Red River secures high-grade polymetallic silver-indium deposits in QLD

Highlights:

- **Red River granted two new polymetallic projects hosting the highest-grade known indium deposits in Australia:**
  - **Isabel Project includes Isabel massive sulphide deposit and Isabel Extended exploration target**
  - **Orient Project includes the West Orient epithermal deposit and East Orient exploration target**
- **Indium is identified as a critical mineral by Geoscience Australia**
- **Projects are located near Herberton in Qld, about 500km from RVR's Thalanga Operations**
- **Isabel deposit has historic mineral resource estimate of 85kt @ 15.3% Zn, 2.8% Pb, 0.7% Cu, 113 g/t Ag & 370 g/t indium (the historical estimate is not compliant with the 2012 JORC Code, drilling and sampling will be required prior to any further quantification of the resource) within 100 metres of surface**
- **Previous drilling at Isabel Extended target intersected massive sulphide mineralisation (7.25m @ 3.3% Cu), 150m from Isabel deposit**
- **West Orient has historical mineral resource estimate of 229kt @ 5.1% Zn, 2.9% Pb, 180 g/t Ag & 190 g/t In (the historical estimate is not compliant with the 2012 JORC Code, drilling and sampling will be required prior to any further quantification of the resource)**
- **Historic drilling at East Orient intersected wide intersections (34m @ 68 g/t Ag from 20m down hole) of low-grade epithermal mineralisation yet to be followed up**
- **Isabel and Orient deposits have potential to provide additional feed to Thalanga Operations or be developed as stand-alone operations. Red River is collating and modelling data from the projects and has undertaken initial site visits.**

Cautionary Statement:

Readers are cautioned that the historical estimates for the Isabel and West Orient Deposits, referred to in this announcement are historical estimates under ASX Listing Rule 5.12 and are not reported in accordance with the JORC Code. A Competent Person has not done sufficient work to classify the historical estimates as mineral resources or ore reserve in accordance with the JORC Code.

It is uncertain that following evaluation and/or further exploration work that the historical estimates will be able to be reported as mineral resources or ore reserves in accordance with the JORC Code. ASX Listing Rule 5.12 specifies the additional information that must be provided in a market announcement that contains historical estimates. This information is contained in Appendices together with additional information on the historical Isabel and West Orient Project estimates.

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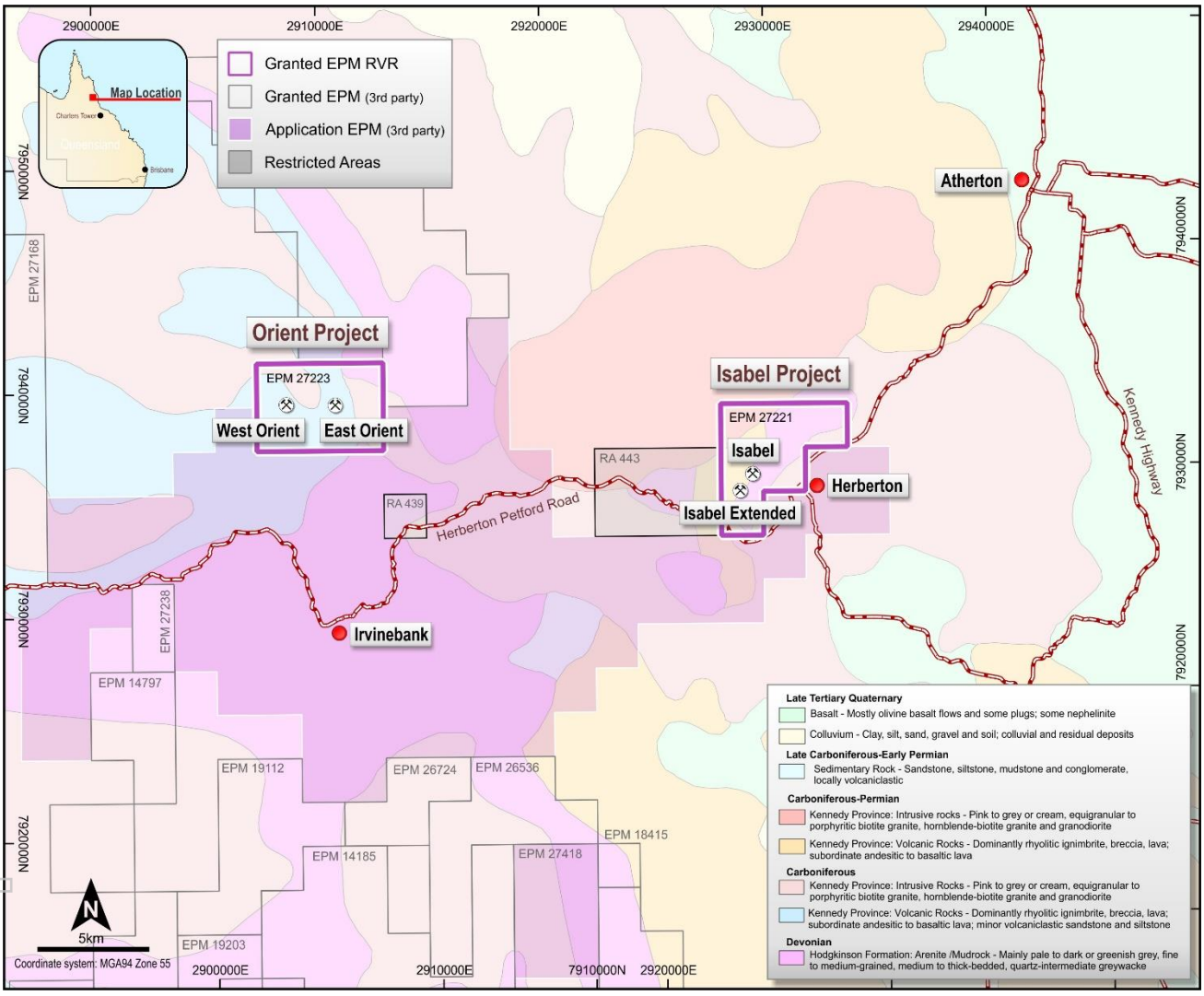
Figure 1 Historic Workings at Orient

Red River Resources Limited (ASX: RVR) ("Red River" or "the Company") is pleased to announce it has been granted the Isabel Project (EPM 27221) and the Orient Project (EPM 27223), located near Herberton in Northern Queensland, approximately 500km from its Thalanga Operation (by sealed road).

Isabel (average indium grade of 370 g/t) and West Orient (average indium grade of 190 g/t) are the highest grade known indium deposits in Australia.

The Isabel Project contains the Isabel polymetallic massive sulphide zinc-lead-copper-silver-indium deposit and the Isabel Extended exploration target, and the Orient Project contains the West Orient zinc-lead-silver-indium deposit and the East Orient exploration target.

Figure 2 Project Location Map



Geoscience Australia (Australian Critical Minerals Prospectus, 2019), and other strategic partners of Australia, including the European Union, France, Japan, Korea, India and the United Kingdom have defined indium as a critical mineral.

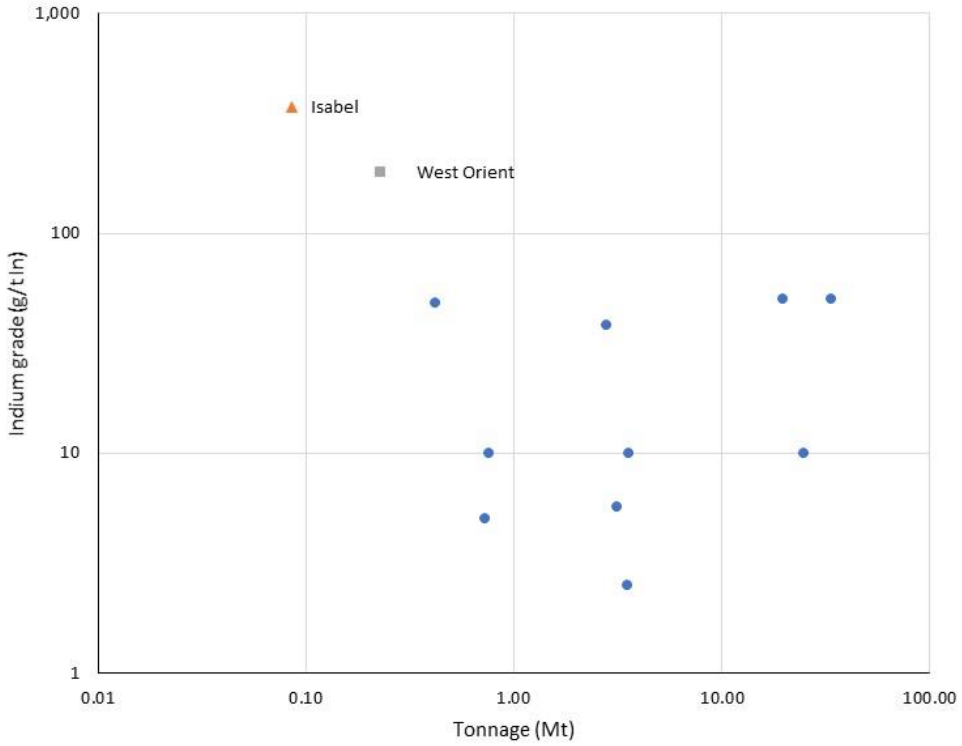
Critical minerals are defined as metals, non-metals and minerals that are considered vital for the economic well-being of the world's major and emerging economies, yet whose supply may be at risk due to geological scarcity, geopolitical issues, trade policy or other factors. Indium is a critical element in low carbon technologies - CIGS (copper-indium-gallium-selenide) thin film solar cells.

Indium is found in trace amounts in base metal sulphides, particularly chalcopyrite, sphalerite, stannite, and cassiterite. Although indium's concentration is highest within chalcopyrite, where concentrations are twice as high as in sphalerite, sphalerite remains the most important indium-bearing mineral for indium recovery.

The average indium content of zinc deposits from which it is recovered ranges from less than 1 ppm to 100 ppm. The indium reports to the zinc concentrate and the indium is recovered at the smelting/refining stage.

The indium price is currently US$250/kg.

Figure 3 Australian deposits with known indium grade



Source: Werner (2017)

1 Isabel Massive Sulphide Deposit (zinc-lead-copper-silver-indium)

The Isabel deposit consists of massive zinc-lead-copper sulphide mineralisation (containing indium and silver), occurring in fine-grained and breccia quartzites. The sulphides are located on both sides of a northwest-southeast trending quartz feldspar dyke.

Work completed on the deposit and vicinity included detailed mapping, geochemical soil sampling, underground sampling, geophysical surveying and both percussion and diamond drilling. Great Northern Mining Corporation NL (GNMC) and Mareeba Mining and Exploration Pty. Ltd. (Mareeba Mining) carried out a 57-hole percussion and diamond drilling program during 1970-1972.

Table 1 Isabel Drilling Programs

Company	Date	Program
Great Northern Mining Corporation	1970	36 percussion and diamond drill holes
Mareeba Mining & Exploration Pty Ltd	September 1971 – May 1972	5 percussion holes and 16 diamond drill holes

Mareeba Mining engaged independent geological and mining consultants Watts, Griffis and McOuat (WGM) to complete an evaluation of the Isabel deposit (preliminary mining study) and Australian Mineral Development Laboratories (AMDEL) to undertake metallurgical test work on samples from Isabel. WGM completed the Isabel Deposit Evaluation in 1972, calculating an historical reserve estimate (non-JORC 2012 compliant) of 83,236 long tons at an average grade of 15.3% zinc, 2.8% lead, 0.7% copper, 3.7 ounces silver, 12.1 ounces indium and 25.5 ounces cadmium per ton for the Isabel deposit within 100 metres of the surface.

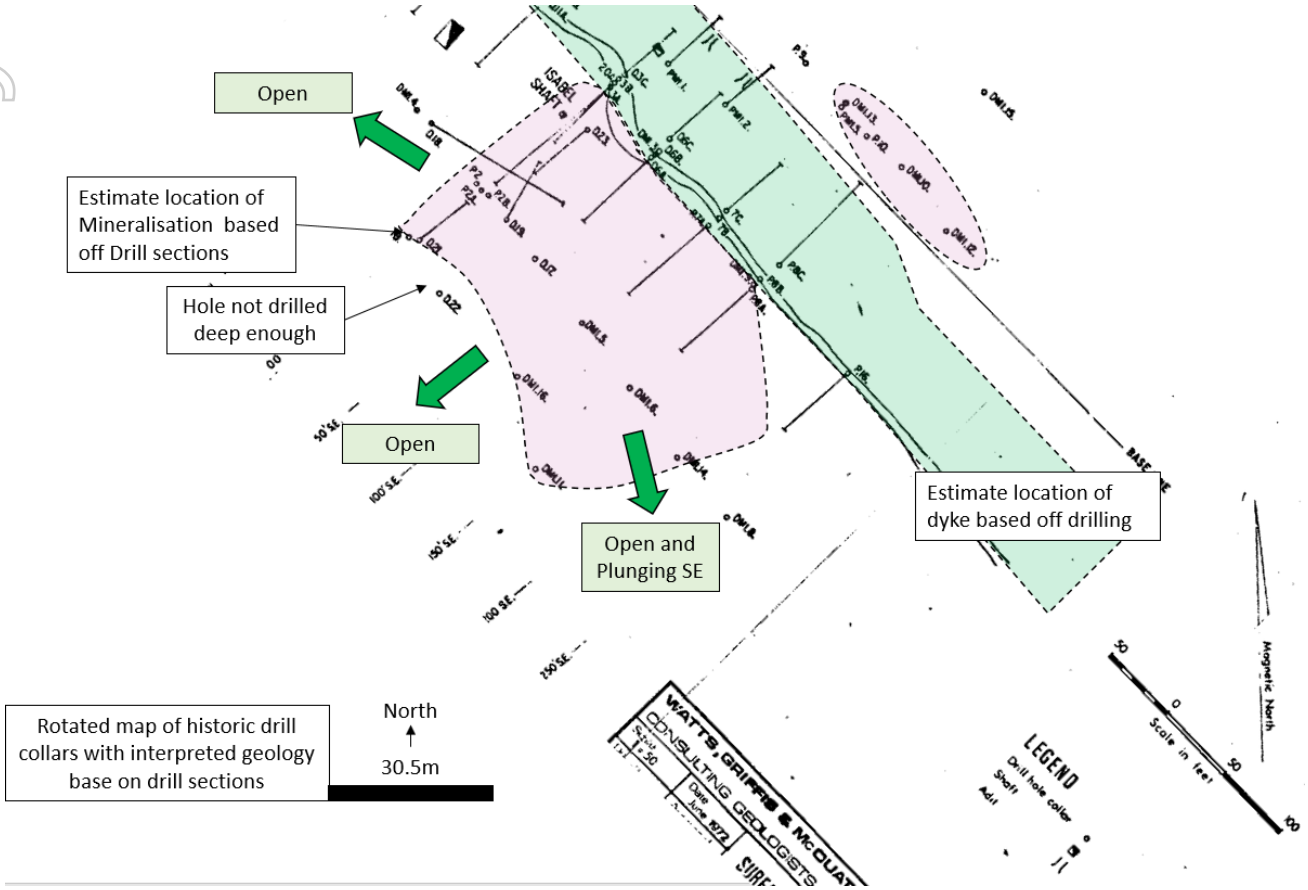
Table 2 Isabel Historical Estimate

Section	Tons	Zn (%)	Pb (%)	Cu (%)	Ag (oz/t)	In (oz/t)	Cd (oz/t)
00 SE Upper Lens	12,517	25.61	0.57	0.86	3.21	12.03	40.0
00 SE Lower Lens	5,760	21.01	1.73	0.85	3.31	9.71	35.0
0+50’ SE Lower Lens	22,720	13.37	6.89	0.45	2.25	14.65	25.0
0+100’ SE Lower Lens	16,396	3.59	2.14	0.72	5.70	9.97	14.62
0+150’ SE Lower Lens	24,193	11.70	0.73	0.61	4.02	11.05	23.53
0+200’ SE Lower Lens	1,630	17.78	4.17	1.00	5.81	20.12	27.94
Total	**83,236**	**15.3**	**2.8**	**0.7**	**3.7**	**12.1**	**25.53**
	Tonnes	**Zn (%)**	**Pb (%)**	**Cu (%)**	**Ag (g/t)**	**In (g/t)**	**Cd (g/t)**
Isabel	**84,570**	**15.3**	**2.8**	**0.7**	**113**	**370**	**771**

Reference: “Evaluation of the Isabel Leases, North Queensland for Mareeba Mining and Exploration Pty Ltd” by Watts, Griffis and McOuat (Australia) Pty Ltd dated June 22, 1972.

The known mineralisation at Isabel has not been constrained by the historical drilling and there is material potential to increase the historical resource.

Figure 4 Isabel Deposit Plan



Reference: "Evaluation of the Isabel Leases, North Queensland for Mareeba Mining and Exploration Pty Ltd" by Watts, Griffis and McOuat (Australia) Pty Ltd dated June 22, 1972.

WGM also completed initial mine design work on a small-scale fully mechanised underground mine at Isabel. Access would be via a decline, and the mine would have a vertical extent of approximately 150m. WGM anticipated producing approximately 92,000 tonnes of ore (allowing for dilution) over a two year mine life.

AMDEL completed metallurgical test work on a bulk composite of drill core from Isabel, which concluded selective flotation of the Isabel bulk composite to produce separate lead and zinc concentrates posed no serious metallurgical problem. AMDEL concluded that due to the nature of the copper mineralisation present it was not viable to produce a separate copper concentrate, however it was possible to produce a bulk lead-copper concentrate.

The AMDEL metallurgical test results were as follows:

Table 3 Recovery to Lead Concentrate & Lead Concentrate Grade

	Cu %	Pb %	Zn %	Sn %	In %	Ag %	Cd %	As %
Recovery to Lead Concentrate	11%	75%	2%	4%	3.4%	34%	2%	2%
	Cu %	**Pb %**	**Zn %**	**Sn %**	**In (g/t)**	**Ag (g/t)**	**Cd %**	**As %**
Lead Concentrate Grade	3%	60%	6%	1%	700	2,600	0.0%	0.8%

Table 4 Recovery to Zinc Concentrate & Zinc Concentrate Grade

	Cu %	Pb %	Zn %	Sn %	In %	Ag %	Cd %	As %
Recovery to Zinc Concentrate	51%	17%	85%	29%	74.5%	43%	86%	na
	Cu %	**Pb %**	**Zn %**	**Sn %**	**In (g/t)**	**Ag (g/t)**	**Cd %**	**As %**
Zinc Concentrate Grade	2.5%	2.2%	50%	1.6%	2,550	440	0.3%	0.5%

Figure 5 Polymetallic massive sulphide mineralisation from Isabel

1.1 Lady Isabel Extended

The Lady Isabel Extended target area is approximately 150m south of the Isabel deposit. No recorded mining has taken place within the Lady Isabel Extended target area but numerous small diggings with shafts and development to about 6m depth or so are present.

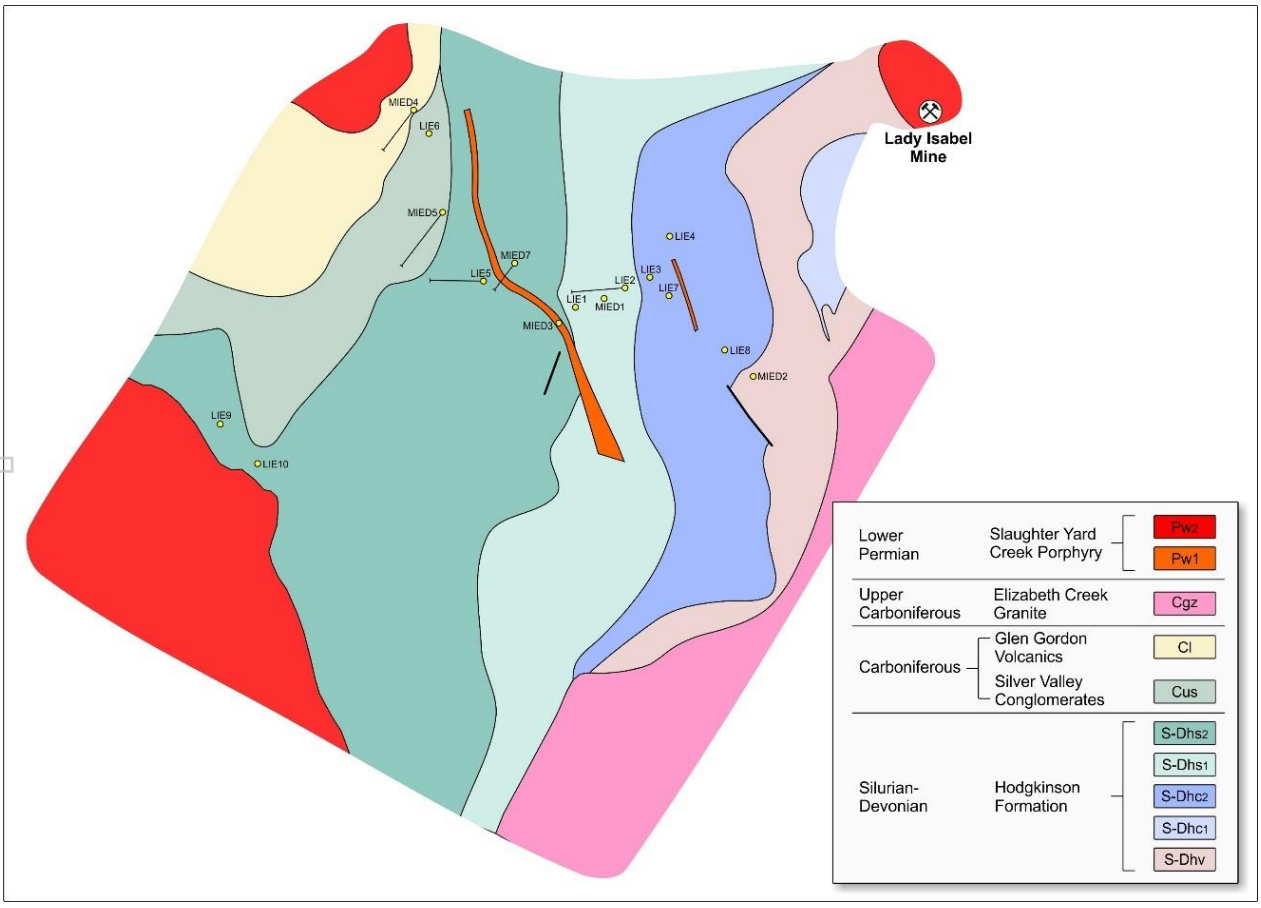
In the early 1970s, Mareeba Mining completed geological mapping, soil geochemistry and an IP survey, followed by additional geophysical surveying, geochemistry and drilling in the early 1980s. Six NQ diameter diamond drill holes targeting geophysical and geochemical anomalies were completed (MIED 1, 2 and 3 in 1980; MIED 4, 5 and 7 in 1981) for a total of 1,1740.4m drilled. Material polymetallic massive sulphide mineralisation was intersected in drill holes MIED 1 and MIED 3.

Table 5 Material drill hole assay summary (MIED 1 & MIED 3 Lady Isabel Extended)

Hole ID	From (m)	To (m)	Intersection (m)(1)	Cu (%)	Pb (%)	Zn (%)	Sn (%)	As (%)	Ag (g/t)	Mineralisation
MIED 1	177.20	178.65	1.45	3.1	0.0	0.3	0.1	0.1	32	Fresh Sulphide
and	182.13	189.38	7.25	3.3	0.2	0.4	0.2	4.2	173	Fresh Sulphide
MIED 3	91.08	93.37	2.55	2.0	1.0	13.2	1.1	-	409	Fresh Sulphide
(1) Downhole width (vertical holes) Reference: Lady Isabel Extended ML 6647 Herberton NQ Summary Report (1982)										

Mareeba Mining completed a further 10 NQ/NQ2 diameter diamond drill holes (DDH LIE 1 to 10) for 1,700m in August – October 1990. Massive sulphide mineralisation (sphalerite-galena-chalcopyrite) was intersected from 35.42 – 36.38m down hole (0.96m thickness) in DDH LIE 6, but assay results are not available.

Figure 6 Lady Isabel Extended Drilling



2 Orient Project

The Orient Project (EPM 27223) consists of the West Orient zinc-lead-silver-indium deposit and the East Orient exploration target. The Project is located 9km north of Irvinebank in Northern Queensland. Silver-lead mineralisation was discovered in 1886 and mining activities ceased in 1924.

Mineralisation occurs in vein systems up to 2m wide (controlled by fractures/shears) containing argentiferous galena, cerussite, anglesite, sphalerite, pyrite, marmatite, cassiterite (minor), and stannite (minor).

The lead-zinc-silver-indium mineralisation at Orient is believed to represent part of an epithermal precious metals system. The Orient vein and stockwork mineralisation are associated with a strongly faulted and deeply fractured zone near the margin of a major caldera subsidence structure.

Great Northern Mining Corporation (GNMC) completed 16 diamond drill holes at West Orient, with the most recent drilling (4 holes) completed in 1988. Results from GNMC drilling indicated there are four major and two minor mineralised vein systems in a north-east trending shear zone. Individual veins have a strike length of up to 900m, and an average width of 0.6m. Dips range from 40° south to almost vertical but are most commonly between 45°–60° south. GNMC also completed an exploration adit into West Orient which intersected the No2 vein system.

Table 6 GNMC Drilling West Orient

Vein	DDH No	From (m)	To (m)	Intersection (m)	Pb %	Zn %	Ag g/t	In g/t
Vein 1	WO3	192.60	193.60	1.00	2.4	2.4	327	90
	WO12	202.00	202.90	0.90	2.8	2.9	323	na
Vein 2	WO4	82.00	82.65	0.65	10.7	7.3	746	233
	WO5	90.00	91.50	1.50	4.2	3.6	258	140
	WO6	118.70	120.10	1.40	4.2	3.0	308	146
	WO7	86.75	87.65	0.90	8.4	4.0	454	140
	WO8	83.80	85.00	1.20	1.2	3.4	75	93
	WO9	60.30	63.30	3.00	1.8	1.7	75	na
	WO10	123.30	123.80	0.50	6.8	3.6	249	87
	WO13	125.60	127.10	1.50	1.3	6.1	100	230
	WO14	69.00	75.40	6.40	1.2	1.1	40	37
	inc.	71.25	71.90	0.65	5.3	2.8	274	283
Vein 3	WO2	69.00	69.60	0.60	8.1	5.8	345	na
	WO3	82.00	83.20	1.20	3.0	4.5	50	na
	WO10	50.00	51.00	1.00	3.8	14.2	96	na
	WO11	38.50	38.90	0.40	16.5	16.0	840	na
	WO13	33.70	36.05	2.35	2.1	2.0	274	71
	inc.	33.70	34.2	0.50	9.0	8.4	1,264	335
	WO15	118.70	121.45	2.75	1.7	4.2	93	83
	inc.	119.70	120.45	0.75	5.4	14.3	307	287
	WO16	50.30	51.45	1.15	1.4	2.5	130	96
	inc.	51.10	51.45	0.35	4.4	6.4	412	309
Vein 4	WO1	98.00	98.75	0.75	17.2	12.0	513	na

Intersection width is downhole with
Indium assays – na (not available)

GNMC calculated an historical reserve estimate (non-JORC 2012 compliant) of 229,000 tonnes at an average grade of 2.9% Pb, 5.1% Zn, 180 g/t Ag & 190 g/t In for Vein 2 and Vein 3 only at the West Orient deposit. Drilling did not delineate the margins of mineralisation, leaving it open to extension in all directions.

Table 7 West Orient Historical Estimate

	Tonnes	Pb (%)	Zn (%)	Ag (g/t)	In (g/t)
West Orient	229,000	2.9	5.1	180	190
Reference: "Pre-Feasibility Mining Report West Orient Silver-Lead-Zinc Project" Great Northern Mining Corporation, January 1989					

GNMC envisaged a small scale UG mining operation at West Orient, with surface access via the exploration adit previously completed by GNMC (intersecting Vein 2), and an internal decline to allow mining access to Vein 2 and Vein 3.

GNMC engaged Robertson Research (1988), who completed limited metallurgical test work on drill core from West Orient. Test work was carried out to produce a gravity concentrate and selective flotation to produce separate zinc and lead concentrates, and a bulk lead-zinc concentrate. No work was carried out on indium recoveries. GNMC noted that they assumed 70% of the indium would be recovered to the zinc concentrate and the zinc concentrate would have an assumed indium grade of ~1,500 g/t In.

Table 8 Lead & Zinc Concentrate Recovery and Grade

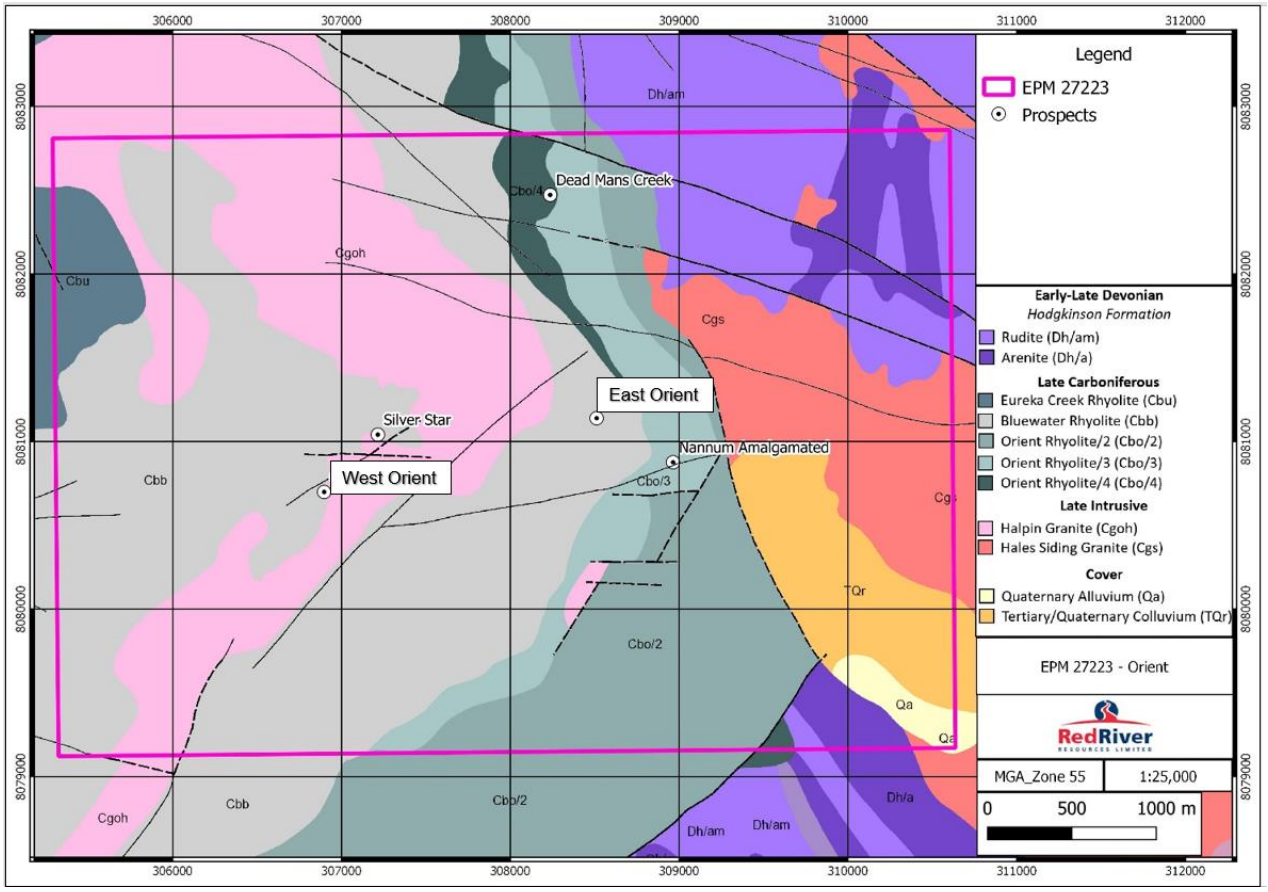
	Pb %	Zn %	Ag %		Pb %	Zn %	Ag g/t
Recovery to Lead Concentrate	90%	-	60%	**Lead Concentrate Grade**	48%	-	2,017
Recovery to Zinc Concentrate	-	85%	10%	**Zinc Concentrate Grade**	-	47%	199

Figure 7 Galena dominant vein mineralisation from Orient

2.1 East Orient

The Orient mineralisation (West and East Orient) demonstrates many features of epithermal deposits including: (a) major and subsidiary branching vein formations and possible stockworks, (b) hosted by a complex volcanic and shallow intrusive sequence, (c) vein mineralogy includes sulpho-salts, arsenic and precious metals, plus the typical epithermal indicator elements (Hg, Te, Sb, As and Ba), and (d) alteration styles include advanced argillic (at East Orient), plus widespread sericitic, propylitic and ferruginous alteration.

Figure 8 Orient Project Geology Plan



GNMC completed four drill holes into the East Orient area (EO2 – EO5) for a total of 410.7m drilled. All holes intersected alteration styles indicative of a large-scale mineralising system, with holes EO3 and EO4 intersecting several lead-zinc-silver-indium vein structures, plus EO3 intersected a wide zone (34.0m) of low grade silver mineralisation (68 g/t Ag) from 20.0m down hole.

Table 9 GNMC Drilling East Orient

DDH No	From (m)	To (m)	Intersection (m)	Pb %	Zn %	Ag g/t	In g/t
EO3	36.0	40.0	4.00	2.0	3.3	154	20
and	44.0	51.0	7.00	1.4	1.3	68	10
EO3	20.0	54.0	34.0	na	na	68	na
EO4	65.0	68.0	3.0	3.8	9.7	146	na
Reference: Great Northern Mining Corporation (1987) na: assay results not available							

Figure 9 Historical workings at East Orient

3 Next Steps

Red River continues to collate and model the historical data for both Isabel and Orient Projects. Red River has undertaken an initial site visit to the Isabel and Orient Projects and has commenced exploration activity.

References

Great Northern Mining Corporation NL (1989) Pre-Feasibility Mining Report West Orient Silver-Lead-Zinc Project

Isley, D. (1982) Lady Isabel Extended ML 6647, Herberton, NQ Summary Report. Prepared for Mareeba Mining and Exploration Pty Ltd.

Walter, A.C. (1987) Orient Camp Geology and Mineralisation. Prepared for Great Northern Mining Corporation NL

Willsteed, T.V., Mullins, W.J. and Brown A.A. (1972) Evaluation of the Isabel Leases, North Queensland for Mareeba Mining and Exploration Pty Ltd by Watts, Griffis and McOuat (WGM) (Australia) Pty Ltd. Prepared for Mareeba Mining and Exploration Pty Ltd.

Werner, T.T. (2017) Indium and the Future of Critical Metals in Australia

Competent Persons Statement

Isabel and West Orient Projects

The information in this release that relates to the Isabel and West Orient Projects is an accurate representation (including the information provided pursuant to ASX Listing Rules 5.12.2 to 5.12.7 (inclusive)) of the available data based on information reviewed by Mr Peter Carolan, who is a Member of The Australasian Institute of Mining and Metallurgy and a full time employee of Red River Resources Ltd.

Mr Carolan has sufficient experience in the style of mineralisation and types of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Carolan consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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.

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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Under ASX Listing Rule 5.12 (LR 5.12), an entity reporting historical or foreign estimates of mineralisation in relation to a material mining project must include all of the information shown in LR5.12. Red River Resources considers the Isabel Project to be a material mining project and as such provides the following information regarding the Isabel Project in accordance with LR 5.12:

Isabel Project

LR5.2.1 The source and date of the historical estimates or foreign estimates

The source of the foreign resource estimate is a study titled "Evaluation of the Isabel Leases, North Queensland for Mareeba Mining and Exploration Pty Ltd" by Watts, Griffis and McOuat (WGM) (Australia) Pty Ltd dated June 22, 1972.

This report is publicly available through the Queensland Government QDEX Reports website. Refer to Report Number 14293 Component 2 (CR_14293_2).

https://www.business.qld.gov.au/industries/mining-energy-water/resources/minerals-coal/online-services/qdex-reports

LR5.2.2 Whether the historical estimates or foreign estimates of mineralisation use categories of mineralisation other than those defined in JORC Code 2012 and if so, an explanation of the differences

The historical resource estimate categorises the mineralisation at Isabel as an 'indicated ore reserve'. This estimate was calculated prior to the introduction of the JORC Code and had not been classified as per the JORC Code 2012.

WGM used a polygonal calculation methodology to calculate the historical estimate. The sections containing all holes drilled by GNMC and Mareeba Mining were drawn and plotted. The zones of mineralisation on each section were divided into blocks, the boundaries of individual blocks normally being drawn halfway between mineralised intersections in adjoining drill holes.

The areas of individual ore blocks were then established by planimetering and volumes calculated by extending the area of influence halfway to the section on each side.

Total tonnage of ore in the deposit was calculated by applying a conservative tonnage factor of 12.5 cubic feet per ton (equivalent Specific Gravity of 2.87). Average grades were calculated on a block by block basis utilising assay data provided by Mareeba Mining.

LR5.12.3 The relevance and materiality of the historical estimates or foreign estimates of mineralisation to the entity

Red River believes that the foreign resource estimate is both relevant and material as it demonstrates there is a historic high grade polymetallic massive sulphide resource at Isabel.

Red River believes, that based on the historic information, that the Isabel deposit has the potential to be mined and trucked to Red River's Thalanga Operation to be processed to produce saleable lead and zinc concentrates containing high levels of indium and silver.

LR5.12.4 The reliability of the historical estimates or foreign estimates of mineralisation, including reference to any criteria in Table 1 of JORC Code 2012 which are relevant to understanding of the reliability of the foreign resource estimates of mineralisation

The historical study was completed by the Canadian geological and mining consultants Watts, Griffis and McOuat (WGM - http://wgm.ca/en/about-wgm/)

WGM undertook an independent calculation of the Isabel historical estimate. It is the opinion of Red River Resources that these estimates are reliable and represent the results of work done to reasonable standards, using quality sampling, testing and geological interpretation. The resource estimate and sampling represented standard industry practice at the time.

LR5.12.5 To the extent known, a summary of the work programs on which the historical estimates or foreign estimates of mineralisation are based and a summary of the key assumptions, mining and processing parameters and methods used to prepare foreign resource estimates of mineralisation.

Several programs of underground sampling and drilling have been completed at the Isabel deposit. Preliminary metallurgical test work was also carried out by AMDEL in 1972 on selected drill core from the Isabel deposit.

Underground Sampling

As part of their investigations of the Isabel lease group for Great Northern Mining Corporation N.L. in 1969-1970, Hall, Ralph and Associates (consulting geologists) sampled the underground workings. A 30-foot vertical shaft was dewatered exposing a 15 foot drive. Hall, Ralph and Associates reportedly sampled the face, walls, floor and roof of this drive. The results of this work are summarised in the following table:

Table 10 Lady Isabel UG sampling results

Sample Location	Interval (feet)	Cu (%)	Pb (%)	Zn (%)	Ag (oz/ton)	Ag (g/t)	In (oz/ton)	In (g/t)
Roof	3	0.26	0.04	15.2	0.7	21.8	-	
Floor	5	0.92	7.4	20.0	10.4	323.5	-	
Face	6	0.53	0.30	25.4	1.3	40.4	25	777.6
East Wall*	15	0.44	0.90	20.4	1.8	56.0	-	
West Wall*	15	0.41	2.68	21.3	2.9	90.2	-	
*averaged								

Extensions of this zone of mineralisation were encountered in the drilling program and comprise part of the historical resource estimate.

Drilling

The following drilling programs were completed at Lady Isabel (1970-1972). Information from these drilling programs were used by WGM to generate the historical estimate. Resultant drill intersections and underground sampling occurred at an approximate spacing of 15m through the historic resource areas.

Table 11 Lady Isabel Drilling Programs

Company	Date	Program
Great Northern Mining Corporation	Second half 1970	36 percussion and diamond drill holes
Mareeba Mining & Exploration Pty Ltd	September 1971 – May 1972	5 percussion holes and 16 diamond drill holes

Metallurgical Test work

AMDEL carried out preliminary metallurgical test work on core samples from the Isabel deposit in June 1972. The AMDEL report was included as Appendix 3 of the Watts, Griffis and McOuat (Australia) Pty Ltd (1972) report. The conclusions of the AMDEL report are as follows:

The Isabel zinc ore, as represented by the DM1 bulk composite tested, is a coarse-grained lead (minor)–zinc (major) ore containing significant quantities of copper, tin, indium, cadmium and silver. The copper mineralisation, both chalcopyrite and stannite, occurs predominately as fine-grained inclusions (generally less than 25 microns) in the coarse grained marmatite making selective separation of the copper and sulphide tin extremely difficult. Similarly, tin, present as both stannite and cassiterite, is intimately associated with the marmatite. Indium and cadmium appear from metallurgical inferences to be closely associated with the zinc.

Selective flotation of the DM1 bulk composite to produce separate lead and zinc concentrates without considering the selective separation of copper from zinc, poses no serious metallurgical problem. Test results were as follows (selective flotation to produce lead and zinc concentrates):

Table 12 Recovery to Lead Concentrate & Lead Concentrate Grade

	Cu %	Pb %	Zn %	Sn %	In %	Ag %	Cd %	As %
Recovery to Lead Concentrate	11%	75%	2%	4%	3.4%	34%	2%	2%
	Cu %	**Pb %**	**Zn %**	**Sn %**	**In (g/t)**	**Ag (g/t)**	**Cd %**	**As %**
Lead Concentrate Grade	3%	60%	6%	1%	700	2,600	0.0%	0.8%

Table 13 Recovery to Zinc Concentrate & Zinc Concentrate Grade

	Cu %	Pb %	Zn %	Sn %	In %	Ag %	Cd %	As %
Recovery to Zinc Concentrate	51%	17%	85%	29%	74.5%	43%	86%	na
	Cu %	**Pb %**	**Zn %**	**Sn %**	**In (g/t)**	**Ag (g/t)**	**Cd %**	**As %**
Zinc Concentrate Grade	2.5%	2.2%	50%	1.6%	2,550	440	0.3%	0.5%

AMDEL also undertook test work to review the potential to produce a bulk Cu-Pb concentrate and a zinc concentrate. Test results were as follows (selective flotation to produce a bulk copper-lead and zinc concentrates):

Table 14 Recovery to Bulk Copper-Lead Concentrate & Bulk Copper-Lead Concentrate Grade

	Cu %	Pb %	Zn %	Sn %	In %	Ag %	Cd %	As %
Recovery to Bulk Cu-Pb Concentrate	40%	75%	6%	13%	11%	43%	nr	nr
	Cu %	Pb %	Zn %	Sn %	In (g/t)	Ag (g/t)	Cd %	As %
Bulk Copper-Lead Concentrate Grade	8%	45%	15%	2%	1,530	1,870	nr	nr

nr: not reported

LR5.12.6 Any more recent estimates or data relevant to the reported mineralisation available to the entity

No further estimates or data relevant to the resource estimation are available.

LR5.12.7 The evaluation and/or exploration work that needs to be completed to verify the historical estimates or foreign estimates of mineralisation as mineral resources or reserves in accordance with JORC Code 2012

A review of historical drilling information is ongoing to ensure the integrity of available data. Red River has commenced a search of archives to capture as much of the historical data as possible and to confirm if any physical samples remain from the drilling programs. Based on the age of the historical drilling information, and the lack of recorded metadata and QA/QC (Quality Assurance/Quality Control) data it is most likely that a systematic drill program will be required prior to any update of the historic estimate to a Mineral Resource.

LR5.12.8 The proposed timing of any evaluation and/or exploration work that the entity intends to undertake and a comment on how the entity intends to fund that work

Red River has commenced a review and evaluation based on electronically available historical data. Once this is complete, Red River intends to undertake a series of site visits and commence exploration activity (sampling, mapping, geophysical exploration and drilling).

Red River will fund evaluation and/or exploration work from current (internal) financial resources.

LR5.12.9 A cautionary statement proximate to, and equal prominence as, the reported historical estimates or foreign estimates of mineralisation

Refer to the cautionary statement in this announcement and proximate to the foreign resource estimates of mineralisation reported in the highlights in this announcement.

LR5.12.10 A statement by a named competent person or persons that the information in the market announcement provided under LR 5.12 to 5.12.7 is an accurate representation of the available data.

Refer to the competent persons statement contained in this announcement

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
Sampling techniques	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. Aspects of the determination of mineralisation that are Material to the Public Report. 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.	The sampling at Isabel and Isabel Extended, is reported to have been undertaken using surface diamond, reverse circulation (RC) and percussion drilling methods and underground channel and chip sampling methods. At Isabel individual underground channel samples of lengths up to 3 feet were taken. Channel and chip sample results are reported as composite results. At Isabel 36 percussion and diamond drilling holes carried out by GNMC in 1970. In 1972, 5 percussion (air-trac) and 16 diamond holes were carried out by MME. By the time of the report from which this information is reported a second percussion program was ongoing from which no data is available. Percussion drilling rarely reached depths greater than 15 m. Diamond drilling extends to 120m below surface. Due to the variable nature of sample lengths it appears that sampling to geological boundaries was undertaken at all projects. There is no further information about sampling techniques for drilling at Isabel and Isabel Extended
Drilling techniques	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).	Isabel: Drilling was completed as a mixture of diamond holes and percussion holes. Isabel Extended: Drilling was completed as a mixture of reverse circulation pre-collars with diamond tails, reverse circulation holes and diamond holes.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Hole ID</th><th>RC metres</th><th>Diamond metres</th><th>Total Depth</th><th>Diameter</th></tr>
<tr><td>MIED1</td><td></td><td>201.2</td><td>201.2</td><td>NQ2</td></tr>
<tr><td>MIED2</td><td></td><td>30</td><td>30</td><td>NQ2</td></tr>
<tr><td>MIED3</td><td></td><td>240</td><td>240</td><td>NQ2</td></tr>
<tr><td>MIED4</td><td></td><td>137.11</td><td>137.11</td><td>NQ2</td></tr>
<tr><td>MIED5</td><td></td><td>179.96</td><td>179.96</td><td>NQ2</td></tr>
<tr><td>MIED7</td><td></td><td>184.13</td><td>184.13</td><td>NQ2</td></tr>
<tr><td>LIE1</td><td>18</td><td>180.4</td><td>198.4</td><td>NQ2</td></tr>
<tr><td>LIE2</td><td>17</td><td>133.4</td><td>150.4</td><td>NQ2</td></tr>
<tr><td>LIE3</td><td>18</td><td>132.3</td><td>150.3</td><td>NQ2</td></tr>
<tr><td>LIE4</td><td>33.25</td><td>116.75</td><td>150</td><td>NQ2</td></tr>
<tr><td>LIE5</td><td>12</td><td>188</td><td>200</td><td>NQ2</td></tr>
<tr><td>LIE6</td><td>18</td><td>132.4</td><td>150.4</td><td>NQ2</td></tr>
<tr><td>LIE7</td><td>17.9</td><td>183.1</td><td>201</td><td>NQ2</td></tr>
<tr><td>LIE8</td><td>3.6</td><td>200.8</td><td>204.4</td><td>NQ2</td></tr>
<tr><td>LIE9</td><td>18</td><td>128.7</td><td>146.7</td><td>NQ2</td></tr>
<tr><td>LIE10</td><td>18</td><td>130.4</td><td>148.4</td><td>NQ2</td></tr>
</table>
</td></tr>
<tr><td>Drill sample recovery</td><td>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.
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.</td><td>There are no records of core recoveries.
At Isabel it is noted that percussion drilling rarely reached depths greater than 15 m due to intersecting the water table. Although diamond drilling is the most appropriate method for sample collection to limit sample bias no further information is available to quantify the quality of sampling for the Isabel deposit.</td></tr>
<tr><td>Logging</td><td>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.
Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.
The total length and percentage of the relevant intersections logged.</td><td>There are no records of geological or geotechnical logs from Isabel.

Geological logging at Isabel Extended is available for holes LIE1 to LIE10 and MIED4, 5 & 7. Logging was qualitative and recorded the following:
• Major and minor lithologies including grainsize and colour
• Alteration type and intensity
• Mineralisation style, intensity and major minerals
• Deformation intensity
• Joint, bedding, fracture, and foliation directions
Colour photographs are available for portions of holes LIE1 to LIE10</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>If core, whether cut or sawn and whether quarter, half or all core taken.
If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.
For all sample types, the nature, quality and appropriateness of the sample preparation technique.</td><td>There is no data about sub-sampling techniques and sample preparation for drilling at Isabel and Isabel Extended</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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.	There are no records of assay and laboratory procedures for Isabel or Isabel Extended.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	There are no records of the raw data for any projects. Available assay results are in the form of significant intercept tables within or attached to annual reports. At Isabel it is reported that the drilling completed by Mareeba Exploration and Mining Pty. Limited and Great Northern Mining Corporation was reviewed by Watts, Griffis and McQuat (Australia) Pty. As part of their appraisal of the Isabel Mine. At Isabel Extended there are more comprehensive assay results for selected drill holes but no assay certificates or raw data are available. At Isabel metallurgical testwork was carried out on a bulk composite by Australian Mineral Development Laboratories (AMDEL) and at West Orient metallurgical testwork was carried out on a drill core samples by Robertson Research. The reported composition of the metallurgical samples provides a form of secondary laboratory checking.
Location of data points	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.	All work was completed in local grids. The location of drill holes at all projects are displayed on maps in local grids. No reports yet obtained contain the conversion to standard grids.

Criteria	JORC Code explanation	Commentary
	Specification of the grid system used. Quality and adequacy of topographic control.	
Data spacing and distribution	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.	At Isabel, underground wall and roof sampling and drill sample intersections achieved a spacings of approximately 15-30 m (50-100 feet) in the areas where historic resources were reported.
Orientation of data in relation to geological structure	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.	At Isabel, generally vertical drilling intersected the approximately flat lying lenses of mineralisation. At Isabel Extended, vertical, and inclined to the west and south west drilling occurs. Drill holes MIED1 and MEID3 which intersected mineralisation were vertical.
Sample security	The measures taken to ensure sample security.	No information is available.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been completed

Under ASX Listing Rule 5.12 (LR 5.12), an entity reporting historical or foreign estimates of mineralisation in relation to a material mining project must include all of the information shown in LR5.12. Red River Resources considers the West Orient Project to be a material mining project and as such provides the following information regarding the West Orient Project in accordance with LR 5.12:

Orient Project

LR5.2.1 The source and date of the historical estimates or foreign estimates

The source of the foreign resource estimate is a study titled "Pre-Feasibility Mining Report West Orient Silver-Lead-Zinc Project" by Great Northern Mining Corporation NL dated January 1989

This report is publicly available through the Queensland Government QDEX Reports website. Refer to Report Number 21971 Part 2 (CR_21971_2).

https://www.business.qld.gov.au/industries/mining-energy-water/resources/minerals-coal/online-services/qdex-reports

LR5.2.2 Whether the historical estimates or foreign estimates of mineralisation use categories of mineralisation other than those defined in JORC Code 2012 and if so, an explanation of the differences

The historical resource estimate categorises the mineralisation at West Orient as a 'drill indicated ore reserve'. This estimate was calculated prior to the introduction of the JORC Code and had not been classified as per the JORC Code 2012.

Great Northern Mining Corporation NL (GNMC) used a polygonal calculation methodology to calculate the historical estimate using diamond drilling intersections only and based on a 5% Zn & Pb cut-off grade.

LR5.12.3 The relevance and materiality of the historical estimates or foreign estimates of mineralisation to the entity

Red River believes that the foreign resource estimate is both relevant and material as it demonstrates there is a historic high-grade zinc-lead-silver-indium resource at West Orient.

Red River believes, that based on the historic information, that the West Orient deposit has the potential to be mined and trucked to Red River's Thalanga Operation to be processed to produce saleable base metal concentrates.

LR5.12.4 The reliability of the historical estimates or foreign estimates of mineralisation, including reference to any criteria in Table 1 of JORC Code 2012 which are relevant to understanding of the reliability of the foreign resource estimates of mineralisation

The historical pre-feasibility study was completed by GNMC. It is the opinion of Red River Resources that the estimate is reliable and represents the results of work done to reasonable standards, using quality sampling, testing and geological interpretation. Both the sampling and resource estimation methods represent standard industry practice of the time.

LR5.12.5 To the extent known, a summary of the work programs on which the historical estimates or foreign estimates of mineralisation are based and a summary of the key assumptions, mining and processing parameters and methods used to prepare foreign resource estimates of mineralisation.

Drilling

The GNMC historical estimate is based upon 16 diamond drill holes completed by GNMC, with the most recent drilling (4 diamond drill holes) being completed in 1988. Drilling was completed over a 600m strike with a resultant drill intersection spacing of 50 to 100m achieved through the historic resource areas.

Metallurgical Test work

Robertson Research (1988) completed limited metallurgical test work on drill core from West Orient. Robertson Research carried out test work to produce a gravity concentrate and selective flotation to produce separate zinc and lead concentrates, and also a bulk lead-zinc concentrate. No work was carried out on indium recoveries. GNMC noted that they assumed 70% of the indium would be recovered to the zinc concentrate and the zinc concentrate would have an assumed indium grade of ~1,500 g/t In.

Table 15 Lead & Zinc Concentrate Recovery and Grade

	Pb %	Zn %	Ag %		Pb %	Zn %	Ag g/t
Recovery to Lead Concentrate	90%	-	60%	**Lead Concentrate Grade**	48%	-	2,017
Recovery to Zinc Concentrate	-	85%	10%	**Zinc Concentrate Grade**	-	47%	199

LR5.12.6 Any more recent estimates or data relevant to the reported mineralisation available to the entity

No further estimates or data relevant to the resource estimation are available.

LR5.12.7 The evaluation and/or exploration work that needs to be completed to verify the historical estimates or foreign estimates of mineralisation as mineral resources or reserves in accordance with JORC Code 2012

A review of historical drilling information is ongoing to ensure the integrity of available data. Red River has commenced a search of archives to capture as much of the historical data as possible and to confirm if any physical samples remain from the drilling programs. Based on the age of the historical drilling information, and the lack of recorded metadata and QA/QC (Quality Assurance/Quality Control) data it is most likely that a systematic drill program will be required prior to any update of the historic estimate to a Mineral Resource.

LR5.12.8 The proposed timing of any evaluation and/or exploration work that the entity intends to undertake and a comment on how the entity intends to fund that work

Red River has commenced a review and evaluation based on electronically available historical data. Once this is complete, Red River intends to undertake a series of site visits and commence exploration activity (sampling, mapping, geophysical exploration and drilling).

Red River will fund evaluation and/or exploration work from current (internal) financial resources.

LR5.12.9 A cautionary statement proximate to, and equal prominence as, the reported historical estimates or foreign estimates of mineralisation

Refer to the cautionary statement in this announcement and proximate to the foreign resource estimates of mineralisation reported in the highlights in this announcement.

LR5.12.10 A statement by a named competent person or persons that the information in the market announcement provided under LR 5.12 to 5.12.7 is an accurate representation of the available data.

Refer to the competent persons statement contained in this announcement

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
Sampling techniques	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. Aspects of the determination of mineralisation that are Material to the Public Report. 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.	The sampling at Orient East and Orient West is reported to have been undertaken using surface diamond, reverse circulation (RC) and percussion drilling methods. Due to the variable nature of sample lengths it appears that sampling to geological boundaries was undertaken at all projects. There is no further information about sampling techniques for drilling at Orient East. For Orient West holes WO10 to WO12 it is reported that diamond core was split and crushed for analysis by A.A.S. in the local laboratory of General Superintendence Co. and by North Queensland Analytical Services of Mareeba (N.Q.A). Upon checking drill core and assays from N.Q.A., lower than realistic assays were noted and check assays were completed where possible.
Drilling techniques	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	Orient West The diameter of all drill holes at Orient West is unknown. WO1-WO11 are diamond drill holes. It is unknown if they were pre collared RC.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</td><td>
<table>
<tr><td>Hole ID</td><td>RC metres</td><td>Diamond metres</td><td>Total Depth</td><td>Diameter</td></tr>
<tr><td>WO13</td><td>30</td><td>173</td><td>203</td><td>Unknown</td></tr>
<tr><td>WO14</td><td>60</td><td>33</td><td>93</td><td>Unknown</td></tr>
<tr><td>WO15</td><td>87</td><td>42.75</td><td>129.75</td><td>Unknown</td></tr>
<tr><td>WO16</td><td>24</td><td>38.8</td><td>62.8</td><td>Unknown</td></tr>
</table>
Orient East
<table>
<tr><td>Hole ID</td><td>RC metres</td><td>Diamond metres</td><td>Total Depth</td><td>Diameter</td></tr>
<tr><td>EO2</td><td>21</td><td>66.2</td><td>87.2</td><td>Unknown</td></tr>
<tr><td>EO3</td><td>90</td><td></td><td>90</td><td>Unknown</td></tr>
<tr><td>EO4</td><td>101</td><td>51.5</td><td>152.5</td><td>Unknown</td></tr>
<tr><td>EO5</td><td>81</td><td></td><td>81</td><td>Unknown</td></tr>
</table>
</td></tr>
<tr><td>Drill sample recovery</td><td>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.
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.</td><td>There are no records of core recoveries.
Although diamond drilling is the most appropriate method for sample collection to limit sample bias no further information is available to quantify the quality of sampling for the Orient West deposit.</td></tr>
<tr><td>Logging</td><td>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.
Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.
The total length and percentage of the relevant intersections logged.</td><td>There are no records of geological or geotechnical logs from Orient West or Orient East</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>If core, whether cut or sawn and whether quarter, half or all core taken.
If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.
For all sample types, the nature, quality and appropriateness of the sample preparation technique.</td><td>There is no data about sub-sampling techniques and sample preparation for drilling at Orient East.

The only information for Orient West is for holes WO10 to WO12 for which the diamond core was split.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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.	There are no records of assay and laboratory procedures for Orient East. At West Orient holes WO10 to WO12 the diamond core was split and crushed for analysis by A.A.S. in the local laboratory of General Superintendence Co. and by North Queensland Analytical Services of Mareeba (N.Q.A). Upon checking drill core and assays from N.Q.A., lower than realistic assays were noted and check assays completed were completed where possible. There are no records of assay and laboratory procedures for holes WO5-WO16.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	There are no records of the raw data for any projects. Available assay results are in the form of significant intercept tables within or attached to annual reports.

Criteria	JORC Code explanation	Commentary
Location of data points	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. Specification of the grid system used. Quality and adequacy of topographic control.	All work was completed in local grids. The location of drill holes at all projects are displayed on maps in local grids. No reports yet obtained contain the conversion to standard grids.
Data spacing and distribution	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.	At West Orient, underground wall and roof sampling and drill sample intersections achieved a spacings of approximately 50-100 m in the areas where historic resources were reported. The drilling covers an approximate strike length of 600m.
Orientation of data in relation to geological structure	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.	At Orient West, the drilling is appropriately inclined (50°) to the north east intersection the south west inclined mineralisation veins. At Orient East, holes EO3 and EO4 are inclined to the north, presently there is insufficient detail to determine the relationship between drill orientation and mineralisation.
Sample security	The measures taken to ensure sample security.	No information is available.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been completed