# ASX Code: "THR"

26 November 2018



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Directors: Michael Billing David Thomas Alastair Middleton Richard Bradey

Key Projects:

• Tungsten Molyhil NT Pilot Mountain USA

• Copper Kapunda SA Company Announcements Office ASX Securities Limited, 20, Bridge Street, Sydney, N.S.W. 2000

# BONYA COPPER MAIDEN RESOURCE ESTIMATE

The Board of Thor Mining Plc ("Thor") (AIM, ASX: THR) is pleased to announce the initial mineral resource estimate for the historic Bonya Copper Mine deposit within the Bonya tenement held jointly (THR; 40%) with Arafura Resources Limited (ARU; 60%) adjacent to the Molyhil mine project in the Northern Territory of Australia.

The small but moderately high-grade copper resource is satellite to, and amenable for treatment in the proposed Molyhil process plant.

#### Highlights:

- An Inferred Resource estimate of 230,000 tonnes, grading 2.0% Copper (Cu), containing 4,600 tonnes of copper, with trace levels of tungsten (WO<sub>3</sub>) and molybdenum (Mo);
- Deposit outcrops at surface, and remains open at depth;
- Amenable to open cut extraction for a significant component of the resource;
- Potential to add six months profitable mine life to Molyhil;
- Situated in close proximity to the Bonya tungsten deposits, scheduled for drill testing early in 2019.

## Table A: Bonya Copper Inferred Resource Estimate

	BONYA COPPER		Copper		
BONYA CC			Grade %	Contained metal (t)	
Inferred	Oxidised	20	1.0	200	
	Fresh	210	2.0	4,400	
	Sub-Total	230	2.0	4,600	

Mick Billing, Executive Chairman, commented:

"This small but high-grade copper resource will provide valuable supplementary mill feed to the Company's nearby Molyhil process plant."

Our primary incentive to acquire an interest in the Bonya exploration licence was, and still remains, the tungsten deposits in the licence area, therefore this "free" copper resource could be considered a bonus"

"The Molyhil processing plant design is amenable to the treatment of copper ores of this nature, without modification, and we expect this material will flow though the plant with no additional investment required, other than mining and haulage."

"This the first of what we believe will be series of satellite tungsten and copper deposits within economic trucking distance of Molyhil."

"In addition to the work on the copper deposit at Bonya, an external review of the vanadium deposits, also on the project licence, is in progress, and we expect to provide investors with an update on this shortly."

"Nearby the Bonya copper deposit are several outcropping tungsten deposits which, upon completion of drill site access clearance, we plan to commence drilling, probably in February 2019."

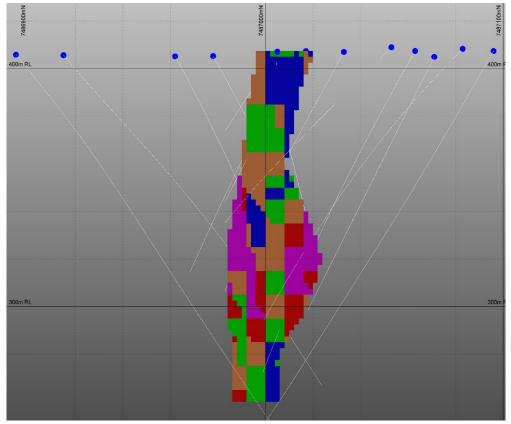


Figure 1: Cross Sectional diagram of the Bonya Copper deposit looking West

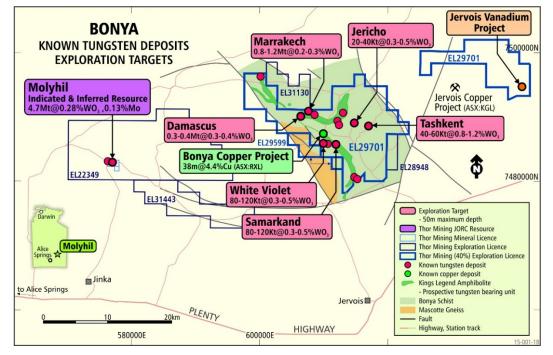


Figure 2: Bonya Project location plan with Bonya Copper Mine (coloured green).

# Summary of Resource Estimate and Reporting Criteria

# Geology and geological interpretation

The Bonya Deposit is located approximately 350km ENE of Alice Springs and approximately 30km east of Thor's 100% owned Molyhil deposit.

The geological setting of the Bonya copper deposit is of an interpreted metamorphosed Proterozoic aged volcanogenic massive sulphide system. Mineralisation is hosted within select units of the Bonya Schist. The rocks are interpreted to have been hydrothermally altered during the mineralisation event, and then strongly regionally metamorphosed to amphibolite grade. The target deposit is analogous to the nearby Jervois copper oxide and sulphide deposits.

The Cu mineralisation is comprised of predominantly stringer and matrix style chalcopyrite, pyrite and pyrrhotite hosted within quartz/biotite schist of the Bonya Metamorphics.

# Drilling techniques and hole spacing

The Bonya drill hole database used for the MRE (mineral resource estimate) contains a total of 15 holes for 1,910.5m of drilling. Comprising 13 RC (reverse circulation) holes and 2 DD (diamond drill) holes.

The majority of holes have been drilled at angles of between 55 - 60° and approximately perpendicular to the strike of the mineralisation. Hole BYRC020 is interpreted to have been drilled down plunge.

Geological and assay data for all drill holes was used in the geological interpretation and MRE.

## Sampling and sub-sampling

Samples from RC drilling were collected over an average 1m interval and submitted for assay. Barren zones were sampled as 4m composites. RC samples were homogenised and subsampled by cone splitting at the drill rig.

Drill core was collected directly into trays, marked up by metre marks and secured as the drilling progressed. Core was cut firstly into half longitudinally along a consistent line, ensuring no bias in the cutting plane. Again, without bias, half core was then cut into two further segments. Depending on the hole, a half or quarter was then collected on a metre basis where possible but not less than 0.25m in length, determined by geological and lithological contacts.

## Sample analysis method

All samples were sent to Australian Laboratory Services (ALS) in Alice Springs for preparation. The samples were sorted and dried. Primary preparation involved crushing the whole sample. The samples were split with a riffle splitter to obtain a sub-fraction which was then pulverised. Pulps were sent to Perth for analysis. A sub-sample of the pulp was digested and analysed via methods ME-ICP61 (0-1% Cu) and ME-OG62 (>1% Cu), which included a four acid digest with analysis by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry (ICP-AES). Internal laboratory QA uses CRM's, blanks, splits and replicates, along with 10% repeats. A limited number of field standards, blanks and duplicates have all been applied in the QAQC methodology. Sufficient accuracy and precision have been established for the type of mineralisation encountered and is appropriate for QAQC in the Resource Estimation.

# **Cut-off grades**

The current Mineral Resource Inventory for the Bonya Deposit has been reported at a cut-off grade of 0.2% Cu. Top cuts were applied as follows: Cu - 10.0%, W - 300 ppm, Mo - 80 ppm.

# **Estimation methodology**

A Mineralisation wireframe were generated in Micromine software using drill hole data supplied by Thor. Resource data was flagged with unique mineralisation domain codes as defined by the wireframe and composited to 1m lengths.

Grade continuity analysis was undertaken in Micromine software for Cu. W and Mo for the mineralised domain and models were generated in all three directions. Parameters were used in the block model estimation. A block model with a parent block size of 10x8x10m with sub-blocks of 2.5 x 2 x 2.5m has been used to adequately represent the mineralised volume, with sub blocks estimated at the parent block scale.

Density data was discussed with Thor and is consistent with expected values for the lithologies present and the degree of weathering. Within the block model, density has been assigned based on oxidation state.

## **Classification criteria**

The resource classification has been applied to the Mineral Resource Estimate based on the drilling data spacing, grade and geological continuity, and data integrity. Portions of the model that have drill spacing of greater than 20m by 20m, and/or with lower levels of confidence in the estimation or potential impact of modifying factors have been classified as **Inferred Mineral Resources.** The classification reflects the view of the Competent Person.

# **Mining and Metallurgy**

It has been assumed that the traditional open cut mining method of drill, blast, load and haul will be used. No other mining assumptions have been made.

No metallurgical recoveries have been applied to the Mineral Resource Estimate.

## **Eventual Economic Extraction**

It is the view of the Competent Person that at the time of estimation there are no known issues that could materially impact on the eventual extraction of the Mineral Resource.

For further information, please contact:

**THOR MINING PLC** Mick Billing Executive Chairman +61 8 7324 1935

## **Competent Person's Report**

The information in this release that relates to the Estimation and Reporting of Mineral Resources has been compiled by Dr Graeme McDonald. Dr McDonald acts as an independent consultant to Thor Mining PLC on the Bonya Mineral Resource estimation. Dr McDonald is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience with the style of mineralisation, deposit type under consideration and to the activities 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" (The JORC Code). Dr McDonald consents to the inclusion in this report of the contained technical information relating to the Mineral Resource Estimation in the form and context in which it appears

The information in this report that relates to exploration results is based on information compiled by

Richard Bradey, who holds a BSc in applied geology and an MSc in natural resource management and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Bradey is an employee of Thor Mining PLC. He has sufficient experience which is 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'. Richard Bradey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Updates on the Company's activities are regularly posted on Thor's website <u>www.thormining.com</u>, which includes a facility to register to receive these updates by email, and on the Company's twitter page @ThorMining.

# About Thor Mining PLC

Thor Mining PLC (AIM, ASX: THR) is a resources company quoted on the AIM Market of the London Stock Exchange and on ASX in Australia.

Thor holds 100% of the advanced Molyhil tungsten project in the Northern Territory of Australia, for which an updated feasibility study in August 2018<sup>1</sup> suggested attractive returns.

Thor also holds 100% of the Pilot Mountain tungsten project in Nevada USA which has a JORC 2012 Indicated and Inferred Resources Estimate<sup>2</sup> on 2 of the 4 known deposits. The US Department of the Interior has confirmed that tungsten, the primary resource mineral at Pilot Mountain, has been included in the final list of Critical Minerals 2018.

Thor is also acquiring up to a 60% interest Australian copper development company Environmental Copper Recovery SA Pty Ltd, which in turn holds rights to earn up to a 75% interest in the mineral rights and claims over the resource<sup>3</sup> on the portion of the historic Kapunda copper mine in South Australia recoverable by way of in situ recovery.

Thor has a material interest in Hawkstone Mining Limited, an Australian ASX listed company with a 100% Interest in a Lithium project in Arizona, USA.

Finally, Thor also holds a production royalty entitlement from the Spring Hill Gold project<sup>4</sup> of:

• A\$6 per ounce of gold produced from the Spring Hill tenements where the gold produced is sold for up to A\$1,500 per ounce; and

• A\$14 per ounce of gold produced from the Spring Hill tenements where the gold produced is sold for amounts over A\$1,500 per ounce.

## <u>Notes</u>

- <sup>1</sup> Refer ASX and AIM announcement of 23 August 2018
- <sup>2</sup> Refer AIM announcement of 22 May 2017 and ASX announcement of 23 May 2017
- <sup>3</sup> Refer AIM announcement of 10 February 2016 and ASX announcement of 12 February 2018
- <sup>4</sup> Refer AIM announcement of 26 February 2016 and ASX announcement of 29 February 2017

# JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Reverse circulation (RC) and diamond (DD) drill techniques have been employed.</li> <li>Drillhole locations were picked up by handheld GPS. Logging of drill samples included lithology, weathering, texture, moisture and contamination (as applicable). Sampling protocols and QAQC are as per industry best practice procedures.</li> <li>RC hole diameter was 5.5" (140 mm). Drill holes were generally angled at -60 to intersect geology as close to perpendicular as possible.</li> <li>HQ3 DD holes were drilled and sampled only in areas of interest.</li> <li>Drillhole locations were picked up by handheld GPS. Logging of drill samples included lithology, weathering, texture, moisture and contamination (as applicable). Sampling protocols and QAQC are as per industry best practice procedures.</li> <li>RC drillholes were sampled on 1m intervals using a cone splitter. Samples were sent to Australian Laboratory Services in Alice Springs for sample preparation which included crushing to 10mm, drying and pulverising (total prep) in LM5 units. The pulps were then sent to Perth for analysis by methods ME-ICP61 (0-1% Cu) and ME-OG62 (&gt;1% Cu), which included a four acid digest with analysis by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry (ICP-AES). Internal laboratory QA uses CRM's, blanks, splits and replicates, along with 10% repeats</li> </ul>
Drilling techniques	<ul> <li>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).</li> </ul>	<ul> <li>Drilling techniques included Reverse Circulation (RC) with hole diameter of 140mm face sampling hammer.</li> <li>Diamond drilling employed the HQ3 technique.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul> <li>RC drill recoveries were visually estimated from volume of sample recovered. All sample recoveries reported by Rox were above 90% of expected.</li> <li>RC samples were visually checked for recovery, moisture and contamination and notes made in the logs.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>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.</li> </ul>	<ul> <li>There were no issues recorded regarding DD recoveries with very minimal core loss recorded in the logs.</li> <li>There is no observable relationship between recovery and grade, and therefore no sample bias.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Detailed geological logs have been carried out on all DD and RC drill holes. The geological data is suitable for inclusion in a Mineral Resource estimate.</li> <li>Logging recorded lithology, mineralogy, mineralisation, weathering, colour, and other sample features. RC chips are stored in plastic RC chip trays.</li> <li>All holes were logged in full.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>RC samples were collected on the drill rig using a cone splitter. All of the mineralised samples were collected dry, as noted in the drill logs and database.</li> <li>The field sample preparation followed industry best practice. This involved collection of samples from the cone splitter and transfer to a calico bag for despatch to the laboratory.</li> <li>Very few standards and field duplicate samples were inserted into the sample runs as is common at the initial stages of a project. No issues were identified.</li> <li>The sample sizes are considered more than adequate to ensure that there are no particle size effects relating to the grain size of the mineralisation, which lies in the percentage range.</li> <li>DD core was cut and either half or quarter core samples taken, with sample intervals between 0.25 – 1m in length.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The analytical technique involved a four acid digest followed by multi- element ICP/AES analysis (ALS analysis codes ME-ICP61 and ME- OG62) and is considered a "complete" digest for most material types, except certain chromite minerals.</li> <li>No geophysical or portable analysis tools were used to determine assay values stored in the database.</li> <li>Internal laboratory control procedures involve duplicate assaying of randomly selected assay pulps as well as internal laboratory standards. All of these data were reported to the Rox and analysed for consistency and any discrepancies.</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Senior technical personnel have visually inspected and verified the significant drill intersections.</li> <li>No holes have been twinned at this stage.</li> <li>Primary data was collected using a standard set of Excel templates on Toughbook laptop computers in the field.</li> <li>No adjustments or calibrations have been made to any assay data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>A hand held GPS has been used to determine collar locations at this stage.</li> <li>The grid system is MGA_GDA94, zone 53 for easting, northing and RL.</li> <li>The topographic surface was generated from digital terrain models generated from low level airborne geophysical surveys.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The nominal drill hole spacing is 20 metres between drill sections. Some sections (but not all) have had more than one hole drilled.</li> <li>The mineralisation and geology shows very good continuity from hole to hole and will be sufficient to support the definition of a Mineral Resource or Ore Reserve and the classifications contained in the JORC Code (2012 Edition).</li> <li>All mineralised intervals reported were sampled at a one metre interval.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>The host rock forms an interpreted fold with varying strike around the nose of the fold. The drill orientations were planned to be perpendicular to the strike direction at each location except at the Bonya Mine where the trend of the mineralisation follows the fold axis and transgresses the geology.</li> <li>No sampling bias is believed to have been introduced.</li> </ul>
Sample security	• The measures taken to ensure sample security.	• Sample security was managed by the Rox. After preparation in the field samples were packed into polyweave bags and transported by the Company directly to the assay laboratory. The assay laboratory audits the samples on arrival and reports any discrepancies back to the Company. No such discrepancies occurred.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>The only audits or reviews of the data associated with this drilling occurred as part of this Mineral Resource Estimate.</li> </ul>

Section 2 Reporting of Exploration Results

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

Criteria	J(	ORC Code explanation	Commenta	ary						
Mineral tenement and land tenure status		Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	<ul> <li>Copper mineralisation at Bonya is located within Exploration Lic EL29701 in the Northern Territory. Thor has recently acquired a interest in EL29701. Arafura Resources Limited retain a 60% in</li> <li>The tenements are in good standing and no known impediment exist.</li> </ul>			red a 40% )% interes				
Exploration done by other parties	•	Acknowledgment and appraisal of exploration by other parties.	teneme	nt area.	Previous	or copper exploration rtical RAB	on involv	ed rock c	hip sar	mpling of
Geology	•	Deposit type, geological setting and style of mineralisation.	<ul> <li>The geological setting is of an interpreted metamorphosed Proterozoic aged volcanogenic massive sulphide system. Mineralisation is hosted within select units of the Bonya Schist. T rocks are interpreted to have been hydrothermally altered during mineralisation event, and then strongly regionally metamorphose amphibolite grade. The target deposit is analogous to the nearby Jervois copper oxide and sulphide deposits.</li> </ul>			hist. The during the				
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Drill hole Information	•	A summary of all information material to the understanding of the exploration results including a tabulation of the following information							o the r Dip	Total Depth
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	•	exploration results including a tabulation of the following information for all Material drill holes: o easting and northing of the drill hole collar	Jervois Hole ID BYRC008 BYRC009	Type RC RC	exide and Easting 609379 609379	Northing 7486978 7486962	<b>RL</b> 405.31 405.20	S. Azimuth 10 10	<b>Dip</b> -60 -60	Total Depth 60 98
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010	Type RC RC RC	exide and Easting 609379 609379 609347	Northing 7486978 7486962 7487000	<b>RL</b> 405.31 405.20 404.71	S. Azimuth 10 10 60	<b>Dip</b> -60 -60	<b>Total</b> <b>Depth</b> 60 98 78
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC011	Type RC RC RC RC RC RC	Easting 609379 609379 609347 609423	Northing 7486978 7486962 7487000 7487005	RL           405.31           405.20           404.71           407.16	<b>Azimuth</b> 10 10 60 195	<b>Dip</b> -60 -60 -60 -55	<b>Total</b> <b>Depth</b> 60 98 78 41
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC011 BYRC012	Type RC RC RC RC RC RC	Easting 609379 609379 609347 609423 609402	Northing 7486978 7486962 7487000 7487005 7487033	RL           405.31           405.20           404.71           407.16           407.04	<b>Azimuth</b> 10 10 60 195 195	<b>Dip</b> -60 -60 -55 -60	Total           Depth           60           98           78           41           114
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC011 BYRC012 BYRC013	Type RC RC RC RC RC RC RC RC	Easting 609379 609379 609347 609423 609402 609357	Northing 7486978 7486962 7487000 7487005 7487033 7487014	RL           405.31           405.20           404.71           407.16           407.04	Azimuth           10           10           60           195           195           180	<b>Dip</b> -60 -60 -55 -60 -60	Total           Depth           60           98           78           41           114           102
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC010 BYRC011 BYRC012 BYRC013 BYRC014	Type RC RC RC RC RC RC RC RC RC RC	Easting 609379 609379 609347 609423 609402 609357 609399	Northing 7486978 7486962 7487000 7487005 7487003 7487014 7487063	RL           405.31           405.20           404.71           407.16           407.04           405.12           407.44	Azimuth           10           10           10           10           10           10           10           10           10           10           10           10           10           10           10           10           195           180           180	Dip -60 -60 -55 -60 -60 -60	Total           Depth           60           98           78           41           114           102           150
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC011 BYRC012 BYRC013 BYRC014 BYRC015	Type RC RC RC RC RC RC RC RC RC RC RC	Easting 609379 609379 609347 609423 609402 609357 609399 609420	Northing 7486978 7486978 7486962 7487000 7487005 7487005 7487033 7487014 7487063 7487083	RL           405.31           405.20           404.71           407.16           407.04           405.12           407.44           408.36	Azimuth           10           10           10           10           10           10           10           10           10           10           10           10           10           10           10           195           180           180	Dip -60 -60 -55 -60 -60 -60 -45	Total           Depth           60           98           78           41           114           102           150           143
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC011 BYRC012 BYRC013 BYRC014 BYRC015 BYRC016	Type RC RC RC RC RC RC RC RC RC RC RC RC	Easting 609379 609379 609347 609423 609402 609357 609399 609420 609419	Northing 7486978 7486978 7486962 7487000 7487005 7487005 7487033 7487014 7487063 7487083 7487017	RL           405.31           405.20           404.71           407.16           407.04           405.12           407.44           408.36           407.39	Azimuth           10           10           10           10           10           10           10           10           10           10           10           10           10           10           10           195           180           180           180	Dip -60 -60 -55 -60 -60 -60 -45 -60	Total           Depth           60           98           78           41           114           102           150           143           72
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC011 BYRC012 BYRC013 BYRC013 BYRC014 BYRC015 BYRC016 BYRC017	Type RC RC RC RC RC RC RC RC RC RC RC RC RC	Easting 609379 609379 609347 609423 609402 609357 609399 609420 609419 609445	Northing 7486978 7486962 7487000 7487005 7487005 7487033 7487014 7487063 7487083 7487017 7487053 7486915 7487071	RL           405.31           405.20           404.71           407.16           407.04           405.12           407.44           408.36           407.39           409.02	Azimuth           10           10           10           10           10           10           10           10           10           10           10           10           10           10           195           195           180           180           180           182	Dip -60 -60 -55 -60 -60 -60 -45 -60 -45	Total           Depth           60           98           78           41           114           102           150           143           72           102
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC011 BYRC012 BYRC013 BYRC014 BYRC015 BYRC016 BYRC017 BYRC018	Type RC RC RC RC RC RC RC RC RC RC RC RC RC	Easting           609379           609379           609379           609379           609423           609402           609357           609399           609420           609419           609380           609313           609430	Northing 7486978 7486962 7487000 7487005 7487033 7487014 7487063 7487063 7487017 7487053 7486915 7487071 7487005	RL           405.31           405.20           404.71           407.16           407.04           405.12           407.44           408.36           407.39           405.66           405           407	Azimuth           10           10           10           10           10           10           10           10           10           10           10           10           195           195           180           180           180           182           360	Dip -60 -60 -55 -60 -60 -60 -45 -60 -45 -50 -60 -65	Total           Depth           60           98           78           41           114           102           150           143           72           102           177
	•	<ul> <li>exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly</li> </ul>	Jervois Hole ID BYRC008 BYRC009 BYRC010 BYRC010 BYRC012 BYRC012 BYRC013 BYRC013 BYRC014 BYRC015 BYRC016 BYRC017 BYRC018 BYRC019	Type RC RC RC RC RC RC RC RC RC RC RC RC RC	Easting           609379           609379           609379           609379           609423           609402           609357           609420           609419           609445           609380           609313	Northing 7486978 7486962 7487000 7487005 7487005 7487033 7487014 7487063 7487083 7487017 7487053 7486915 7487071	RL           405.31           405.20           404.71           407.16           407.04           405.12           407.44           408.36           407.39           405.66           405	Azimuth           10           10           10           10           10           10           10           10           10           10           10           10           195           195           180           180           180           182           360           145	Dip -60 -60 -55 -60 -60 -60 -45 -60 -45 -50 -60	Total           Depth           60           98           78           41           114           102           150           143           72           102           177           123

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>All reported analysis intervals have been length weighted to 1 metre. No top cuts have been applied. A lower cut-off of 1.0% Cu has been applied, with up to 2m of internal dilution allowed.</li> <li>High grade intervals internal to broader zones of mineralisation are reported as included intervals.</li> <li>No metal equivalent values have been used or reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	• The attitude of the targeted mineralisation was unknown, but suspected to be steeply dipping. Drillhole azimuths were planned to be perpendicular to strike. Given the angle of the drill holes and the interpreted steep dip of the host rocks and mineralisation, reported intercepts will be more than true width.
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Refer to Figures and Tables in the text.</li> </ul>
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>Likely mineralised sections have been analysed at 1m intervals, while other sections have been sampled with 4m composites.</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>Selected RC holes have been cased with PVC for future downhole electro-magnetic geophysical surveying.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> <li>mation and Reporting of Mineral Resources</li> </ul>	<ul> <li>Further drilling is warranted to locate extensions to mineralisation both at depth and along strike. In addition further geophysics may be considered as a targeting tool if appropriate.</li> </ul>

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

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>A data check of source assay data and survey data has been undertaken and compared to the database. No translation issues have been identified. The data was validated during the interpretation of the mineralisation, with no significant errors identified. Only RC and DD holes have been included in the MRE.</li> <li>Data validation processes are in place and run upon import into Micromine to be used for the MRE. Checks included: missing intervals, overlapping intervals and any depth errors.</li> <li>A DEM topography to DGPS collar check has been completed.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>No Site visits by the CP have been undertaken at this stage due to the current lack of field activity in the area.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The geological interpretation is considered weak due to the small number of drill holes and nature of the mineralisation. The mineralisation is hosted within the Bunya schist.</li> <li>Diamond drill core and reverse circulation drill holes have been used in the MRE. Lithology, structure, alteration and mineralisation data has been used to generate the mineralisation model. The primary assumption is that the mineralisation is hosted within structurally controlled locations on the southern limb of steeply plunging fold structure.</li> <li>Due to the close spaced nature of the drilling data and the preliminary nature of the project, no alternative interpretations have been considered at this stage.</li> <li>The mineralisation interpretation is based on a copper cut-off grade of 0.1% Cu.</li> <li>The mineralisation appears to be pipe like and plunge in a similar direction to the associated fold structure. A single grade domain has been identified and estimated using a hard boundary.</li> </ul>
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The Cu mineralisation is hosted within a pipe like structure with a strike length of approximately 50m and width of approximately 30m.</li> <li>The mineralisation outcrops at surface and has been modelled to a depth of 150m below surface.</li> <li>The mineralisation plunges at approximately 70 degrees to the west.</li> </ul>

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>Grade estimation of Cu, W and Mo has been completed using Ordinary Kriging (OK) into a single mineralised domain using Micromine software. Variogram orientations are largely controlled by the strike and dip of the mineralisation.</li> <li>There have been no previous estimates. A check estimate using an alternative estimation technique (ID2) has also been undertaken.</li> <li>No assumptions have been made regarding recovery of any by- products.</li> <li>The data spacing varies within the deposit but with a nominal drill hole spacing of 20 m by 20 m. A parent block size of 10 m (X) by 8 m (Y) by 10 m (Z) with a sub-block size of 2.5 m (X) by 2 m (Y) by 2.5 m (Z) has been used to define the mineralisation, with the Cu, W and Mo estimated at the parent block scale. <ul> <li>Pass 1 estimation has been undertaken using a minimum of 4 and a maximum of 32 samples into a search ellipse with a radius of 40m, with samples from a minimum of two drill holes.</li> <li>Pass 2 estimation has been undertaken using a minimum of two drill holes.</li> <li>Pass 3 estimation has been undertaken using a minimum of two drill holes.</li> <li>Pass 3 estimation has been undertaken using a minimum of two drill holes.</li> <li>Pass 3 estimation has been undertaken using a minimum of two drill holes.</li> <li>Pass 3 estimation has been undertaken using a minimum of two drill holes.</li> </ul> </li> <li>No selective mining units are assumed in this estimate.</li> <li>Cu, W and Mo have been estimated within the mineralised domain. No correlation between variables has been assumed.</li> <li>The mineralisation and geological wireframes have been used to flag the drill hole intercepts in the drill hole assay file. The flagged intercepts have then been used to create composites in Micromine. The composite data has been determined using a combination of histograms and log probability plots. It was decided that top-cuts need to be applied as follows: Cu – 10.0%, W – 300 ppm, Mo – 80 ppm</li> <li>Model validation has been carried out, inclu</li></ul>

Criteria	JORC Code explanation	Commentary
		absent grades; statistical comparison against the input drill hole data and graphical plots.
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	The tonnes have been estimated on a dry basis.
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>For the reporting of the Mineral Resource Estimate, a 0.2% Cu cut-off has been used after consultation with Thor.</li> </ul>
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul> <li>It has been assumed that the traditional open cut mining method of drill, blast, load and haul will be used.</li> <li>No other assumptions have been made at this time.</li> </ul>
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>No metallurgical recoveries have been applied.</li> <li>It is assumed that processing would be undertaken at the proposed nearby processing facility at Thor's Molyhil project.</li> </ul>
Environmen- tal factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul> <li>No environmental assumptions have been made during the MRE.</li> </ul>
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	<ul> <li>There have been no direct measurements of any drill samples at the Bonya deposit. Therefore, given the relative uncertainties associated with this mineral resource estimate it is appropriate at this stage to assign a general average SG based on mineralisation style and</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	oxidation state. A value of 2.8 g/cm <sup>3</sup> has been assigned to all fresh mineralisation and a value of 2.6 g/cm <sup>3</sup> to all oxidised mineralisation.
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The resource classification has been applied to the MR estimate based on the drilling data spacing, grade and geological continuity, and data integrity.</li> <li>The classification takes into account the relative contributions of geological and data quality and confidence, as well as grade confidence and continuity.</li> <li>The classification reflects the view of the Competent Person.</li> </ul>
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>This Mineral Resource estimate has not been audited by an external party.</li> </ul>
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</li> <li>The statement relates to global estimates of tonnes and grade.</li> <li>No production records have been supplied as part of the scope of works, so no comparison or reconciliation has been made. Historically, only a small amount of copper has been produced from shallow pits.</li> </ul>