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Great Southern Copper PLC
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12 September 2023

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

Regional Stream Sediment Survey at Especularita Defines Multiple Targets for Follow-Up

Drone-mag Survey Completed and Interpretation of Results in Progress

Great Southern Copper plc (LSE: GSCU), the company focused on copper-gold exploration in Chile, is pleased to provide an update of its regional exploration programmes at Especularita including the results of its recently completed stream sediment sampling survey.

Highlights:

- Results received for 658 samples collected from second and third order stream catchments
- Numerous multi-element zonation patterns and anomaly hotspots are evident project-wide
- Porphyry, high-sulphidation epithermal and intrusive-related metal signatures and zonation patterns are identified for follow-up exploration programmes
- Drone magnetics survey complete and interpretation work in progress
- Permitting for proposed drilling at Abundante and Teresita is in progress

Exploration Update:

GSC recently received final assay results for its regional stream sediment sampling programme at Especularita which commenced in Feb 2023[1] and was designed to provide broad-scale gold, base metal, and trace element geochemistry across the Especularita project area. The results from the survey defined multi-element zonation patterns within and surrounding the extensive area of lithocap alteration and has identified targets for follow-up prospect-scale Cu-Au exploration.

The Company has also completed its first drone-magnetic survey at Especularita which is designed to provide detailed coverage of the Company's drill-ready targets at Teresita and Victoria[2] and regional information for target generation. The survey comprised 482 flight lines, at a 50m line-spacing, for a total of 1,480 line-km surveyed. A selected area over the Abundante mine prospect[3] was surveyed at 25m spaced line intervals. Interpretation of the magnetic data is in progress by ExploreGeo of Perth, WA.

Prospect-scale exploration at Especularita is continuing at the Victoria and Aurelia prospects where the Company is undertaking mapping and soil sampling activities. Planning and permitting for scout drilling programmes at the Teresita and Abundante prospects is also in progress.

Next Steps:
The stream sediment assay data outlines a significant number of anomalies and metal-zonation patterns that require follow-up exploration (Figures 1D). All anomalies will be field checked with mapping and sampling programmes to assess their potential as exploration prospects/targets.

Sam Garrett, Chief Executive Officer of Great Southern Copper, said: "This comprehensive stream sediment survey at Especularita has been very effective, and together with other regional datasets, is helping the Company complete reconnaissance-scale exploration across its large project footprint.

"The results from the survey have delineated new target areas for follow-up exploration. Multi-element zonation patterns identified in the data are consistent with the geochemical signatures for porphyry Cu, epithermal Au, and intrusive-related Cu-Au types of mineralisation. Using these results, the Company will now commence a regional follow-up mapping and sampling campaign with the aim of delineating prospect-scale targets for scout drilling.

"In addition, we are awaiting the interpretation report from the completed drone magnetics survey, which will be used together with the stream sediment survey data to further refine our targeting. We are also progressing through the permitting and approvals process for our planned scout drilling programmes at Teresita and Abundante.

"It is pleasing to see the continued progress and encouraging results at Especularita and we look forward to updating the market further in due course."

Background:
Large-scale mineral systems and mineral deposits such as those associated with porphyry, high-sulphidation epithermal, IOCG, and intrusive-related Cu-Au systems, for example, often exhibit zoned metal distributions as well as zoned alteration patterns. Different deposit types may also exhibit characteristic metal "signatures", such as Cu-Mo-Pb-Zn anomalies in porphyry Cu systems, which can help differentiate them from other deposit types. These elements may be used as "pathfinder elements" in the exploration for such deposits. Added complexity in metal distribution patterns may also occur where adjacent deposit systems (clusters) interact with or overprint one another. Understanding of the metal zonation in a mineral system, therefore, is useful for target vectoring and the design of suitable exploration programmes.

Reconnaissance exploration at GSC's Especularita project to date has found evidence of the potential for porphyry-type Cu-Au mineralisation plus associated base-metal skarn, tourmaline breccia-hosted Cu-Au and high sulphidation epithermal type Au-Ag mineralisation. In addition, intrusive-related mesothermal style vein-breccia Cu-Au deposits are also recognised in outcrop. While the Especularita project encompasses an area of approximately 140 km^2 (almost 50 times larger than the area of the City of London) the entire mineral system, or mineral field, centred at Especularita is measured over an area greater than 300 km^2.

For such large project areas with heavily indurated terrane sampling of stream sediment material using very low detection limits provides explorers with an effective first-pass geochemistry tool to quickly narrow the search area for potential mineral deposits. Interpreting surface geochemistry results may be complicated by the effects of intense supergene weathering and deep oxidation which typically result in a depletion of metal contents at surface which, therefore, may not reflect the true hypogene metal content at depth potentially resulting in poor

exploration outcomes. The stream sediment data, combined with geological mapping allow GSC the opportunity to interpret and "map out" metal zonation patterns (or metal depletion patterns) in rocks that would otherwise be interpreted to be "barren" and in this way identify new exploration targets in areas that may have been previously overlooked.

Sampling and results:

A total of 658 stream sediment samples were collected from second and third order streams across the Especularita project area (Figure 1). Approximately 4-6kg of sediment material, dry-sieved to 2mm, was collected at each sample location represented by a composite of 3-4 sample sites collected over a 20m length of stream bed. Individual samples were each allocated a unique sample number using a ticket-book system and the location recorded with a hand-held GPS unit (WGS84 zone 19S datum, UTM coordinate system). Once the sample was collected, all sampling equipment (sieves, shovels) were cleaned with a brush and cloth before collecting the next sample in order to minimise contamination between sample locations.

Samples were transported from the field and delivered by Company employees to ALS Laboratories in Santiago where they were prepared for analysis (weighed, dried, crushed and pulverised). A subsequent 200g split of each sample pulp was then forwarded to the ALS geochemical laboratory in Lima, Peru, where samples were assayed for gold (30g fire assay with ICP-AES finish, ALS code AU-ICP21) and analysed for 48 major, base and trace elements by ICP-MS following a four-acid digest (ALS code ME-MS61).

The Especularita stream sediment assay results highlight numerous anomalies and anomalous trends for a broad spectrum of target and path-finder elements including **Au-Ag-As-Ba-Bi-Cu-Fe-Mn-Mo-Pb-Sb-Te-W-Zn**. Metal zonation patterns, as well as hotspot anomalism, are clearly evident across the project and are interpreted to reflect variations in mineralisation style, geology and alteration type, as well as weathering and oxidation profiles. In particular, metal zonation patterns in the Especularita data are interpreted to be representative of:

1. High-sulphidation Epithermal type mineralisation: Coincident **Sb-Pb-As-Ag-Bi-Te** anomalism is a recognised trace element signature for epithermal type mineralisation. At Especularita, **Sb-Pb-As-Ag-Bi-Te** anomalism is broadly coincident with the high-sulphidation, advanced argillic alteration which defines the "Cerro Colorado" lithocap (Figure 1B).

2. Porphyry Cu-Au / breccia-hosted mineralisation: Coincident **Cu-Mo-Zn+Mn** anomalism at Especularita is indicative of potential porphyry Cu-Au type mineralisation. This assemblage occurs in 3-4 clusters, or hotspots, typically located at the granodiorite-volcanic contact and/or marginal to the lithocap alteration. Au-Cu is relatively depleted in creeks draining the lithocap alteration which is interpreted to represent a combination of inherently low values in advanced argillic alteration, together with supergene leaching of near-surface sulphides (Figure 1A).

3. Intrusive-related Cu-Au mineralisation: Coincident **Au-W-Fe** anomalism is closely associated with the granodiorite intrusive which hosts known intrusive-related, mesothermal style Au-base metal vein breccia swarms (such as at the Company's Teresita prospect[1,4,5]). Streams draining the hornfelsed volcanics surrounding the granodiorite are typically anomalous in **Zn-Fe** which is consistent with distal type IR vein-breccias such as those recognised at the Victoria prospect[1,4,6,7] (Figure 1C).

References:

1. RNS 3666Q (20 Feb 2023): Exploration update at Especularita and San Lorenzo.
2. RNS 7231B (06 Jun 2023): Magnetic surveys commence at Especularita.

3. RNS 2962G (18 Jul 2023): High grade Cu in rock chip samples up to 3.39% Cu from Abundante mine prospect
4. RNS 2146H (22 Nov 2022): Early exploration at Especularita identifies multiple Cu-Au targets and completion of drilling at San Lorenzo.2
5. RNS 5675F (11 Jul 2023): High grade Cu-Au in rock chip samples from Teresita up to 5.97% Cu and 13.7g/t Au.
6. RNS 2868U (27 Mar 2023): Float sampling at Victoria prospect completed with grades up to 2.1% Cu and 4.29g/t Au.
7. RNS 0445V (03 Apr 2023): Rock chip assay grades up to 6.9% Cu and 1.85g/t Au in outcrop from Victoria prospect.

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Notes for Editors:

About Great Southern Copper

Great Southern Copper PLC is a UK-listed mineral exploration company focused on the discovery of copper-gold deposits in Chile. The Company has the option to acquire rights to 100% of two projects that are prospective for large scale 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 northern Chile, and the Especularita Project located approximately 170km to the south of the San Lorenzo project. The two early-stage Cu-Au exploration projects are within the same coastal metallogenic belt as other major deposits including Teck's Carmen de 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 actively engaged in exploration and evaluation work programmes targeting both large tonnage, low to medium grade Cu-Au deposits as well as high-grade 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 Geologists. Mr Garrett is the CEO and a shareholder 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.

This announcement includes information that relates to Exploration Results prepared and first disclosed under the JORC Code (2012) and extracted from the Company's previous LSE announcements as noted, and the Company's Prospectus dated 20 December 2021. Copies of these announcements are available from the LSE Announcements page of the Company's website: www.gscplc.com.

The Company confirms that it is not aware of any new information or data that materially affects the information included within the Prospectus dated 20 December 2021.

Forward Looking and Cautionary Statements

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions. Forward-looking statements, opinions and estimates included in this report are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward-looking statements may be affected by a range of variables that could cause actual results to differ from estimated or anticipated results and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward-looking statements. So, there can be no assurance that actual outcomes will not materially differ from these forward-looking statements.

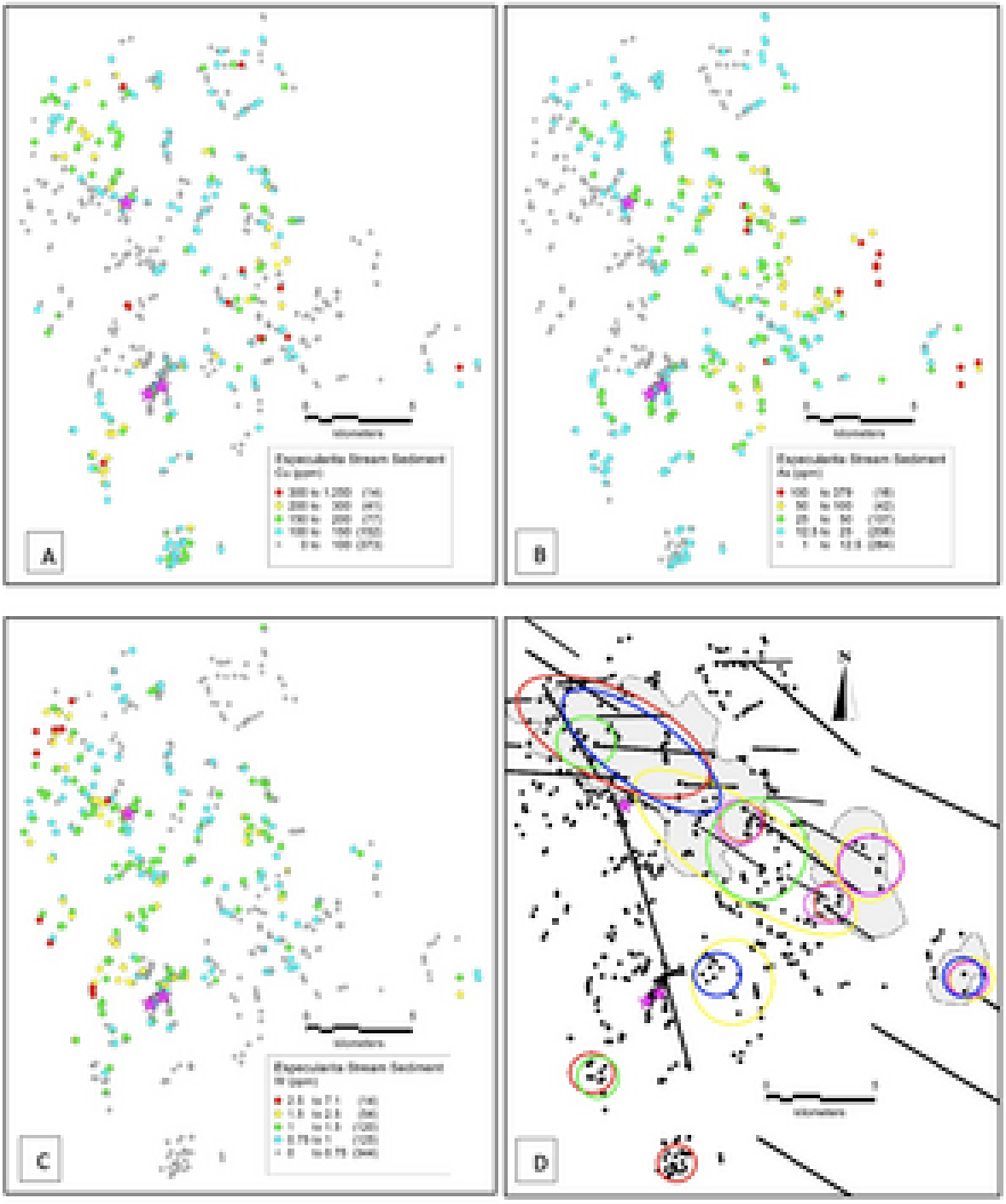

Figure 1: *Especularita stream sediment thematic maps for Cu (A-porphyry signature), As (B-epithermal signature) and W (C-IRGS signature). Stars indicate location of current prospects. A compilation of the metal distribution pattern for epithermal targets (Ag-As-Bi-Sb-Te) is illustrated by figure D and highlights the close relationship of stream anomalies with epithermal signature with NW faults and the high sulphidation lithocap alteration (grey outline). Ag=green, As=yellow, Bi=blue, Sb=purple, Te=red.*

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