2 December 2024

# East Star Resources Plc

# ("East Star" or the "Company")

#### **Copper Porphyry Exploration Update**

East Star Resources Plc (LSE:EST), which is exploring for copper in Kazakhstan, is pleased to provide an update on its copper porphyry exploration strategy at the Snowy licence, on the paleozoic Balkash-IIi volcanic arc, which was initially funded by a US 500,000 BHP Xplor grant.

# Highlights:

- Soil sampling has identified a very large gold (Au) in soil anomaly (5km by 1km), coincident with the alteration signature from the multispectral imagery and directly along strike from an artisanal gold mine
- A second large anomaly (2km by 2km) with porphyry potential, has been identified through strong molybdenum ("Mo") and bismuth ("Bi") pathfinder elements, with results indicating >10 times Mo and >100 times Bi above anomalous thresholds
- Based on the data, management consider Snowy warrants further exploration for potential epithermal gold and copper porphyry systems

# Next steps

Field verification of the targets and geological mapping over the areas identified by the soil geochemistry is a necessary next step. In the Central Target area (detailed below), field mapping will aim to identify veining consistent with a porphyry system at explorable depth, whilst mapping of the East Target (detailed below) will look for veins and textures supportive of epithermal mineralisation. If the field mapping supports the target styles of mineralisation, a likely next step would be geophysics in the form of an Induced Polarity (IP) survey designed to directly target disseminated sulphide mineralisation.

# Chris van Wijk, East Star Technical Director, commented:

"We're very happy with the soil sampling results on our Snowy licence. Our initial work using ASTER multispectral imagery identified several areas of potential hydrothermal alteration and guided the initial acquisition of this licence. The soil geochemistry completed has identified several areas with highly enriched pathfinder elements that correspond with anomalous areas highlighted by the multi-spectral imaging. The geochemical data is consistent with that seen proximal to other mineralised systems and worthy of further exploration."

# Systematic soil geochemistry and lithocap sampling

During the 2024 field season, 1,469 soil samples were collected for multi-element soil geochemistry over the Snowy licence area. The licence was known to host at least two very large silica lithocaps and hence the aim of the soil sampling programme was to test whether the lithocaps contained pathfinder elements suggestive of the presence of a mineralised system.

The results have identified two coherent targets: the Central and East Targets, both of which display highly anomalous soil geochemistry and are worthy of follow-up work in the next field season.

The Central Target displays multi-element geochemical anomalism consisting of very strong Mo and Bi anomalies and moderate copper anomalism, which is similar to the geochemical signature expected proximal to a porphyry system. Lower copper anomalism is likely explained by the higher mobility of copper in the weathering profile when compared to the less mobile Mo and Bi.

The East Target displays anomalous gold and silver in soils, which is consistent with the nearby artisanal workings, thought to have exploited an epithermal vein at surface.

#### Multi-spectral analysis

Work began over the licence area by assessing the regional multi-spectral response using ASTER data. As expected, the silica lithocaps that are so visible at surface have a strong multi-spectral signature in ASTER data. Figure 1 below shows the KLI Index over the Snowy licence. The KLI Index is a composite band index designed to highlight the Kaolin group of minerals, which are commonly present in highly altered, leached lithocaps such as Snowy. The ASTER imagery is useful at delineating the size extent of the lithocaps and their potential mineralogy, which have now been further refined using the multi-element geochemistry data.

The KLI index shows two particularly strong anomalies, corresponding to the known lithocap referred to as Snowy and the extension of an artisanal mining area in the east of the licence area (East Target). Several other areas present lower intensity anomalies, one of which, the Central Target, has now been demonstrated to have multi-element geochemical anomalism consistent with a porphyry system.





Figure 1 KLI index generated from ASTER data - KLI index is used to identify areas of hydrothermal alteration which may be proximal to mineralization.

# Systematic soil geochemistry and lithocap sampling

1,469 soil samples were collected for multi-element soil geochemistry over the Snowy licence area with the aim of testing whether the lithocaps identified through the ASTER work yielded any geochemical anomalism suggestive of a mineralised system. The samples were analysed using an Aqua Regia digest with ICP-MS finish, which is an economical assay method yielding ultra-low detection limits for a wide variety of elements and includes gold and mercury in the same analysis. Gold and mercury are key pathfinders for both porphyry and related epithermal mineralisation.

The Central Target corresponds to an anomalous intrusive body in the centre of the licence that aligns with an area of weak alteration that can be detected in the ASTER imagery (See Figure 1 above). This area, shown in Figures 2a and b, is highly anomalous in Bi (up to 371ppm) and Mo (up to 52ppm) and also has low level anomalism in copper (up to 1,575ppm copper (Cu)). These results are significant because copper is expected to be mobile in the acidic lithocap environment and hence is often depleted; however, Mo and Bi are much less mobile in acidic weathering environments and will persist in the soils at surface. Furthermore, Aqua Regia will tend to under-report Mo in soils and therefore, the fact that these soils are so anomalous in Mo makes this area worthy of further investigation.



Figures 2a (left) shows the Bi anomaly & 2b (right) shows the Mo anomaly

The East target is clearly visible in the ASTER imagery as an east-west trending anomaly in the KLI index. This target is reinforced by very anomalous gold and silver results (two samples showing 0.28g/t Au and ~1g/t Ag in soils) in soil geochemistry (See Figure 3 below). This target is lent further weight by the fact that there is an historical excavation on an outcropping epithermal style vein, which was presumably excavated to test the gold potential. The artisanal workings are clearly visible in satellite imagery, and the soil geochemistry shows this trend continuing to the east into the Snowy licence area.





Figure 3 - Showing Au in soil results as well as location of open pit artisanal mine workings.

# **Regional setting**

The licence is located on the western end of the paleozoic Balkash-Ili volcanic arc. The Balkash-Ili arc is known to host multiple copper and gold rich porphyry and skarn deposits with the best-known examples including Aktogai-Aidarly and the Kounrad mine (~650Mt @ 0.59% Cu), which is located some 230km to the south of the licence.

The licence is well served by existing infrastructure including the main Balkash to Astana highway and a railway used to transport metals from the Balkash mining complex. The road and rail are both located around 50km to the west of the licence. Access to the licence is via a network of gravel tracks and roads.

### Copper porphyry exploration strategy

Under the Company's copper porphyry strategy, East Star has identified a number of regional targets, which has to date principally focussed on the Balkash-IIi magmatic arc, host to the Kounrad deposit (~650Mt @ 0.59% Cu) and Aktogai-Aidarly (~2.5Bt @ 0.39% Cu). Results to date have resulted in a decision to progress Snowy and drop Ayagoz while we refine our additional targets for initial field work in 2025. By applying modern mineral systems concepts combined with advanced desktop analytical techniques and on the ground geological confirmation, East Star intends to secure other prospective exploration licences for further field work.

### East Star Resources Plc

Alex Walker, Chief Executive Officer Tel: +44 (0)20 7390 0234 (via Vigo Consulting)

SI Capital (Corporate Broker)

Nick Emerson Tel: +44 (0)1483 413 500

Peterhouse Capital Limited (Corporate Broker)

Peter Greensmith Tel: +44 (0) 20 7469 0930

Vigo Consulting (Investor Relations)

Ben Simons / Peter Jacob Tel: +44 (0)20 7390 0234

### About East Star Resources Plc

East Star Resources is focused on the discovery and development of copper and other strategic minerals required for the energy revolution. With eight licences covering >1,000 km<sup>2</sup> in three mineral rich districts of Kazakhstan, East Star is undertaking an intensive exploration programme, applying modern geophysics to discover minerals in levels that were not previously explored. East Star's most advanced project is a copper deposit on the world-class Rudny Altai VMS Belt where the Company delivered a JORC compliant inferred resource of 20.3Mt @ 1.16% copper, 1.54% zinc and 0.27% lead close to infrastructure, within trucking distance of third-party mills with excess capacity. East Star's management are based permanently on the ground, supported by local expertise, and a joint venture with the state mining company on certain projects. In 2024, East Star was selected to receive grant funding through the BHP Xplor programme for copper porphyry exploration.

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The person who arranged for the release of this announcement was Alex Walker, CEO of the Company.

# **Competent Person Statement**

The technical information related to East Star Resources assets contained in this report that relates to Exploration Results is based on information compiled by Mr Christopher van Wijk, who is a Member of the Australasian Institute of Mining and Metallurgy and who is a Geologist employed by East Star Resources as an Executive Director. Mr van Wijk 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 van Wijk consents to the inclusion in the release of the matters based on the information he has compiled in the form and context in which it appears.

This announcement contains inside information for the purposes of Article 7 of Regulation 2014/596/EU which is part of domestic UK law pursuant to the Market Abuse (Amendment) (EU Exit) Regulations (SI 2019/310) ("UK MAR"). Upon the publication of this announcement, this inside information (as defined in UK MAR) is now considered to be in the public domain.

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