Sun Valley Minerals

Sun Valley Extends Tarumán Gold-Silver-in-Soil Anomaly with > 1 km; Identifies Visible Gold Occurrences in Early & Ongoing Trenching; New Geophysics Shines Light on Tarumán Structural Controls; Submits 3 New Prospecting Licence Applications in Uruguay

June 26, 2025

Dear Sun Valley Shareholder or Follower,

Sun Valley Minerals Inc. ("**Sun Valley**" or the "**Company**") is pleased to provide the following updates, including recent activities at the Company's wholly owned Tarumán Gold-Silver Project in Uruguay:

- *Follow-up Auger-Soil Sampling at Tarumán Main Significantly Expanded & Better Defined the Gold-Silver-in-Soil Anomaly – Additional Infill Auger-Soil Sampling is Planned*
- *Recently Completed Ground-Based FDEM & Orientation Gravity Surveys at Tarumán Main Shines New Light on Structural Controls & Geological Model*
- *Positive Observations, Including Visible Gold Occurrences in the First ~1,500 Meters of an Ongoing Trenching Program at Tarumán Main – Assays Pending*
- *Provides Updated Geological Understanding of Tarumán Main*
- *Provides General Overview of Historical Work at the Company's 100% owned Keana Project*
- *New Prospecting Licence Applications Aim to Double the Company's Land Position in Uruguay Since Closing its Previous Financing - Expanding the Rivera Portfolio & Extending the Existing Contiguous Tarumán & Keana Land Package*
- *Completed an Expansion of the On-Site Work Facilities at Tarumán to Accommodate Increasing Exploration Activities, Including Future Drilling*
- *Completed a Baseline Water-Quality Assessment Study at Tarumán Main – Results Confirm Positive Water Quality Conditions as Reference for Ongoing & Future Environmental Monitoring*

Tarumán Main – Soil Sampling Update

Follow-up infill and step-out auger-soil sampling successfully expanded and refined the known gold-silver-in-soil surface anomaly (*Figures 1 & 2*). Surface mineralization remains unconstrained to the northeast where planned follow-up infill sampling will aim at further delineating the anomaly.

The primary gold-in-soil anomaly, described as the *"Core Zone"*, is characterized by gold-in-soil concentrations greater than ~15 ppb Au, and is encompassed by a broader *"Fringe Zone"* gold-in-soil anomaly, characterized by gold-in-soil concentrations exceeding ~7 ppb Au. The latter currently extends ~3,000 meters in length and ~1,500 meters in width. The combined Core- and-Fringe Zone anomalies coincide with a prominent silver-in-soil anomaly, characterized by silver-in-soil concentrations greater than ~60 ppb Ag. The gradational nature of the gold-silver-in-soil anomaly is attributed to potential geochemical zonation within the broader mineralized system.

Following the successful expansion of the gold-silver-in-soil anomaly, the Company has begun preparations to extend its current drilling and trenching rights to the north.

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February 2025: Gold-in-Soil Anomaly **June 2025: Gold-in-Soil Anomaly**

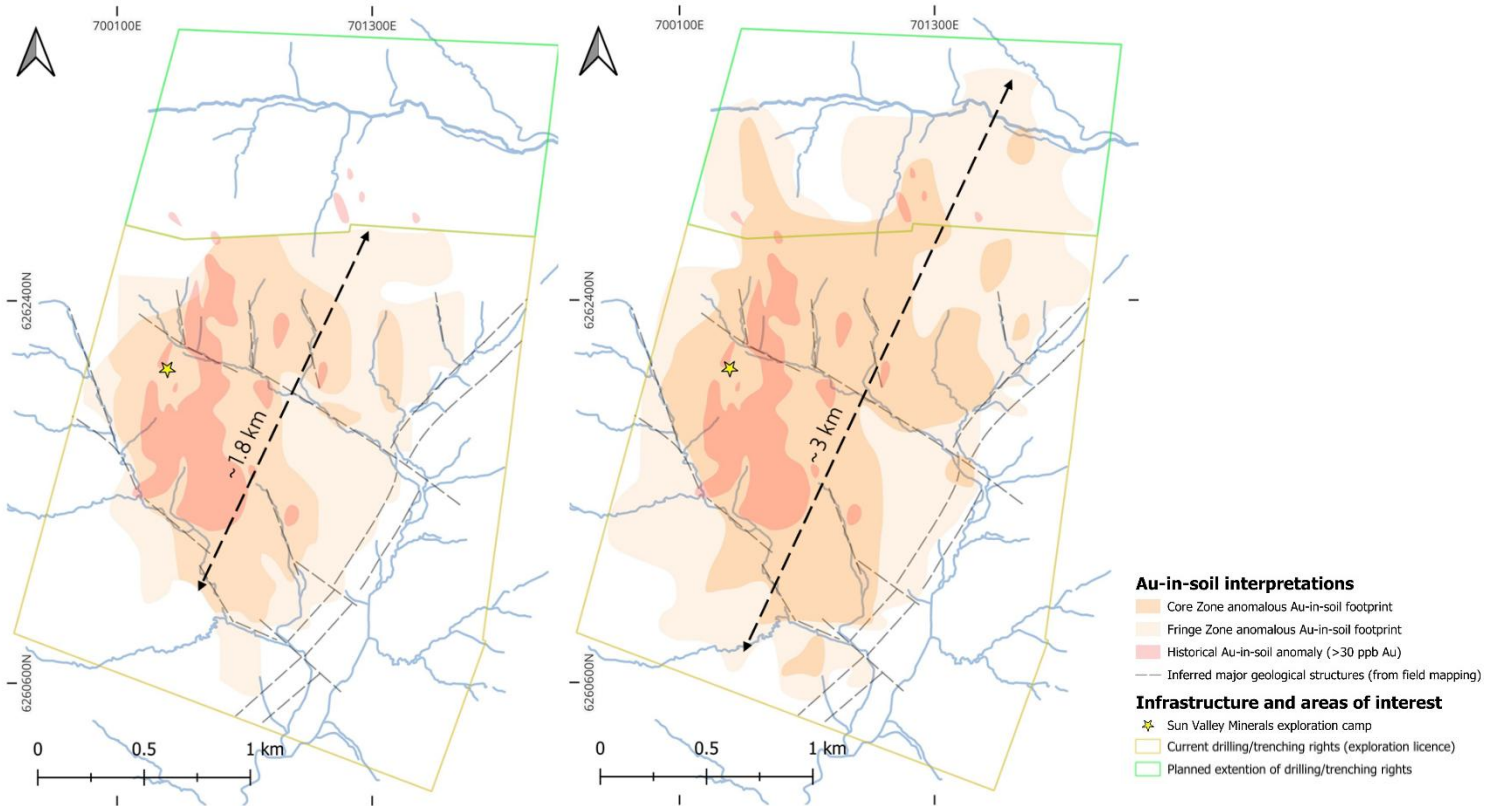


Figure 1: Tarumán Main - Interpreted Gold-in-Soil Anomaly at Over Time.

Gold-in-Soil: Completed & Planned Auger Sampling **Silver-in-Soil: Completed & Planned Auger Sampling**

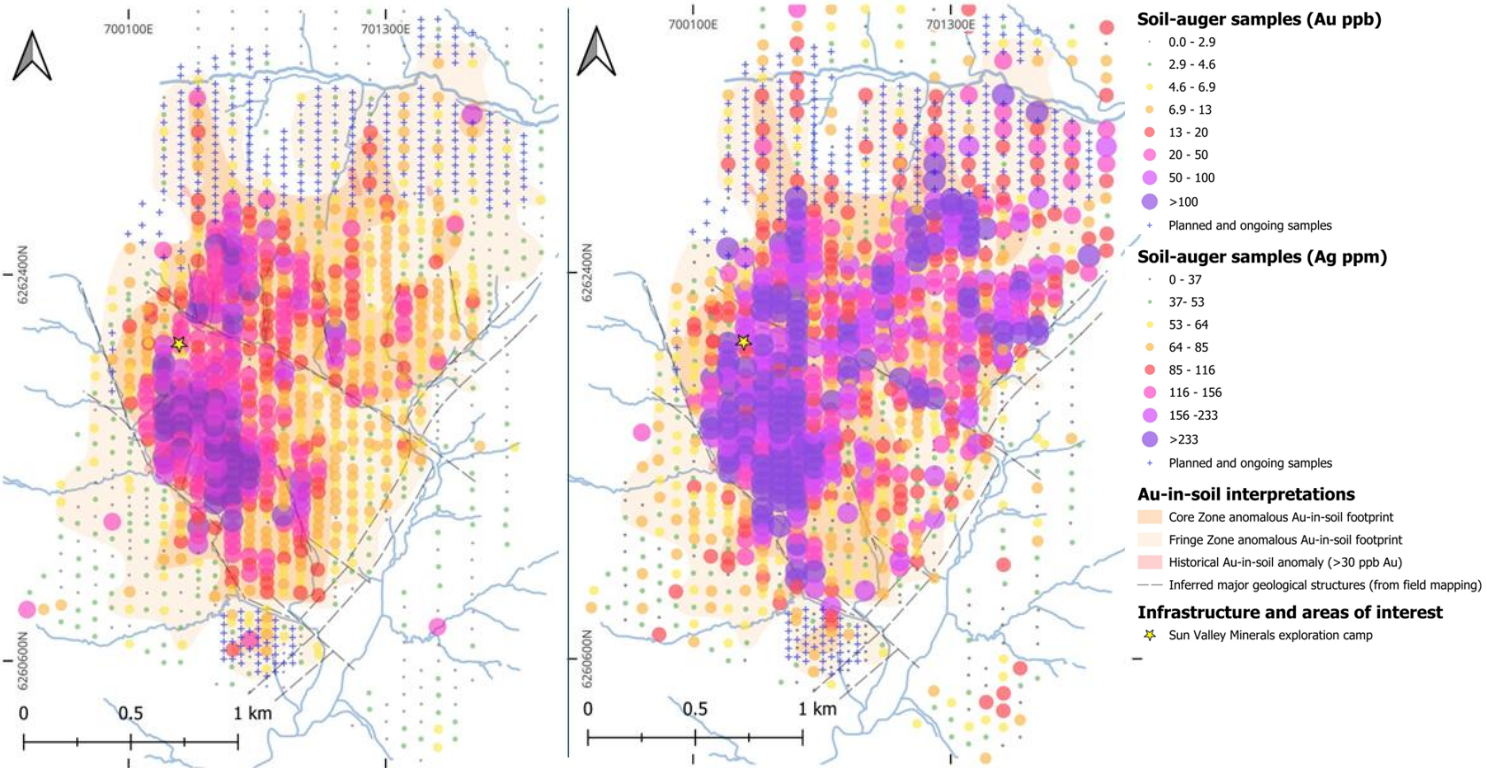


Figure 2: Tarumán Main - Gold-in-Soil (Left) & Silver-in-Soil (Right) Results to Date.

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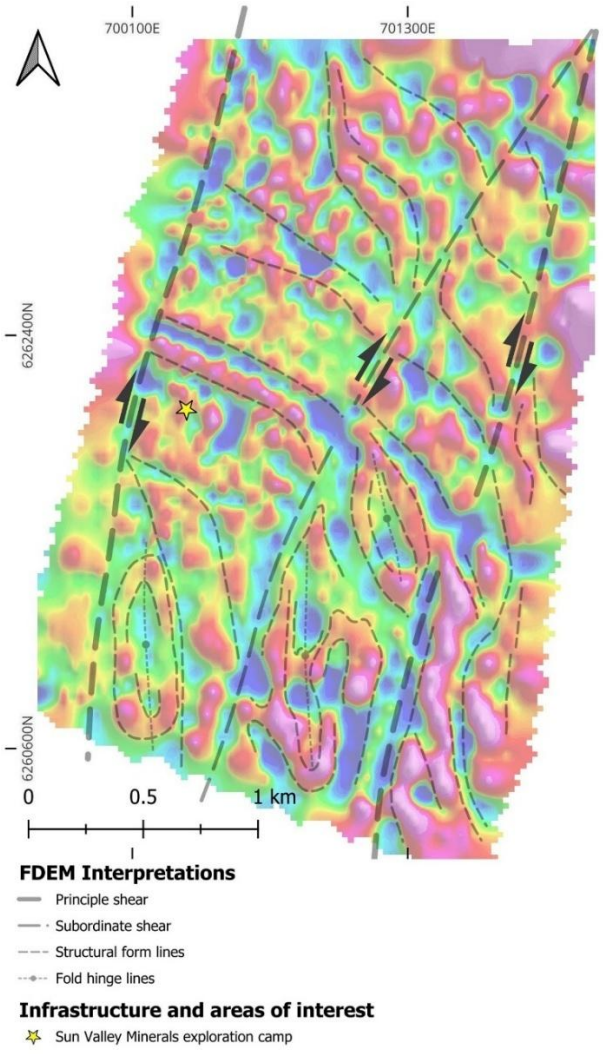


Figure 3: Tarumán Main - Ground-Based FDEM Survey

Tarumán Main - Geophysics Update

A recently completed ground-based Frequency Domain Electromagnetic (FDEM) survey has successfully resolved structural features interpreted to represent key controls on gold-silver mineralization (*Figure 3*).

Preliminary interpretation highlights a set of northwest-southeast to east-west oriented lineaments, interpreted as structurally permissive dilational zones, broadly confined between three principal northeast-southwest trending apparent dextral shear zones and their subsidiary north-south splays. These orientations correspond with those of mineralized quartz-sulphide veins and breccias observed and sampled at surface, supporting their interpretation as fluid pathways associated with late-stage shearing.

Interpreted fold hinges with north-south to northwest-southeast trends are also evident in the FDEM dataset and correlate with fold geometries exposed in several trenches to date (*Figure 4*).

The FDEM results correlate well with subtle features observed in high-resolution ground-based magnetic survey data and are further corroborated by an orientation gravity survey, which confirms key structural domains.

Tarumán Main - Trenching Update

The Company completed ~1,500 meters of trenches as part of an ongoing program that commenced in early April. ~4,500 meters of trenches are currently prioritised out of a potential ~10,000 meters planned. The majority of priority trenches are focussed on prospective areas that are untested by historical exploration, including newly identified targets located up to 1 kilometre east of the historical gold-in-soil anomaly, where most of the past trenching and drilling was concentrated.

Trenching at or near historical trench locations are designed as tie-line trenches, aimed at complementing past work through infill, and renewed focus on northwest-southeast oriented structures and veins, which were not the primary focus of past exploration efforts.

Oxidised / replacement-style gossas, cross-cutting quartz-sulphide veins and breccias—often containing fresh sulphides, as well as visible gold occurrences—have been observed in several trenches excavated to date. The Company has yet to receive assay results for these trenches.

Whilst trenching has generally been successful, with no material complications to date, progress has been slower than anticipated due to frequent rainfall. The Company is committed to completing the initial ~4,500 meters of prioritized trenches, after which it will assess the viability of transitioning directly to drilling over continued trenching. Refer to *Figure 4* for an overview of completed and ongoing trenching.

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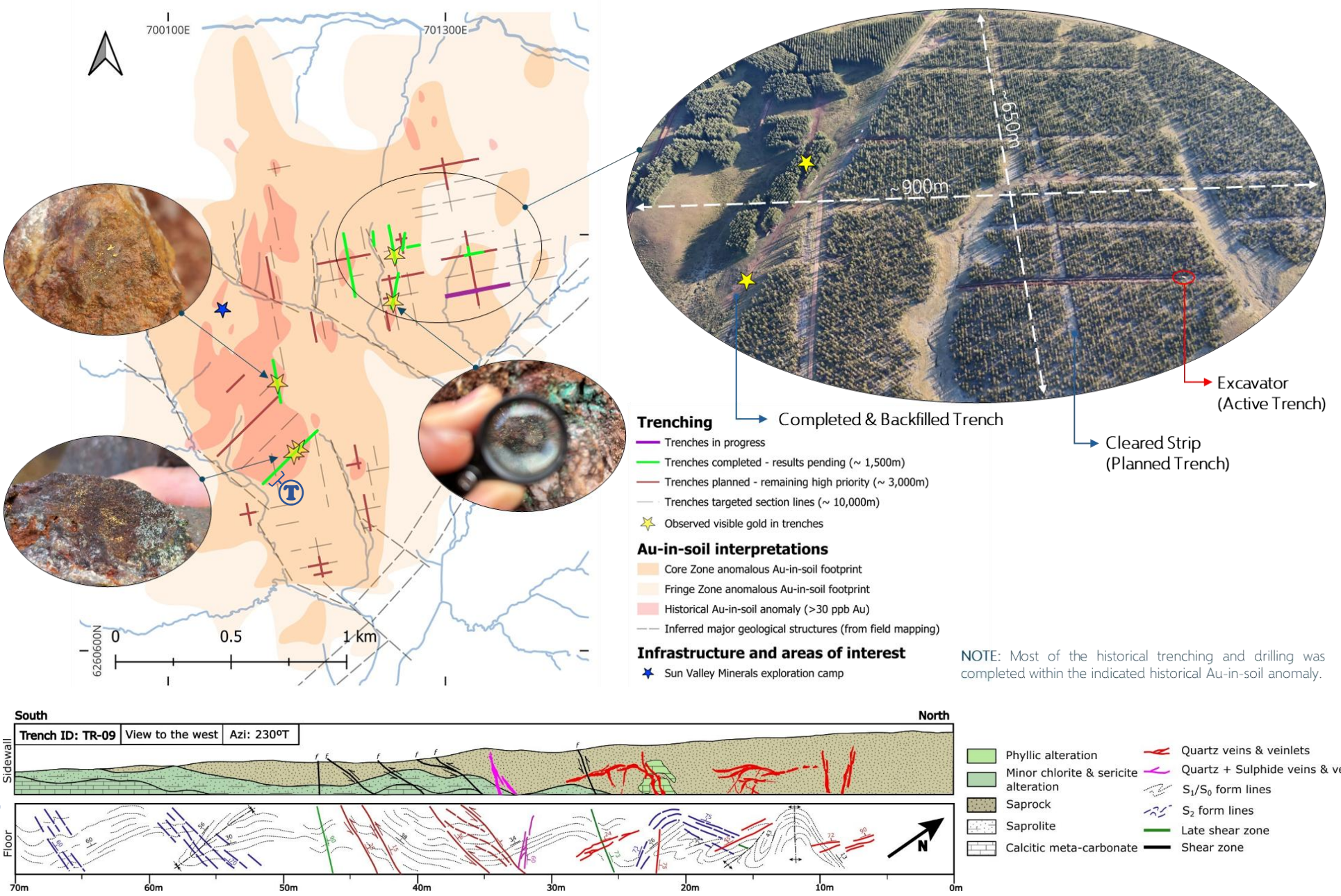


Figure 4: Tarumán Main - Completed & Ongoing Trenching.

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Figure 5: Tarumán Main - Structural Interpretation.

Tarumán Main – Geological Understanding Update

The Tarumán Main target is situated within a northeast–southwest trending corridor of poly-deformed, lower- to middle-greenschist facies carbonate-rich and siliciclastic metasedimentary rocks. This corridor is interpreted to lie proximal to, and structurally influenced by, the regional-scale Sierra Ballena Shear Zone (SBSZ), a long-lived and complex deformation system inferred to have undergone a progressive, multi-stage tectonic evolution.

The SBSZ initially developed during Ediacaran sinistral transpressional deformation associated with the Brasiliano–Pan-African orogeny, followed by exhumation and a transition to brittle-ductile conditions, with subsequent dextral reactivation during the early Cambrian. This late-stage structural overprint is interpreted to have created key fluid pathways for hydrothermal mineralizing systems at Tarumán Main and across the broader region. The timing and structural setting of mineralization observed at Tarumán Main are consistent with this evolution and support a syn- to late-tectonic mineralizing event, in line with the progressive deformation model proposed by Oyhantçabal et al. (2010) and Sosa et al. (2021).

From west to east, the interpreted project stratigraphy includes: Quartzitic metasedimentary rocks; interbedded calcitic and dolomitic metacarbonates with subordinate meta-argillite; siliciclastic-rich metacarbonates; a mylonitic quartz-feldspar schist of uncertain origin; and phyllitic meta-mudstones. These lithologies display marked contrasts in mineralogical composition and mechanical competence, which are interpreted to influence both their deformation response and mineralization potential.

The primary structural framework is defined by three principal northeast-southwest trending shear zones, interpreted from a combination of field observations and FDEM geophysical data. These structures broadly coincide with major lithological boundaries and are considered to represent reactivated (significantly older) thrusts, overprinted by brittle-ductile shearing. Between these shear zones and their north-south subsidiary splays, a network of northwest–southeast to east–west trending structural corridors is inferred to have developed, enhancing dilation and fluid flow. These structurally complex zones are interpreted as local first-order controls on mineralization, particularly where they intersect favourable lithologies or inherited structural features.

Mineralization is interpreted to have formed during a later phase of shearing associated with the SBSZ structural regime, following earlier folding and thrusting events. This shearing is inferred to have locally overprinted, transposed, or deflected earlier fabrics, producing complex overprinting relationships that are often difficult to

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resolve, particularly due to the sub-parallel orientation of successive deformation phases. The complex folding patterns observed are also interpreted to result from, or be strongly influenced by, this late-stage shearing.

This interpretation is further supported by the presence of cross-cutting quartz-sulphide veins and breccias, which trend northwest–southeast to east–west, and are typically associated with northeast–southwest trending apparent dextral shear zones that rework older fabrics. These features highlight the role of late-stage shear activity in controlling fluid flow and mineralization.

Two principal mineralization styles are recognised:

1. Quartz-sulphide vein and breccia-hosted style, associated with steep to moderately dipping northwest–southeast to east–west trending structures, commonly forming en-echelon arrays within or near shear zones and their splays. Veins exhibit brittle-ductile textures, while breccias are brittle and locally vuggy, indicating formation under relatively shallow crustal conditions. Veins and their selvages are often brecciated and sulphide-mineralized.

2. Intrafolial replacement style, involving selective sulphide mineralization and alteration along bedding planes, foliation, fold hinges, and reactivated structural surfaces.

Dolomitization is interpreted as the dominant alteration style associated with both mineralization styles, while sodic, sericitic, propylitic, and talc alteration are locally inferred from petrographic and visual analysis, particularly within replacement zones. The distribution of these alteration assemblages suggests that at least two distinct hydrothermal events may have occurred.

The two mineralization styles are interpreted to spatially overlap and interact within multi-oriented, anastomosing shear-fracture networks. Zones of dilation and structural complexity, particularly where they coincide with favourable lithological units or inherited features such as fold hinges, are interpreted to act as mineralization traps. These intersections commonly host elevated concentrations of gold, copper, lead, and zinc, reinforcing their significance as priority exploration targets. The presence of polymetallic sulphides, often accompanied by pathfinder elements such as arsenic, antimony, and molybdenum, provides additional geochemical vectors to mineralization. Field observations further suggest that steeper structures are more consistently and visibly mineralized than shallow-dipping ones, indicating their role as primary hydrothermal conduits.

Soil geochemistry provides strong support for the current geological model at Tarumán Main. A broad, coherent anomaly measuring up to 1.5 kilometre in width is interpreted to be residual, reflecting in-situ bedrock geochemistry rather than transported material. This interpretation is supported by the area's gently undulating topography and subdued relief, which suggest a preserved paleo-surface with minimal influence from erosion or alluvial processes. The anomaly closely follows the interpreted strike length of the mineralized corridor and is well-constrained within key structural domains identified through mapping, trenching, and FDEM data. Its alignment with both lithological contacts and structural trends underscores its value as a reliable vectoring tool for ongoing exploration.

The interpreted strike extent of the mineralized corridor at Tarumán Main, based on work to date, measures up to 3 kilometres, with structural continuity suggesting potential extensions to the northeast and southwest. Approximately 8 kilometres to the southwest, the Keana prospect defines a second mineralized footprint of similar scale (~3 km), based on limited historical rock chip and soil sampling. Its sub-parallel, along-strike orientation relative to Tarumán Main supports the interpretation of shared structural controls and a potentially district-scale mineralized system. This enhances the strategic value of the Company's current tenement position and highlights the broader exploration potential across the consolidated regional portfolio.

The geological model at Tarumán Main continues to evolve with the integration of new structural, lithological, geophysical, and petrographic data. Mineralization exhibits a hybrid character, displaying diagnostic features of

both carbonate-replacement systems, such as replacement textures, stratigraphic association, and carbonate alteration, and orogenic gold systems, including structural control, brittle-ductile veining, and multi-phase fluid flow. However, it is currently interpreted to have formed not during peak compressional deformation, but rather during a later phase of shearing, potentially linked to retrograde exhumation and early crustal extension. The orogenic features may reflect a protracted, deformation-driven fluid flow regime, active during the waning stages of orogenesis. A magmatic contribution, in terms of thermal input and fluid source, is considered plausible, though remains unconfirmed. Ongoing work is focused on refining mineralization controls, testing continuity, and advancing toward drill-ready targets.

Keana Project – Activity Update & Historical Work Overview

Historical work at the Company's wholly owned Keana project identified it as an area of high interest with geological similarities to Tarumán. Historical exploration activities at Keana include limited soil sampling, rock chip sampling, limited ground-based magnetic surveys, and trenching by hand. No mechanized exploration drilling or trenching has ever been conducted on the project.

Sun Valley currently holds prospecting rights over the Keana project, which allows for non-intrusive, non-mechanized exploration activities. In preparation for future work programs at Keana, the Company is currently assessing soil data from an orientation soil sampling program completed earlier this year. Preliminary results, compared to historical soil data, confirms that Sun Valley's sampling protocol, which targets finer fractions from the BH and BH/CH soil horizons, is effective in enhancing anomaly detection while minimizing nugget effect.

Refer to *Figure 7* for and overview of historical soil sampling and hand-trenching completed at Keana.

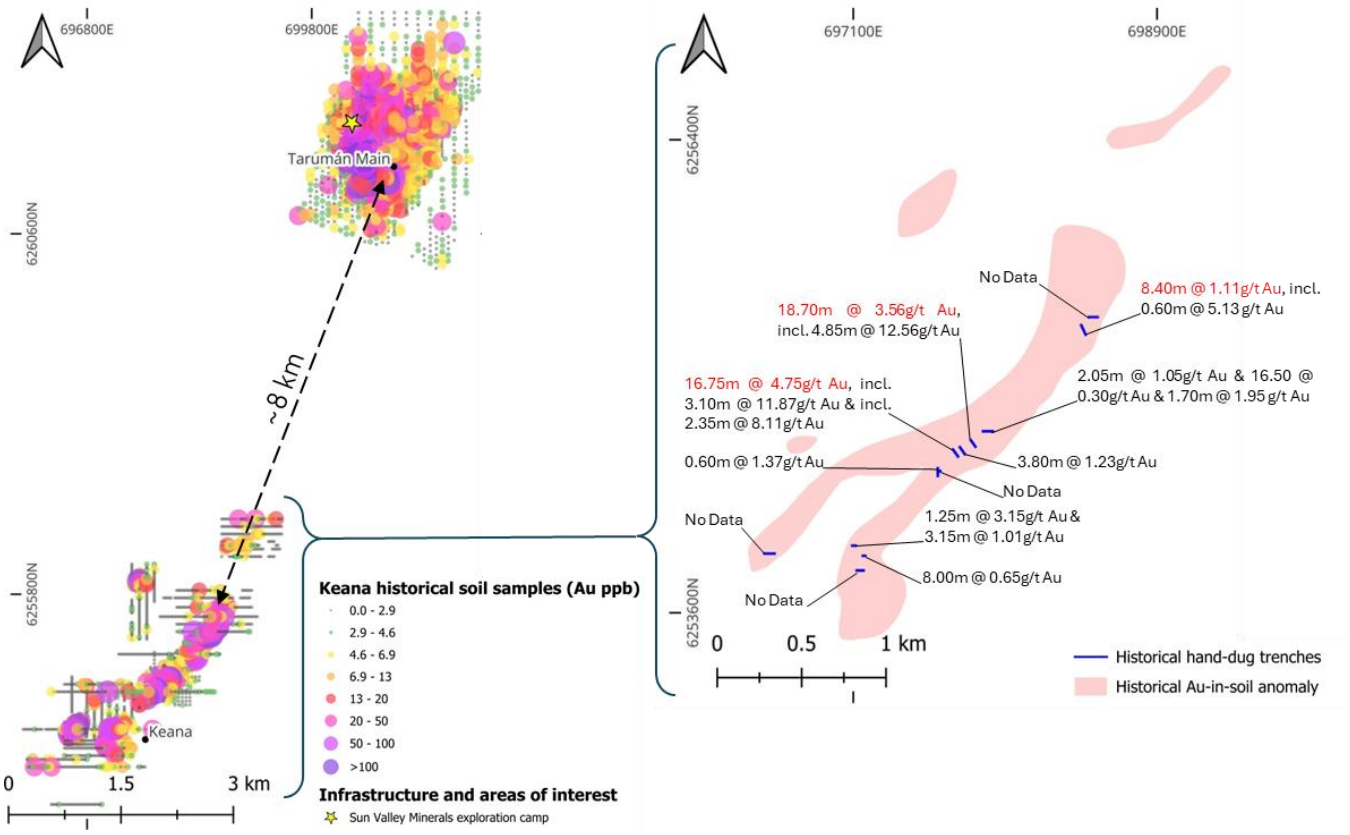


Figure 6: Keana - Historical Soil Sampling & Hand Trenching (Trench Assays Taken from Historical Exploration Report).

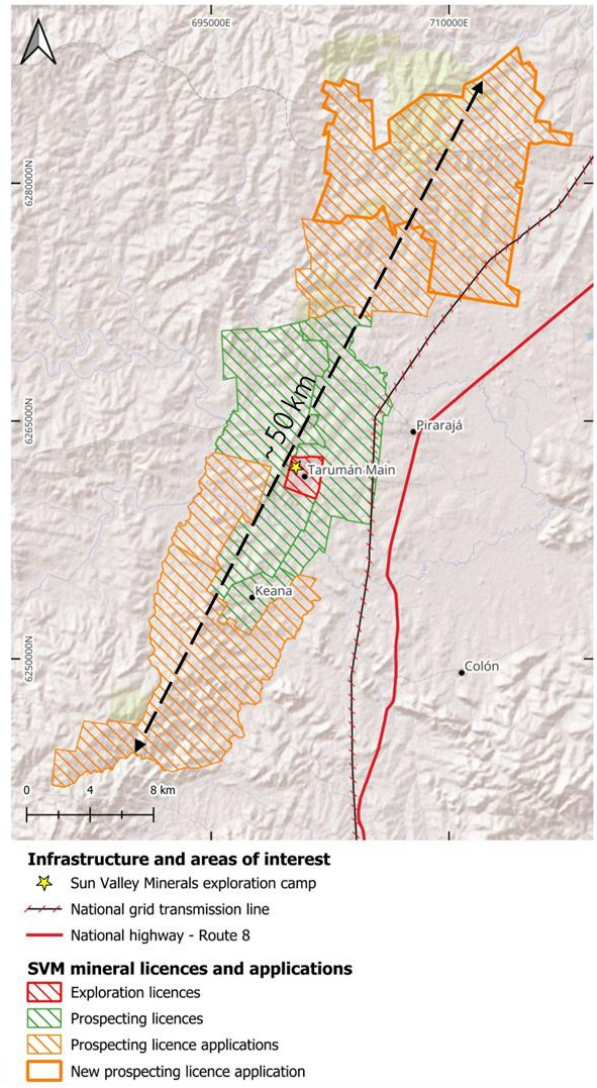


Figure 7: Lavalleja - Land Package.

Mineral Licences & Licence Applications Update

The Company submitted 3 new prospecting licence applications in Uruguay. New licence applications, in addition to the licence applications announced in the February 28 shareholder update, aim to increase the Company's land position in Uruguay to ~87,155 hectares - A 97% increase over its combined licence and licence application holdings at the time of closing its previous financing on November 22nd.

~13,192-Hectare Prospecting Licence Application Contiguous to Existing Tarumán-Keana Group Land Package

The Company submitted a ~13,192-hectare prospecting licence application along strike-and-contiguous-to the northeastern segment of its existing Tarumán-Keana group of licences and licence applications in Lavalleja Department, Uruguay. This new licence application covers prospective ground along the northeast-southwest trending Dom Feliciano Fold-and-Thrust Belt and aims to expand the footprint of the Company's combined licences and licence applications in the area to ~43,917 hectares (*Figure 5*).

~19,968 Hectares in New Prospecting Licence Applications in Rivera Department

The Company submitted two new prospecting licence applications in Rivera Department, north-eastern Uruguay. These new licence applications cover ~12,057 hectares and ~7,911 hectares respectively and are positioned along strike of the San Gregorio Shear Zone over areas believed to include untested historical exploration targets. The applications expand the footprint of the Company's licence applications in the area to ~38,971 hectares (*Figure 6*).

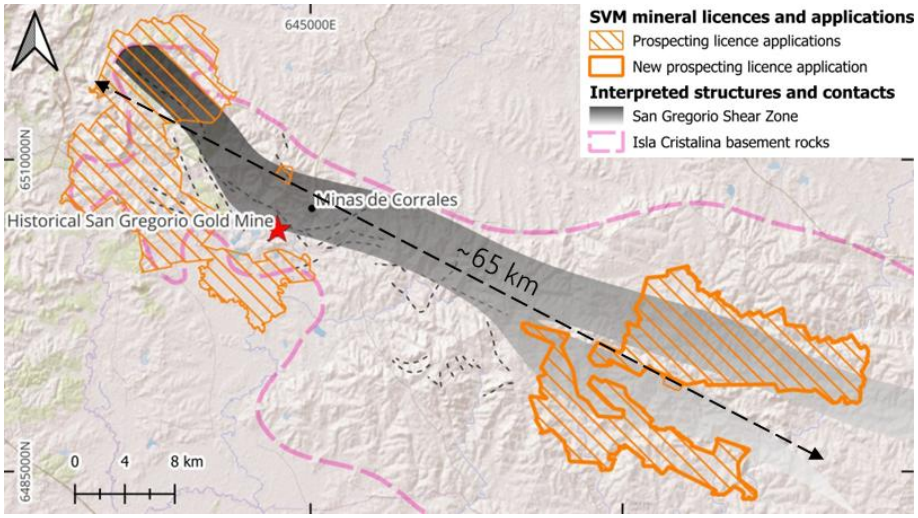


Figure 8: Rivera - Land Package.

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General Updates

To align with increasing exploration activities, including future drill programs, the Company recently expanded its on-site work facilities at Tarumán.

Prior to commencing trenching at the Tarumán Main, the Company completed a baseline water quality assessment over the exploration licence area, conducted by CASS Consultores. The study aimed to establish pre-existing water quality conditions as a reference for ongoing and future environmental monitoring, by analysing heavy metals, hydrocarbons, pH, and bacteria in both surface and groundwater sources. The results indicated no exceedances related to exploration activities.

In addition to the above, the Company also funded two groundwater boreholes to support local landowners, as well as future diamond drilling exploration programs.



Figure 9: General Activities.

Qualified Person's Statement

Mr. Laubser Pepler, M.Sc. is Vice President Exploration of Sun Valley and has reviewed and approved the scientific and technical information in this shareholder update. He is a registered Professional Natural Scientist with the South African Council for Natural Scientific Professions (Pr. Sci. Nat. No.125018) and a Qualified Person for the purposes of National Instrument 43-101.

Refer to *Appendix A* for an overview of technical procedures and methodologies related to sample collection, preparation and processing, and geochemical analysis relevant to results disclosed and discussed in this document.

About Sun Valley Minerals Inc.

Sun Valley Minerals Inc., founded in 2021, is a private Toronto-based corporation focused on early-stage mineral exploration and project generation in Uruguay. The Company currently holds 100% of the Tarumán and Keana gold-silver projects located in Lavalleja Department.

For any further details, please do not hesitate to contact me.

On Behalf of The Board of Directors & The Sun Valley Team

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Cautionary Statement Regarding Forward-Looking Information

This shareholder letter has been issued as a matter of interest to investors and other followers of the Company. This shareholder update contains certain statements that constitute "forward-looking statements" and "forward-looking information" within the meaning of applicable securities laws (collectively, "forward-looking statements"). Forward-looking statements include, but are not limited to, statements about the future financial or operating performance of Sun Valley Minerals Inc., the anticipated mineralization of its properties, its planned exploration programs, the use of proceeds from the Offering and the anticipated nature of the Company's projects. Generally, forward-looking statements can be identified by terminology such as "plan", "expect", "believe", "project", "estimate", "forecast", "intend" and other similar terminology, or statements that certain actions, events or results "will", "may" or "would" or "will be achieved".

Forward-looking statements are based on the expectations and reasonable assumptions of the Company's management team at the time such statements are made. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of productivity, performance or achievements to differ materially from those expressed or implied by such forward-looking statements, including, but not limited to, general business, economic, competitive factors, dependence on third parties, actual results of operations and other commodity industry risks. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in the forward-looking statements, other factors may cause results not to be as anticipated, estimated or intended.

The recipient agrees and acknowledges that neither Sun Valley nor any of its representatives has any obligation whatsoever to update or keep current any information contained herein at any time, and the Company hereby disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Investment in the common shares of the Company is highly speculative given its present stage of development.

All references to dollar amounts in this shareholder update are to Canadian dollars unless otherwise specified.

Appendix A

Technical Procedures and Methodologies

WORK STREAM	SUMMARY PROCEDURES & METHODS
Trench channel sampling	***Laboratory:*** *ALS – Mendoza (Argentina).* ***Sample Collection:*** *Trench walls and floors are cleaned as thoroughly as possible before logging and sampling. Samples were defined post-logging and surveying. Channel samples weighing between 8 – 12 kg are collected at an average interval of 1.2 m (minimum 0.3 m; maximum 3 m; dependant on geological complexity). In soft material, samples are extracted from the base of trench walls using hammer and chisel; where fresh rock was exposed, a diamond-blade saw is used to extract samples from the trench floor. All samples are collected in plastic bags and kept off the trench wall and floor to avoid contamination. Sampling equipment is cleaned thoroughly between samples.* ***Trench Logging & Surveying:*** *Trench start (collar) and end points, and trench traces were recorded using a differential GPS (DGPS). Geological logging is completed at defined intervals using field laptops and standardized logging templates. Logged parameters include lithology, alteration, mineralization, magnetic susceptibility, strain, structural measurements, and self-potential measurements, with magnetic susceptibility readings collected via handheld meters. Field sections, field stereonets, georeferenced field photographs and selected hand specimens accompany each trench. Logging data is routinely managed, validated and incorporated into a geological database by an off-site database geologist.* ***Analytical Methods*** *– Phase 1: All samples will undergo full sample preparation (PREP-31), including drying, crushing, and pulverization to 85% <75 µm. Gold and silver will be analyzed via fire assay with gravimetric finish (ME-GRA22). Overlimit values will be reassayed using the appropriate ore-grade method (ME-OG62). In parallel, all samples will be screened using handheld pXRF (pXRF-30) for Cu, Pb, and Zn, based on previously demonstrated correlations between pXRF and laboratory ICP results. ALS has been instructed to retain both pulp and coarse reject materials for a minimum of 12 months to allow for future confirmatory work. Phase 2: Phase 2 sampling will selectively follow up on anomalous intervals identified in Phase 1. Sample selection will be guided by geological context and geochemical thresholds defined using historical trenching data: >0.19 g/t Au, >3.5 g/t Ag, >300 ppm Cu/Zn, and >1,000 ppm Pb. Selected samples will be submitted for multi-element analysis via four-acid digestion and Inductively Coupled Plasma Atomic Emission Spectroscopy (ME-ICP61), to refine geochemical vectors and support drill targeting.* ***QAQC:*** *Certified Reference Materials (OREAS 231, 21F, 235 and 240), field duplicates, and certified field blanks are inserted at a 20% insertion.*
FDEM and Gravity Surveys	***Survey Team:*** *GeoFocus (Pty) Ltd. (South Africa).* ***Independent Interpretation & Validation Team:*** *GeoKincern (Pty) Ltd. (Australia).* ***<u>Frequency-Domain Electromagnetics (FDEM)</u>*** ***Equipment & Setup:*** *FDEM data were acquired using the IRIS Promis-10 system. The survey consisted of 37 lines at 100 m spacing (~59.6 km) and 15 additional infill lines at 50 m spacing (~12.4 km), totaling approximately 72 km. Station spacing was 25 m. Ten frequencies were initially recorded, of which four (220 Hz, 440 Hz, 880 Hz, and 7040 Hz) were retained for final interpretation due to their superior geological signal and signal-to-noise ratio.*

	Data Processing & QAQC: *Field data were downloaded and converted using IRIS EmSys software, and subsequently processed, gridded, and interpreted in Seequent's Oasis Montaj. A base shift correction was applied to lines 15, 16, and 17, and lines 4, 24, and 25 were re-surveyed due to artefacts observed in the 880 Hz In-Phase dataset. QAQC measures included base station checks and verification against re-surveyed lines.* ***Interpretation Highlights:*** *The quadrature-phase (imaginary) component effectively imaged conductivity contrasts within the subsurface, while the in-phase (real) component delineated variations in magnetic susceptibility. The data revealed a highly prominent arcuate WNW-trending conductor and several NW-SE and N-S trending structural corridors, many of which correlate spatially with anomalous gold-in-soil and rock chip results. The western N–S corridor, in particular, showed strong correspondence with elevated Au values and is considered a high-priority structural control.* ***Geological Application:*** *The FDEM survey successfully resolved structurally controlled features not visible in either ground or airborne magnetic datasets due to masking by younger magnetic dykes and weak susceptibility contrasts in the host rocks. The structural interpretation supports a carbonate-hosted mineralisation model with strong late-stage shear control, and FDEM results were instrumental in refining trenching targeting.* *<u>Ground Gravity (GG)</u>* ***Equipment & Setup:*** *Orientation gravity data were acquired using a Scintrex CG-5 Autograv gravimeter paired with GNSS RTK GPS units for accurate elevation control. Gravity profiles were co-located with FDEM lines 10, 17, and 24, with 20 m station spacing. A total of 306 gravity stations were collected over approximately 6.4 km of line coverage.* ***Data Processing & QAQC:*** *Gravity data were processed using standard reduction procedures in Oasis Montaj, including corrections for Earth Tide, elevation, and Bouguer anomaly. Gravity reductions were tested at three assumed rock densities (2.5, 2.75, and 3.0 g/cm³), with 2.75–3.0 g/cm³ yielding optimal decorrelation from topography, consistent with the presence of denser carbonate units. Twelve repeat stations (approximately 4%) were collected as part of QAQC and yielded a mean repeat error of 0.018 mGal, indicating high data reliability.* ***Interpretation Highlights:*** *The gravity survey detected subtle anomalies (generally within a <1 mGal envelope). Gravity lows were observed over the same structurally significant areas highlighted in FDEM data, including the arcuate WNW-trending conductor and the eastern limb of the western N–S corridor. These features are interpreted to represent weathered or altered zones, or low-density lithologies such as siltstones, shales, or brecciated carbonates associated with mineralisation.* ***Geological Application:*** *The orientation gravity survey confirmed the structural framework interpreted from FDEM and further supports the presence of lithological and structural complexity associated with gold mineralisation. The gravity method proved effective in low-relief carbonate-dominated terrains and is recommended for expansion to a full grid-based survey to enhance regional structural interpretation and support future drill targeting.*
Infill & Expansion Auger-Soil Sampling	***Laboratory:*** *ALS - Mendoza (Argentina).* ***Sample Collection:*** *1 to 2 kg auger-soil field samples were collected between 0.5 - 1.4m in depth, targeting the lower B and/or B/C horizons. Samples were collected on a 20cm run basis using mechanical hand-auger tools. All samples were logged and stored in chip trays.* ***Sample Spacing:*** *Initial sampling was conducted on 160m line spacing and 80m sample spacing, with final follow-up spacing of*

	80m line spacing and 40m sample spacing. **Oven drying & SCR-51 (<75 microns):** *Samples were oven-dried for 12 hours at 80 degrees Celsius and dry screened to -75 µm. Final sample weights for laboratory submission ranged from 150 - 200g.* **AuME-ST44 (Super Trace Gold & Multi-Element by ICP-MS):** *-75 µm samples were analysed via aqua regia digestion followed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS), offering ultra-trace detection for gold and multi-element analysis.* **QAQC:** *A 20% insertion rate of Certified Reference Materials (OREAS21f and 45h standards), field duplicates, and uncertified field blanks.*
Orientation Auger-Soil Sampling	***Laboratories:*** *SGS & ALS – Salta and Mendoza (Argentina).* **Sample Collection:** *An average of 8kg per soil horizon was collected on a 20cm run basis, with the total sampling depth not exceeding 2m or past the lower B-horizon. Samples were collected using mechanical hand-auger tools. All samples were logged and stored in chip trays.* **Sample Location & Spacing:** *Two sampling grids of 3 x 3m (9 auger-soil holes per grid with an average of 7 samples per hole representing the various soil horizons encountered). Study areas were located on residual soils perceived as "barren" and "mineralized" for accurate comparison.* **Oven drying & SCR-51:** *Samples were oven-dried for 12 hours at 80 degrees Celsius and dry screened to custom requirements - 2mm, 1mm, 500µm, 250µm, 180µm, 120µm, 75µm, and for clay separates.* **SCR-CLAY (Clay Fraction Separation):** *Isolated clay-sized fractions (2 – 10 microns) from sampled soil horizons were extracted for further analyses.* **AuME-ST44 (Super Trace Gold & Multi-Element by ICP-MS):** *Various fractions from sampled soil horizons were analysed via aqua regia digestion followed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS), offering ultra-trace detection for gold and multi-element analysis.* **Au-CN44 (50g Cyanide Leach with ICP-MS Finish):** *Various fractions from sampled soil horizons were analysed via Cyanide leach extraction of gold from a 50g sample with analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS).* **QAQC:** *A 20% insertion rate of Certified Reference Materials (OREAS21f and 45h standards), field duplicates, and uncertified field blanks.*
Heavy Mineral Concentrate Stream Sediment Sampling	***Laboratory:*** *ALS - Mendoza (Argentina).* **Sample Collection:** *20 – 40kg (wet weight) of stream sediment material is collected from selected trap sites along streams not exceeding 400m in length, typically ranging between 100 – 250m.* **Heavy Mineral Concentrate Extraction:** *The entire sample underwent two cycles through a heavy mineral concentrate shaker with the heavy mineral concentrate stream being selectively removed, resulting in a final heavy mineral concentrate typically comprising 150 – 300g of silt-sized material.* **DRY-21 (Sample Drying):** *The samples were dried at 60 degrees Celsius.* **PUL-31 (Pulverize to 85% <75 µm):** *The sample was crushed and pulverized so that 85% passes through a 75 µm sieve.* **AuME-ST44 (Super Trace Gold & Multi-Element by ICP-MS):** *Samples underwent aqua regia digestion followed by analysis with Inductively Coupled Plasma Mass Spectrometry (ICP-MS) for ultra-trace detection of gold and multiple elements.* **Au-GRA22 (Gold by Fire Assay with Gravimetric Finish - 50g Charge):** *Gold determination was conducted using the fire assay method with a gravimetric finish.*
Rock Chip Sampling	***Laboratory:*** *ALS - Mendoza (Argentina).* **Sample Collection:** *1 – 5 kg grab samples are collected either as in-situ or float material. The locations and weights of these samples are meticulously recorded in the field as they are collected, along with relevant geological information.* **PUL-31 (Pulverize to 85% <75 µm):** *Each sample is crushed and pulverized so that 85% passes through a 75-micron sieve.* **ME-ICP61a (Four Acid Digestion with ICP-AES**

		Finish): *Multi-element analysis employing a four-acid digestion (HF-HNO_3-$HClO_4$-HCl) followed by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) for detection.* ***ME-OG62 (Ore Grade Multi-Element Analysis):*** *Like ME-ICP61a but specifically optimized for higher-grade ore samples to ensure accurate quantification at elevated concentrations.* ***Au-AA26 (Gold by Fire Assay with AAS Finish - 50g Charge):*** *Fire assay method using a 50g sample, with gold determination conducted via Atomic Absorption Spectroscopy (AAS).* ***Au-GRA22 (Gold by Fire Assay with Gravimetric Finish - 50g Charge):*** *Gold determination also performed using a fire assay method with a gravimetric finish for precise quantification.* ***QAQC:*** *Certified Reference Materials (OREAS 231, 21F, 235 and 240) were inserted at irregular sample intervals.*
Ground Surveys	Magnetic	*Retrieved raw data at a 50m and/or 200m line spacing using a GEMS Systems GSM-19 Overhauser Magnetometer. The data collected includes timestamps, spatial coordinates (GPS), total magnetic intensity (TMI), and auxiliary sensor readings such as altimeter and base station data. This data is imported into Geosoft Oasis Montaj in CSV format, and the data attributes are meticulously checked to ensure that the correct data and data types are present. Diurnal Correction is applied. Noise issues are addressed through methods such as Spike Removal using a despike filter, and Tie Line Levelling to ensure balance between traverse lines and tie lines. The corrected data is then converted into a grid using methods like Minimum Curvature, Kriging, or other appropriate gridding techniques. The final gridded products are enhanced by applying various filters such as Reduction to Pole (RTP), various derivatives (1VD, 2VD), Upward Continuation, Analytic Signal (AS), and Tilt Derivative (TDR).*

References

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