



Red River hits high-grade gold and silver at Thalanga

Highlights:

- Outstanding results from New Queen Lens as part of RVR's Liontown drilling, highlighting gold and silver-rich mineralisation at shallow depths
- Peak assay results of up to 39.3 g/t Au and 2,750 g/t Ag. Notable drill intersections include:
- LTDD19015 intersected 28.50m @ 0.2% Cu, 2.2% Pb, 4.2% Zn, 1.7 g/t Au & 171 g/t Ag (11.8% Zn Eq.) from 69.80m down-hole; including:
 - 3.85m @ 0.6% Cu, 7.6% Pb, 15.8% Zn, 4.5 g/t Au & 218 g/t Ag (32.4% Zn Eq.) from 84.15m down-hole; and
 - 1.00m @ 0.5% Cu, 3.3% Pb, 4.2% Zn, 5.9 g/t Au & 2,750 g/t Ag (80.5% Zn Eq.) from 94.00m down-hole and
- LTDD19018 intersected 5.05m @ 0.2% Cu, 2.4% Pb, 4.0% Zn, 3.3 g/t Au & 25 g/t Ag (9.0% Zn Eq.) from 77.45m down-hole;
- LTDD19021 intersected 3.55m @ 0.2% Cu, 3.0% Pb, 5.9% Zn, 6.3 g/t Au & 112 g/t Ag (15.3% Zn Eq.) from 78.35m down-hole; including
 - 0.47m @ 1.3% Cu, 15.5% Pb, 30.3% Zn, 39.3 g/t Au & 352 g/t Ag (77.0% Zn Eq.) from 78.80 m down-hole
- Results from a further 16 holes expected shortly
- JORC 2012 Resource Estimate will be updated early 2020 and mining studies to follow
- The recent exploration success at Liontown has materially upgraded the likelihood of development eventuating, which has significant implications for Thalanga operation

Red River Resources Limited (ASX: RVR) is pleased to report further high-grade assay results up to 39.3 g/t Au and 2,750 g/t Ag from drilling at the New Queen Lens (Liontown Project), part of Red River's Thalanga Operations in Northern Queensland.

The Liontown Project comprises polymetallic volcanic hosted massive sulphide (VHMS) deposits (New Queen Lens, Main Lens and Liontown East) and the Carrington Lode, a gold-rich copper mineralised vein system (intrusion-related gold-copper vein system – IRGS). It has a current total Mineral Resource of 3.6Mt at 10.0% Zinc Equivalent.

Red River commenced drilling at Liontown in June 2019 and has completed 34 drill holes (5,278m drilled) to date, with assay results received for 18 holes. Red River is awaiting assays for the remaining 16 holes, which are expected shortly.

New Queen Lens Drilling Results

The New Queens Lens is a large body (approximately 600m by 250m by 5m) of polymetallic (Cu-Pb-Zn) VHMS mineralisation with significant precious metal (gold and silver) credits. Drilling to date has returned wide intercepts of high-grade polymetallic fresh sulphide mineralisation with material precious metals, particularly gold, from within 30m of the surface.

Red River is pleased to report the assay results from the latest seven drill holes completed at the New Queen Lens (Liontown Project). Assay results from this group of drill holes (refer to Table 1) highlight the precious metal-rich nature of the VHMS mineralisation, with notable intercepts including:

- LTDD19015 intersected 28.50m @ 0.2% Cu, 2.2% Pb, 4.2% Zn, 1.8 g/t Au & 171 g/t Ag (11.8% Zn Eq.) from 69.80m down-hole; including
 - 3.85m @ 0.6% Cu, 7.6% Pb, 15.8% Zn, 4.5 g/t Au & 218 g/t Ag (32.4% Zn Eq.) from 84.15m down-hole; and
 - 1.00m @ 0.5% Cu, 3.3% Pb, 4.2% Zn, 5.9 g/t Au & 2,750 g/t Ag (80.5% Zn Eq.) from 94.00m down-hole
- LTDD19018 intersected 5.05m @ 0.2% Cu, 2.4% Pb, 4.0% Zn, 3.3 g/t Au & 25 g/t Ag (9.0% Zn Eq.) from 77.45m down-hole;
- LTDD19021 intersected 3.55m @ 0.2% Cu, 3.0% Pb, 5.9% Zn, 6.3 g/t Au & 112 g/t Ag (15.3% Zn Eq.) from 78.35m down-hole; including
 - 0.47m @ 1.3% Cu, 15.5% Pb, 30.3% Zn, 39.3 g/t Au & 352 g/t Ag (77.0% Zn Eq.) from 78.80 m down-hole.

Table 1 Material drill hole assay summary (current drilling), Liontown Project (New Queen Lens Sulphide)

Hole ID	From	To	Down Hole Intersection	True Width Estimate	Cu	Pb	Zn	Au	Ag	Zn Eq.
	(m)	(m)	(m)	(m)	(%)	(%)	(%)	(g/t)	(g/t)	(%)
LTDD19014	65.20	86.00	20.80	20.80	0.1	0.8	2.4	0.4	32	4.4
inc.	65.20	69.15	3.95	3.95	0.0	0.8	3.0	1.2	127	7.6
LTDD19015	69.80	98.30	28.50	13.37	0.2	2.2	4.2	1.7	171	11.8
inc.	84.15	88.00	3.85	1.90	0.6	7.6	15.8	4.5	218	32.4
inc.	94.00	95.00	1.00	0.46	0.5	3.3	4.2	5.9	2,750	80.5
LTDD19016	67.00	69.80	2.80	2.23	0.2	2.6	4.9	2.2	85	11.0
LTDD19017	38.05	47.00	8.95	7.98	0.3	2.7	4.7	0.7	106	11.1
inc.	41.00	44.28	3.28	2.85	0.6	3.7	8.2	1.2	194	18.9
LTDD19018	77.45	87.35	9.90	8.06	0.1	1.5	2.8	1.7	15	5.8
inc.	77.45	82.50	5.05	4.83	0.2	2.4	4.0	3.3	25	9.0
LTDD19019	67.00	71.25	4.25	3.69	0.1	1.5	4.8	0.7	34	7.6
LTDD19021	78.35	81.90	3.55	3.38	0.2	2.6	5.4	5.3	95	13.4
inc.	78.80	79.27	0.47	0.40	1.3	15.5	30.3	39.3	352	77.0

New Queen Lens Development

Red River has commenced remodelling the New Queen Lens using the drill results received to date, and this process will continue as results from the remaining 16 holes are received. The updated block model will be used to progress a preliminary mining study for the New Queen Lens expected to be completed 1H in 2020. The majority of the known New Queen Lens mineralisation falls within an existing Mining Lease (ML10277) which is held by Red River's wholly owned subsidiary, Cromarty Resources Pty Ltd.

Figure 1 New Queen Lens Long Section

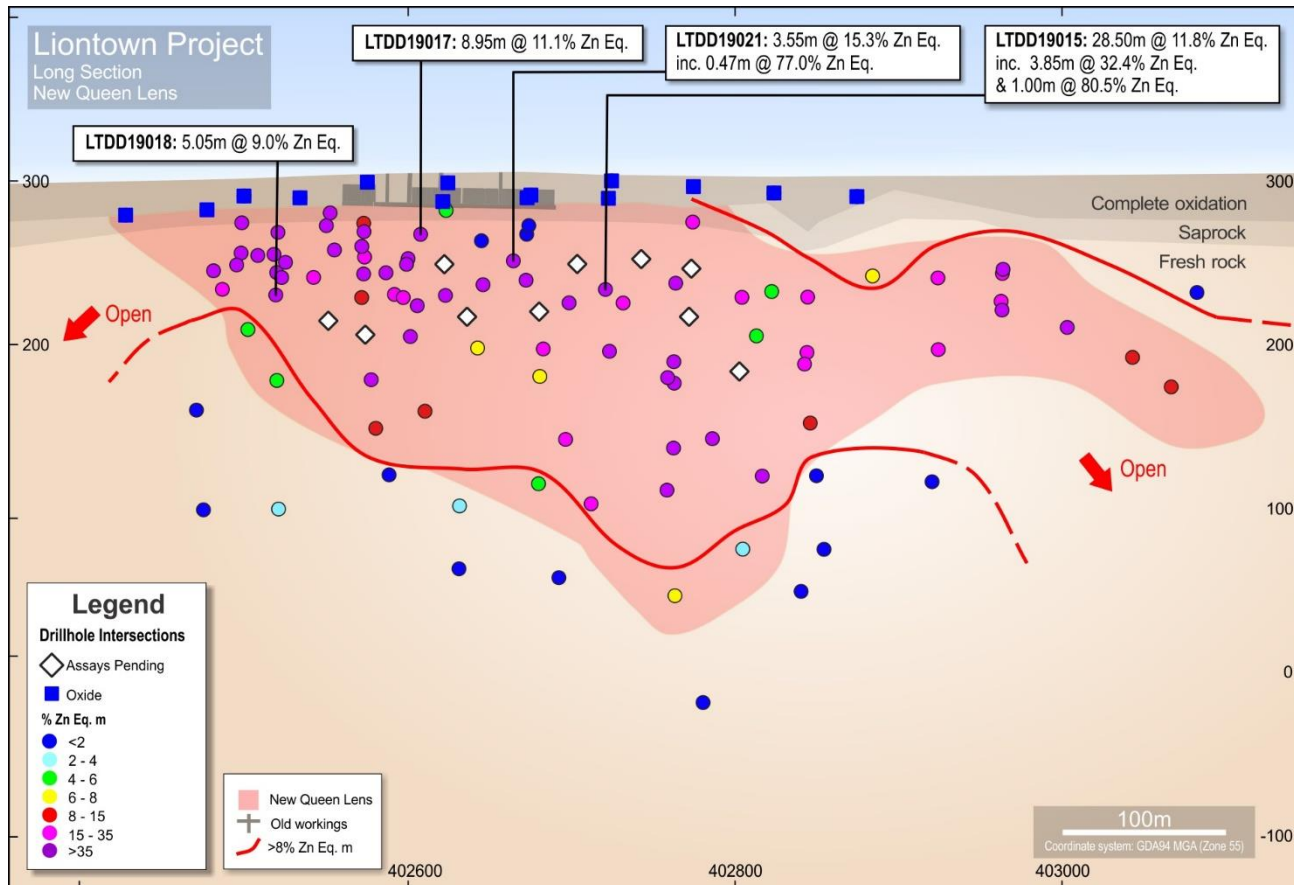


Figure 2 Liontown Project Location

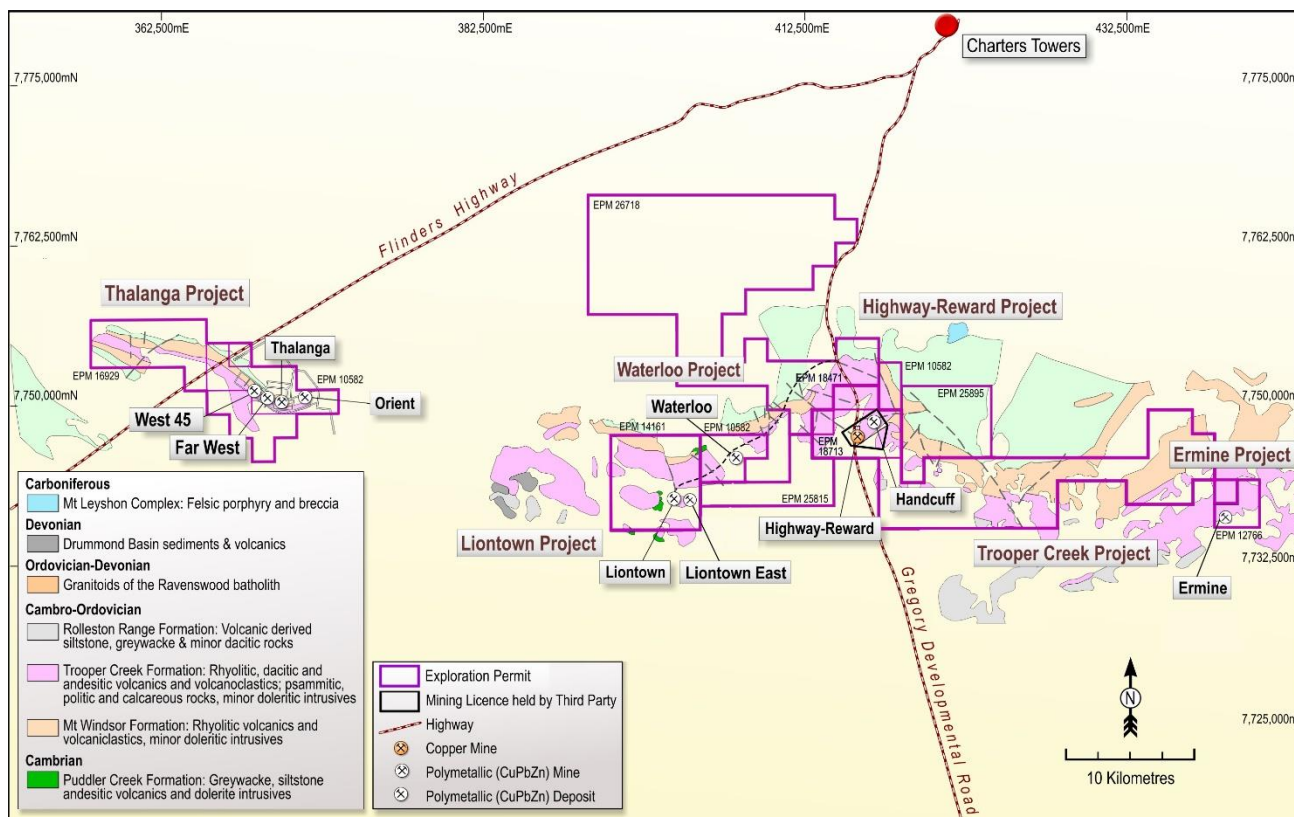


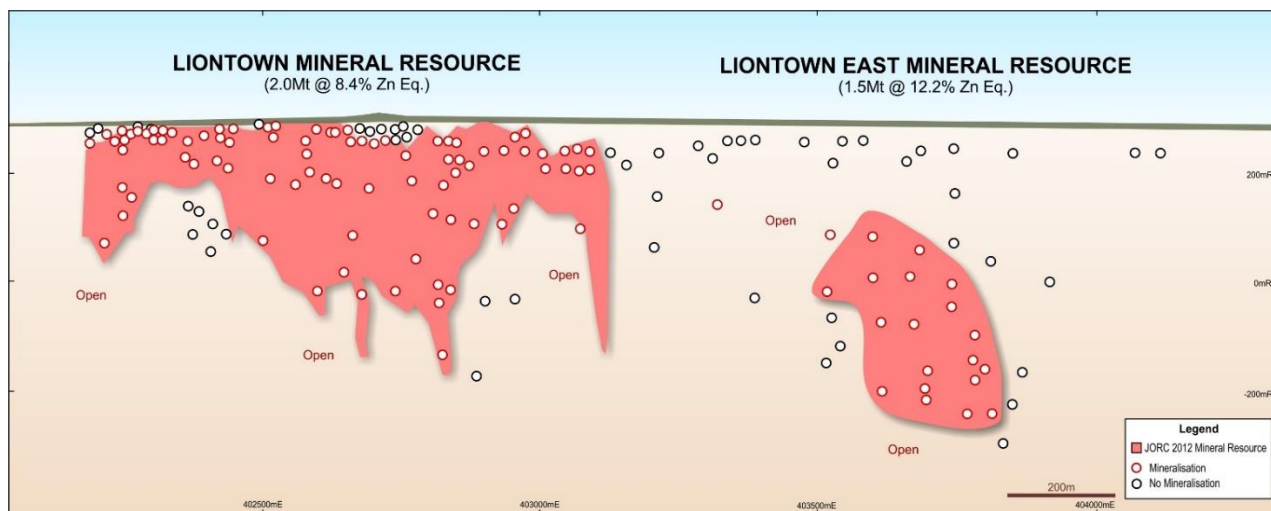
Table 2 Liontown JORC Mineral Resource

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
	Subtotal	2,038	0.5	1.6	4.6	0.8	25	8.4
Liontown East	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	1,515	0.5	2.5	7.3	0.7	29	12.2
	Subtotal	1,515	0.5	2.5	7.3	0.7	29	12.2
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
	Total	3,553	0.5	2.0	5.7	0.8	27	10.0

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 3 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

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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:

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

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

Table 3 Drill hole information summary, Liantown Project

Hole ID	Depth (m)	Dip	Azi (MGA)	East (MGA)	North (MGA)	RL (MGA)	Lease ID	Hole Status
LTDD19001	347.78	-49	1	402485	7742710	291	EPM14161	Completed
LTDD19002	257.7	-51	185	402500	7742947	300	ML10277	Completed
LTDD19003	176.5	-61	353	402484	7742763	293	ML10277	Completed
LTDD19004	214.2	-50	8	402459	7742788	295	ML10277	Completed
LTDD19005	224	-47	153	402500	7742947	300	ML10277	Completed
LTDD19007	173.4	-54	356	402586	7742788	294	ML10277	Completed
LTDD19008	279	-61	352	402623	7742789	294	ML10277	Completed
LTDD19010	222.48	-51	172	402642	7742948	306	ML10277	Completed
LTDD19011	158.8	-48	158	402500	7742947	300	ML10277	Completed
LTDD19012	83.9	-51	317	402558	7742906	302	ML10277	Completed
LTDD19013	144.5	-58	172	402642	7742948	306	ML10277	Completed
LTDD19014	116.4	-47	355	402593	7742857	299	ML10277	Completed
LTDD19015	204.8	-48	162	402700	7742957	306	EPM14161	Completed
LTDD19016	112.9	-55	353	402497	7742850	299	ML10277	Completed
LTDD19017	95.2	-58	348	402627	7742894	304	ML10277	Completed
LTDD19018	127.3	-55	33	402500	7742848	299	ML10277	Completed
LTDD19019	108.5	-53	345	402554	7742860	299	ML10277	Completed
LTDD19020	159.5	-66	357	402555	7742859	299	ML10277	Assays pending
LTDD19021	117.5	-52	345	402667	7742857	301	ML10277	Completed
LTDD19022	148.9	-48	189	402788	7742976	306	EPM14161	Assays pending
LTDD19023	150.7	-63	345	402667	7742857	301	EPM14161	Assays pending
LTDD19024	197.4	-57	166	402787.4	7742977	306	ML10277	Assays pending
LTDD19025	102.5	-50	327	402763.3	7742873	301	EPM14161	Assays pending
LTDD19026	93.6	-57	2	402772	7742873	301	EPM14161	Assays pending
LTDD19027	104.05	-48	358	402705	7742864	300	ML10277	Assays pending
LTDD19028	162.5	-52	350	402642	7742830	298	ML10277	Assays pending
LTDD19029	203.3	-47	349	402586	7742785	294	ML10277	Assays pending
LTDD19030	114.5	-53	5	402849	7742883	298	EPM14161	Assays pending
LTDD19031	120.5	-52	4	402810	7742875	302	EPM14161	Assays pending
LTDD19032	134.3	-50	11	402593	7742856	300	ML10277	Assays pending
LTDD19033	78.5	-50	10	402723	7742882	301	ML10277	Assays pending
LTDD19034	81.5	-53	355	402699	7742900	300	ML10277	Assays pending
LTDD19035	145	-56	335	402655	7742907	300	EPM14161	Assays pending
LTDD19036	116.5	-71	347	402626	7742894	304	ML10277	Assays pending

APPENDIX 2

Liontown Queen Lens Assay Details (LTDD19014)

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19014	65.20	65.70	0.50	0.0	0.9	3.6	0.5	280	11.7	Fresh Sulphide
LTDD19014	65.70	66.05	0.35	0.1	1.6	6.2	1.6	684	25.7	Fresh Sulphide
LTDD19014	66.05	67.05	1.00	0.0	0.1	3.5	0.0	5	3.8	Fresh Sulphide
LTDD19014	67.05	67.72	0.67	0.0	0.6	2.0	0.5	15	3.2	Fresh Sulphide
LTDD19014	68.10	68.75	0.65	0.0	0.1	0.4	0.9	24	1.6	Fresh Sulphide
LTDD19014	68.75	69.15	0.40	0.3	3.5	6.9	7.3	225	20.2	Fresh Sulphide
LTDD19014	69.15	70.15	1.00	0.1	1.4	2.4	1.9	42	5.9	Fresh Sulphide
LTDD19014	70.15	71.15	1.00	0.1	0.9	1.6	0.3	24	3.4	Fresh Sulphide
LTDD19014	71.15	72.15	1.00	0.0	0.4	0.5	0.1	4	1.0	Fresh Sulphide
LTDD19014	72.15	72.50	0.35	0.1	1.0	2.6	0.1	17	4.3	Fresh Sulphide
LTDD19014	72.50	73.50	1.00	0.0	0.0	0.1	0.1	1	0.1	Fresh Sulphide
LTDD19014	73.50	74.40	0.90	0.0	0.1	0.5	0.1	3	0.7	Fresh Sulphide
LTDD19014	74.40	74.90	0.50	0.1	0.0	3.4	0.2	6	4.1	Fresh Sulphide
LTDD19014	74.90	75.30	0.40	0.4	1.1	4.2	0.4	16	7.2	Fresh Sulphide
LTDD19014	75.30	75.60	0.30	0.4	5.7	10.4	0.4	35	18.0	Fresh Sulphide
LTDD19014	75.60	76.70	1.10	0.0	0.1	0.6	0.0	2	0.8	Fresh Sulphide
LTDD19014	76.70	77.20	0.50	0.1	0.0	4.5	0.2	6	5.1	Fresh Sulphide
LTDD19014	77.20	78.00	0.80	0.1	0.0	2.2	0.1	3	2.7	Fresh Sulphide
LTDD19014	78.00	79.00	1.00	0.1	0.0	2.8	0.1	7	3.3	Fresh Sulphide
LTDD19014	79.00	79.60	0.60	0.0	0.0	1.1	0.0	3	1.3	Fresh Sulphide
LTDD19014	79.60	80.20	0.60	0.0	0.2	1.6	0.0	5	2.0	Fresh Sulphide
LTDD19014	80.20	81.05	0.85	0.2	2.5	4.3	0.1	11	7.6	Fresh Sulphide
LTDD19014	81.05	82.00	0.95	0.1	2.1	2.9	0.0	7	5.3	Fresh Sulphide
LTDD19014	82.00	83.00	1.00	0.0	0.0	0.1	0.0	1	0.15	Fresh Sulphide
LTDD19014	83.00	83.70	0.70	0.0	0.4	1.2	0.0	1	1.62	Fresh Sulphide
LTDD19014	83.70	84.00	0.30	0.2	5.8	7.6	0.1	14	13.74	Fresh Sulphide
LTDD19014	84.00	85.00	1.00	0.0	0.4	0.6	0.0	1	1.02	Fresh Sulphide
LTDD19014	85.00	86.00	1.00	0.2	2.5	5.8	0.1	10	8.93	Fresh Sulphide
Downhole width only										

Liontown Queen Lens Assay Details (LTDD19015)

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19015	69.80	70.90	1.10	0.1	0.7	1.8	5.8	88	7.7	Fresh Sulphide
LTDD19015	70.90	71.85	0.95	0.3	2.6	2.7	0.6	30	7.0	Fresh Sulphide
LTDD19015	71.85	72.20	0.35	0.1	2.0	3.9	2.3	31	8.0	Fresh Sulphide
LTDD19015	72.20	73.00	0.80	0.1	1.0	1.2	0.6	9	2.9	Fresh Sulphide
LTDD19015	73.00	74.00	1.00	0.1	2.1	3.0	0.5	12	5.9	Fresh Sulphide
LTDD19015	74.00	75.10	1.10	0.0	0.9	2.1	0.4	4	3.3	Fresh Sulphide
LTDD19015	75.10	75.50	0.40	0.4	6.5	10.2	3.3	24	19.7	Fresh Sulphide
LTDD19015	75.50	76.00	0.50	0.1	0.6	3.7	0.4	2	4.6	Fresh Sulphide
LTDD19015	76.00	76.80	0.80	0.0	0.3	0.4	0.1	1	0.8	Fresh Sulphide
LTDD19015	76.80	77.65	0.85	0.0	0.3	0.2	0.0	1	0.6	Fresh Sulphide
LTDD19015	77.65	78.30	0.65	0.0	0.1	1.0	0.1	0	1.1	Fresh Sulphide
LTDD19015	78.30	78.60	0.30	0.0	0.1	1.5	0.1	1	1.7	Fresh Sulphide
LTDD19015	78.60	79.50	0.90	0.3	5.4	7.9	0.5	19	14.4	Fresh Sulphide
LTDD19015	79.50	80.50	1.00	0.1	2.4	3.7	0.3	13	6.7	Fresh Sulphide
LTDD19015	80.50	81.50	1.00	0.0	0.0	0.1	0.1	6	0.4	Fresh Sulphide
LTDD19015	81.50	82.50	1.00	0.0	0.2	0.3	0.1	5	0.6	Fresh Sulphide
LTDD19015	82.50	83.50	1.00	0.0	0.2	0.5	0.1	5	0.9	Fresh Sulphide
LTDD19015	83.50	84.15	0.65	0.0	0.3	0.6	0.1	35	1.9	Fresh Sulphide
LTDD19015	84.15	85.00	0.85	0.5	3.9	7.4	1.8	192	18.3	Fresh Sulphide
LTDD19015	85.00	86.00	1.00	0.4	7.7	13.9	1.9	138	26.5	Fresh Sulphide
LTDD19015	86.00	87.00	1.00	0.6	8.8	18.9	7.6	219	38.1	Fresh Sulphide
LTDD19015	87.00	88.00	1.00	0.8	9.6	21.9	6.5	318	44.5	Fresh Sulphide
LTDD19015	88.00	89.00	1.00	0.1	1.5	3.4	0.8	51	6.8	Fresh Sulphide
LTDD19015	89.00	90.00	1.00	0.0	0.1	0.4	0.7	11	1.1	Fresh Sulphide
LTDD19015	90.00	91.00	1.00	0.0	0.0	0.1	0.6	8	0.7	Fresh Sulphide
LTDD19015	91.00	92.00	1.00	0.0	0.7	1.9	4.3	52	6.2	Fresh Sulphide
LTDD19015	92.00	93.00	1.00	0.0	0.2	0.7	0.6	22	1.8	Fresh Sulphide
LTDD19015	93.00	94.00	1.00	0.2	1.6	2.6	0.7	616	20.2	Fresh Sulphide
LTDD19015	94.00	95.00	1.00	0.5	3.3	4.2	5.9	2750	80.5	Fresh Sulphide
LTDD19015	95.00	95.40	0.40	0.0	0.4	0.7	3.2	116	5.6	Fresh Sulphide
LTDD19015	95.60	96.45	0.85	0.0	0.3	0.4	1.3	47	2.6	Fresh Sulphide
LTDD19015	96.45	97.10	0.65	0.0	0.0	0.0	0.1	2	0.1	Fresh Sulphide
LTDD19015	97.10	97.80	0.70	0.4	6.4	13.7	5.8	240	29.6	Fresh Sulphide
LTDD19015	97.80	98.30	0.50	0.3	1.8	4.5	0.3	29	7.8	Fresh Sulphide
LTDD19015	98.30	99.00	0.70	0.1	1.0	2.2	0.2	12	3.8	Fresh Sulphide
LTDD19015	99.00	100.00	1.00	0.2	1.1	2.4	0.1	9	4.1	Fresh Sulphide
LTDD19015	100.00	101.00	1.00	0.1	0.7	2.0	0.1	6	3.0	Fresh Sulphide
Downhole width only										

Liontown Queen Lens Assay Details (LTDD19016)

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19016	67.00	68.00	1.00	0.0	0.3	0.6	1.2	64	3.2	Fresh Sulphide
LTDD19016	68.00	69.00	1.00	0.2	2.9	5.7	4.6	114	13.9	Fresh Sulphide
LTDD19016	69.00	69.80	0.80	0.3	5.0	9.3	0.5	76	17.0	Fresh Sulphide
Downhole width only										

Liontown Queen Lens Assay Details (LTDD19017)

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19017	37.55	38.05	0.50	0.0	0.8	2.7	0.2	27	4.4	Fresh Sulphide
LTDD19017	38.05	39.05	1.00	0.3	2.9	5.9	0.3	62	11.1	Fresh Sulphide
LTDD19017	39.05	39.40	0.35	0.0	0.2	0.8	0.0	4	1.0	Fresh Sulphide
LTDD19017	39.40	40.35	0.95	0.1	0.9	1.5	0.1	45	3.8	Fresh Sulphide
LTDD19017	40.35	40.60	0.25	0.1	0.6	1.2	0.1	33	2.9	Core Loss
LTDD19017	40.60	41.00	0.40	0.0	0.1	0.5	0.1	4	0.8	Fresh Sulphide
LTDD19017	41.00	41.40	0.40	2.2	9.2	30.0	1.4	361	55.4	Fresh Sulphide
LTDD19017	41.40	42.15	0.75	0.2	2.6	5.1	0.2	72	9.9	Fresh Sulphide
LTDD19017	42.15	42.50	0.35	0.2	2.6	4.9	0.2	87	10.1	Core Loss
LTDD19017	42.50	43.00	0.50	0.2	2.5	4.7	0.1	109	10.5	Fresh Sulphide
LTDD19017	43.00	43.63	0.63	0.5	1.7	3.4	2.8	86	10.1	Fresh Sulphide
LTDD19017	43.63	44.28	0.65	0.4	5.1	7.7	2.2	460	26.3	Fresh Sulphide
LTDD19017	44.28	44.70	0.42	0.2	2.2	2.4	0.6	65	6.9	Fresh Sulphide
LTDD19017	44.70	45.30	0.60	0.2	2.9	4.0	0.5	86	9.9	Fresh Sulphide
LTDD19017	45.30	46.00	0.70	0.2	1.4	2.0	0.3	56	5.5	Fresh Sulphide
LTDD19017	46.00	47.00	1.00	0.1	4.2	1.8	0.8	80	8.5	Fresh Sulphide
LTDD19017	47.00	48.00	1.00	0.0	1.0	1.4	0.3	33	3.3	Fresh Sulphide
LTDD19017	48.00	49.00	1.00	0.0	1.1	1.9	0.3	31	3.9	Fresh Sulphide
LTDD19017	49.00	49.55	0.55	0.0	0.1	2.3	0.2	11	2.9	Fresh Sulphide
Downhole width only										

Liontown Queen Lens Assay Details (LTDD19018)

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19018	77.30	77.45	0.15	0.1	0.8	1.3	2.7	15.4	4.0	Core Loss
LTDD19018	77.45	78.19	0.74	0.1	1.5	2.5	5.3	29.8	7.6	Fresh Sulphide
LTDD19018	78.19	78.90	0.71	0.1	1.0	2.0	2.8	18.6	5.1	Fresh Sulphide
LTDD19018	78.90	79.80	0.90	0.1	1.7	3.2	5.0	33.9	8.5	Fresh Sulphide
LTDD19018	79.80	80.30	0.50	0.1	2.3	4.4	2.8	29.9	9.0	Fresh Sulphide
LTDD19018	80.30	80.85	0.55	0.3	5.9	9.1	6.0	45.8	19.4	Fresh Sulphide
LTDD19018	80.85	81.50	0.65	0.0	1.1	2.1	0.6	8.8	3.7	Fresh Sulphide
LTDD19018	81.50	82.50	1.00	0.3	3.9	5.2	1.0	15.6	10.8	Fresh Sulphide
LTDD19018	82.50	83.00	0.50	0.1	2.0	3.0	0.1	9.9	5.6	Fresh Sulphide
LTDD19018	83.00	84.00	1.00	0.0	0.3	0.4	0.1	2.2	0.9	Fresh Sulphide
LTDD19018	84.00	85.00	1.00	0.0	0.0	0.2	0.0	0.3	0.2	Fresh Sulphide
LTDD19018	85.00	86.00	1.00	0.0	0.0	0.3	0.0	0.3	0.3	Fresh Sulphide
LTDD19018	86.00	86.80	0.80	0.0	0.3	3.0	0.1	3.3	3.4	Fresh Sulphide
LTDD19018	86.80	87.35	0.55	0.3	1.5	5.9	0.2	12.7	8.6	Fresh Sulphide
LTDD19018	87.35	87.50	0.15	0.1	0.6	3.9	0.1	5.5	5.0	Core Loss
Downhole width only										

Liontown Queen Lens Assay Details (LTDD19019)

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19019	65.40	66.00	0.60	0.0	0.1	0.7	0.1	3	0.9	Fresh Sulphide
LTDD19019	66.00	67.00	1.00	0.0	0.1	0.5	0.9	9	1.3	Fresh Sulphide
LTDD19019	67.00	67.40	0.40	0.2	4.5	10.4	0.1	3	15.1	Fresh Sulphide
LTDD19019	67.40	68.00	0.60	0.1	2.9	7.9	1.7	91	13.9	Fresh Sulphide
LTDD19019	68.00	68.50	0.50	0.0	0.8	1.8	1.0	58	4.6	Fresh Sulphide
LTDD19019	68.50	69.00	0.50	0.1	0.9	2.0	0.6	40	4.4	Fresh Sulphide
LTDD19019	69.00	70.00	1.00	0.1	1.7	4.3	0.8	34	7.5	Fresh Sulphide
LTDD19019	70.00	70.50	0.50	0.0	0.2	2.3	0.1	11	2.8	Fresh Sulphide
LTDD19019	70.50	71.25	0.75	0.0	0.0	5.7	0.1	0	5.7	Fresh Sulphide
Downhole width only										

Liontown Queen Lens Assay Details (LTDD19021)

Hole ID	From (m)	To (m)	Int (m)	Cu%	Pb%	Zn%	Au g/t	Ag g/t	Zn Eq. %	Mineralisation
LTDD19021	77.60	78.35	0.75	0.0	0.9	3.1	0.2	13	4.5	Fresh Sulphide
LTDD19021	78.35	78.80	0.45	0.2	1.7	2.3	1.3	88	7.2	Fresh Sulphide
LTDD19021	78.80	79.27	0.47	1.3	15.5	30.3	39.3	352	77.0	Fresh Sulphide
LTDD19021	79.27	80.00	0.73	0.1	0.7	1.5	2.0	177	8.1	Fresh Sulphide
LTDD19021	80.00	80.92	0.92	0.0	0.1	0.2	0.4	11	0.7	Fresh Sulphide
LTDD19021	80.92	81.90	0.98	0.0	2.0	4.5	1.6	56	8.6	Fresh Sulphide
Downhole width only										

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
<i>Sampling techniques</i>	<p>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. Include reference to measures taken to ensure sample retrospectivity and the appropriate calibration of any measurement tools or systems used.</p> <p>Aspects of the determination of mineralisation that are Material to the Public Report.</p> <p>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.</p>	<p>Diamond drilling (DD) techniques were used to obtain samples</p> <p>No samples were collected from mud rotary drilling. 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</p> <p>Diamond samples were sawn in half using an onsite core saw. All Red River samples were sent to Intertek Genalysis Laboratories Townsville.</p> <p>Samples were crushed to sub 6mm, split and pulverised to sub 75µm in order to produce a representative sub-sample for analysis.</p> <p>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, & Zr was undertaken. A selection of samples was also assayed for Au using a 25g Fire Assay technique</p>
<i>Drilling techniques</i>	<p>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).</p>	<p>Red River diamond drilling techniques consist of; HQ3 diamond core drilling until competent rock</p> <p>NQ2 diamond core and navigational drilling for the remainder of the drill holes.</p>
<i>Drill sample recovery</i>	<p>Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples.</p> <p>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.</p>	<p>Sample recovery is measured and recorded by company trained geology technicians</p> <p>Minimal core loss mostly at the top of the drill hole has been recorded at Liontown</p> <p>Recovery in ore zones from Liontown Resources Limited diamond drilling is typically 100%</p>
<i>Logging</i>	<p>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p>	<p>Holes are logged to a level of detail that would support mineral resource estimation.</p> <p>Qualitative logging includes lithology, alteration and textures</p> <p>Quantitative logging includes sulphide and gangue mineral percentages</p> <p>All drill core was photographed</p> <p>All drill holes have been logged in full</p>

Criteria	JORC Code explanation	Commentary
	The total length and percentage of the relevant intersections logged.	
<i>Sub-sampling techniques and sample preparation</i>	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>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.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>Core was sawn, and half core sent for assay</p> <p>Sample preparation is industry standard, occurring at an independent commercial laboratory which has its own internal Quality Assurance and Quality Control procedures</p> <p>Samples were crushed to sub 6mm, split and pulverised to sub 75µm in order to produce a representative sub-sample for analysis</p> <p>Laboratory certified standards were used in each sample batch</p> <p>The sample sizes are considered to be appropriate to correctly represent the mineralisation style</p>
<i>Quality of assay data and laboratory tests</i>	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>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.</p>	<p>The assay methods employed are considered appropriate for near total digestion</p> <p>Laboratory certified standards were used in each sample batch</p> <p>Certified standards returned results within an acceptable range</p> <p>No field duplicates are submitted for diamond core.</p>
<i>Verification of sampling and assaying</i>	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>Laboratory results have been reviewed by Company geologists and laboratory technicians</p> <p>No twinned holes were drilled for this data set</p>
<i>Location of data points</i>	<p>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.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>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.</p> <p>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</p> <p>Coordinate system used is MGA94 Zone 55</p> <p>Topographic control is based on a detailed 3D Digital Elevation Model</p>

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied.	The current drill spacing is approximately 40-150m No sample compositing has been applied
<i>Orientation of data in relation to geological structure</i>	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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.	Drill holes are orientated perpendicular to the perceived strike of the host lithologies where possible The orientation of the multiple lenses varies resulting in some holes resulting in less than perpendicular intersections Drill holes are drilled at a dip based on logistics and dip of anomaly to be tested The orientation of the drilling is designed to not bias sampling Orientation of the HQ3 core was undertaken to define structural orientation
<i>Sample security</i>	The measures taken to ensure sample security.	Samples have been overseen by company staff during transport from site to Intertek Genalysis laboratories, Townsville.
<i>Audits or reviews</i>	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been carried out at this point

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	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. 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.	The drilling was conducted on Mining Lease 10277 and Exploration Permit EPM 14161 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 Red River engaged Native Title Claimants, the Gudjalla People to conduct cultural clearances of drill pads and access tracks The Exploration Permits are in good standing
<i>Exploration done by other parties</i>	Acknowledgment and appraisal of exploration by other parties.	Historic Exploration was carried out by Esso Exploration, Liontown Resources, Nickle Mines, Great Mines & Pan Continental Mining. Work programs included drilling and geophysics
<i>Geology</i>	Deposit type, geological setting and style of mineralisation.	The exploration model is Volcanic Hosted Massive Sulphide (VHMS) base metal mineralisation The regional geological setting is the Mt Windsor Volcanic Sub-province, consisting of Cambro-Ordovician marine volcanic and volcano-sedimentary sequences
<i>Drill hole Information</i>	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. If the exclusion of this information is justified the Competent Person should clearly explain why this is the case.	See Table 2 – Drill Hole Details See Appendix 1 – Assay Details
<i>Data aggregation methods</i>	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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated.	Interval length weighted assay results are reported Significant Intercepts relate to assay results > 5% Zn Equivalent. Zn equivalent formula utilised is: $Zn\% + (Cu\% * 3.3) + (Pb\% * 0.9) + (Au\text{ ppm} * 0.5) + (Ag\text{ ppm} * 0.025)$ 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.
<i>Relationship between mineralisation widths and intercept lengths</i>	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	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.

Criteria	JORC Code explanation	Commentary
	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').	Down hole intercepts are reported. True widths are likely to be approximately 30 to 80% of the down hole widths.
<i>Diagrams</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.	Refer to plans and sections within report
<i>Balanced reporting</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.	The accompanying document is considered to represent a balanced report
<i>Other substantive exploration data</i>	Other exploration data, if meaningful and material, should be reported.	All meaningful and material data is reported
<i>Further work</i>	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further Drilling at Lione town is ongoing