



## Drilling to test priority Cu-Au targets at Atlantis

### HIGHLIGHTS - Atlantis Cu-Au Prospect

- Drill rig to be mobilised to site next week to test compelling copper-gold targets
- Priority targets include:
  - The three EM conductors which may represent an accumulation of sulphides on the limbs of the fold
  - The contact between the sediments/black shales and the Bittles Tank Mafic Volcanics, which is where the majority of gold is found at the +5Moz Stawell gold mine<sup>1</sup>
  - Prospective parts of the 6.5km long Au-Cu-As-Pb-Zn multi-element soil anomaly, noting that the Phase I drill program only tested 150m strike length of this anomaly
- Downhole EM survey will be completed in conjunction with the drilling program to give additional vectors to mineralisation

Koonenberry Gold Ltd (ASX:KNB) ("Koonenberry" or the "Company") is pleased to report on the progress of work at the Koonenberry Project.

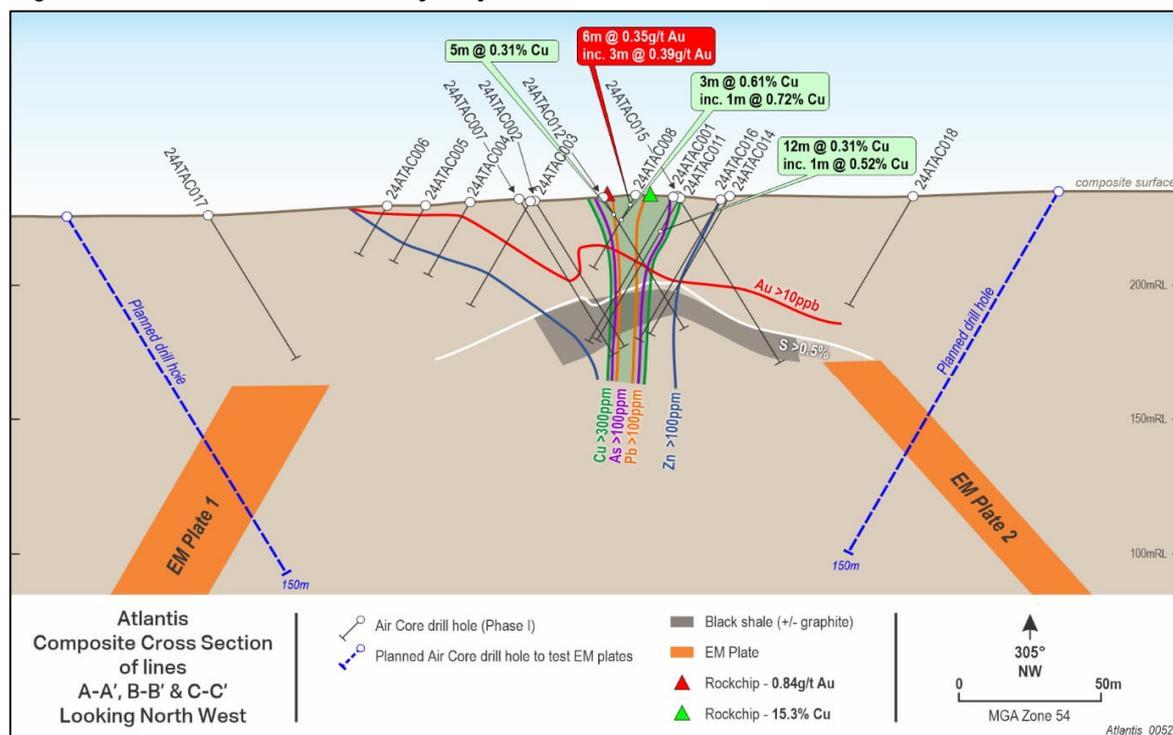


Figure 1. Composite cross section (sections A, B & C combined) of Atlantis April 2024 AC drill traces and anomalous multi-element geochemistry contours and zonation from Pb to As-Cu to distal Zn.

Managing Director, Dan Power, said: "Our first phase of drilling at Atlantis intersected copper-gold-lead-zinc mineralisation from surface. Key geological features such as carbonaceous sediments, silica-feldspar-biotite-iron carbonate alteration and a pyrite-arseniferous pyrite-pyrrhotite-arsenopyrite-chalcopyrite-galena-sphalerite sulphide assemblage are consistent with our Stawell-type exploration model and indicate that the right fluids have moved through the rocks. During this next phase of drilling, we will be testing the three EM conductors which could represent sulphide accumulations on the limbs of the fold associated with copper-gold mineralisation. We will also be testing other priority targets during this program and look forward to reporting results in due course."

## Atlantis Phase II Drilling

Approximately 2,000m of drilling is planned at Atlantis during this second phase of drilling. The program has been designed to test:

- The three EM conductors which may represent an accumulation of sulphides:
  - EM Plate 1 (200 x 125m dimensions)
  - EM Plate 2 (150 x 125m dimensions)
  - EM Plate 3 (300 x 125m dimensions)
- The contact between the sediments/black shales and the Bittles Tank Mafic Volcanics, which is where the majority of gold is found at the +5Moz Stawell gold mine<sup>1</sup>
- Highly prospective parts of the 6.5km long Au-Cu-As-Pb-Zn multi-element soil anomaly, noting that the current drill program has only tested 150m of this anomaly

As previously reported, drilling during Phase I, with a standard Air Core rig, was unable to penetrate to depth due to the unexpected hard and silicified rocks. Phase II drilling will utilise a “slimline RC” rig configuration which has a larger hammer and air compressor.

## Forward Program

The Atlantis drill program has been designed to systematically test key targets and is expected to take around 10 days to complete. The downhole EM surveys will be conducted immediately after completion of the drilling.

A high impact program testing the recently identified Central Gold Zone at Bellagio is also planned<sup>2</sup>.

PROSPECT	ACTIVITY	OBJECTIVE	Mar	Apr	May	Jun	Jul	Aug	Sep
Atlantis Cu-Au Prospect	AC Drilling	Phase I drill testing (first ever drill test)		▶ ✓					
	AC Drilling	Phase II drill testing				▶			
	Geophysics	Define drill targets					▶		
Bellagio Au Prospect	AC Drilling	Define gold zone footprint		▶ ✓					
	AC Drilling	Target depth extensions		▶ ✓					
	AC Drilling	Target E-W trending Central Gold Zone					▶		
Royal Oak Fault	Geophysics	Define faults and trap sites							
	Geochemistry	Define targets along prospective fault			▶ ✓	▶			
	AC Drilling	Phase I drill testing of priority targets						▶	
Pipeline Prospects	AC Drilling	Phase I drill testing of priority targets					▶		

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*Table 1.* Planned Forward Work Program. Please note that planned discovery activity is indicative and subject to change due to various factors.

<sup>1</sup> References to Stawell Gold mine and geological similarities do not in any way guarantee that the Company will have any success at all or similar successes in delineating a Mineral Resource on any of Koonenberry Gold's projects. Refer to disclaimer on page 11

<sup>2</sup> Refer ASX announcement dated 13/06/2024

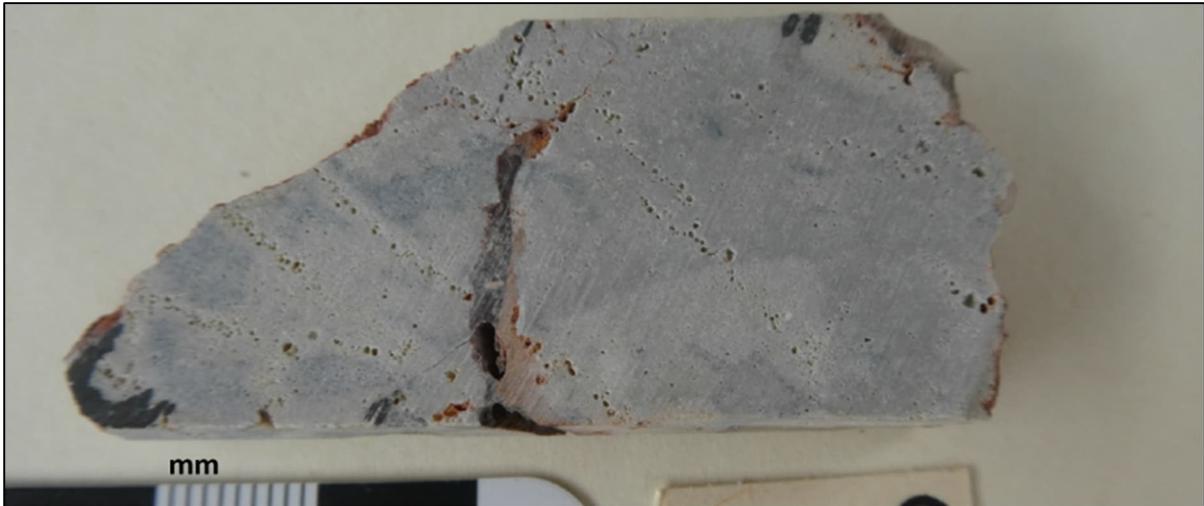
## Atlantis Prospect Background

The Atlantis Prospect is defined by a 6.5km long gold-copper-antimony-arsenic soil anomaly. Stratiform malachite and remnant sulphides have been observed in outcrop in association with silica and hematite alteration. High-grade rock chip assays of 15.3% Cu and 5.62% Cu, as well as up to 0.84g/t Au, 16,000ppm As and 0.34% Pb, have been returned from outcrop.<sup>3</sup>



*Photo 1. Rock chip sample KB03113, which returned 15.3% Copper, comprised of oxidised white meta-tuffaceous siltstone with oxide copper mineralisation (green/dark grey in photo).*

The geology comprises sediments, volcanics and an interpreted doubly-plunging basalt dome (represented as a magnetic high). The area is considered highly prospective for orogenic gold mineralisation (Stawell Gold Mine – Type). Copper-dominant mineralisation styles such as VMS (Volcanogenic Massive Sulphides) are also considered to be possible.



*Photo 2 – Slab from Atlantis outcrop of sample KB03118 which returned 0.838g/t Gold<sup>4</sup>, dominated by secondary silica (hydrothermal alteration), containing abundant ex-sulphide coarse voids (up to 1mm) which are flanked by fibrous pressure fringe quartz.*

A Moving-Loop Electromagnetic (MLEM) survey was completed in March 2023 at the Atlantis Prospect to test for the presence of conductive bodies potentially representing sulphide mineralisation (Figure 2). The survey was completed over only a 600m strike length of the 6.5km long gold-copper-antimony arsenic soil anomaly. Three Electromagnetic (EM) conductors were detected proximal to peak gold and copper rock chip assays of 0.84g/t gold and 15.3% Cu.

<sup>3</sup> Refer ASX announcement dated 1/03/2023

<sup>4</sup> Refer ASX announcement dated 21/03/2023

The EM conductors, whilst relatively weak, are interpreted to represent possible interconnected sulphide veinlets associated with Cu-Au mineralisation. These are labelled as EM Plate 1 – 3 on the cross section (Figure 3) and have approximate strike lengths of 200m, 150m and 300m respectively, each with 125m down dip extent.

Significantly, the high-grade Cu-Au rock chip samples sit up dip from the modelled central plate. The down dip extension of the SW plate coincides with a monoclinical flexure in the conductivity profiles. These coincidences could be interpreted as up-dip leakage of sulphide mineralisation from a NE dipping body and the SW dipping plate reflecting a fault (Figure 3).

In addition, the high-grade rock chips, copper-gold-multiple element soil anomalies and the late-time EM response (red component) are all co-incident with a fold hinge mapped by the Geological Survey of NSW. Modelled EM plates appear to be located on both limbs of the fold. The limbs may have increased structural complexity related to deformation and folding and therefore be better sites for mineralisation.

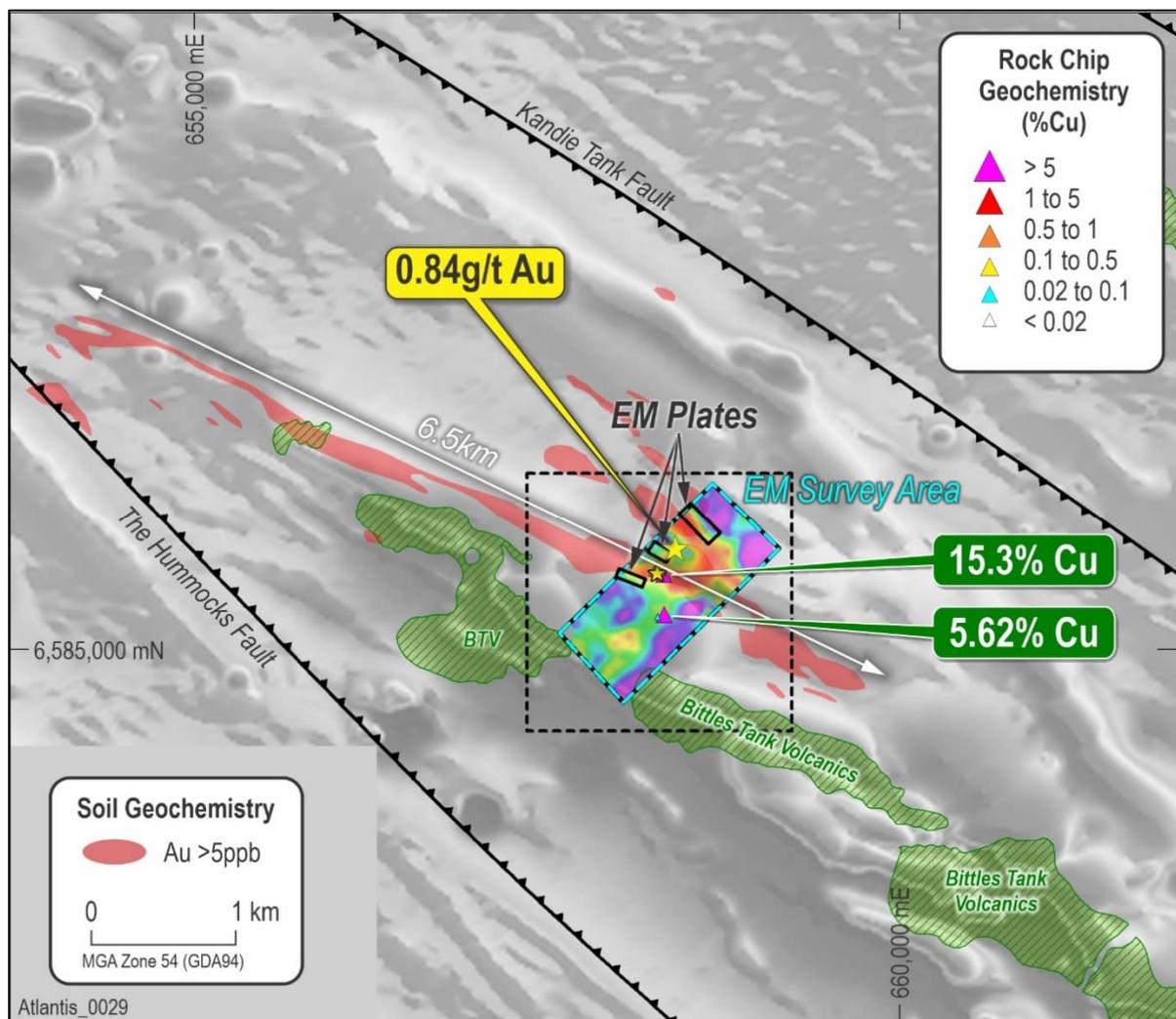


Figure 2. Atlantis Prospect with Late Time (Channel 21) EM image within the survey area over Grayscale RTP aeromagnetic image, 6.5km long Gold in soil anomaly, Rock Chips and Volcanics outcrop. See Figure 3 for cross-section of EM Survey Area.

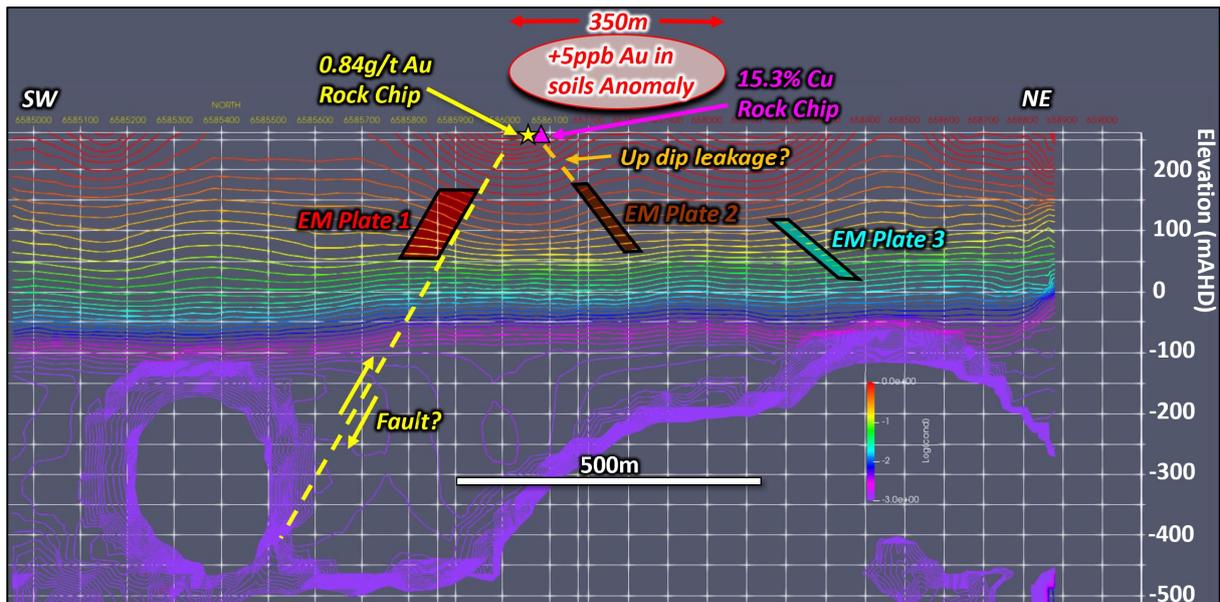


Figure 3. SW-NE cross-section through the high-grade copper rock chips (view toward NW) with modelled EM plates, conductivity contours and interpreted structures. Elevation mAHD is metres Australian Height Datum. Note the location is also coincident with the 350m wide Cu-Au soil anomaly.

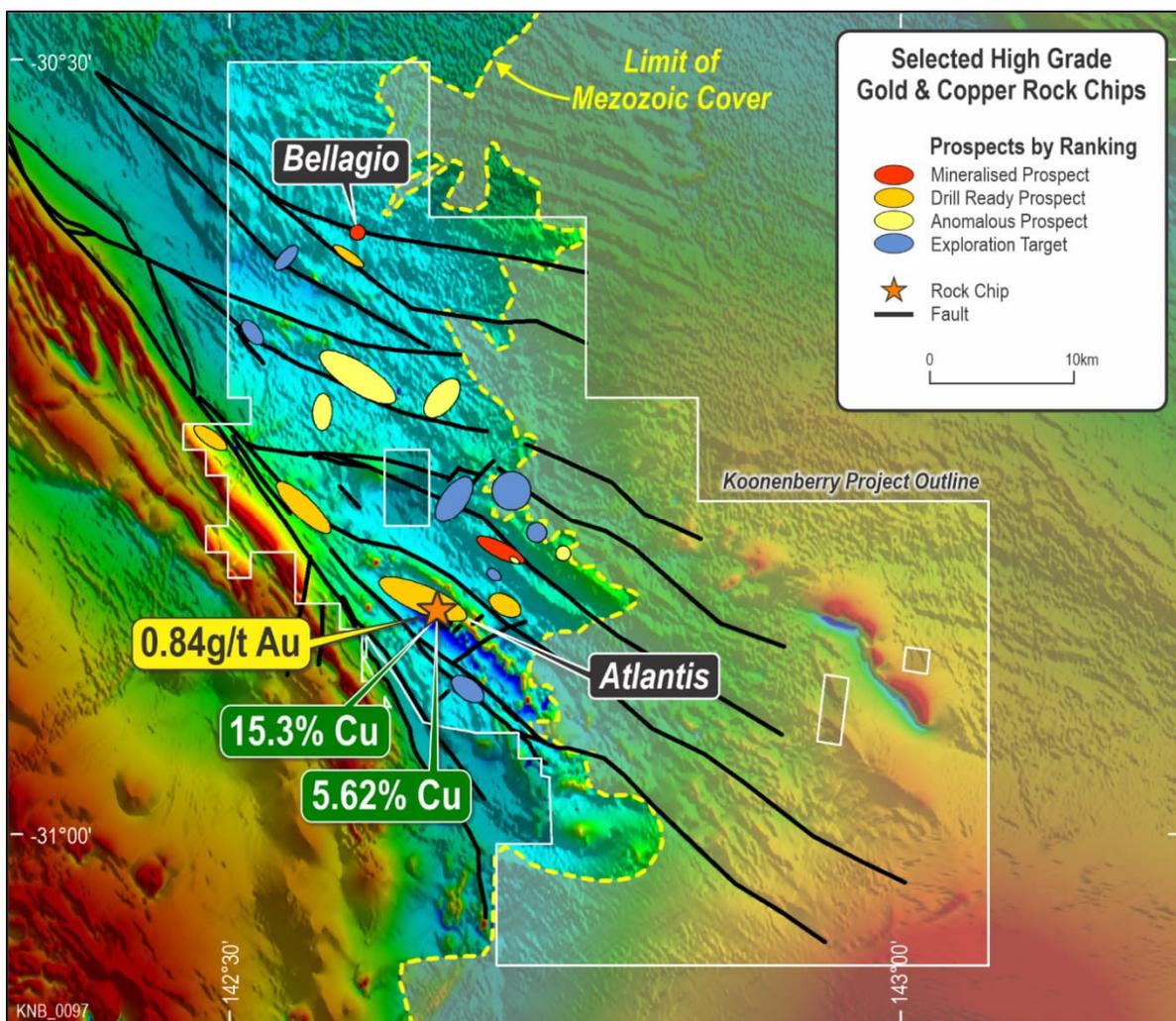


Figure 4. Atlantis Prospect, including select rock chip results<sup>5</sup>, in relation to the numerous Prospects within the Koonenberry Project.

<sup>5</sup> Refer ASX announcement dated 21/03/2023



The first phase of Air Core drilling at Atlantis was completed in May 2024. Drilling intersected copper-gold mineralisation from surface with significant intersections including 3m @ 0.61% Cu from 9m, including 1m @ 0.72% Cu from 9m (24ATAC008), 12m @ 0.31% Cu from 9m (24ATAC011), 5m @ 0.31% Cu from 5m (24ATAC012) and 6m @ 0.35g/t Au and 0.57% Pb from 0m (24ATAC008)<sup>6</sup>.

A 25m wide zone of anomalous copper (>300ppm) associated with gold, arsenic, lead and zinc mineralisation was interpreted as being potentially significant as it may represent leakage and/or zonation from a larger system or leakage along a fault splay from one or more of the deeper EM targets. Alternatively, it could also represent leakage from the highly prospective contact between the sediments and the Bittles Tank Mafic Volcanics which outcrop to the west but may also be expected at depth (see Figure 5).

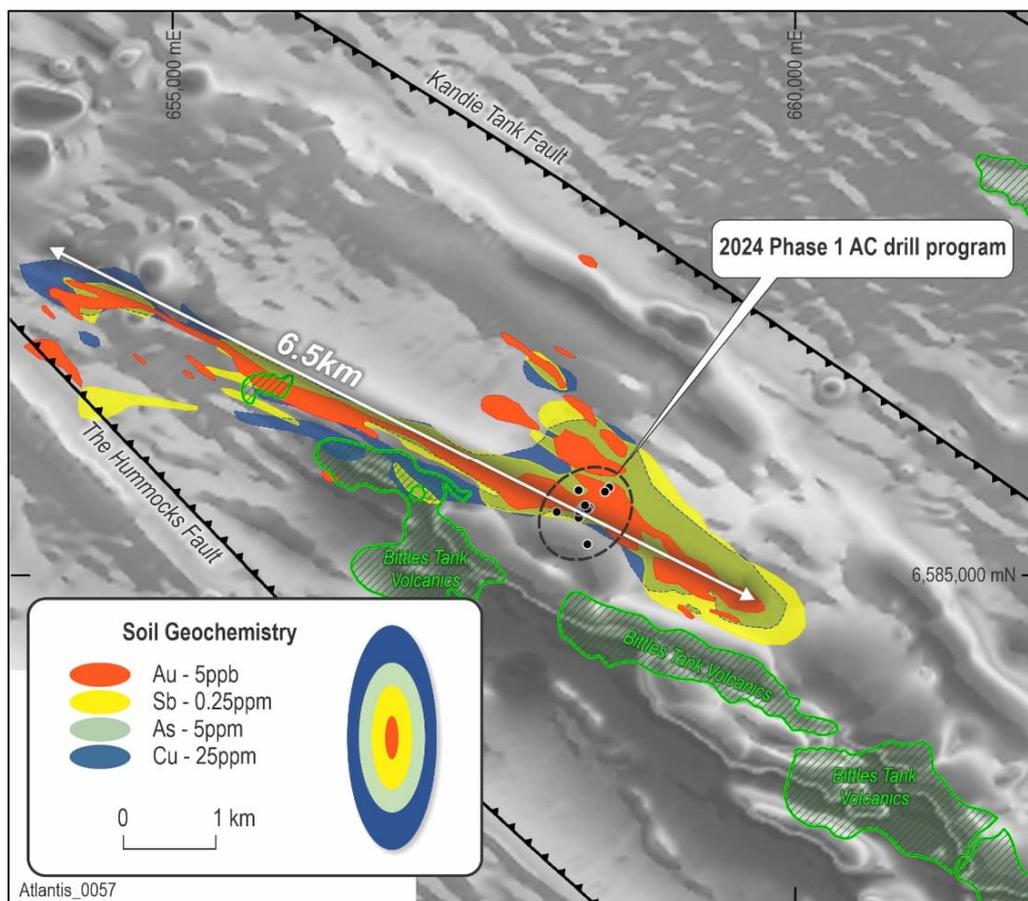


Figure 5. Air Core drill collars in relation to the 6.5km long Gold-Copper and Pathfinder element soil anomaly which defines the Atlantis Prospect & mapped volcanics over grayscale RTP aeromagnetics.

<sup>6</sup> Refer ASX announcement dated 28/05/2024

## Geological Observations and Discussion

Drilling intersected lithic muddy lithic feldspathic quartz siltstone, feldspar quartz greywacke and laminated carbonaceous mudstone and (all from the Cambrian Teltawongee Group). Minor multi-stage quartz veins were also intersected. The sedimentary sequence has been metamorphosed to sub-greenschist/greenschist facies.

The carbonaceous mudstone unit forms a marker horizon and indicates that the stratigraphy may be folded into an antiform or be a parasitic fold on a larger antiformal/domal structure. This is apparent on the geological cross section. The limbs may have increased structural complexity related to deformation and folding and may therefore be better sites for Cu-Au mineralisation. Significantly, the modelled EM plates appear to be located on both limbs of the fold.

Alteration observed in the field was predominantly silica, however secondary alkali feldspar, K-feldspar, biotite (retrograde to chlorite) and sericite/muscovite has been confirmed petrographically and is likely to represent a potassic peak metamorphic metasomatic event. Fe-carbonate alteration has been observed to cross-cut the earlier alteration assemblage and may represent a second, cooler fluid event.

In addition, no sulphides other than pyrite were observed in hand specimen (although malachite was observed in the weathered zone), however very fine to ultra fine-grained Fe-sulphides are observed petrographically intergrown with, interstitial to and included within the quartz, alkali feldspar, biotite and Fe-rich carbonate alteration assemblage. Sulphides are observed as pyrite, arseniferous pyrite, pyrrhotite, arsenopyrite and chalcopyrite in polished thin section work. Highly anomalous Pb and Zn assays (Pb max 0.95%, Zn max 0.15%)<sup>7</sup> also suggest that Galena and Sphalerite are also likely to be present in the samples. In previous petrological studies on the outcropping mineralisation at Atlantis, vein-related sulphides were indeed determined to include galena along with arsenopyrite and chalcopyrite.

**Company geologists believe that the structural setting, geology, metal association, sulphide species and alteration at Atlantis has striking similarities with that of the +5Moz Stawell Gold mine in Western Victoria. At Stawell, quartz veining and gold mineralisation occurs at or near the contact between carbonaceous shales and mafic volcanics (basalt domes). The same geology exists at Atlantis and remains a highly prospective and untested target to date. At Stawell, the domes are located between two bounding faults which may be analogous to the Hummocks Fault and the Kandie Tank Fault at Atlantis (see Figure 2).**

In addition, the gold mineralisation at Stawell has an iron sulphide-arsenic-copper-lead-zinc association (specifically pyrite (FeS) -pyrrhotite (FeS) -arsenopyrite (FeAsS) -chalcopyrite (CuS) -galena (PbS) -sphalerite (ZnS)) (<https://portergeo.com.au/database/mineinfo.asp?mineid=mn654>). Mineralisation at Stawell is typically associated with silica-chlorite-sericite alteration. **The same metal association, sulphide species and alteration has been observed in this initial drilling program at Atlantis and provides great encouragement for additional work.**

*Note that references to the Stawell Gold mine and geological similarities do not in any way guarantee that the Company will have any success at all or similar successes in delineating a Mineral Resource on any of Koonenberry Gold's projects.*

<sup>7</sup> Refer ASX announcement dated 28/05/2024



Table 2 below outlines the Stawell Gold mine characteristics (taken from <https://portergeo.com.au/database/mineinfo.asp?mineid=mn654>), and compares them to the geological features observed to date at Atlantis. Refer to disclaimer on page 16 regarding references to the Stawell Gold mine.

ATLANTIS	+5Moz STAWELL GOLD MINE (Magdala Deposit)
<b>DIMENSIONS</b>	
Basalt Dome interpreted from magnetic highs: 2.5km W x ~10km L x ?km D	Basalt Dome (Magdala Dome): 1.2km W x ~5km L x >1.7km D
<b>GEOCHEMISTRY</b>	
*Au in soil anomaly 6.5km x 900m (+5ppb, max 49.4ppb Au) *Rock chips: 15.3% Cu, 0.84 g/t Au, 16,000ppm As, 0.34% Pb *Au +Sb-As-Cu ±Pb-Zn pathfinder element association	*Au +Sb-As-Cu ±Pb-Zn pathfinder element association
<b>HOST ROCKS</b>	
<u>Teltawongee Beds</u> *Turbiditic sandstone, greywacke, siltstone, and carbonaceous mudstone	<u>Albion Formation</u> *Black mudstone, some of which is sulphidic, interbedded sandstone and siliceous siltstone *The host rock to much of the gold mineralisation
Bittles Tank Volcanics – contains MORBs ~500Ma Magnetic highs, possible remnant magnetism	Magdala Basalt – MORB 515Ma Magnetic highs (+- remnant magnetism)
<b>MINERALISATION</b>	
*Pyrite, arseniferous pyrite, pyrrhotite, arsenopyrite, chalcocopyrite, galena, ?sphalerite	*Gold + arsenopyrite-pyrite-pyrrhotite- chalcocopyrite-galena sphalerite *Arrays of quartz-sulphide tension veins immediately adjacent to the Stawell Facies-Magdala Basalt contact
<b>ALTERATION</b>	
Silica, K-feldspar, biotite, chlorite, sericite/illite, Fe-carbonate	Silica, chlorite, stilpnomelane, Fe-carbonate
<b>STRUCTURAL GEOLOGY</b>	
*Adjacent to deep crustal/mantle-tapping fault (Koonenberry Fault)	*Proximal to deep crustal/mantle-tapping fault (Moyston Fault)
*Wedged between Hummocks and Kandie Tank Faults	Wedged between Stawell and Coongee Faults
*Doubly-plunging antiform (mafic dome) interpreted from magnetic highs 2.5km W x ~10km L x ? D	*Doubly-plunging basalt dome (Magdala Antiform) 1.2km W x ~5km L x >1.7km D
*Subject to Delamarian and Benambran orogenies *Basalts are interpreted to have been thrust up from depth  *Structural complexity, particularly along western limb	**Subject to Delamarian and Benambran orogenies *Basalt thrust up from depth *Dilational geometries/space is created by earlier Delamarian deformation *Gold trap sites along fold hinges and structures wrapping around the dome
<b>GOLD MINERALISATION AGE</b>	
*440 Ma during Benambran Orogeny (Tibooburra)	*440 Ma in Western Lachlan Orogeny, Bulk of Gold in the late Stawell D4 event, with a final event in D5 from 426-420 Ma

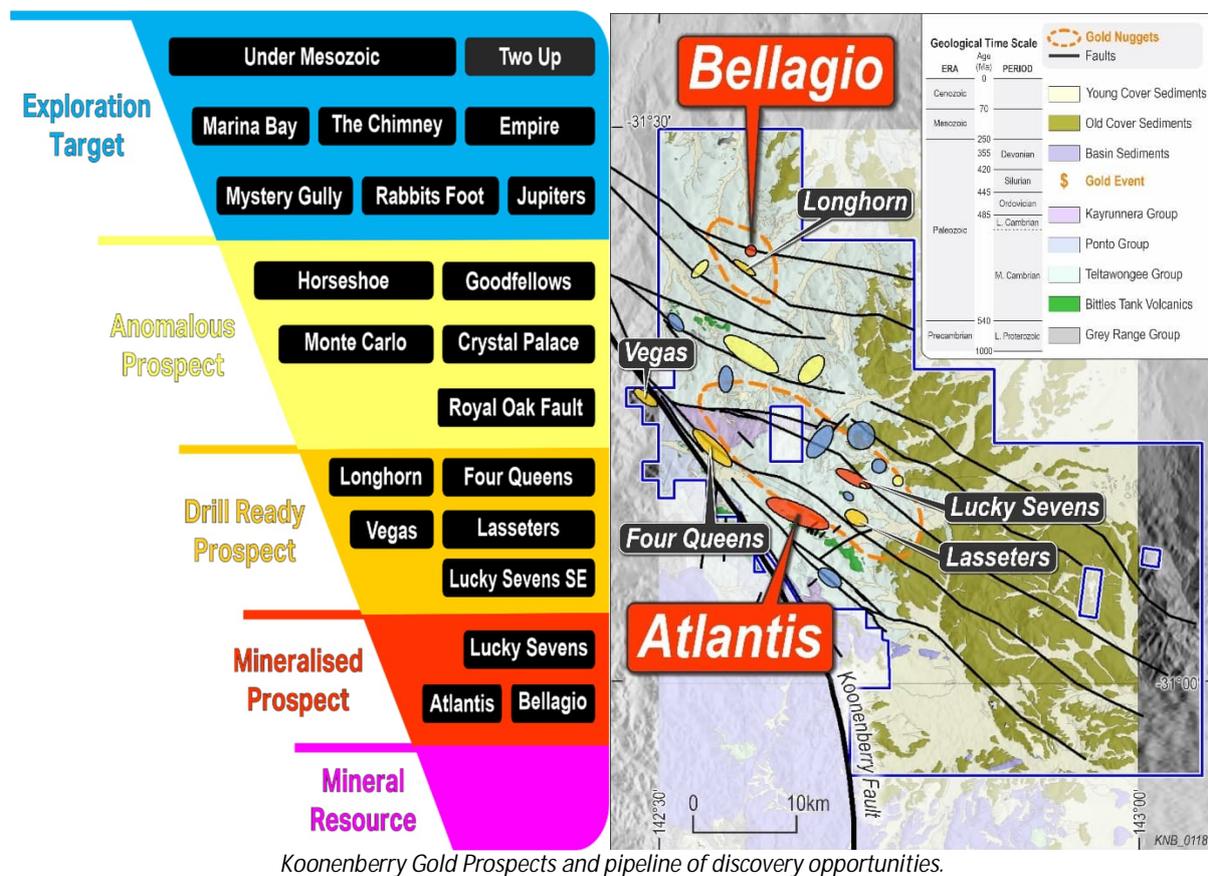
Table 2 - Geological comparison of Atlantis Prospect with the Stawell Gold Deposit.

-ENDS-

## ABOUT KOONENBERRY GOLD

Koonenberry Gold Ltd is a minerals explorer based in Australia aiming to create value for shareholders through exploration at the Company's 100%-owned Koonenberry Gold Project. The Project is located in north-western New South Wales, approximately 160km north-east of the major mining and cultural centre of Broken Hill and 40km west of the opal mining town of White Cliffs. Good access is available via main roads connecting Broken Hill, White Cliffs and Tibooburra. Acquired in 2017, and with an IPO in 2021, the Project covers 2,060km<sup>2</sup> of granted EL's in a consolidated tenement package.

With abundant evidence of high-grade mineralisation in multiple bedrock sources and a pipeline of emerging targets, the tenement package offers a compelling district scale Greenfields discovery opportunity in an underexplored and emerging province. Koonenberry Gold holds a dominant position in the Koonenberry Belt in NSW which is believed to be an extension of the Stawell Zone in Western Victoria and therefore has the potential for the discovery of significant gold deposits.



This ASX release was authorised by the Board of the Company.

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- 13/06/2024 KNB (ASX). Bellagio gold footprint extended and new targets defined.



### Competent Persons Statement

*The information in this announcement that relates to Exploration Results is based on information compiled under the supervision of Mr Paul Wittwer, who holds a BSc Geology (Hons.), is a Member of the Australian Institute of Geoscientists (AIG) and the Australian Institute of Mining and Metallurgy (AusIMM) and is the Exploration Manager of Koonenberry Gold Limited. Mr Wittwer has sufficient experience that 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 Exploration Results, Mineral Resources and Ore Reserves.' Mr Wittwer consents to the inclusion in this report of the matter based on his information in the form and context in which it appears. Where reference is made to previous announcements of exploration results in this announcement, the Company confirms that it is not aware of any new information or data that materially affects the information and results included in those announcements.*

### Forward looking statements

*This announcement may include forward looking statements and opinion. Often, but not always, forward looking statements can be identified by the use of forward looking words such as "may", "will", "expect" "intend", "plan", "estimate", "anticipate", "continue", "outlook" and "guidance" or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs. Forward looking statements are based on Koonenberry and its Management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect Koonenberry's business and operations in future. Koonenberry does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that Koonenberry's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by Koonenberry or Management or beyond Koonenberry's control. Although Koonenberry attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of Koonenberry. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law in providing this information Koonenberry does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any changes in events, conditions, or circumstances on which any such statement is based.*

### Cautionary statement on visual estimates of mineralisation

*Any references in this announcement to visual results are from visual estimates by qualified geologists. Laboratory assays are required for representative estimates of quantifiable elemental values. Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.*

### Proximate statements

*This announcement may contain references to other parties either nearby or proximate to Koonenberry Gold's projects and/or references that may have topographical or geological similarities to Koonenberry Gold's projects, including the Stawell Gold Mine in Western Victoria. It is important to note that such discoveries or geological similarities do not in any way guarantee that the Company will have any success at all or similar successes in delineating a Mineral Resource on any of Koonenberry Gold's projects.*

