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# AERIS RESOURCES LIMITED

## BUDGERYGAR DEPOSIT

### Mineral Resource Estimate

30<sup>th</sup> June 2019

#### Report Version

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Author/s	Name	Title
	Brad Cox	Competent Person – Mineral Resource estimate

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## **1 PROJECT SUMMARY**

### **1.1 INTRODUCTION AND SETTING**

The Budgerygar deposit is a sulphide copper mineralised body located on ML1544 in central New South Wales (NSW), Australia. The deposit geology has historically been described as a Besshi style volcanic associated massive sulphide (VMS) occurrence. This opinion on deposit genesis has changed. We now describe the deposit as a structurally controlled intrusive sulphide body. The different geological interpretation results from reviewing many sulphide occurrences within the Tritton Resource tenement package that all show a strong structural control with copper mineralisation associated with late stage deformational events within the sedimentary host rock.

The Budgerygar deposit contains potential economic grades of copper, gold and silver. The gold and silver value in the mineralised domains are modest and the economics of the Tritton mine are dominated by copper metal production.

This Mineral Resource estimate is an update on previously reported Mineral Resource estimates for the Budgerygar deposit. The 2019 estimate is based entirely on an updated geological model using the same drillhole data which informed the previous resource model.

The Budgerygar Mineral Resource is reported as an Inferred Mineral Resource under the JORC 2012 guidelines.

### **1.2 LOCATION**

The Budgerygar deposit is located approximately 45 kilometres north west of the township of Nyngan in central NSW. Nyngan with a population of 3,000 is the regional centre. The small village of Hermidale, population 50, is located approximately 15 kilometres to the south of Tritton Copper Operation.

The Budgerygar deposit is located approximately 600 metres north of the Tritton mine. Access to the Tritton mine is via the sealed Barrier Highway from Nyngan to Hermidale and then via the sealed Yarrandale road from Hermidale to the mine site.

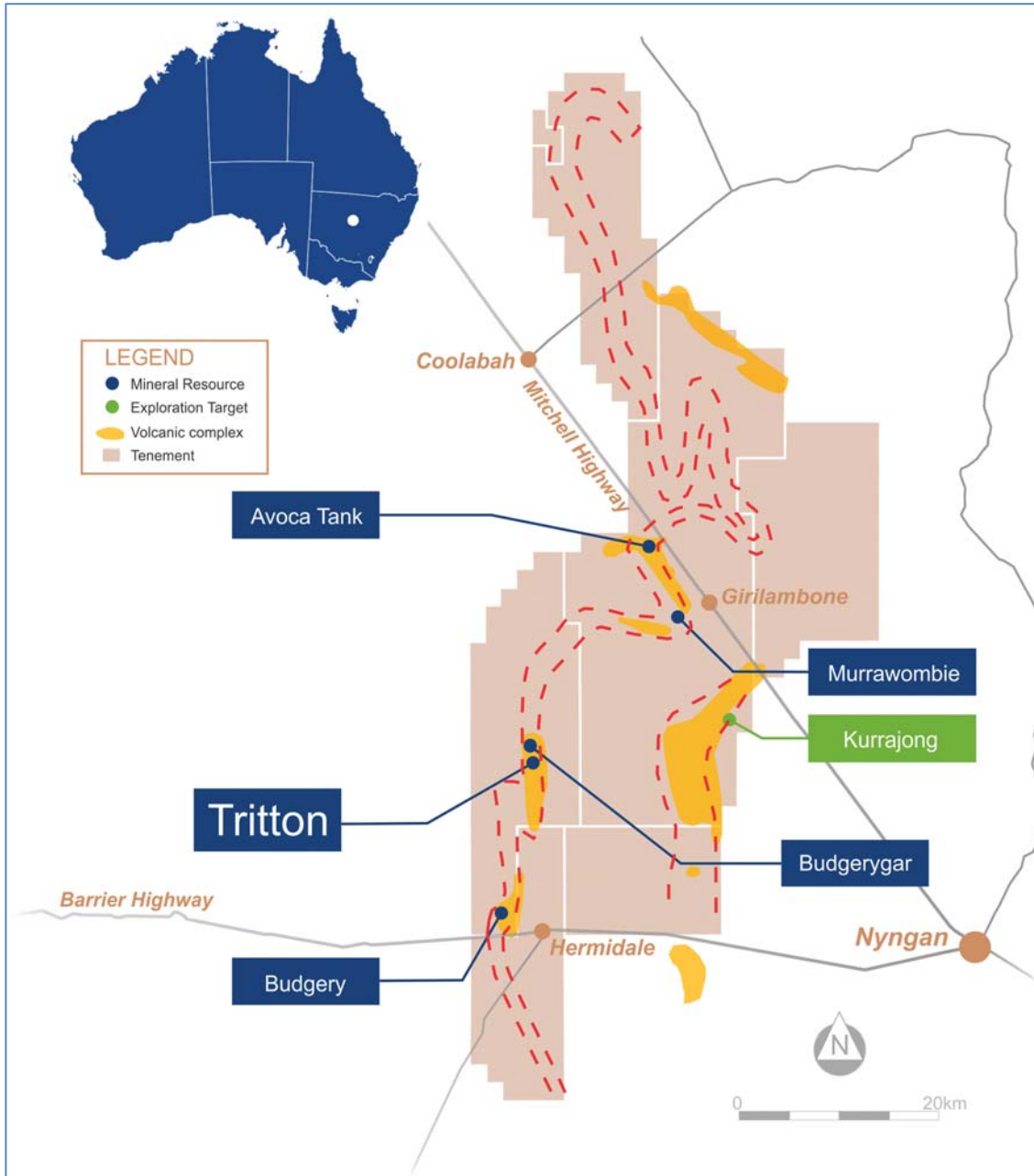
The Budgerygar deposit is located on Mining Lease (ML) 1544.

### **1.3 HISTORY**

Copper mining commenced at the Budgerygar area in 1906 with the sinking of numerous shafts adjacent to outcropping gossaneous material over several kilometres along strike. Mining continued until 1914 with approximately 2,000 tonnes of copper ore mined from the Budgerygar mine.

From 1989 Central West Gold completed a limited drill program testing the extents of mineralisation within and surrounding the historical workings. Nord Australex Pty Limited and Straits Mining Pty Ltd joint ventured into the project and completed ground based moving loop electromagnetic surveying (SIROTEM) over the Budgerygar deposit in mid 1995. The survey detected a strong EM response underneath the Budgerygar historical workings interpreted to be associated with a significant sulphide body. Shallow reverse circulation (RC) drill programs were completed over the following years defining a chalcocite mineralised horizon which was considered uneconomic for open pit mining. A limited number of drill holes (RC and diamond) were completed testing the deeper sulphide component to the mineralised system. Drilling intersected the sulphide horizon however copper grades were considered low grade and were not pursued further.

Tritton Resources Limited acquired the tenement over Budgerygar in October 2002. Periodical drill programs were completed up to the late 2000s targeting sulphide mineralisation. At the completion of drilling in 2008 an inaugural Mineral Resource was completed for the Budgerygar deposit in 2009. No further drilling activities have occurred at the Budgerygar deposit since the completion of the 2009 Mineral Resource estimate.



**Figure 1 Location and Lease outlines for the Tritton Copper Operation.**

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## 2 GEOLOGY

Regionally mineralisation is hosted within early to mid-Ordovician turbidite sediments, forming part of the Girilambone Group. The Budgerygar deposit is hosted within greenschist facies, deformed pelitic to psammitic sediments, and sparse zones of coarser sandstones.

Sulphide mineralisation within the Tritton tenement package has been classified as either a structurally controlled epigenetic sulphide system or a stratiform “Besshi style” volcanogenic massive sulphide (VMS) deposit. Recent geological investigations at the Budgerygar deposit have identified sulphide mineralisation occurring late in the structural deformation events. Sulphide mineralisation is dominated by massive, banded and stringer pyrite +/- chalcopyrite.

### 2.1 RESOURCE ESTIMATION MODEL

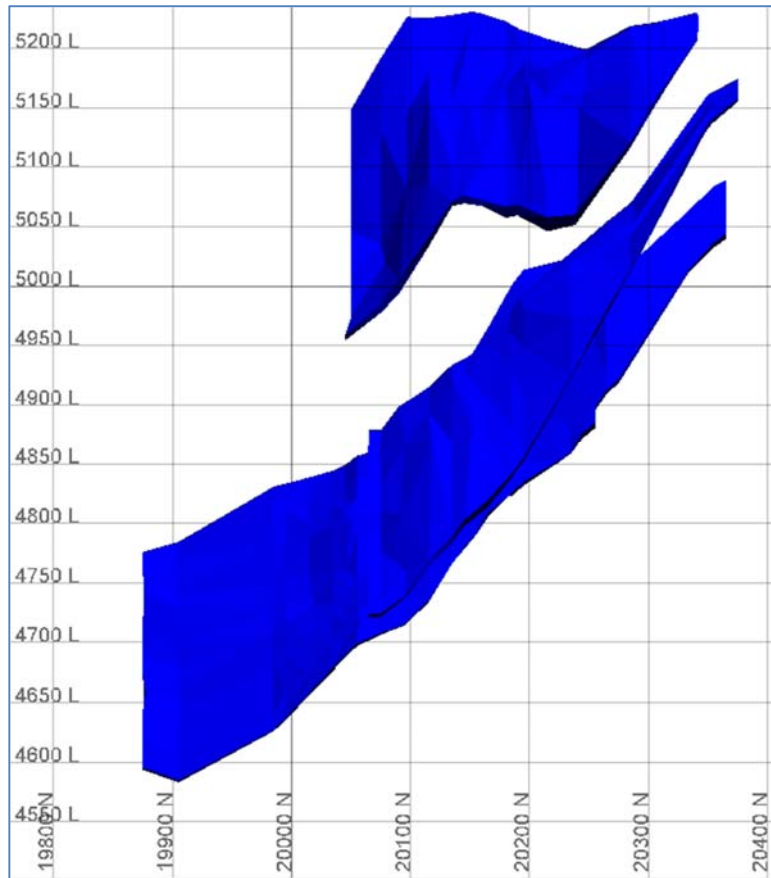
The reported Mineral Resource figures for the Budgerygar deposit are derived from an updated geology interpretation and remodeling process including relogging of key drillholes (*budjuly19\_rsc.bmf*). Four separate copper sulphide domains and several lithological domains were modelled. Copper grade estimates are generated within each copper sulphide domain. The updated Budgerygar grade model is classified as Inferred Mineral Resource. Drill spacing varies from approximately 40 metre x 40 metre to 100 metre x 100 metre.

Refer to Figure 2 and Figure 3 which outlines the location of the classified Mineral Resource used for the reporting of the Budgerygar Mineral Resource as at 30th June 2019.

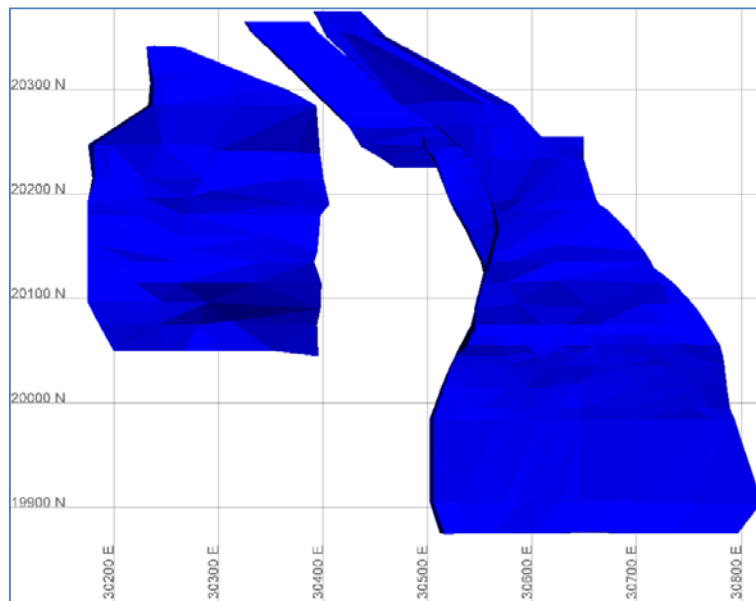
### 2.2 MINERAL RESOURCE CUT-OFF GRADE

The copper sulphide domains are defined by bounding 0.5% copper grade shells which are used to constrain grade estimates for the Budgerygar deposit. A 0.5% copper cut-off grade was selected based on log probability plots of copper mineralisation within and surrounding the Budgerygar system. Each estimation domain is based on drill hole assay data and ore textures. Block grades are interpolated within each domain using ordinary kriging.

Within the bounding 0.5% copper grade shells Mineral Resource is reported at a block cut-off grade of 0.8% copper. Mineral Resource is quoted as material at or above a 0.8% copper block cut-off grade. Application of this cut-off grade excludes blocks below 0.8% copper that exist within the grade shell.



**Figure 2 Long section view looking west at the reported Budgerygar Mineral Resource as at 30 June 2019.**



**Figure 3 Plan view showing the spatial location of the reported Budgerygar Mineral Resource as at 30 June 2019.**

### 3 MINERAL RESOURCE ESTIMATE

#### 3.1 RESULTS

The Mineral Resource estimate reference date is 30<sup>th</sup> June 2019. The Budgerygar deposit has been remodelled and re-estimated since the previous reporting period.

**Table 1 Classified Mineral Resource for the Budgerygar deposit as at 30<sup>th</sup> June 2019<sup>1,2</sup>**

Resource Category	Tonne (kt)	Copper (%)	Contained Copper (kt)	Au (g/t)	Contained Au (koz)	Ag (g/t)	Contained Ag (koz)
Measured	0	0.0	0	0.0	0	0.0	0
Indicated	0	0.0	0	0.0	0	0.0	0
<b>Total M&amp;I</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>
Inferred	2,300	1.5	34	0.2	15	5.2	380
<b>Total</b>	<b>2,300</b>	<b>1.5</b>	<b>34</b>	<b>0.2</b>	<b>15</b>	<b>5.2</b>	<b>380</b>

1. Mineral Resource is reported at a 0.8% Cu cut-off grade.
2. Discrepancy in summation may occur due to rounding.

#### 3.2 CHANGE FROM PREVIOUS PUBLIC REPORT

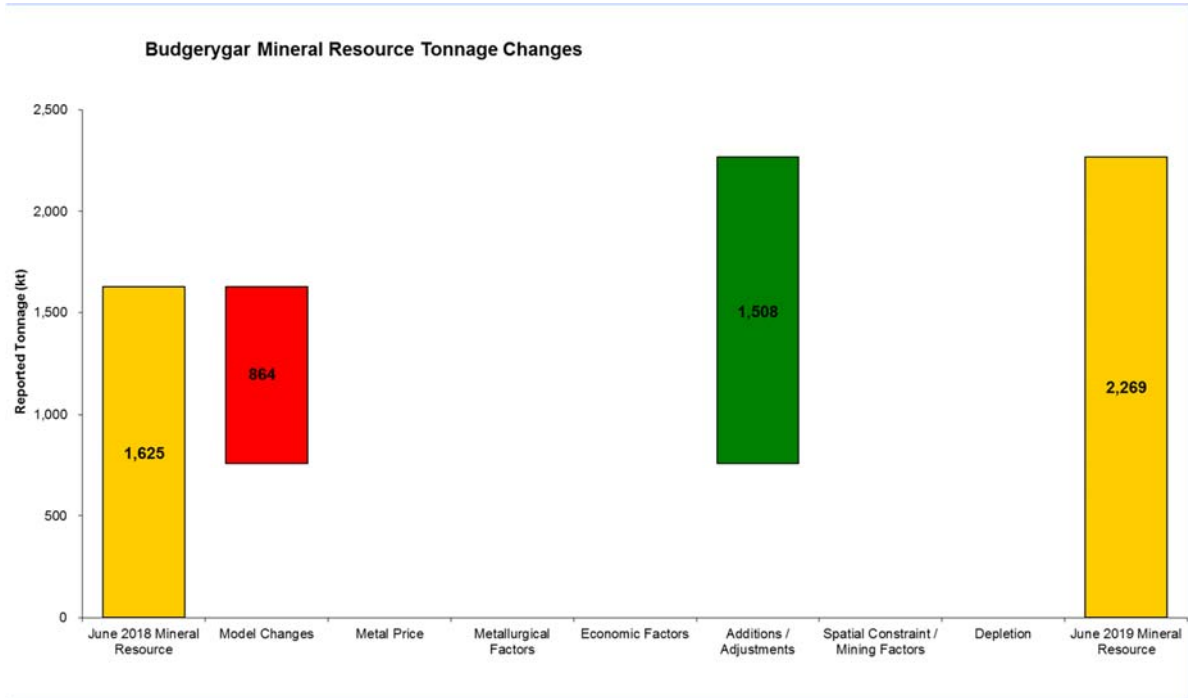
Material changes to the Budgerygar Mineral Resource from the previous reporting period are limited to an increase in reported tonnes. Density values used for the 2019 Mineral Resource model were estimated via Ordinary Kriging from bulk density measurements taken from the drill core. Density values used for the previous Mineral Resource model were assigned a default value of 3.1 within the copper sulphide estimation domain.

**Table 2 Change in the reported Budgerygar Mineral Resource since previous public report<sup>1,2</sup>**

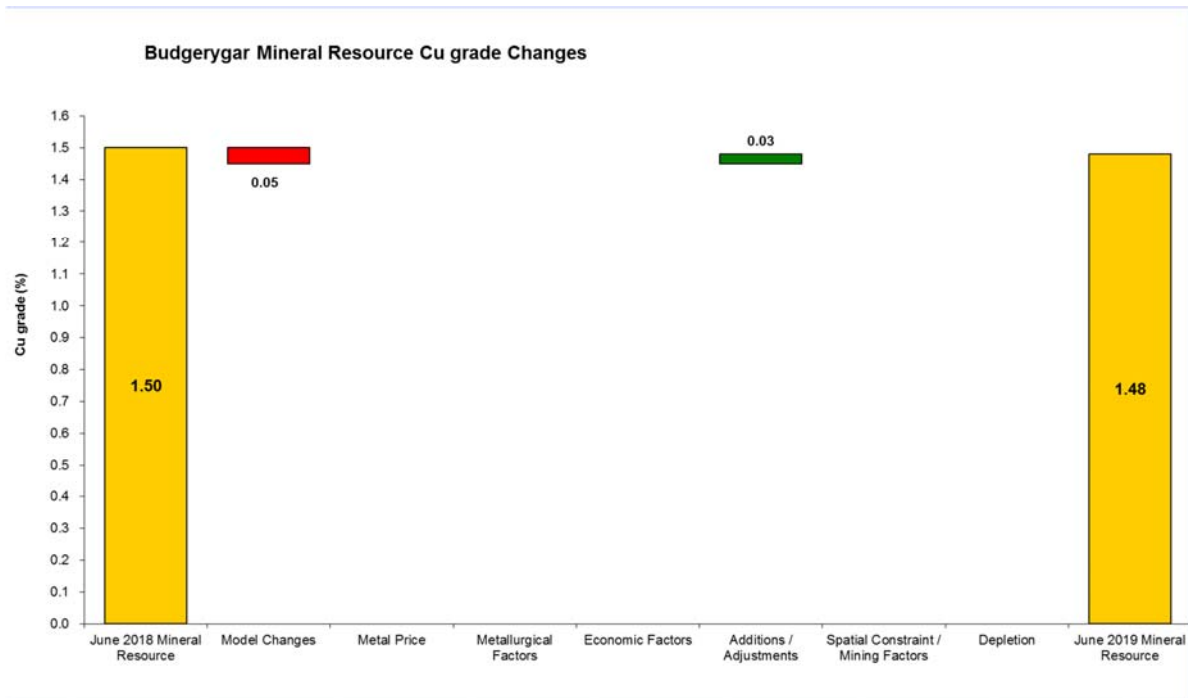
Estimate	Resource Category	Tonne (kt)	Copper (%)	Contained Copper (kt)	Au (g/t)	Contained Au (koz)	Ag (g/t)	Contained Ag (koz)
June 2019	Measured	0	0.0	0	0.0	0	0.0	0
	Indicated	0	0.0	0	0.0	0	0.0	0
	<b>Total M&amp;I</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>
	Inferred	2,300	1.5	34	0.2	15	5.2	380
	<b>Total</b>	<b>2,300</b>	<b>1.5</b>	<b>34</b>	<b>0.2</b>	<b>15</b>	<b>5.2</b>	<b>380</b>
	June 2018	Measured	0	0.0	0	0.0	0	0.0
Indicated	0	0.0	0	0.0	0	0.0	0	
<b>Total M&amp;I</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	
Inferred	1,600	1.5	24	0.1	6	0.0	0	
<b>Total</b>	<b>1,600</b>	<b>1.5</b>	<b>24</b>	<b>0.1</b>	<b>6</b>	<b>0.0</b>	<b>0</b>	
<i>difference</i>	Measured	0	0.0	0	0.0	0	0.0	0
	Indicated	0	0.0	0	0.0	0	0.0	0
	<b>Total M&amp;I</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>0</b>
	Inferred	640	0.0	9	0.1	9	5.2	380
	<b>Total</b>	<b>640</b>	<b>0.0</b>	<b>9</b>	<b>0.1</b>	<b>9</b>	<b>5.2</b>	<b>380</b>

1. Mineral Resource is reported at a 0.8% Cu cut-off grade.
2. Discrepancy in summation may occur due to rounding.





**Figure 4 Tonnage changes between the June 2018 and June 2019 Budgerygar reported figures. Figures are reported from raw data and rounded to nearest 1kt.**



**Figure 5 Copper grade changes between the June 2018 and June 2019 Budgerygar reported figures. Figures are reported from raw data and rounded to nearest 0.01% Cu.**

**3.3 STATEMENT OF COMPLIANCE WITH JORC CODE REPORTING**

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

**3.3.1 Competent Person Statement**

I, Brad Cox confirm that I am the Competent Person for the Budgerygar Mineral Resource and:

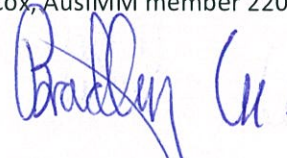
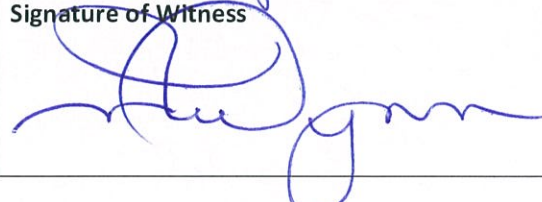
- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having relevant experience to the style of mineralisation and type of deposit described in the Report and to the activity for which I am accepting responsibility.
- I am a Member of the Australasian Institute of Mining and Metallurgy, (AusIMM membership No.220544).
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of Aeris Resources Limited.

I verify that the Budgerygar Mineral Resource summarised in this report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources.

**3.3.2 Competent Person Consent**

With respect to the sections of this report for which I am responsible – Mineral Resource estimate - I consent to the release of the Budgerygar Mineral Resource Statement as at 30<sup>th</sup> June 2019 by the directors of Aeris Resources Limited.

<p><b>Signature of Competent Person</b></p> <p>Brad Cox, AusIMM member 220544</p> 	<p><b>Date</b></p> <p>01/10/2019</p>
<p><b>Signature of Witness</b></p> 	<p><b>Witness Name and Address</b></p> <p>Narelle Wynn</p>

**3.4 JORC CODE, 2012 EDITION – TABLE 1 REPORT: BUDGERYGAR MINERAL RESOURCE**

**3.4.1 Section 1 Sampling Techniques and Data**

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

Criteria	Commentary
<i>Sampling techniques</i>	<ol style="list-style-type: none"> <li>1. All diamond core samples are based on ½ core. Pre-collar RC samples in waste zones taken as 4 metre composites and re-spit to 1 metre samples when return assays or geology indicate copper or gold mineralisation.</li> <li>2. All diamond core is aligned, measured and metre marked.</li> <li>3. During all drill programs at the Budgerygar deposit, Aeris Resources have ensured drill contractors completing the works maintain a high industry standard. Diamond drill sample lengths are generally taken at 1.0 metre intervals. At geological boundaries (based on mineralisation textural differences or material changes in chalcopyrite content) the sample length can vary between a minimum of 0.5 metres and maximum of 1.4 metres. Sampling is extended 10 metres beyond the mineralised system. Exploration and resource definition diamond core which intersected the mineralised Budgerygar deposit are predominantly NQ2 in size. All Exploration holes sampled by Aeris Resources for the Budgerygar Mineral Resource are analysed by a 35 element three stage Aqua Regia digestion with an ICP finish (ME-ICP41) suitable for Cu concentrations between 1 ppm to 10,000 ppm. All Cu samples greater than or equal to 1.0% Cu were re-submitted for an ore digest to determine Cu concentrations greater than 1.0% (ME-OG46). Au assays were completed via fire assay fusion with an AAS finish using a 30g charge (Au-AA22) suitable for Au grade ranges between 0.01 g/t – 100 g/t. All Au samples greater than or equal to 1.0 g/t Au were re-submitted for an ore grade 30g fire assay charge to determine Au concentrations greater than 1.0 g/t Au (Au-AA25). All grade control diamond drill holes and underground samples are assayed using the ore grade digest method (ME-OG46) for Cu, Fe, Ag, Zn, Pb and S. Au assays are completed via Au-AA25. Sample preparation and assaying are completed at the ALS laboratory in Orange NSW.</li> </ol>
<i>Drilling techniques</i>	<ol style="list-style-type: none"> <li>1. All drilling data intersecting the modelled Budgerygar copper sulphide domains was completed via diamond drilling. RC drill holes completed at Budgerygar intersect the upper portions of the mineralised system within the oxide mineralised horizon. The geological interpretation has focused only on the sulphide mineralised system and as such has not incorporated the shallow RC drill holes.</li> </ol>
<i>Drill sample recovery</i>	<ol style="list-style-type: none"> <li>1. All diamond core recoveries are measured and recorded by Aeris Resources field technicians or geologists. Initial drill holes completed by NORD targeting the Budgerygar deposit did not have RQD routinely recorded. RC pre-collar sample recoveries were not recorded nor required to be recorded as all material estimated for the Budgerygar mineralisation is defined by diamond drill core. RQD measurements are taken on all core prior to all sampling. This procedure has been part of the standard drill core processing procedure since 2005.</li> <li>2. Rock competency is very good through the Budgerygar mineralised system and adjoining country rock. Faults intersected are generally sub metre in thickness and contain minor amounts of clay/fine susceptible to core loss. Industry standard drilling</li> </ol>

Criteria	Commentary
	<p>practices are maintained to ensure sample recoveries and core presentation remains at a high level.</p> <p>3. No significant relationship appears to exist between recovery and grade.</p>
<i>Logging</i>	<p>1. All diamond core and RC chips are geologically logged by company geologists. All surface holes drilled by Aeris Resources are geotechnically logged. All logging is to the level of detail to support the Budgerygar style of mineralisation.</p> <p>2. Logging of diamond core and RC samples record lithology, alteration, mineralisation, degree of oxidation, structure, RQD and recovery. All exploration core was photographed in both dry and wet form. All RC intervals are stored in plastic chip trays, labelled with intervals and hole number. Core is stored in core trays and labelled similarly.</p> <p>3. All RC and core samples were logged in full.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p>1. Diamond core samples are cut using an Almonte automatic core saw. Half core samples are collected on average at 1.0 metre intervals and can vary between 0.5 metres to 1.4 metres. Sample intervals not equal to 1.0 metre generally occur at mineralisation/geology contacts.</p> <p>2. RC samples for waste sections are collected at 1 metre intervals, with a 1 metre split and bulk residual collected on the drill rig. The bulk residual was composited to 4 metre intervals by spear sampling. If RC composites returned above background copper or gold values, the stored original 1 metre split was sent to the laboratory for analysis.</p> <p>3. Samples taken are appropriate for the Budgerygar mineralisation style. Half core drill core samples are sent to ALS laboratory in Orange NSW for sample preparation and assaying. Upon arrival at the laboratory sample weights are recorded. Samples greater than 3kg are crushed via a Boyd crusher (90% passing 2 millimetres) and rotary split to a sub sample between 2kg to 3kg. The sub sample is pulverised via a LM5 to 85% passing 75µm. A 300g sample is taken from the pulverised material for assaying. Samples less than 3kg are crushed via a jaw crusher to 70% passing 6 millimetres and the whole sample is pulverised in a LM5 with a 300g sub sample taken for assaying.</p> <p>4. Sample blanks and industry standards are routinely submitted at a frequency of 1:20. Duplicates and pulps are retained and re-submitted periodically to test assay reproducibility.</p> <p>5. The sample sizes are considered appropriate to the grain size of the material being sampled.</p>
<i>Quality of assay data and laboratory tests</i>	<p>1. Mineralisation at the Budgerygar deposit is associated with primary sulphides. Copper mineralisation is primarily associated with chalcopyrite. Copper mineralisation is largely interpreted to be remobilised and varies in nature from fine disseminated spots to zones of erratic +10cm scale stock work textures. The assay methods described previously are considered appropriate for the style of mineralisation. Sample preparation methods are also considered appropriate for the style of mineralisation. Review of sample duplicates indicates the assay repeatability is very good.</p> <p>2. Information regarding assay techniques used for samples taken pre 2005 cannot be confirmed. However, drill holes completed up to this period are spatially distributed amongst more recent drilling which the assay methodology/techniques are known. Aeris Resources are confident the assay methods used would meet industry standards based on the geological protocols in place at the time.</p> <p>3. No other methods were used to derive assay values for resource estimation.</p>

Criteria	Commentary
	<ol style="list-style-type: none"> <li>4. Laboratory QA/QC samples included the use of blanks, duplicates, standards (commercial certified reference materials) and repeats.</li> </ol>
<p><i>Verification of sampling and assaying</i></p>	<ol style="list-style-type: none"> <li>1. Significant mineralised intersections are reviewed by the logging geologist. QAQC results are reviewed on a batch by batch and monthly basis. Deviations from precision tolerances are investigated on a batch by batch basis. If grade bias is observed then follow up with the laboratory typically occurs on a monthly basis.</li> <li>2. No twinned holes were conducted.</li> <li>3. All Aeris Resources geological data is logged directly to a Panasonic tough book laptop at the core yard using company logging codes. Data is logged directly to Acquire (offline) which is then uploaded to the Acquire network database once the computer is docked to the office workstation. In built Acquire validation occurs at the time of data entry. Assay results are returned electronically on a batch by batch basis from the ALS laboratory via the webtrieve portal. Returned assay batches are reviewed prior to upload to the Acquire database. If a batch fails QAQC procedures then follow up and potential reassaying from the laboratory is required. Assay data are not uploaded to the Acquire database until a batch passes all QAQC tests.</li> <li>4. No adjustments to assay data are made.</li> </ol>
<p><i>Location of data points</i></p>	<ol style="list-style-type: none"> <li>1. All surface drill holes completed from 2005 onwards have collar locations surveyed by using a DGPS by either a contractor or staff surveyor. All pre 2005 drill holes were surveyed by either staff surveyor(s) or contractors using a theodolite.</li> <li>2. Surveyed collar co-ordinates are entered and stored within Aeris Resources corporate Acquire database.</li> <li>3. Geology interpretations and grade estimates are based on a local Tritton Mine Grid (TMG). The TMG is rotated 8.423° to the west from AGD 66 true north.</li> <li>4. Quality and accuracy of the drill collars are suitable for geological interpretation and resource estimation.</li> </ol>
<p><i>Data spacing and distribution</i></p>	<ol style="list-style-type: none"> <li>1. Drill spacing across the Budgerygar deposit vary from approximately 100 metres (N) x 100 metres (RL) to 40 metres (N) x 40 metres (RL).</li> <li>2. As a general rule Measured Mineral Resource is defined from a 20 metres x 20 metres drill spacing. Indicated Mineral Resource is defined from a 40 metre x 40 metre drill spacing. Inferred Mineral Resource is defined from drill spacings up to 100 metres x 100 metres. Based on the observed geological continuity the drill spacing is appropriate to classify as Inferred Mineral Resource.</li> <li>3. The Budgerygar mineralisation is defined sufficiently to define both geology and grade continuity for an Inferred Mineral Resource classification only.</li> <li>4. Samples are composited to 1.0 metre intervals. A majority of the assay data are 1.0 metres in length. Within an estimation domain composite lengths are created at 1.0 metre intervals from HW to FW. In some instances the FW sample may be less than 1.0 metre in length. Samples greater than or equal to 0.5 metres are retained for estimation and those less than 0.5 metres are not used for estimation.</li> </ol>

Criteria	Commentary
<i>Orientation of data in relation to geological structure</i>	<ol style="list-style-type: none"> <li>1. Drillholes intersect the deposit at high angles to the mineralised system i.e. approaching a perpendicular angle.</li> <li>2. There is a negligible chance of potential grade bias based on drill orientation/intersection angles.</li> <li>3. No material issues due to sampling bias have been identified.</li> </ol>
<i>Sample security</i>	<ol style="list-style-type: none"> <li>1. Chain of Custody is managed by the Company. Samples post 2005 were stored on site in polyweave bags containing approximately 5 samples. These bags are securely tied, then loaded and wrapped onto a pallet for dispatch to the laboratory. The samples are freighted directly to the laboratory with appropriate documentation listing sample numbers and analytical methods requested. Samples are immediately receipted by a laboratory staff member on arrival, with a notification to Aeris Resources of the number of samples that have arrived.</li> </ol>
<i>Audits or reviews</i>	<ol style="list-style-type: none"> <li>1. No external reviews have been completed. An independent review and geological interpretation/remodelling exercise was completed by Aeris staff geologists. The work was completed independently from the previous geological interpretation.</li> </ol>

### 3.4.2 Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	Commentary
<i>Database integrity</i>	<ol style="list-style-type: none"> <li>1. All assay results are logged against unique sample numbers. A sampling sheet detailing sample numbers and core / RC intervals is completed prior to sample collection. During the sampling process each sample interval is cross-referenced to the sample number and checked off against the sampling sheet. Pre-numbered bags are used to minimize errors. Assay data is received via email in a common electronic format and verified against the Acquire database.</li> <li>2. Data validation and QAQC procedures are completed by staff geologists. Geology logs are validated by the core logging geologist. Assay data is not uploaded to the corporate Acquire database until all QAQC procedures have been satisfied.</li> </ol>
<i>Site visits</i>	<ol style="list-style-type: none"> <li>1. Brad Cox (Aeris Resources – Geology Manager) has made numerous site visits during FY2019. The visits included underground inspections focused on geological mapping, drill core inspection and reviewing geologic interpretations.</li> </ol>
<i>Geological interpretation</i>	<ol style="list-style-type: none"> <li>1. The confidence in the Budgerygar geology model is relatively high. Many geological similarities observed from the Budgerygar drill core are similar to observations made at the Tritton and Murrawombie deposits. There appears to be a strong structural/deformational control to mineralisation at Budgerygar, particularly along the interpreted F4 fold corridor. F4 fold corridors have been hypothesised to control mineralisation at Tritton.</li> <li>2. Data used for the geological interpretation includes drill hole data (diamond core and RC). There are not significant assumptions made other than the mineralised system extends between drill holes along the interpreted orientation.</li> </ol>

Criteria	Commentary
	<p>Mineralisation is easily visible from the host turbidite sequences. The geometry of the mineralised system is understood at drill spacings up to 80 metre x 80 metre.</p> <ol style="list-style-type: none"> <li>3. Estimation domains used for the latest resource estimate are based on interpreted geology defined from drill core. Cu estimates are constrained within a series of 0.5% Cu grade shells.</li> <li>4. Mineralisation is still open at depth below the modelled wireframe solids. Additionally, there is scope to increase the mineralised system along strike to the south and north.</li> </ol>
<i>Dimensions</i>	<ol style="list-style-type: none"> <li>1. The Budgerigar mineralised system is tabular in nature with an overall down dip length of 850 metres with mineralisation still open at depth and along strike (south and north). Mineralisation begins at approximately 40 metres below surface (5,230mRL). The mineralised lodes vary in thickness averaging 6-10 metres and dip between 35° - 45° east. Strike extents vary from 100 metres to 300 metres.</li> </ol>
<i>Estimation and modelling techniques</i>	<ol style="list-style-type: none"> <li>1. Ordinary kriging was used to estimate all variables. Ordinary kriging is an appropriate for this style of mineralisation. Vulcan software was used to create 3D geology/estimation domain wireframes, generate descriptive statistics and grade estimation. Isatis software was used to report descriptive statistics and model variograms. Metal per composite analysis and review of descriptive statistics were used to determine appropriate top cut values. For the Cu data no top cuts were applied. Estimation was either performed in 2 passes or 3 depending on the search size and dimensions of the estimation domain. Estimation pass 1 was generally set at 70% of the variogram range, estimation pass 2 set at 140% of variogram range and estimation pass 3 was designed to populate all remaining blocks within the estimation domain.</li> <li>2. All estimates within each estimation domain are validated against declustered composites. Mean grade estimates that fall within 5% of the declustered composite mean grade are considered acceptable. If the difference is outside a 5% tolerance then the estimation and/or decluster cell size is reviewed and changes made if necessary.</li> <li>3. No assumptions have been made for the recovery of gold and silver by-products.</li> <li>4. Other variables estimated included Au, Ag and bulk density.</li> <li>5. The parent block sized used for the updated estimate was 20 metres (E) x 20 metres (N) x 20 metres (RL) with sub celling down to 1 metre (E) x 1 metre (N) x 1 metre (RL). The cell size takes into consideration drill spacing and grade variability in different orientations.</li> <li>6. No assumptions have been applied to the model for selective mining unit.</li> <li>7. No correlation has been made between variables.</li> <li>8. The distinction between background Cu and Cu associated with mineralisation was defined from a combination of geology/textural logging and population distributions associated with a log probability plot. From this a 0.5% Cu cut-off was selected to define the bounding Cu estimation domain. Geological domains were modelled and tested against each other (geological interpretation, descriptive statistics, QQ plots and contact plots) to determine whether they could be incorporated into one domain or separated. This approach was used for each variable estimated. Domain boundaries were treated as hard domains whereby only composite data associated with an estimation domain is used for estimation.</li> <li>9. Drillhole data from each variable was reviewed within each estimation domain to determine whether top cuts are required.</li> </ol>

Criteria	Commentary
	<p>Top cuts were applied based on metal per composite analysis, histogram distributions and spatial location of composite data. Top cuts were applied if too much metal was assigned to particular composites (metal per composite) and/or clear disconnect from histogram distribution and spatially where the anomalous composites occur in relation to other samples.</p> <p>10. All estimates within each estimation domain are validated against declustered composites. Mean grade estimates that fall within 5% of the declustered composite mean grade are considered acceptable. If the difference is outside a 5% tolerance then the estimation and/or decluster cell size is reviewed and changes made if necessary. Estimates were also validated visually in Vulcan displaying block estimates and composite data. Swath plots on 20 metre levels were also created showing block estimates and declustered composite data in the X, Y and Z directions for each variable estimated.</p>
<i>Moisture</i>	1. Tonnages are estimated on a dry basis.
<i>Cut-off parameters</i>	1. A 0.5% Cu cut-off was used for domaining mineralised Cu. The selection of an appropriate cut-off grade was based on geology (ore textures and lithology) and log probability plot distributions.
<i>Mining factors or assumptions</i>	1. Not applicable.
<i>Metallurgical factors or assumptions</i>	1. Not applicable.
<i>Environmental factors or assumptions</i>	1. Tailing waste from the Tritton ore processing plant is disposed at the current tailings storage facility within ML1544 (or utilised as paste fill). Waste from underground development is stored on site for future rehabilitation of the Tailing Storage Facility. Any potentially acid forming waste is used for stope backfill underground. No significant environmental impacts have been identified from the Tritton Copper Operations. The same process/methodology would follow for any future mining activities at Budgerygar.
<i>Bulk density</i>	<p>1. Bulk density has been estimated via ordinary kriging within all estimation domains. For the background estimation domain outside of the mineralised system a default value of 2.70 was applied (average density of unmineralised turbidite sediments).</p> <p>2. Bulk density values were measured using the Archimedes Principle Method' (weight in air v's weight in water). Varying forms of silicification is present throughout the mineralised system and porosity associated with the turbidite host sediments is negligible. Vugs have been noticed within the drill core on rare occasions. Technically the bulk density determination method does not consider for the presence of vugs. Given they have only been observed on the rare occasion and are not correlatable to specific zones they are not considered to represent a material problem with current bulk density determinations.</p> <p>3. Bulk density has been estimated from the bulk density measurements. For material outside the mineralised domains an average density value for the host material has been assigned based on the density of unmineralised turbidite sediments i.e. 2.70.</p>



Criteria	Commentary
<i>Classification</i>	<ol style="list-style-type: none"> <li>1. Classification of the resource estimate has been guided by confidence in the geological interpretation and drill density. The Budgerygar Mineral Resource has been classified as Inferred.</li> <li>2. The drill and input data density is reasonable in its coverage for this style of mineralisation and estimation techniques to allow confidence for the tonnage and grade distribution to the levels of Inferred.</li> <li>3. The updated Budgerygar geology interpretation/model and resource estimate appropriately reflects the competent persons understanding of the geological and grade distributions.</li> </ol>
<i>Audits or reviews</i>	<ol style="list-style-type: none"> <li>1. External reviews and audits have not been conducted on the Budgerygar Mineral Resource model. The current geological interpretation, estimation domain assumptions and grade estimates have been reviewed internally by the geology team. No fatal flaws or significant issues were identified.</li> </ol>
<i>Discussion of relative accuracy/ confidence</i>	<ol style="list-style-type: none"> <li>1. The models have been validated visually against drilling and statistically against input data sets on a domain and on swath plot basis. 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>2. Inferred material relates to a global estimate.</li> <li>3. Geological modelling and estimation protocols used for the 2019 Budgerygar Mineral Resource are consistent with protocols used at Tritton and Murrawombie. Mine to mill reconciliations for the FY2019 year period from Tritton and Murrawombie have shown that Ore Reserves has estimated within 1% of tonnes and 5% of Cu grade providing a minimal variance for metal. Tritton resource has been mined since 2005. Reconciliations demonstrate the current models provide good confidence in the estimation and the estimation process used both the Tritton and Murrawombie Resource estimates.</li> </ol>

End Report