



Far West Ore Reserve and Mineral Resource Update – Supplementary Announcement

Red River Resources Limited (Red River or the Company) (ASX:RVR) lodged an ASX announcement dated 21 November 2017 titled “Far West Ore Reserve and Mineral Resource Update Extends Thalanga Mine Life”.

Red River has lodged a supplementary announcement containing additional information under ASX Listing Rules 5.8.1 and 5.9.1 in relation to the ASX announcement dated 21 November 2017.

About Red River Resources (ASX: RVR)

RVR is the leading ASX pure play zinc producer, with its key asset being the high quality Thalanga Zinc Project in Central Queensland. RVR commenced concentrate production at the Thalanga Zinc Project in September 2017 and RVR is focused on maximising returns from the Project by increasing plant throughput and extending mine life through increasing Mineral Resources and Ore Reserves at deposits currently in the mine plan (West 45, Thalanga Far West and Waterloo), by potentially converting Mineral Resources into Ore Reserves at Liontown and Orient and by continuing to aggressively explore our growing pipeline of high quality targets within the surrounding area.

On behalf of the Board,

Mel Palancian
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- *Geology and geological interpretation*

The Thalanga Far West deposit is classified as a volcanogenic-massive-sulphide type (VHMS) where copper, zinc, lead, silver and gold mineralisation is found associated with a suite of sulphide minerals including sphalerite, galena, chalcopyrite, pyrite and other minor sulphide assemblages. Mineralised zones are typically represented by fault controlled lenses located within a blue quartz eye volcanic unit.

The ore horizon comprises all the rock types which lie between the footwall rhyolite and the hangingwall dacites and consists of quartz eye volcanoclastics, exhalites, massive and semi massive sulphides and minor rhyolite and sediments. A quartz eye unit dominates the ore horizon and is characterised by 3-10mm blue quartz phenocrysts and lesser sporadically distributed 1-4mm feldspar in a variably sericitic, siliceous and chloritic groundmass.

The unit is predominately sericite altered and can contain large coherent clasts of quartz feldspar phyric rhyolite. Sub rounded clasts of granoblastic quartz +/- magnetite occur sporadically throughout the unit and may represent re-deposited fragments of a previous exhalite horizon formed on the sea floor at the footwall contact.

Exhalites and jasper also exist within the ore horizon, these are chemical sediments formed by the interaction of hydrothermal fluids with seawater. Jasper marks the paleo-seafloor positions considered essential for VHMS deposition, and commonly form as lateral terminations to the stratiform sulphide lenses. The exhalite type alteration refers to the chlorite-actinolite +/- barite rich units which occur at various positions within the ore horizon unit.

- *Sampling and sub-sampling techniques*

From late 2016 through to mid-2017 an additional series of 42 HQ/NQ2 sized diamond drill holes were completed to test for extensions of the Thalanga Far West Resource area up dip and to infill with a view to upgrading inferred material to indicated within the model. The holes were successful in confirming the up dip continuity of the mineralised domain and to also upgrade inferred areas to indicated through the upper sections of the model.

Table 1 Historical Drilling Summary

| Deposit | Hole Type | No. Holes |
|-------------------|---|------------|
| Thalanga Far West | Historical Diamond | 360 |
| | Underground Sludge Holes | 348 |
| | Reverse Circulation | 15 |
| | 2017 Diamond Holes | 42 |
| | Total Holes | 765 |
| | Total Used for Resource Estimate | 417 |

- *Drilling techniques*

The drilling data is primarily comprised of diamond holes drilled from surface. A total of 15 reverse circulation holes were also drilled into the resource area. The diamond from surface were pre-collared with RC down to approximately 100m where HQ core was commenced, this core size was further reduced to NQ2 size core where the ore interval was intersected.

- *The criteria used for classification, including drill and data spacing and distribution. This includes separately identifying the drill spacing used to classify each category of mineral resources (inferred, indicated and measured) where estimates for more than one category of mineral resource are reported*

The resource classification was based on a combination of drill spacing and assessment of geological continuity of the mineralisation domains. Measured blocks were typically coded where the distance to composites averaged less than 10m, indicated blocks coded where average distance to composites was between 10m and 25m and inferred blocks coded where average was between 25m and 50m. Areas of the resource where average distance to composites was greater than 50m were not classified.

- *Sample analysis method*

Diamond drilling was used to obtain core samples, primarily NQ2 drill core. Samples consist of half NQ2 drill core and sample intervals were selected by company geologists based on visual mineralization, with intervals ranging from 0.5 to 1.45m based on geological boundaries

Samples were sawn in half using an onsite core saw and sent to Intertek Genalysis laboratories Townsville. Samples were crushed to sub 6mm, split and pulverised to sub 75µm in order to produce a representative sub-sample for analysis.

Analysis 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. A selection of samples was also assayed for Au using a 30g Fire Assay technique.

- *Estimation methodology*

The source drilling, sampling and QAQC data was supplied by Red River to Mining One consultants together with a 3D interpretation of the mineralised domains and intrusive dykes in the form a wireframe models for the Thalanga Far West deposit. An inverse distance estimate was run to estimate copper, zinc, lead, silver and gold grades into the block model.

- *Cut off grade(s), including the basis for the selected cut-off grade(s)*

The resources have been reported above a 5% Zn Eq cut-off into inferred, indicated and measured categories.

The basis for cut off grade is that a 5% ZnEq grade is assessed as the lower cut-off for definition of potential economic mineralization using the proposed underground mining methodology. The 5% ZnEq resource envelope provides within which the proposed mining inventory can be sourced.

- *Mining and metallurgical methods and parameters, and other material modifying factors considered to date*

The underground mining method selected is overhand benching and utilises conventional underground mechanised mining practices. This is the same stoping method used currently at the West 45 underground mine. The stoping sequence is based on mining bottom-up from two set horizons, one of which will be filled with cemented rockfill and the remaining stope voids will be filled with rockfill. The selected mining method is considered well suited to the disposition of the orebody and ground conditions; it is also flexible to enable ready adjustments to stope strike lengths as needed.

Development mining using drill and blast methods will commence from the surface. The main decline will be 5m wide by 5.5m high and at a gradient of 1 in 7. Ore development will be mined 4.5m wide and 4.5m high. A standard underground mobile mining fleet will be utilised for underground mining activities including a twin boom jumbo drill, production drill, load haul dump units and 50t trucks.

The Thalanga Far West orebody is an extension of the Thalanga West orebody which was mined in the 1990's. An exploration drive was mined from Thalanga West to Thalanga Far West to conduct an extensive underground drilling campaign and also one stope was extracted before the mine closed in 1998. There are numerous geotechnical reports by Kevin Rosengren & Associates relating to the performance and ground conditions at Thalanga West. The main geotechnical issue at Thalanga West was when the microdiorite dyke intersected stope voids and unravelled. It is assumed that Thalanga Far West will, in places, have the microdiorite dyke intersecting or in close proximity to some stopes and development. Therefore, the mine design for Thalanga Far West is based on significantly smaller stopes than Thalanga West. In addition the mine plan includes cablebolting of all stope hangingwalls from every ore drive using 6m long cables, 4 per ring and rings spaced at 2.5m. Stope brows will also be cable bolted at set points.

The sublevel interval chosen is 20m floor to floor and stope strike lengths of 20m to 25m maximum. Stopes are planned to be mined in single lifts. The average stope width is approximately 5m. The minimum stope width of 2m was applied for the mine design. Hangingwall and footwall dilution of 0.5m wide each (1m total) was included. A recovery factor of 95% has been applied to all diluted stope tonnages.

No unplanned dilution has been applied to development ore and a recovery of 100% has been assumed. Measured, Indicated and Inferred Mineral Resources have been used in the study. Conventional long hole drilling and blasting will be used to break the stope ore.

It is assumed that development will be bolted and meshed in the backs and walls using galvanised elements. Bolts in the decline backs will be grouted/encapsulated. Cable bolting has been allowed for at all development intersections.

A stand-off pillar of approximately 30m has been assumed between the historic Thalanga West workings and designed Thalanga Far West stopes. Probe holes from new development drives will be needed to confirm the stand-off pillar distance. Groundwater inflows are assumed to be high since the Thalanga West workings have been filled with un-cemented tailings and the mine plan assumes that the historic workings will be progressively dewatered as the decline advances down via a series of dewatering holes.

A power line is installed near the planned mine portal which is assumed will be extended and the mine plan includes establishment of a stepdown transformer. An air compressor and receiver, underground two way communications as well as associated underground air, water and electrical reticulations systems are included in the mine plan.

A ventilation system consisting of a surface to underground exhaust raise along with primary and secondary fans is included in the mine plan. The decline is assumed to be used as the fresh air intake.

An egress system from surface (progressively installed as the mine workings become deeper) and an underground refuge chamber is included in the mine plan. Water supply to the underground operations is nearby and extension of this system is included in the mine plan. Diesel storage facility, workshops, mine offices and change houses are currently in place. The run of mine ore pad is approximately 450m away and waste rock dump is also in place.

- *Metallurgical methods and parameters*

The Thalanga poly metallic processing facility is approximately 0.5km from the proposed Thalanga Far West portal and has treated approximately 30,000t of Thalanga Far West ore the late 1990's. It has also successfully treated approximately 3.66Mt of primary sulphides from the adjacent Thalanga mine. It is intended that this facility will be used to beneficiate Thalanga Far West mineralisation.

The processing facility consists of a three stage crushing circuit including a primary jaw crusher and, secondary and tertiary cone crushers, a 640kW primary ball plant, two 640kW secondary ball plants, separate copper, lead and zinc flotation circuits, separate copper, lead and zinc thickeners, a vertical filter press and an associated reagent dosing systems and control systems. A regrind plant is also a part of the circuit.

The maximum throughput of this plant treating poly metallic ore is considered to be 650kt per annum as achieved in 1996. The Company is operating the plant at a throughput of approximately 325kt per annum and there is ample capacity for processing Thalanga Far West. The company considers that there will be surplus capacity in the processing plant.

The processing facility utilises differential flotation of copper, lead and zinc minerals and is a common and proven beneficiation method throughout the mining industry but also in the past at Thalanga. The process plant is considered to be appropriate to the Thalanga Far West style of mineralisation and is not novel in its nature.

The metallurgical factors applied in the economic evaluations are based on Thalanga mine historicals; zinc concentrate 89% recovery & 56% concentrate grade, lead concentrate 75% recovery & 60% concentrate grade plus 50% recovery of silver & 30% recovery of gold into the lead concentrate, copper concentrate 80% recovery & 26% concentrate grade plus 15% recovery of silver & 17% recovery of gold into the copper concentrate. There are no material deleterious elements expected that will prevent the saleability of the concentrates

- *The criteria used for classification, including the classification of the mineral resources on which the ore reserves are based and the confidence in the modifying factors applied*

There is a high level of confidence in the modifying factors (mining, processing, metallurgical, infrastructure, economic, legal, social and government) applied to the Far West Mineral Resource. This is driven by the following considerations:

The Far West deposit is an extension of the Thalanga massive sulphide deposit which was mined between 1989 and 1998, by open pit and underground methods and processed through the Thalanga Mill to produce separate, saleable copper, lead and zinc concentrates. This

Thalanga is a fully operational and permitted minesite, and Red River restarted production at Thalanga in 2017, with underground mining commencing at the West 45 deposit in early 2017, and concentrate production.

The concentrate produced from West 45 is sold on long term offtake to Glencore (copper concentrate) and Trafigura (lead and zinc).

- *Feasibility Study*

The Reserve Estimate has been prepared based on an internal feasibility study that assesses the technical and economic study of the potential viability of developing Mineral Resources at an order of magnitude. It includes assessments, modifying and operational factors required to demonstrate that progress to early works and production can be reasonably justified at the time of reporting.

As a part of the Study, a detailed mine design and schedule was developed by Mining Plus. The study assumes that the Thalanga processing plant and all supporting infrastructure is in place which is the current status as at November 2017. The Thalanga Operations are currently mining and processing ore from the West 45 mine which is approximately 1km to the west of Thalanga Far West. It is assumed that Thalanga Far West will start in 2018.

COMPETENT PERSONS STATEMENT

Far West Mineral Resource

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

Far West Ore Reserve

The information in this report that relates to the estimation and reporting of the Far West Ore Reserve is based on and fairly represents, information and supporting documentation compiled by Mr Mel Palancian who is a Member of The Australasian Institute of Mining and Metallurgy and a full time employee of Red River Resources.

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