Argonaut RESOURCES NL

ASX announcement

12 December 2013

Nyungu Exploration Target – Table 1

On 9 April 2013, Argonaut Resources NL (ASX: ARE) made an announcement to the Australian Securities Exchange titled 'Exploration Target established for Nyungu and Kavipopo areas at Lumwana West, Zambia'. Schedule 1 to this release contained a report by RungePincockMinarco dated 8 April 2013 and titled 'Nyungu Deposit – Exploration Target'.

This report contained a section titled 'Exploration Target Statement and Parameters'. This section contains similar information to that required by Table 1 under the JORC Code 2012, but is not in the standard format of Table 1.

The following pages contain Table 1 information further to the 8 April 2013 Nyungu Exploration Target estimation by RungePincockMinarco and are intended to be read in conjunction with this report.

Argonaut Resources NL will shortly release an exploration update for the Lumwana West project included a revised global Exploration Target estimation.

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Sections of information contained in this report that relate to Exploration Results were compiled or supervised by Mr Lindsay Owler BSc, MAusIMM who is a Member of the Australasian Institute of Mining and Metallurgy and is a full time employee of Argonaut Resources NL. Mr Owler holds shares and options in Argonaut Resources NL, as described on page 10 of the Company's 2013 Annual Report. Mr Owler has sufficient experience which is relevant to the style of mineral deposits 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 Mineral Resources and Ore Reserves". Mr Owler consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data - Nyungu

(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.*	• RC chip samples were collected in plastic bags on a one metre basis, weighed, checked for moisture and split using a multi-layered riffle with a reference sample stored and a sample set aside for dispatch to certified laboratory. Hand held XRF measurements taken on RC samples with composite sampling conducted on non-mineralised material (cut off grade < 0.1% Cu) and single metre sampling of mineralised material (cut off grade > 0.1% Cu). These composited and single metre samples were then despatched to the certified laboratory. Half drill core (NQ predominantly, minor HQ) sampled based on observed mineralisation and intervals of one metre or less determined by geologic contacts within mineralised units. Quarter drill core sampled outside observed mineralisation and intervals of two metres or less determined by geologic contacts within non mineralised units.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Drill core cut at a consistent distance relative to solid orientation line or dashed mark up line.
	• *Aspects of the determination of mineralisation that are Material to the Public Report.*	• Not Applicable.
	• *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• RC and core samples despatched in batches to SGS Kalulushi (2011) and Intertek Genalysis (2012) on single metre or composited basis. Sample preparation involved sorting, drying, crushing and pulverising to produce a pulp. These sample pulps were air freighted to SGS Townsville (2011) or Intertek Genalysis Johannesburg and Perth (2012). Analysis conducted was standard 4 acid digestion for 40 to 46 elements by ICP-OES and ICP-MS analysis (SGS – ICP40Q, Genalysis – 4A/OM10) and a 25 or 30g charge for fire assay (SGS – FAA303, Genalysis – FA25/AA).
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Criteria	JORC Code explanation	Commentary
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).*	• A total of 3586 metres (1930 m in 2011 and 1656 m in 2012) RC drilling conducted by Ox Drilling with face sampling bit. A total of 4881.19 metres (2183.43 m in 2011 and 2697.76 m in 2012) orientated diamond drilling conducted by Ox Drilling. Most diamond drilling as tails on RC drillholes, predominantly NQ diameter and minor HQ diameter. Orientation by Reflex ACT II RD NQ orientation instrument (2012) and by spear orientation (2011).
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.*	• Initial geotechnical logging recording core recoveries and RQD. Recoveries from diamond tail drilling greater than 95%. RC Chips samples weighed and weight recorded to estimate recovery. • Not Applicable. • No observed relationship between core loss and grade
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Logging of drillcore incorporated the following details: from-to depths, colour and hue, stratigraphy, weathering, nature of basal contact, texture, structure, structure orientation; type, mode and intensity of alteration and ore minerals, zone type for mineralised rock (oxide, supergene, hypogene, leached), geological notes and % of ore minerals. Logging of RC chips was conducted on a metre by metre basis while for the diamond drill core, criteria for unit boundaries was based on contrasting lithologies, absence or presence of mineralisation; sudden changes of weathering – usually associated with structures, plus changes in major rock forming or alteration minerals such as the presence of large garnets. A guide to core logging was written to provide uniformity of interpretations and consistent data entry. • All core photographed wet and dry, photographs digitally named and organised. • 100%.
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.*	• All core cut with core saw. Half core sampled in mineralised units, quarter core sampled in non-mineralised units • RC samples were checked for moisture. If wet or damp, allowed to dry for several days and then split using a multi-layered riffle.

Criteria	JORC Code explanation	Commentary
	• *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.*	• High quality sampling procedures and appropriate sample preparation technique. • Several standards (commercial certified reference material) were inserted at intervals of 1 in 20 in rotation. Immediately following a standard, a blank was inserted. • RC reference sample in storage and half to three quarter core retained if further analysis required. Field duplicates taken at rate of 1 in 33 samples for RC samples. • Sample size (approximately 2kg in weight) considered appropriate to the grain size of material being sampled.
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.*	• Certified laboratories utilised (SGS and Intertek Genalysis), appropriate technique (ICP-OES and ICP-MS, fire assay) for elements. Techniques are considered total for the type of mineralisation. • Not Applicable • Several standards (commercial certified reference material) were inserted at intervals of 1 in 20 in rotation. Immediately following a standard, a blank was inserted. QA/QC monitored on each batch and re-analysis conducted errors exceed set limits.
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.*	• All significant intersection and majority of drillcore has been inspected by numerous geologists including Argonaut's Exploration Director, Chief Geologist and Principal Geologist from geological contractor. • Verification drilling conducted in 2011 of historic intercepts from early 2000's Zamanglo drilling. • All geological data including the coordinates, dip, azimuth, drill type, core size, date etc was entered into the proprietary ioLogger database (2012) and into Excel spreadsheet templates (2011). • Elevation coordinates changed from handheld GPS data to coordinate extracted from UTS 2010 survey DTM.

Criteria	JORC Code explanation	Commentary
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.*	• Drillhole collars were surveyed by handheld Garmin 72 or 62 GPS. No DGPS survey has yet been undertaken. • All GPS collar locations recorded in WGS84 UTM Zone 35 South. • All collar locations corrected to UTS 2010 survey DTM.
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 applied.*	• Data spacing is generally 200 metres traverses with 160 metre drillhole spacing, some traverses have 80 metre drillhole spacing. • Additional drilling to a nominal 100 metre traverse by 80 metre drill spacing has been estimated geostatically sufficient to establish geological and grade continuity. • Samples from within the mineralisation wireframes were used to conduct a sample length analysis. The vast majority of samples were 1m in length. Surpac software was then used to extract fixed length 1m down hole composites within the intervals coded as mineralisation intersections.
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.*	• Majority of drillholes orientated to intercept normal to the strike of mineralisation and were inclined to the east. Mineralisation is interpreted to strike 015 true, dip moderately to steeply to the west and plunge moderately to the north. • Due to the dip attitude of the mineralisation, 70^{o} inclined drillholes do not intersect the mineralisation completely perpendicular. This is not considered to have introduced any significant bias.
Sample security	• *The measures taken to ensure sample security.*	• All reference RC samples and retained drill core are stored in secure sheds in Kitwe at the geological contractor's facility.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No known audits or reviews of the sampling procedures and protocols.

Section 2 Reporting of Exploration Results- Nyungu

(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.*	• Large Scale Prospecting Licence, 16121-HQ-LPL, Lumwana West, approximately 100 km west of Solwezi, Zambia. Licence recently renewed for further 2 year period. Current expiry date is 20/07/2015. Prior to expiry an application for extension of term will be submitted to the Geological Survey of Zambia. Mwombezhi Resources holds 100% of the licence, Lumwana West Resources (100% subsidiary of Argonaut Resources NL) has an earn in joint venture. Currently, have acquired 51% interest and can earn in to a maximum of 90% interest. Portions of the licence area are forest reserves requiring permission to access.
	• *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.*	• No known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Roan Selection Trust (1960's – 1970's) - Regional soil sampling, augering, wagon drilling and diamond drilling. Drilling at Nyungu (Drillholes MM295 and MM296). AGIP – COGEMA JV (1982 – 1987) - Systematic regional radiometric traversing, soil and stream sediment sampling, geological mapping, pitting and trenching between 1982 and 1987. No drilling. Phelps Dodge (1990's) - Soil sampling and drilling. Drilling at Nyungu and Kavipopo (Drillholes NYU1 and 2, KAV 1 and 2). Zamanglo (2000 - 2003) – Regional and infill soil sampling. Geological mapping, IP/CR/CSAMT geophysical surveys. Three phases of RC drilling, two programs at Nyungu (MBD00RC001-011 and MBD01RC001-009) and one regional program (MBD02RC001-012) Equinox (2003 – 2008) – unknown but some unknown drill collars are presumably from this phase
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Style of mineralisation targeted is Lumwana style, structurally controlled, shear hosted, Cu +/- Co (+/- U and Au).

Criteria	JORC Code explanation	Commentary

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 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.*
		• See Table – Nyungu Drillholes

Data aggregation methods	• *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.*	• The interpreted mineralisation envelopes were based on a nominal 0.1% Cu cut-off grade for low grade material and 0.7% Cu cut-off grade for high grade material, with a minimum down hole length of 4m. Statistical analysis of the assay values indicated a natural cut-off for low grade at 0.1% Cu and between 0.6 and 0.8% Cu for high grade. Samples from within the mineralisation wireframes were used to conduct a sample length analysis. The vast majority of samples were 1m in length. Surpac software was then used to extract fixed length 1m downhole composites within the intervals coded as mineralisation intersections. Following a review of the population histograms and log probability plots and noting the low coefficient of variation statistics for Cu, it was determined that the application of a high grade cut was not warranted
	• *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.*	• Not Applicable.
	• *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not Applicable.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with 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').*	• Due to the dip attitude of the mineralisation, 70^{o} inclined drillholes do not intersect the mineralisation completely perpendicular. • Drilling is normal to strike of the mineralisation but not completely perpendicular to the dip. • Down hole length reported, not true width.

Criteria	JORC Code explanation	Commentary
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.*	• Refer to figures within Nyungu Deposit - Exploration Target report
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.*	• Aggregate reporting is appropriate since the mineralisation is disseminated through the host unit.
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.*	• Coincident IP chargeability anomaly with the mineralisation. Coincident Cu surface geochemical anomaly to greater than 200ppm. Geological and structural observations utilised to interpret geological and mineralisation models. No bulk density information available. No Metallurgical test work conducted.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or 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.*	• Planned extensional and target testing drilling in March – June Quarters 2014. • All future exploration work is commercially sensitive and will not be released to the market until results are available.

Section 3 Estimation and Reporting of Mineral Resources - Nyungu

(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 and interpretations of the Nyungu deposit was provided to RPM. The key files included: Drilling database – Nyungu_Runge.mdb, Cross and long section interpretations and Nyungu interpretation notes word document – Nyungu Interp Notes.doc. The Nyungu drill hole database is managed by ioGlobal. For 2011 drilling, drill hole data was digitally captured using Excel spreadsheets and then manually migrated into ioHub, a cloud-based data management system. For 2012 drilling, data entry utilised ioHub input software to automatically merge with the ioHub data management system.
	• *Data validation procedures used.*	• Digital geological and assay data input referenced to drillcore viewing and core photo library. Drilling data regularly inspected and queried to verify spatial location, orientation and validity. Statistical analysis of assay data to identify any inconsistencies. Encom Discover and Surpac software data validation units to check for overlapping, duplicate or missing 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.*	• Lindsay Owler visited site at regular intervals. Site visits conducted at regular intervals by Argonaut Chief Geologist and geological contractor's Principal Geologist. No site visit was conducted by Shaun Searle of RPM. A site visit was not considered necessary for the generation of a Surpac block model for the purposes of reporting an Exploration Target.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	• The deposits display good geological and mineralisation continuity from information provided, however due to the predominantly wide section spaced drilling, both geological and grade continuity is assumed rather than verified.
	• *Nature of the data used and of any assumptions made.*	• Cross sectional and long sectional interpretation in 2D and 3D environment. Mineralisation envelopes were based on a nominal 0.1% Cu cut-off grade for low grade material and 0.7% Cu cut-off grade for high grade material, with a minimum down hole length of 4m
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• No identified effect.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	• Based primarily upon geological observations with secondary supporting geophysical data (IP chargeability).

Criteria	JORC Code explanation	Commentary
	• *The factors affecting continuity both of grade and geology.*	• Late stage, brittle, cross faulting. These are potentially identifiable in geophysical data sets.
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 Nyungu deposits represent two continuous, well-defined zones of copper-cobalt mineralisation. The broad mineralised zones of economic interest range between structurally complex, folded geometry at Nyungu Central; to relatively simple, east-dipping geometry at Nyungu South. The mineralisation boundaries are well-defined at both deposits. Drilling has confirmed the presence of mineralisation over a strike length of 1,700m at Nyungu Central and 1,000m at Nyungu South. Maximum width at Nyungu Central is approximately 150m and interpretation extends to approximately 350m below surface which is that extent of drilling. To form ends to the wireframes, the end section strings were copied to a position approximately midway to the next section and adjusted to match the mineralised trend of the zone. Where mineralisation was not closed, the end section strings were copied to a position to match the IP geophysical mapping.
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.*	• Geostatistical analysis produced reasonable variograms. A 0.1% Cu cut-off grade was used to delineate the mineralised zones. Samples within the wireframes were composited to 1m intervals. A Surpac block model was used for the estimate with a block size of 100m NS by 50m EW by 10m vertical with sub-cells of 12.5m by 6.25m by 1.25m. For all zones in the Nyungu deposit, the wireframe objects were used as hard boundaries in the interpolation. That is, only grades inside each object were used to interpolate the blocks inside the object. The Inverse Distance Squared (ID^2) algorithm was selected for grade interpolation. An “ellipsoid" search was used to select data for interpolation. An isotropic search was used with a search radius of 400m. The minimum number of samples used in the search varied for each domain, ranging between 4 and 12 samples in order to fill the model in a single pass. The maximum number of samples was 48.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• No previous estimates are known.
	• *The assumptions made regarding recovery of by-products.*	• No recovery of by-products has been assumed.

Criteria	JORC Code explanation	Commentary
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	• No deleterious elements or other non-grade variables of economic significance have been estimated into the model at his stage.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• A block size of 5 (X) x 5 (Y) x 2 m (Z) was used in the model.
	• *Any assumptions behind modelling of selective mining units.*	• No other variables were considered in the estimate, as this is an early stage project.
	• *Any assumptions about correlation between variables.*	• No other variables were considered in the estimate, as this is an early stage project.
	• *Description of how the geological interpretation was used to control the resource estimates.*	• Geological interpretation was used to control the estimates by restricting the use of sample intervals outside the interpreted mineralisation wireframes.
	• *Discussion of basis for using or not using grade cutting or capping.*	• Following a review of the population histograms and log probability plots and noting the low coefficient of variation statistics for Cu, it was determined that the application of a high grade cut was not warranted.
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• No reconciliation data is available as no production has taken place.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The Nyungu Exploration Target estimate characterised dry bulk density by geological weathering zone.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• This estimation was reported at a range of cut-off grades as the project is in an early stage and comprehensive metallurgical test work has not been undertaken from which a reasonable economic cut-off grade can be derived.
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.*	• At this stage of exploration, no assumptions have been applied. Purpose of this work was to provide an estimated Exploration Target of tonnage and grade at Nyungu.

Criteria	JORC Code explanation	Commentary
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.*	• At this stage of exploration, no assumptions have been applied. Purpose of this work was to provide an estimated Exploration Target of tonnage and grade at Nyungu.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• At this stage of exploration, no assumptions have been applied. Purpose of this work was to provide an estimated Exploration Target of tonnage and grade at Nyungu.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	• Assumed. A bulk density value of 2.80t/m3 was used for fresh (both mineralised and waste) rock. This value is consistent with similar mineralisation styles and lithologies.
	• *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.*	• Not Applicable.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• A bulk density of 1.80t/m^3 was used for the overburden, 2.10t/m^3 for oxide and 2.40t/m^3 transition material.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	• Purpose of this work was to provide an estimated Exploration Target of tonnage and grade at Nyungu. As such, no QAQC or density data were reviewed and the model not classified according to JORC standards. The block model has an attribute “class” for all blocks within the wireframes coded as “undf”.
	• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*	• Not Applicable.
	• *Whether the result appropriately reflects the Competent Person’s view of the deposit.*	• Not Applicable.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No external audits or reviews have been carried out to date
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 Nyungu deposits show reasonable continuity of mineralisation allowing the drill hole intersections to be modelled into coherent, geologically robust wireframes. However due to the predominantly wide section spaced drilling, both geological and grade continuity is assumed rather than verified. This estimate is classified as an Exploration Target due to this.
	• *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.*	• Not Applicable
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Not Applicable.

Table - Nyungu Drillholes

DH ID	East WGS84 Zone 35S	North WGS84 Zone 35S	Elevation DTM	Dip	Azimuth	Total Depth	RC PC Depth	Operator	Downhole From (m)	Downhole To (m)	Downhole Interval (m)	Cu (%)	Co (%)	U (ppm)	Au (g/t)	Oxidation State	Comment
NYU11RD001	339102	8630414	1321	-90		308.50	100.75	MRL	37	145	108	0.35	0.07		0.13	oxide/transition/fresh	RC and DD
including									63	90	27	0.51	0.05		0.14	oxide/transition	RC
and									104	141	37	0.30	0.11		0.15	fresh	DD
									152	165	13	0.21			0.18	fresh	DD
									184	245	61	0.42				fresh	DD
including									187	189	2	0.38		835		fresh	DD
and									209	222	13	0.80				fresh	DD
									268	290	22	0.46	0.03			fresh	DD
including									274	284	10	0.81	0.03			fresh	DD
NYU11RD002	339254	8630416	1313	-90		299.81	82.37	MRL	94	135	41	0.37	0.03			fresh	DD
including									125	135	10	0.36	0.06	354	0.27	fresh	DD
									142	159	17	0.37	0.08		0.11	fresh	DD
including									142	151	9	0.48	0.12		0.16	fresh	DD
including									142	149	7	0.43	0.13	1601	0.19	fresh	DD
NYU11RD003	339406	8630414	1318	-90		194.65	106.15	MRL				NSI					RC and DD
NYU11RD004	338954	8630416	1335	-90		296.50	49.00	MRL	121	141	20	0.53	0.02			fresh	RC
									127	137	10	0.74	0.03			fresh	DD
NYU11RD005	339227	8629624	1315	-90		185.60	83.20	MRL	22	95	73	0.28				oxide/transition/fresh	RC and DD
including									61	85	24	0.54			0.10	transition/fresh	DD
including									61	68	7	0.92	0.02		0.27	transition	DD
NYU11RD006	339079	8629616	1328	-60	90	149.20	61.70	MRL	16	26	10	0.27	0.02			oxide	RC
									107	113	6	1.05				fresh	DD
NYU11RD007	338831	8629626	1335	-90		70.00	70.00	MRL				NSI					RC, no DD tail
NYU11RD008	339355	8629624	1320	-60	90	191.20	166.00	MRL	83	119	36	0.34				transition/fresh	RC
including									104	111	7	0.75				fresh	RC
									135	147	12	0.13				fresh	RC
NYU11RD009	339304	8630028	1322	-60	90	200.30	85.00	MRL	24	79	55	0.23	0.02		0.21	oxide/transition	RC
including									24	35	11	0.44	0.06		0.22	oxide	RC
and									40	54	14	0.26	0.03	340	0.56	oxide/transition	RC
including									45	49	4	0.15	0.02	960	1.43	oxide/transition	RC
									128	140	12	0.32	0.03			fresh	DD
NYU11RD010	339150	8630018	1328	-60	90	305.14	96.85	MRL	4	36	32	0.15	0.02			oxide	RC
									51	**227**	**176**	**0.55**	0.04			oxide/transition/fresh	RC and DD
including									66	75	9	0.98				transition	RC
and									96.85	112	15.15	0.79	0.02			fresh	DD
and									**166**	**199**	**33**	**1.04**	0.10			fresh	DD
NYU11RD011	339003	8630018	1328	-60	90	300.10	81.85	MRL	240	242	2	0.38	0.01			fresh	DD
									251	256	5	0.36	0.06			fresh	DD
NYU11RD012	338545	8630024	1338	-60	90	121.50	74.10	MRL				NSI					RC and DD
NYU11RD013	339294	8630830	1316	-60	90	116.20	75.60	MRL	29	46	17	0.21	0.04			oxide/transition	RC
including									31	32	1	0.57	0.56			oxide	RC
NYU11RD014	338736	8630826	1349	-60	90	200.20	76.00	MRL				NSI					RC and DD
NYU11RD015	338450	8630820	1349	-60	90	82.00	82.00	MRL				NSI					RC, no DD tail
NYU11RD016	339434	8631226	1337	-60	90	180.30	117.90	MRL				NSI					RC and DD

Table - Nyungu Drillholes

DH ID	East WGS84 Zone 35S	North WGS84 Zone 35S	Elevation DTM	Dip	Azimuth	Total Depth	RC PC Depth	Operator	Downhole From (m)	Downhole To (m)	Downhole Interval (m)	Cu (%)	Co (%)	U (ppm)	Au (g/t)	Oxidation State	Comment
NYU11RD017	338699	8631218	1331	-70	90	53.00	53.00	MRL				NSI					RC, no DD tail
NYU11RD018	338494	8631224	1340	-70	90	76.00	76.00	MRL				NSI					RC, no DD tail
NYU11RD019	338600	8630822	1350	-70	90	179.30	82.00	MRL				NSI					RC and DD
NYU11RD020	338405	8630420	1332	-70	90	150.30	46.30	MRL				NSI					RC and DD
NYU11RD021	339230	8629832	1331	-70	90	206.30	97.10	MRL	31	105	74	0.33	0.01			oxide/transition/fresh	RC and DD
including									49	58	9	0.50	0.01			oxide	RC
and									70	77	7	0.76				transition/fresh	RC
and									91	94	3	1.69				fresh	DD
									115	121	6	0.53				fresh	DD
									147	161	14	0.65				fresh	DD
									173	**204**	**31**	**1.57**	0.02			fresh	DD
including									**174**	**191**	**17**	**2.44**	0.03			fresh	DD
including									**174**	**180**	**6**	**5.51**	0.07		**0.30**	fresh	DD
NYU11RD022	339265	8630212	1324	-90		180.40	100.20	MRL	12	102	90	0.46	0.07			oxide/transition/fresh	RC and DD
including									32	52	20	0.47	0.14			oxide/transition	RC
and									64	98	34	0.67	0.07			transition/fresh	RC
NYU11RD023	339123	8630224	1326	-90		67.00	67.00	MRL	8	67	59	0.49	0.02			oxide/transition	RC
including									16	26	10	0.49	0.04		0.38	oxide/transition	RC
and									20	67	47	0.57	0.02			oxide/transition	RC, open EOH
MM296	339090	8630290	1345	-90		551.70	0.00	RST	10	18	8	0.19	0.03			oxide	DD, Historic DD re-analysed
									32	36	4	0.18	0.01			oxide/transition	DD, Historic DD re-analysed
									92	109	17	0.73	0.09			fresh	DD, Historic DD re-analysed
									122	133	11	0.22	0.02			fresh	DD, Historic DD re-analysed
									227	253	26	0.63	0.02		0.17	fresh	DD, Historic DD re-analysed
including									227	230	3	1.39	0.03			fresh	DD, Historic DD re-analysed
and									240	247	7	0.83	0.02		0.26	fresh	DD, Historic DD re-analysed
									377	384	7	0.43	0.01			fresh	DD, Historic DD re-analysed
									389	403	14	0.73	0.01			fresh	DD, Historic DD re-analysed
including									394	402	8	1.16	0.01			fresh	DD, Historic DD re-analysed
									423	434	11	0.14				fresh	DD, Historic DD re-analysed
NYRD024	338240	8626396	1307	-70	90	216.00	109.00	MRL	80	103	23	0.19				transition/fresh	RC
including									94	96	2	0.62				transition/fresh	RC
									114	140	26	0.16				fresh	DD
including									121	124	3	0.44				fresh	DD
NYRD025	338162	8626400	1310	-70	90	186.15	80.00	MRL	27	42	15	0.27				oxide/transition	RC
including									28	36	8	0.35				oxide/transition	RC
									62	81	19	0.14				transition/fresh	RC/DD
									87	90	3	0.35				fresh	DD
NYRD026	338079	8626401	1311	-70	90	113.65	61.00	MRL				NSI					RC/DD
NYRD027	338320	8626800	1307	-70	90	198.65	103.00	MRL	47	80	33	0.15				transition/fresh	RC
									161.75	169.00	7.25	0.11				fresh	DD
NYRD028	338240	8626800	1310	-70	90	201.15	120.00	MRL	135.55	139	2.95	0.11				fresh	DD
NYRD029	338161	8626800	1312	-70	90	149.65	46.00	MRL				NSI					RC/DD

Table - Nyungu Drillholes

DH ID	East WGS84 Zone 35S	North WGS84 Zone 35S	Elevation DTM	Dip	Azimuth	Total Depth	RC PC Depth	Operator	Downhole From (m)	Downhole To (m)	Downhole Interval (m)	Cu (%)	Co (%)	U (ppm)	Au (g/t)	Oxidation State	Comment
NYRD030	338126	8629801	1321	-70	90	200.65	40.00	MRL	143	164.82	21.82	0.51				fresh	DD
including									143	145	2	1.30			0.06	fresh	DD
NYRD031	338120	8630222	1332	-70	90	305.65	58.00	MRL	**26**	**58**	**32**	**0.46**	0.04		0.05	oxide/transition	RC
including									**40**	**55**	**15**	**0.71**	0.04		0.10	oxide/transition	RC
									77.00	83.10	6.10	0.66	0.04		0.12	transition/fresh	DD
									131.45	163.45	32	0.35				fresh	DD
including									157	162.35	5.35	0.82				fresh	DD
									188.65	193	4.35	0.68				fresh	DD
									216.90	**295**	**78.10**	**0.59**	**0.05**			fresh	DD
including									216.90	252	35.10	0.77	0.07			fresh	DD
including									219	228	9	1.15				fresh	DD
including									**237**	**259**	**22**	**0.59**	**0.13**			fresh	DD
NYRC032	339082	8630801	1332	-70	90	133.00	133.00	MRL				NSI					RC, no DD tail
NYRC033	338998	8630802	1337	-70	90	85.00	85.00	MRL				NSI					RC, no DD tail
NYRC034	339820	8635601	1268	-70	90	100.00	100.00	MRL				NSI					RC, no DD tail
NYRC035	339742	8635601	1272	-70	90	127.00	127.00	MRL				NSI					RC, no DD tail
NYRC036	339540	8633199	1294	-70	90	91.00	91.00	MRL				NSI					RC, no DD tail
NYRC037	339621	8633203	1289	-70	90	91.00	91.00	MRL	70	79	9	0.17				transition/fresh	RC, no DD tail
NYRD038	339159	8630799	1330	-70	90	300.00	91.00	MRL	246	295	49	0.40	0.08			fresh	DD
including									**258**	**289**	**31**	**0.54**	**0.12**		0.05	fresh	DD
including									**259**	**267**	**8**	**0.95**	**0.12**		0.08	fresh	DD
and									**273**	**280**	**7**	**0.41**	**0.26**			fresh	DD
NYRD039	338237	8626601	1309	-70	90	216.45	55.00	MRL	72	80	8	0.20				transition/fresh	DD
									107	124	17	0.40				fresh	DD
NYRD040	338154	8626600	1311	-70	90	159.55	61.00	MRL	18	22	4	0.13				oxide	RC
									27	**56**	**29**	**0.54**				oxide/transition	RC
									47	**54**	**7**	**1.24**				transition	RC
									74	76.96	2.96	0.12				transition/fresh	DD
NYRD041	338125	8626203	1311	-70	90	116.46	80.00	MRL	0	80	80	NSI					RC/DD
NYRD042	338201	8626198	1312	-70	90	170.55	67.00	MRL	25	36	11	0.14				oxide	RC
									64	80	16	0.16				transition/fresh	RC/DD
									105	111	6	0.28				fresh	DD
									118	132	14	0.14				fresh	DD
NYRD043	339225	8630760	1332	-70	90	242.65	0.00	MRL	38.65	47.65	9	0.61			0.05	oxide/transition	DD
									63	90	27	0.28				transition/fresh	DD
NYRD044	339200	8630600	1332	-70	90	239.75	0.00	MRL	20.75	33.75	13.00	0.10				oxide	DD
									96.28	99.00	2.72	0.32				fresh	DD
									104	106.00	2.00	0.20				fresh	DD
									112	119.75	7.75	0.16				fresh	DD
									149.75	154.68	4.93	0.58				fresh	DD
									161	165.00	4.00	0.19				fresh	DD
									171	208.78	37.78	0.15				fresh	DD
									186.78	192.78	6.00	0.24	0.16		0.07	fresh	DD

Table - Nyungu Drillholes

DH ID	East WGS84 Zone 35S	North WGS84 Zone 35S	Elevation DTM	Dip	Azimuth	Total Depth	RC PC Depth	Operator	Downhole From (m)	Downhole To (m)	Downhole Interval (m)	Cu (%)	Co (%)	U (ppm)	Au (g/t)	Oxidation State	Comment
NYRD045	339120	8630300	1331	-70	90	302.55	0.00	MRL	**29.55**	**101.00**	**71.45**	**0.61**	**0.06**			oxide/transition/fresh	DD
including									63.55	84.79	21.24	1.03	0.07		0.05	transition/fresh	DD
									125.66	161.00	35.34	0.54				fresh	DD
including									145.31	156.00	10.69	1.00				fresh	DD
									220.55	**285.25**	**64.70**	**0.49**	**0.03**			fresh	DD
including									258.25	269.25	11.00	1.02	0.04			fresh	DD
NYRD046	339138	8630105	1329	-70	90	290.25	0.00	MRL	5.25	27.00	21.75	0.11			0.06	oxide	DD
									32.25	61.25	29.00	0.18			0.06	oxide/transition	DD
									69.25	126.75	57.50	0.44				transition/fresh	DD
									132.75	166.00	33.25	0.44				fresh	DD
									172	**264.88**	**92.88**	**0.66**	**0.11**			fresh	DD
including									**183.38**	**221.50**	**38.12**	**1.04**	**0.11**			fresh	DD
and									**218.5**	**241.50**	**23.00**	**0.51**	**0.21**			fresh	DD

Notes

1 *Pre collars by Reverse Circulation drilling*
2 *1m and 2 to 4m composite sample interval in RC drilling*
3 *1m and 2m composite sample interval in Diamond Core drilling*
4 *Calculated using 0.1% Cu lower cut threshold, no upper cut threshold, maximum 4 metres internal dilution*
5 *Analysis in 2011 by SGS - Methods ICP40Q and ICP23Q (for ore grade Cu), FAA303 for Au*
6 *Analysis in 2012 by Intertek Genalysis - Methods 4A/OES and 4A/MS, FA25/AAS for Au*
7 *Coordinate System: WGS84, Zone 35 South*
8 *NSI = No Significant Intercepts*
9 *RC = Reverse Circulation intercept*
10 *DD = Diamond Core intercept*
11 *EOH = End of Hole*
12 MRL = Mwombezhi Resources Limited
13 RST = Roan Selection Trust