



## QUARTERLY ACTIVITIES REPORT 31 MARCH 2023

### HIGHLIGHTS

- Focus this quarter was on the execution of three high impact induced polarisation (IP) geophysics surveys at the South Cobar Project, following identification of large-scale prospective trends

### SOUTH COBAR: COPPER-GOLD-LEAD-ZINC TARGETS

- A 26.4 line-kilometre induced polarisation (IP) geophysical survey commenced at Achilles during the quarter and was finalised in late April - the first of three high impact IP surveys being undertaken targeting sulphide mineralisation
- The Achilles IP survey was initially conducted with 400m spaced lines however pre-processing results in the field suggested infill lines were warranted and were subsequently completed to 200m
- Surveying has now commenced at the Hilltop target, to be followed by the Planet target
- The Creamy Hills historic gold mine workings were mapped and sampled **over a 1.2km strike length, returning rock chip results to 24.4g/t gold**
- Creamy Hills location in a backthrust on the eastern edge of the Cobar Basin is thought to be analogous to the geological position of the world class CSA Copper Mine 20km north of Cobar
- The Hilltop target was mapped and sampled, with initial indications suggesting the potential to host near-surface Cobar-style gold-base metal mineralisation, with the target yet to be effectively drill-tested
- The Nyora exploration licence application is still pending being granted, due in May
- An exploration licence renewal application was submitted for the Cargelligo licence

### MOOREFIELD-OOTHA: GOLD-COPPER TARGETS

- One hundred and sixteen soil samples taken at 400m spacing at the Ootha tenement to gain a first pass understanding of the extent of the copper anomalism. Infill soil sampling is planned to better **highlight the known copper trend**

### GUNDAGAI: COPPER-GOLD-LEAD-ZINC TARGETS

- At Bongongalong, structural mapping and rock chip sampling undertaken with nineteen samples sent to the lab
- An exploration licence renewal application submitted for the Gundagai licence

Australian Gold and Copper Ltd (ASX: AGC) (“AGC” or the “Company”) is pleased to report on its March 2023 quarter activities.

### Corporate

During the quarter, on 20 January 2023, 32,272,716 fully paid ordinary shares were released from escrow.

During the quarter, the Company lodged its Half Year Financial Report for the period ending 31 December 2022.

The Company cash at the end of the quarter was \$2.8m.

### Exploration and Operations March Quarter

#### **SOUTH COBAR PROJECT: COPPER-GOLD-LEAD-ZINC (EL8968, EL9336, ELA6563, AGC 100%)**

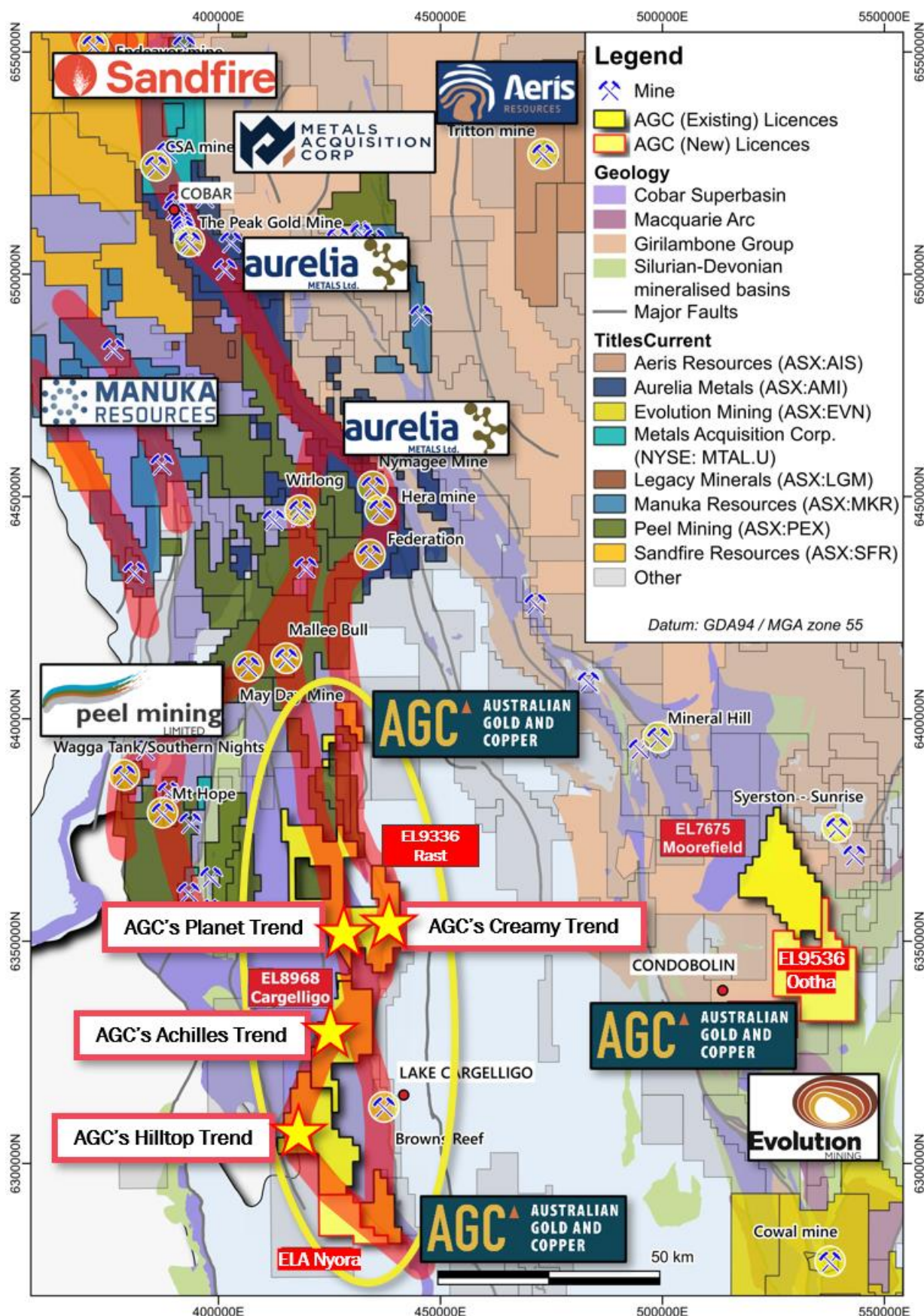
##### **Induced Polarisation Geophysical Surveys**

During the quarter, a 26.4 line-kilometre pole-dipole induced polarisation (IP) geophysical survey was commenced and completed over the Achilles trend at the South Cobar Project (AGC ASX 18 April 2023), see **Figures 1- 3** for survey location. Results of the survey will be reported once data processing and analysis is complete.

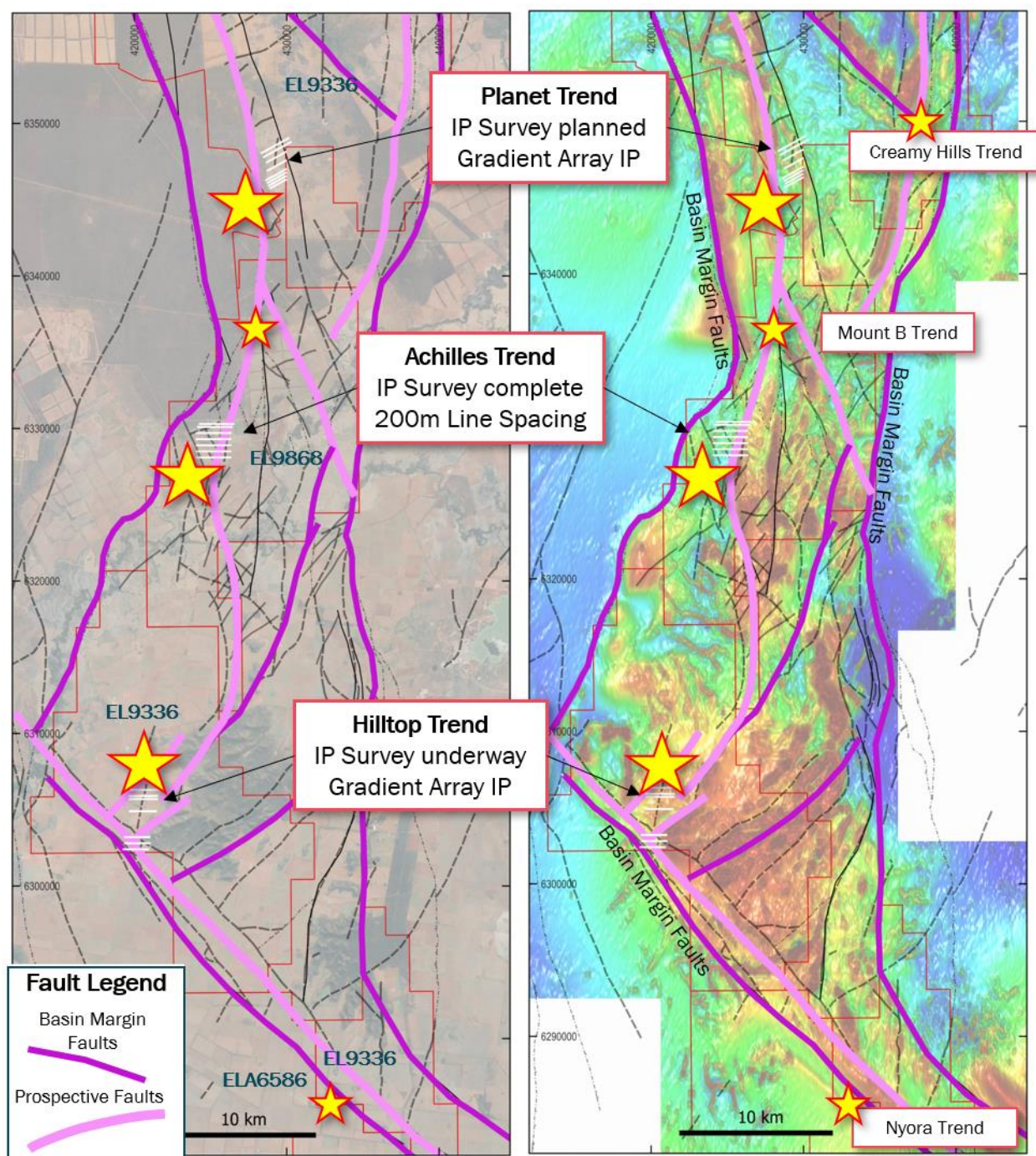
**Achilles is an early-stage, high-priority base-metal gold target** with strong surface geochemistry and existing base metal mineralisation in drill results (ASX AGC 3 May 2021, ASX AGC 9 June 2021), displaying similarities to the high-grade Federation Zn-Pb-Au-Cu discovery (Thomas., et al., 2022) currently being developed by Aurelia Metals (ASX: AMI) along strike to the north of Achilles (ASX AGC 16 March 2023). IP surveys were instrumental in the discovery of the Federation deposit (Thomas., et al., 2022) and in Carnaby Resources’ recent discoveries at their Greater Duchess copper-gold project (ASX CNB 9 March 2023).

The Achilles IP survey was originally planned with 400m spaced lines, however given pre-processing in-field results, 200m infill lines were considered warranted and subsequently completed, see **Figures 3**.

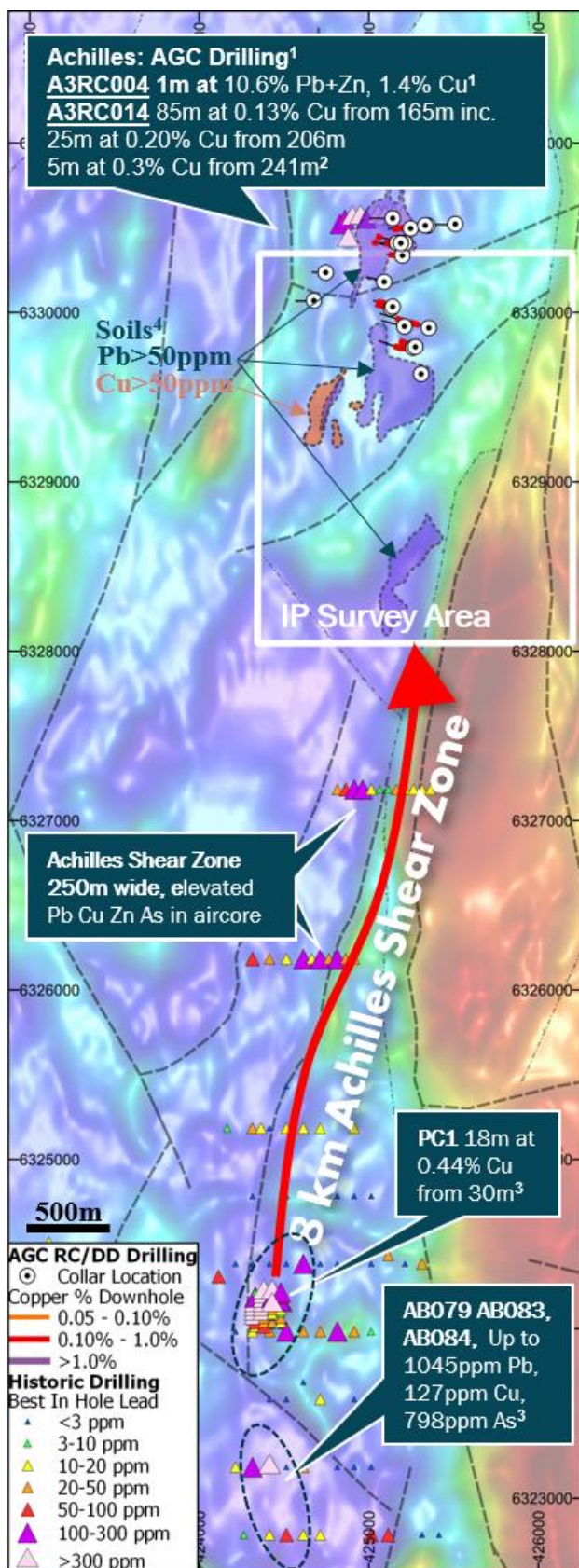
Gradient array IP surveying has now commenced at the Hilltop target, which has significant surface gold and lead anomalism (ASX AGC 5 April 2023) and is located 20km south of Achilles. After the survey at Hilltop has been completed, gradient array IP surveying will be undertaken at the Planet target which is 20km north of Achilles.



**Figure 1:** Cobar Basin map showing recent major discoveries and mines relative to AGC's exploration licences in yellow and major prospective trends in red/yellow stars (ASX AGC 16 March 2023).



**Figure 2:** South Cobar Project tenement map with target locations (yellow stars) and IP surveys locations (white lines), on satellite photo (left) and magnetics TMI RTP (right), (ASX AGC 16 March 2023).



**Figure 3 Above:** The Achilles shear target showing the location of the IP survey (<sup>1</sup>AGC ASX 3 May 2021, <sup>2</sup>AGC ASX 15 September 2021, <sup>3</sup>AGC ASX prospectus lodged 18th November 2020).

**Figure 4 Right:** Photographs of Fender Geophysics' induced polarisation equipment at Achilles.

### Creamy Hills Gold Target

During the quarter, the AGC discovery team **uncovered a cluster of historic mines**, called Creamy Hills gold mines at the South Cobar Project, spanning 1.2km in length (AGC ASX 3 March 2023). The mines are centred on a cluster of significant workings 250m in length and up to 80m deep.

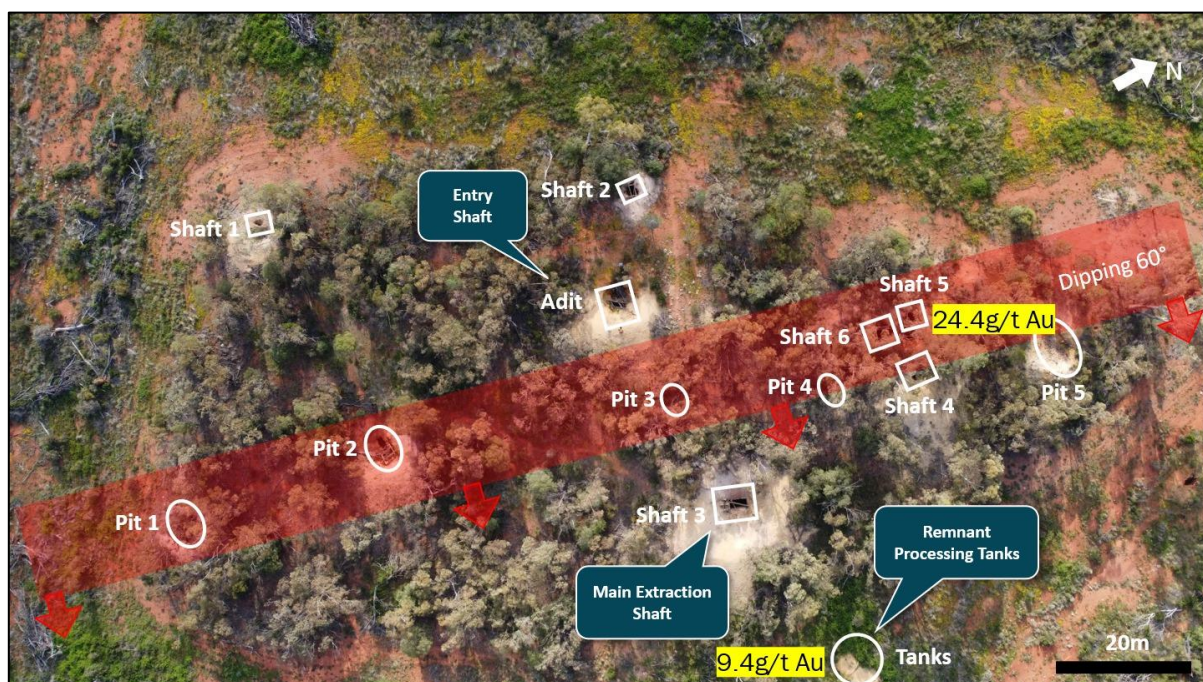
First pass sampling designed to determine the prospective rock types returned (AGC ASX 3 March 2023):

- **rock chips to 24.4g/t gold** within the shafts and dumps (CHRK019) and
- **composite samples to 9.4g/t gold** from mine tailings (CHRK021)

The location of the gold mines is in a deformed wedge of folded rock within a back thrust of the major Woorara Fault on the eastern edge of the Cobar Superbasin. This location is considered an analogous position to the world-class Cobar mines including the CSA Copper Mine north of Cobar which also sit within folds in the Rookery Fault back thrust on the eastern edge of the Cobar Basin.

The Company believes significant potential exists for expansion as no modern geochemistry, geophysics or drilling has been conducted and the targets are open in every direction.

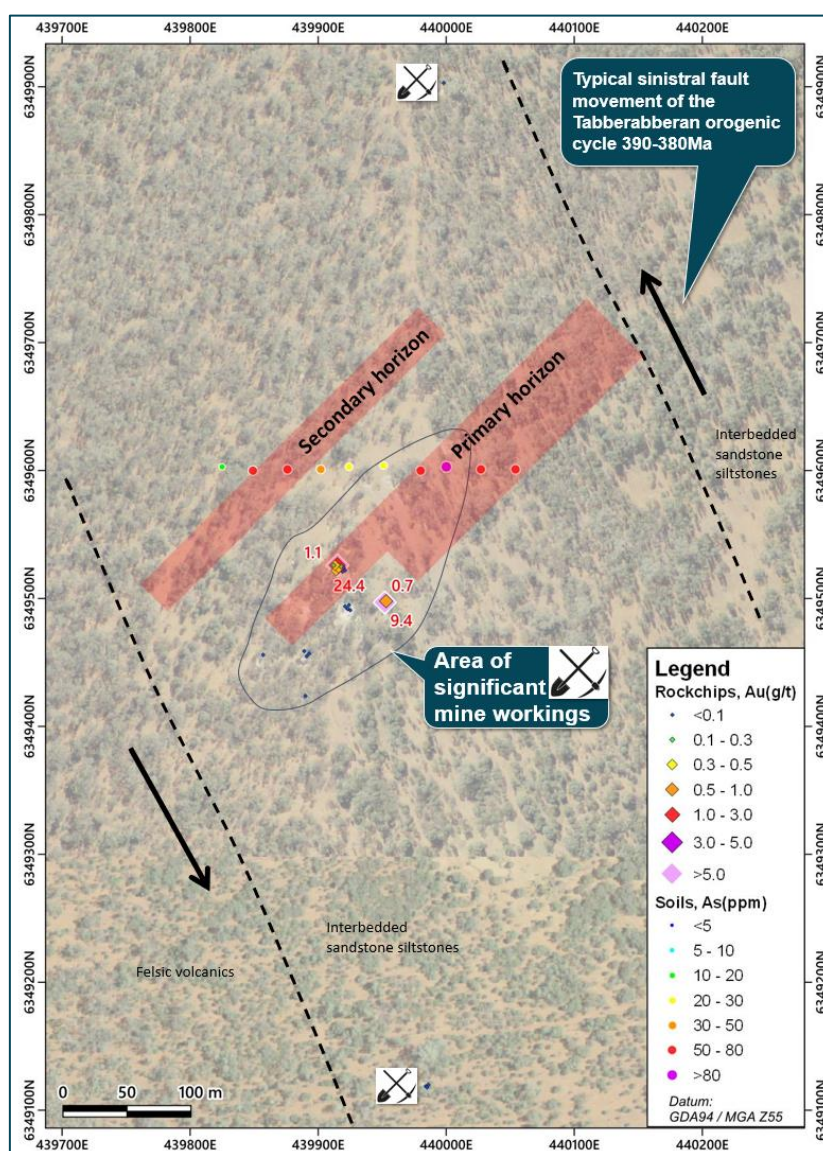
A limited soil sampling test line returned two zones of elevated arsenic anomalism suggesting multiple stacked mineralised faults. Next steps are to complete a broader soil survey to map anomalism in the soils and expand the footprint (AGC ASX 3 March 2023).



**Figure 5:** Drone photographs with annotated notes of mine workings, projected lode to surface and the locations of the highest grade gold samples (AGC ASX 3 March 2023).



**Figure 6:** Mine shafts and workings at Creamy Hills gold mine (AGC ASX 3 March 2023).



**Figure 7:** Plan view map of the regional geology and structural interpretation (AGC ASX 3 March 2023).

### Hilltop Copper-Gold Target

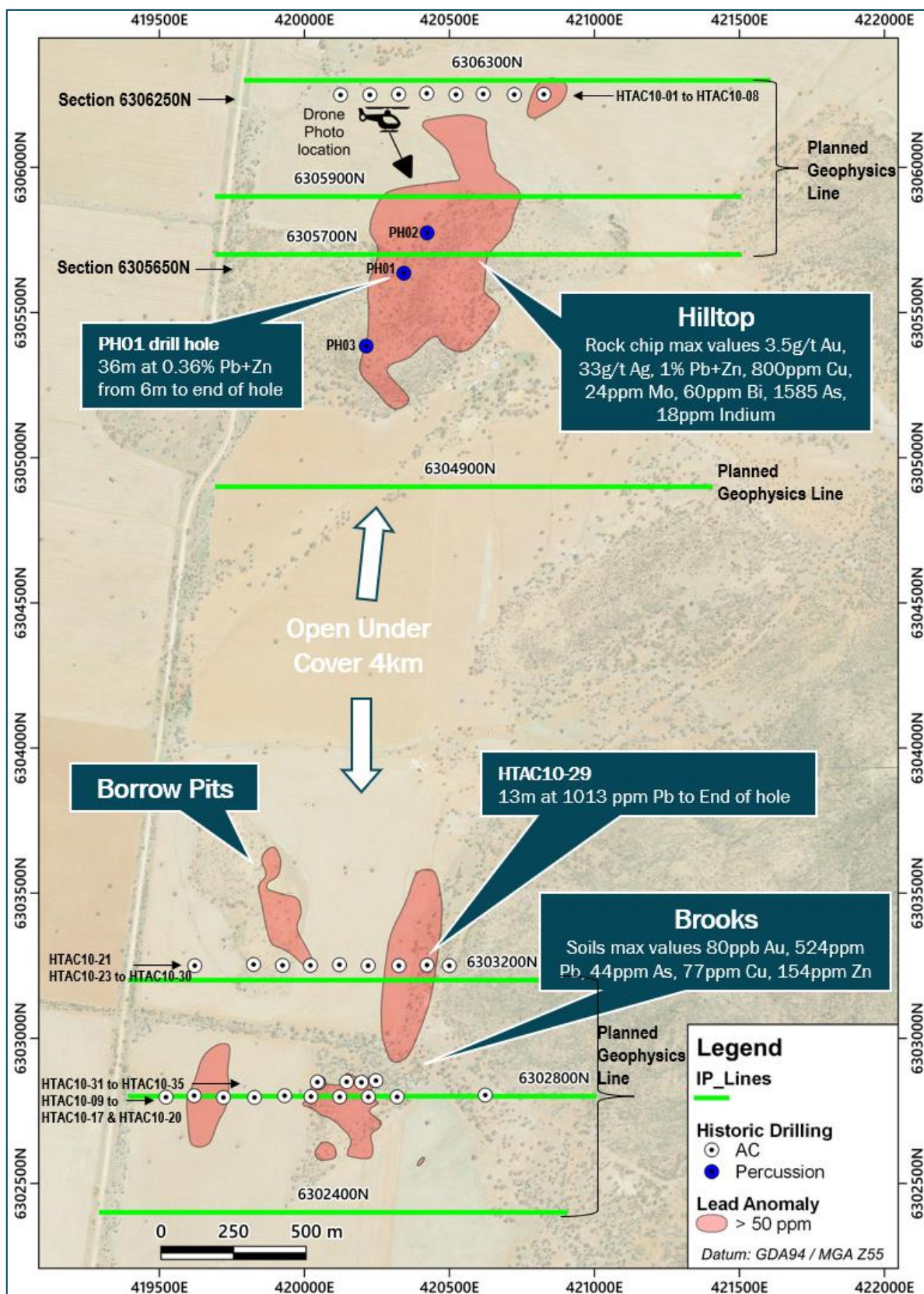
Hilltop was identified during target generation and regional reconnaissance and followed-up by soil and rock chip sampling through new licence EL 9336. Hilltop sits within the recently announced prospective target horizons (see **Figures 1 and 2**, ASX AGC 16 March 2023), which is dominated by volcanic and sedimentary rocks consistent with the Cobar Basin (Bull and McPhie, 2006).

**Hilltop is more than 4km long with outcropping rocks on the hills (Figures 8-10) displaying strong lead-in-soils anomalism.** Currently, the main Hilltop target zone is a hill defined by soil sampling recently completed with an exceptional >100ppm lead in soil zone 1,000m long by 500m wide (**Figure 9**, ASX AGC 5 April 2023). The lead-in-soil anomaly separates into two zones greater than >200ppm lead and coincident with gold in rock chips up to 3.5g/t gold. The geology at these higher tenor anomalies exhibits a SW plunge and pose as exceptional drill targets (AGC ASX 5 April 2023).

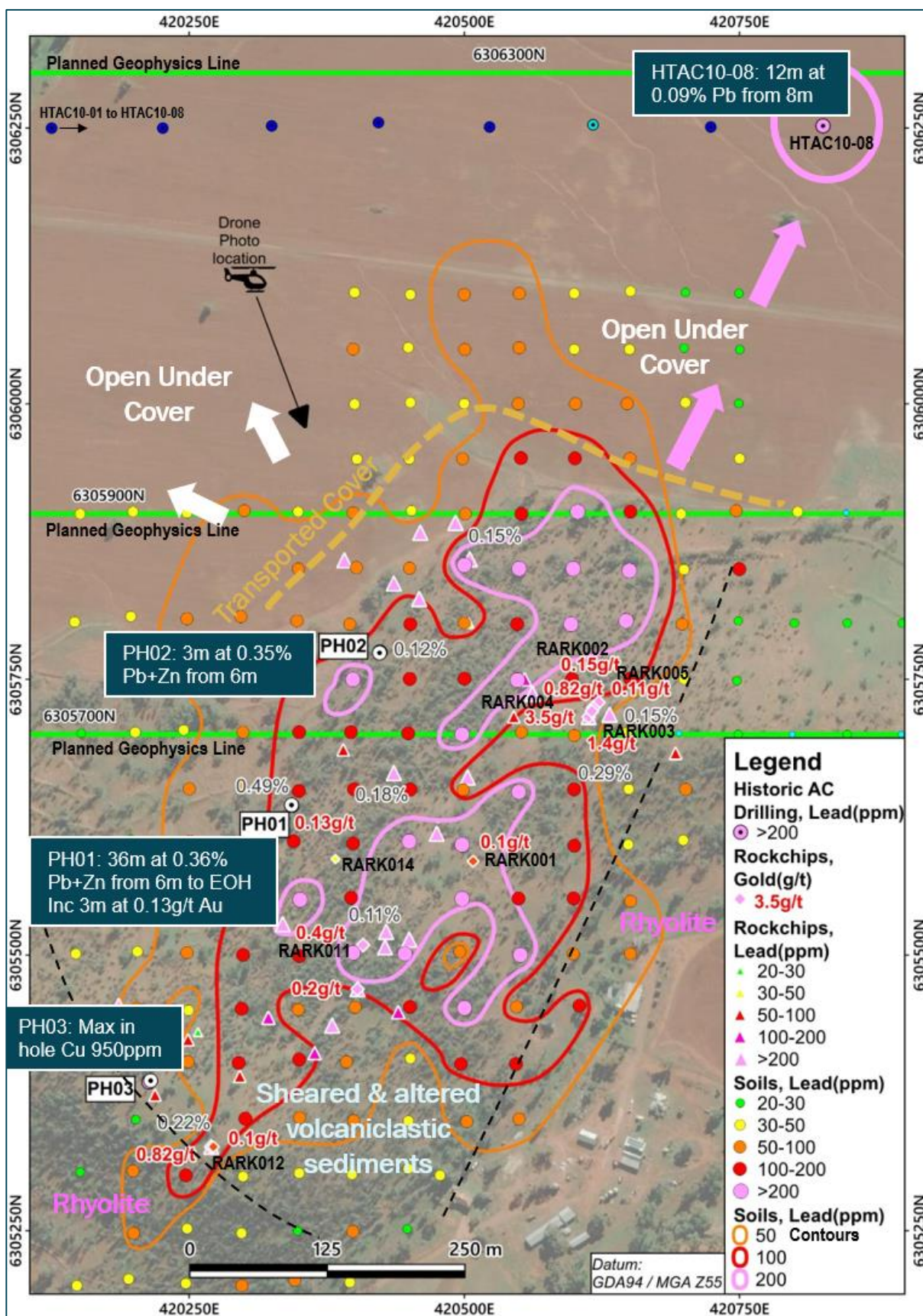
The prospective geochemistry is hosted in sheared, quartz-sericite-chlorite altered volcaniclastic rocks that abut coherent, blocky rhyolite. **Localised areas display strong leached sulphide textures, called gossans, which host the highest tenor gold (Figure 9 and 10, AGC ASX 5 April 2023).**

Nine rock chips taken recently returned up to 3.5g/t gold, 33g/t silver, 1.0% lead + zinc and 800ppm copper (RARK004), with seven of those returning 0.1g/t Au or greater (**Figure 9**, AGC ASX 5 April 2023).

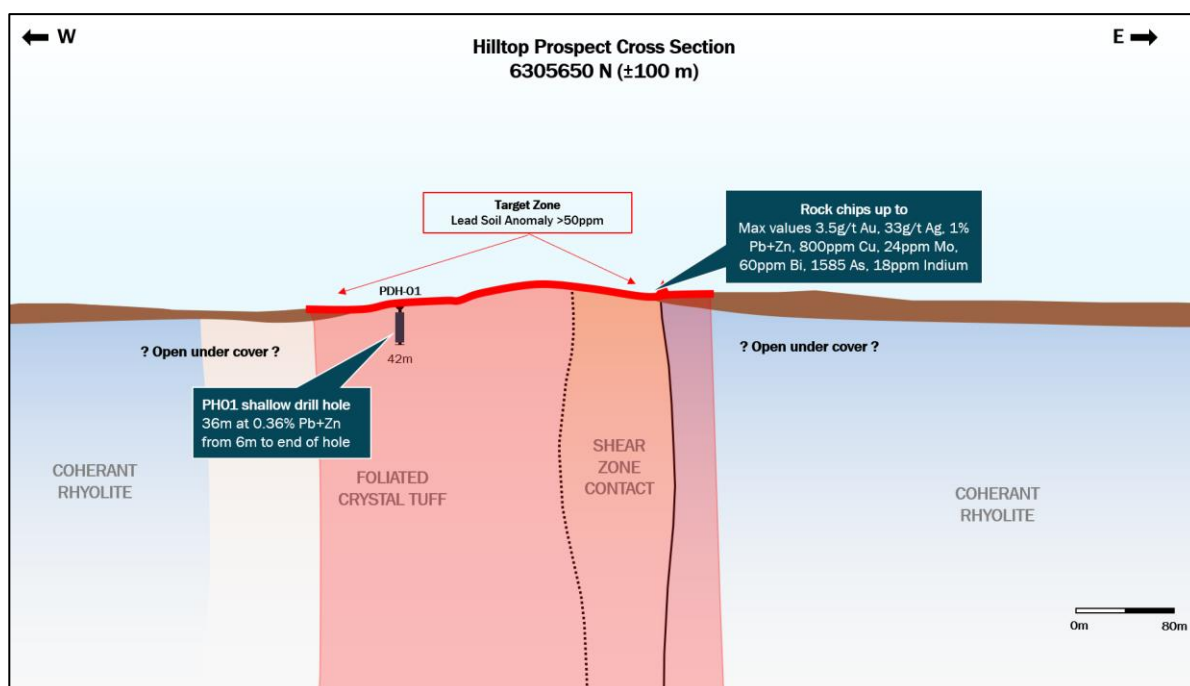
**Hilltop has the potential to host significant copper-gold-lead-zinc sulphide mineralisation, with the current IP survey expected to aid in drill targeting.**



**Figure 8:** Satellite map showing historic holes, lead in soils zones and planned geophysics lines across the 4km Hilltop trend (AGC ASX 5 April 2023).



**Figure 9:** Plan map of the main Hilltop target with strong >100ppm lead-in-soil anomaly over 800m in length, separating into two at >200ppm, also gold in rock chips form a northeast trend. Results from three shallow historic holes support potential for a large Cobar style system (AGC ASX 5 April 2023).

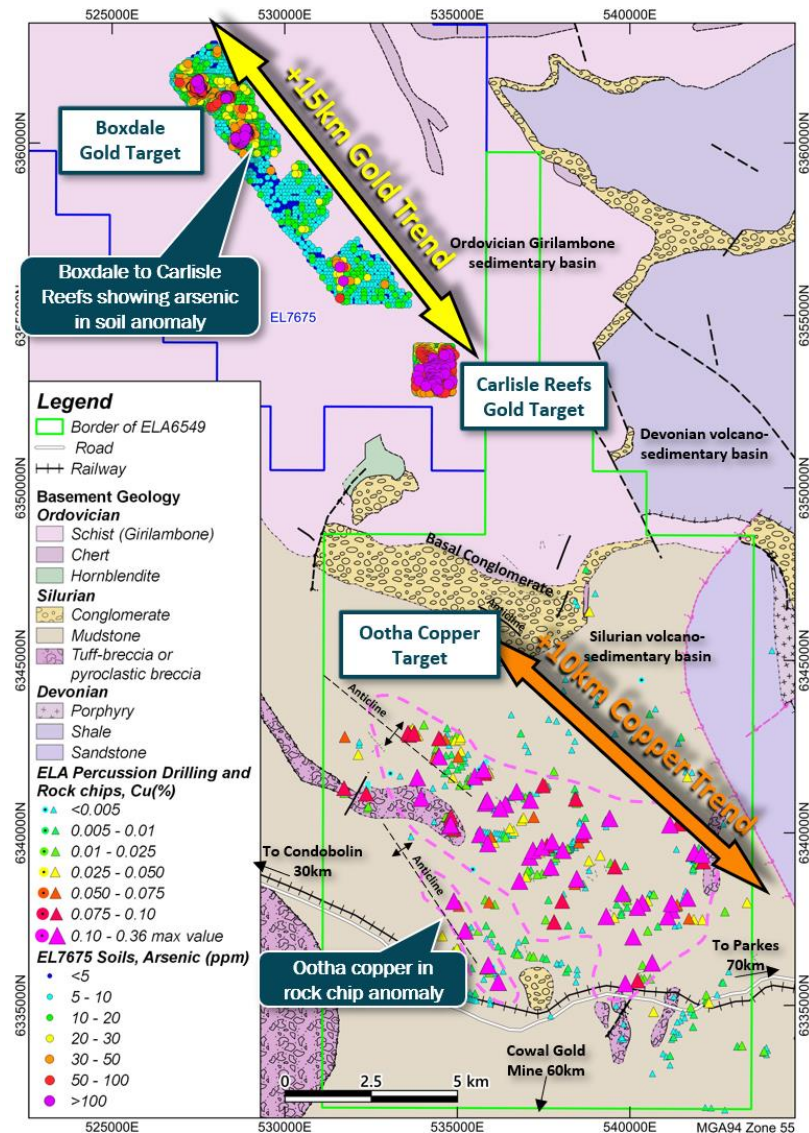


**Figure 10:** Schematic cross sections from the Hilltop prospect showing basic geology and target zones in red. See Figure 8 for section location (AGC ASX 5 April 2023).

An exploration licence renewal application was submitted for the Cargelligo licence.

#### MOOREFIELD-OOTHA PROJECT: COPPER-GOLD (EL7675, EL9536, AGC 100%)

During the quarter, the Ootha licence was granted and first pass generative soil sampling (one hundred and sixteen soil samples) was conducted across accessible areas. Infill sampling is warranted to better highlight the NW trend seen in historic rock chips (AGC ASX 16 November 2022).



**Figure 11:** Plan view map of the Ootha Copper Target relative to the Company's 15km Boxdale to Carlisle Reefs trend with geology by the NSW Geological Survey (AGC ASX 16 November 2022).

### GUNDAGAI PROJECT: GOLD (EL8955, AGC 100%)

During the quarter, at the Bongongalong target, structural mapping and rock chip sampling was conducted with nineteen samples sent to the lab for analysis.

An exploration licence renewal application was submitted for the Gundagai licence.

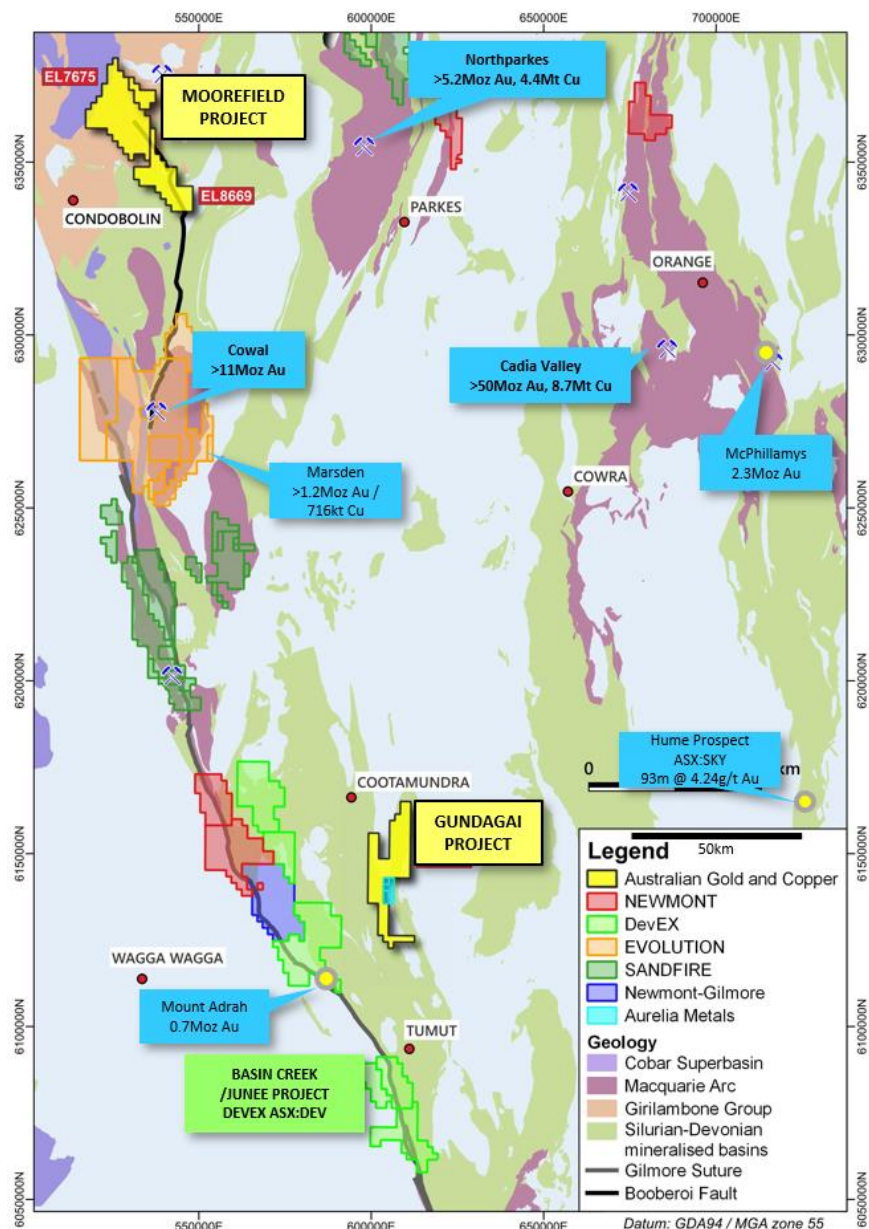


Figure 12: Plan view map of the Gundagai Project

## Forward Exploration Schedule

**South Cobar Project:** Induced polarisation (IP) geophysical survey has commenced at the Hilltop target, to be followed by the Planet target. Once all three surveys are complete, drill targets will be designed and ranked. Further soil sampling is also planned at the Creamy Hills gold mines to expand on the already completed soil sample test line which confirmed that transported cover is not masking the surface geochemical response (AGC ASX 3 March 2023).

**Ootha and Gundagai Projects:** Infill soil sampling is planned at the Ootha Project and a new soil sampling survey is planned at Gundagai's Bongongalong target.

**Upcoming Conferences:** AGC's Managing Director Glen Diemar will be presenting at the Gold Coast Investment Showcase Conference 21-22 June 2023, the AUSTEX Investor Lunch in Brisbane 4 July 2023 and the Australian Gold Conference in Sydney 29-30<sup>th</sup> August 2023.

### ASX Additional Information

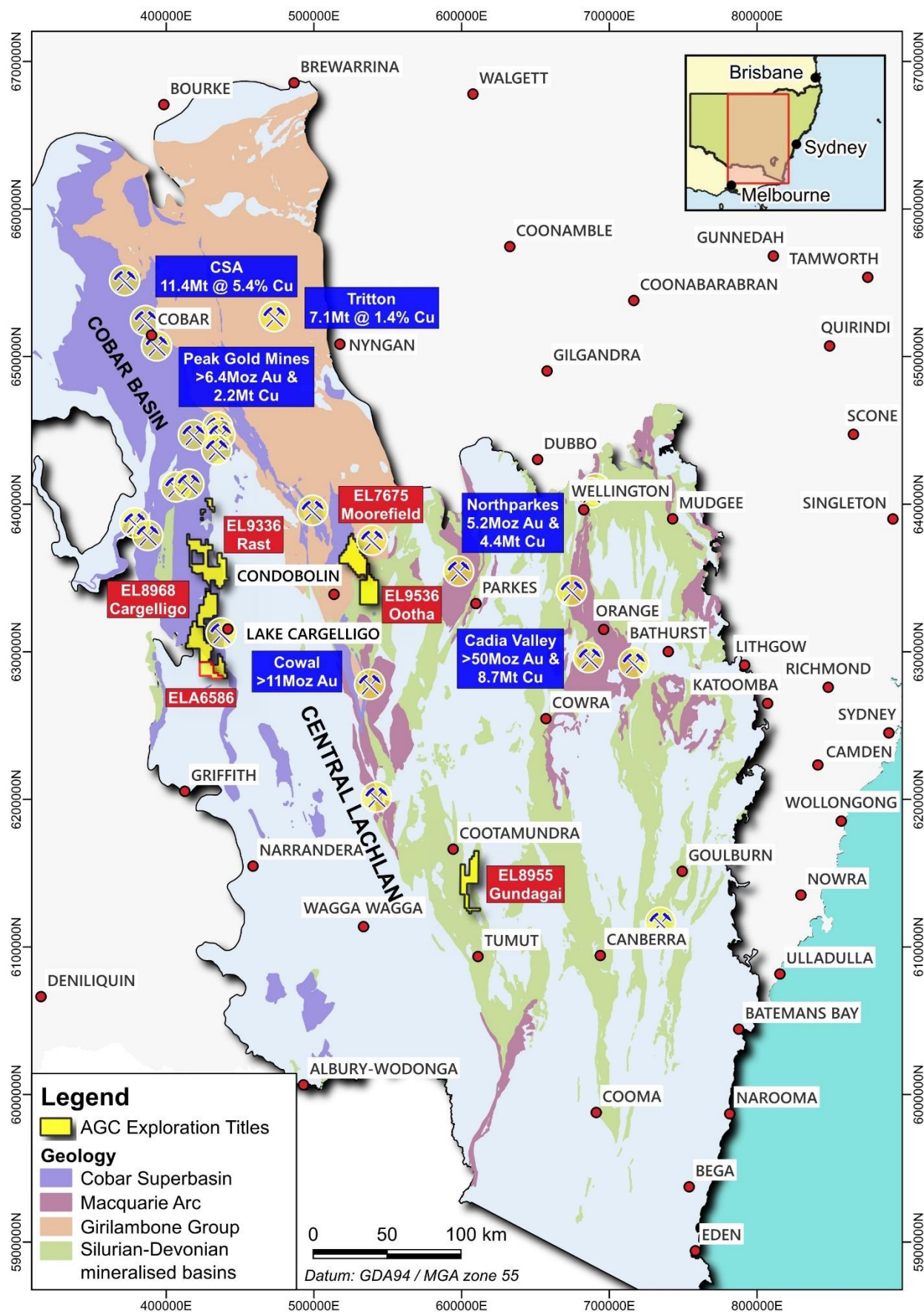
As per ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was \$326,000. Full details of exploration activity during the Quarter are set out in this report.

As per ASX Listing Rule 5.3.2: There were no substantive mining production and development activities during the Quarter.

As per ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Quarter were \$116,000. The Company advises that this relates to director's fees, shared services and accounting and company secretarial related services.

### Projects Overview

AGC's diversified portfolio located in the Central Lachlan Fold Belt of NSW includes the Moorefield-Ootha projects exploring for multi-million ounce gold copper deposits, the southern Cobar Super-Basin copper-gold/base-metal project exploring for Hera and Federation style deposits, and the Gundagai gold project, exploring for multi-million ounce McPhillamy's type gold deposits. All AGC's tenements are 100% owned with no royalties or buy-backs.



**Figure 13:** Location of AGC's Projects in relation to major mines and deposits within the Lachlan Fold Belt., see p100 AGC ASX prospectus lodged 18th November 2020.

## REFERENCES

AGC ASX Prospectus lodged 18 November 2020

AGC ASX 3 May 2021, *Base-metal sulphides overlying EM conductor at Achilles*

AGC ASX 15 September 2021 *Exploration Update*

AGC ASX 16 November 2022 *New project area features 10km long copper target*

AGC ASX 3 March 2023, *High grade historic gold mines discovered at South Cobar*

AGC ASX 15 March 2023, *South Cobar Project Regional Technical Update*

AGC ASX 16 March 2023, *South Cobar Project Regional Technical Update Relodged*

AGC ASX 20 March 2023, *Hilltop: A new gold base metal target South Cobar*

AGC ASX 5 April 2023, *Hilltop: A new gold base metal target South Cobar Relodged*

AGC ASX 18 April 2023, *Exploration Update South Cobar Project*

Bull, K.F. and McPhie, J., 2006, Facies architecture of the Early Devonian Ural Volcanics, New South Wales: Australian Journal of Earth Sciences, v. 53, p. 919-945

CNB ASX, 9 March 2023, *Presentation - Euroz Hartleys Institutional Conference*

Thomas O., Smith P., McKinnon A., 12 May 2022, *Federation Zn-Pb-Au-Cu-Ag Deposit, Nymagee District NSW*. Presentation, Discoveries in the Tasmanides, Mines and Wines Conference, Orange NSW. (<https://smedg.org.au/wp-content/uploads/2022/05/220510-Mines-and-Wines-Federation.pdf>)

This announcement has been approved for release by the Board of AGC.

**ENDS**

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## Tenement Register

Tenement	Reference	Location	Interest at 01/01/23	Acquired/Disposed	Interest at 31/03/23
Moorefield	EL 7675	NSW	100%	-	100%
Ootha	EL9536	NSW	-	Acquired	100%
Cargelligo	EL 8968	NSW	100%	-	100%
Rast	EL 9336	NSW	100%	-	100%
Nyora	ELA 6586	NSW	100%	-	100%
Gundagai	EL 8955	NSW	100%	-	100%

There are no Farm-in or Farm-out Arrangements held by Australian Gold and Copper Ltd

### Competent Persons Statement

The information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Glen Diemar who is a member of the Australian Institute of Geoscientists. Mr. Diemar is a full-time employee of Australian Gold and Copper Limited, and is a shareholder, however Mr. Diemar believes this shareholding does not create a conflict of interest, and Mr. Diemar 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Diemar consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

### Forward-Looking Statements

This announcement contains "forward-looking statements." All statements other than those of historical facts included in this announcement are forward-looking statements. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and based upon information currently available to the company and believed to have a reasonable basis. Although the company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements. Forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, copper, gold, and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. The forward-looking statements contain in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement".

### Previously Reported Information

The information in this report that references previously reported exploration results is extracted from the announcements referenced and the Company's ASX IPO Prospectus released on the date noted in the body of the text where that reference appears. The ASX IPO Prospectus is available to view on the Company's website or on the ASX website ([www.asx.com.au](http://www.asx.com.au)). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.