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Aterian PLC
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Operational Update:
Airborne Geophysical Interpretation, Tata and Azrar Projects, Morocco

Aterian Plc
("**Aterian**" or the "**Company")**

Aterian Plc (LSE: ATN), the critical metal-focused exploration and development company, is pleased to provide an operational update on recent work conducted on the Company's Tata and Azrar Projects ("**Tata**", "**Azrar**" or the "**Projects**") in the Kingdom of Morocco ("**Morocco**").

The Company acquired line data, in 2024, covering over 250 km^2 from historical airborne geophysical surveys flown over the Tata and Azrar Projects from the Ministry of Energy, Transition and Sustainable Development in Rabat, Morocco. The surveys were flown in 1998-1999 by Geoterrex Dighem Pty., collecting magnetometry, gamma-spectrometry, and multi-frequency electromagnetic data. This data has been reprocessed and reinterpreted as part of an ongoing target generation exercise over the projects.

Highlights:

- Historical magnetometry, gamma-spectrometry, and multi-frequency electromagnetic data acquired and reinterpreted as part of an ongoing target generation exercise over the projects.
- Tata and Azrar projects are located in the Western Anti-Atlas of Morocco, a known sediment-hosted copper-silver province.
- Multiple airborne geophysical targets are defined at Tata and Azrar for ground follow-up.
    - o Tata Project - Four priority targets covering a cumulative 14.3 km strike length.
    - o Azrar Project - Five priority targets covering a cumulative 11.4 km^2 area.
    - o Targets include two previously unexplored zones.
- Tata project highlights
    - o Copper mineralisation extended within two mineralised stratigraphic horizons and is visible on the surface.
        32 km of combined prospective strike length has been identified to date.
        13 km combined strike length of target horizons remains untested.
    - o Mineralised apparent thicknesses of up to 8.5 m within the basal Adoudou Formation returned:
        Up to 1.50 % Cu, 0.97 Cu %, and 0.32 % Cu from an 8 m thick carbonate sequence.
        Up to 1.02 % Cu, 0.51 % Cu, and 0.48 % Cu from an 8.5 m thick carbonate sequence.
- Azrar project highlights
    - o Tifrit copper-gold target: 0.82 g/t Au and 0.63 % Cu over 9.0 m from surface chip channel targeting northerly strike quartz veins, including :
        0.70 g/t Au and 0.55 % Cu over 7.6 m from 0 to 7.6 m along the channel, and
        2.97 g/t Au and 2.00 % Cu over a 0.7 m interval from 8.3 m to 9.0 m.
    - o These results and previously announced samples (per the announcement of 31 January 2024) indicate this gold-copper target zone's potential strike length to be 3.8 km.
    - o Ougri sedimentary-hosted copper target: Up to 2.92 % Cu and 16 g/t Ag from rock chip samples over an 800 m strike length of a 1.4 km basal Adoudou Formation target.
    - o Izarzar fault zone hosted copper target: Up to 1.37 % Cu and 6 g/t Ag from a variably mineralised fault zone with an apparent width of up to 13.25 m within folded Adoudou Formation sediments.
- The interpretation work involved analysing geophysical data within a geological context, considering several factors such as the regional, tectonic, lithological, and alteration controls on copper mineralisation.

Simon Rollason, CEO of Aterian, commented:
"The acquisition, re-processing and interpretation of historical airborne geophysical data is an important element in our ongoing portfolio-wide targeting, rationalisation and prioritisation process.

The survey covers over 250 km^2, with five prospective copper target areas at Azrar and four at Tata identified for follow-up groundwork. Targets were generated using a multi-layered approach, combining multiple historic and recently acquired geological and geochemical datasets."

"Several targets are coincident with known mineralised occurrences at Azrar, which include 0.82 g/t Au and 0.63 % Cu over 9.0 m from surface chip channel targeting northerly strike quartz veins, in addition to previously identified targets such as the Ougri sedimentary-hosted copper target, where rock chip samples reported up to 2.92 % Cu and 16 g/t Ag over an 800 m strike length of a 1.4 km basal Adoudou Formation target. One target, where no prior exploration has been undertaken, is focussed over an apparent 4.4 km strike length of basal Adoudou sediments.

"At Tata, where 32 km of prospective mineralised strike length has been mapped, four target areas have been delineated, coinciding with early positive copper indications within the lower Adoudou Formation. One target (Tata Cu-02) has not been explored, with surface copper reported from the other three geophysical targets. In addition, results will aid our understanding of the sedimentary basin architecture, allowing us to target potential areas of interest further and contextualise field-derived datasets better. We look forward to updating shareholders with results from the upcoming field programmes when they are received."

Project Summary:

The Tata and Azrar projects cover 138.6 km^2 and 76.9 km^2, respectively. Both projects can be accessed via asphalt roads and a network of smaller tracks. The Company holds a 100 % interest in both Projects, located in the western Anti-Atlas Mountains, a region considered highly prospective for sedimentary-hosted copper mineralisation.

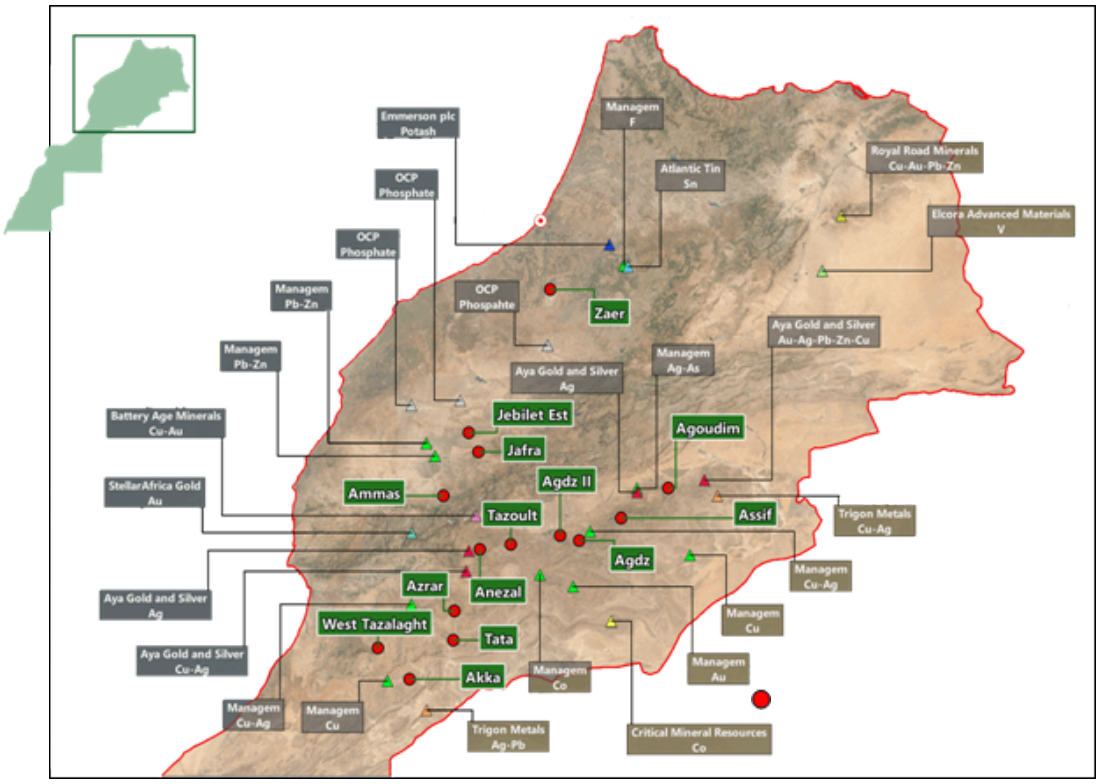
Tata Project

The Tata Project occurs approximately 165 km southeast of the port city of Agadir and 50 km southeast of the Tizert copper-silver project (estimated resources of 57 Mt grading 1.03 % Cu and 23 g/t Ag), currently under development by Managem Group. The Project lies 30 km south of the Company's Azrar copper-silver project. Late Ediacaran to early Cambrian-aged Adoudounian sediments occur within the Project along the margins of the Paleoproterozoic Tagragra de Tata Inlier. These sedimentary units are known to host copper mineralisation within the Anti-Atlas and represent the primary copper target on the Project.

Azrar Project

Azrar occurs approximately 155 km southeast of the port city of Agadir and 45 km east of the Tizert copper-silver project. Late Ediacaran to early Cambrian-aged Adoudounian sediments occur within the Project along the southeastern margins of the Paleoproterozoic Agadir-Melloul Inlier.

Aterian Project

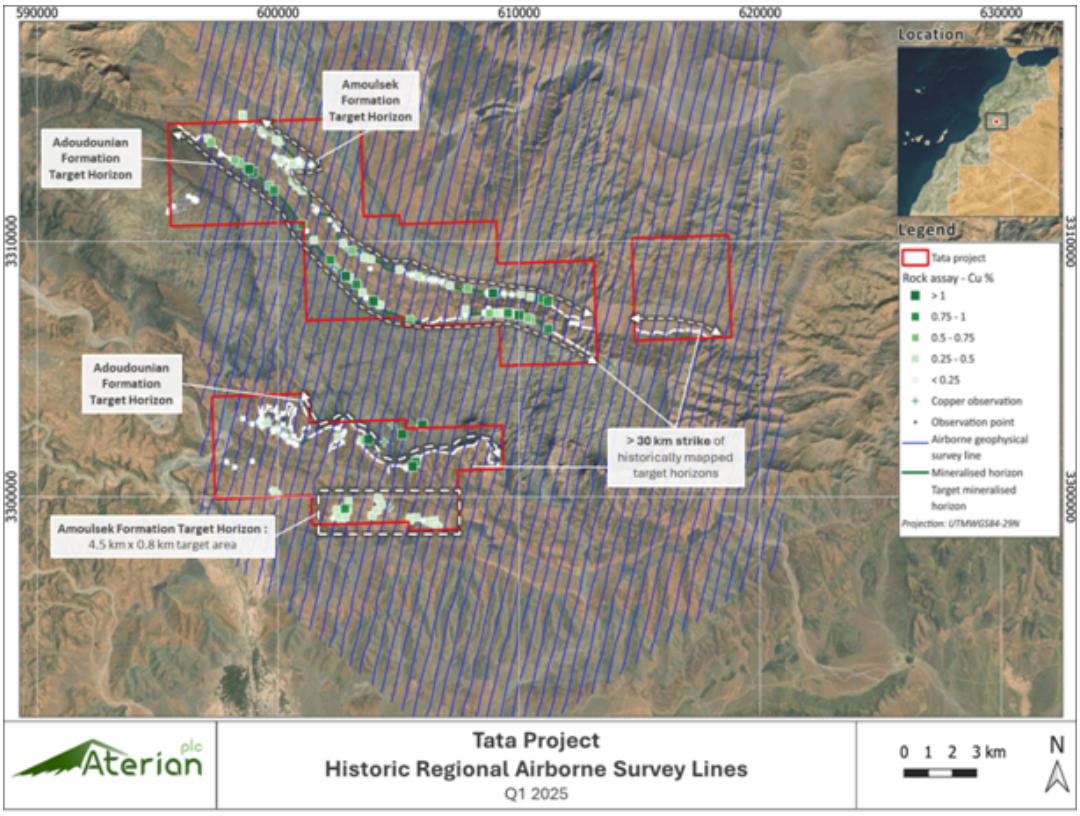


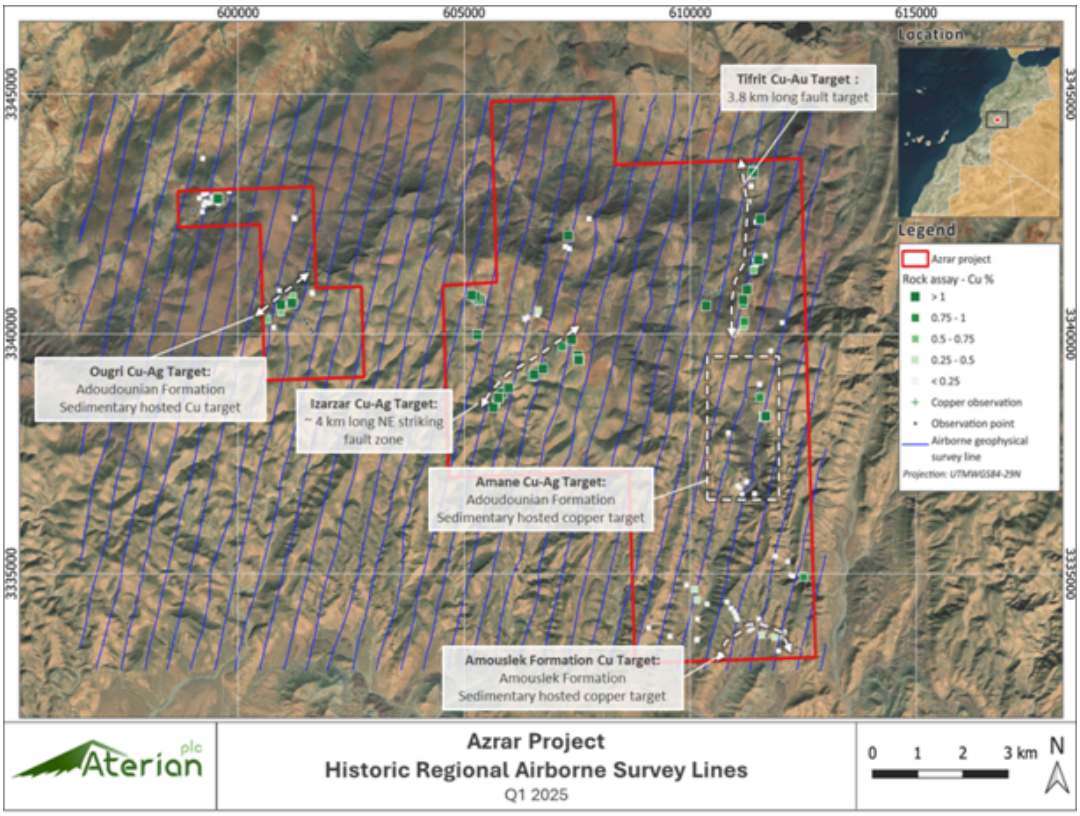
Aterian Exploration Results

The objective of the work stream was to provide an overview of the processing methodology previously employed and the results obtained through the joint interpretation of these datasets supplemented by the results of recent reconnaissance geochemical sampling. The interpretation resulted in a pseudo-geological map highlighting key features such as lithological domains, magmatic intrusions, and extensive fault tectonics, reflecting three deformation events. Prospective target areas for further ground exploration have been identified within the project areas based on the analysis of multiparameter geophysical data and the regional geological context.

Historical Airborne Geophysical Survey Parameters

The flight lines have an NNE-SSW trend with a line spacing of 500 m. This direction was considered optimal for mapping lithological units and fault tectonics, which generally trend almost orthogonally to the direction of flight lines. The measurement point spacing along the flight lines varies from 2.5 to 4 m for magnetic and electromagnetic surveys and 10 to 20 m for the gamma-ray spectrometric survey. Such a step between the measurement points is considered to provide sufficient spatial resolution of the geophysical data for mapping lithological units within the project areas.





Data Re-Interpretation

The geophysical data was re-interpreted based on a joint analysis of an extensive set of maps dynamically linked in an Oasis Montaj GIS project. The interpretation was conducted by manually identifying characteristic patterns of structural units in geophysical fields based on prior geological data [Isles and Rankin, 2013].

Gamma-spectrometric and electromagnetic data played the most significant role in the interpretation for identifying potassium, thorium and resistivity anomalies that outline lithological domains. The magnetic data is important in identifying faults and tectonic structures in the basement, outcropping and buried magmatic bodies,and highly magnetised inhomogeneities in the lithological domains. The available regional geological maps and point descriptions made at geological observation points were used to aid the geological interpretation of geophysical anomalies. Several factors were considered during the interpretation process:

1. Regional factors
   The known mineralisation tends to be localised at the edge of Paleoproterozoic-Neoproterozoic basement inliers [Maddi et al., 2011], with most of the historical and active copper mines confined to such structural boundaries in the Anti-Atlas. In addition, the historical geological mapping shows the occurrence of Cu (and gold in the case of Tata) mineralisation in a similar structural position within the project areas.

2. Tectonic factors
   Many copper deposits hosted within Lower Paleozoic formations of the Anti-Atlas are closely associated with fold structures generated directly on basement extensional faults [Ouchchen et al., 2023]. In contrast to the Eastern Anti-Atlas, these faults do not come to the surface in the Western Anti-Atlas, so geophysical interpretation is necessary to map them.

3. Lithological factors
   Stratiform sediment-hosted copper mainly occurs in two horizons [Maddi et al., 2011; Oummouch et al., 2017]: (1) basal dolomites of the Adoudou Formation in close proximity to basement schists or volcanic sediments within the inliers, and (2) Mid-Cambrian dolomite beds. These formations must be located near the basement inlier's regional boundary, i.e., the regional factor controlling copper mineralisation is being fulfilled.

4. Alteration factors
   Observations show that the mineralisation is leached around some sub-vertical faults that cut across the stratiform mineralisation and along the contact between the basal series and the overlying dolomites. These leached zones are typically characterised by hematite alteration [Oummouch et al., 2017]. It should be noted that iron oxide and hydroxide minerals in the leached zones have low magnetic susceptibility (the exception is magnetite) [Fairhead, 2015]. However, their clusters can produce distinct magnetic field anomalies against the background of host sedimentary rocks or granite gneiss.

The prospective target areas were identified by considering the contribution of each factor controlling copper mineralisation. First, the boundary area between the dolomites of the Adoudou Formation and the volcanic rocks of the Ait Boulemane Formation was considered. Then, within this area, zones with the most extensive development of D1/D2 deformation elements, regarded as migration pathways for hydrothermal fluids, and D2/D3 elements, considered as accumulation zones for copper mineralisation [Ouchchen et al., 2023], were selected. The number and relative location of faults are criteria for prioritising the prospective target areas. More weight was given to the faults of the existing D2/D3 elements within the recommended target areas.

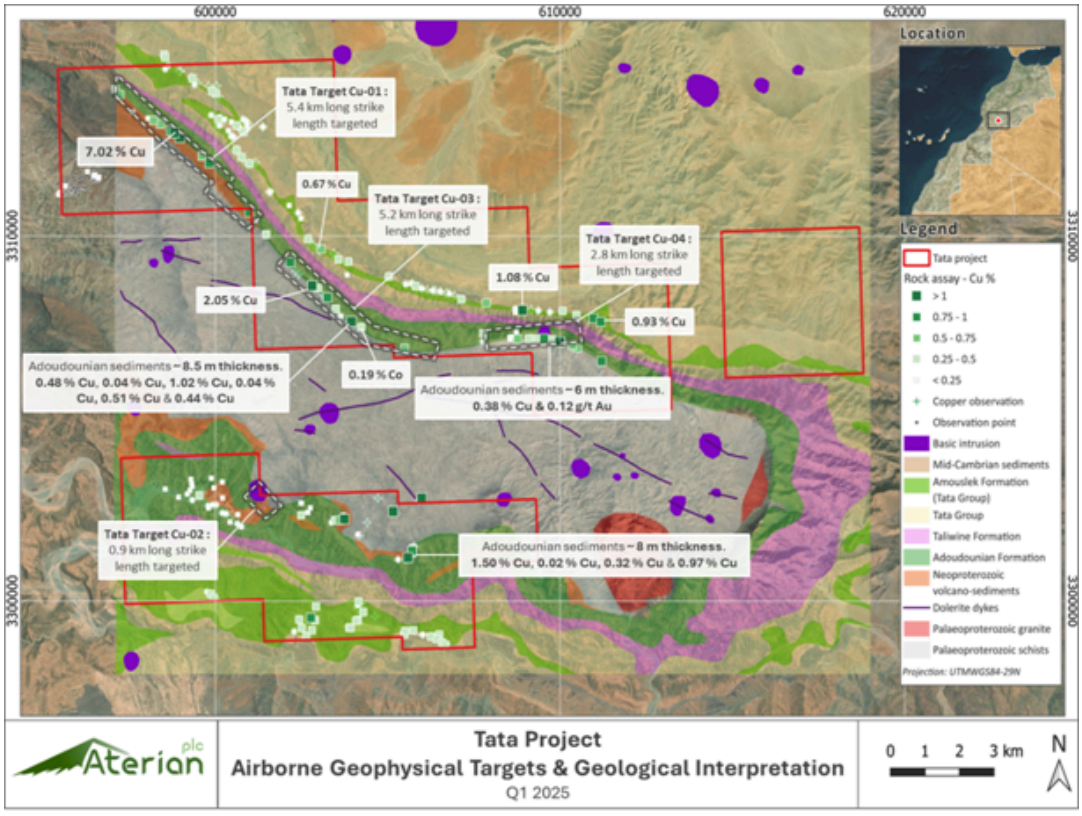
Targets identified for ground follow-up

Tata

Based on this study's outcome, four copper target areas are recommended for further ground follow-up work. The table below ranks these recommended copper targets by priority.

Target	Size (km^2)	Target Strike Length (km)	Comment
Tata Cu-01	2.8	5.4	- 5.4 km of basal Adoudou sediments. Up to 7.02 % Cu.
Tata Cu-02	1.5	0.9	- Previously unexplored - 1.1 km of basal Adoudou sediments targeted
Tata Cu-03	0.5	5.2	- 5.2 km of basal Adoudou sediments. Up to 8.5 m wide mineralised apparent widths
Tata Cu-04	2.6	2.8	- 2.8 km of basal Adoudou sediments. Up to 6 m wide mineralised apparent widths

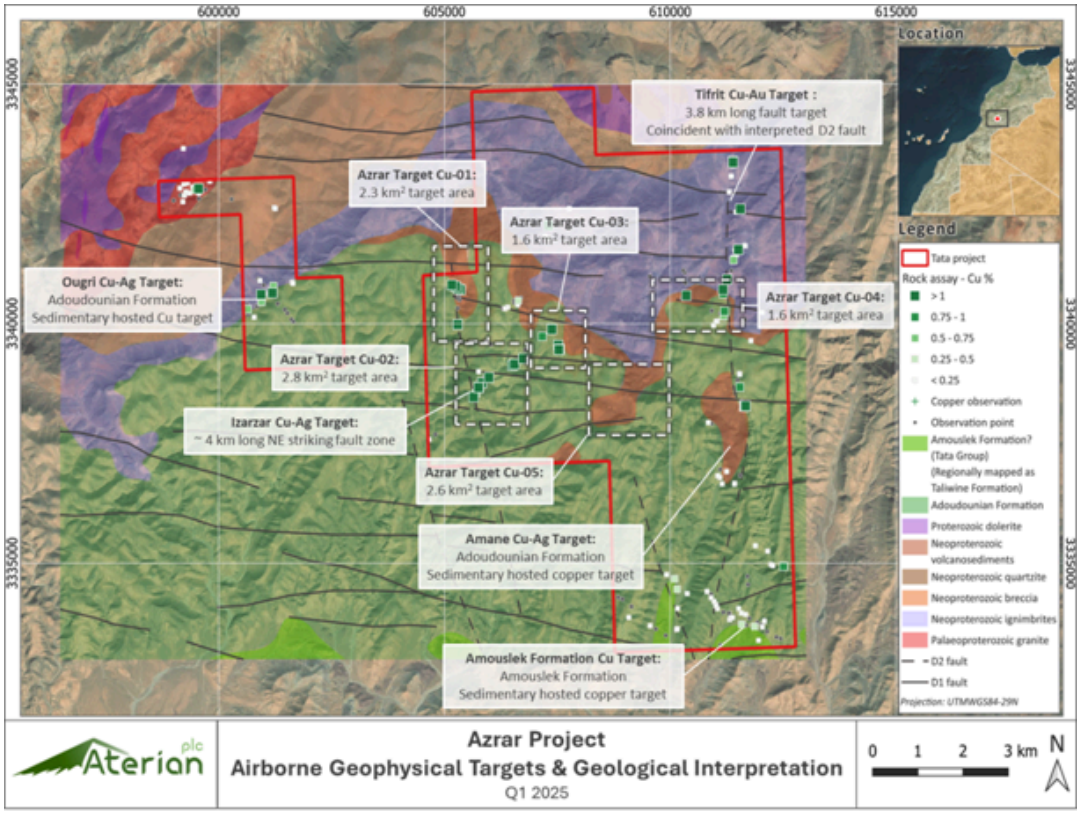
The identified targets correspond to the genetic model of copper mineralisation formation in the Anti-Atlas. This model [Ouchchen et al., 2023] suggests that mineralisation occurred as a result of copper-bearing fluids penetrating the base of the Cambrian and terminal Neoproterozoic sedimentary cover along regional extensional faults that bound the Palaeoproterozoic basement high. Subsequently, the sedimentary cover on the flanks of the basement highs was eroded, exposing the mineralised base of the Cambrian and terminal Neoproterozoic sedimentary cover.



Azrar

Five copper target areas have been recommended for further ground follow-up work. The table below ranks these recommended copper targets by priority.

Target	Size (km^2)	Target Characteristics
Azrar Cu-01	2.3	- 1.7 km of basal Adoudou sediments - 2.15 km of cumulative interpreted fault strike length with up to 3.79 % Cu from recon sampling within a fault zone.
Azrar Cu-02	2.8	- 2 km of the mapped Izarzar fault, locally returning up to 3.45 % Cu 40 g/t Ag - 6.4 km of cumulative interpreted fault strike length - 1.85 km cumulative strike length of fold hinge targets.
Azrar Cu-03	1.6	- 1.4 km of the mapped Izarzar fault zone, locally returning up to 4.01 % Cu with 27 g/t Ag - 1.7 km of basal Adoudou sediments - 2.6 km of cumulative interpreted fault strike length.
Azrar Cu-04	2.1	- 1.1 km of the Tifrit fault zone, locally returning 0.82 g/t Au and 0.63 % Cu over 9.0 m from a surface chip channel - 2.4 km of basal Adoudou sediments - 1.4 km of interpreted fault strike length with visible copper showings (yet to be sampled) within the volcanic units
Azrar Cu-05	2.6	- Previously unexplored - 4.4 km of basal Adoudou sediments - 3 km of cumulative interpreted strike length



Work Plan for the Tata and Azrar Projects
Tata Project

Future work programmes at the Tata Project will include further geological mapping to explore the copper potential in the untested areas of the sedimentary package, supported by detailed mapping and channel samples at selected locations perpendicular to the bedding/stratigraphy. Ground-based geophysical surveys will aid in drill hole planning based on the surface mapping and sampling outcomes and will be supported by the airborne geophysical data re-interpretation.

Azrar Project

Future work programmes at the Azrar Project will include follow-up geological mapping and sampling of prospective targets described above, supported by a ground-based magnetic geophysical survey and trenching over the Tifrit copper-gold target to define future drill targets. In addition, traverse mapping and sampling will be undertaken over structural targets defined from remote sensing data analysis to refine the geological model and prioritise targets.

Qualified Person
The technical disclosure in this regulatory announcement has been approved by Simon Rollason, Chief Executive Officer of Aterian Plc. He is a graduate of the University of the Witwatersrand in Geology (Hons) and a Member of the Institute of Materials, Minerals and Mining, with over 30 years of experience in mineral exploration and mining.

- ENDS -

This announcement contains information which, prior to its disclosure, was inside information as stipulated under Regulation 11 of the Market Abuse (Amendment) (EU Exit) Regulations 2019/310 (as amended).

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Notes to Editors:

About Aterianplc

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Aterian plc is an LSE-listed exploration and development company with a diversified African portfolio of critical metals projects.

Aterian plc is actively seeking to acquire and develop new critical metal resources to strengthen its existing asset base while supporting ethical and sustainable supply chains as the world transitions to a sustainable, renewable future. The supply of these metals is vital for developing the renewable energy, automotive, and electronic manufacturing sectors, which are playing an increasing role in reducing carbon emissions and meeting climate ambitions globally.

The Company recently entered into a joint venture agreement with Rio Tinto Mining and Exploration Limited for Rio Tinto to earn into the HCK project in southern Rwanda to explore and develop a lithium-tantalum-niobium-tin mining operation. The Company also holds an exploration licence in Rwanda. Aterian has a portfolio of multiple copper-silver (+ gold) and base metal projects in Morocco. In January 2024, the Company announced the acquisition of a 90% interest in Atlantis Metals. This private Botswana registered company holds one mineral prospecting licence for copper-silver in the Kalahari Copperbelt and three for lithium brine exploration in the Makgadikgadi Pans region.

The Company's strategy is to seek new exploration and production opportunities across the African continent and to develop new sources of critical mineral assets for exploration, development, and trading.

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Glossary of Terms

The following is a glossary of technical terms:

"Ag"	means	silver
"Anti-Atlas Mountains"	means	a mountain range in Morocco, forming part of the Atlas Mountains in northwest Africa. The Anti-Atlas extends from the Atlantic Ocean in the southwest towards the northeast to the heights of Ouarzazate and further east to the city of Tafilalt, a distance of approximately 500 km. The range borders on the Sahara to the south
"Au"	means	Gold
"Breccia"	means	a rock consisting of angular fragments of stones cemented by finer materials
"Cambrian"	means	is the first geological period (538 to 485 ma) of the Paleozoic Era
"Cu"	means	copper
"Ediacaran"	means	the uppermost division of the Proterozoic Eon of Precambrian time and the youngest period (635 to 538 ma) of three that make up the Neoproterozoic Era
"Ferruginous"	means	containing iron oxides
"Float sample"	means	loose pieces of rock that are not connected to an outcrop
"g/t"	means	grams per tonne
"Hercynian or Variscan Orogeny"	means	an orogenic belt that evolved during the Devonian and Carboniferous periods, from about 419 to 299 million years ago
"Inlier"	means	an area of older rocks surrounded by younger rocks. The erosion of overlying younger rocks typically forms inliers.
"km"	means	kilometres
"m"	means	metres
"Ma"	means	million years
"mm"	means	millimetres
"Mt"	means	millions of tonnes
"Outcrop"	means	a rock formation that is *in situ* and visible on the surface
"Qualified Person"	means	a person who has the education, skills, and professional credentials to act as a qualified person under NI 43-101
"Paleoproterozoic"	means	the first of three subdivisions of the Proterozoic Eon (occurring from 2,500 billion to 1,600 Ma. This period is marked by the first stabilisation of the continents and when cyanobacteria evolved.
"Sedimentary-hosted copper"	means	stratabound copper deposits that are typically restricted to a narrow range of layers within a sedimentary sequence but do not necessarily follow sedimentary bedding.
"Stratabound"	means	a mineral deposit confined to a single stratigraphic unit
"Stratiform"	means	parallel to the bedding planes of the surrounding rock
"Vein"	means	a distinct sheetlike body of crystallised minerals within a rock

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