

# Zeehan Low Grade Furnace Slag/Matte Shipments Resume & Tartana Resource Upgrade Information

# **Highlights**:

- First Zeehan shipment leaves Burnie Port after the granting of the Stage 2 permit
- 11,004 tonne export completed with further 120,000 tonnes remaining stockpile
- Further information with respect to significant upgrade of Tartana supergene/transition resource

R3D Resources Limited (ASX: **R3D**) (the **Company**), is pleased to announce that Zeehan low grade furnace slag/matte shipments have resumed following the granting of the Stage 2 permit by the West Coast Council on 15 August 2022. The permit allows crushing on site and access to the northern stockpile.

A condition of the granting has been the increase in the mining lease bond and the preparation of a final rehabilitation plan for the site. The bond has increased to \$200,000 and which has already been paid by the Company partly through prepayment of a portion of the first shipment while a rehabilitation plan has been submitted and is currently being reviewed by the EPA.

The M/V Key West departed on the 23 September 2022 with a 11,004-tonne export load destined for South Korea. This is the 15th shipment by the Company with total exports to-date of 305,097 tonnes. Remaining stockpiles on site are in the order of 120,000 tonnes.

R3D Managing Director Stephen Bartrop commented:

"The restart of exports of low-grade zinc furnace slag/matte is pleasing given its cash contribution to the Company as well as the ability to move the project forward to eventually complete the rehabilitation of site which had previously remained in its current state for many years."

## Tartana Supergene/Transition Resource Upgrade

The Company announced a significant upgrade of the supergene resource at the Tartana open pit on 21 September 2022. This programme was designed to upgrade and extend existing copper resources which may be suitable for heap leaching to produce copper sulphate using the existing heap leach – solvent extraction – crystallisation infrastructure which is currently undergoing refurbishment.

In accordance with Listing Rule 5.8.1 the Company provides the following further information on the resource upgrade.

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## 1. Geology and geological interpretation.

The Tartana project is located in a belt of Silurian and Devonian age siltstone, fine-grained sandstone, chert and limestone (Chillagoe Formation) that trends north-west and is steeply dipping. The Chillagoe Formation is separated from the Proterozoic rocks to the west by the Palmerville Fault and which is a regionally extensive, major Basin-forming fault.

The siltstone and sandstone at Tartana have a weakly developed, steeply dipping cleavage formed during basin inversion. Folding is moderately plunging to the north-west. Also observed in the Tartana open pit and in drill core is a medium grained felsic intrusion that is weakly deformed. This intrusion is likely to be part of the Permo-Carboniferous suite, although, no absolute age dating has been reported. Regionally, the same belt of rocks hosts the Red Dome porphyry copper-gold, Mungana porphyry copper-gold-zinc deposit and the Redcap and King Vol skarn deposits.

The primary copper mineralisation in the historical pit is structurally controlled. Chalcopyrite is developed as veins in dilatant fractures. The main mineralised trends are sub-parallel to bedding striking around 150 southeast and dip steeply to the northeast. Other common mineralised fracture orientations include striking 800 and dipping 700 north and striking 70 and dipping 75 north. A number of shallower dipping chalcopyrite-bornite veins trending 145 and dipping 55 northeast have steep dipping footwall mineralised fractures, indicating normal fault movement. Other chalcopyrite veins sets are shallow dipping and may represent mineralisation in stress fractures above an intrusive at depth.

## 2. Sampling and sub-sampling techniques

In the Tartana resource defined area of the Tartana Flats the average sample length of all sampled holes is 1m and covers both recent RC drilling and historical RC and diamond drilling. RC samples were split to 1-2 kg sample size while historical diamond drill core was half sawn. Sub-sampling techniques and sample preparation involved washing all chips to removed drilling mud and polymers prior to logging, photographing and storing.

Composites of the drill hole assays were generated using Maptek Vulcan software with run lengths of 1m, which is consistent with the typical sample interval. These composites honour the geological wireframes. Checking was undertaken by generating an Isis file and visually inspecting the result of the composite.

Any assays with below detection limit negative values from -999 to 0 were adjusted to 0.0 in the composite file.

Specific components of the compositing include:

- Run lengths of 1 metre
- Data field Cu, Au, Zn, Pb and Ag were composited

The composite file was applied a tag for each composite with the character 700 (supergene) and 100 (mined) in the 'bound' column of the Isis file. This file was subsequently used in the estimation process.



# 3. Drilling techniques

The Company conducted a 28-hole (1,620m) RC drilling program in April – May 2022 which was designed to upgrade the previous resource as well as verify historical drilling. Historical drilling has been carried out by a combination of both RC and diamond drilling with the management of Mr Tom Saunders.

A combined total of 68 drill holes intersect the mineralised supergene in Tartana flats area and these holes were selected for compositing (specifically the collar, survey and assay tables) to establish wire frame modelling.

## 4. Drill Spacing and Other Criteria

Indicated versus Inferred spacing

Cross sections were provided by R3D to model lithology and mineralisation wireframes for the Tartana flats area. The mineralisation was intersected on approximately 10 drilling sections and is currently known to a depth of at least 40m below the surface. The mineralisation has been drilled on a drill pattern of approximately 10-20 m by 30-60m and strikes approximately 330 degrees. The mineralised zone is interpreted as being flat lying.

Mineral resources have been calculated by BMS based on a bearing of 150 degrees. Mineralisation is present as a single mineralised supergene domain - defined using lithology logs, where possible, and Cu grades. The block model was created using the one bdf file and the model contains only default values except for the variable domain, which was populated in relation to the domain wireframe in which the blocks reside.

A rotation of 150 bearing, 0 plunge and 0 dip was applied to the blocks.

A Vulcan block model was created to encompass the full extent of the deposit.

The classification of blocks into Indicated and Inferred Resources was a two stage process. The first stage categorised blocks based on the pass 1 flag variable. The second stage categorised blocks to construct smoothed, realistic 3D solids that defined a region of medium confidence based on grade and geological continuity (using guidelines in the JORC 2012 Code).

#### 5. Sample analysis method

RC samples were dispatched to SGS Laboratories in Townsville and tests for copper and silver and gold when silver assayed > 10 ppm. SGS complete ore grade base metal assays where initial testing exceeds detection limits. SGS analysis codes and descriptions are outlined below.

SGS Code	Description
GO_FAA30V10	Au, FAS, ore grade, AAS, 30g-10mL
GO_IMS41Q100	4 Acid Digest (HCL/HCLO4/HF/HNO3), ICP-MS
GO_ICP41Q100	4 Acid Digest (HCL/HCLO4/HF/HNO3), ICP
G_WGH_KG	Weight of samples received

Historical drill sampling has used similar methodologies by SGS or ALS.



# 6. Estimation methodology

The 3D wireframe file of the single domain was created in Vulcan and snapped to the drill holes. 68 drillholes were used to inform the MRE with the Mineralised Envelope modelled using a supergene classification from geology logs based on the presence of secondary sulphides from the 2022 drilling programme. The 3D wireframe file of the single domain was created in Vulcan and snapped to the drill holes.

Hole Type	Drill hole Series	Drill hole Number	Resource Metres
RC	NARC	6	155.5
RC	TRC	58	1,292.2
DD	TDH	1	27.7
DD	TRDH	3	78.9
Total		68	1554.3

- A Vulcan block model was created by BMS for the MRE with a block size of 5 m NW-SE × 5 m NE-SW × 5 m vertical with sub-cells of 1 m × 1 m.
- The block model was constrained to a single domain. Parameters of the model are shown below.
- Copper was modelled through the block model.

Model Name	х	Y	Z
Origin	209000	8125300	400
Offset	-600	-300	-600
Offset	-100	100	0
Block Size (sub-blocks)	5 (1)	5 (1)	5 (1)

Variables	Description	
Cu	unCut Grade - reportable	
Min_Domain	Mineralisation domain	
Avg_dist	list Average distance to samples	
zone	Insitu, mined etc	
holecount	Number of drill holes	
Numsam	umsam Number of Samples used for Block grade interpolation	
BD	Bulk Density	
Mined	d Mined or Insitu	
OX	oxidation	

- Inverse Distance (IVD) interpolation with an oriented ellipsoid search was used to estimate Cu and Au grade in the single domains for fresh rock as a check block model
- A first pass long axis radius of 29 m with a minimum number of informing samples of 10 was used. The major axis radius was increased to 58 m for the second pass. A third pass with an increased search radius



of 1,032 m and a decrease in the minimum number of samples from 8 to 2 was required to fill blocks within the extremities of the resource wireframes (see tables below)

- ~30% of the resource volume filled in the 1st pass, ~60% in the 2nd pass and the remainder in the 3rd pass for Tartana Creek
- No high-grade copper cuts were applied to Tartana Creek or Tartana deposits
- A bulk density value of 2.65 t/m3 was applied to Tartana Supergene
- Search and estimation parameters below

Pass	Min Sample	Max Sample	Distance (m)
1	8	40	29
2	8	40	59
3	2	40	1032

Domain	Strike	Plunge	Dip	Discretisation
700	240	0.5	0.5	3x:3y:3z

- To check that the interpolation of the Block Model correctly honoured the drilling data and domain wireframes, BMS carried out a validation of the estimate using the following procedures:
  - -Comparison of volumes defined by the domain wireframes and the associated Block Model
  - -A comparison of the composited sample grade statistics with Block Model grade statistics for the single domain
  - -Visual sectional comparison of drill hole grades versus estimated block grades.
- The volumes were almost identical. The overall volume difference is less than 1%. BMS considered this to be an acceptable result.
- A visual section comparison was undertaken of drill hole grades versus estimated block grades, which revealed satisfactory comparable grades.

## 7. Cut-off grade(s), including the basis for the selected cut-off grade(s)

A range of reportable MRE cut-off grades were provided and no high-grade copper cuts were applied.

# 8. Mining and metallurgical methods and parameters, and other material modifying factors considered to date.

Mining is expected to be carried by bulk mining open cut methods. R3D has been refurbishing an existing heap leach – solvent extraction – crystallisation plant which produced copper sulphate pentahydrate for approximately a decade before being place on care and maintenance in 2014.



The Company has completed bottle roll tests on heap leach material to determine leachable copper content (see ASX announcement dated 22 July 2022). It is currently completing metallurgical testwork on the supergene mineralisation.

This announcement has been approved by the Disclosure Committee of R3D Resources Limited.

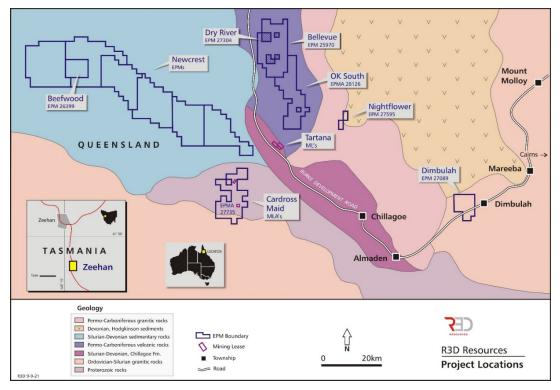
Further Information:

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#### **About R3D Resources Limited**

R3D Resources is a significant copper-gold explorer and developer in the Chillagoe Region in Far North Queensland. R3D owns several projects of varying maturity, with the most advanced being the Tartana mining leases, which contain an existing heap leach – solvent extraction – crystallisation plant. Work has commenced to restart this plant to provide future cash flow through the sale of copper sulphate. In Tasmania, Tartana has secured permitting to excavate and screen for export low-grade zinc furnace slag/matte from its Zeehan stockpiles in Western Tasmania and has been shipping zinc slag to South Korea. These two projects have the potential to generate a strong cash flow to underpin the R3D's extensive exploration activities in the Chillagoe region.





#### **Competent Person's Statement**

The information in this announcement that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Wayne (Tom) Saunders who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM), and a Member of the Australian Institute of Geologists (AIG). Mr Saunders has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration, and to the activity that is being 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 Saunders is an employee of R3D Resources Limited, and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Geoff Reed who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM (CP)), and a Member of the Australian Institute of Geologists (AIG). Mr Reed has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration, and to the activity that is being 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 Reed is a consultant of R3D Resources Limited, and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

#### **Disclaimer Regarding Forward Looking Statements**

This ASX announcement contains various forward-looking statements. All statements, other than statements of historical fact, are forward-looking statements. Forward-looking statements are inherently subject to uncertainties in that they may be affected by a variety of known and unknown risks, variables and factors which could cause actual values or results, performance or achievements to differ materially from the expectations described in such forward-looking statements.

R3D Resources does not give any assurance that the anticipated results, performance or achievements expressed or implied in those forward-looking statements will be achieved.