

ASX Announcement
31 May 2023

New Large Copper Tenement Identified by Regional Targeting Work

- **Ground-breaking regional-scale geological targeting work is identifying new areas prospective for copper, base metal and gold deposits**
- **A new large, 585km² Exploration Licence to the north of Aeris's Tritton Copper Operations has been applied for based on this work**
- **Total ground holding now increased to 2,900km² - focused on the highly prospective Cobar-Nyngan region in central NSW**

Helix Resources Limited (ASX: HLX) has applied for a new 585km² Exploration Licence (EL) prospective for copper discoveries located along strike from the Company's Collierina Copper Trend, including the advanced CZ Project as well as the large-scale copper mines at Aeris Resources' (ASX:AIS) Tritton Operations, in the Cobar-Nyngan copper region of NSW.

New regional scale targeting work has highlighted the strategic importance of the tenure to the Company's quest to make new copper discoveries (refer **Figure 1 – Simplified Geological Location Plan**).

Helix has utilised reprocessed geophysical data and regional scale geological mapping to identify geological features related to mineralisation which are generally obscured due to the thick monotonous rock sequences with little 'geophysical contrast' and scarcity of outcrop in the region and hence very little effective exploration.

This work has added vital detail to the interpretation of the regional geology, including the sequences and structures associated with mineralisation throughout the recognised copper-bearing trend. Specific 'signatures' were recognised within the prospective host sequence to the copper deposits including the recently acquired northern tenure, the ground currently being mined by Aeris Resources at Tritton and extending south to Helix's Collierina project.

These findings are also being applied to Helix's existing 2,300km² of tenure to identify new copper (and gold) targets. On grant of the ELA, expected in several months, the Company will have a total of 2,900km² of prospective tenure in the greater Cobar region of central NSW.

Helix's Managing Director, Mike Rosenstreich commented: *"This regional exploration work is focused on making new copper discoveries - and we do that by understanding the geological setting of the known deposits. The rocks which host our eastern tenements are referred to as the Girilambone Group – a thick monotonous sequence in which it can be difficult to identify rock types or structures. This makes it very challenging to characterise the geological setting for copper deposits and they are much less explored.*

"Therefore, over the past 12 months we have put boots on the ground and applied the latest geophysical processing techniques to build up a detailed geological model to identify key areas prospective for mineralisation. This proprietary copper signature has led us to peg a major new tenement and is enhancing the targeting work on our existing ground. With benign weather and improved land access we are building momentum, lining up new targets for drill testing while work continues on an updated Resource statement for the Canbelego Main Lode, which is anticipated prior to the end of the financial year."



Helix is undertaking groundbreaking regional scale work focused on making new copper discoveries in the highly prospective, underexplored Cobar region

Understanding the regional scale geological controls on mineralisation through mapping the different rock units (or lithologies) and the structural relationships (lithostratigraphic mapping) are important components of Helix's ongoing multi-faceted regional exploration program, designed to make new copper discoveries.

This work has generally not been undertaken before and certainly not at this scale utilising recent geophysical processing and experienced geologists to map and integrate the data.

It is a major commitment by the Company's tenure, but essential to provide context for interpretation of regional-scale VTEM and geochemical data sets as well as reprocessed aeromagnetic and gravity data. The lithostratigraphic map represents a compilation of all these elements, old and new, to facilitate new copper, base metal or gold discoveries.

Lithostratigraphic Mapping - details

Regional-scale lithostratigraphic mapping has been completed over a 70,000km² area of interest (AOI) covering the Company's tenement portfolio in the Cobar-Nyngan region. A simplified version of the lithostratigraphic map is presented in **Figure 1**.

Geophysical data sets were reprocessed to define gravity and magnetic domains across the AOI, providing the 'scaffold' for the regional lithostratigraphic map.

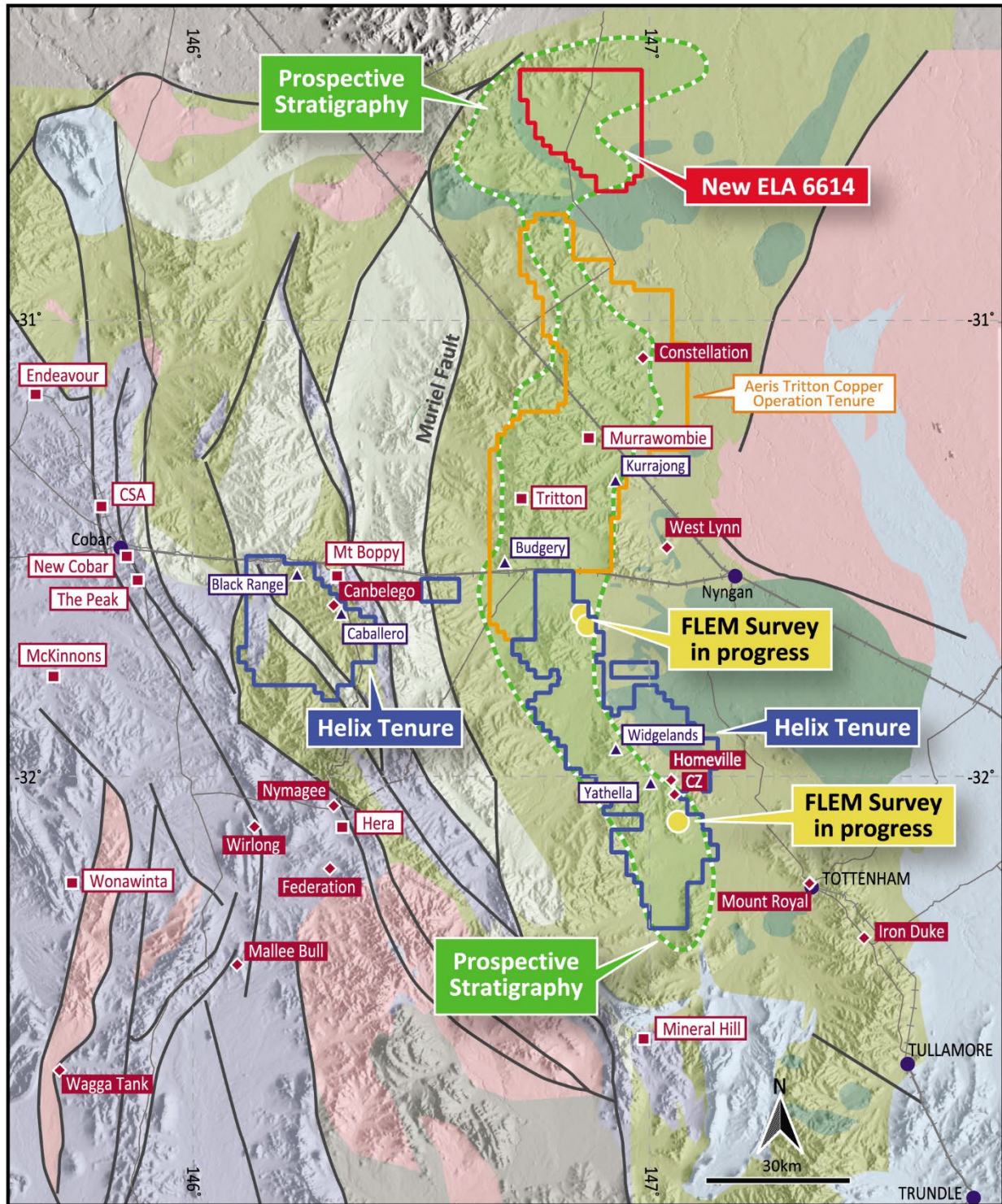
Lithostratigraphic correlation across the domains was guided by new time-space plots in the north and south of the AOI that were prepared as part of this study.

Key areas for targeted geological field traverses were defined by interpretation of detailed spectral and radiometric data. The fieldwork was undertaken over a five-month period from January 2023, and included visits to the GSNSW core library in Londonderry to review drill core from key areas to support the interpretation.

Dr Joel Fitzherbert, a consulting geologist formerly of the Geological Survey of NSW, was retained by the Company to undertake this work. It is an important initial step in the development and implementation of a regional scale deposit targeting strategy to be applied to areas within the AOI.

Aspects of the key geological elements identified

There is a relationship between thick sandstone horizons, mafic magmatic complexes, and copper mineralisation in the Girilambone Group east of the Muriel Fault. This prospective stratigraphy is hosted by the Lower Girilambone Group and extends from west of the town of Tottenham to north of the recently discovered Constellation copper deposit, over a strike length of 220km (**Figure 1**).



GEOLOGY LEGEND

	Cobar Basin		Upper Girilambone Group
	Other Devonian		Lower Girilambone Group
	Silurian & Devonian Intrusions		Other Ordovician
	Fifield Suite Intrusions		Faults

LEGEND

	Helix Tenure		Mine
	ELA6614		Deposit
	Aeris Tenure		Prospect
	Prospective Stratigraphy		VTEM Target
			Town
			Railway
			Roads

Figure 1: Simplified Geological Location Plan - interpretive map of the AOI over relief-shaded DEM showing prospective stratigraphy in the Eastern Girilambone Group and ELA6614



First benefits - new EL Application

Helix's interpretation work has identified some of these associations occurring approximately 60km north of the Constellation Deposit. The ground was open, and Helix applied for 585km² tenement to cover this extension of the prospective sequence (ELA 6614).

The ELA covers thick quartzite units which are exposed at the northern end of the AOI, within a series of closely associated magnetic highs, similar to the Tritton area. The presence of quartzite rather than sandstone is consistent with proximity to the underlying intrusive rocks of the Fifield Suite where metamorphic grade would be expected to be higher.

When granted, ELA6614 will expand the Company's tenement holdings in the region to ~ 2,900km².

Current work in progress

The Company has recently commenced auger drilling with a second auger rig for geochemical sampling in the Collierina Trend south of the CZ Project (**Figure 1**).

The first auger rig is continuing geochemical sampling on the Rochford Trend as reported recently – 4 May 2023 "New Large Scale Copper Anomalies Emerging Along Rochford Trend".

The geochemical sampling by both auger rigs will continue for several months.

In addition, a fixed loop electromagnetic (FLEM) survey is in progress over VTEM targets in the north of the Collierina Trend, and another FLEM survey is planned in the Fiveways area south of CZ – refer ASX report, 16 May 2023 "Surveys Follow-up High Priority Electromagnetic Targets". The FLEM surveys will be completed by mid-June.

The updated Mineral Resource estimate for the Canbelego Project is on track for completion and reporting in June 2023.

Drill programs are being planned to test the various targets being generated by these different work streams.

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.