



## More High Grade Copper Intercepts at Collierina

### Highlights

- The next batch of assays from the current drilling program at Collierina have been received.
- Further high-grade copper has been returned with an intercept of **4m @ 5.2% Cu, 0.3g/t Au, 1.0% Zn from 278m, incl. 1m @ 10.1% Cu, 0.9g/t Au, 2.7% Zn in CORC096.**
  - *A key result in the plunge portion of the Central Zone - testing a zone of strong off-hole EM conductance, target derived from a nearby hole - CORC088 (4m @ 3.4% Cu).*
- In addition two separate high-grade copper intercepts of **4m @ 2.5% Cu, from 195m, incl. 1m @ 9.2% Cu, 0.2g/t Au and 4m @ 2.4% Cu, 0.2g/t Au, 1% Zn from 222m incl. 1m @ 6.1% Cu, 0.4g/t Au, 3.3% Zn returned in CORC100.**
  - *Another important "linkage" intercept in the 180m "gap" between the Central Zone mineralisation and the deeper plunge plane results returned in mid-2018.*
- These intercepts, which are both open to the north, reinforce the continuous nature of the high grade copper throughout the plunge plane of the deposit.
- A relationship between stronger localised EM conductance and higher copper grades also continues to emerge as the program progresses.

### Ongoing Program

- Inclement weather continued during late December, delaying down hole EM (DHEM) surveying and diamond tails on RC pre-collars deeper in the plunge zone.
- Drilling is expected to recommence later this week targeting EM conductor positions and extensions of the high-grade Central Zone copper mineralisation to approximately 450m from surface and approximately 1,100m down plunge.
- Current drill program now expected to conclude by the end of January.
- Remaining drilling results are to be included in preparation of a maiden JORC resource for the Collierina Deposit, which is now expected to be reported during the first quarter 2019.

Helix Resources Limited (ASX:HLX) (**Helix** or **the Company**) is pleased to provide an update on the reverse circulation (RC) and diamond drill (DDH) program testing for continuity and extensions of the high-grade Central Zone massive sulphide at the Collierina Copper Deposit.

The second batch of assays have been received with further high-grade copper returned from zones of chalcopyrite bearing massive and semi-massive sulphide (refer Figure 1 and 3). High-grade copper has been returned, with an intercept of **4m @ 5.2% Cu, 0.3g/t Au, 1.0% Zn from 278m, incl. 1m @ 10.1%**

**Cu, 0.9g/t Au, 2.7% Zn** in CORC096. This is an important result in the plunge portion of the Central Zone as it tested a zone of strong off-hole EM conductance from a nearby hole - CORC088 (4m @ 3.4% Cu).

In addition two separate high-grade copper intercepts of **4m @ 2.5% Cu, from 195m, incl. 1m @ 9.2% Cu, 0.2g/t Au and 4m @ 2.4% Cu, 0.2g/t Au, 1% Zn from 222m incl. 1m @ 6.1% Cu, 0.4g/t Au, 3.3% Zn** returned in CORC100. This is another important “linkage” intercept in the 180m “gap” between the Central Zone mineralisation and the deeper plunge plane results returned in mid-2018.

These results are significant as they confirm the continuity of Central Zone mineralisation throughout the plunge plane, which remains open at depth (refer Figure 1 & 3). These intercepts which are open to the north also illustrate the relationship between localised zones of strong EM conductance and higher grades of copper within the massive sulphides (refer Figure 2).

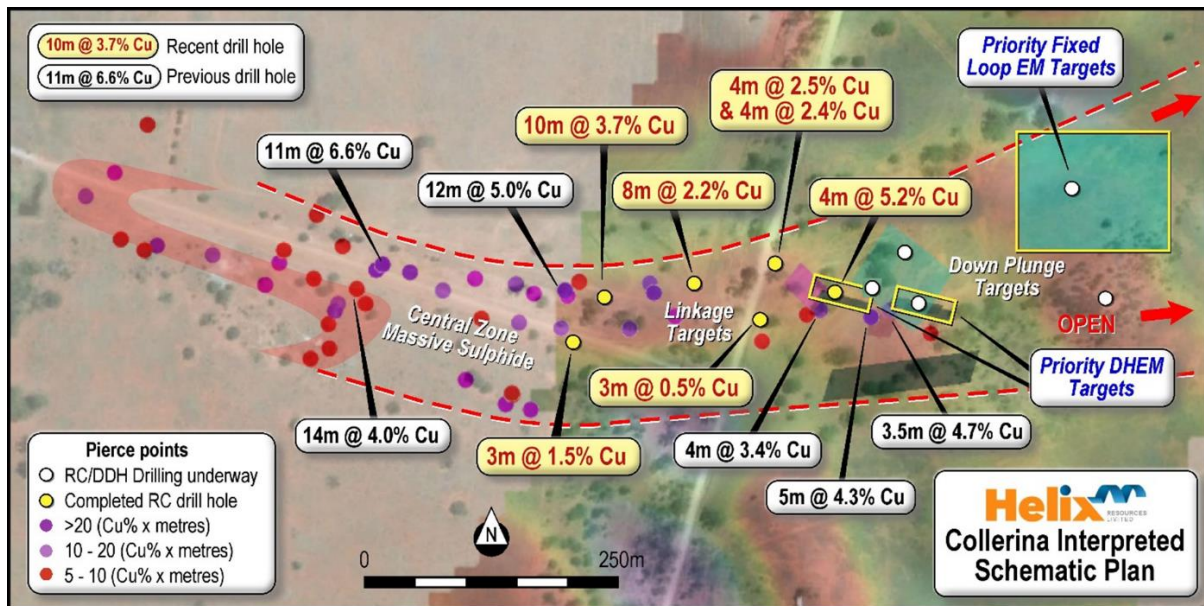


Figure 1: Schematic plan of the Collerina Copper Deposit target corridor with high priority EM targets being tested as part of the current drilling campaign. New intercepts highlighted in red labels.

A third hole CORC091 was also received in this batch, returning 3m @ 0.5% Cu from 249m. This hole appears to have intersected a pyritic (iron sulphide) rich zone, up dip of the high-grade copper-rich zones.

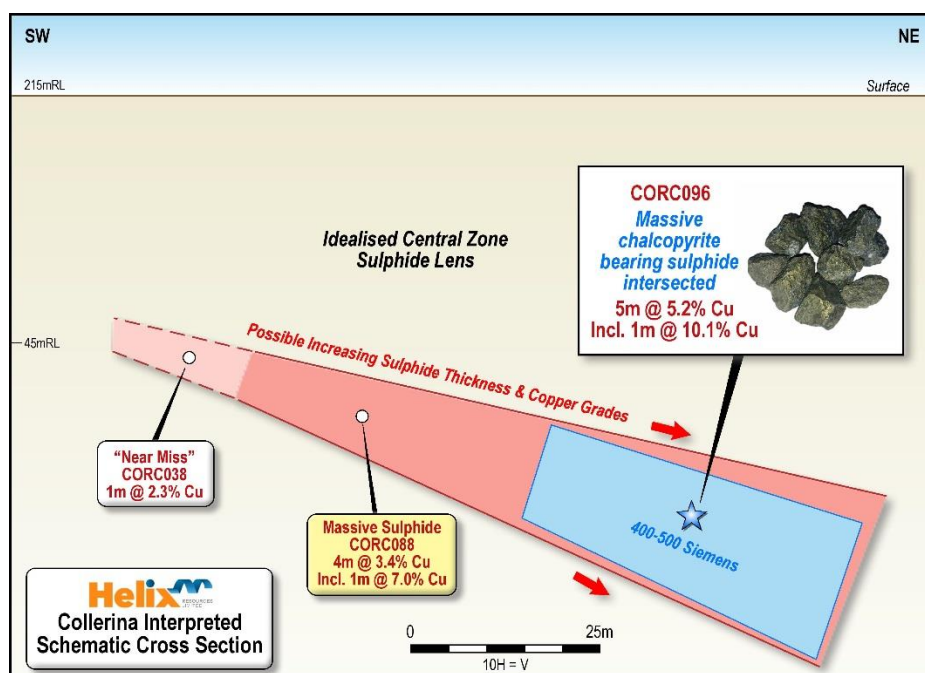


Figure 2: Schematic cross section showing high grade copper associated with strong off-hole EM conductors.

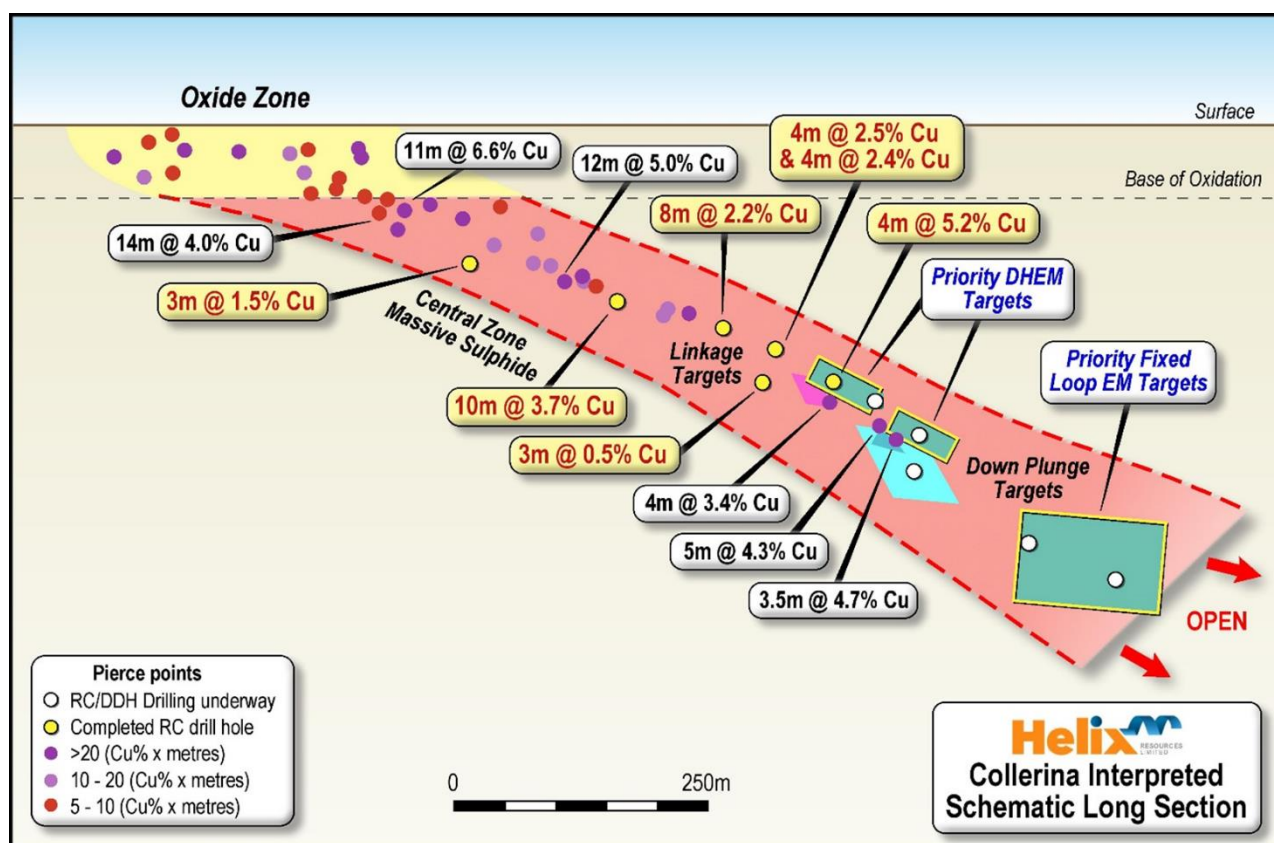


Figure 3: Schematic long-section showing approximate location of drill traces targeting the Central Zone massive sulphide body down plunge approximately 1.1km (450m from surface).

## Ongoing Program

After further delays from weather and contractor scheduling in December, diamond tails on RC pre-collars are recommencing later this week. The remaining drill holes are targeting both DHEM and fixed-loop EM conductor positions deeper in the plunge direction, looking to define and confirm the continuation of the Central Zone copper mineralisation at depth approximately 450m from surface and 1,100m down plunge.

Electromagnetics and a refined modelling method has proven to be an effective exploration tool in the deeper drilling at Collierina and will continue to be used to vector toward higher copper grades within the system.

The current program at the Collierina Deposit is now expected to conclude by the end of January 2019. The remaining results are to be included in a maiden JORC resource, now expected to be reported during the first quarter of 2019.

**Drill Hole Summary – 9 January 2019 (Completed or in progress)**

Hole ID (RC/DDH)	East (MGA-94 zn55)	North (MGA-94 zn55)	Depth (meters)	Dip (degrees)	Direction (grid)	Comment
CORC091	505775	6454915	251	-75	325	<b>Reported</b>
CORC092	505815	6454890	348	-70	010	Pre-collar
CORC093	505788	6454935	295	-75	330	8m @ 2.2% Cu
CORC094	505610	6454970	216	-90	170	10m @ 3.7% Cu
CORC095	505545	6454950	150	-90	170	3m @ 1.5% Cu
CORC096	505780	6454880	330	-70	020	<b>Reported</b>
CORC097	505585	6454890	300	-70	020	Pre-collar
CORC100	505690	6454980	252	-90	180	<b>Reported</b>
CORC101	505895	6454910	340	-90	020	Pre-collar
CORC102	506075	6454990	380	-85	010	Pre-collar
CORC103	506107	6455020	420	-75	010	Pre-collar

Table 1: Drillhole detail for completed or in progress holes in the current program

**Drill Hole Results Summary –9 January 2019 (Completed)**

Hole ID	From	To	Result
<b>CORC091</b>	249m	253m	3m @ 0.5% Cu
CORC093	263m	271m	8m @ 2.2% Cu, 1.1% Zn, 0.14g/t Au, 4g/t Ag
CORC094	161m	171m	10m @ 3.7% Cu, 0.17g/t Au, 0.15% Zn and 6.6g/t Ag
incl:	162m	163m	1m @ 19.7% Cu, 0.33g/t Au, 36g/t Ag, 0.5% Zn
CORC095	127m	130	3m @ 1.5% Cu, 0.2g/t Au
<b>CORC096</b>	278m	282m	4m @ 5.2% Cu, 0.3g/t Au, 1.0% Zn
incl:	279m	280m	1m @ 10.1% Cu, 0.9g/t Au, 2.7% Zn and 15.5g/t Ag
<b>CORC100</b>	195m	199m	4m @ 2.5% Cu
incl:	198m	199m	1m @ 9.2% Cu, 0.2g/t Au and 11g/t Ag
And:	222m	226m	4m @ 2.4% Cu, 0.2g/t Au, 1% Zn
incl:	223m	224m	1m @ 6.1% Cu, 0.4g/t Au, 3.3% Zn and 9.5g/t Ag

Table 2 Results from holes drilled to date in current program, based on 0.1% Cu cut-off and no internal dilution



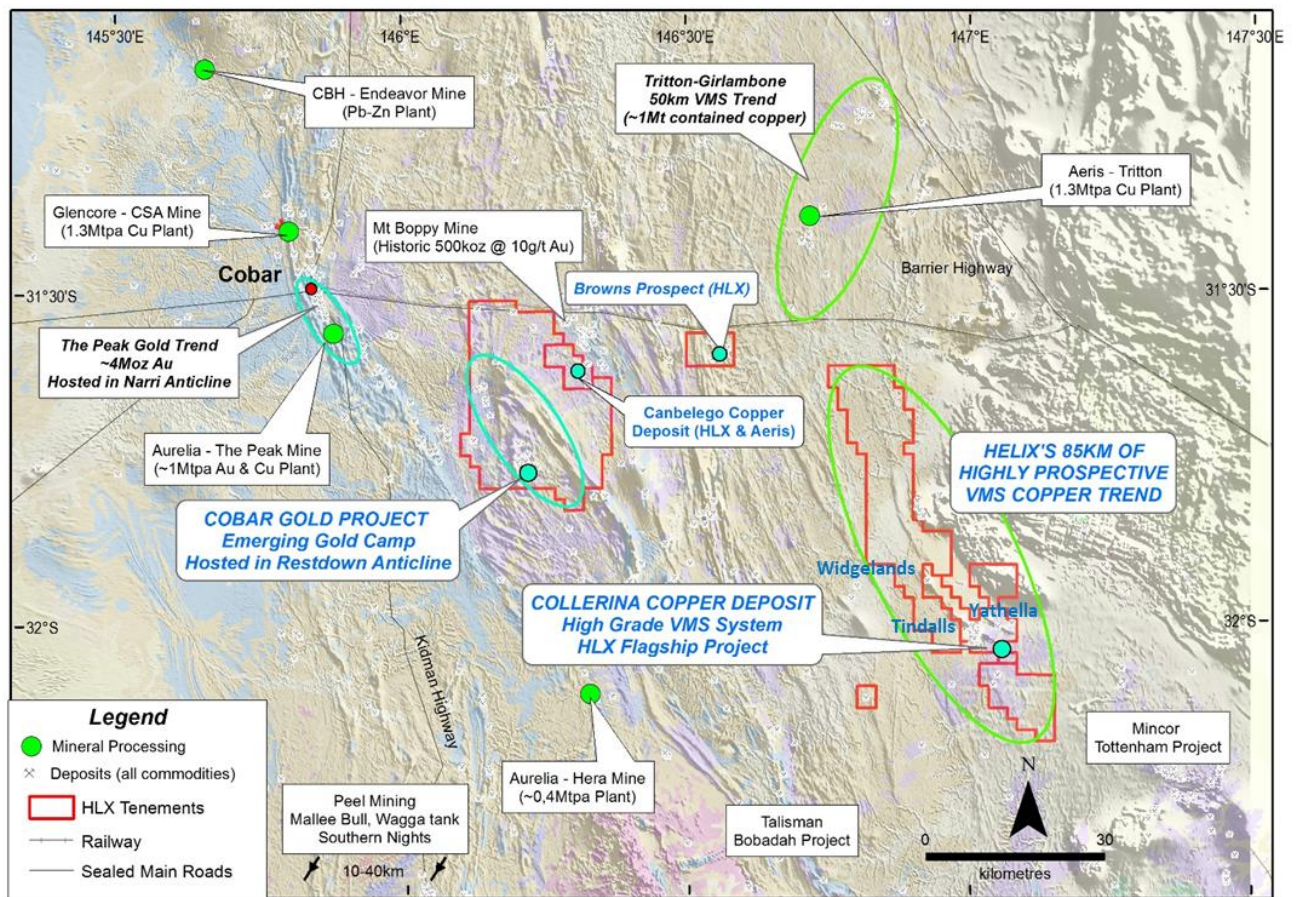


Figure 4: Location of Helix's copper prospects and projects near mining operations in the Central West Region of NSW

- ENDS -

For further information:

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

#### **Competent Persons Statement**

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information reviewed 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 2004 and 2012 Editions 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)

For full details of exploration results refer to previous ASX announcements on Helix's website. Helix Resources is not aware of any new information or data that materially effects the information in this announcement

<sup>1</sup> For full details of exploration results refer to the ASX announcements dated 4 February 2015, 29 June 2016, 1 December 2016, 3 August 2017, 8 November 2017, 14 February 2018, 27 February 2018, 5 April 2018, 14 May 2108, 13 June 2018, 18 July 2018 16 November 2018 and 10 December 2018. Helix Resources is not aware of any new information or data that materially effects the information in these announcements.

#### **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.

No new information that is considered material is included in this document. All information relating to exploration results has been previously released to the market and is appropriately referenced in this document. JORC tables are not considered necessary to accompany this document.

# JORC Code – Table 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 Collierina drilling used a commercial contractor for RC and is following up with DDH drilling. A total of 3 holes were reported (refer Table 1 and 2 in body of announcement). Holes were orientated at various grid directions, and were drilled at dips of 70-90°.</li> <li>The drill hole locations were located by handheld GPS with down hole surveys were conducted during drilling, using an in-rod down-hole system.</li> <li>RC Drilling was used to obtain 1m split samples from selected intervals. Some sampling was completed as 4m composites around areas of interest. RC was collected at the rig as a split sample from each metre with selected metres collected by Helix staff for assay. DDH is using NQ method to collect core, holes to be oriented and logged for geology, structure and rock quality.</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>RC and DDH are the methods chosen for the holes drilled and RC were drilled with a 150mm face sampling hammer and DDH is using the NQ inner tube method using industry practice drilling methods.</li> </ul>
<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>Sample weight and recoveries are observed during the drilling and any sample under-sized or over-sized was noted the geological logs.</li> <li>Samples were checked by the geologist for volume, moisture content, possible contamination and recoveries. Any issues are discussed with the drilling contractor.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<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> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• All RC samples have a representative sieved amount of drill chips collected in trays for future reference.</li> <li>• Logging of Drilling recorded lithology, alteration, degree of oxidation, fabric and colour.</li> <li>• All holes were/are to be logged in full.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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 future DDH samples follow industry practice. This involves oven drying, pulverization of total sample using LM5 mills until 85% passes 75 micron.</li> <li>• Field QA_QC involved repeat sampling and the laboratories standard QA_QC procedures.</li> <li>• The sample sizes are considered appropriate to the grain size of the material being sampled. Repeatability of RC assays was good.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<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 base metals is a mixed acid digest with a MS collection. Gold was assayed via the fire assay method.</li> <li>• Laboratory QA/QC samples involving the use of blanks, duplicates, standards (certified reference materials), replicates as part of in-house procedures.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<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>Results have been verified by Company management.</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 a secure Access databases and verified.</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.</li> <li>Grid system is GDA94 Zone 55.</li> <li>Surface RL data collected using GPS. Topography around the drilled area is a slight slope grading from Grid North-East to drainage west of the main drilled area. Variation in topography is less than 5m across the drilled area.</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 at the Collierina Project are targeting infill zones relating to geophysical targets.</li> <li>This is an infill and step-out drilling program conducted by Helix for the Project.</li> <li>Sampling involved 1m interval samples. Some sampling in areas of low-priority were subject to 4m composite sampling assay. DDH will be sampled on geological boundaries through the zone of interest and 1m intervals beyond that zone.</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 drilling and diamond holes have been previously completed within the copper mineralised zone with good correlation observed between data sets.</li> <li>No orientation based sampling bias has been identified in the data to date.</li> <li>High grade base metals and associated gold was intersected in many of the holes drilled.</li> </ul>
<b>Sample security</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. The samples were freighted directly to the laboratory with appropriate documentation listing sample numbers intervals and/or cut, with 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 drilling to date.</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 Collerina Project is on EL6336, now EL8768. Helix secured the precious and base metal rights under a split commodity agreement with the owners Augur minerals Limited (now Collerina Cobalt/ALPHA HPA Limited). The tenement is in good standing, with a renewal due in October 2019. There are no known impediments to operating in this area.</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>Previous modern exploration on the Collerina was limited to 3 holes drilled by CRA in the 1980's all three holes intersected copper mineralisation. Historic shafts and pits are present in the area, which date back to small scale mining activities in the early 1900's.</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>The prospect is considered to be a hybrid VMS style system similar to the Tritton style systems in the region.</li> </ul>
<b>Drill hole Information</b>	<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:</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 table 1 and table 2 in the body of the text</li> <li>No material information was excluded from the results listed</li> </ul>
<b>Data aggregation methods</b>	<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> </ul>	<ul style="list-style-type: none"> <li>Results were reported from geological intervals, with no internal dilution.</li> <li>No weighting has been used</li> <li>No metal equivalent results were reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<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>The program was designed to intersect various targets of base metal mineralisation.</li> <li>From our understanding of the Prospect, drilling is designed to intersect target mineralisation as close to perpendicular as practical.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to figure 1, 2 and 3</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Table 1 and 2</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Previously reported activities Refer to ASX announcements on <a href="http://www.helix.net.au">www.helix.net.au</a> for details</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Additional drilling and geophysics continues to further assess the extent of the Collierina Deposit, with the company aiming to prepare a resource estimate following this phase of exploration.</li> </ul>