

**Corporate Details****Ordinary Shares**  
424.47m**Market Cap**  
9.7m**ASX Code**  
HLX**Board of Directors****Mr Peter Lester**  
*Non-Executive Chairman***Mr Michael Wilson**  
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## JOGMEC Funded Stage 2 Drilling Campaign Fast-Tracked - Second Hole Underway

### Highlights

- ❑ JOGMEC commits to funding the Stage 2 exploration drilling phase, over an aggressive (6 month) timeframe at the Samuel Copper Project - Chile.
- ❑ The Stage 2 program comprises of **8-10 holes for a minimum 3,000m** testing targets derived from the Stage 1 geophysics and mapping activities.
- ❑ The JV Management Committee has directed Helix's Chile technical team to progress immediately onto Stage 2, with an approved budget of **US\$800,000**.
- ❑ The diamond drill rig will remain onsite to complete the first-pass drill testing of numerous Manto and Porphyry style copper targets at Samuel.

### Drilling Update

- ❑ Diamond drilling of first-ever hole has been completed. (refer 29 March 2019 ASX announcement)  
Assays are expected later this month. The second hole is now underway.
- ❑ This first hole (SA19-01) was extended from 400m to 465m, testing below an area of historic copper oxide workings, in a structurally favourable setting.
- ❑ The hole has intersected highly altered and partly brecciated volcanics, before moving into a monzonitic intrusive.
- ❑ Traces of disseminated and veinlet-style copper sulphides were identified in core from both lithology types (refer to Photos).
- ❑ Geology in the first-ever hole suggests this large system at Samuel is both fertile and prospective for the styles of copper mineralisation being sought.

Helix Resources Limited (ASX:HLX) (**Helix** or the **Company**) is pleased to announce that Japanese organisation and JV Partner JOGMEC has advised Helix that they have received internal approvals and have committed to funding the exploration drilling phase of the Samuel Copper Project JV.

An US\$800,000 (~AUD\$1.13m) contribution from JOGMEC will sole-fund a minimum 3,000m of diamond drilling in an additional 8-10 holes, fulfilling their funding commitment to Stage 2 of the Samuel Joint Venture Agreement.

The Stage 2 Program will be completed over a shortened six (6) month period to the end of September 2019. Drill collar positions at priority targets have been approved by the JV Management Committee.

This aggressive timeframe and program commitment ensures early drill testing of up to 10 priority target areas derived from the Stage 1 field activities, and maximises copper exploration at the Samuel Project over the coming months. The Project area is prospective for both Manto-style and Porphyry-style copper (+gold) systems.

Helix Managing Director, Mick Wilson, said: "Our JV Partner, the highly regarded Japanese organisation JOGMEC, informed us of their desire to immediately commit to the exploration drilling phase of the Samuel JV on a shortened timeframe. This commitment to this drilling-focused phase of the JV is an exciting development, with drilling news flow expected throughout the second and third quarters of 2019 from the Samuel Copper Project. Importantly, Helix retains a material exposure to another large copper asset in this world-class jurisdiction, and it allows Helix to continue to focus our main efforts on the advancement of our flagship copper assets in NSW."

To date, ten (10) priority target areas have been derived from the Stage 1 work programs within the 40 square kilometre project area (refer 29 March 2019 ASX announcement). With JOGMEC having informed Helix of their approval and commitment to Stage 2, the majority of these targets are expected to be drill tested by the end of September 2019.

### Drilling Program Update

The first ever hole at the Samuel Copper Project is now completed. (the hole was funded from the remaining budget from the Stage 1 program (refer 29 March 2019 ASX announcement)). This hole tested below historic copper oxide workings within a coincident geochemical anomaly in a structurally favourable geological setting (refer Figure 1).

The hole, initially planned to a depth of 400m, was extended to 465m, and has returned encouraging visual signs for primary copper mineralisation with copper sulphides in both the highly altered and variably brecciated volcanics as well as the altered monzonitic intrusive intersected from 369m down hole.

Hole 1 is currently being logged, photographed and sampled. The core from the Samuel Project will be assayed for base metals and gold, with batches of results from assays expected toward the end of this month. The hole will be considered for a follow-up down-hole IP survey.



*Photo 1: Traces of mixed pyrite and copper oxides\* on fracture planes in altered andesite in Hole 1*



*Photo 2: Traces of mixed primary sulphides (chalcopryite and bornite)\* on fracture planes in altered andesite at 329m in Hole 1*



*Photo 3: Traces of disseminated primary copper sulphides (chalcopryite)\* in altered monzonite between 385-405m.*



*Photo 4: Andesite/Monzonite Contact at 369m down hole in Hole 1.*

*\*Note: pictures of copper bearing sulphides in core from SA19-01 are included for geological purposes and should not be considered indicative of the overall distribution of copper sulphide in this first hole. Assays are expected to be available in 4-6 weeks.*

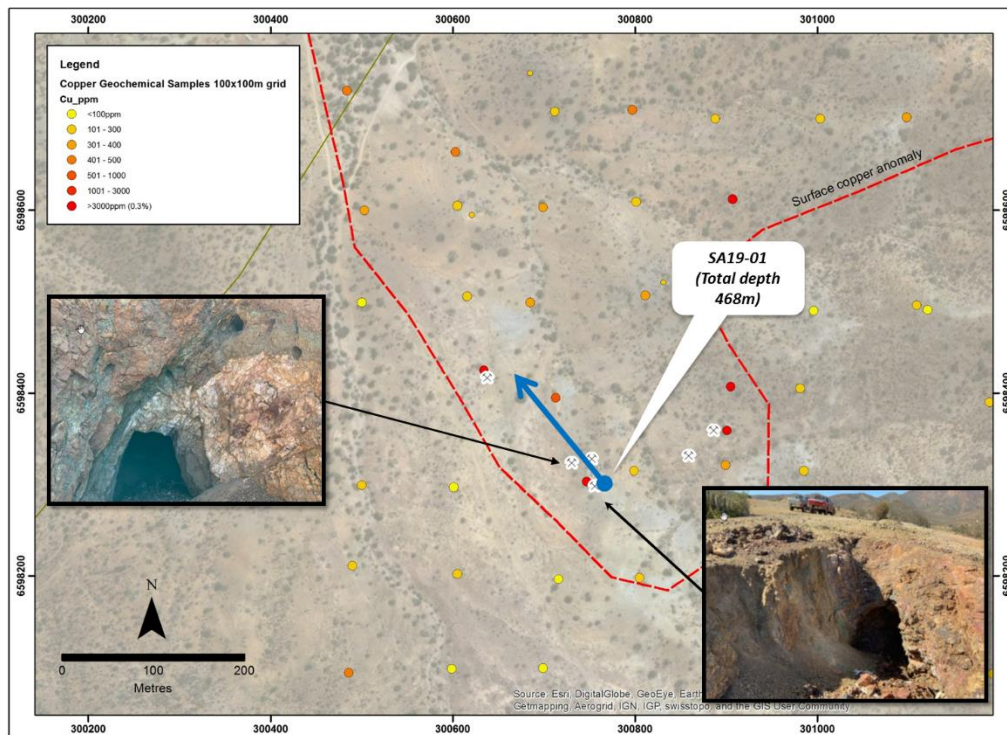


Figure 1: Approximate position of Hole 1 - targeting primary lithologies below historic copper workings



Photos 5 & 6: Diamond drill rig set up at Hole 1, Samuel Copper Project, the rig has now moved to hole 2.

The JV Management Committee has prioritised drill hole locations at the target areas identified from the Stage 1 geophysics, mapping and surface sampling. Drilling is underway on hole 2 (SA19-02) with the drill rig expected to remain onsite now for the entire Stage 2 drilling campaign.

Table 1: Diamond drillhole collar information at 7 May 2019

| Proposed | Site ID | East (WGS84) | North (WGS84) | Elevation (masl) | Depth | Azimuth | Incline | Priority | Objective                                                       |
|----------|---------|--------------|---------------|------------------|-------|---------|---------|----------|-----------------------------------------------------------------|
| JOGMEC01 | SA19-01 | 300766       | 6598302       | 504              | 465m  | 320     | -70     | 1        | Targeting under historic workings testing basement stratigraphy |
| Hole-01  | SA19-02 | 298965       | 6598033       | 516              | 500   | 190     | -50     | 1        | Stockwork related to major NE regional structures               |

Helix is acting as manager during the early stages of the JV, earning a Management Fee, and are making our recommendations to the JV participants based on our extensive exploration experience and 8 years operational knowledge working in Chile. Helix is looking to maximise value for the JV participants by delivering an optimal outcome from the programs from funding made available by JOGMEC.

## About the Samuel Copper Project JV

Helix executed a binding Interim Joint Venture Agreement (**IJVA**) with JOGMEC in relation to Helix's 100%-owned Samuel Copper Project in Chile, announced 5<sup>th</sup> September 2018.

The IJVA provides for the continued exploration of the copper prospective and large-scale Samuel Project from a conceptual target without financial contribution from Helix through the earn-in period. In addition, Helix will receive a management fee while Helix's Chilean team manages the JV through Stages 1- 3.

## Key terms of the IJVA

The IJVA provides an avenue for JOGMEC to earn up to a 60% interest in the Samuel Project by funding a 3 stage US\$2.4M program to 31 March 2021. The JV terms are:

- **Stage 1:** Contribute **US\$0.4M (Minimum Commitment)** by 31 March 2019 primarily for the purpose of undertaking of large-scale geophysical surveys and mapping of the Samuel porphyry and manto-style copper systems.
- **Stage 2:** Contribute **US\$0.8M** by 31 March 2020 primarily for the purpose of undertaking initial exploration **diamond drilling** to drill test the identified priority targets for mineralised systems.
- **Stage 3:** Contribute **US\$1.2M** by 31 March 2021 primarily for the purpose of undertaking a second phase **diamond drilling** to establish scale and continuity of any identified mineralised systems.
- At completion of Stage 3 JOGMEC will earn an option to acquire 60% equity in the project and have the right to sell their joint venture interest by tender to a Japanese company.
- Helix's Chilean team will manage the project until the completion of Stage 3 with Helix receiving a Management Fee for these services.

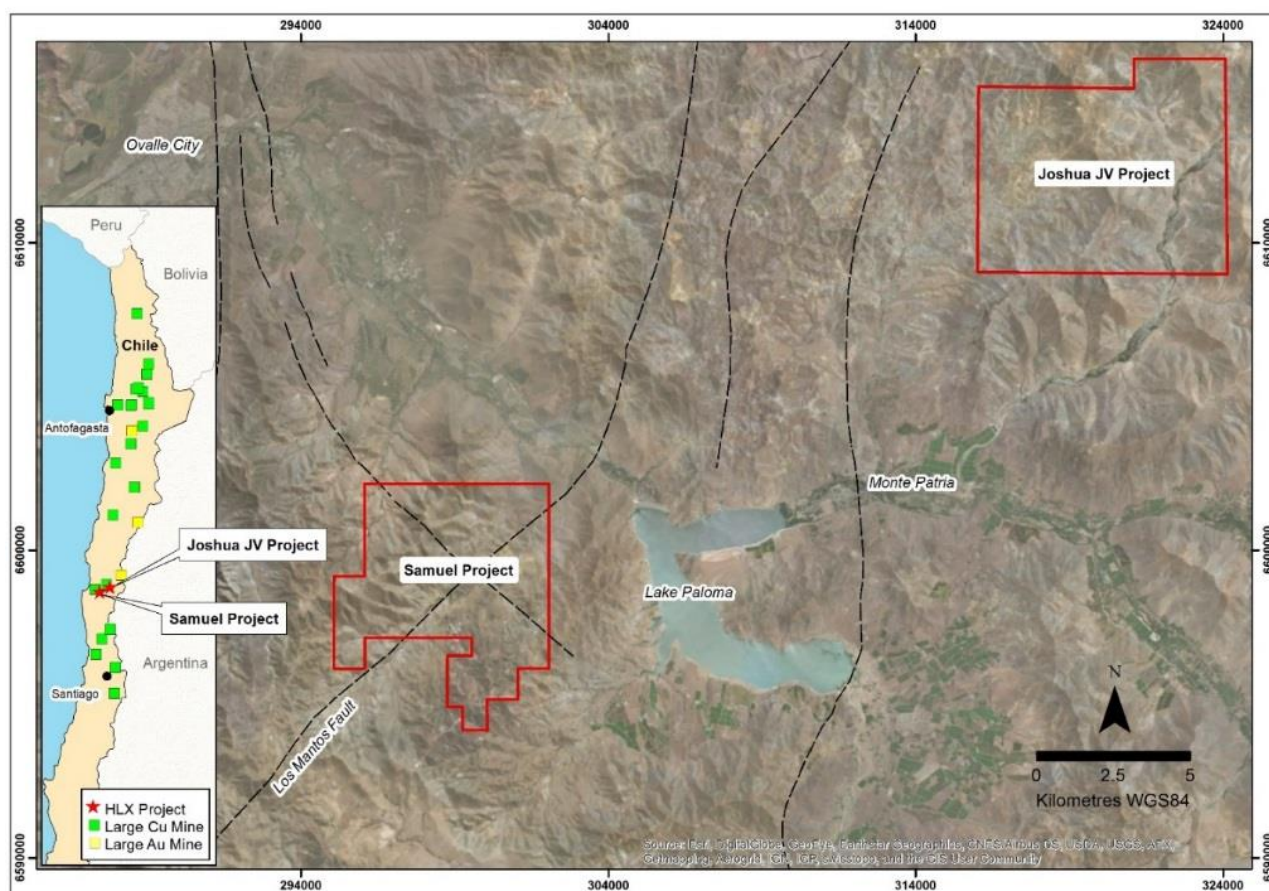


Figure 2 Location of the Samuel Project, situated on the intersection of two major regional structures, 25km southwest of Ovalle City – Region IV Chile

## **History of the Samuel Copper Project**

The Samuel Copper Project was a greenfield project generated by Helix and is located southeast of Ovalle City in Region IV, approximately 25km southwest of the Joshua Project and 320km North of Santiago - Chile. The Samuel Project lies on the intersection of the regionally significant Los Mantos Fault and a major NW trending lineament, both structures control numerous mineral deposits and mines in the district (Refer Figure 3).

The project is prospective for both porphyry and manto-style copper mineralisation. The main target area is defined by an approximate 19km<sup>2</sup> zone of mixed intrusives, volcanics, stockworks and breccias with porphyry related alteration defining the extent of the system.

**- ENDS -**

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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)

<sup>1</sup> For full details of exploration results refer to previous ASX announcements 17 October 2014, 30 January 2015, 9 September 2018, 20 November 2018 and 29 March 2019 on Helix's website. Helix Resources is not aware of any new information or data that materially effects the information in this announcement

## **Forward-Looking Statements**

This ASX release may include forward-looking statements. These forward-looking statements are not historical facts but rather are based on Helix Resources Ltd.'s current expectations, estimates and assumptions about the industry in which Helix Resources Ltd operates, and beliefs and assumptions regarding Helix Resources Ltd.'s future performance. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates", "potential" and similar expressions are intended to identify forward-looking statements. Forward- looking statements are only predictions and are not guaranteed, and they are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of Helix Resources Ltd. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward- looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Helix Resources Ltd does not undertake any obligation to update or revise any information or any of the forward-looking statements in this announcement or any changes in events, conditions or circumstances on which any such forward looking statement is based.

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

## JORC Code Table

### 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 (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sounds, 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</i></li> </ul> | <p><b>Drilling</b></p> <ul style="list-style-type: none"> <li>Chile-based commercial drilling contractors are conducting DDH drilling (DV Drilling)</li> <li>Drill hole locations were determined using a hand-held GPS. No down-hole surveys have been conducted to date.</li> <li>Diamond core will be sampled on 2m intervals, taking half or quarter core as a first pass and then with follow-up sampling at various intervals (<math>\approx</math> 1m) to better understand particular lithological metal associations.</li> <li>The samples will be collected by Helix staff (diamond core).</li> <li>The samples will be under the direct control of Helix staff at all times and transported to the laboratory by Helix staff.</li> </ul> <p><b>Soils</b></p> <ul style="list-style-type: none"> <li>Soil samples were collected in 2018 by experienced contract samplers under the direction of Helix staff.</li> <li>Samples were collected at approximate 100m intervals along lines 100m apart.</li> </ul> |

| Criteria                     | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                                                                                         | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>The QA/QC data collected over the course of the program indicate no issues were encountered with the analytical method and assay results.</li> <li>The data was collected and stored digitally in the field.</li> </ul>                                                                                                                                                                                                                                                                                                               |
|                              | <b>Rock Samples (including Rock Chip Samples)</b>                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Rock samples were collected by Helix staff.</li> <li>Each sample is a composite of approximately 5 pieces of rock collected within a 3m radius of the recorded sample point to give a total sample weight of approximately 2kg to 3kg.</li> <li>The samples were secured in the company compound before being driven to the laboratory by Helix staff.</li> <li>At the laboratory, the samples were crushed and pulverised using industry standards.</li> <li>The laboratory's standard QA/QC procedures were carried out.</li> </ul> |
| <b>Drilling techniques</b>   | <ul style="list-style-type: none"> <li><i>Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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 is the drilling method chosen.</li> <li>Diamond HQ and NQ drill core was collected using double tube and all other industry practice methods.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Drill sample recovery</b> | <ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul> | <ul style="list-style-type: none"> <li>Sample weight and recoveries were observed during the drilling and any under- sized or over-sized drill samples were recorded.</li> <li>Samples were checked by the geologist for volume, moisture content, possible contamination and recoveries. Any issues were discussed with the drilling contractor.</li> </ul>                                                                                                                                                                                                                 |
| <b>Logging</b>               | <ul style="list-style-type: none"> <li><i>Whether core and chip samples have been geologically and geotechnically logged to a</i></li> </ul>                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Criteria                                              | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                              | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                       | <p><i>level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> <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> | <p>Mineral samples were logged and then stored in chip trays for future reference.</p> <ul style="list-style-type: none"> <li>The drill core is stored in core trays in Ovalle, and comprehensively logged and sampled.</li> <li>Visual estimates of the proportion of sulphides: From systematic logging of NQ diamond drill core, the visual estimate of the total amount of sulphide (pyrite+chalcopyrite+molybdenite) in individual metre intervals ranges from 0.01% to 5%. The relative proportion of each sulphide species present in each metre interval is estimated to range from absent to 50% of the total amount of sulphide present. The amount of sulphide and the relative proportions of the sulphide species from metre to metre are highly variable and a detailed estimate of this variability is not possible within the limits of acceptable accuracy. The metal grades of the core shall be determined by assay. The sulphides occur as disseminations and randomly oriented, penetrative veins. The veins range from 0.1mm to 20cm thick. The sulphide is accompanied by one or more of the following gangue minerals in variable proportions: quartz, albite, chlorite, sericite, epidote and tourmaline. The visual estimates are estimates only and fine sulphide may be under-estimated, if present. Identification of the sulphide species and visual estimates of the proportions of those sulphide species present have been made by two geologists with more than 25 years experience each in porphyry copper mineralisation.</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</i></li> </ul>                          | <ul style="list-style-type: none"> <li>The preparation of DDH samples follow industry practice. This involves oven drying, pulverization of total sample using LM5 mills until 85% passes 75 micron.</li> <li>The laboratory's standard QA/QC procedures were carried out.</li> <li>The sample sizes are considered appropriate to the grain size of the material being sampled.</li> <li>Repeatability of assays will be assessed upon receipt</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Criteria                                          | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   | <p>technique.</p> <ul style="list-style-type: none"> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>•</li> <li>•</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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul> | <ul style="list-style-type: none"> <li>• All assays to be conducted at accredited assay laboratories in Santiago, Chile (Andes Analytical Assay).</li> <li>• The analytical technique to be used for base metals was a mixed acid digest with an MS determination of metal concentrations. Gold will be assayed by fire assay method.</li> <li>• Laboratory QA/QC samples involving the use of blanks, duplicates, standards (certified reference materials) and replicates as part of in-house procedures.</li> <li>• Helix are not aware of any new information or data that materially effects the information in this announcement.</li> </ul> |
| <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</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>• Results will be verified by Helix and JOGMEC management.</li> <li>• Geological data is collected using handwritten log sheets, which detailed geology (weathering, structure, alteration, mineralisation), sample quality, sample interval, sample number and QA/QC inserts (standards, duplicates, blanks) into the numbering sequence. This data, together with the assay data received from the laboratory, and subsequent survey data entered into a</li> </ul>                                                                                                                                       |

| Criteria                                             | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                                                                 | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      | <p><i>(physical and electronic) protocols.</i></p> <ul style="list-style-type: none"> <li><i>Discuss any adjustment to assay data.</i></li> </ul>                                                                                                                                                                                                                                                                     | secure Access databases and verified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <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 determined using a GPS (<math>\pm 5\text{m}</math>).</li> <li>Grid system is WGS-84 Zone 19S.</li> <li>Surface RL data collected using GPS and Google Earth.</li> <li>Variation in topography is approximately 100m within the drill zone.</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 were positioned to test specific parts of a porphyry/manto copper system and designed to intersect rocks lying beneath either anomalous surface features such as rock alteration (silica, tourmaline, sericite, chlorite, magnetite, clay) and/or high metal concentrations (copper, molybdenum), structures, or IP anomalies (zones of high resistivity and/or chargeability).</li> <li>No drilling had been conducted by anyone on the Samuel Project prior to Helix commencing drilling operations in 2018.</li> <li>The drilling has been conducted in a manner consistent with the procedures set out in this JORC table.</li> <li>Drilling phases 1 &amp; 2 will be conducted for Helix and JOGMEC.</li> <li>Helix staff will supervise all drilling.</li> </ul> |
| <b>Orientation of data in relation to geological</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> </ul>                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Surface sampling and the position of the drill holes and sampling techniques and intervals are considered appropriate for the early-phase exploration of a large porphyry or manto system with bulk-tonnage copper sulphide potential.</li> <li>The distribution of copper is known to be variably enriched and depleted within</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Criteria                 | JORC Code explanation                                                                                                                                                                                                                           | Commentary                                                                                                                                                                                                                                                                                                    |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>structure</b>         | <ul style="list-style-type: none"> <li>If the relationship between the orientation and the orientation of mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul> | <p>an overall copper system.</p> <p>k</p>                                                                                                                                                                                                                                                                     |
| <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 Helix staff and its contractors. The samples will be freighted directly to the laboratory with appropriate documentation listing sample numbers, sample batches, and required analytical methods and element determinations.</li> </ul> |
| <b>Audits or reviews</b> | <ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</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 Samuel Project is located on concessions Bogarin 1-17. Helix owns the project 100%, with JOGMEC having the right to earn an interest in the project of up to 60% by spending US\$2.4M over 2years.</li> <li>The mineral concessions are in good standing and payment of statutory fees is managed for Helix by a Land Management Consultant in Santiago, Chile.</li> <li>This is no statutory, minimum, annual expenditure commitment for exploration and mining titles in Chile.</li> <li>There are no known impediments to operating in this area.</li> <li>The drill area is situated at a relatively low altitude for Chile (&lt;600m) and can be accessed all year round.</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>No previous modern exploration has occurred at Samuel prior to Helix's involvement commencing in 2015.</li> <li>A number of small artisanal mines and working are present throughout the district.</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 project is considered to be prospective for copper (gold-molybdenum) porphyry-style and manto-style mineralisation.</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>No previous drilling</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Data**

- In reporting Exploration Results, weighting

**aggregation methods**

*averaging techniques, maximum and/or minimum grade truncations (e.g. 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*

Helix is not aware of any new information or data that may materially effects the information in these announcements.

| Criteria                                                                | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>stated.</i>                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <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 (e.g. 'down hole length, true width not known').</i></li> </ul> | <ul style="list-style-type: none"> <li>The drilling is initially designed to 'prove concept' that a large, porphyry or manto copper system is present at Samuel.</li> <li>The geology (lithological associations, metal associations, alteration zonation patterns) has been determined to be consistent with that of a large porphyry system and associated manto systems.</li> <li>Porphyry and manto copper systems are generally broad in all dimensions and mineralised drill intercepts are generally treated as true-widths given the size of the system and the pervasive nature of the mineralisation (10's -100's of metres wide and thick).</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. Helix is not aware of any new information or data that materially effects the information in these announcements.</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 Helix's previous announcements dated 29 March 2019. Helix and Manhattan are not aware of any new information or data that materially effects the information in these announcements.</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</i></li> </ul>                                                                                                                                                                                               | <ul style="list-style-type: none"> <li><b>ASTER:</b> PhotoSat Information Ltd conducted the remote-sensing mineral alteration study in March 2018. ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) is an imaging instrument flying on Terra, a satellite launched in December 1999 as part of NASA's Earth Observation System. Band widths in the Visible to Near-Infrared, Shortwave Infrared and Thermal Infrared</li> </ul>                                                                                                                                                                                                             |

| Criteria            | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                                                                 | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <p><i>method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>                                                                                                                                                                                                                                   | <p>are measured. Diagnostic combinations (ratios) of these bands are then used to characterize and map the areal extend of Iron Oxide, Hydroxyl, Kaolinite- Alunite, Sericite and Silica alteration zones.</p> <ul style="list-style-type: none"> <li>• <b>Induced Polarisation (IP) Survey:</b> A pole-dipole IP survey was conducted for Helix by MapaLtda in 2018. The data was collected on 100m centres along E-W lines spaced 400-800m apart using Industry best practices for data collection and processing.</li> <li>• <b>Aeromagnetics:</b> A drone-borne aeromagnetic survey was conducted by GFDas Geofisica UAV over an area of approximately 40sq. km. in December 2018 for Helix as part of the Stage 1 work program. The drone was fitted with a fluxgate magnetometer. Flight lines: N-S and 50m apart. Tie-lines: E-W and 1000m apart. The survey was designed to cover the entire ASTER alteration anomaly. Elevation difference across the survey area: 450m. Total flight lines: approx. 800km. Average altitude: 50m. System Name: GeoMagDrone™. The data has been imaged by Southern Geoscience Consultants in Perth, Western Australia.</li> </ul> |
| <b>Further work</b> | <ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. 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>• All drill core assay results for the JOGMEC 2019 drilling program are awaited, a further 8 – 10 holes are planned for completion before the end of September.</li> <li>•</li> <li>•</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |