Resource Upgrade at Blanco Y Negro Deposit - Chile

- **New Indicated and Inferred Resource for Blanco y Negro (ByN) Deposit**

  Indicated: 0.8Mt @ 1.5% Cu, 0.5 g/t Au for 12kt Cu and 12koz Au*

  Inferred: 0.7Mt@ 1.3% Cu, 0.6g/t Au for 8kt Cu and 12koz Au*

  Total Resource: 1.5Mt @ 1.4% Cu, 0.5g/t Au for 20ktCu and 24koz Au*

- **60% of the resource has now been upgraded to the Indicated category.**
- **The ByN deposit sits on a 100% owned mining lease.**
- **The Company has received expressions of interest from third parties to purchase the ByN Project**

Helix Resources Limited has completed a resource update on the ByN deposit in Region IV, Chile. The update was undertaken following the drilling completed in 2014. The Company has received expressions of interest from third parties to purchase the ByN Project and Helix will keep the market informed of any further developments when they arise.

The new resource estimation has increased the tonnes by approximately 10% and upgraded the classification of the ByN deposit, with 60% of the resource moving into the Indicated JORC category. Infill Reverse Circulation (RC) drilling was undertaken as part of the RC program completed in late 2014 (details Table 2). This additional drilling has improved knowledge of metal distribution and confirmed geological continuity in the main zone.

Drilling at ByN has intersected copper and gold mineralisation with results including 19.5m @ 2% Cu and 1.1 g/t Au and 30m @ 1.4% Cu and 0.3g/t Au. The deposit remains open to the northwest along strike and down dip (Figure 1)
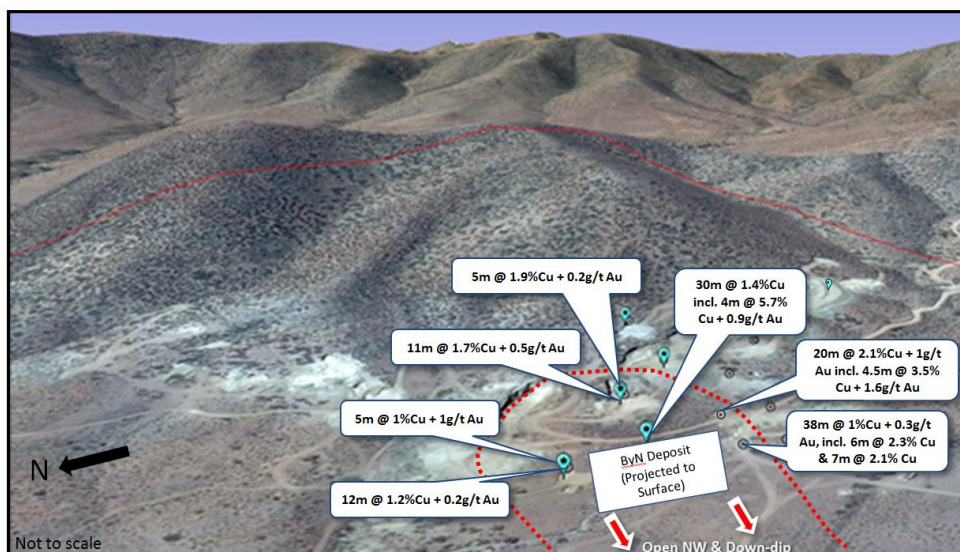

Figure 1: Approximate position of B y N Deposit on local topography with significant results.

*Resource is reported at a 0.5% Cu cutoff grade and figures are subject to rounding (refer Table 1)

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Table 1 : ByN Deposit Material Type
August 2015 Mineral Resource Estimation (0.5% Cu cut off)

	Oxide		Transition		Fresh		Total
	Tonnes & Grade	Metal	Tonnes & Grade	Metal	Tonnes & Grade	Metal	
Indicated	360kt @ 1.0% Cu , 0.2 g/t Au	4,000t Cu 2,500oz Au	280kt @ 1.8% Cu, 0.6g/t Au	5,000t Cu 5,600oz Au	140kt @ 2.2% Cu, 0.8g/t Au	3,000t Cu 3,500oz Au	0.8Mt @ 1.5% Cu, 0.5g/t Au for 12,000t Cu & 12,000oz Au
Inferred	140kt @0.8% Cu, 0.6g/t Au	1,000t Cu 3,000oz Au	30kt @ 0.7% Cu, 0.4g/t Au	240t Cu 460oz Au	480kt @ 1.4% Cu, 0.6g/t Au	7,000t Cu 9,000oz Au	0.7Mt @ 1.3% Cu, 0.6g/t Au for 8,000t Cu & 12,000oz Au
Total	**500kt @ 1.0% Cu, 0.3g/t Au**	**5,000t Cu 5,000oz Au**	**310kt @ 1.6% Cu, 0.6g/t Au**	**5,200t Cu 6,100oz Au**	**620kt @ 1.6 % Cu, 0.6g/t Au**	**10,000t Cu 12,500oz Au**	**1.5Mt @ 1.4% Cu, 0.5g/t Au for 20,000t Cu & 24,000oz Au**

Note: discrepancies in totals are due to rounding

Geology and Geological Interpretation

ByN is a shear and vein hosted copper and gold system in a geological setting of volcanic, intrusive and associated sediments that are variably sheared and faulted within the regionally significant Los Mantos Fault system in Region IV, Chile. The material included in the resource is dominated by oxide copper mineral species mainly malachite and azurite and in the transition zone Chalcocite and Chalcopyrite.

The confidence of the geology of the resource is suitable for Indicated and Inferred resource status. The continuity of the geology and grade distribution is understood in the main zone, but there is not sufficient drilling information to accurately determine the metal distribution in the peripheral zones.

Mineralisation has been defined by one main central mineralised zone with a single zone of weak mineralisation in the HW and a single zone in the FW and a low grade southern zone. The main zone has been interpreted over six drill sections approximately 50m apart with actual mineralisation between 5 continuous sections. The mineralised central zone has been extrapolated down dip and terminated against a cross-cutting fault.

Mineralisation has been interpreted based on geological boundaries including dilution or a nominal 0.3% Cu cut off with a steep dip of -65° towards grid west.

Sampling and Sub-sampling Techniques

The Blanco Y Negro deposit was delineated using Reverse Circulation (RC) and Diamond Core (DC) drilling. A total of 21 holes were used to delineate and bound the resource estimate. Holes were sited on an approximate between a 50 x 50m and 100 x 50m grid and were generally orientated to the Grid East (060°) at dips between -50 & -80°.

The drill hole collars were located by handheld GPS. Down hole surveys were conducted post drilling using a down-hole gyro system in five of the drill holes completed within the indicated classified zone. No down-hole surveys have been conducted in the remaining holes at this stage.

RC drilling was used to obtain generally 1m and 2m samples from which 3kg was pulverized to produce a charge for geochemical analysis.

Diamond core was NQ2 size for diamond coring and tails off RC pre-collars. Half core was collected and sampled generally on 1m intervals or smaller intervals in specific cases where clear lithological boundaries or structures were present.

The preparation of both RC and core samples followed industry practice.

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Drilling Techniques

Diamond drilling accounts for the majority of the drilling through mineralised zones completed in phase 1 and this was followed up by RC drilling including some close to previous holes in phase 2.

RC Drilling was completed using a 140mm face sampling hammer. Depths ranged from 83m to 144m within the main mineralisation corridor.

Diamond drilling comprised NQ2 core and NQ2 Core 'tails'. DDH holes ranged from 90-170m. RC Pre-collar depths ranged from 30 to 110m. DC tails ranged in depth form 60 to 150m on these pre-collars.

Classification Criteria

Drill holes are on an approximate 50x 50m and 100m x 50m grid spacing, which covers the majority of the main mineralised zone. The drill spacing is adequate for the geological and grade continuity and is appropriate for Mineral Resource estimation.

Samples were composited to 1 metre lengths in any drill hole intercepts where 2m sampling was included in the resource modelling.

Sample Analysis

All assays were conducted at an accredited assay laboratory. The analytical technique used for base metals was a mixed acid digest with an ICP_AES finish. Any samples returning greater than 10,000ppm Cu were re-assayed with an Atomic Absorption (AAS) finish. Gold was assayed using an aqua-regia and AAS finish and subsequent high grade material using a 30g charge fire assay technique. In phase 2 copper was also determined for soluble and insoluble to assist in classification.

Laboratory QA/QC samples included the use of blanks, duplicates, standards (certified reference materials) as part of in-house procedures. The Standard, Repeat and Duplicate assays for the drilling are within acceptable limits of accuracy for this style of deposit.

Estimation Methodology

The resource estimation for grade was estimated using Inverse distance to the power of 2. The software package for the grade estimation and geological interpretation was Surpac. Copper, Gold, Silver and Density were estimated.

Estimation for each element was conducted using the same parameters and were estimated using two passes (refer to Appendix 1 for details).

Estimation of grade was within interpreted hard grade boundaries based on a nominal 0.3 Cu % with a minimum of 2m down hole. Internal dilution was domained separately when mineralised grade was less than 0.3% Cu for sections greater than 2m in width and estimated separately.

Minor mining by local artisanal miners has been previously conducted at surface. Historical records were reviewed and were able to be reconciled against the current model, (taking into account hand sorting of material).

The resource was modelled using a 20 mN by 5 mE by 5 mZ (grid) with sub celling down to 5 mN by 1.25 mE and 1.25 mZ. Each ore domain has been flagged, coded and modelled separately. The Z direction selected at 5 metres to reflect the possible selected mining bench height.

Ore grade boundaries were defined within the Blanco Y Negro vein/shear.

No top cuts were applied for any of the elements estimated. Coefficients of variation for the estimated elements were low. Block model volume validation was validated against solid wireframes for each ore domain. Block model validation for grade was conducted visually by section northings.

Cut-off Grades

The nominal 0.3 % Cu cut-off grade used for the mineralized interpretation was chosen as this appears to reflect the natural background grade cut-off.

Mining and Metallurgical Factors

The only assumption made regarding to possible mining practices is the setting of the model in the Z direction to 5 metres. The most likely bench height for open pit mining (+/- 1m) assuming hydraulic equipment is used. Mining dilution along or across strike has been taken into account in the new resource estimate.

Surface material has been previously extracted from the Blanco Y Negro concession by artisanal miners and processed at a government-run copper SX-EW plant approximately 30km by road from the mining concession. It is assumed that the oxide material in the resource has similar characteristics to the material previously mined.

Metallurgical testing would be undertaken as part of any future advancement of the project within a Scoping study or similar study.

Competent Persons Statement

The information in this report that relates to the Mineral Resource Estimation for Blanco y Negro is based on information compiled by Mr Byron Dumpleton a Consultant Resource Geologist from his company BKD Resources Pty Ltd. Mr Dumpleton is a member of the Australian Institute of Geoscientist. Mr Dumpleton has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Dumpleton consents to the inclusion in this report of the matters based on their information in the form and context in which they appear.

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr M Wilson who is a full time employee of Helix Resources Limited and a Member of The Australasian Institute of Mining and Metallurgy. Mr M Wilson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr M Wilson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Details of the assumptions underlying any Resource estimations are contained in previous ASX releases or at www.helix.net.au

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Table 2: Additional Drill hole details and assay results included from 2014 program into resource model.

Hole ID	Easting	Northing	RL	Dip	Azimuth	Depth	Results
ARBN14-001	295069	6603679	478	-60	060	144.0	No significant result
ARBN14-002	294944	6603776	450	-60	060	77.0	From 50m – 24m @ 0.6% Cu incl. **10m @ 1.0% Cu + 0.3g/t Au**
ARBN14-003	294943	6603778	450	-75	007	105.0	From 56m – 45m @ 1.1% Cu + 0.2g/t Au, incl.– **30m @ 1.4% Cu from 67m, incl. 4m @ 5.7% Cu + 0.9g/t Au**
ARBN14-004	295032	6603536	478	-80	070	50.0	From 21m – 20m @ 0.3%Cu + 0.2g/t Au incl. 4m @ 0.7% Cu + 0.8g/t Au
ARBN14-005	295010	6603700	469	-80	338	105.0	From 56m – 6m @ 0.3%Cu+0.1 g/t Au and From 76m 20m @ 0.1%Cu + 0.1g/t Au
ARBN14-006	295047	6603720	478	-60	030	80.0	From 39m – 4m @ 0.3%Cu + 0.3g/t Au
ARBN14-007	294989	6603755	461	-60	060	75.0	From 20m – 40m @ 0.8% Cu + 0.2g/t Au incl. **11m @ 1.7%Cu +0.5g/t Au**
ARBN14-008	294941	6603835	445	-60	060	50.0	From 28m – 18m @ 0.7% Cu + 0.3g/t Au incl. **5m @ 1.0% Cu + 1g/t Au**

Assays reported from 1m split samples at a 0.1%Cu Cut-off, with max 2m internal dilution.

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APPENDIX 1

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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 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.*	• The B y N deposit was delineated using Reverse Circulation (RC) and Diamond Core (DC) drilling. A total of 21 holes were used to delineate and bound the resource estimate. Holes were sited on an approximate 50m X 50m and 100 x 50m grid and were generally orientated to the Grid East (060°) at dips between -50 & 80°. • The drill hole locations were located by handheld GPS. Down hole surveys were conducted post drilling using a down-hole gyro system in five of the drill holes completed. No down-hole surveys were conducted in the remaining holes. • RC drilling was used to obtain generally 1m and 2m samples from which 3kg was pulverized to produce a charge for geochemical analysis. Diamond core was NQ_2 size for diamond coring and tails off RC pre-collars. Core was split and half-core was collected over 1m intervals within mineralised zones and prepared and assayed using the same methods for RC .
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 drilling accounts for the majority of the drilling through mineralised zones completed in phase 1 with RC drilling used in phase 2 (2014). • RC Drilling was completed using a 140mm face sampling hammer. Depths ranged from 83m to 144m within the main mineralisation corridor. • Diamond core drilling comprised NQ_2 core and NQ_2 Core 'tails'. DDH holes ranged from 90-170m. RC Pre-collar depths ranged from 30 to 110m. DC tails ranged in depth form 60 to 150m on these pre-collars.
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*	• Drill core and RC samples recoveries were recorded on the lithology field logs with observations compared to the core and samples produced. • RC samples were checked by the geologist for volume, moisture content, possible contamination and recoveries. Core was reconstructed in continuous lengths where applicable and depths

Criteria	JORC Code explanation	Commentary
	loss/gain of fine/coarse material.	marker annotated and checked against core blocks. Any issues are discussed with the drilling contractor.
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.*	• Core holes were geologically logged as part of the logging and sampling process. All RC chip samples have a representative grab sample placed in 1m intervals in chip trays and geologically logged. • Logging of both RC and Core samples recorded lithology, alteration, mineralisation, degree of oxidation, fabric and colour. Core was photographed in both dry and wet form. All RC 1m intervals are stored in plastic chip trays, labeled with interval and hole number. Drill Core is labeled, stacked and palletized in timber core trays at the Company's core yard in Ovalle • All holes (RC and core) were logged in full.
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.*	• Half core was collected and samples generally on on 1m intervals or smaller intervals in specific cases where clear lithological boundaries or structures were present. • The preparation of both RC and core samples followed industry practice. This involves oven drying, coarse crushing (core-only), pulverization of total sample using LM2 mills until 95% passes 150 micron. • Field QA-QC involved oversight of collection of riffle split sampling of single metre RC samples to approximately 3kg bags by site geologist and review of core-cutting and collection of 1m samples at core yard. • The sample sizes are considered appropriate to the grain size of the material being sampled and assayed.
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.*	• All assays were conducted at an accredited assay laboratory Andes Analytical Assay Limitada. The analytical technique used for basemetals was a mixed acid digest with an ICP_AES finish. Any samples returning greater than 10,000ppm Cu were re-assayed with an Atomic Absorption (AAS) finish. Gold was assayed using an aqua regia and aas finish and subsequent high grade material using a 30g charge fire assay technique. • This is considered appropriate for the material • Laboratory QA/QC samples included the use of blanks, duplicates, standards (certified reference materials) as part of in-house procedures. Standard, Repeat and duplicate assays for drilling and are within acceptable limits of accuracy for this style of deposit.
Verification of sampling	• *The verification of significant intersections by either independent or alternative company personnel.*	• Significant intersections have been verified by the field geologist(s), Exploration Manager and Managing Director.

Criteria	JORC Code explanation	Commentary
and assaying	• *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.*	• Two twinned holes were collected in phase 2 drilling to compare RC with DDH results. The holes geological and assay variability was within acceptable ranges. • Geological data was collected using handwritten log sheets which detailed geology (weathering, structure, alteration, mineralisation), sampling quality and intervals, sample numbers and survey data. This data, together with the assay data received from the laboratory and subsequent survey data were entered into databases and verified from the original laboratory data and field data. • No adjustments were conducted
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.*	• The drill collar positions were picked-up using GPS. A Gyroscopic downhole tools was used to collect survey information subsequent to the completion of drilling where possible. • Grid system is WGS84 Zone 19S. Local grid has also been used for estimation purposes and geological interpretation and drill planning. The local grid is design so that sections are approximately perpendicular to the average strike of the resource. The grid has a rotation of 60 degrees to the west. • Surface RL data collected using GPS. Topography around the resource is a hill in grid east to a valley grid west of the resource area. A topographical wireframe (DTM) has been constructed using the data provided by an external geophysical contractor who undertook a detailed ground magnetic survey over the project area in 2Q13 The survey provided - 50m line spacing with continuous readings.
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.*	• Drill holes for ByN is on an approximate 50m x 50m and 100m x 50m grid spacing, which covers the majority of the main mineralised zone. • The drill spacing is adequate for the geological and grade continuity and is appropriate for Mineral Resource and Ore Reserve estimation. • Samples were composited to1 metre lengths in any drill hole intercepts where 2m sampling was included in the resource modelling.
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.*	• Inclined RC and DDH drilling has been completed within the mineralised zones with good correlation observed between data sets • No orientation based sampling bias has been identified in the data to date.
Sample	• *The measures taken to ensure sample security.*	• Chain of Custody is managed by the Company. RC Samples were

Criteria	JORC Code explanation	Commentary
security		collected onsite generally in polyweave bags containing 5-10 samples. The bags are securely tied and freighted directly to the laboratory in secure cages with appropriate documentation listing sample numbers and analytical methods requested. • Diamond core was transported by Helix staff, logged and cut at the Company secure core yard in the nearby town of Ovalle, with samples bagged, batched and freighted directly to the laboratory with appropriate documentation listing sample numbers and analytical methods requested.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No additional QA/QC has been conducted for the Resource model drilling. Umpire lab re-assaying of selected samples is planned as part of future development studies.

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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Blanco y Negro 1/20 mining concession is 100% owned by Helix Resources Chile Limitada, a 100% owned subsidiary of Helix Resource limited. • Title Blanco y Negro 1/20 of the concession is in good standing at the time of reporting and is a mining lease.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• No previous exploration has been conducted on the property prior to Helix involvement, however a small parcel of oxide material was mined by artisanal miners and toll-treated at the nearby Government owned SX-EW plant
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Blanco y Negro is a shear and vein hosted copper and gold system in a geological setting of volcanics, intrusives and associated sediments, variably sheared and faulted within the regionally significant Los Mantos Fault system. The material included in the resource is dominated by oxide copper mineral species.

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:*
	  o *easting and northing of the drill hole collar*
	  o *elevation or RL (Reduced Level – elevation above sea level in*
		• Refer to ASX announcement on 10 September 2014 and drill collar table in main announcement

Criteria	JORC Code explanation	Commentary

	metres) of the drill hole collar
	  o *dip and azimuth of the hole*
	  o *down hole length and interception depth*
	  o *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.*	

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.* • *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.*	• Refer to section 3
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').*	• Drilling was generally aimed at intersecting mineralisation as close to perpendicular as possible, based on the ability to position a drill rig to do so. Holes used to estimate the resource are within this criteria
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 previous releases
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.*	• No additional data is available at the time of reporting
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.*	• Refer to main body of this release

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.*	• Data used in the resource estimation was derived from the projects drilling database held in Chile and replicated on the company database in Australia. • Validation has occurred through cross-checking of geology to assays, assay data compared to original files received from the laboratory by the field staff in Chile, and then by Helix staff in Australia prior to resource estimation. Hardcopies of both geological logs and certified copies of laboratory assays are held in the Chile office. Original laboratory digital files are also available for cross reference.
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.*	• Mr. Mick Wilson, acting as a Competent Person for the geology and exploration portions of the Table was involved with the project from its purchase in mid-2012 and has made numerous site visits during this time, including during the drilling program. He was part of the team that developed the Geological Interpretation for the Blanco Y Negro Deposit.
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 geological interpretation is considered to be reasonable for this style of deposit. The confidence of the resource figures is suitable for Indicated and Inferred. • Mineralisation has been defined by one main central mineralised zone with a single zone of weak mineralisation in the HW and a single zone in the FW, a southern pod was also interpreted. The FW zone has been based around a single intercept from hole ARBN13-002. The main zone has been interpreted over six drill sections approximately 50m apart with actual mineralisation between 5 continuous sections. The mineralised central zone has been extrapolated down dip and terminated against a cross-cutting fault. Mineralisation has been interpreted based on a nominal 0.3% Copper cut off or vein material with a steep dip of -65 towards grid west. • The geological interpretation has been based on geological and grade boundaries. • The factors for grade continuity are subjective with the limited drilling information. The continuity of the Geology is reasonably understood.
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 mineralised zone is approximately 250 metre along strike with mineralisation extended to depths from approximately 50 to 350 metres. The variable depths is due to the oblique nature of the

Criteria	JORC Code explanation	Commentary
		intersection between the moderately westerly (grid) steep dipping mineralised zone against the NW (grid) trending near vertical fault. The mineralised (true) width varies from 2 to 25 metres.
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 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.*	• The resource estimation for grade was estimated using Inverse distance to the power of 2. The software package for the grade estimation and geological interpretation was Surpac. Copper, Gold, Silver and Density were estimate. Estimation for each element was conducted using the same parameters and were estimated using two passes. For the first pass a search radius of 105 metres along strike/plunge with an anisotropy used for the search ellipsoid with a ratio of 2:1 for major to semi-major direction and 3 to 1 for major to minor direction. For the second pass a 210m radius was used also using the same anisotropy ratios for both the major to semi-major and major to minor directions. Estimation of grade was within interpreted hard grade boundaries based on a nominal 0.3% Copper with a minimum of 2m down hole. Internal dilution was domained separately when mineralised grade was less than 0.3% Copper for sections greater than 2m in width and estimated separately. • Blanco Y Negro is an updated resource. Mining by local artisanal miners has been conducted at surface. Historical records were available and reconcile against the current model, taking into account hand sorting of material. • No assumptions have been made for recovery of by-products. • No deleterious elements were estimated. • The resource was modelled using a 20 mN by 5 mE by 5 mZ (grid) with sub celling down to 5 mN by 1.25 mE and 1.25 mZ. Each ore domain has been flagged, coded and modelled separately. • The Z direction selected at 5 metres to reflect the possible selected mining bench height. • N/A • Ore grade boundaries were defined within the Blanco Y Negro vein/shear. • No top cuts were applied for any of the elements estimated. Coefficient of variation for the estimated elements were low. • Block model volume validation was validated against ore solid wireframes for each ore domain. Block model validation for grade was conducted visually by section northings.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on dry basis.

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Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The nominal 0.3 % Copper cutoff grade used for the mineralized interpretation was chosen as this appears to reflect the natural background grade cutoff.
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.*	• Only assumption made regarding to possible mining practices is the setting of the model in the Z direction to 5 metres. The most likely bench height for open pit mining (+/- 1m) assuming hydraulic equipment is used. No account has been taken for mining dilution along or across strike.
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.*	• Surface material has been previously extracted from the Blanco Y Negro concession by artisanal miners and processed at a government-run copper plant approximately 30km by road from the mining concession. It is assumed that the oxide material in the resource has similar characteristics to the material previously mined Metallurgical testing will be undertaken part of any future advancement of the project within a Scoping study or similar.
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.*	• Desktop studies and background work has commenced on various aspects regarding average rainfall, ground water, land access and potential mining scenarios. More detailed work will form part of any future advancement of the project within a Scoping study or mine permitting framework.
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.* • *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*	• For the Blanco Y Negro resource bulk density values were determined for host rock and mineralised shear and vein material from selected that appear to be representative. • Density measurements were determined on diamond core samples using the 'Archemides Method' (weight in air v's weight in water). • It was not possible to determine the density of much of the friable material, much of which was not recovered in DDHBN003 and ARDBN005 • Bulk density was assigned by weathering/material type interpreted

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	evaluation process of the different materials.	from geological logging.
Classificatio n	• *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 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.*	• Classification of the resource is based on drilling density, geological confidence and the position of the shoots within the main shear and vein material for each domain. The mineral resource has been classified into Indicated and Inferred categories based on drill hole spacing, geological confidence, and grade continuity and estimation quality. The combination of these factors together guides the coding of the resource. Indicated material is generally material with average drill spacing of 50 metres along with reasonable geology confidence and grade continuity. Inferred material is generally material that has average drill spacing greater than 50 metres and or the geology or grade continuity confidence is low. • The drill and input data density is comprehensive in its coverage for this style of resource for an open pit evaluation to allow reasonable confidence for the tonnage and grade distribution to the levels of Indicated and Inferred. • The Mineral Resource estimated appropriately reflects the view of the competent person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No External Audits have been conducted. Historical mining has occurred by artisanal miners and records of the grade and tonnage of this material are available.
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 and confidence of the estimate should be compared with production data, where available.*	• The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC code. • The statement relates to global estimate of tonnes and grade for an Indicated and Inferred resource.