



ASX RELEASE (14 FEBRUARY 2023)

## Maiden Queen Grade Zinc Resource

### Highlights:

- Maiden resource estimated for the Queen Grade Zinc deposit within the Tartana mining leases
- Total resources of 39,000 tonnes of contained zinc at 5.29% Zn using a 0.5% Zn cut-off grade with potential Ag and Pb credits not included in the resource estimation.
- Resources estimated to 160 m depth with the mineralisation outcropping on a ridge line. Mineralisation remains open at depth.
- Mineralisation style is similar to nearby King Vol orebody indicating scope for continuity to significant depths e.g. > 500m
- Flotation testwork indicates high zinc recoveries of >98% to a concentrate grading 42% zinc with initial rougher flotation testwork
- Next steps including drilling to extend and upgrade resources as well as initial open pit design.

R3D Resources Limited (ASX: **R3D**) (the **Company**), is pleased to announce a maiden resource for the Queen Grade zinc deposit which is located within the Tartana Mining Leases. The zinc skarn mineralisation is located away from the recently announced copper resource associated with the open pit and northern oxide zone, however the mineralisation may be related to the same porphyry at depth. Similar high grade zinc skarn mineralisation occurs at the adjacent King Vol mine some 650 m to the southwest (see Figure 1a) and which is owned by Aurora Metals Limited.

R3D Managing Director Stephen Bartrop commented:

"We are excited that we have finally been able to report a 39,000-tonne maiden zinc resource in the Queen Grade zinc project. We believe this is a significant resource which will allow us to commence open pit mine design studies (potentially later progressing to underground mining) while in the background, further drilling is likely to extend the resource size, particularly at depth.

"Silver, lead, copper and potentially gold and indium grades have not been incorporated into the resource zinc grade but are likely to provide meaningful credits in the future."

Bluespoint Mining Services Pty Ltd ("BMS") has estimated a maiden zinc resource for the Queen Grade deposit based on recent and historical drilling. As reported to the ASX on the 11 July and 21 October 2022, drillhole TDH24 reported a downhole intersection of 12m at 10.7% Zn from 160.7m and confirmed mineralisation continuity at depth (see Figure 1b). Further drilling has been completed since TDH 24 and these data have been included in this mineral resource estimate.

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Figure 1. 1(a) Queen Grade diamond drilling with the outcropping gossan in the foreground and the grey scar of the King Vol zinc mine in the background (owned by Aurora Metals Limited). 1(b). Part of the TDH24 downhole intersection of 12m at 10.7% Zn from 160.7m (See ASX announcement dated 21 October 2022).

### Mineral Resource Estimate

BMS has estimated the following inferred mineral resource for the Queen Grade zinc deposit at various zinc cutoff grades. The contained zinc is not overly sensitive to changes in the zinc cutoff grade reflective the massive and banded sulphide nature of the mineralisation.

Grade Cut off (%)	Tonnes (kt)	Zn Grade (%)	Density (t/m <sup>3</sup> )	Zn (kt)
0.5	734	5.29	3.14	38.9
1.5	563	6.62	3.14	37.3
2.5	495	7.25	3.14	35.9
5	355	8.63	3.14	30.6

Figure 2. Inferred Mineral Resources at various zinc cut off grades. Source: BMS.

The mineralisation is hosted in sequence of steeply dipping limestones, andesite, bedded cherts and arkosic sandstones and with the gossanous material at surface representing the weathered sulphide rich skarn. The inferred mineral resource dimensions have been estimated within a 130m (strike) by 20m (width) by 160m (depth) volume.

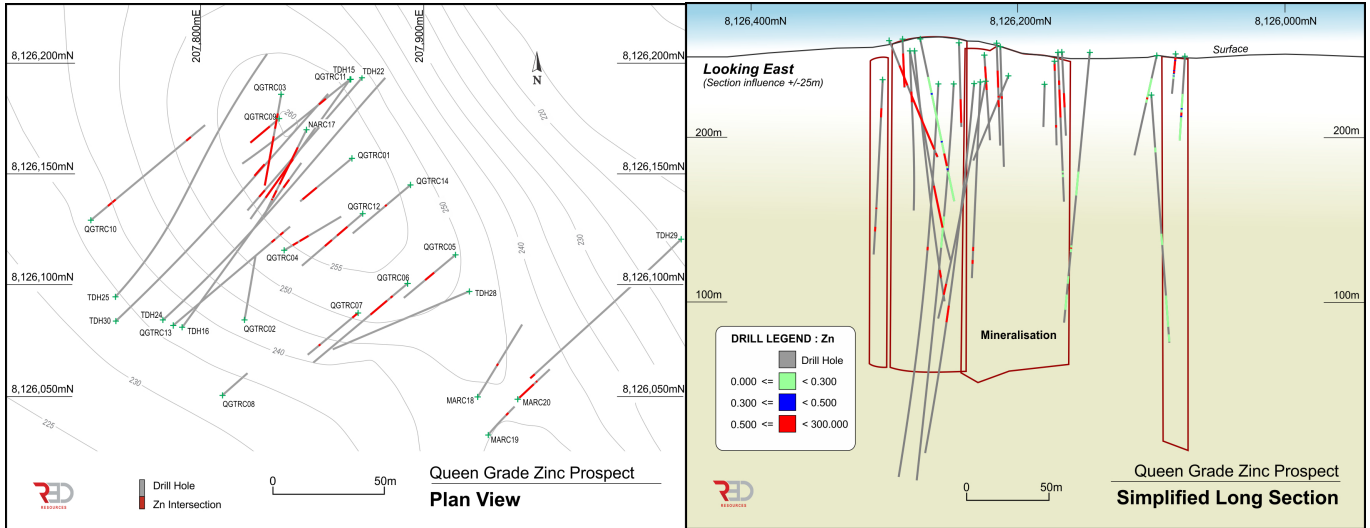


Figure 3. 2(a) Plan view showing drill collars, hole traces and zinc mineralisation. 2(b) Long section with drill traces and zinc mineralisation. There is an interpreted fault 'window' between the main body of mineralisation and the southern body.

Zinc mineralisation extends to over 900 m depth at the neighbouring King Vol mine and it is expected that the Queen Grade zinc mineralisation is likely to continue to substantial depths beyond the 160 m depth used in the current mineral resource estimate. Figure 4 shows a cross section through the main zone and it is evident that the zinc sulphide mineralisation is relatively coherent and likely continue at depth.

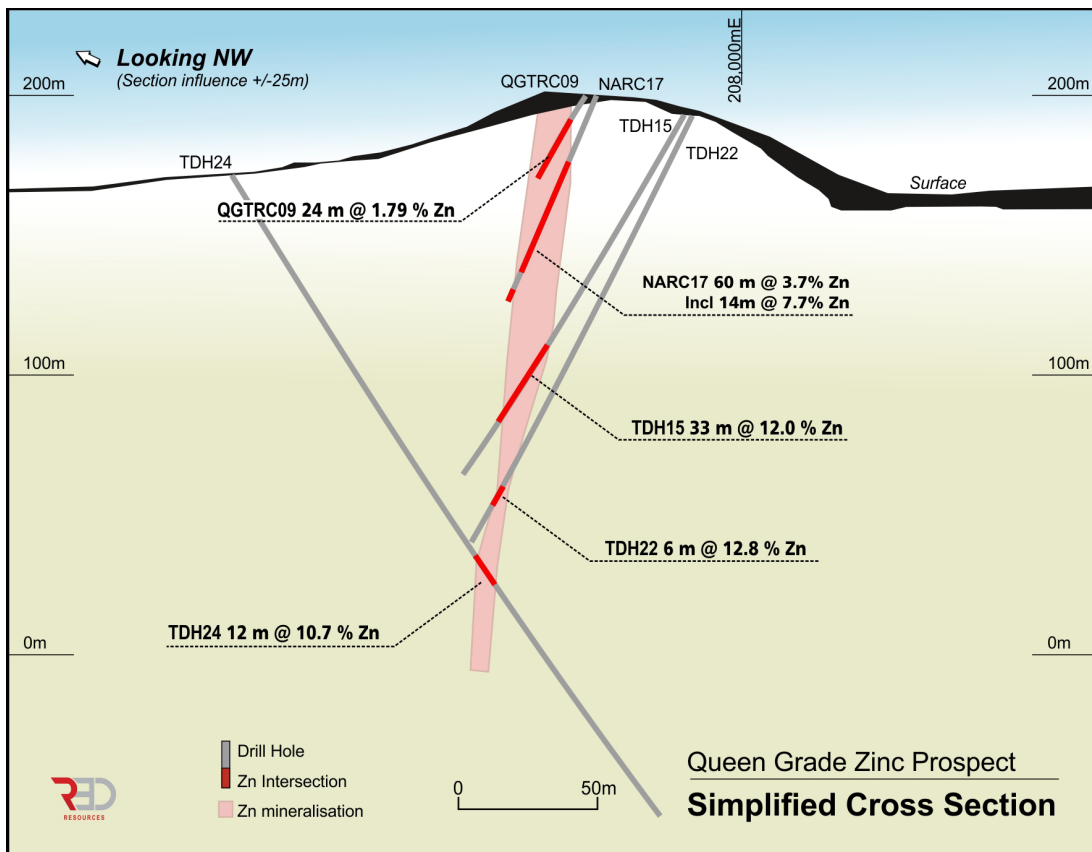


Figure 4. Cross section through the main ore zone. Source: BMS

## Metallurgical Testwork

The Company has previously commissioned Core Resources Pty Ltd to conduct flotation testwork on a composite sample from Drill hole TDH 22. The testwork indicated high zinc recoveries of >98% to a concentrate grading 42% zinc with its initial rougher flotation testwork. The sample tested (from 5 m of TDH 22) assayed 16.1% Zn, 0.25% Cu and 0.57% Pb. Core Resources also report that the flotation kinetics were fast with recoveries achieved in 2 minutes in the laboratory tests at a primary grind of 80% passing 75 microns. Work is ongoing with regrinding and cleaning testwork along with analysis of zinc concentrates for any impurity elements.

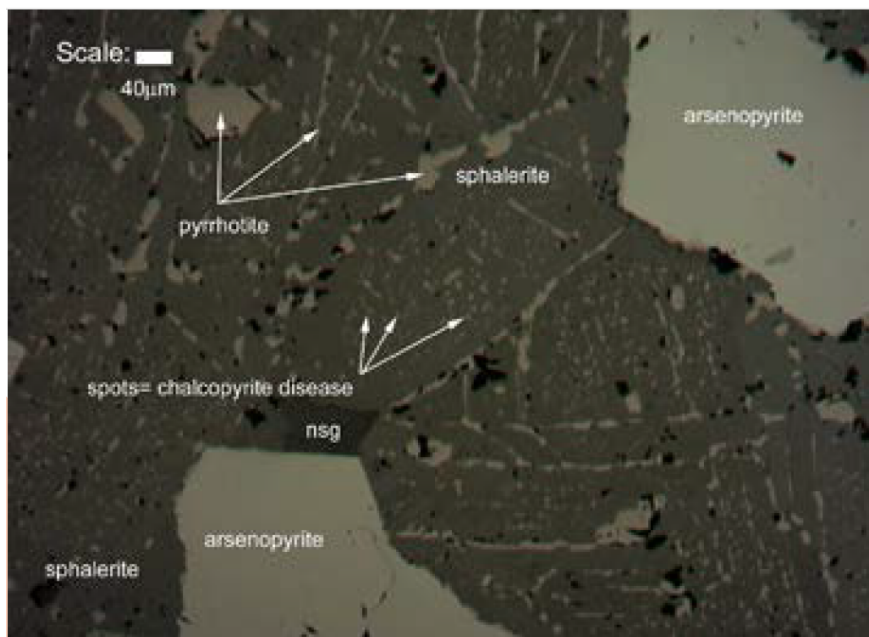


Figure 13 is a photomicrograph of the Queen Grade zinc mineralisation from TDH22 with pyrrhotite ( $\text{Fe}_{1-x}\text{S}$  ( $x = 0$  to  $0.2$ )) and chalcopyrite ( $\text{CuFeS}_2$ ) exsolutions with coarse grained sphalerite ( $\text{ZnS}$ ) grains.

## Further Information on the Resource Estimation

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

### 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 Queen Grade sulphide zinc mineralisation is a steeply dipping sulphide orebody which outcrops on a ridge line as a gossan. The host lithologies comprise shales, limestones, cherts and andesites.

## 2. Sampling and sub-sampling techniques

At Queen Grade 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 Zn, Pb, Ag, Cu, Au were composited

The composite file was applied a tag for each composite with the character 1000 in the 'bound' column of the Isis file. This file was subsequently used in the estimation process.

## 3. Drilling techniques

The Company conducted a 5-hole (1,389m) Diamond (2-holes for 724.2 m) and RC (3 holes for 665 m) drilling program in July – September 2022. This was designed to test depth extensions to mineralisation as well as verify historical drilling. Historical drilling has been carried out by a combination of both RC and diamond drilling.

A combined total of 18 drill holes intersected the mineralisation in the Queen Grade 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

Cross sections were provided by R3D to model lithology and mineralisation wireframes for the Queen Grade project area. The mineralisation was intersected on approximately 10 drilling sections and is currently known to a depth of at least 160m below the surface.

Mineral resources have been calculated by BMS based on a bearing of 150 degrees. Mineralisation is present as a single mineralised domain - defined using lithology logs, where possible, and Zn 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 deg 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 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 tested for zinc, lead, copper and silver and gold. 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. 18 drillholes were used to inform the MRE with the Mineralised Envelope modelled using geology logs based on the presence of sulphides from the 2022 and earlier drilling programmes. 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	2	80
RC	TRC	11	213.5
DD	TDH	5	61
<b>Total</b>		<b>18</b>	<b>354.5</b>

- 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 × 1 m.
- The block model was constrained to a single domain. Parameters of the model are shown below.

Model Name	X	Y	Z
Origin	207875.0	8125950.0	400.0
Offset	-400	-100	-600
Offset	100	300	0
Block Size (sub-blocks)	5 (1)	5 (1)	5 (1)

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

- Inverse Distance (IVD) interpolation with an oriented ellipsoid search was used to estimate Zn grade for Domain 1000
- 18 assayed drill holes were analysed drill holes within the database provided by R3D. These assays from the 18 drill holes have been used by BMS in the Queen Grade MRE.
- In the Queen Grade resource defined area of the Queen Grade the average sample length of all sampled holes is 1m. This reflects that the vast majority of samples were based on 1m lengths
- A first pass long axis radius of 50 m with a minimum number of informing samples of 8 was used. The major axis radius was increased to 100 m for the second pass. A third pass with an increased search radius of 180 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)
- ~45% of the resource volume filled in the 1st pass, ~30% in the 2nd pass and the remainder in the 3rd pass for Queen Grade
- A bulk density value of 3.1 t/m<sup>3</sup> was applied to Queen Grade
- Search and estimation parameters below
- Search and estimation parameters below

Pass	Min Sample	Max Sample	Distance (m)
1	8	40	50
2	8	40	100
3	2	40	1032

Domain	Discretisation
1000	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 zinc 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 with later potential underground development.

The Company has commissioned Core Resources Pty Ltd to conduct flotation testwork on core samples in 2018. As mentioned earlier the flotation testwork on a composite sample from Drill hole TDH 22 indicated high zinc recoveries of >98% to a concentrate grading 42% zinc with the initial rougher flotation testwork.

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

Further Information:

**Stephen Bartrop**

Managing Director

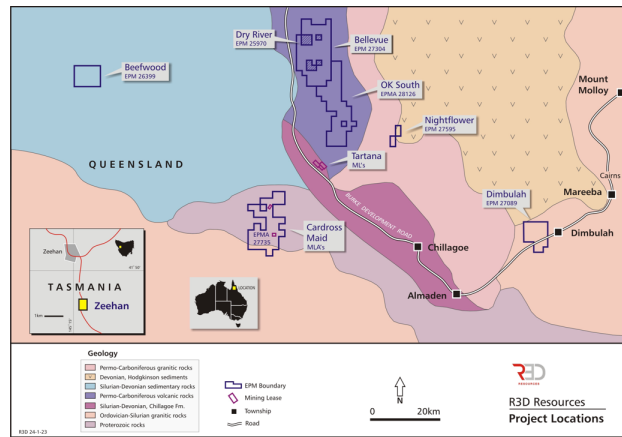
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## About R3D Resources Limited



R3D Resources is a significant copper, gold, silver and zinc explorer and developer in the Chillagoe Region of 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 nestled between resource estimates of 45,000 tonnes of copper at Tartana and 39,000 tonnes of zinc at Queen Grade both reported to JORC standards. Recommissioning the currently idle plant to provide future cash flow through the sale of copper sulphate is expected in H1 CY 2023.

### 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 undertaken 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 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 undertaken 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.

Table 1. *Drillholes and drillhole intersections used in the MRE*

dhid	midx	midy	midz	From (m)	To (m)	Length (m)	Zn (%)
NARC17	207837.0	8126149.9	208.2	25.0	88.0	63.0	3.50
NARC20	207947.5	8126052.1	243.6	1.0	18.0	17.0	0.60
QGTRC01	207849.5	8126141.2	215.9	40.0	57.0	17.0	7.61
QGTRC03	207832.0	8126161.1	215.5	18.0	83.0	65.0	5.41
QGTRC04	207844.9	8126119.6	235.8	8.0	25.0	17.0	1.30
QGTRC05	207902.1	8126102.6	222.6	29.0	39.0	10.0	0.68
QGTRC06	207880.8	8126089.9	223.2	20.0	46.0	26.0	1.22
QGTRC07	207869.2	8126085.6	242.6	2.0	7.0	5.0	0.68
QGTRC09	207827.1	8126167.9	240.7	10.0	34.0	24.0	1.79
QGTRC10	207760.0	8126136.7	214.9	21.0	27.0	6.0	0.97
QGTRC11	207794.2	8126165.4	144.4	106.0	109.0	3.0	0.78
QGTRC12	207860.9	8126121.7	229.7	19.0	45.0	26.0	2.33
QGTRC13	207833.8	8126121.2	128.3	116.0	128.0	12.0	1.67
QGTRC14	207883.8	8126135.8	224.5	33.0	35.0	2.0	1.29
TDH15	207834.0	8126147.2	157.5	95.5	126.6	31.1	12.00
TDH16	207837.8	8126145.0	107.1	145.1	154.5	9.3	5.90
TDH22	207827.2	8126141.0	117.9	147.7	154.6	6.9	12.76
TDH24	207844.0	8126147.5	95.3	160.4	172.4	18.2	10.52
TDH29	207950.5	8126059.1	79.6	171.0	173.0	2.0	0.05

JORC Code, 2012 Edition

Section 1 Sampling Techniques and Data

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Sampling of historical 1960s and 1970s reverse circulation (RC) holes was generally in 3 feet increments and sampling of drill core was generally in 10 feet or 30 feet increments. No duplicates, standards or blanks are known to have been used.</li> <li>Sampling of historical 1990s drill core was generally done at 1 m intervals. No duplicates, standards or blanks are known. Details of the sampling of 1990s RC drilling is generally not known. The use of duplicates, standards or blanks is not known. Sample weight of historical sampling is unknown.</li> <li>Diamond – ¼ core cut – Outokumpu. ¼ to ½ core CEC – diamond core was used in the total Majestic MRE but only for zonal trends in the Transitional model.</li> <li>Sampling of 2006 RC holes was generally in 1 m intervals. The use of duplicates, standards or blanks is not known.</li> <li>Sampling of 2009–2012 drill core was generally in 1 m intervals. Core was sawn in half and washed prior to submission for assay. The use of duplicates, standards or blanks is not known.</li> <li>R3D 2022 programs RC 1 m splits or diamond core half sawn in 1 m sections and washed prior to sampling. Standards were included in the assay program.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>5.5in RC and Diamond Core (NQ)</li> <li>R3D 2022 Programs – RC utilizing truck mounted Drill Rig and Compressor</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Historical core recovery rate has not been recorded.</li> <li>Techniques used to maximise sample recovery are not known.</li> <li>The relationship between sample recovery and grade has not yet been determined.</li> <li>The 2006 RC drilling delivered &gt;87.5% recoveries; the 2009–2012 DD holes produced &gt;85% recovery.</li> <li>R3D 2022 Programs - RC recoveries are exceed 99% and Diamond Core have recoveries are exceeding 99%.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Some historical drillholes have geological logs, although the records are incomplete.</li> <li>Individual samples are not specifically described geologically.</li> <li>Geotechnical logging is absent.</li> <li>Logging is qualitative in nature.</li> <li>2009–2012 DD holes were logged with emphasis on rock types, amount and percentage of veining and identification of minerals present. Core was photographed</li> <li>R3D 2022 programs – detailed logging of geology, alteration and structures in diamond core. Geology and observable alteration logged in RC chips.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>Historical core preparation has generally not been documented for RC or RAB drilling.</li> <li>Historical sample nature, quality and appropriateness is generally unknown.</li> <li>Majority of historic sampling does not include reported quality control procedures.</li> <li>Measures to ensure that sampling is representative of in situ material are yet to be determined or may not have been carried out for much of the historical drilling.</li> <li>2009 – 2012 – diamond core was sawn, washed and photographed prior to sampling.</li> <li>R3D 2022 programs – diamond core was sawn, washed and photographed prior to sampling. RC drilling was bagged, split for samples and sieved for logging.</li> </ul>
<b>Quality of</b>	<ul style="list-style-type: none"> <li>Nature, quality and appropriateness of assaying and laboratory procedures are</li> </ul>

<p><b>assay data and laboratory tests</b></p>	<ul style="list-style-type: none"> <li>• unknown for the historical sampling.</li> <li>• Analabs Townsville – has been used with standard assay methods for base and precious metals in historical sampling with historical data available.</li> <li>• 2009–2012 DD hole samples were assayed by SGS Laboratories in Townsville.</li> <li>• The use of standards and blanks have not been documented for historical sampling from the drilling and no information is available on their accuracy or precision.</li> <li>• Metallurgical samples – Cu by ICP587</li> <li>• R3D 2022 Programs – RC and diamond samples were dispatched to SGS Laboratories in Townsville and tested for copper, silver, and gold when silver assayed &gt; 10ppm.</li> <li>• Contract with laboratory in place to complete ore grade base metal assays.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>• Verification of significant intersections independently undertaken for historical assay sheets as received from the designated SGS laboratory and are available for drilling completed in 2006.</li> <li>• Original assay sheets available for 2009 to 2012 drilling programs.</li> <li>• Depths in historical drillholes are stated in feet and were converted into metric units.</li> <li>• Check sampling during metallurgical testing. Composite metallurgical feed grade sampling matches 95% RC assaying.</li> <li>• R3D 2022 Programs – No repeat assays or laboratory assays undertaken to date. R3D currently has external base metal standards on site. These were inserted at a rate of each 20th sample (5%) in the RC sampling.</li> </ul>
<p><b>Location of data points</b></p>	<ul style="list-style-type: none"> <li>• Drillhole positions have been recorded using handheld GPS units, which were regularly checked against several base station survey points established by Kagara Zinc Ltd. The results confirm that the handheld GPS units are accurate to within 3 m for east and north co-ordinates and within 4 m for the elevation.</li> <li>• Drillholes that could not be located due to collar destruction were estimated by reconstructing the Majestic grid in relation to GDA94 and measured graphically. These are generally considered to be within 10 m of their true position.</li> <li>• Data were captured in Map Grid of Australia GDA 94, Zone 55.</li> <li>• No historical downhole surveys were carried out except for drilling of two Outokumpu diamond drillholes. Most of the DD holes are dipping at -60°; most of the RC holes are dipping at -45° and most of the RAB holes are at -90°.</li> <li>• Fully surveyed theodolite which was tied into mining and topographic features. Later differential GPS controls completed on some of the Solomon Copper infill drilling.</li> <li>• R3D 2022 Programs – Handheld GPS reading 10+ satellites with a nominal accuracy of 5m was used for initial location of collar. R3D has completed a drone LIDAR over the whole of the four mining leases. This will enable to improve accuracy of the collar location down to DGPS quality. A Public Survey Mark (PSM) is located between Tartana and King Vol for survey control.</li> <li>• Downhole survey (magnetic bearing and declination) was completed by an Imdex downhole survey machine supplied by the drilling company with readings every 30m downhole.</li> </ul>
<p><b>Data spacing and distribution</b></p>	<ul style="list-style-type: none"> <li>• Data spacing varies depending on the drill program. Drilling has been conducted on 100 m × 100 m spacing, then depending on results, the follow-up drilling was typically on a 50 m × 50 m spacing or 20 m × 20 m spacing.</li> <li>• Where spacing is 20 m × 20 m, it may be possible to determine the geological and grade continuity. 50m lines 12.5 – 25m along lines.</li> <li>• R3D 2022 Program – Sampling was completed at 1m intervals for the RC chips</li> </ul>

Criteria	Commentary
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Mineralisation is defined on the limits of geochemical data primarily from surface DD, RC and RAB drilling.</li> <li>It is considered that there is no sampling bias in any of the historical data.</li> <li>Drilling generally at right angles to prevailing geological strike.</li> <li>Holes drilled angled 45-65. Average 60% dip.</li> <li>R3D 2022 Programs – The drilling was designed to test the steeply dipping mineralized zones at right angles to the surface strike.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The various companies that drilled at the Tartana project maintained their own sample security measures.</li> <li>All sampled core from 2009–2012 drilling was sent to Townsville SGS laboratories. The remaining core from other drill programs is stored securely under cover on site. Onsite supervision at all times.</li> <li>Delivered to laboratory designated secure transport.</li> <li>R3D 2022 Programs – Security remains in place at the mine site and a reliable transport agent has been engaged to transport the samples to the laboratory in Townsville.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>A review of drilling prior to 2006 was carried out by Stevens and Associates (2006)</li> <li>Multiple audits conducted by Majestic staff as well as Solomon Copper both before and after commencement of mining.</li> <li>Tartana completed traverses involving geological mapping to ensure mineralisation trends in line with observable geology.</li> <li>SRK IGR review of historical data in 2021</li> <li>R3D 2022 Programs – Review by BMS as part of MRE studies.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>R3D holds 100% interest in the Tartana Project, consisting of ML 4819, ML 4820, ML 5312 and ML 20489.</li> <li>A 1.5% Net Smelter Royalty exists over ML 4819, ML 4820, ML 5312 and ML 20489.</li> <li>The previously mined Tartana open pit, leach pads, and copper sulphate production facilities are located on ML 5312.</li> </ul>
<b>Exploration done by other parties – drilling only</b>	<ul style="list-style-type: none"> <li>CEC – diamond drilling results used in the deeper Majestic primary resource calculations</li> <li>Outokumpu – Deep diamond drilling Tartana Flats and partly Tartana Hill</li> <li>Dominion – limited to Queen Grade zinc – not in the Majestic Resource Statement</li> <li>Adam – Drilling at Queen Grade only</li> <li>Aztec – resampling and relogging at Queen Grade only</li> <li>Solomon Copper – RC and diamond completed on Tartana Hill. Postdate Majestic drilling. Shallow RC results match the majestic shallow RC results – however survey control and check assays were not completed.</li> </ul>

<p><b>Geology</b></p>	<ul style="list-style-type: none"> <li>• The Tartana project is located on a belt of Silurian and Devonian age siltstone, fine-grained sandstone, chert and limestone rocks (Chillagoe Formation) that trends northwest and dips steeply to southeast.</li> <li>• The Chillagoe Formation is separated from the Pre-Cambrian Dargalong Metamorphics by the Palmerville Fault, which passes immediately west of the Tartana leases and is a regionally extensive, major basin-forming fault.</li> <li>• 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.</li> <li>• .Weathered oxide copper – red ochre, limited malachite and azurite outcrop on the hills and Tartana named from the tartan colours associated with this mineralisation.</li> </ul>
<p><b>Drill hole Information</b></p>	<ul style="list-style-type: none"> <li>• 5.5in RC completed by Majestic and Solomon Copper.</li> <li>• All samples were collected ex cyclone and riffle split on site.</li> <li>• Later metallurgical samples were resplit before larger samples were collected for check assay and test work.</li> <li>• Majestic RC drilling completed by Drill Torque, Townsville in one campaign with no issues.</li> <li>• NQ4 completed by Outokumpu</li> <li>• BQ to NQ by CEC.</li> <li>• Downhole surveys only completed by Outokumpu that demonstrated a consistent lift down hole. Corrections were applied to all CEC diamond hole traces but not to the Majestic RC holes due to their shallow depths. Application of the lift correction fixed major issues in the older non JORC CEC Ore Reserves and brought all Tartana Hill intersections into the one zone.</li> <li>• R3D 2021/2022 drilling has been completed by a Townsville based drilling contractor with a high level of competence and industry recognition.</li> <li>• RC Precollar was undertaken up to 155m with quality recovery throughout.</li> <li>• Diamond drilling is generally NQ size (46.5mm diameter).</li> <li>• Downhole surveys are completed at intervals of 30m downhole spacing.</li> <li>• The core is oriented for geological structural analysis both at core recovery runs but also at the survey points.</li> </ul>

Criteria	Commentary
<p><b>Data aggregation methods</b></p>	<ul style="list-style-type: none"> <li>• R3D 2021/2022 Program – RC drilling by AED contractors</li> <li>• No high-grade top-cuts were used in tabulating the significant intercepts and this approach is considered appropriate at this stage of the exploration programs.</li> <li>• Significant intersections have been calculated for intersections with grade in excess of 0.5% Cu or 1.0% Zn when a minimum of 3 m downhole at this grade was intersected.</li> <li>• No metal equivalents were calculated.</li> <li>• Completed on a range of cut off grades.</li> <li>• Intersections in the collar of each hole were individually evaluated to exclude soil, dump and scree contamination or pad fill.</li> <li>• R3D 2022 programs – Drill intervals were determined for zones averaging &gt;5,000 ppm copper</li> </ul>



<b><i>Relationship between mineralisation widths and intercept lengths</i></b>	<ul style="list-style-type: none"> <li>Mineralisation is defined on the limits of geochemical data primarily from surface DD, RC and RAB drilling Average 60% of true width.</li> <li>R3D 2022 Program – R3D sampled all mineralized zones (as defined by as a minimum of 1% total sulphide and/or shearing). Non mineralised sections (as defined by the geological chip inspection) will be completed only where they abut mineralized zones.</li> </ul>
<b><i>Diagrams</i></b>	<ul style="list-style-type: none"> <li>Summary of historical maps, plans, cross sections available in SRK 2021 IGR</li> <li>R3D 2022 Program – see main body of report</li> </ul>
<b><i>Balanced reporting</i></b>	<ul style="list-style-type: none"> <li>Yes. Multiple reports by multiple companies and independent geologists.</li> </ul>
<b><i>Other substantive exploration data</i></b>	<ul style="list-style-type: none"> <li>All historical exploration and mapping data incorporated into geological model</li> <li>Other data includes geochemistry, surveying, geophysics and shallow to deep open hole percussion drilling. This drilling is excluded from any calculations due to poor recoveries.</li> </ul>
<b><i>Further work</i></b>	<ul style="list-style-type: none"> <li>R3D– Further drilling to extend and upgrade existing resource...</li> </ul>

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

<b>Criteria</b>	<b>Commentary</b>
<b><i>Database integrity</i></b>	<ul style="list-style-type: none"> <li>R3D Resources have compiled all existing spreadsheets into a Vulcan database for modelling and for verification</li> <li>Drill hole collars have been accurately surveyed in using a GPS. Historical drilling has been converted to GDA2020 grid.</li> <li>100% of drill holes are angled drill holes.</li> <li>No known twin holes have been used in the BMS MRE.</li> </ul>
<b><i>Site visits</i></b>	<ul style="list-style-type: none"> <li>TS involved in the various programs</li> <li>GR has made a site visit</li> </ul>
<b><i>Geological interpretation</i></b>	<p>The Queen Grade Zinc Project covers a separate zone of zinc-rich skarn mineralisation which outcrops as gossanous material on a chert-dominated ridge north west of the Tartana open pit (see Stevens 2006).</p> <ul style="list-style-type: none"> <li>The Queen Grade mineralisation comprises a sequence of gossan, limestones, andesite, bedded cherts and arkosic sandstones and with the gossanous material representing a weathered sulphide rich skarn. This gossan is reported to be similar to the weathered calc-silicate skarns observed elsewhere in the Chillagoe District, particularly at Red Dome as well as at King Vol (see Stevens 2006).</li> <li>The project was drilled using a drill pattern of approximately 10-20m x 40-60m.</li> </ul>

Criteria	Commentary																																																										
	<ul style="list-style-type: none"> <li>The mineralisation was intersected on approximately 10 drilling sections and is currently known to a depth of at least 160m below the surface.</li> <li>Mineralisation is present as a single mineralised supergene domain - defined using lithology logs, where possible, and Zn grades.</li> <li>The likelihood that mineralisation is developed in an orientation other than that interpreted is considered to be low, due to the drill pattern which provides a good density of data.</li> </ul>																																																										
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>130m by 20m by 160m inferred MRE</li> </ul>																																																										
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The Tartana leases contain data for 204 surface drill holes for 18430m. The Queen Grade contains data for 18 surface drillholes relevant for the MRE. The 3D wireframe files of five domains was created in Vulcan and snapped to the drill holes</li> </ul> <table border="1" data-bbox="481 748 1503 1066"> <thead> <tr> <th>Hole Type</th> <th>Drill hole Series</th> <th>Drill hole Number</th> <th>Resource Metres</th> </tr> </thead> <tbody> <tr> <td>RC</td> <td>NARC</td> <td>2</td> <td>80</td> </tr> <tr> <td>RC</td> <td>TRC</td> <td>11</td> <td>213.5</td> </tr> <tr> <td>DD</td> <td>TDH</td> <td>5</td> <td>61</td> </tr> <tr> <td><b>Total</b></td> <td></td> <td><b>18</b></td> <td><b>354.5</b></td> </tr> </tbody> </table> <p>* Drilling database summary of diamond drill holes that intersect mineralisation.</p> <ul style="list-style-type: none"> <li>A Vulcan block model was created by BMS for the MRE with a block size of 5m NW-SE × 5m NE-SW × 5m vertical with sub-cells of 1m × 1m × 1m.</li> <li>The block model was constrained to a single domain. Parameters of the model are shown below.</li> <li>Zinc was modelled through the block model.</li> <li>A Vulcan block model was created to encompass the full extent of the deposit.</li> </ul> <table border="1" data-bbox="481 1323 1503 1644"> <thead> <tr> <th>Model Name</th> <th>X</th> <th>Y</th> <th>Z</th> </tr> </thead> <tbody> <tr> <td>Origin</td> <td>207875.0</td> <td>8125950.0</td> <td>400.0</td> </tr> <tr> <td>Offset</td> <td>-400</td> <td>-100</td> <td>-600</td> </tr> <tr> <td>Offset</td> <td>100</td> <td>300</td> <td>0</td> </tr> <tr> <td>Block Size (sub-blocks)</td> <td>5 (1)</td> <td>5 (1)</td> <td>5 (1)</td> </tr> </tbody> </table> <table border="1" data-bbox="481 1680 1503 2092"> <thead> <tr> <th>Variables</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Zn</td> <td>Zn Grade - reportable</td> </tr> <tr> <td>Min_Domain</td> <td>Mineralisation domain</td> </tr> <tr> <td>Avg_dist zone</td> <td>Average distance to samples In situ, mined etc</td> </tr> <tr> <td>holecount</td> <td>Number of drill holes</td> </tr> <tr> <td>Numsam</td> <td>Number of Samples used for Block grade interpolation</td> </tr> <tr> <td>BD</td> <td>Bulk Density</td> </tr> <tr> <td>Mined</td> <td>Mined or In situ</td> </tr> <tr> <td>ox</td> <td>oxidation</td> </tr> </tbody> </table>	Hole Type	Drill hole Series	Drill hole Number	Resource Metres	RC	NARC	2	80	RC	TRC	11	213.5	DD	TDH	5	61	<b>Total</b>		<b>18</b>	<b>354.5</b>	Model Name	X	Y	Z	Origin	207875.0	8125950.0	400.0	Offset	-400	-100	-600	Offset	100	300	0	Block Size (sub-blocks)	5 (1)	5 (1)	5 (1)	Variables	Description	Zn	Zn Grade - reportable	Min_Domain	Mineralisation domain	Avg_dist zone	Average distance to samples In situ, mined etc	holecount	Number of drill holes	Numsam	Number of Samples used for Block grade interpolation	BD	Bulk Density	Mined	Mined or In situ	ox	oxidation
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	<ul style="list-style-type: none"> <li>• Inverse Distance (IVD) interpolation with an oriented ellipsoid search was used to estimate Zn grade for Domain 1000</li> <li>• 18 assayed drill holes were analysed drill holes within the database provided by R3D. These assays from the 18 drill holes have been used by BMS in the Queen Grade MRE.</li> <li>• In the Queen Grade resource defined area of the Queen Grade the average sample length of all sampled holes is 1m. This reflects that the vast majority of samples were based on 1m lengths.</li> <li>• A first pass long axis radius of 50 m with a minimum number of informing samples of 8 was used. The major axis radius was increased to 100 m for the second pass. A third pass with an increased search radius of 180 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)</li> <li>• - ~45% of the resource volume filled in the 1st pass, ~30% in the 2nd pass and the remainder in the 3rd pass for Queen Grade</li> <li>• A bulk density value of 3.1 t/m<sup>3</sup> was applied to Queen Grade</li> <li>• Search and estimation parameters below</li> </ul> <table border="1" data-bbox="480 837 1505 1010"> <thead> <tr> <th>Pass</th> <th>Min Sample</th> <th>Max Sample</th> <th>Distance (m)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8</td> <td>40</td> <td>50</td> </tr> <tr> <td>2</td> <td>8</td> <td>40</td> <td>100</td> </tr> <tr> <td>3</td> <td>2</td> <td>40</td> <td>1032</td> </tr> </tbody> </table> <table border="1" data-bbox="480 1057 1272 1487"> <tbody> <tr> <td style="width: 33%;">Domain</td> <td style="width: 33%;"></td> <td style="width: 33%;">Discretisation</td> </tr> <tr> <td>1000</td> <td></td> <td>3x:3y:3z</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• 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: <ul style="list-style-type: none"> <li>- Comparison of volumes defined by the domain wireframes and the associated Block Model</li> <li>- A comparison of the composited sample grade statistics with Block Model grade statistics for the single domain</li> <li>- Visual sectional comparison of drill hole grades versus estimated block grades.</li> </ul> </li> <li>• The volumes were almost identical. The overall volume difference is less than 1%. BMS considered this to be an acceptable result.</li> <li>• A visual section comparison was undertaken of drill hole grades versus estimated block grades, which revealed satisfactory comparable grades.</li> </ul>	Pass	Min Sample	Max Sample	Distance (m)	1	8	40	50	2	8	40	100	3	2	40	1032	Domain		Discretisation	1000		3x:3y:3z
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<b>Moisture</b>	<ul style="list-style-type: none"> <li>• Tonnages in the model are estimated on a dry in situ basis.</li> </ul>																						
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• No high-grade cuts were applied. The estimate has been reported at various cut-off grade</li> </ul>																						

Criteria	Commentary
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>No Mining Factors were assumed in the Mineral Resource estimate.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>Flotation testwork (on a composite sample from Drill hole TDH 22) by independent consultant, Core Resources Pty Ltd has indicated high zinc recoveries of &gt;98% to a concentrate grading 42% zinc with its initial rougher flotation testwork. The sample tested (from 5 m of TDH 22) assayed 16.1% Zn, 0.25% Cu and 0.57% Pb. Flotation kinetics were fast with recoveries achieved in 2 minutes in the laboratory tests at a primary grind of 80% passing 75 microns.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Nil</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>BMS used density data determined at a sister project of Montevideo. Density measurements for individual assay intervals at Montevideo were available for all core holes except MVD08. A weighted average of these measured densities was applied to each intercept. Conservative density values were assigned for all other intersections as follows: <ul style="list-style-type: none"> <li>Density of 3.1 for intercepts &lt;10% Zn</li> <li>Density of 3.5 for intercepts of 10-20% Zn</li> <li>Density of 4 for intercepts &gt;20%</li> </ul> </li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>Inferred Resource.</li> <li>Mineral Resource Estimates have been classified as Inferred according to JORC Code 2012 guidelines based on the drilling density, grade continuity and level of geological understanding</li> <li>Grade-tonnage curves representing all blocks in the model for gold were plotted</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>Internal Only</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>Drill density sufficient for inferred.</li> <li>The Queen Grade deposit has been tested with high-quality drilling, sampling and assaying. Drilling and logging have defined the mineralised domains to provide an accurate volume. The relative accuracy of the MRE is reflected in the reporting of the Mineral Resource. The Mineral Resource has been classified as an Inferred Mineral Resource as per the JORC Code (2012) guidelines</li> <li>This MRE is global in nature until relevant tonnages and relevant technical and economic evaluations are required and have been undertaken.</li> </ul>

#### References:

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