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MARKET RELEASE **22 March 2018**

Rocklands Ore Reserves Update

Highlights

- **Total Rocklands Ore Reserves estimated at 11.6 million tonnes (Mt) (0.87% copper (Cu) and 0.21 gold (Au) grams/tonne) as at 31 December 2017**
- **Reserves update excludes potential sales of cobalt and magnetite - future recovery of cobalt remains an option if shown as commercially viable**
- **Pit optimisation process to be commissioned for next Reserve Update for FY18**
- **Operational improvements continue, with planning underway for further reserves growth through orebody discoveries amid rising copper and cobalt prices**

Queensland copper producer CuDeco Limited (ASX:CDU) announced today an updated Ore Reserves estimate for its flagship Rocklands Copper Mine, as flagged in its earlier announcement released 27 December 2017. A summary of the Ore Reserve is as follows (for full details, refer to the report prepared by Australian Mine Design and Development Pty Ltd (AMDAD), as attached to this announcement):

Rocklands Ore Reserves	Mt	Cu %	Au g/t
Proved	9.5	0.90	0.21
Probable	2.1	0.72	0.19
Total Ore Reserves	11.6	0.87	0.21

This Ore Reserve update represents a material change from the maiden December 2015 Ore Reserve announced by CuDeco on 11 December 2015. The key changes are reflected in the following table:

Ore Reserve	Mt	Δ Ore t	Δ Cu t
31 December 2015 Ore Reserve Statement	**27.6**		
Less:			
Exclusion of Cobalt and Magnetite Changes and re-optimisations to pit designs in September 2016 to exclude cobalt and magnetite; along with the actual in-pit exclusions	-11.7	-42%	-17%
Ore Processed Depletion of the Reserves due to processing of ore to 31.12.17	-2.3	-8%	-13%
Changes to: • Commodity prices forecasts in respect of copper and gold prices; • Forecast processing costs, site fixed cost and copper concentrate realisation costs based on operational experience and planned initiatives; • Forecast process recoveries based on operational experience and additional test work; and • Stockpile removal of mineralised waste / other adjustments	0.5	1%	-3%
In-pit grade control model mismatch to Resource Model **	-2.5	-9%	-16%
Total changes	**-16.0**	**-58%**	-49%
Reserves Estimate as at 31 December 2017	**11.6**		

** This reconciliation was conducted in the highest grade area and possibly the most complex mineralogy of the Rocklands deposit. The remaining ore in the final pushback of the LM Pit and the other pits, where only minimal mining has so far been conducted, may show greater consistency with the Resource Model. Please also refer to ASX Announcement 31/10/2017, Annual Rocklands Resource Update.

As the December 2017 Ore Reserve represents a material change from the December 2015 Ore Reserve the following information is supplied in accordance with ASX Listing Rule 5.91:

December 2015	**December 2017**
Material assumptions and outcomes	
Based on 2016 Rocklands Feasibility study and owner mining since 2012. Process plant still under construction.	Based on actual operating and sales data. Current mining contract. Processing since mid-2016.
Products forecast to include copper, gold, cobalt and magnetite.	Products include copper and gold.
Ore Reserves: 28 Mt at 0.71% Cu, 0.14g/t Au, 357ppm Co and 6.17% Magnetite	Ore Reserves: 11.6Mt at 0.87% Cu and 0.21g/t Au
The criteria used for classification, including classification of the mineral resources on which the ore reserves are based	
The Ore Reserve Estimate is based on the November 2013 Resource Estimate prepared by Mining Associates Pty.	The Ore Reserve Estimate is based on the November 2013 Resource Estimate prepared by Mining Associates Pty Ltd updated in October 2017 (ASX announcement 31/10/2017).
Resource categories were defined using sampling density, number of informing samples and conditional bias slope of regression as follows: • Measured - maximum number of informing samples, bias slope of regression >0.8 • Indicated - maximum number of informing samples, bias slope of regression >0.4 • Inferred - block estimated within domain wireframes, minimum of 3 informing samples within maximum search of 300m	Resource categories were defined using sampling density, number of informing samples and conditional bias slope of regression as follows: • Measured - maximum number of informing samples, bias slope of regression >0.8 • Indicated - maximum number of informing samples, bias slope of regression >0.4 • Inferred - block estimated within domain wireframes, minimum of 3 informing samples within maximum search of 300m
Stockpiles are Measured.	Stockpiles are Measured. Three Mineralised Waste stockpiles were assessed as currently sub-economic and were removed from the Ore Reserve.
Ore Reserves are a subset of the Mineral Resource Measured Resources become Proved Reserves Indicated resources become Probable Reserves No Inferred Resources are included in Ore Reserves Exceptions: • Lack of geotechnical information over part of the RS Pit and all the RD pit meant Measured Resources became Probable Reserves	Ore Reserves are a subset of the Mineral Resource Measured Resources become Proved Reserves Indicated resources become Probable Reserves No Inferred Resources are included in Ore Reserves Exceptions: • Lack of geotechnical information over part of the RS Pit and all the RD pit meant Measured Resources became Probable Reserves • All oxide ore is classed Probable Ore until pending further work on Resource to “as mined” reconciliations.
The mining method selected and other mining assumptions, including mining recovery and mining dilution factors	
Opencut mining	Opencut mining
Final pit designs based on 2014 pit optimisation including copper, gold, cobalt and magnetite.	Final pit designs based on September 2016 pit optimisation including copper and gold.

<table>
<tr><th>December 2015</th><th>December 2017</th></tr>
<tr><td>Mining dilution modelled as 0.5m skin on all resource blocks.
Mining loss 5%.
Overall effect:
• Effect on tonnes 0%
• Overall Cu grade factor 97%
• Overall contained metal factor 92%</td><td>Resources to reserves estimated by call factors based on recent reconciliations of Resource to “as mined” estimated from grade control sampling and measured truck weights.
• Tonnage call factor 105.3%
• Cu grade call factor 71.9%
• Au grade call factor 95.1%</td></tr>
<tr><td colspan="2">The processing method selected and other processing assumptions, including the recovery factors applied and allowances made for deleterious elements</td></tr>
<tr><td>Flotation of sulphides and oxide ore to produce a Cu/Au concentrate for sale.
+40mm copper nuggets separated at primary crush stage and sent to copper metal casting plant.
-40mm crushed feed containing significant native copper processed in gravity circuit prior to flotation to produce a gravity concentrate.
High pressure rolls grinding used to prepare gravity and straight flotation feed.
Cobalt recovered in pyrite concentrate from Cu/Au tails.
Magnetite recovered by magnetic separation on tails.</td><td>Flotation of sulphides and oxide ore to produce a Cu/Au concentrate for sale.
+40mm copper nuggets separated at primary crush stage and sent to copper metal casting plant.
-40mm crushed feed containing significant native copper processed in gravity circuit prior to flotation to produce a gravity concentrate.
High pressure rolls grinding used to prepare gravity and straight flotation feed.</td></tr>
<tr><td>Multiple ore types defined by oxidation, proportion of native copper and copper mineral species.</td><td>Three ore types:
• Oxide
• Gravity (includes recoverable amounts of native copper)
• Fresh (sulphides)
These types divided into high and low grade to optimize process performance.</td></tr>
<tr><td>Process recoveries:
• Copper in oxide 65%
• Native copper 95%
• Copper in sulphides as bornite 92%
• Copper in sulphides as chalcocite 90%
• Copper in sulphides as chalcopyrite 95%
• Gold (all ore types) 75%
• Cobalt variable
• Magnetite 80%</td><td>Process recoveries:
• Copper in oxide feed 65%
• Copper in gravity feed 80%
• Copper in Fresh (sulphide) feed 90%
• Gold (all ore types) 75%</td></tr>
<tr><td>Stockpile recoveries as above.</td><td>Recoveries assessed for each stockpile based on ore type, grade and length of time stored.</td></tr>
<tr><td>No deleterious elements are assumed in concentrates.</td><td>No penalties are paid for deleterious elements in concentrate.</td></tr>
<tr><td colspan="2">The basis of the cut-off grade(s) or quality parameters applied</td></tr>
</table>

December 2015	December 2017
Cut-off grades based on Net Metal value (NMV) per tonne where: NMV = Cu % * Cu recovery * Cu price + Au g/t * Au recovery * Au price + Co ppm * Co recovery * Co price + Mag % * Mag recovery * Mag price – Process cost per tonne – Site General and Administration costs per tonne Positive NMV is above cut-off and is Ore Metal prices are net of realisation costs (concentrate transport and smelter charges) and royalties. Net prices used were: • Copper A$3.20/lb • Gold A$1200/oz • Cobalt A$18/lb • Magnetite A$140/tonne The NMV calculation includes adjustments for grade units. Other inputs to the net prices and NMV calculation were: • AUD/USD 0.715 • Combined process and site G&A cost A$13.20/tonne feed • Royalty copper 4.10% • Royalty gold 5.00% • Royalty cobalt 2.70% • Royalty magnetite A$1.25/tonne	Cut-off grades based on Net Metal value (NMV) per tonne where: NMV = Cu % * Cu recovery * Cu price + Au g/t * Au recovery * Au price + Process cost per tonne – Site General and Administration costs per tonne Positive NMV is above cut-off and is Ore Metal prices are net of realisation costs (concentrate transport and smelter charges) and royalties. Net prices used were: • Copper A$3.16/lb • Gold A$1519/oz The NMV calculation includes adjustments for grade units. Other inputs to the net prices and NMV calculation were: • AUD/USD 0.77 • Combined process and site G&A cost • Oxide A$14.51/tonne feed • Gravity A$17.84/tonne feed • Fresh A$14.51/tonne feed • Royalty copper 4.68% • Royalty gold 5.00% Realisation costs included in the net metal prices above are based on current transport and offtake agreements.
Mining costs are not included in the cut-off grade calculation but are in the pit optmisation. In 2015 mining costs were forecast from the owner operation and were unreliable due to performance of the second hand fleet.	Mining costs are not included in the cut-off grade calculation but are in the pit optmisation. Costs are taken from the current mining contract and are known with a high degree of certainty.
Estimation methodology	
Resource model is Ordinary Kriged.	Resource model is Ordinary Kriged.
Material modifying factors, including status of environmental approvals, mining tenements and approvals, other governmental factors and infrastructure requirements for selected mining methods and for transportation to market.	
In 2015 Rocklands was an operating mine but the process plant was still under construction.	Rocklands is an operating mine. Mining commenced in 2012 and ore processing in mid-2016.
The Rocklands Copper Mine is located within granted mining leases ML90177 and ML90188, and Infrastructure Lease ML90219. Landowner agreements formed part of the granting, and remain current for the duration of the mining leases. Native Title Ancillary agreements have been signed with the Mitakoodi and Mayi peoples and the Kalkadoon peoples, the local custodians of the areas covered by the mining leases. Mining Leases detailed above are granted for a period of 30 years; there is no known impediment to operating for this period of time. The Project operates under a Plan of Operations, the most recent of which was approved on 17th October, 2013.	The Rocklands Copper Mine is located within granted mining leases ML90177 and ML90188, and Infrastructure Lease ML90219. Landowner agreements formed part of the granting, and remain current for the duration of the mining leases. Native Title Ancillary agreements have been signed with the Mitakoodi and Mayi peoples and the Kalkadoon peoples, the local custodians of the areas covered by the mining leases. Mining Leases detailed above are granted for a period of 30 years; there is no known impediment to operating for this period of time. The Project operates under a Plan of Operations, the most recent of which was approved on 17th October, 2013.
Infrastructure near completion. Well established concentrate transport infrastructure in place for nearby operations.	Operating mine with all required infrastructure and product transport.

The full Ore Reserves Statement including Sections 1, 2, 3 and 4 of Table 1 of the JORC Code accompanies this announcement as required by ASX Listing Rule 5.92.

The final pit designs for the 31 December 2017 Reserves Estimate are based on the September 2016 pit optimisation. The Company intends to commission a new pit optimisation using current inputs as a matter of priority for its formal mining plan to be as closely aligned as possible to the updated Reserve. This process will also form the basis of the next Reserve Update for 30 June 2018.

Commenting on the results, CuDeco Chairman Peter Hutchison said: "These results reflect the Company's decision to exclude pyrite / cobalt and magnetite from the Reserve, on the basis that we have not yet secured viable economic offtake solutions for these minerals. However, the near doubling of the cobalt price over the past year shows the potential for this asset and we continue to vigorously pursue options to monetise these commodities, which would see them reintroduced to future Reserve Statements."

He added: "It should also be noted that this this updated Reserve Estimate has been determined on a non-optimised basis. The completion of this pit and operational optimisation process, including a closer alignment of operations to the orebody requirements, is a key priority for the Company."

Chief Executive Officer Jiang Gongyang added: "Our major ambition for the Rocklands project is to continue to actively pursue initiatives which will enhance the value of our Reserve and indeed overall financial performance over the medium and longer terms.

"We have made much progress in recent months in this regard, and major ongoing initiatives which will maintain this momentum include the completion of the Native Copper Bypass Circuit by the end of this month, cost and operational process optimisation across the business, and the pursuit of value accretive growth initiatives.

"Planning for further exploration activity is underway as the Company sees the potential to add to the reserve through further orebody discoveries, in an environment of rising copper prices and constrained supply. We remain focused on maximising value from our flagship Cloncurry project for the benefit of our shareholders, employees and all other stakeholders."

On behalf of the Board.

Competent Persons Statement

The Rocklands Ore Reserve Statement for 31 December 2017 was compiled and audited by John Wyche BE(Min), BComm, MAusIMM, CP and includes contributions from persons listed in the Statement. Mr Wyche is a Principal Mining Engineer with Australian Mine Design and Development Pty Ltd. Mr Wyche is not an employee or security holder of CuDeco. He is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy and has 30 years of experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Wyche confirms that this announcement is based on, and fairly represents, information and supporting documentation provided by him. Mr Wyche has provided written consent to CuDeco as to the form and context in which the Ore Reserves and supporting documentation are presented in this market announcement.

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Ore Reserves Update

Rocklands Group Copper Project, Australia

As at 31 December 2017

Prepared by Australian Mine Design and Development Pty Ltd

for

CuDeco Limited

Authors: John Wyche - AMDAD

Effective Date: 21 March 2018
Submitted Date: 21 March 2018

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1 ORE RESERVES STATEMENT

1.1 SCOPE

The December 2017 Rocklands Ore Reserves Estimate was prepared for CuDeco Limited (CuDeco) by Australian Mine Design and Development Pty Ltd (AMDAD). It deals with the resources for the Rocklands copper deposit in NW Queensland, Australia, as at 31 December 2017. All of the reserves are for extraction by open pit mining. The Rocklands Project is held 100% by CuDeco.

This Ore Reserves Statement is an update of the maiden Rocklands Copper Project Ore Reserve Statement as at December 2015 re-presented to June 2016 in the CuDeco Annual Report released on 17 November 2016.

1.2 ORE RESERVES SUMMARY

The Ore Reserve Estimate is summarised in Table 1 broken down by mill feed types. The Ore Reserves include the remaining material within the final pit designs and the mined material on stockpile.

Open pit operations at Rocklands commenced in late 2012 and ore processing in mid-2016. Significant tonnes of ore were on stockpile at the commencement of processing such that stockpiles were included in the 2015 Ore Reserves. This Ore Reserve Estimate continues to include stockpiled ore up to the end of December 2017 along with ore remaining in the designed open pits after this date.

Table 1 Rocklands Copper Project Ore Reserves

	Mtonnes	Cu%	Au g/t
Proved In Pit			
Oxide	0.0	0.00	0.00
Gravity	1.5	1.32	0.24
Fresh	6.1	0.76	0.22
Total Proved in Pit	7.6	0.87	0.22
Probable In Pit			
Oxide	0.5	0.78	0.19
Gravity	0.7	0.98	0.17
Fresh	1.0	0.51	0.21
Total Probable In Pit	2.1	0.72	0.19
Total In Pit			
Oxide	0.5	0.78	0.19
Gravity	2.2	1.22	0.22
Fresh	7.0	0.73	0.22
Total In Pit	9.7	0.84	0.22
Total Waste tonnes	76.8		
Waste : Ore	7.9		
Proved in Stockpiles			
Oxide	0.5	0.86	0.09
Gravity	0.9	1.41	0.24
Fresh	0.6	0.48	0.12
Total Proved in Stockpiles	1.9	1.01	0.17
Total Ore Reserves			
Proved	9.5	0.90	0.21
Probable	2.1	0.72	0.19
Total Ore Reserves	11.6	0.87	0.21

Notes:
The tonnes and grades shown in the totals rows are stated to a number of significant figures reflecting the confidence of the estimate. The table may nevertheless show apparent inconsistencies between the sum of components and the corresponding rounded totals.

1.3 CHANGES TO CUT OFF GRADE INPUTS FROM DECEMBER 2015 TO DECEMBER 2017

Operational experience gained since the start of ore processing in mid-2016 and current strategic planning has resulted in changes to the inputs used to set cut off grades.

Table 2 Changes to Cut Off Grade Inputs from December 2015 to December 2017

Input	Units	December 2015	December 2017
Exchange Rate	USD/AUD	1.41	1.30
Metal Prices			
Copper	USD/lb		3.15
	AUD/lb		4.10
Less realisation costs:			
Concentrate transport	AUD/lb		0.26
Smelter treatment charge	AUD/lb		0.20
Copper payability	AUD/lb		0.20
Copper refining charge	AUD/lb		0.11
Royalties	AUD/lb		0.16
Net copper price	**AUD/lb**	**3.20**	**3.16**
Gold	USD/oz		1,300
	AUD/oz		1,690
Less realisation costs:			
Gold payability	AUD/oz		85
Gold refining	AUD/oz		7
Royalties	AUD/oz		80
Net gold price	**AUD/oz**	**1,200**	**1,519**
Cobalt	AUD/lb	18.00	Not included
Magnetite	AUD/t	140	Not included
Operating Costs			
General and Administration Cost	AUD/t mill feed	Incl. in Process	2.51
Process Cost			
Oxide	AUD/t mill feed		12.00
Gravity	AUD/t mill feed		15.33
Fresh	AUD/t mill feed		12.00
Total Costs (excluding mining)			
Oxide	**AUD/t mill feed**	**13.20**	**14.51**
Gravity	**AUD/t mill feed**	**13.20**	**17.84**
Fresh	**AUD/t mill feed**	**13.20**	**14.51**
Process Recoveries			
Copper			
Oxide		65%	65%
Gravity		95%	80%
Fresh		92 - 95%	90%
Gold (all ore types)		75%	75%
Cobalt		Variable	Not included
Magnetite		80%	Not included

Recovery of ore in stockpiles has been assessed for each stockpile based on type, copper grade and length of time since mining.

In addition to these changes recent reconciliations of the insitu resource tonnes and grades to the as mined tonnes and grades defined by grade control and measured truck weights have resulted in a change in the mining loss and dilution from a geometric model applied to the resource block model to call factors which reflect observed performance.

1.4 CHANGES TO ORE RESERVES FROM DECEMBER 2015 TO DECEMBER 2017

The December 2017 Ore Reserve estimate including in-pit and stockpiled ore shows substantial changes to the December 2015 Ore Reserve.

Table 3 Total Change from December 2015 to December 2017

Ore Reserve	Mt	Cu %	Au g/t	Cu kt	Au koz
31 December 2015	27.6	0.72	0.14	198	125
31 December 2017	11.6	0.87	0.21	101	78
Change	-16.0	0.61	0.09	-97	-47
	-58%			-49%	-37%

The December 2017 estimate takes account of changes to a number of factors including:

- Changes to final pit designs based on new pit optimisation run in August 2016,
- Depletion due to processing of in pit and stockpiled ore,
- Changes to forecasts for the processing costs, site fixed cost and copper concentrate realisation costs based on operational experience,
- Changes to the forecast copper and gold prices,
- Changes to process recoveries based on operational experience and additional test work,
- Definition of the ore reserve at the grade control level compared to the resource model,
- Exclusion of cobalt and magnetite from the product sales; only copper and gold are included, and
- Exclusion of sub-economic mineralised waste from stockpile Ore Reserves.

The main reason for the August 2016 pit optimisation and subsequent re-design was the exclusion of cobalt and magnetite. Future recovery of cobalt remains an option if it can be shown to be commercially viable.

Table 4 Breakdown of Changes from December 2015 to December 2017

Ore Reserve	Mt	Cu kt	∆ Ore t	∆ Cu t
31 December 2015	27.6	198		
Less:				
Change to pit design	-5.6	-24	-20%	-12%
Depletion ore to mill	-2.3	-27	-8%	-13%
In-pit changes to prices, process + G&A costs and recoveries	0.2	5	1%	2%
In-pit grade control model mismatch to resource model	-2.5	-31	-9%	-16%
In-pit exclusion of cobalt and magnetite	-6.1	-10	-22%	-5%
Stockpile removal of sub-economic Mineralised Waste	-1.1	-13	-4%	-7%
Adjustment for measurement errors	1.5	3	5%	1%
Total changes	-16.0	-97	-58%	-49%
31 December 2017	11.6	101		

1.5 CONTRIBUTING PERSONS

The 2017 Ore Reserve Statement prepared by AMDAD is supported by contributions from the persons listed in Table 5.

1.6 ACCORD WITH JORC CODE

This Ore Reserves Statement has been prepared in accordance with the guidelines of the Australasian Code for the Reporting of Resources and Reserves 2012 Edition (the JORC Code).

The Competent Person signing off on the overall Ore Reserves Estimate is Mr John Wyche, of Australian Mine Design and Development Pty Ltd, who has 31 years of relevant experience in operations and consulting for open pit metalliferous mines.

Table 5 Contributing Experts

Expert Person/Company	Area of Expertise	References / Information Supplied
Cameron Skinner Mining Manager, CuDeco	Mine operations	Final pit designs, mining contract, mining operations, production records and forecasts
Andrew Day Geology Superintendent, CuDeco	Geology and grade control	Grade control, resource to grade control reconciliation, December 2017 pit survey, December 2017 stockpiles
Mark DeSouza Metallurgy Superintendent, CuDeco	Metallurgy	Process recovery forecasts for remaining in-pit ore and stockpiles
Levy Mwanza Financial Controller, CuDeco	Commercial	Operating costs, copper and gold price forecasts, copper concentrate transport, smelter and refining costs.
Mark Gregory Consultant to CuDeco	Former CEO CuDeco	Coordination of December 2017 Ore Reserve
John Wyche Principal Mining Engineer, AMDAD Pty Ltd	Overall sign-off of Ore Reserves	Calculation of cut off grades on information supplied by CuDeco, reporting and final assignment of Ore Reserve categories, compilation of Ore Reserves Statement.

1.7 RESERVE ASSESSMENT

Table 6 JORC Table 1 Section 4, Estimation and Reporting Ore Reserves

Sections 1, 2 and 3 of this table were prepared by Mining Associates Pty Ltd for the June 2017 Mineral Resource Update and are presented in this December 2017 Ore Reserve Statement without change. Section 4 was prepared by Australian Mine Design and Development Pty Ltd and relates specifically to the December 2017 Ore Reserve.

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *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 (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a*	• The resource estimate is based on drill samples only, no surface samples were used. • Representative 1 metre samples were taken from ¼ (NQ, HQ) or ½ (NQ, BQ) diamond core. Reverse circulation (RC) and rotary air blast (RAB) drilling was used to obtain 1 m and 3 m samples respectively, from which 3 kg was used for sample analysis. • RAB samples were deemed to be unrepresentative and prone to bias and were not used for resource estimation purposes. • Only assay result results from recognised, independent assay laboratories were used for Resource estimation after QAQC was verified.

Criteria	JORC Code explanation	Commentary
	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.	
Drilling techniques	• *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).*	• Diamond (DD) of NQ, PQ, HQ and BQ diameters with standard and triple tube sample recovery and reverse circulation (RC) with "through the bit" sample recovery data were used for geological interpretation and resource estimation. • Where high rates of water inflow were encountered, or for drill holes exceeding depth limits of RC drilling, DD tails were added to complete drilling. • Current practice is to use DD only in mineralised zones.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• DD core recovery averaged 98% overall, and exceeded 80% in 96% of the meters drilled in the mineralised zone. • RC recovery was recorded as bag size estimate and bag weight for all samples • RC -In most cases when chip recovery was poor and sample became wet the hole was stopped and a diamond tail was added. • DD - Analysis of recovery results vs grade indicates no significant trend occurs indicating bias of grades due to diminished recovery and / or wetness of samples. • RC - Loss of native copper in the weathered portion of the mineralised zones at Las Minerale and Rocklands South was identified and could result in an underestimation of the copper grade when using RC drill data, in certain circumstances. In areas where native copper is prevalent, core samples were given preference for use in estimation.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource*	• Drill samples were logged for lithology, mineralisation and alteration using a standardised logging system, including the recording of visually estimated volume percentages of major minerals. • Early (2006 to mid 2008) rock chip and core samples were logged on paper and data entry

Criteria	JORC Code explanation	Commentary
	estimation, mining studies and metallurgical studies. • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	completed by a 3rd Party Contractor and Database administrator in 2008. • Since 2008, rock chip and core samples were logged on site directly into Microsoft Excel field data capture templates with self-validating drop down field lists. • Drill core was photographed after being logged by the geologist. • Drill core not used for bulk metallurgical testing and RC drill chips are stored at the Rocklands site.

Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*
	• *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.*
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*
		• All DD core was orientated along the bottom of hole, where possible. A cut line was drawn 1 cm to the right of the core orientation line.
		• Core was cut with a diamond saw, ½ core was used for NQ and BQ analysis, ¼ core was used for HQ and PQ analysis to standardise the sample size per meter.
		• RC samples were split using a riffle splitter attached to the cyclone on the drill rig.
		• Sample intervals in DD and RC were 1 m down-hole in length unless the last portion of DD hole was part of a metre.
		• SGS Minerals Townsville Sample Preparation:
		• All samples were dried. Drill core was placed through jaw crusher and crushed to approx. 8mm.RC chips and core were split if necessary to a sample of less than approximately 3.5kg.
		• Native copper samples were prepared by 2 methods. Grain size of native copper determined which method was used.:
		  • Samples where native copper grain size was less than 2mm were disc ground to approximately 180µm.500g was split and lightly pulverised for 30 seconds to approximately 100µm.
		  • Samples where native copper grain size was greater than 2mm were put through a roller crusher to approximately 3mm.Samples were sieved at 2mm with copper greater than 2mm hand picked out of sample. Material less than 2mm and residue above 2mm was disc ground to approximately 180µm.500g was split from the sample and lightly pulverised for 30 seconds to approximately 100µm.
		• All other sampled material not containing native copper was pulverised to a nominal 90% passing 75µm.
		AMDEL Bureau Veritas Mt Isa Sample Preparation
		• After receiving, checking and sorting samples were dried at 103°C for 6 hours.

Criteria	JORC Code explanation	Commentary
		• Core samples were put through a jaw Crusher and crushed to approximately -10mm.Sample was split if sample weight over 3kg. • Rock chip samples weighing over 3kg were crushed with the use of a Boyde crusher and split with 3kg of material retained. • Samples were pulverised for 5 minutes in an LMS until 90% passed through -106µm.Sample was split with the remaining pulp put in storage.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• Prior to May 2011, Cu and Co grades were determined predominately by • 3 acid digest with either a ICP-AES (Inductively-Coupled Plasma Atomic Emission Spectrometer) or AAS (Atomic absorption Spectrometer) determination (SGS methods, ICP22D, ICP40Q, AAS22D AAS23Q, AAS40G).Post May 2011, Cu and Co grades were determined predominantly by 2 acid digest by ICP-OES (Inductively Coupled Plasma Optical Emission Spectrometer) determination at AMDEL Mt Isa laboratory. • Prior to May 2011, Au grades were determined by 50g Fire Assay (at SGS Townsville method FAA505).Post May 2011, Au grades were determined by 40g Fire Assay (at AMDEL Adelaide and Mt Isa method FA1). • Prior to May 2011, calcium and sulphur grades were determined by ICP – AES, post May 2011, sulphur grades were determined by aqua regia digest by ICP-OES. • Magnetite grades were determined by measurements of magnetic susceptibility taken on samples, which were compared to Davis Tube test results to determine a non-linear regression. It is recognised that a low susceptibility portion of the magnetite does exist, and hence magnetite grades may be underestimated in certain locations, but no correction has been found reliable at this time. Additional clarification should be available after results of the current bulk-sample programme have been analysed. • All analyses were carried out at internationally recognised, independent assay laboratories SGS, ALS, Genalysis, and Amdel Bureau Veritas. • Quality assurance was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis. • Assay results outside the optimal range for methods were re-analysed by appropriate methods. Copper assay results differ little between acid digest methods but cobalt assay results show a significant underestimation when analysed using the AAS. Using results from an extensive re-assaying programme to define a regression formula, AAS Co assays

Criteria	JORC Code explanation	Commentary
		were corrected to an equivalent ICP grade for estimation purposes. This correction factor affected 39% of samples in mineralised zones. • Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QAQC procedures, as well as coarse and pulp blanks, and certified matrix matched copper-cobalt-gold standards. Performance for standards has been adequate, apart from a period of systematic laboratory error, where standards are suspected to have been only partially digested. In-house cobalt only standards are more variable in results than those of Ore Research copper and gold, which is attributed to the in-house origin.These were later replaced by the copper-cobaltgold standards certified by Ore Research Pty Ltd. • Re-assay programmes of sample intervals analysed prior to QAQC implementation, and those of the systematic laboratory error period have shown correlations between re-assay and original results to be chiefly within the realm of analytical error, and as such, acceptable. • Field duplicates collected in three retrospective programmes were affected by weathering and cementing of samples, making assay comparison difficult. Recent duplicate samples, split and despatched with the originating drill hole, show good correlation within paired copper and cobalt results, although gold results are variable, which is attributed to coarse (>75µm) gold mineralisation. Core sample duplicates were attempted, butwere considered by CuDECO to be of little use as a measure of assay repeatability, due to local variation in mineralisation. • QAQC monitoring is an active and ongoing process on batch by batch basis by which unacceptable results are re-assayed as soon as practicable. • An issue was found with early AAS sample grades for cobalt and a large number of these samples have been re-assayed for Co via ICP methods. Enough data exists to define a close correlation between ICP and AAS results such that the remaining AAS assays were corrected using a linear regression formula (Co_ppm_ICP = 1.0764 * Co_ppm_AAS + 16.51). This affects approximately 39% of Co analyses in mineralised zones. • A limited check assay program carried out in 2007 on 497 samples suggested that Cu may be understated by approximately 5%. • DTR analysis (Davis tube recovery), which indicates magnetite content, has been carried out on 538 samples. Non-linear correlations with magnetic susceptibility readings on pulp samples, core and RC chips were defined and have been used to derive calculated

Criteria	JORC Code explanation	Commentary
		magnetite contents for estimation purposes. An extensive program of magnetic susceptibility and DTR measurements on pulp samples is currently underway, which is expected to further refine calculated magnetite content.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• An umpire assay programme of 528 mineralised samples from 173 drill holes was completed by ALS Laboratories in 2007 • Results between twinned RC and diamond holes are in approximate agreement, when taken into consideration with the natural variation associated with breccia-hosted ore bodies, identified coarse mineralisation, and subsequent weathering overprinting. • All assay data QAQC is checked prior to loading into the CuDECO Explorer 3 data base. • The CuDECO Explorer 3 data base was originally developed and managed by consulting geologists, Terra Search Pty Ltd, and was subsequently handed over to CuDECO Ltd in mid-2009. The data base and geological interpretation is collectively managed by the CuDECO Resource Committee, and relayed to the Resource Consultants by the nominated member of this committee, Exploration Adviser Mr David Wilson.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All drill holes at Rocklands have been surveyed with a differential global positioning system (DGPS) to within 10 cm accuracy and recorded in the CuDECO Explorer 3 database. • All drill holes, apart from vertical, have had down hole magnetic surveys at intervals not greater than 50 m and where magnetite will not affect the survey. Surveys where magnetite is suspected to have influenced results have been removed from the Database. • Where surveys are dubious the hole was resurveyed, where possible, via open hole in non-magnetic material.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been*	• Drilling has been completed on nominal local grid north-south sections, commencing at 100 m spacing and then closing to 50 m and 25 m for resource estimation. Local drilling in complex near-surface areas is further closed in to 12.5m • Vertical spacing of intercepts on the mineralised zones similarly commences at 100 m spacing and then closing to 50m and 25m for resource estimation, again some closer spacing is used in complex areas. • Drilling has predominantly occurred with angled holes approximately 55° to 60° inclination below the horizontal and either drilling to the local grid north or south, depending on the dip of the target mineralised zone.

Criteria	JORC Code explanation	Commentary
	applied.	• Holes have been drilled to 600 m vertical depth • Drilling is currently focused on the known mineralised zones of Las • Minerale and Las Minerale East; Rocklands South and South Extension; Rocklands Central and Le Meridian; Rainden, Solsbury Hill and Fairfield. • Data spacing and distribution is sufficient to establish geological and grade continuity appropriate for the Mineral Resource estimation procedure and has been taken into account in 3D space when determining the classifications to be applied. • Samples were composited to 2m down-hole for resource estimation in the known wireframe constrained mineralised zones and 10m down-hole in the general lithology zone (Inferred only).
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Drilling was completed on local grid north-south section lines along the strike of the known mineralised zones and from either the north or the south depending on the dip • Vertical to south dipping ore bodies at Las Minerale, Rocklands South Extended, Rainden and Solsbury Hill, were predominantly drilled to the north whilst vertical to north dipping ore bodies at Las Minerale East, Rocklands South, Rocklands Central and Le Meridian were predominantly drilled to the south. Fairfield strikes northeast to the local grid and is vertically dipping, most drill holes intersect at a low-moderate angle. • Scissor drilling, (drilling from both north and south), as well as vertical drilling, has been used in key mineralised zones at Las Minerale and Rocklands South to achieve unbiased sampling of possible structures, mineralised zones and weathering horizons. • Horizontal layers of supergene enrichment occur at shallow depths in Las Minerale and Rocklands South and a vertical drill program was undertaken to address this layering and to provide bulk samples for metallurgical test work.
Sample security	• *The measures taken to ensure sample security.*	• Samples are either dispatched from site through a commercial courier or company employees to the Laboratories.Samples are signed for at the Laboratory with confirmation of receipt emailed through.Samples are then stored at the laboratory and returned to a locked storage shed on site.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• CuDECO conducts internal audits of sampling techniques and data management on a regular basis, to ensure industry best practice is employed at all times. External reviews and audits of sampling have been conducted by the following groups:

Criteria	JORC Code explanation	Commentary
		• 2007 – In July 2007, Snowden were engaged to conduct a review of drilling and sampling procedures at Rocklands, provide guidance on potential areas of improvement in data / sample management and geological logging procedures, and to ensure the Rocklands sampling and data record was appropriate for use in resource estimation. All recommendations were implemented. • 2010 – In early 2010 Hellman &Schofield conducted a desktop review of the Rocklands database, as part of their due diligence for the resource estimate they completed in May 2010. Apart from limited logic and spot checks, the database was received on a "good faith" basis with responsibility for its accuracy taken by CuDECO. A number of issues were identified by H&S but these were largely addressed by CuDECO and H&S regarded unresolved issues at the time of resource estimation as unlikely to have a material impact on future estimates. • 2010 - Mr Andrew Vigar of Mining Associates Limited visited the site in 12 to 15 October, 3 to 5 November and 8 to 10 December 2010 during the compilation of detailed review the drilling, sampling techniques, QAQC and previous resource estimates and 17 to 19 March 2011 to confirm the same for new drilling incorporated into this resource estimate. Methods were found to conform to international best practise, including that required by the JORC standard.

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	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	• The Rocklands Copper Mine is located within granted mining leases ML90177 and ML90188, and Infrastructure Lease ML90219. Landowner agreements formed part of the granting, and remain current for the duration of the mining leases. • Native Title Ancillary agreements have been signed with the Mitakoodi & Mayi peoples and the Kalkadoon peoples, the local custodians of the areas covered by the mining leases. • Mining Leases detailed above are granted for a period of 30 years; there is no known impediment to operating for this period of time. The Project operates under a Plan of

Criteria	JORC Code explanation	Commentary
	• *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.*	Operations, the most recent of which was approved on 17th October, 2013.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous reports on the Double Oxide mine by CRA and others between 1987 and 1994 describe a wide shear zone containing a number of sub parallel mineralised zones with a cumulative length of 6 km.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Hosted within metamorphosed meso-Proterozoic age volcano-sedimentary rocks and intrusive dolerites of the Eastern Fold Belt of the Mt Isa Inlier. • Dominated by dilational brecciated shear zones containing coarse patchy to massive primary mineralisation, with high-grade supergene chalcocite enrichment and bonanza-grade coarse native copper in oxide. Structures hosting mineralisation are sub-parallel, eastsoutheast striking and steeply dipping. The observed mineralisation, and alteration, exhibit affinities with Iron Oxide-Copper-Gold (IOCG) style deposits. Polymetallic copper-cobalt-gold mineralisation, and significant magnetite, persists from the surface, through the oxidation profile, and remains open at depth.
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is*	• Summary of drilling by type and year is given in the table below. Note that some DD holes are tails on the end of RC pre-collars, such that the number of DD collars is overstated. The total number of drill hole collars and all drilling metres are correct.

Drilling Type		2010	2011	2012	2013	Total
RAB	# holes	1514	499	1668	145	3826
	metres	7820	2819	18741.5	2211	31591.5
DD	# holes	239	111	235	28	613
	metres	47286.04	17386.68	24749.41	7507.9	96930.03
RC	# holes	1491	84	2		1577
	metres	221263.1	9850.8	195.7		231309.6

Criteria	JORC Code explanation	Commentary

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.

Geotech DD	# holes			8		8
	metres			182.6		182.6
Open Hole	# holes			1	6	7
	metres			285	1394	1679
Total	**# holes**	**3109**	**684**	**1914**	**179**	**5886**
	metres	**276369.14**	**30056.48**	**44154.21**	**11112.9**	**361692.73**

Data aggregation methods

JORC Code explanation:

- *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.*
- *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.*
- *The assumptions used for any reporting of metal equivalent values should be clearly stated.*

Commentary:

- Intercepts from individual drilling programs have been reported by CuDeco in separate ASX announcements and are not repeated here.
- Informing Samples were composited to two metre lengths honouring the geological domains and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit).
- Metal equivalents are not used in domaining, but are reported. The formulae used are as follows
- CuCoAu equivalent grades were based on metal prices and metallurgical recoveries provided by CuDeco and refer to recovered equivalents:
- Cu 95% recovery US$2.00 per Pound
- Co 90% recovery US$26.00 per Pound
- Au 75% recovery US$900 per Ounce
- Magnetite 75% recovery US$195 per Tonne
- The recovered copper equivalent formula was:
  - Copper equivalent CuCoAu% = Cu % + Co ppm*0.001232 + Au ppm*0.518238
  - Copper equivalent CuEq% = Cu % + Co ppm *0.001232 + Au ppm *0.518238 + magnetite %*0.035342

Relationship between mineralisation widths and

JORC Code explanation:

- *These relationships are particularly important in the reporting of Exploration Results.*
- *If the geometry of the mineralisation with*

Commentary:

- Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths.
- Exploration results have been reported by CuDECO in earlier statements to the ASX as an

Criteria	JORC Code explanation	Commentary
intercept lengths	*respect to the drill hole angle is known, its nature should be reported.* • *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').*	interval with 'from' and 'to' stated in tables of significant economic intercepts. Tables clearly indicate that true widths will generally be narrower than those reported. • Resource estimation, as reported later, was done in 3D space.
Diagrams	• *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.*	• Tabulated intercepts for all drill holes is not considered applicable to a project with over 5000 drill holes and estimated resources. Results of individual drilling programmes with significant intercepts, maps and cross sections have been reported to the ASX by CuDECO at the time of drilling.
Balanced reporting	• *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.*	• Resources have been reported at a range of cut-off grades, above a minimum suitable for open pit mining.
Other substantive exploration data	• *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.*	• Extensive work in these areas has been completed, and was reported by CuDECO in earlier statements to the ASX.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or*	• Mineralisation is open at depth. Current estimates are restricted to those expected to be reasonable for open pit mining. Limited drilling below this depth (-250m RL) shows widths

Criteria	JORC Code explanation	Commentary
	depth extensions or large-scale step-out drilling). • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	and grades potentially suitable for underground extraction. CuDECO are currently considering target sizes and exploration programs to test this potential to 1,000m from surface.

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
Database integrity	• *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.* • *Data validation procedures used.*	• The Rocklands database is a Microsoft Access based Explorer 3 database system. • Data is logged directly into an Excel spreadsheet logging system with drop down field lists. • Validation checks are written into the importing program in the Explorer 3 data base, an error is triggered if data is not in correct format and ensures all data is of high quality. • Digital assay data is obtained from the Laboratory, QAQC checked and imported into Explorer 3. • Data tables were exported from Explorer 3 as a sub-set, also in MS Access format, and connected directly to the Gemcom Surpac mine software used by MA for interpretation and resource estimation. • Data was validated prior to resource estimation by the reporting of basic statistics for each of the grade fields, including examination of maximum values, and visual checks of drill traces and grades on sections and plans. Errors were reported back to CuDECO for correction in the Explorer3 Database.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the*	• Mr Andrew Vigar of Mining Associates Limited visited the site from 12 to 15 October, 3 to 5 November and 8 to 10 December 2010, and from 17 to 19 March 2011 during

Criteria	JORC Code explanation	Commentary
	outcome of those visits. • *If no site visits have been undertaken indicate why this is the case.*	the compilation of a detailed review of the drilling, sampling techniques, QAQC and previous resource estimates.Mr. Vigar also visited the site from 24 to 25 September 2013 to confirm the same for new drilling incorporated into this resource estimate.Methods were found to conform to international best practise, including that required by the JORC standard.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The Rocklands copper-cobalt-gold mineralisation is hosted in a series of subparallel, east south east trending, steeply dipping zones. Mineralised lodes occur within a metamorphosed sedimentary succession of siltstone, sandstone/quartzite, quartz magnetite/jaspilite lenses, calcareous beds and calc-silicates of Proterozoic age. Copper is the dominant mineralisation at Rocklands, lesser amounts of cobalt and gold. Copper mineralisation extends from surface to depth with overlapping oxide, secondary and primary styles of copper mineralisation. Mineralisation appears to be associated with and controlled by steeply dipping, west northwest trending, linear, structures that cut the shallow dipping metasedimentary sequence at a high angle. • Orientation and grade of the known mineralised zones are clearly influenced by a combination of steeply dipping structurally controlled features, which may be spatially associated with largely sub vertical dolerite dykes, and shallowly dipping favourable lithological units.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The main area of defined mineralisation occurs as a number of sub-parallel structures over a corridor strike length of 3 km, 1.7 km wide and up to 0.64 km down dip, which excludes Solsbury Hill, Fairfield and nearby domains situated immediately to north of the main zone. There are a total of 38 currently defined domains, including Solsbury Hill and Fairfield.

Mineralised domain extents (local grid)				
		East	North	RL
All Resource	min	9350	9960	-425
	max	12375	14860	235
	extent	3025	4900	660
Main Corridor	min	9390	12100	-425
	max	12375	13175	235
	extent	2985	1075	660

Criteria	JORC Code explanation	Commentary
		• Upper limits of the Mineral Resource were constrained by a surveyed topographic surface current to 1st October 2014, which included mined out areas.
Estimation and modelling techniques	• *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.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological*	• The resource estimate has been revised from "first principles" based on a review and re-interpretation of the geological controls and using the results of the extensive recent drilling programs. • Mineralised domains were digitised on cross sections defining boundaries for High-grade Cu as >0.5%Cu, Low-grade Cu as >0.1% Cu and Cobalt as >100ppm Co. The domains are nested. There are a total of 38 currently defined domains. The intervals for each drill hole for each domain were tagged into database tables and used for compositing and selection of informing samples. • Grade estimation of copper, gold, cobalt and magnetite in most mineralised domains used ordinary kriging (OK) into a parent block size of 12.5 m (E) by 2 m (N) by 5 m (RL) for all areas except Fairfield. Estimation at Fairfield used a parent block size of 6.25 m (E) by 1 m (N) by 2.5 m (RL). • Grade estimation of copper in Las Minerale and Rocklands South high grade domains used multiple indicator kriging (MIK) with cut-offs of 2%, 10% and 20% Cu. Two MIK estimates were obtained using DD-only and RC + DD data, so that sampling bias related to drilling method could be minimised. The estimated Cu value assigned in the final block model was based on the conditional bias slope of an OK estimate using DD-only data in the following manner: If DD IK slope > 0.3, block grade = DD IK grade; if slope <0.3, block grade = DD-RC IK grade. • Defined mineralised domains were constrained with 3D wireframes Results for Cu were compared with the raw drill data and also with block estimates made using Nearest Neighbour and Inverse Distance squared block estimates, the first to test the impact of averaging and clustering, the latter the impact of clustering and the selected variogram. Resource categories were defined using sampling density, number of informing samples and conditional bias slope of regression. • Geological and grade modelling work encompassed all drilling. Modelling work was extended vertically to the limits of the current drillhole assay database; section interpretations were extended a maximum of 25 m down dip and beyond the limit of drilling. Mineralisation is interpreted to be continuous between drill holes both along strike and down dip within the defined domains.

Criteria	JORC Code explanation	Commentary
	interpretation was used to control the resource estimates. • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Host lithologies between defined wireframe domains were allocated a lithological type and grades estimated into a larger block size of 50 m (E) by 8 m (N) by 20 m (RL) with data available outside of the wireframe domains. Where possible the wireframe domains were extended to these areas, but some areas where drilling and/or geological knowledge was insufficient remained, these areas are known as "undomained". Where grades above cut-off were identified and where these blocks had sufficient informing samples for the tonnage and grade estimates to be reliable, have been included in the inferred category only. • Weathering horizons for oxide and semi-oxide were defined on section by CuDECO using drill lithological logs, as were domains for native copper and chalcocite at Las Minerale and Rocklands South. • Block models were validated by visual and statistical comparison of drill hole and block grades and through grade-tonnage analysis. • Kriged copper estimates were validated against Nearest Neighbour and Inverse Distance Squared copper estimates. These alternative models undertaken by different software and personnel achieved very close agreement with the reported results
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• All tonnages are reported on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Lower cut-off grade for resource reporting of 0.2% CuCoAu and only blocks above -250m RL were applied to blocks in reporting the resource estimates for a range of cut-off grades. • Total C1 costs (mining, milling and admin) are approximately $18 per tonne of ore, which was based on open pit mining and a strip ratio of 3 to 1. Using weighted average price for Cu Co and Au over the last 5 years and allowing for differential recoveries gives a cut-off of approx. 0.23% CuCoAu. • Magnetite only resources are reported above a minimum cut-off of 10%.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *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.*	• Preliminary pit optimisation was undertaken using Whittle software by an independent mining engineering consultancy. The aim of this work was to identify the approximate proportion of the modelled estimates that fall inside an optimum pit shell using prevailing metal prices, preliminary metallurgical recoveries and assumed inputs such as pit slopes. This work was not intended to define reserves. The key metallurgical recovery assumptions were 95% for Cu, 90% for Co and 75% for Au as advised by CuDECO, The pit reached a depth of about -180m RL • Size of preliminary conceptual pits is strongly affected by inputs, particularly metal recoveries and metal prices which, if unrealised, may result in significant portions of resource estimates not reporting to future open pits. • The Xstrata December 2009 Resource Statement for the nearby, and geologically similar, Ernest Henry open cut is for a Total Resource of 21Mt @ 0.9% Cu, 0.5 g/t Au and 18%magnetite using a cut-off grade of 0.27 % Cu. Final depth is 530m below surface. • The resource is therefore considered as open pittable above an elevation of 250 m RL, or about 475 m from surface.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• No deleterious elements are present in concentrate products produced in the test programmes at concentrations in excess of, or near to, concentrations which would be likely to attract a penalty from a smelter or other end users. • Concentrate products are above the minimum specification required to achieve full payment from smelters or other end users. • The following procedures and processing techniques have been applied to Rocklands mineralised zones:

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Zone</th><th>Crush</th><th>Screen</th><th>Leach</th><th>Mill</th><th>Gravity Conc.</th><th>Floatation</th><th>Filtration</th></tr>
<tr><td>Oxidised</td><td>√</td><td></td><td>√</td><td></td><td></td><td>√</td><td></td></tr>
<tr><td>Native Copper</td><td>√</td><td>√</td><td></td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>Chalcocite</td><td>√</td><td></td><td></td><td>√</td><td></td><td>√</td><td>√</td></tr>
<tr><td>Primary</td><td>√</td><td></td><td></td><td>√</td><td></td><td>√</td><td>√</td></tr>
</table>

• The following recovery values can be applied, based on weighted averages, across the mineralised zones to support resource estimation calculations:
<table>
<tr><th>Element/mineral</th><th>Copper</th><th>Cobalt</th><th>Gold</th><th>Magnetite</th></tr>
<tr><td>Recovery</td><td>95%</td><td>90%</td><td>75%</td><td>75%</td></tr>
</table>
</td></tr>
<tr><td>Environmental factors or assumptions</td><td>• 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</td><td>• The Assessment Report for the Environmental Impact Statement and Environmental Management Plan for the Rocklands Goup Copper Project was issued by the Queensland Government on 1st August 2011 and the Environmental Authority (EA) which enabled the commencement of the Project was issued on 31st October, 2011.
• The Project currently operates under the Queensland EA, Permit Number EPML00887913.
• The environmental approvals referred to above allow the Project to operate at an average processing rate of 3.0 million tonnes per annum of ore and to dispose of the associated waste and tailings in approved-design waste-rock dumps and tailings storage facilities.</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</td><td></td></tr>
<tr><td>Bulk density</td><td>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.
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.
Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</td><td>There were 3002 measurements, plus a number of validation tests undertaken for bulk density determinations with a spatial distribution across the Rocklands mineralised zones. Both internal and external laboratories were used in the bulk density programme. The results have been determined by way of averages for each of the main mineralised zones.
The mineralised zones exhibited a definable trend of increasing bulk density with copper and magnetite grade and this has been factored for resource calculations.
Based on the results obtained, the following table is applied to the mineralised zones for resource estimation purposes:
<table>
<tr><th>Zone</th><th>Baseline (t/m3)</th><th>Cu% Factor</th><th>Magnetite % Factor</th></tr>
<tr><td>Oxide</td><td>2.38</td><td>0.657</td><td>0.0279</td></tr>
<tr><td>Semi Oxide</td><td>2.70</td><td>0.0620</td><td>0.0247</td></tr>
<tr><td>Native Copper</td><td>2.50</td><td>0.0645</td><td>0.0267</td></tr>
<tr><td>Chalcocite</td><td>2.75</td><td>0.062</td><td>0.0221</td></tr>
<tr><td>Primary Mineralised</td><td>2.9</td><td>0.0605</td><td>0.0227</td></tr>
<tr><td>Fresh</td><td>2.75</td><td>0.0625</td><td>0.242</td></tr>
</table>
The grade formula applied to the zone for resource estimation estimation purposes is as follows:
Bulk density = Baseline + %Cu*CuFactor + Magnetite%*MagnetiteFactor</td></tr>
<tr><td>Classification</td><td>The basis for the classification of the Mineral Resources into varying confidence categories.
Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade</td><td>Resource classification is based on number of informing samples, kriging conditional bias slope (“Slope”) and search distance to informing samples.
Blocks within the defined wireframes domains are classified as measured, indicated or inferred based on the following criteria
Measured - maximum number of informing samples, Slope >0.8
Indicated - maximum number of informing samples, Slope >0.4</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	○ Inferred - block estimated within domain wireframes, minimum of 3 informing samples within maximum search of 300m. • Host lithologies between defined wireframe domains are known as "undomained". Where grades above cut-off of 0.2% CuCoAu were identified and where these blocks had sufficient informing samples for the tonnage and grade estimates to be reliable, have been included in the inferred category only. Search range for this category was reduced to 200 m and minimum number of informing samples increased to 10 as no domain wireframes were used. • Magnetite-only material was also allocated in the "undomained" section of the deposit using the same criteria as described above. A cut-off of 10% magnetite was applied.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• CuDECO's internal review and audit of theFebruary 2014 Mineral Resource Estimate consisted of data analysis and geological interpretation of over 210 individual cross-sections, comparing drill-hole data with the resource estimate block model. • Good correlation of geological and grade boundaries were observed, however some loss of resolution is observed when high-grade results are present, due to the apparent smoothing of these results into surrounding blocks. • No external audits or reviews of the mineral resource estimate were undertaken. **Comparison with previous Mineral Resource estimate** • In May 2011 CuDECO released a mineral resource estimate prepared by Mining Associates Australia. • CuEq equivalent grades were based on metal prices and metallurgical recoveries provided by CuDECO and refer to recovered equivalents: Cu95% recovery US$2.00 per Pound Co90% recovery US$26.00 per Pound Au75% recovery US$900.00 per Ounce Magnetite75% recovery US$175 per Tonne The recovered copper equivalent formulae applied were: CuCoAu% = Cu % + Co ppm*0.001232 + Au ppm*0.518238 CuEq% = Cu % + Co ppm*0.001232 + Au ppm*0.518238 +magnetite %*0.035342 • Compared with the 2011 estimate, there is little change in total tonnes, except for depletion. Although tonnes were gained with the addition of Fairfield, adjustments to mineralised domain wireframes based on new drilling resulted in a similar net

Criteria	JORC Code explanation	Commentary
		decrease elsewhere. Measured resource tonnes increased, while Indicated and Inferred tonnes decreased due to additional drilling increasing estimation confidence in some areas. • There is a substantial increase in copper and magnetite grades. Copper grades at higher CuEq cut-offs (0.4% and 0.8%) were increased due to the effects of sample bias in Las Minerale and Rocklands South high grade oxide zones being mitigated by MIK estimation, and from new high grade intersections of copper in parts of Rocklands South. Magnetite grades have almost doubled as a result of updated factors being used to convert magnetic susceptibility to magnetite content.
Discussion of relative accuracy/ confidence	• *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.* • *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.* • *These statements of relative accuracy*	• An approach to the resource classification was used which combined both confidence in geological continuity (domain wireframes) and statistical analysis. The level of accuracy and risk is therefore reflected in the allocation of the measured, indicated and inferred resource categories. • “Undomained” material, both copper and magnetite mineralisation is restricted by the current level of drilling. Reporting of this as an Inferred resource was constrained by use of tight estimation parameters. It is expected that further work will extend this considerably. • Using the slope of regression as a guide to classification of mineral resource takes the quality and hence accuracy of the block estimates into consideration. • Resources estimates have been made on a local basis using a block model with variable block sizes which reflect the informing sample density. The model is suitable for technical and economic evaluation. • The deposit is has had minor production in recent years. A grade control system, including reconciliation to the resource estimates, has been implemented and further work is required on Mill Reconciliation.

Criteria	JORC Code explanation	Commentary
	and confidence of the estimate should be compared with production data, where available.	

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

Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.*
	• *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*
		• The Ore Reserve Estimate is based on the November 2013 Resource Estimate prepared by Mining Associates Pty Ltd (MAPL) updated in October 2017 (ASX announcement 31/10/2017). CuDeco supplied the resource drill hole database, geological interpretation and domain wireframes and average density estimates for the material types. MAPL undertook all other aspects of the resource modelling work, and takes overall responsibility for the resource estimate.
		• The Resource Estimate is in a rotated block model format, with grades interpolated using Ordinary Kriging (OK). Kriging techniques were used to estimate grade into large panels, these panels were subsequently sub-blocked to 12.5m x 2m x 5m (local-grid East x local-grid North x RL). The estimation has been tightly constrained within wireframe boundaries defined by geology, structure and a 0.1% copper grade envelope. The model includes grades for copper, cobalt, gold and magnetite.
		• The modelled resource grades do not incorporate dilution.
		• Bulk density has been defined using 3,002 measurements, categorised according to weathering, copper mineral zones, copper grade and magnetite grade. Bulk density measurements were taken on cut and un-cut diamond drill core using wax coating where necessary and determined by the Archimedean Method, i.e. weight in air/weight in water.
		• The estimated resources include Measured, Indicated and Inferred categories, and are inclusive of the Ore Reserves. Resource categories were defined using sampling density, number of informing samples and conditional bias slope of regression as follows:-
		  ○ Measured - maximum number of informing samples, bias slope of regression >0.8
		  ○ Indicated - maximum number of informing samples, bias slope of regression >0.4

Criteria	JORC Code explanation	Commentary
		◦ Inferred - block estimated within domain wireframes, minimum of 3 informing samples within maximum search of 300m. • The unmined portion of the Ore Reserve is a subset of the unmined portion of the Resource. • The surface stockpiles form part of the Proved Ore Reserve and are a conversion from that component of the Measured Resource with adjustments to tonnes and grades based on the grade control data.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	John Wyche, Competent Person for overall Ore Reserves sign-off, undertook a site visit at Rocklands on 19 June 2014 including the following inspections: • Rocklands open cut and waste rock dump areas • Ore stockpiles • Process plant (under construction)
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *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.*	• Rocklands is an operating mine. • Mining operations commenced at the Rocklands Project in 2012 and the processing plant has been operating for approximately 18 months. The Ore Reserve estimate is based on operational experience. The analysis is at a higher accuracy than the Feasibility Study.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Ore/waste cut-off grade (COG) is based on the Net Metal Value per tonne (NMV) for each block in the Resource Model after application of call factors to adjust from estimated insitu tonnes and grades to expected run-of-mine (ROM), or “as mined” tonnes and grades. The NMV per tonne calculation for each block is: NMV = Cu_{ROM} tonnes x Cu recovery x Net Cu price per tonne + Au_{ROM} grams x Au recovery x Net Au price per gram

Criteria	JORC Code explanation	Commentary
		- Process cost per tonne of mill feed - General and Administration cost per tonne of mill feed where the Cu and Au prices are net of realisation costs (see Table 2). Blocks with a positive NMV are above cut off and classed as ore. Blocks with a negative NMV are below cut off and classed as waste. • The COG calculation uses current: o Process and site costs, o Copper concentrate transport costs and smelting and refining charges, o Process recoveries for copper based on current stable performance of the process plant, o Current Queensland Government royalties, o Median forecasts for three year USD/AUD rate, copper price and gold price from Consensus Economics. o Details of inputs are shown in Table 2 of this Statement. • All ore at Rocklands is processed by flotation. Ore with significant amounts of native copper is also passed through a gravity circuit to recover the native copper in a gravity concentrate. • Three ore types are defined by the effect of oxidation state on copper recovery and the presence of significant proportions of fine or coarse native copper. Each ore type is assigned a process recovery and process cost as shown in Table 2. The ore types are: o Oxide ore o Gravity ore o Fresh ore • The Ore Reserve includes current stockpiles. There are 28 stockpiles on site. Each was assessed by CuDeco's Metallurgical Superintendent in terms of its composition by ore type, its copper grade and the length of time it since it was mined and a process recovery was assigned. These recoveries were used with the costs and metal prices used for the in-pit cut off grades to determine if the stockpile is cash positive for inclusion in the Ore Reserve. This process resulted in three stockpiles classed as Mineralised Waste by CuDeco being excluded from the Ore Reserve.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *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).* • *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.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The Ore Reserve estimate is based on extraction of ore by open pit mining in a conventional truck and shovel operation, using 180t and 190t class hydraulic excavators, in backhoe configuration, and 90t dump trucks. Drilling and blasting is conducted on 10m high benches. Digging is conducted on flitches of 2.5m height in the ore and up to 5m high in bulk waste blocks. • The Ore Reserves were estimated within a final pit design that incorporates haul roads and safety berms. The current final pit design is based on a Whittle™ optimised pit generated in 2016 using slope parameters recommended by geotechnical consultants and mining cost estimates derived from the proposed mining contract at that time. • The open pit designs incorporate staged pits to access higher value ore early in the mine life. • CuDeco undertook a detailed reconciliation over the last six 10 metre benches mined to compare the insitu tonnes and grades reported from the resource block model to the grades estimated from close spaced grade control sampling and the tonnes mined based on ore mark ups on the benches and measured by weigh cells on the trucks. The analysis focused on the last three benches where CuDeco considers that they have been able to achieve the most reliable and repeatable grade control. The ore tonnes from these benches constitutes approximately four months of production. • Call factors were derived from the reconciliation to convert tonnes and grades reported from the resource block model to run–of-mine (ROM) values which closely match the measured mill feed. The call factors increase insitu tonnes by 5.3% and decrease insitu copper and gold grades by 28.1% and 4.9% respectively. • The Ore Reserve estimate is based on Measured and Indicated Mineral Resources. Inferred Resources are not included.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is*	• All oxide, gravity and fresh ore at Rocklands is processed by flotation to produce a copper concentrate for sale to smelters. • Gravity ore contains a significant proportion of fine or coarse native copper and is also processed through a gravity circuit to recover the native copper which may not be

Criteria	JORC Code explanation	Commentary
	well-tested technology or novel in nature. • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *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.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	efficiently recovered by flotation alone. • At the time of the December 2015 Ore Reserve it was planned to recover cobalt and magnetite but the current process is focused on copper and gold. For the December 2017 Ore Reserve any cobalt or magnetite reporting to the copper concentrate is not considered in the sale price. Options remain for recovering cobalt and / or magnetite in the future. • Emphasis has been placed on simplifying and optimizing the copper flotation process culminating in addition of the gravity circuit in late 2017. Copper and gold recoveries and concentrate grades used in estimation of this Ore Reserve are based on stable production achieved through the second half of 2017 and early 2018 along with additional test work to optimize the process.
Environmental	• *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.*	• Rocklands is an operating mine. Mining commenced in 2012 and ore processing in mid 2016. • The project is operating under an approved Environmental Authority. • All environmental and regulatory permits, agreements and approvals are in place and in good standing.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water,*	• Rocklands is an operating mine. Mining commenced in 2012 and ore processing in mid 2016. • All infrastructure required for the operation of the project as defined in this Ore Reserves

Criteria	JORC Code explanation	Commentary
	transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Statement is in place.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Rocklands is an operating mine. Mining commenced in 2012 and ore processing in mid-2016. • Options exist to expend further capital if analyses demonstrate that such expenditure would add value but the existing project is fit for the operation that this Ore Reserve is based on. • Mining costs are based on the current mining contract. • Processing and site costs are based on current costs with some adjustments forecast over the coming months now that the project is settling into steady state operation. • The current Queensland Government royalty for copper in concentrate is levied at 4.68% of gross sales less realisation costs (concentrate transport and smelting and refining charges). Gold in concentrate is levied at 5% of gross sales. • Further detail on costs is presented in Table 3 to this Ore Reserves Statement.
Revenue factors	• *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.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Concentrate transport costs and smelting and refining charges are based on the most recent shipments which have been at or close to target tonnes and grades. • Copper and gold prices and the USD/AUD exchange rate are the median three year forecasts from Consensus Economics dated 31 January 2017 and covering the period 2019 to 2022.

Criteria	JORC Code explanation	Commentary
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• 100% of Rocklands' copper concentrate sales are currently covered by off-take agreements.
Economic	• *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.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• When the costs, recoveries and metal prices used in this Ore Reserve estimate are applied to the Ore Reserve and remaining pit quantities the project returns a strongly cash positive operating cash flow. These inputs are derived from current actual costs and near term forecasts. It is reasonable to expect that they are representative of the remaining three to four years of operation on the currently defined Ore Reserve.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Rocklands is an operating mine. Mining commenced in 2012 and ore processing in mid 2016. • All environmental and regulatory permits, agreements and approvals are in place and in good standing. This includes Native Title, Heritage and Local government.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements*	• Rocklands is an operating mine. Mining commenced in 2012 and ore processing in mid 2016. • The project is operating under an approved Environmental Authority. • All environmental and regulatory permits, agreements and approvals are in place and in good standing. This includes Native Title, Heritage and State, Local and Federal government.

Criteria	JORC Code explanation	Commentary
	and marketing arrangements. • *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.*	
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• In most cases Measured Mineral resources convert to Proved Ore Reserves and Indicated Mineral Resources convert to Probable Ore Reserves. • In two cases modifying factors have resulted in Measured Mineral Resources being converted to Probable Ore Reserves: ○ Lack of geotechnical information for a small area on the western side of Rocklands South and over the Rainden pit has resulted in categorizing the Measured Mineral Resource in these areas as part of the Probable Ore Reserve. ○ All of the Measured Oxide Resource included in the Ore Reserve has been classed as Probable Ore because the reconciliation analysis was in a zone comprising mostly fresh and gravity ore. The call factors estimated in this zone apply a significant reduction to the resource model grades. Although the call factors are also applied to the oxide zone there is less reliable information so the call factors in the oxide are at a lower level of confidence.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• No audits or reviews of this, or previous, Ore Reserve Statements have been conducted.
Discussion of relative	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an*	• Estimation of this Ore Reserve uses current and near term forecast production and cost data and metal prices based on a broad set of forecasts. The site data is from recent months when the mining and processing has stabilised from earlier performance and cost

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	*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.* • *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.* • *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.* • *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.*	variability. It is reasonable to expect that the inputs are reliable estimates of future performance. • The resource to ROM reconciliation showed significant variation with reductions to copper and gold grades but similar tonnes. The ROM values are reasonably consistent over the last four to six months of production and show reasonable agreement with the mill feed head grades. This suggests that a review of the 2013 resource model may be warranted using the extensive operational data now available. • Although the variation between the resource and grade control model grades is significant it is consistent over the last four to six months of production giving confidence that the call factor provides a good estimate of ROM tonnes and grades for the gravity and fresh ore types going forward. There is less direct evidence to support application of the call factor to the oxide ore but oxide forms only 24% of the Ore Reserve tonnes and the downward grade adjustment of the call factor may even be overly conservative when applied to oxide. • It is noted that the reconciliation was conducted in the highest grade area and possibly the most complex mineralogy of the Rocklands deposit. The remaining ore in the final pushback of the LM Pit and the other pits where only minimal mining has so far been conducted may show greater consistency with the resource model. • Approximately 20% of the tonnes and contained copper in the Ore Reserve are from current stockpiles which have been defined by grade control and so carry a high degree of confidence.

1.8 RESOURCE AND RESERVE CATEGORIES – EXPLANATION

According to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition:-

A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve.

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve or under certain circumstances to a Probable Ore Reserve.

An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

The guidelines in the JORC Code state that the term 'economically mineable' implies that extraction of the Ore Reserves has been demonstrated to be viable under reasonable financial assumptions. This will vary with the type of deposit, the level of study that has been carried out and the financial criteria of the individual company. For this reason, there can be no fixed definition for the term 'economically mineable'.

A 'Probable Ore Reserve' is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.

A 'Proved Ore Reserve' is the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.

The guidelines provided in the JORC Code note that "A Proved Ore Reserve represents the highest confidence category of reserve estimate and implies a high degree of confidence in geological and grade continuity, and the consideration of the Modifying Factors. The style of mineralisation or other factors could mean that Proved Ore Reserves are not achievable in some deposits."

The following figure, from the JORC Code, sets out the framework for classifying tonnage and grade estimates to reflect different levels of geological confidence and different degrees of technical and economic evaluation.

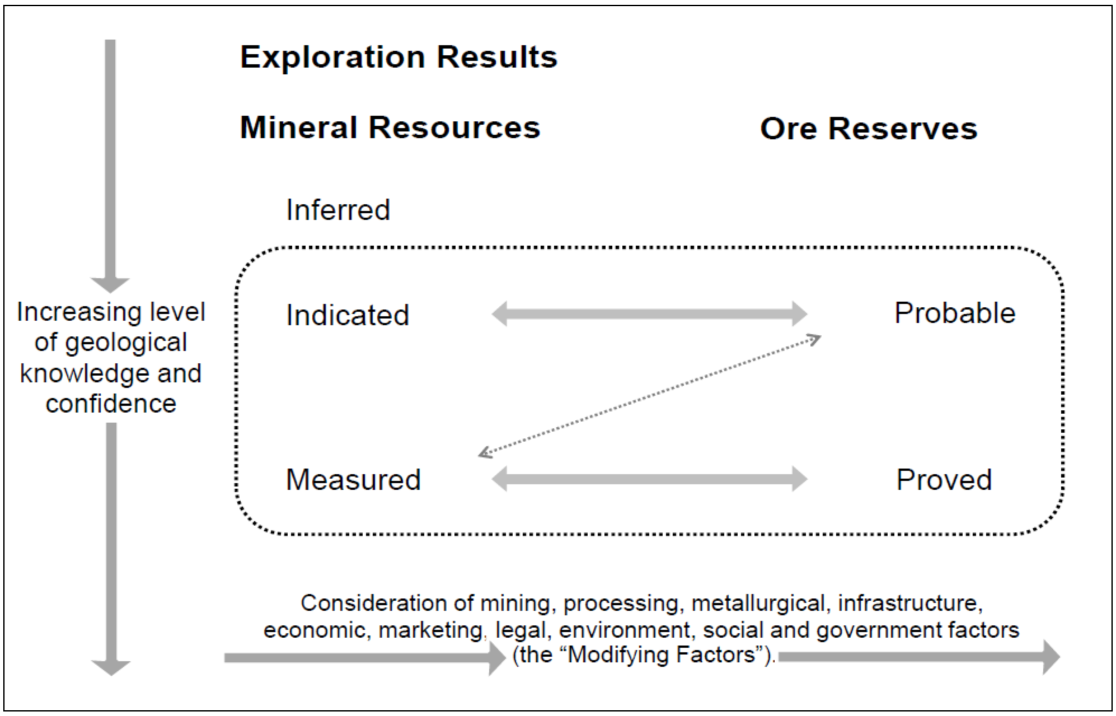

Figure 1 General relationship between Exploration Results, Mineral Resources and Ore Reserves, from 2012 JORC Code Figure 1

Mineral Resources can be estimated on the basis of geoscientific information with some input from other disciplines. Ore Reserves, which are a modified sub-set of the Indicated and Measured Mineral

Resources (shown within the dashed outline in the Figure above), require consideration of the Modifying Factors affecting extraction, and should in most instances be estimated with input from a range of disciplines.

Measured Mineral Resources may be converted to either Proved Ore Reserves or Probable Ore Reserves. The Competent Person may convert Measured Mineral Resources to Probable Ore Reserves because of uncertainties associated with some or all of the Modifying Factors which are taken into account in the conversion from Mineral Resources to Ore Reserves.

Inferred Resources cannot convert to Ore Reserves.