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22 November 2022

## Great Southern Copper plc ("GSC" or the "Company")

# Early Exploration at Especularita Identifies Multiple Cu-Au Targets and Completion of Drilling at San Lorenzo

### Prospect-scale Exploration Commenced

Great Southern Copper plc (LSE: GSCU), the company focused on copper-gold exploration in Chile, is pleased to announce that district-scale reconnaissance exploration at its Especularita Cu-Au project is progressing well and identifying targets for detailed prospect-scale exploration.

### Highlights:

- · Early reconnaissance exploration identifies prospects with potential for;
  - o High grade vein-hosted Au-Cu targets,
  - o High grade breccia-hosted Cu+Au targets, and
  - o Evidence of a possible porphyry-related Cu-Au alteration system
- · Up to 7.22 %Cu and 13.1 ppm Au in reconnaissance rock chip samples,
- · Prospect-scale mapping and sampling already commenced on two initial targets,
- · Ground magnetic surveys to commence early 2023
- · San Lorenzo scout drilling completed and assay results received for the first hole

The Especularita project is located within the coastal metallogenic belt of northern Chile and is dominated by a large, partially-eroded advanced argillic lithocap formed in volcanic rocks near the contact with a granodiorite batholith. Alteration and mineralisation related to the system is observed over a 100 km<sup>2</sup> area and includes skam-type base-metal deposits, mesothermal Au-Cu veins, and Cu-Au breccia pipes. Near-surface porphyry-style Cu mineralisation may also exist beneath shallow cover and the lithocap.

Reconnaissance geological mapping and sampling across the company's extensive Especularita project in Chile commenced earlier this year and is designed to identify specific areas (prospects) with potential to host economic Cu-Au mineralisation. Results to date confirm that multiple styles of mineralisation and alteration occur within the Especularita project area consistent with a large mineralising system with potential to host porphyry-related Cu-Au type deposits.

**Sam Garrett, Chief Executive Officer of Great Southern Copper, said:** "The company's Cu-Au exploration efforts at Especularita are ramping up and rapidly identifying exciting prospects which we plan to explore in detail with the aim to enhance our pipeline of drilling targets for 2023 and beyond. Especularita encompasses a very large mineral system. We have identified a broad range of deposit types and are highly encouraged by these early exploration results. The reconnaissance work is on-going and we expect to generate further exciting prospects in 2023."

Detailed geological mapping and sampling has now commenced on two prospects at Especularita including a structurally-controlled mesothermal vein-hosted target with high-grade Au-Cu in reconnaissance rock chip assays (Teresita prospect), and a breccia-hosted Cu+Au target where coarse copper sulphide is observed in float samples (Victoria prospect) over an area of 500x500m<sup>2</sup>.

At Teresita anomalous Au-Cu mineralisation is hosted in structurally-controlled mesothermal

style quartz vein material that has subsequently been brecciated and overprinted by carbonate. Gold and copper grades within the quartz vein material are typically anomalous and range up to 13.1 g/t Au and 7.22% Cu from reconnaissance grab samples (Figure 1-2). To date multiple veins have been observed over one kilometre of strike and a width of 200m in an area partly covered by scree and gravel. Historical small-scale mining is evident along the vein structure, however, the hardness of the rock and the occurrence of sulphide minerals near to surface suggests that the artisanal workings were minimal. Detailed mapping and sampling at Teresita is now in progress to better understand the system and define its limits. It is expected that this work will be complemented with a ground magnetics survey in the first quarter of 2023.



**Figure 1:** Reconnaissance rock grab sample assay results for gold (I) and copper (r) at the Teresita prospect, Especularita. UTM WGS84-195.



**Figure 2:** Brecciated quartz-carbonate vein structure at Teresita is traced over 1km along strike (1). High grade disseminated chalcopyrite-bornite (+gold) hosted in quartz fragments within the vein breccia (r).

At the Victoria prospect, Cu (+Au) mineralisation occurs as disseminated and coarse infilling sulphides within brecciated and albite-magnetite-specularite-actinolite altered volcanics that occurs in outcrop and as float over a broad area close to the contact between the host granodiorite batholith and the overlying altered volcanics (Figure 3). Assay results from reconnaissance rock samples are pending. Detailed mapping and sampling at Victoria is now in progress and will also be complemented with a ground magnetic survey in the first quarter of



**Figure 3:** Copper sulphide mineralisation hosted in silica breccia, Victoria prospect (l), silica vein breccia float, Victoria prospect, Especularita (r).

### San Lorenzo Scout Diamond Drilling

Scout exploration drilling at GSC's San Lorenzo project has been completed with 17 holes (2,959m) drilled across 4 prospects areas (Chinchillon, Central, Hermanas and Cerro Blanco). The scout program was designed to; (1) determine if oxidised sheeted fracture-veins observed at surface represent sulphide mineralisation at depth, (2) determine the Cu-Au potential of monzonite intrusions with associated UST alteration, (3) understand controls on mineralisation styles, and (4) determine suitable exploration methods for the project using results from the scout drilling to vector towards mineralisation centres.

Preliminary assay results have been received for first hole SLD005 and are being assessed and validated. The results show that anomalous copper (<2,000 ppm) is related to swarms of broad-spaced sheeted veins of quartz-actinolite-feldpsar with variable chalcopyrite-pyritemolybdenite and magnetite, and that best grades correlate with areas of highest veinlet frequency. This confirms our interpretation that widespread weathered veinlets with Cu and Fe oxides at surface are mineralised at depth, and that areas of intense fracturing have the highest potential. Also, assays indicate that veinlets with strong feldspar alteration halos can have disseminated Cu mineralisation.

Results for SLD006 are pending and core preparation and sampling of the remaining holes is in progress.



**Figure 4:** Copper mineralisation in SLD005; chalcopyrite+actinolite-quartz fracture vein with minor white selvage halo (I), and coarse disseminated chalcopyrite within a broader pink feldspar alteration halo (r).

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### **Notes for Editors:**

### About Great Southern Copper

Great Southern Copper is a mineral exploration company focused on copper-gold deposits in Chile. The Company has the option to acquire rights to 100% of two projects that are prospective for large porphyry style copper-gold deposits in the underexplored coastal belt of Chile, a globally significant mining jurisdiction and the world's largest copper producer.

The two projects comprise the San Lorenzo Project, northeast of the coastal town of La Serena in northem Chile, and the Especularita Project located approximately 170km to the south of the San Lorenzo project. The two early-stage Cu-Au projects are within the same metallogenic belt as major coastal producing operations including Teck's Andacollo copper and gold mine. Significant historical small-scale and artisanal workings for both copper and gold are readily evident in both exploration project areas.

Great Southern Copper is strategically positioned to support the global market for copper, a key metal in the clean energy transition around the world. The Company is planning an exploration and evaluation two-year work programme for the copper-gold projects, targeting principally large tonnage, low to medium grade porphyry style Cu-Au deposits.

Further information on the Company is available on the Company's website:

#### https://gscplc.com

### **Competent Person Statement**

The information in this announcement that relates to exploration results is based on and fairly represents information reviewed or compiled by Mr Sam Garrett, a Competent Person who is a Member of the Australian Institute of Geoscientists and a Fellow of the Society of Economic Gelogists. Mr Garrett is the CEO of Great Southern Copper PLC. Mr Garrett has sufficient experience that is relevant to the styles of mineralisation and types 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". Mr Garrett has provided his prior written consent to the inclusion in this announcement of the matters based on information in the form and context in which it appears.

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