Cobre Limited A.C.N. 626 241 067 (**ASX: CBE**)
Level 10, Kyle House, 27 Macquarie Place
SYDNEY NSW 2000
Tel: + 61 407 123 143
www.cobre.com.au

19 June 2024

ASX Limited - Company Announcements Platform

COMMENCEMENT OF PIONEERING SEISMIC SURVEY IN THE KALAHARI COPPERBELT

KITLANYA WEST COPPER PROJECT, BOTSWANA

Cobre Limited (ASX: **CBE**, **Cobre** or **Company**) is pleased to announce the commencement of an active 2D reflection seismic survey, with overlapping passive seismic survey (Ambient Noise Tomography "**ANT**"), on the Kitlanya West Copper Project (**KIT-W**) in the Kalahari Copper Belt (**KCB**), Botswana. This pioneering programme is designed to:

- Image potential large-scale fold trap-sites where Tier 1 copper deposits may be hosted;
- Identify structures which may provide pathways for copper mineralisation;
- Compliment and help resolve the basin architecture interpreted from recently completed Airborne Gravity Gradient (**AGG**) surveys;
- Provide diamond drill targets for the compelling Tlou target defined in the 2023 soil and reverse circulation drill campaign (*see ASX announcement 29 November 2023*).

The programme has been developed and generated through the support of the BHP Xplor programme where Cobre is proud to be a participant in the 2024 cohort (*see ASX announcement 23 January 2024*).

Commenting on the seismic exploration programme, Adam Wooldridge, Cobre's Chief Executive Officer, said:

"This is another exciting step in the advancement of Cobre's KCB projects with Cobre pioneering this exploration method in the KCB. Effectively imaging the target redox contact, feeder structures and fold trap-sites which may host blind copper deposits adds enormous value to our exploration projects and provides a far higher degree of confidence for target drilling. This groundbreaking, innovative seismic survey in the KCB, traditionally a tool for reserved for Majors, to achieve these goals is a fantastic opportunity. We'd like to extend our thanks to BHP for providing the support through Xplor, which has helped us to realise this opportunity."

Approximately 62km of active 2D reflection-seismic lines will be surveyed on the northern portion of the KIT-W project with a view to imaging the sub-basin architecture, basin margin contact/s, controlling structures and fold geometry associated with the Tlou target which forms part of a set of compelling fold trap-sites which may host copper deposits. Tlou is the most advanced fold target on the project with consistent anomalous copper noted in Reverse Circulation (**RC**) bedrock chips and multi-element soil samples over an area of 4 km x 1.2 km including evidence of chrysocolla mineralisation in fractures (*see ASX announcement 29 November 2023*).

A key aspect of the seismic survey will be to build on the AGG interpretation (*see ASX announcement 29 January 2024*), particularly in understanding the source of the gravity low anomalies believed to relate to sub-basin architecture as well as the prominent gravity and magnetic anomaly associated with the Tlou target. By combining these methods, it may be possible to cost-effectively delineate and advance several target trap-sites for target drill testing.

The active seismic survey collection, processing and interpretation will be managed by HiSeis of Australia. The survey will be undertaken using STRYDE Nodes™ with a 1.5 ton accelerated weight drop source.

An ANT survey will be undertaken over a complimentary 100km^2 area with a view to testing the technology as a cost-effective alternative or supporting tool for active seismic survey. The ANT survey will be managed, processed and interpreted by the Institute of Mine Seismology. The survey will be conducted with both Stryde and Smart Solo geophones.

A set of type samples have been selected from drill core and submitted to the Council for Geoscience for petrophysical analysis to aid with the interpretation of the seismic data.

The active seismic and ANT surveys have been designed by experts with the aim to test and develop a cost-effective exploration tool for targeting of Tier 1 trap-sites for sedimentary hosted copper systems in the KCB. Although seismic surveys have been used to explore for sedimentary hosted copper systems elsewhere, Cobre is pioneering this exploration method in the KCB. This exciting opportunity is being conducted with support from BHP through their Xplor programme.

Figures 1 to 3 illustrate the position of the upcoming seismic surveys on a variety of AGG products, highlighting the target objectives of the survey.

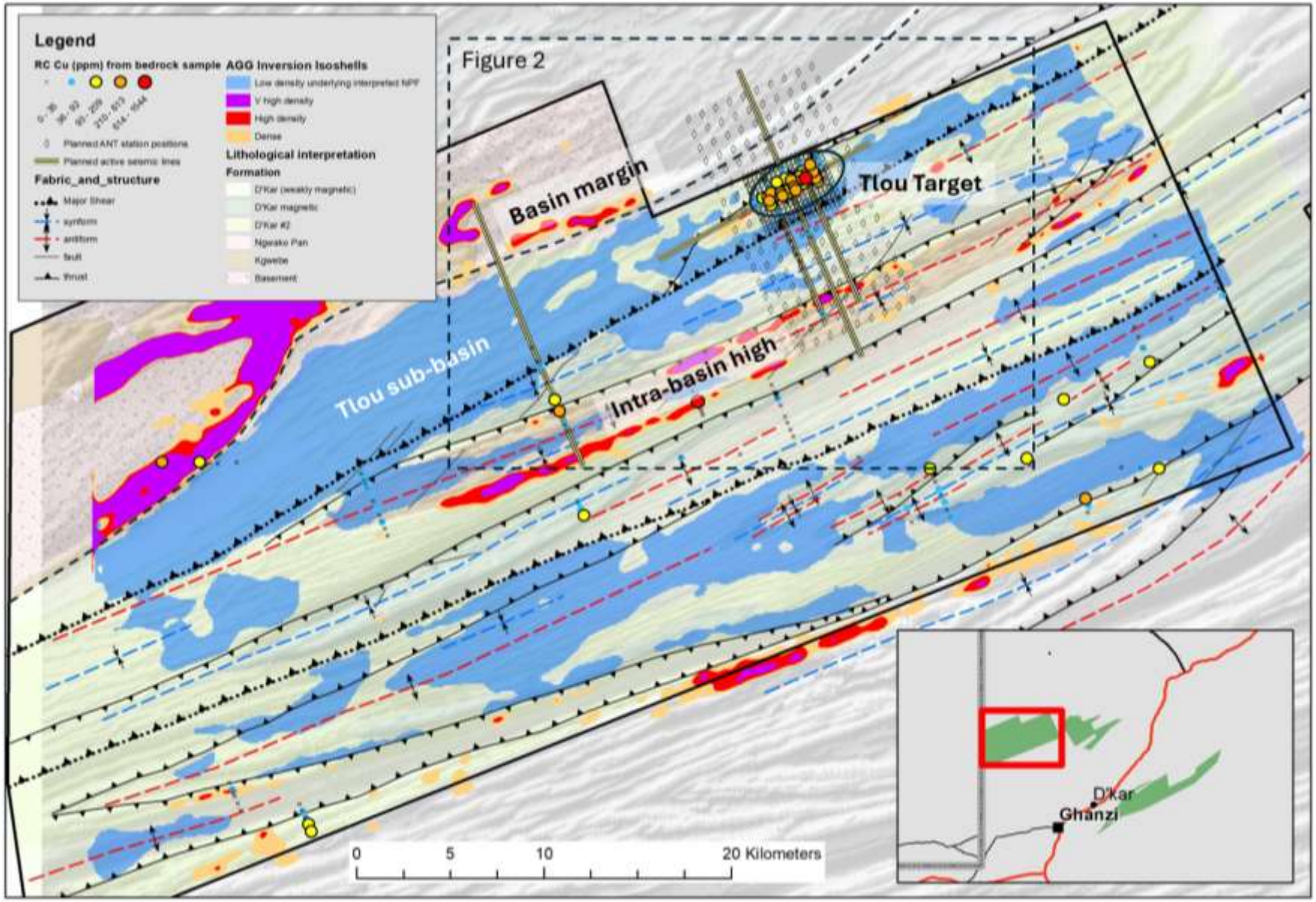

***Figure 1**. Location of planned active and passive seismic surveys on sub-basins, intra-basin highs and basin margins highlighted from AGG interpretation. The Tlou target is clearly defined in anomalous copper results from RC bedrock sampling.*

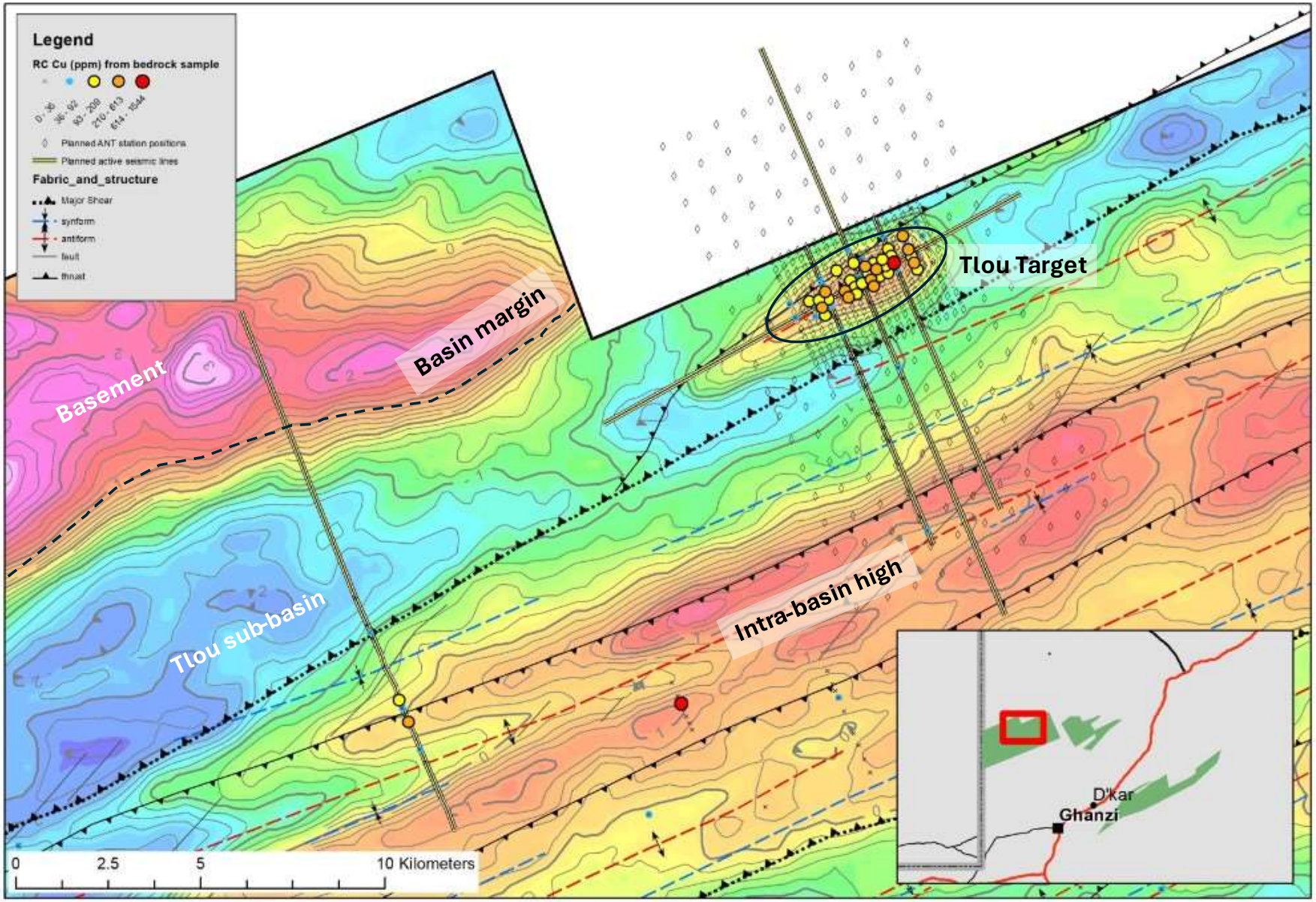

***Figure 2**. Location of planned active and passive seismic surveys on residual gravity product which highlights the Tlou sub-basin and target.*

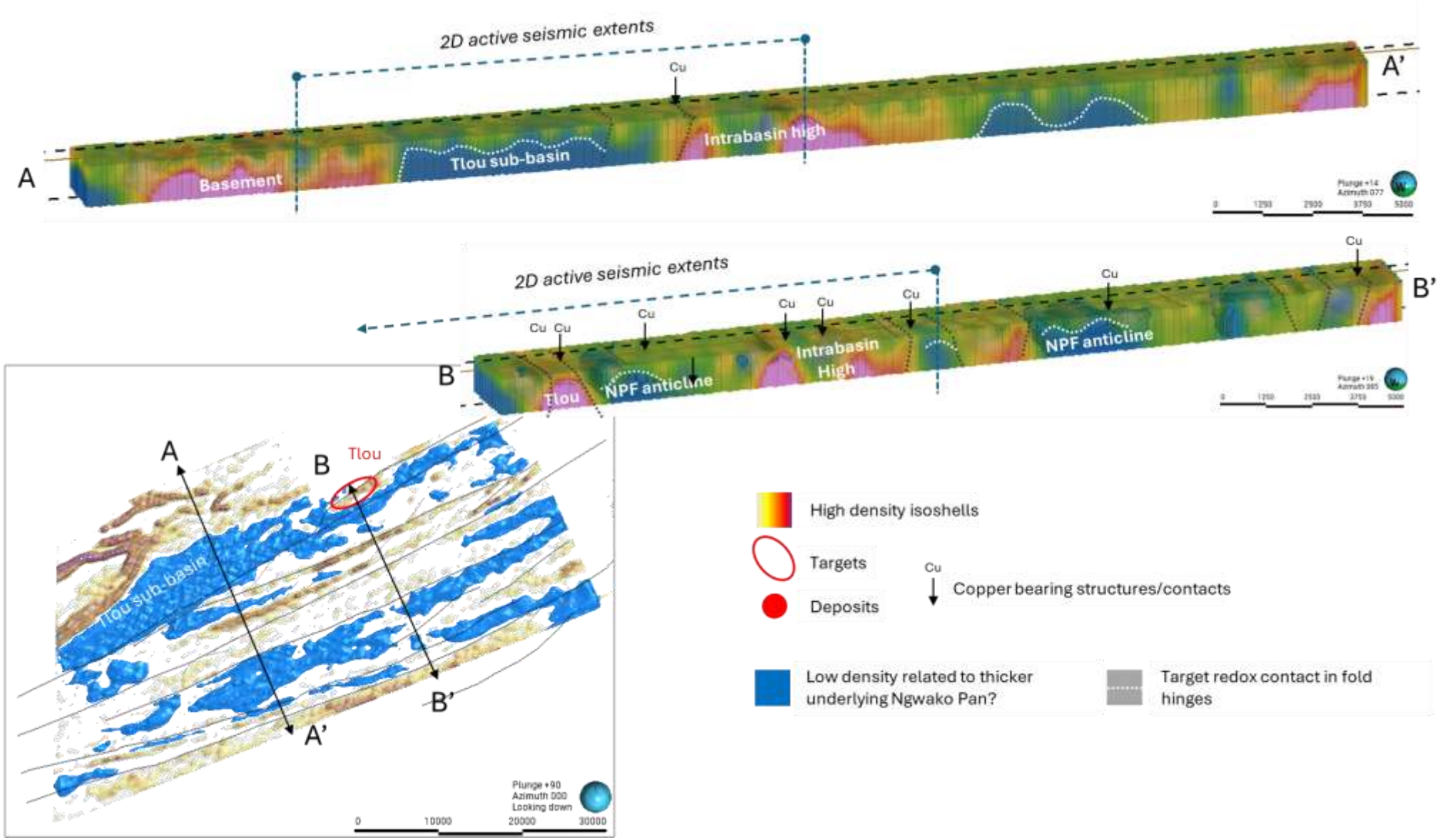

Figure 3. *Sections through the tensor inversion products from the AGG survey. The sections highlight the potential targets which should be resolved in the upcoming seismic survey.*

Motivation for seismic survey

Sedimentary copper deposit models typically favour a basin margin setting both from a fluid focus and traps-site development potential where larger Tier 1 deposits may occur. Cobre holds a dominant land position on both northern and southern basin margins of the KCB, both of which remain relatively underexplored. The use of AGG surveys has allowed Cobre to delineate the basin margin and detect a number of sub basins across both project areas. One sub basin in particular, the Tlou basin, located on the KIT-W project, is the focus of the upcoming seismic survey (*Figures 1 to 3*). Both the active seismic and the ANT surveys are regarded as very powerful geophysical exploration tools for the evaluation of these sub basis where results are expected to aid with the following:

- Understanding the sub-basin geometry, and the relationship to interpreted intrabasinal highs and basin margins;
- Image reflectors / velocity contrasts associated with the prospective stratigraphic redox contact at depth;
- Establishment of basin-basement contact at depth;
- Direct targeting of large-scale trap sites over the Tlou target - these trap-sites, with the redox contact preserved in the fold hinge, would provide an ideal position for formation of Tier-1 deposits in the KCB;
- Detection of major structures that may have acted as key pathways for copper bearing fluids during initial basin formation and subsequent inversion; and
- Provide key information for the interpretation of AGG results.

The results of the seismic surveys will be integrated with all of the existing exploration datasets to develop the best areas for target drilling with the potential for short-term discoveries.

Creating an effective exploration toolkit for discovery of Tier 1 deposits

Seismic surveys can be used to image subsurface geological features at high resolution down to several kilometres depth but are often considered too expensive for early-stage projects in the mineral exploration industry. A significant portion of the survey cost can be attributed to the active seismic source (e.g. Vibroseis truck) together with the deployment of large field crews operating and moving wired geophones. With the invention and refinement of wireless geophones, and the use of smaller active sources (e.g. accelerated drop weight), this technology, becomes an attractive, more cost-effective exploration tool.

Passive seismic methods, which use ambient sources of seismic vibrations, including ocean swells, wind in trees or traffic, initially developed as a research tool to investigate the structure of the crust and mantle, have recently been introduced into the mineral exploration space. This method does not require the deployment of active sources for seismic waves, and therefore provides a comparatively

low-cost, low-environmental impact alternative or supplementary method for conventional active seismic data acquisition.

By combining seismic methods with AGG, magnetic, bedrock and soil sampling results it may be possible to effectively model priority fold and structural trap-sites with a much higher degree of confidence for targeted diamond drilling. The combination of methods can then be used across the KCB as an effective targeting toolkit.

Geology, Mineralisation and Exploration Target

Mineralisation in the KCB is sediment-hosted and structurally controlled, with copper-silver mineralisation most frequently hosted along the redox contact between the basal units of the reduced marine sedimentary rocks of the D'Kar Formation and oxidised clastic sedimentary red bed units of the Kuke and Ngwako Pan Formations and the underlying volcanosedimentary Kgwebe Formation. Of particular interest are the tight, upright folds which offer ideal trap-sites for upgrading of copper-silver mineralisation and formation of large deposits. These folds are typically bounded by district-scale shears (often with evidence of copper anomalism) which would provide the necessary plumbing architecture for movement of copper-rich fluids during basin formation and subsequent closure and deformation. A schematic illustration of the preserved fold hinge model is illustrated in *Figure 4*. Exploration is currently focussed on advancing and testing these buried anticline hinge zones which provide the best location for the formation of Tier 1 deposits.

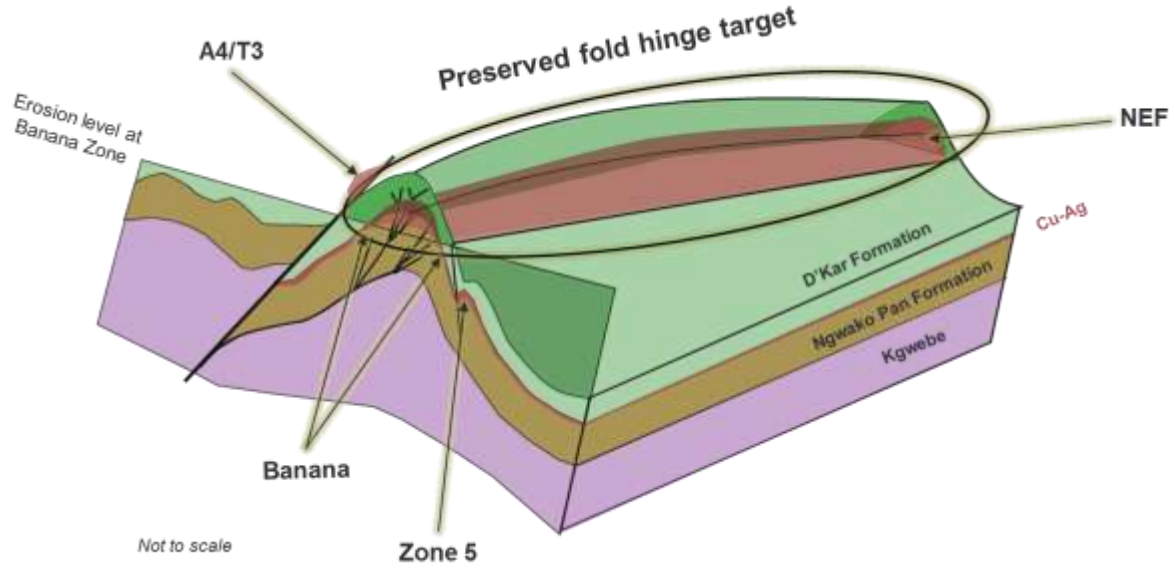

***Figure** 4: Schematic illustrating of the target model compared with typical settings for known KCB deposits.*

This ASX release was authorised on behalf of the Cobre Board by: Adam Wooldridge, Chief Executive Officer.

For more information about this announcement, please contact:

Adam Wooldridge

Chief Executive Officer

wooldridge@cobre.com.au

COMPETENT PERSONS STATEMENT

The information in this announcement that relates to exploration results is based on information compiled by Mr David Catterall, a Competent Person and a member of a Recognised Professional Organisations (ROPO). David Catterall has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012). David is the principal geologist at Tulia Blueclay Limited and a consultant to Kalahari Metals Limited. David Catterall is a member of the South African Council for Natural Scientific Professions, a recognised professional organisation.

David Catterall consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

JORC Tables have not been included as the announcement contains no new results . See ASX announcements for further information :

- *29 November 2023: ENCOURAGING NEW TARGETS IDENTIFIED ON THE KITLANYA WEST PROJECT, BOTSWANA*
- *29 January 2024: AIRBORNE GRAVITY GRADIENT RESULTS HIGHLIGHT PRIORITY SETTINGS FOR LARGE-SCALE COPPER-SILVER DEPOSIT FORMATION, BOTSWANA*