

# ASX Announcement 16 May 2023

# Geophysical Ground Surveys follow up High Priority Airborne Electromagnetic Targets

- Ground based geophysical surveys are in progress to follow-up several high-priority airborne electromagnetic (EM) anomalies considered prospective for high-grade copper mineralisation, identified on the Collerina Copper Trend<sup>1</sup>
- The objective is to identify the optimal position in the airborne EM anomaly for drill testing. These anomalies, which include the Quanda and Fiveways targets, have never been drilled.
- We note that the Constellation Deposit discovered by Aeris Resources Ltd in 2020 was an airborne EM discovery and has since been upgraded to a 6.7million tonne Mineral Resource grading 1.9% copper (Cu) and 0.6 g/t gold (Au)<sup>2</sup> and remains 'open' for growth expansion
- The ground EM survey results should be available in early July and drill planning will be undertaken as soon as possible after that
- The commencement of this initial ground geophysical survey is another component of Helix's ongoing multi-faceted regional exploration program designed to make new copper discoveries. The Company is well funded and has an experienced locally based exploration team to continue this work

Helix Resources Limited (ASX: HLX) is pleased to advise that High Powered Electromagnetics Pty Ltd (HPEM) has commenced a surface geophysical survey to follow-up high priority electromagnetic (EM) anomalies identified by the airborne EM survey completed in 2021 (refer **Background Note**).

Helix's Managing Director, Mike Rosenstreich commented; "Regional exploration, hunting for new copper deposits has always been part of the Helix strategy since I took this role in January 2021. New discoveries, particularly for a highly focused company like ours, generates tremendous value for shareholders when they do happen.

But they only 'happen' if you have the funds, the ground and the team; we have all three! We are methodically applying new technology and the impact is like brightly illuminating a dark room for the first time in our ability to 'see' the geology and detect mineralisation in difficult covered terrains such as at Collerina.

Now, after a long period of weather-related delays, access is available and we are not wasting any time to test these anomalies. Interestingly, Russell Mortimer, our Geophysical Consultant also worked on the EM survey which discovered Aeris Resources' Constellation deposit north of us and he remarked on the similarity of that anomaly to our Quanda anomaly.

<sup>1</sup> Refer Helix ASX Report 23 March 2021

<sup>2</sup> Refer Aeris Resources ASX Report 18 April 2023



#### BOARD & MANAGEMENT Non-Executive Chairman Peter Lester

Peter Lester Non-Executive Director Kylie Prendergast Managing Director Mike Rosenstreich

#### CAPITAL STRUCTURE

Shares on Issue 2,323M Market Cap 13.94M Share Price \$0.006

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It is very satisfying to see our regional work here and at Rochford gaining momentum and generating positive results. I look forward to providing further updates across a range of activities covering many targets hunting for new copper deposits." Helix's 100% owned Exploration Licences cover approximately 150km of the prospective 'Collerina and Quanda Copper Trends' as presented in Figure 1 -Location Plan. Both trends extend to the north and host the various copper mines, deposits discovery, along the same and prospects around which Aeris Resources Ltd.'s (ASX: AIS) Tritton mineralised trend north of Operations is focused. Electromagnetic surveys are a proven discovery tool in the area; most recently Aeris' Constellation deposit was discovered by airborne EM. It was followed up by ground geophysics and subsequently drilling to outline the current 'open'

> Mineral Resource estimate of 6.7 million tonnes at 1.9% copper (Cu) and 0.6 g/t gold (Au)<sup>3</sup>. Constellation lies 60km to the north along interpreted extensions of the

Collerina Copper Trend from Helix's tenements. This work will be the most significant early-stage exploration work undertaken on the Collerina Copper Trend in nearly two years due to weather and associated cropping related access issues.

Prior to 2021, only 20% of In early 2021, Helix undertook an airborne EM survey covering the three main copper trends had airborne mineralised trends on its tenure. To that time only 20% of Helix's copper trends EM coverage had EM coverage, namely just a small portion of the Collerina Copper trend around the Central Zone (CZ) mineralisation.

> To undertake effective assessment of the 120km 'strike' extent of mineralised trends a regional scale airborne EM survey was regarded as a "proven discovery tool" for the style of copper mineralisation being targeted.

> The survey was completed in February 2021 and results reported in March<sup>4</sup>. Subsequent target generation work and anomaly assessment on the Collerina Trend has identified 10 high-priority targets beyond CZ for follow-up work as shown in Figure 1 – Location Plan.

These results prompted Helix to expand its tenement holding to the west to cover the interpreted position of the Quanda Trend and to ensure tenement coverage over EM anomalies on the former western boundary. Geophysical consultant Russell Mortimer from Southern Geoscience Consultants assisted in the planning and the interpretation of the 2021 survey results.

Of the ten anomalies identified at the Collerina Trend, two were regarded as particularly significant; Quanda-Hermidale and Fiveways, plus several others which could be possible extensions of the CZ mineralisation.

Saline ground water conditions and 'iron-rich' cover affect some portions of the Collerina Trend tenements, in particular the central area around the CZ mineralisation. This is challenging to 'see-through' when applying electromagnetics. This has been recognised and considered when prioritising the target anomalies.

Aeris Resources'

Helix's tenure

Constellation deposit

(~123kt of contained copper<sup>2</sup>) is an 'EM'

<sup>&</sup>lt;sup>3</sup> Refer Aeris Resources ASX Report 18 April 2023

<sup>&</sup>lt;sup>4</sup> Refer ASX Report 23 March 2021



With wet weather causing delays, Helix took the opportunity to undertake further reprocessing and interpretation of the EM anomalies

First geophysical test in progress

With ground-based follow-up not possible in 2021 and 2022, Helix engaged Mitre Geophysics to review the airborne EM data and to prioritise the targets to test first.

Mitre's work supported testing the Quanda-Hermidale and the Fiveways EM anomalies as high priority.

A similar approach was adopted for the EM data from Rochford and Meryula Trends – assisting Helix to prioritise additional anomalies for follow-up.

Ground based 'fixed-loop' EM (FLEM) surveys were designed by Russell Mortimer, and are being undertaken by HPEM:

- Quanda-Hemidale:
  - Series of coincident magnetic and EM anomalies over a 6km long trend
  - South 'on trend' to Aeris' new Constellation copper discovery
  - No drilling
- Fiveways:
  - Subtle but significant conductors
  - No surface geochemistry coverage
  - No drilling

Refer to Figure 1 – Location Plan for the location of the survey areas.

Further FLEM surveys in the CZ Project area may also be considered to test for possible mineralised extensions into previously undrilled areas. Potential saline conductive cover may occur in this area which requires consideration to ensure surveys are effective.

Drill testing is planned following the ground EM surveys	The purpose of the ground-based FLEM surveys is to resolve the airborne electromagnetic anomalies to a resolution where focussed testing by drilling is possible.
	The exact nature of the drilling type and program extent will depend on the

results of the geophysical survey.

The commencement of this initial ground geophysical survey is another component of Helix's ongoing multifaceted regional exploration program designed to make new copper discoveries. The Company is well funded and has an experienced locally based exploration team to continue this work. The Company looks forward to providing further updates.

### COMPETENT PERSON STATEMENT

The information in this report that relates to exploration results, Mineral Resource estimates and geological data for the Cobar projects is based on information generated and compiled by Mr Gordon Barnes and Mr Mike Rosenstreich who are both employees and shareholders of the Company. Mr Barnes is a Member of the Australian Institute of Geoscientists and Mr Rosenstreich is a Fellow of the Australasian Institute of Mining and Metallurgy. They both have sufficient experience that is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken to each qualify as Competent Person(s) as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Barnes and Mr Rosenstreich have consented to the inclusion of this information in the form and context in which it appears in this report.

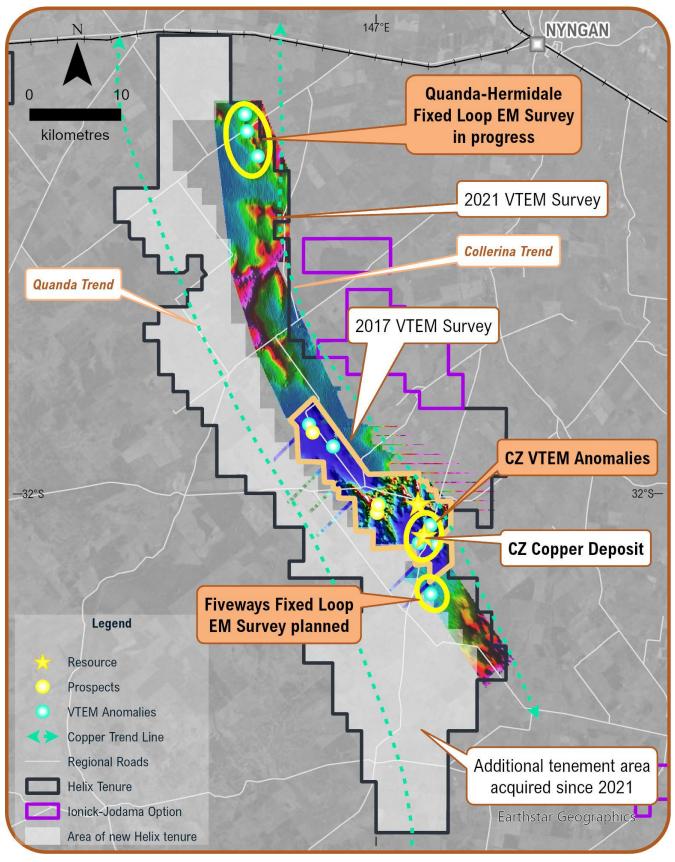


Figure 1: VTEM Anomalies identified for follow-up on the Collerina Trend over channel 25 VTEM imagery, showing coverage of the VTEM survey

## BACKGROUND NOTE – 2021 VTEM SURVEYS (refer ASX report 23 March 2021)

In February 2021 Helix utilised the heli-borne VTEM MAX<sup>™</sup> system from UTS – GeoTech Australia, flying a total of 2,337-line kilometres over the remaining 80% of the Company's prospective 120km of copper trends. The survey was flown predominantly at 200 metre line spacing and included 100 metre spaced infill lines on 21 areas which yielded 'strong' signatures. The infill survey lines were flown to confirm and refine the extent of the EM anomalies in those areas of interest.

Three major trends were flown; Collerina, Rochford and Meryula Trends. Additional survey lines covering the Canbelego and CZ areas were also flown to assist in integrating the previous, 2017 VTEM data to this new survey and to help refine and prioritise other EM targets identified in the survey.

Geophysical consultant Russell Mortimer from Southern Geoscience Consultants (SGC) was commissioned to assist in planning the survey and has overseen the delivery of daily data as the survey progressed.

Based on the preliminary interpretations and target generation work, 24 priority anomalies were identified.

## This ASX release was authorised by the Board of Directors of Helix Resources Ltd.



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#### **Board of Directors:**

Peter LesterNon-Executive ChairmanKylie PrendergastNon-Executive DirectorMike RosenstreichManaging Director

Company Secretary Ben Donovan



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### **About Helix Resources**

Helix Resources is an ASX-listed resources company which is 'all-in on copper' exploration in the prolific copper producing region of Cobar, NSW. The Company possesses a sizable ground position across two tenement groups which are largely untested despite being located within ~50km of significant copper producing operations. The western tenement consists of 30km of contiguous strike and the Company is advancing a pipeline of wholly owned copper opportunities, as well as the Canbelego JV Project (70% owned and operated by Helix and 30% owned by Aeris Resources Ltd ASX: AIS) where massive copper sulphides have been intersected. The eastern tenement group encompasses more than 150km of prospective strike and includes the 100% owned CZ copper deposit.