



27 February 2026

## Option to Acquire Highly Prospective Copper-Gold Projects in Chile

- **Option to acquire 100% of the Blanco y Negro Copper Gold Deposit sits on 128 hectares of exploitation leases:**
  - Historical mine within trucking distance of several nearby copper processing plants with capacity
  - Hosts a defined a JORC-2012 Indicated and Inferred Mineral Resource Estimate of 1.5Mt at 1.4% Cu, 0.5g/t Au for 20,000t Cu and 24,000oz Au (*see table 1*) - Mineralisation open to NW, down-dip and down-plunge
  - Multiple high grade intercepts<sup>1</sup> including:
    - **20m@2.1%Cu + 1g/t Au including 4.5m@3.5% Cu and 1.6 g/t Au**
    - **30m@1.44%Cu including 4m@5.7% Cu and 0.9% g/t Au**
    - **38m@1% Cu and 0.3% g/t Au including 6m@2.3% Cu and 7m @ 2.1% Cu**
- **Option to acquire 75% of the Joshua Copper-Gold Multi-Phase Porphyry Project:**
  - Discovered by Helix Resources in 2011: Multiple porphyry phases over a 6km x 3km; open in all directions
  - Compelling historical diamond drilling results include:
    - **400m @ .33% Cu<sup>Eq</sup> (0.25% Cu, 0.1g/t Au) from surface<sup>2</sup>**
    - **Includes 70m @ 0.41% Cu<sup>Eq</sup>, 20m @ 0.52% Cu<sup>Eq</sup> and 38m @ 0.44% Cu<sup>Eq</sup>**
  - Extensive unexplored targets over ~5,100 HA held under 18 concessions
  - Situated 45km south of Adacollo 250Mt @ 0.62% Cu, 0.25g/t Au (Teck)
- **Options secured on favourable terms and capital light upfront:**
  - Low upfront costs: US\$155,000 option fee payable on signing; a further US\$150,000 due 6 months after
  - Future payments, including the project purchase, are based on key milestones such as permits being granted and production commencement (*see transaction terms below*)
- **Planned near-term works program:**
  - Blanco y Negro exploration, mine survey and planning and approvals for an initial 5,000 tpm operation
  - Assess further copper and gold targets at Blanco y Negro for drilling and resource expansion
  - Compilation and re-release of all historical data on the Joshua project based on current metal prices
- **Freehill's revenue-generating aggregates business supplying blue chip customers is positioned for major scale up**

Freehill Mining Limited (ASX: FHS 'Freehill' or 'the Company') is pleased to confirm that it has signed an option agreement with private Chilean company Companario Minerals Limitada ('CML') to acquire up to 100% three highly prospective projects in Region IV in Chile, including a JORC 2012 compliant copper and gold resource on a granted mining lease and a large-scale multi-phase porphyry system with compelling historical exploration results.

Today's announcement aligns with Freehill's stated goal of gaining exposure to gold and copper projects which have defined resources, near-term production potential with low upfront capex and significant exploration upside. Under the terms of the option agreement Freehill's financial exposure is limited to option payments capped at US\$305,000 in the next six months with future payments tied to permitting, production and/or on-sale of the projects.

Alongside these opportunities, Freehill has the added advantage of a growing its cash-generating aggregates business which is supplying material to some of Chile's largest cement and infrastructure companies from two projects, Islon and Yervas Buenas, both located in region IV. Gross sales have increased month-on-month since October 2025 and this business is expected to be cash-flow positive in the current quarter with some limited capital expenditure to enhance monthly sales and improve margins. Gross sales exceeded A\$300,000 in January alone and this is expected to keep tracking up. The potential scale of this business is considerable.

**Non-Executive Chairman Ben Jarvis commented:** *"We are delighted to have secured the rights to acquire a portfolio of highly prospective copper-gold projects. Blanco y Negro hosts a valuable resource with excellent grade and considerable exploration upside. Limited low-cost exploration, mine planning and permitting for an initial 5,000 tonne a month operation are our immediate priorities. The project is located near to a government run copper processing plant which Freehill intends to utilise. Joshua is a multi-phase porphyry system with some compelling historical exploration results and further upside given only a small percentage of the project has been explored. We will work with our technical team to assess the historical data and define the next phase of exploration. Given the project's scale, we will seek to bring in partners best suited to assets of this size. We are also pleased to confirm that our aggregates business has now stabilised and limited capex is required for this business to becoming cash-flow positive this quarter. Cash-flow from this operation supports future growth initiatives."*

**Managing Director Paul Davies added:** *"Freehill is exceptionally well positioned in the near-term with a growing aggregates business that is delivering improved sales and better margins. Demand for our material currently exceeds supply and we see tremendous upside in this region of Chile to grow what is a solid cash generating operation underpinned by a stable, quality blue chip customer base. This provides the foundation on which we can now build a quality portfolio of copper-gold projects with near-term production potential and exploration upside."*

### **Immediate work programs**

Freehill has engaged technical consultants to collate of the all historical data and reports on the Joshua porphyry project available from Codelco, Helix Resources Limited and Manhattan Corporation Limited with the view to developing a comprehensive geological data set for shareholders and interested third parties.

Exploration at Blanco y Negro is planned next month which will involve assessing mineralisation in the historical mine, trenching and drilling potential extensions where the mineralisation is open to the NW.

Freehill is in advanced discussions to engage a third party with extensive exploration and mining capability that can potentially assist with the exploration and development of these projects. Negotiations are ongoing and as yet, are incomplete.

### **Background Information on Projects**

**The Blanco y Negro project, also drilled by drilled by Helix Resources** is a vein/shear-hosted copper–gold system in Region IV, Chile, situated ~10 km SW of Ovalle and ~21 km NE of Punitaqui. The project comprises ~128 ha of exploitation concessions and is hosted within the Los Mantos Fault system. Mineralisation occurs as oxide copper (dominantly malachite and azurite) with transition zone chalcocite and chalcopyrite, and a single main central mineralised zone with weaker hanging-wall and footwall zones; the system remains open to the northwest, down-dip and down-plunge.

The stated JORC-2012 Mineral Resource (0.5% Cu cut-off) is 1.5 Mt at 1.4% Cu and 0.5 g/t Au (total ~20,000 t Cu and ~24,000 oz Au). The resource is reported across oxide, transition and fresh domains (see Table 1, p.2) and sits on granted mining concessions, providing immediate tenure and local trucking/capacity advantages. Drilling and mapping have returned multiple porphyry-style and shear-hosted high-grade intercepts as referenced in the highlights above. These results, combined with the oxide-dominated resource and open continuity, support potential for further resource growth with targeted infill and down-plunge drilling.

**The Joshua copper–gold porphyry project** (discovered by Helix Resources in 2011) is a large, multi-phase porphyry system located in Region IV of Chile, ~350 km north of Santiago and about 40 km east of Ovalle, hosted within a low-altitude, well-connected coastal porphyry belt. Helix and successive partners have mapped a broad coincident copper-in-soil and IP anomaly across a broad strike length and extending to depths in excess of 500 m; the broader project footprint covers many square kilometres with multiple identified porphyry targets and good year-round access to regional infrastructure.

Exploration to date has returned wide, continuous porphyry-style mineralisation and some locally higher grades. Notable reported intersections include long, coherent zones such as 400 m at ~0.33% Cu-equivalent and 256 m at ~0.32% Cu-equivalent from Helix drilling. Drilling and core logging have confirmed multiple intrusive/porphyry events (andesitic, dacitic and dioritic phases), widespread sulphide mineralisation including chalcocite and chalcopyrite, and locally significant molybdenite, all of which point to a large, zoned porphyry system that remains open and only partially tested.

The **Samuel copper/gold porphyry project** is located 17km south-east of the city of Ovalle and 17km north-east of the Punitaqui mine, is prospective for copper-gold porphyry, manto and breccia style mineralisation. The Project consists of 3,972Ha of exploration concessions. Exploration by Helix Resources and funding partners focussed on an area of 4.0km x 2.7km, being a metallogenic strip of upper to mid Cretaceous rocks that are bounded by large NW and NE regional controlling structures. The dominant geology of the Project area consists of intrusive rocks. A dacitic porphyry intrudes the intrusive rocks and volcanics, generating hydrothermal alteration and stockwork of Cu-quartz veins.

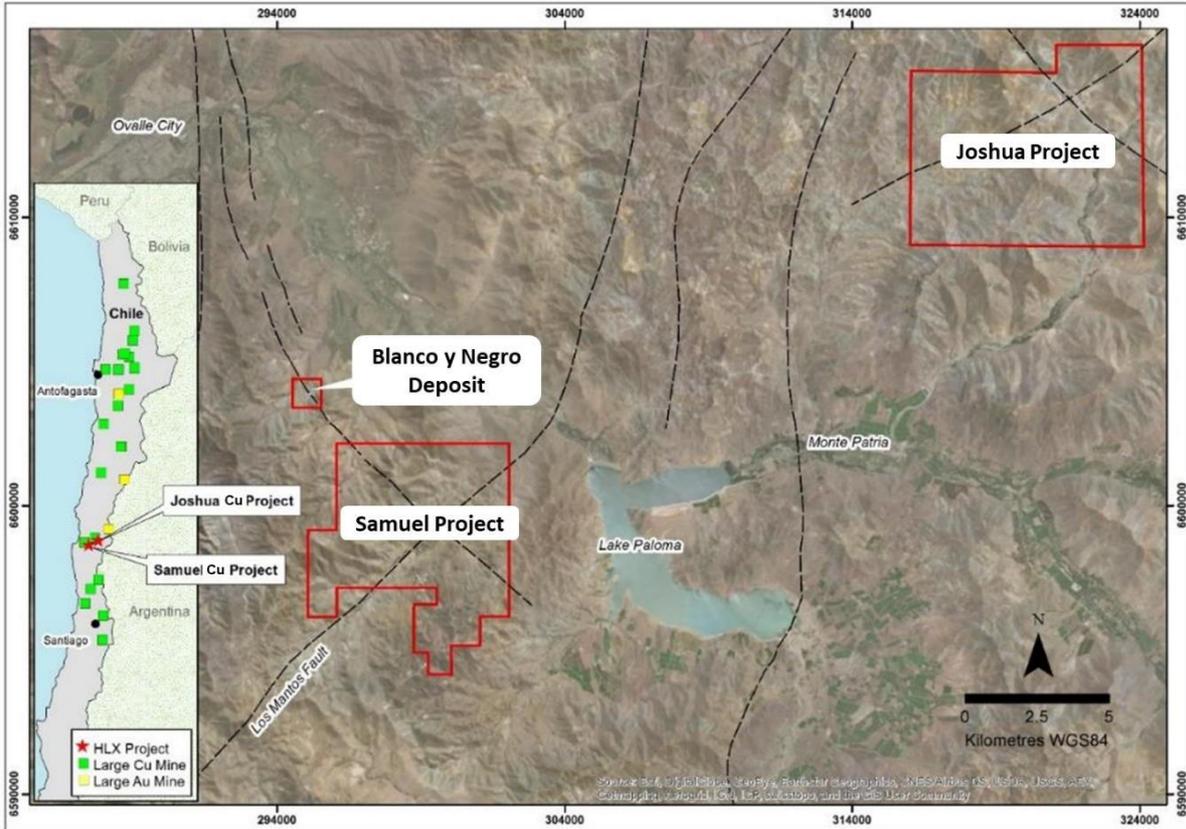


Figure 1: Location Map of Projects (HLX announcement, 20 December, 2020)<sup>3</sup>

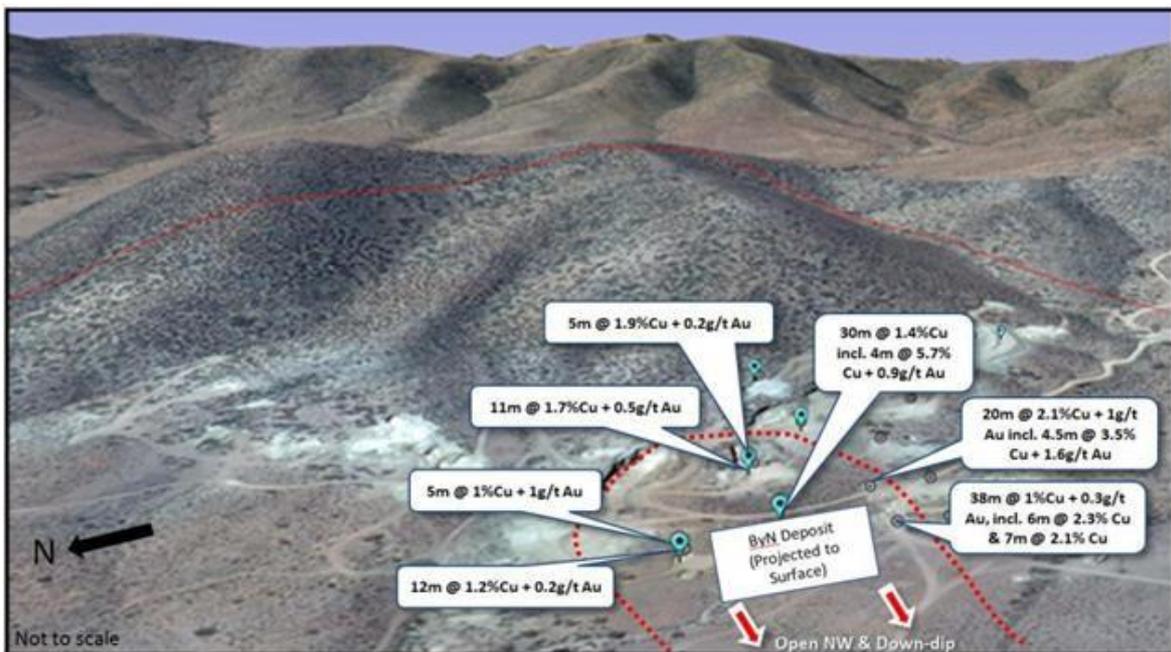


Figure 2: Blanco Negro drilling, 2012 (Source: HLX ASX release, 20 December, 2020)<sup>4</sup>



Figure 3: Historical Open-cut at Blanco Negro Cu-Au Mine (Source: Hermes Exploration, Sep'2024)

August 2015 Mineral Resource Estimation (0.5% Cu cut off)

	Oxide		Transition		Fresh		Total
	Tonnes & Grade	Metal	Tonnes & Grade	Metal	Tonnes & Grade	Metal	
<b>Indicated</b>	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
<b>Inferred</b>	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
<b>Total</b>	500kt @ 1.0% Cu, 0.3g/t Au	5,000t Cu 5,000t 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

Table 1: JORC (2012) Resource at Blanco Negro (Refer to HLX ASX release dated 13 August, 2015)<sup>5</sup>

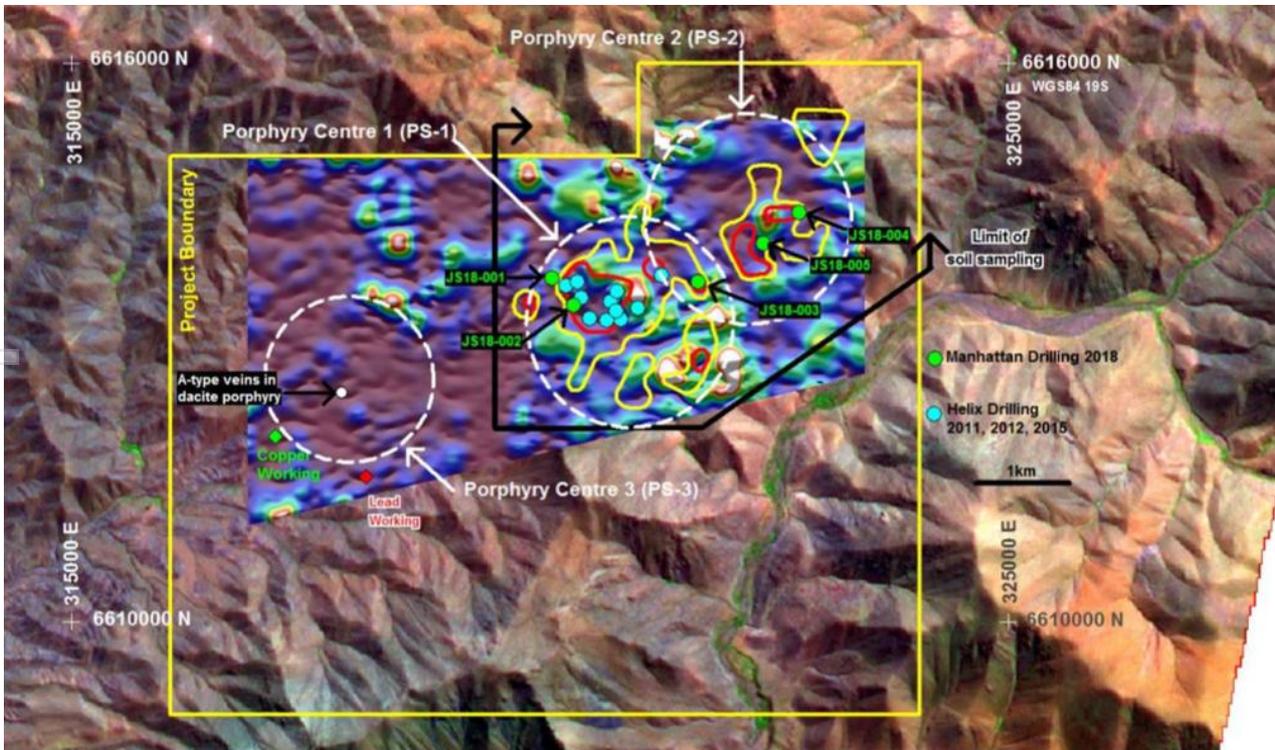


Figure 4: Location of three interpreted porphyry centres and location of historical drill holes (source: Manhattan Corporation Limited 2019 annual report)<sup>6</sup>

For personal use only

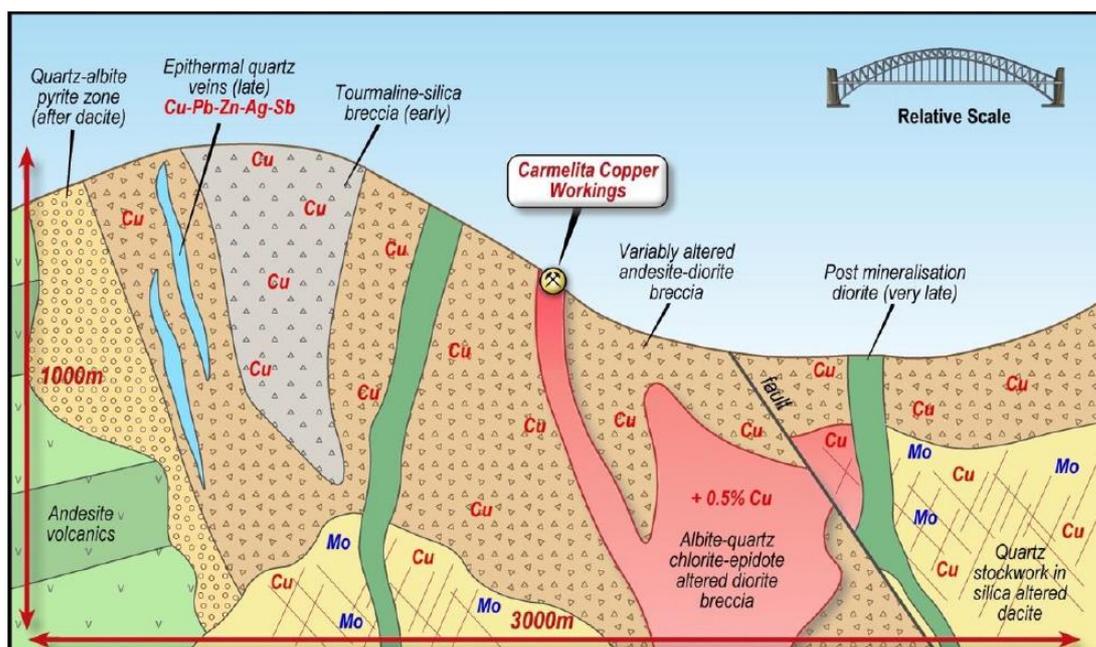


Figure 5: The Joshua porphyry system – interpreted schematic geological model in NE-SW section (source: Manhattan Corporation Limited 2019 annual report)<sup>7</sup>

### Transaction terms

El Dorado Hold Co Pty Ltd, a wholly owned subsidiary of FHS, has entered into an option agreement with Companario Minerals Limitada (a Chilean company) (CML) to purchase 100% interest in the “Blanco y Negro”, and 75% of the “Joshua”<sup>\*</sup> and “Samuel”, mining concessions, claims and rights in Chile (Projects) for a total purchase price of US\$4 million (Option Agreement). The Projects are set out at Schedule 1.

The key commercial terms of the Option Agreement are as follows:

- a) **Purchase price** - US\$4 million.
- b) **Asset to be acquired** - a 100% interest in the Blanco y Negro Project, a 75% interest in the Joshua Project<sup>\*</sup> and a 75% interest in the Samuel Project. CML will retain a 25% interest in each of the Joshua Project<sup>\*</sup> and the Samuel Project, with FHS having the right to acquire those interests as described in (d) below.
- c) **Payment terms:**
  - i. US\$155,000 on signing the Option Agreement (which has been paid by FHS);
  - ii. US\$150,000 within 6 months of signing the Option Agreement;
  - iii. US\$250,000 within 30 business days of Sernageomin's (the Chilean National Geology and Mining Service) approval to extract up to 5,000 tons of material per month;
  - iv. US\$500,000 within 30 days of commencing economic production; and
  - v. US\$2,950,000 balance within 12 months of commencing economic production. If the US\$2,950,000 balance is not paid within 6 months of commencing production CML will receive 10% of the net monthly income for the next 6 months (where such payments are not included in the purchase price).

At any time, FHS may formalise the full purchase with payment of the balance of the US\$4 million outstanding.

- d) **Further option:** FHS has an option to acquire the remaining 25% interest held by CML at an agreed value at that time of acquisition.
- e) **Other terms:**
  - i. From signing the Option Agreement, FHS will pay the mining patents associated with the Projects.
  - ii. FHS will have the right to commence work on the Joshua Project and the Samuel Project upon signing the Option Agreement.

- iii. FHS will pay the patents (taxes) for the annual mining concessions upon signing the Option Agreement which involves an initial payment of US\$5,000 plus US\$500 per month and annual licence fees when due.
- iv. Helix Resources Limited holds a 1.0% net smelter return payable in relation to the Projects.

FHS notified ASX of the transaction and ASX has confirmed that FHS is not required to seek shareholder approval under Listing Rule 11.1.2 nor comply with Listing Rule 11.1.3.

**Approved for release by the Board of the Company.**

**For further information, please contact:**

Paul Davies  
Chief Executive Officer  
Freehill Mining Limited  
+61 419 363 630

Ben Jarvis  
Non-Executive Chairman  
0413 150 448  
[ben.jarvis@sdir.com.au](mailto:ben.jarvis@sdir.com.au)

**FOOTNOTES**

<sup>1</sup> Helix Resources Limited (ASX:HLX) announcement dated 22 December 2020 - Status Update of Helix's Chilean Copper Assets - <https://www.asx.com.au/asx/v2/statistics/displayAnnouncement.do?display=pdf&idsId=02325266>

<sup>2</sup> See note 1.

<sup>3</sup> See note 1.

<sup>4</sup> See note 1.

<sup>5</sup> See note 1.

<sup>6</sup> See note 1.

<sup>7</sup> Manhattan Corporation Limited (ASX:MHC) annual report dated 17 September 2019 -

<https://www.asx.com.au/asx/v2/statistics/displayAnnouncement.do?display=pdf&idsId=02147955>

**MINERAL RESOURCE ESTIMATES**

The information in this announcement relating to the Mineral Resource Estimates and Exploration Results for the Project is extracted from the following HLX announcements:

1. [Maiden Inferred Resource - Blanco Y Negro Project - Chile](#) dated 20 November 2013 as set out at Annexure A;
2. [Addendum to Maiden Inferred Resource Chile Announcement](#) dated 28 November 2013 as set out at Annexure B;
3. [High Grade Copper Gold at Blanco Y Negro Chile](#) dated 10 September 2014 as set out at Annexure C;
4. [Resource Upgrade at Blanco Y Negro Deposit - Chile](#) dated 13 August 2015 as set out at Annexure D; and
5. [Status update on Chilean copper assets](#) dated 22 December 2020 as set out at Annexure E.

The above being the **Helix Announcements**.

**NO NEW INFORMATION**

Full details of the Indicated and Inferred Mineral Resource Estimate contained in this announcement are provided in the Helix Announcements. Freehill confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource Mineral Resource Estimate in the relevant market announcement continue to apply and have not materially changed.

Freehill has not independently verified the information relating to the Mineral Resource Estimate contained in this announcement and the Helix Announcements. Please refer to the Helix Announcements for further details and for the Competent Person's Statement relating to the Mineral Resource Estimate set out in the Helix Announcements.

Freehill has not independently verified the information relating to the Mineral Resource Estimate contained in this announcement. Please refer to the Helix Announcements for further details and for the Competent Person's Statement relating to the Mineral Resources set out in the Helix Announcements.

### **COMPETENT PERSON STATEMENT**

The information in this report that relates to Mineral Resource Estimate and exploration results is based on information compiled by Mr Geoffrey Muers, a Competent Person who is a Fellow of the Geological Society of Australia. Mr Muers is a consultant to Freehill Mining Limited and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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' (the JORC Code 2012). Mr Muers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### **FORWARD-LOOKING STATEMENTS**

This report may contain "forward-looking statements" within the meaning of securities laws of applicable jurisdictions. Forward-looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "target", "intend", "plan", "estimate", "anticipate", "believe", "continue", "objectives", "outlook", "guidance" or other similar words, and include statements regarding certain plans, strategies and objectives of management and expected financial performance. These forward-looking statements involve known and unknown risks, uncertainties and other factors, many of which are outside the control of Freehill and any of its officers, employees, agents or associates. Actual results, performance or achievements may vary materially from any projections and forward-looking statements and the assumptions on which those statements are based. Exploration potential is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. Readers are cautioned not to place undue reliance on forward-looking statements and Freehill assumes no obligation to update such information.

# JORC Code, 2012 Edition – Table 1

From Helix Resources Limited announcement on 13 August 2015

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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 &amp; 80°.</li> <li>• 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.</li> <li>• 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<sub>2</sub> 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 .</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>□ <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond drilling accounts for the majority of the drilling through mineralised zones completed in phase 1 with RC drilling used in phase 2 (2014).</li> <li>• RC Drilling was completed using a 140mm face sampling hammer. Depths ranged from 83m to 144m within the main mineralisation corridor.</li> <li>• Diamond core drilling comprised NQ<sub>2</sub> core and NQ<sub>2</sub> 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.</li> </ul>

personal use only

Criteria	JORC Code explanation	Commentary
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill core and RC samples recoveries were recorded on the lithology field logs with observations compared to the core and samples produced.</li> <li>• 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 marker annotated and checked against core blocks. Any issues are discussed with the drilling contractor.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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</li> <li>• All holes (RC and core) were logged in full.</li> </ul>
<b>Subsampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• The sample sizes are considered appropriate to the grain size of the material being sampled and assayed.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• This is considered appropriate for the material</li> <li>• 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.</li> </ul>
<b>Verification of sampling and assaying</b>	<p>□ <i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <ul style="list-style-type: none"> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<p>□ Significant intersections have been verified by the field geologist(s), Exploration Manager and Managing Director.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The drill spacing is adequate for the geological and grade continuity and is appropriate for Mineral Resource and Ore Reserve estimation.</li> <li>• Samples were composited to 1 metre lengths in any drill hole intercepts where 2m sampling was included in the resource modelling.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• Inclined RC and DDH drilling has been completed within the mineralised zones with good correlation observed between data sets</li> <li>• No orientation based sampling bias has been identified in the data to date.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Chain of Custody is managed by the Company. RC Samples were 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.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Blanco y Negro 1/20 mining concession is 100% owned by Helix Resources Chile Limitada, a 100% owned subsidiary of Helix Resource limited.</li> <li>Title Blanco y Negro 1/20 of the concession is in good standing at the time of reporting and is a mining lease.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> <li>○ <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to ASX announcement on 10 September 2014 and drill collar table in main announcement</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>• <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to section 3</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to previous releases</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Other substantive exploration data</b>	<p>☐ <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>	<p>☐ No additional data is available at the time of reporting</p>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<p>☐ Refer to main body of this release</p>

### 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
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>• <i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i></li> <li>• <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Data used in the resource estimation was derived from the projects drilling database held in Chile and replicated on the company database in Australia.</li> <li>• 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.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The geological interpretation has been based on geological and grade boundaries.</li> <li>The factors for grade continuity are subjective with the limited drilling information. The continuity of the Geology is reasonably understood.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<p>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 intersection between the moderately westerly (grid) steep dipping mineralised zone against the NW (grid) trending near vertical fault.</p> <ul style="list-style-type: none"> <li>The mineralised (true) width varies from 2 to 25 metres.</li> </ul>

personal use only

Criteria	JORC Code explanation	Commentary
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li><i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li><i>The assumptions made regarding recovery of by-products.</i></li> <li><i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>No assumptions have been made for recovery of by-products.</li> <li>No deleterious elements were estimated.</li> <li>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.</li> <li>The Z direction selected at 5 metres to reflect the possible selected mining bench height.</li> <li>N/A</li> <li>Ore grade boundaries were defined within the Blanco Y Negro vein/shear.</li> <li>No top cuts were applied for any of the elements estimated. Coefficient of variation for the estimated elements were low.</li> <li>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.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>Tonnages are estimated on dry basis.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>The nominal 0.3 % Copper cutoff grade used for the mineralized interpretation was chosen as this appears to reflect the natural background grade cutoff.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

personal use only

Criteria	JORC Code explanation	Commentary
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Density measurements were determined on diamond core samples using the 'Archemides Method' (weight in air v's weight in water).</li> <li>• It was not possible to determine the density of much of the friable material, much of which was not recovered in DDHBN003 and ARDBN005</li> <li>• Bulk density was assigned by weathering/material type interpreted from geological logging.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>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).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The Mineral Resource estimated appropriately reflects the view of the competent person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>

personal use only

Criteria	JORC Code explanation	Commentary
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The statement relates to global estimate of tonnes and grade for an Indicated and Inferred resource.</li> </ul>

**Annexure A – HLX announcement: “Maiden Inferred Resource - Blanco Y Negro Project - Chile” dated 20 November 2013**

For personal use only



Helix Resources Limited (ASX:HLX) is a minerals exploration company focused on identification, acquisition and development of projects in Australia and Chile

## MAIDEN INFERRED RESOURCE BLANCO Y NEGRO PROJECT – CHILE

Helix Resources Limited is pleased to announce a maiden inferred resource for the Company's 100% owned Blanco y Negro Project in Region IV – Chile.

### Inferred Resource Estimate – Blanco y Negro Project

Oxide: 1.4Mt @ 1.4% Cu, 0.5g/t Au\*, estimated at a 0.4% Cu cut-off grade  
(20,000t Copper, 23,000oz Gold)

Including a high-grade component of:

Oxide: 0.9Mt @ 2.0% Cu, 0.75g/t Au\*, estimated at a 0.8% Cu Cut-off grade  
(17,000t Copper, 20,000oz Gold)

*\*Numbers subject to rounding*

This is a significant step for the Blanco y Negro project

- The inferred resource provides a foundation for the Company to advance a high grade copper (+ gold) deposit that is nearby to infrastructure in Region IV.
- The resource estimate and associated interpretation has provided a detailed geological model to assist in targeting extensions and repeats of the initial resource at Blanco y Negro.
- Confirms the potential of the area to host deposits of meaningful size and grade that Helix is targeting as part of its broader exploration strategy for the region.

**Table 1: Inferred Mineral Resource Estimate at various cut-off grades**

Cut Off Grade Cu%	Tonnes	Cu %	Au g/t	Cu (t)	Au (oz)
0	2,100,000	1.0	0.4	21,000	24,000
0.3	1,640,000	1.3	0.4	21,000	23,500
<b>0.4</b>	<b>1,440,000</b>	<b>1.4</b>	<b>0.5</b>	<b>20,000</b>	<b>23,000</b>
0.5	1,140,000	1.7	0.6	19,000	22,500
<b>0.8</b>	<b>880,000</b>	<b>2.0</b>	<b>0.7</b>	<b>17,500</b>	<b>21,000</b>
1.5	720,000	2.1	0.8	15,500	19,500
2	430,000	2.4	0.9	10,000	13,000
2.5	100,000	2.9	1.1	3,000	4,000

*Note: Table contents subject to rounding to nearest significant figure*

The resource estimate was undertaken by an external consultant Mr Byron Dumpleton based on geological interpretation by Helix's Chilean and Australian technical team, following the 2,200m of RC/DDH drilling at Blanco y Negro during the 2013 field season. Details of the Estimate are contained in Appendix 1.

For personal use only



Helix Resources Limited (ASX:HLX) is a minerals exploration company focused on identification, acquisition and development of projects in Australia and Chile

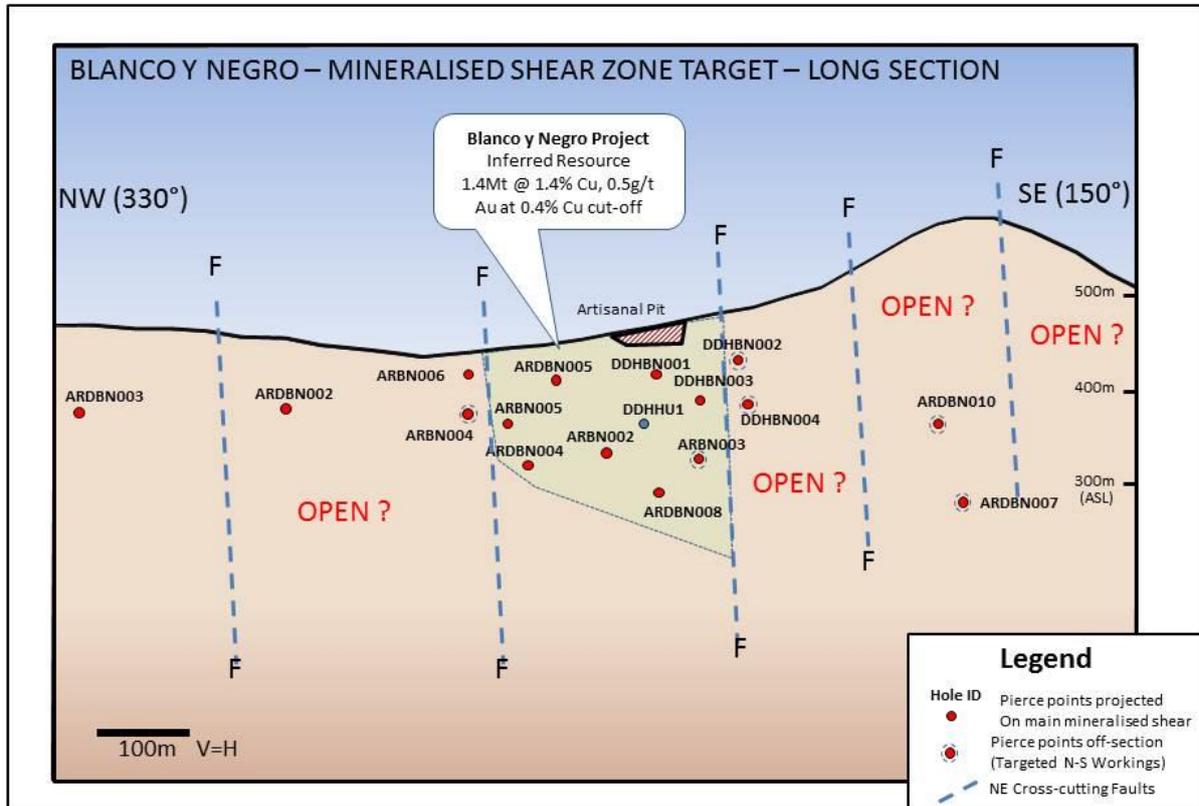


Figure 1: Longsection of main shear direction showing approximate outline of resource wireframe

## Future Activities

Based on the establishment of a maiden inferred resource for the Blanco y Negro Project and geological model derived from the resource process, Helix has identified a series of targets along strike and within the mining lease that will be prioritised for future programs.

The geological model referenced back to surface magnetics (Figure 2) illustrates several zones of interest, where late-stage NE striking faults appear to offset the main NW shearzone.

Surface mapping over a strike of ~600m has been undertaken along the southern extension of the offsets of the main trend and further mapping is planned.

For personal use only



Helix Resources Limited (ASX:HLX) is a minerals exploration company focused on identification, acquisition and development of projects in Australia and Chile

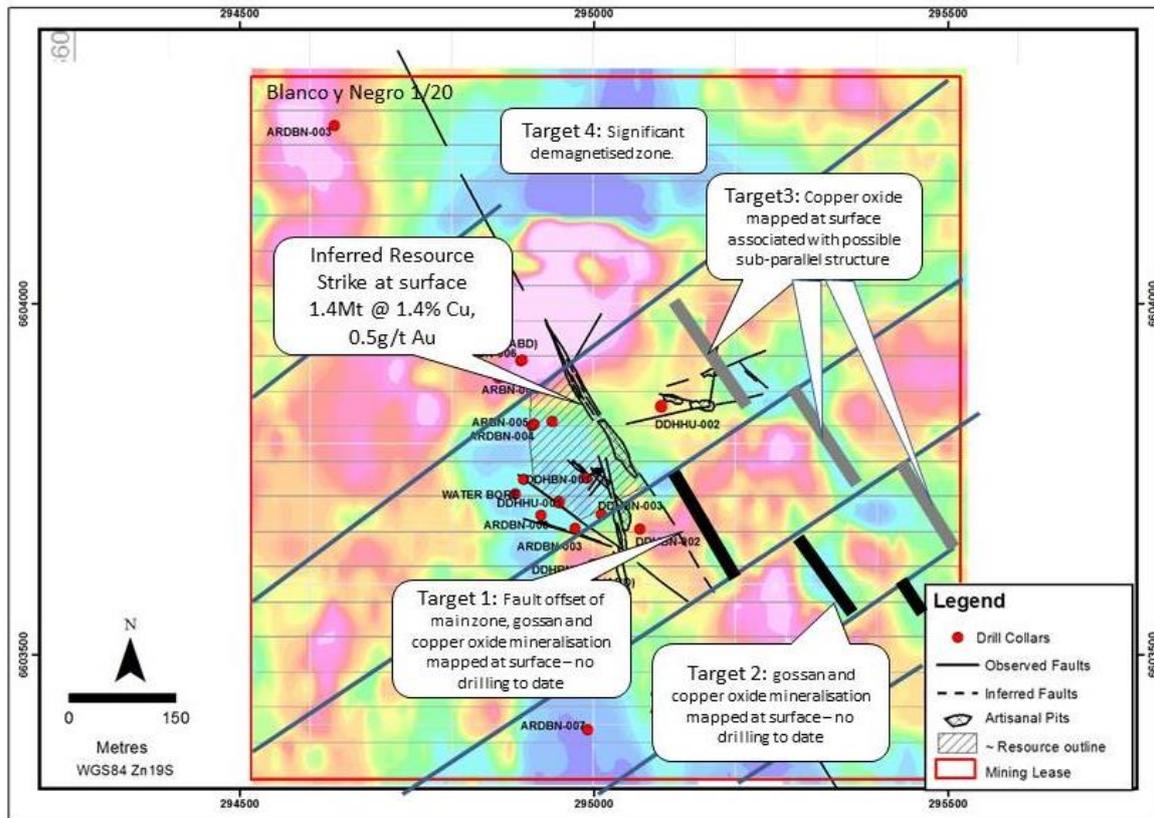


Figure 2: Blanco Y Negro Mining concession on ground magnetics with activities to date and future targets.

Table 2: Drill Collar coordinates

Site ID	Northing WGS84	Easting WGS84	Local N	Local E	RL	Azimuth	Dip	Length
ARBN13-001	6603729	294889	100019	9825	446	0	-90	104
ARBN13-002	6603749	294901	100031	9845	444	60	-55	120
ARBN13-003	6603679	294974	99934	9874	454	60	-80	169
ARBN13-004	6603894	294865	100174	9887	441	60	-58	120
ARBN13-005	6603827	294915	100091	9897	439	60	-60	83
ARBN13-006	6603919	294899	100179	9929	437	60	-55	130
ARDBN13-002	6604074	294775	100375	9899	460	60	-60	159.3
ARDBN13-003	6604253	294634	100601	9866	450	60	-52	151.4
ARDBN13-004	6603826	294913	100091	9894	439	60	-83	140.2
ARDBN13-005	6603832	294941	100082	9922	445	60	-55	100.8
ARDBN13-006	6603918	294897	100179	9927	437	60	-87	40
ARDBN13-007	6603393	294992	99676	9745	468	60	-60	102
ARDBN13-008	6603698	294926	99974	9842	447	60	-80	248.2
ARDBN13-009	6603629	294999	99877	9870	466	60	-85	60
ARDBN13-010	6603443	295089	99671	9855	495	60	-55	240
DDHBN13-001	6603751	294989	99988	9923	461	60	-50	91.6
DDHBN13-002	6603678	295065	99887	9952	478	60	-70	91.6
DDHBN13-003	6603699	295011	99932	9915	469	60	-80	122
DDHBN13-004	6603627	294999	99876	9869	466	60	-63	170.3
DDHHU12-001	6603717	294951	99978	9873	454	50	-60	309.75

Key to collar names: ARBN-XXX - RC Only, ARDBN-XXX - RC with DDH tail, DDHBN-XXX - DDH Only

# Helix Resources Limited

## Gold, Copper, Iron Ore in Australia and Chile



Helix Resources Limited (ASX:HLX) is a minerals exploration company focused on identification, acquisition and development of projects in Australia and Chile

### Competent Persons Statement for the Blanco Y Negro Resource.

The information in this report that relates to Exploration Results is based on information compiled by Mick Wilson and is a full-time employee of Helix Resources Limited. Mr Wilson is a member the Australasian Institute of Mining and Metallurgy. Mr Wilson has sufficient experience of relevance to the style of mineralisation and the types of deposits under consideration, and to the activities undertaken, the qualify as Competent Persons as defined in the 2012 Addition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

The information in this report that relates to Mineral Resource Estimation 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.



# APPENDIX 1

## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The Blanco y Negro deposit was delineated using Reverse Circulation (RC) and Diamond Core (DC) drilling. A total of 13 holes were used to delineate and bound the resource estimate. Holes were sited on an approximate 100 x 50m grid and were generally orientated to the Grid East (060°) at dips between -50 &amp; 80°.</li> <li>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.</li> <li>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<sub>2</sub> 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 .</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling accounts for the majority of the drilling through mineralised zones completed to date.</li> <li>RC Drilling was completed using a 140mm face sampling hammer. Depths ranged from 83m to 120m within the main mineralisation corridor.</li> <li>Diamond core drilling comprised NQ<sub>2</sub> core and NQ<sub>2</sub> Core 'tails'. DDH holes ranged from 90-170m. RC Pre-collar depths ranged from 30 to 110m. DC tails ranged in depth from 60 to 150m on these pre-collars.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade</li> </ul>	<ul style="list-style-type: none"> <li>Drill core and RC samples recoveries were recorded on the lithology field logs with observations compared to the core and samples produced.</li> <li>RC samples were checked by the geologist for volume, moisture content, possible contamination and recoveries. Core was</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<p>reconstructed in continuous lengths where applicable and depths marker annotated and checked against core blocks. Any issues are discussed with the drilling contractor.</p> <ul style="list-style-type: none"> <li>• There were some issues with recovery of drill core within the mineralised zones in holes DDHBN13-001 and ARDBN-005, where core recovery was approximately 50-60% due to the friable nature of the mineralisation (breccia).</li> <li>• The copper and gold assays may be more reliable with better recovery in the affected holes. The company plans to “twin” the affected holes in a future program to obtain better recovery via RC or wider diameter DDH core as part of a future program.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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</li> <li>• All holes (RC and core) were logged in full.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• The sample sizes are considered appropriate to the grain size of the material being sampled and assayed.</li> </ul>
Quality of assay data and laboratory	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc,</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> </ul>

Criteria	JORC Code explanation	Commentary
tests	<p><i>the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<p>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.</p> <ul style="list-style-type: none"> <li>• This is considered appropriate for the material</li> <li>• N/A</li> <li>• 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.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant intersections have been verified by the field geologist(s), Exploration Manager and Managing Director.</li> <li>• No twinned holes have been completed to date, however are planned for a future program.</li> <li>• 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.</li> <li>• N/A</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>
Data spacing and	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill holes for ByN is on an approximate 100m x 50m grid spacing, which covers the majority of the main mineralised zone.</li> </ul>

Criteria	JORC Code explanation	Commentary
distribution	<p>degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The drill spacing is adequate for the geological and grade continuity and is appropriate for Mineral Resource and Ore Reserve estimation.</li> <li>Samples were composited to 1 metre lengths in any drill hole intercepts where 2m sampling was included in the resource modelling.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Inclined RC and DDH drilling has been completed within the mineralised zones with good correlation observed between data sets</li> <li>No orientation based sampling bias has been identified in the data to date.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Chain of Custody is managed by the Company. RC Samples were 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.</li> <li>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.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No additional QA/QC has been conducted for the 2013 Resource model drilling. Umpire lab re-assaying of selected samples is planned as part of future development studies.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Blanco y Negro 1/20 mining concession is 100% owned by Helix Resources Chile Limitada, a 100% owned subsidiary of Helix Resource limited.</li> <li>Title Blanco y Negro 1/20 of the concession is in good standing at the time of reporting and is a mining lease.</li> </ul>

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>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 (dominate species, malachite and azurite).</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to drill collar table in main announcement</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to section 3</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to previous releases</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No additional data is available at the time of reporting</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to main body of this release</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>• <i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i></li> <li>• <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Data used in the resource estimation was derived from the projects drilling database held in Chile and replicated on the company database in Australia.</li> <li>• 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.</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> </ul>

Criteria	JORC Code explanation	Commentary
		that developed the Geological Interpretation for the Blanco Y Negro Deposit.
Geological interpretation	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The confidence of the resource figures is suitable for Inferred. The continuity of the geology is reasonably understood but there is not enough drilling information for grade, hence actual metal distribution and is not yet suitable for public reserve evaluation.</li> <li>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. 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 4 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% Cu cut off or vein material with a steep dip of -65 towards grid west.</li> <li>The geological interpretation has been based on geological and grade boundaries</li> <li>The factors for grade continuity are subjective with the limited drilling information. The continuity of the Geology is reasonably understood.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>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 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 15 metres.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of</li> </ul>	<ul style="list-style-type: none"> <li>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 100 metres along strike/plunge with an anisotropy used for the search ellipsoid with a ratio of 2:1 for major to semi-major direction (i.e. down dip direction the distance is 50 m) and 5 to 1 for major to minor direction (i.e. 20m across strike/plunge). For the second pass a 200m 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</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>economic significance (eg sulphur for acid mine drainage characterisation).</i></p> <ul style="list-style-type: none"> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<p>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.</p> <ul style="list-style-type: none"> <li>Blanco Y Negro is a maiden resource. Mining by local artisanal miners has been conducted at surface. No historical records were available to reconcile against the current model.</li> <li>No assumptions have been made for recovery of by-products.</li> <li>No deleterious elements were estimated.</li> <li>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.</li> <li>The Z direction selected at 5 metres to reflect the possible selected mining bench height.</li> <li>N/A</li> <li>Ore grade boundaries were defined within the Blanco Y Negro vein/shear.</li> <li>No top cuts were applied for any of the elements estimated. Coefficient of variation for the estimated elements were low.</li> <li>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.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>Tonnages are estimated on dry bases.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li><i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>The nominal 0.3 % Cu cutoff grade used for the mineralized interpretation was chosen as this appears to reflect the natural background grade cutoff.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>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 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.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Density measurements were determined on diamond core samples using the 'Archimedes Method' (weight in air v's weight in water).</li> <li>It was not possible to determine the density of much of the friable material, much of which was not recovered in DDHBN13-001 and ARDBN005</li> <li>Bulk density was assigned by weathering/material type interpreted from geological logging.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Classification of the resource is based on drilling density, geological confidence and the position of the shoots within the main shear and vein material within the two passes of the estimation runs. All material within the interpreted shear/vein zone within the two passes are classified as Inferred.</li> <li>Appropriate account has been taken of all relevant factors</li> <li>yes</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>No External Audits have been conducted. This is a maiden resource, historical mining has occurred by artisanal miners.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>Discussion of relative accuracy/confidence</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The statement relates to global estimate of tonnes and grade for an Inferred resource.</li> <li>• No production data is available.</li> </ul>

**Annexure B - HLX announcement: "Addendum to Maiden Inferred Resource Chile Announcement" dated 28 November 2013**

For personal use only

# Helix Resources Limited

Gold, Copper, Iron Ore in Australia and Chile



28 November 2013

The Manager  
Company Announcements Platform  
Australian Securities Exchange

BY ELECTRONIC LODGEMENT

## **Addendum to Blanco Y Negro Maiden Inferred Resource Announcement 20/11/2013**

The Company provides an Addendum to the Blanco Y Negro Maiden Inferred Resource Announcement of 20 November 2013 in order to comply with ASX Listing Rule 5.8.1.

Yours sincerely

**Joneen McNamara**  
Company Secretary





## ADDENDUM TO MAIDEN INFERRED RESOURCE BLANCO Y NEGRO PROJECT –CHILE ANNOUNCEMENT.

Helix Resources Limited submits the following information as an Addendum to their Maiden Inferred Resource Blanco Y Negro announcement dated 20<sup>th</sup> November 2013. Further details may be found in Table 1 of APPENDIX 1 of the announcement dated 20<sup>th</sup> November 2013.

### Geology and Geological Interpretation

Blanco Y Negro 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. The material included in the resource is dominated by oxide copper mineral species mainly malachite and azurite.

The confidence of the geology of the resource is suitable for Inferred resource status. The continuity of the geology is reasonably understood but there is not sufficient drilling information for grade, hence actual metal distribution and it is not yet suitable for public reserve evaluation.

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. 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 4 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% Cu 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.

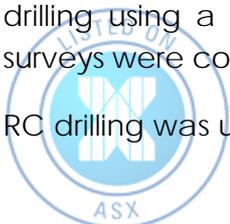
The factors for grade continuity are subjective with the limited drilling information. The continuity of the geology is reasonably understood.

### Sampling and Sub-sampling Techniques

The Blanco Y Negro deposit was delineated using Reverse Circulation (RC) and Diamond Core (DC) drilling. A total of 13 holes were used to delineate and bound the resource estimate. Holes were sited on an approximate 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. 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<sub>2</sub> 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. 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.

## Drilling Techniques

Diamond drilling accounts for the majority of the drilling through mineralised zones completed to date.

RC Drilling was completed using a 140mm face sampling hammer. Depths ranged from 83m to 120m within the main mineralisation corridor.

Diamond drilling comprised NQ<sub>2</sub> core and NQ<sub>2</sub> Core 'tails'. DDH holes ranged from 90-170m. RC Pre-collar depths ranged from 30 to 110m. DC tails ranged in depth from 60 to 150m on these pre-collars.

## Classification Criteria

Drill holes are on an approximate 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, Andes Analytical Assay Limitada. 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.

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. For the first pass a search radius of 100 metres along strike/plunge with an anisotropy used for the search ellipsoid with a ratio of 2:1 for major to semi-major direction (i.e. down dip direction the distance is 50 m) and 5 to 1 for major to minor direction (i.e. 20m across strike/plunge). For the second pass a 200m 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 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.

Blanco Y Negro is a maiden resource. Mining by local artisanal miners has been conducted at surface. No historical records were available to reconcile against the current model.

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.

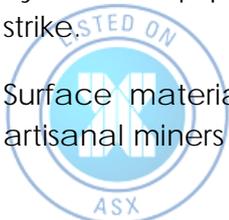
## Cut-off Grades

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. No account has been taken for mining dilution along or across strike.

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 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 study.

## Competent Persons Statement for the Blanco Y Negro Resource.

The information in this report that relates to Exploration Results is based on information compiled by Mick Wilson and is a full-time employee of Helix Resources Limited. Mr Wilson is a member the Australasian Institute of Mining and Metallurgy. Mr Wilson has sufficient experience of relevance to the style of mineralisation and the types of deposits under consideration, and to the activities undertaken, the qualify as Competent Persons as defined in the 2012 Addition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Wilson consents to the inclusion in this report of the matters based on their information in the form and context in which they appear. Mr Wilson has 2,349,700 shares in Helix Resources.

The information in this report that relates to Mineral Resource Estimation 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.



**Annexure C - HLX announcement: "High Grade Copper Gold at Blanco Y Negro Chile" dated 10 September 2014**

For personal use only

## High Grade Copper/Gold at Blanco Y Negro - Chile

- Assay results include 30m @ 1.4% Cu + 0.3g/t Au from 67m incl. 4m @ 5.7% Cu + 0.9g/t Au
- Drilling Program highlights potential for a supergene enrichment zone.
- New untested sub-cropping gossanous zone identified 280m north of current resource.

Helix Resources Limited is pleased to announce results from the recent 8 hole Reverse Circulation (RC) drilling program at Blanco y Negro – Region IV, Chile.

High grade copper and gold assays were returned (refer Table 1), with hole ARBN14-003 returning a significant high-grade intercept of **30m @ 1.4% Cu + 0.3g/t Au from 67m, incl. 4m @ 5.7% Cu and 0.9g/t Au**. The result from this hole confirms the presence of a supergene chalcocite enrichment zone along strike in the system.

Table 1: Significant Copper/Gold intercepts from recent drilling program.

Hole ID	From (m)	Assay Result
ARBN14-002	50m	24m @ 0.6% Cu + 0.2g/t Au incl. <b>10m @ 1.0% Cu + 0.3g/t Au</b>
ARBN14-003	67m	<b>30m @ 1.4% Cu + 0.3g/t Au incl. 4m @ 5.7% Cu + 0.9g/t Au</b>
ARBN14-007	20m	40m @ 0.8% Cu + 0.2g/t Au incl. <b>11m @ 1.7% Cu + 0.5g/t Au</b>
ARBN14-008	28m	18m @ 0.7% Cu + 0.4g/t Au incl. <b>5m @ 1.0% Cu + 1.0g/t Au</b>

Refer to table 2 for full drill hole details.

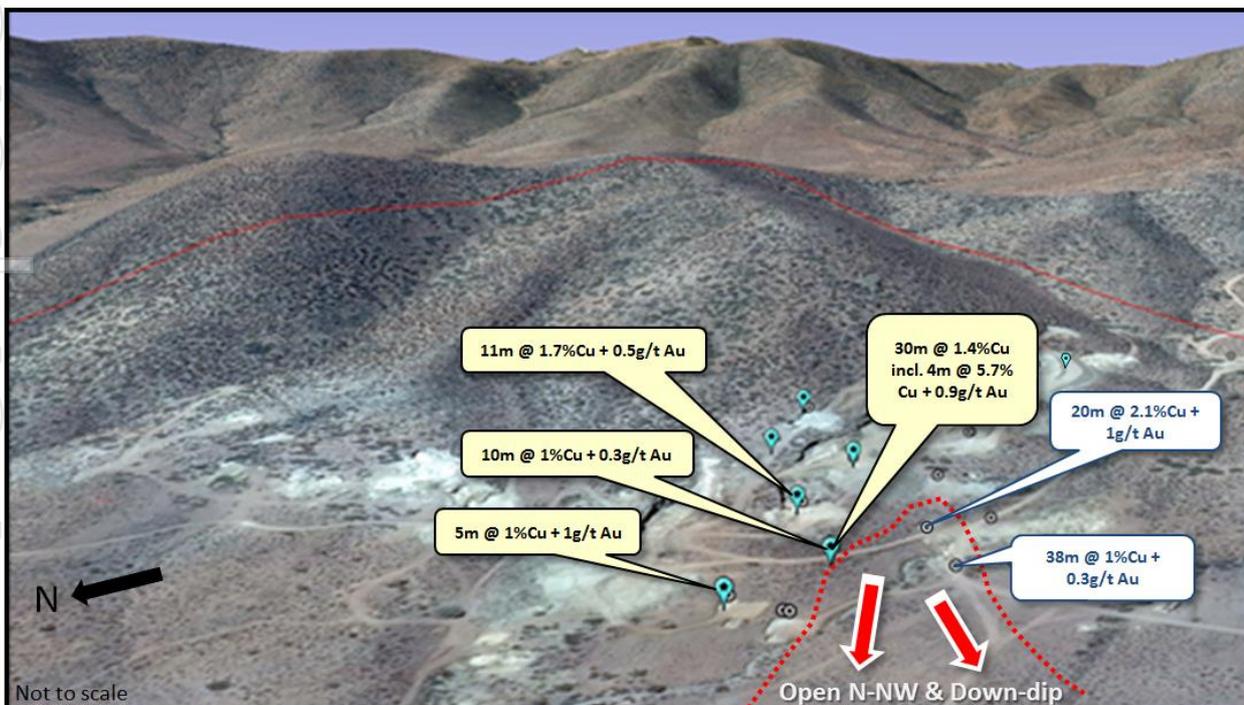


Figure 1: Blanco y Negro Drill collar positions on topography (significant program results – Black, previous results – Blue), mineralisation remains open.

The 686m RC program was completed during August. The best results were returned from a section 70m NW of the original DDHU-001 (20m@ 2%Cu and 1.1g.t Au) where mineralisation was intersected in both holes over significant widths (refer figure 2). This drilling has confirmed the presence of a supergene enrichment zone within the main shear. The chalcocite-rich zone, within the broader intercept, returned significant copper grades and associated gold (**4m @ 5.7%Cu + 0.9g/t Au**).

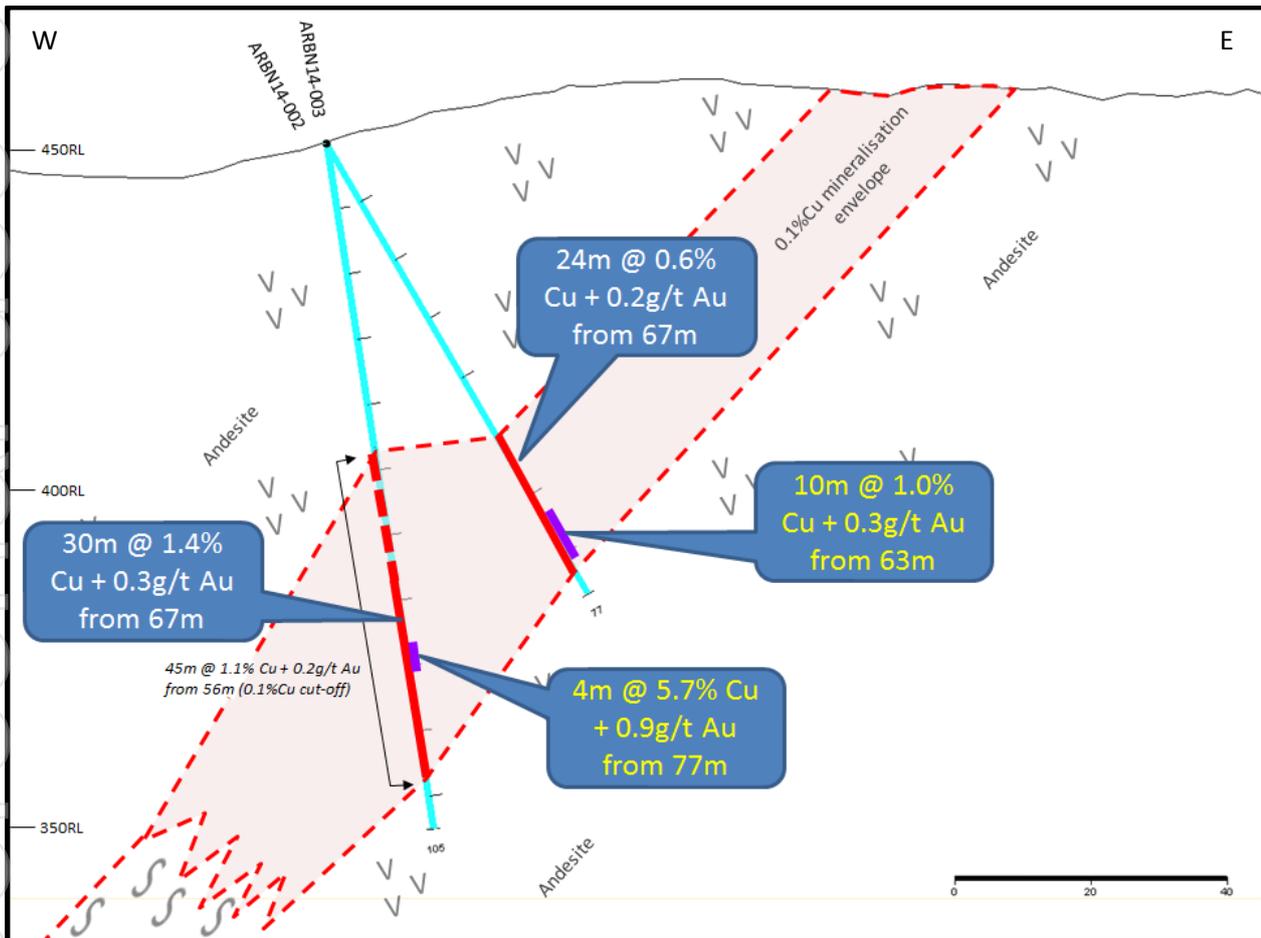


Figure 2: Cross-section showing mineralisation in holes ARBN14-002 and ARBN14-003

The high-grades intersected to date remain open down-dip and to the north-west, providing immediate future drilling targets.

Further field reconnaissance undertaken during the program has identified a new target 280m north of the current resource. This target, untested by drilling, has an associated magnetic low with sub-cropping gossanous material present at surface. This target position is in a similar magnetic setting to where the best grades have been intersected to date in the main zone (refer Figure 3).

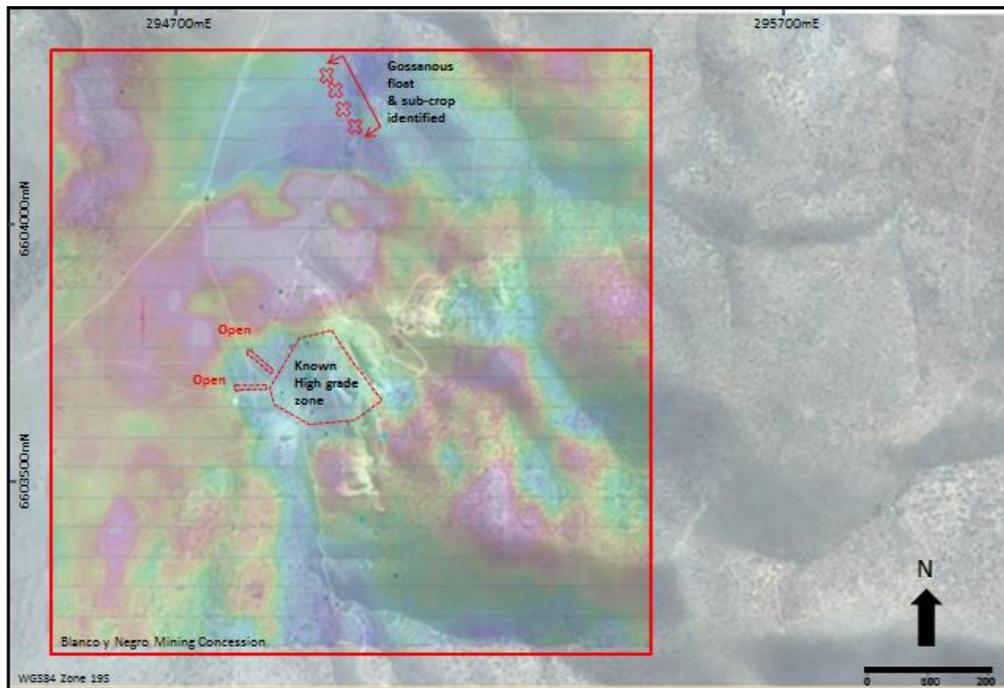


Figure 3: Ground Magnetics over Blanco y Negro Mining Concession, showing location of new target zone

Exploration drilling to the south of the current resource intersected wide zones of anomalous copper and gold. Further work is required in this area.

Table 2: Drill hole details and assay results.

Hole ID	Easting	Northing	RL	Dip	Azimuth	Depth	Results
ARBN14-001	295069	6603679	478	-60	060	144.0	Not sampled
ARBN14-002	294944	6603776	450	-60	060	77.0	From 50m – 24m @ 0.6% Cu incl. <b>10m @ 1.0% Cu + 0.3g/t Au</b>
ARBN14-003	294943	6603778	450	-75	007	105.0	From 56m – 45m @ 1.1% Cu + 0.2g/t Au, incl.– <b>30m @ 1.4% Cu from 67m, incl. 4m @ 5.7% Cu + 0.9g/t Au</b>
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. <b>11m @ 1.7%Cu +0.5g/t Au</b>
ARBN14-008	294941	6603835	445	-60	060	50.0	From 28m – 18m @ 0.7% Cu + 0.3g/t Au incl. <b>5m @ 1.0% Cu + 1g/t Au</b>

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

For personal use only

## Competent Persons Statement

*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](http://www.helix.net.au)

- ENDS -

For further information:

Mick Wilson  
Managing Director  
[mick.wilson@helix.net.au](mailto:mick.wilson@helix.net.au)  
Ph: +61 8 9321 2644

Pasquale Rombola  
Chairman  
[pasquale.rombola@helix.net.au](mailto:pasquale.rombola@helix.net.au)  
Ph: +61 413 239 630

# JORC Code – Table 1

## Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The Blanco y Negro drilling used a commercial contractor for Reverse Circulation (RC) drilling. A total of 8 holes were drilled for 686m (refer Table 2 in body of announcement). Holes were generally orientated to the Grid East (060°), some holes were drilled at different orientations to utilize the limited drill pads available and were drilled at dips between -60 &amp; 80°.</li> <li>The drill hole locations were located by handheld GPS. No down hole surveys were conducted during drilling, however it is expected holes returning economic grades will be surveyed using a down-hole gyro system.</li> <li>RC drilling was used to obtain 1m samples over zones of interest from which 3kg was sent to a commercial laboratory, pulverized to produce a charge with base metals and gold assayed.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>RC Drilling was the method chosen for all holes drilled. A 140mm face sampling hammer was used. Depths ranged from 50m to 140m.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>RC sample weight and recoveries are recorded on the geological logs with results compared to the geological logs.</li> <li>RC samples were checked by the geologist for volume, moisture content, possible contamination and recoveries. Any issues are discussed with the drilling contractor.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Logging of both RC and Core samples recorded lithology, alteration, mineralisation, degree of oxidation, fabric and colour. All RC 1m intervals are stored in plastic chip trays, labeled with interval and hole</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>number.</li> <li>All holes were logged in full.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The preparation of RC and core samples follows industry practice. This involves oven drying, coarse crushing (core-only), pulverization of total sample using LM5 mills until 85% passes 75 micron.</li> <li>Field QA_QC involved field duplicates of RC samples to test repeatability.</li> <li>The sample sizes are considered appropriate to the grain size of the material being sampled. Repeatability of higher grade material is good.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>All assays were conducted at accredited assay laboratory. The analytical technique used for copper was a mixed acid digest with a ICP-AAS detection and a fire assay from a 30g charge with an ICP_OES finish for gold</li> <li>Laboratory QA/QC samples were involving the use of blanks, duplicates, standards (certified reference materials), replicates 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.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Significant intersections have been verified by the Exploration Manager and Directors.</li> <li>Two holes were twinned holes to assess zones of poor recovery from the previous drilling program. Results confirmed mineralisation with grade confirmation/improvement of both copper and gold</li> <li>Geological data was collected using handwritten log sheets which detailed geology (weathering, structure, alteration, mineralisation), sampling quality and intervals, sample numbers, QA/QC and survey data. This data, together with the assay data received from the laboratory and subsequent survey data were entered into Access databases and verified.</li> </ul>
Location of	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations</li> </ul>	<ul style="list-style-type: none"> <li>The drill collar positions were picked-up using GPS.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>data points</i>	<p><i>used in Mineral Resource estimation.</i></p> <ul style="list-style-type: none"> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>Grid system is WGS84 Zone 19S.</li> <li>Surface RL data collected using GPS. Topography around the drilled area is a hill grading from Grid east to a valley grid west of the drilled 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 - 50m line spacing with continuous readings.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill holes for ByN were targeting various geological, structural and geochemical targets.</li> <li>When combined with the drilling to date, the drill spacing is adequate for the geological and grade continuity and is appropriate for Mineral Resource and Ore Reserve estimation.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Inclined RC drilling has been completed within the mineralised zones with good correlation observed between data sets</li> <li>No orientation based sampling bias has been identified in the data to date.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>Chain of Custody is managed by the Company. RC Samples were collected onsite generally in 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.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No additional QA/QC has been conducted for the 2014 drilling.</li> </ul>

**Annexure D – HLX announcement: “Resource Upgrade at Blanco Y Negro Deposit - Chile” dated 13 August 2015**

For personal use only

## 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)

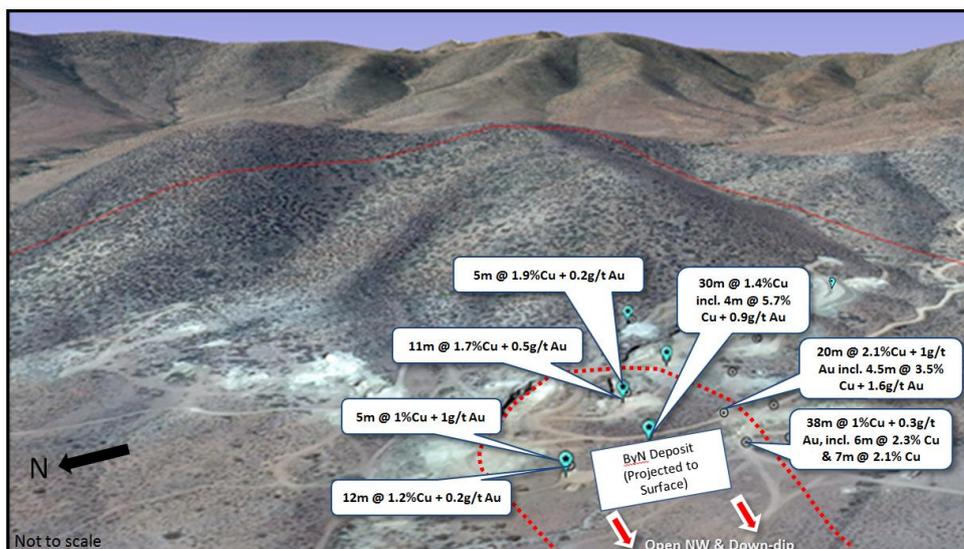


Figure 1: Approximate position of B y N Deposit on local topography with significant results.

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

For personal use only

**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	
<b>Indicated</b>	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
<b>Inferred</b>	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
<b>Total</b>	<b>500kt @ 1.0% Cu, 0.3g/t Au</b>	<b>5,000t Cu 5,000t Au</b>	<b>310kt @ 1.6% Cu, 0.6g/t Au</b>	<b>5,200t Cu 6,100oz Au</b>	<b>620kt @ 1.6 % Cu, 0.6g/t Au</b>	<b>10,000t Cu 12,500oz Au</b>	<b>1.5Mt @ 1.4% Cu, 0.5g/t Au for 20,000t Cu &amp; 24,000oz Au</b>

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.

### **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 from 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 Dumbleton a Consultant Resource Geologist from his company BKD Resources Pty Ltd. Mr Dumbleton is a member of the Australian Institute of Geoscientist. Mr Dumbleton 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 Dumbleton 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](http://www.helix.net.au)

- ENDS -

For further information:

Mick Wilson  
 Managing Director  
 mick.wilson@helix.net.au  
 Ph: +61 8 9321 2644

Pasquale Rombola  
 Chairman  
 pasquale.rombola@helix.net.au  
 Ph: +61 413 239 630

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. <b>10m @ 1.0% Cu + 0.3g/t Au</b>
ARBN14-003	294943	6603778	450	-75	007	105.0	From 56m – 45m @ 1.1% Cu + 0.2g/t Au, incl.– <b>30m @ 1.4% Cu from 67m, incl. 4m @ 5.7% Cu + 0.9g/t Au</b>
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. <b>11m @ 1.7%Cu +0.5g/t Au</b>
ARBN14-008	294941	6603835	445	-60	060	50.0	From 28m – 18m @ 0.7% Cu + 0.3g/t Au incl. <b>5m @ 1.0% Cu + 1g/t Au</b>

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

# APPENDIX 1

## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>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 &amp; 80°.</li> <li>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.</li> <li>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<sub>2</sub> 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 .</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling accounts for the majority of the drilling through mineralised zones completed in phase 1 with RC drilling used in phase 2 (2014).</li> <li>RC Drilling was completed using a 140mm face sampling hammer. Depths ranged from 83m to 144m within the main mineralisation corridor.</li> <li>Diamond core drilling comprised NQ<sub>2</sub> core and NQ<sub>2</sub> Core 'tails'. DDH holes ranged from 90-170m. RC Pre-collar depths ranged from 30 to 110m. DC tails ranged in depth from 60 to 150m on these pre-collars.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential</li> </ul>	<ul style="list-style-type: none"> <li>Drill core and RC samples recoveries were recorded on the lithology field logs with observations compared to the core and samples produced.</li> <li>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</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>loss/gain of fine/coarse material.</i>	marker annotated and checked against core blocks. Any issues are discussed with the drilling contractor.
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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</li> <li>• All holes (RC and core) were logged in full.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• The sample sizes are considered appropriate to the grain size of the material being sampled and assayed.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• This is considered appropriate for the material</li> <li>• 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.</li> </ul>
<b>Verification of sampling</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant intersections have been verified by the field geologist(s), Exploration Manager and Managing Director.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>and assaying</b>	<ul style="list-style-type: none"> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>No adjustments were conducted</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>The drill spacing is adequate for the geological and grade continuity and is appropriate for Mineral Resource and Ore Reserve estimation.</li> <li>Samples were composited to 1 metre lengths in any drill hole intercepts where 2m sampling was included in the resource modelling.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Inclined RC and DDH drilling has been completed within the mineralised zones with good correlation observed between data sets</li> <li>No orientation based sampling bias has been identified in the data to date.</li> </ul>
<b>Sample</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>Chain of Custody is managed by the Company. RC Samples were</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>security</b>		<p>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.</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Blanco y Negro 1/20 mining concession is 100% owned by Helix Resources Chile Limitada, a 100% owned subsidiary of Helix Resource limited.</li> <li>• Title Blanco y Negro 1/20 of the concession is in good standing at the time of reporting and is a mining lease.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Refer to ASX announcement on 10 September 2014 and drill collar table in main announcement</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>metres) of the drill hole collar</i></p> <ul style="list-style-type: none"> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> <ul style="list-style-type: none"> <li>● <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>● <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>● <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li>● <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Refer to section 3</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>● <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>● <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>● <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>● 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</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>● <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Refer to previous releases</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>● <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>● No additional data is available at the time of reporting</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>● <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>● <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Refer to main body of this release</li> </ul>

## Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Data used in the resource estimation was derived from the projects drilling database held in Chile and replicated on the company database in Australia.</li> <li>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.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The geological interpretation has been based on geological and grade boundaries.</li> <li>The factors for grade continuity are subjective with the limited drilling information. The continuity of the Geology is reasonably understood.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li><i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li><i>The assumptions made regarding recovery of by-products.</i></li> <li><i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li><i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<p>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.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>No assumptions have been made for recovery of by-products.</li> <li>No deleterious elements were estimated.</li> <li>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.</li> <li>The Z direction selected at 5 metres to reflect the possible selected mining bench height.</li> <li>N/A</li> <li>Ore grade boundaries were defined within the Blanco Y Negro vein/shear.</li> <li>No top cuts were applied for any of the elements estimated. Coefficient of variation for the estimated elements were low.</li> <li>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.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li><i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>Tonnages are estimated on dry basis.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The nominal 0.3 % Copper cutoff grade used for the mineralized interpretation was chosen as this appears to reflect the natural background grade cutoff.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Density measurements were determined on diamond core samples using the 'Archimedes Method' (weight in air v's weight in water).</li> <li>It was not possible to determine the density of much of the friable material, much of which was not recovered in DDHBN003 and ARDBN005</li> <li>Bulk density was assigned by weathering/material type interpreted</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>evaluation process of the different materials.</i>	from geological logging.
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>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).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The Mineral Resource estimated appropriately reflects the view of the competent person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The statement relates to global estimate of tonnes and grade for an Indicated and Inferred resource.</li> </ul>

**Annexure E - HLX announcement: "Status update on Chilean copper assets"  
dated 22 December 2020**

For personal use only

## Status Update of Helix's Chilean Copper Assets

Advanced copper and gold explorer, Helix Resources Limited (ASX:HLX) (**Helix** or the **Company**) is pleased to provide a status update of its prospective Chilean Copper-Gold Assets.

### HIGHLIGHTS

#### STATUS

Helix retains three projects 100% in Region IV in Chile, including a JORC 2012 compliant copper and gold resource on a granted mining lease and two larger Copper-Gold exploration projects.

The holding costs of these projects over the past 2 – 3 years have been predominantly underwritten by Joint Venture partners, as such the projects have represented a free-option for HLX shareholders to participate in a major copper discovery. We note the copper price is testing the highest level for a decade.

#### BLANCO Y NEGRO DEPOSIT

- An historical mine area within trucking distance of several nearby copper operations with capacity.
- Vein/Shear hosted deposit. Produced low-volume copper as recently as 2014.
- Helix has defined a JORC-2012 Indicated and Inferred Mineral Resource Estimate of 1.5Mt at 1.4% Cu, 0.5g/t Au for 20,000t Cu and 24,000oz Au (see table 1).
- Mineralisation remains open to the northwest, down-dip and down-plunge.

#### JOSHUA COPPER PORPHYRY PROJECT

- A greenfield porphyry discovery by Helix,
- Diamond drilling at the Joshua Prospect produced results including 400m @ 0.33% CuEq from surface.
- Multiple porphyry phases have been identified in the Joshua Copper system over a 6km x 3km area.
- A new, large-scale porphyry prospect at Joshua West has been identified and is yet to be tested with drilling.

#### SAMUEL COPPER MANTO/PORPHYRY PROJECT

- Large target area 19km<sup>2</sup> with initial exploration data collected. (Drone Magnetics, IP Survey, Initial Drilling)
- Deep diamond drilling within breccia and manto style copper target areas have so far produced anomalous results which are indicative of copper-gold (+/- molybdenum) mineralisation.
- A priority target has been delineated from the exploration so far, and provides a high potential walk-up drill target for drill testing.

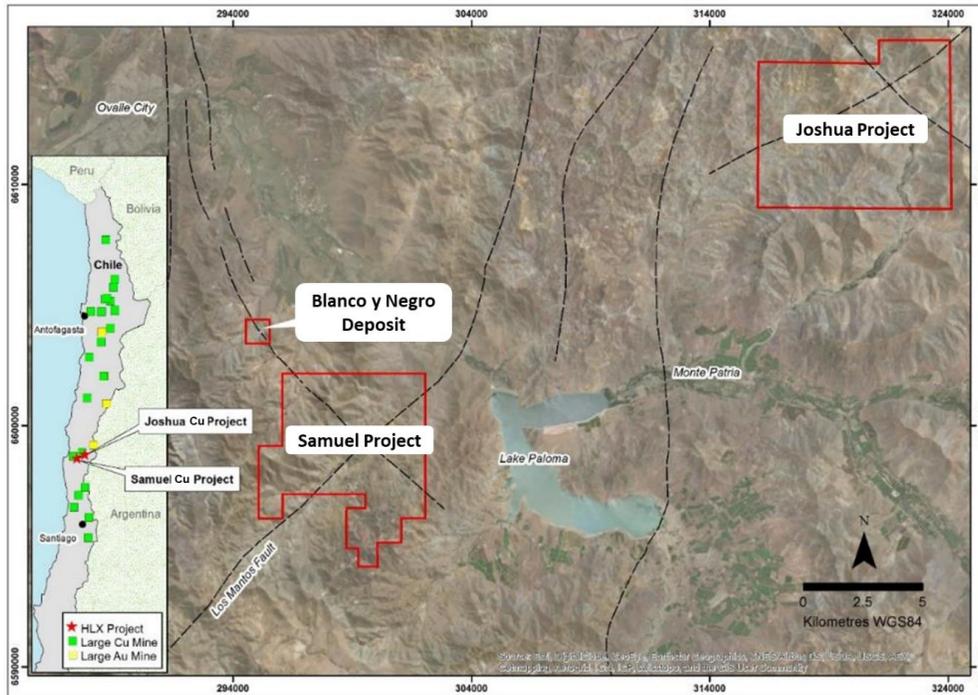


Figure 1: Location map of Helix's Chilean projects, near Ovalle City in the Coastal Range of Region IV

### BLANCO Y NEGRO DEPOSIT (100% HLX)

Blanco y Negro (ByN) is a shear/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 Mineral Resource is dominated by oxide copper mineral species mainly malachite and azurite and in the transition zone chalcocite and chalcopyrite.

The Project consists of approximately 128Ha of exploitation concessions to the northwest of the Samuel Project (Mining Concessions Blanco y Negro 1-20)

Blanco y Negro is hosted in the regionally significant shear system situated 21km NE of Xiana Mining's Punitaqui operations and 10km SW of Ovalle in Coquimbo Region.

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 existing JORC-2012 Mineral Resource at Blanco y Negro is open to the north-west as well as down-dip and plunge.

August 2015 Mineral Resource Estimation (0.5% Cu cut off)

Table 1

	Oxide		Transition		Fresh		Total
	Tonnes & Grade	Metal	Tonnes & Grade	Metal	Tonnes & Grade	Metal	
<b>Indicated</b>	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
<b>Inferred</b>	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
<b>Total</b>	500kt @ 1.0% Cu, 0.3g/t Au	5,000t Cu 5,000t 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

For full details on Resource, refer ASX announcement 13 August 2015

For personal use only

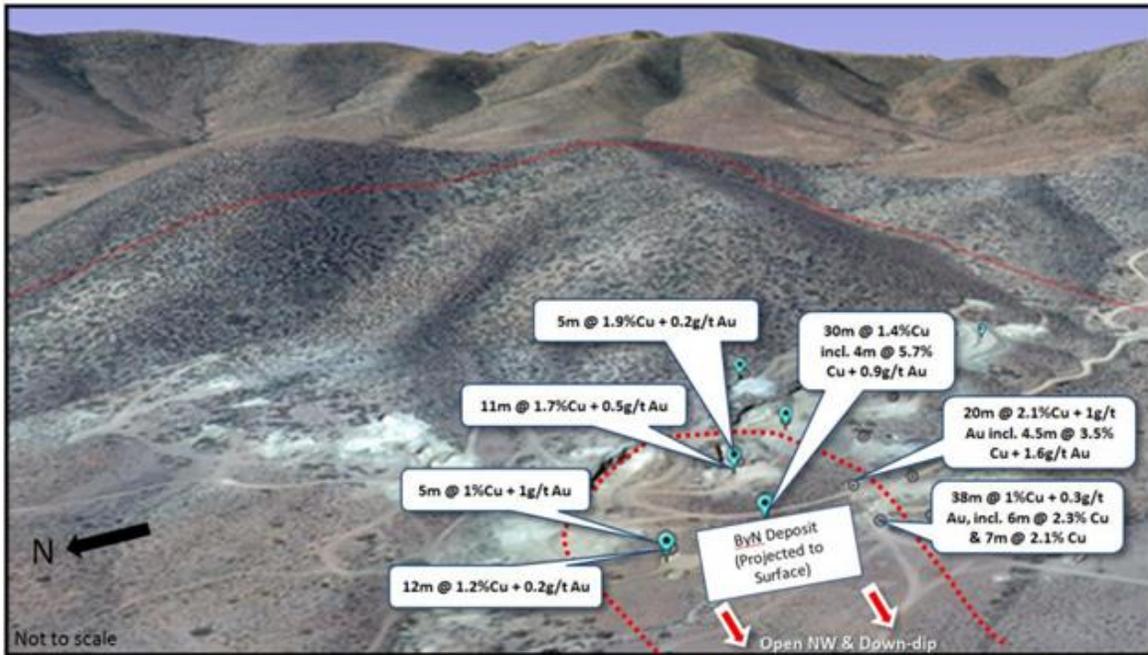


Figure 2: 3d Schematic showing significant drill intercepts at the Blanco y Negro Deposit

### JOSHUA COPPER/GOLD PORPHYRY PROJECT (100% HLX)

The Joshua Project is targeting Cu/Au porphyry systems in a region of lower Cretaceous volcanics, intruded by younger Palaeocene to Eocene intrusives, an important epoch for Chilean porphyry systems.

The Joshua Project is located 350km north of Santiago in Chile's coastal porphyry copper belt. The 50 sq.km project area has all-year-round access and is favourably situated at low altitude, and close to infrastructure including ports, rail, roads and possible power and water solutions for any future mining scenarios.

The Joshua porphyry copper system is characterised by a regionally significant alteration anomaly (6.5km by 2km), centred on a zone of surface copper mineralisation, brecciation and silica-tourmaline alteration. The broad alteration response at Joshua is similar to that of the Andacollo Cu-Au porphyry deposit located 45km to the northwest of the Joshua Project and operated by North American mid-cap company, Teck.

Multiple porphyry phases have been identified at the Joshua Project, with less than 20% of the overall system drill tested to date. A priority drill ready target is present at the Joshua West Prospect.

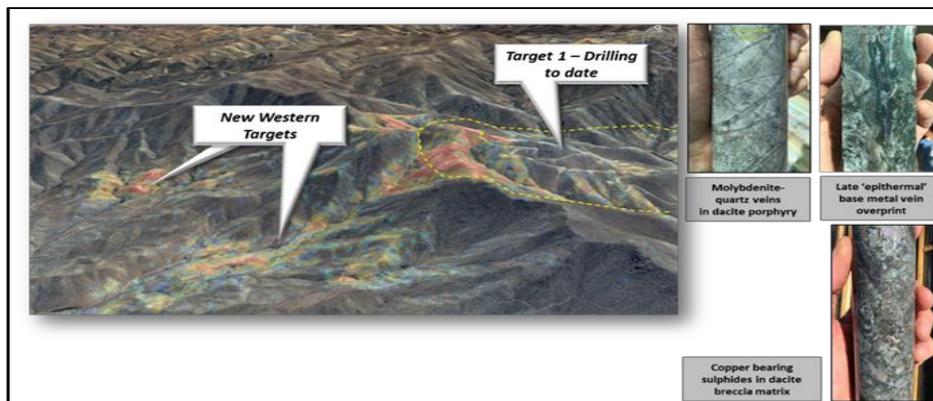


Figure 3: 3d Schematic showing hydrothermal ASTER alteration draped on topography at Joshua and example of porphyry related alteration and veining in diamond core from Joshua drilling.

For personal use only



## Competent Person Statement

The Information in this report that relates to Exploration Results is based on information compiled by Mr Michael Wilson, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Wilson is a full-time employee and shareholder of Helix Resources Limited. Mr Wilson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Wilson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Forward-Looking Statements

This ASX release may include forward-looking statements. These forward-looking statements are not historical facts but rather are based on Helix Resources Ltd.'s current expectations, estimates and assumptions about the industry in which Helix Resources Ltd operates, and beliefs and assumptions regarding Helix Resources Ltd.'s future performance. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates", "potential" and similar expressions are intended to identify forward-looking statements. Forward-looking statements are only predictions and are not guaranteed, and they are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of Helix Resources Ltd. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Helix Resources Ltd does not undertake any obligation to update or revise any information or any of the forward-looking statements in this announcement or any changes in events, conditions or circumstances on which any such forward looking statement is based.

## This ASX release was authorised by the Board of Directors of Helix Resources Ltd.



ABN: 27 009 138 738  
ASX: HLX



**Contact Details:**  
Helix Resources Limited  
78 Churchill Avenue,  
SUBIACO, WA, 6008

PO Box 825  
West Perth, WA, 6872

Email: [helix@helix.com.au](mailto:helix@helix.com.au)  
Web: [www.helixresources.com.au](http://www.helixresources.com.au)  
Tel: +61 (0)8 9321 2644



**Board of Directors:**  
Peter Lester Executive Chairman  
Tim Kennedy Non-Executive Director  
Jason Macdonald Non-Executive Director

**Company Secretary**  
Ben Donovan



**Investor Contact:**  
Peter Lester  
Tel: +61 (0)8 9321 2644  
Email: [helix@helix.com.au](mailto:helix@helix.com.au)



**Media Contact:**  
Michael Vaughan  
Fivemark Partners  
Tel: +61 422 602 720  
Email: [michael.vaughan@fivemark.com.au](mailto:michael.vaughan@fivemark.com.au)

## About Helix Resources

Helix Resources Limited (ASX:HLX) has been listed on the ASX since May 1986, exploring and developing projects in Australia and globally.

The Company's current focus is its exciting copper and gold projects located near Cobar in New South Wales. The Cobar Region is highly endowed, with a number of gold and base metals mines active in the region including the CSA Mine, Peak Mine, Tritton Copper Operations and Hera Mine.

At the Company's 100% owned **Collerina Copper Project**, the Company discovered the VMS-hosted Central Zone deposit in 2017, with a maiden Mineral Resource defined soon after. The Company is actively exploring in and around the Mineral Resource, looking for both clusters of mineralisation as well as potential extensions to the Mineral Resource.

To the west, the Company's 100% owned **Cobar Gold Project** has identified a number of Mineral Resources, mainly focused around high-grade historical workings. The geology and structure at these prospects are similar to that seen at the 4Moz Peak Gold Mine to the north, where deposits are known to extend to over 1600m depth. The Company is looking to increase the Mineral Resources as well as assess near term mining and processing opportunities.

More recently, the Company identified a 1.7km x 0.7km northwesterly trending zone, which it has called the **Rochford Trend**. Within the trend, the **Bijoux Prospect** was the first drill tested by the Company, with wide zones of anomalous copper identified by pXRF analysis in the field. Detailed gold and base metals assays are pending.

For personal use only