

ASX Announcement

5 February 2016

## **JOSHUA PORPHYRY EXPANDS WITH FURTHER DRILLING RESULTS**

- **Drilling results continue to illustrate the significant size potential of the Joshua Porphyry Copper Project with large widths of copper mineralisation in most holes.**
  - **Copper grades have returned up to 0.9% Cu associated with at least three porphyry events.**
  - **Increasing grade at lower altitudes from drilling is consistent with the geological model and bodes well for further exploration at Joshua.**
  - **The Company and JV partner EPG are currently assessing results and further exploration programs for 2016. A decision is expected to be finalised in March.**
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Helix Resources is pleased to provide further assay results from the remaining holes of the Stage 1 diamond drilling program at the Joshua Copper Porphyry Project in Region IV – Chile.

The Stage 1 diamond drilling program has now been completed by the projects JV partner and all holes intersected porphyry-style mineralisation in part or all of the hole lengths. The program has extended the known strike of the system to at least 800m (Figure 1).

Results from the remaining four holes have been received from the Joint Venture manager. Hole 5 copper grades increased significantly, averaging 0.4%-0.5% Cu over several 10 metre intervals between 450- 700m with a single 2m sample from 466m returning 2m @ 0.91% Cu (copper grades in Hole 5 averaged 0.2% Cu over 498m from 160m). Refer to Table 2 for full results.

The increasing grade at lower altitudes from drilling at Target 1 is consistent with the geological model for the system and bodes well for further exploration at Joshua. The 3,500m of diamond drilling has tested only an 800m x 250m portion of the 3,000m x 1,500m coincident copper-in-soil and IP anomaly which represents the main Joshua porphyry target.

The drilling has confirmed the presence of the high grade copper mineral, chalcocite in the system (Refer photo 1). Drilling also identified at least three separate porphyry events; including: Andesitic, Dacitic and Dioritic porphyry associated with the copper mineralisation at the Joshua Copper Project.

The Joint Venture manager, EPG, is currently compiling data for a detailed report on the drill program to allow the Company and EPG to assess plans for the 2016 exploration program. A decision is expected to be finalised in March.

EPG has an option to increase its equity in the project by funding a further US\$1.8m in the Joshua Copper Porphyry Project.



Photo 1: Chalcocite replacing Chalcopyrite in JO-05

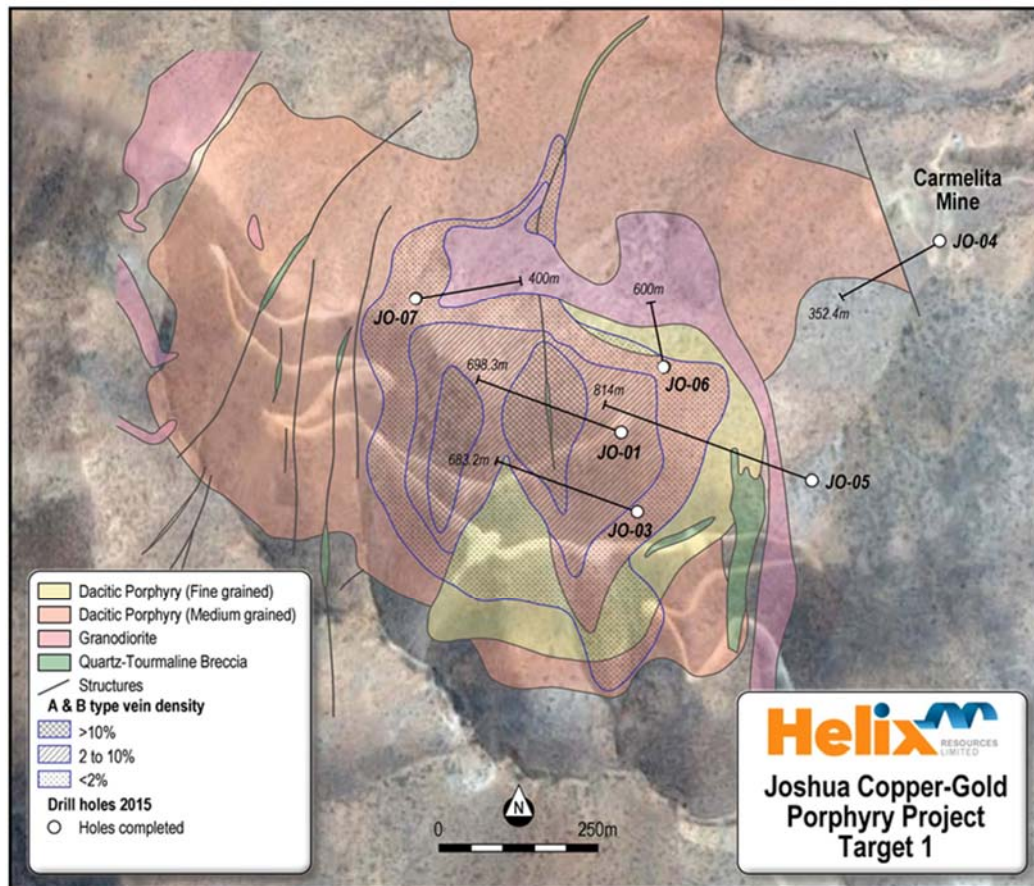


Figure 1: The 2015 Drill hole traces on Joshua Target 1 plan map

**Table 1: Drill Collar locations to date**

Hole ID	Easting (WGS84-19S)	Northing (WGS84-19S)	RL (above sea level)	Azimuth	Dip	Target Depth	Drilled Depth	Comment
JO-01	320750	6613450	1500	290	-70	500	695	
JO-02	320820	6613350	1444	290	-75	600	30	Abandoned
JO-03	320820	6613355	1444	280	-75	600	683	
JO-04	321250	6613750	1178	240	-60	300	352	
JO-05	321050	6613375	1348	290	-65	700	815	
JO-06	320890	6613550	1416	350	-80	600	638	
JO-07	320372	6613672	1416	80	-65	450	242	

**Table 2: Complete Results of the 3,500m drilling program**

Hole ID	From	Result
<b>JO-01<sup>1</sup></b>	0m	650m @ 0.2% Cu, 0.05g/t Au, 1.1g/t Ag and 10ppm Mo
Incl.	388m	94m @ 0.4% Cu, 0.05g/t Au, 1.2g/t Ag and 10ppm Mo
<b>JO-03<sup>2</sup></b>	0m	654m @ 0.2% Cu, 0.04g/t Au and 25ppm Mo*
Incl.	638m	14m @ 0.6% Cu, 0.08g/t Au and 35ppm Mo (to end of porphyry rocks)*
<b>JO-04</b>	264m	89m @ 0.1% Cu to EOH (drill hole did not reach target)
<b>JO-05</b>	160m	498m @ 0.2% Cu, 0.02g/t Au
Incl.	460	10m @ 0.4% Cu (Peak 2m interval assay of 0.9% Cu)
	500	10m @ 0.4% Cu
	622	10m @ 0.5 % Cu
	644	10m @ 0.4% Cu
<b>JO-06</b>	84m	8m @ 0.2% Cu, 0.06g/t Au
and	120m	2m @ 0.4% Cu, 0.2g/t Au
<b>JO-07</b>	20m	22m @ 0.2% Cu

*Intersections based on 2m sampling, assayed using mixed acid digest technique for base metal and fire assay for gold.*

*Results are based on a 0.1% Cu cut-off grade and subject to rounding.*

1. Refer to ASX announcement dated 25 November 2015, Helix is not aware of any new information or data that materially effects the information in the said announcement.
2. Refer to ASX announcement dated 17 December 2015, Helix is not aware of any new information or data that materially effects the information in the said announcement.

*\*Silver assays remain outstanding at the time of reporting.*



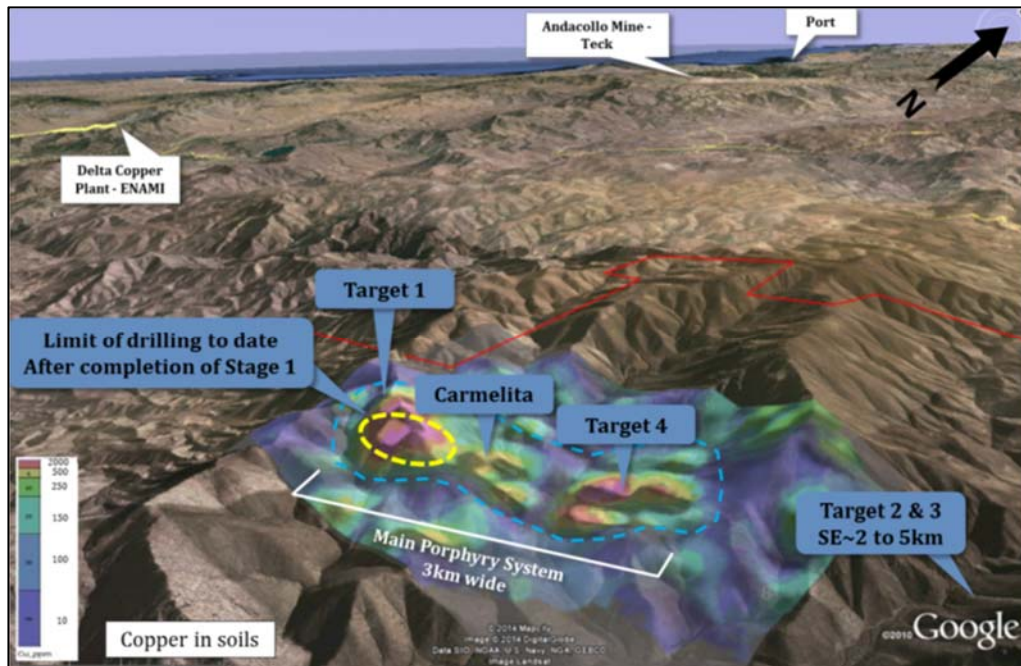


Figure 2: Main Porphyry System at Joshua Project

The main Joshua porphyry target is at least 3 kilometres across and 1 kilometre wide comprising a large copper in soil anomaly coincident with a large IP anomaly, continuing to a depth in excess of 500m from surface. The main Joshua porphyry target comprises Target 1, the Carmelita Mine zone and Target 4.



Photo 2: Chalcopyrite mineralisation from 650m in JO-05



Photo 3: Disseminated Chalcopyrite at 623m in JO-05



Photo 4: Example of molybdenum veining present at Joshua.

### **About the Joshua Project**

The Joshua Project is located in Region IV Chile, 40km East of Ovalle, at low altitude (less than 1,700m), nearby to infrastructure (refer Figure 2). Four porphyry targets have so far been identified in a regionally significant north-west structural corridor within the total project area of 100km<sup>2</sup>.

The main porphyry system (Target 1, Carmelita Mine & Target 4) is defined by an IP anomaly covering 10km<sup>2</sup> and is coincident with anomalous soil geochemistry over the target zone.

### **About the Joshua Project Joint Venture**

An Earn-In Agreement over the Joshua Project was executed in June 2015 with Fondo De Inversion Privado EPG Exploracion Minera (EPG Mining Exploration Fund). The fund is managed by EPG Partners S.A, a Chilean based private equity and advisory company. The fund retains an experienced team and is uniquely suited to capturing exploration opportunities in Chile.

#### **Key terms:**

- Stage 1: EPG has the option to earn a 33.4% interest in the Joshua Project by undertaking a minimum of 3,500m of diamond drilling within 1 year for a minimum commitment of US\$1.2m.
- Stage 2: Upon completion of Stage 1, EPG can then elect to increase its interest to 50.1% in the Joshua Project by completing up to 6,500m of RC and diamond drilling within 1.5 years for a minimum commitment of US\$1.8m.
- Following the completion of the two stage program, EPG will have a 50.1% interest in the project and Helix will retain a 49.9% interest in the project. A Joint Venture over the project will then form to progress the project.



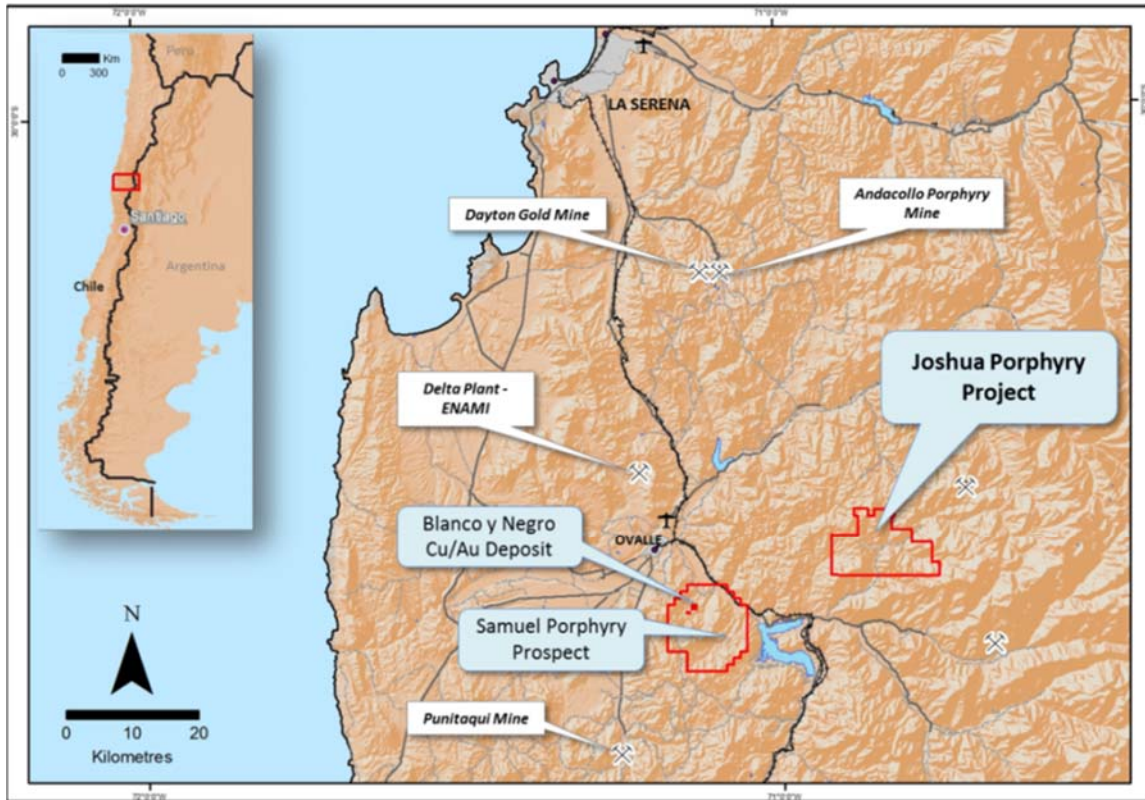


Figure 2: Joshua Project Location Map

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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 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.

## JORC Code – Table 1

### Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The Joshua Project drilling is being managed by Helix’s Chilean JV partner EPG. EPG used a commercial contractor for DDH drilling. A total of 6 holes for approximately 3500m (refer Table 1 in body of announcement). Holes were orientated in various directions depending on collar location and target</li> <li>The drill hole locations were located by handheld GPS. Down hole surveys will occur with a down-hole system at a future date.</li> <li>DDH drilling was used to obtain 2m samples over the entire hole length with 2m half core samples collected (~3kg). The 1m samples were sent to a commercial laboratory, pulverized to produce a representative charge with base metals and gold assayed.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>DDH Drilling was the method chosen for all holes drilled. Drilling starting with PQ for collars followed by HQ and then NQ diameter depending on depth. Depths ranged from 352mm to 815m so far.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery</li> </ul>	<ul style="list-style-type: none"> <li>DDH sample weight and recoveries are observed during the drilling and any issues were noted the geological logs.</li> <li>DDH core was checked by the geologist for recoveries. Any issues are discussed with the drilling contractor.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples have been geologically logged.</li> <li>• Logging recorded lithology, alteration, degree of oxidation, fabric and colour and presence of mineralisation. All core is stored in plastic trays, labeled with interval and hole number at EPG's site in nearby Monte Patria.</li> <li>• All holes were logged in full.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The preparation of 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 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>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All assays were conducted at accredited assay laboratory. The analytical technique used for base metals, a mixed acid digest with a ICP-AES 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 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 WGS84 zone 19S.</li> <li>Surface RL data collected using GPS. Topography around the drilled area is a Hill grading from Grid West to East. Variation in topography is around 320m 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 Joshua 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 2m interval samples collected and sent to the laboratory for assay.</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 DDH drilling has been completed within the mineralised zones.</li> <li>No orientation based sampling bias has been identified in the data to date.</li> <li>Copper was intersected in the hole reported in this announcement and visual reports of copper sulphide mineralisation were logged in remaining holes with assays pending.</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 EPG partners. Samples were collected onsite. The bags are securely tied and freighted directly to the laboratory with appropriate documentation listing sample numbers and analytical methods requested.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No additional QA/QC has been conducted for the 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 Joshua Project is located on Exploration Concessions Joshua 1-39. The Joshua Project is subject to a exploration and development agreement between the tenement owner, Helix Resources Chile Limitada, a 100% owned subsidiary of Helix Resources Limited and EPG Partners (refer to commentary on the JV terms in announcement),.</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 Joshua Project was limited to mapping, geophysics and an RC and DDH program by Helix between 2011 and 2013. Copper mineralisation associated with porphyry rocks were identified from the early work.</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 copper porphyry system consistent with the deposits and mines of the Chilean porphyry belts.</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 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</li> </ul>	<ul style="list-style-type: none"> <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>



Criteria	JORC Code explanation	Commentary
	<p><i>be shown in detail.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>The program was designed to intersect porphyry copper mineralisation at the Target 1 Prospect..</li> <li>Result are reported as down hole length, with true width not definitive at this early stage..</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 body of announcement figure 1</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 2 for all results exceeding 0.1% Cu cut-off in hole 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 on the Joshua Project included a two drilling programs of 2000m, soil sampling, mapping and rockchip sampling and an IP survey. 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>Results from the program will be assessed with the JV partners to discuss future programs EPG has the right to earn further equity by spending an additional US\$1.8m on the project.</li> </ul>