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NEWS RELEASE

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HANNAN EXPLORATION UPDATE ON THE SORTILEGIO ALKALIC COPPER-GOLD PORPHYRY IN PERU

Vancouver, Canada – **Hannan Metals Limited** (“Hannan” or the “Company”) (TSXV: HAN) (OTCPK: HANMF - <https://www.commodity-tv.com/ondemand/companies/profil/hannan-metals-ltd/>) is pleased to provide an exploration update on the new Sortilegio alkalic copper-gold (“Cu-Au”) porphyry discovery at the 100% owned Valiente project in Peru (Figure 1).

Sortilegio is located 19 km east from the township of Tingo Maria in central Peru, within a previously unknown [Miocene-age](#) porphyry-epithermal copper-gold mineralized belt within the Belen project area.

In addition, Hannan also provides an update on Peruvian drill permitting and work programs from Chile and Ireland.

Highlights:

- The Sortilegio Cu-Au porphyry represents the first detailed work on an alkalic porphyry target at Valiente due to the style of mineralization, host rock composition, alteration assemblages and geochemical pathfinders.
- Detailed mapping at Sortilegio has demonstrated a leached alkalic porphyry style copper mineralization over an **area of 1800 m by 1000 m area**. Most notable is a stockwork of goethite veinlets overprinting all phaneritic rocks with six core zones with >20 veinlets/metre. Lower intensity veining, marked by 10-20 veinlets/metre envelope the core zone and form a halo to the higher-grade mineralization (Figure 2-3). High-grade copper-gold bearing massive goethite boulders with remnants of secondary biotite with **one boulder assaying 16.0% Cu and 4.4 g/t Au** (previously announced [here](#)) are interpreted to be sourced from structurally controlled mineralization within these core zones.
- Drill permitting across the San Martin and Valiente projects in Peru is advancing.
- Ground magnetic and electromagnetic surveys have been completed in Chile, with the data now under review.
- At the Kilmurry target in Ireland, drill hole 23-3643-19 failed to reach the high amplitude seismic reflector, interpreted to represent massive sulphides, predicted at 700-800 m depth due to a 37 m wide open void drilled from 513 m down hole depth which created challenging drill conditions.

Michael Hudson, CEO, states: *"The Sortilegio target is contained within a 140 km by 50 km area, named the Valiente Project, where Hannan's exploration team has identified 18 intrusion related porphyry/epithermal/skarn targets. Sortilegio is part of the most advanced Belen project area, where Hannan has been advancing drill permitting.*

"Sortilegio Cu-Au porphyry represents the first detailed work on an alkalic porphyry at Valiente. Alkalic porphyries represent a silica undersaturated gold-rich end member of the copper-porphyry class of mineral deposits and are sought after targets by both the copper and gold major mining companies.

"Peru is slow to permit drilling, however we are happy to play the long game while we continue to discover multiple new copper and gold targets over vast areas in the frontier of the back arc of the Andes, while continually earning the support of local stakeholders to create future opportunities in this part of Peru."

Geological Discussion

Alkalic porphyries represent a silica undersaturated copper-gold-rich end member of porphyry mineralization. They include some of the highest gold grades in porphyry systems (Ridgeway, Cadia Far East). Magnetite is locally abundant. They are often environmentally benign (low pyrite, with high neutralization capacity of some host rocks). Examples include the Cadia

district porphyries of the Macquarie Arc in NSW, Australia (729 Mt @ 0.79 g/t Au and 0.30% Cu), as well as Galore Creek (785 Mt @ 0.52% Cu, 0.29g/t Au and 4.87 g/t Ag) and Mt Millgan (590 Mt @ 0.193% Cu and 0.35 g/t Au) in British Columbia, Canada.

At Sortilegio, Hannan believes that the style of mineralization, host rock composition and alteration and geochemical assemblages associated with copper mineralization represents the first detailed work undertaken on alkalic-end member porphyry target at Valiente. Sortilegio is located 7 km north the Ricardo Herrera Cu porphyry target, which demonstrates the highly productive mineral system emerging from the Valiente project. Further early-stage indications for alkalic-style porphyry mineralization at Valiente also include Previsto, located 20 km to the north-east of Sortilegio.

The bedrock of the Sortilegio area is characterized by a multistage intrusive event with complex intercutting relationships. The event was dated (U-Pb) by Hannan in May 2023 to belong to the fertile Miocene epoch (21.8-21.2 Ma). The rocks are composed of diorite to monzonite intrusions, gabbro pyroxenite/lamprophyre and a late stage of megacryst k-feldspar rich monzonite. The intercutting relationships are mostly gradational, and the youngest rocks are the gabbro pyroxenite/lamprophyre and monzonite. The monzonite is mostly K-feldspar megacrystic with a pegmatitic texture. The youngest rocks mapped are thin porphyritic dykes and veins and they are inferred to be contemporary with the mineralization.

The mineralization overprints all rocks in the area. It is characterized by a zoned stockwork of goethite-hematite veinlets with relicts of sulphides. The zoning is marked by the intensity of the veinlets/metre and vein brecciation in the contact of the k-feldspar megacrystic monzonite. The goethite-hematite veins have formed after primary copper sulfides and represent a leached part of the system, with minor remnants of chalcopyrite-pyrite still present. Magmatic-hydrothermal breccias are often important hosts in alkalic systems.

A rock saw across outcrops was used to accurately map the intensity of the veinlets. The work outlined multiple core areas where the intensity of veinlets (and copper grade) reaches >20 veinlets/metre within a broad halo of lower intensity veining (<20 veinlets/metre) measuring 1,500 m by 600 m in size. Within the core areas, several mineralized shear zones parallel to the Andean thrusting have been mapped. These zones host higher copper grades in narrower structures. Gossanous boulders with remnants of secondary biotite hosted the highest copper and gold values are interpreted to be sourced from these shear zones, with 4 boulders (previously announced [here](#)) assaying up to 16% Cu and 4.39 g/t Au with a range of 33 ppm Cu to 16% Cu and 0.13 g/t Au to 4.39 g/t Au. Narrow porphyritic dykes and veins host rich mineralization internally and at their contacts with wall rock.

Alteration at Sortilegio is subtle and often difficult to distinguish from the regional propylitic alteration that is common in the area. Field mapping suggests that calc-sodic alteration assemblages such as chlorite, actinolite, epidote and albite are more commonly associated with mineralization. Potassic alteration, manifested by hydrothermal biotite K-feldspar alteration exists in some zones but is often challenging to map due masking by the composition of the host rocks.

Finally, zones of phyllic alteration are rare in the area but when encountered, they are pervasive and appear structurally controlled and are strongly mineralized with copper oxides and specular hematite where one channel assayed 3.7 m @ 0.44% Cu (Figures 4-5). Further channel sampling at Sortilegio has been directed by outcrop in creek beds. Forty-two channels from the core zones with >20 veinlets/metre were cut. Of these, 26 channels averaged 3.3 m @ 687 ppm Cu and with a maximum of 4,365 ppm Cu and minimum of 258 ppm Cu with individual channel lengths between 0.8 m to 10 m (Figure 4). These results are considered encouraging given the sporadic nature of outcrops and the leached environment.

Hannan's field teams are now advancing into adjacent areas outside the Belen zone, where up to 18 intrusion related porphyry/epithermal/skarn targets have been identified. Hannan's aim is to build a pipeline of porphyry targets to be drill tested during the next 5 years.

Valiente History

The 100% owned Valiente project is located in central eastern Peru, east of the city of Tingo Maria (Figure 1). The area is characterized by steep topography on the eastern flank of the Central Cordillera with elevations between 800 m and 2,000 m above sea level (a.s.l.). The project was discovered in 2021 during an extensive greenfields exploration program initiated by Hannan.

Peru has been a major copper and gold producer since precolonial times. Currently known gold deposits include orogenic gold, porphyry Cu-Au, porphyry Au, transitional porphyry-epithermal, epithermal, and placer gold. The Valiente project is a new a porphyry-epithermal metallogenic belt in the central eastern Andes. The Valiente project is located further east than most of the conventional Andean porphyry settings and shows regional similarities to deposits such as the large Bajo de Alumbra copper-gold porphyry in Argentina. It is interpreted that Valiente was formed in a tectonically favourable area associated with an arc-oblique wrench fault system, that may have aided the ascent of oceanic arc-related magmas into the transfer zone so far inboard from the magmatic arc.

The Valiente project is believed to consist of an overlapping suit of porphyry targets with composition ranging from conventional calc-alkalic to alkalic hosted Cu-Au mineralization. It is anticipated that both high and low-magnetic and radiometric correlations may exist within the property and a detailed evaluation combining the airborne data with 3D litho-structural interpretations and results from stream sediments samples (BLEG) is currently being undertaken.

In 1984 Ingemmet, the Peruvian Geological Survey, conducted mapping in the central part of the Central Cordillera in the Departments of Huanuco and Ucayali. The area was sporadically explored during the 1990's by Gitennes, Newcrest, BHP, WMC and others but records are sparse. At this time, access to the area was restricted because of unpredictable security conditions and poor infrastructure.

From 2020 to 2021, Hannan launched a greenfields exploration program for porphyry and epithermal gold deposits in the high jungle areas of the Eastern Cordillera of Peru, which included regional database compilation, target generation, and field mapping. Hannan also conducted regional stream sediment sampling (fine clay fraction). The target generation permitted definition of prospective area, one of which was the Valiente block located along the eastern flank of the Central Cordillera, Department of Ucayali.

In 2022, field work started in the Belen area which represents a small proportion (4%) of Hannan's total landholding at Valiente. In this area, several geochemical anomalies were found, with boulders of diorite porphyry containing quartz-sulfide and magnetite veinlets. Subsequent mapping, soil and rock sampling at Belen during the last two months has identified porphyry-style alteration and veinlets.

Field and social teams are actively engaged in the area, with Hannan's policy to undertake exploration activities only within areas where full support from local stakeholders exists.

Peru Drill Permitting Update

Valiente

The drill permit area at Valiente encompasses the Belen area and extends over 12 km by 3 km from the Ricardo Herrera, Miocene-age copper-gold porphyry target with a surface footprint of 1,600 m x 800 m and chargeable IP geophysical anomaly to >500 m vertical depth, through to the Vista Alegre epithermal target area that extends over 1.7 km with multiple auriferous silicious boulders and finally further north to the Sortilegio alkalic porphyry.

Hannan received approval from local communities in the Belen area to initiate work for an Environmental Impact Statement (Declaración de Impacto Ambiental, or "DIA") study at the start of 2023. The DIA is the primary environmental certification required to allow low impact mineral exploration programs, that include diamond drilling, to proceed in Peru. The area for the DIA allows for 40 drill platforms and covers an area approximately 12 km long and 3 km wide (3,600 hectares), including the main target areas across the Belen area from Ricardo Herrera, Vista Alegre and Sortilegio (Figure 2). Over the last 3 months, baseline studies for the DIA have been completed. These involved up to 12 specialist consultants undertaking socio-economic and environmental baseline studies, environmental monitoring, archaeological investigations, community workshops and liaison activities.

The next step before completion and submission of the DIA to the relevant authorities is to set a date for hold the Public Participation meeting outlining Hannan's exploration plans. This meeting allows the communities have the opportunity to place on record their approval of the company's proposed drill program at Belen.

San Martin

Hannan made its final submission for its DIA at the San Martin sedimentary hosted Cu-Ag project in [April, 2022](#). During the last month Hannan has held alignment meetings with the relevant authorities (DGAAM, SERFOR and ANA) in Lima that expressed that they will make a final review and submit a reply to Hannan shortly. Based on these points Hannan understands the DIA may be approved during Q3 2023. Once the DIA is approved Hannan can then apply for authority to initiate activities (statutory 30 day approval). On receiving the initiate activities authority, Hannan can then apply for a water permit (statutory 45 day approval) and plan the logistics for the drilling (platform and access construction).

Updates on Non-Peruvian Projects

Chile

At the Cerro Rolando target in Chile, both 100 km (over a 19.2 km² area) of ground magnetics and 7.2 km² of fixed loop transient electromagnetic ("TEM") surveys have been successfully completed. A large coherent, deep (1.2 km) sourced magnetic target (over a 1 km x 1 km area) was observed, coincident with both shallow and deeper electromagnetic anomalies. The deeper and more extensive TEM anomaly appears to be a 400 m to 450 m deep saline aquifer. Next steps are to determine if induced polarization geophysics are appropriate to test the shallow 100 m to 150 m deep TEM anomaly that is associated on the margins of the magnetic anomaly.

Ireland

Drilling of hole 23-3643-19 has at Kilmurry, Ireland was terminated due to technical drill issues caused by a 37 m wide open space void from 513 m down hole. The void was intersected before reaching the high amplitude seismic reflector, interpreted to represent massive sulphides, predicted at 700-800 m depth. The void created significant unrecoverable drill issues. The exploration permit, PL3643, is now under statutory renewal that will take 3-4 months and the next steps are for the Company are to consider re-collaring the drill hole after renewal of the exploration prospecting licence.

Technical Background

All samples were collected by Hannan geologists. Samples were transported to ALS in Lima via third party services using traceable parcels. At the laboratory, rock samples were prepared and analyzed by standard methods. The sample preparation involved crushing 70% to less than 2 mm, riffle split off 250g, pulverize split to better than 85% passing 75 microns. Samples were analyzed by method ME-MS61, a four acid digest performed on 0.25g of the sample to quantitatively dissolve most geological materials. Analysis is via ICP-MS. Channel samples are considered representative of the in-situ mineralization samples and sample widths quoted approximate the true width of mineralization, while grab samples are selective by nature and are unlikely to represent average grades on the property. Gold was analyzed by ALS in Lima using a standard sample preparation and 25g fire assay sample charge.

All soil samples were collected by Hannan geologists using an in-house protocol for soil sampling in jungle areas. The samples were subsequently analyzed with a portable XRF ("pXRF") deploying a protocol developed by [Hannan for the San Martin project](#). The method is designed to minimize risk of contamination and ground disturbance. In most cases the sample media is the "B-horizon" of the soil profile. Only 100g of sample material is collected from each site. From the soil sample a pellet is produced which is dried and analyzed by a pXRF. Certified reference material, blanks and field duplicates are routinely added to monitor the quality of the pXRF data and 10% of all samples are submitted to ALS in Lima to validate the pXRF data. Gold was analyzed by ALS in Lima using a standard sample preparation and 25g fire assay sample charge.

About Hannan Metals Limited (TSXV:HAN) (OTCPK: HANNF)

[Hannan Metals Limited](#) is a natural resources and exploration company developing sustainable resources of metal needed to meet the transition to a low carbon economy. Over the last decade, the team behind Hannan has forged a long and successful record of discovering, financing, and advancing mineral projects in Europe and Peru. Hannan is a top ten in-country explorer by area in Peru.

Mr. Michael Hudson FAusIMM, Hannan's Chairman and CEO, a Qualified Person as defined in National Instrument 43-101, has reviewed and approved the technical disclosure contained in this news release.

On behalf of the Board,

"Michael Hudson"
Michael Hudson, Chairman & CEO

Further Information

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THE VALIENTE COPPER GOLD PROJECT

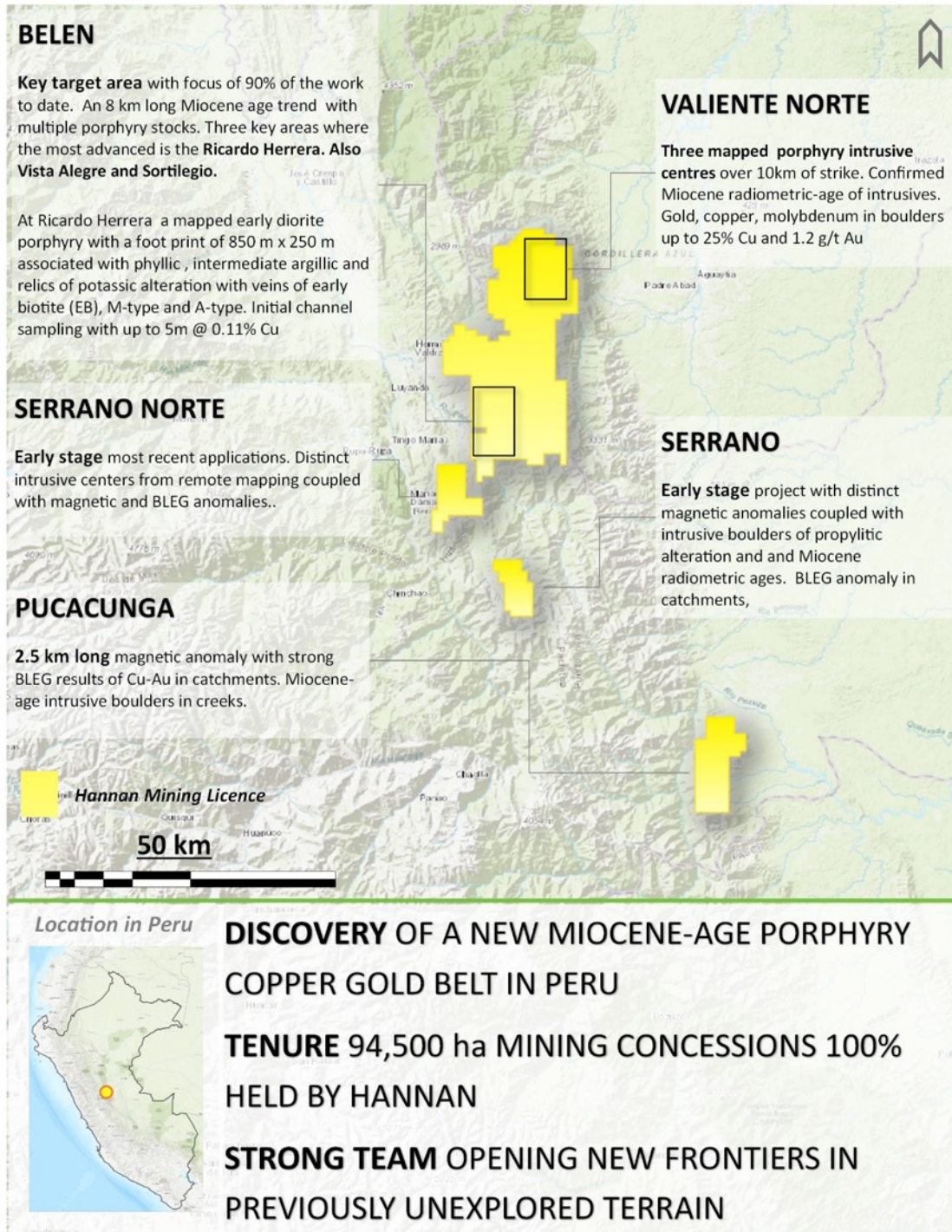


Figure 1. Overview of the Valiente project in Peru

SUMMARY MAP OF THE BELEN AREA

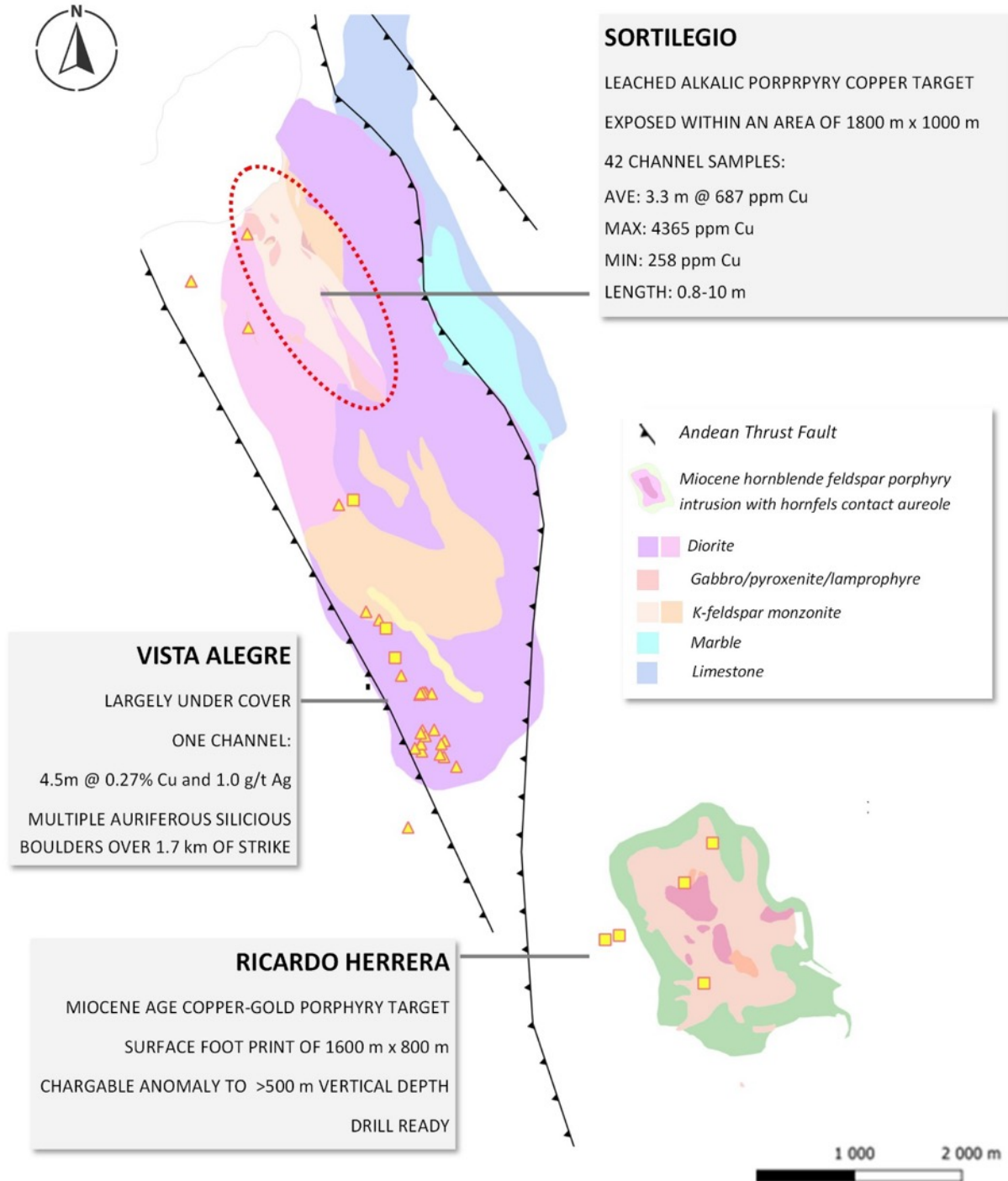


Figure 2. Summary of key targets and geological domains at the Belen area.

MAP OF THE SORTILEGIO TARGET

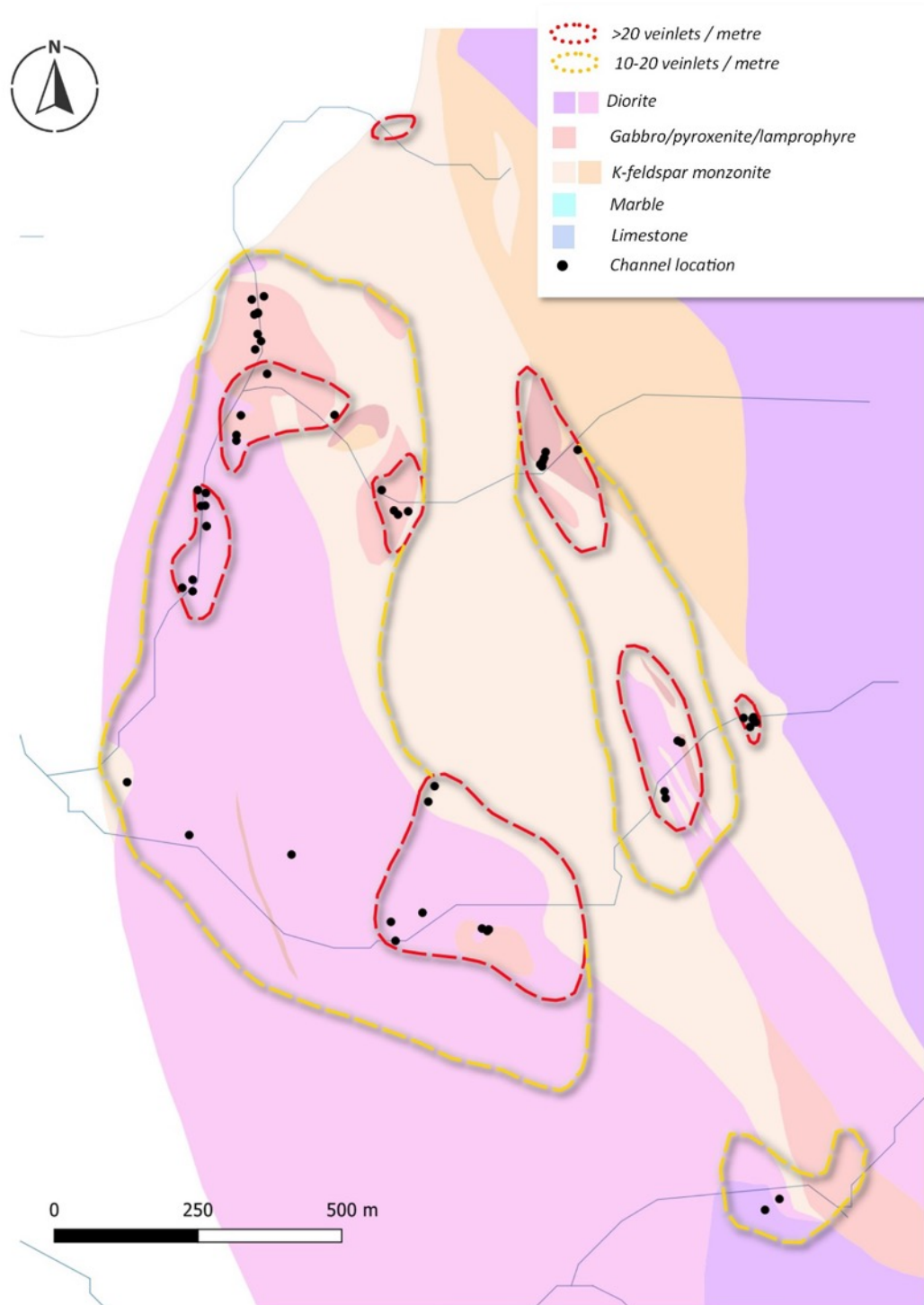


Figure 3. Geological map of the Sortilegio target area. Sortilegio is a leached alkalic porphyry style copper target. The mineralization is marked by a stockwork of goethite –hematite veinlets overprinting all phaneritic rocks



Figure 4. Selected rock photos from Sortilegio to demonstrate the style of mineralization.

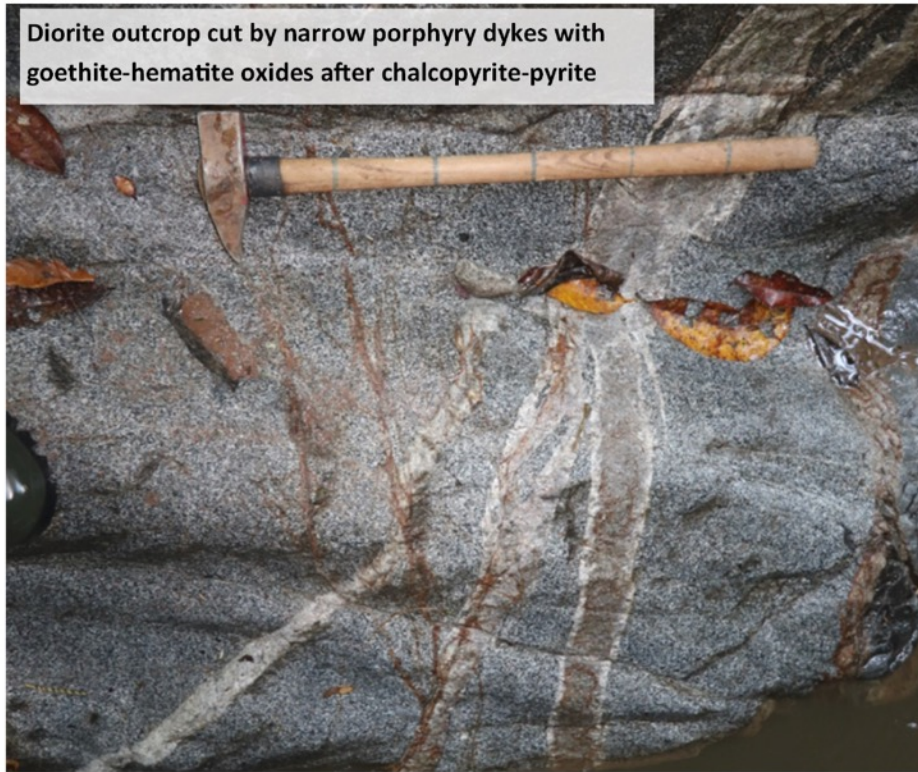


Figure 5. Selected rock photos from Sortilegio to demonstrate the style of mineralization.

CHANNEL ID	From (m)	To (m)	Interval (m)	Comp:Cu_ppm	Comp:Au_ppm
CH13645	14.00	16.00	2.00	1085	0.019
CH13673	0.00	0.80	0.80	1690	0.004
CH13685	4.00	6.00	2.00	343	<DL
CH13696	10.00	12.00	2.00	348	0.002
CH13706	2.00	5.60	3.60	283	0.002
CH13711	2.30	4.60	2.30	258	0.007
CH13716	0.00	3.70	3.70	4365	0.01
CH13718	0.00	3.90	3.90	626	0.031
CH13722	0.00	1.80	1.80	1165	0.008
CH13723	0.00	1.70	1.70	2240	0.021
CH13724	0.00	1.60	1.60	1635	0.006
CH13725	0.00	7.20	7.20	348	0.001
CH13816	0.00	1.70	1.70	356	0.001
CH13825	0.00	2.20	2.20	415	0.002
CH13827	0.00	6.30	6.30	416	0.001
CH13902	10.00	11.20	1.20	280	0.001
CH13937	0.00	3.20	3.20	372	0.003
CH13950	0.00	4.00	4.00	342	0.003
CH13952	0.00	3.50	3.50	583	0.001
CH16079	4.00	10.00	6.00	308	0.002
CH16079	12.00	22.00	10.00	341	0.002
CH16090	1.00	3.50	2.50	876	0.001
CH16093	0.00	4.50	4.50	510	0.007
CH16095	0.00	2.00	2.00	295	0.005
CH16095	3.50	5.00	1.50	844	0.01
CH16098	0.00	5.60	5.60	516	0.009

Table 1. Table of channel results from Sortilegio only showing channels > 250 ppm Cu lower cut-off from the zones with > 20 goetite-hematite veinlets / metre.