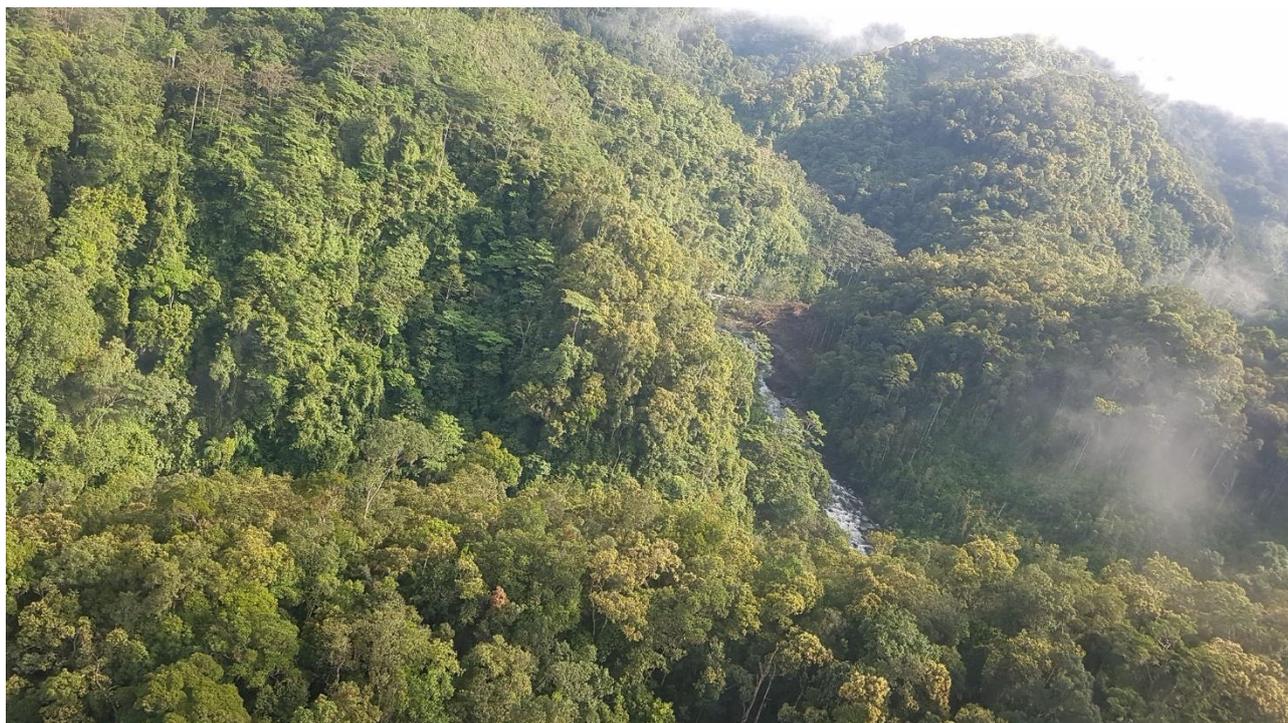


## **Significant Copper Prospect Identified at Yalua**

Canterbury Resources Limited (ASX: CBY) is pleased to advise that it has generated a significant new drill target at the Yalua Copper Prospect within its Ekuti Range Project in Papua New Guinea.

A broad 1km<sup>2</sup> copper-molybdenum geochemical anomaly has been defined following a recently completed soil sampling program. This geochemical anomaly is coincident with mapped quartz-sulphide stockwork veins, an outcropping dioritic intrusion and a magnetic anomaly.

Canterbury's team has commenced assessment of the logistics of an initial scout drilling program.



*Figure 1 Yalua Prospect, Morobe Province, PNG*

### **Canterbury's Managing Director, Grant Craighead, said:**

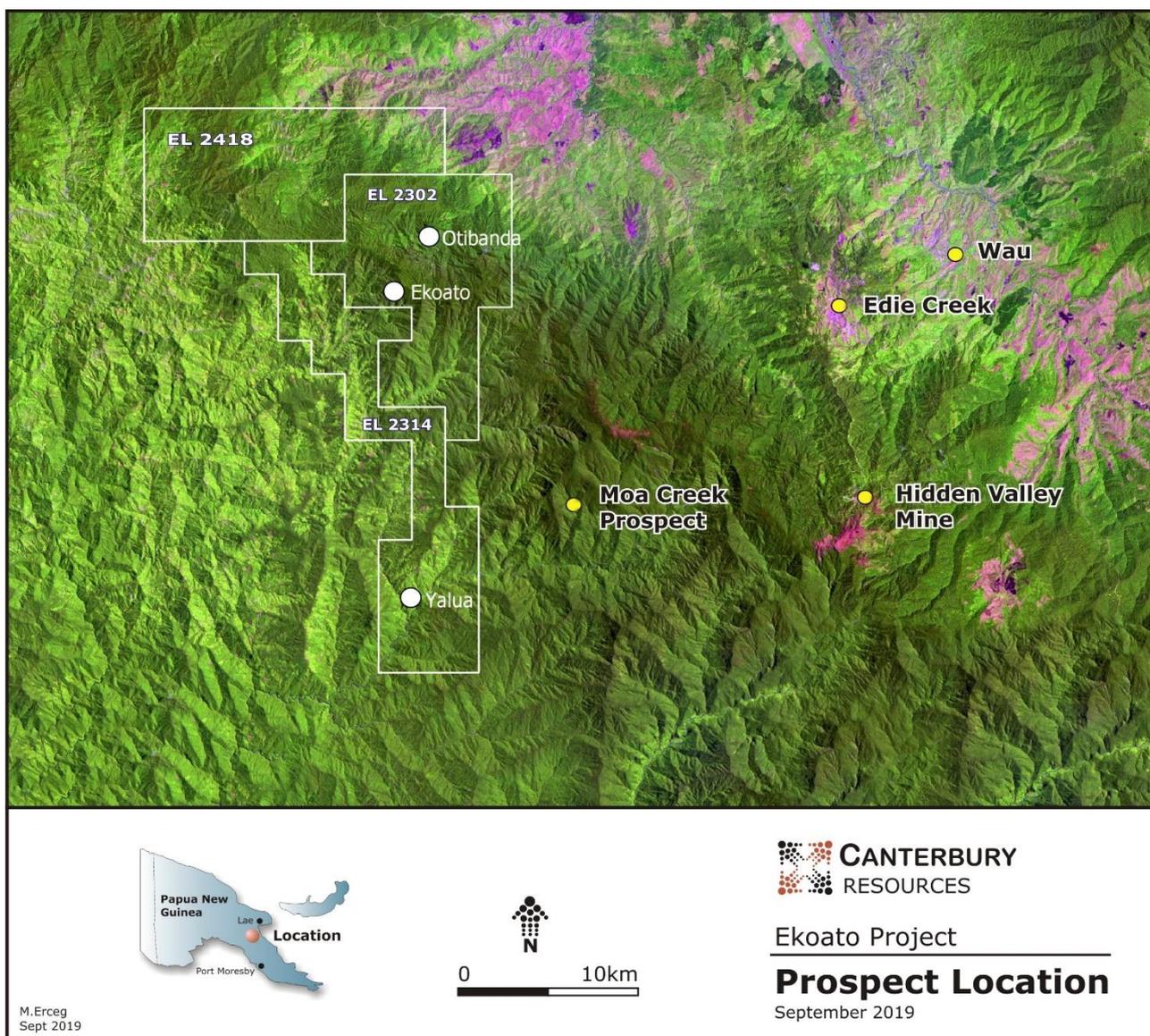
"We are pleased that our systematic exploration continues to generate such compelling drill targets. It further highlights the strong copper-gold mineralisation attributes of the region and follows hot on the heels of our drilling success at Ekoato, announced in July."

## **Yalua Prospect**

### **Mt Evina EL2314, Papua New Guinea (CBY 100%)**

The Yalua Prospect is located towards the southern end of the Mt Evina tenement (EL2314), which forms part of Canterbury's Ekuti Range Project (comprising EL2302, EL2314 and EL2418) in Morobe Province. This district is a well-endowed metallogenic belt that hosts world class epithermal and porphyry style deposits, including the large Wafi-Golpu copper-gold project and the Hidden Valley gold mine.

Canterbury's tenements have reasonable access to infrastructure, being around 30km west of the regional towns of Wau and Bulolo (where Canterbury has operational facilities) and 80km southwest of the major port city of Lae (PNG's second largest city).



*Figure 2 Location Plan of Canterbury's Ekuti Range Tenements and the Yalua Prospect*

## Yalua Field Program

At the Yalua porphyry prospect, a grid-based surface soil sampling program was completed in August 2019. The program identified a broad 1km<sup>2</sup> soil geochemical anomaly which is coincident with mapped quartz veins, an outcropping dioritic intrusion and a magnetic anomaly.

Salient features of the Yalua prospect are:

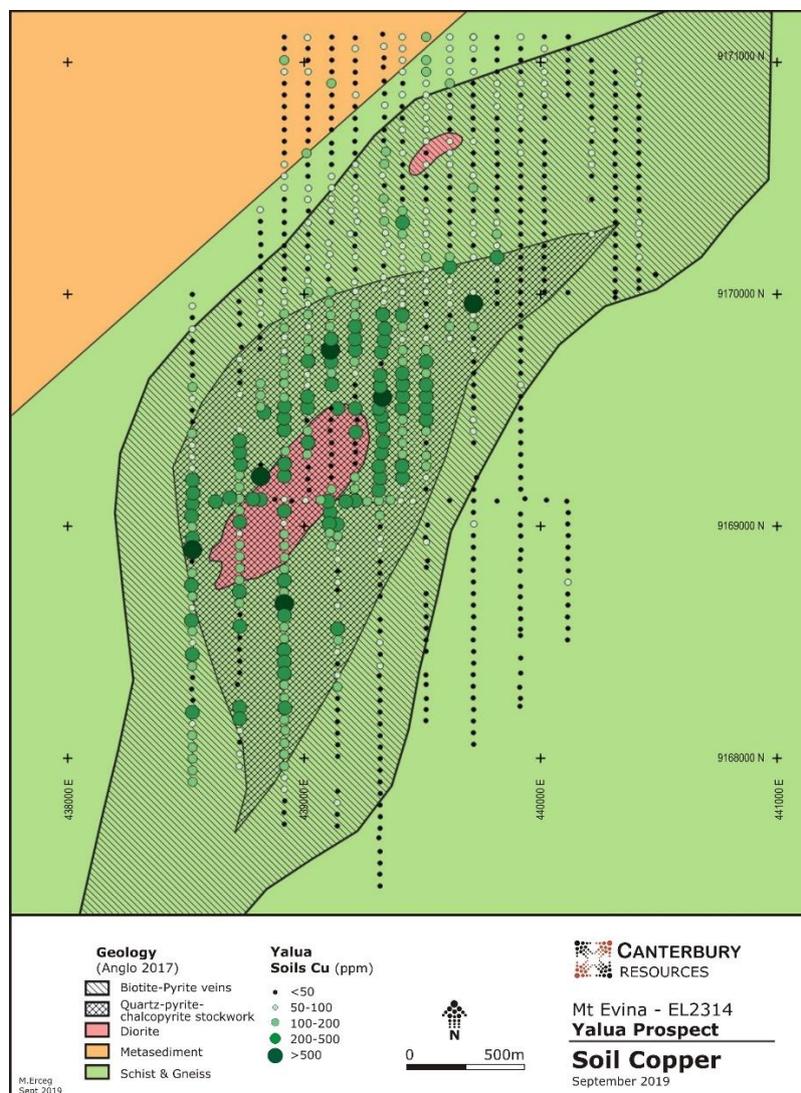
- Central dioritic intrusion mapped over 500m
- Quartz-sulphide (pyrite and chalcopyrite) vein stockwork in surrounding sediments
- Broad 1,000m by 1,000m coincident copper and molybdenum soil geochemical anomaly
- Coincident elevated magnetic anomaly
- No historical drilling
- 10km south of Canterbury's Ekoato prospect and 20km west of Harmony's Hidden Valley gold mine

The Yalua prospect was highlighted as an area of interest in regional geochemical surveys by CRAE (1980s), Newmont (2009) and most recently by Anglo American (2017).

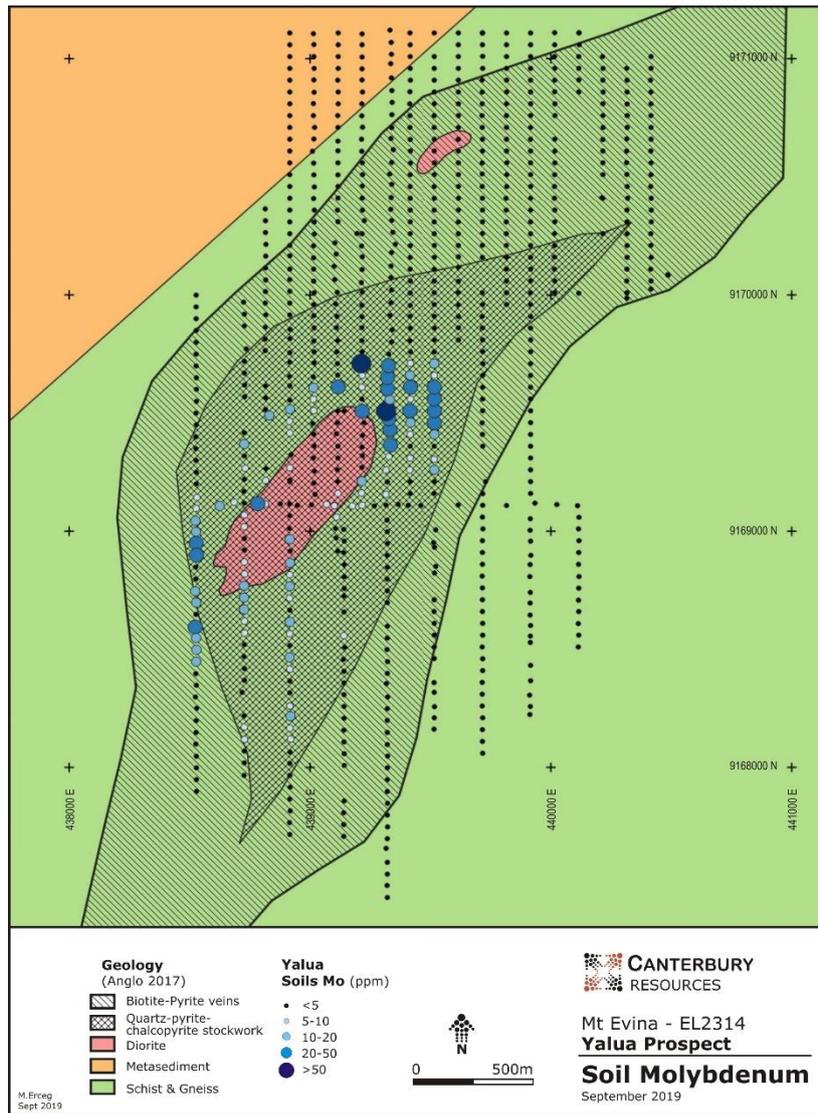
Geological mapping by Anglo American identified a broad area of quartz and sulphide (pyrite and chalcopyrite) vein stockwork centred on a dioritic intrusion. Anglo American interpreted the Yalua prospect to represent the upper parts of a porphyry system, with an epithermal overprint.

During Canterbury's 2019 program, 796 soil samples were collected on 100m spaced north-south lines, with samples collected every 50m along each line. Samples were sent to Intertek Laboratories in Lae for preparation and assay.

The copper (Figure 3) and molybdenum (Figure 4) soil geochemical anomalies clearly coincide with mapped intrusive and quartz-pyrite-chalcopyrite vein stockwork hosted in sediments surrounding the diorite intrusion.



**Figure 3 Yalua Copper in Soil Geochemistry**

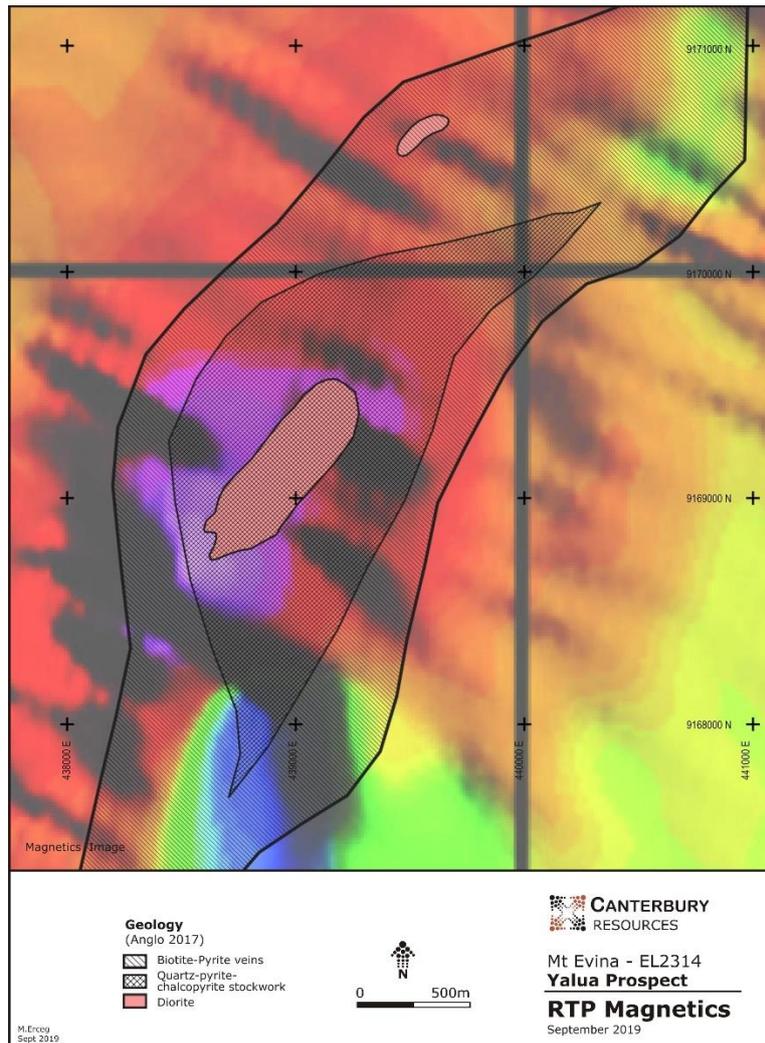


*Figure 4 Yalua Molybdenum in Soil Geochemistry*



*Figure 5 Canterbury's Field team Dispatching Soil Samples*

A broad magnetic high coincides with the intrusion (Figure 6).



**Figure 6 Yalua Magnetics**

The geology, geochemistry, and geophysics are consistent with Anglo's earlier interpretation that Yalua represents a high-level copper mineralised porphyry system.

Canterbury will continue to compile recent geological mapping, further assess the geochemical and geophysical data, and assess local logistics, in order to define targets warranting scout drilling.



On behalf of the Board  
Grant Craighead, Managing Director

Please direct enquiries to:

Mr Grant Craighead  
Telephone: +61 9392 8020  
Email: [gcraghead@canterburyresources.com.au](mailto:gcraghead@canterburyresources.com.au)

## **COMPETENT PERSON'S STATEMENT**

The technical information in this report which relates to Exploration Results is based on information compiled by Mr Michael Erceg, MAIG RPGeo. Mr Erceg is an Executive Director of Canterbury Resources Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Erceg consents to the inclusion in this report of the matters based on that information in the form and context in which it appears.

## **ABOUT CANTERBURY RESOURCES LIMITED**

Canterbury Resources Limited (ASX: CBY) ("Canterbury" or the "Company") is an ASX-listed resource company focused on creating shareholder wealth by generating, exploring and monetising potential Tier-1 copper-gold projects in the southwest Pacific. It has established a strong portfolio of projects in Australia, Papua New Guinea and Vanuatu that are prospective for porphyry copper-gold and epithermal gold-silver deposits. The Company is managed by an experienced team of resource professionals, with a strong track record of exploration success and mine development in the region.

Canterbury's near-term plans include drilling programs at three of its more advanced assets – the Ekoato and Bismarck porphyry copper-gold projects in Papua New Guinea and the Briggs porphyry copper project in Queensland. Each program provides the potential for the discovery and/or delineation of a large-scale copper ( $\pm$ gold) resource. The 100% owned Briggs and Ekoato projects are being managed and funded by Canterbury, while the Bismarck JV Project (Canterbury 40%) is being managed and sole-funded by Rio Tinto Exploration (PNG) Limited as part of a Farm-In and Joint Venture Agreement.

## **DISCLAIMER**

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)", "potential(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Soil samples comprise ~1kg un-sieved material collected from 0.5 to 1m below surface on a 100 by 50m grid</li> <li>Sample weights are considered to be adequate to be representative.</li> <li>Whole sample sent to laboratory for preparation and assay.</li> </ul>
Drilling techniques	<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 (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>No drilling completed at Yalua prospect</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <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>Not applicable</li> </ul>
Logging	<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</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>studies.</p> <ul style="list-style-type: none"> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Sample preparation follows industry best standard. Samples dried, crushed and pulverized at Intertek Laboratories.</li> </ul>
Quality of assay data and laboratory tests	<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> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• Sample preparation oven dry, crush, pulverize (Intertek Laboratories)</li> <li>• Assay Au by Fire Assay 50g charge detection 0.005ppm</li> <li>• Assay multi-element (32 elements) by Aqua Regia/OES (Intertek code AR01/OE)</li> <li>• No duplicates collected.</li> <li>• Commercially available standards and blanks included in each dispatch at a rate of ~1 per 100 samples.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• All field data manually collected, entered into Excel spreadsheets, and validated. Compiled spreadsheets and laboratory assay results stored on company database on SharePoint.</li> </ul>
Location of data points	<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>• Grid WGS84 UTM55S. Location of sample points by GPS</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	
Data spacing and distribution	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• ~100 by 50m grid</li> </ul>
Orientation of data in relation to geological structure	<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> <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>• N-S grid across NE and NW regional structures</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples delivered by company personnel to laboratory</li> </ul>
Audits or reviews	<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>• None completed</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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> <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>• EL2314 100% owned by Canterbury Resources PNG</li> <li>• No impediments to licence to operate in the area</li> <li>• The tenement is in good standing.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Newmont Work at Yalua (also spelt Yelauwa)</li> </ul> <p>EL1370 - Heiweni - Annual report for the period 10/09/2009 to 09/09/2010 Newmont 2010</p> <p>BLEG</p> <p>There were a number of significant results along the Indivi River near the village of Yelauwa including 20.4ppb, 17ppb, 12.82ppb and 11.22ppb Au. The source of the Indivi River anomalies most likely lies further upstream outside EL1370, however some of the anomalous results lie on tributaries to the river, whose catchments lie entirely within the EL. Historic CRA mapping from 1984 indicates alluvial Au workings in the area of the latest elevated BLEG results.</p> <p>Rock Chip</p> <p>Rock chip and float material was sampled opportunistically during the BLEG program with a total of 39 samples collected. Results included 1.29 ppm Au from a sample collected on the Indivi River with the sample described as medium grained diorite with 10-15% fine grained disseminated pyrite minor disseminated chalcopyrite and a single thin quartz +pyrite +chalcopyrite vein.</p> <p>EL1370 - Heiweni - Annual report for the period 10/09/2010 to 09/09/2011 Newmont 2011</p> <p>Further infill sampling (3 samples) was completed along the Indivi River near the village of Yelauwa, the area was originally highlighted by elevated reconnaissance BLEG results and an airmag anomaly. A detailed analysis of the regional BLEG Au and multi element data has been conducted, indicating that Otibanda has a porphyry signature. A mixed porphyry and epithermal signature is indicated for the Indivi River sampling at Yelauwa.</p> <p>Porphyry material was identified at Yelauwa with potassic / propylitic alteration and B veins noted, sampling returned 425-436ppm Cu but no significant Au from the area</p>

Criteria	JORC Code explanation	Commentary
		<p>The petrology report for 2 samples from the Indivi River prospect in the south of the tenement has been received (additional petrology samples for the prospect were collected on the adjacent EL1754). Samples comprise sandstone close to the Indivi magnetic feature with metamorphic biotite and actinolite and a weak retrograde alteration to sericite overprint. Plus one sample of monzodiorite porphyry from northwest of the Indivi magnetic feature closer to the Copper Creek prospect. The sample of monzodiorite shows K feldspar-biotite alteration with strong retrograde alteration to sericite-carbonate-chlorite.</p> <ul style="list-style-type: none"> <li>• Anglo America 2017 (EL2314 Annual Report to Nov 2017)</li> </ul> <p>The Yalua area has been poorly explored in the past and its prospectivity is highlighted by a few samples from the Mineral Resources Authority (MRA) with anomalous copper and gold values obtained from rocks with quartz veins in metasediments.</p> <p>The mapping program identified a NNE trending 3 x 1km hydrothermal footprint, characterised by quartz veining, with at least 3 vein stages and localised stock-working and dog tooth quartz texture. Disseminated pyrite and minor chalcopyrite associated with weak biotite alteration within metasediments was also observed within this zone.</p> <p>The main part affected by hydrothermal alteration was defined by a discontinuous outcropping 700 x 250m equigranular hornblende diorite, showing weak chlorite alteration of hornblende and disseminated magnetite. This intrusion was observed to cut most of the veins and was also cut by few pyrite - chlorite veins. Porphyritic diorite and granodiorite floats with quartz-chalcopyrite-molybdenite and sulphide veins were mapped, but the outcrop was not located. The small size and extremely rounded nature of the floats suggests that their provenance was likely to be distal. Mineralisation is mostly constrained within the metasediments, in disseminations (2-5% sulphides) and veins.</p>

Criteria	JORC Code explanation	Commentary
		<p>Stream sediment geochemistry results from 7 samples show only one very weakly anomalous sample (185 ppm Cu, 27 ppb Au) associated with a mapped 30m outcrop of porphyritic diorite and Owen Stanley metamorphics. Several rock chips returned strongly anomalous base metal-Au results (max 0.16% Cu, max 2.75g/t Au, max &gt;1% Pb and max 1418ppm Te).</p> <p>Based on the observations above, in particular dog tooth quartz textures of quartz and weak chlorite – magnetite alteration, the erosional level is highly likely to be very shallow - within the epithermal environment. The association of Cu-Au with Pb also suggests shallow levels and the elevated Te assays suggest an intrusive related hydrothermal system. There is potential for porphyry copper at depth.</p>
Geology	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Epithermal Au-Ag and porphyry Cu-Au-Mo</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• See Figures in body of report</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All meaningful and material data reported</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Fully assess geology, geochemistry and coincident geophysics to identify anomalies warranting scout drill testing</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
Site visits	<ul style="list-style-type: none"> <li>• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>• If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>• Nature of the data used and of any assumptions made.</li> <li>• The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>• The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>• The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> <li>• Description of how the geological interpretation was used to control the resource estimates.</li> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>available.</i>	
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Mining factors or assumptions	<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>Not applicable</li> </ul>
Metallurgical factors or assumptions	<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>Not applicable</li> </ul>
Environmental factors or assumptions	<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>Not applicable</li> </ul>
Bulk density	<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>Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
	<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> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Audits or reviews	<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>Not applicable</li> </ul>
Discussion of relative accuracy/confidence	<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>Not applicable</li> </ul>

#### Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	<ul style="list-style-type: none"> <li>• <i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i></li> <li>• <i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<i>Study status</i>	<ul style="list-style-type: none"> <li>• <i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i></li> <li>• <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>• <i>The basis of the cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>• <i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i></li> <li>• <i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i></li> <li>• <i>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</i></li> <li>• <i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i></li> <li>• <i>The mining dilution factors used.</i></li> <li>• <i>The mining recovery factors used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Any minimum mining widths used.</li> <li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>The infrastructure requirements of the selected mining methods.</li> </ul>	
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Costs	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges,</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>penalties for failure to meet specification, etc.</i></p> <ul style="list-style-type: none"> <li><i>The allowances made for royalties payable, both Government and private.</i></li> </ul>	
Revenue factors	<ul style="list-style-type: none"> <li><i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i></li> <li><i>he derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Market assessment	<ul style="list-style-type: none"> <li><i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i></li> <li><i>A customer and competitor analysis along with the identification of likely market windows for the product.</i></li> <li><i>Price and volume forecasts and the basis for these forecasts.</i></li> <li><i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Economic	<ul style="list-style-type: none"> <li><i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</i></li> <li><i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Social	<ul style="list-style-type: none"> <li><i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Other	<ul style="list-style-type: none"> <li><i>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</i></li> <li><i>Any identified material naturally occurring risks.</i></li> <li><i>The status of material legal agreements and marketing arrangements.</i></li> <li><i>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Classification</i>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Ore Reserves into varying confidence categories.</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> <li><i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Ore Reserve estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<i>Discussion of relative accuracy/confidence</i>	<ul style="list-style-type: none"> <li><i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i></li> <li><i>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.</i></li> <li><i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i></li> <li><i>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>