

ASX Announcement 14 April 2015

### **DHEM IDENTIFIES UN-TESTED ZONE AT COLLERINA**

- The latest Down Hole Electromagnetic (DHEM) survey has identified a steeper dip to the high-grade VMS mineralisation;
- With this revised orientation, drilling so far has only intersected the upper portion of the high-grade mineralisation.
- A detailed review of previous drilling is underway to assist in targeting high-grade mineralisation in future programs.
- Gold assays from recent drilling program have now been received with peak values of up to 1.1g/t Au being returned. These results show good correlation with the base metal results.

Helix Resources Limited (ASX:HLX) is pleased announce that modelling has been received from the latest DHEM geophysical survey that was completed in 3 selected holes.

The latest DHEM modelling provides an orientation of the EM conductors of at least 60 degrees. Previous modelling suggested the EM conductors had an orientation of 30 degrees. Given the massive sulphide nature of the mineralisation intersected in the drilling so far, the previous DHEM surveys appear to have been dominantly influenced by the strength of the plunge response.

In consultation with the Company's technical advisor, a detailed geological review is currently underway assessing all data gathered from the 2,100m of drilling completed to date. This work will be used to best target down-dip drilling of the high grade zone in future programs.

Higher grade VMS-style mineralisation, with intercepts exceeding 3% copper (with associated zinc, gold and silver) have been returned over a strike of at least 200m, remaining open down dip and along the plunge direction to the north-east. It also appears likely that the zone of interest is tightly folded (possibly asymmetrically), with potential for thickening of mineralisation in fold noses, repeats of mineralisation in fold limbs and also separate mineralised horizons along strike.

The Company has now received gold assays from the recent drilling program. Gold assays correlate well with the base metal results and complement the significant intercepts detailed below.



Table 1: Significant Collerina Prospect March Drilling Results- March 2015<sup>1</sup>

Site_ID	Depth from	Result
CORC010	78m	5m@ 0.5% Cu, 0.1g/t Au, 2g/t Ag
Incl.	79m	1m @ 1% Cu, 0.2g/t Au, 4g/t Ag
CORC011	84m	10m @ 2.6% Cu, 1.4% Zn, 0.5g/t Au, 9g/t Ag
Incl.	86m	7m @ 3.2% Cu, 1.7% Zn, 0.6g/t Au, 11g/t Ag
CORC012	97m	9m @ 1.9% Cu, 1.4% Zn, 0.4g/t Au, 7g/t Ag
Incl.	97m	5m @ 3.2% Cu, 2.4% Zn, 0.7g/t Au, 12g/t Ag
CORC013	127m	1m @ 0.2% Zn
CORC014	151m	1m @ 0.9% Cu, 2g/t Ag
and	154m	3m @ 0.2% Zn
CORC015	130m	4m @ 1.6% Cu, 0.4% Zn, 0.3g/t Au, 5g/t Ag
Incl.	131m	2m @ 3% Cu, 0.8% Zn, 0.6g/t Au, 9g/t Ag
CORC016	93mm	2m @ 1% Cu, 0.8% Zn, 0.3 g/t Au, 1g/t Ag

Intersections based on 1m sampling, assayed using mixed acid digest technique for base metals and fire assay method for gold. Results are based on a 0.1% Cu cut-off grade and subject to rounding.

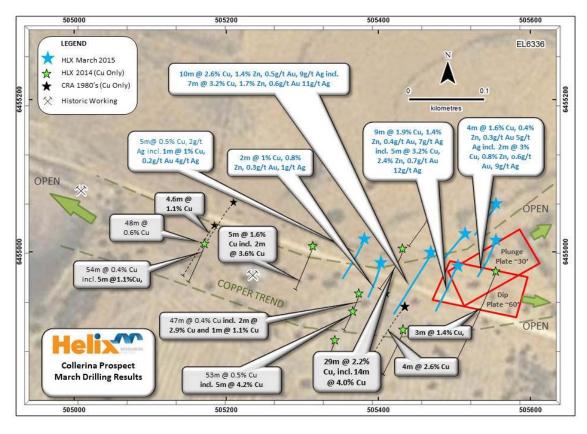


Figure 1: Collerina Prospect - Drill hole location plan, incl. results to date and new DHEM conductors1



- ENDS -

For further information:

Mick Wilson Managing Director mick.wilson@helix.net.au Pasquale Rombola Chairman pasquale.rombola@helix.net.au

Ph: +61 8 9321 2644 Ph: +61 413 239 630

#### **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

<sup>&</sup>lt;sup>1</sup> For full details of exploration results refer to ASX announcements dated 1 April 2014. Helix Resources is not aware of any new information or data that materially effects the information in this announcement.



# JORC Code - Table 1

## Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>The Collerina Prospect drilling used a commercial contractor for Reverse Circulation (RC) drilling. A total of 7 holes were drilled for 1073m (refer Table 2 in body of announcement). Holes were orientated to Grid SW (200 or 210°), and were drilled at dips of 60-70°.</li> <li>The drill hole locations were located by handheld GPS. Down hole surveys were conducted during drilling, using an in-rod down-hole system at a future date.</li> <li>RC drilling was used to obtain 1m samples over the entire hole length with 1m split samples collected (~3kg). The 1m samples were sent to a commercial laboratory, pulverized to produce a representative charge with gold and base metals assayed (Base metals reported 1 April 2015).</li> </ul>
Drilling techniques	<ul> <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> <li>RC Drilling was the method chosen for all holes drilled. A 140mm face sampling hammer was used. Depths ranged from 96m to 200m.</li> </ul>
Drill sample recovery	<ul> <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> <li>RC sample weight and recoveries are observed during the drilling and any sample under-sized or over-sized was noted 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>



Criteria	JORC Code explanation	Commentary
Logging	<ul> <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> <li>All RC chip samples have a representative grab sample placed in 1m intervals in chip trays and geologically logged.</li> <li>Logging of RC samples recorded lithology, alteration, degree of oxidation, fabric and colour. All RC 1m intervals are stored in plastic chip trays, labeled with interval and hole number.</li> <li>All holes were logged in full.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <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> <li>The preparation of RC 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 as well as field standards 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>
Quality of assay data and laboratory tests	<ul> <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> <li>All assays were conducted at accredited assay laboratory. The analytical technique used for base metals, a mixed acid digest with a ICP-AES &amp; MS detection. Gold 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 inhouse procedures. Standard, repeat and duplicate assays for drilling suggest the presence of coarse gold.</li> </ul>
Verification of sampling and assaying	<ul> <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)</li> </ul>	<ul> <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</li> </ul>



Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>protocols.</li> <li>Discuss any adjustment to assay data.</li> <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> <li>laboratory and subsequent survey data were entered into a secure Access databases and verified.</li> <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>
Data spacing and distribution	<ul> <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> <li>Drill holes at the Collerina Prospect were targeting various geological and geophysical targets.</li> <li>This was the second drilling program for the Project and therefore the amount of drilling remains insufficient to establish a JORC compliant resource.</li> <li>Sampling involved 1m interval samples collected and sent to the laboratory for assay.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <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> <li>Massive sulphides was intersected in several of the holes drilled.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <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 with appropriate documentation listing sample numbers and analytical methods requested.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No additional QA/QC has been conducted for the drilling to date.

### Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral	<ul> <li>Type, reference name/number, location and ownership</li> </ul>	The Collerina Prospect is located on EL6336 (Collerina Project),



Criteria	JORC Code explanation	Commentary
tenement and land tenure status	<ul> <li>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>	which is subject to a exploration and development agreement between the tenement owner, Augur Resources Limited and Helix Resources Limited, via its 100% owned subsidiary Oxley Exploration Pty Ltd, Helix has earned 100% of the precious and Basemetal rights which are subject to a 1.5% net smelter royalty retained by Augur. The tenement is in good standing, with a renewal due in October 2015. There are no known impediments to operating in this area.
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Previous modern exploration on the Collerina Prospect was limited to mapping and three holes drilled by CRA in the 1980's. All three holes intersected copper mineralisation (refer Figure 1 &amp; 2). Historic shafts and pits are present in the area, which date back to small scale mining activities in the early 1900's.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The prospect is considered to be a base metal VMS style system consistent with the deposits and mines of the Girilambone-Tottenham district.</li> </ul>
Drill hole Information	<ul> <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> <li>Refer to table 1 in the body of the text</li> <li>No material information was excluded from the results listed</li> </ul>
Data aggregation methods	<ul> <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> <li>A cut-off grade of 0.1% Cu was used</li> <li>No weighting has been used</li> <li>No metal equivalent results were reported.</li> </ul>
Relationship between mineralisatio	<ul> <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> <li>The program was designed to intersect modelled EM conductors and associated geological targets.</li> <li>Result are reported as down hole length, with true width not definitive</li> </ul>



Criteria	JORC Code explanation	Commentary
n widths and intercept lengths	<ul> <li>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>	at this early stage, however review of geological logs suggest the system is dipping/plunging shallowly (<30°) to the Northeast.
Diagrams	<ul> <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>	Refer to body of announcement figure 1
Balanced reporting	<ul> <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>	Refer to Table 1 for all results exceeding 0.1% Cu cut-off
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>Previously reported activities on the Collerina Prospect included a maiden drilling program of 1043m, soil auger sampling, mapping and rockchip sampling andsurface EM and DHEM Surveys. Refer to ASX announcements on <a href="https://www.helix.net.au">www.helix.net.au</a> for details</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout 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> <li>Based on this drill program, and follow-up, the Company is undertaking a geological review, which will determine a plan for further drilling.</li> </ul>