

#### **Corporate Details**

**Ordinary Shares** 424.47m

Market Cap 8.91m

**ASX Code** 

HLX

#### **Board of Directors**

**Mr Peter Lester** Non-Executive Chairman

Mr Michael Wilson Managing Director

Mr Timothy Kennedy Non-Executive Director

**Mr Jason Macdonald** Non-Executive Director

#### **Contact**

78 Churchill Avenue Subiaco, WA 6008

T: +61 8 9321 2644

**F:** +61 8 9321 3909

E: helix@helix.net.au

W: www.helix.net.au

# **Quarterly Activities Report - Period Ending 31 March 2019**

# **Highlights**

### **Collerina Copper Project - NSW**

- Drill program completed with finalisation of the initial Collerina JORC Resource underway with resource reporting expected within 10 days.
- Geology, structure, downhole geophysics and drill assays are being integrated to model the copper mineralisation at the Collerina Deposit.
- High-grade copper mineralisation (with associated zinc, silver and gold) has been intersected throughout the system, confirming continuity of the copper mineralisation from surface for over 950m down plunge (330m from surface).

### Drill Highlights from March Quarter1:

- 1m @ 9.2% Cu, 0.2g/t Au and 11g/t Ag within 4m @ 2.5% Cu from 195m, & 1m @ 6.1% Cu, 0.4g/t Au, 3.3% Zn and 9.5g/t Ag within 4m @ 2.4% Cu from 222m in CORC100.
- 1m @ 10.1% Cu, 0.9g/t Au, 2.7% Zn and 15.5g/t Ag within 4m @ 5.2% Cu, 0.3g/t **Au, 1.0% Zn** from 278m in CORC096
- 2m @ 5.1% Cu, 0.5g/t Au, 7g/t Ag, 1.4% Zn within 5m @ 2.4% Cu, 0.3g/t Au, **3.5g/t Ag and 0.6% Zn** from 327m in CORC097.
- A relationship continues to emerge between higher copper grades and localised DHEM conductance surrounding cross-cutting structures. This will drive future drill targeting.
- The high grade portions of the mineralised system remain open at depth, along strike and in the dip margins, with possible repeats in the footwall and hanging wall.

## Samuel Project - Chile

- Funding partner JOGMEC requested fast-tracking to drilling at Samuel this quarter. This concluded JOGMEC's Stage 1 (US\$400,000) commitment.
- Drilling of the first-ever hole at Samuel has recently been completed to a depth of 468m targeting an IP anomaly under historic copper oxide workings.
- The first hole intersected volcanic and intrusive lithologies, with traces of disseminated and veinlet-style chalcopyrite and bornite identified in core. Assays are expected in May 2019
- The Stage 1 cutting-edge drone magnetics, induced polarisation surveys, mapping and surface sampling completed during the Quarter have identified 10 priority targets for drill testing in Stage 21.
- JOGMEC has recently approved Stage 2, - the main exploration drilling phase (Contribution: US\$800,000 [AUD\$1.13M]). Details of Stage 2 program will be released in separate announcement.

#### Joshua Project - Chile

- During the quarter JV partner Manhattan evaluated the results of its Stage 1 diamond drilling program and completed a reconnaissance soil sampling and mapping program was conducted at Joshua West
- The work identified a complex NE-trending, 800m-wide structural corridor (Vein Corridor) characterised by a cluster of historical artisanal workings established on a system of sheeted, base metal-bearing (copper-lead-zinc-barite) quartz veins.
- Follow-up work has been scheduled to define drill testing opportunities before Manhattan's election whether to proceed to Stage 2 in late May.



## **Quarterly Activities**

#### **Collerina Copper Project - NSW**

### **Resource Update**

A drill program at Collerina was concluded during the March quarter, allowing for the Company to progress to producing an initial resource estimation for the project. The drilling and subsequent modelling has illustrated the importance of geological and structural controls at Collerina and will assist in driving future targeting at the deposit.

The modelling process, which involves the detailed integration of geochemical, geophysical and structural data to form a coherent geological model is expected to conclude shortly, with reporting within 10 days of this announcement.

#### **Drilling**

The reported intercepts during the quarter show that lateral continuity is present in the deeper parts of the high-grade Central Zone copper mineralisation. These additional results at depth confirm the continuity of the strike and distribution of the copper mineralisation, as observed near surface, continues down the plunge of the deposit.

The two deepest holes (CORC1002 & 103), both diverted away from the EM target positions by over 50m) however still intersected the margins of target horizon and footwall maker horizon. Follow-up DHEM has confirmed nearby conductive target positions, which remain untested. This will be a priority in future drilling.

The drilling results also highlight the continuation of the zonation of base metals within the dip plane of the mineralisation (first noted in the shallower intercepts) in the system.

A pattern of increasing zinc to copper ratios from up-dip (zinc poor) to down-dip (zinc rich) is evident in intercepts so far. This important observation is assisting to more accurately target the zones with higher copper content within the mineralised envelopes and will also assist in modelling the metal zonation during the resource estimation process.

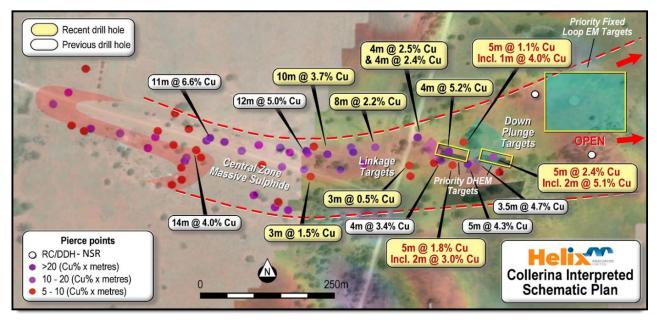


Figure 1: Plan of Collerina drilling showing piece points of copper mineralisation projected to surface



A review of the DHEM to date and the maiden resource geological modelling has identified several priority areas surrounding the drilled portions of the Collerina deposit. These target areas warrant drilling in the next phase of work, to build further confidence in the geological model, as we target the system in the periphery and deeper to expand the overall scale of the Collerina Deposit. Planning for targeting the untested regional prospects is also underway.

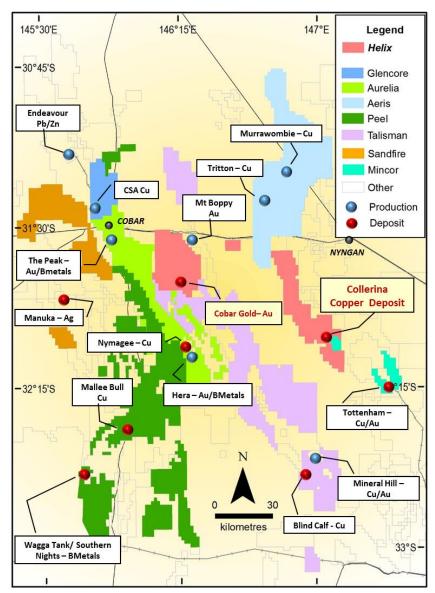


Figure 2: Location of Helix's copper prospects and projects near mining operations in the Central West Region of NSW



Table 1: Drill Hole Significant Results Detailed Summary<sup>1</sup>

Hole ID	From	То	Result
CORC089EXT	296m	301m	5m @ 1.8% Cu, 0.2g/t Au & 2g/t Ag
Incl:			2m @ 3.0% Cu, 0.2g/t Au, 3.8g/t Ag
CORC091	249m	253m	3m @ 0.5% Cu
CORC093	263m	271m	8m @ 2.2% Cu, 1.1% Zn, 0.14g/t Au, 4g/t Ag
CORC094 incl:	161m 162m	171m 163m	10m @ 3.7% Cu, 0.17g/t Au, 0.15% Zn and 6.6g/t Ag 1m@ 19.7% Cu, 0.33g/t Au, 36g/t Ag, 0.5% Zn
CORC095	127m	130	3m @ 1.5% Cu, 0.2g/t Au
CORC096	278m	282m	4m @ 5.2% Cu, 0.3g/t Au, 1.0% Zn
incl:	279m	280m	1m @ 10.1% Cu, 0.9g/t Au, 2.7% Zn and 15.5g/t Ag
CORC097	327m	332m	5m @ 2.4% Cu, 0.3g/t Au, 3.5g/t Ag and 0.6% Zn
Incl:			2m @ 5.1% Cu, 0.5g/t Au, 7g/t Ag, 1.4% Zn
CORC100	195m	199m	4m @ 2.5% Cu
incl:	198m	199m	1m @ 9.2% Cu, 0.2g/t Au and 11g/t Ag
And:	222m	226m	4m @ 2.4% Cu, 0.2g/t Au, 1% Zn
incl:	223m	224m	1m @ 6.1% Cu, 0.4g/t Au, 3.3% Zn and 9.5g/t Ag
CORC104	320m	325m	5m @ 1.1% Cu, 0.1g/t Au, 1.5g/t Ag and 0.7% Zn
			1m @ 4.0% Cu, 0.3g/t Au, 7.5g/t Ag and 2.4% Zn

Results based on 0.1% Cu cut-off

## **Samuel Project - Chile**

Japanese organisation and JV Partner JOGMEC is fully funding the program and during the quarter requested the JV move immediately to drill test a priority copper target, originally planned for Stage 2.

The remaining funds from the Stage 1 (US\$400,000) were directed immediately to drilling the first target area, with diamond drilling commencing at the end of the March Quarter. The first hole tested a high-priority target for primary copper mineralisation to a depth of 468m, below historic copper oxide workings within a coincident geophysical and geochemical anomaly.

The hole intersected volcanics and intrusives with traces of patchy chalcopyrite and bornite identified in core (disseminated and veinlets on fracture planes), with associated pyrite, magnetite. Alteration varied with sericite, chlorite, biotite and magnetite alteration noted throughout the hole. Several zones of potassic alteration were noted.

The core from hole 1 is currently being detail logged, photographed and cut for sampling. Samples are expected to be in the lab shortly, with assays expected during May 2019

## Stage 1 Results

To date, ten (10) priority target areas have been derived from the Stage 1 work programs within the 40 square kilometre project area<sup>1</sup>. The majority of these targets are now expected to be drill tested in the main exploration drilling phase (Stage 2 program). JOGMEC has approved and will progress to Stage 2 (USD\$800,000) following on immediately from the current drill hole. An aggressive drilling program over a shortened timeframe will see drilling continue throughout the next quarter. Details on the Stage 2 program will be released in a separate announcement.



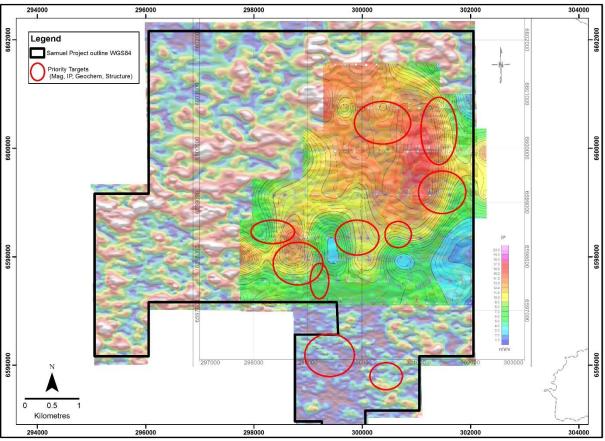


Figure 3: Priority target areas draped on ANSIG magnetics and the -200m IP chargeability image

## **Aeromagnetic Survey**

Helix completed an aeromagnetic survey last quarter using a UAV based GeoMagDrone™ system from local Chilean provider GFDas. The system carried out an 890 line kilometre ultra-detailed aeromagnetic survey over the entire 40km² Samuel Project area.

The aeromagnetic survey highlighted variations in the local magnetic responses, isolating areas of possible porphyry-style alteration, intrusive bodies, potential mineralising structures and contrasting lithologies throughout the project area.

Helix's geology and structural consultant Mr Leigh Rankin visited site last month. An interpretation of the magnetics was undertaken and ground-truthed to build a geological and structural model for the area.

From this work a series of priority targets were identified. These targets are being assessed and ranked, with the majority expected to be drill tested as part of the Stage 2 exploration drilling program, which has a budget of US\$800,000 (approx. AUD\$1.13M).

#### **Induced Polarisation Survey**

Induced Polarisation (IP) geophysical surveys are a proven and effective tool for refining drill targets in both porphyry and manto-style copper systems in Latin America.

IP surveys were completed earlier this month by a Chilean Contractor completing a survey over 8 lines for a total of 27 line kilometres. The IP survey has highlighted a series of chargeable features to a depth of 500m from surface, with a chargeable feature present in the northern part of the survey area.



### **Mapping and Sampling**

Helix's Chilean field team has also undertaken 1:5,000 scale geological and alteration mapping across the Samuel Project area. Surface sampling has occurred in three areas on an approximate 100m x 100m sampling grid. These coincide with areas of geophysical anomalism and will assisted in prioritising drill collar positions within these target areas. The combination of the IP anomalies, magnetic interpretation and mapping has resulted in the 10 targets identified so far.

### **Joshua Copper Project - Chile**

During the quarter and prior to its decision whether to proceed with Stage 2 of the Joshua Option Agreement JV partner Manhattan elected to initiate fieldwork on the unexplored western portion (Joshua West) of the large (6.5km by 2km) Joshua Alteration System with the objective of identifying positions that hold shallow or outcropping base metal potential.

The ASTER response of the broad Joshua Alteration System is similar to that of the Andacollo Cu-Au porphyry deposit, which is located 45km to the northwest of the Joshua Project and operated by North American midtier company Teck.

Initial fieldwork conducted at Joshua West in the March 2019 Quarter has identified a complex NE-trending, 800m-wide structural corridor (Vein Corridor, refer Figure 1) characterised by a cluster of historical artisanal workings established on a system of sheeted, base metal-bearing (copper-lead-zinc-barite) quartz veins (Figure 2), several zones of strongly altered (sericite-quartz) andesite, tourmaline breccias and veined (A-type quartz stockwork) dacite porphyry.

Follow-up geological mapping and comprehensive channel rock-chip sampling have been scheduled to establish the frequency, density and grade of the veins, with the objective of defining drill testing opportunities as part of the Stage 2 program. Manhattan currently has until 31 May to elect to proceed to Stage 2.



Figure 4 Exploration Overview, Joshua Project Area.



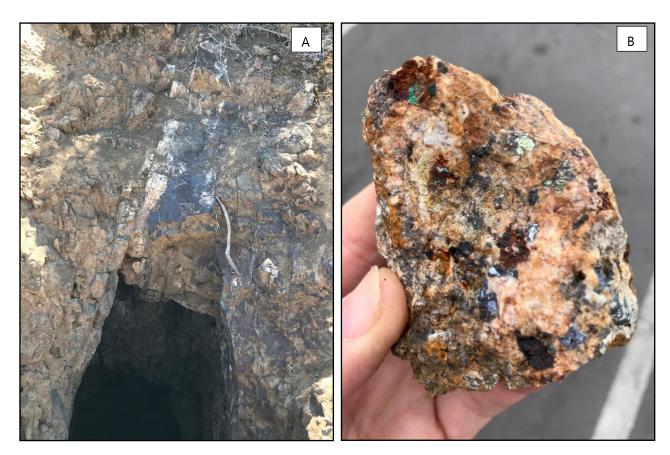


Figure 5 | Joshua West Photo A: Artisanal Working on High Grade Copper Vein (318014E 6613116N WGS84 19S). Photo B: Chalcopyrite-malachite-galena bearing quartz vein (317925E 6613195N WGS84 19S). Individually the veins are about 1metre wide, but collectively, they represent a potential zone over 100m wide.

## **Other Projects**

Rehabilitation activities were undertaken at both the Cobar Gold Project and Mundarlo VMS Project during the quarter to satisfy the Companies statutory requirements. Rehabilitation is conducted in accordance with industry practice and monitored for annual reporting to the appropriate Government departments.

For further information:

Mick Wilson
Managing Director
mick.wilson@helix.net.au
Ph: +61 8 9321 2644

### **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

<sup>1</sup> For full details of exploration results refer to previous ASX announcements 9 January 2019, 1 March 2019 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