ASX Announcement
6 July 2023

Ground geophysics confirms airborne electromagnetic anomalies – drilling planned

Key Points

- **In early 2021, five high-priority electromagnetic (EM) anomalies were defined by an airborne survey (VTEM) across the Quanda and Fiveways targets**
- **Four of those five VTEM anomalies have now been confirmed by follow-up ground based EM at the Quanda and Hermidale areas along the Collerina Trend[1]**
- **EM surveying is a vital tool for copper discovery within the region and these four targets are prospective for high-grade copper mineralisation**
- **Drilling testing is planned to commence in August. These targets have not been drilled previously**
- **The Constellation Deposit discovered by Aeris Resources Ltd in late 2019 was an airborne EM discovery and has since been upgraded to a 6.7 million tonne Mineral Resource grading 1.9% copper (Cu) and 0.6 g/t gold (Au)[2] – and remains 'open' for expansion**
- **The completion of this ground geophysical survey in combination with ongoing regional geochemical sampling and geological mapping are core activities designed to make new copper discoveries. The Company is well funded and has an experienced locally based exploration team to continue this wor**k

Helix Resources Limited (ASX: HLX) ("Helix" or "the Company") is pleased to advise that recently completed ground based 'fixed-loop' EM (FLEM) surveys have confirmed the presence of 'conductive' anomalies at both the Quanda and Fiveways high-priority copper targets identified by a VTEM survey flown in early 2021[3].

The purpose of the ground EM surveys just completed was to confirm the presence of the original VTEM anomaly and also to generate more detailed conductivity data. This data enables the anomaly to be modelled into a shape to assess whether it is geologically 'reasonable' and further assists future drill targeting work.

In summary, the ground EM survey was very successful:

- **At Quanda to Hermidale** four high priority anomalies were identified from the 2021 VTEM survey extending over approximately 6km. The recently completed FLEM surveys confirmed basement conductors at three of these anomalies (referred to as CNV1-3 on **Figure 1-Location Plan**), which are modelled as gently easterly dipping plates, typically from 50 to 75 metres (m) beneath the surface with dimensions ranging from 900m x 500m to 600 x 450m. The fourth VTEM anomaly was attributed to local conductive cover with no basement sources identified.

[1] Refer Helix ASX Report 16 May 2023
[2] Refer Aeris Resources ASX Report 18 April 2023
[3] Refer Note on 2021 VTEM Survey page 7 of this report

- **At Fiveways** a single discrete VTEM anomaly was followed up. The FLEM survey confirmed a basement conductor (referred to as CSV1 on **Figure 1**) modelled as a westerly dipping plate extending from 125 to 150m depth with dimensions of 200m x 200m.

Further details are provided in the following **Technical Report** and **Appendix 1: JORC Table 1**.

Commenting on the on the geophysical results, Helix Managing Director Mike Rosenstreich said:

"These are terrific new copper targets in our growing pipeline of exploration opportunities within the Cobar region. Quanda-Hermidale and Fiveways are located along a regional scale copper trend yet have never been drilled. I am surprised and very pleased with the 'four out of five' strike rate confirming airborne EM anomalies with the ground-based surveys.

I was on site last week and the exploration team is very excited to be building up a significant inventory of copper targets across all our tenements. Their planning is progressing well, and the Company anticipates to be testing these prospects with the drill bit as early as August.

These new targets possess significant scale with overall levels of conductance that are subtle but distinctive. Given the history of copper discovery using electromagnetics within the region, the detection of an anomaly with 'scale' is the critical factor rather than the absolute conductivity and permits fairly straight forward drill testing.

Having just completed the Canbelego Main Lode resource update[4] our workflow is now focused on making new discoveries. I look forward to providing further updates as we continue to build up momentum on our inventory of targets and soon start to systematically drill test them."

TECHNICAL REPORT

Airborne electromagnetic (EM) surveys are a 'proven' discovery tool for copper deposits in the Cobar-Nyngan region. The Constellation deposit was discovered by Aeris Resources in late 2019 utilising an airborne EM technology.

In early 2021, only ~20% of the prospective copper trends interpreted on Helix's tenements had EM coverage around the CZ Project on the Collerina Trend. To gain an important, regional scale exploration data set – Helix flew a Versatile Time-domain Electromagnetic (VTEM) survey over the 'other ~80% of its prospective copper trends (at the time), including the rest of the Collerina Trend, in early 2021.

Subsequent target generation work and anomaly assessment on the Collerina Trend has identified twelve high-priority VTEM targets. Helix has recently undertaken follow-up ground EM surveys on five of these; Quanda-Hermidale in the north (four targets) and Fiveways in the south (one target), as shown in **Figure 1 – Regional Map**.

Ground-based 'fixed loop' electromagnetic (FLEM) surveys over VTEM targets commenced in May 2023[5] and were completed in June. Results from the FLEM surveys have now been received. On four of the five original VTEM targets the FLEM surveys confirmed significant basement conductors in the Quanda-Hermidale and Fiveways areas.

Quanda-Hermidale

A series of coincident magnetic and VTEM anomalies are present in a 6km long trend in the Quanda to Hermidale localities in the north of Exploration Licence 7438. Four distinct VTEM targets and subtle magnetic anomalies were followed with seven FLEM surveys (CNV1 to CNV7), as shown in **Figure 2 – Quanda-Hermidale EM**

[4] Refer Helix ASX Report 14 June 2023
[5] Refer Helix ASX Report 16 May 2023

anomalies. Three significant conductors have been defined associated with loops CNV1 to CNV3, which are described below (**Figure 2**).

- **CNV1** – a basement conductor was defined over the VTEM target, with conductive cover also present. Modelling was undertaken to account for the conductive cover and to isolate the basement conductor response. A weak basement conductor plate was defined with a dimension of approximately 900m x 500m that is dipping 40-50° to the east. The CNV1 conductor plate has low conductance (30-40S) and a depth to top of 50m to 75m.

- **CNV2** – a local basement conductor was defined consistent with the VTEM target. Modelling accounted for conductive overburden and generated a basement conductor plate with a dimension of approximately 800m x 400m that is dipping 15-35° to the east-northeast. The CNV2 conductor plate has low conductance (45-60S) and a depth to top of 75m to 100m.

- **CNV3** – a local basement conductor was defined over the VTEM target. Modelling accounted for conductive overburden and generated a basement conductor with a dimension of approximately 600m x 450m that is dipping 25-40° to the northeast. The CNV3 conductor has low conductance (45-55S) and a depth to top of 50m to 75m.

The observed conductive responses and mid channel anomalism for loops CNV4 to CNV7 are considered to be related solely to local conductive cover with an associated elevated VTEM response in channel 30 (**Figure 2**). No legitimate basement conductors were identified for these loops.

Fiveways

A discrete and relatively subtle VTEM target at Fiveways was followed up with a single FLEM loop (CSV1). A clear mid-channel, localised FLEM anomaly was defined, within background conductive cover noise and interference from a fence line to the east. Modelling generated a basement conductor with a dimension of approximately 200m x 200m that is dipping 25-35o to the west-northwest. The CSV1 conductor has low conductance (100-150S) and depth to top of 125m to 150m.

Next Steps

There is no historic drilling in the Quanda-Hermidale and Fiveways areas where the new basement conductors have been defined. Auger drilling is currently in progress in the Fiveways area and planning for follow-up reverse-circulation (RC) drilling at the Quanda-Hermidale and Fiveways conductors is in progress.

It is anticipated that RC drilling will commence in August, subject to regulatory approval.

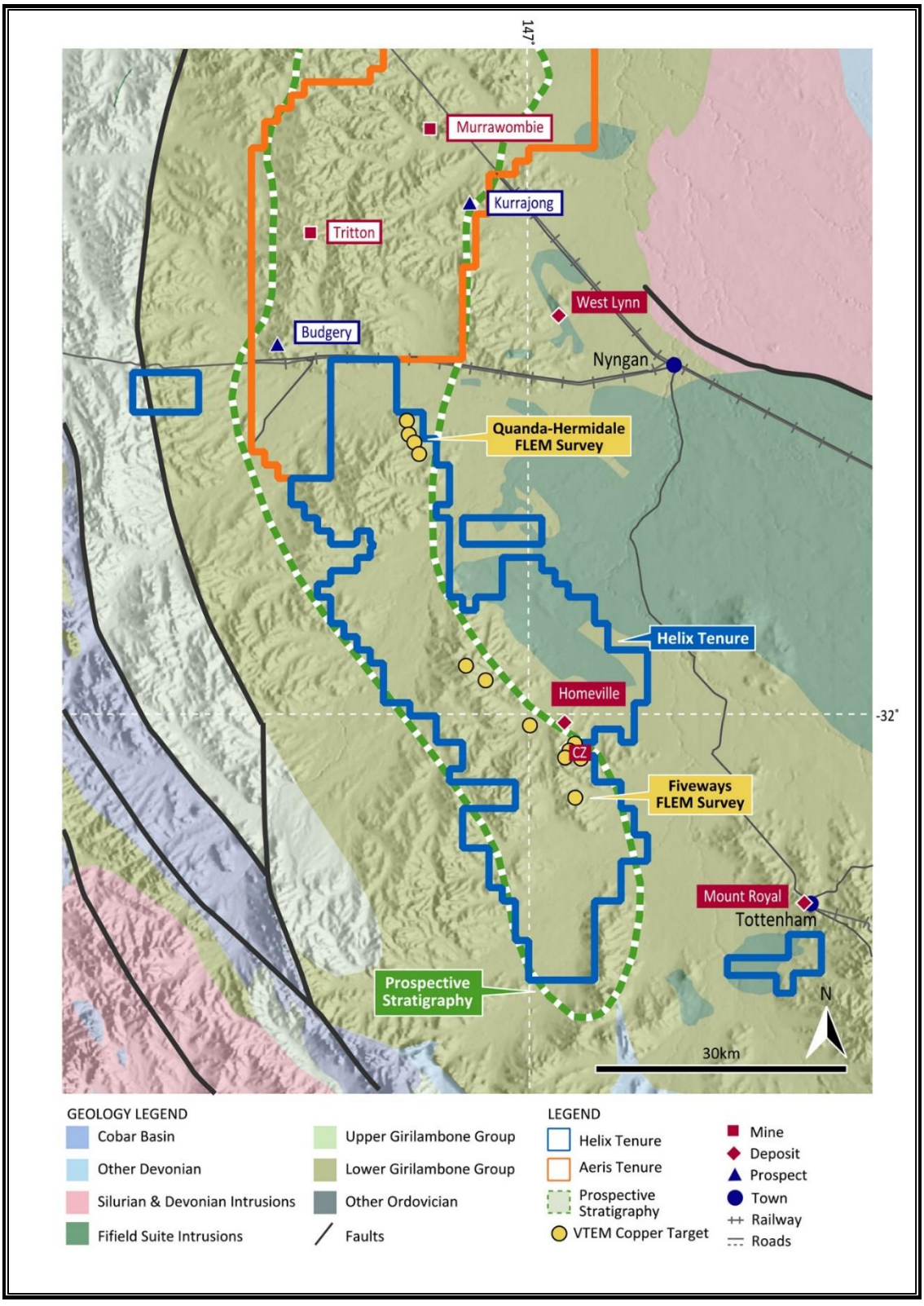

Figure 1: Regional geology map showing VTEM Targets identified for follow-up on the Collerina Trend

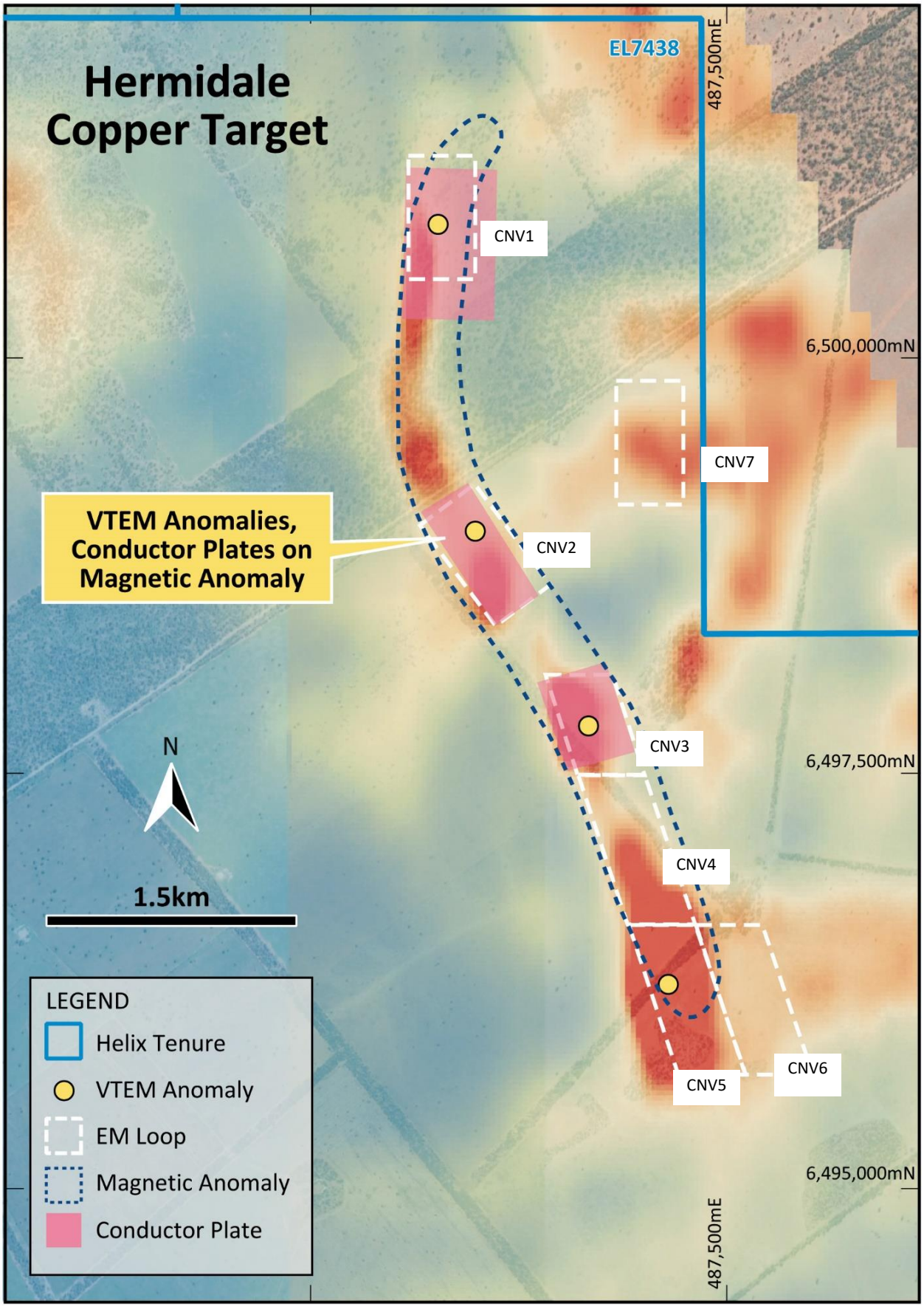

Figure 2: Quanda-Hermidale VTEM and magnetic anomalies and FLEM loops over channel 30 VTEM response

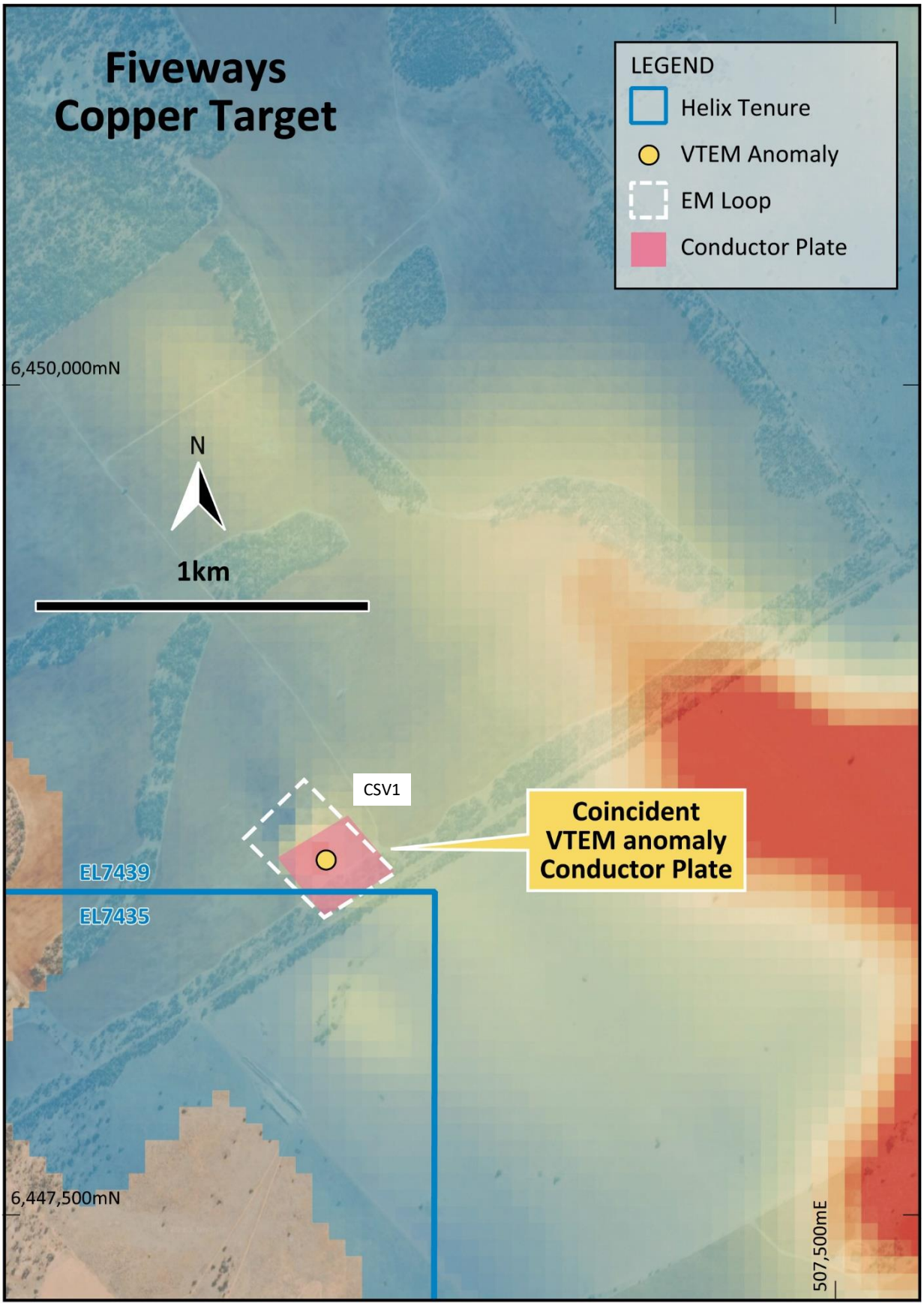

Figure 3: Fiveways VTEM anomaly and FLEM loop over channel 30 VTEM response. The strong VTEM response in the east is conductive cover.

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

In February 2021 Helix utilised the heli-borne VTEM MAX™ 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.

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.

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

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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.

APPENDIX 1: JORC Code Table 1

July 2023 – Collerina Trend EM Surveys

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	**Fixed Loop EM (FLEM) survey** • Contractor High Power EM (HPEM) conducted the FLEM surveys. • Loop sizes ranged from 400m x 950m to 400m x 750m. • Line spacing was 150m and station spacing was 50m. • Seven loops were completed in the Quanda-Hermidale area. • One loop was completed in the Fiveways area. • Fixed loop - ZXY components, EW Lines - X+ 090az, Y+ 000az • Frequency – 5Hz, 50msec TB - 50% Duty Cycle – Crone 50 channel file or 1.67Hz, 150msec TB - 50% Duty Cycle – Crone 150 channel file • Survey Equipment – Nordic EM24 GDD - B-Field Surveying - LANDTEM HT SQUID sensor; Transmitter ORE HPTX – current 100-200A. • Survey parameters – 64-128stks+ - 2-3 readings for each station, ~1ms ramp
Drilling techniques	• *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.).*	• No drilling undertaken.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• No drilling undertaken.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• No drilling undertaken.
Sub- sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected including for instance results for field, duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• No drilling undertaken.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• No assay data reported.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No assay data reported.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resourceestimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Loop and station positions were determined using a GPS (±5m). • Grid system is MGA94 Zone 55. • Surface RL data collected using GPS and verified by public Digital Elevation Models.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Loop sizes ranged from 400m x 950m to 400m x 750m. • Line spacing was 150m and station spacing was 50m.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The long axis of each loop is parallel to the interpreted strike of basement geology. • Station lines are perpendicular to the interpreted strike of basement geology.
Sample security	• *The measures taken to ensure sample security.*	• Not applicable.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Not applicable.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• The FLEM surveys were conducted on tenements EL7438 and EL7439, which are located to the east and south of Nyngan NSW. • Both tenements are 100% held by Oxley Exploration Pty Ltd, a wholly owned subsidiary of Helix Resources Limited. • The tenements are in good standing. • There are no known impediments to operating in this area. • The survey areas are situated in open paddocks that are used for cropping or grazing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• There has been minimal previous exploration in the survey areas.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The areas are prospective for stratiform copper mineralisation.

Drill hole Information	• *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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *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.*
		• No drilling undertaken.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting 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.*	• Not applicable.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *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').*	• Not applicable.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Refer to Figures in this announcement.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• The reporting is balanced, and all material information has been disclosed.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Follow-up DD and/or RC drilling is planned.