

ASX Announcement 6 October 2016

## **Drilling Commences in NSW**

 Helix is pleased to announce that it has commenced drilling at the Collerina Copper-Zinc Project and recommenced drilling at the Cobar Gold Project in NSW after recent weather delays.

### **Collerina Copper-Zinc Project**

- A program of 11 holes of RC and diamond drilling will test new EM Targets to a depth of 420m at the Collerina Copper-Zinc Project.
- Drilling is testing extensions of the main zone, a strong off-hole EM target (4x EM response of main zone) below previous drilling, and a new EM target located 1km North of the Collerina Prospect.

## **Cobar Gold Project**

- Diamond drilling is targeting structural controls of high-grade gold at the Boundary and Good Friday Prospects.
- Diamond drilling has recommenced after weather delays. Commencement of the proposed aircore drilling at the Battery Tank Prospect will be considered when the prevailing wet ground conditions improve.

Helix Resources Limited (ASX:HLX) is pleased to advise that the drilling programs the Company is undertaking to test extensions and new EM targets at the Collerina Copper-Zinc Project and high-grade gold at the Cobar Gold Project are underway after delays from rainfall and flooding during August and September in the Central Western region of NSW.

### **Collerina Copper-Zinc Project**

Helix has committed to an 11 hole RC and diamond drilling program to test new EM targets at the Collerina Copper-Zinc Project. Drilling will be testing extensions to the main mineralisation position to a depth of 420m. The zone is coincident with EM anomalism in the latest ground and down-hole surveys and extends the main zone target position well beyond the eastern-most holes drilled to date at Collerina (refer Figure 1).

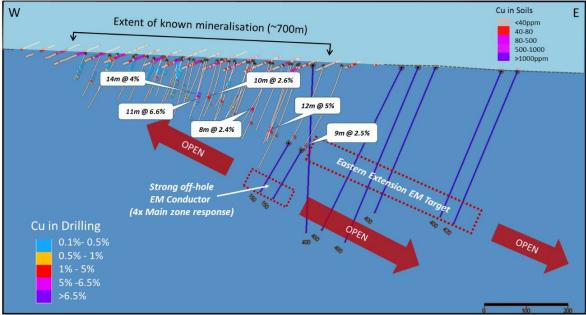


Figure 1: 3D schematic of Collerina Prospect showing EM targets and planned drilling

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The second drill target is a sub-parallel strong off-hole EM conductor (4 times the EM response of main zone) which has been modelled beneath the drilling completed to date. Diamond tails on two holes on the current eastern-most line will test this position (refer Figure 1). This new sub-parallel target position is completely untested by drilling along strike and down dip/plunge. A further 3 RC holes are planned to test a new EM target 1km north of the Collerina Prospect.

### **Cobar Gold Project**

Drilling at the Cobar Gold project is targeting the structural controls of high-grade gold at the Boundary and Good Friday Prospects and first-pass aircore drilling at the Battery Tank Prospect.

Diamond drilling has recommenced after rain delays. A review of the geology in the first diamond hole at the Good Friday Prospect (HRDD001) suggests the hole was drilled within an alteration zone, but has not intersected the main high-grade structure within the depth drilled (93.8m). Gold assays have confirmed this with no significant (>1g/t Au) assays returned.

A second hole is currently underway at the Good Friday Prospect (HRDD003) and is being drilled west and up-dip of the first hole, closer to the historic shaft and controlling high-grade structure. If HRDD003 intersects the structure, there is an opportunity to re-enter the initial hole, HRDD001, to target the main structure at depth.

The hole at the Boundary Prospect (HRDD002) has been completed to a depth of 122m, with good correlation of quartz veining and iron-rich veining in altered sediments through the broad target zone. The core from HRDD002 has been dispatched to the laboratory for cutting and assay.

Commencement of aircore drilling at the Battery Tank Prospect will be considered when the prevailing wet ground conditions improve.

Table 1: DDH Collar details - Cobar Gold Project

Project	Site_ID	Easting	Northing	Dip	Azi	Total Depth	HoleType
EL6140	HRDD001	427021	6485903	-60	218	93.8m	DDH
	HRDD002	428940	6485913	-60	060	122.4m	DDH
	HRDD003	427012	6485887	-60	218	TBA	DDH

Table 2: DDH Results to Date - Cobar Gold Project

Hole ID	From	То		
HRDD001	No Significant (>1g/t Au) result -	No Significant (>1g/t Au) result - Target not intersected in depth drilled (93.8m)		
HRDD002	Core dispatched to Laboratory for cutting and assay			
HRDD003	Drilling currently underway			

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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 <a href="https://www.helix.net.au">www.helix.net.au</a>

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## **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 Cobar Gold Project drilling used a commercial contractor for DDH drilling. A total of 3 holes are being drilled (refer Table 1 &amp; 2 in body of announcement). Holes were orientated to Grid SW (218°) or grid NE (060°), and were drilled at dips of 60°.</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.</li> <li>DDH drilling was used to obtain 1m samples over the entire hole length with 1m half core samples collected (~3kg). The 1m samples were cut and collected at a commercial laboratory, pulverized to produce a representative charge with gold assayed.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	DDH Drilling was the method chosen for all holes drilled. The core diameter was HQ size.
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>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>
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 core is retained as a half core representation of the metres drilled with the core held at the Companies storage facility</li> <li>Logging of Core was recorded lithology, alteration, degree of oxidation, fabric and colour.</li> <li>All holes were/are to be 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</li> </ul>	<ul> <li>The preparation of core samples follows industry practice. This involves oven drying, coarse crushing (coreonly), pulverization of total sample using LM5 mills until 85% passes 75 micron.</li> <li>Field QA_QC involved 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>



Criteria	JORC Code explanation	Commentary
	<ul> <li>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>	
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 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 in-house procedures.</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) protocols.</li> <li>Discuss any adjustment to assay data.</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 laboratory and subsequent survey data were entered into a secure Access databases and verified.</li> </ul>
Location of data points	<ul> <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>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 Cobar Gold Project were targeting various geological and geophysical targets.</li> <li>This was the first DDH drilling program conducted by Helix for the Project and therefore the amount of drilling remains insufficient to establish a JORC compliant resource.</li> <li>Sampling involved 1m interval samples cut at 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>High grade gold was intersected in several of the holes drilled.</li> </ul>
Sample security	The measures taken to ensure sample security.	Chain of Custody is managed by the Company. The core wasfreighted directly to the laboratory with appropriate documentation listing sample numbers intervals to cut and analytical methods requested.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No additional QA/QC has been conducted for the 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 tenement and land tenure status	<ul> <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>	The Cobar Gold Project is located on EL6140 a JV between Helix 70% and manager and 30% Glencore (diluting). The tenement is in good standing, with a renewal due in October 2016. There are no known impediments to operating in this area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Previous modern exploration on the Cobar Gold Project was limited set-depth 20m open hammer holes drilled by CRA in the 1970's with follow-up work by Glencore in the mid 2000's. Historic shafts and pits are present in the area, which date back to small scale mining activities in the early 1900's.
Geology	Deposit type, geological setting and style of mineralisation.	The prospect is considered to be sediment hosted epithermal style gold.
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>	Refer to table 1 in the body of the text     No material information was excluded from the results listed
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.  Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.  The assumptions used for any reporting of metal equivalent values should be clearly stated.	<ul> <li>No significant results to date</li> <li>No weighting has been used</li> <li>No metal equivalent results were reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<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 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> <li>The program was designed to intersect structural controls of high grade gold mineralisation.</li> <li>No significant results have been reported to date</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to previous announcements for hole location
Balanced reporting	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.	Refer to Table 1
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;	Previously reported activities Refer to ASX announcements on <u>www.helix.net.au</u> for details



Criteria	JORC Code explanation	Commentary
	metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	<ul> <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>	Based on positive results from the remainder of this drill program, additional drilling will be considered to further assess the potential of these prospect.