

19 March 2018

## Maiden Pantera MRE pushes Avanco's Carajás Resource Base Beyond 1 Mt of Contained Copper

ASX: AVB ('AVANCO' OR 'THE COMPANY') is pleased to announce a **Maiden Mineral Resource Estimate** for the Company's recently acquired **Pantera Copper Project**.

- Maiden Inferred Mineral Resource Estimate (MRE) for Pantera<sup>1</sup> of:

**20.8 million tonnes at 1.7% copper and 0.2 g/t gold, for 350,000 tonnes of copper and 140,000 ounces of gold**

- Drilling is currently underway at Pantera with three rigs in operation on a 5,000m drill programme focused on infilling the historical 200 metre spaced sections, and testing the eastern strike extension
- Substantial potential on the underexplored eastern side of Pantera, where massive sulphides (not seen in existing historical drilling) are being mined from a small artisanal shaft, while mineralisation defined by drilling remains open at depth on every section, and along strike
- The addition of the Pantera project's Maiden MRE, takes the Company's total Carajás copper portfolio to beyond One Million tonnes of contained copper metal, something that has long been a target for the Company. Carajás Inferred, Indicated and Measured resource now stand at:

**58.3 million tonnes at 1.7% copper and 0.3 g/t gold, for 1,011,400 tonnes of copper and 666,100 ounces of gold**

- Avanco has the right to acquire 100% of Pantera from Vale SA ("Vale")

Commenting on the on the Maiden Pantera MRE, Tony Polglase, Managing Director said: *"This MRE marks a number of significant milestones for Avanco, propelling the Company's Carajás resource base beyond One Million tonnes of contained copper, and just as importantly making rapid progress on a project that has defined our first transaction with Vale in the Carajás, and introduced us to the BNDES."*

### CARAJAS COPPER – Mineral Resources Summary

DEPOSIT	Million Tonnes	Cu (%)	Au (ppm)	Copper Metal (T)	Gold Metal (Oz)
Measured	5.4	2.3	0.5	123,200	94,400
Indicated	20.6	1.7	0.3	349,000	290,500
Inferred	32.3	1.7	0.2	539,200	281,200
<b>TOTAL</b>	<b>58.31</b>	<b>1.7</b>	<b>0.3</b>	<b>1,011,400</b>	<b>666,100</b>

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**PANTERA OVERVIEW**

In January 2018, Avanco announced the agreed terms for an option to acquire 100% of the Pantera Copper Project from Vale. Pantera, like the nearby Antas mine, is located near established infrastructure in the world class Carajas region of Brazil.

The Pantera license extends to 9,700 ha, situated 110 km west of the Company’s Pedra Branca Project. It is located close to excellent infrastructure, near Vale’s operating Onça Puma Nickel Mine, and the mining towns of Tucumá and Ourilândia do Norte that support it (Figure 1).

Geologically Pantera is typical of the Carajas IOCG<sup>1</sup> style of deposit, comprising of predominately chalcopyrite mineralisation in tabular ore zones hosted within a steeply dipping shear zone.

Under the terms of the Vale option, drilling is required to establish a valuation based on US\$ 0.04/lb of copper contained in JORC Measured and/or Indicated Resources, or by paying US\$ 0.04/lb of copper based on a non-JORC Resource of 400,000 tonnes of copper metal<sup>2</sup>. The Company believes these terms, targets and contained copper assumptions are reasonable and achievable.

Historical drilling by Vale focussed on the western side of the license where 17 holes on 200 m spaced sections defined 1.5 km of continuous mineralisation, and these drill holes form the basis of the MRE. A 5,000m drill programme has commenced utilising 3 diamond rigs has to infill the historical 200m space sections, and then test the strike extension on the eastern end of Pantera.

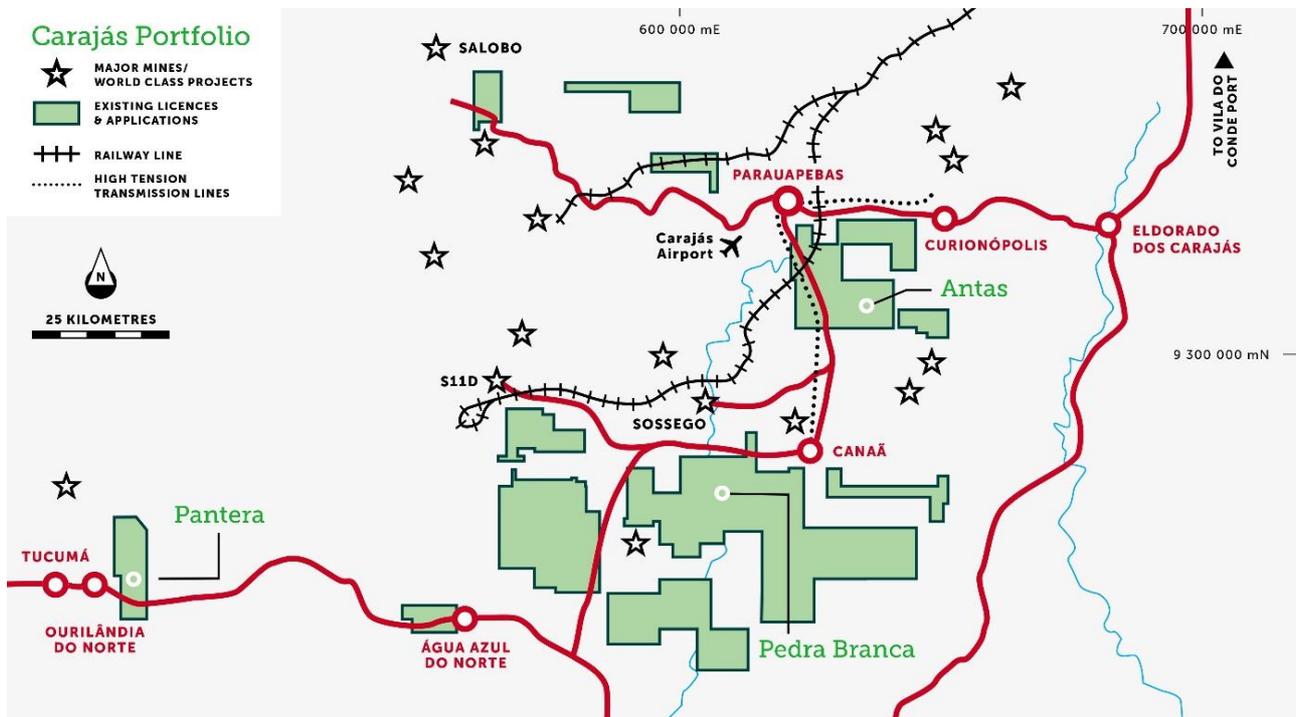


Figure 1: Location of the Pantera Copper project in Avanco’s Carajás portfolio

**CORPORATE**

Management are extremely pleased to have progressed the Pantera project quickly to its maiden MRE, and at a size which reflects closely to the non-JORC Resource of 400,000 tonnes of copper metal that was agreed as one of the payment terms <sup>2</sup> with Vale.

Pantera represents success in leveraging the Company's early mover status in the Carajás, cements the relationship with Vale and the BNDES, and potentially paves the way for future transactions in the region.

TONY POLGLASE  
MANAGING DIRECTOR

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CARAJAS COPPER – Mineral Resources <sup>3,4,5,6,7</sup>

DEPOSIT	Category	Million Tonnes	Cu (%)	Au (ppm)	Copper Metal (T)	Gold Metal (Oz)
Pantera <sup>8</sup>	Inferred	20.80	1.7	0.2	350,000	140,000
<b>Total Pantera</b>		<b>20.80</b>	<b>1.7</b>	<b>0.2</b>	<b>350,000</b>	<b>140,000</b>
PB East <sup>9</sup>	Measured	1.98	2.7	0.7	53,000	43,000
	Indicated	5.72	2.8	0.7	161,000	123,000
	Inferred	2.78	2.7	0.6	75,000	55,000
	<b>Total</b>	<b>10.48</b>	<b>2.8</b>	<b>0.7</b>	<b>289,000</b>	<b>221,000</b>
PB West <sup>9</sup>	Indicated	4.46	2.04	0.61	91,000	87,000
	Inferred	2.74	1.72	0.56	47,000	49,000
	<b>Total</b>	<b>7.19</b>	<b>1.92</b>	<b>0.59</b>	<b>138,000</b>	<b>136,000</b>
<b>Total Pedra Branca</b>		<b>17.67</b>	<b>2.44</b>	<b>0.65</b>	<b>427,000</b>	<b>357,000</b>
Antas North <sup>10</sup>	Measured	2.84	2.2	0.5	62,200	48,400
	Indicated	2.93	1.5	0.3	44,000	31,500
	Inferred	3.99	1.1	0.2	43,200	24,200
	<b>Total</b>	<b>9.76</b>	<b>1.5</b>	<b>0.3</b>	<b>149,400</b>	<b>104,100</b>
Antas South <sup>11</sup>	Measured	0.59	1.34	0.18	8,000	3,000
	Indicated	7.50	0.7	0.2	53,000	49,000
	Inferred	1.99	1.18	0.2	24,000	13,000
	<b>Total</b>	<b>10.08</b>	<b>0.83</b>	<b>0.2</b>	<b>85,000</b>	<b>65,000</b>
<b>Total Antas</b>		<b>19.84</b>	<b>1.1</b>	<b>0.2</b>	<b>234,400</b>	<b>169,100</b>
<b>TOTAL</b>		<b>58.31</b>	<b>1.7</b>	<b>0.3</b>	<b>1,011,400</b>	<b>666,100</b>

ANTAS COPPER MINE – Ore Reserves <sup>12,13</sup>

LOCATION	JORC Category	Economic Cut-Off Cu%	Million Tonnes	Copper (%)	Gold (g/t)	Copper Metal (T)	Gold Metal (Oz)
Antas Mine	Proved	0.5	0.90	3.58	0.73	32,300	21,200
	Probable	0.5	1.83	1.83	0.43	33,600	25,600
Mine Stockpiles	Proved	0.5	0.04	0.93	0.28	400	400
<b>TOTAL PROVEN + PROBABLE</b>			<b>2.78</b>	<b>2.38</b>	<b>0.53</b>	<b>66,300</b>	<b>47,200</b>

CENTROGOLD – Mineral Resources <sup>14,15,16</sup>

DEPOSIT	Category	Million Tonnes	Au (g/t)	Gold Metal (Oz)
Contact Zone <sup>17</sup>	Indicated	2.1	2.5	168,000
	Inferred	5.9	2.2	424,000
	<b>Total</b>	<b>8.1</b>	<b>2.3</b>	<b>592,000</b>
Blanket Zone <sup>17</sup>	Indicated	11.4	1.9	711,000
	Inferred	1.9	2.0	118,000
	<b>Total</b>	<b>13.3</b>	<b>1.9</b>	<b>829,000</b>
Chega Tudo <sup>17</sup>	Indicated	8.2	1.6	425,000
	Inferred	3.1	1.5	152,000
	<b>Total</b>	<b>11.3</b>	<b>1.6</b>	<b>577,000</b>
<b>COMBINED TOTAL</b>		<b>32.6</b>	<b>1.9</b>	<b>1,999,000</b>

**Competent Persons Statement**

*The information in this report that relates to Mineral Resources has been compiled or reviewed by Mr Aaron Green, who is a full-time employee of CSA Global Pty Ltd. Mr. Green is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012). Mr. Green consents to the disclosure of this information in this report in the form and context in which it appears.*

*The information in this report that relates to Exploration Results or listing rule 5.8. is an accurate representation of the available data and is based on information compiled by Mr. Simon Mottram who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Mottram is an Executive Director of Avanco Resources Limited; in which he is also a shareholder. Mr. Mottram 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 (CP) as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Mottram consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

1. Mineralisation at Pantera is of an Iron Oxide Copper Gold (IOCG) style, typical of that found in the Carajás Province of Brazil, and well documented in respected geological texts
2. See ASX Announcement "Avanco Acquires Pantera Project from Vale", 16 January 2018, for details
3. See ASX Announcement "Pedra Branca Resource Upgrade Delivers Substantial Increase in Both Contained Copper and Confidence", 13 July 2015, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Pedra Branca West MRE
4. Refer ASX Announcement "Pedra Branca Resource Upgrade, Advances Development Strategy", 26 May 2016, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Pedra Branca East MRE
5. See ASX Announcement "Stage 1 set to excel on new high-grade Copper Resource", 7 May 2014, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Antas North MRE
6. See ASX announcement "Major Resource Upgrade for Rio Verde", 8 February 2012, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Antas South MRE
7. The Antas South JORC compliant resource was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012, on the basis that the information has not materially changed since it was last reported
8. Grade Tonnage Reported above a Cut-off Grade of 0.6% Copper for Sulphide Resources
9. Grade Tonnage Reported above a Cut-off Grade of 0.9% Copper
10. Grade Tonnage Reported above a Cut-off Grade of 0.4% Copper for Sulphide Resources
11. Grade Tonnage Reported above a Cut-off Grade of 0.3% Copper for Oxide Resources
12. See ASX Announcement "Maiden Reserves Exceed Expectations for Antas Copper", 17 September 2014, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Antas North JORC (2012) Reported Reserve estimate
13. Measured and Indicated Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves
14. See ASX Announcement "CentroGold- Improved Mineral Resource Confidence Advances Scoping Study", 26 April 2017, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Contact MRE
15. See ASX Announcement "CentroGold Resources Increase 45% and Exceeds 1.8 Million Ounce", 13 November 2017, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Chega Tudo MRE
16. See ASX Announcement "CentroGold Project Approaches 2 Million Ounces", 07 February 2018, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Blanket MRE
17. Grade Tonnage Reported above a Cut-off Grade of 1.0g/t Gold

## ASX LISTING RULE 5.8.1 COMPLIANCE

### PROJECT BACKGROUND

The Pantera project is located in the south-eastern portion of the State of Pará near the towns of Ourilândia do Norte and Tucumá. It is accessed via paved roads (PA-150, BR-010 and PA-279) from the capital city of Belém 900 km North.

Locally, the project is situated 110 km west of the Company's Pedra Branca Project, or 12 km east of the established mining town of Tucumá, which supports Vale's Onça Puma Nickel Mine.

### Geology and Geological Interpretation

The Pantera deposit is interpreted as an Iron Oxide Copper Gold (IOCG) style deposit, comprising steeply dipping tabular ore zones of predominantly Cu (chalcopyrite rich with lesser bornite), and minor Au mineralisation.

Like other Neoproterozoic to Paleoproterozoic IOCG deposits in the southern portion of the Carajás domain, the Pantera deposit is also associated with shear zones associated with the WNW-ENE Canaã dos Carajás shear zone. Pantera is principally hosted by an intrusive granodiorite body.

At a deposit scale, the orientation of mineralisation parallels that of multiple shear zones within the host granitoid, which has been subject to pervasive hydrothermal alteration. Shear zones are typified by biotite-quartz schists, sericite schists and feldspathic schists, and mylonitisation. Primary mineralisation assemblages are dominated by chalcopyrite, lesser bornite, pyrite and pyrrhotite, and present as breccia style, massive sulphide and intense stock work mineralisation.

The geological interpretation comprises nested grade domains modelled at a lower Cu cut-off grade of 0.2%. The overburden and oxide zones were also modelled, from geological interpretations based upon drill sample logs and assays.

### Drilling Techniques

The Pantera deposit was sampled using diamond drill holes at nominal 200 m section spacings on 50-100 m NW-SE oriented sections. Nineteen drill holes were drilled by REDE - Engenharia e Sondagens Ltda for 4,250 m. Hole diameters were primarily of HQ diameter, with NQ used where necessary. Overall recoveries are consistently >80% in oxide and >99% in fresh rock.

Drill holes were generally angled ( $-60^\circ$ ) towards grid southeast, with one drill hole (PKC-PANT-DH00016) drilled at  $-70$  degrees.

### Sampling Techniques

Both HQ and NQ core were half core sampled, with the half core sent for analysis and the remainder stored in the core library. Half core samples typically weigh between 3 and 5 kg. Samples were taken at intervals ranging from 0.75 to 1.25 m in mineralised zones, and up to 2 m in barren zones. Lithological, weathering and drill hole diameter changes were honoured for sampling.

Samples were transported to the analytical laboratory and crushed, dried and pulverised to produce a sub-sample for analysis.

### Sample Analysis Method

The analytical database comprises analyses for Cu and 50 other elements. Following a 4-acid digest, the pulp samples were analysed by ME-MS61 ultra-trace level method using inductively coupled plasma (ICP-MS and ICP-AES). Samples were analysed for Au (g/t) by fire assay with a 50g charge. All samples with copper grades higher than 2,000ppm were re-analysed by the Atomic Absorption Spectrometry (AAS) method.

### Estimation Methodology

All block modelling and grade estimation work was carried out using Micromine software. A block model with parent cells of 50 mE by 20 mN by 20 mRL was constructed, incorporating the mineralisation domains (low grade and high grade), overburden and oxide domains. Sub-celling was used to enable adequate filling of the wireframe models. Boundaries between domains were treated as hard. High grade cuts were applied based on statistical analysis.

The block model and flagged composited sample data were 'flattened' in the Y-plane and stretched to a constant thickness of 50 m. Spatial statistical analyses of the sample data, including variography, was carried out in flattened space. The mineralisation domains in the block model were interpolated for Cu and Au by Ordinary Kriging. A search ellipse was oriented according to the variogram model directions and used to select samples for the grade estimation. The radii of the search ellipse were derived from the variogram ranges.

Dry density data were interpolated into the block model using Cu variogram model parameters.

The resource model was validated prior to final reporting.

### Cut-off Grades

The MRE is reported above a 0.6% Cu cut-off which approximates a conservative cut-off grade used for potential open pit mining.

### Mineral Resource Classification

The Mineral Resource was classified Inferred, taking into account the level of geological understanding of the deposit, surface mapping, the quality assurance and quality control of samples and sample analyses, the quantity and quality assurance of density data, and drill hole spacing (nominal 200 m section spacings on 50-100 m NW-SE oriented sections). The classification reflects the general low level of supporting data available for the estimate including QAQC, sampling and assaying protocols, chain of custody for assays, and geological confidence in mineralised domain continuity. For the Inferred classification category, there is sufficient evidence to imply but not verify geological and grade continuity.

### Eventual Economic Extraction

The Pantera Project is located in the well-developed Carajás Province mineral field, situated 110 km west of the Company's Pedra Branca Project. It is located close to excellent infrastructure, including Vale S.A's operating Onça Puma Nickel Mine and the mining town of Tucumá. An all-weather airstrip supporting the Vale operations is located nearby. Paved roads and grid electrical power are located within several kilometres of the project. As such, The Competent Person (Mineral Resources) believes there are reasonable prospects for eventual economic extraction of the deposit.

The following Table and Sections are provided to ensure compliance with the JORC Code (2012 Edition)

**TABLE 1 – Section 1: Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling core is cut in half onsite using an industry standard core saw, perpendicular to mineralisation or geology to produce two identical (mirrored) halves. Samples are collected consistently from the same side of cut core, sent to an internationally accredited independent assay laboratory, and analysed for a suite of elements by appropriate analytical techniques for the style and type of Iron Oxide Copper Gold (IOCG) mineralisation.</li> </ul>
	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>The drill hole collar locations were surveyed with a DGPS instrument and surveyed (centimetre precision) after completion. Drill samples are logged for lithology, weathering, structure, mineralogy, mineralisation, colour and other features. It is the view of the Competent Person that this work and the subsequent results are of adequate quality to assure the reliability of historical work.</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is HQ and NQ in size, sampled at intervals ranging from 0.75 to 1.25 m in mineralised zones, and up to 2 m in barren zones. Core is cut in half to produce sample weights of 3–5 kg. Samples are crushed, dried and pulverised (total prep) to produce a sub-sample for analysis. Using a four-acid digest, drill core samples are analysed for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn e Zr. (ICP) and Au (Fire Assay, 50 g). Mineralised zones and samples with &gt;2,000 ppm Cu are further analysed for “Ore Grade” Cu by Atomic Absorption Spectrometry (AAS).</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>It is the view of the Competent Person that this work and the subsequent results are of adequate quality to assure the reliability of historical work.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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 style="list-style-type: none"> <li>Diamond drilling is a combination of HQ and NQ. Core is reconstructed into continuous runs on an angle iron cradle orientation device.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core recoveries were logged and recorded in the database. Overall recoveries are consistently &gt;80% in oxide and &gt;99% in fresh rock. Drill sample recoveries are recorded as an average for each metre and recorded in the database. Recoveries are excellent and there are no known sample recovery problems, with the exception of the soil profile.</li> </ul>
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is reconstructed into continuous runs on an angle iron cradle for recovery measurement and core orientation. Depths are checked against those marked on the core blocks, and against the drilling company's records.</li> </ul>
	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>There is no known sample bias or potential for sample bias.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Drill samples are logged for lithology, weathering, structure (diamond core), mineralogy, mineralisation, colour and other features.</li> <li>It is the view of the Competent Person that this work and the subsequent results are of adequate quality to assure the reliability of historical work, and that the level of detail and quality of the work is appropriate to support future studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul style="list-style-type: none"> <li>Drill samples are logged for lithology, weathering, structure, mineralogy, mineralisation, colour and other features. Core is photographed both wet and dry.</li> </ul>
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All drill holes are logged completely from start to finish of the hole.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <li>Where sampled, core is cut in half onsite using an industry standard core saw, perpendicular to mineralisation or geology to produce two identical (mirrored) halves. Samples are collected consistently from the same side of cut core.</li> </ul>
	<ul style="list-style-type: none"> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling to date has been by diamond core.</li> </ul>
	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>Sample preparation is according to industry standard, including oven drying, coarse crush, and pulverisation.</li> <li>It is the view of the <b>Competent Person</b> that this work and the subsequent results are of adequate quality to assure the reliability of historical work.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>An industry standard QAQC programme has been used, involving Certified Reference Materials “standards” for Cu (with Cu grades ranging from low to very high), and blank samples, which are introduced in the assay batches at an approximate rate of one control sample per 20 normal samples. These QAQC results are reported along with the sample values in the preliminary and final analysis reports. Umpire checking of the Primary laboratory is then carried out by a Secondary laboratory. Both are internationally accredited independent assay laboratories.</li> <li>It is the view of the <b>Competent Person</b> that this work and the subsequent results are of adequate quality to assure the reliability of historical work.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Duplicates are inserted at an approximate rate of 1 duplicate per 20 normal samples. Umpire checking of the Primary laboratory is then carried out at by a Secondary laboratory, at an approximate rate of 1 control sample per 20 normal samples, or a minimum of 3 umpire samples per hole.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Sample sizes are considered to be appropriate and correctly represent the style and type of mineralisation.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul style="list-style-type: none"> <li>Assaying uses a four-acid digest (48 elements) and atomic absorption which are standard industry methods for Base and Precious metals analysis. The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica-based samples. The method approaches total dissolution of most minerals. "Ore grade" Cu is further analysed by an accredited AAS "Ore Grade" analysis method. The analysis is considered total and appropriate.</li> </ul>
	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>None have been used.</li> </ul>
	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>An industry standard QAQC programme involving Certified Reference Cu Materials "standards" (with Cu grades ranging from low to very high), blank samples, duplicates and Umpire Laboratory check sampling has been used.</li> <li>It is the view of the Competent Person that this work and the subsequent results are of adequate quality to assure the reliability of historical work.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>Avanco's Exploration Manager and/or senior geologists have visually verified significant intersections and results in the historical drilling.</li> </ul>
	<ul style="list-style-type: none"> <li>The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>The Company uses twin holes routinely in the more advanced stages of resource definition drilling, and for metallurgical drilling. Historic work is of an exploratory nature and no twin holes have been completed so far.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data was collected on Excel templates with detailed geological and structural logging recorded on paper. The historical information has been transferred, validated, complied, and managed by an in-house database manager in a Acquire database. All Company Intellectual Property is stored on a central server, kept in a secure and environmentally controlled room. Automated tape back-up occurs on a nightly basis and duplicate back-ups are regularly rotated “off-site” as a secondary precaution in case of loss of the Server site.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>No adjustments or calibrations are made to assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Collar locations are surveyed by DGPS on the State Survey Datum using true Mean Sea Level RL’s (centimetre precision) after completion. Downhole surveys are completed using a Maxibor digital down-hole tool with readings taken every 3 m.</li> </ul>
	<ul style="list-style-type: none"> <li>Specification of the grid system used.</li> </ul>	<ul style="list-style-type: none"> <li>Universal Transverse Mercator, SAD69 Zone 22 South.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Regional Topographic control and Digital Terrain Models are used. Accurate ground surveying of topography will be completed in later stages of exploration.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Current drilling is exploratory in nature on 200 m spaced sections. Infill drilling will follow on a nominal 100 m by 100 m spacing.</li> </ul>
	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Current drilling is exploratory in nature. No Mineral Resources are reported herein.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Current drilling is exploratory in nature. Sample compositing has not been applied.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Current drilling is exploratory in nature. Drilling has been orientated to be as optimal as practicable to the known geology and mineralisation.</li> </ul>
	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The Competent Person does not believe that any sample bias has been introduced.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Information regarding the chain of custody, and sample security for historical Pantera samples is not available in the currently accessible data.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>The Company's independent Resource consultants (CSA Global Pty Ltd of Perth, WA) and their CP completed a satisfactory site visit in March 2017, as part of a wider review of all projects where Mineral Resource estimates produced by them or will be in the future.</li> <li>It is the view of the Competent Person that the historical work and the subsequent results are of adequate quality to assure the reliability of this work</li> </ul>

TABLE 1 – Section 2: Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Avanco Resources Mineração Ltda, a wholly owned Brazilian subsidiary of Avanco Resources Ltd., has an option to acquire 100% of exploration license 850.777/1990.</li> <li>Government royalties amount to a 2% gross on Cu and 1.5% gross on Au. Unless otherwise agreed a 1% Cu and 0.75% Au royalty is payable to the owner of the surface rights. Other third-party royalties amount to: 1.5% on gross revenue payable to BNDS, and a 1% NSR to Vale for any copper production outside of the Historical Mineralised Zone.</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>850.777/1990 is a granted Exploration License in its second 3-year term. The licence is in good standing. To maintain the area in good standing Avanco will prepare and submit the “final exploration report” to the regulatory authorities on behalf of Vale in March 2018. Management sees no reason that the final report will not be considered acceptable and considers that the risk of tenure being compromised is very small</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Avanco’s CP has determined that the quality and integrity of historical work is adequate for inclusion, consideration and interpretation in the current work programme.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Shear zone hosted Iron Oxide Copper Gold (IOCG) breccia pipe, with mineralisation hosted within granodiorite rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:                             <ol style="list-style-type: none"> <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> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not presented in this announcement but were presented in the company’s Pantera ASX announcement dated 16 January 2018.</li> <li>All drill hole information was used to support the Mineral Resource estimate discussed in this announcement.</li> </ul>
	<ul style="list-style-type: none"> <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 explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The information has not been excluded.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not presented in this announcement.</li> </ul>
	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not presented in this announcement.</li> </ul>
	<ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Metal Equivalents have not been used in this report.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation at Pantera is comprised of tabular ore zones hosted within a steeply dipping shear zone.</li> </ul>
	<ul style="list-style-type: none"> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. ‘down hole length, true width not known’).</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not presented in this announcement.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Diagrams</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No exploration results are reported in this document.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Results from all 19 historical drill holes completed to date were used to support the estimation of the Mineral Resource.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported (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 style="list-style-type: none"> <li>All material and meaningful data, relevant to the scope of work in this report, has been included in this report. There is no other information, which is available and/or in the opinion of the Competent Person, lacking in this report.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> </ul>	<ul style="list-style-type: none"> <li>Current drilling is exploratory in nature. Future work will consist of in-fill drilling in addition to step-out and drilling at depth to test extensions.</li> </ul>
	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Significant potential for extension exists at depth, with all existing sections open down dip, and potential exists along strike beyond the reach of existing drilling. This document covers the reporting of a MRE, however a plan showing the extent of existing drilling over Pantera and appropriate sections have been provided recently in the company's Pantera ASX announcement dated 16 January 2018.</li> </ul>

**TABLE 1 – Section 3: Estimation and Reporting of Mineral Resources**

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>The database used in the Mineral Resource estimate was provided to CSA Global as a series of Microsoft Excel spreadsheets. Creation of this database requires basic data integrity such as logging depths not exceeding recorded depths of holes and no overlapping assay or logging values.</li> <li>The measures taken to ensure accurate data capture and ensure integrity of the data against transcription or keying errors have not been verified by the Competent Person.</li> </ul>
	<ul style="list-style-type: none"> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Validation of the data by CSA Global included checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, missing collars, and unrealistic element values.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> </ul>	<ul style="list-style-type: none"> <li>The CP, Aaron Green of CSA Global, visited the project on 30<sup>th</sup> March 2017. The CP inspected the existing site layout and garimpeiro workings. Avanco's Director – Exploration and Development, and CP (Simon Mottram) has performed several site visits to the project.</li> </ul>
	<ul style="list-style-type: none"> <li>If no site visits have been undertaken indicate why this is the case</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Geological interpretation was completed by CSA Global geologists. The geological interpretations are suitable for the level of information available, and stage of appraisal at which the project current stands. Continuity of mineralisation cannot be assumed but is implied by visual appraisal of grade continuity and also by the correlation between regional structure, lithology and the mineralisation.</li> <li>The geological interpretation provided a suitable foundation for the modelling of a Cu deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>Nature of the data used and of any assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>Detailed geological logging, and available assay data, were used in the interpretation of the currently reported Mineral Resource.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Geological continuity is implied between drill holes and conforms well to the anticipated geological model based on the interpretation of regional geology, and its association with mineralisation. The data do not readily offer alternative interpretations.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Grade has been the primary influence in controlling the Mineral Resource estimation. Wireframes have been constructed for the main mineralised horizons as determined by the chemical assays.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>Continuity of geology and structures can be implied, and traced between drill holes by visual and geochemical characteristics.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Pantera Mineral Resource is contained within an area defined by a strike length of 1,700m (along azimuth 80), and 50-100 m width. Pantera is mineralised from surface and extends a further 380 m down dip (sub-vertical).</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All modelling was undertaken using Micromine.</li> <li>The model constructed comprises nested high and low-grade wireframes, modelled at cut-offs of 0.2-2.5% and &gt; 2.5% Cu.</li> <li>Boundaries between domains were treated as hard. High grade cuts were applied to the low-grade domain only.</li> <li>A block model of dimensions 50 by 20 by 20m (XYZ) was generated and coded for belonging to one of the two grade domains (exclusive of one another). This model was then flattened in the y plane (section along a single northing) and stretched to a constant thickness of 50m. Input composites were similarly flattened and stretched to maintain their relative spatial relationship to the target block model.</li> <li>Statistical analysis was conducted wholly within Micromine. Spatial</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>statistical analysis, including variography was conducted in flattened space. Due to the poor quality of raw variography, the variogram of the median indicator for both Cu data were used for estimation.</p> <ul style="list-style-type: none"> <li>• Block grades were interpolated using ordinary kriging (OK).</li> <li>• An orientated 'ellipsoid' search was used to select data for interpolation. Search ellipsoid orientations were based on orientations derived from the variographical analysis. A single ellipsoid was generated and used for both Cu and Au estimation. Dimensions of the ellipsoid were based on the average length of the longest range structure in variography of Cu in each of the 3 principal directions.</li> <li>• A three pass search was used to complete estimation for Cu within the domain objects.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No previous estimates were available for review.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Gold has been estimated as it is assumed it will be recoverable as part of the Cu recovery process and/or potentially via gravity separation, however metallurgical testwork is required to confirm this.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> </ul>	<ul style="list-style-type: none"> <li>• No potentially deleterious elements have been considered.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A parent cell size of 50 m E by 20 m N by 20 m RL was adopted with standard sub-celling to 5 m E by 2 m N by 2 m RL to maintain the resolution of the mineralised lenses.</li> </ul>
	<ul style="list-style-type: none"> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No assumptions were made regarding selective mining units.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>Any assumptions about correlation between variables.</i></li> </ul>	<ul style="list-style-type: none"> <li>No assumptions were made about the correlation between variables.</li> </ul>
	<ul style="list-style-type: none"> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>The geometry of the host granitoid, and the orientation of shear zones within the host were used to guide interpretation of the mineralisation domains. Hydrothermal alteration within the shear zones is considered related to mineralising events.</li> <li>The wireframe objects were used as hard boundaries for grade interpolation.</li> </ul>
	<ul style="list-style-type: none"> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> </ul>	<ul style="list-style-type: none"> <li>Statistical analysis was completed using Micromine</li> <li>Following statistical analysis, it was determined that high grade cuts were required for Cu within the low-grade domain only.</li> </ul>
	<ul style="list-style-type: none"> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>Validation checks included statistical comparison between drill sample grades and OK block estimate results for each domain. Visual validation of grade trends for each element along the drill sections was also completed in addition to swath plots comparing drill sample grades and model grades for northings, eastings and elevation. These checks show reasonable correlation between estimated block grades and drill sample grades.</li> <li>No reconciliation data is available as no mining has taken place.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>Tonnages have been estimated on a dry in situ basis.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been reported at a variety of cut-off grades, including a zero cut-off. The selection of these grades generally coincides with the inflection points evident in the distribution of input data, and those used for modelling.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><b>Mining factors or assumptions</b></p>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No mining assumptions were made on the basis that the deposit is at the early stage exploration phase and remains open. Additional drilling is required to determine key deposit characteristics before detailed mining evaluation can take place.</li> </ul>
<p><b>Metallurgical factors or assumptions</b></p>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No information is available.</li> </ul>
<p><b>Environmental factors or assumptions</b></p>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No assumptions regarding possible waste and process residue disposal options have been made. As the project is still in early stage exploration, it was not considered necessary to yet make such determinations. The deposit does exist in the well-developed Carajas province mineral field, with the nearby Cristalino mine and numerous other large Cu-Au mining operations operating within the region.</li> <li>The existence of these other operating mines in a similar geological setting makes it a reasonable assumption that waste and process residue disposal are unlikely to be development limiting issues.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><b>Bulk density</b></p>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple density measurements exist within the Pantera database. In-situ density within the Mineral Resource estimate was determined via ordinary kriging, using the variography and search parameters for Cu.</li> <li>The wet density measurements were used to calculate the dry density values based on the derived regression formulas.</li> </ul>
	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Density measurements were calculated using the water immersion method from drill core across the deposit and from the various rock types.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Given the intended purpose of the Mineral Resource estimate, bulk densities for the waste material have not been determined, and so the only material to have densities applied (for the purposes of calculating metal content and tonnages) was the mineralised domain material – whose density values were estimated from available measurements via ordinary kriging.</li> </ul>
<p><b>Classification</b></p>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource was classified Inferred, taking into account the level of geological understanding of the deposit, geological mapping, quality of samples, density data, drill hole spacing, and sampling and assaying processes.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The classification reflects the general low level of supporting data available for the estimate including QAQC, sampling and assaying protocols, chain of custody for assays, and geological confidence in mineralised domain continuity.</li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>Internal audits were completed by CSA Global which verified the technical inputs, methodology, parameters and results of the estimate.</li> </ul>
<b>Discussion of relative accuracy / confidence</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The Mineral Resource accuracy is communicated through the classification assigned to the deposit. The Mineral Resource estimate has been classified in accordance with the JORC Code, 2012 Edition using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this Table.</li> <li>The Mineral Resource statement relates to a global estimate of in-situ tonnes and grade.</li> <li>Other than very limited artisanal mining, the deposit defined by the MRE covered in this document has not been mined.</li> </ul>