276.96	277.49	0.53	3.0	0.0	0.0	0.0	5	-	Copper Rich Zone
LTDD19001	277.49	277.79	0.30	1.4	0.0	0.0	0.0	5	-	Copper Rich Zone
LTDD19001	277.79	278.40	0.61	0.2	0.0	0.0	0.0	1	-	
LTDD19001	300.00	300.60	0.60	0.0	0.0	0.0	0.0	0	-	
LTDD19001	300.60	301.00	0.40	0.8	0.0	0.0	0.0	1	-	Quartz Veining
LTDD19001	301.00	301.45	0.45	0.0	0.0	0.0	0.0	0	-	Quartz Veining
LTDD19001	301.45	302.00	0.55	1.6	0.0	0.0	0.0	2	-	Quartz Veining
LTDD19001	302.00	302.70	0.70	1.3	0.0	0.0	0.0	2	-	Quartz Veining
LTDD19001	302.70	303.05	0.35	0.0	0.0	0.0	0.0	0	-	Quartz Veining
LTDD19001	303.05	303.77	0.72	1.6	0.0	0.0	0.0	2	-	Quartz Veining
LTDD19001	303.77	304.50	0.73	0.1	0.0	0.0	0.0	0	-	Quartz Veining
LTDD19001	304.50	305.25	0.75	0.2	0.0	0.0	0.0	1	-	Quartz Veining
LTDD19001	305.25	306.00	0.75	0.1	0.0	0.0	0.0	1	-	Quartz Veining
LTDD19001	306.00	306.70	0.70	0.6	0.1	1.0	0.1	4	-	Quartz Veining
LTDD19001	306.70	307.40	0.70	0.0	0.0	0.0	1.1	0	-	
Downhole width only										
Zn Eq. % not reported for zones identified as copper dominant mineralisation										
LML: Liontown Main Lens										

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19002	39.00	39.85	0.85	0.01	0.07	0.99	0.2	9	1.4	
LTDD19002	39.85	40.10	0.25	0.07	0.75	1.29	2.9	13	4.0	New Queen Lens
LTDD19002	40.10	40.36	0.26	0.11	2.20	5.22	1.2	14	8.5	New Queen Lens
LTDD19002	40.36	40.47	0.11	0.04	0.19	1.20	0.1	2	1.6	New Queen Lens
LTDD19002	40.47	40.90	0.43	0.19	3.16	6.68	0.7	10	10.7	New Queen Lens
LTDD19002	40.90	41.80	0.90	0.20	3.53	7.35	0.8	11	11.9	New Queen Lens
LTDD19002	41.80	42.56	0.76	0.45	6.65	11.43	6.2	20	22.5	New Queen Lens
LTDD19002	42.56	42.86	0.30	0.41	9.23	13.76	19.1	35	33.8	New Queen Lens
LTDD19002	42.86	43.20	0.34	0.28	3.62	6.47	0.2	13	11.1	New Queen Lens
LTDD19002	43.20	43.75	0.55	0.09	1.27	2.51	0.1	6	4.2	New Queen Lens
LTDD19002	43.75	44.70	0.95	0.04	0.50	0.71	0.1	4	1.4	New Queen Lens
LTDD19002	44.70	45.50	0.80	0.03	0.29	0.39	0.1	2	0.8	New Queen Lens
LTDD19002	45.50	46.25	0.75	0.37	4.07	5.49	4.1	17	12.8	New Queen Lens
LTDD19002	46.25	47.25	1.00	0.63	6.27	7.78	22.0	22	27.1	New Queen Lens
LTDD19002	47.25	48.24	0.99	0.76	7.23	11.25	4.0	46	23.4	New Queen Lens
LTDD19002	48.24	48.68	0.44	0.11	2.33	3.66	0.2	7	6.4	New Queen Lens
LTDD19002	48.68	49.35	0.67	0.24	3.39	7.31	0.2	13	11.5	New Queen Lens
LTDD19002	49.35	49.70	0.35	0.27	3.25	7.46	0.3	12	11.7	New Queen Lens
LTDD19002	49.70	50.62	0.92	0.30	3.16	7.57	0.3	12	11.9	New Queen Lens
LTDD19002	50.62	50.90	0.28	0.39	5.19	10.86	0.4	18	17.5	New Queen Lens
LTDD19002	50.90	51.90	1.00	0.00	0.05	0.25	0.0	1	0.4	New Queen Lens
LTDD19002	51.90	52.90	1.00	0.43	4.82	6.88	0.2	13	13.0	New Queen Lens
LTDD19002	52.90	53.62	0.72	0.56	7.46	15.09	0.3	23	24.4	New Queen Lens
LTDD19002	53.62	53.92	0.30	0.16	1.19	8.36	0.1	7	10.2	New Queen Lens
LTDD19002	53.92	54.92	1.00	0.70	7.83	13.65	0.3	20	23.6	New Queen Lens
LTDD19002	54.92	55.28	0.36	0.48	7.40	13.40	0.2	18	22.2	New Queen Lens
LTDD19002	55.28	56.10	0.82	0.03	0.04	0.62	0.0	2	0.8	New Queen Lens
LTDD19002	56.10	57.10	1.00	0.04	0.05	2.23	0.2	7	2.7	New Queen Lens
LTDD19002	57.10	57.40	0.30	0.01	0.05	0.63	0.1	5	0.9	New Queen Lens
LTDD19002	57.40	58.30	0.90	0.02	0.02	3.39	0.1	4	3.6	New Queen Lens
LTDD19002	58.30	58.62	0.32	0.06	0.02	1.69	0.1	5	2.1	New Queen Lens
LTDD19002	58.62	59.60	0.98	0.66	0.02	9.42	0.1	7	11.8	New Queen Lens
LTDD19002	59.60	59.90	0.30	0.07	0.01	5.49	0.1	3	5.8	New Queen Lens
LTDD19002	59.90	60.60	0.70	0.46	0.02	10.73	0.3	6	12.5	New Queen Lens
LTDD19002	60.60	61.76	1.16	0.35	0.02	5.28	0.1	3	6.6	New Queen Lens
LTDD19002	61.76	62.45	0.69	0.04	0.02	1.17	0.1	2	1.4	New Queen Lens
LTDD19002	62.45	62.60	0.15	0.00	0.02	0.50	0.0	1	0.7	New Queen Lens
LTDD19002	62.60	63.60	1.00	0.00	0.01	0.12	0.0	1	0.2	New Queen Lens
LTDD19002	63.60	64.45	0.85	0.01	0.02	0.39	0.0	2	0.5	New Queen Lens
LTDD19002	64.45	65.60	1.15	0.13	1.79	10.29	0.1	8	12.6	New Queen Lens
LTDD19002	65.60	66.60	1.00	0.43	9.21	13.88	0.3	22	24.3	New Queen Lens
LTDD19002	66.60	67.50	0.90	0.37	5.99	9.40	0.5	15	16.6	New Queen Lens
LTDD19002	67.50	68.50	1.00	0.42	3.98	7.34	0.3	10	12.7	New Queen Lens
LTDD19002	68.50	69.64	1.14	0.03	0.04	3.16	0.1	1	3.3	New Queen Lens

Downhole width only

Zn Eq. % not reported for zones identified as copper dominant mineralisation

LML: Liontown Main Lens

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19002	69.64	70.60	0.96	0.01	0.02	0.33	0.0	1	0.4	New Queen Lens
LTDD19002	70.60	71.00	0.40	0.04	0.02	0.60	0.0	1	0.8	New Queen Lens
LTDD19002	71.00	72.00	1.00	0.08	0.02	2.93	0.1	2	3.3	New Queen Lens
LTDD19002	72.00	73.08	1.08	0.18	0.02	5.26	0.1	2	6.0	New Queen Lens
LTDD19002	73.08	74.00	0.92	0.20	0.77	4.56	0.1	6	6.1	New Queen Lens
LTDD19002	74.00	74.85	0.85	0.24	0.29	5.64	0.1	4	6.8	New Queen Lens
LTDD19002	74.85	75.61	0.76	0.26	0.73	10.51	0.2	7	12.3	New Queen Lens
LTDD19002	75.61	76.19	0.58	0.21	1.97	8.35	0.1	11	11.1	New Queen Lens
LTDD19002	76.19	77.20	1.01	0.19	0.22	4.19	0.1	5	5.2	New Queen Lens
LTDD19002	77.20	78.38	1.18	0.11	1.33	4.69	0.1	6	6.4	New Queen Lens
LTDD19002	78.38	79.30	0.92	0.41	2.73	10.57	0.2	11	14.7	New Queen Lens
LTDD19002	79.30	80.00	0.70	0.16	1.22	3.27	0.1	5	5.1	New Queen Lens
LTDD19002	80.00	80.78	0.78	0.11	1.11	1.98	0.3	5	3.6	New Queen Lens
LTDD19002	80.78	81.60	0.82	0.12	1.78	3.07	3.2	12	6.9	New Queen Lens
LTDD19002	81.60	82.15	0.55	0.03	0.49	1.17	0.3	3	1.9	New Queen Lens
LTDD19002	82.15	82.70	0.55	0.14	1.89	1.92	0.2	6	4.3	New Queen Lens
LTDD19002	82.70	83.10	0.40	0.13	1.23	2.23	0.2	23	4.5	New Queen Lens
LTDD19002	83.10	83.35	0.25	0.03	0.18	0.24	0.0	2	0.6	New Queen Lens
LTDD19002	83.35	84.20	0.85	0.24	2.25	4.44	0.6	17	8.0	New Queen Lens
LTDD19002	84.20	85.00	0.80	0.24	3.59	6.95	0.6	30	12.0	New Queen Lens
LTDD19002	85.00	85.67	0.67	0.07	1.42	2.24	1.7	18	5.1	New Queen Lens
LTDD19002	85.67	86.04	0.37	0.34	10.61	20.35	8.3	118	38.1	New Queen Lens
LTDD19002	86.04	86.60	0.56	0.12	1.70	2.48	3.1	15	6.3	New Queen Lens
LTDD19002	86.60	87.50	0.90	0.27	2.69	3.16	0.7	25	7.4	New Queen Lens
LTDD19002	87.50	88.00	0.50	0.22	1.91	3.26	0.4	23	6.5	New Queen Lens
LTDD19002	88.00	89.00	1.00	0.11	1.26	1.08	0.2	11	3.0	New Queen Lens
LTDD19002	89.00	90.00	1.00	0.27	2.24	1.74	0.2	19	5.2	New Queen Lens
LTDD19002	90.00	90.53	0.53	0.21	2.95	3.92	0.1	18	7.8	New Queen Lens
LTDD19002	90.53	90.90	0.37	0.05	1.63	3.35	0.2	7	5.2	New Queen Lens
LTDD19002	90.90	91.80	0.90	0.78	11.92	20.24	1.0	36	34.9	New Queen Lens
LTDD19002	91.80	92.55	0.75	0.32	5.66	9.09	0.3	16	15.8	New Queen Lens
LTDD19002	92.55	93.50	0.95	0.80	9.11	14.81	0.3	25	26.4	New Queen Lens
LTDD19002	93.50	94.00	0.50	0.29	6.35	5.28	0.3	16	12.5	New Queen Lens
LTDD19002	94.00	94.76	0.76	0.12	1.47	2.85	0.1	4	4.7	New Queen Lens
LTDD19002	94.76	95.80	1.04	0.09	1.28	2.88	0.3	5	4.6	New Queen Lens
LTDD19002	95.80	97.00	1.20	0.02	0.19	0.47	0.1	2	0.8	
LTDD19002	97.00	98.00	1.00	0.00	0.01	0.04	0.0	0	0.1	

Downhole width only

Zn Eq. % not reported for zones identified as copper dominant mineralisation

LML: Liontown Main Lens

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19002	182.60	183.10	0.50	7.77	0.26	0.37	0.1	58	27.7	LML Lower (Contact)
LTDD19002	183.10	183.60	0.50	0.48	1.63	7.55	0.1	19	11.1	LML Lower (Contact)
LTDD19002	183.60	184.00	0.40	1.03	4.39	23.19	0.1	42	31.7	LML Lower (Contact)
LTDD19002	184.00	184.58	0.58	1.57	6.87	16.58	0.1	34	28.8	LML Lower (Contact)
LTDD19002	184.58	184.82	0.24	0.19	2.85	5.28	0.1	14	8.9	LML Lower (Contact)
LTDD19002	184.82	185.22	0.40	0.11	2.28	4.84	0.2	10	7.6	LML Lower (Contact)
LTDD19002	185.22	186.36	1.14	6.70	0.69	1.30	0.1	52	25.4	LML Lower (Contact)
LTDD19002	186.36	186.70	0.34	0.27	0.36	2.24	0.1	10	3.7	LML Lower (Contact)
LTDD19002	186.70	187.30	0.60	0.37	0.57	3.77	0.2	13	5.9	LML Lower (Contact)
LTDD19002	216.00	217.00	1.00	0.20	0.75	3.64	0.1	20	5.5	
LTDD19002	217.00	217.63	0.63	0.14	0.57	2.30	0.1	13	3.7	
LTDD19002	217.63	218.05	0.42	0.04	0.56	2.25	0.1	13	3.3	
LTDD19002	218.05	218.80	0.75	0.86	11.79	22.15	0.5	94	38.2	LML Central
LTDD19002	218.80	219.10	0.30	0.60	4.87	8.47	0.2	60	16.5	LML Central
LTDD19002	219.10	220.00	0.90	0.05	0.47	0.79	0.0	4	1.5	
LTDD19002	220.00	221.00	1.00	0.07	0.48	0.69	0.0	5	1.5	
LTDD19002	221.00	221.70	0.70	0.14	0.28	0.99	0.0	6	1.9	
LTDD19002	221.70	222.15	0.45	0.27	0.03	4.80	0.1	8	5.9	
LTDD19002	233.95	234.50	0.55	0.05	0.35	0.70	0.4	10	1.6	
LTDD19002	234.50	235.10	0.60	0.25	1.25	1.96	1.9	175	9.2	LML Upper
LTDD19002	235.10	235.74	0.64	0.43	4.55	11.35	1.2	163	21.5	LML Upper
LTDD19002	235.74	236.50	0.76	0.18	0.88	8.11	0.2	24	10.2	LML Upper
LTDD19002	236.50	237.00	0.50	0.74	4.48	15.36	0.5	61	23.6	LML Upper
LTDD19002	237.00	237.80	0.80	0.68	6.62	15.16	1.4	138	27.5	LML Upper
LTDD19002	237.80	238.32	0.52	0.60	5.34	15.88	0.6	114	25.8	LML Upper
LTDD19002	238.32	238.62	0.30	0.25	1.60	8.99	0.3	21	11.9	LML Upper
LTDD19002	238.62	239.60	0.98	0.01	0.05	0.13	0.0	1	0.3	

Downhole width only

Zn Eq. % not reported for zones identified as copper dominant mineralisation

LML: Liontown Main Lens

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation		
LTDD19003	107.92	108.40	0.48	0.3	2.8	7.2	0.4	99	13.5	Liontown Main Lens		
LTDD19003	108.40	108.94	0.54	0.2	1.4	4.4	0.6	54	7.9	Liontown Main Lens		
LTDD19003	108.94	109.85	0.91	0.1	1.0	2.7	0.1	38	5.1	Liontown Main Lens		
LTDD19003	109.85	110.00	0.15	<i>Zone of core loss – assigned zero grade</i>								
LTDD19003	110.00	110.80	0.80	0.0	0.0	0.7	0.0	1	0.8	Liontown Main Lens		
LTDD19003	110.80	111.65	0.85	0.0	0.0	0.3	0.0	1	0.4	Liontown Main Lens		
LTDD19003	111.65	112.30	0.65	0.0	0.1	2.4	0.1	3	2.7	Liontown Main Lens		
LTDD19003	112.30	113.10	0.80	0.1	0.8	3.6	0.1	7	4.8	Liontown Main Lens		
LTDD19003	113.10	113.64	0.54	0.1	1.6	8.5	0.5	25	11.2	Liontown Main Lens		
LTDD19003	113.64	114.00	0.36	0.1	0.6	4.5	0.2	28	6.1	Liontown Main Lens		
LTDD19003	114.00	114.40	0.40	0.0	0.0	0.6	0.1	3	0.7	Liontown Main Lens		
LTDD19003	114.40	115.40	1.00	<i>Zone of core loss – assigned zero grade</i>								
LTDD19003	115.40	116.35	0.95	0.4	0.5	7.4	0.3	27	9.8	Liontown Main Lens		
LTDD19003	116.35	116.90	0.55	<i>Zone of core loss – assigned zero grade</i>								
LTDD19003	116.90	117.80	0.90	0.0	0.1	4.6	0.1	6	5.0	Liontown Main Lens		
LTDD19003	117.80	119.90	2.10	<i>Zone of core loss – assigned zero grade</i>								
LTDD19003	119.90	120.45	0.55	0.0	0.1	0.6	0.1	3	0.8			
LTDD19003	120.45	120.70	0.25	0.1	0.3	1.2	0.1	10	2.0			
LTDD19003	120.70	121.30	0.60	0.0	0.2	0.9	0.1	6	1.4			
LTDD19003	121.60	122.25	0.65	0.0	0.3	1.7	0.1	6	2.2			
LTDD19003	122.25	122.90	0.65	0.0	0.2	2.7	0.1	4	3.0			
LTDD19003	122.90	123.90	1.00	0.0	0.3	0.9	0.0	2	1.2			
LTDD19003	123.90	124.50	0.60	0.0	0.2	0.8	0.0	2	1.1			
LTDD19003	124.50	125.11	0.61	0.0	0.1	0.4	0.0	1	0.6			
LTDD19003	125.11	125.88	0.77	0.0	0.2	0.6	0.0	2	0.9			
LTDD19003	125.88	126.50	0.62	0.0	0.2	0.5	0.0	2	0.7			
LTDD19003	126.50	127.40	0.90	0.0	0.3	0.9	0.1	2	1.3			
LTDD19003	127.40	128.00	0.60	0.0	0.2	1.0	0.1	2	1.3			
LTDD19003	128.00	129.00	1.00	0.0	0.3	1.0	0.1	2	1.5			
LTDD19003	129.00	130.00	1.00	0.0	0.2	1.4	0.0	2	1.7			
LTDD19003	130.00	131.00	1.00	0.0	0.4	1.0	0.0	2	1.5			
LTDD19003	131.00	131.73	0.73	0.1	0.5	1.8	0.0	4	2.6			
LTDD19003	131.73	132.50	0.77	0.0	0.0	0.2	0.0	1	0.3			
LTDD19003	132.50	133.50	1.00	0.3	2.1	6.6	0.1	10	9.7	LML Lower (Contact)		
LTDD19003	133.50	134.45	0.95	0.7	1.4	10.6	0.1	14	14.5	LML Lower (Contact)		
LTDD19003	134.45	135.70	1.25	0.4	1.8	9.3	0.1	12	12.5	LML Lower (Contact)		
LTDD19003	135.70	136.00	0.30	1.7	0.2	38.9	0.1	25	45.4	LML Lower (Contact)		
LTDD19003	136.00	136.48	0.48	1.9	0.1	13.1	0.1	18	19.9	LML Lower (Contact)		
LTDD19003	136.48	137.28	0.80	0.3	0.1	1.2	0.0	6	2.4			
Downhole width only												
Zn Eq. % not reported for zones identified as copper dominant mineralisation												
LML: Liontown Main Lens												



Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation		
LTDD19004	77.50	77.90	0.40	0.5	0.6	0.2	0.1	6	-			
LTDD19004	77.90	78.80	0.90	3.8	6.0	0.4	9.2	21	-	Liontown Main Lens		
LTDD19004	79.40	80.00	0.60	0.8	6.5	0.3	0.6	5	-	Liontown Main Lens		
LTDD19004	80.00	80.60	0.60	0.5	6.7	0.2	0.8	13	-	Liontown Main Lens		
LTDD19004	82.60	83.05	0.45	0.3	8.2	0.2	0.7	23	-	Liontown Main Lens		
LTDD19004	83.05	83.60	0.55	0.7	10.3	0.4	3.4	22	-	Liontown Main Lens		
LTDD19004	83.60	84.00	0.40	1.8	2.1	1.2	0.4	1	-	Liontown Main Lens		
LTDD19004	84.00	84.30	0.30	1.4	1.9	1.0	1.9	1	-	Liontown Main Lens		
LTDD19004	85.60	86.60	1.00	1.1	1.1	0.9	0.1	0	-	Liontown Main Lens		
LTDD19004	86.60	87.20	0.60	0.7	0.8	0.7	0.2	1	-	Liontown Main Lens		
LTDD19004	87.80	88.30	0.50	0.7	4.0	0.8	0.0	3	-	Liontown Main Lens		
LTDD19004	88.30	89.00	0.70	0.1	0.2	0.1	0.0	1	-			
LTDD19004	202.60	203.00	0.40	0.1	0.0	0.3	0.0	1				
LTDD19004	203.00	205.60	2.60	Void – Old Workings								
LTDD19004	205.60	206.06	0.46	4.4	0.3	1.0	0.6	25				
LTDD19004	206.06	206.80	0.74	3.0	0.0	0.4	0.2	5				
LTDD19004	206.80	207.40	0.60	0.1	0.0	0.1	0.2	1				

*\*bdl – below detection limit*

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19005	36.00	36.70	0.70	0.0	0.3	0.7	0.1	1	1.1	
LTDD19005	36.70	37.04	0.34	0.2	7.6	19.1	1.8	27	28.1	New Queen Lens
LTDD19005	37.04	37.90	0.86	0.1	3.1	7.6	0.3	12	11.2	New Queen Lens
LTDD19005	37.90	38.50	0.60	0.4	9.3	17.1	2.6	30	28.7	New Queen Lens
LTDD19005	38.70	39.15	0.45	0.3	4.0	5.8	6.8	16	14.0	New Queen Lens
LTDD19005	39.15	39.60	0.45	0.1	2.2	1.7	0.4	6	4.4	New Queen Lens
LTDD19005	39.60	40.00	0.40	0.1	1.4	1.8	0.2	4	3.6	New Queen Lens
LTDD19005	40.00	41.00	1.00	0.1	0.8	1.0	0.1	4	2.1	New Queen Lens
LTDD19005	41.00	41.90	0.90	0.2	1.6	3.7	0.2	7	6.1	New Queen Lens
LTDD19005	41.90	42.80	0.90	0.1	2.0	5.3	0.2	9	7.8	New Queen Lens
LTDD19005	42.80	43.50	0.70	0.2	2.1	3.6	0.6	11	6.7	New Queen Lens
LTDD19005	43.50	44.15	0.65	0.5	4.2	27.8	1.6	41	35.0	New Queen Lens
LTDD19005	44.15	44.90	0.75	0.3	4.2	26.4	1.2	32	32.5	New Queen Lens
LTDD19005	44.90	45.60	0.70	0.3	0.2	23.1	0.4	7	24.5	New Queen Lens
LTDD19005	45.60	46.70	1.10	0.2	1.5	5.6	0.8	8	8.1	New Queen Lens
LTDD19005	46.70	47.10	0.40	0.0	1.3	5.1	0.2	7	6.6	New Queen Lens
LTDD19005	47.10	47.40	0.30	0.0	1.8	5.6	0.4	9	7.7	New Queen Lens
LTDD19005	47.40	47.80	0.40	0.0	2.4	6.1	0.7	10	8.9	New Queen Lens
LTDD19005	47.80	48.20	0.40	2.7	0.2	43.7	3.9	13	55.2	New Queen Lens
LTDD19005	48.20	49.00	0.80	0.2	1.4	2.5	0.2	8	4.5	New Queen Lens
LTDD19005	49.00	49.90	0.90	0.3	2.7	4.2	0.7	12	8.2	New Queen Lens
LTDD19005	49.90	50.50	0.60	0.9	10.5	17.2	1.0	34	31.0	New Queen Lens
LTDD19005	50.50	51.00	0.50	0.5	2.5	8.6	0.5	17	13.3	New Queen Lens
LTDD19005	51.00	51.85	0.85	0.4	4.0	7.9	0.4	18	13.4	New Queen Lens
LTDD19005	51.85	53.00	1.15	0.1	0.7	1.4	0.1	3	2.5	New Queen Lens
LTDD19005	53.00	53.70	0.70	0.0	0.3	0.7	0.0	3	1.3	New Queen Lens
LTDD19005	53.70	54.25	0.55	0.5	4.2	6.4	0.3	20	12.6	New Queen Lens
LTDD19005	54.25	55.04	0.79	0.3	1.2	1.7	0.1	6	4.0	New Queen Lens
LTDD19005	55.04	56.00	0.96	0.1	1.4	2.9	0.1	5	4.6	New Queen Lens
LTDD19005	56.00	56.42	0.42	0.1	2.1	3.9	0.1	7	6.3	New Queen Lens
LTDD19005	56.42	56.70	0.28	0.1	3.9	9.1	0.2	12	13.2	New Queen Lens
LTDD19005	56.70	57.15	0.45	0.1	2.5	9.5	0.2	10	12.6	New Queen Lens
LTDD19005	57.15	57.70	0.55	0.1	2.1	4.9	0.2	9	7.4	New Queen Lens
LTDD19005	57.70	58.50	0.80	0.0	1.7	3.7	0.2	8	5.6	New Queen Lens
LTDD19005	58.50	59.00	0.50	0.1	3.3	5.1	0.3	13	8.7	New Queen Lens
LTDD19005	59.00	60.15	1.15	0.0	1.3	3.8	0.2	6	5.2	New Queen Lens
LTDD19005	60.15	60.70	0.55	0.1	4.8	10.6	0.5	13	16.0	New Queen Lens
LTDD19005	60.70	61.00	0.30	0.4	7.3	11.1	7.6	17	23.0	New Queen Lens
LTDD19005	61.00	62.05	1.05	0.1	1.4	1.8	0.4	5	3.7	New Queen Lens
LTDD19005	62.05	62.55	0.50	0.1	1.1	1.4	0.7	5	3.3	New Queen Lens
LTDD19005	62.55	63.50	0.95	0.1	1.3	1.8	0.2	4	3.5	New Queen Lens
LTDD19005	63.50	64.50	1.00	0.3	3.4	6.0	0.4	11	10.6	New Queen Lens
LTDD19005	64.50	65.00	0.50	0.2	2.6	3.6	1.8	9	7.9	New Queen Lens
LTDD19005	65.00	66.00	1.00	0.4	4.9	9.0	1.1	20	15.9	New Queen Lens
LTDD19005	66.00	67.00	1.00	0.1	1.6	3.5	8.6	14	9.9	New Queen Lens
LTDD19005	67.00	68.00	1.00	0.1	1.9	3.7	3.1	15	7.7	New Queen Lens
LTDD19005	68.00	68.50	0.50	0.1	1.5	3.0	0.6	12	5.2	New Queen Lens
LTDD19005	68.50	68.70	0.20	0.1	1.3	2.8	0.3	15	4.7	New Queen Lens
LTDD19005	68.70	70.00	1.30	0.1	1.2	2.8	0.1	17	4.6	New Queen Lens

\*bdl – below detection limit

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19005	70.00	70.60	0.60	0.0	0.9	1.9	0.2	13	3.2	New Queen Lens
LTDD19005	70.60	71.00	0.40	0.0	0.7	1.2	0.1	11	2.3	New Queen Lens
LTDD19005	71.00	72.00	1.00	0.1	0.7	1.3	0.1	12	2.4	New Queen Lens
LTDD19005	72.00	73.00	1.00	0.0	0.9	1.8	0.1	17	3.3	New Queen Lens
LTDD19005	73.00	74.00	1.00	0.1	1.9	4.4	2.6	27	8.4	New Queen Lens
LTDD19005	74.00	75.00	1.00	0.1	2.3	5.2	1.7	27	9.3	New Queen Lens
LTDD19005	75.00	76.00	1.00	0.1	1.1	1.9	0.6	12	3.7	New Queen Lens
LTDD19005	76.00	77.00	1.00	0.1	1.4	3.2	0.3	14	5.4	New Queen Lens
LTDD19005	77.00	78.00	1.00	0.0	1.0	2.6	0.6	14	4.2	New Queen Lens
LTDD19005	78.00	79.00	1.00	0.0	0.8	1.6	3.1	40	4.9	New Queen Lens
LTDD19005	79.00	80.00	1.00	0.0	0.2	0.3	0.1	12	0.9	New Queen Lens
LTDD19005	80.00	81.00	1.00	0.0	0.1	0.2	0.1	5	0.4	New Queen Lens
LTDD19005	81.00	81.50	0.50	0.0	0.0	0.1	0.1	1	0.2	New Queen Lens
LTDD19005	81.50	82.20	0.70	0.0	0.0	0.2	0.1	1	0.3	New Queen Lens
LTDD19005	82.20	82.60	0.40	0.1	2.9	5.5	0.8	30	9.7	New Queen Lens
LTDD19005	82.60	82.90	0.30	0.0	0.5	0.6	0.2	8	1.3	New Queen Lens
LTDD19005	82.90	84.00	1.10	0.1	0.8	1.8	4.3	16	5.4	New Queen Lens
LTDD19005	84.00	85.00	1.00	0.1	1.8	3.9	1.9	34	7.8	New Queen Lens
LTDD19005	85.00	86.00	1.00	0.0	0.6	1.2	1.0	15	2.7	New Queen Lens
LTDD19005	86.00	87.00	1.00	0.1	1.6	3.3	6.7	28	9.1	New Queen Lens
LTDD19005	87.00	88.00	1.00	0.0	0.3	0.6	1.9	11	2.1	New Queen Lens
LTDD19005	88.00	89.00	1.00	0.0	0.0	0.1	0.0	3	0.2	
<i>*bdl – below detection limit</i>										

## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample retrospectivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling (DD) techniques were used to obtain samples</li> <li>No samples were collected from mud rotary drilling.</li> <li>Diamond core was placed in core trays for logging and sampling. Half core samples were nominated by the geologist from diamond core based on visual inspection of mineralisation. Intervals ranged from 0.15 to 1.5m based on geological boundaries</li> <li>Diamond samples were sawn in half using an onsite core saw. All Red River samples were sent to Intertek Genalysis Laboratories Townsville.</li> <li>Samples were crushed to sub 6mm, split and pulverised to sub 75µm in order to produce a representative sub-sample for analysis.</li> <li>Analysis of all Red River samples consisted of a four-acid digest and Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) for the following elements; Ag, As, Ba, Bi, Ca, Cu, Fe, K, Mg, Mn, Na, Pb, S, Sb, Ti, Zn, &amp; Zr was undertaken. A selection of samples was also assayed for Au using a 25g Fire Assay technique</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Red River diamond drilling techniques consist of;</li> <li>HQ3 diamond core drilling until competent rock</li> <li>NQ2 diamond core and navigational drilling for the remainder of the drill holes.</li> <li>Reverse circulation drilling techniques was completed using a 5.5 bit</li> <li>Reverse circulation bit size and drill configuration of historic holes is not known.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery is measured and recorded by company trained geology technicians</li> <li>Minimal core loss mostly at the top of the drill hole has been recorded at Liantown</li> <li>Recovery in ore zones from Liantown Resources Limited diamond drilling is typically 100%</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have</li> </ul>	<ul style="list-style-type: none"> <li>Holes are logged to a level of detail that would</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> <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>	<p>support mineral resource estimation.</p> <ul style="list-style-type: none"> <li>• Qualitative logging includes lithology, alteration and textures</li> <li>• Quantitative logging includes sulphide and gangue mineral percentages</li> <li>• All drill core and RC chips were photographed</li> <li>• All drill holes have been logged in full</li> <li>• RC drilling contractors adjust their drilling approach to specific conditions to maximise sample recovery.</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<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, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core was sawn, and half core sent for assay</li> <li>• Sample preparation is industry standard, occurring at an independent commercial laboratory which has its own internal Quality Assurance and Quality Control procedures</li> <li>• Samples were crushed to sub 6mm, split and pulverised to sub 75µm in order to produce a representative sub-sample for analysis</li> <li>• Laboratory certified standards were used in each sample batch</li> <li>• The sample sizes are considered to be appropriate to correctly represent the mineralisation style</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The assay methods employed are considered appropriate for near total digestion</li> <li>• Laboratory certified standards were used in each sample batch</li> <li>• Certified standards returned results within an acceptable range</li> <li>• No field duplicates are submitted for diamond core.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Laboratory results have been reviewed by Company geologists and laboratory technicians</li> <li>• No twinned holes were drilled for this data set</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	
<b>Location of data points</b>	<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>A portion of Red River collars surveyed with RTKGPS and others by hand-held GPS as noted in Table 2. Re-survey of 105 historic drill collars was carried out by Liontown Resources Limited.</li> <li>Down hole surveys conducted with digital magnetic multi-shot camera at 20-40m intervals by Red River Resources. A portion of drill holes were surveyed by multi-shot survey</li> <li>Coordinate system used is MGA94 Zone 55</li> <li>Topographic control is based on a detailed 3D Digital Elevation Model</li> </ul>
<b>Data spacing and distribution</b>	<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>The current drill spacing is approximately 40-150m</li> <li>No sample compositing has been applied</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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 holes are orientated perpendicular to the perceived strike of the host lithologies where possible</li> <li>The orientation of the multiple lenses varies resulting in some holes resulting in less than perpendicular intersections</li> <li>Drill holes are drilled at a dip based on logistics and dip of anomaly to be tested</li> <li>The orientation of the drilling is designed to not bias sampling</li> <li>Orientation of the HQ3 core was undertaken to define structural orientation</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples have been overseen by company staff during transport from site to Intertek Genalysis laboratories, Townsville.</li> </ul>
<b>Audits or reviews</b>	<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 audits or reviews have been carried out at this point</li> </ul>

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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>The drilling was conducted on Mining Lease 10277 and Exploration Permit EPM 14161</li> <li>ML 10277 and EPM 14161 are held by Cromarty Pty Ltd. (a wholly owned subsidiary of Red River Resources) and forms part of Red River's Thalanga Zinc Project</li> <li>Red River engaged Native Title Claimants, the Gudjalla People to conduct cultural clearances of drill pads and access tracks</li> <li>The Exploration Permits are in good standing</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Historic Exploration was carried out by Esso Exploration, Liontown Resources, Nickle Mines, Great Mines &amp; Pan Continental Mining. Work programs included drilling and geophysics</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The exploration model is Volcanic Hosted Massive Sulphide (VHMS) base metal mineralisation</li> <li>The regional geological setting is the Mt Windsor Volcanic Sub-province, consisting of Cambro-Ordovician marine volcanic and volcano-sedimentary sequences</li> </ul>
<b>Drill hole Information</b>	<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, including, easting and northing, elevation or RL, dip and azimuth, down hole length, interception depth and hole length.</li> <li>If the exclusion of this information is justified the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>See Table 2 – Drill Hole Details</li> <li>See Appendix 1 – Assay Details</li> </ul>
<b>Data aggregation methods</b>	<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>Interval length weighted assay results are reported</li> <li>Significant Intercepts relate to assay results &gt; 5% Zn Equivalent.</li> <li>Zn equivalent formula utilised is: <math>Zn\% + (Cu\% * 3.3) + (Pb\% * 0.9) + (Au_{ppm} * 0.5) + (Ag_{ppm} * 0.025)</math></li> <li>Where core loss occurs the average length-weighted grade of the two adjacent samples were attributed to the interval for the purpose of calculating intersection. The maximum interval of missing core incorporated in the reported intersection is 1 metre.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <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>	<ul style="list-style-type: none"> <li>• The mineralisation is interpreted to be dipping at approximately 65 to 90 degrees, drill holes have been designed to intercept the mineralisation as close to perpendicular as possible.</li> <li>• Down hole intercepts are reported. True widths are likely to be approximately 30 to 80% of the down hole widths.</li> </ul>
<b>Diagrams</b>	<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 plans and sections.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to plans and sections within report</li> </ul>
<b>Balanced reporting</b>	<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>• The accompanying document is considered to represent a balanced report</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All meaningful and material data is reported</li> </ul>
<b>Further work</b>	<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> </ul>	<ul style="list-style-type: none"> <li>• Further Drilling at Lione town is ongoing</li> </ul>