



## **New DHEM Targets identified at Collerina Deposit**

*Drill program commenced testing modelled EM conductive trends*

### **Highlights**

- DHEM surveys across multiple holes have identified further conductive zones at the Collerina Deposit.**
- Interpreted to represent additional sulphide mineralisation within a trend down dip/plunge and east of the Central zone mineralisation at the Collerina Deposit.**
- Modelled off-hole EM plates form a new conductive trend over 300m in length, along interpreted extensions and below the dip plane of previous intercepts.**
- Next round of drilling set to test this trend across two key target orientations.**
- Drill rig has mobilised to site and drilling planned to commence tomorrow.**
- Further DHEM surveys planned to be undertaken post this round of drilling.**

Helix Resources Limited (ASX:HLX) (**Helix** or **the Company**) is pleased to announce that downhole electromagnetic (**DHEM**) surveys completed across multiple previous deeper drillholes have identified a new EM conductive trend at the Collerina Deposit. Modelled EM plates are interpreted to represent potential for additional sulphide accumulation down dip/plunge and east of the Central zone mineralisation.

The Central zone mineralisation at the Collerina Deposit is characterised by a shallow plunging, shallow dipping massive sulphide that has been identified in drilling from surface to a vertical depth of 190m. Average grades in the Central zone exceed 2.5% Cu, with additional zinc, gold and silver present<sup>1</sup>.

The off-hole modelled plates in the new EM conductive trend cover a 300m long zone and are derived from surveys across multiple drillholes. Modelling of the DHEM data in the new zone shows evidence for EM plates in a similar shallow dip to the Central zone massive sulphide mineralisation, as well as evidence for steeper dipping and perpendicular dipping EM plates. The changes in geometry may represent localised folding, feeder zones or re-mobilised sulphide mineralisation on structural offsets.

The holes tested by DHEM surveys were selected following a detailed geological and structural review of the deep diamond tails undertaken in the December quarter of 2017. Several holes were extended as part of this program in order to provide suitable platforms for the DHEM and several loop configurations were used to ensure best electrical coupling with these new target zone plate orientations.

This geological review has also driven the planning of the new drilling program, with a revised drill direction to test both modelled (shallow dipping and steep dipping/perpendicular) plate directions, refer Figure 1.

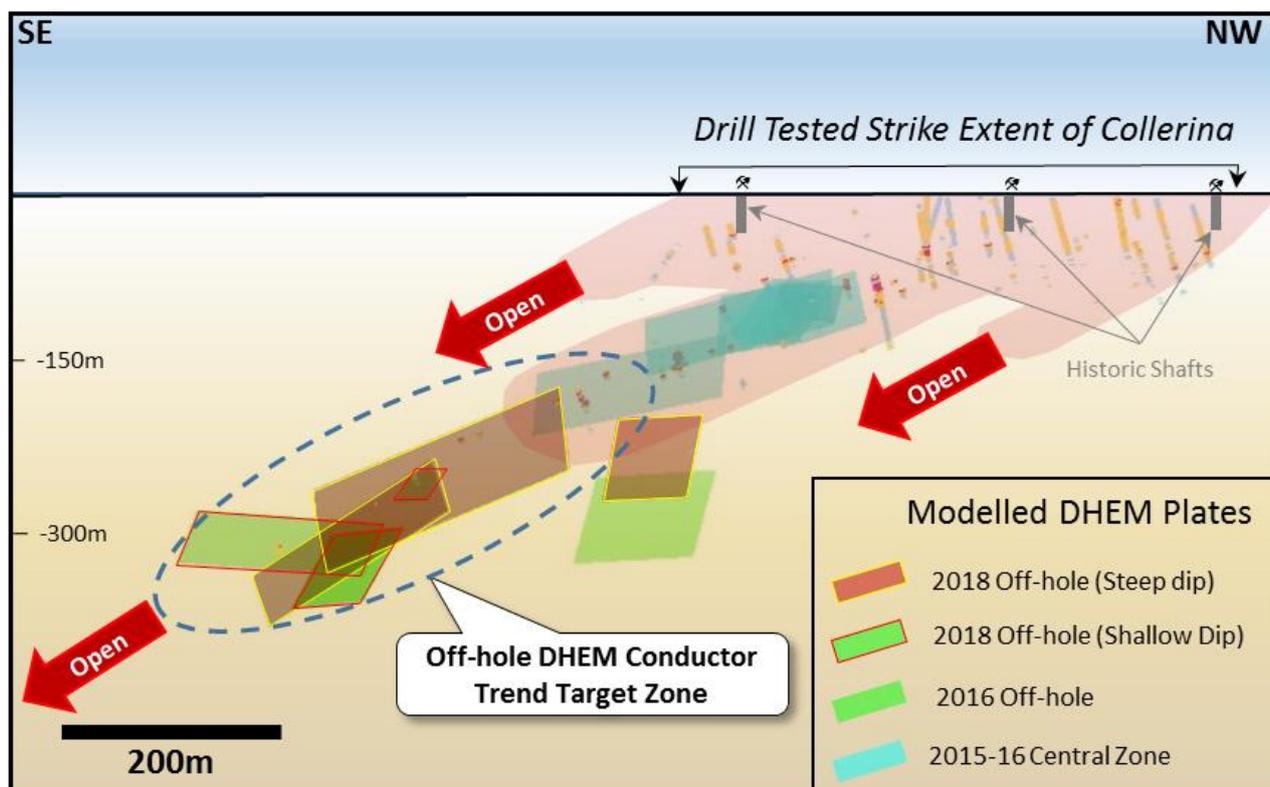


Figure 1: Schematic of Collerina Deposit looking southwest, showing location of modelled plates from recent DHEM surveys

As seen elsewhere in the district, geometry of mineralisation can vary significantly over relatively short distances. Drilling to date in the eastern extensions of Collerina may have been ineffective in testing localised folding and short fault offsets in this dip/plunge position. The recent DHEM has identified clear off-hole conductors in this zone, however the best-fit modelling for several of the EM plates appear to be in a semi-parallel direction to the previous drilling direction.

### Diamond tail drilling

Several extensional diamond tails were drilled last quarter to assess possible extensions in the dip plane of the Collerina Deposit. This was complemented by further tails on previously drilled RC holes on the eastern extension of the Collerina Deposit for these DHEM surveys. As previously reported, the 2017 holes intersected disseminated and veinlets of stringer style sulphides in the dip plane, below and along plunge of the Central zone mineralisation. Holes 81 and 84 were subsequently extended to provide deeper holes for DHEM survey platforms and some zones were selected for assay, refer Table 1.

### Next steps

The next round of drilling at the Collerina Deposit is set to commence today, with a drill rig mobilised to site overnight. Drilling will initially target this latest EM conductive trend, using a revised drill direction, with follow-up DHEM planned in these new platforms to refine the geological model and assist in potential vectoring toward additional zones of massive sulphide.

The planned drilling will be undertaken in conjunction with ongoing regional copper mapping and sampling programs announced recently.

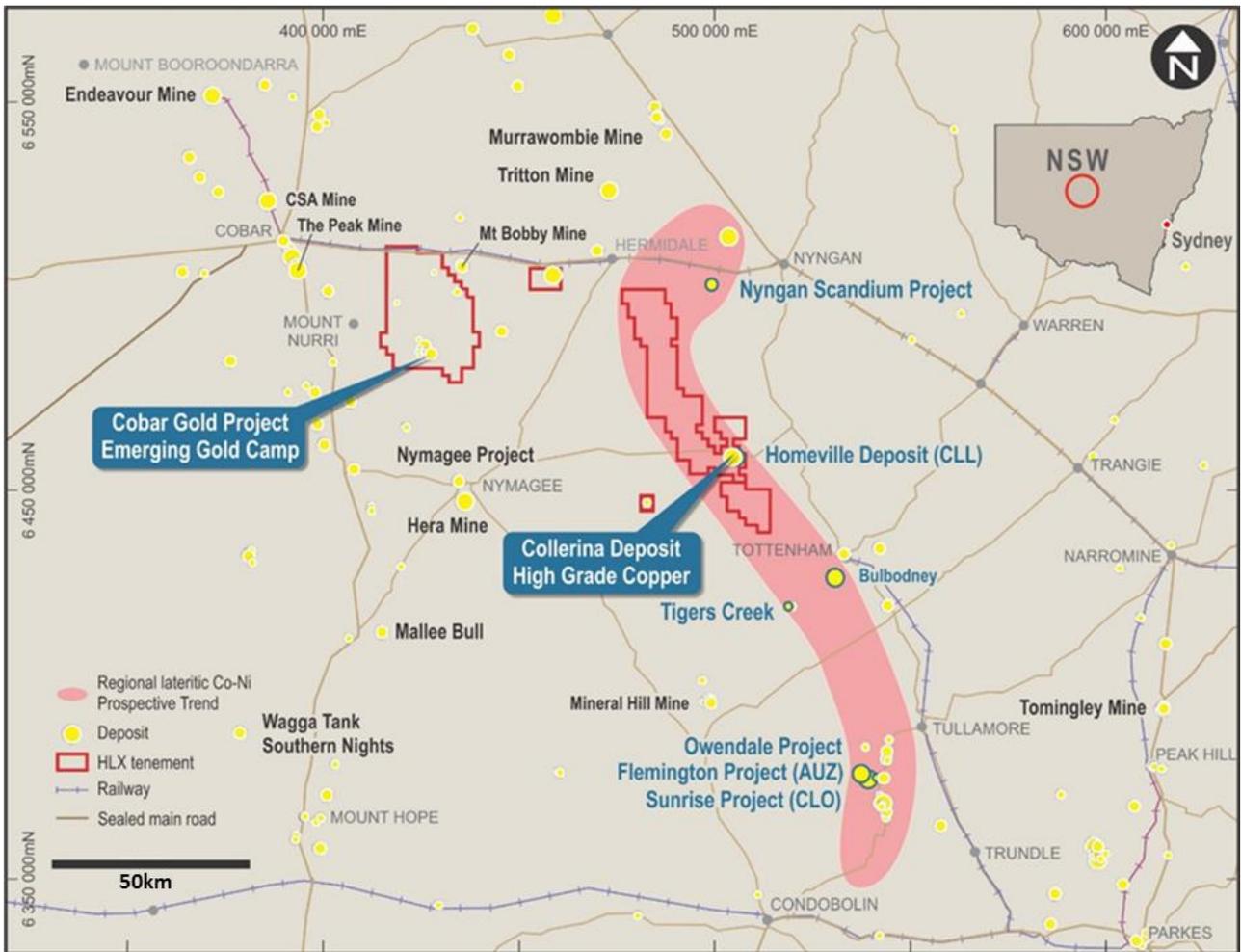


Figure 2: Location map showing Helix's Central NSW projects in relation to operating Copper and Gold mines, significant deposits and projects, and lateritic Co-Ni trend.

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### 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 ASX announcements dated 1 April 2015, 10 November 2015, 18 February 2016, 24 May 2016, 29 June 2016 2 November 2016, 1 December 2016, 13 July 2017 and 8 November 2017. 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.

Table 1: Details from late 2017 DDH tail drilling

Site ID	Easting	Northing	RL	Type	DDH Tail	Total Depth	Sampling	Comments
CORC039	505947	6455141	215	DDH Tail	42.2m	434.2m	Not Sampled	Extended for DHEM only
CORC045	506000	6454975	215	DDH Tail	74.3m	430.3m	22m sampled (NSR)	Extended for DHEM
CORC080	505846	6455177	215	DDH Tail	166.1m	366.1m	25m sampled (NSR)	Intersected Fault
CORC081	505853	6455189	215	DDH Tail	134.8m	384.8m	25m sampled (NSR)	Extended for DHEM
CORC084	505714	6455132	215	DDH Tail	150m	444m	27m Sampled (1m @ 0.6% Cu, within 4m @ 0.2% Cu from 265m)	Intersected copper sulphide stringers in dip plane, extended for DHEM

NSR – No significant result

# 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 Collerina drilling used a commercial contractor for RC and drilling. A total of 5 DDH tails were drilled (refer Table 1 in announcement). Holes were orientated generally to grid 215 grid directions, and were drilled at dips of between 60-90°.</li> <li>• The drill hole locations were located by handheld GPS with down hole surveys conducted during drilling, using an in-rod down-hole system.</li> <li>• DDH drilling was used to obtain 1m to 2m half core samples from selected intervals. DDH drilling is NQ size. Core zones identified for sampling were transported to the laboratory where they were subject to structural and geological logging prior to cutting for sampling.</li> <li>• A Contractor was secured to complete the DHEM survey, undertaken in selected holes from the 2017 DDH drilling program. Several transmitter loops were used to transmit a current of 200 amps. A down hole probe was used to measure the EM response with survey stations every 10m and anomalies of interest were infilled to 5m stations.</li> <li>• A data collection system was used with information transmitted to the Companies Geophysical Consultant (SGC) for QA/QC and data processing and modelling.</li> <li>• Maxwell modelling software was used to model the EM data and produce best-fit plate models where conductors were present.</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>• DDH was the method chosen for the holes drilled and were drilled with NQ triple tube DDH coring, 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>• Recovery is observed during the drilling and any core with core loss was noted the geological logs.</li> <li>• Any issues regarding core loss were 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 core sampled or not is collected in trays and retained 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 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 used standards for 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 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>• 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>• 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>• 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.</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>• 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 at the Collerina Project were mostly drilled to provide suitable platforms for DHEM, with structural and geological data also collected.</li> <li>• This was a step-out and extensional drilling program conducted by Helix for the Project and at the end of the planned programs further DHEM is expected to be completed.</li> <li>• Sampling involved 1-2m interval samples.</li> <li>• The DHEM surveys at the Collerina Deposit were targeting conductors in zones where drilling had identified sporadic copper results within the dip/plunge of the massive sulphide.</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 drilling and diamond holes have been previously completed within the central 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>• The measures taken to ensure sample security.</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>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Chain of Custody of DHEM data is managed by the Company's geophysical field contractor and geophysical consultants. The data is transferred daily and QA/QC'd by a qualified geophysicist.</li> </ul>
<b>Audits reviews</b>	<b>or</b> • <i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>No additional QA/QC has been conducted for the drilling to date.</li> <li>An internal peer review of the DHEM interpretations are carried out internally within the geophysical consultancy.</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/ELA5612. Helix has secured the precious and base metal rights, and certain rights to lateritic cobalt and nickel rights under a split commodity agreement with the owners Augur minerals Limited (Now Collerina Cobalt Limited). The tenement is in good standing. 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 tenement for copper was limited to historic copper shafts and pits are present in the area, which date back to small scale mining activities in the early 1900's. CRA completed 3 holes at Collerina prior to Helix's involvement</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 prospects are considered to be similar to Tritton-style mineralisation and structurally modified VMS systems, similar to the many similar copper 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>Drilling assays reported relate to DDH tails on exploratory holes targeting possible copper mineralisation extensions and to provide platforms for DHEM surveys. Only selected zones were collected for assay.</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> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Results were reported for samples of DDH completed.</li> <li>No weighting has been used</li> <li>No metal equivalent results were reported.</li> </ul>
<b>Relationship between mineralisation</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</li> </ul>	<ul style="list-style-type: none"> <li>The program was designed to assess the dip potential of the Collerina Deposit and to provide deep platforms for DHEM targeting massive sulphide accumulation. A significant trend of off-hole</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>n widths and intercept lengths</b>	<p><i>drill hole angle is known, its nature should be reported.</i></p> <ul style="list-style-type: none"> <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>	<p>Conductors has been identified for testing</p> <ul style="list-style-type: none"> <li>Some of the geometry of the new EM modelling is near parallel to previous drilling and will therefore require a different drill direction to test in the follow-up program</li> <li></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 figure 1 and 2</li> </ul>
<b>Balanced reporting</b>	<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>Refer to Table 1</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>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><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>Drilling underway, further mapping and regional geophysics is planned to further assess the potential of the the Collerina Deposit and region prospectivity on the tenement.</li> </ul>